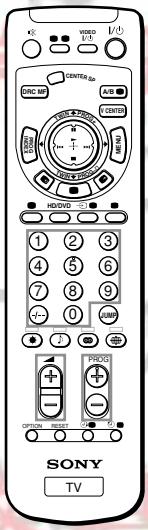
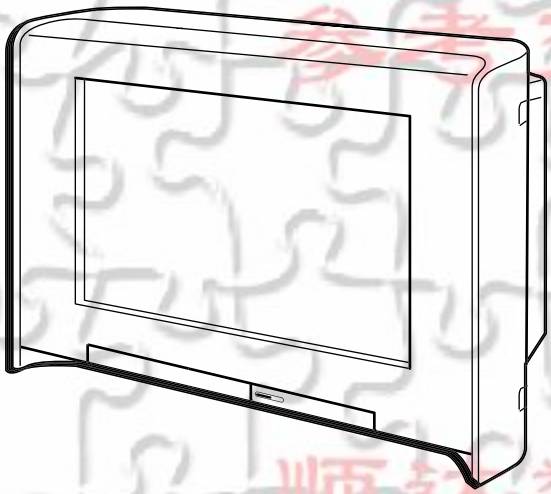
Self Diagnosis Supported model

SERVICE MANUAL AX-1CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-HX32M31	RM-1008	OCE	SCC-M13C-A				



RM-1008



KV-HX32M31

TRINITRON® COLOR TV

SONY®

Specifications

Power requirements	220–240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV.	
Television system	B/G, I, D/K, M	
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
Available language for Teletext	English, Farsi, French	
Stereo/Bilingual system	NICAM Stereo/Bilingual D/K, I, B/G; A2 Stereo/Bilingual (German) B/G	
Channel coverage		
B/G	VHF : 0 to 12, 5A, 19A / UHF : 28 to 69 / CATV : S01 to S03, S1 to S41 (Australia only) VHF : 1 to 11 / UHF : 21 to 69 / CATV : S01 to S03, S1 to S41 (New Zealand only) VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41	
I	UHF : B21 to B68 / CATV : S01 to S03, S1 to S41	
D/K	VHF : C1 to C12, R1 to R12 / UHF : C13 to C57, R21 to R60 / CATV : S01 to S03, S1 to S41, Z1 to Z39	
M	VHF : A2 to A13 / UHF : A14 to A79/ CATV : A-8 to A-2, A to W+4, W+6 to W+84	
(Antenna)	75-ohm external terminal	
Audio output (Speaker)	7.5W + 7.5W	
Number of terminal		
(Video)	Input: 4 Output: 1	Phono jacks; 1 Vp-p, 75 ohms
(Audio)	Input: 6 Output: 1	Phono jacks; 500 mVrms
(S Video)	Input: 2	Y: 1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms
(Component Video)	Input: 2	Phono jacks Y: 1 Vp-p, 75 ohms, sync negative P_B/C_B: 0.7 Vp-p, 75 ohms P_R/C_R: 0.7 Vp-p, 75 ohms Audio: 500 mVrms
(G/B/R/HD/ VD Video)	Input: 1	Phono jacks G: 0.7 Vp-p, 75 ohms, B: 0.7 Vp-p, 75 ohms, R: 0.7 Vp-p, 75 ohms HD: 0.7 Vp-p, 75 ohms, VD: 0.7 Vp-p, 75 ohms
(Center Speaker)	Input:1	120 W max., 8 ohms
(Headphones)	Output: 1	Stereo minijack
Picture tube		32in.
Tube size (cm) (measured diagonally)		82
Screen size (cm) (measured diagonally)		76
Dimensions (w/h/d, mm)		898 x 607 x 563
Mass (kg)		66.5

Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESECOMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFEOPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

TABLE OF CONTENTS

SECTION 1
SELF DIAGNOSIS FUNCTION

1. Summary of Self-Diagnosis Function

- This device includes a self-diagnosis function.
- In case of abnormalities, the ⏻ indicator automatically blinks. It is possible to predict the abnormality location by the number of blinks. The Instruction Manual describes blinking of the ⏻ indicator.
- If the symptom is not reproduced sometimes in case of a malfunction, there is recording of whether a malfunction was generated or not. Operate the remote command to confirm the matter on the screen and to predict the location of the abnormality.

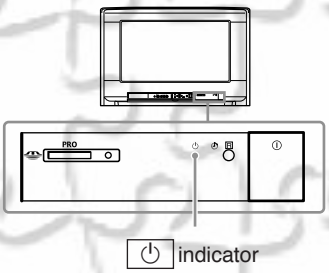
2. Diagnosis Items and Prediction of Malfunction Location

- When a malfunction occurs the ⏻ indicator only blinks for one of the following diagnosis items. In case of two or more malfunctions, the item which first occurred blinks. If the malfunctions occurred simultaneously, the item with the lower blink count blinks first.
- The screen display displays the results regarding all the diagnosis items listed below. The display " 0 " means that no malfunctions occurred.

Diagnosis Item	Number of times ⏻ indicator blinks	Probable Cause Location	Detected Symptoms
+B overcurrent (OCP)	2 times	T8001 (FBT) Rare short-circuit etc. (D board) Q5001 (H-OUT), Q5006 (D board)	Has entered standby mode. (Relay is off when the power turns on.)
+B overvoltage (OVP)	3 times	+B load open (D board) R6570 Open PH8003, control system malfunction L2603 Open	Has entered standby mode.
Vertical deflection stopped (V-STOP)	4 times	IC5101 (V. OUT) (D board) IC0401 (CXA2170Q) (MG board)	Has entered standby mode.
IK error (AKB ERROR)	5 times	VIDEO OUT IC malfunction IC9001, 9002, 9003 (C board) IC0401 (CXA2170Q) (MG board)	Has not entered standby mode.
Low-B error	6 times	Sub power supply system load shorted etc. (A board)	Has entered standby mode.
Horizontal deflection stopped (H-STOP)	7 times	IC0401 (CXA2170Q) (MG board) Q5404 (S-COR-OUT), Q5001 (H-OUT), Q5006	Has entered standby mode.
Audio Protector	8 times	IC2000, 2001 malfunction (A board)	Has entered standby mode.
Zero Cross DET error	9 times	RY6000 Power relay melting down (A board)	Has not entered standby mode.
High-Voltage stopped (HV-PROT)	10 times	T8001 (FBT) rare short-circuit (D board) IC8002, Q8013, 8014, R8051 (D board)	Has entered standby mode.

3. Blinking count display of ⏻ indicator

< FRONT PANEL >



* One blink is not used for self-diagnosis.

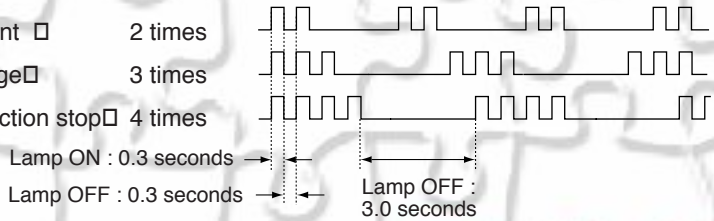
¥EXAMPLE

<Diagnosis Items> <Number of Blinks>

¥ +B overcurrent 2 times

¥ +B overvoltage 3 times

¥ Vertical deflection stop 4 times



Release of ⏻ indicator blinking.

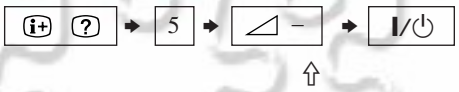
- The STAND BY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.
  But in the RLY ERR (10 times blinking), do not release by tuning power off.
  For details, refer to the item 1-6.

4. Self-diagnosis screen displays

- In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

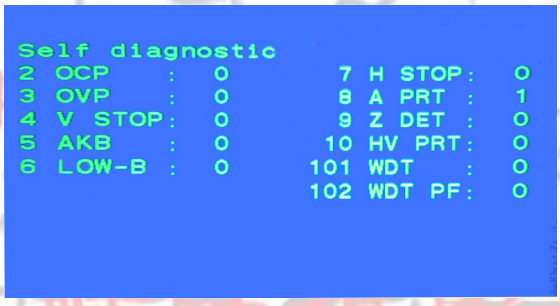
<Screen Display Method>

- Quickly press the remote command button in the following order from the standby state.



Be aware that this differs from the method of entering the service mode (+).

Self-diagnosis screen display



- "G" : OK, "NG" : DETECTS ONCE OR MORE
- THE 10 DIGITS OF NUMERALS ARE FOR CHECKING, NO RELATION TO DIAGNOSIS.
- 101 : NO LED BLINKING FOR WDT.
  "0" : NUMBER OF DETECTION.

5. After the self-diagnosis operation

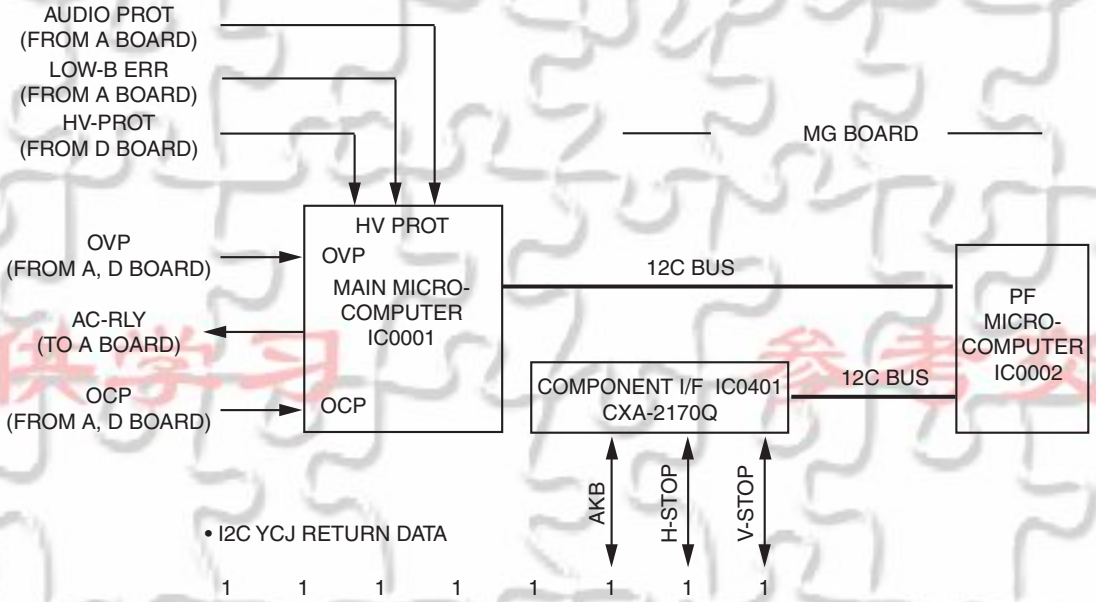
- The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to " 0 ".
- If the results display is not returned to " 0 " it will not be possible to judge a new malfunction after completing repairs.

<Method of Clearing Results Display>

1. Power off (Set to the standby mode)
2. [i+] [?] → [5] → [◿ +] → [I/⏻] (Service Mode)
3. Channel [8] → [0] (Test reset = Factory preset condition)

<Method of Ending Self Diagnosis Screen>

- When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

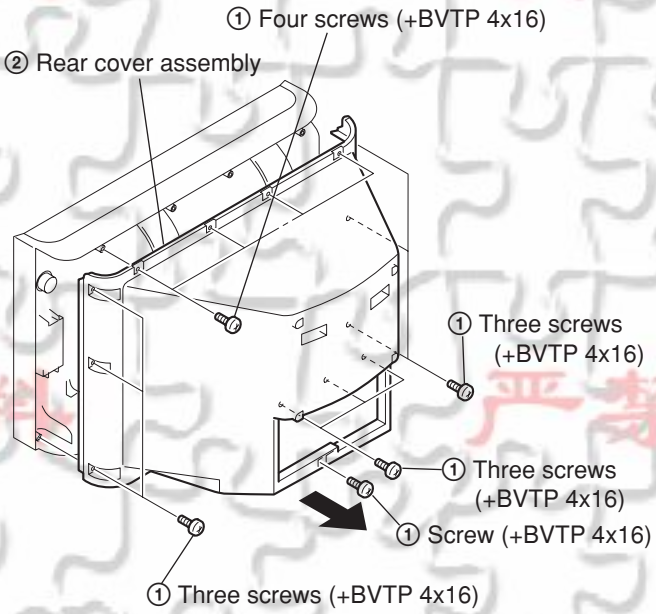


LED BLINKING TIMES	SYMPTOM
2	+B OCP
3	+B OVP
4	V-STOP
5	AKB
6	LOW-B ERROR
7	H-STOP
8	AUDIO PROT
9	Z DET
10	HV PRT

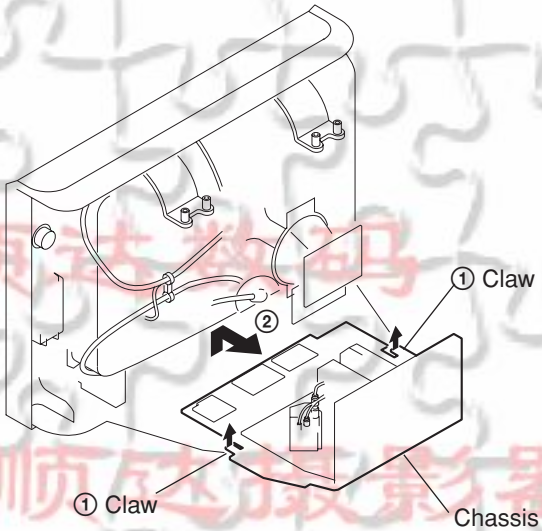
+B OCP	If the IC701 Pin 44 (+B OCP DET) is high 2 seconds, turn AC-RELAY low (P-OFF) and make STANDBY LED blinks twice.
+B OVP	If the IC701 Pin 45 (+B OVP DET) is high 2 seconds, turn AC-RELAY low (P-OFF) and make STANDBY LED blinks three times.
V-STOP	If the return data Bit0 (VNG) from CXA2150Q is "1" while 2 seconds, turn AC-RELAY low (P-OFF) and make STANDBY LED blinks four times.
AKB	If the return data Bit2 (IKREF) from CXA2150Q is "0" and there is no change for 20 seconds, make STANDBY LED blinks five times. At this time, AC-RELAY continues to high.
LOW-B ERROR	If the IC701 Pin 69 (AC-RELAY) is high and the Pin 43 (LOW-B ERROR DET) is low while 5 seconds, turn AC-RELAY low (P-OFF) and make STANDBY LED blinks six times.
H-STOP	If the return data Bit1 (HNG) from CXA2170 is "1" while 2 seconds, turn AC-RELAY low (P-OFF) and make STANDBY LED blinks seven times.
W. D. T.	Observes the watch dock timer (BUS COMMUNICATION ERROR DET) bus communication. If errors are detected, counts up and reform the bus communication and displays the number of time. (No LED blinking).
AUDIO PROT	In case of Pin 85 of IC101 (AUDIO PROT DET) turns high 60msec twice at a time, makes AC-RELAY turns low (Power off) and STANDBY-LED blinks 8 times.
HV-PROT	In case of Pin 33 of IC101 (HV-PROT DET) turns high 10 seconds continuously in normal operation or in BS fixed Stand-by, makes AC-RELAY turns low (Power off) and STANDBY-LED blinks 10 times.
Z DET	There are two causes for Zero Cross Error. Normally the pulse doubled AC power supply frequeny is fed to Pin 8 of IC101. But in case of the abnormal pulse is fed, it makes AC-RELAY turns low (Power off) and STANDBY-LED blinks 9 times. In this case, "1" is not displayed in '9. Z DET' column in the self-diagnosis mode.

SECTION 2
DISASSEMBLY

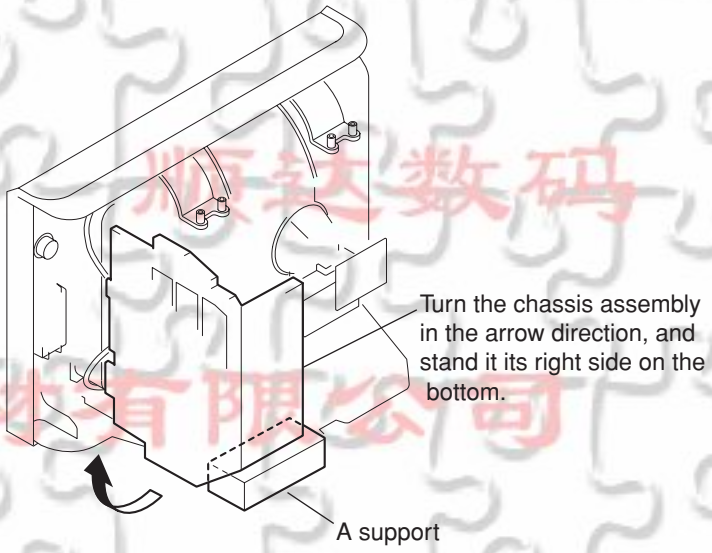
2-1. REAR COVER ASSEMBLY



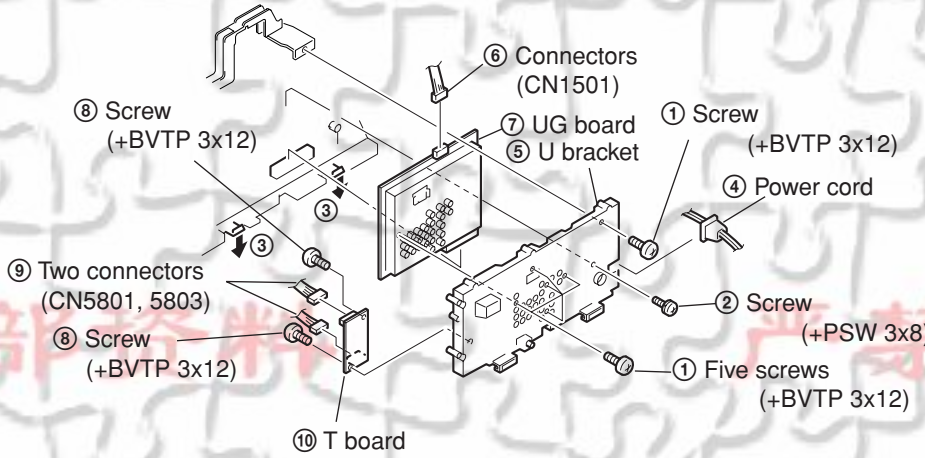
2-2. CHASSIS ASSEMBLY



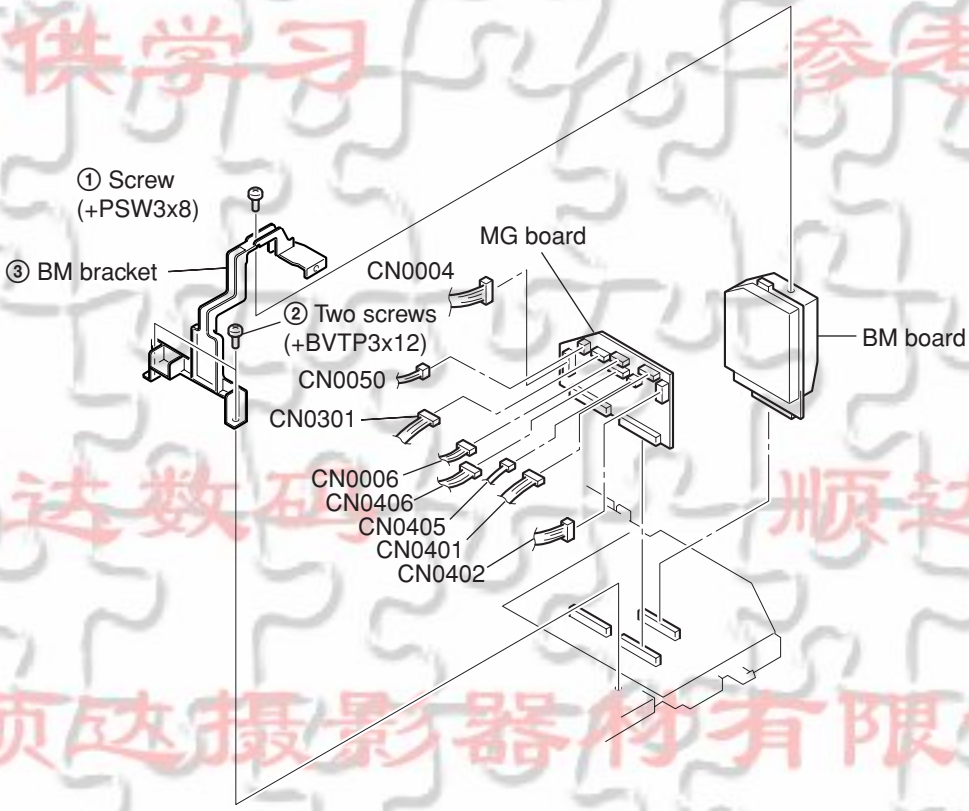
2-3. SERVICE POSITION



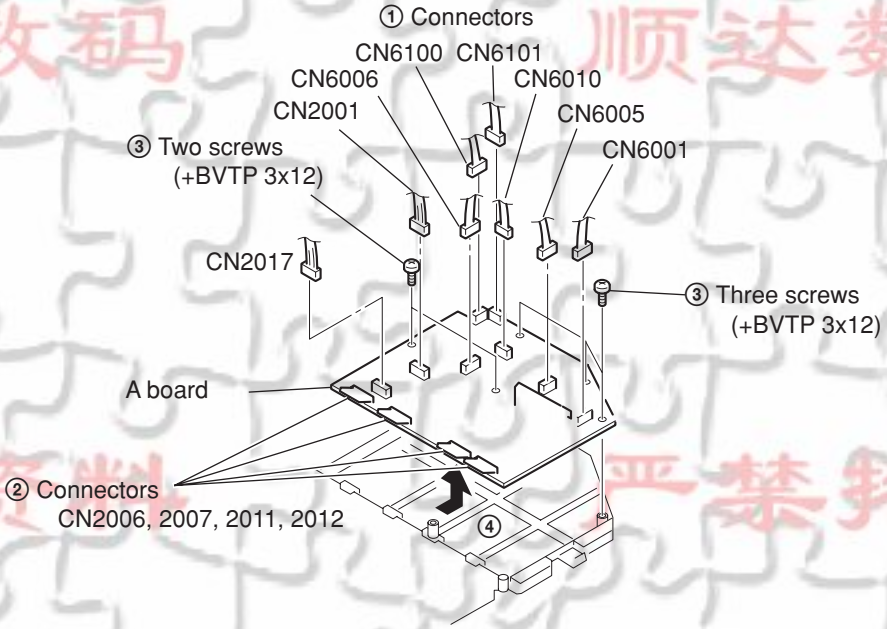
2-4. T AND UG BOARDS



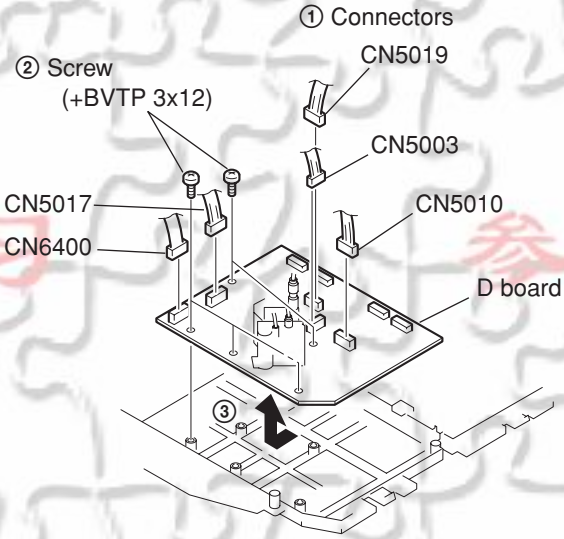
2-5. BM AND MG BOARDS



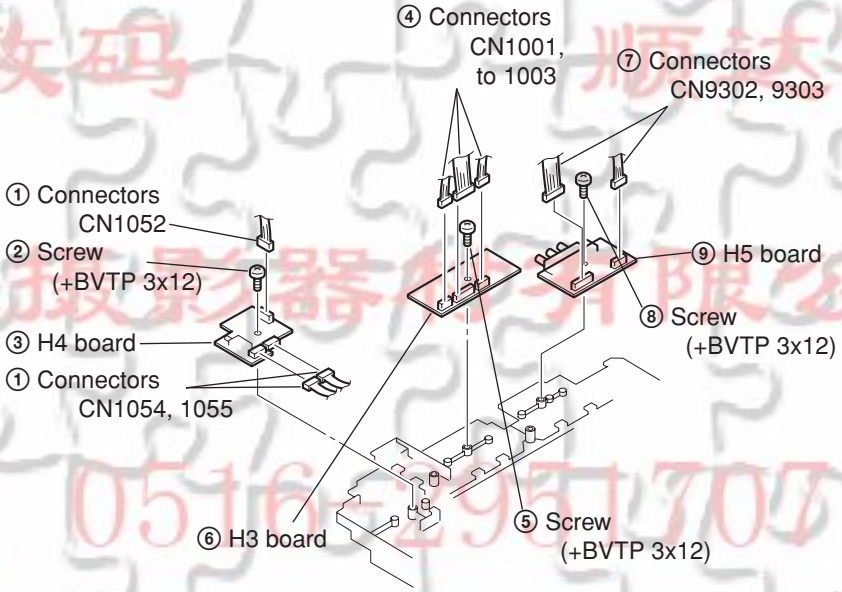
2-6. A BOARD



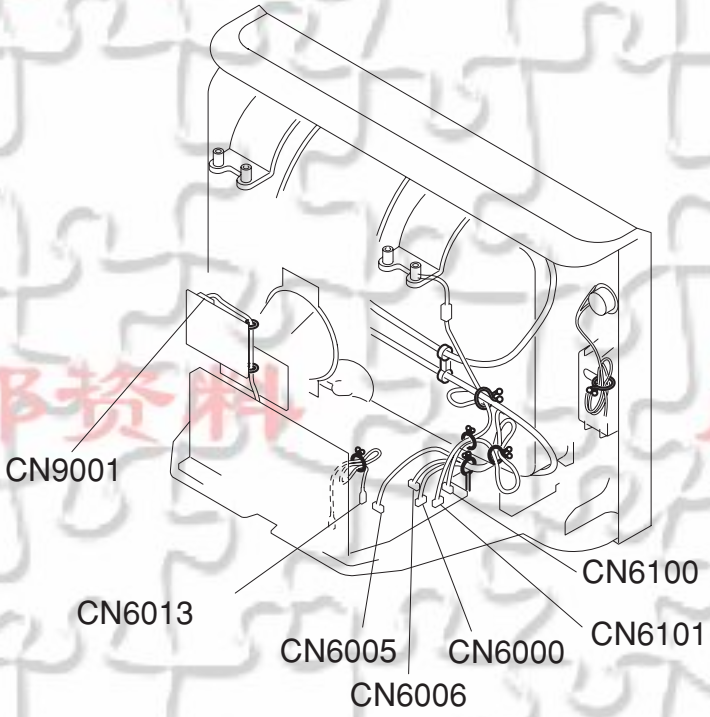
2-7. D BOARD

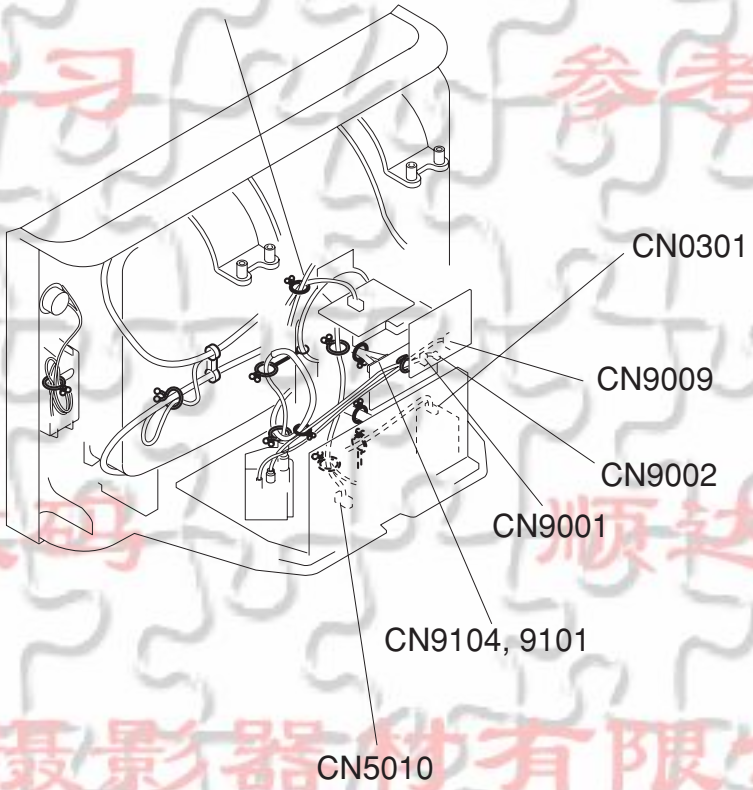


2-8. H3, H4 AND H5 BOARDS



2-9. HARNESS ARRANGEMENT

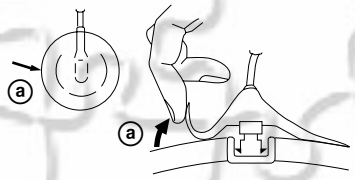




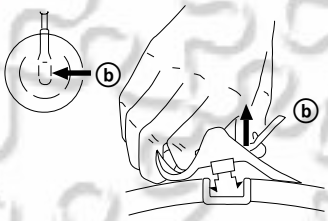
2-10. REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

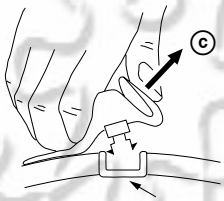
• REMOVING PROCEDURES



① **Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.**



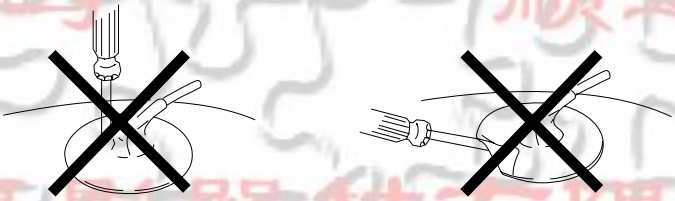
② **Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.**



③ **When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.**

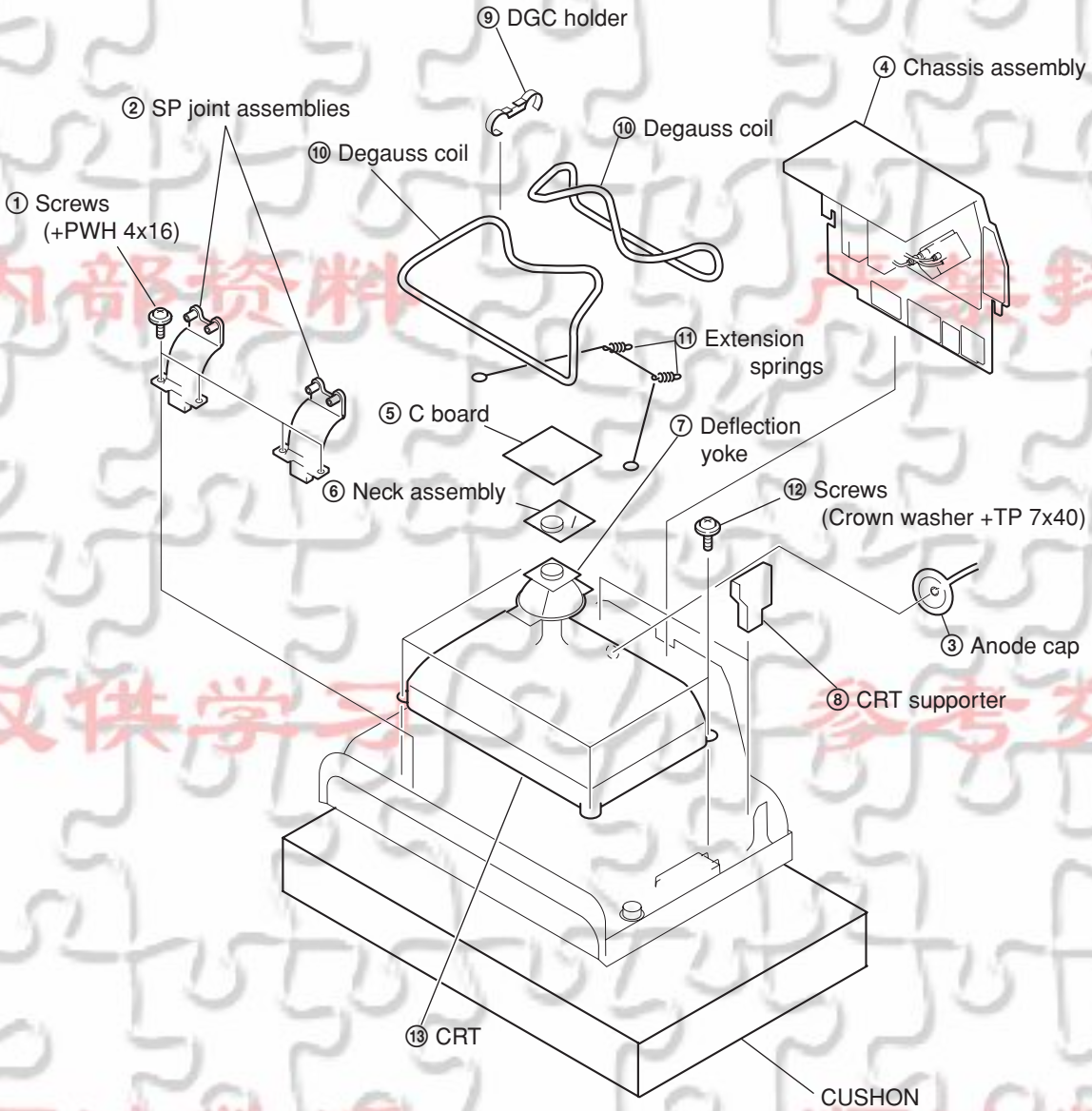
• HOW TO HANDLE AN ANODE-CAP

① **Do not damage the surface of anode-caps with sharp shaped objects.**
② **Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.**
③ **Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.**



2-11. CRT

NOTE: After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.



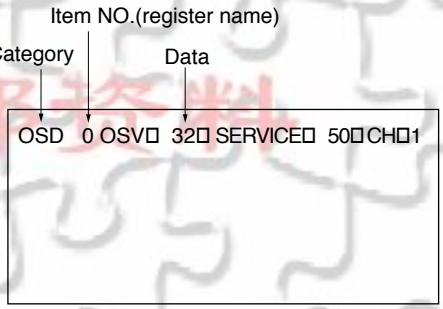
SECTION 3
SERVICE MODE

3-1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

1. Standby mode. (Power off)
2. [i+] [?] → [5] → [(+)] → [I/⏻]
   on the Remote Commander.
   (Press each button within a second.)

3-2. SERVICE MODE ADJUSTMENT



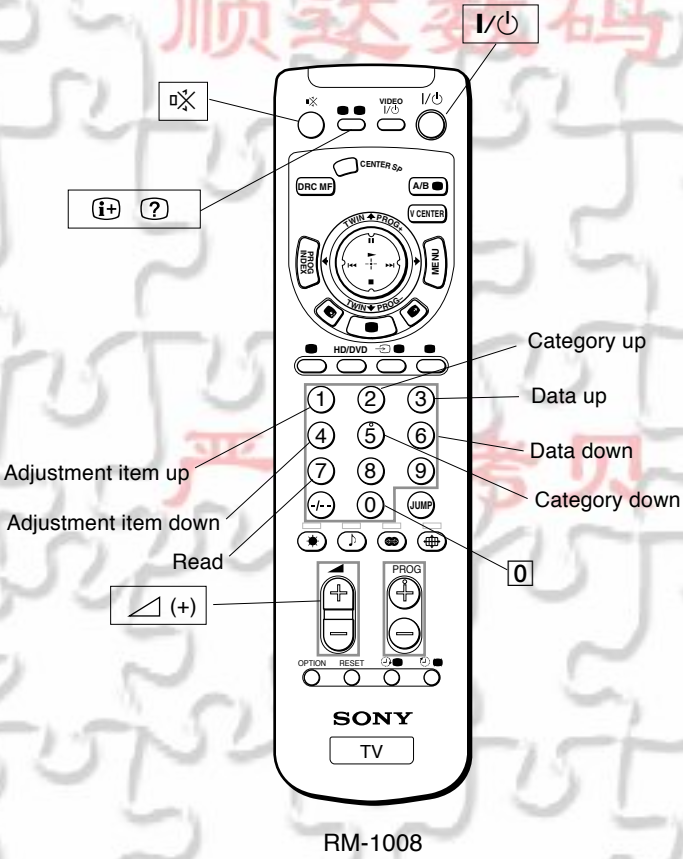
3. The SCREEN displays the item being adjusted.
4. Press [1] or [4] on the Remote Commander to select the category.
5. Press [3] or [6] on the Remote Commander to change the data.
6. Press [2] or [5] on the Remote Commander to select the adjustment item.
7. If you want to recover the latest values press [7] then [0] to read the memory.
8. Press [MUTING] then [0] to write into memory.
9. Turn power off.

Note: Press [8] then [0] on the Remote Commander to initialize or turn set off and on to exit.

3-3. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn power off with the remote commander.
2. Turn power on and set to Service Mode.
3. Call the adjusted items again and confirm they were adjusted.

3-4. ADJUSTING BUTTONS AND INDICATOR



RM-1008

3-5.SERVICE MODE LIST

OSD

Functionality No.	Functionality Name	Range	Standards	Function	Remarks
00	OSV		32	OSD V Position	
01	OSH		13	OSD H Position	
02	FW1		07	OSD ODD/EVEN Field Window Setup #1	
03	FW2		20	OSD ODD/EVEN Field Window Setup #2	
04	VOF		*1	OSD V Position (Offset)	Wide/50/60/100/120/HD/Twin/Favorite/Index

Standards *1

Functionality No.	Functionality Name	FULL50	FULL60	FULL100	FULL120	WDZM50	WDZM60	WDZM100
04	VOF	32	32	32	32	32	32	32

Functionality No.	Functionality Name	WDZM120	ZOOM50	ZOOM60	ZOOM100	ZOOM120	INDEX50	INDEX60
04	VOF	32	32	32	32	32	32	32

Functionality No.	Functionality Name	FAVORITE50	FAVORITE60	TWIN50	TWIN60	HD50	HD60	MS
04	VOF	32	32	32	32	32	32	32

Functionality No.	Functionality Name	VCOMP	VCOMP60	VCOMP100	VCOMP120
04	VOF	32	32	32	32

MSP

Functionality No.	Functionality Name	Range	Standards	Function	Remarks
00	WST		21	W/G Stereo Threshold	
01	WBT		236	W/G Bilingual Threshold	
02	WLL		05	W/G Monaural Threshold	
03	WAC		01	W/G Agreement Count	
04	WDL		48	W/G Search Delay	
05	NDL		32	NICAM Search Delay	
06	SDL		16	Stereo status Read Delay	
07	AGC		01	AGC Switch Auto/Constant	
08	REL		40	AGC Gain at Constant Mode	
09	CRM		00	Carrier muting on/off	
10	ACO		01	Audio Clock out on/off	
11	FP		27	FM Prescale for non-M system	
12	FPM		50	FM Prescale for M system	
13	FH		54	FM Prescale for HDEV	
14	FHM		101	FM Prescale for HDEV and M	
15	WGP		28	W/G Prescale	
16	NIP		127	NICAM Prescale	
17	ERR		80	Auto FM switch Threshold	
18	VOL		48	Loud Speaker gain 0700h to 07FFh	

TEXT

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	TXH		35	Teletext Horizontal Display Position	
01	TXV		63	Teletext Vertical Display Position	
02	THD		56	Teletext H-sync Active Edge Shift	
03	TVD		00	Teletext V-sync Active Edge Shift	
04	HPL		00	Teletext H-sync Polarity Configuration	
05	VPL		00	Teletext V-sync Polarity Configuration	
06	FPL		01	Teletext Field Polarity Configuration	
07	FMD		03	Teletext Fastext/TOP Force Mode	
08	TBR		15	Teletext RGB Brightness	
09	NOP		02	Teletext National Option Table Configuration	
10	TCH		02	Teletext Twisted Character Set Configuration	

PIC

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	PIC		* 1	User Picture	Picture Mode
01	COL		* 1	User Color	Picture Mode
02	BRI		* 1	User Bright	Picture Mode
03	HUE		*1	User Hue	Picture Mode
04	SHP		* 1	User Sharp	Picture Mode
05	PIOF		*2	Picture Offset (Picture * (20-data)/20 * Eco(75%)	MS/NORMAL/MULTI/OTHER

Standards *1

Functionality		Picture Mode			
No.	Name	Dynamic	Standard	Hi-Fine	Personal
00	PIC	100	80	60	50
01	COL	60	60	50	50
02	BRI	43	50	50	50
03	HUE	50	50	50	50
04	SHP	50	50	50	50

Standards *2

Functionality		Picture Offset				
No.	Name	MS	Normal(4:3)	HD	Twin/Index/Pap	Other
05	PIOF	5	2	5	5	1

SOU

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	BAS		*1	User Bass S	ound Mode
01	TRE		*1	User Treble S	ound Mode

Standards *1

Functionality		Sound Mode			
No.	Name	Dynamic	Drama	Soft	Personal
00	BAS	50	50	50	50
01	TRE	50	50	50	50

DRC

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	CLAR		*1	User DRC Palette Initial number Clarity	
01	REAL		*1	User DRC Palette Initial Number Reality	

Standards *1

Functionality		DRC Palette (TV Custom1)		DRC Palette (TV Custom2)		DRC Palette (TV Custom3)		DRC Palette (Video Custom1)		DRC Palette (Video Custom2)	
No.	Name	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per
00	CLAR	01	01	50	50	80	80	01	01	50	50
01	REAL	25	25	55	55	90	90	25	25	55	55

Functionality		DRC Palette (Video Custom3)		DRC Palette (Comp Custom1)		DRC Palette (Comp Custom2)		DRC Palette (Comp Custom3)	
No.	Name	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per	Dynamic	Std/HiFine/Per
00	CLAR	80	80	01	01	50	50	80	80
01	REAL	90	90	25	25	55	55	90	90

LUMA

Functionality		Range	Standards
No.	Name		
0	BROF	0-7	*1
1	GAMM	0-7	*1
2	GAMS	0-15	*2
3	RGAM	0-15	*2
4	GGAM	0-15	*2
5	BGAM	0-15	*2
6	BLK	0-7	*1
7	APED	0-3	*3
8	DCTR	0-15	*3
9	ABLM	0-3	*3

Standards *1

RF / CV / YC / COMP

No.	Name	Dynamic													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	BROF	0	0	0	0	0	0	4	4	1	1	1	1	3	3
1	GAMM	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	BLK	6	6	6	6	6	6	7	7	7	7	7	7	7	7

No.	Name	Standard													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	BROF	5	5	5	3	3	3	4	4	4	4	1	1	1	1
1	GAMM	3	3	3	3	3	3	4	4	4	4	4	4	4	4
6	BLK	4	4	4	4	4	4	4	4	4	4	5	5	5	5

No.	Name	Hi-fine													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	BROF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	GAMM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	BLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0

No.	Name	Personal													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	BROF	5	5	5	3	3	3	4	4	4	4	1	1	1	1
1	GAMM	3	3	3	3	3	3	4	4	4	4	4	4	4	4
6	BLK	4	4	4	4	4	4	4	4	4	4	5	5	5	5

RGB / MS / Twin

No.	Name	Dynamic													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	BROF	4	4	1	1	1	1	3	3	1	1	1	1	1	0
1	GAMM	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	BLK	7	7	7	7	7	7	7	7	5	5	5	5	5	5

No.	Name	Standard													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	BROF	4	4	4	4	1	1	1	1	1	1	1	1	1	1
1	GAMM	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	BLK	4	4	4	4	5	5	5	5	5	5	5	5	5	5

No.	Name	Hi-Fine													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	BROF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	GAMM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	BLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0

No.	Name	Personal													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	BROF	4	4	4	4	1	1	1	1	1	1	1	1	1	1
1	GAMM	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	BLK	4	4	4	4	5	5	5	5	5	5	5	5	5	5

Standards *2

No.	Name	GAMMA0	GAMMA1	GAMMA2	GAMMA3	GAMMA4	GAMMA5	GAMMA6	GAMMA7
2	GAMS	13	13	13	13	13	13	13	13
3	RGAM	0	4	5	6	7	8	9	10
4	GGAM	0	4	5	6	7	8	9	10
5	BGAM	0	4	5	6	7	8	9	10

Standards *3

No.	Name	BLK0	BLK1	BLK2	BLK3	BLK4	BLK5	BLK6	BLK7
7	APED	0	1	3	3	2	1	3	2
8	DCTR	0	5	8	15	10	5	10	10
9	ABLM	0	0	0	1	0	0	1	1

COLR

Functionality		Range	Standards
No.	Name		
0	CLOF	0-7	*1
1	HUOF	0-7	*1
2	RDRV	0-63	41
3	GDRV	0-63	30
4	BDRV	0-63	35
5	RCUT	0-63	41
6	GCUT	0-63	31
7	BCUT	0-63	24
8	SBRT	0-63	25
9	DCOL	0-3	1
10	WBSW	0-1	*2
11	SBOF	0-7	*2
12	RDOF	0-63	*2
13	GDOF	0-63	*2
14	BDOF	0-63	*2
15	RCOF	0-63	*2
16	GCOF	0-63	*2
17	BCOF	0-63	*2
18	AXIS	0-3	*1
19	R-YR	0-15	*3
20	R-YB	0-15	*3
21	G-YR	0-15	*3
22	G-YB	0-15	*3

Standards *1

RF / CV / YC / COMP

No.	Name	Dynamic													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	CLOF	6	6	6	5	5	5	6	6	6	6	5	5	5	5
1	HUOF	3	3	1	3	3	1	3	2	3	3	3	3	3	3
18	AXIS	3	3	1	3	3	1	3	1	3	1	3	1	3	1

No.	Name	Standard													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	CLOF	1	1	3	1	1	3	1	3	4	4	4	4	4	4
1	HUOF	3	3	1	3	3	1	3	2	3	3	3	3	3	3
18	AXIS	3	3	1	3	3	1	3	1	3	1	3	1	3	1

No.	Name	Hi-Fine													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	CLOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1	HUOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	AXIS	3	3	1	3	3	1	3	1	3	1	3	1	3	1

No.	Name	Personal													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	CLOF	1	1	3	1	1	3	1	3	4	4	4	4	4	4
1	HUOF	3	3	1	3	3	1	3	2	3	3	3	3	3	3
18	AXIS	3	3	1	3	3	1	3	1	3	1	3	1	3	1

RGB / MS / Twin

No.	Name	Dynamic													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	CLOF	6	6	6	6	5	5	5	5	7	7	7	7	7	6
1	HUOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	AXIS	3	1	3	1	3	1	3	1	1	1	1	1	1	1

No.	Name	Standard													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	CLOF	1	1	4	4	4	4	4	4	4	4	4	4	4	4
1	HUOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	AXIS	3	1	3	1	3	1	3	1	1	1	1	1	1	1

No.	Name	Hi-Fine													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	CLOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1	HUOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	AXIS	3	1	3	1	3	1	3	1	1	1	1	1	1	1

No.	Name	Personal													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	CLOF	1	1	4	4	4	4	4	4	4	4	4	4	4	4
1	HUOF	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	AXIS	3	1	3	1	3	1	3	1	1	1	1	1	1	1

Standards *2

No.	Name	COOL	WARM	MIDCOOL
10	WBSW	0	1	0
11	SBOF	3	3	3
12	RDOF	31	31	31
13	GDOF	32	35	31
14	BDOF	35	44	31
15	RCOF	31	19	31
16	GCOF	32	33	31
17	BCOF	38	63	31

Standards *3

No.	Name	AXIS0	AXIS1	AXIS2	AXIS3
19	R-YR	8	14	9	9
20	R-YB	9	15	15	9
21	G-YR	9	8	9	9
22	G-YB	6	4	7	7

CLTY

Functionality		Range	Standards
No.	Name		
0	SYSM	0-3	*1
1	UVML	0-3	*1
2	VMCR	0-3	*1
3	VMLM	0-3	*1
4	VMF0	0-3	*1
5	VMDL	0-15	*1
6	SHOF	0-3	*1
7	SHF0	0-1	*1
8	PROV	0-3	*1
9	F1LV	0-3	*1
10	LTLV	0-3	*1
11	LTMD	0-1	*1
12	CTLV	0-3	*1
13	MIDE	0-63	*1
14	VMLV	0-15	*2

Standards *1

No.	Name	Dynamic													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	SYSM	1	1	1	1	1	1	2	2	2	2	3	3	3	3
1	UVML	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	VMCR	0	0	0	2	2	2	0	0	0	0	0	0	0	0
3	VMLM	3	3	3	3	3	3	0	0	0	0	0	0	0	0
4	VMF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	8	8	8	3	3	3	3	3	5	5	5	5	10	10
6	SHOF	3	3	3	3	3	3	0	0	0	0	1	1	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	0	0	0	0	0	0	2	2	3	3	0	0
10	LTLV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	3	3	3	3	3	3	0	0	0	0	0	0	0	0
13	MIDE	3	3	3	7	7	7	11	11	27	27	19	19	19	19

No.	Name	Dynamic													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	SYSM	2	2	2	2	3	3	3	3	3	3	3	3	3	2
1	UVML	3	3	3	3	3	3	3	3	2	2	2	2	2	3
2	VMCR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	VMLM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	VMF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	3	3	5	5	5	5	10	10	10	10	10	10	10	5
6	SHOF	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	2	2	3	3	0	0	0	0	0	0	0	0
10	LTLV	3	3	3	3	3	3	3	3	0	0	0	0	0	3
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	MIDE	11	11	27	27	19	19	19	19	23	23	23	23	23	27

No.	Name	Standard													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	SYSM	1	1	1	1	1	1	2	2	2	2	3	3	3	3
1	UVML	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	VMCR	0	0	0	2	2	2	0	0	0	0	0	0	0	0
3	VMLM	3	3	3	3	3	3	0	0	0	0	0	0	0	0
4	VMF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	8	8	8	3	3	3	3	3	5	5	5	5	10	10
6	SHOF	1	1	1	1	1	1	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	0	0	0	0	0	0	1	1	0	0	0	0
10	LTLV	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	1	1	1	1	1	1	0	0	0	0	0	0	0	0
13	MIDE	2	2	2	6	6	6	10	10	26	26	18	18	18	18

No.	Name	Standard													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	SYSM	2	2	2	2	3	3	3	3	3	3	3	3	3	2
1	UVML	3	3	3	3	3	3	3	3	2	2	2	2	2	3
2	VMCR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	VMLM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	VMF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	3	3	5	5	5	5	10	10	10	10	10	10	10	5
6	SHOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	1	1	0	0	0	0	0	0	0	0	0	0
10	LTLV	0	0	0	0	0	0	1	1	0	0	0	0	0	0
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	MIDE	10	10	26	26	18	18	18	18	22	22	22	22	22	26

No.	Name	Hi-Fine													
		RF			CV/YC			Comp							
		480_60I	480_60I	576_50I	480_60I	480_60I	576_50I	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
		NTSC	PAL	PAL	NTSC	PAL	PAL								
0	SYSM	1	1	1	1	1	1	2	2	2	2	3	3	3	3
1	UVML	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	VMCR	0	0	0	2	2	2	0	0	0	0	0	0	0	0
3	VMLM	3	3	3	3	3	3	0	0	0	0	0	0	0	0
4	VMF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	8	8	8	3	3	3	3	3	5	5	5	5	10	10
6	SHOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	LTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	MIDE	0	0	0	4	4	4	8	8	24	24	16	16	16	16

No.	Name	Hi-Fine													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	SYSM	2	2	2	2	3	3	3	3	3	3	3	3	3	2
1	UVML	3	3	3	3	3	3	3	3	2	2	2	2	2	3
2	VMCR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	VMLM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	VMF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	3	3	5	5	5	5	10	10	10	10	10	10	10	5
6	SHOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	LTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	MIDE	8	8	24	24	16	16	16	16	20	20	20	20	20	24

No.	Name	Personal													
		RF			CV/YC			Comp							
		480_60I	480_60I	576_50I	480_60I	480_60I	576_50I	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
		NTSC	PAL	PAL	NTSC	PAL	PAL								
0	SYSM	1	1	1	1	1	1	2	2	2	2	3	3	3	3
1	UVML	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	VMCR	0	0	0	2	2	2	0	0	0	0	0	0	0	0
3	VMLM	3	3	3	3	3	3	0	0	0	0	0	0	0	0
4	VMF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	8	8	8	3	3	3	3	3	5	5	5	5	10	10
6	SHOF	1	1	1	1	1	1	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	0	0	0	0	0	0	1	1	0	0	0	0
10	LTLV	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	1	1	1	1	1	1	0	0	0	0	0	0	0	0
13	MIDE	2	2	2	6	6	6	10	10	26	26	18	18	18	18

No.	Name	Personal													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie	All Format
0	SYSM	2	2	2	2	3	3	3	3	3	3	3	3	3	2
1	UVML	3	3	3	3	3	3	3	3	2	2	2	2	2	3
2	VMCR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	VMLM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	VMF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	VMDL	3	3	5	5	5	5	10	10	10	10	10	10	10	5
6	SHOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	F1LV	0	0	1	1	0	0	0	0	0	0	0	0	0	0
10	LTLV	0	0	0	0	0	0	1	1	0	0	0	0	0	0
11	LTMD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	MIDE	10	10	26	26	18	18	18	18	22	22	22	22	22	26

Standards *2

No.	Name	Dynamic			Standard			Hi-Fine			Personal		
		LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
14	VMLV	15	10	15	6	5	10	4	5	5	4	5	10

MIDE

Functionality		Range	Standards
No.	Name		
0	POP	0-63	*1
1	MHLY	0-3	*1
2	MHLC	0-3	*1
3	MVLY	0-3	*1
4	MVLC	0-3	*1
5	MHYR	0-3	*1
6	MHYL	0-3	*1
7	MHYE	0-7	*1
8	MHYO	0-1	*1
9	MHCR	0-3	*1
10	MHCL	0-3	*1
11	MHCE	0-7	*1
12	MHCO	0-1	*1
13	MVYR	0-3	*1
14	MVYL	0-3	*1
15	MVYE	0-7	*1
16	MVCR	0-3	*1
17	MVCL	0-3	*1
18	MVCE	0-7	*1

Standards *1

No.	Name	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	MHLY	3	3	3	3	1	1	1	1	1	1	1	1	0	1	2	1
2	MHLC	3	3	3	3	3	3	3	3	3	3	3	3	0	3	3	3
3	MVLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	MVLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	MHYR	0	0	0	1	0	0	0	1	0	0	0	1	1	0	1	1
6	MHYL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	MHYE	2	2	2	7	0	0	2	7	0	0	2	7	4	6	6	6
8	MHYO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	MHCR	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
10	MHCL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	MHCE	0	2	3	5	0	0	0	5	0	0	0	0	7	7	7	7
12	MHCO	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
13	MVYR	0	0	0	2	1	1	1	2	1	1	1	1	1	1	1	1
14	MVYL	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
15	MVYE	0	0	2	5	0	2	3	5	0	2	3	4	0	0	3	4
16	MVCR	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
17	MVCL	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
18	MVCE	0	0	0	3	0	0	0	3	0	0	0	0	0	0	2	3

No.	Name	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	MHLY	2	2	2	2	0	0	0	0	1	1	1	1	1	1	1	1
2	MHLC	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
3	MVLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	MVLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	MHYR	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
6	MHYL	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
7	MHYE	2	2	2	4	0	0	0	0	0	2	4	7	0	0	2	5
8	MHYO	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1
9	MHCR	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1
10	MHCL	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
11	MHCE	0	2	2	4	0	0	0	0	0	0	2	5	0	0	2	5
12	MHCO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	MVYR	2	2	0	2	1	1	1	1	1	1	1	2	1	1	1	1
14	MVYL	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
15	MVYE	0	1	2	4	0	0	1	2	0	2	2	4	0	0	0	0
16	MVCR	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1
17	MVCL	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0
18	MVCE	0	0	2	3	0	0	1	2	0	1	2	3	0	0	1	3

No.	Name	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
1	MHLY	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0
2	MHLC	3	3	3	3	0	0	0	0	3	3	0	0	0	0	0	0
3	MVLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	MVLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	MHYR	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0
6	MHYL	1	1	2	2	1	1	1	1	1	1	1	1	0	0	0	0
7	MHYE	4	7	2	7	2	4	7	7	2	5	7	7	0	0	0	0
8	MHYO	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0
9	MHCR	0	0	0	0	0	0	1	1	2	2	0	1	0	0	0	0
10	MHCL	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
11	MHCE	0	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0
12	MHCO	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
13	MVYR	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0
14	MVYL	0	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0
15	MVYE	0	3	7	5	0	0	4	4	0	3	4	4	0	0	0	0
16	MVCR	0	0	0	0	0	0	1	1	2	2	1	1	0	0	0	0
17	MVCL	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
18	MVCE	0	0	0	0	0	0	4	4	0	0	4	4	0	0	0	0

No.	Name	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
1	MHLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	MHLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	MVLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	MVLC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	MHYR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	MHYL	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
7	MHYE	0	2	4	7	7	0	0	0	0	0	0	0	0	0	0	0
8	MHYO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MHCR	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
10	MHCL	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
11	MHCE	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0
12	MHCO	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
13	MVYR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	MVYL	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
15	MVYE	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0
16	MVCR	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
17	MVCL	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
18	MVCE	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0

CCPM

Functionality		Range	Standards
No.	Name		
0	REFC	0-3	1
1	YLEV	0-255	*1
2	CLEV	0-255	*1
3	SHUE	0-15	*1
4	SHUO	0-7	3
5	YCDL	0-15	*2
6	FUP2	0-3	*3
7	SHF0	0-1	*3
8	PROV	0-7	*3
9	SHPC	0-3	*3
10	SSHP	0-15	*3
11	CBPF	0-3	*4
12	CBPA	0-3	*4
13	CEQ	0-3	*4
14	SFIL	0-1	*5
15	SSTC	0-1	*5
16	AFCG	0-3	*10
17	AFLG	0-3	*6
18	AFCM	0-1	*6
19	AFLC	0-1	*6
20	AFHC	0-1	*6
21	CDM1	0-3	*6
22	CDM2	0-1	*6
23	CDM3	0-1	*6
24	CLPP	0-63	28
25	BGPS	0-15	*7
26	APED	0-3	*8
27	DCTR	0-3	*8
28	YTRP	0-1	*9
29	CTRP	0-1	*9
30	STUP	0-15	*10
31	VINT	0-15	*10
32	CLAD	0-1	*10
33	SSAD	0-1	*10
34	CLPG	0-3	*10
35	HSSL	0-3	*10
36	VSSL	0-3	*10
37	STTC	0-3	*10
38	VAFC	0-1	*10
39	SLPF	0-1	*11
40	1774	0-15	0
41	NCOM	0-1	*12
42	SDLP	0-1	*13
43	ROM2	0-1	*13
44	VECR	0-1	*14
45	VECL	0-1	*14
46	VECN	0-3	*14
47	VEGA	0-7	*14
48	BPT1	0-255	*15
49	BPT2	0-255	*15
50	KLEV	0-3	*16
51	APCG	0-3	*16
52	BLKM	0-3	1
53	HSPO	0-15	7
54	VBIS	0-31	5
55	ID1W	0-1	1
56	30H	0-255	0
57	3410	0-3	0
58	4CNT	0-1	1
59	SDOF	0-1	0
60	APAT	0-3	2
61	APHL	0-3	2
62	APAR	0-3	1
63	APHY	0-3	0
64	DTTC	0-3	2
65	DTLT	0-3	2
66	E656	0-1	0
67	DCLP	0-1	0
68	MVSW	0-3	*10
69	MVCT	0-15	7

*Available for MS mode only.

Standards *1

No.	Name	RF		CV		YC		Comp		MS
		60Hz	50Hz	60Hz	50Hz	50Hz	60Hz	50Hz	60Hz	
1	YLEV	169	171	184	188	187	187	185	185	115
2	CLEV	105	102	102	103	105	105	194	194	113
3	SHUE	0	7	6	7	6	7	7	7	7

Standards *2

No.	Name	RF			CV		YC		Comp	MS
		NTSC	PAL_DKI	PAL_OTHER	NTSC	PAL	NTSC	PAL		
5	YCDL	8	5	7	8	8	7	7	8	9

Standards *3

No.	Name	Dynamic													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	7	7	7	7	7	7	7	7
9	SHPC	3	3	3	2	2	2	2	2	2	2	2	2	2	2
10	SSHP	8	8	8	9	9	9	10	10	10	10	10	10	10	10

No.	Name	Dynamic													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie(Hi-Fine)	All Format
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	7	7	7	7	7	7	7	7	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	SSHP	10	10	10	10	10	10	10	10	10	10	10	10	10	10

No.	Name	Standard													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	2	2	2	2	2	2	0	0
10	SSHP	8	8	8	7	7	7	8	8	8	8	8	8	7	7

No.	Name	Standard													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie(Hi-Fine)	All Format
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	0	0	2	2	2	2	2	2
10	SSHP	8	8	8	8	8	8	7	7	8	8	8	8	8	8

No.	Name	Hi-Fine													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	2	2	2	2	2	2	0	0
10	SSHP	8	7	7	7	7	7	7	7	7	7	7	7	7	7

No.	Name	Hi-Fine													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie(Hi-Fine)	All Format
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	0	0	2	2	2	2	2	2
10	SSHP	7	7	7	7	7	7	7	7	7	7	7	7	7	7

No.	Name	Personal													
		RF			CV/YC			Comp							
		480_60I NTSC	480_60I PAL	576_50I PAL	480_60I NTSC	480_60I PAL	576_50I PAL	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	2	2	2	2	2	2	0	0
10	SSHP	8	8	8	7	7	7	8	8	8	8	8	8	7	7

No.	Name	Personal													
		RGB								MS					Twin
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Index	Full	Popup	Player	Movie(Hi-Fine)	All Format
6	FUP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	PROV	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	SHPC	2	2	2	2	2	2	0	0	2	2	2	2	2	2
10	SSHP	8	8	8	8	8	8	7	7	8	8	8	8	8	8

Standards *4

No.	Name	RF NTSC (GR: OFF)	PAL_DKI	PAL_OTHER	CV NTSC	PAL	YC NTSC	PAL
11	CBPF	2	2	2	0	0	0	0
12	CBPA	1	1	1	0	0	0	0
13	CEQ	1	1	1	0	0	0	0

Standards *5

No.	Name	RF	CV	YC	Comp	Digital
14	SFIL	1	1	1	1	1
15	SSTC	0	0	0	0	0

Standards *6

No.	Name	RF	CV/YC	Other
17	AFLG	0	0	0
18	AFCM	0	0	0
19	AFLC	0	0	0
20	AFHC	0	0	0
21	CDM1	2	2	2
22	CDM2	0	0	0
23	CDM3	0	0	0

Standards *7

No.	Name	RF	VIDEO1	VIDEO2	VIDEO3	VIDEO4/Other
25	BGPS	10	9	9	9	9

Standards *8

No.	Name	Single	Black0	Black1	Black2	Black3	Black4	Black5	Black6	Black7
26	APED	0	0	0	0	0	0	0	0	0
27	DCTR	0	0	0	0	0	0	0	0	0

Standards *9

No.	Name	SD	Other
28	YTRP	1	0
29	CTRP	1	0

Standards *10

No.	Name	RF	CV/YC	Other							
				480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
16	AFCG	1	0	1	1	1	1	1	1	1	1
30	STUP	0	0	0	0	0	0	0	0	0	0
31	VINT	7	7	7	7	7	7	7	7	3	3
32	CLAD	0	0	0	0	0	0	0	0	0	0
33	SSAD	0	0	0	0	0	0	1	1	1	1
34	CLPG	2	2	2	2	2	2	2	2	2	2
35	HSSL	3	3	3	3	3	3	3	3	3	3
36	VSSL	2	2	2	2	2	2	3	3	3	3
37	STTC	2	2	2	2	2	2	2	2	2	2
38	VAFC	1	1	1	1	1	1	1	1	1	1
68	MVSW	2	2	2	2	2	2	2	2	2	2

Standards *11

No.	Name	RF	CV	YC/Other
39	SLPF	0	0	0

Standards *12

No.	Name	60Hz			50Hz		
		RF	BS/CV/YC	Other	RF	CV/YC	Other
41	NCOM	0	0	0	0	0	0

Standards *13

No.	Name	SD	Other
42	SDLP	1	0
43	ROM2	0	0

Standards *14

No.	Name	Dynamic				Standard			
		60Hz		50Hz		60Hz		50Hz	
		RF	Other	RF	Other	RF	Other	RF	Other
44	VECR	0	0	0	0	0	0	0	0
45	VECL	0	0	0	0	0	0	0	0
46	VECN	2	2	2	2	2	2	2	2
47	VEGA	0	0	0	0	0	0	0	0

No.	Name	Hi-Fine				Personal			
		60Hz		50Hz		60Hz		50Hz	
		RF	Other	RF	Other	RF	Other	RF	Other
44	VECR	0	0	0	0	0	0	0	0
45	VECL	0	0	0	0	0	0	0	0
46	VECN	2	2	2	2	2	2	2	2
47	VEGA	0	0	0	0	0	0	0	0

Standards *15

No.	Name	RF	Other	
48	BPT1	40	40	Only At Auto Color System Mode
49	BPT2	30	30	Only At Auto Color System Mode

Standards *16

No.	Name	RF	CV	YC/Other
50	KLEV	2	2	2
51	APCG	0	0	0

COMB

Functionality		Range	Standards
No.	Name		
0	NSS	0-31	*1
1	TESS	0-7	0
2	NSC	0-31	*1
3	NSV	0-1	*1
4	SCTP	0-3	*1
5	CYBP	0-3	*1
6	Y2BP	0-3	*1
7	C2LE	0-3	*1
8	DTCN	0-3	*1
9	VEDL	0-7	*1
10	HP	0-7	*1
11	PNR	0-1	*1
12	NCDT	0-1	*1
13	MC1	0-15	*1
14	MC2	0-15	*1
15	CR1	0-3	*1
16	CR2	0-15	*1
17	CR3	0-3	*1
18	CR4	0-3	*1
19	CCR	0-3	*1
20	CHED	0-3	*1
21	CVED	0-3	*1
22	CR5	0-7	*1
23	YFLT	0-7	*1
24	C3LE	0-3	*1
25	YMFH	0-15	*1
26	YMFV	0-7	*1
27	F2SW	0-1	*1
28	MO1	0-15	*1
29	MO2	0-7	*1
30	MNNR	0-1	*1
31	DTH	0-7	*1
32	DTV	0-7	*1
33	DT2D	0-3	*1
34	DTHP	0-7	*1
35	DTCR	0-7	*1
36	D2FC	0-3	*1
37	D2F	0-15	*1
38	D2F2	0-3	*1
39	D2FL	0-3	*1
40	DC	0-3	*1
41	CVFL	0-7	*1
42	H2DD	0-3	*1
43	HC2F	0-1	*1
44	THRU	0-1	0
45	MCH	0-31	*1
46	MCV	0-3	*1
47	PEDS	0-1	*1
48	MMK	0-7	*1
49	MKAM	0-1	*1
50	GHLT	0-1	*1
51	TESL	0-7	0
52	MNSW	0-1	*1
53	MDYB	0-3	*1
54	LCBP	0-7	*1
55	BPSE	0-1	*1
56	CR2H	0-1	*1
57	IMPR	0-3	*1
58	IMPS	0-1	*1
59	IMPL	0-1	*1
60	PLPL	0-3	*1
61	MDYE	0-3	*1
62	PLCL	0-1	*1
63	BPL2	0-7	*1
64	HPL	0-7	*1
65	CVFP	0-1	*1
66	STDH	0-3	*1
67	SHH	0-3	*1
68	BPOF	0-1	*1
69	C1L	0-1	*1
70	BPL3	0-7	*1
71	D2F3	0-7	*1
72	LPSW	0-1	*1
73	LCR	0-1	*1
74	F2CR	0-1	*1
75	YIR	0-1	*1
76	MOMO	0-1	*1
77	CYV	0-1	*1
78	PAL3	0-1	*1

Standards *1

No.	Name	NTSC		PAL	
		Standard	NonStandard	Standard	NonStandard
0	NSS	8	8	8	8
2	NSC	15	15	15	15
3	NSV	1	1	1	1
4	SCTP	0	2	0	0
5	CYBP	0	1	1	1
6	Y2BP	0	1	0	1
7	C2LE	1	0	1	0
8	DTCN	1	0	1	0
9	VEDL	3	3	3	3
10	HP	2	2	2	2
11	PNR	0	0	0	0
12	NCDT	0	0	0	0
13	MC1	4	4	15	15
14	MC2	3	3	15	15
15	CR1	1	1	1	1
16	CR2	1	1	1	1
17	CR3	0	0	0	0
18	CR4	1	1	1	1
19	CCR	2	2	2	2
20	CHED	2	2	2	2
21	CVED	3	3	2	2
22	CR5	4	3	0	0
23	YFLT	4	4	4	4
24	C3LE	1	1	1	1
25	YMFH	3	3	3	3
26	YMFV	1	1	1	1
27	F2SW	0	0	0	0
28	MO1	15	15	6	6
29	MO2	3	3	3	3
30	MNNR	1	1	1	1
31	DTH	2	2	2	2
32	DTV	2	2	2	2
33	DT2D	2	2	2	2
34	DTHP	3	3	2	2
35	DTCR	4	4	4	4
36	D2FC	3	3	3	3
37	D2F	9	9	8	8
38	D2F2	1	1	1	1
39	D2FL	0	0	0	0
40	DC	0	0	0	0
41	CVFL	3	0	3	0
42	H2DD	0	0	1	1
43	HC2F	1	1	1	1
45	MCH	15	15	22	22
46	MCV	1	1	0	0
47	PEDS	0	0	0	0
48	MMK	7	7	7	7
49	MKAM	0	0	0	0
50	GHLT	0	0	0	0
52	MNSW	0	0	0	0
53	MDYB	0	0	0	0
54	LCBP	2	2	2	2
55	BPSE	1	1	1	1
56	CR2H	0	0	0	0
57	IMPR	3	3	3	3
58	IMPS	1	1	1	1
59	IMPL	0	0	0	0
60	PLPL	1	1	1	1
61	MDYE	3	3	3	3
62	PLCL	1	1	1	1
63	BPL2	1	1	1	1
64	HPL	1	1	1	1
65	CVFP	0	0	0	0
66	STDH	2	2	1	1
67	SHH	1	1	1	1
68	BPOF	1	1	0	0
69	C1L	1	1	1	1
70	BPL3	7	7	7	7
71	D2F3	2	2	2	2
72	LPSW	1	1	1	1
73	LCR	1	1	1	1
74	F2CR	1	1	1	1
75	YIR	1	1	1	1
76	MOMO	0	0	0	0
77	CYV	0	0	0	0
78	PAL3	1	1	1	1

YCTM(CXA2163)

Functionality		Range	Standards
No.	Name		
0	YLEV	0-63	21
1	CLEV	0-63	13
2	SCON	0-15	*1
3	SCOL	0-15	*1
4	YDLY	0-15	*1
5	SHAP	0-15	*1
6	SHF0	0-3	2
7	PREO	0-3	3
8	BPF0	0-3	1
9	BPFQ	0-3	2
10	FLSW	0-1	1
11	CBOF	0-15	9
12	CROF	0-15	9
13	SR-Y	0-15	7
14	SB-Y	0-15	7

Standards *1

No.	Name	RF	Other
2	SCON	7	7
3	SCOL	7	7
4	YDLY	5	5
5	SHAP	6	6

YCTS(CXA2163)

Functionality		Range	Standards
No.	Name		
0	YLEV	0-63	43
1	CLEV	0-63	29
2	SCON	0-15	*1
3	SCOL	0-15	*1
4	SHUE	0-63	*1
5	YDLY	0-15	*2
6	SHAP	0-15	*1
7	SHF0	0-3	2
8	PREO	0-3	3
9	BPF0	0-3	1
10	BPFQ	0-3	2
11	FLSW	0-1	1
12	CBOF	0-15	9
13	CROF	0-15	7
14	SR-Y	0-15	7
15	SB-Y	0-15	7
16	PNGW	0-1	1
17	PNIS	0-1	0
18	NCOM	0-1	1
19	ATPD	0-3	*3
20	DCTR	0-3	*3

Standards *1

No.	Name	60Hz		50Hz	
		RF	Other	RF	Other
2	SCON	8	7	8	7
3	SCOL	5	7	6	6
4	SHUE	36	32	31	31
6	SHAP	7	7	7	7

Standards *2

No.	Name	RF			CV		YC	
		NTSC	PAL_DKI	AL_OTHE	NTSC	PAL	NTSC	PAL
5	YDLY	3	6	3	3	3	5	5

Standards *3

No.	Name	Single	Black0	Black1	Black2	Black3	Black4	Black5	Black6	Black7
19	ATPD	0	0	0	0	0	0	0	0	0
20	DCTR	0	0	0	0	0	0	0	0	0

YCTC(CXA2163)

Functionality		Range	Standards
No.	Name		
0	SDTS	0-1	1
1	BELS	0-3	2
2	BLF0	0-1	0
3	SVID	0-1	0
4	SGPP	0-3	0
5	SIDS	0-1	1
6	CDMD	0-3	0
7	AFCG	0-3	0
8	MVM	0-1	0

MCP

Functionality		Range	Standards
No.	Name		
0	TCOF	0-1	0
1	PON	0-1	1
2	RON	0-1	1
3	GON	0-1	1
4	BON	0-1	1
5	AKBO	0-1	0
6	RGBL	0-3	2
7	YLMT	0-3	0
8	BLKB	0-3	1
9	YOF	0-15	*1
10	CBOF	0-63	*1
11	CROF	0-63	*1
12	SPIC	0-15	*1
13	SCOL	0-63	*1
14	SHUE	0-63	*1
15	ABLT	0-15	*2

Standards *1

No.	Name	DRC		A nalog			RGB				MS	Twin
		RF/CV/YC	Comp-480i	480p/576p	720p	1080i	DRC	480p	720p	1080i		
9	YOF	7	7	7	7	7	7	7	7	7	7	7
10	CBOF	26	26	26	27	26	26	35	25	24	24	27
11	CROF	26	26	26	27	26	26	29	31	31	31	28
12	SPIC	8	5	5	10	10	9	9	12	12	8	8
13	SCOL	31	31	31	31	31	31	31	31	31	33	31
14	SHUE	31	31	31	31	31	31	31	31	31	31	31

Standards *2

No.	Name	Other	Small Pic (Normal)
15	ABLT	0	6

DEF1

Functionality		Range	Standards
No.	Name		
0	VPOS	0-63	24
1	VSIZ	0-63	31
2	VLIN	0-15	8
3	VSCO	0-15	*1
4	VCEN	0-63	31
5	VPIN	0-31	*2
6	NSCO	0-63	31
7	HTPZ	0-31	15
8	ZOOM	0-1	*3
9	APSW	0-1	*4
10	ASPT	0-63	*5
11	SCRL	0-63	*5
12	UVLN	0-15	*6
13	LVLN	0-15	*6
14	VPSO	0-15	*7

Standards *1

No.	WideZoom	Other
3 VSCO	11	8

Standards *2

No.	Vcomp	Other
5 VPIN	15	15

Standards *3

No.	Zoom WideZoom	Other
8 ZOOM	1	0

Standards *4

No.	HD		SD
	50Hz	60Hz	
9 APSW	1	0	1

Standards *5

No.	Full						VComp/Normal					
	50Hz		60Hz		100Hz	120Hz	50Hz		60Hz		100Hz	120Hz
	SD	HD	SD	HD	SD	SD	SD	HD	SD	HD	SD	SD
10 ASPT	3	18	3	3	0	0	3	3	3	3	0	0
11 SCRL	31	31	31	31	36	35	31	31	31	31	36	35

No.	WideZoom				Zoom			
	50Hz	60Hz	100Hz	120Hz	50Hz	60Hz	100Hz	120Hz
	SD	SD	SD	SD	SD	SD	SD	SD
10 ASPT	22	22	20	20	43	43	41	41
11 SCRL	31	31	36	35	31	31	37	36

Standards *6

No.	WideZoom	Other
12 UVLN	4	0
13 LVLN	4	0

Standards *7

No.	50Hz	60Hz	100Hz	120Hz
14 VPSO	7	6	10	13

DEF2

Functionality		Range	Standards
No.	Name		
0	HCNT	0-63	31
1	HPOS	0-63	*1
2	HSIZ	0-63	*2
3	SLIN	0-15	*2
4	MPIN	0-15	*2
5	PIN	0-63	*2
6	UCP	0-63	*2
7	LCP	0-63	*2
8	PPHA	0-63	*3
9	VANG	0-63	31
10	LANG	0-63	31
11	VBOW	0-63	31
12	LBOW	0-63	31
13	UXCG	0-3	2
14	LXCG	0-3	0
15	UXCP	0-3	2
16	LXCP	0-3	0
17	XCPP	0-1	0
18	PPHO	0-15	*4
19	PINO	-4/+3	*5
20	UCPO	-4/+3	*5
21	LCPO	-4/+3	*5
22	VAOC	0-7	0
23	HIHS	0-31	*6
24	HISL	0-7	*6
25	HIMP	0-15	*6
26	HIPN	0-15	*6

Standards *1

No.	HD	SD
1 HPOS	22	24

Standards *2

No.	WideZoom	Other
2 HSIZ	49	31
3 SLIN	11	6
4 MPIN	15	7
5 PIN	40	31
6 UCP	31	35
7 LCP	31	35

Standards *3

No.	Zoom WideZoom	Other
8 PPHA	20	20

Standards *4

No.	50Hz	60Hz	100Hz	120Hz
18 PPHO	3	0	3	6

Standards *5

No.	60Hz		100Hz		120Hz	
	WideZoom	Other	WideZoom	Other	WideZoom	Other
19 PINO	0	0	1	1	1	1
20 UCPO	0	0	0	0	-1	-1
21 LCPO	0	0	0	0	0	0

Standards *6

No.	WideZoom/ VComp	Other
23 HIHS	0	5
24 HISL	5	2
25 HIMP	15	8
26 HIPN	0	3

DEF3

Functionality		Range	Standards
No.	Name		
0	HBLK	0-1	1
1	LBLK	0-63	*1
2	RBLK	0-63	*1
3	VBLK	0-1	*2
4	TBLK	0-15	*3
5	BBLK	0-15	*3
6	AFCM	0-3	3
7	JUMP	0-1	*4
8	VDJP	0-1	*5
9	AKBT	0-31	*3

Standards *1

No.	HD	SD
1 LBLK	54	54
2 RBLK	30	28

Standards *2

No.	Zoom WideZoom	Other
3 VBLK	0	1

Standards *3

No.	Full						4:3VComp/Normal					
	50Hz		60Hz		100Hz	120Hz	50Hz		60Hz		100Hz	120Hz
	SD	HD	SD	HD	SD	SD	SD	HD	SD	HD	SD	SD
4 TBLK	7	4	1	4	15	12	7	7	1	2	15	12
5 BBLK	14	6	8	8	9	4	14	14	8	9	9	4
9 AKBT	20	16	18	16	20	18	20	16	18	16	20	18

No.	WideZoom				Zoom			
	50Hz	60Hz	100Hz	120Hz	50Hz	60Hz	100Hz	120Hz
	SD	SD	SD	SD	SD	SD	SD	SD
4 TBLK	12	12	15	12	7	7	7	7
5 BBLK	15	15	9	15	7	7	7	7
9 AKBT	15	15	22	15	15	15	15	15

Standards *4

No.	Vcomp/Norm	Other
7 JUMP	0	0

Standards *5

No.	Zoom	HD	Other
	WideZoom		
8 VDJP	1	1	0

DEF4

Functionality		Range	Standards
No.	Name		
0	QPDC	0-63	*1
1	QPDV	0-63	*1
2	QPDP	0-15	*1
3	QPAM	0-63	*1
4	QPAV	0-63	*1
5	QPAP	0-15	*1
6	COPY	0-3	0

Standards *1

No.	Vcomp/Norm	Other
0 QPDC	31	31
1 QPDV	59	59
2 QPDP	6	6
3 QPAM	31	31
4 QPAV	51	51
5 QPAP	6	6

DEF5

Functionality		Range	Standards
No.	Name		
0	VON	0-1	1
1	EWDC	0-1	0
2	AGCS	0-1	0
3	ACMP	0-7	0

MID1

Functionality		Range	Standards
No.	Name		
0	DYCD	0-15	*1
1	DYSD	0-7	*2
2	MDVP	0-15	*3

Standards *1

No.	Single	Other
0 DYCD	2	2

Standards *2

No.	Single(Norm)	Twin/Freeze	MS	Index
1 DYSD	1	0	1	0

Standards *3

No.	Vcomp				Other			
	50Hz	60Hz	100Hz	120Hz	50Hz	60Hz	100Hz	120Hz
2 MDVP	12	0	15	15	0	0	15	15

MID2

Functionality		Range	Standards
No.	Name		
0	BCOL	0-15	*1
1	MSYS	0-1	1

Standards *1

No.	Single(Normal)	TWIN	Freeze	Index	Favorite/PAP	MS
0 BCOL	0	4	1	4	4	6

MID3

Functionality		Range	Standards
No.	Name		
0	MHPH	-8/+7	*1
1	SHPH	-8/+7	*2

Standards *1

No.	RF		CV		YC		Comp								
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other
0 MHPH	5	-1	5	-1	5	-1	3	3	2	2	2	0	0	1	0

No.	RGB									MS
	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other	
0 MHPH	7	7	-8	-8	0	0	0	0	0	0

Standards *2

No.	RF		CV		YC	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
1 SHPH	4	6	4	6	4	6

VSW

Functionality		Range	Standards
No.	Name		
0	VTC	0-3	1
1	HSEP	0-1	1

CRNR

Functionality		Range	Standards
No.	Name		
0	YNR	0-15	*1
1	CNR	0-15	*1

Standards *1

No.	Name	RF	CV	YC	Comp	MS
0	YNR	0	0	0	0	0
1	CNR	0	0	0	0	0

RNR

Functionality		Range	Standards
No.	Name		
0	NYLP	0-1	*1
1	NYG	0-3	*1
2	NYPH	0-31	*1
3	NYLM	0-15	*1
4	NCLP	0-1	*1
5	NCG	0-3	*1
6	NCPH	0-31	*1
7	NCLM	0-15	*1

Standards *1

No.	Name	RNR=OFF											
		RF		CV/YC		Component							
		50Hz	60Hz	50Hz	60Hz	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	NYLP	0	0	0	0	0	0	0	0	0	0	0	0
1	NYG	0	0	0	0	0	0	0	0	0	0	0	0
2	NYPH	0	0	0	0	0	0	0	0	0	0	0	0
3	NYLM	0	0	0	0	0	0	0	0	0	0	0	0
4	NCLP	0	0	0	0	0	0	0	0	0	0	0	0
5	NCG	0	0	0	0	0	0	0	0	0	0	0	0
6	NCPH	0	0	0	0	0	0	0	0	0	0	0	0
7	NCLM	0	0	0	0	0	0	0	0	0	0	0	0

No.	Name	RNR=HIGH											
		RF		CV/YC		Component							
		50Hz	60Hz	50Hz	60Hz	480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I
0	NYLP	0	0	0	0	0	0	0	0	0	0	0	0
1	NYG	1	3	1	3	3	1	3	1	1	1	1	1
2	NYPH	13	5	13	5	5	13	5	13	13	13	13	13
3	NYLM	10	2	10	2	2	10	2	10	10	10	10	10
4	NCLP	0	1	0	1	1	0	1	0	0	0	0	0
5	NCG	1	1	1	1	1	1	1	1	1	1	1	1
6	NCPH	13	3	13	3	3	13	3	13	13	13	13	13
7	NCLM	10	2	10	2	2	10	2	10	10	10	10	10

No.	Name	RNR=OFF									
		RGB									MS
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other	
0	NYLP	0	0	0	0	0	0	0	0	0	0
1	NYG	0	0	0	0	0	0	0	0	0	0
2	NYPH	0	0	0	0	0	0	0	0	0	0
3	NYLM	0	0	0	0	0	0	0	0	0	0
4	NCLP	0	0	0	0	0	0	0	0	0	0
5	NCG	0	0	0	0	0	0	0	0	0	0
6	NCPH	0	0	0	0	0	0	0	0	0	0
7	NCLM	0	0	0	0	0	0	0	0	0	0

No.	Name	RNR=HIGH									
		RGB									MS
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other	
0	NYLP	0	0	0	0	0	0	0	0	0	0
1	NYG	3	1	3	1	1	1	1	1	0	0
2	NYPH	5	13	5	13	13	13	13	13	0	0
3	NYLM	2	10	2	10	10	10	10	10	0	0
4	NCLP	1	0	1	0	0	0	0	0	0	0
5	NCG	1	1	1	1	1	1	1	1	0	0
6	NCPH	3	13	3	13	13	13	13	13	0	0
7	NCLM	2	10	2	10	10	10	10	10	0	0

BNR

Functionality		Range	Standards
No.	Name		
0	EDL	0-7	*1
1	LFL	0-7	*1
2	DCT	0-7	*1
3	BLEV	0-7	*1
4	DNE	0-1	*1

Standards *1

No.	Name	BNR:OFF									
		RF/CV/YC/Comp/RGB									MS
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other	
0	EDL	0	0	0	0	0	0	0	0	0	0
1	LFL	0	0	0	0	0	0	0	0	0	0
2	DCT	0	0	0	0	0	0	0	0	0	0
3	BLEV	0	0	0	0	0	0	0	0	0	0
4	DNE	0	0	0	0	0	0	0	0	0	0

NoiseReducer BnrFormatInputPack 2Byte

No.	Name	BNR:HIGH									
		RF/CV/YC/Comp/RGB									MS
		480_60I	576_50I	480_60P	576_50P	720_60P	720_50P	1080_60I	1080_50I	Other	
0	EDL	2	2	2	2	2	2	2	2	2	2
1	LFL	2	2	2	2	2	2	2	2	2	2
2	DCT	2	2	2	2	2	2	2	2	2	2
3	BLEV	7	7	7	7	7	7	7	7	7	7
4	DNE	1	1	1	1	1	1	1	1	1	1

SNNR

Functionality		Range	Standards
No.	Name		
0	MODE	0-3	0
1	SNNR	0-7	0
2	HYST	0-15	7
3	WSLT	0-255	*1
4	SSSN	0-15	*2
5	F2SN	0-3	*2
6	SCSN	0-3	*2
7	VGSN	0-7	*2
8	YNSN	0-15	*2
9	CNSN	0-15	*2
10	PYSN	0-31	*2
11	LYSN	0-15	*2
12	PCSN	0-31	*2
13	LCSN	0-15	*2
14	7SHP	0-63	*2
15	7YF1	0-3	*2
16	7LTI	0-3	*2
17	7CTI	0-3	*2
18	7VML	0-15	*2
19	7VMC	0-3	*2
20	MIDD	0-63	*2
21	CCLV	0-15	*2
22	CCBP	0-1	*2
23	PCR4	0-1	*2
24	PYMH	0-7	*2
25	PYMV	0-7	*2
26	PMO1	0-7	*2
27	PMO2	0-7	*2
28	PDF2	0-7	*2
29	PF2D	0-1	*2
30	SACG	0-3	*2
31	SALG	0-3	*2

Standards *1

No.	Name	A	B	C	D	E	F	G
3	WSLT	5	20	45	63	85	110	127

Standards *2

No.	Name	0	1	2	3	4	5	6	7
4	SSSN	0	1	2	2	2	2	2	3
5	F2SN	0	0	0	0	0	0	0	0
6	SCSN	0	0	1	1	1	1	1	1
7	VGSN	0	1	1	1	1	1	1	1
8	YNSN	0	2	3	4	5	6	7	8
9	CNSN	0	2	3	4	5	6	7	8
10	PYSN	0	0	0	0	0	0	0	0
11	LYSN	0	0	0	0	0	0	0	0
12	PCSN	0	0	0	0	0	0	0	0
13	LCSN	0	0	0	0	0	0	0	0
14	7SHP	0	0	1	1	3	3	3	4
15	7YF1	0	0	1	1	2	2	2	3
16	7LTI	0	0	1	1	2	2	3	3
17	7CTI	0	0	1	1	2	2	3	3
18	7VML	0	3	5	7	9	11	13	15
19	7VMC	0	0	1	1	2	2	2	3
20	MIDD	0	0	1	1	2	2	2	3
21	CCLV	0	3	5	7	9	11	13	15
22	CCBP	0	0	0	0	0	0	0	0
23	PCR4	0	0	0	0	0	0	0	0
24	PYMH	0	0	0	0	0	0	0	0
25	PYMV	0	0	0	0	0	0	0	0
26	PMO1	0	0	0	0	0	0	0	0
27	PMO2	0	0	0	0	0	0	0	0
28	PDF2	0	0	0	0	0	0	0	0
29	PF2D	0	0	0	0	0	0	0	0
30	SACG	0	0	0	0	1	2	2	2
31	SALG	0	0	0	0	1	1	1	1

AWID

Functionality		Range	Standards
No.	Name		
0	AWOF	0-1	1
1	FRWD	0-3	2
2	FRTI	0-3	2
3	LPFL	0-1	0
4	UPAR	0-1	0
5	UPTH	0-1	0
6	X149	0-1	0
7	DMST	0-1	0
8	UPRL	0-1	0
9	OFSL	0-1	0
10	SLOF	0-1	0
11	FR43	0-3	2
12	REFP	0-15	5
13	REFM	0-15	1

DDEV

Functionality		Range	Standards	Remarks
No.	Name			
0	ASPT	0-1	0	
1	OVSR	0-31	18	
2	DTYP	0-7	0	
3	DFID	0-15	0	
4	ALTD	0-7	0	Highland Value
5	HICM	0-1	0	Highland SW
6	ALMX	0-7	4	

SFC

Functionality		Range	Standards
No.	Name		
0	COPC	0-1	0
1	COPL	0-1	0
2	TESW	0-1	1
3	ENSW	0-1	1
4	NSSW	0-1	1
5	EWSW	0-1	1
6	LTEU	-128/+127	-47
7	LTEC	-128/+127	-46
8	LTED	-128/+127	-57
9	RTEU	-128/+127	46
10	RTEC	-128/+127	36
11	RTED	-128/+127	50
12	NSTE	-128/+127	-32
13	LENU	-128/+127	-45
14	LENC	-128/+127	-63
15	LEND	-128/+127	-65
16	RENU	-128/+127	63
17	RENC	-128/+127	64
18	REND	-128/+127	44
19	NSEN	-128/+127	-36
20	LNSU	-128/+127	-23
21	LNSC	-128/+127	0
22	LNSD	-128/+127	23
23	RNSU	-128/+127	-23
24	RNSC	-128/+127	0
25	RNSD	-128/+127	23
26	NSNS	-128/+127	84
27	LEWU	-128/+127	-21
28	LEWC	-128/+127	0
29	LEWD	-128/+127	21
30	REWU	-128/+127	21
31	REWC	-128/+127	0
32	REWD	-128/+127	-21
33	APEN	0-255	64
34	TECT	0-255	64
35	ENCT	0-255	66
36	NSCT	0-255	64
37	EWCT	0-255	64
38	HPOS	0-10	5
39	VPOS	0-255	15
40	VOSI	0-255	*1
41	RVOS	0-255	*1
42	VSEI	0-255	*1
43	RVSE	0-255	*1
44	VINT	0-255	*1
45	RVIN	0-255	*1
46	ODP	0-255	8
47	ODVM	0-255	109
48	ODHH	0-255	166
49	HPHL	0-255	246
50	HOS	0-255	40
51	HSEI	0-255	93
52	HINT	0-255	93
53	HLIN	0-255	56
54	LDCV	0-255	13
55	VCOM	0-255	20
56	TESL	0-255	63
57	PWMA	0-255	255
58	HCMX	0-255	32
59	VCMX	0-255	32
60	LCMX	0-255	64
61	LAMX	0-255	64
62	NSMX	0-255	64
63	UPMX	0-15	3
64	HSLV	0-31	27

Standards *1

No.	FULL						NORMAL/VCOMP					
	480P/960I 60Hz	1080I/540P 60Hz	480I 120Hz	576I 100Hz	576P/1152I 50Hz	1080I/540P 50Hz	480P/960I 60Hz	1080I/540P 60Hz	480I 120Hz	576Iz 100Hz	576P/1152I 50Hz	1080I/540P 50Hz
40 VOSI	18	0	8	16	24	49	18	0	8	16	24	49
41 RVOS	0	0	0	0	0	0	0	0	0	0	0	0
42 VSEI	51	45	30	31	61	56	51	45	30	31	61	56
43 RVSE	0	0	0	0	0	0	0	0	0	0	0	0
44 VINT	51	57	26	31	61	56	51	57	26	31	61	56
45 RVIN	0	0	0	0	0	0	0	0	0	0	0	0

No.	WIDEZOOM				ZOOM			
	480P/960I 60Hz	480I 120Hz	576I 100Hz	576P/1152I 50Hz	480P/960I 60Hz	480I 120Hz	576I 100Hz	576P/1152I 50Hz
40 VOSI	30	11	16	37	67	30	42	84
41 RVOS	96	43	52	96	64	26	32	96
42 VSEI	54	34	39	63	45	32	34	53
43 RVSE	0	0	0	0	0	0	0	0
44 VINT	47	24	29	57	40	20	24	48
45 RVIN	32	22	22	32	22	13	16	32

AP

Functionality		Range	Standards
No.	Name		
0	SUBV	0-15	*1
1	BASS	0-15	*2
2	TREB	0-15	*2
3	BBE	0-1	*2
4	BBEL	0-31	*2
5	BBEH	0-31	*2
6	AGC	0-1	*3
7	AGCL	0-3	*3
8	SUR	0-15	*4

Standards *1

No.	TruSurround	Simulated	OFF
0 SUBV	2	3	3

Standards *2

No.	Personal (BBE:off)						Personal (BBE:Low)						Personal (BBE:High)					
	Tu			Others			Tu			Others			BS			Others		
	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF
1 BASS	7	6	6	7	6	6	7	7	7	7	7	7	7	7	7	7	7	7
2 TREB	7	6	6	7	6	6	7	7	7	7	7	7	7	7	7	7	7	7
3 BBE	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
4 BBEL	0	0	0	0	0	0	8	6	6	8	6	6	14	12	12	14	12	12
5 BBEH	0	0	0	0	0	0	8	6	6	8	6	6	14	12	12	14	12	12

No.	Dynamic						Drama						Soft					
	Tu			Others			Tu			Others			Tu			Others		
	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF	TruSurround	Simulated	OFF
1 BASS	11	10	10	11	10	10	10	9	9	10	9	9	10	8	8	10	8	8
2 TREB	8	7	7	8	7	7	9	8	8	9	8	8	9	7	7	9	7	7
3 BBE	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4 BBEL	5	13	13	16	15	15	10	8	8	12	10	10	0	0	0	0	0	0
5 BBEH	16	14	14	17	16	16	13	11	11	14	12	12	0	0	0	0	0	0

Standards *3

No.	Intellient Volume	
	Auto	OFF
6 AGC	1	0
7 AGCL	0	0

Standards *4

No.	Effect		
	TruSurround	Simulated	OFF
8 SUR	12	15	0

MSMO

Functionality		Range	Standards
No.	Name		
0	MSPF	0-1	0
1	MIXU	0-1	0
2	STD1	0-1	0
3	LVDS	0-3	2
4	BGLV	0-255	0
5	DPAC	0-1	0

OSDP

Functionality		Range	Standards
No.	Name		
0	LEVL	0-15	0
1	FFLV	0-15	0

ASEL

Functionality		Range	Standards
No.	Name		
0	TU1	0-15	10
1	TU2	0-15	9
2	TU3	0-15	0
3	VID1	0-15	7
4	VID2	0-15	5
5	VID3	0-15	4
6	VID4	0-15	3
7	YUV1	0-15	2
8	YUV2	0-15	1
9	YUV3	0-15	0
10	MS	0-15	8
11	ATSC	0-15	0
12	CSPK	0-15	6

VSEL

Functionality		Range	Standards
No.	Name		
0	TU1	0-15	1
1	TU2	0-15	2
2	TU3	0-15	0
3	VID1	0-15	5
4	VID2	0-15	6
5	VID3	0-15	7
6	VID4	0-15	4
7	YUV1	0-31	16
8	YUV2	0-31	18
9	YUV3	0-31	0
10	ATSC	0-31	0
11	SECM	0-31	17

DRCV

Functionality		Range	Standards
No.	Name		
0	MFVR	0-1	0
1	ISEL	0-1	1
2	ORES	0-255	*1
3	ONCT	0-255	*1
4	FMAT	0-1	0
5	FMTH	0-3	*2
6	FSEL	0-1	1
7	CDLY	0-3	2
8	LMIT	0-1	0
9	LMLV	0-3	*3
10	LMSL	0-1	1
11	VDLY	0-3	1
12	VDPR	0-3	3
13	WPLL	0-3	2
14	CRCT	0-1	0

Standards *1

No.	Name	Dynamic				Standard			
		RF	BS/CV/YC	Component	RGB	RF	BS/CV/YC	Component	RGB
2	ORES	128	128	128	128	128	128	128	128
3	ONCT	128	128	128	128	128	128	128	128

No.	Name	Hi-Fine				Personal			
		RF	BS/CV/YC	Component	RGB	RF	BS/CV/YC	Component	RGB
2	ORES	128	128	128	128	128	128	128	128
3	ONCT	128	128	128	128	128	128	128	128

Standards *2

No.	Name	Other	RF
5	FMTH	1	1

Standards *3

No.	Name	Dynamic	Standard	Hi-Fine	Personal
9	LMLV	2	2	2	2

PFID

Functionality		Range	Standards
No.	Name		
0	COLS	0-7	2
1	DEFS	0-7	2
2	DRC	0-1	1
3	AMAX	0-1	1
4	FRME	0-1	0
5	SMAX	0-1	1
6	FVLO	0-1	1
7	2057	0-1	0
8	NSMT	0-1	0
9	YDET	0-1	0

PFOP

Functionality		Range	Standards
No.	Name		
0	CMD	0-15	

GUID

Functionality		Range	Standards	Function	Remarks
No.	Name				
01	CUID		0	Guide Select country ID (0:English,1:Tiwan,2:Korea,3:English)	

POWR

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	DLY1		4	Power On Delay1	
01	DLY2		0	Power On Delay2	
02	DLY3		4	Power On Delay3	
03	ZDET		31	Zero Detect Delay	
04	ZTMO		30	Zero Detect Timeout (*10ms min 300ms)	

OPM

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	APC		1	APC Switch	
01	TSY		0	TV System Selection under searching with Auto TV System	
02	AFM		1	Auto FM switch	
03	DBL		0	Disable Blueback function	
04	SSO		1	Speed CH Search Selection	
05	SCH		1	CH Selection for Shipping Condition	NTSC Only
06	SCA		1	Cable/Air Selection for Shipping Condition	NTSC Only
07	DMG		0	Disable Menu-operation Guide	
08	VSN		0	Enable Noise Reduction in Video Mode	
09	LBB		0	Lower Blue Back Intensity	
10	23P		1	2/3 Pull Down Mode 0: Force OFF, 1: Auto	
11	DF		35	DF_PHA	
12	DQP		30	DQP_PHA	
13	VLIM		*1	Wide V-Center Limit	50/60/ZM/WZ
14	TUT1		5	Tune Wait Time Mode1 (Max) 30[ms] + 10[ms] * service_data	
15	TUT2		5	Tune Wait Time Mode2 (Max) 30[ms] + 10[ms] * service_data	
16	TUT3		5	Tune Wait Time Mode3 (Max) 30[ms] + 10[ms] * service_data	
17	TUTW		5	Tune Wait Time 6 point sense	
18	3NR		1	3D-NR INIT (User Reset or Test Reset)	
19	SIG		*2	No-Signal Detect number of lock detect count.	TV/Video(HD/DVD)
20	NSIG		*2	No-Signal Detect number of unlock detect counter.	TV/Video(HD/DVD)

***1**

Functionality		V-Center Limit			
No.	Name	WIDEZOOM 50Hz	WIDEZOOM 60Hz	ZOOM 50Hz	ZOOM 60Hz
13	VLIM	15	15	15	15

***2**

Functionality		Signa-Detect	
No.	Name	RF	Video
19	SIG	0	5
20	NSIG	0	20

OPB

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	OP0		60	Optional Bits 0	
01	OP1		107	Optional Bits 1	
02	OP2		3	Optional Bits 2	
03	OP3		104	Optional Bits 3	
04	OP4		52	Optional Bits 4	

SRV

Functionality		Range	Standards	Function	Remarks
No.	Name				
00	COM			Service Command	

SECTION 4
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

4-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast
   Brightness } normal
2. Position neck assy as shown in Fig4-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 4-2 through 4-4.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 4-3.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.

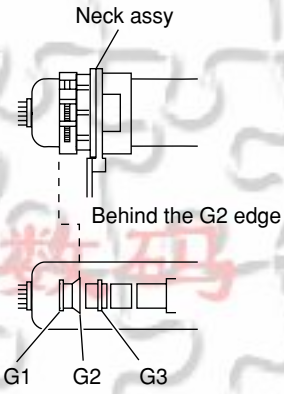


Fig. 4-1

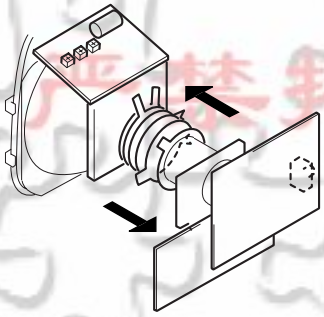


Fig. 4-2

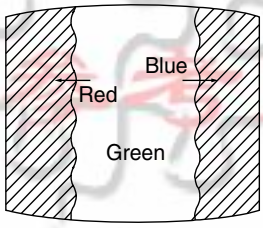


Fig. 4-3

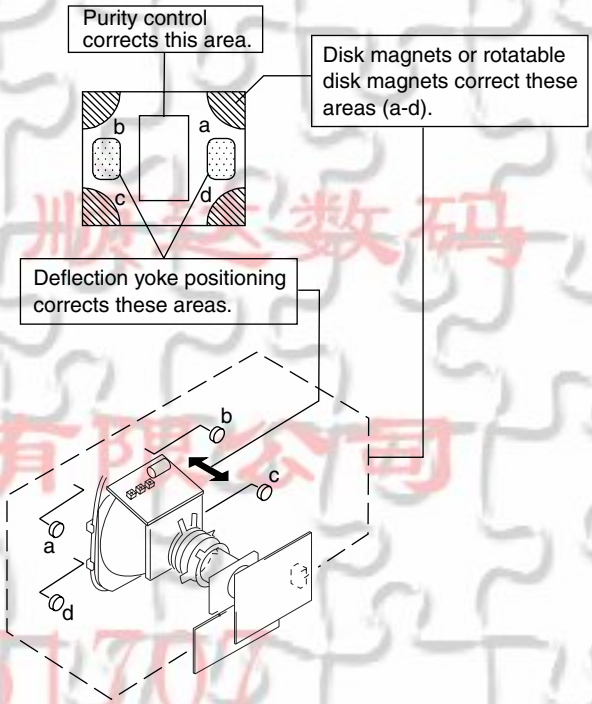


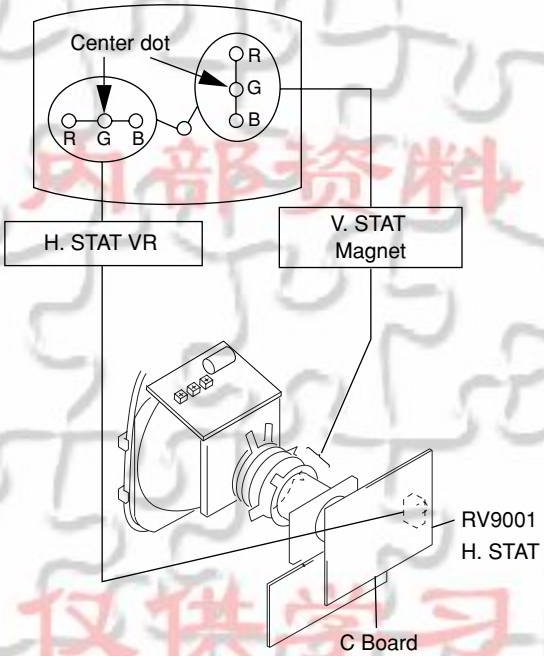
Fig. 4-4

4-2. CONVERGENCE ADJUSTMENT

Preparation :

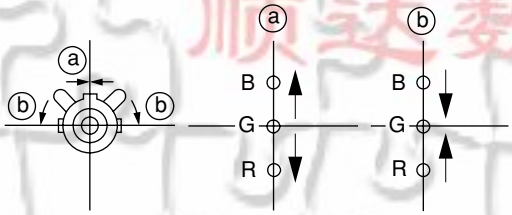
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Set the Picture Mode to “STANDARD”.
- Cross hatch / Dot pattern.

(1). Horizontal and Vertical Static Convergence

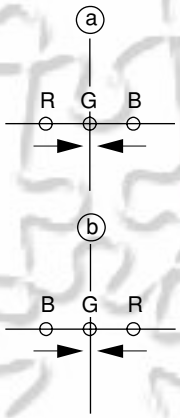


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)

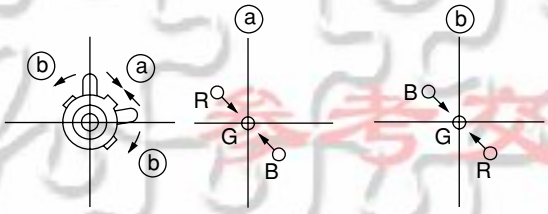
① V. STAT

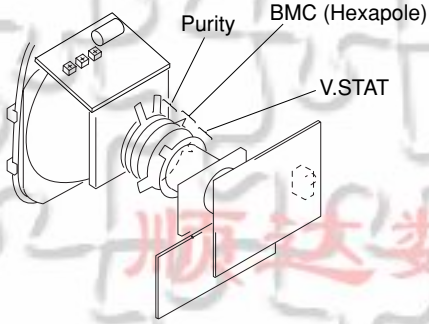


② H. STAT VR



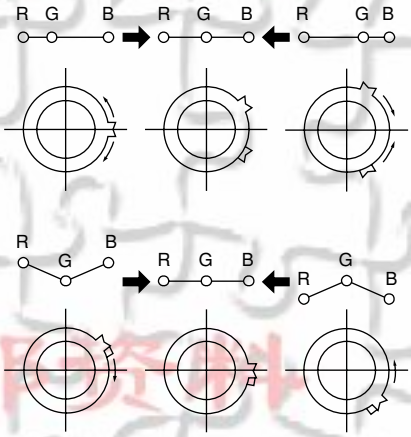
③ BMC





④ BMC (Hexapole) Magnet.

If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.

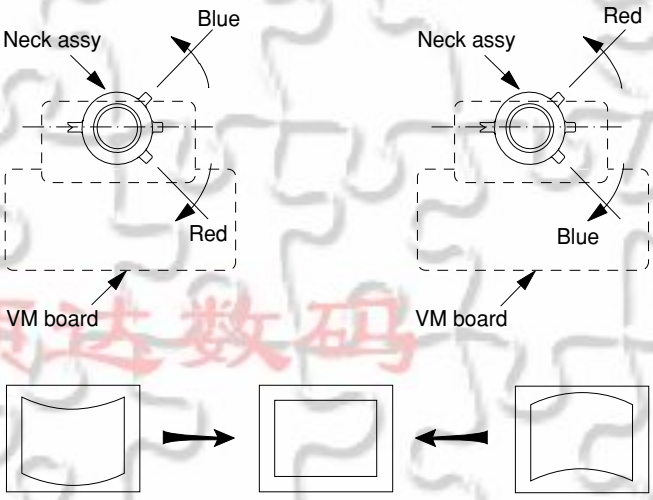


Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .
2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

(2) Dynamic Convergence Adjustment

Preparation:

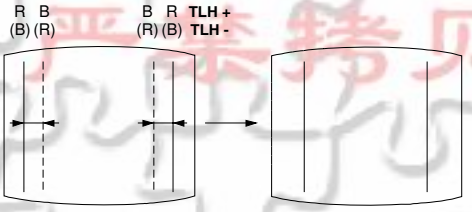
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence
- Set the PICTURE and BRIGHTNESS to normal.

1. Adjust TLH. (TLH correction piece)

① Receive the dot/hatch pattern signal and adjust picture quality by the menu.

② Correct horizontal mis-convergence of red and blue of both sides on the X axis.

When red is outside insert BMC magnet to right side (THL+) views from DY neck. And when blue is outside, insert it to left side (THL–) and take both sides.



2. Adjust XCV core.

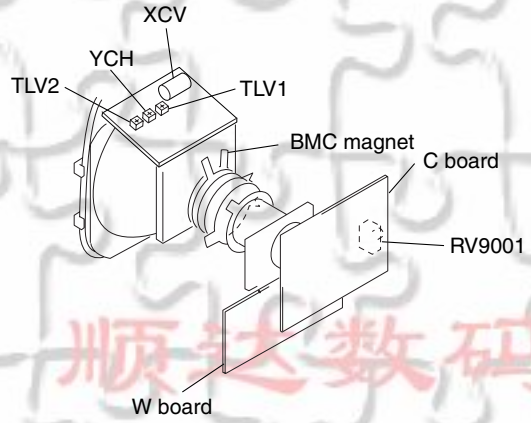
To able to become balance of XCV on the X axis well.

3. Adjust V-TILT.

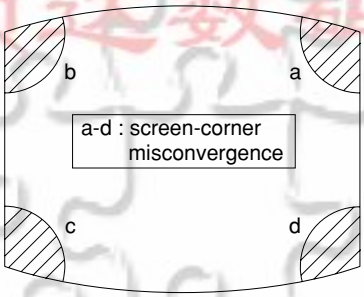
Correct the vertical mis-convergence of red and blue of vertically sides on the Y axis.

4. Adjust YCH.

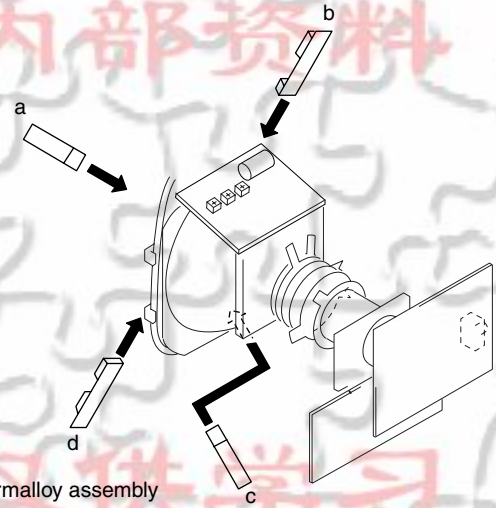
Adjust horizontal mis-convergence of red and blue of vertically sides on the Y axis. Mentioned above steps 2 to 4 are adjusting respectively perform minuteness tracking.



(3) Screen-corner Convergence



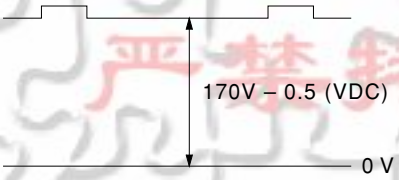
Fix a Permalloy assy corresponding to the misconverged areas.



4-3. G2 (SCREEN) ADJUSTMENT

1. G2 (SCREEN) ADJUSTMENT

1) Set to zoom mode and the PICTURE and BRIGHTNESS to normal and to the service mode.
2) In put monoscope signal.
3) Set the service data. CXA2150P-210: ABLK10
4) Connect R, G and B of the C board cathode to the oscilloscope.
5) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
6) Whilst watching the picture, adjust the screen VR located on the flyback transformer to the point just before the flyback return lines disappear (to the point before cut-off)

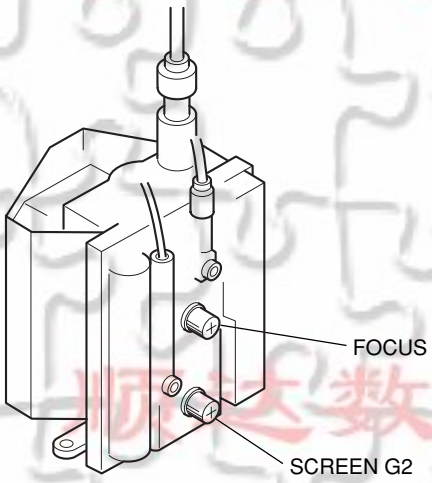


4-4. FOCUS ADJUSTMENT 1

Note

Focus adjustment should be completed before W/B adjustment.

(1) Receive digital monoscope pattern.
(2) Set DRC-MF to “Progressive” and PICTURE to “Standard”.
(3) Adjust FOCUS VR so that the center of the screen becomes justfocus.



FLYBACK TRANSFORMER (T8001)

4-5. NECK ASSY TWIST ADJUSTMENT

(1) Receive dot/hatch pattern.
(2) Turn FOCUS VR fully counter-clockwise.
(3) Confirm the dot shape at the screen center.
(4) Resume FOCUS VR.

Note

In case of turning NECK ASSY, loosen the screw 3 turns. Do not move the position.

4-6. PICTURE DISTORTION ADJUSTMENT

Note: In this adjustment use the monoscope signal.
Adjust in the service mode "DEF1" and "DEF2".

0 (VPOS)-DEF1 1 (VSIZ)-DEF1

2 (VLIN)-DEF1 3 (VSCO)-DEF1

11 (SCRL)-DEF1 12 (UVLN)-DEF1

13 (LVLN)-DEF1

2 (HSIZ)-DEF2 1 (HPOS)-DEF2

5 (PIN)-DEF2 6 (UCP)-DEF2

7 (LCP)-DEF2 8 (PPHA)-DEF2

9 (VANG)-DEF2 11 (VBOW)-DEF2

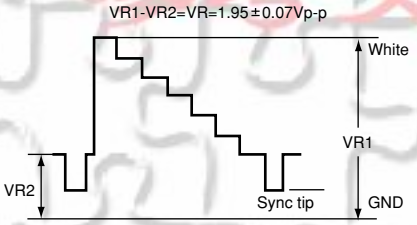
4-7.P & P SUB CONTRAST ADJUSTMENT (VIDEO) (NTSC/PAL)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, No setup)
   VIDEO terminal (main) : Color-bar (white-75%, No setup)
2. VIDEO MODE : AV Pro
   PICTURE : maximum
   COLOR : minimum
   RGB Signal : off
3. Set to P & P mode, and set to service mode.
4. Set the service data.

Category	Reg. No & Name	Standards
MCP	2 RON	1
	3 GON	0
	4 BON	0
	7 YLMT	1
PIC	0 PIC	100
	1 COL	0
	5 PIOF	0

5. Connect an oscilloscope between the check point and ground.
   Check points : CN9001 pin ① (R-DRV) (C Board)
6. Adjust the item as shown below.

	Category	Reg. No & Name
LEFT	CCPM	1 YLEV
RIGHT	YCTS	0 YLEV



7. Write the data into memory.

MUTE → 12

4-8. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (VIDEO) (NTSC/PAL)

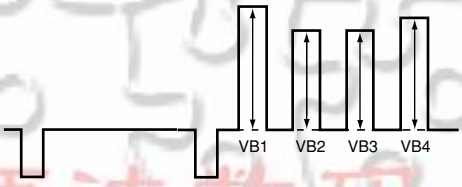
1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, No setup)
   VIDEO terminal (main) : Color-bar (white-75%, No setup)
2. VIDEO MODE : AV Pro
   PICTURE : maximum
   COLOR : center
   RGB Signal : on
3. Set to P & P mode, set to service mode.
4. Set the service data.

Category	Reg. No & Name		Standards
MCP	2	RON	1
	3	GON	1
	4	BON	1
	7	YLMT	1
PIC	0	PIC	60
	1	COL	50

5. Connect an oscilloscope between pin ⑤ (B-DRV) of CN9001 (C board) connecter and ground.
6. Adjust the item as shown below to have VB1 ≦ VB4 and VB2 ≦ VB3 in the waveform levels.

	Category	Reg. No & Name	
LEFT	CCPM	2	CLEV
		3	SHUE
RIGHT	YCTS	1	CLEV
		4	SHUF

7. Write the data into memory.
   MUTE → 12



4-9. WHITE BALANCE ADJUSTMENT

(1). VIDEO MODE : AV PRO
   PICTURE : Maximum
   COLOR : Minimum
   Color Temp. : High
   DRC-MF : Progressive
(2). Receive the all white signal and set to full mode screen and to the service mode.
(3). Minimize the cut-offs and make drives normal in the following items.

Category	Reg. No & Name	
COLR	3	GDRV
	4	BDRV
	6	GCUT
	7	BCUT

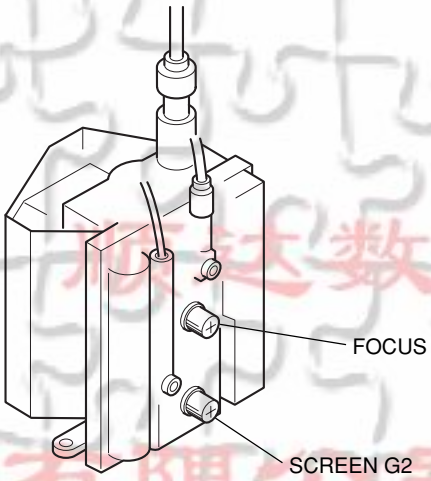
(4). Adjust with the cut-offs and the drives mutually the white balance becomes best in the mode the picture is maximum or minimum.

4-10. FOCUS ADJUSTMENT 2

Note

Focus adjustment should be completed before W/B adjustment.

(1) Receive digital monoscope pattern.
(2) Set DRC-MF to “Progressive” and PICTURE to “Standard”.
(3) Adjust FOCUS VR so that the center of the screen becomes justfocus.
(4) Change the receiving signal to white pattern and blue back.
(5) Confirm MAGENTA RING should not be over the limit sample. In case MAGENTA RING is over the limit sample, adjust FOCUS VR to take tracking of MAGENTA RING and FOCUS.



FLYBACK TRANSFORMER (T8001)

SECTION 5
SAFETY RELATED ADJUSTMENTS

[D BOARD]

5-1. +B MAX VOLTAGE CONFIRMATION

1. Supply 242 $\pm^{2}_{0}$ VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage between the both sides of C6512 on D board is 137.0 V dc or less.

5-2. HV REGULATION CIRCUIT ADJUSTMENT

When replacing the following components marked with ◪ on the schematic diagram always check HV regulation, and if necessary re-adjust.

⊠: RV8002
◪: IC8004, IC8005,
R8014, R8015, R8017
PH8003
T8001 (FBT)
D board

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Receive the dot signal.
4. Set PIC MIN/BRT MIN.
5. Confirm that the static voltmeter reading is 31.5 ± 0.3kVDC.
6. If not, adjust with RV8002 to the specified value.

5-3. HV PROTECTOR CIRCUIT CHECK

When replacing the following components marked with ◪ on the schematic diagram always check hold-down voltage.

⊠: RV8002
◪: D8014
IC8001
R8016, R8019, R8046, R8052, R8072,
R8078, R8079, R8165
T8001 (FBT)
D board

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Receive the dot signal.
4. Set PIC MIN/BRT MIN.
5. The set turns off (the protector circuit activates) at the 36.6kVDC or less reading on the static voltmeter.
6. After that, adjust the item 5-2 (Return to 31.5kVDC).

5-4. IK PROTECTOR CIRCUIT CHECK (D BOARD)

When replacing the following components marked with / on the schematic diagram, always check IK protector circuit.

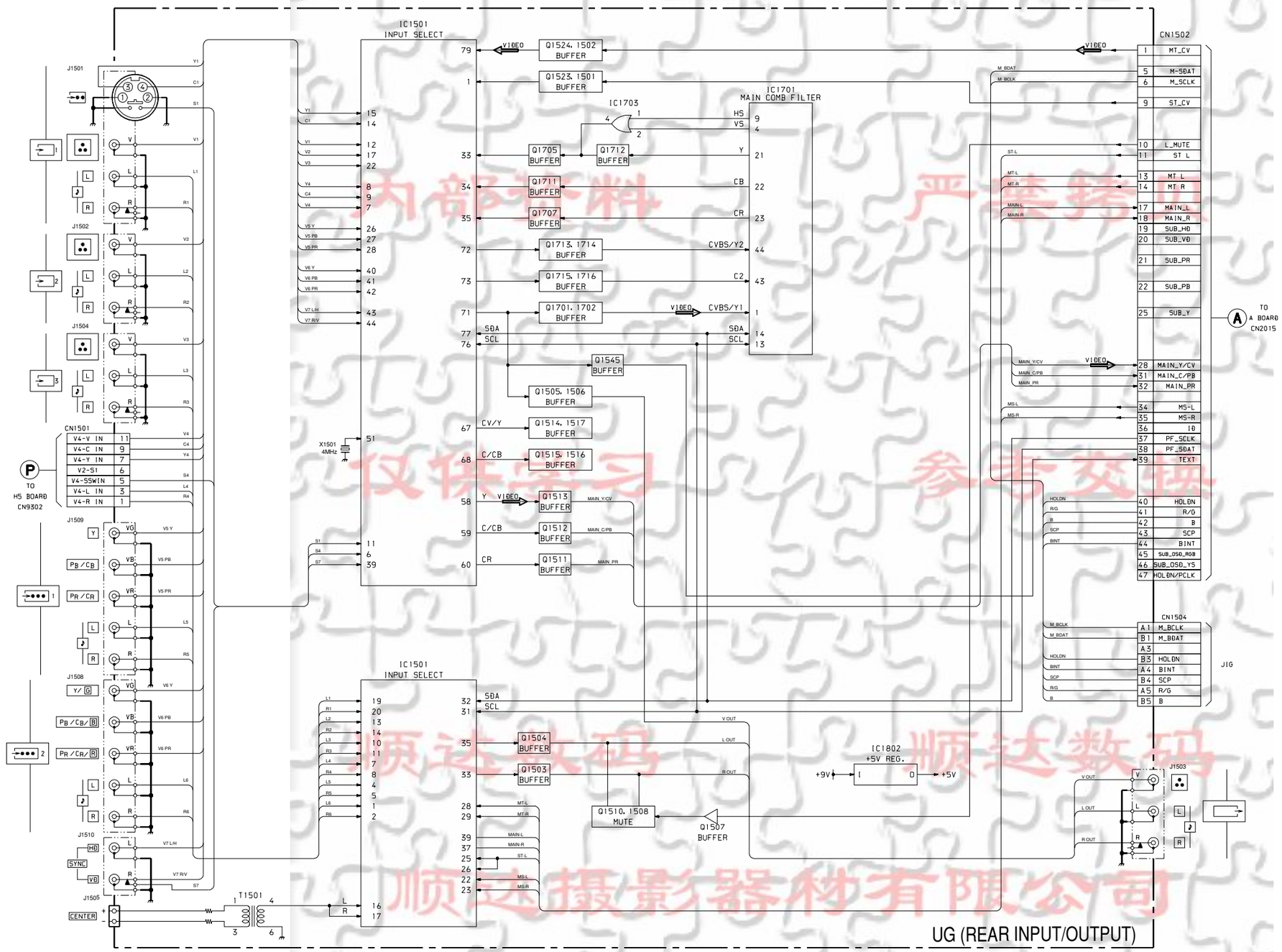
◪: D8004
IC8001
Q8007
R8027, R8030, R8035,R8037
R8038, R8039, R8040, R8041, R8043,
D board

1. Unsolder T8001 (FBT) Pin 1 and connect a DC current meter between Pin 1 and the pattern.
2. Remove R0494 (MG MOUNT).
3. Feed the all white signal, increase the picture and brightness slowly and check the hold-down works when the reading on the DC current meter is 2670uA.
4. Turn power off.
5. Remove the DC current meter and set R0494 solder the unsolder portions.

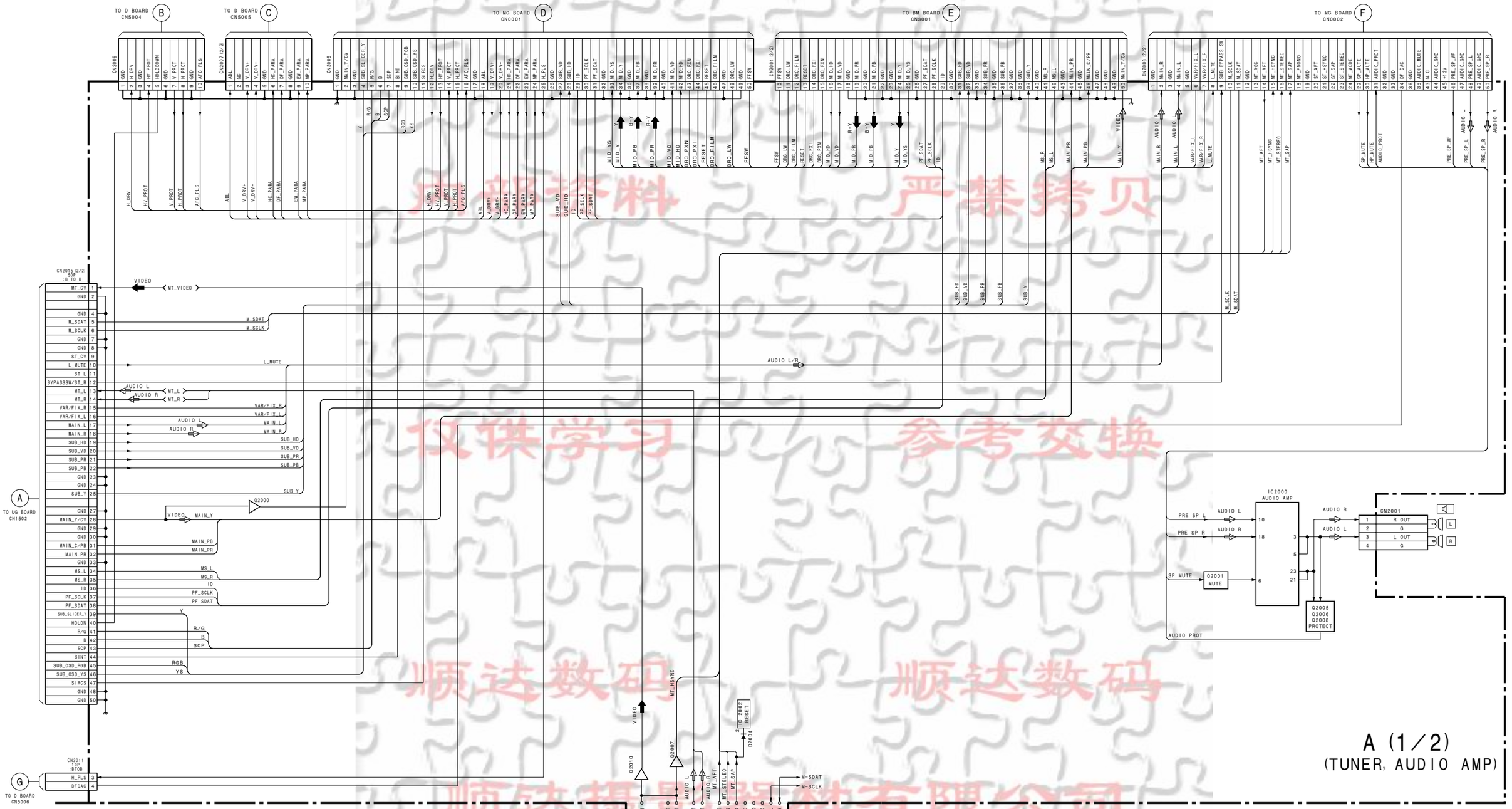
MEMO

SECTION 6
DIAGRAMS

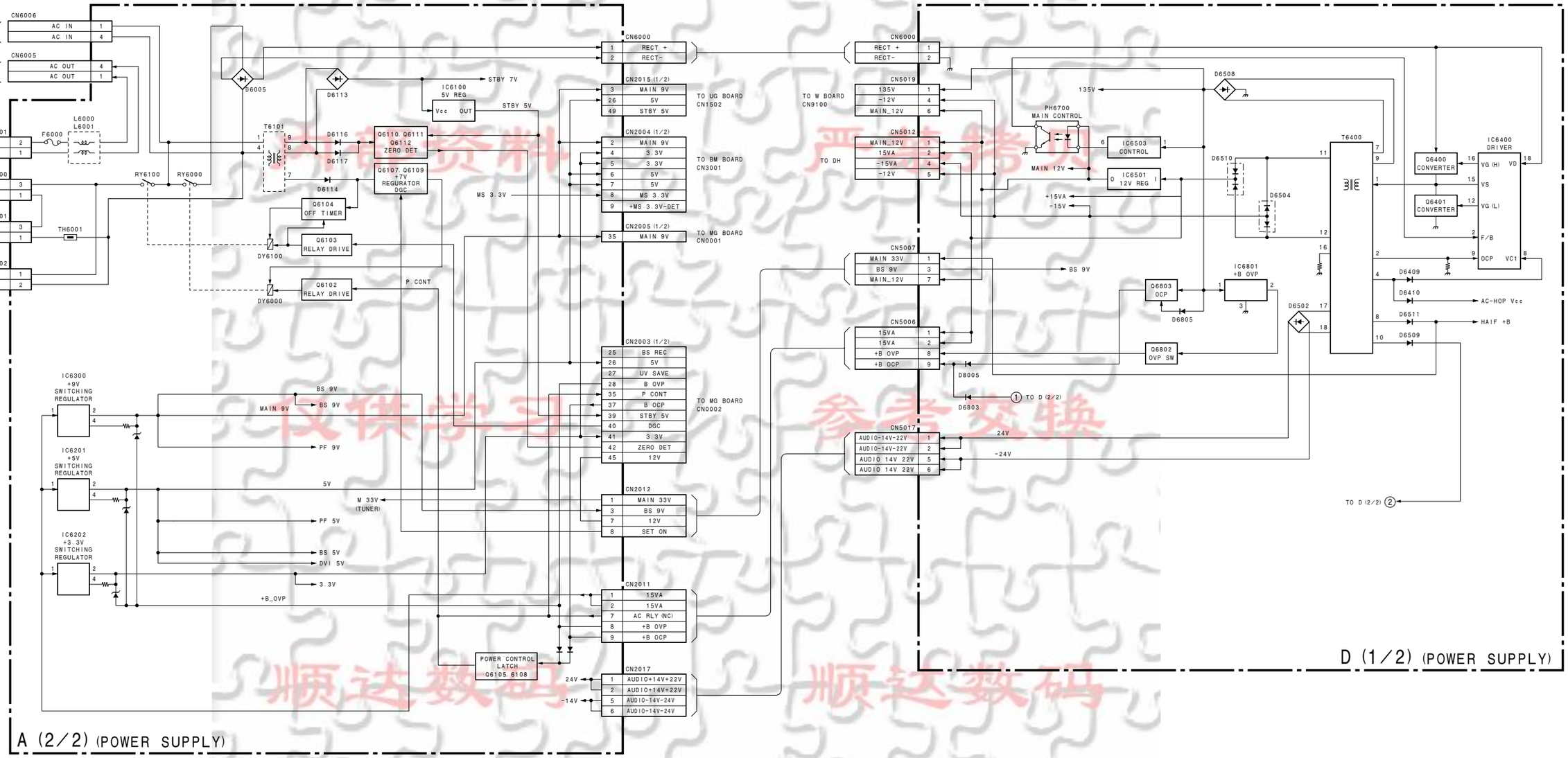
6-1. BLOCK DIAGRAM (1)



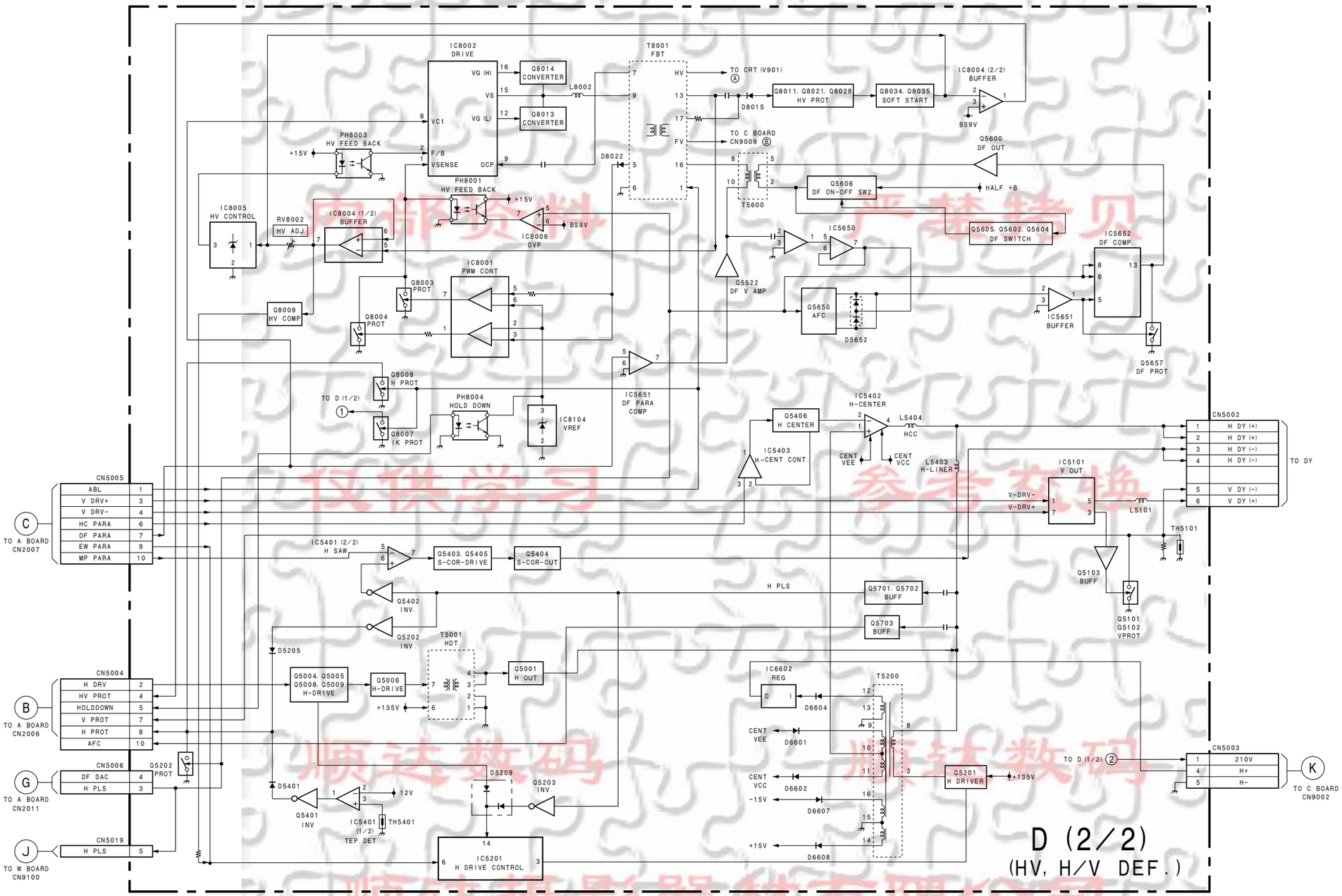
BLOCK DIAGRAM (2)



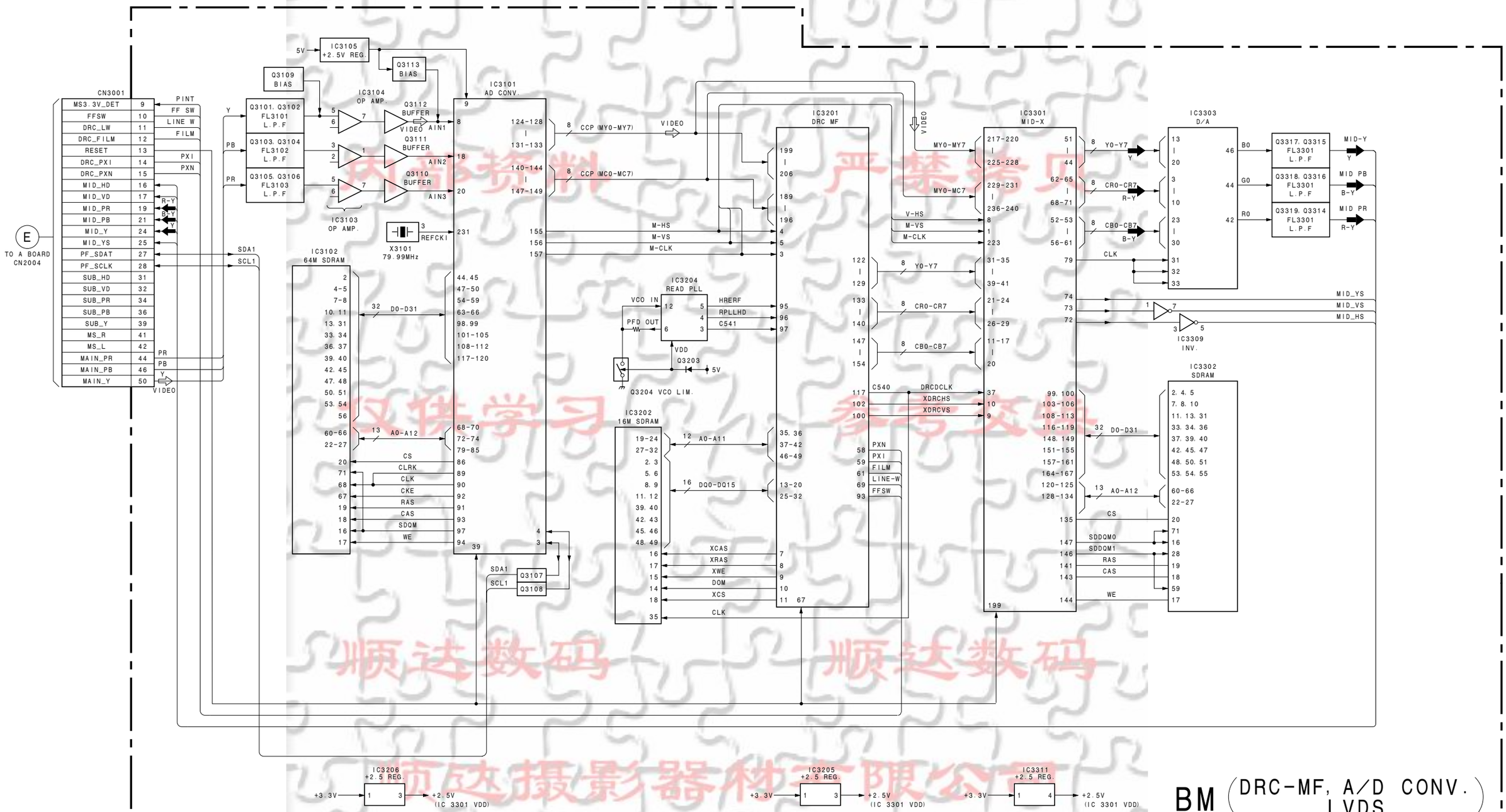
BLOCK DIAGRAM (3)



BLOCK DIAGRAM (4)

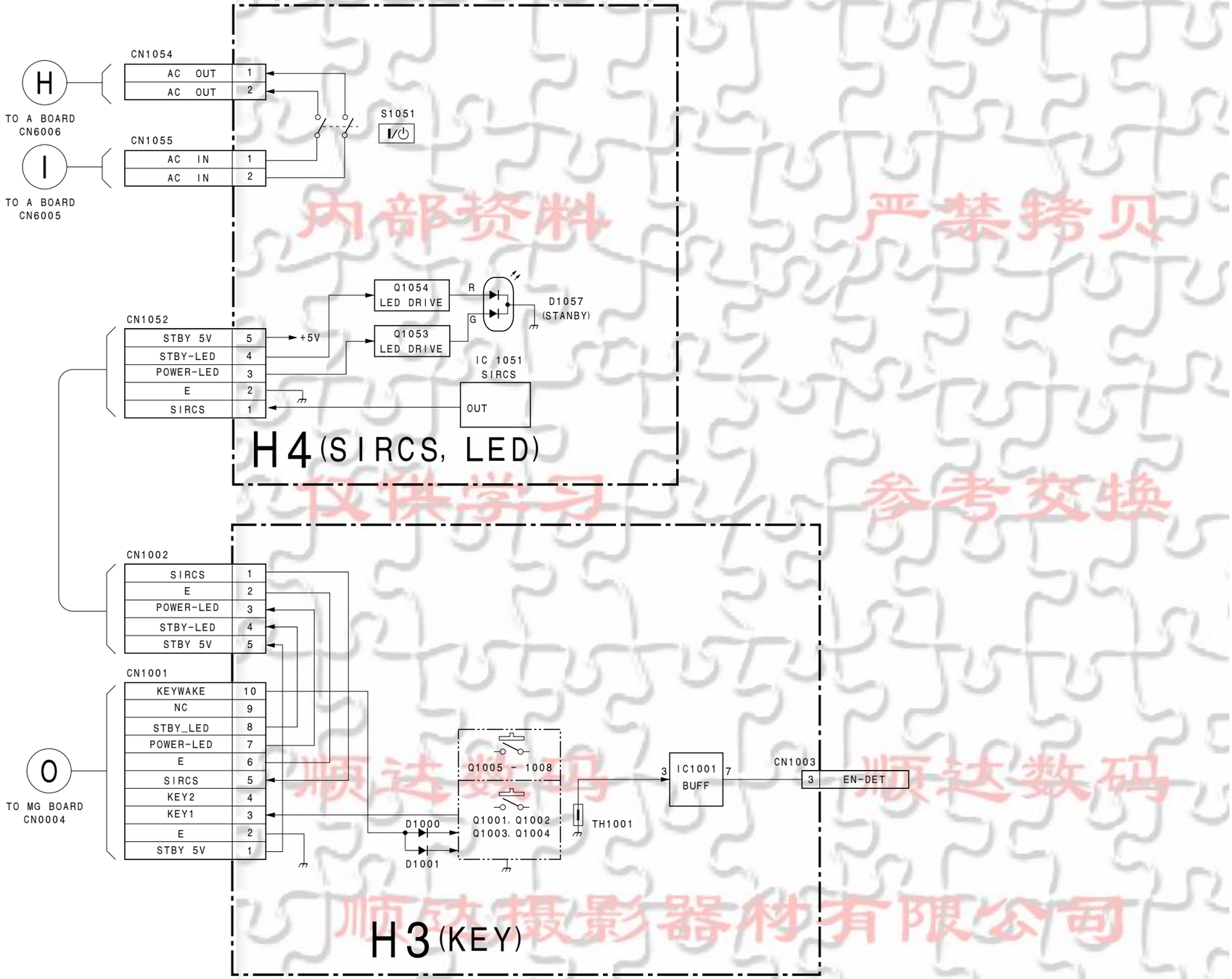


BLOCK DIAGRAM (5)

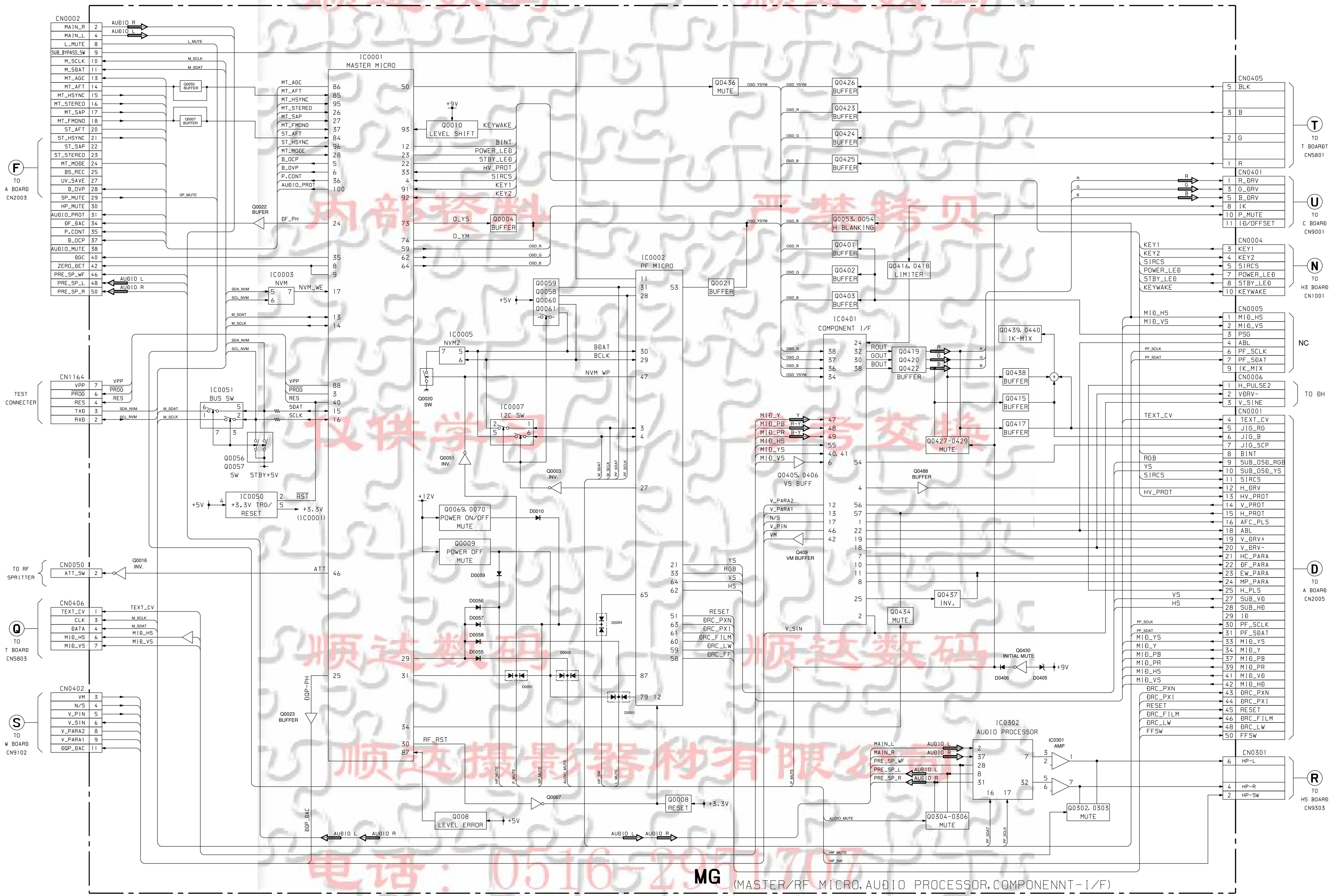


BM (DRC-MF, A/D CONV. LVDS)

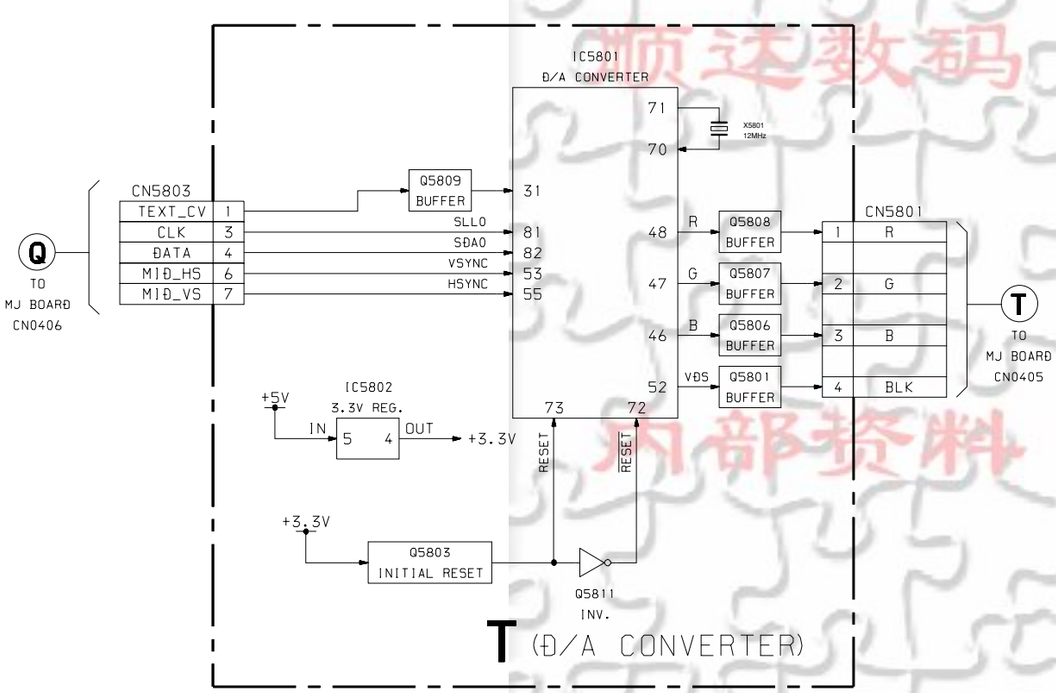
BLOCK DIAGRAM (6)

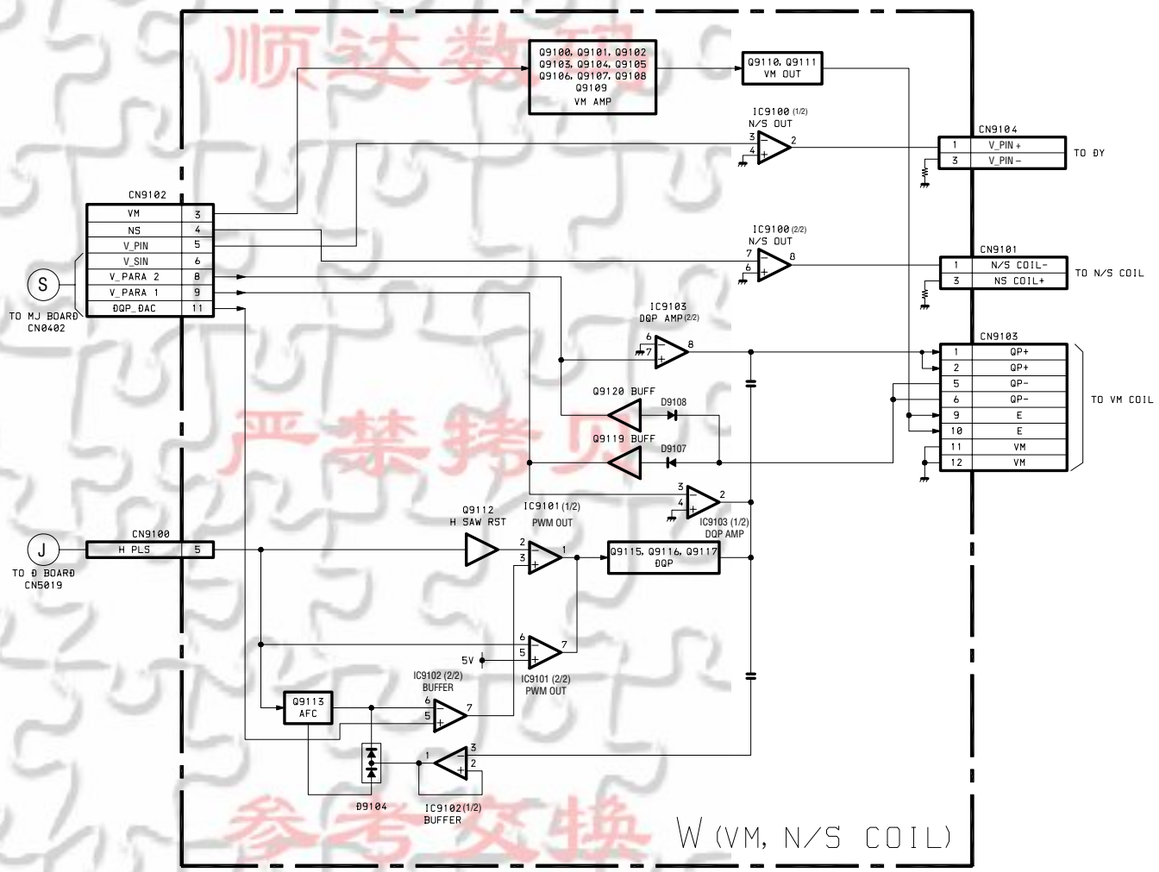


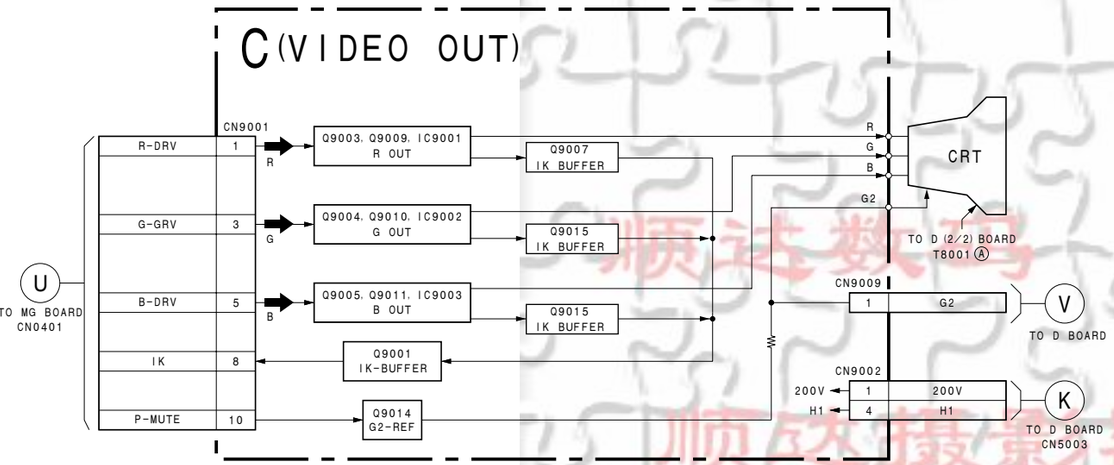
BLOCK DIAGRAM (7)

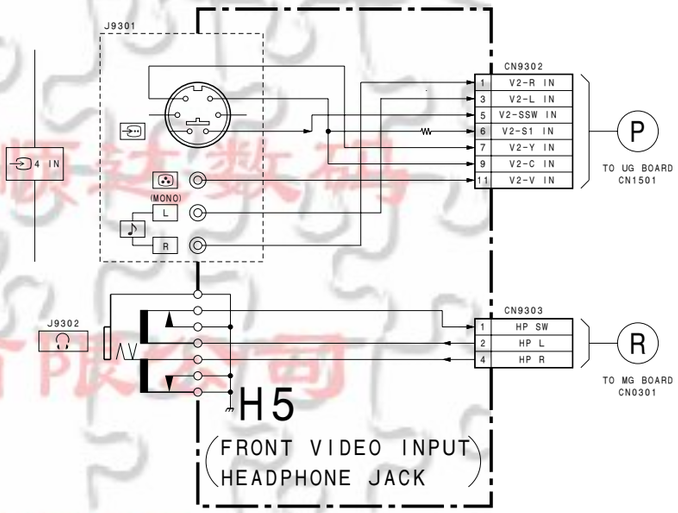


BLOCK DIAGRAM (8)

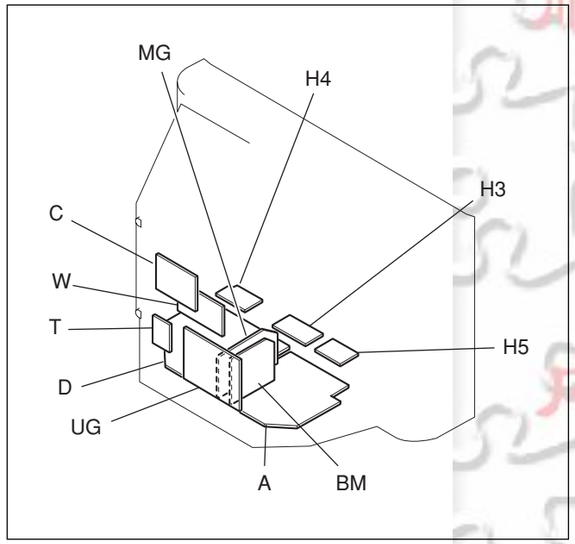








6-2. CIRCUIT BOARDS LOCATION



Note: The symbol ▬ display is on the component slde.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

The symbol ▬ indicate fast operating fuse. Replace only with fuse of same rating as maked.

6-3. SCHEMATIC DIAGRAMS

Note:
- Capacitors without voltage indication are all 50V.
- All resistors are in ohms.
  kΩ=1000Ω, MΩ=1000kΩ
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

  Pitch : 5mm
  Rating electrical power : 1/4 W
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- ▭ : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⏚ : earth-chassis.
- The components identified by ⧓ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪ , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⧓ and repeat the adjustment until the specified value is achieved.
  (Refer to RV8002 adjustment on Page 56.)
- Readings are taken with a PAL color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.

- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  ＊ : Measurement impossibillity.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ▬ ▬ : B– bus.
- ⇨ : signal path.(RF)

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

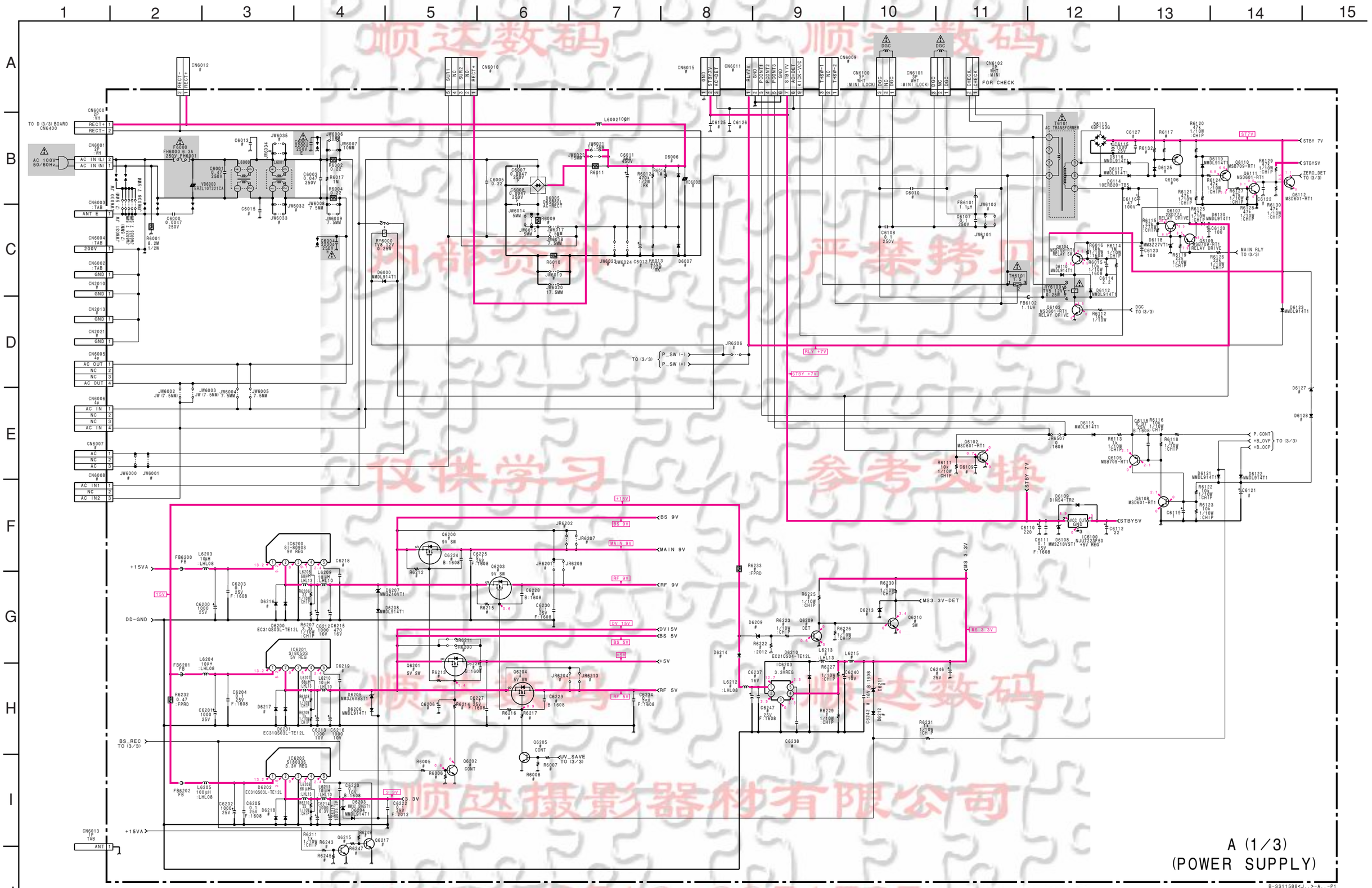
Terminal name of semiconductors in silk screen printed circuit (＊)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base Emitter	
②	Transistor	▬	Collector / Base Emitter	
③	Diode	⊓	Cathode — Anode	
④	Diode	T	Cathode / Anode (NC)	
⑤	Diode	▬	Cathode / Anode (NC)	
⑥	Diode	T	Common / Anode Cathode	
⑦	Diode	▬	Common / Anode Cathode	
⑧	Diode	T	Common / Anode Anode	
⑨	Diode	▬	Common / Anode Anode	
⑩	Diode	T	Common / Cathode Cathode	
⑪	Diode	▬	Common / Cathode Cathode	
⑫	Diode	▌	Anode Cathode / Anode Anode / Cathode Anode	
⑬	Transistor (FET)	▌	Drain Source / Gate	
⑭	Transistor (FET)	⊢	Drain Source / Gate	
⑮	Transistor (FET)	▌	□ Source / □ Drain / □ Gate	
⑯	Transistor	▌	□ Emitter / □ Collector / □ Base	
⑰	Transistor	⊣	C2 B1 E1 / E2 B2 C1	
⑱	Transistor	⊣	C1 B2 E2 / E1 B1 C2	
⑲	Transistor	▬	C1 B2 E2 / E1 B1 C2	
⑳	Transistor	▬	C1 B2 E2 / E1 B1 C2	
㉑	Transistor	▬	E2 B1 E1 / C2 C1(B2)	
㉒	Transistor	▬	(B2) B1 E1 E2 / C1 C2	
㉓	Transistor	▬	(B2) E2 E1 B1 / C2 C1	
–	Discrete semiconductot			

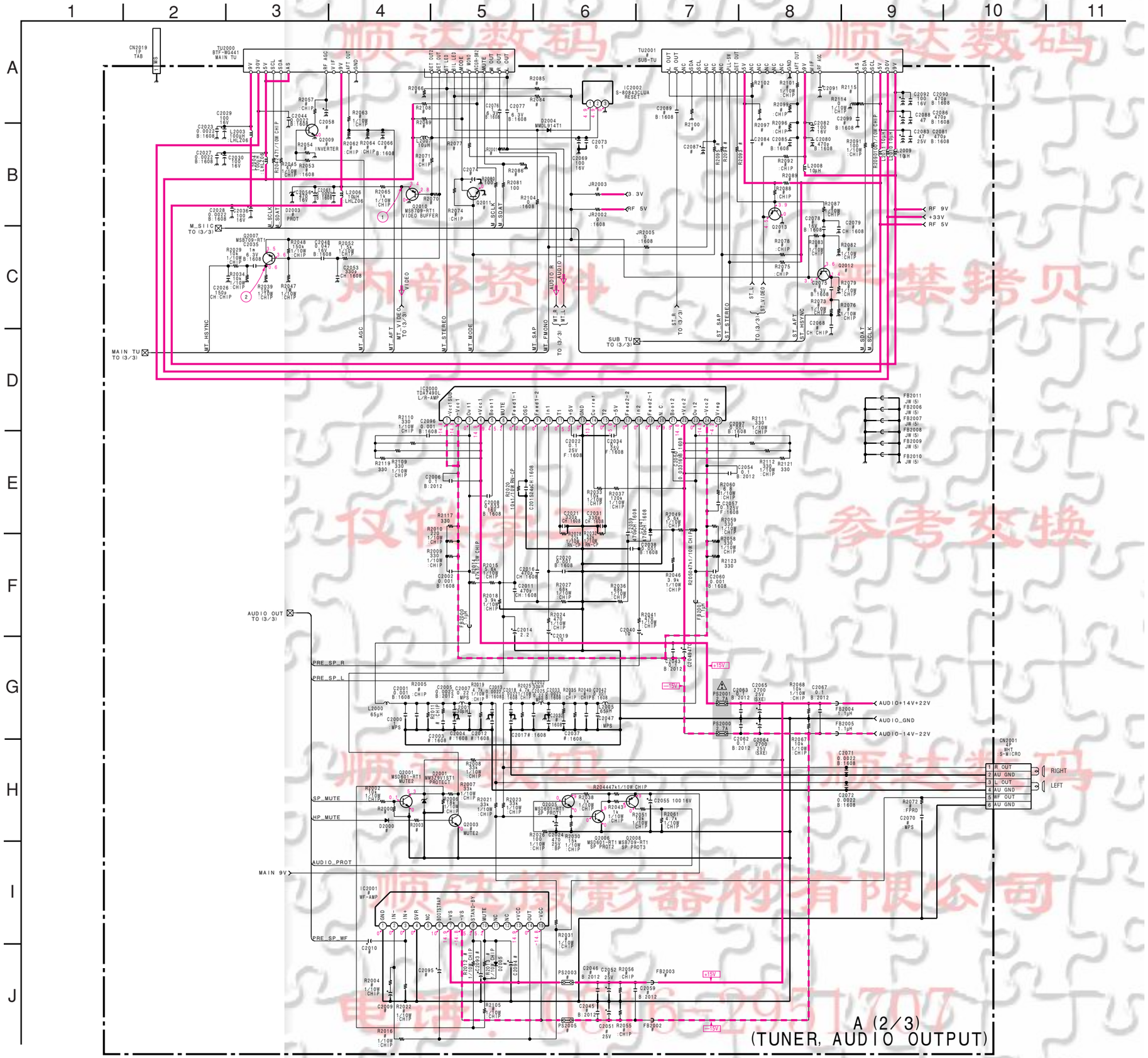
(Chip semiconductors that are not actually used are included.)

Ver.1.5

(1) Schematic Diagram of A (1/3) Board

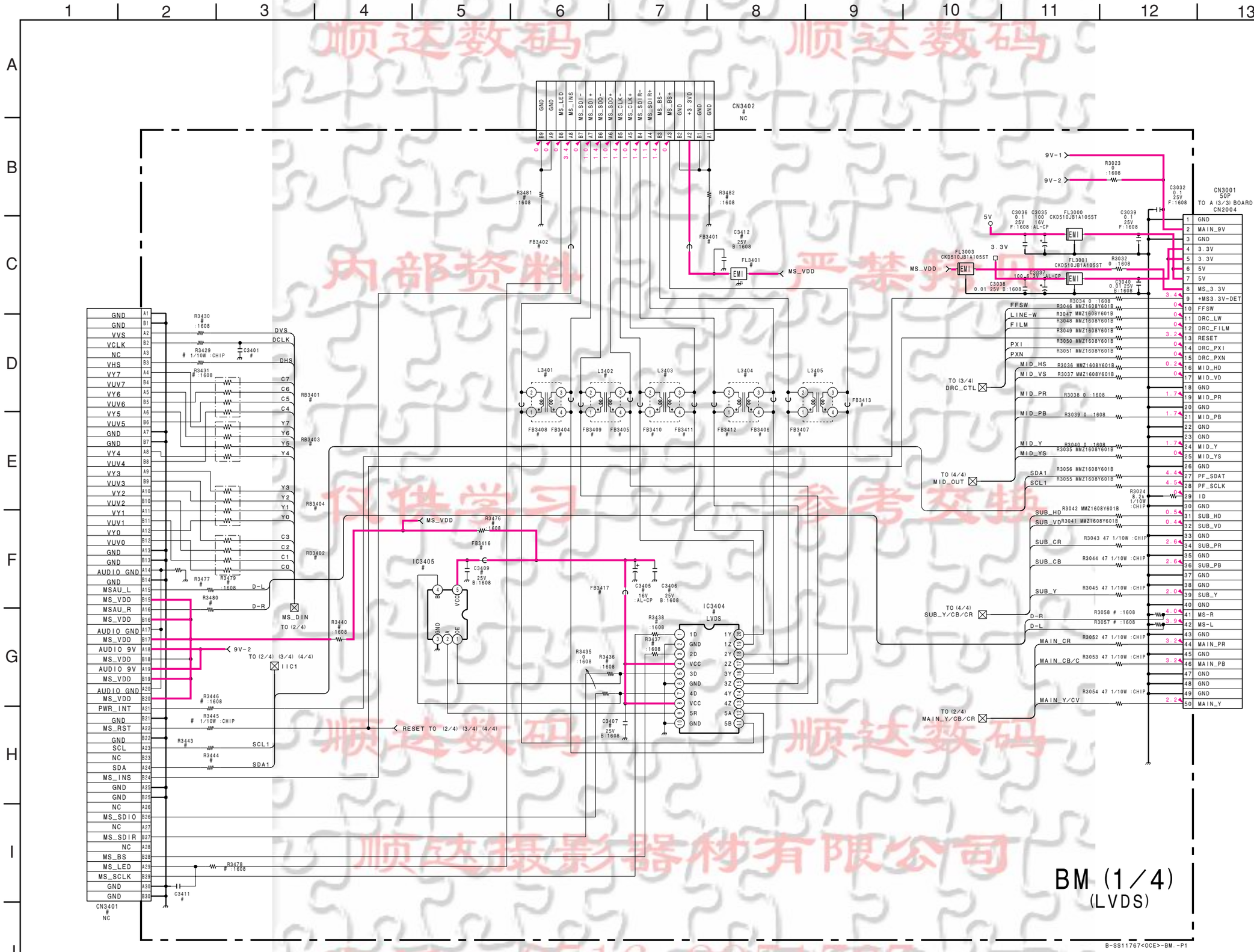


(2) Schematic Diagram of A (2/3) Board

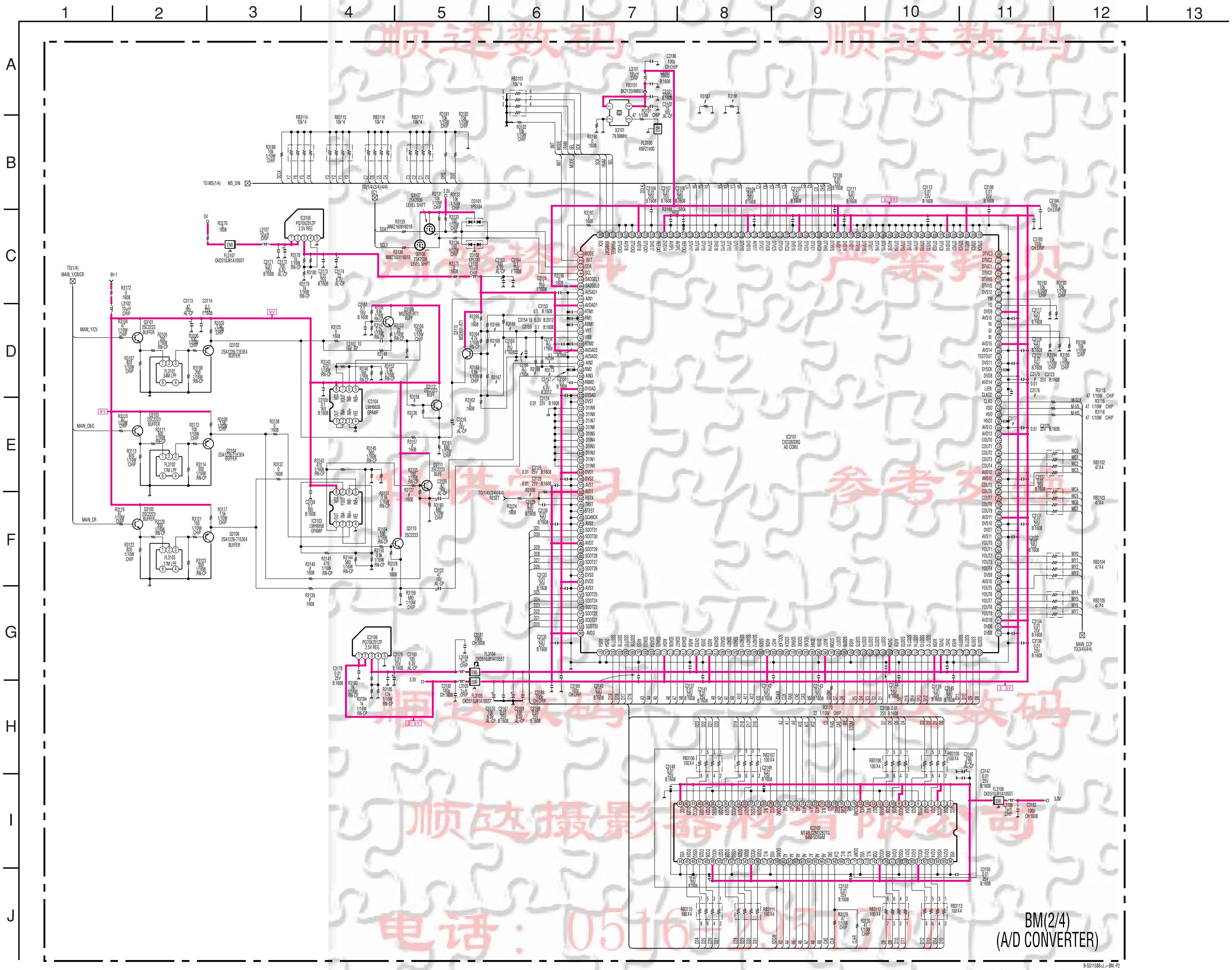


(3) Schematic Diagram of A (3/3) Board

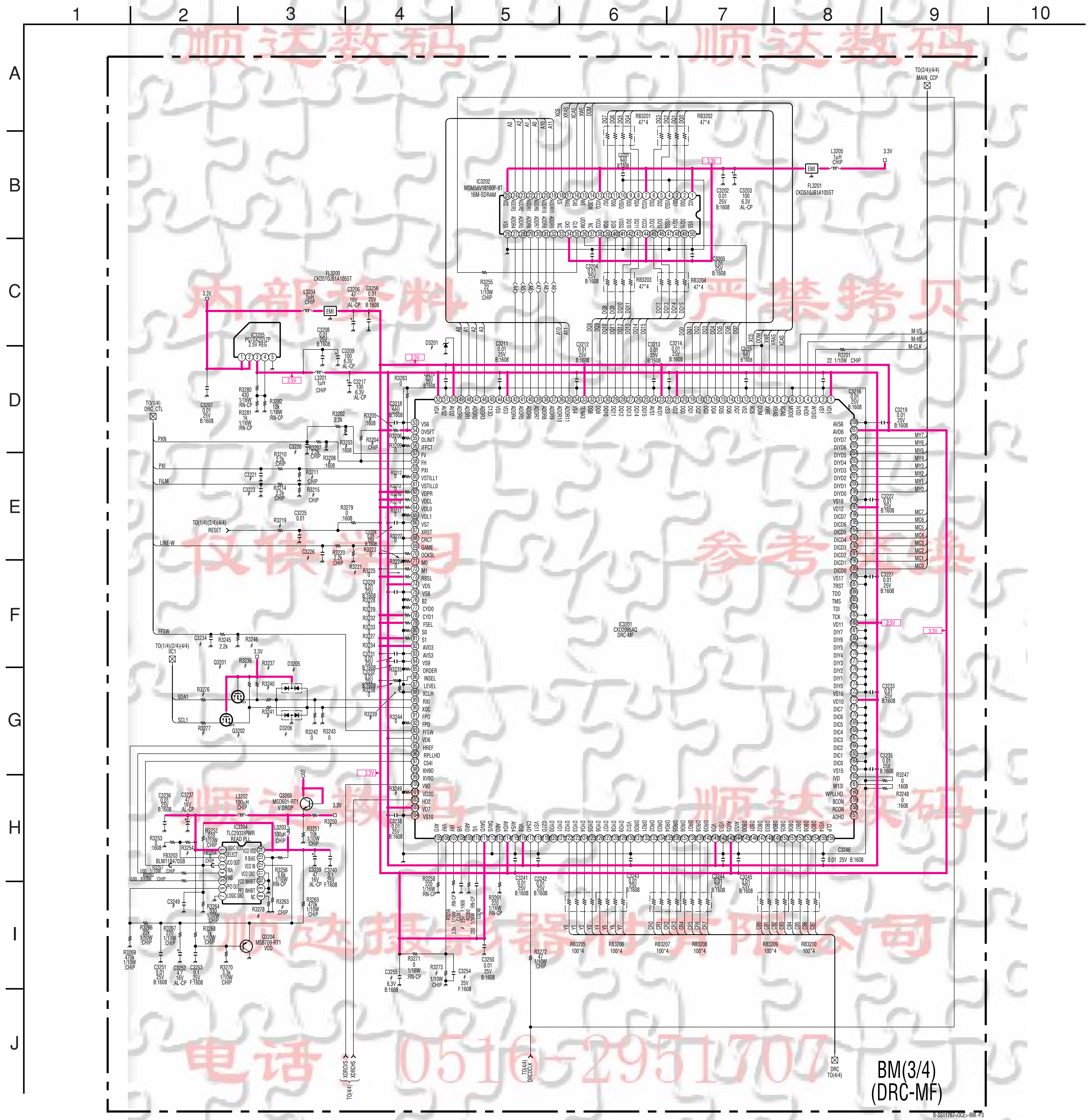
(4) Schematic Diagram of BM (1/4) Board



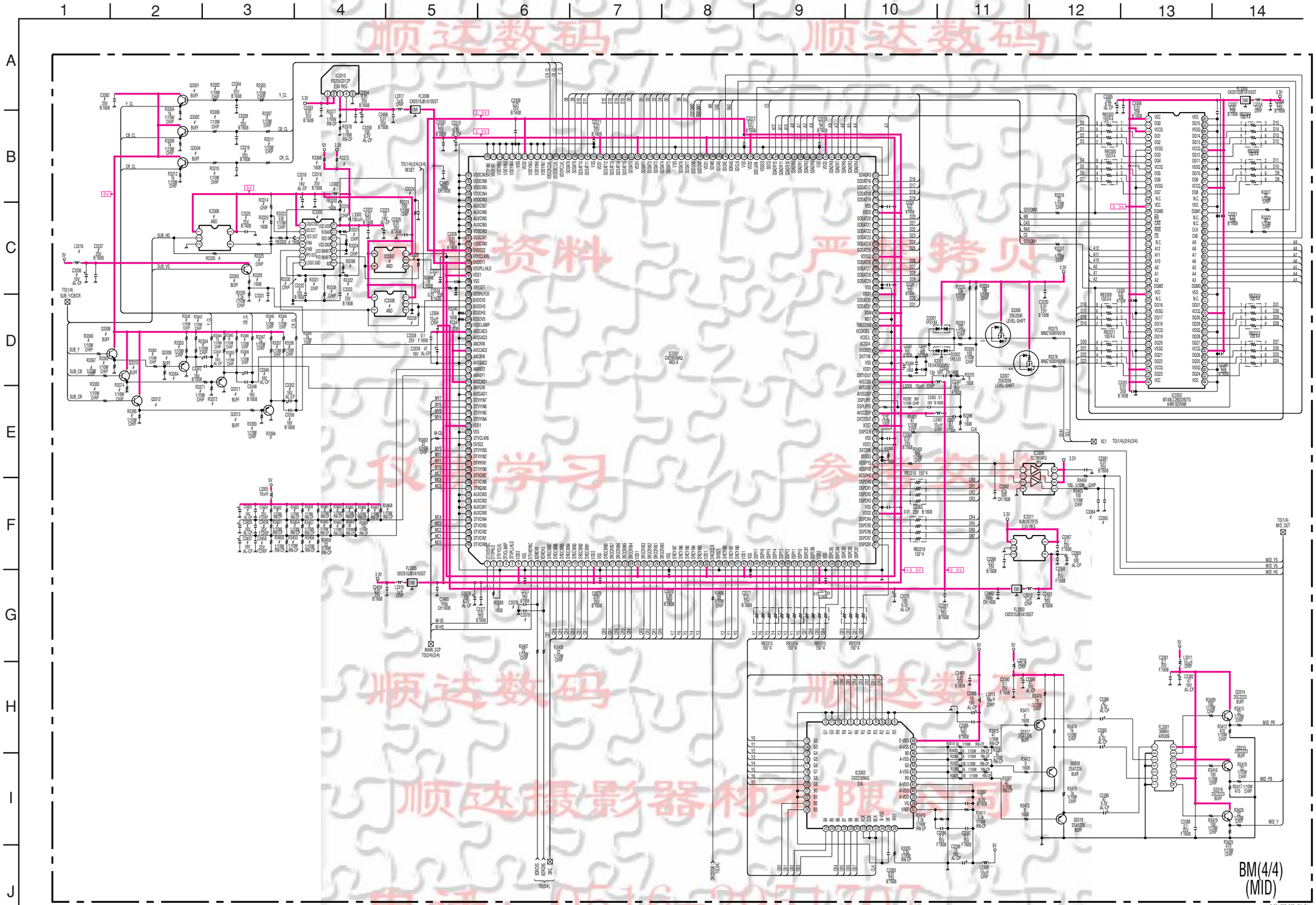
(5) Schematic Diagram of BM (2/4) Board



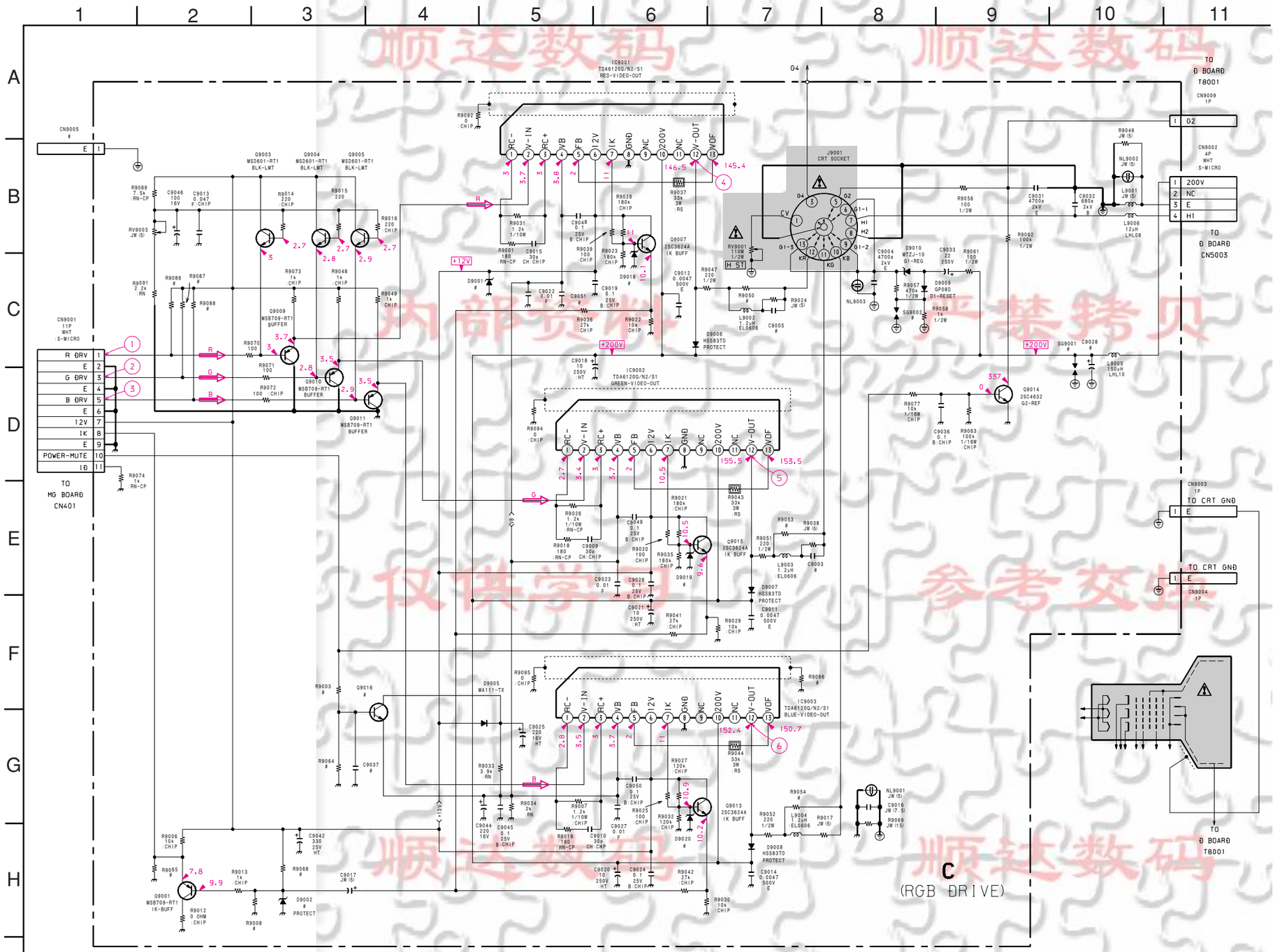
(6) Schematic Diagram of BM (3/4) Board



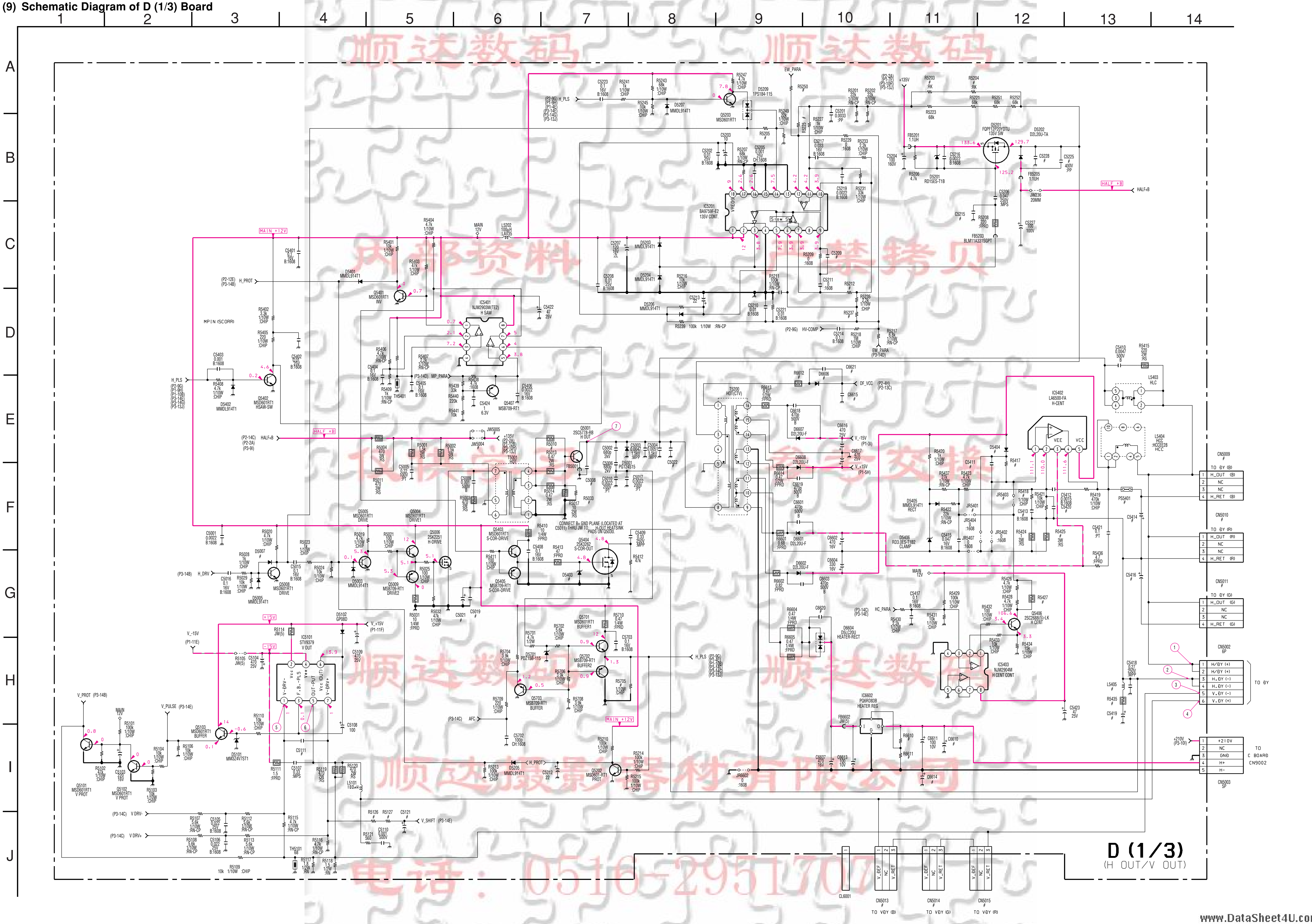
(7) Schematic Diagram of BM (4/4) Board



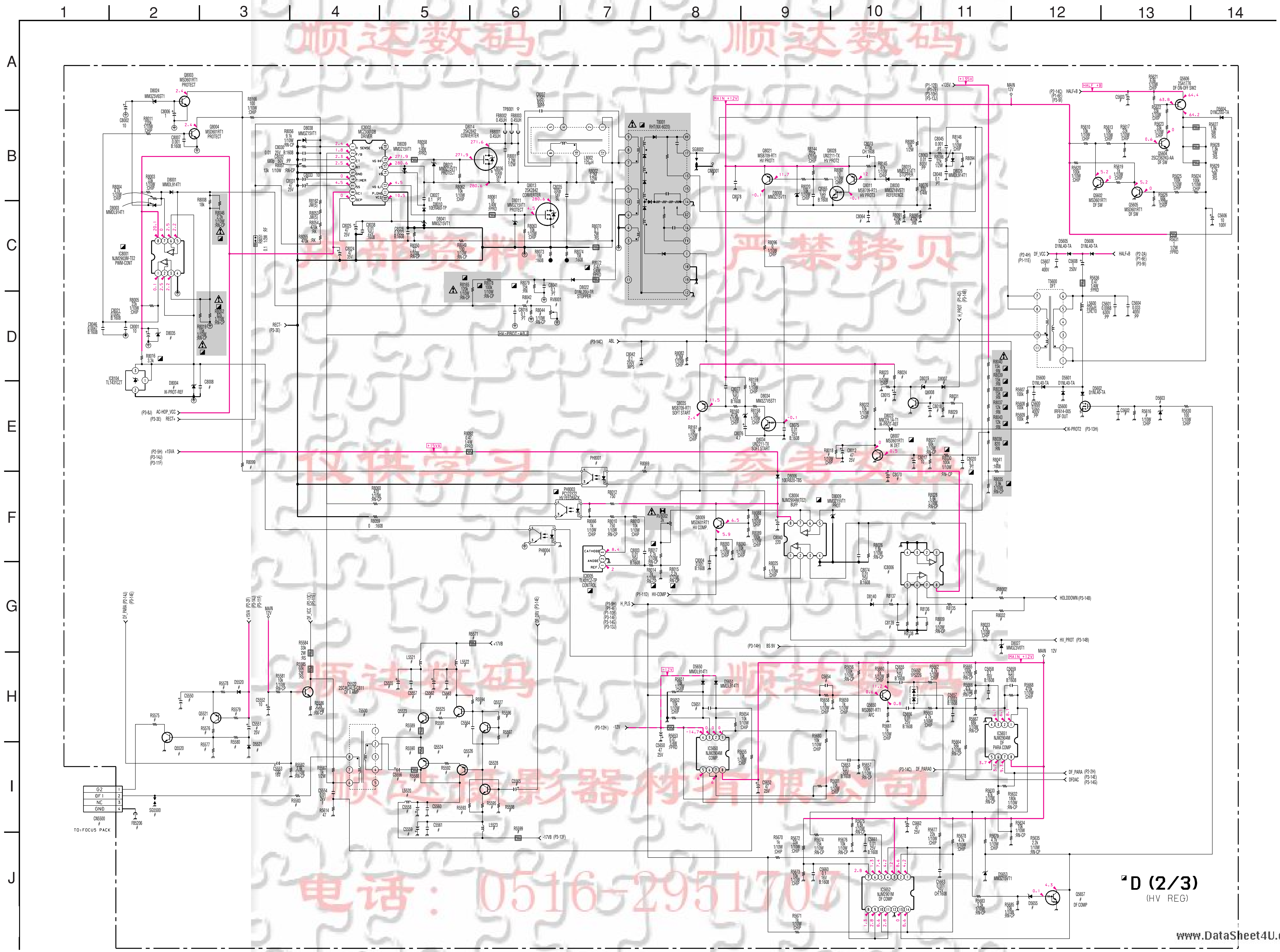
(8) Schematic Diagram of C Board



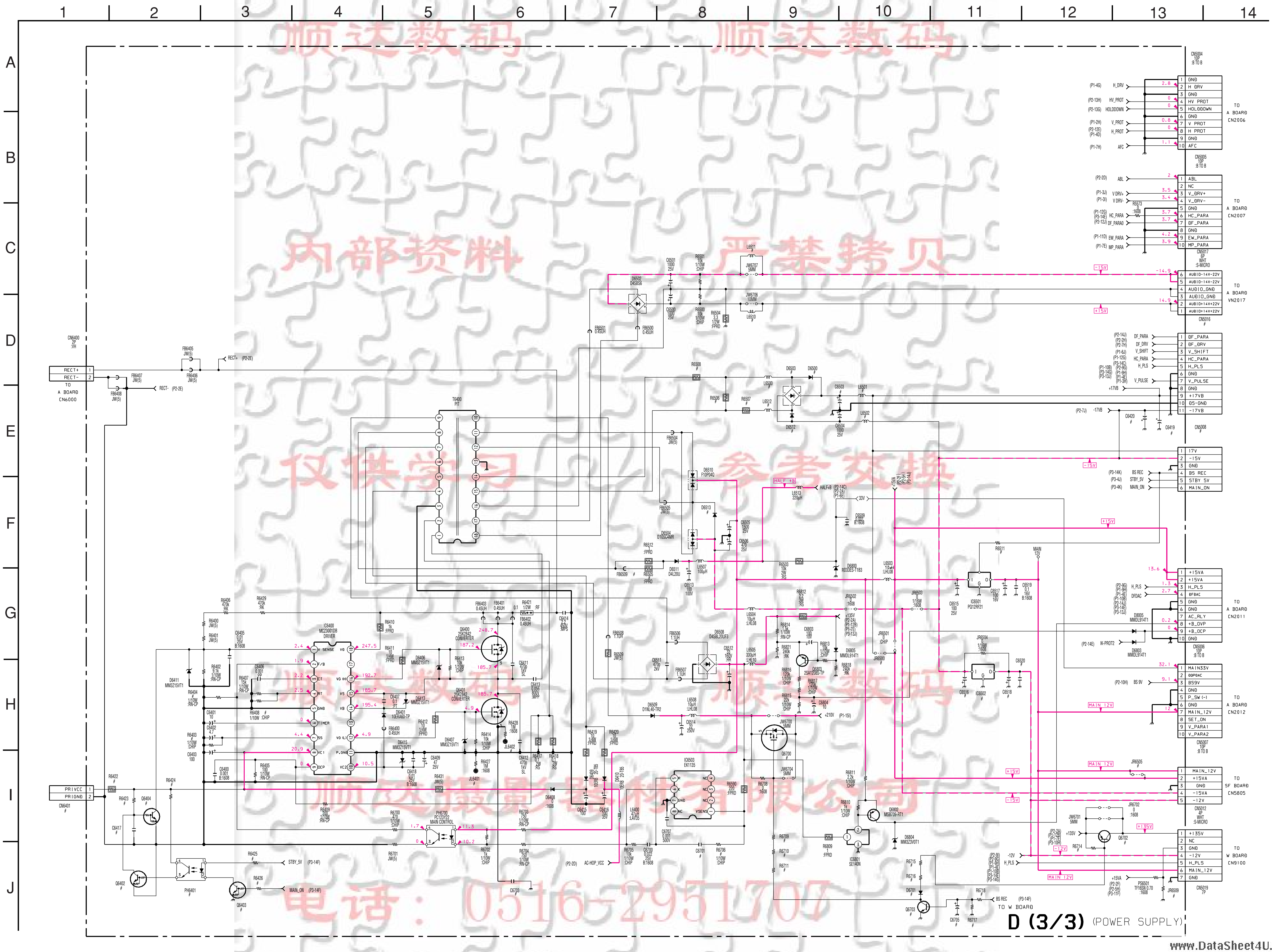
(9) Schematic Diagram of D (1/3) Board



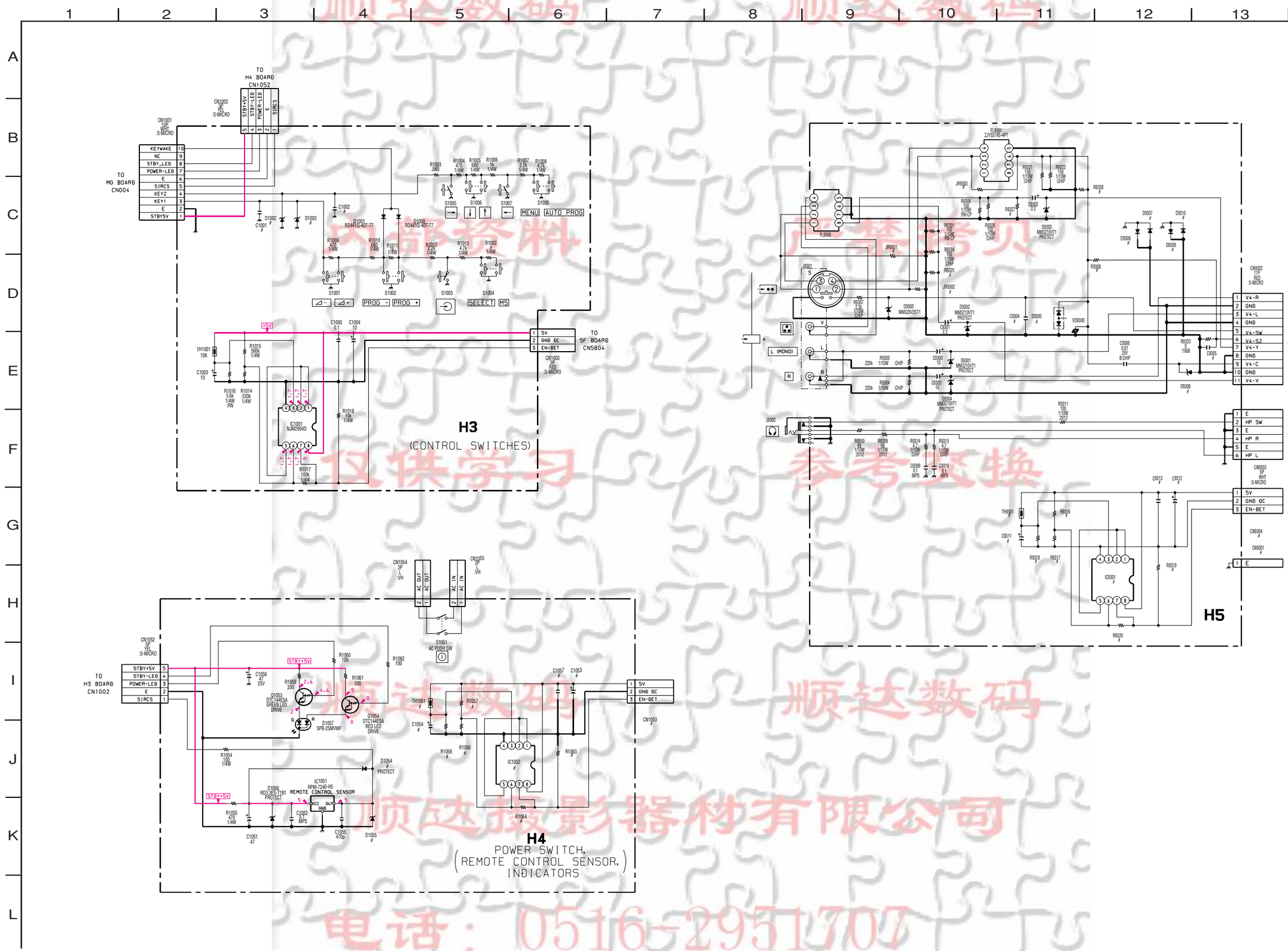
(10) Schematic Diagram of D (2/3) Board



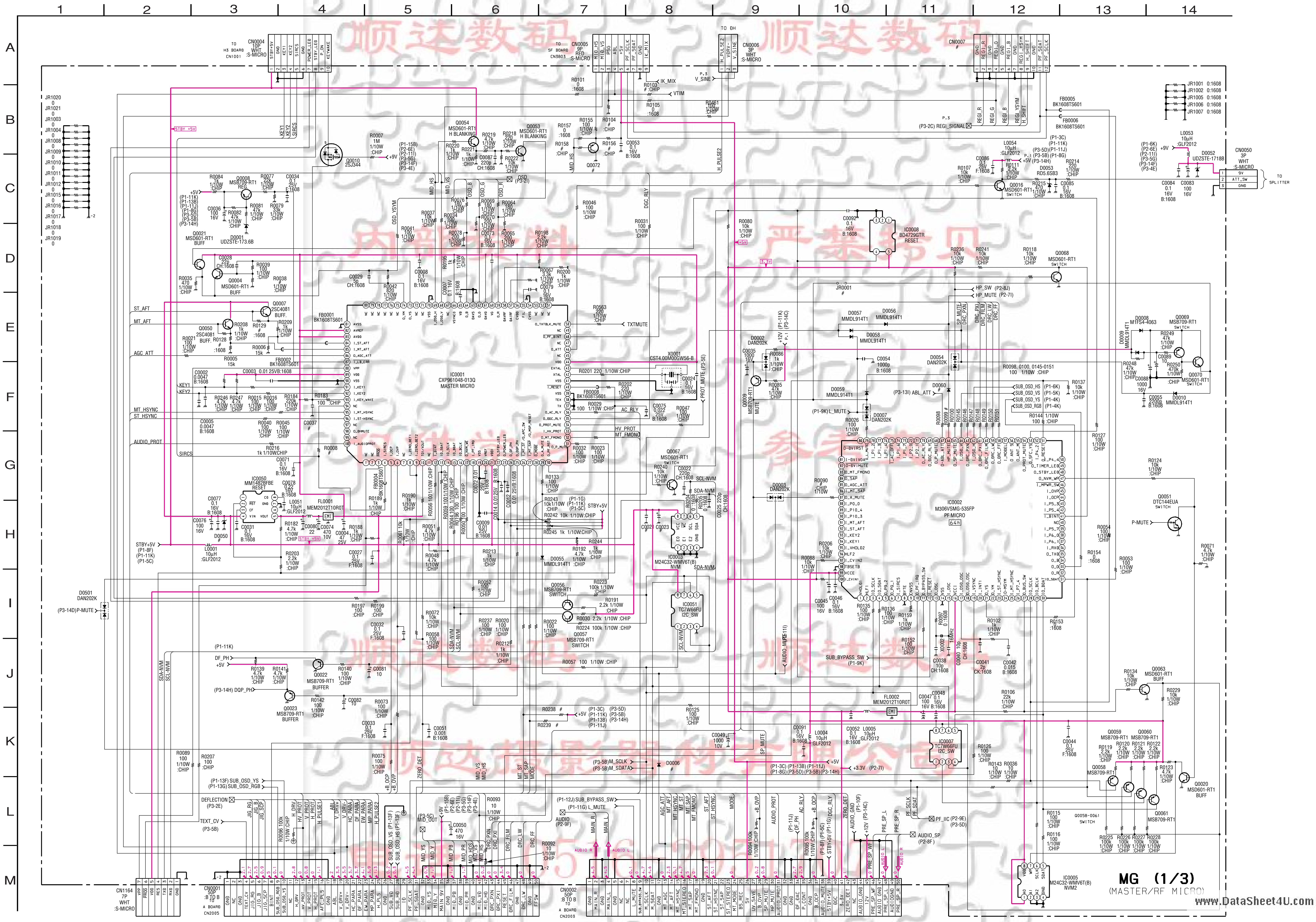
(11) Schematic Diagram of D (3/3) Board



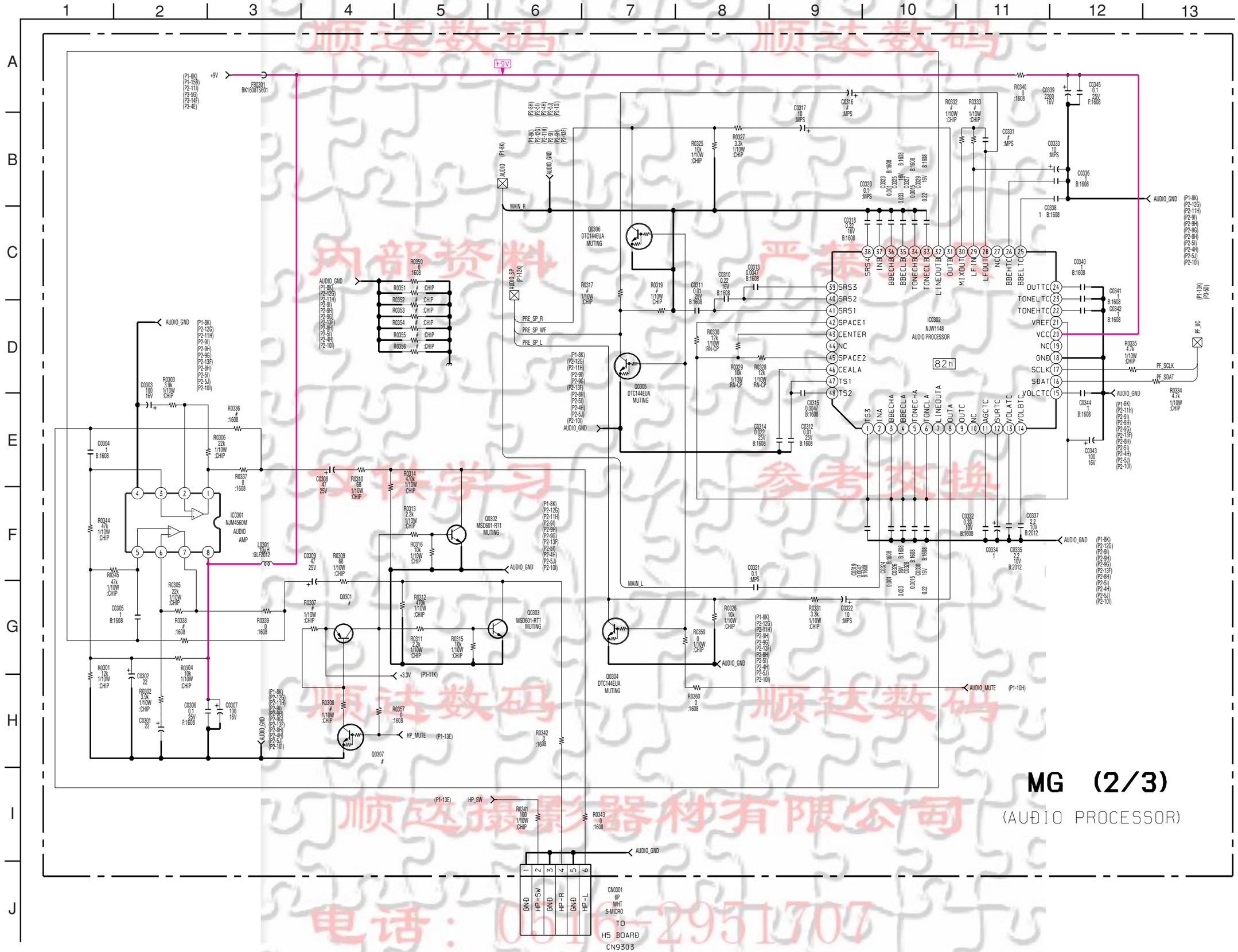
(12) Schematic Diagram of H3, H4, H5 Board



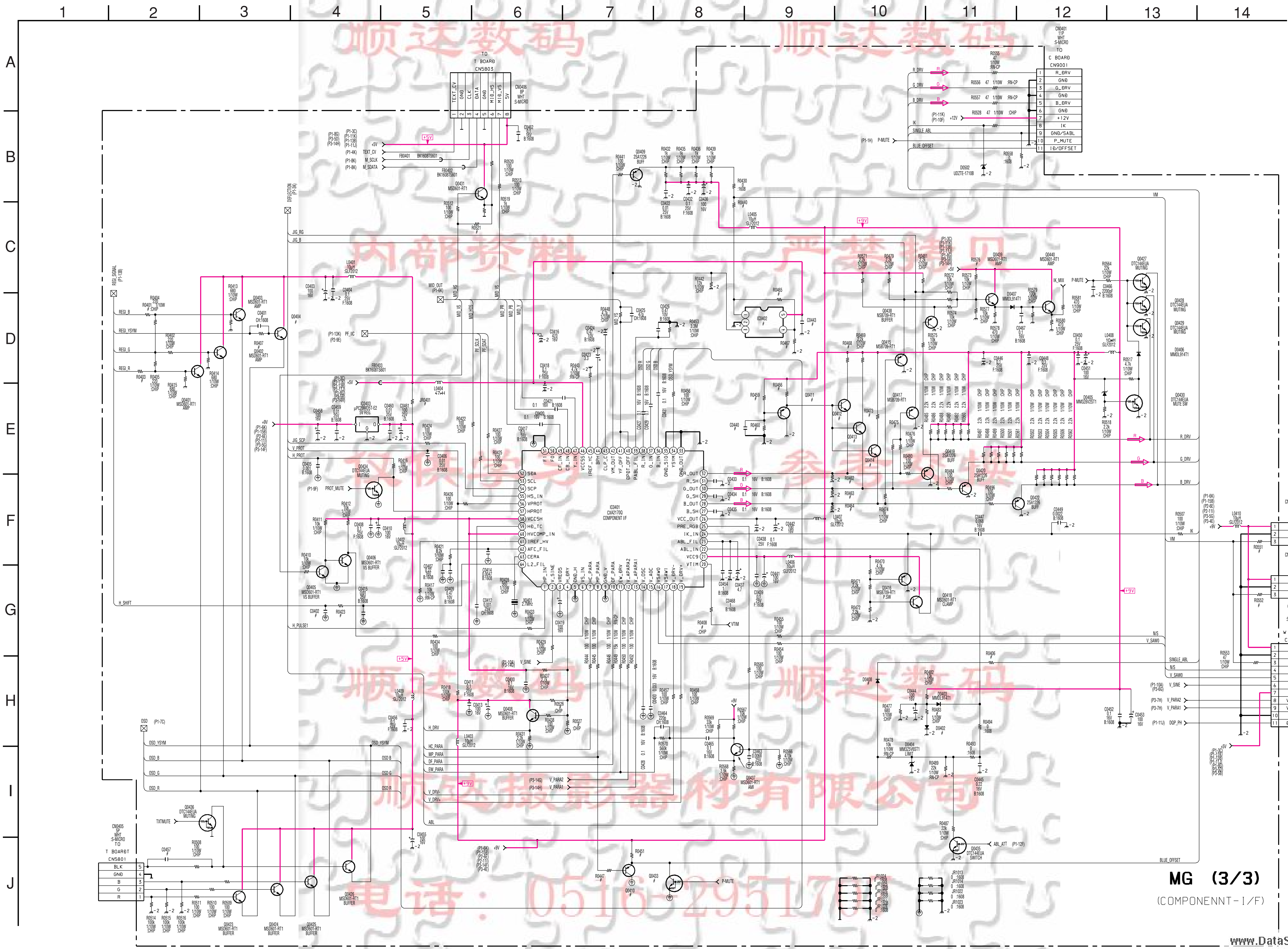
(13) Schematic Diagram of MG (1/3) Board



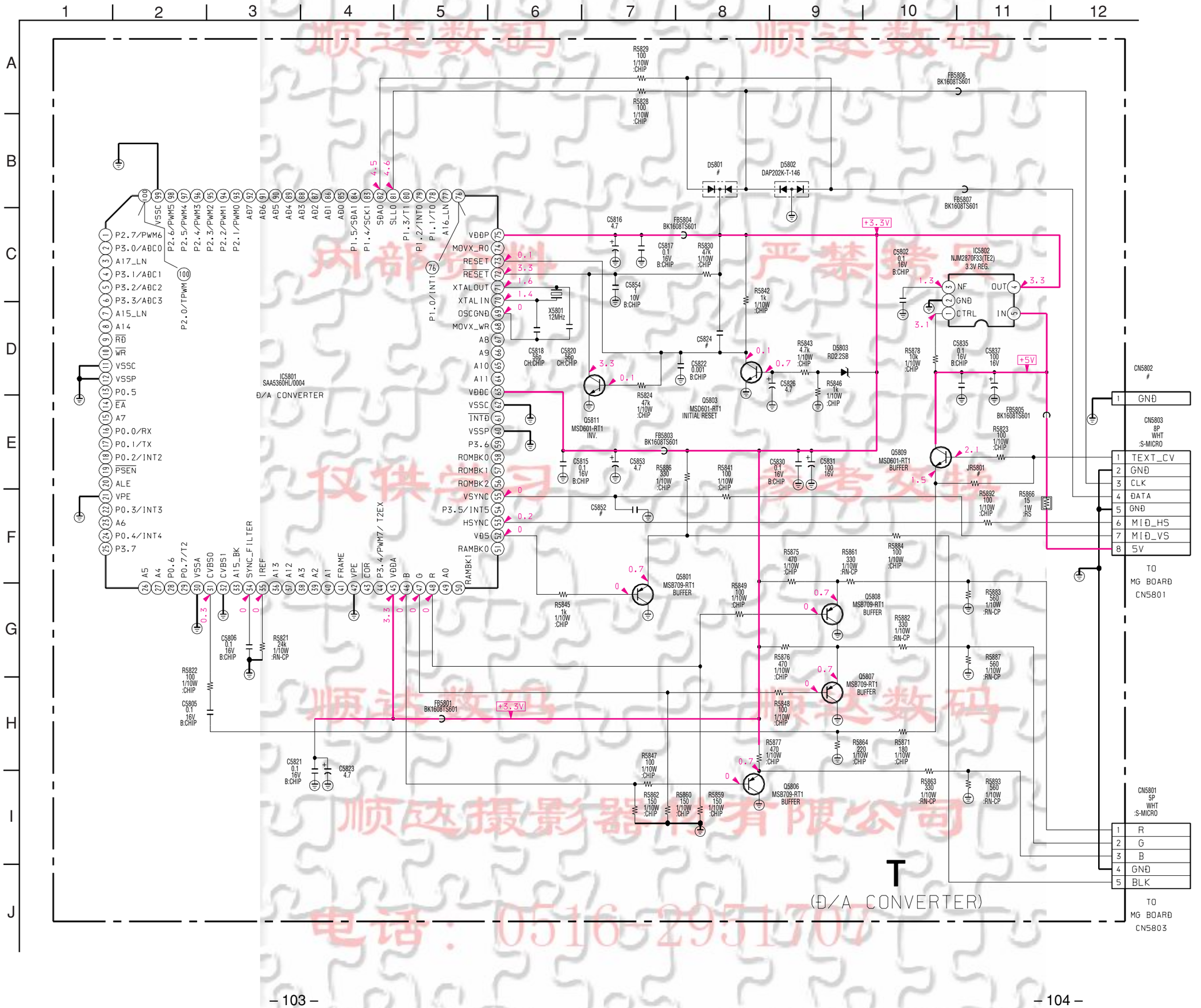
(14) Schematic Diagram of MG (2/3) Board



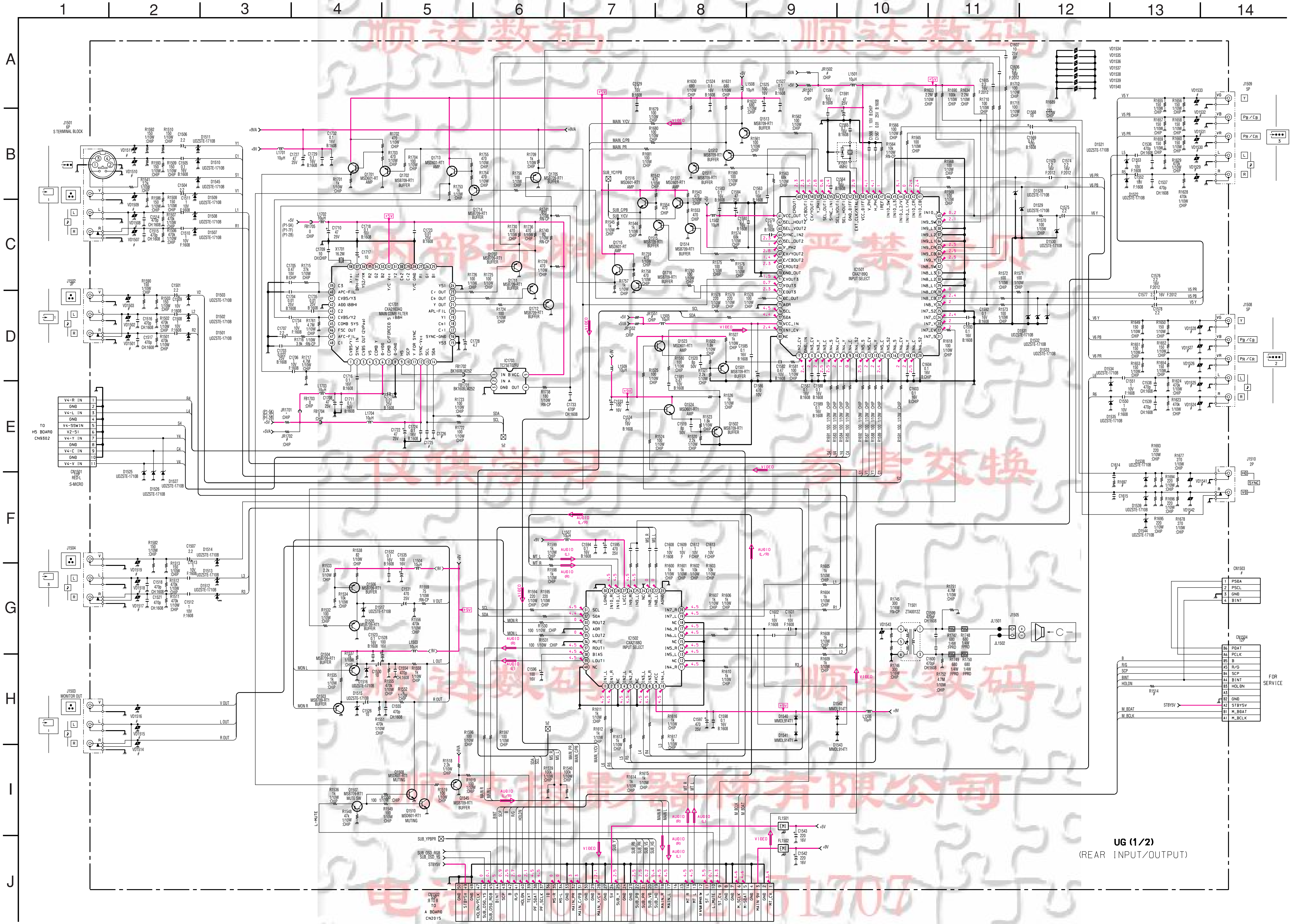
(15) Schematic Diagram of MG (3/3) Board



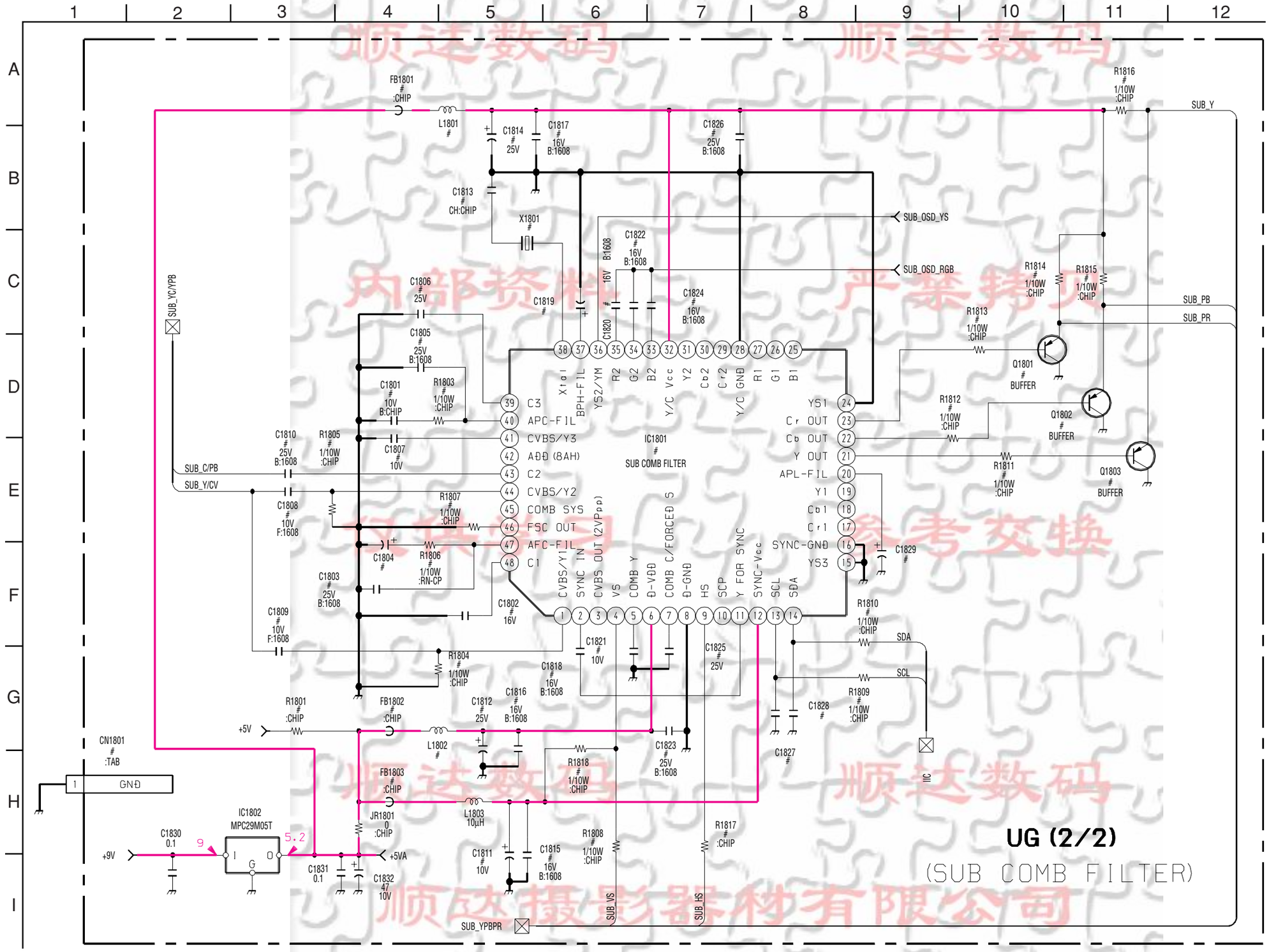
(16) Schematic Diagram of T Board



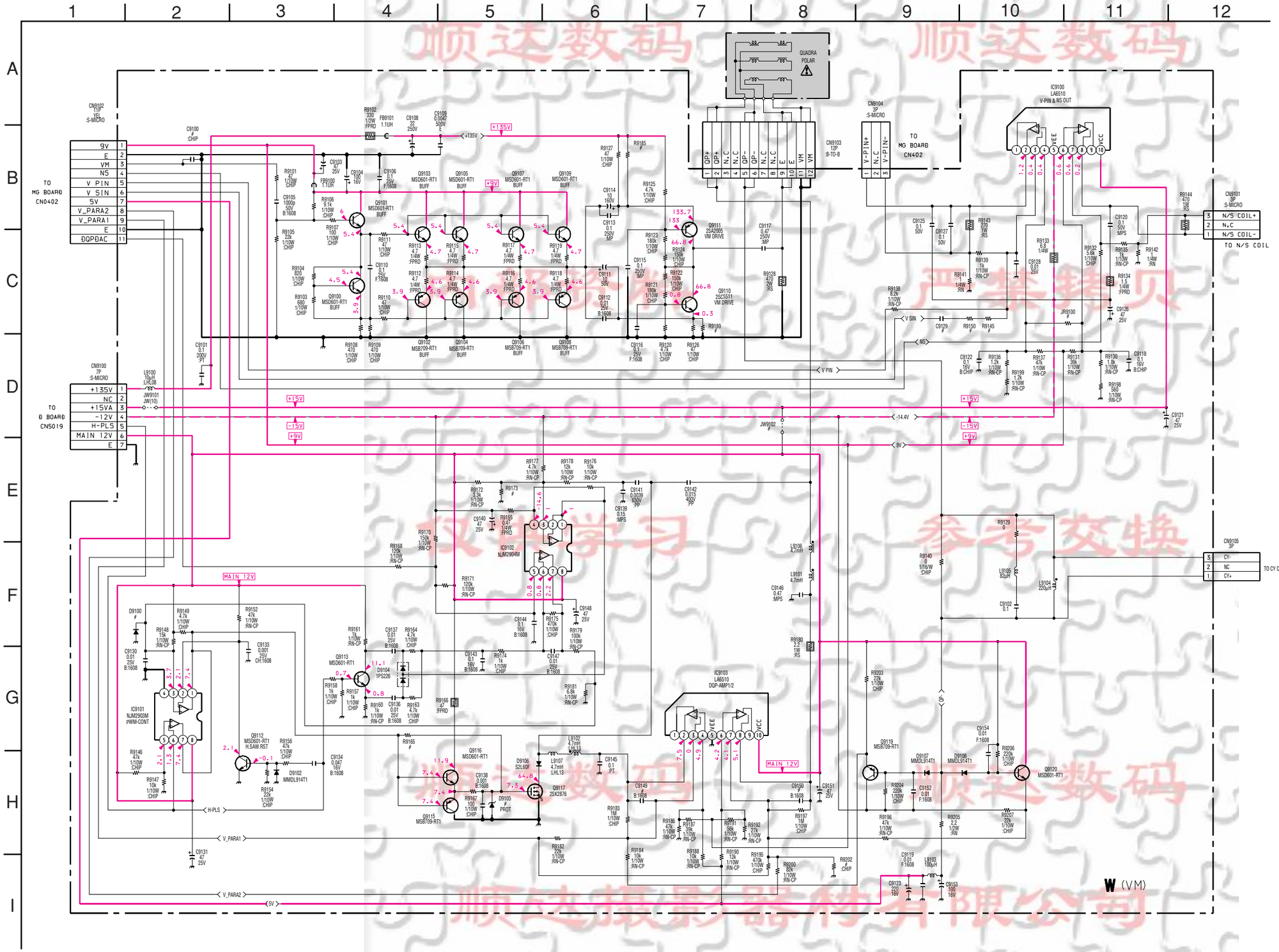
(17) Schematic Diagram of UG (1/2) Board



(18) Schematic Diagram of UG (2/2) Board



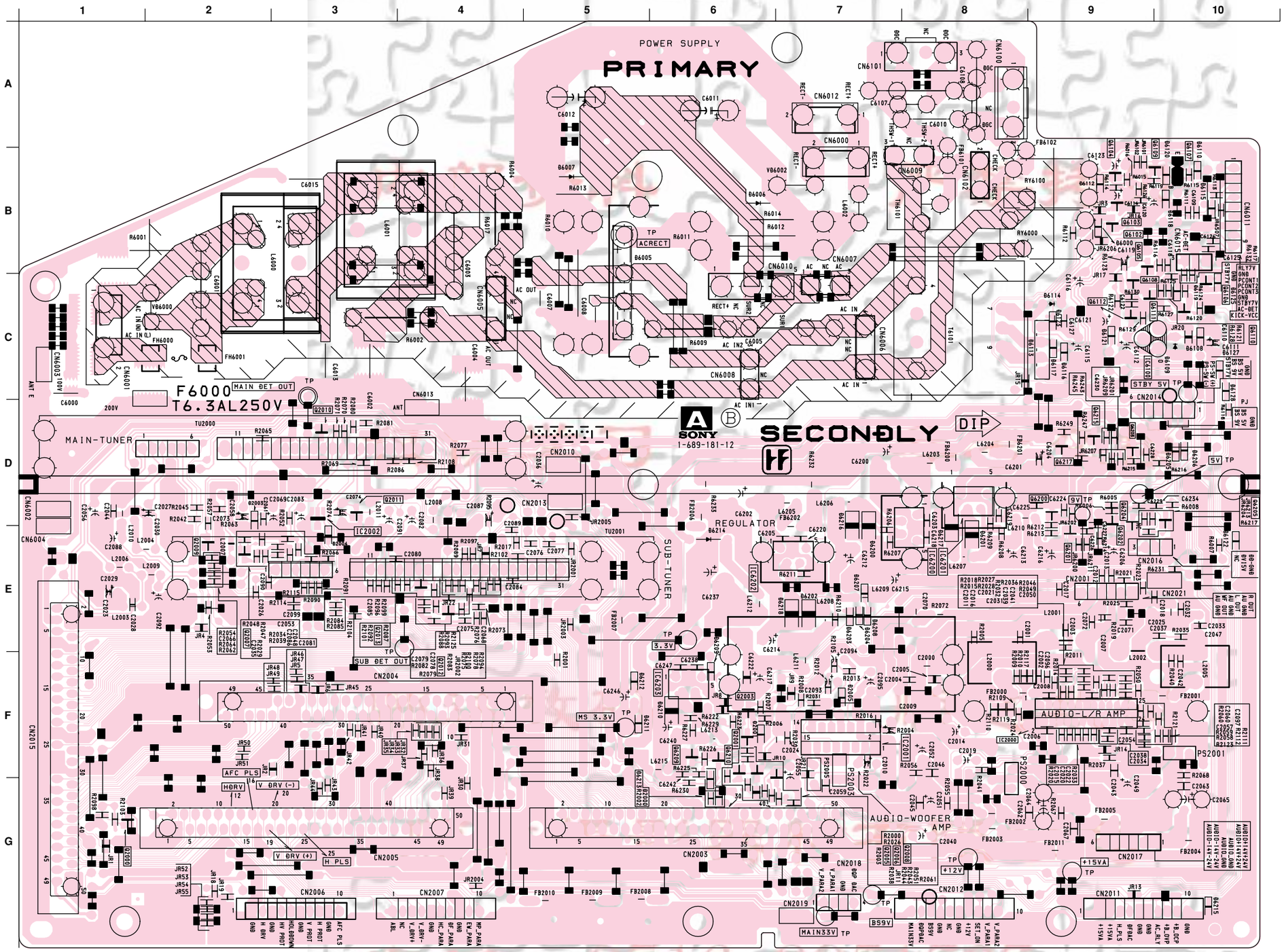
(19) Schematic Diagram of W Board



6-4. PRINTED WIRING BOARDS

A [POWER SUPPLY, TUNER, AUDIO OUTPUT, RELAY BOARD]

— A BOARD —



• A BOARD SEMICONDUCTOR LOCATION

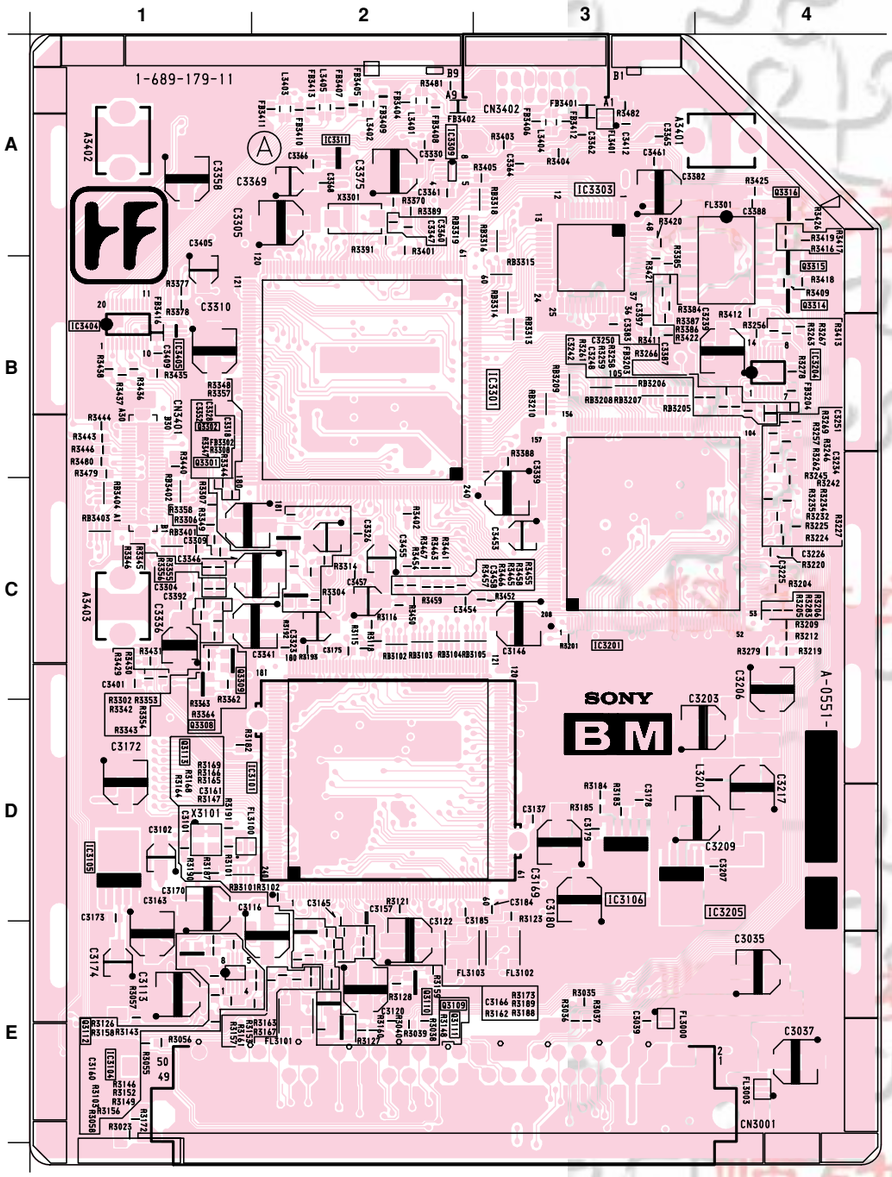
IC		
IC2000	F-9	
IC2001	F-7	
IC2002	D-3	
IC6100	C-9	
IC6200	D-8	
IC6201	D-8	
IC6202	E-7	
IC6203	F-6	

TRANSISTOR		*
Q2000	G-1	①
Q2001	F-6	①
Q2005	F-6	①
Q2006	F-6	①
Q2007	E-2	①
Q2008	F-6	①
Q2010	D-3	①
Q2012	E-4	①
Q2013	E-4	①
Q6102	B-9	①
Q6103	B-9	①
Q6104	B-9	①
Q6105	B-9	①
Q6107	B-10	①
Q6108	B-9	①
Q6109	B-10	①
Q6110	C-10	①
Q6111	C-9	①
Q6112	C-9	①
Q6209	F-6	①
Q6210	F-6	①

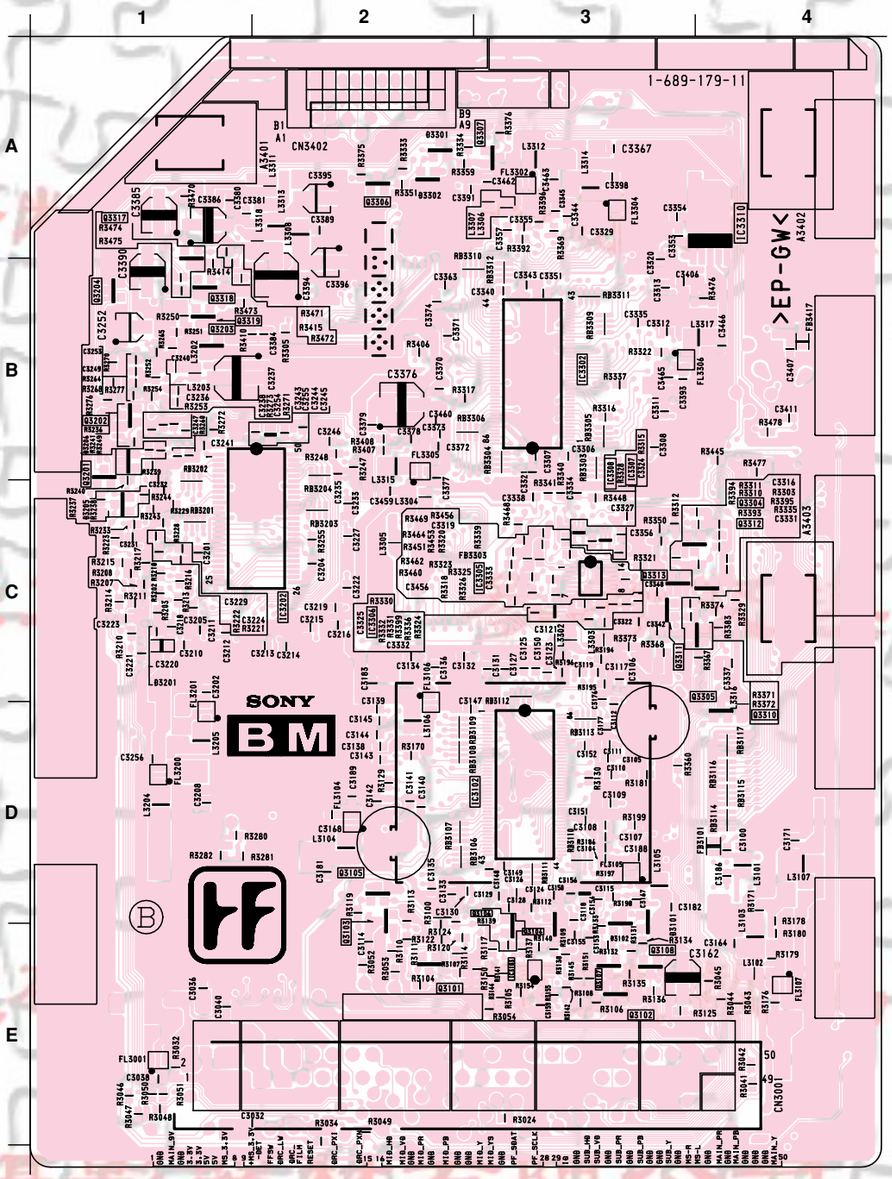
DIODE		*
D2001	F-6	③
D2004	E-3	③
D2005	F-7	③
D6000	B-9	③
D6005	B-5	③
D6108	C-10	③
D6109	C-10	③
D6110	B-10	③
D6112	B-9	③
D6113	C-9	③
D6114	C-9	③
D6115	B-10	③
D6116	C-9	③
D6117	C-9	③
D6118	B-10	③
D6119	C-10	③
D6120	B-10	③
D6121	C-9	③
D6122	E-10	③
D6123	C-9	③
D6200	D-7	③
D6201	E-8	③
D6202	E-7	③
D6203	E-7	③
D6204	E-7	③
D6205	D-10	③
D6206	D-10	③
D6207	E-7	③
D6208	E-7	③
D6209	F-6	③
D6210	F-6	③
D6211	F-5	③
D6212	F-5	③
D6214	E-6	③
D6215	G-10	③

BM [LVDS, DRC-MF, A/D CONVERTER, MID]

— BM BOARD (A Side) —



— BM BOARD (B Side) —



• BM BOARD SEMICONDUCTOR LOCATION

IC

	COMPONENT SIDE	CONDUCTOR SIDE	*
IC3101	D-2		
IC3102		D-3	
IC3103		E-3	
IC3104	E-1		
IC3105	D-1		
IC3106	D-3		
IC3201	C-3		
IC3202		C-2	
IC3204	B-4		
IC3205	D-3		
IC3301	B-2		
IC3302		B-3	
IC3303	A-3		
IC3305		C-3	
IC3306		C-3	
IC3307		C-3	
IC3308		C-3	
IC3309	A-2		
IC3310		A-4	
IC3311	A-2		
IC3404	B-1		
IC3405	B-1		

TRANSISTOR

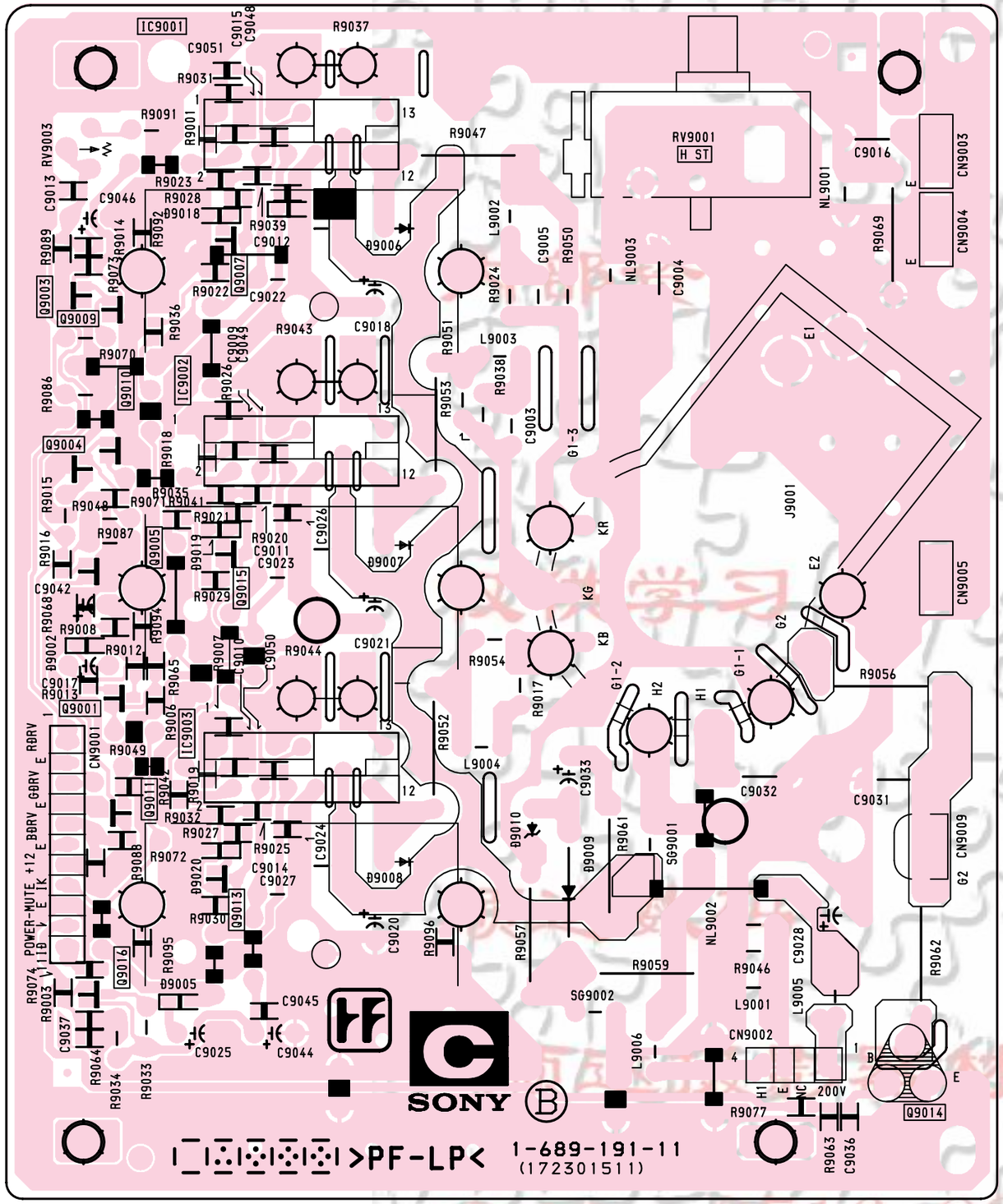
	COMPONENT SIDE	CONDUCTOR SIDE	*
Q3101		E-2	②
Q3102		E-3	②
Q3103		D-2	②
Q3104		E-3	②
Q3105		D-2	②
Q3106		D-3	②
Q3107		E-3	②
Q3108		E-3	②
Q3109	E-2		②
Q3110	E-2		②
Q3111	E-2		②
Q3112	E-1		②
Q3113	E-2		②
Q3201		B-1	②
Q3202		B-1	②
Q3203		B-1	②
Q3204		B-1	②
Q3301	C-2		②
Q3302	C-2		②
Q3304		C-4	②
Q3305		D-4	②
Q3306		A-2	②
Q3307		A-3	②
Q3308	C-1		②
Q3309	C-1		②
Q3310		C-4	②
Q3311		C-3	②
Q3312		C-4	②
Q3313		C-3	②
Q3314	B-4		②
Q3315	B-4		②
Q3316	A-4		②
Q3317		A-1	②
Q3318		B-1	②
Q3319		B-1	②

DIODE

	COMPONENT SIDE	CONDUCTOR SIDE	*
D3101		D-3	⑤
D3102		D-3	⑤
D3205		C-1	⑤
D3206		B-1	⑤
D3301		A-2	⑤
D3302		A-2	⑤

C [RGB DRIVE]

— C BOARD —



• D BOARD SEMICONDUCTOR LOCATION

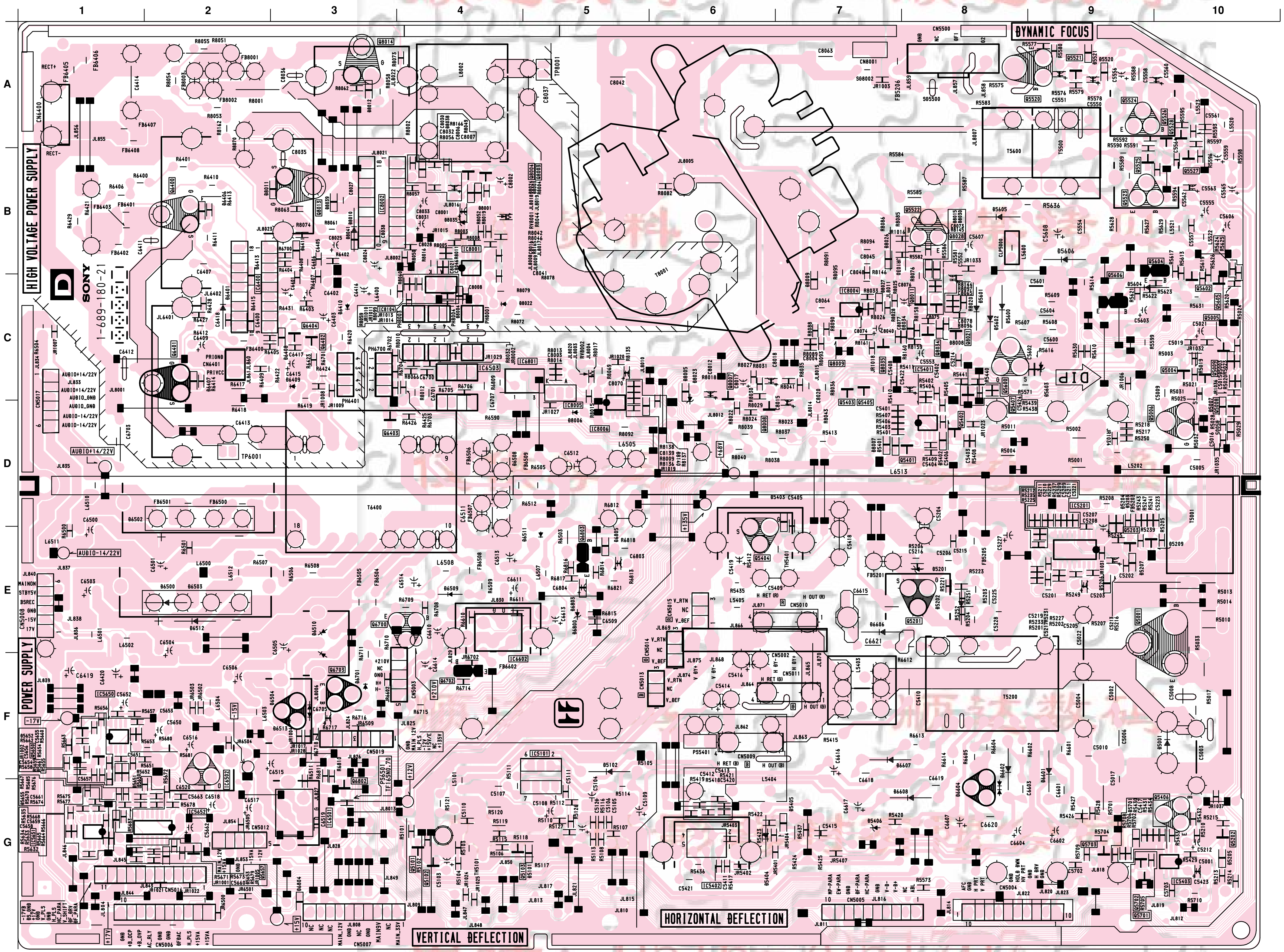
DIODE		
*		
IC3101	D-2	
IC5101	F-5	
IC5201	E-9	
IC5401	D-8	
IC5402	G-6	
IC5403	G-10	
IC5650	F-1	
IC5651	G-1	
IC5652	G-2	
IC6400	C-2	
IC6501	G-3	
IC6503	C-4	
IC6602	E-4	
IC6801	C-5	
IC8001	B-4	
IC8002	B-3	
IC8004	C-7	
IC8005	C-5	
IC8104	C-4	

TRANSISTOR		
*		
Q5001	E-10	
Q5004	C-10	①
Q5005	C-10	①
Q5006	D-10	
Q5008	D-10	①
Q5009	C-10	①
Q5101	G-4	①
Q5102	G-4	①
Q5103	G-4	①
Q5201	E-8	
Q5202	G-10	①
Q5203	E-9	①
Q5401	D-8	①
Q5402	D-8	①
Q5403	C-7	①
Q5404	E-6	
Q5405	C-7	①
Q5406	G-10	
Q5522	B-8	
Q5600	C-8	
Q5602	C-10	①
Q5604	B-10	
Q5605	C-10	①
Q5606	C-9	
Q5650	F-1	①
Q5657	G-2	①
Q5701	G-9	①
Q5702	G-9	①
Q5703	G-9	①
Q6400	B-2	
Q6401	C-2	
Q6802	G-3	①
Q6803	E-5	
Q8003	B-4	①
Q8004	B-4	①
Q8007	C-6	①
Q8009	C-7	①
Q8011	C-8	①
Q8013	B-3	
Q8014	A-3	
Q8021	C-8	①
Q8028	C-8	①
Q8034	C-8	①
Q8035	C-7	①

DIODE		
*		
D5001	F-10	
D5003	C-10	③
D5005	D-10	③
D5101	G-5	③
D5102	F-5	
D5201	E-8	
D5202	E-8	
D5203	E-9	③
D5204	E-9	③
D5205	G-10	③
D5206	E-9	③
D5207	E-9	③
D5209	E-9	③
D5401	D-7	③
D5402	D-8	③
D5405	G-7	③
D5406	G-7	
D5600	C-8	
D5601	C-8	
D5602	C-8	
D5603	C-9	
D5604	C-9	
D5605	B-8	
D5606	B-9	
D5650	F-1	③
D5651	F-1	③
D5652	F-1	③
D5653	G-2	③
D5655	G-1	③
D5701	G-9	③
D6401	C-2	③
D6406	B-2	③
D6407	C-2	③
D6408	C-3	③
D6409	C-3	
D6410	C-3	
D6411	B-3	③
D6413	C-2	③
D6415	C-2	③
D6502	D-2	
D6504	F-3	
D6508	D-4	
D6509	E-4	
D6510	E-3	
D6511	E-5	
D6601	F-9	
D6602	F-8	
D6604	G-8	
D6607	F-7	
D6608	G-8	
D6800	E-5	
D6803	E-5	③
D6804	G-3	③
D6805	E-5	③
D8001	B-4	③
D8003	B-4	③
D8005	C-6	③
D8006	D-5	
D8008	C-8	③
D8009	C-7	③
D8010	B-3	
D8011	B-3	③
D8012	A-3	③
D8015	B-8	③
D8022	C-4	
D8023	C-6	
D8024	B-4	③
D8026	B-7	③
D8027	C-7	③
D8030	B-8	③
D8034	C-8	③
D8038	B-4	③
D8039	B-3	③
D8041	B-3	

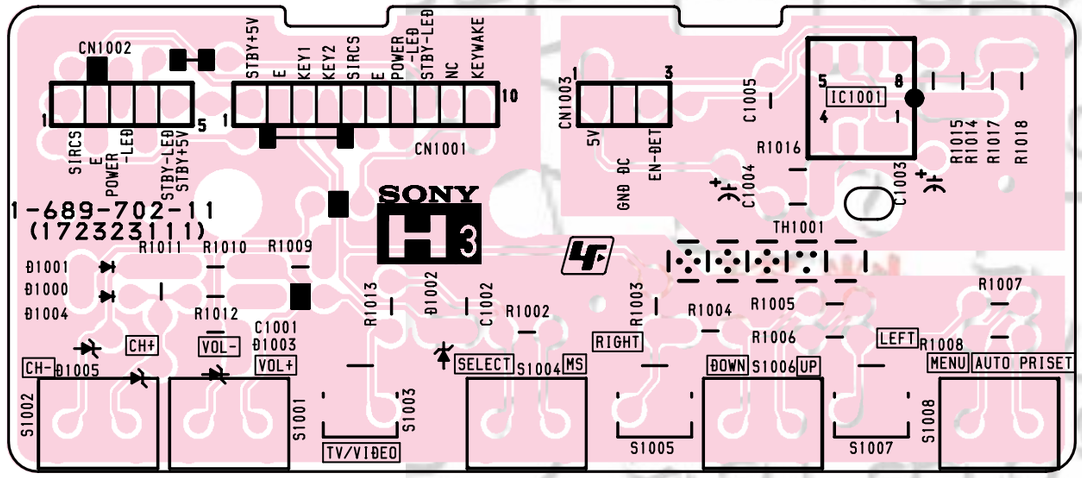
D [H OUT/V OUT, HV REG, POWER SUPPLY]

— D BOARD —



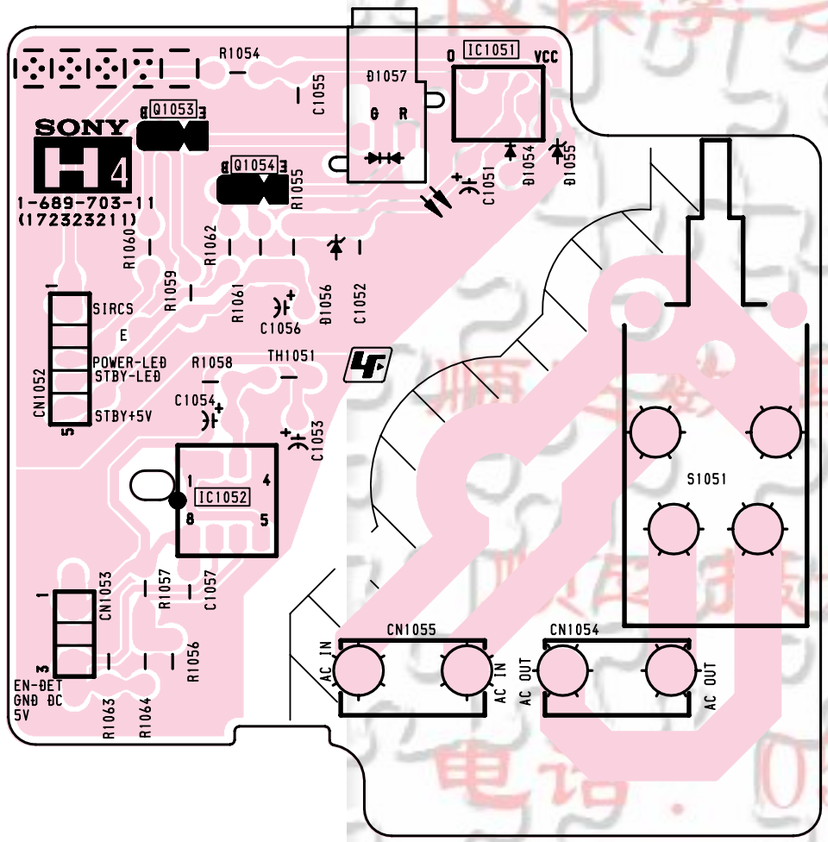
H3 [CONTROL SWITCHES]

— H3 BOARD —



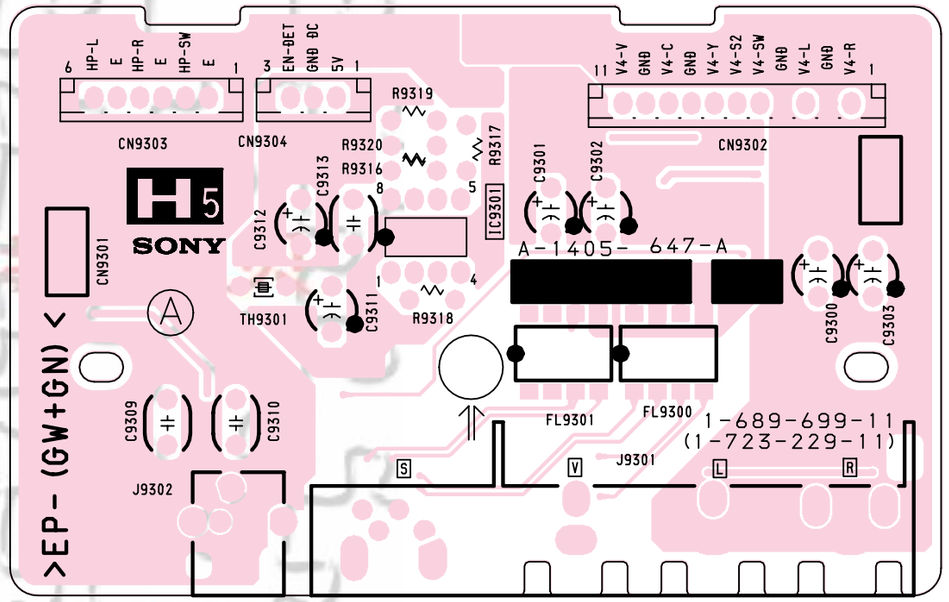
H4 [POWER SWITCH, REMOTE CONTROL SENSOR, INDICATORS]

— H4 BOARD —

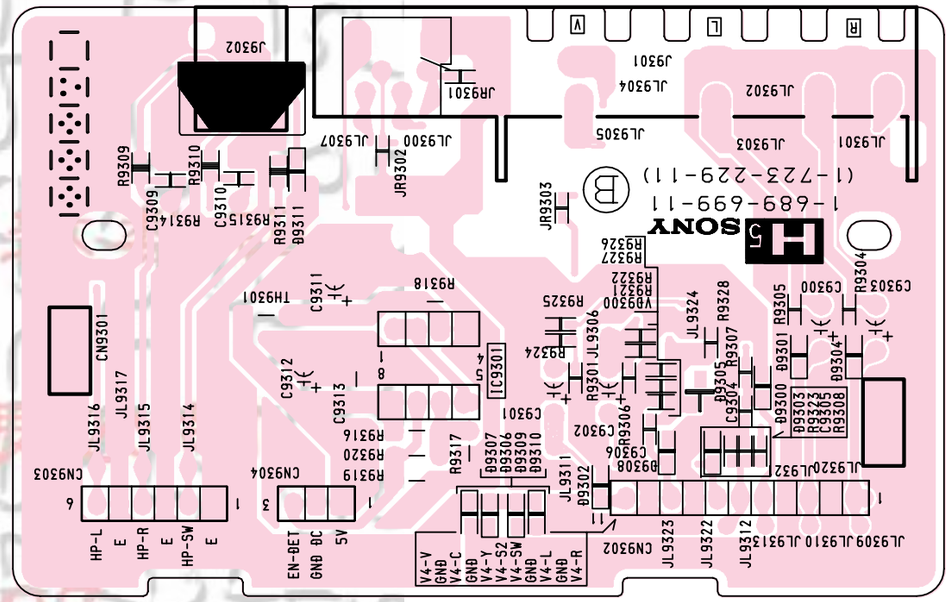


H5 [VIDEO 4 IN, PHONES]

— H5 BOARD (A Side) —

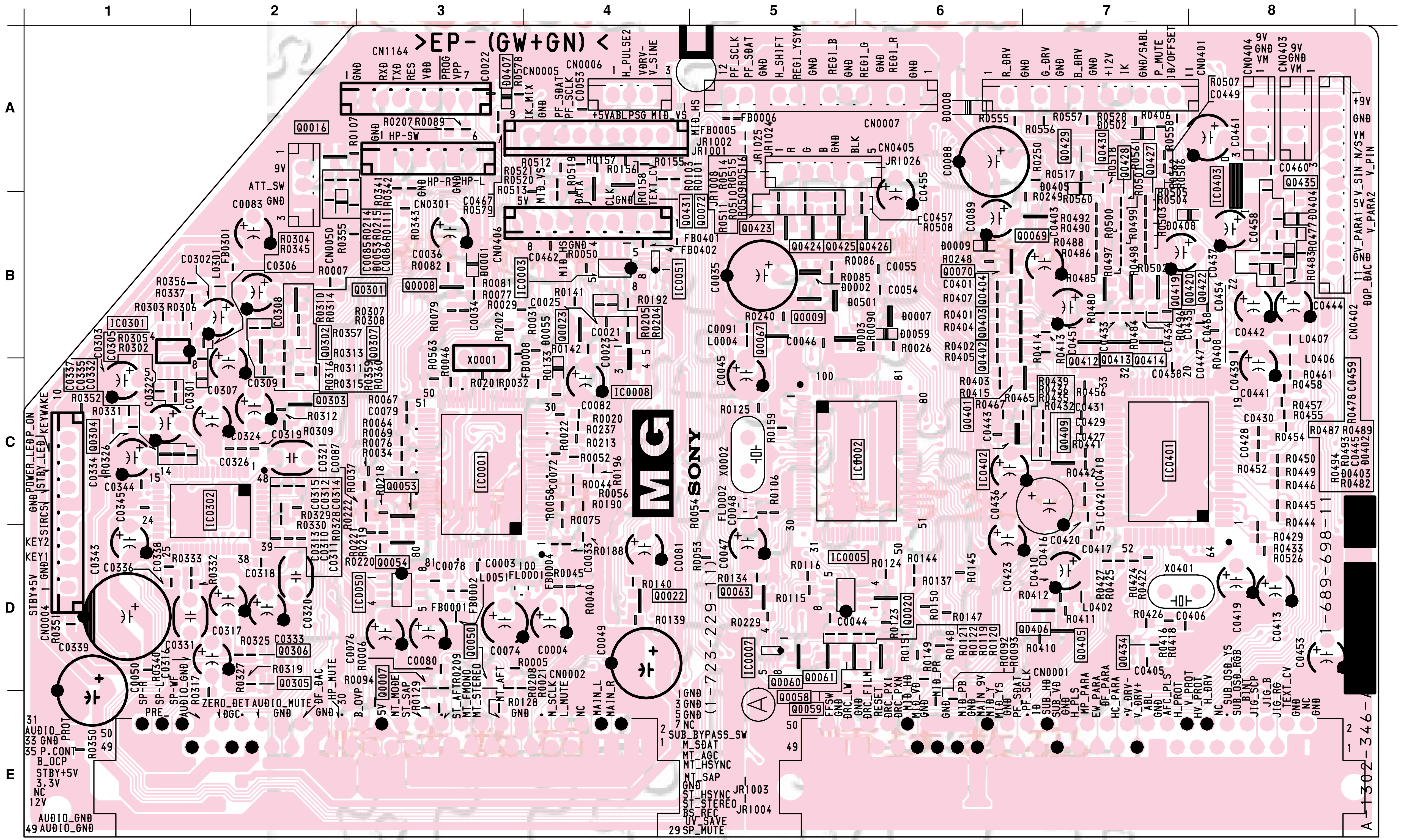


— H5 BOARD (B Side) —



MG [MASTER/RF MICRO, AUDIO PROCESSOR, COMPONENNT-I/F]

— MG BOARD (A Side) —



• MG BOARD SEMICONDUCTOR LOCATION

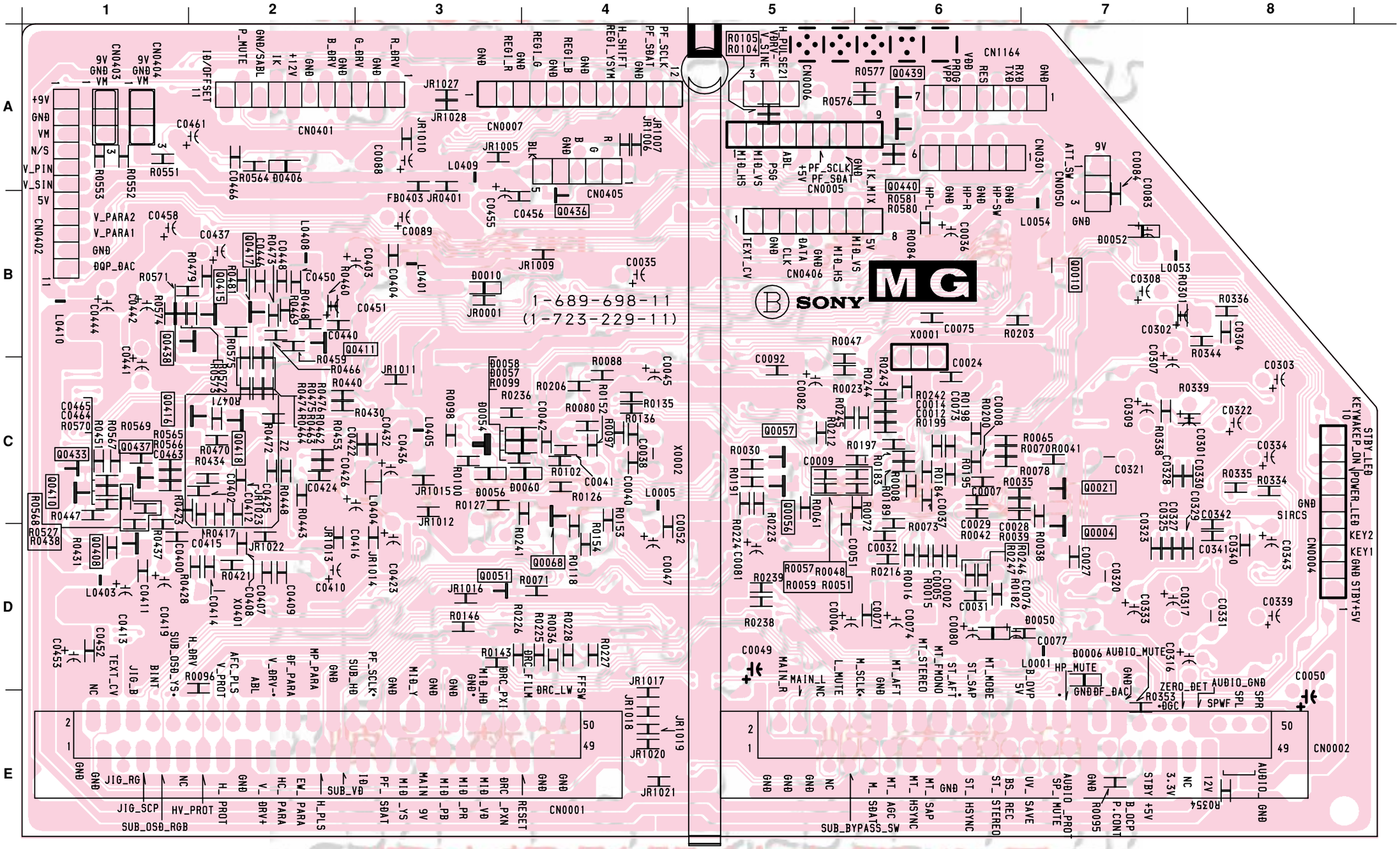
IC

Ref.	COMPONENT SIDE	CONDUCTOR SIDE	*
IC0001	C-3		
IC0002	C-5		
IC0003	B-4		
IC0005	D-5		
IC0007	D-5		
IC0008	C-4		
IC0050	D-3		
IC0051	B-4		
IC0301	B-1		
IC0302	C-2		
IC0401	C-7		
IC0403	A-8		

TRANSISTOR

Ref.	COMPONENT SIDE	CONDUCTOR SIDE	*
Q0004		C-7	①
Q0007	D-3		②
Q0008	B-3		②
Q0009	B-5		②
Q0010		B-7	②
Q0016	A-2		②
Q0020	D-6		②
Q0021		C-7	①
Q0022	D-4		②
Q0023	B-4		②
Q0050	D-3		②
Q0051		D-3	①
Q0053	C-3		②
Q0054	D-3		②
Q0056		C-5	①
Q0057		C-5	①
Q0058	D-5		②
Q0059	D-6		②
Q0060	D-5		②
Q0061	D-5		②
Q0063	D-5		②
Q0067	B-5		②
Q0068		C-4	①
Q0069	B-7		②
Q0070	B-6		②
Q0302	B-2		②
Q0303	C-2		②
Q0304	C-1		②
Q0305	D-2		②
Q0306	D-2		②
Q0401	C-6		②
Q0402	B-6		②
Q0403	B-6		②
Q0405	D-7		②
Q0406	D-7		②
Q0408		D-1	①
Q0409	D-7		②
Q0415		B-2	①
Q0416		C-2	①
Q0417		B-2	①
Q0418		C-2	①
Q0419	B-7		②
Q0420	B-7		②
Q0422	B-7		②
Q0423	B-5		②
Q0424	B-5		②
Q0425	B-5		②
Q0426	B-6		②
Q0427	A-7		②
Q0428	A-7		②
Q0429	A-7		②
Q0430	A-7		②
Q0431	A-4		②

— MG BOARD (B Side) —



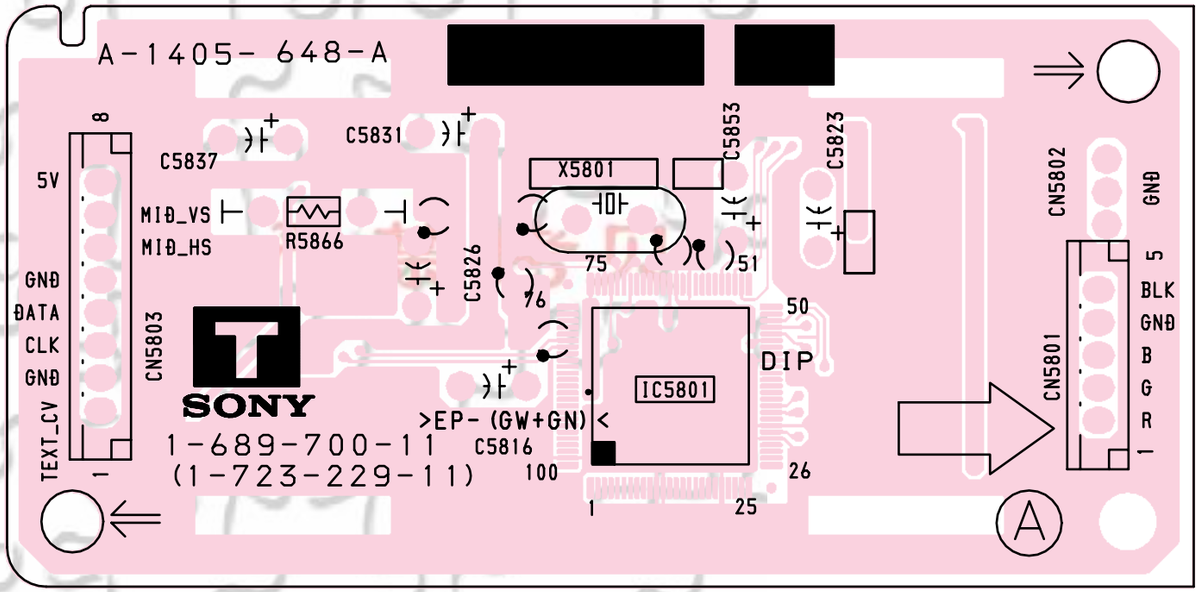
Q0434	D-7		②
Q0435	B-8		②
Q0436		B-4	①
Q0437		C-1	①
Q0438		B-1	①
Q0439		A-6	①
Q0440		A-6	①

DIODE

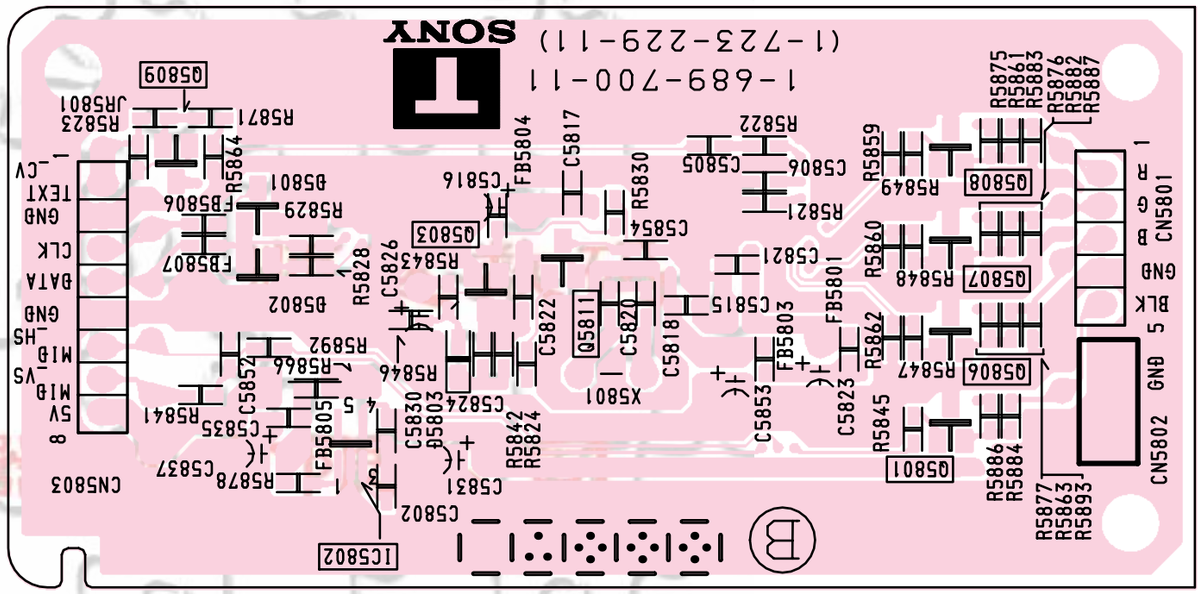
			COMPONENT SIDE	CONDUCTOR SIDE *
D0001	B-3			③
D0002	B-5			⑤
D0003	B-5			⑤
D0007	B-6			⑤
D0008	A-6			③
D0009	B-6			③
D0010		B-3		③
D0052		B-7		③
D0053	B-2			③
D0054		C-3		④
D0055	C-4			③
D0056		C-3		③
D0057		C-3		③
D0058		C-3		③
D0059	B-6			③
D0403	B-8			③
D0404	B-8			③
D0405	A-7			③
D0406		A-2		③
D0407	A-3			③
D0501		B-5		⑤
D0502	A-7			③

T [TELE TEXT]

— T BOARD (A Side) —



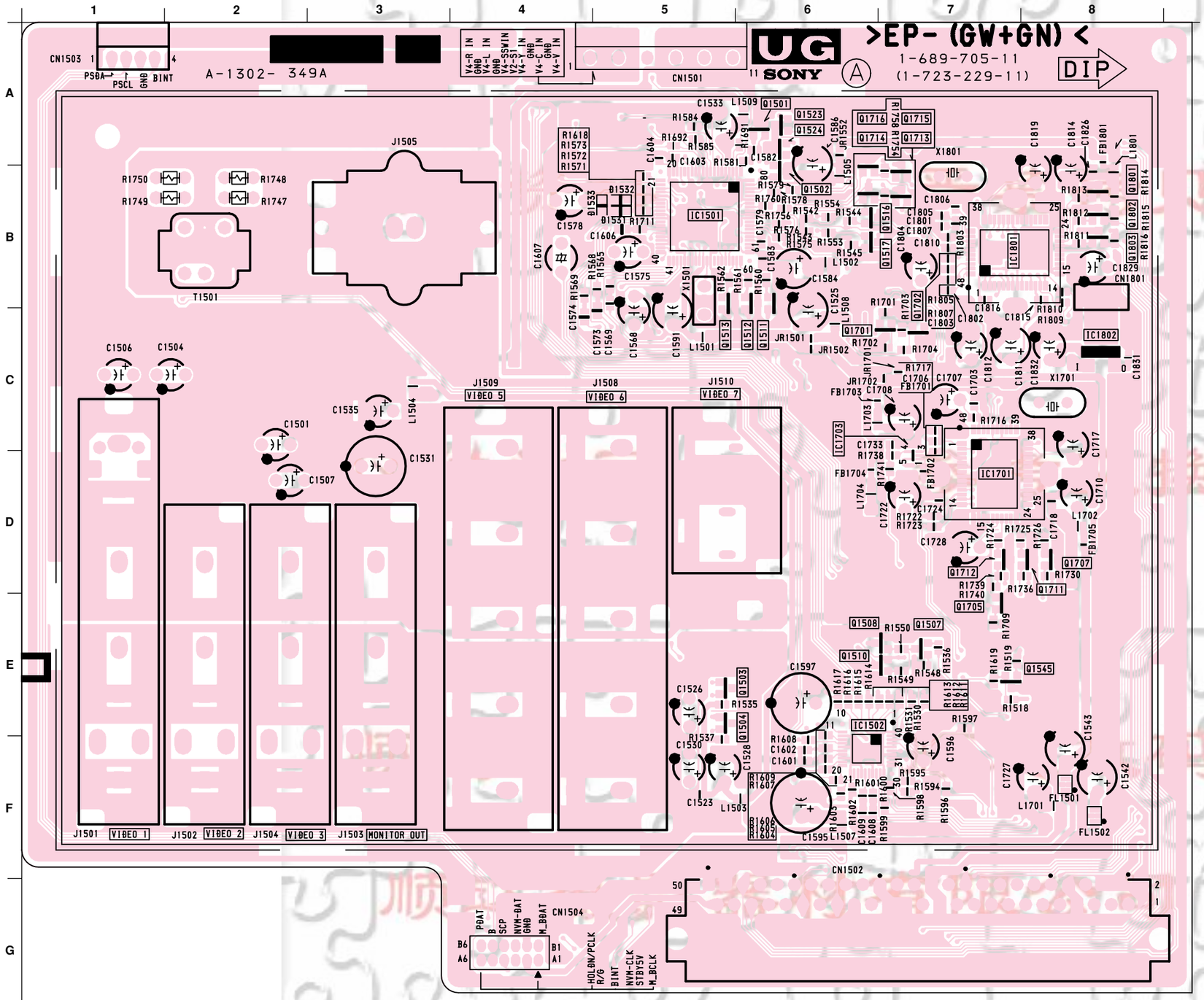
— T BOARD (B Side) —



UG

[REAR INPUT/OUTPUT, SUB COMB FILTER]

— UG BOARD (A Side) —



• UG BOARD SEMICONDUCTOR LOCATION

IC

	COMPONENT SIDE	CONDUCTOR SIDE	*
IC1501	B-5		
IC1502	F-6		
IC1701	D-7		
IC1703	D-7		
IC1801	B-7		
IC1802	C-8		

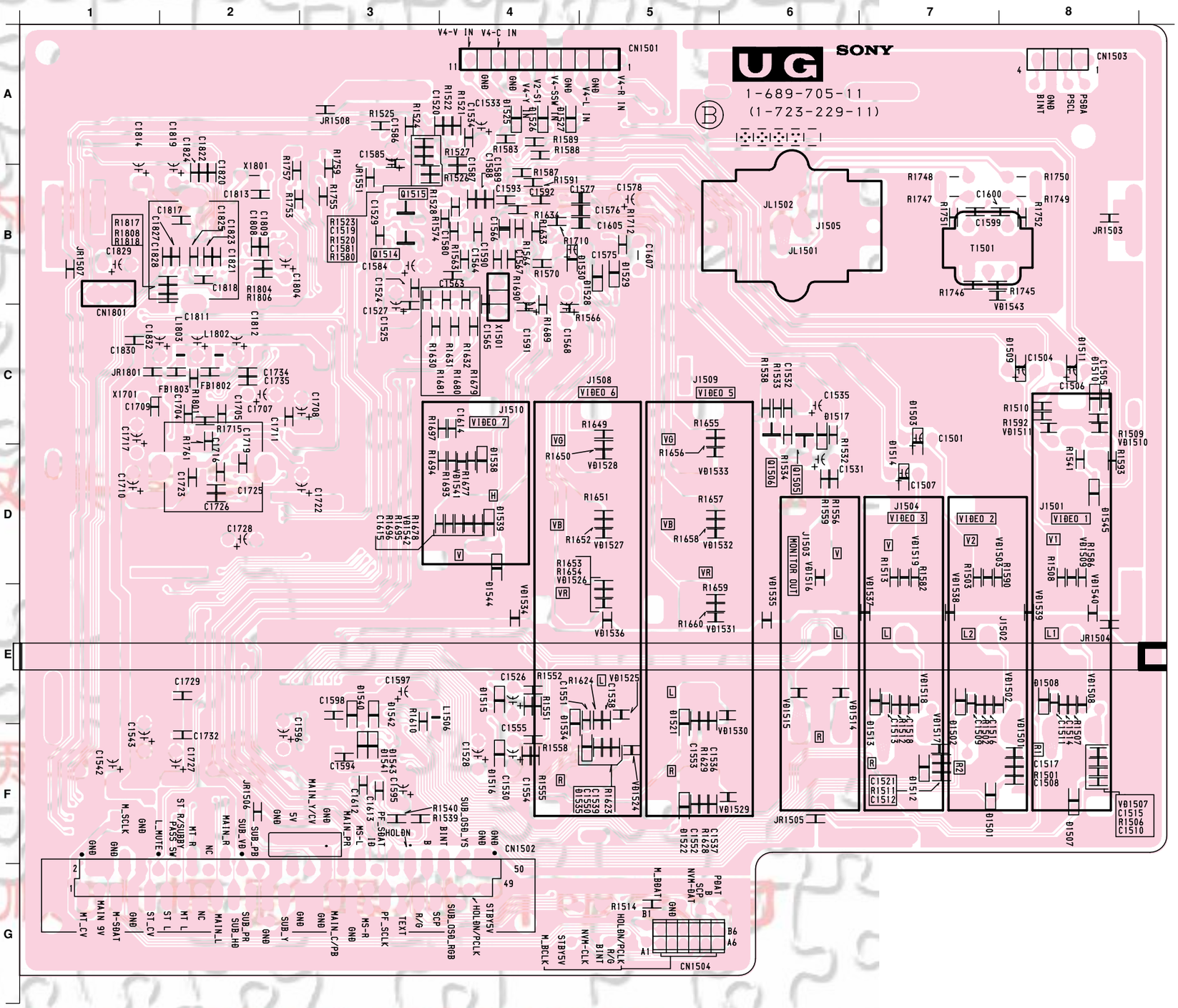
TRANSISTOR

	COMPONENT SIDE	CONDUCTOR SIDE	*
Q1501	A-6		②
Q1502	B-6		②
Q1503	E-5		②
Q1504	E-5		②
Q1505		C-6	①
Q1506		C-6	①
Q1507	E-7		②
Q1508	E-7		②
Q1510	E-7		②
Q1511	C-6		②
Q1512	C-6		②
Q1513	C-5		②
Q1514		B-3	①
Q1515		B-3	①
Q1516	B-6		②
Q1517	B-6		②
Q1523	A-6		②
Q1524	A-6		②
Q1545	E-7		②
Q1701	C-7		②
Q1702	C-7		②
Q1705	E-7		②
Q1707	D-8		②
Q1711	D-8		②
Q1712	D-7		②
Q1713	B-7		②
Q1714	B-6		②
Q1715	B-7		②
Q1716	B-6		②
Q1801	B-8		②
Q1802	B-8		②
Q1803	B-8		②

DIODE

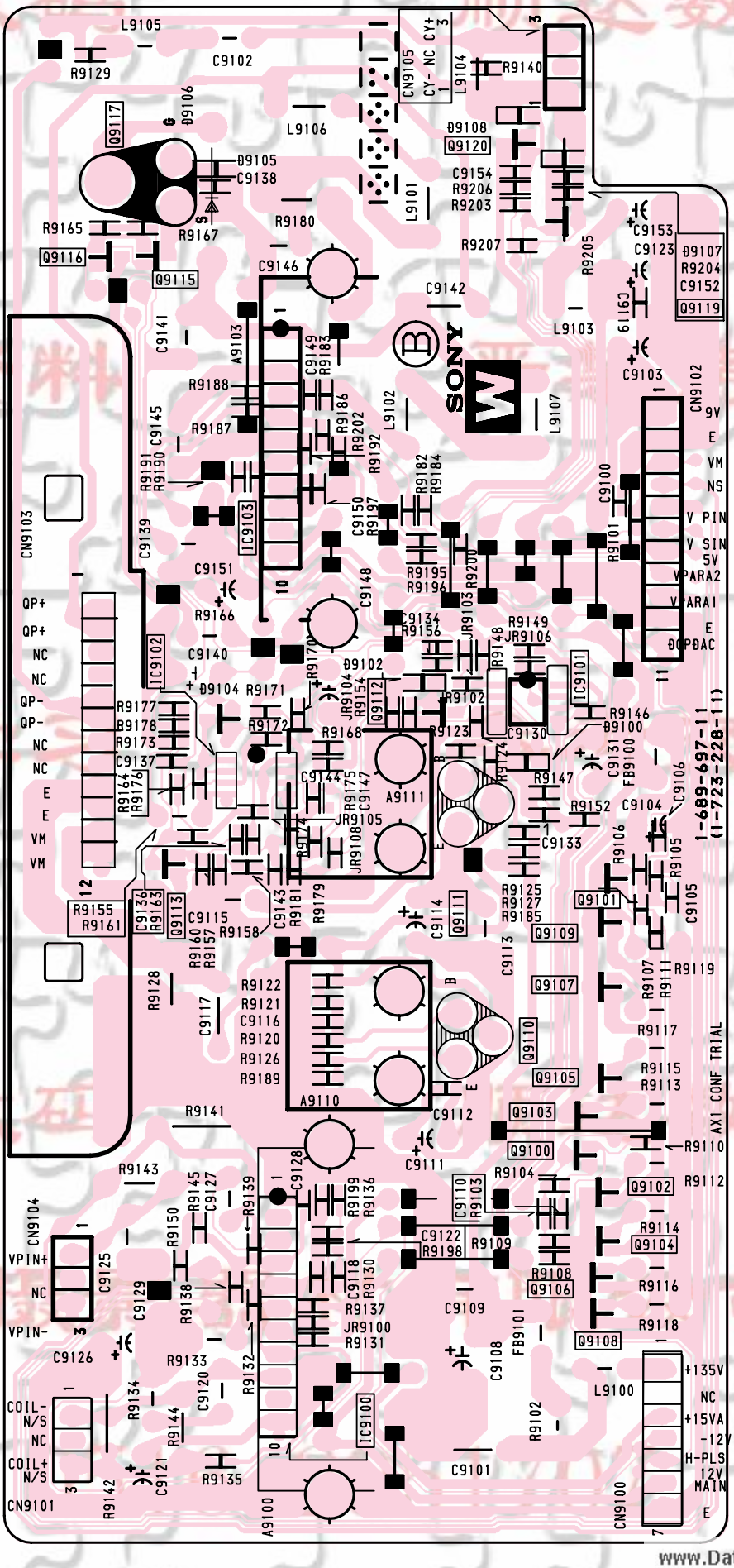
	COMPONENT SIDE	CONDUCTOR SIDE	*
D1501		F-7	③
D1502		E-7	③
D1503		C-7	③
D1507		F-8	③
D1508		E-8	③
D1509		C-8	③
D1510		C-8	③
D1511		C-8	③
D1512		F-7	③
D1513		E-7	③
D1514		D-7	③
D1515		E-4	③
D1516		F-4	③
D1517		C-6	③
D1521		E-5	③
D1522		F-5	③
D1525		A-4	③
D1526		A-4	③
D1527		A-4	③
D1528		B-5	③
D1529		B-5	③
D1530		B-4	③
D1531	B-5		③
D1532	B-5		③
D1533	B-5		③
D1534		E-4	③
D1535		F-4	③
D1538		D-4	③
D1539		D-4	③
D1540		E-3	③
D1541		F-3	③
D1542		E-3	③
D1543		F-3	③
D1544		D-4	③
D1545		D-8	③

— UG BOARD (B Side) —



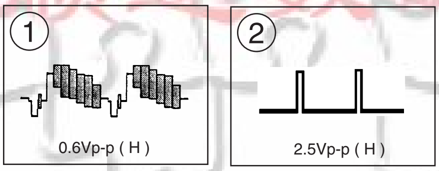
W [VM]

— W BOARD —

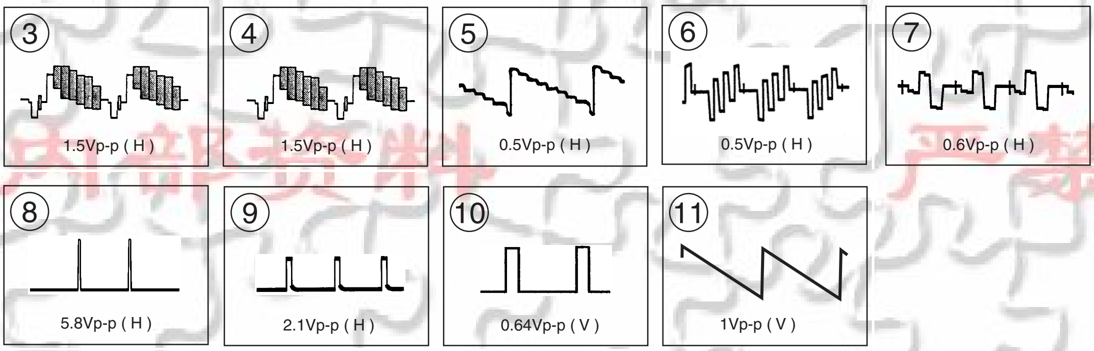


6-5. WAVEFORMS

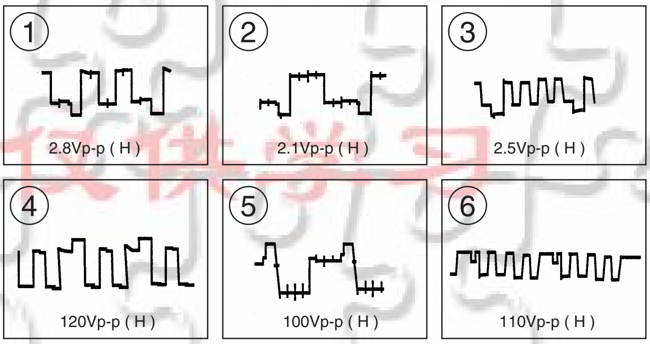
•A (2/3) BOARD WAVEFORMS



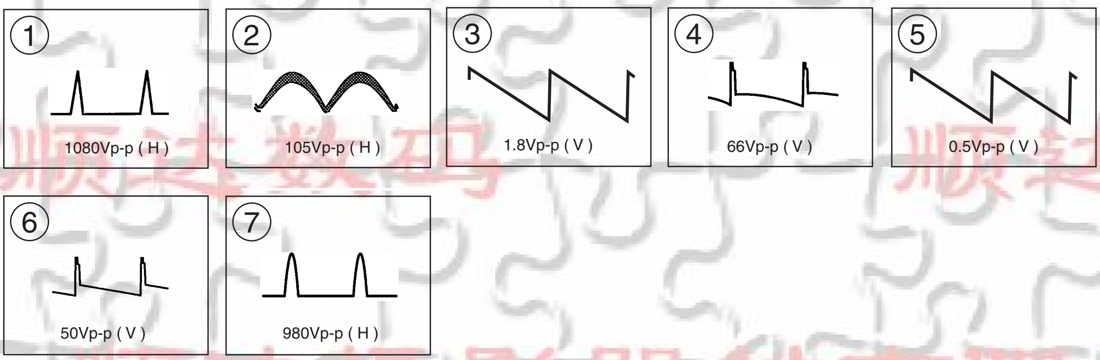
•A (3/3) BOARD WAVEFORMS



• C BOARD WAVEFORMS

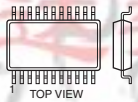


•D (1/3) BOARD WAVEFORMS



6-6. SEMICONDUCTORS

AK4352VT-E2



16pin

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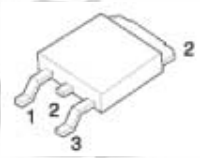

BA9759F-E2

18pin

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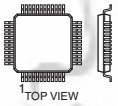

208pin

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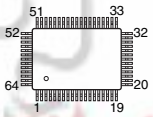

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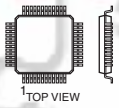

44pin

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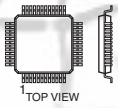

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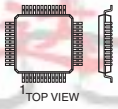

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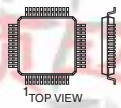

240pin

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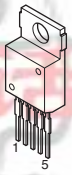

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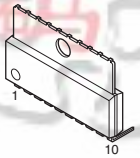

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NJM2903M-TE2
NJM2904M
NJM2904M-TE2
NJM4558E(TE2)
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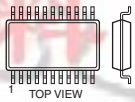
TC7W04FU-TE12R
TC7W66FU(TE12R)
TC7WH74FK



8pin

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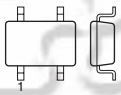

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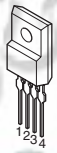

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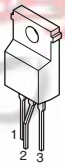

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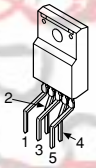
SI-8050S-LF1101



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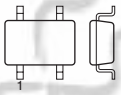
TC7SET02FU(TE85R)
TC7SET08FU(TE85L)



5pin

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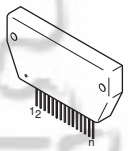

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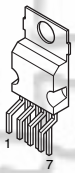

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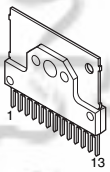

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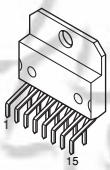

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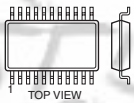
TLC2933IPWR-12



14pin

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2SA1163-G
2SA1226
2SA1576A-T106-R
2SA1611-M5M6
2SB709A-QRS-TX
2SC2223-F13
2SC2713-G
2SC3624A-T1L15L
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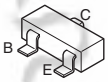

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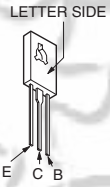
2SC2688-(5)LK



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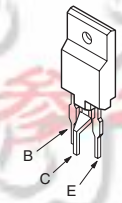

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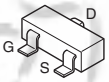

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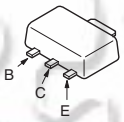

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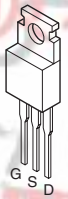

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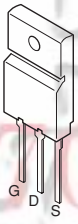

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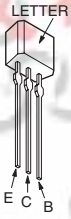

HN1B01FU-TE85R

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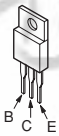

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10ERB20-TB5
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RD3.9SB2
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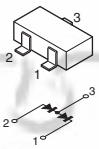

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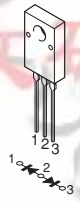
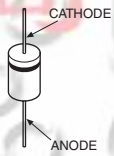


D1NL20U
D1NL20U-TR



D1NL40-TA2
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D4SBS6

D1NS4
D2L20U
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RB441Q-40T77
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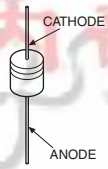
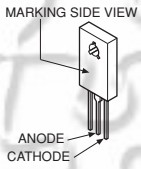
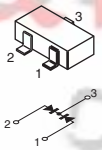
RD15ES-B1
RD3.0ES-B2
RD3.3ES-B2
RD5.1ES-B1
RD5.1ESB2



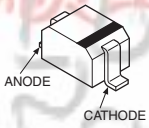
D5LC20U-4012



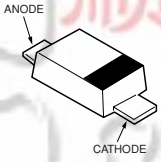
DAN202K
DAN202K-T-146



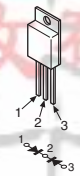
DTZ10B
MA111-TX
MMDL914T1
PDZ15B-115
PDZ4.7B-115
RD5.6SB3-T1
UDZS-TE17-18B
UDZS-TE17-3.6B
UDZS-TE17-6.2B
UDZ-TE-17-18B
UDZ-TE-17-6.8B
UDZ-TE-17-7.5B



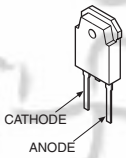
EC31QS03L-TE12L
KDS160-RTK



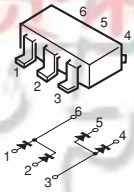
F10P04Q



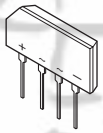
FMQ-G5FMS



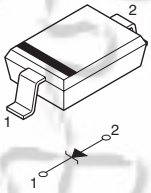
HN1D03FU



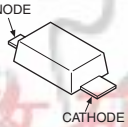
KBP153G-A2



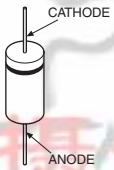
MM3Z15VT1
MM3Z27VT1
MM3Z3V0T1
MM3Z3V9ST1
MM3Z4V7ST1
MM3Z9V1ST1



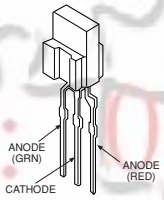
M1FS4-4063



RD33EB3T



SPB-25MVWF



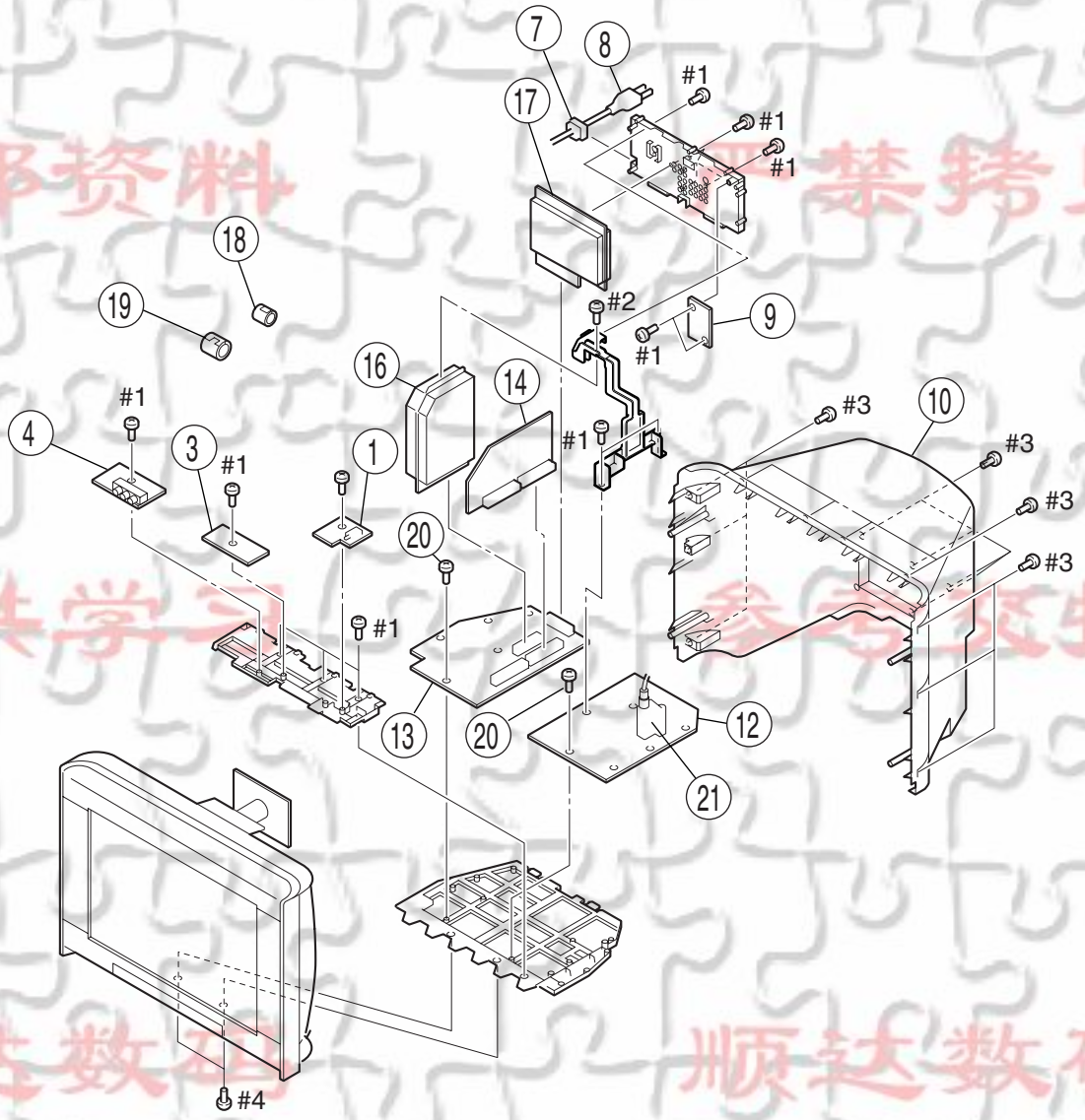
SECTION 7
EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

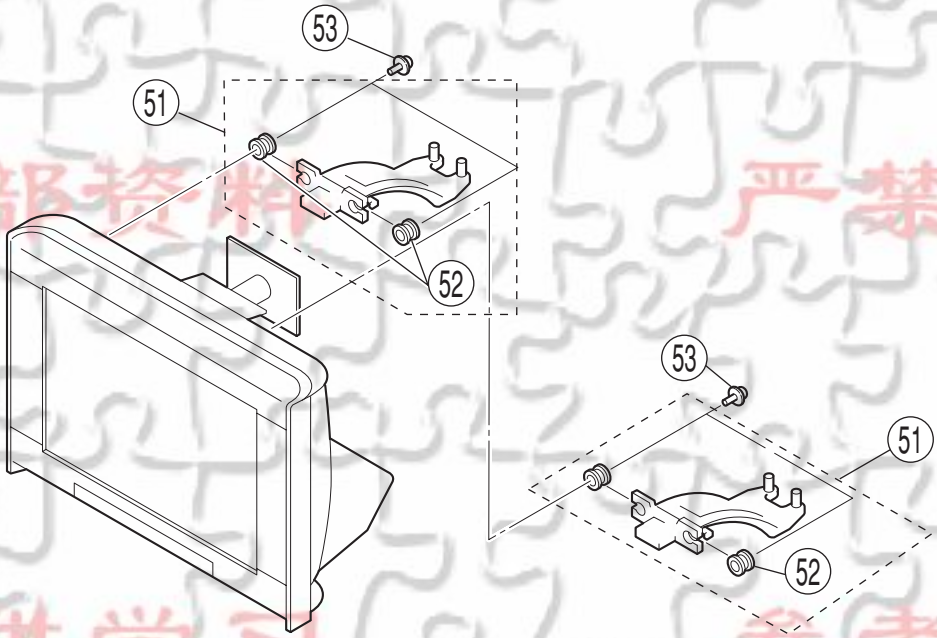
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CHASSIS SECTION



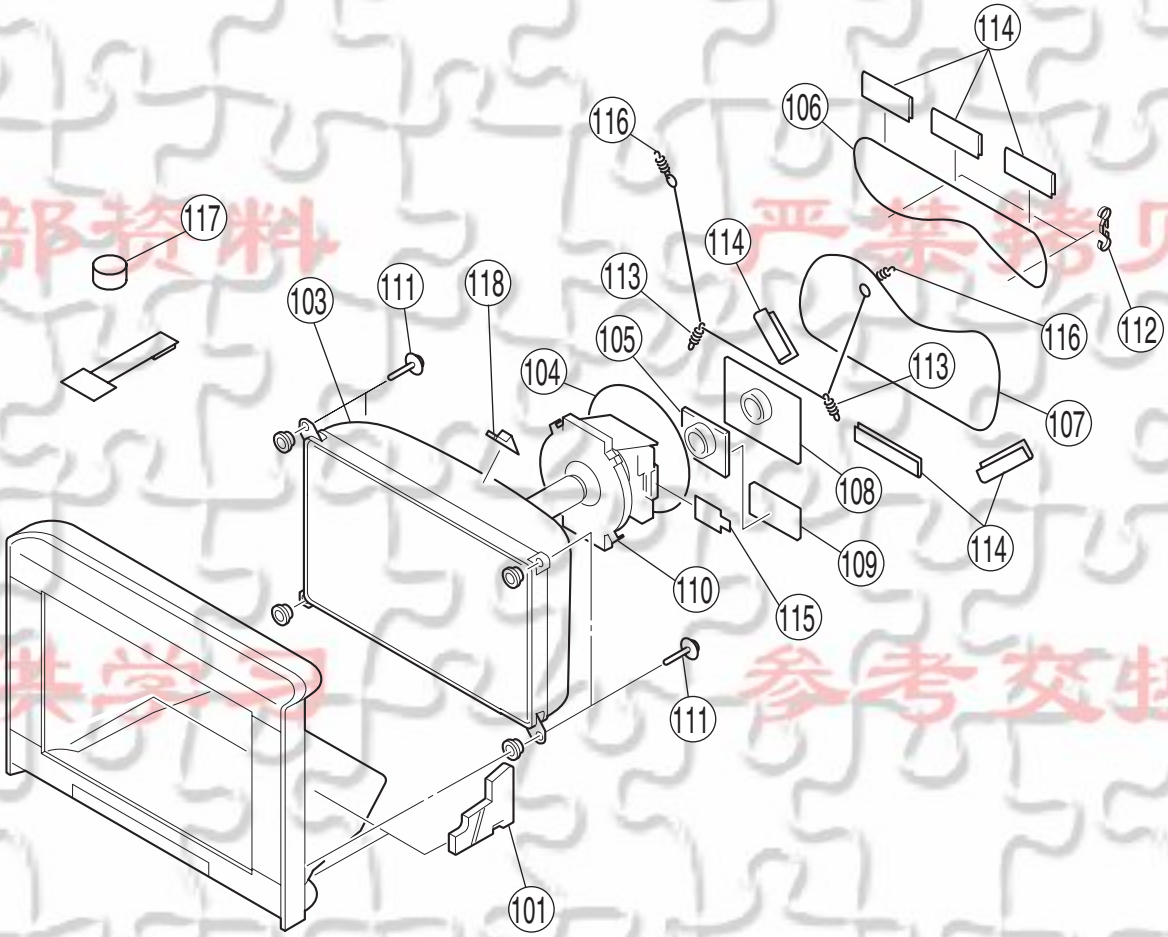
REF. NO.		PART NO.	DESCRIPTION	REMARK
1	*	A-1405-651-A	H4 BOARD, COMPLETE	
3	*	A-1405-650-A	H3 BOARD, COMPLETE	
4	*	A-1405-647-B	H5 BOARD, COMPLETE	
7		4-022-115-00	HOLDER, AC CORD	
8		⚠ 1-757-345-11	CORD, POWER (WITH FILTER)	
9	*	A-1405-648-B	T BOARD, COMPLETE	
10	*	X-4041-966-1	REAR COVER ASSY	
12	*	A-1302-742-A	D BOARD, COMPLETE	
13	*	A-1302-740-A	A BOARD, COMPLETE	
14	*	A-1302-743-A	MG BOARD, COMPLETE	
16	*	A-1302-739-A	BM BOARD, COMPLETE	
17	*	A-1302-741-A	UG BOARD, COMPLETE	
18		1-543-993-11	CORE, FERRITE	
19		1-500-497-11	FILTER, CLAMP (FERRITE CORE)	
20		4-046-797-01	SCREW (3X12), (+)BVTAP	
21		⚠ 1-453-445-21	FBT ASSY NX-6020//M3B4	
#1		7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
#2		7-682-948-01	SCREW +PSW 3X8	
#3		7-685-663-71	SCREW +BVTP 4X16 TYPE2 IT-3	
#4		7-685-659-71	SCREW +BVTP 4X8	

7-2. SUPER WOOFER BLOCK



REF. NO.		PART NO.	DESCRIPTION	REMARK
51	*	X-4041-897-2	SP JOINT ASSY	
52		4-374-745-11	CUSHION (A)	
53		4-058-870-01	SCREW, (4X16) W (+) P TAPPING	

7-3. CRT SECTION

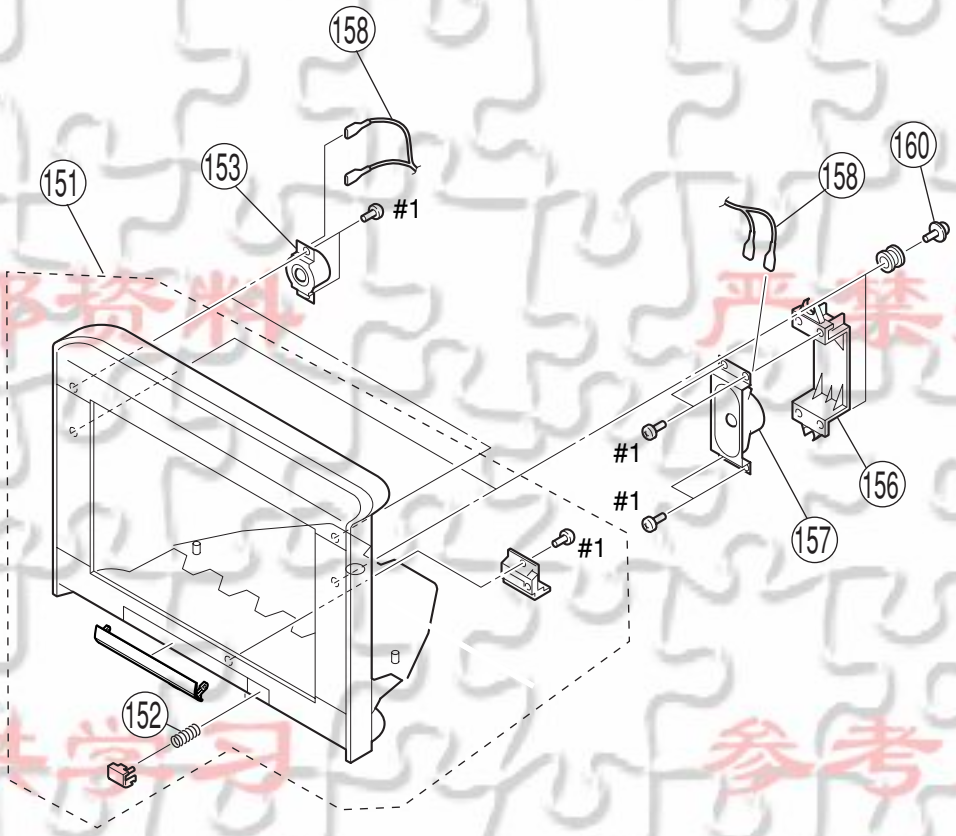


The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.		PART NO.	DESCRIPTION	REMARK
101		X-4042-369-2	SUPPORTER ASSY, CRT (32)	
103	⚠	8-735-110-05	CRT 32RVEN	
104	⚠	1-451-498-21	COIL, NA ROTATION	
105	⚠	8-453-022-21	MA2920-M2	
106	⚠	1-456-398-11	COIL, DEGAUSS	
107	⚠	1-456-398-21	COIL, DEGAUSS	
108	*	A-1405-659-A	C BOARD, COMPLETE	
109	*	A-1410-655-A	W BOARD, COMPLETE	

REF. NO.		PART NO.	DESCRIPTION	REMARK
110	⚠	1-451-551-13	DY Y32VEC-T	
111		4-080-811-01	SCREWTAPPIN7+CROWN WASHER(L40)	
112		4-064-883-03	HOLDER (S), DGC	
113		4-065-852-21	SPRING, TENSION	
114		4-098-960-01	DGC CUSHION (L)	
115		2-163-920-01	PLATE, TLH CORRECTION	
116		4-369-318-61	SPRING, TENSION	
117		1-452-032-00	MAGNET, DISC	
118		4-086-199-02	SPACER, DY	

7-4. BEZEL SECTION



REF. NO.		PART NO.	DESCRIPTION	REMARK
151		X-4042-775-1	CABINET ASSY	
152		4-042-593-01	SPRING, COMPRESSION	
153		1-825-575-11	LOUDSPEAKER (5CM)	
156	*	4-086-708-01	BRACKET, SPEAKER	
157		1-825-574-11	LOUDSPEAKER (5.5X13CM)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
158	1-900-275-97	LEAD ASSY (B), SPEAKER	
160	4-302-404-03	SCREW (WASHER HEAD) (+P 4X16)	
#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	

A

SECTION 8
ELECTRICAL PARTS LIST

The components identified by shading and mark ⚠ are critial for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- The components identified by in ⊠ this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- CAPACITORS
  PF : μμ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION			REMARK
*	A-1302-740-A	A BOARD, COMPLETE			
		**********			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
*	7-322-065-48	RUBBER, SILICONE RTV (KE-3490)			
	7-682-948-01	SCREW +PSW 3X8			
		< CAPACITOR >			
C2000	1-136-177-00	FILM	1μF	5%	50V
C2001	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2002	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2005	1-164-161-11	CERAMIC CHIP	0.0022μF	10%	50V
C2006	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2007	1-137-190-91	FILM	0.22μF	5%	50V
C2008	1-164-677-11	CERAMIC CHIP	0.033μF	10%	16V
C2011	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2013	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2014	1-109-953-11	ELECT	2.2μF	20%	50V
C2015	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C2016	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2018	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2019	1-126-964-11	ELECT	10μF	20%	50V
C2020	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2021	1-162-959-11	CERAMIC CHIP	330pF	5%	50V
C2022	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C2023	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2024	1-107-704-51	ELECT	470μF	20%	25V
C2025	1-137-190-91	FILM	0.22μF	5%	50V
C2026	1-164-217-11	CERAMIC CHIP	150pF	5%	50V
C2027	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2028	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2029	1-126-933-11	ELECT	100μF	20%	16V
C2030	1-126-933-11	ELECT	100μF	20%	16V
C2031	1-162-959-11	CERAMIC CHIP	330pF	5%	50V
C2033	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2034	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C2035	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V
C2036	1-126-933-11	ELECT	100μF	20%	16V
C2038	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2039	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2040	1-126-964-11	ELECT	10μF	20%	50V
C2041	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2042	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2043	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2044	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2047	1-136-177-00	FILM	1μF	5%	50V
C2048	1-165-176-11	CERAMIC CHIP	0.047μF	10%	16V
C2049	1-126-055-11	ELECT	470μF	20%	50V
C2050	1-164-677-11	CERAMIC CHIP	0.033μF	10%	16V
C2053	1-162-959-11	CERAMIC CHIP	330pF	5%	50V
C2054	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2055	1-126-933-11	ELECT	100μF	20%	16V
C2056	1-126-935-11	ELECT	470μF	20%	16V
C2057	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C2060	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2061	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2062	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2063	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2064	1-165-738-31	ELECT	2700μF	20%	25V
C2065	1-165-738-31	ELECT	2700μF	20%	25V
C2067	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2069	1-126-933-11	ELECT	100μF	20%	16V
C2071	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2072	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C2073	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C2076	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V
C2077	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V
C2080	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2081	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2082	1-126-933-11	ELECT	100μF	20%	16V
C2083	1-126-947-11	ELECT	47μF	20%	25V
C2086	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2088	1-126-967-11	ELECT	47μF	20%	50V
C2090	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2092	1-126-933-11	ELECT	100μF	20%	16V
C2096	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C2097	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C6000	1-117-703-11	CERAMIC	0.0047μF	99%	250V
C6001 ⚠	1-165-530-31	MYLAR	0.47μF	10	0V
C6002 ⚠	1-119-894-51	CERAMIC	2200pF	20%	250V
C6003	1-165-530-31	MYLAR	0.47μF	10	0V
C6004 ⚠	1-119-894-51	CERAMIC	2200pF	20%	250V
C6005	1-165-529-31	MYLAR	0.22μF	10	0V
C6007	1-161-964-91	CERAMIC	0.0047μF		250V
C6008	1-161-964-91	CERAMIC	0.0047μF		250V
C6011	1-125-906-11	ELECT	560μF	20%	450V
C6107	1-165-528-31	MYLAR	0.1μF	10	0V
C6108	1-165-528-31	MYLAR	0.1μF	10	0V
C6110	1-126-934-11	ELECT	220μF	20%	16V
C6111	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C6112	1-126-965-91	ELECT	22μF	20%	50V
C6114	1-126-961-11	ELECT	2.2μF	20%	50V
C6115	1-126-942-61	ELECT	1000μF	20%	25V
C6116	1-128-562-11	ELECT	47μF	20%	100V
C6118	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V
C6119	1-126-960-11	ELECT	1μF	20%	50V
C6120	1-126-968-11	ELECT	100μF	20%	50V
C6123	1-126-968-11	ELECT	100μF	20%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
C6200	1-128-954-11	ELECT	1000µF	20%	25V
C6201	1-128-954-11	ELECT	1000µF	20%	25V
C6202	1-128-954-11	ELECT	1000µF	20%	25V
C6203	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6204	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6205	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6212	1-128-950-31	ELECT	1000µF	20%	16V
C6213	1-128-945-31	ELECT	1000µF	20%	10V
C6214	1-128-942-31	ELECT	1000µF	20%	6.3V
C6215	1-126-935-11	ELECT	470µF	20%	16V
C6216	1-126-926-11	ELECT	1000µF	20%	10V
C6217	1-126-916-11	ELECT	1000µF	20%	6.3V
C6220	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C6222	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C6225	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6227	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6230	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6234	1-164-156-11	CERAMIC CHIP	0.1µF		25V

< CONNECTOR >

CN2001*	1-564-507-11	PLUG, CONNECTOR 4P
CN2003*	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P
CN2004*	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P
CN2005*	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P
CN2006*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN2007*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN2011*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN2012*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN2015*	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P
CN2017*	1-564-509-11	PLUG, CONNECTOR 6P
CN2019	1-695-915-11	TAB (CONTACT)
CN6000*	1-580-843-11	PIN, CONNECTOR (POWER)
CN6001*	1-580-843-11	PIN, CONNECTOR (POWER)
CN6002	1-695-915-11	TAB (CONTACT)
CN6003	1-695-915-11	TAB (CONTACT)
CN6004	1-695-915-11	TAB (CONTACT)
CN6005*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN6006*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN6013	1-695-915-11	TAB (CONTACT)
CN6100*	1-766-241-11	PIN, CONNECTOR (PC BOARD) 3P
CN6101*	1-766-241-11	PIN, CONNECTOR (PC BOARD) 3P
CN6102*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P

< CAPACITOR >

D2001	6-500-028-01	DIODE	MM3Z9V1ST1
D2004	8-719-081-97	DIODE	MMDL914T1
D6000	8-719-081-97	DIODE	MMDL914T1
D6005	8-719-022-99	DIODE	D6SB60L
D6108	8-719-056-93	DIODE	UDZ-TE-17-18B
D6109	8-719-510-02	DIODE	D1NS4
D6110	8-719-081-97	DIODE	MMDL914T1
D6112	8-719-081-97	DIODE	MMDL914T1
D6113	6-500-582-01	DIODE	KBP153G-A2
D6114	6-500-567-21	DIODE	10ERB20-TB5
D6115	8-719-081-97	DIODE	MMDL914T1
D6116	8-719-081-97	DIODE	MMDL914T1
D6117	8-719-081-97	DIODE	MMDL914T1
D6118	6-500-555-01	DIODE	MM3Z27VT1
D6119	8-719-081-97	DIODE	MMDL914T1
D6120	8-719-081-97	DIODE	MMDL914T1
D6121	8-719-081-97	DIODE	MMDL914T1

REF. NO.	PART NO.	DESCRIPTION	REMARK
D6122	8-719-081-97	DIODE MMDL914T1	
D6123	8-719-081-97	DIODE MMDL914T1	
D6200	8-719-078-04	DIODE EC31QS03L-TE12L	
D6201	8-719-078-04	DIODE EC31QS03L-TE12L	
D6202	8-719-078-04	DIODE EC31QS03L-TE12L	
D6203	8-719-036-94	DIODE RD5.6SB-T1	
D6204	8-719-081-97	DIODE MMDL914T1	
D6205	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D6206	8-719-081-97	DIODE MMDL914T1	
D6207	8-719-977-28	DIODE DTZ10B	
D6208	8-719-081-97	DIODE MMDL914T1	
D6215	6-500-654-01	DIODE MM3Z3V0T1	

< FUSE >

F6000 ⚠	1-576-753-11	FUSE	6.3A	250V

< FERRITE BEAD >

FB2000	1-469-578-11	FERRITE	1.1µH
FB2001	1-469-578-11	FERRITE	1.1µH
FB2002	1-469-578-11	FERRITE	1.1µH
FB2003	1-469-578-11	FERRITE	1.1µH
FB2004	1-469-578-11	FERRITE	1.1µH
FB2005	1-469-578-11	FERRITE	1.1µH
FB6101	1-469-578-11	FERRITE	1.1µH
FB6102	1-469-578-11	FERRITE	1.1µH
FB6200	1-412-911-11	FERRITE	0µH
FB6201	1-412-911-11	FERRITE	0µH
FB6202	1-412-911-11	FERRITE	0µH
FH6000	1-533-223-11	FUSE HOLDER	0A 0V
FH6001	1-533-223-11	FUSE HOLDER	0A 0V

< IC >

IC2000	6-704-237-01	IC	TDA7490L
IC2002	6-703-781-01	IC	S-80843CLUA-B64T2G
IC6100	6-704-655-01	IC	NJU7223F50
IC6200	6-703-656-01	IC	SI-8090S
IC6201	8-759-474-09	IC	SI-8050S-LF1101
IC6202	8-759-659-28	IC	SI-8033S

< JUMPER RESISTOR >

JR1	1-216-295-91	SHORT CHIP	0
JR2	1-216-295-91	SHORT CHIP	0
JR3	1-216-295-91	SHORT CHIP	0
JR4	1-216-295-91	SHORT CHIP	0
JR5	1-216-295-91	SHORT CHIP	0
JR6	1-216-295-91	SHORT CHIP	0
JR7	1-216-295-91	SHORT CHIP	0
JR8	1-216-295-91	SHORT CHIP	0
JR9	1-216-295-91	SHORT CHIP	0
JR10	1-216-295-91	SHORT CHIP	0
JR11	1-216-295-91	SHORT CHIP	0
JR13	1-216-295-91	SHORT CHIP	0
JR14	1-216-295-91	SHORT CHIP	0
JR15	1-216-295-91	SHORT CHIP	0
JR16	1-216-295-91	SHORT CHIP	0
JR17	1-216-295-91	SHORT CHIP	0
JR18	1-216-864-11	SHORT CHIP	0
JR19	1-216-864-11	SHORT CHIP	0
JR20	1-216-295-91	SHORT CHIP	0
JR21	1-216-295-91	SHORT CHIP	0

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION		REMARK
JR22	1-216-864-11	SHORT CHIP	0	
JR30	1-216-864-11	SHORT CHIP	0	
JR31	1-216-864-11	SHORT CHIP	0	
JR32	1-216-864-11	SHORT CHIP	0	
JR33	1-216-864-11	SHORT CHIP	0	
JR34	1-216-864-11	SHORT CHIP	0	
JR35	1-216-864-11	SHORT CHIP	0	
JR36	1-216-864-11	SHORT CHIP	0	
JR37	1-216-864-11	SHORT CHIP	0	
JR38	1-216-864-11	SHORT CHIP	0	
JR39	1-216-864-11	SHORT CHIP	0	
JR40	1-216-864-11	SHORT CHIP	0	
JR41	1-216-864-11	SHORT CHIP	0	
JR42	1-216-864-11	SHORT CHIP	0	
JR43	1-216-864-11	SHORT CHIP	0	
JR44	1-216-864-11	SHORT CHIP	0	
JR45	1-216-864-11	SHORT CHIP	0	
JR46	1-216-864-11	SHORT CHIP	0	
JR47	1-216-864-11	SHORT CHIP	0	
JR48	1-216-864-11	SHORT CHIP	0	
JR49	1-216-864-11	SHORT CHIP	0	
JR50	1-216-864-11	SHORT CHIP	0	
JR51	1-216-864-11	SHORT CHIP	0	
JR52	1-216-864-11	SHORT CHIP	0	
JR53	1-216-864-11	SHORT CHIP	0	
JR54	1-216-864-11	SHORT CHIP	0	
JR55	1-216-864-11	SHORT CHIP	0	
JR2003	1-216-864-11	SHORT CHIP	0	
JR6101	1-216-864-11	SHORT CHIP	0	
JR6200	1-216-864-11	SHORT CHIP	0	
JR6201	1-216-864-11	SHORT CHIP	0	
JR6202	1-216-864-11	SHORT CHIP	0	
JR6204	1-216-864-11	SHORT CHIP	0	
JR6206	1-216-295-91	SHORT CHIP	0	
JR6207	1-216-864-11	SHORT CHIP	0	
JR6209	1-216-864-11	SHORT CHIP	0	
JR6211	1-216-864-11	SHORT CHIP	0	
JR6213	1-216-864-11	SHORT CHIP	0	
JR6507	1-216-864-11	SHORT CHIP	0	

< COIL >

L2000	1-456-451-21	INDUCTOR	65µH	
L2001	1-456-450-21	INDUCTOR	30µH	
L2002	1-456-450-21	INDUCTOR	30µH	
L2003	1-469-320-21	INDUCTOR	100µH	
L2004	1-469-320-21	INDUCTOR	100µH	
L2005	1-456-451-21	INDUCTOR	65µH	
L2006	1-469-317-21	INDUCTOR	10µH	
L2007	1-400-397-11	INDUCTOR	10µH	
L2008	1-414-856-11	INDUCTOR	10µH	
L2009	1-414-856-11	INDUCTOR	10µH	
L2010	1-414-856-11	INDUCTOR	10µH	
L2011	1-414-856-11	INDUCTOR	10µH	
L6000 ⚠	1-433-900-11	TRANSFORMER, LINE FILTER		
L6001 ⚠	1-433-900-11	TRANSFORMER, LINE FILTER		
L6002	1-406-977-21	INDUCTOR	100µH	
L6203	1-412-525-31	INDUCTOR	10µH	
L6204	1-412-525-31	INDUCTOR	10µH	
L6205	1-412-537-31	INDUCTOR	100µH	
L6206	1-456-414-11	COIL, CHOPPER		
L6207	1-456-414-11	COIL, CHOPPER		
L6208	1-456-414-11	COIL, CHOPPER		
L6209	1-412-525-31	INDUCTOR	10µH	
L6210	1-412-525-31	INDUCTOR	10µH	
L6211	1-412-525-31	INDUCTOR	10µH	

< IC LINK >

PS2000⚠	1-576-390-91	IC LINK	2.5A 50V	
PS2001⚠	1-576-390-91	IC LINK	2.5A 50V	

< TRANSISTOR >

Q2000	8-729-010-05	TRANSISTOR	MSB709-RT1
Q2001	8-729-010-25	TRANSISTOR	MSD601-RT1
Q2005	8-729-010-25	TRANSISTOR	MSD601-RT1
Q2006	8-729-010-25	TRANSISTOR	MSD601-RT1
Q2007	8-729-010-05	TRANSISTOR	MSB709-RT1
Q2008	8-729-010-05	TRANSISTOR	MSB709-RT1
Q2010	8-729-010-05	TRANSISTOR	MSB709-RT1
Q6102	8-729-010-25	TRANSISTOR	MSD601-RT1
Q6103	8-729-271-31	TRANSISTOR	2SC2713-G
Q6104	8-729-216-31	TRANSISTOR	2SA1163-G
Q6105	8-729-010-05	TRANSISTOR	MSB709-RT1
Q6107	8-729-140-96	TRANSISTOR	2SD774-34
Q6108	8-729-010-25	TRANSISTOR	MSD601-RT1
Q6109	8-729-010-05	TRANSISTOR	MSB709-RT1
Q6110	8-729-010-05	TRANSISTOR	MSB709-RT1
Q6111	8-729-010-25	TRANSISTOR	MSD601-RT1
Q6112	8-729-010-25	TRANSISTOR	MSD601-RT1

< RESISTOR >

R2000	1-216-855-11	METAL CHIP	680K	5%	1/10W
R2001	1-216-864-11	SHORT CHIP	0		
R2002	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2006	1-216-836-11	METAL CHIP	18K	5%	1/10W
R2007	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2008	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2009	1-216-815-11	METAL CHIP	330	5%	1/10W
R2010	1-216-815-11	METAL CHIP	330	5%	1/10W
R2014	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2015	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R2018	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R2019	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2020	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R2021	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2023	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2024	1-216-817-11	METAL CHIP	470	5%	1/10W
R2025	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2026	1-216-809-11	METAL CHIP	100	5%	1/10W
R2027	1-216-843-11	METAL CHIP	68K	5%	1/10W
R2028	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R2029	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2030	1-216-835-11	METAL CHIP	15K	5%	1/10W
R2032	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R2033	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2036	1-216-843-11	METAL CHIP	68K	5%	1/10W
R2037	1-216-846-11	METAL CHIP	120K	5%	1/10W
R2038	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2041	1-216-817-11	METAL CHIP	470	5%	1/10W
R2042	1-216-805-11	METAL CHIP	47	5%	1/10W
R2043	1-216-821-11	METAL CHIP	1K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R2044	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2045	1-216-805-11	METAL CHIP	47	5%	1/10W
R2046	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R2047	1-216-857-11	METAL CHIP	1M	5%	1/10W
R2048	1-216-847-11	METAL CHIP	150K	5%	1/10W
R2049	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R2050	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2051	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2052	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R2058	1-216-815-11	METAL CHIP	330	5%	1/10W
R2059	1-216-815-11	METAL CHIP	330	5%	1/10W
R2060	1-216-795-11	METAL CHIP	6.8	5%	1/10W
R2061	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2063	1-216-864-11	SHORT CHIP	0		
R2065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2067	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2068	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2070	1-216-864-11	SHORT CHIP	0		
R2080	1-216-809-11	METAL CHIP	100	5%	1/10W
R2081	1-216-809-11	METAL CHIP	100	5%	1/10W
R2090	1-216-809-11	METAL CHIP	100	5%	1/10W
R2091	1-216-809-11	METAL CHIP	100	5%	1/10W
R2098	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2103	1-216-809-11	METAL CHIP	100	5%	1/10W
R2104	1-216-864-11	SHORT CHIP	0		
R2109	1-216-815-11	METAL CHIP	330	5%	1/10W
R2110	1-216-815-11	METAL CHIP	330	5%	1/10W
R2111	1-216-815-11	METAL CHIP	330	5%	1/10W
R2112	1-216-815-11	METAL CHIP	330	5%	1/10W
R2114	1-216-864-11	SHORT CHIP	0		
R2117	1-216-815-11	METAL CHIP	330	5%	1/10W
R2119	1-216-815-11	METAL CHIP	330	5%	1/10W
R2121	1-216-815-11	METAL CHIP	330	5%	1/10W
R2123	1-216-815-11	METAL CHIP	330	5%	1/10W
R6001	1-247-289-00	METAL	8.2M	5%	1W
R6002	1-240-303-31	CEMENTED	0.22	5%	10W
R6004	1-240-303-31	CEMENTED	0.22	5%	10W
R6010	1-240-876-41	CEMENTED	1	5%	15W
R6011	1-240-876-41	CEMENTED	1	5%	15W
R6014	1-219-759-11	METAL	1M	5%	1/2W
R6015	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6016	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6017	1-219-759-11	METAL	1M	5%	1/2W
R6111	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6112	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R6114	1-216-857-11	METAL CHIP	1M	5%	1/10W
R6115	1-216-837-11	METAL CHIP	22K	5%	1/10W
R6116	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R6119	1-216-837-11	METAL CHIP	22K	5%	1/10W
R6120	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6121	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6124	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6125	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6126	1-216-837-11	METAL CHIP	22K	5%	1/10W
R6127	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6128	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6129	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6130	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6206	1-211-977-11	METAL CHIP	22	0.5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6207	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R6208	1-211-969-11	METAL CHIP	10	0.5%	1/10W
R6209	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R6210	1-211-981-11	METAL CHIP	33	0.5%	1/10W
R6211	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R6231	1-216-821-11	METAL CHIP	1K	5%	1/10W
R6232	1-249-377-11	CARBON	0.47	5%	1/4W
		< RELAY >			
RY6000	1-755-395-11	RELAY (AC POWER)			
RY6100⚠	1-755-198-11	RELAY, AC POWER			
		< TRANSFORMER >			
T6101 ⚠	1-443-060-11	TRANSFORMER, STANDBY			
		< THERMISTOR >			
TH6101⚠	1-803-540-11	THERMISTOR			
		< TUNER >			
TU2000	8-598-451-60	TUNER, FSS BTF-WG441			
		< VARISTOR >			
VD6000⚠	1-804-995-21	VARISTOR			

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* A-1302-739-A BM BOARD, COMPLETE

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		< CAPACITOR >			
C3032	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3035	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3036	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3037	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3038	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3039	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3040	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3100	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C3101	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C3102	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3104	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3105	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3106	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3107	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3108	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3109	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3110	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3111	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3112	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3113	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3114	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3115	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3116	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3117	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3118	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3119	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3120	1-126-204-11	ELECT CHIP	47µF	20%	16V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C3121	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3122	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3123	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3124	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3125	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3126	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3127	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3128	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3129	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3131	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3132	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3133	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3134	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3135	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3136	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3137	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3138	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3139	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3140	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3141	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3142	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3143	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3144	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3146	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3147	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3148	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3149	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3150	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3151	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3152	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3153	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3154	1-137-710-11	CERAMIC CHIP	10µF	20%	6.3V
C3155	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3156	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3157	1-137-710-11	CERAMIC CHIP	10µF	20%	6.3V
C3158	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3159	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3160	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3161	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3162	1-128-357-11	ELECT CHIP	10µF	20%	16V
C3163	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3164	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3165	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3166	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3167	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3168	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3169	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3170	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3171	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3172	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3173	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3174	1-124-778-00	ELECT CHIP	22µF	20%	6.3V
C3178	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3179	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3180	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3181	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3182	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3183	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3184	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3185	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3186	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3188	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3189	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3201	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3202	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3203	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3204	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3205	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3206	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3207	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3208	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3209	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3210	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3211	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3212	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3213	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3214	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3215	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3216	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3217	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3218	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3219	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3222	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3224	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3225	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C3227	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3229	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3231	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3232	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3233	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3235	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3236	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3237	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3238	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3239	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3240	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3241	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3242	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3243	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3244	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3245	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3246	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3248	1-216-864-11	SHORT CHIP	0		
C3250	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3251	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3252	1-128-996-11	ELECT CHIP	4.7µF	20%	50V
C3253	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3256	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3305	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3306	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3307	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3308	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3310	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3311	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3312	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3313	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3320	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3321	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3328	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3329	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3330	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3334	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3335	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C3338	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3339	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3340	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3343	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3344	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3345	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3351	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3353	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3354	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3355	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3357	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3358	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3360	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3361	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3362	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C3363	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3366	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3367	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3368	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3369	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3370	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3371	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3372	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3373	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3374	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3375	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3376	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3377	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3380	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3381	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3382	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3383	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3384	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3385	1-126-205-11	ELECT CHIP	47µF	20%	6.3V
C3386	1-126-205-11	ELECT CHIP	47µF	20%	6.3V
C3387	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3388	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3389	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3390	1-126-205-11	ELECT CHIP	47µF	20%	6.3V
C3391	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3393	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3394	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3395	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3396	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3397	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3398	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3459	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3460	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3461	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3462	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3463	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3465	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C3466	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
		< CONNECTOR >			
CN3001*	1-816-448-11	CONNECTOR, BOARD TO BOARD 50P			
		< DIODE >			
D3101	8-719-066-11	DIODE 1PS184-115			
D3102	8-719-066-10	DIODE 1PS181-115			
D3301	8-719-066-11	DIODE 1PS184-115			
D3302	8-719-066-10	DIODE 1PS181-115			
		< FERRITE BEAD >			
FB3101	1-414-234-22	FERRITE	0µH		
FB3203	1-469-110-21	FERRITE	0µH		
FB3204	1-216-864-11	SHORT CHIP	0		
FB3302	1-216-864-11	SHORT CHIP	0		
		< FILTER >			
FL3000	1-234-177-21	FERRITE	0µH		
FL3001	1-234-177-21	FERRITE	0µH		
FL3003	1-234-177-21	FERRITE	0µH		
FL3100	1-234-677-21	FILTER, EMI			
FL3101	1-234-560-21	FILTER, LOW PASS			
FL3102	1-234-559-21	FILTER, LOW PASS			
FL3103	1-234-559-21	FILTER, LOW PASS			
FL3104	1-234-177-21	FERRITE	0µH		
FL3105	1-234-177-21	FERRITE	0µH		
FL3106	1-234-177-21	FERRITE	0µH		
FL3107	1-234-177-21	FERRITE	0µH		
FL3200	1-234-177-21	FERRITE	0µH		
FL3201	1-234-177-21	FERRITE	0µH		
FL3301	1-781-923-21	FILTER, LOW PASS (SMD)			
FL3302	1-234-177-21	FERRITE	0µH		
FL3304	1-234-177-21	FERRITE	0µH		
FL3305	1-234-177-21	FERRITE	0µH		
FL3306	1-234-177-21	FERRITE	0µH		
		< IC >			
IC3101	8-752-425-02	IC CXD3802BQ			
IC3102	6-703-430-01	IC MT48LC2M32BTG-6-Y94W			
IC3103	6-703-529-01	IC LMH6658MM/J5000172			
IC3104	6-703-529-01	IC LMH6658MM/J5000172			
IC3105	8-759-712-65	IC PQ070XZ01ZP			
IC3106	8-759-712-65	IC PQ070XZ01ZP			
IC3201	8-752-409-78	IC CXD2095AQ			
IC3202	6-703-791-01	IC MSM56V16160F-8T3FM1			
IC3204	8-759-669-78	IC TLC2933IPWR-12			
IC3205	8-759-712-65	IC PQ070XZ01ZP			
IC3301	8-759-672-57	IC CXD9509AQ			
IC3302	6-703-430-01	IC MT48LC2M32BTG-6-Y94W			
IC3303	8-752-409-20	IC CXD2309AQ			
IC3309	8-759-082-57	IC TC7W04FU(TE12R)			
IC3310	8-759-712-65	IC PQ070XZ01ZP			
IC3311	8-759-833-72	IC NJM2870F25-TE2			
		< COIL >			
L3101	1-412-029-11	INDUCTOR	10µH		
L3102	1-469-555-21	INDUCTOR	10µH		
L3103	1-412-029-11	INDUCTOR	10µH		
L3104	1-412-026-11	INDUCTOR	1µH		
L3105	1-412-026-11	INDUCTOR	1µH		
L3106	1-412-026-11	INDUCTOR	1µH		
L3107	1-412-029-11	INDUCTOR	10µH		
L3201	1-412-026-11	INDUCTOR	1µH		
L3202	1-469-561-21	INDUCTOR	100µH		
L3203	1-469-561-21	INDUCTOR	100µH		

REF. NO.	PART NO.	DESCRIPTION			REMARK
L3204	1-412-026-11	INDUCTOR	1µH		
L3205	1-412-026-11	INDUCTOR	1µH		
L3304	1-469-555-21	INDUCTOR	10µH		
L3306	1-469-555-21	INDUCTOR	10µH		
L3307	1-469-555-21	INDUCTOR	10µH		
L3308	1-412-029-11	INDUCTOR	10µH		
L3311	1-469-555-21	INDUCTOR	10µH		
L3312	1-412-026-11	INDUCTOR	1µH		
L3313	1-412-029-11	INDUCTOR	10µH		
L3314	1-412-026-11	INDUCTOR	1µH		
L3315	1-412-026-11	INDUCTOR	1µH		
L3317	1-412-026-11	INDUCTOR	1µH		
L3318	1-469-555-21	INDUCTOR	10µH		
		< TRANSISTOR >			
Q3101	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3102	8-729-122-63	TRANSISTOR	2SA1226		
Q3103	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3104	8-729-122-63	TRANSISTOR	2SA1226		
Q3105	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3106	8-729-122-63	TRANSISTOR	2SA1226		
Q3107	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q3108	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q3109	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q3110	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3111	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3112	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3113	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q3203	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q3204	8-729-010-05	TRANSISTOR	MSB709-RT1		
Q3306	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q3307	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q3314	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3315	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3316	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q3317	8-729-122-63	TRANSISTOR	2SA1226		
Q3318	8-729-122-63	TRANSISTOR	2SA1226		
Q3319	8-729-122-63	TRANSISTOR	2SA1226		
		< RESISTOR >			
R3023	1-216-864-11	SHORT CHIP	0		
R3024	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R3032	1-216-864-11	SHORT CHIP	0		
R3034	1-216-864-11	SHORT CHIP	0		
R3035	1-543-949-22	FERRITE	0µH		
R3036	1-543-949-22	FERRITE	0µH		
R3037	1-543-949-22	FERRITE	0µH		
R3038	1-216-864-11	SHORT CHIP	0		
R3039	1-216-864-11	SHORT CHIP	0		
R3040	1-216-864-11	SHORT CHIP	0		
R3041	1-543-949-22	FERRITE	0µH		
R3042	1-543-949-22	FERRITE	0µH		
R3043	1-216-805-11	METAL CHIP	47	5%	1/10W
R3044	1-216-805-11	METAL CHIP	47	5%	1/10W
R3045	1-216-805-11	METAL CHIP	47	5%	1/10W
R3046	1-543-949-22	FERRITE	0µH		
R3047	1-543-949-22	FERRITE	0µH		
R3048	1-543-949-22	FERRITE	0µH		
R3049	1-543-949-22	FERRITE	0µH		
R3050	1-543-949-22	FERRITE	0µH		
R3051	1-543-949-22	FERRITE	0µH		

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3052	1-216-805-11	METAL CHIP	47	5%	1/10W
R3053	1-216-805-11	METAL CHIP	47	5%	1/10W
R3054	1-216-805-11	METAL CHIP	47	5%	1/10W
R3055	1-543-949-22	FERRITE	0µH		
R3056	1-543-949-22	FERRITE	0µH		
R3101	1-216-805-11	METAL CHIP	47	5%	1/10W
R3102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3103	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3104	1-216-805-11	METAL CHIP	47	5%	1/10W
R3105	1-218-830-11	METAL CHIP	200	0.5%	1/10W
R3106	1-216-809-11	METAL CHIP	100	5%	1/10W
R3107	1-216-820-11	METAL CHIP	820	5%	1/10W
R3108	1-218-830-11	METAL CHIP	200	0.5%	1/10W
R3109	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3110	1-216-805-11	METAL CHIP	47	5%	1/10W
R3111	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R3112	1-216-809-11	METAL CHIP	100	5%	1/10W
R3113	1-216-820-11	METAL CHIP	820	5%	1/10W
R3114	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R3115	1-216-805-11	METAL CHIP	47	5%	1/10W
R3116	1-216-805-11	METAL CHIP	47	5%	1/10W
R3117	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3118	1-216-805-11	METAL CHIP	47	5%	1/10W
R3119	1-216-805-11	METAL CHIP	47	5%	1/10W
R3120	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R3121	1-216-809-11	METAL CHIP	100	5%	1/10W
R3122	1-216-820-11	METAL CHIP	820	5%	1/10W
R3123	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R3124	1-216-864-11	SHORT CHIP	0		
R3125	1-216-864-11	SHORT CHIP	0		
R3129	1-216-805-11	METAL CHIP	47	5%	1/10W
R3130	1-216-805-11	METAL CHIP	47	5%	1/10W
R3131	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3133	1-216-809-11	METAL CHIP	100	5%	1/10W
R3134	1-216-809-11	METAL CHIP	100	5%	1/10W
R3135	1-543-949-22	FERRITE	0µH		
R3136	1-543-949-22	FERRITE	0µH		
R3137	1-216-864-11	SHORT CHIP	0		
R3138	1-216-864-11	SHORT CHIP	0		
R3141	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R3142	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R3143	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R3144	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R3145	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R3146	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R3147	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R3148	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R3150	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R3151	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R3152	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R3153	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R3154	1-216-809-11	METAL CHIP	100	5%	1/10W
R3155	1-216-809-11	METAL CHIP	100	5%	1/10W
R3156	1-216-847-11	METAL CHIP	150K	5%	1/10W
R3158	1-216-809-11	METAL CHIP	100	5%	1/10W
R3159	1-216-819-11	METAL CHIP	680	5%	1/10W
R3160	1-216-819-11	METAL CHIP	680	5%	1/10W
R3161	1-216-819-11	METAL CHIP	680	5%	1/10W
R3162	1-216-864-11	SHORT CHIP	0		
R3163	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W
R3164	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R3165	1-216-864-11	SHORT CHIP	0		

BM

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3170	1-216-801-11	METAL CHIP	22	5%	1/10W
R3171	1-216-864-11	SHORT CHIP	0		
R3172	1-216-864-11	SHORT CHIP	0		
R3176	1-216-864-11	SHORT CHIP	0		
R3178	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3179	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3181	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3182	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3183	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3184	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3185	1-218-873-11	METAL CHIP	12K	0.5%	1/10W
R3186	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3190	1-216-864-11	SHORT CHIP	0		
R3192	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3193	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3194	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3195	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3196	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3197	1-216-864-11	SHORT CHIP	0		
R3198	1-216-864-11	SHORT CHIP	0		
R3199	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3201	1-216-801-11	METAL CHIP	22	5%	1/10W
R3202	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3206	1-216-864-11	SHORT CHIP	0		
R3207	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3209	1-216-864-11	SHORT CHIP	0		
R3210	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3212	1-216-864-11	SHORT CHIP	0		
R3213	1-216-864-11	SHORT CHIP	0		
R3214	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3216	1-216-864-11	SHORT CHIP	0		
R3217	1-216-864-11	SHORT CHIP	0		
R3218	1-216-864-11	SHORT CHIP	0		
R3220	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3222	1-216-864-11	SHORT CHIP	0		
R3223	1-216-864-11	SHORT CHIP	0		
R3224	1-216-864-11	SHORT CHIP	0		
R3225	1-216-864-11	SHORT CHIP	0		
R3227	1-216-864-11	SHORT CHIP	0		
R3228	1-216-864-11	SHORT CHIP	0		
R3229	1-216-864-11	SHORT CHIP	0		
R3232	1-216-864-11	SHORT CHIP	0		
R3233	1-216-864-11	SHORT CHIP	0		
R3234	1-216-864-11	SHORT CHIP	0		
R3235	1-216-864-11	SHORT CHIP	0		
R3238	1-216-864-11	SHORT CHIP	0		
R3242	1-216-864-11	SHORT CHIP	0		
R3243	1-216-864-11	SHORT CHIP	0		
R3245	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3247	1-216-864-11	SHORT CHIP	0		
R3248	1-216-864-11	SHORT CHIP	0		
R3251	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3252	1-216-813-11	METAL CHIP	220	5%	1/10W
R3253	1-216-864-11	SHORT CHIP	0		
R3255	1-216-801-11	METAL CHIP	22	5%	1/10W
R3256	1-218-860-11	METAL CHIP	3.6K	0.5%	1/10W
R3257	1-216-809-11	METAL CHIP	100	5%	1/10W
R3259	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R3262	1-216-809-11	METAL CHIP	100	5%	1/10W
R3264	1-216-815-11	METAL CHIP	330	5%	1/10W
R3265	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3266	1-216-837-11	METAL CHIP	22K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3267	1-216-813-11	METAL CHIP	220	5%	1/10W
R3268	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3269	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3270	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3271	1-216-864-11	SHORT CHIP	0		
R3272	1-216-805-11	METAL CHIP	47	5%	1/10W
R3279	1-216-864-11	SHORT CHIP	0		
R3280	1-218-838-11	METAL CHIP	430	0.5%	1/10W
R3281	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3282	1-218-873-11	METAL CHIP	12K	0.5%	1/10W
R3283	1-216-864-11	SHORT CHIP	0		
R3304	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3305	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R3308	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3312	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3315	1-216-809-11	METAL CHIP	100	5%	1/10W
R3316	1-216-801-11	METAL CHIP	22	5%	1/10W
R3317	1-216-801-11	METAL CHIP	22	5%	1/10W
R3322	1-216-805-11	METAL CHIP	47	5%	1/10W
R3323	1-216-815-11	METAL CHIP	330	5%	1/10W
R3333	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3334	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3335	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3337	1-216-801-11	METAL CHIP	22	5%	1/10W
R3340	1-216-864-11	SHORT CHIP	0		
R3341	1-216-864-11	SHORT CHIP	0		
R3344	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3347	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3350	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3351	1-216-809-11	METAL CHIP	100	5%	1/10W
R3359	1-216-809-11	METAL CHIP	100	5%	1/10W
R3369	1-216-864-11	SHORT CHIP	0		
R3370	1-216-864-11	SHORT CHIP	0		
R3375	1-543-949-22	FERRITE	0µH		
R3376	1-543-949-22	FERRITE	0µH		
R3377	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3378	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3384	1-211-987-11	METAL CHIP	56	0.5%	1/10W
R3385	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R3386	1-211-987-11	METAL CHIP	56	0.5%	1/10W
R3387	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R3388	1-216-864-11	SHORT CHIP	0		
R3389	1-216-864-11	SHORT CHIP	0		
R3391	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R3392	1-216-818-11	METAL CHIP	560	5%	1/10W
R3396	1-216-864-11	SHORT CHIP	0		
R3401	1-216-805-11	METAL CHIP	47	5%	1/10W
R3402	1-216-801-11	METAL CHIP	22	5%	1/10W
R3403	1-216-819-11	METAL CHIP	680	5%	1/10W
R3404	1-216-809-11	METAL CHIP	100	5%	1/10W
R3405	1-216-809-11	METAL CHIP	100	5%	1/10W
R3406	1-216-801-11	METAL CHIP	22	5%	1/10W
R3407	1-216-801-11	METAL CHIP	22	5%	1/10W
R3408	1-216-801-11	METAL CHIP	22	5%	1/10W
R3409	1-216-809-11	METAL CHIP	100	5%	1/10W
R3410	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R3411	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R3412	1-216-817-11	METAL CHIP	470	5%	1/10W
R3413	1-216-801-11	METAL CHIP	22	5%	1/10W
R3414	1-211-987-11	METAL CHIP	56	0.5%	1/10W
R3415	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R3416	1-216-809-11	METAL CHIP	100	5%	1/10W
R3417	1-216-817-11	METAL CHIP	470	5%	1/10W
R3418	1-216-801-11	METAL CHIP	22	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3419	1-216-809-11	METAL CHIP	100	5%	1/10W
R3420	1-218-823-11	METAL CHIP	100	0.5%	1/10W
R3421	1-218-823-11	METAL CHIP	100	0.5%	1/10W
R3422	1-218-823-11	METAL CHIP	100	0.5%	1/10W
R3425	1-216-817-11	METAL CHIP	470	5%	1/10W
R3426	1-216-801-11	METAL CHIP	22	5%	1/10W
R3448	1-216-864-11	SHORT CHIP	0		
R3459	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R3469	1-218-844-11	METAL CHIP	750	0.5%	1/10W
R3470	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3471	1-216-864-11	SHORT CHIP	0		
R3472	1-216-864-11	SHORT CHIP	0		
R3473	1-216-864-11	SHORT CHIP	0		
R3474	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3475	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< NETWORK RESISTOR >			
RB3101	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
RB3102	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3103	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3104	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3105	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3106	1-233-576-11	RES, CHIP NETWORK	100		
RB3107	1-233-576-11	RES, CHIP NETWORK	100		
RB3108	1-233-576-11	RES, CHIP NETWORK	100		
RB3109	1-233-576-11	RES, CHIP NETWORK	100		
RB3110	1-233-576-11	RES, CHIP NETWORK	100		
RB3111	1-233-576-11	RES, CHIP NETWORK	100		
RB3112	1-233-576-11	RES, CHIP NETWORK	100		
RB3113	1-233-576-11	RES, CHIP NETWORK	100		
RB3114	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
RB3115	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
RB3116	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
RB3117	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
RB3201	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3202	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3203	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3204	1-239-409-11	RES, CHIP NETWORK	47 (3216)		
RB3205	1-233-576-11	RES, CHIP NETWORK	100		
RB3206	1-233-576-11	RES, CHIP NETWORK	100		
RB3207	1-233-576-11	RES, CHIP NETWORK	100		
RB3208	1-233-576-11	RES, CHIP NETWORK	100		
RB3209	1-233-576-11	RES, CHIP NETWORK	100		
RB3210	1-233-576-11	RES, CHIP NETWORK	100		
RB3303	1-233-576-11	RES, CHIP NETWORK	100		
RB3304	1-233-576-11	RES, CHIP NETWORK	100		
RB3305	1-233-576-11	RES, CHIP NETWORK	100		
RB3306	1-233-576-11	RES, CHIP NETWORK	100		
RB3309	1-233-576-11	RES, CHIP NETWORK	100		
RB3310	1-233-576-11	RES, CHIP NETWORK	100		
RB3311	1-233-576-11	RES, CHIP NETWORK	100		
RB3312	1-233-576-11	RES, CHIP NETWORK	100		
RB3313	1-233-813-11	RES, NETWORK	150 (3216)		
RB3314	1-233-813-11	RES, NETWORK	150 (3216)		
RB3315	1-233-813-11	RES, NETWORK	150 (3216)		
RB3316	1-233-813-11	RES, NETWORK	150 (3216)		
RB3318	1-233-813-11	RES, NETWORK	150 (3216)		
RB3319	1-233-813-11	RES, NETWORK	150 (3216)		
		< VIBRATOR >			
X3101	1-795-951-21	QUARTZ CRYSTAL OSCILLATOR(SMD) 79.99MHz			
X3301	1-781-887-21	VIBRATOR, CRYSTAL 18.543956MHz			

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* A-1405-659-A C BOARD, COMPLETE
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	4-042-408-02	PIN (45), WIRE			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		< CAPACITOR >			
C9004	1-115-350-51	CERAMIC	0.0047µF		2KV
C9009	1-163-104-00	CERAMIC CHIP	30pF	5%	50V
C9010	1-163-104-00	CERAMIC CHIP	30pF	5%	50V
C9011	1-161-830-00	CERAMIC	0.0047µF		500V
C9012	1-161-830-00	CERAMIC	0.0047µF		500V
C9013	1-163-035-00	CERAMIC CHIP	0.047µF		50V
C9014	1-161-830-00	CERAMIC	0.0047µF		500V
C9015	1-163-104-00	CERAMIC CHIP	30pF	5%	50V
C9018	1-107-961-91	ELECT	10µF	20%	250V
C9019	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9020	1-107-961-91	ELECT	10µF	20%	250V
C9021	1-107-961-91	ELECT	10µF	20%	250V
C9022	1-101-004-00	CERAMIC	0.01µF		50V
C9023	1-101-004-00	CERAMIC	0.01µF		50V
C9024	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9025	1-104-653-11	ELECT	220µF	20%	16V
C9026	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9027	1-101-004-00	CERAMIC	0.01µF		50V
C9031	1-115-350-51	CERAMIC	0.0047µF		2KV
C9032	1-162-116-00	CERAMIC	680pF	10%	2KV
C9033	1-107-662-11	ELECT	22µF	20%	250V
C9036	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C9042	1-128-527-11	ELECT	330µF	20%	25V
C9044	1-126-934-11	ELECT	220µF	20%	16V
C9045	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9046	1-126-933-11	ELECT	100µF	20%	16V
C9048	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9049	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C9050	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
		< CONNECTOR >			
CN9001*	1-764-334-11	PLUG, CONNECTOR 11P			
CN9002*	1-564-507-11	PLUG, CONNECTOR 4P			
CN9003	1-695-915-11	TAB (CONTACT)			
CN9004	1-695-915-11	TAB (CONTACT)			
CN9009	1-785-879-11	CONNECTOR, ONE TOUCH			
		< DIODE >			
D9005	8-719-404-50	DIODE MA111-TX			
D9006	8-719-051-85	DIODE HSS83TD			
D9007	8-719-051-85	DIODE HSS83TD			
D9008	8-719-051-85	DIODE HSS83TD			
D9009	8-719-908-03	DIODE GP08DPKG23			
D9010	8-719-110-17	DIODE RD10ESB2			
		< IC >			
IC9001	8-759-680-01	IC TDA6120Q/N2/S1			
IC9002	8-759-680-01	IC TDA6120Q/N2/S1			
IC9003	8-759-680-01	IC TDA6120Q/N2/S1			

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION		REMARK
		< JACK >		
J9001	⚠ 1-451-544-11	SOCKET, CRT		
		< COIL >		
L9002	1-408-592-11	INDUCTOR	1.2µH	
L9003	1-408-592-11	INDUCTOR	1.2µH	
L9004	1-408-592-11	INDUCTOR	1.2µH	
L9005	1-406-666-21	INDUCTOR	150µH	
L9006	1-412-526-11	INDUCTOR	12µH	
		< DISCHARGE GAP >		
NL9003	1-519-421-11	GAP, DISCHARGE		
		< TRANSISTOR >		
Q9001	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
Q9003	8-729-422-27	TRANSISTOR	2SD601A-Q	
Q9004	8-729-422-27	TRANSISTOR	2SD601A-Q	
Q9005	8-729-422-27	TRANSISTOR	2SD601A-Q	
Q9007	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L	
Q9009	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
Q9010	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
Q9011	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
Q9013	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L	
Q9014	8-729-823-81	TRANSISTOR	2SC4632LS-CB7	
Q9015	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L	
		< RESISTOR >		
R9001	1-216-633-11	METAL CHIP	180 0.5% 1/10W	
R9006	1-216-073-91	RES-CHIP	10K 5% 1/10W	
R9007	1-216-653-11	METAL CHIP	1.2K 0.5% 1/10W	
R9012	1-216-295-91	SHORT CHIP	0	
R9013	1-216-049-11	RES-CHIP	1K 5% 1/10W	
R9014	1-216-033-00	RES-CHIP	220 5% 1/10W	
R9015	1-249-409-11	CARBON	220 5% 1/4W	
R9016	1-216-033-00	RES-CHIP	220 5% 1/10W	
R9018	1-216-633-11	METAL CHIP	180 0.5% 1/10W	
R9019	1-216-633-11	METAL CHIP	180 0.5% 1/10W	
R9020	1-216-025-11	RES-CHIP	100 5% 1/10W	
R9021	1-216-103-00	RES-CHIP	180K 5% 1/10W	
R9022	1-216-073-91	RES-CHIP	10K 5% 1/10W	
R9023	1-216-103-00	RES-CHIP	180K 5% 1/10W	
R9025	1-216-025-11	RES-CHIP	100 5% 1/10W	
R9026	1-216-653-11	METAL CHIP	1.2K 0.5% 1/10W	
R9027	1-216-099-00	RES-CHIP	120K 5% 1/10W	
R9028	1-216-103-00	RES-CHIP	180K 5% 1/10W	
R9029	1-216-073-91	RES-CHIP	10K 5% 1/10W	
R9030	1-216-073-91	RES-CHIP	10K 5% 1/10W	
R9031	1-208-784-11	METAL CHIP	1.2K 0.5% 1/10W	
R9032	1-216-099-00	RES-CHIP	120K 5% 1/10W	
R9033	1-215-435-00	METAL	3.9K 1% 1/4W	
R9034	1-215-428-00	METAL	2K 1% 1/4W	
R9035	1-216-103-00	RES-CHIP	180K 5% 1/10W	
R9036	1-216-083-00	RES-CHIP	27K 5% 1/10W	
R9037	1-215-926-00	METAL OXIDE	33K 5% 3W	
R9039	1-216-025-11	RES-CHIP	100 5% 1/10W	
R9041	1-216-083-00	RES-CHIP	27K 5% 1/10W	
R9042	1-216-083-00	RES-CHIP	27K 5% 1/10W	
R9043	1-215-926-00	METAL OXIDE	33K 5% 3W	
R9044	1-215-926-00	METAL OXIDE	33K 5% 3W	
R9047	1-219-744-11	METAL	220 5% 1/2W	
R9048	1-216-049-11	RES-CHIP	1K 5% 1/10W	
R9049	1-216-049-11	RES-CHIP	1K 5% 1/10W	
R9051	1-219-744-11	METAL	220 5% 1/2W	
R9052	1-219-744-11	METAL	220 5% 1/2W	
R9056	1-219-743-11	METAL	100 5% 1/2W	
R9057	1-219-510-11	METAL	470K 5% 1/2W	
R9059	1-219-746-11	METAL	1K 5% 1/2W	
R9061	1-219-743-11	METAL	100 5% 1/2W	
R9062	1-260-123-11	CARBON	100K 5% 1/2W	
R9063	1-216-097-11	RES-CHIP	100K 5% 1/10W	
R9070	1-247-807-31	CARBON	100 5% 1/4W	
R9071	1-247-807-31	CARBON	100 5% 1/4W	
R9072	1-216-025-11	RES-CHIP	100 5% 1/10W	
R9073	1-216-049-11	RES-CHIP	1K 5% 1/10W	
R9074	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	
R9077	1-216-073-91	RES-CHIP	10K 5% 1/10W	
R9089	1-208-803-11	METAL CHIP	7.5K 0.5% 1/10W	
R9091	1-215-429-00	METAL	2.2K 1% 1/4W	
R9092	1-216-295-91	SHORT CHIP	0	
R9094	1-216-295-91	SHORT CHIP	0	
R9095	1-216-295-91	SHORT CHIP	0	
		< VARIABLE RESISTOR >		
RV9001	⚠ 1-241-714-11	RES, ADJ, METAL FILM 110M (H STAT)		

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* A-1302-742-A D BOARD, COMPLETE
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	3-710-578-01	COVER, VOLUME, 6 MOLD			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	4-382-854-21	SCREW (M3X14), P, SW (+)			
*	7-322-065-48	RUBBER, SILICONE RTV (KE-3490)			
		< CAPACITOR >			
C5001	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C5002	1-162-116-00	CERAMIC	680pF	10%	2KV
C5003	1-117-832-21	FILM	4700pF	3%	1.5KV
C5004	1-117-83311	FILM	5100pF	3%	1.5KV
C5005	1-137-401-11	MYLAR	0.22µF	5%	100V
C5006	1-162-116-00	CERAMIC	680pF	10%	2KV
C5009	1-162-318-11	CERAMIC	0.001µF	10%	500V
C5010	1-104-989-91	MYLAR	0.0022µF	10%	200V
C5015	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5016	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5017	1-104-989-91	MYLAR	0.0022µF	10%	200V
C5103	1-126-934-11	ELECT	220µF	20%	16V
C5104	1-126-941-11	ELECT	470µF	20%	25V
C5105	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C5106	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C5107	1-130-783-71	MYLAR	0.33µF	10%	100V
C5108	1-126-968-11	ELECT	100µF	20%	50V
C5109	1-126-941-11	ELECT	470µF	20%	25V
C5110	1-162-318-11	CERAMIC	0.001µF	10%	500V
C5201	1-137-367-11	MYLAR	0.0033µF	5%	50V
C5202	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5203	1-126-964-11	ELECT	10µF	20%	50V
C5204	1-107-648-91	ELECT	100µF	20%	160V
C5205	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C5206	1-136-187-11	MYLAR	0.047µF	10%	250V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C5207	1-165-727-31	ELECT	120µF	20%	16V
C5208	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5210	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5211	1-216-864-11	SHORT CHIP	0		
C5212	1-126-965-91	ELECT	22µF	20%	50V
C5213	1-126-965-91	ELECT	22µF	20%	50V
C5214	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5216	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C5217	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C5219	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C5221	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5223	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5225	1-100-122-41	FILM	0.022µF	5%	400V
C5227	1-128-563-11	ELECT	100µF	20%	100V
C5401	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5402	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5403	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C5404	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5405	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5406	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C5408	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5409	1-117-665-11	FILM	0.33µF	5%	250V
C5410	1-161-830-11	CERAMIC	0.0047µF		500V
C5412	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C5415	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C5417	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5418	1-117-664-11	FILM	0.27µF	5%	250V
C5421	1-130-495-00	MYLAR	0.1µF	5%	50V
C5422	1-126-947-11	ELECT	47µF	20%	25V
C5423	1-126-947-11	ELECT	47µF	20%	25V
C5424	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C5552	1-126-964-11	ELECT	10µF	20%	50V
C5553	1-126-933-11	ELECT	100µF	20%	16V
C5554	1-115-349-51	CERAMIC	0.01µF		2KV
C5600	1-100-122-31	FILM	0.022µF	5%	400V
C5601	1-100-144-31	FILM	0.0068µF	5%	630V
C5604	1-100-123-31	FILM	0.033µF	5%	400V
C5606	1-128-582-11	ELECT	10µF	20%	100V
C5607	1-107-666-91	ELECT	1µF	20%	400V
C5608	1-107-957-11	ELECT	1µF	20%	250V
C5650	1-126-947-11	ELECT	47µF	20%	25V
C5652	1-126-947-11	ELECT	47µF	20%	25V
C5653	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5655	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5656	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5657	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C5658	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5659	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5660	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5661	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5662	1-126-947-11	ELECT	47µF	20%	25V
C5663	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C5702	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C5703	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C6400	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C6401	1-126-964-11	ELECT	10µF	20%	50V
C6402	1-126-963-11	ELECT	4.7µF	20%	50V
C6403	1-126-968-11	ELECT	100µF	20%	50V
C6405	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C6406	1-136-479-11	FILM	0.001µF	2%	50V
C6407	1-130-495-00	MYLAR	0.1µF	5%	50V
C6409	1-126-947-11	ELECT	47µF	20%	25V
C6411	1-100-613-81	CERAMIC	470pF	5%	1KV

REF. NO.	PART NO.	DESCRIPTION			REMARK
C6412	1-100-613-81	CERAMIC	470pF	5%	1KV
C6413	1-165-954-11	FILM	56000pF	3%	800V
C6414	1-117-228-71	MYLAR	2.2µF	10%	450V
C6415	1-126-968-11	ELECT	100µF	20%	50V
C6416	1-126-948-11	ELECT	100µF	20%	35V
C6418	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C6500	1-126-942-61	ELECT	1000µF	20%	25V
C6501	1-126-942-61	ELECT	1000µF	20%	25V
C6504	1-126-942-61	ELECT	1000µF	20%	25V
C6505	1-131-970-11	ELECT	1500µF	20%	25V
C6506	1-128-953-31	ELECT	470µF	20%	25V
C6509	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C6511	1-104-332-11	CERAMIC	470pF	10%	2KV
C6512	1-165-441-81	ELECT	33µF	20%	160V
C6513	1-128-563-11	ELECT	100µF	20%	100V
C6514	1-107-662-11	ELECT	22µF	20%	250V
C6515	1-165-733-31	ELECT	100µF	20%	25V
C6517	1-126-933-11	ELECT	100µF	20%	16V
C6519	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C6601	1-102-228-00	CERAMIC	470pF	10%	500V
C6602	1-126-935-11	ELECT	470µF	20%	16V
C6603	1-102-228-00	CERAMIC	470pF	10%	500V
C6604	1-165-728-31	ELECT	330µF	20%	16V
C6607	1-165-729-31	ELECT	470µF	20%	16V
C6611	1-104-658-91	ELECT	100µF	20%	10V
C6613	1-104-658-91	ELECT	100µF	20%	10V
C6616	1-126-941-11	ELECT	470µF	20%	25V
C6617	1-126-941-11	ELECT	470µF	20%	25V
C6618	1-102-228-00	CERAMIC	470pF	10%	500V
C6619	1-102-228-00	CERAMIC	470pF	10%	500V
C6700	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C6707	1-162-318-11	CERAMIC	0.001µF	10%	500V
C6803	1-104-658-91	ELECT	100µF	20%	10V
C6804	1-126-964-11	ELECT	10µF	20%	50V
C8001	1-126-964-11	ELECT	10µF	20%	50V
C8002	1-126-964-11	ELECT	10µF	20%	50V
C8003	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8004	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8006	1-126-960-11	ELECT	1µF	20%	50V
C8007	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8012	1-126-947-11	ELECT	47µF	20%	25V
C8016	1-130-495-00	MYLAR	0.1µF	5%	50V
C8017	1-126-964-11	ELECT	10µF	20%	50V
C8020	1-130-495-00	MYLAR	0.1µF	5%	50V
C8021	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C8024	1-126-947-11	ELECT	47µF	20%	35V
C8025	1-126-947-11	ELECT	47µF	20%	25V
C8027	1-130-495-00	MYLAR	0.1µF	5%	50V
C8028	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C8030	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8031	1-126-947-11	ELECT	47µF	20%	25V
C8032	1-117-160-51	FILM	680pF	2%	100V
C8033	1-126-964-11	ELECT	10µF	20%	50V
C8035	1-100-614-81	CERAMIC	330pF	5%	1KV
C8036	1-100-614-81	CERAMIC	330pF	5%	1KV
C8037	1-165-953-11	FILM	47000pF	3%	800V
C8038	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8040	1-126-969-11	ELECT	220µF	20%	50V
C8041	1-130-495-00	MYLAR	0.1µF	5%	50V
C8042	1-136-189-00	MYLAR	0.1µF	10%	250V
C8045	1-130-471-00	MYLAR	0.001µF	5%	50V
C8046	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C8048	1-130-495-00	MYLAR	0.1µF	5%	50V
C8063	1-135-945-22	FILM	10000pF	3%	800V
C8065	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8073	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C8074	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8076	1-126-963-11	ELECT	4.7µF	20%	50V
C8077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
		< CONNECTOR >			
CN5002*	1-580-798-11	CONNECTOR PIN (DY) 6P			
CN5004*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN5005*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN5006*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN5007*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN5012*	1-564-507-11	PLUG, CONNECTOR 4P			
CN5017*	1-564-509-11	PLUG, CONNECTOR 6P			
CN6400*	1-580-843-11	PIN, CONNECTOR (POWER)			
		< DIODE >			
D5001	8-719-061-21	DIODE	FMQ-G5FMS		
D5003	8-719-081-97	DIODE	MMDL914T1		
D5005	8-719-081-97	DIODE	MMDL914T1		
D5101	6-500-021-01	DIODE	MM3Z4V7ST1		
D5102	8-719-908-03	DIODE	GP08D		
D5201	8-719-110-39	DIODE	RD15ES-B1		
D5202	8-719-028-45	DIODE	D2L20U		
D5203	8-719-081-97	DIODE	MMDL914T1		
D5204	8-719-081-97	DIODE	MMDL914T1		
D5205	8-719-081-97	DIODE	MMDL914T1		
D5206	8-719-081-97	DIODE	MMDL914T1		
D5207	8-719-081-97	DIODE	MMDL914T1		
D5209	8-719-066-11	DIODE	1PS184-115		
D5401	8-719-081-97	DIODE	MMDL914T1		
D5402	8-719-081-97	DIODE	MMDL914T1		
D5405	8-719-081-97	DIODE	MMDL914T1		
D5406	8-719-109-63	DIODE	RD3.0ESB2		
D5600	8-719-052-90	DIODE	D1NL40-TA2		
D5601	8-719-052-90	DIODE	D1NL40-TA2		
D5602	8-719-052-90	DIODE	D1NL40-TA2		
D5603	8-719-110-39	DIODE	RD15ES-B1		
D5604	8-719-063-70	DIODE	D1NL20U		
D5605	8-719-052-90	DIODE	D1NL40-TA2		
D5606	8-719-052-90	DIODE	D1NL40-TA2		
D5650	8-719-081-97	DIODE	MMDL914T1		
D5651	8-719-081-97	DIODE	MMDL914T1		
D5652	8-719-062-51	DIODE	1PS226-115		
D5653	8-719-082-03	DIODE	MM3Z15VT1		
D5701	8-719-082-03	DIODE	MM3Z15VT1		
D6401	8-719-083-78	DIODE	10ERA60-TP		
D6406	8-719-082-03	DIODE	MM3Z15VT1		
D6407	8-719-082-03	DIODE	MM3Z15VT1		
D6408	1-216-864-11	SHORT CHIP	0		
D6409	6-500-567-21	DIODE	10ERB20-TB5		
D6410	6-500-567-21	DIODE	10ERB20-TB5		
D6411	8-719-082-03	DIODE	MM3Z15VT1		
D6413	8-719-082-03	DIODE	MM3Z15VT1		
D6415	8-719-082-03	DIODE	MM3Z15VT1		
D6502	8-719-060-88	DIODE	D4SBS6		
D6504	8-719-510-13	DIODE	D10SC4MR		
D6508	8-719-062-40	DIODE	D4SBL20µF3		

REF. NO.	PART NO.	DESCRIPTION	REMARK
D6509	8-719-052-90	DIODE D1NL40-TA2	
D6510	8-719-052-37	DIODE F10P04Q	
D6511	8-719-074-79	DIODE YG911S2R	
D6601	8-719-028-45	DIODE D2L20U	
D6602	8-719-028-45	DIODE D2L20U	
D6604	8-719-075-66	DIODE D5LC20U-4012	
D6607	8-719-028-45	DIODE D2L20U	
D6608	8-719-028-45	DIODE D2L20U	
D6800	8-719-150-92	DIODE RD33EB3T	
D6803	8-719-081-97	DIODE MMDL914T1	
D6804	6-500-654-01	DIODE MM3Z3V0T1	
D6805	8-719-081-97	DIODE MMDL914T1	
D8001	8-719-081-97	DIODE MMDL914T1	
D8003	8-719-081-97	DIODE MMDL914T1	
D8005	8-719-081-97	DIODE MMDL914T1	
D8006	6-500-567-21	DIODE 10ERB20-TB5	
D8008	8-719-082-03	DIODE MM3Z15VT1	
D8009	8-719-082-03	DIODE MM3Z15VT1	
D8010	8-719-083-78	DIODE 10ERA60-TP	
D8011	8-719-082-03	DIODE MM3Z15VT1	
D8012	8-719-082-03	DIODE MM3Z15VT1	
D8015	8-719-081-97	DIODE MMDL914T1	
D8022	8-719-063-73	DIODE D1NL20U-TR	
D8023	8-719-070-10	DIODE NNCD5.1A-T1	
D8024	8-719-036-94	DIODE MM3Z5V6ST1	
D8026	8-719-081-97	DIODE MMDL914T1	
D8027	6-500-654-01	DIODE MM3Z3V0T1	
D8030	8-719-056-93	DIODE UDZ-TE-17-18B	
D8034	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D8038	8-719-082-03	DIODE MM3Z15VT1	
D8039	8-719-082-03	DIODE MM3Z15VT1	
D8041	8-719-082-03	DIODE MM3Z15VT1	
		< FERRITE BEAD >	
FB5001	1-543-298-11	FERRITE	0µH
FB5201	1-469-578-11	FERRITE	1.1µH
FB5203	1-469-127-21	FERRITE	0µH
FB5205	1-469-578-11	FERRITE	1.1µH
FB6400	1-469-579-11	FERRITE	0.45µH
FB6401	1-469-579-11	FERRITE	0.45µH
FB6402	1-469-579-11	FERRITE	0.45µH
FB6403	1-469-579-11	FERRITE	0.45µH
FB6500	1-469-579-11	FERRITE	0.45µH
FB6501	1-469-579-11	FERRITE	0.45µH
FB6506	1-469-578-11	FERRITE	1.1µH
FB6507	1-469-578-11	FERRITE	1.1µH
FB6508	1-469-578-11	FERRITE	1.1µH
FB8001	1-469-579-11	FERRITE	0.45µH
FB8002	1-469-579-11	FERRITE	0.45µH
FB8003	1-469-579-11	FERRITE	0.45µH
		< IC >	
IC5101	8-759-696-71	IC STV9379A	
IC5201	8-759-585-82	IC BA9759F-E2	
IC5401	8-759-700-07	IC NJM2903M-TE2	
IC5402	8-759-803-42	IC LA6500-FA	
IC5403	8-759-701-01	IC NJM2904M	
IC5650	8-759-701-01	IC NJM2904M	
IC5651	8-759-701-01	IC NJM2904M	
IC5652	8-759-981-61	IC NJM2901M	
IC6400	6-705-810-01	IC MCZ3001DB	

D

REF. NO.	PART NO.	DESCRIPTION	REMARK
IC6501	8-759-518-68	IC PQ12RF21	
IC6503	6-704-264-01	IC EK1135	
IC6602	8-749-013-76	IC PQ6RD83B	
IC6801	8-749-921-86	IC SE-140N	
IC8001	8-759-700-07	IC NJM2903M	
IC8002	6-705-810-01	IC MCZ3001DB	
IC8004	8-759-701-01	IC NJM2904M	
IC8005	8-759-586-17	IC TL1431CZ-AP	
IC8104	8-759-586-17	IC TL1431CZ-AP	
		< JUMPER RESISTOR >	
JR1001	1-216-864-11	SHORT CHIP 0	
JR1002	1-216-864-11	SHORT CHIP 0	
JR1003	1-216-864-11	SHORT CHIP 0	
JR1004	1-216-864-11	SHORT CHIP 0	
JR1005	1-216-864-11	SHORT CHIP 0	
JR1006	1-216-864-11	SHORT CHIP 0	
JR1007	1-216-864-11	SHORT CHIP 0	
JR1008	1-216-864-11	SHORT CHIP 0	
JR1009	1-216-864-11	SHORT CHIP 0	
JR1010	1-216-864-11	SHORT CHIP 0	
JR1011	1-216-864-11	SHORT CHIP 0	
JR1013	1-216-864-11	SHORT CHIP 0	
JR1014	1-216-864-11	SHORT CHIP 0	
JR1015	1-216-864-11	SHORT CHIP 0	
JR1016	1-216-864-11	SHORT CHIP 0	
JR1017	1-216-864-11	SHORT CHIP 0	
JR1018	1-216-864-11	SHORT CHIP 0	
JR1019	1-216-864-11	SHORT CHIP 0	
JR1020	1-216-864-11	SHORT CHIP 0	
JR1021	1-216-864-11	SHORT CHIP 0	
JR1022	1-216-864-11	SHORT CHIP 0	
JR1023	1-216-864-11	SHORT CHIP 0	
JR1024	1-216-864-11	SHORT CHIP 0	
JR1025	1-216-864-11	SHORT CHIP 0	
JR1028	1-216-864-11	SHORT CHIP 0	
JR1030	1-216-864-11	SHORT CHIP 0	
JR1031	1-216-864-11	SHORT CHIP 0	
JR1032	1-216-864-11	SHORT CHIP 0	
JR1034	1-216-864-11	SHORT CHIP 0	
JR1036	1-216-864-11	SHORT CHIP 0	
JR5402	1-216-864-11	SHORT CHIP 0	
JR5404	1-216-864-11	SHORT CHIP 0	
JR5407	1-216-864-11	SHORT CHIP 0	
JR6501	1-216-864-11	SHORT CHIP 0	
JR6502	1-216-864-11	SHORT CHIP 0	
JR6503	1-216-864-11	SHORT CHIP 0	
JR6504	1-216-864-11	SHORT CHIP 0	
JR6602	1-216-864-11	SHORT CHIP 0	
JR6702	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L5101	1-406-665-11	INDUCTOR 100µH	
L5202	1-414-189-31	INDUCTOR 100µH	
L5403	1-424-997-11	COIL, HORIZONTAL LINEARITY	
L5404	1-428-932-11	INDUCTOR 4mH	
L5600	1-406-667-11	INDUCTOR 220µH	
L6400	1-414-187-11	INDUCTOR 47µH	
L6503	1-412-525-31	INDUCTOR 10µH	
L6504	1-412-525-31	INDUCTOR 10µH	
L6505	1-406-668-21	INDUCTOR 330µH	
L6507	1-412-537-31	INDUCTOR 100µH	
L6508	1-412-525-31	INDUCTOR 10µH	
L6513	1-456-166-11	COIL, CHOPPER	
L8002	1-428-950-31	INDUCTOR 125µH	
		< PHOTOCOUPLER >	
PH6700	8-749-016-81	PHOTOCOUPLER PC123Y22	
PH8003	8-749-016-81	PHOTOCOUPLER PC123Y22	
		< IC LINK >	
PS6501	1-576-688-11	FUSE 0.4A 32V	
		< TRANSISTOR >	
Q5001	6-550-077-01	TRANSISTOR 2SC5778-RB	
Q5004	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5005	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5006	8-729-038-83	TRANSISTOR 2SK2251-01-F19	
Q5008	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5009	8-729-010-05	TRANSISTOR MSB709-RT1	
Q5101	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5102	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5103	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5201	6-550-153-11	TRANSISTOR FQpF12P20YDTU	
Q5202	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5203	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5401	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5402	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5403	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5404	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q5405	8-729-010-05	TRANSISTOR MSB709-RT1	
Q5406	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q5407	8-729-010-05	TRANSISTOR MSB709-RT1	
Q5522	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q5600	8-729-050-48	TRANSISTOR IRF614-005	
Q5602	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5604	8-729-800-32	TRANSISTOR 2SC2362K-G	
Q5605	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5606	8-729-045-65	TRANSISTOR 2SA1776TV2Q	
Q5650	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5701	8-729-010-25	TRANSISTOR MSD601-RT1	
Q5702	8-729-010-05	TRANSISTOR MSB709-RT1	
Q5703	8-729-010-05	TRANSISTOR MSB709-RT1	
Q6400	6-550-526-11	TRANSISTOR 2SK2842(LBS2SONY)	
Q6401	6-550-526-11	TRANSISTOR 2SK2842(LBS2SONY)	
Q6802	8-729-010-05	TRANSISTOR MSB709-RT1	
Q6803	8-729-019-57	TRANSISTOR 2SA1208S-TP	
Q8003	8-729-010-25	TRANSISTOR MSD601-RT1	
Q8004	8-729-010-25	TRANSISTOR MSD601-RT1	
Q8007	8-729-010-25	TRANSISTOR MSD601-RT1	
Q8009	8-729-010-25	TRANSISTOR MSD601-RT1	
Q8011	8-729-010-05	TRANSISTOR MSB709-RT1	
Q8013	6-550-526-11	TRANSISTOR 2SK2842(LBS2SONY)	
Q8014	6-550-526-11	TRANSISTOR 2SK2842(LBS2SONY)	
Q8021	8-729-010-05	TRANSISTOR MSB709-RT1	
Q8028	8-729-421-22	TRANSISTOR UN2211-TX	
Q8034	8-729-421-22	TRANSISTOR UN2211-TX	
Q8035	8-729-010-05	TRANSISTOR MSB709-RT1	

D

REF. NO.	PART NO.	DESCRIPTION			REMARK
		< RESISTOR >			
R5001	1-243-608-71	METAL OXIDE	1.5K	5%	3W
R5002	1-243-608-71	METAL OXIDE	1.5K	5%	3W
R5003	1-215-915-21	METAL OXIDE	470	5%	3W
R5013	1-243-949-71	METAL OXIDE	0.47	5%	2W
R5014	1-243-949-71	METAL OXIDE	0.47	5%	2W
R5017	1-215-880-00	METAL OXIDE	10	5%	2W
R5019	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5020	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5021	1-216-809-11	METAL CHIP	100	5%	1/10W
R5023	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5025	1-216-809-11	METAL CHIP	100	5%	1/10W
R5028	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5029	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5031	1-249-393-11	CARBON	10	5%	1/4W
R5032	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5101	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5102	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5103	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5104	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5107	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R5108	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R5109	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5111	1-249-383-11	CARBON	1.5	5%	1/4W
R5112	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R5113	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R5115	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R5116	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R5117	1-214-798-21	METAL	1.8	1%	1/2W
R5118	1-214-796-00	METAL	1.5	1%	1/2W
R5119	1-243-572-71	METAL OXIDE	470	5%	2W
R5120	1-243-572-71	METAL OXIDE	470	5%	2W
R5121	1-249-414-11	CARBON	560	5%	1/4W
R5201	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R5202	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R5206	1-249-425-11	CARBON	4.7K	5%	1/4W
R5207	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5208	1-249-409-11	CARBON	220	5%	1/4W
R5209	1-216-864-11	SHORT CHIP	0		
R5210	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5211	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R5213	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5214	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5215	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5216	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5217	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R5218	1-216-857-11	METAL CHIP	1M	5%	1/10W
R5221	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5223	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5227	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5229	1-216-864-11	SHORT CHIP	0		
R5231	1-216-839-11	METAL CHIP	33K	5%	1/10W
R5233	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5235	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5239	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R5241	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5243	1-216-843-11	METAL CHIP	68K	5%	1/10W
R5245	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5247	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5249	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5251	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5252	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5401	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5402	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R5403	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5404	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5405	1-216-813-11	METAL CHIP	220	5%	1/10W
R5406	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R5407	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R5408	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5409	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R5410	1-249-393-11	CARBON	10	5%	1/4W
R5411	1-216-809-11	METAL CHIP	100	5%	1/10W
R5412	1-249-437-11	CARBON	47K	5%	1/4W
R5413	1-249-401-11	CARBON	47	5%	1/4W
R5415	1-215-888-00	METAL OXIDE	220	5%	2W
R5419	1-216-853-11	METAL CHIP	470K	5%	1/10W
R5420	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5421	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5422	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R5423	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5424	1-216-389-11	METAL OXIDE	1	5%	3W
R5426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5428	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5429	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5430	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5431	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5432	1-216-809-11	METAL CHIP	100	5%	1/10W
R5433	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5434	1-216-835-11	METAL CHIP	15K	5%	1/10W
R5436	1-249-389-11	CARBON	4.7	5%	1/4W
R5437	1-218-881-11	METAL CHIP	27K	0.5%	1/10W
R5438	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5439	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R5440	1-218-903-11	METAL CHIP	220K	0.5%	1/10W
R5441	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R5573	1-216-864-11	SHORT CHIP	0		
R5581	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R5582	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R5584	1-243-594-71	METAL OXIDE	33K	5%	2W
R5585	1-243-598-71	METAL OXIDE	68K	5%	2W
R5586	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R5587	1-260-328-11	CARBON	1K	5%	1/2W
R5607	1-249-441-11	CARBON	100K	5%	1/4W
R5608	1-249-441-11	CARBON	100K	5%	1/4W
R5609	1-249-441-11	CARBON	100K	5%	1/4W
R5610	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5613	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5614	1-249-401-11	CARBON	47	5%	1/4W
R5617	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5619	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5620	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5621	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R5622	1-216-839-11	METAL CHIP	33K	5%	1/10W
R5623	1-216-839-11	METAL CHIP	33K	5%	1/10W
R5624	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5625	1-216-845-11	METAL CHIP	100K	5%	1/10W
R5626	1-216-843-11	METAL CHIP	68K	5%	1/10W
R5627	1-243-610-71	METAL OXIDE	2.2K	5%	3W
R5628	1-243-610-71	METAL OXIDE	2.2K	5%	3W
R5629	1-243-610-71	METAL OXIDE	2.2K	5%	3W
R5630	1-216-809-11	METAL CHIP	100	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5631	1-260-292-11	CARBON	1	5%	1/2W
R5632	1-218-901-11	METAL CHIP	180K	0.5%	1/10W
R5633	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R5634	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R5635	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R5636	1-249-377-11	CARBON	0.47	5%	1/4W
R5651	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5652	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5653	1-249-377-11	CARBON	0.47	5%	1/4W
R5654	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5655	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5656	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R5657	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R5658	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5659	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5661	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5662	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5663	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5664	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R5665	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R5666	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R5667	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R5668	1-216-853-11	METAL CHIP	470K	5%	1/10W
R5670	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5671	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5672	1-216-839-11	METAL CHIP	33K	5%	1/10W
R5673	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5674	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R5675	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R5676	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R5677	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5678	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5679	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5680	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5681	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5683	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R5685	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R5701	1-260-107-11	CARBON	4.7K	5%	1/2W
R5702	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R5704	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R5706	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R5708	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R5709	1-216-813-11	METAL CHIP	220	5%	1/10W
R5710	1-249-377-11	CARBON	0.47	5%	1/4W
R6402	1-218-870-11	METAL CHIP	9.1K	0.5%	1/10W
R6405	1-218-823-11	METAL CHIP	100	0.5%	1/10W
R6406	1-245-478-21	METAL	470K	1%	1/4W
R6407	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R6409	1-218-830-11	METAL CHIP	200	0.5%	1/10W
R6410	1-249-417-11	CARBON	1K	5%	1/4W
R6411	1-249-393-11	CARBON	10	5%	1/4W
R6412	1-249-393-11	CARBON	10	5%	1/4W
R6413	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6414	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6417	1-245-315-71	METAL OXIDE	0.1	5%	2W
R6418	1-245-315-71	METAL OXIDE	0.1	5%	2W
R6419	1-249-393-11	CARBON	10	5%	1/4W
R6420	1-249-393-11	CARBON	10	5%	1/4W
R6421	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R6427	1-216-857-11	METAL CHIP	1M	5%	1/10W
R6428	1-216-857-11	METAL CHIP	1M	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6429	1-245-478-21	METAL	470K	1%	1/4W
R6500	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6501	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6503	1-243-588-71	METAL OXIDE	10K	5%	2W
R6504	1-260-298-51	CARBON	3.3	5%	1/2W
R6512	1-249-381-11	CARBON	1	5%	1/4W
R6590	1-249-409-11	CARBON	220	5%	1/4W
R6601	1-249-379-11	CARBON	0.68	5%	1/4W
R6602	1-249-380-11	CARBON	0.82	5%	1/4W
R6604	1-249-377-11	CARBON	0.47	5%	1/4W
R6605	1-249-377-11	CARBON	0.47	5%	1/4W
R6613	1-260-288-11	CARBON	0.47	5%	1/2W
R6614	1-260-288-11	CARBON	0.47	5%	1/2W
R6700	1-216-817-11	METAL CHIP	470	5%	1/10W
R6702	1-216-821-11	METAL CHIP	1K	5%	1/10W
R6703	1-218-484-11	METAL CHIP	750	5%	1/10W
R6704	1-218-484-11	METAL CHIP	750	5%	1/10W
R6705	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6708	1-216-864-11	SHORT CHIP	0		
R6809	1-249-417-11	CARBON	1K	5%	1/4W
R6810	1-216-821-11	METAL CHIP	1K	5%	1/10W
R6811	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R6812	1-243-511-71	METAL OXIDE	2.2	5%	3W
R6813	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6814	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W
R6815	1-216-837-11	METAL CHIP	22K	5%	1/10W
R6816	1-216-846-11	METAL CHIP	120K	5%	1/10W
R6817	1-216-846-11	METAL CHIP	120K	5%	1/10W
R6818	1-245-471-21	METAL	240K	1%	1/4W
R6821	1-245-471-21	METAL	240K	1%	1/4W
R8001	1-219-512-11	METAL	2.2M	5%	1/2W
R8002	1-219-512-11	METAL	2.2M	5%	1/2W
R8003	1-216-839-11	METAL CHIP	33K	5%	1/10W
R8004	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8005	1-216-837-11	METAL CHIP	22K	5%	1/10W
R8008	1-218-877-11	METAL CHIP	18K	0.5%	1/10W
R8010	1-218-484-11	METAL CHIP	750	5%	1/10W
R8011	1-216-849-11	METAL CHIP	220K	5%	1/10W
R8012	1-247-828-11	CARBON	750	5%	1/4W
R8013	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8014	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R8015	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R8016	1-247-843-11	CARBON	3.3K	5%	1/4W
R8017	1-218-857-11	METAL CHIP	2.7K	0.5%	1/10W
R8019	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R8020	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8022	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8025	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8026	1-218-853-11	METAL CHIP	1.8K	0.5%	1/10W
R8027	1-218-891-11	METAL CHIP	68K	0.5%	1/10W
R8028	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R8030	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R8033	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8035 ⚠	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R8036	1-215-419-00	METAL	820	1%	1/4W
R8037 ⚠	1-215-447-00	METAL	12K	1%	1/4W
R8038 ⚠	1-215-449-00	METAL	15K	1%	1/4W
R8039 ⚠	1-215-449-00	METAL	15K	1%	1/4W
R8040 ⚠	1-215-432-00	METAL	3K	1%	1/4W
R8041	1-216-864-11	SHORT CHIP	0		
R8043 ⚠	1-215-447-00	METAL	12K	1%	1/4W
R8046 ⚠	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R8049	1-218-823-11	METAL CHIP	100	0.5%	1/10W

KV-HX32M31

RM-1008

D **H3**

- The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R8050	1-211-979-11	METAL CHIP	27	0.5%	1/10W
R8051	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R8052 ⚠	1-218-893-11	METAL CHIP	82K	0.5%	1/10W
R8054	1-245-478-21	METAL	470K	1%	1/4W
R8055	1-245-478-21	METAL	470K	1%	1/4W
R8056	1-218-870-11	METAL CHIP	9.1K	0.5%	1/10W
R8057	1-218-874-11	METAL CHIP	13K	0.5%	1/10W
R8058	1-249-393-11	CARBON	10	5%	1/4W
R8059	1-216-864-11	SHORT CHIP	0		
R8060	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R8061	1-249-393-11	CARBON	10	5%	1/4W
R8062	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8063	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8066	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8070	1-245-315-71	METAL OXIDE	0.1	5%	2W
R8072	1-249-377-11	CARBON	0.47	5%	1/4W
R8073	1-216-857-11	METAL CHIP	1M	5%	1/10W
R8074	1-216-857-11	METAL CHIP	1M	5%	1/10W
R8076	1-249-411-11	CARBON	330	5%	1/4W
R8078 ⚠	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R8079	1-215-449-00	METAL	15K	1%	1/4W
R8082	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R8085	1-219-749-91	METAL	10K	5%	1/2W
R8086	1-219-750-91	METAL	22K	5%	1/2W
R8088	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8089	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8090	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8091	1-215-485-00	METAL	470K	1%	1/4W
R8092	1-249-377-11	CARBON	0.47	5%	1/4W
R8093	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8095	1-215-485-00	METAL	470K	1%	1/4W
R8096	1-216-864-11	SHORT CHIP	0		
R8097	1-216-797-11	METAL CHIP	10	5%	1/10W
R8144	1-216-849-11	METAL CHIP	220K	5%	1/10W
R8145	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8146	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8158	1-216-809-11	METAL CHIP	100	5%	1/10W
R8159	1-216-835-11	METAL CHIP	15K	5%	1/10W
R8160	1-216-853-11	METAL CHIP	470K	5%	1/10W
R8161	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8165 ⚠	1-218-897-11	METAL CHIP	120K	0.5%	1/10W
R8166	1-216-809-11	METAL CHIP	100	5%	1/10W
		< VARIABLE RESISTOR >			
⋈RV8002 ⚠	1-225-627-91	RES, VAR, ADJ, CERMET 2K (HV)			
		< SPARK GAP >			
SG8002	1-517-499-21	GAP, SPARK			
		< TRANSFORMER >			
T5001	1-435-636-31	TRANSFORMER, HORIZONTAL DRIVE			
T5200	1-439-823-11	TRANSFORMER, HORIZONTAL OUTPUT			
T5600	1-437-942-21	DYNAMIC FOCUS TRANSFORMER(DFT)			
T6400	1-439-820-21	TRANSFORMER, CONVERTER (PIT)			
T8001 ⚠	1-453-445-21	FBT ASSY NX-6020//M3B4			
		< THERMISTOR >			
TH5101	1-800-193-00	THERMISTOR			
TH5401	1-807-796-11	THERMISTOR			

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* A-1405-650-A H3 BOARD, COMPLETE

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		< CAPACITOR >			
C1003	1-126-964-11	ELECT	10µF	20%	50V
C1004	1-126-964-11	ELECT	10µF	20%	50V
C1005	1-136-497-81	FILM	0.1µF	5%	50V
		< CONNECTOR >			
CN1001*	1-764-333-11	PLUG, CONNECTOR 10P			
CN1002*	1-564-508-11	PLUG, CONNECTOR 5P			
CN1003*	1-564-506-11	PLUG, CONNECTOR 3P			
		< DIODE >			
D1000	8-719-050-84	DIODE RB441Q-40T-77			
D1001	8-719-050-84	DIODE RB441Q-40T-77			
		< IC >			
IC1001	8-759-700-42	IC NJM2904D			
		< RESISTOR >			
R1004	1-249-413-11	CARBON	470	5%	1/4W
R1005	1-249-415-11	CARBON	680	5%	1/4W
R1006	1-249-417-11	CARBON	1K	5%	1/4W
R1007	1-249-421-11	CARBON	2.2K	5%	1/4W
R1008	1-249-425-11	CARBON	4.7K	5%	1/4W
R1009	1-249-413-11	CARBON	470	5%	1/4W
R1010	1-249-415-11	CARBON	680	5%	1/4W
R1011	1-249-417-11	CARBON	1K	5%	1/4W
R1012	1-249-421-11	CARBON	2.2K	5%	1/4W
R1013	1-249-425-11	CARBON	4.7K	5%	1/4W
R1014	1-247-891-00	CARBON	330K	5%	1/4W
R1015	1-247-897-11	CARBON	560K	5%	1/4W
R1016	1-215-439-00	METAL	5.6K	1%	1/4W
R1017	1-249-441-11	CARBON	100K	5%	1/4W
R1018	1-249-429-11	CARBON	10K	5%	1/4W
		< SWITCH >			
S1001	1-762-837-11	SWITCH, TACTILE (VOL +/-)			
S1002	1-762-837-11	SWITCH, TACTILE (PROG +/-)			
S1003	1-692-431-21	SWITCH, TACTILE (TV/VIDEO)			
S1004	1-762-837-11	SWITCH, TACTILE (SELECT)			
S1005	1-692-431-21	SWITCH, TACTILE (RIGHT)			
S1006	1-762-837-11	SWITCH, TACTILE (UP/DOWN)			
S1007	1-692-431-21	SWITCH, TACTILE (LEFT)			
S1008	1-762-837-11	SWITCH, TACTILE (AUTO PROG/MENU)			
		< THERMISTOR >			
TH1001	1-807-796-11	THERMISTOR			

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
	* A-1405-651-A	H4 BOARD, COMPLETE			
		**********			
	* 4-055-304-11	HOLDER, LED			
		< CAPACITOR >			
C1051	1-126-947-11	ELECT	47µF	20%	25V
C1052	1-136-497-81	FILM	0.1µF	5%	50V
C1055	1-102-824-00	CERAMIC	470pF	5%	50V
C1056	1-126-947-11	ELECT	47µF	20%	25V
		< CONNECTOR >			
CN1052*	1-564-508-11	PLUG, CONNECTOR 5P			
CN1054*	1-580-844-11	PIN, CONNECTOR (POWER)			
CN1055*	1-580-844-11	PIN, CONNECTOR (POWER)			
		< DIODE >			
D1056	8-719-109-66	DIODE RD3.3ES-B2			
D1057	8-719-083-18	DIODE SPB-25MVWF			
		< IC >			
IC1051	6-704-532-01	IC RPM7240-SH5			
		< TRANSISTOR >			
Q1053	8-729-030-02	TRANSISTOR DTC144ESA			
Q1054	8-729-030-02	TRANSISTOR DTC144ESA			
		< RESISTOR >			
R1054	1-247-807-31	CARBON	100	5%	1/4W
R1055	1-249-413-11	CARBON	470	5%	1/4W
R1059	1-249-411-11	CARBON	330	5%	1/4W
R1060	1-247-807-31	CARBON	100	5%	1/4W
R1061	1-249-411-11	CARBON	330	5%	1/4W
R1062	1-247-807-31	CARBON	100	5%	1/4W
		< SWITCH >			
S1051 ⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
		**********			
	* A-1405-647-B	H5 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C9300	1-126-964-11	ELECT	10µF	20%	50V
C9301	1-126-961-11	ELECT	2.2µF	20%	50V
C9302	1-126-961-11	ELECT	2.2µF	20%	50V
C9303	1-126-964-11	ELECT	10µF	20%	50V
C9306	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9309	1-136-497-81	FILM	0.1µF	5%	50V
C9310	1-136-497-81	FILM	0.1µF	5%	50V
		< CONNECTOR >			
CN9302*	1-764-334-11	PLUG, CONNECTOR 11P			
CN9303*	1-564-509-11	PLUG, CONNECTOR 6P			

REF. NO.	PART NO.	DESCRIPTION			REMARK
		< DIODE >			
D9300	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D9301	8-719-977-28	DIODE DTZ10B			
D9302	8-719-977-28	DIODE DTZ10B			
D9303	8-719-977-28	DIODE DTZ10B			
D9304	8-719-977-28	DIODE DTZ10B			
		< FILTER >			
FL9300	1-239-583-22	FERRITE	0µH		
FL9301	1-239-583-22	FERRITE	0µH		
		< JACK >			
J9301	1-779-947-11	TERMINAL BLOCK, S (VIDEO OUT 4)			
J9302	1-815-325-11	JACK (HEADPHONE)			
		< RESISTOR >			
R9301	1-216-811-11	METAL CHIP	150	5%	1/10W
R9304	1-216-849-11	METAL CHIP	220K	5%	1/10W
R9305	1-216-849-11	METAL CHIP	220K	5%	1/10W
R9306	1-216-811-11	METAL CHIP	150	5%	1/10W
R9307	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9309	1-216-021-00	RES-CHIP	68	5%	1/10W
R9310	1-216-021-00	RES-CHIP	68	5%	1/10W
R9311	1-216-025-11	RES-CHIP	100	5%	1/10W
R9314	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R9315	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R9321	1-216-811-11	METAL CHIP	150	5%	1/10W
R9322	1-216-811-11	METAL CHIP	150	5%	1/10W
R9323	1-216-864-11	SHORT CHIP	0		
R9324	1-216-811-11	METAL CHIP	150	5%	1/10W
R9326	1-216-811-11	METAL CHIP	150	5%	1/10W
		< VARISTOR >			
VD9300	1-803-974-21	VARISTOR, CHIP -1608			
		**********			
	* A-1302-743-A	MG BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C0002	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0003	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0004	1-126-947-11	ELECT	47µF	20%	25V
C0005	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0007	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0008	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0012	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0014	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0022	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C0024	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0025	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C0027	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0028	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C0029	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C0031	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0032	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0033	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0034	1-164-156-11	CERAMIC CHIP	0.1µF		25V

MG

REF. NO.	PART NO.	DESCRIPTION			REMARK
C0035	1-126-767-11	ELECT	1000µF	20%	16V
C0036	1-126-933-11	ELECT	100µF	20%	16V
C0038	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C0040	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C0041	1-162-907-11	CERAMIC CHIP	2pF	0.25pF	50V
C0042	1-164-245-11	CERAMIC CHIP	0.015µF	10%	25V
C0044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0045	1-126-933-11	ELECT	100µF	20%	16V
C0046	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0047	1-126-933-11	ELECT	100µF	20%	16V
C0048	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0049	1-128-945-31	ELECT	1000µF	20%	10V
C0050	1-128-949-31	ELECT	470µF	20%	16V
C0051	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C0052	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0053	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0054	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C0055	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C0071	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0072	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0073	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0074	1-126-935-11	ELECT	470µF	20%	10V
C0075	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C0076	1-126-933-11	ELECT	100µF	20%	16V
C0077	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0078	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0079	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0080	1-126-965-91	ELECT	22µF	20%	50V
C0081	1-126-964-11	ELECT	10µF	20%	50V
C0082	1-126-964-11	ELECT	10µF	20%	50V
C0083	1-126-933-11	ELECT	100µF	20%	16V
C0084	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0085	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0086	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0087	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C0088	1-126-767-11	ELECT	1000µF	20%	16V
C0089	1-126-964-11	ELECT	10µF	20%	50V
C0091	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0092	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0301	1-126-965-91	ELECT	22µF	20%	50V
C0302	1-126-933-11	ELECT	100µF	20%	16V
C0303	1-126-965-91	ELECT	22µF	20%	50V
C0304	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0305	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0306	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0307	1-126-933-11	ELECT	100µF	20%	16V
C0308	1-126-947-11	ELECT	47µF	20%	25V
C0309	1-126-947-11	ELECT	47µF	20%	25V
C0310	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0311	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0312	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0313	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0314	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C0315	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0317	1-126-964-11	ELECT	10µF	20%	50V
C0318	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0319	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0320	1-136-497-81	FILM	0.1µF	5%	50V
C0321	1-136-497-81	FILM	0.1µF	5%	50V
C0322	1-126-964-11	ELECT	10µF	20%	50V
C0323	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C0324	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C0325	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C0326	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C0327	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C0328	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C0329	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0330	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0332	1-128-934-91	CERAMIC CHIP	0.33µF	20%	10V
C0333	1-126-964-11	ELECT	10µF	20%	50V
C0334	1-126-960-11	ELECT	1µF	20%	50V
C0335	1-125-889-91	CERAMIC CHIP	2.2µF	10%	10V
C0336	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0337	1-125-889-91	CERAMIC CHIP	2.2µF	10%	10V
C0338	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0339	1-126-768-11	ELECT	2200µF	20%	16V
C0340	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0341	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0342	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0343	1-126-933-11	ELECT	100µF	20%	16V
C0344	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0345	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0400	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0403	1-126-933-11	ELECT	100µF	20%	16V
C0404	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0405	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C0406	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0407	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0408	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0409	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C0410	1-126-933-11	ELECT	100µF	20%	16V
C0411	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0412	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C0413	1-126-933-11	ELECT	100µF	20%	16V
C0414	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C0415	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0416	1-126-935-11	ELECT	470µF	20%	16V
C0417	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0418	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0419	1-126-933-11	ELECT	100µF	20%	16V
C0420	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0421	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0422	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0423	1-126-962-11	ELECT	3.3µF	20%	50V
C0424	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C0425	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C0426	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C0427	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0428	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0429	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0430	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C0431	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0432	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0433	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0434	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0435	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0436	1-126-933-11	ELECT	100µF	20%	16V
C0437	1-126-963-11	ELECT	4.7µF	20%	50V
C0438	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0439	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0441	1-126-933-11	ELECT	100µF	20%	16V
C0442	1-126-933-11	ELECT	100µF	20%	16V
C0444	1-126-933-11	ELECT	100µF	20%	16V
C0445	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C0446	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C0447	1-110-563-11	CERAMIC CHIP	0.068µF	10%	16V
C0448	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0449	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C0450	1-164-156-11	C AM HIP	0. F		25V
C0451	1-126-933-11	ELECT	100µF	20%	16V
C0452	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0453	1-126-933-11	ELECT	100µF	20%	16V
C0454	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C0455	1-126-933-11	ELECT	100µF	20%	16V
C0456	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C0458	1-126-933-11	ELECT	100µF	20%	16V
C0459	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0460	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C0461	1-165-733-31	ELECT	100µF	20%	25V
C0462	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0463	1-162-969-11	CERAMIC CHIP	0.0068µF	10%	25V
C0464	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C0465	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0466	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C0467	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C0468	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
		< CONNECTOR >			
CN0001*	1-793-498-11	CONNECTOR, BOARD TO BOARD 50P			
CN0002*	1-793-498-11	CONNECTOR, BOARD TO BOARD 50P			
CN0004*	1-764-333-11	PLUG, CONNECTOR 10P			
CN0005*	1-564-512-11	PLUG, CONNECTOR 9P			
CN0050*	1-564-506-11	PLUG, CONNECTOR 3P			
CN0301*	1-564-509-11	PLUG, CONNECTOR 6P			
CN0401*	1-764-334-11	PLUG, CONNECTOR 11P			
CN0402	1-764-334-11	PLUG, CONNECTOR 11P			
CN0405*	1-564-508-11	PLUG, CONNECTOR 5P			(HR32M31)
CN0406*	1-564-511-11	PLUG, CONNECTOR 8P			(HR32M31)
CN1164*	1-564-510-11	PLUG, CONNECTOR 7P			
		< DIODE >			
D0001	8-719-083-57	DIODE UDZSTE-173.6B			
D0002	8-719-914-43	DIODE DAN202K			
D0003	8-719-914-43	DIODE DAN202K			
D0007	8-719-914-43	DIODE DAN202K			
D0008	8-719-080-69	DIODE M1FS4-4063			
D0009	8-719-081-97	DIODE MMDL914T1			
D0010	8-719-081-97	DIODE MMDL914T1			
D0052	8-719-083-66	DIODE UDZSTE-1718B			
D0053	8-719-158-18	DIODE RD5.6SB3-T1			
D0054	8-719-914-43	DIODE DAN202K-T-146			
D0055	8-719-081-97	DIODE MMDL914T1			
D0056	8-719-081-97	DIODE MMDL914T1			
D0057	8-719-081-97	DIODE MMDL914T1			
D0058	8-719-081-97	DIODE MMDL914T1			
D0059	8-719-081-97	DIODE MMDL914T1			
D0403	8-719-081-97	DIODE MMDL914T1			
D0404	8-719-036-94	DIODE RD5.6SB-T1			
D0405	8-719-037-01	DIODE RD6.2SB3-T1			
D0406	8-719-081-97	DIODE MMDL914T1			
D0407	8-719-081-97	DIODE MMDL914T1			
D0501	8-719-914-43	DIODE DAN202K			
D0502	8-719-977-28	DIODE DTZ10B			

REF. NO.	PART NO.	DESCRIPTION	REMARK
		< FERRITE BEAD >	
FB0001	1-414-921-11	FERRITE 0µH	
FB0002	1-414-921-11	FERRITE 0µH	
FB0004	1-414-921-11	FERRITE 0µH	
FB0005	1-414-921-11	FERRITE 0µH	
FB0006	1-414-921-11	FERRITE 0µH	
FB0008	1-414-921-11	FERRITE 0µH	
FB0301	1-414-921-11	FERRITE 0µH	
FB0401	1-414-921-11	FERRITE 0µH	
FB0402	1-414-921-11	FERRITE 0µH	
FB0403	1-414-921-11	FERRITE 0µH	
		< FILTER >	
FL0001	1-239-895-11	FILTER, EMI (SMD)	
FL0002	1-239-895-11	FILTER, EMI (SMD)	
		< IC >	
IC0001	8-753-213-34	IC CXP961048-013Q	
IC0002	6-803-843-01	IC M306VSMG-535FP	
IC0003	6-704-573-01	IC M24C32-WMN6T(B)	
IC0005	6-704-573-01	IC M24C32-WMN6T(B)	
IC0007	8-759-488-29	IC TC7W66FU(TE12R)	
IC0008	6-801-402-01	IC BD4729GTR	
IC0050	6-702-474-01	IC MM1482BFBE	
IC0051	8-759-488-29	IC TC7W66FU(TE12R)	
IC0301	8-759-745-64	IC NJM4560M-TE2	
IC0302	6-704-236-01	IC NJW1148	
IC0401	8-752-102-68	IC CXA2170Q	
IC0403	8-759-642-22	IC µPC29M05T-E2	
		< JUMPER RESISTOR >	
JR1001	1-216-864-11	SHORT CHIP 0	
JR1002	1-216-864-11	SHORT CHIP 0	
JR1003	1-216-864-11	SHORT CHIP 0	
JR1004	1-216-864-11	SHORT CHIP 0	
JR1005	1-216-864-11	SHORT CHIP 0	
JR1006	1-216-864-11	SHORT CHIP 0	
JR1007	1-216-864-11	SHORT CHIP 0	
JR1008	1-216-864-11	SHORT CHIP 0	
JR1009	1-216-864-11	SHORT CHIP 0	
JR1010	1-216-864-11	SHORT CHIP 0	
JR1011	1-216-864-11	SHORT CHIP 0	
JR1012	1-216-864-11	SHORT CHIP 0	
JR1013	1-216-864-11	SHORT CHIP 0	
JR1014	1-216-864-11	SHORT CHIP 0	
JR1015	1-216-864-11	SHORT CHIP 0	
JR1016	1-216-864-11	SHORT CHIP 0	
JR1017	1-216-864-11	SHORT CHIP 0	
JR1018	1-216-864-11	SHORT CHIP 0	
JR1019	1-216-864-11	SHORT CHIP 0	
JR1020	1-216-864-11	SHORT CHIP 0	
JR1021	1-216-864-11	SHORT CHIP 0	
JR1022	1-216-864-11	SHORT CHIP 0	
JR1023	1-216-864-11	SHORT CHIP 0	
JR1024	1-216-864-11	SHORT CHIP 0	
JR1025	1-216-864-11	SHORT CHIP 0	
JR1026	1-216-864-11	SHORT CHIP 0	
JR1027	1-216-864-11	SHORT CHIP 0	
JR1028	1-216-864-11	SHORT CHIP 0	

REF. NO.	PART NO.	DESCRIPTION		REMARK
		< COIL >		
L0001	1-400-397-11	INDUCTOR	10µH	
L0004	1-400-397-11	INDUCTOR	10µH	
L0005	1-400-397-11	INDUCTOR	10µH	
L0051	1-400-397-11	INDUCTOR	10µH	
L0053	1-400-397-11	INDUCTOR	10µH	
L0054	1-400-397-11	INDUCTOR	10µH	
L0301	1-400-397-11	INDUCTOR	10µH	
L0401	1-400-397-11	INDUCTOR	10µH	
L0402	1-400-397-11	INDUCTOR	10µH	
L0403	1-400-397-11	INDUCTOR	10µH	
L0404	1-469-559-21	INDUCTOR	47µH	
L0405	1-400-397-11	INDUCTOR	10µH	
L0406	1-400-397-11	INDUCTOR	10µH	
L0407	1-400-397-11	INDUCTOR	10µH	
L0408	1-400-397-11	INDUCTOR	10µH	
L0409	1-400-397-11	INDUCTOR	10µH	
L0410	1-400-397-11	INDUCTOR	10µH	
		< TRANSISTOR >		
Q0004	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0007	8-729-905-35	TRANSISTOR	2SC4081T106R	
Q0008	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0009	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0010	8-729-028-23	TRANSISTOR	2SJ344(TE85L)	
Q0016	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0020	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0021	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0022	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0023	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0050	8-729-905-35	TRANSISTOR	2SC4081T106R	
Q0051	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0053	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0054	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0056	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0057	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0058	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0059	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0060	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0061	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0063	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0067	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0068	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0069	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0070	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0302	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0303	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0304	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0305	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0306	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0401	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0402	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0403	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0405	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0406	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0408	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0409	8-729-122-63	TRANSISTOR	2SA1226	
Q0415	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0416	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0417	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0418	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0419	8-729-122-63	TRANSISTOR	2SA1226	
Q0420	8-729-122-63	TRANSISTOR	2SA1226	
Q0422	8-729-122-63	TRANSISTOR	2SA1226	
Q0423	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0424	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0425	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0426	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0427	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0428	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0429	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0430	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0431	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0434	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0435	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0436	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q0437	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0438	8-729-010-05	TRANSISTOR	MSB709-RT1	
Q0439	8-729-010-25	TRANSISTOR	MSD601-RT1	
Q0440	8-729-010-25	TRANSISTOR	MSD601-RT1	
		< RESISTOR >		
R0005	1-216-835-11	METAL CHIP	15K 5% 1/10W	
R0006	1-216-835-11	METAL CHIP	15K 5% 1/10W	
R0007	1-216-857-11	METAL CHIP	1M 5% 1/10W	
R0015	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0016	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0020	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0021	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0022	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0023	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0026	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0029	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0030	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	
R0031	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0032	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0034	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0035	1-216-817-11	METAL CHIP	470 5% 1/10W	
R0036	1-216-797-11	METAL CHIP	10 5% 1/10W	
R0037	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R0039	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0040	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0041	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0042	1-216-820-11	METAL CHIP	820 5% 1/10W	
R0044	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0045	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0046	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0047	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0048	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
R0050	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0051	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
R0052	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0053	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0054	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0056	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0057	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0058	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0059	1-216-809-11	METAL CHIP	100 5% 1/10W	
R0061	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R0064	1-216-812-11	METAL CHIP	180 5% 1/10W	
R0065	1-218-675-11	METAL CHIP	200 5% 1/10W	
R0067	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	
R0069	1-216-812-11	METAL CHIP	180 5% 1/10W	

REF. NO.	PART NO.	DESCRIPTION			REMARK
R0070	1-218-675-11	METAL CHIP	200	5%	1/10W
R0071	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0072	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0073	1-216-809-11	METAL CHIP	100	5%	1/10W
R0075	1-216-809-11	METAL CHIP	100	5%	1/10W
R0076	1-216-812-11	METAL CHIP	180	5%	1/10W
R0077	1-216-837-11	METAL CHIP	22K	5%	1/10W
R0078	1-218-675-11	METAL CHIP	200	5%	1/10W
R0079	1-216-839-11	METAL CHIP	33K	5%	1/10W
R0080	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0081	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0082	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0084	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0085	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0086	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0088	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0089	1-216-809-11	METAL CHIP	100	5%	1/10W
R0092	1-216-797-11	METAL CHIP	10	5%	1/10W
R0093	1-216-797-11	METAL CHIP	10	5%	1/10W
R0094	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0095	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0096	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0097	1-216-864-11	SHORT CHIP	0		
R0098	1-216-809-11	METAL CHIP	100	5%	1/10W
R0100	1-216-809-11	METAL CHIP	100	5%	1/10W
R0101	1-216-864-11	SHORT CHIP	0		
R0102	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0105	1-216-864-11	SHORT CHIP	0		
R0106	1-216-837-11	METAL CHIP	22K	5%	1/10W
R0107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0111	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0115	1-216-809-11	METAL CHIP	100	5%	1/10W
R0116	1-216-809-11	METAL CHIP	100	5%	1/10W
R0118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0120	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0121	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0122	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0123	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0124	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0125	1-216-809-11	METAL CHIP	100	5%	1/10W
R0126	1-216-809-11	METAL CHIP	100	5%	1/10W
R0127	1-216-809-11	METAL CHIP	100	5%	1/10W
R0133	1-216-809-11	METAL CHIP	100	5%	1/10W
R0134	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0135	1-216-809-11	METAL CHIP	100	5%	1/10W
R0136	1-216-809-11	METAL CHIP	100	5%	1/10W
R0137	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0139	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0140	1-216-809-11	METAL CHIP	100	5%	1/10W
R0141	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0142	1-216-809-11	METAL CHIP	100	5%	1/10W
R0143	1-216-797-11	METAL CHIP	10	5%	1/10W
R0144	1-216-809-11	METAL CHIP	100	5%	1/10W
R0145	1-216-797-11	METAL CHIP	10	5%	1/10W
R0146	1-216-809-11	METAL CHIP	100	5%	1/10W
R0147	1-216-797-11	METAL CHIP	10	5%	1/10W
R0148	1-216-809-11	METAL CHIP	100	5%	1/10W
R0149	1-216-809-11	METAL CHIP	100	5%	1/10W
R0150	1-216-809-11	METAL CHIP	100	5%	1/10W
R0151	1-216-809-11	METAL CHIP	100	5%	1/10W
R0152	1-216-809-11	METAL CHIP	100	5%	1/10W
R0153	1-216-864-11	SHORT CHIP	0		
R0154	1-216-864-11	SHORT CHIP	0		
R0155	1-216-809-11	METAL CHIP	100	5%	1/10W
R0157	1-216-864-11	SHORT CHIP	0		
R0159	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0182	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0183	1-216-809-11	METAL CHIP	100	5%	1/10W
R0184	1-216-849-11	METAL CHIP	220K	5%	1/10W
R0188	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0189	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0190	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0191	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0192	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0195	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0196	1-216-809-11	METAL CHIP	100	5%	1/10W
R0197	1-216-809-11	METAL CHIP	100	5%	1/10W
R0198	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0199	1-216-809-11	METAL CHIP	100	5%	1/10W
R0200	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0201	1-216-813-11	METAL CHIP	220	5%	1/10W
R0202	1-216-813-11	METAL CHIP	220	5%	1/10W
R0203	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0204	1-216-864-11	SHORT CHIP	0		
R0205	1-216-864-11	SHORT CHIP	0		
R0206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0207	1-216-809-11	METAL CHIP	100	5%	1/10W
R0208	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0209	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0212	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0213	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0214	1-216-813-11	METAL CHIP	220	5%	1/10W
R0215	1-216-817-11	METAL CHIP	470	5%	1/10W
R0216	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0218	1-216-813-11	METAL CHIP	220	5%	1/10W
R0219	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0221	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0222	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0223	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0224	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0225	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0226	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0227	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0228	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0229	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0236	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0237	1-216-809-11	METAL CHIP	100	5%	1/10W
R0240	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0241	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0242	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0243	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0244	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0245	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0246	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0247	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0248	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0249	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0250	1-216-853-11	METAL CHIP	470K	5%	1/10W
R0301	1-216-834-11	METAL CHIP	12K	5%	1/10W
R0302	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R0303	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R0304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0305	1-216-837-11	METAL CHIP	22K	5%	1/10W

MG

REF. NO.	PART NO.	DESCRIPTION			REMARK
R0306	1-216-837-11	METAL CHIP	22K	5%	1/10W
R0309	1-216-807-11	METAL CHIP	68	5%	1/10W
R0310	1-216-807-11	METAL CHIP	68	5%	1/10W
R0311	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0312	1-216-853-11	METAL CHIP	470K	5%	1/10W
R0313	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0314	1-216-853-11	METAL CHIP	470K	5%	1/10W
R0315	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0316	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0325	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0326	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0327	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R0328	1-218-873-11	METAL CHIP	12K	0.5%	1/10W
R0329	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R0330	1-218-873-11	METAL CHIP	12K	0.5%	1/10W
R0331	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R0334	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0337	1-216-864-11	SHORT CHIP	0		
R0339	1-216-864-11	SHORT CHIP	0		
R0340	1-216-864-11	SHORT CHIP	0		
R0341	1-216-809-11	METAL CHIP	100	5%	1/10W
R0342	1-216-864-11	SHORT CHIP	0		
R0343	1-216-864-11	SHORT CHIP	0		
R0344	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0345	1-216-841-11	METAL CHIP	47K	5%	1/10W
R0350	1-216-864-11	SHORT CHIP	0		
R0357	1-216-864-11	SHORT CHIP	0		
R0359	1-216-864-11	SHORT CHIP	0		
R0360	1-216-864-11	SHORT CHIP	0		
R0402	1-216-813-11	METAL CHIP	220	5%	1/10W
R0404	1-216-813-11	METAL CHIP	220	5%	1/10W
R0405	1-216-813-11	METAL CHIP	220	5%	1/10W
R0410	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0411	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0413	1-216-819-11	METAL CHIP	680	5%	1/10W
R0414	1-216-819-11	METAL CHIP	680	5%	1/10W
R0415	1-216-819-11	METAL CHIP	680	5%	1/10W
R0416	1-216-809-11	METAL CHIP	100	5%	1/10W
R0417	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R0418	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0421	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R0422	1-216-809-11	METAL CHIP	100	5%	1/10W
R0424	1-216-809-11	METAL CHIP	100	5%	1/10W
R0425	1-216-809-11	METAL CHIP	100	5%	1/10W
R0426	1-216-809-11	METAL CHIP	100	5%	1/10W
R0427	1-216-809-11	METAL CHIP	100	5%	1/10W
R0428	1-216-818-11	METAL CHIP	560	5%	1/10W
R0429	1-216-809-11	METAL CHIP	100	5%	1/10W
R0430	1-216-864-11	SHORT CHIP	0		
R0431	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0432	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0433	1-216-809-11	METAL CHIP	100	5%	1/10W
R0434	1-216-809-11	METAL CHIP	100	5%	1/10W
R0435	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0436	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0437	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R0438	1-216-809-11	METAL CHIP	100	5%	1/10W
R0439	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0441	1-216-809-11	METAL CHIP	100	5%	1/10W
R0442	1-216-834-11	METAL CHIP	12K	5%	1/10W
R0443	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R0444	1-216-809-11	METAL CHIP	100	5%	1/10W
R0445	1-216-809-11	METAL CHIP	100	5%	1/10W
R0446	1-216-809-11	METAL CHIP	100	5%	1/10W
R0448	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0449	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R0450	1-216-809-11	METAL CHIP	100	5%	1/10W
R0452	1-216-809-11	METAL CHIP	100	5%	1/10W
R0453	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R0454	1-216-809-11	METAL CHIP	100	5%	1/10W
R0455	1-216-809-11	METAL CHIP	100	5%	1/10W
R0456	1-216-809-11	METAL CHIP	100	5%	1/10W
R0457	1-216-809-11	METAL CHIP	100	5%	1/10W
R0458	1-216-809-11	METAL CHIP	100	5%	1/10W
R0469	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0470	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0471	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0472	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0474	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0476	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0477	1-216-819-11	METAL CHIP	680	5%	1/10W
R0478	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R0479	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0480	1-216-809-11	METAL CHIP	100	5%	1/10W
R0481	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0482	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0484	1-216-809-11	METAL CHIP	100	5%	1/10W
R0485	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0486	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0487	1-216-837-11	METAL CHIP	22K	5%	1/10W
R0488	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0489	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R0490	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0492	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0493	1-216-864-11	SHORT CHIP	0		
R0494	1-216-864-11	SHORT CHIP	0		
R0496	1-216-809-11	METAL CHIP	100	5%	1/10W
R0497	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0498	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0499	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0500	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0501	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0502	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0503	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0504	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0505	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0506	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0507	1-216-809-11	METAL CHIP	100	5%	1/10W
R0508	1-216-809-11	METAL CHIP	100	5%	1/10W
R0509	1-216-809-11	METAL CHIP	100	5%	1/10W
R0510	1-216-809-11	METAL CHIP	100	5%	1/10W
R0511	1-216-809-11	METAL CHIP	100	5%	1/10W
R0512	1-216-809-11	METAL CHIP	100	5%	1/10W
R0513	1-216-809-11	METAL CHIP	100	5%	1/10W
R0514	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0515	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0516	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0517	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R0518	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0519	1-216-821-11	METAL CHIP	1K	5%	1/10W
R0520	1-216-809-11	METAL CHIP	100	5%	1/10W
R0528	1-216-805-11	METAL CHIP	47	5%	1/10W
R0553	1-216-805-11	METAL CHIP	47	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R0555	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R0556	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R0557	1-211-985-11	METAL CHIP	47	0.5%	1/10W
R0558	1-216-864-11	SHORT CHIP	0		
R0560	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0561	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0562	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0563	1-216-813-11	METAL CHIP	220	5%	1/10W
R0564	1-216-837-11	METAL CHIP	22K	5%	1/10W
R0565	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0566	1-216-853-11	METAL CHIP	470K	5%	1/10W
R0567	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0568	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R0569	1-216-839-11	METAL CHIP	33K	5%	1/10W
R0570	1-216-855-11	METAL CHIP	560K	5%	1/10W
R0571	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R0572	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0573	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0574	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0575	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0577	1-216-833-11	METAL CHIP	10K	5%	1/10W
R0578	1-216-817-11	METAL CHIP	470	5%	1/10W
R0579	1-216-845-11	METAL CHIP	100K	5%	1/10W
R0580	1-216-817-11	METAL CHIP	470	5%	1/10W
R0581	1-216-817-11	METAL CHIP	470	5%	1/10W

< VIBRATOR >

X0001	1-781-282-51	VIBRATOR, CERAMIC
X0002	1-781-589-21	VIBRATOR, CRYSTAL 16MHz
X0401	1-760-895-21	VIBRATOR, CERAMIC 2.7MHz

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* A-1405-648-B T BOARD, COMPLETE
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< CAPACITOR >

C5802	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5805	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5806	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5815	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5816	1-126-963-11	ELECT	4.7µF	20%	50V
C5817	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5818	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C5820	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C5821	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5822	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C5823	1-126-963-11	ELECT	4.7µF	20%	50V
C5826	1-126-963-11	ELECT	4.7µF	20%	50V
C5830	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5831	1-126-933-11	ELECT	100µF	20%	16V
C5835	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5837	1-126-933-11	ELECT	100µF	20%	16V
C5853	1-126-963-11	ELECT	4.7µF	20%	50V
C5854	1-165-908-11	CERAMIC CHIP	1µF	10%	10V

< CONNECTOR >

CN5801*	1-564-508-11	PLUG, CONNECTOR 5P
CN5803*	1-564-511-11	PLUG, CONNECTOR 8P

REF. NO.	PART NO.	DESCRIPTION	
		< DIODE >	
D5802	8-719-914-44	DIODE	DAP202K-T-146
D5803	8-719-063-66	DIODE	RD2.2SB-T1
		< FERRITE BEAD >	
FB5801	1-414-921-11	FERRITE	0µH
FB5803	1-414-921-11	FERRITE	0µH
FB5804	1-414-921-11	FERRITE	0µH
FB5805	1-414-921-11	FERRITE	0µH
FB5806	1-414-921-11	FERRITE	0µH
FB5807	1-414-921-11	FERRITE	0µH
		< IC >	
IC5801	6-803-172-11	IC	SAA5360HL/0004,518
IC5802	8-759-828-44	IC	NJM2870F33(TE2)
		< TRANSISTOR >	
Q5801	8-729-010-05	TRANSISTOR	MSB709-RT1
Q5803	8-729-010-25	TRANSISTOR	MSD601-RT1
Q5806	8-729-010-05	TRANSISTOR	MSB709-RT1
Q5807	8-729-010-05	TRANSISTOR	MSB709-RT1
Q5808	8-729-010-05	TRANSISTOR	MSB709-RT1
Q5809	8-729-010-25	TRANSISTOR	MSD601-RT1
Q5811	8-729-010-25	TRANSISTOR	MSD601-RT1

< RESISTOR >

R5821	1-218-880-11	METAL CHIP	24K	0.5%	1/10W
R5822	1-216-809-11	METAL CHIP	100	5%	1/10W
R5823	1-216-809-11	METAL CHIP	100	5%	1/10W
R5824	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5828	1-216-809-11	METAL CHIP	100	5%	1/10W
R5829	1-216-809-11	METAL CHIP	100	5%	1/10W
R5830	1-216-841-11	METAL CHIP	47K	5%	1/10W
R5841	1-216-809-11	METAL CHIP	100	5%	1/10W
R5842	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5843	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5845	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5846	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5847	1-216-809-11	METAL CHIP	100	5%	1/10W
R5848	1-216-809-11	METAL CHIP	100	5%	1/10W
R5849	1-216-809-11	METAL CHIP	100	5%	1/10W
R5859	1-216-811-11	METAL CHIP	150	5%	1/10W
R5860	1-216-811-11	METAL CHIP	150	5%	1/10W
R5861	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R5862	1-216-811-11	METAL CHIP	150	5%	1/10W
R5863	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R5864	1-216-813-11	METAL CHIP	220	5%	1/10W
R5866	1-243-832-71	METAL OXIDE	15	5%	1W
R5871	1-216-812-11	METAL CHIP	180	5%	1/10W
R5875	1-216-817-11	METAL CHIP	470	5%	1/10W
R5876	1-216-817-11	METAL CHIP	470	5%	1/10W
R5877	1-216-817-11	METAL CHIP	470	5%	1/10W
R5878	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5882	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R5883	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R5884	1-216-809-11	METAL CHIP	100	5%	1/10W
R5886	1-216-815-11	METAL CHIP	330	5%	1/10W
R5887	1-218-841-11	METAL CHIP	560	0.5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5892	1-216-809-11	METAL CHIP	100	5%	1/10W
R5893	1-218-841-11	METAL CHIP	560	0.5%	1/10W
X5801	1-578-774-11	VIBRATOR, CRYSTAL			

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* A-1302-741-A UG BOARD, COMPLETE
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< CAPACITOR >

C1501	1-126-961-11	ELECT	2.2µF	20%	50V
C1504	1-126-961-11	ELECT	2.2µF	20%	50V
C1505	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1506	1-126-961-11	ELECT	2.2µF	20%	50V
C1507	1-126-961-11	ELECT	2.2µF	20%	50V
C1508	1-115-156-11	CERAMIC CHIP	1µF		10V
C1509	1-115-156-11	CERAMIC CHIP	1µF		10V
C1510	1-115-156-11	CERAMIC CHIP	1µF		10V
C1511	1-115-156-11	CERAMIC CHIP	1µF		10V
C1512	1-115-156-11	CERAMIC CHIP	1µF		10V
C1513	1-115-156-11	CERAMIC CHIP	1µF		10V
C1514	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1515	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1516	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1517	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1518	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1519	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C1520	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C1521	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1523	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1524	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1525	1-126-933-11	ELECT	100µF	20%	16V
C1526	1-126-964-11	ELECT	10µF	20%	50V
C1527	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1528	1-126-933-11	ELECT	100µF	20%	16V
C1529	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1530	1-126-964-11	ELECT	10µF	20%	50V
C1531	1-126-941-11	ELECT	470µF	20%	25V
C1532	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1533	1-126-933-11	ELECT	100µF	20%	16V
C1534	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1535	1-126-933-11	ELECT	100µF	20%	16V
C1536	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1537	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1538	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1539	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1542	1-126-934-11	ELECT	220µF	20%	16V
C1543	1-126-934-11	ELECT	220µF	20%	16V
C1550	1-115-156-11	CERAMIC CHIP	1µF		10V
C1551	1-115-156-11	CERAMIC CHIP	1µF		10V
C1552	1-115-156-11	CERAMIC CHIP	1µF		10V
C1553	1-115-156-11	CERAMIC CHIP	1µF		10V
C1554	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1555	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1563	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1564	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1565	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1566	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1567	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1568	1-126-964-11	ELECT	10µF	20%	50V
C1569	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C1573	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1574	1-164-505-11	CERAMIC CHIP	2.2µF		16V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C1575	1-126-961-11	ELECT	2.2µF	20%	50V
C1576	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1577	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1578	1-126-961-11	ELECT	2.2µF	20%	50V
C1579	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1580	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1581	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C1582	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C1583	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1584	1-126-947-11	ELECT	47µF	20%	25V
C1585	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1586	1-126-925-91	ELECT	470µF	20%	10V
C1587	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1588	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1589	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1590	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1591	1-126-947-11	ELECT	47µF	20%	25V
C1592	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1593	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1594	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1595	1-126-941-11	ELECT	470µF	20%	25V
C1596	1-126-933-11	ELECT	100µF	20%	16V
C1597	1-126-941-11	ELECT	470µF	20%	25V
C1598	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1599	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1600	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1601	1-115-156-11	CERAMIC CHIP	1µF		10V
C1602	1-115-156-11	CERAMIC CHIP	1µF		10V
C1603	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1604	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1605	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1606	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1607	1-107-698-11	ELECT	10µF	20%	25V
C1608	1-115-156-11	CERAMIC CHIP	1µF		10V
C1609	1-115-156-11	CERAMIC CHIP	1µF		10V
C1612	1-115-156-11	CERAMIC CHIP	1µF		10V
C1613	1-115-156-11	CERAMIC CHIP	1µF		10V
C1703	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C1704	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1705	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C1706	1-115-156-11	CERAMIC CHIP	1µF		10V
C1707	1-126-961-11	ELECT	2.2µF	20%	50V
C1708	1-126-947-11	ELECT	47µF	20%	25V
C1709	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C1710	1-126-947-11	ELECT	47µF	20%	25V
C1711	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1716	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1717	1-126-964-11	ELECT	10µF	20%	50V
C1718	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1719	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1722	1-126-947-11	ELECT	47µF	20%	25V
C1723	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1724	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1727	1-126-947-11	ELECT	47µF	20%	25V
C1728	1-126-963-11	ELECT	4.7µF	20%	50V
C1729	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1732	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1733	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1734	1-115-156-11	CERAMIC CHIP	1µF		10V
C1735	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1830	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1831	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1832	1-126-959-91	ELECT 47µF 20% 10V	
		< CONNECTOR >	
CN1501*	1-564-526-31	PLUG, CONNECTOR 11P	
CN1502*	1-793-498-11	CONNECTOR, BOARD TO BOARD 50P	
CN1504*	1-785-531-11	PIN, CONNECTOR (PC BOARD) 12P	
		< DIODE >	
D1501	8-719-977-28	DIODE DTZ10B	
D1502	8-719-977-28	DIODE DTZ10B	
D1503	8-719-977-28	DIODE DTZ10B	
D1507	8-719-977-28	DIODE DTZ10B	
D1508	8-719-977-28	DIODE DTZ10B	
D1509	8-719-977-28	DIODE DTZ10B	
D1510	8-719-977-28	DIODE DTZ10B	
D1511	8-719-977-28	DIODE DTZ10B	
D1512	8-719-977-28	DIODE DTZ10B	
D1513	8-719-977-28	DIODE DTZ10B	
D1514	8-719-977-28	DIODE DTZ10B	
D1515	8-719-977-28	DIODE DTZ10B	
D1516	8-719-977-28	DIODE DTZ10B	
D1517	8-719-977-28	DIODE DTZ10B	
D1521	8-719-977-28	DIODE DTZ10B	
D1522	8-719-977-28	DIODE DTZ10B	
D1525	8-719-977-28	DIODE DTZ10B	
D1526	8-719-977-28	DIODE DTZ10B	
D1527	8-719-977-28	DIODE DTZ10B	
D1528	8-719-977-28	DIODE DTZ10B	
D1529	8-719-977-28	DIODE DTZ10B	
D1530	8-719-977-28	DIODE DTZ10B	
D1531	8-719-977-28	DIODE DTZ10B	
D1532	8-719-977-28	DIODE DTZ10B	
D1533	8-719-977-28	DIODE DTZ10B	
D1534	8-719-977-28	DIODE DTZ10B	
D1535	8-719-977-28	DIODE DTZ10B	
D1538	8-719-977-28	DIODE DTZ10B	
D1539	8-719-977-28	DIODE DTZ10B	
D1540	8-719-081-97	DIODE MMDL914T1	
D1541	8-719-081-97	DIODE MMDL914T1	
D1542	8-719-081-97	DIODE MMDL914T1	
D1543	8-719-081-97	DIODE MMDL914T1	
D1544	8-719-977-28	DIODE DTZ10B	
D1545	8-719-056-82	DIODE UDZ-TE-17-6.2B	
		< FERRITE BEAD >	
FB1701	1-469-179-21	FERRITE 0µH	
FB1702	1-469-179-21	FERRITE 0µH	
FB1703	1-216-864-11	SHORT CHIP 0	
FB1704	1-216-864-11	SHORT CHIP 0	
FB1705	1-216-864-11	SHORT CHIP 0	
		< IC >	
IC1501	8-752-108-00	IC CXA2189Q-TL	
IC1502	8-752-107-98	IC CXA2188Q-T4	
IC1701	8-752-099-05	IC CXA2163AQ-T6	
IC1703	8-759-481-08	IC TC7SET02FU(TE85R)	
IC1802	8-759-642-22	IC µPC29M05T-E2	
		< JACK >	
J1501	1-774-748-11	TERMINAL BLOCK, S (VIDEO IN 1)	
J1502	1-750-517-21	JACK BLOCK, PIN 3P (VIDEO IN 2)	
J1503	1-750-517-21	JACK BLOCK, PIN 3P (MONITOR OUT)	
J1504	1-750-517-21	JACK BLOCK, PIN 3P (VIDEO IN 3)	
J1505	1-537-712-11	TERMINAL, PUSH (SPEAKER)	
J1508	1-815-015-11	JACK BLOCK, PIN (COMPONENT VIDEO IN 2)	
J1509	1-815-015-11	JACK BLOCK, PIN (COMPONENT VIDEO IN 1)	
J1510	1-816-597-11	PIN JACK BLOCK 2P (SYNC HD/VD)	
		< JUMPER RESISTOR >	
JR1501	1-216-864-11	SHORT CHIP 0	
JR1507	1-216-864-11	SHORT CHIP 0	
JR1508	1-216-864-11	SHORT CHIP 0	
JR1552	1-216-864-11	SHORT CHIP 0	
JR1701	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L1501	1-400-397-11	INDUCTOR 10µH	
L1502	1-400-397-11	INDUCTOR 10µH	
L1503	1-400-397-11	INDUCTOR 10µH	
L1504	1-400-397-11	INDUCTOR 10µH	
L1505	1-400-397-11	INDUCTOR 10µH	
L1506	1-400-397-11	INDUCTOR 10µH	
L1507	1-400-397-11	INDUCTOR 10µH	
L1508	1-400-397-11	INDUCTOR 10µH	
L1509	1-400-397-11	INDUCTOR 10µH	
L1701	1-400-397-11	INDUCTOR 10µH	
L1702	1-400-397-11	INDUCTOR 10µH	
L1703	1-400-397-11	INDUCTOR 10µH	
L1704	1-400-397-11	INDUCTOR 10µH	
		< TRANSISTOR >	
Q1501	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1502	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1503	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1504	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1505	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1506	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1507	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1508	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1510	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1511	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1512	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1513	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1514	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1515	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1516	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1517	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1523	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1524	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1545	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1701	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1702	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1705	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1707	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1711	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1712	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1713	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1714	8-729-010-05	TRANSISTOR MSB709-RT1	
Q1715	8-729-010-25	TRANSISTOR MSD601-RT1	
Q1716	8-729-010-05	TRANSISTOR MSB709-RT1	

UG

REF. NO.	PART NO.	DESCRIPTION			REMARK
		< RESISTOR >			
R1501	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1502	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1503	1-216-811-11	METAL CHIP	150	5%	1/10W
R1506	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1507	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1508	1-216-811-11	METAL CHIP	150	5%	1/10W
R1509	1-216-811-11	METAL CHIP	150	5%	1/10W
R1510	1-216-811-11	METAL CHIP	150	5%	1/10W
R1511	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1512	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1513	1-216-811-11	METAL CHIP	150	5%	1/10W
R1518	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1519	1-216-809-11	METAL CHIP	100	5%	1/10W
R1520	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1521	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1522	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R1523	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R1524	1-216-809-11	METAL CHIP	100	5%	1/10W
R1525	1-216-809-11	METAL CHIP	100	5%	1/10W
R1526	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1527	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1528	1-216-809-11	METAL CHIP	100	5%	1/10W
R1530	1-216-809-11	METAL CHIP	100	5%	1/10W
R1531	1-216-809-11	METAL CHIP	100	5%	1/10W
R1532	1-216-809-11	METAL CHIP	100	5%	1/10W
R1533	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1534	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1535	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1536	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1537	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1538	1-216-808-11	METAL CHIP	82	5%	1/10W
R1539	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1540	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1541	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1542	1-216-817-11	METAL CHIP	470	5%	1/10W
R1543	1-216-817-11	METAL CHIP	470	5%	1/10W
R1544	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1545	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1548	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1549	1-216-809-11	METAL CHIP	100	5%	1/10W
R1550	1-216-809-11	METAL CHIP	100	5%	1/10W
R1551	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1552	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1553	1-216-817-11	METAL CHIP	470	5%	1/10W
R1554	1-216-817-11	METAL CHIP	470	5%	1/10W
R1555	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1556	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1558	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1559	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R1560	1-216-809-11	METAL CHIP	100	5%	1/10W
R1561	1-216-809-11	METAL CHIP	100	5%	1/10W
R1562	1-216-809-11	METAL CHIP	100	5%	1/10W
R1563	1-216-843-11	METAL CHIP	68K	5%	1/10W
R1564	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R1565	1-216-809-11	METAL CHIP	100	5%	1/10W
R1566	1-216-809-11	METAL CHIP	100	5%	1/10W
R1568	1-216-809-11	METAL CHIP	100	5%	1/10W
R1569	1-216-809-11	METAL CHIP	100	5%	1/10W
R1570	1-216-809-11	METAL CHIP	100	5%	1/10W
R1571	1-216-809-11	METAL CHIP	100	5%	1/10W
R1572	1-216-809-11	METAL CHIP	100	5%	1/10W
R1573	1-216-809-11	METAL CHIP	100	5%	1/10W
R1574	1-216-843-11	METAL CHIP	68K	5%	1/10W
R1575	1-216-809-11	METAL CHIP	100	5%	1/10W
R1576	1-216-809-11	METAL CHIP	100	5%	1/10W
R1578	1-216-813-11	METAL CHIP	220	5%	1/10W
R1579	1-216-813-11	METAL CHIP	220	5%	1/10W
R1580	1-216-809-11	METAL CHIP	100	5%	1/10W
R1581	1-216-809-11	METAL CHIP	100	5%	1/10W
R1582	1-216-811-11	METAL CHIP	150	5%	1/10W
R1583	1-216-809-11	METAL CHIP	100	5%	1/10W
R1584	1-216-809-11	METAL CHIP	100	5%	1/10W
R1585	1-216-809-11	METAL CHIP	100	5%	1/10W
R1586	1-216-811-11	METAL CHIP	150	5%	1/10W
R1587	1-216-809-11	METAL CHIP	100	5%	1/10W
R1588	1-216-809-11	METAL CHIP	100	5%	1/10W
R1589	1-216-809-11	METAL CHIP	100	5%	1/10W
R1590	1-216-811-11	METAL CHIP	150	5%	1/10W
R1591	1-216-809-11	METAL CHIP	100	5%	1/10W
R1592	1-216-811-11	METAL CHIP	150	5%	1/10W
R1593	1-216-811-11	METAL CHIP	150	5%	1/10W
R1594	1-216-813-11	METAL CHIP	220	5%	1/10W
R1595	1-216-813-11	METAL CHIP	220	5%	1/10W
R1596	1-216-809-11	METAL CHIP	100	5%	1/10W
R1597	1-216-809-11	METAL CHIP	100	5%	1/10W
R1598	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1599	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1600	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1601	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1602	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1603	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1604	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1605	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1606	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1607	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1608	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1609	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1610	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1611	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1612	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1613	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1614	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1615	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1616	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1617	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1618	1-216-809-11	METAL CHIP	100	5%	1/10W
R1619	1-216-809-11	METAL CHIP	100	5%	1/10W
R1623	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1624	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1628	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1629	1-216-853-11	METAL CHIP	470K	5%	1/10W
R1630	1-216-819-11	METAL CHIP	680	5%	1/10W
R1631	1-216-819-11	METAL CHIP	680	5%	1/10W
R1632	1-216-819-11	METAL CHIP	680	5%	1/10W
R1633	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R1634	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R1649	1-216-811-11	METAL CHIP	150	5%	1/10W
R1650	1-216-811-11	METAL CHIP	150	5%	1/10W
R1651	1-216-811-11	METAL CHIP	150	5%	1/10W
R1652	1-216-811-11	METAL CHIP	150	5%	1/10W
R1653	1-216-811-11	METAL CHIP	150	5%	1/10W
R1654	1-216-811-11	METAL CHIP	150	5%	1/10W
R1655	1-216-811-11	METAL CHIP	150	5%	1/10W
R1656	1-216-811-11	METAL CHIP	150	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1657	1-216-811-11	METAL CHIP	150	5%	1/10W
R1658	1-216-811-11	METAL CHIP	150	5%	1/10W
R1659	1-216-811-11	METAL CHIP	150	5%	1/10W
R1660	1-216-811-11	METAL CHIP	150	5%	1/10W
R1677	1-216-814-11	METAL CHIP	270	5%	1/10W
R1678	1-216-814-11	METAL CHIP	270	5%	1/10W
R1679	1-216-809-11	METAL CHIP	100	5%	1/10W
R1680	1-216-809-11	METAL CHIP	100	5%	1/10W
R1681	1-216-809-11	METAL CHIP	100	5%	1/10W
R1689	1-216-813-11	METAL CHIP	220	5%	1/10W
R1690	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1691	1-216-809-11	METAL CHIP	100	5%	1/10W
R1692	1-216-809-11	METAL CHIP	100	5%	1/10W
R1693	1-216-813-11	METAL CHIP	220	5%	1/10W
R1694	1-216-813-11	METAL CHIP	220	5%	1/10W
R1695	1-216-813-11	METAL CHIP	220	5%	1/10W
R1696	1-216-813-11	METAL CHIP	220	5%	1/10W
R1701	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1702	1-216-817-11	METAL CHIP	470	5%	1/10W
R1703	1-216-817-11	METAL CHIP	470	5%	1/10W
R1704	1-216-809-11	METAL CHIP	100	5%	1/10W
R1709	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1710	1-216-809-11	METAL CHIP	100	5%	1/10W
R1711	1-216-809-11	METAL CHIP	100	5%	1/10W
R1712	1-216-809-11	METAL CHIP	100	5%	1/10W
R1715	1-216-838-11	METAL CHIP	27K	5%	1/10W
R1716	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W
R1717	1-220-397-11	METAL CHIP	4.7M	5%	1/10W
R1722	1-216-809-11	METAL CHIP	100	5%	1/10W
R1723	1-216-809-11	METAL CHIP	100	5%	1/10W
R1724	1-216-809-11	METAL CHIP	100	5%	1/10W
R1725	1-216-809-11	METAL CHIP	100	5%	1/10W
R1726	1-216-809-11	METAL CHIP	100	5%	1/10W
R1730	1-216-817-11	METAL CHIP	470	5%	1/10W
R1736	1-216-817-11	METAL CHIP	470	5%	1/10W
R1738	1-218-829-11	METAL CHIP	180	0.5%	1/10W
R1739	1-216-817-11	METAL CHIP	470	5%	1/10W
R1740	1-211-991-11	METAL CHIP	82	0.5%	1/10W
R1741	1-218-845-11	METAL CHIP	820	0.5%	1/10W
R1745	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R1746	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R1747	1-249-415-11	CARBON	680	5%	1/4W
R1748	1-249-415-11	CARBON	680	5%	1/4W
R1749	1-249-415-11	CARBON	680	5%	1/4W
R1750	1-249-415-11	CARBON	680	5%	1/4W
R1751	1-220-397-11	METAL CHIP	4.7M	5%	1/10W
R1752	1-220-397-11	METAL CHIP	4.7M	5%	1/10W
R1753	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1754	1-216-817-11	METAL CHIP	470	5%	1/10W
R1755	1-216-817-11	METAL CHIP	470	5%	1/10W
R1756	1-216-809-11	METAL CHIP	100	5%	1/10W
R1757	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1758	1-216-817-11	METAL CHIP	470	5%	1/10W
R1759	1-216-817-11	METAL CHIP	470	5%	1/10W
R1760	1-216-809-11	METAL CHIP	100	5%	1/10W
R1761	1-220-397-11	METAL CHIP	4.7M	5%	1/10W

< TRANSFORMER >

T1501	1-437-982-11	SOUND INPUT TRANSFORMER	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		< VARISTOR >	
VD1534	1-803-974-21	VARISTOR, CHIP -1608	
VD1535	1-803-974-21	VARISTOR, CHIP -1608	
VD1536	1-803-974-21	VARISTOR, CHIP -1608	
VD1537	1-803-974-21	VARISTOR, CHIP -1608	
VD1538	1-803-974-21	VARISTOR, CHIP -1608	
VD1539	1-803-974-21	VARISTOR, CHIP -1608	
VD1540	1-803-974-21	VARISTOR, CHIP -1608	
VD1543	1-803-974-21	VARISTOR, CHIP -1608	
		< VIBRATOR >	
X1501	1-781-282-11	VIBRATOR, CERAMIC 4MHz	
X1701	1-781-612-11	VIBRATOR, CRYSTAL 16.2MHz	
X1801	1-781-612-11	VIBRATOR, CRYSTAL 16.2MHz	

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* A-1410-655-A W BOARD, COMPLETE
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	4-382-854-01	SCREW (M3X8), P, SW (+)

< CAPACITOR >

C9101	1-104-999-11	MYLAR	0.1µF	10%	200V
C9102	1-130-495-00	MYLAR	0.1µF	5%	50V
C9103	1-126-947-11	ELECT	47µF	20%	25V
C9104	1-126-933-11	ELECT	100µF	20%	16V
C9105	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9106	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9108	1-107-662-11	ELECT	22µF	20%	250V
C9109	1-161-830-00	CERAMIC	0.0047µF	500V	
C9110	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9111	1-126-964-11	ELECT	10µF	20%	50V
C9112	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9113	1-137-528-11	MYLAR	0.1µF	10%	250V
C9114	1-107-636-11	ELECT	10µF	20%	160V
C9115	1-137-528-11	MYLAR	0.1µF	10%	250V
C9116	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9117	1-117-450-11	MYLAR	0.47µF	10%	250V
C9118	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C9119	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C9120	1-130-495-00	MYLAR	0.1µF	5%	50V
C9121	1-126-947-11	ELECT	47µF	20%	25V
C9122	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C9123	1-126-934-11	ELECT	220µF	20%	16V
C9125	1-130-495-00	MYLAR	0.1µF	5%	50V
C9126	1-126-947-11	ELECT	47µF	20%	25V
C9127	1-130-495-00	MYLAR	0.1µF	5%	50V
C9128	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9131	1-126-947-11	ELECT	47µF	20%	25V
C9133	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C9134	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C9136	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9137	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9138	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9139	1-136-167-00	FILM	0.15µF	5%	50V
C9140	1-126-947-11	ELECT	47µF	20%	25V
C9141	1-129-709-61	FILM	0.0039µF	5%	630V
C9142	1-100-121-11	FILM	0.015µF	5%	400V
C9143	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C9144	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

W

REF. NO.	PART NO.	DESCRIPTION			REMARK
C9145	1-130-495-00	MYLAR	0.1µF	5%	50V
C9146	1-137-194-81	FILM	0.47µF	5%	50V
C9147	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9148	1-126-947-11	ELECT	47µF	20%	25V
C9151	1-126-947-11	ELECT	47µF	20%	25V
C9152	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C9153	1-165-727-31	ELECT	120µF	20%	16V
C9154	1-162-974-11	CERAMIC CHIP	0.01µF		50V
		< CONNECTOR >			
CN9100*	1-564-510-11	PLUG, CONNECTOR 7P			
CN9101*	1-564-506-11	PLUG, CONNECTOR 3P			
CN9102	1-764-334-11	PLUG, CONNECTOR 11P			
CN9103*	1-770-747-11	CONNECTOR, BOARD TO BOARD 12P			
CN9104*	1-564-506-11	PLUG, CONNECTOR 3P			
CN9105*	1-564-506-11	PLUG, CONNECTOR 3P			
		< DIODE >			
D9102	8-719-081-97	DIODE MMDL914T1			
D9104	8-719-062-51	DIODE 1PS226-115			
D9106	8-719-060-90	DIODE S2L60F			
D9107	8-719-081-97	DIODE MMDL914T1			
D9108	8-719-081-97	DIODE MMDL914T1			
		< FERRITE BEAD >			
FB9100	1-469-578-11	FERRITE	1.1µH		
FB9101	1-469-578-11	FERRITE	1.1µH		
		< IC >			
IC9100	8-759-822-38	IC LA6510			
IC9101	8-759-700-07	IC NJM2903M-TE2			
IC9102	8-759-701-01	IC NJM2904M(TE2)			
IC9103	8-759-822-38	IC LA6510			
		< J0UMPER RESISTOR >			
JR9102	1-216-864-11	SHORT CHIP	0		
JR9103	1-216-864-11	SHORT CHIP	0		
JR9104	1-216-864-11	SHORT CHIP	0		
JR9105	1-216-864-11	SHORT CHIP	0		
JR9106	1-216-864-11	SHORT CHIP	0		
JR9108	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L9100	1-412-525-31	INDUCTOR	10µH		
L9101	1-406-987-21	INDUCTOR	4.7mH		
L9102	1-406-987-21	INDUCTOR	4.7mH		
L9103	1-412-537-31	INDUCTOR	100µH		
L9104	1-406-979-11	INDUCTOR	220µH		
L9105	1-412-536-31	INDUCTOR	82µH		
L9106	1-406-987-21	INDUCTOR	4.7mH		
L9107	1-406-987-21	INDUCTOR	4.7mH		
		< TRANSISTOR >			
Q9100	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9101	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9102	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9103	8-729-010-25	TRANSISTOR MSD601-RT1			

REF. NO.	PART NO.	DESCRIPTION			REMARK
Q9104	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9105	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9106	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9107	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9108	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9109	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9110	8-729-045-04	TRANSISTOR 2SC5511			
Q9111	8-729-045-05	TRANSISTOR 2SA2005			
Q9112	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9113	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9115	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9116	8-729-010-25	TRANSISTOR MSD601-RT1			
Q9117	8-729-052-29	TRANSISTOR 2SK2876-01MR-F122			
Q9119	8-729-010-05	TRANSISTOR MSB709-RT1			
Q9120	8-729-010-25	TRANSISTOR MSD601-RT1			
		< RESISTOR >			
R9101	1-216-805-11	METAL CHIP	47	5%	1/10W
R9102	1-260-322-11	CARBON	330	5%	1/2W
R9103	1-216-819-11	METAL CHIP	680	5%	1/10W
R9104	1-216-820-11	METAL CHIP	820	5%	1/10W
R9105	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9106	1-218-870-11	METAL CHIP	9.1K	0.5%	1/10W
R9107	1-216-809-11	METAL CHIP	100	5%	1/10W
R9108	1-216-817-11	METAL CHIP	470	5%	1/10W
R9109	1-216-817-11	METAL CHIP	470	5%	1/10W
R9110	1-216-805-11	METAL CHIP	47	5%	1/10W
R9111	1-216-805-11	METAL CHIP	47	5%	1/10W
R9112	1-249-389-11	CARBON	4.7	5%	1/4W
R9113	1-249-389-11	CARBON	4.7	5%	1/4W
R9114	1-249-389-11	CARBON	4.7	5%	1/4W
R9115	1-249-389-11	CARBON	4.7	5%	1/4W
R9116	1-249-389-11	CARBON	4.7	5%	1/4W
R9117	1-249-389-11	CARBON	4.7	5%	1/4W
R9118	1-249-389-11	CARBON	4.7	5%	1/4W
R9119	1-249-389-11	CARBON	4.7	5%	1/4W
R9120	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9121	1-216-848-11	METAL CHIP	180K	5%	1/10W
R9122	1-216-847-11	METAL CHIP	150K	5%	1/10W
R9123	1-216-848-11	METAL CHIP	180K	5%	1/10W
R9124	1-216-847-11	METAL CHIP	150K	5%	1/10W
R9125	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9126	1-216-805-11	METAL CHIP	47	5%	1/10W
R9127	1-216-805-11	METAL CHIP	47	5%	1/10W
R9128	1-243-572-71	METAL OXIDE	470	5%	2W
R9129	1-216-864-11	SHORT CHIP	0		
R9130	1-218-853-11	METAL CHIP	1.8K	0.5%	1/10W
R9131	1-218-885-11	METAL CHIP	39K	0.5%	1/10W
R9132	1-218-865-11	METAL CHIP	5.6K	0.5%	1/10W
R9133	1-249-391-11	CARBON	6.8	5%	1/4W
R9134	1-249-383-11	CARBON	1.5	5%	1/4W
R9135	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R9136	1-218-849-11	METAL CHIP	1.2K	0.5%	1/10W
R9137	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R9138	1-218-869-11	METAL CHIP	8.2K	0.5%	1/10W
R9139	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R9141	1-214-657-11	METAL	1	1%	1/4W
R9142	1-214-657-11	METAL	1	1%	1/4W
R9143	1-243-693-71	METAL OXIDE	270	5%	1W
R9144	1-243-696-71	METAL OXIDE	470	5%	1W
R9146	1-216-841-11	METAL CHIP	47K	5%	1/10W
R9147	1-216-833-11	METAL CHIP	10K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R9148	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R9149	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9152	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R9154	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9155	1-249-377-11	CARBON	0.47	5%	1/4W
R9156	1-216-841-11	METAL CHIP	47K	5%	1/10W
R9157	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9158	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9160	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R9161	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R9163	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9164	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9166	1-249-401-11	CARBON	47	5%	1/4W
R9167	1-216-809-11	METAL CHIP	100	5%	1/10W
R9168	1-218-897-11	METAL CHIP	120K	0.5%	1/10W
R9170	1-218-899-11	METAL CHIP	150K	0.5%	1/16W
R9171	1-218-897-11	METAL CHIP	120K	0.5%	1/10W
R9172	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R9174	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9175	1-216-853-11	METAL CHIP	470K	5%	1/10W
R9176	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9177	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W
R9178	1-216-834-11	METAL CHIP	12K	5%	1/10W
R9179	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R9180	1-216-353-00	METAL OXIDE	2.2	5%	1W
R9181	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R9182	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R9183	1-216-857-11	METAL CHIP	1M	5%	1/10W
R9184	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R9186	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R9187	1-218-885-11	METAL CHIP	39K	0.5%	1/10W
R9188	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R9190	1-218-873-11	METAL CHIP	12K	0.5%	1/10W
R9191	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R9192	1-218-881-11	METAL CHIP	27K	0.5%	1/10W
R9195	1-216-853-11	METAL CHIP	470K	5%	1/10W
R9196	1-218-887-11	METAL CHIP	47K	0.5%	1/10W
R9197	1-216-857-11	METAL CHIP	1M	5%	1/10W
R9198	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R9199	1-218-849-11	METAL CHIP	1.2K	0.5%	1/10W
R9200	1-218-893-11	METAL CHIP	82K	0.5%	1/10W
R9203	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9204	1-216-849-11	METAL CHIP	220K	5%	1/10W
R9205	1-214-800-11	METAL	2.2	1%	1/2W
R9206	1-216-849-11	METAL CHIP	220K	5%	1/10W
R9207	1-216-837-11	METAL CHIP	22K	5%	1/10W

****

REF. NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
	⚠ 1-451-498-21	COIL, NA ROTATION	
	⚠ 1-451-551-13	DEFLECTION YOKE (Y32VEC-T)	
	⚠ 1-456-398-11	DEGAUSSING COIL (WITH LCC)	
	⚠ 1-456-398-21	DEGAUSSING COIL (WITH LCC)	
	1-500-497-11	FILTER, CLAMP (FERRITE CORE)	
	1-543-993-11	CORE, FERRITE	
	⚠ 1-757-345-11	CORD, POWER (WITH FILTER)	
	1-825-574-11	LOUDSPEAKER (5.5X13cm)	
	1-825-575-11	LOUDSPEAKER (5cm)	
	1-900-275-97	LEAD ASSY (B), SPEAKER	
	⚠ 8-453-022-21	NA2920-M2	
	⚠ 8-735-110-05	CRT 32RVEN	

****

		ACESSORIES & PACKING MATERIALS	
		**********	
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)	
*	4-091-319-01	BAG, PROTECTION	
*	4-101-900-01	INDIVIDUAL CARTON	
*	4-096-375-01	TRAY	
*	4-096-376-01	CUSHION UPPER	
*	4-096-377-01	CUSHION LOWER	
	4-098-757-11	MANUAL, INSTRUCTION	
*	4-097-268-01	POST, CORNER (REAR)	
	4-392-003-01	BAND, HOLD	
	4-392-004-11	CLIP	

****

		REMOTE COMMANDER	
		**********	
	1-478-287-11	STANDARD TYPE COMMANDER	(RM-1008)
	9-885-019-97	LID, BATTERY CASE	(FOR REMOTE COMMANDER)

SONY

4-098-757-**11** (1)

Trinitron Color TV

Operating Instructions

- Before operating the unit, please read this manual thoroughly and retain it for future reference.

FD Trinitron
WEGA

KV-HX32

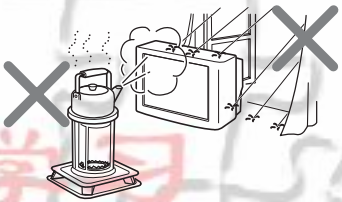
M31

WARNING

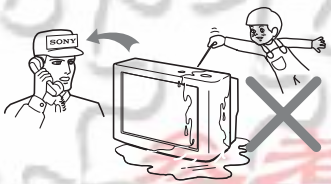
- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220–240 V AC.
- Do not plug in the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid leaks from the batteries and touches your skin, immediately wash it away with water.

For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

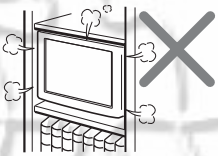
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



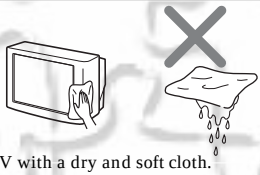
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



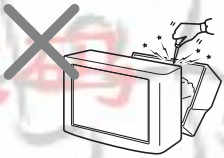
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



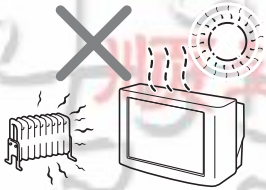
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



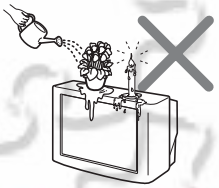
Clean the TV with a dry and soft cloth.
Do not use benzine, thinner, or any other chemicals to clean the TV. Do not attach anything (e.g., adhesive tape, cellophane tape, glue) on the painted cabinet of the TV. Do not scratch the picture tube.



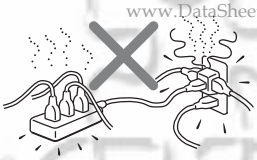
Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



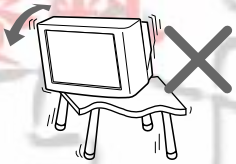
Your TV is recommended for home use only.
Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.



Do not place any objects on the TV. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.



Install the TV on a stable TV stand and floor which can support the TV set weight. Ensure that the TV stand surface is flat and its area is larger than the bottom area of the TV.

Pull the power cord out by the plug. Do not pull the power cord itself. Even if your TV is turned off, it is still connected to the AC power source (mains) as long as the power cord is plugged in. Unplug the TV before moving it or if you are not going to use it for several days.

The features you will enjoy include:

- "DRC-MF" for viewing higher quality pictures (page 21)
- "Picture Mode" / "Sound Mode" / "Surround" for customizing your TV (pages 20 and 26)
- "Wide Screen" to enjoy wide mode pictures (page 22)

Your TV also offers the following features:

- Initial Setup function for on-screen language selection, picture position adjustment and automatic channel presetting. (page 9)
- Menu language options — English / Chinese / Arabic (page 47)
- "Program Block" for locking out specific channels (page 56)
- "Intelligent Volume" for automatic volume adjustment (page 43)
- "Fine" tuning feature (page 52)
- Button Joystick on the remote control for easier operation (page 38)
- "Eco Mode" to save energy (page 48)
- "Game Mode" for video games (page 48)

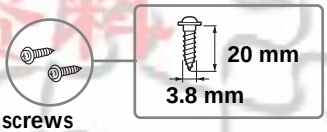
Table of Contents

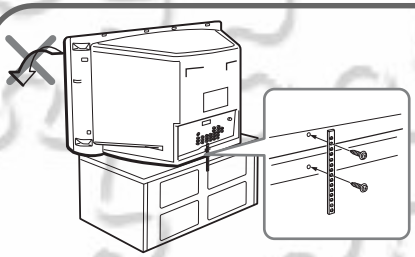
Getting Started

Step 1

Secure the TV

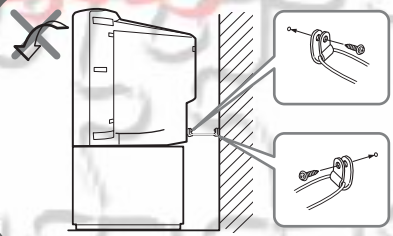
To prevent the TV from falling, use the supplied screws, clamps and band to secure the TV.





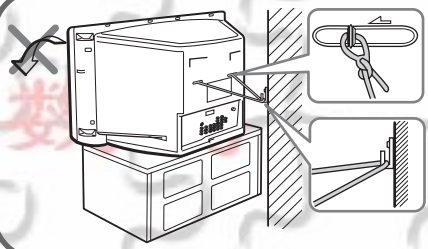
Screw the band to the TV stand and to the provided hole at the rear of your TV.

or



(1) Put a cord or chain through the clamps.
(2) Screw one clamp to a wall or pillar and the other clamp to the provided hole at the rear of your TV.

or



(1) Attach each end of a cord or chain to the provided holders at the rear of your TV.
(2) Securely fix the attached cord or chain to a wall or pillar using an attachment which can support the TV set weight.

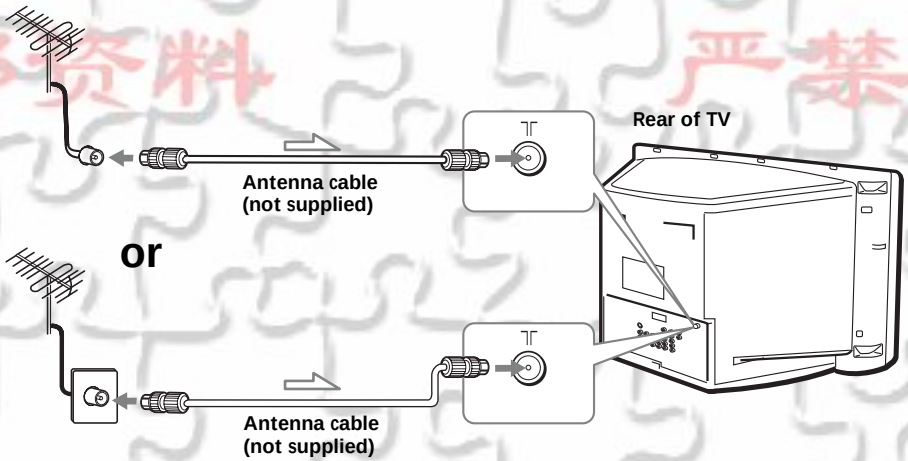
Note

- Use only the supplied screws. Use of other screws may damage the TV.

Step 2

Connect the antenna

If you wish to connect a VCR, see the “Connect a VCR” diagram on page 8.



For optimum Performance

To connect the TV to the antenna or the VCR, use a coaxial cable.

Note that one end of the cable has a male plug fitted while the other end is fitted with a female socket. Connect the male plug to the ⅂⅁ (antenna) terminal of the TV.

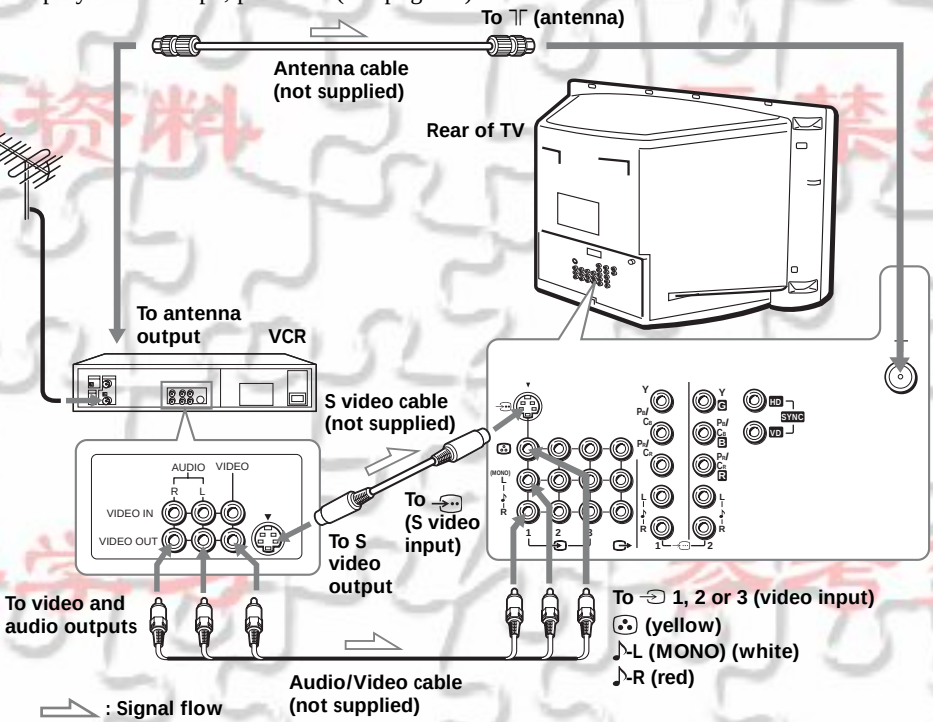
CAUTION

Do not connect the power cord until all other connections are complete; otherwise, a minimal current leakage through the antenna and / or other terminals to the ground could occur.

continued

Connect a VCR

To play a video tape, press ⊖ (see page 18).



Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ⊤ (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When you connect a VCR to the S video input, display the "Setup" menu and select "Auto" for "S Input" (see page 49). If the signals are input to both ⊖ (S video input) and (video input), the S video signal is automatically selected. To view the video signal input to (video input), select "Off" for "S Input".

Step 3

Insert the batteries into the remote

Note

- Do not use old batteries or different types of batteries together.

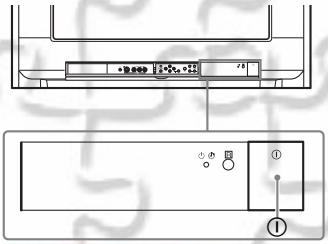
Step 4

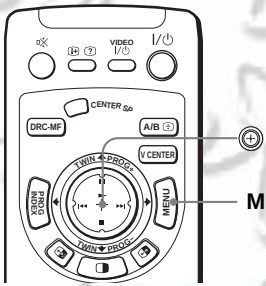
Set up your TV automatically

When you first turned on the TV, the “Picture Rotation” and “Picture V-Position” menus will appear in the process of “Initial Setup”. These menus allow you to adjust the inclination of picture, shift of the picture vertical position, and color patches caused by the earth’s magnetic field. (These phenomena do not indicate the TV’s problem.) Adjust “Picture Rotation” and “Picture V-Position” appropriately.

Tip

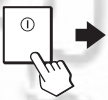
- When you install the TV to another location, make sure to adjust “Picture Rotation” and “Picture V-Position” using the menu (see page 50).





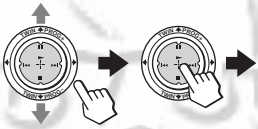
1 **Press ⏻ to turn on the TV.**

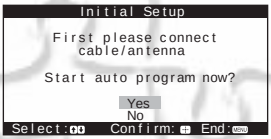
The “Initial Setup” menu appears, and you can select the on-screen language.



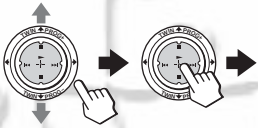
2 **Move ⊕ up or down to select the desired language, then press ⊕.**

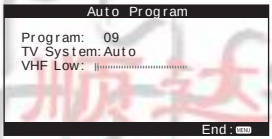
“Start auto program now?” appears.





3 **Move ⊕ up or down to select “Yes”, then press ⊕ to preset the channels automatically.**





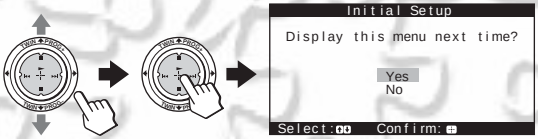
The screen will indicate automatic presetting is in progress. After channel presetting is complete, the “Picture Rotation” menu appears.

continued

4 **If the upper and lower bars are slanted, move ⊕ left or right so that they become horizontal, then press ⊕.**

"Picture V-Position" menu appears.

5 **If the upper and lower bars are not equally positioned to the top and bottom of the screen, move ⊕ up or down to adjust them, then press ⊕.**



"Display this menu next time?" appears.

6 **Move ⊕ up or down to select "No", then press ⊕.**

The "Initial Setup" menu will not appear again the next time you turn on the TV by pressing ⏻.

To allow this menu to appear again, select "Yes", then press ⊕.

Tips

- You can immediately go to the end of the "Initial Setup" menu by pressing MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 51).

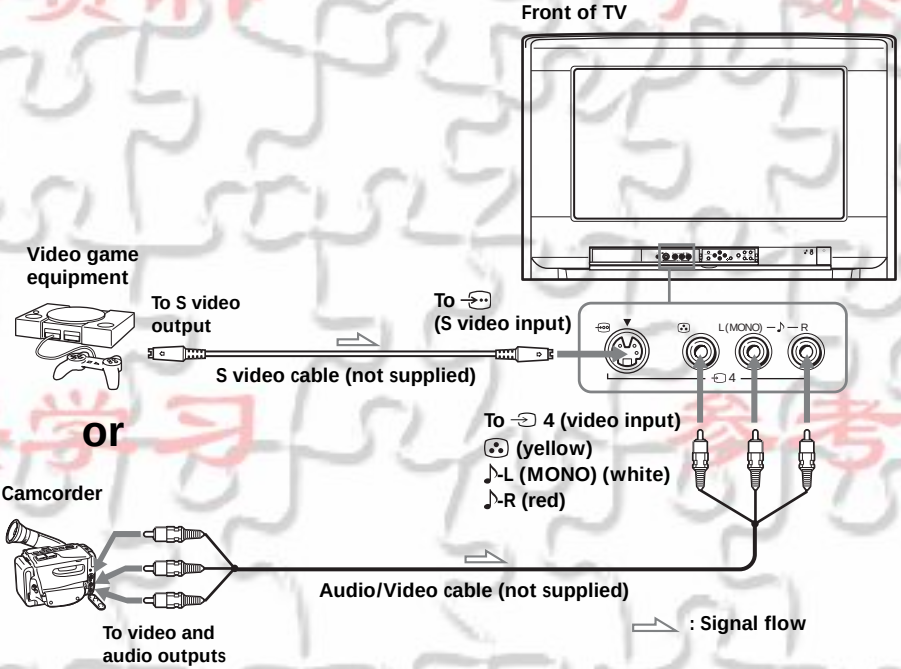
Notes

- Before adjusting "Picture Rotation" and "Picture V-Position", keep external speakers or other electrical equipment away from the TV. The magnetic disturbance from these equipment or the direction of the earth's magnetic field may affect the TV.
- If you do not succeed in adjusting "Picture Rotation" and "Picture V-Position", turn off the TV and change its location or direction, then try to adjust using the menu. Do not move the TV while the TV is turned on. If you do, abnormal color patches may appear on the picture. Press ⏻ on the TV to turn off the TV for about 15 minutes, then turn it on again to demagnetize the TV.
- When adjusting "Picture Rotation", adjust the value step by step. If you rotate the bars largely at a time, color distortion may occur.
- You cannot adjust "Picture Rotation" and "Picture V-Position" when HD signals are input.

Connecting optional components

You can connect optional audio / video components, such as a VCR, a DTV (Digital Television) receiver, multi disc player, camcorder, video game, or stereo system. To watch and operate the connected equipment, see pages 18 and 31.

Connecting a camcorder/video game equipment using ⇨ 4 (video input 4) jacks

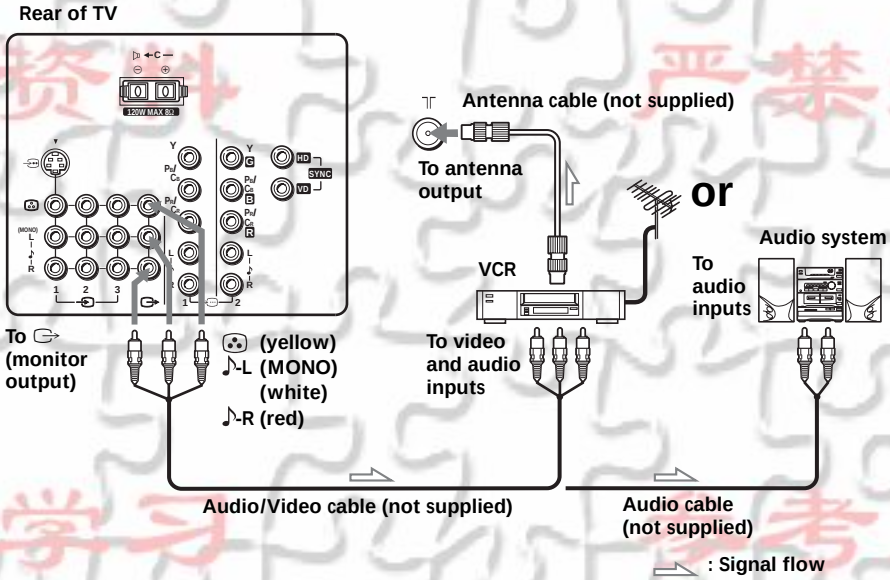


Notes

- When connecting video game equipment, display the “Setup” menu and select “On” for “Game Mode” to adjust the picture setting that is suitable for video games (see page 48).
- You can also connect video equipment to the ⇨ 1, 2, or 3 (video input) jacks at the rear of your TV.
- When you connect video equipment to the S video input, display the “Setup” menu and select “Auto” for “S Input” (see page 49). If the signals are input to both ⇨ (S video input) and (video input), the S video signal is automatically selected. To view the video signal input to (video input), select “Off” for “S Input”.

continued

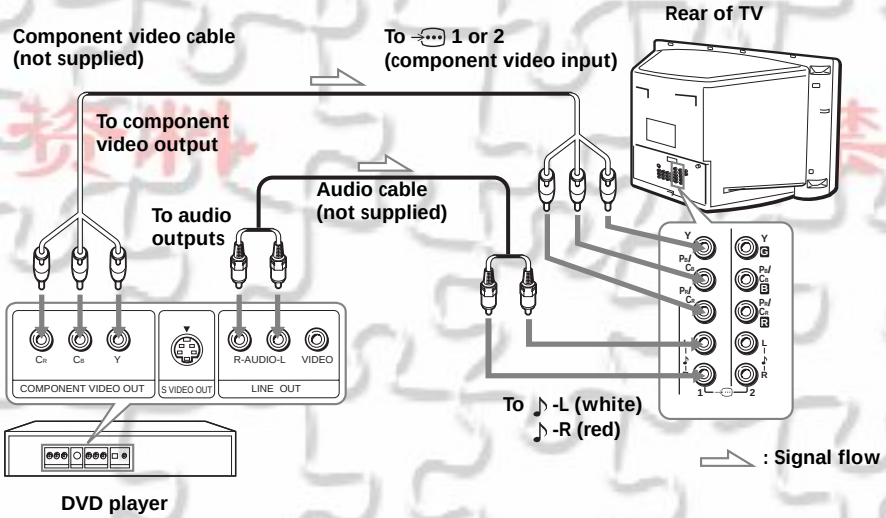
Connecting audio/video equipment using the ⇨ (monitor output) jacks



Note

- If you select "HD / DVD 1" or "HD / DVD 2" on your TV screen (see page 18), sound will be heard but no picture will be output from ⇨ (monitor output). This does not indicate a malfunction.

Connecting a DVD player to → (component video input) 1 or 2 jacks



Notes

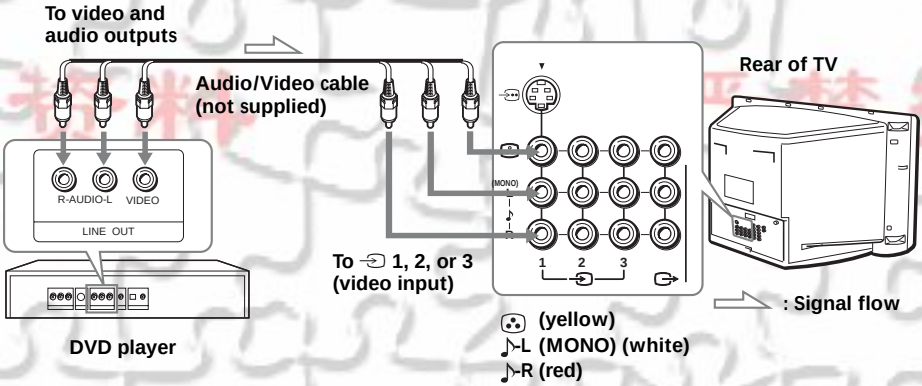
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
P_B / C_B (blue)	C_b, B-Y or P_B
P_R / C_R (red)	C_r, R-Y or P_R

- Connect nothing to the HD / VD jacks when connecting a DVD player to → 1 or 2 (component video input).
- If you select “HD / DVD 1” or “HD / DVD 2” on your TV screen (see page 18), sound will be heard but no picture will be output from ⇨ (monitor output). This does not indicate a malfunction.
- When receiving a progressive signal through → (component video input), “DRC-MF” and “Game Mode” are not selectable.

continued

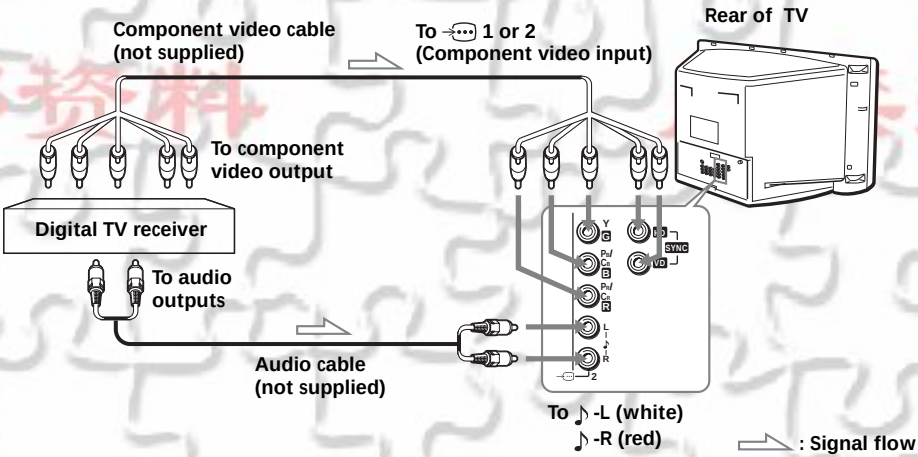
Connecting a DVD player to ⇨ (video input) 1, 2 or 3 jacks



Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, display the “Picture” menu and select “Personal” for “Picture Mode”, then adjust the sharpness (“Sharpness”) under “Picture Adjustment” (see page 41).
- You can also connect a DVD player to ⇨ (S video input) on the TV.

Connecting a DTV (digital television) receiver to 1 or 2 (component video input) jacks



Note

- The TV is equipped with the G / B / R / HD / VD inputs.
  If your DTV receiver is equipped with the Y / P_B / P_R output connectors, connect it to the Y / P_B / P_R connectors of 1 or 2. Connect nothing to the HD / VD connectors of 2.
  If your DTV receiver is not equipped with the Y / P_B / P_R output connectors, connect it to the G / B / R / HD / VD connectors of 2.

Tip

- The TV accepts the following signal formats:

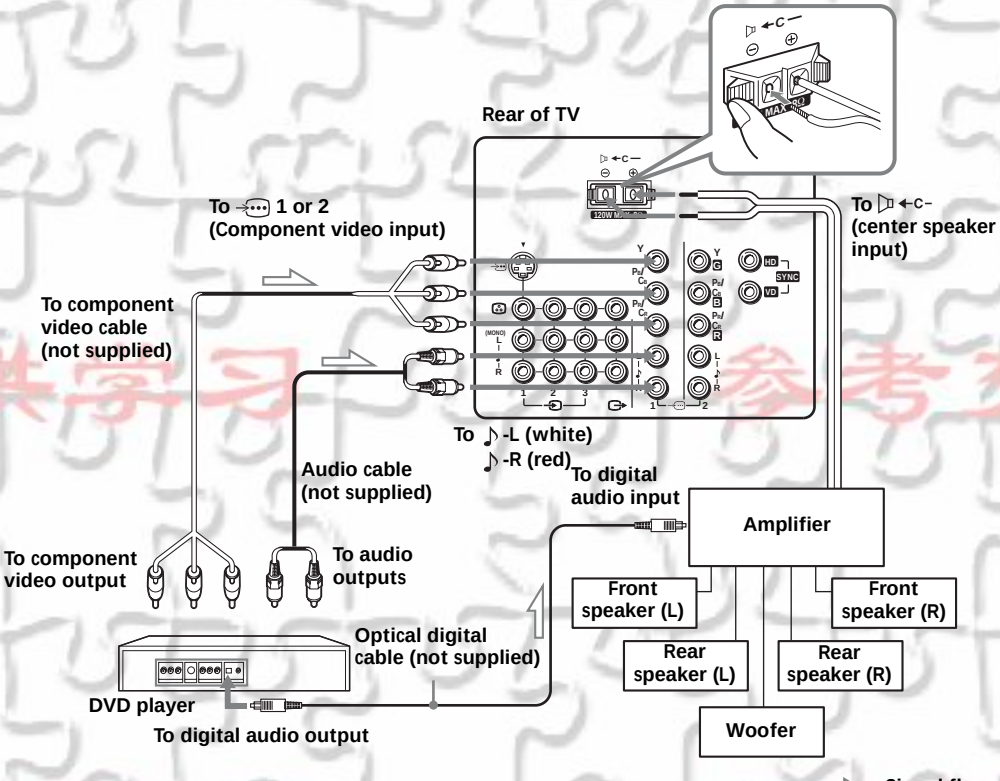
Total scanning line	Effective scanning line	fV (Hz)
1125i	1080i	50 / 60
750p	720p	50 / 60
625p	576p	50
625i	576i	50
525p	480p	60
525i	480i	60

continued

Connecting an amplifier

If you use an amplifier with a Dolby* surround decoder instead of the TV's audio system, you can use the TV's speakers as the center speaker for your audio system.

Using the speaker cords supplied with the amplifier, connect the speaker terminals of the amplifier to the ▷ ←c– (center speaker input) terminals on the TV.



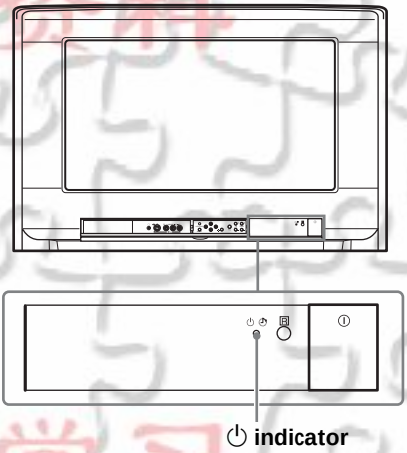
Note

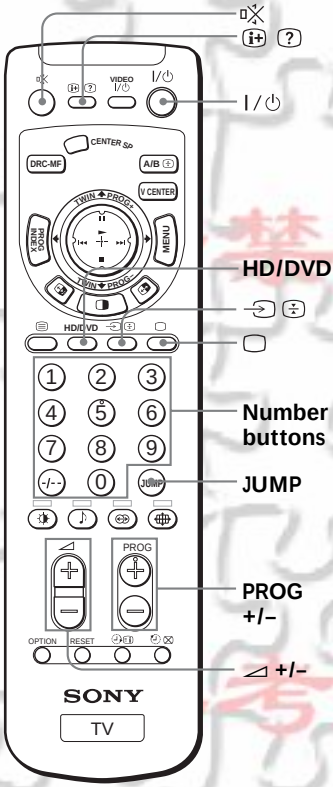
- To use the TV's speakers as the center speaker, display the "Sound" menu and select "CENTER IN" for "Speaker" (see page 43).

* "Dolby" is a trademark of Dolby Laboratories.

Watching the TV

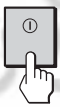
This section explains various functions and operations used while watching the TV. Most operations can be done using the remote.





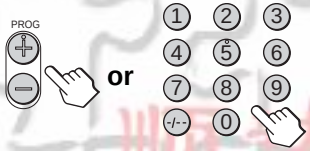
1 Press ⏻ to turn on the TV.

When the TV is in standby mode (the ⏻ indicator on the TV is lit red), press I / ⏻ on the remote.



2 Press PROG +/– or the number buttons to select the TV channel.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



Note

- When you turn on the TV, either the program number or video mode is displayed for approximately 40 seconds. The Eco Mode (ECO) icon will also appear if “Eco Mode” in the “Setup” menu is set to “On” (see page 48).

continued

To select a TV program quickly

1 Press and hold PROG +/–.

2 Release PROG +/– when the desired program number appears.

Note

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

Additional tasks

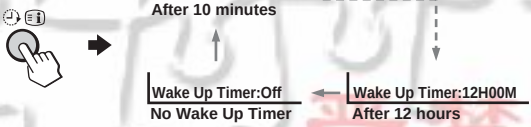
To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	INPUT (or INPUT on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4", "HD/DVD 1" or "HD/DVD 2". To return to the TV screen, press 🖵 (or INPUT on the TV).
Watch the component input (DVD, DTV receiver)	HD/DVD to select "HD/DVD 1" or "HD/DVD 2". To return to the TV screen, press 🖵 (or INPUT on the TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	DISPLAY.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the TV channel or video mode you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.
The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until “Wake Up Timer: Off” appears, or press ⏻ on the TV to turn it off.

Note

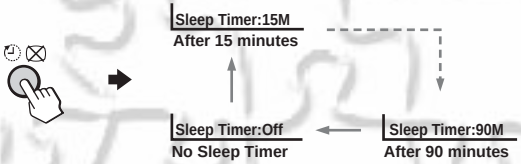
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

You can select the period of time from among 15, 30, 45, 60, 75 and 90 minutes.

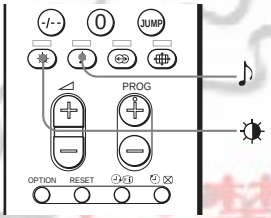
The Sleep timer starts immediately after you have set it.



To cancel the Sleep timer

Press ◴ until “Sleep Timer: Off” appears, or turn the TV off.

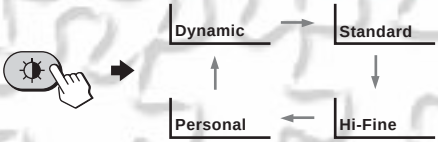
Selecting the picture and sound modes



You can select picture and sound modes and adjust the setting to your preference in the “Personal” option.

Selecting the picture mode

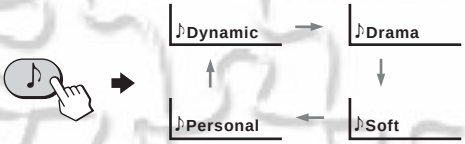
Press ☼ repeatedly until the desired picture mode is selected.



Select	To
“Dynamic”	receive high contrast pictures.
“Standard”	receive normal pictures.
“Hi-Fine”	receive higher resolution pictures with mild contrast.
“Personal”	receive the last adjusted picture setting from the “Picture Adjustment” menu under the “Picture” menu (see page 41).

Selecting the sound mode

Press ♪ repeatedly until the desired sound mode is selected.



Select	To
“Dynamic”	listen to dynamic and clear sound that emphasizes both the low and high tones.
“Drama”	listen to sound that emphasizes voice and high tones.
“Soft”	receive soft sound.
“Personal”	receive the last adjusted sound setting from the “Sound Adjustment” menu under the “Sound” menu (see page 42).

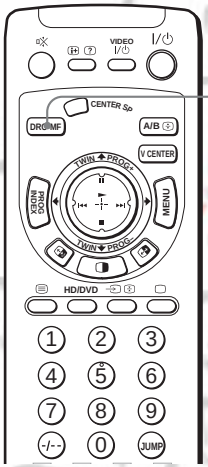
Tip

- You can also set the picture and sound modes using the menu (see “Changing the “Picture” setting” on page 39 and “Changing the “Sound” setting” on page 42).

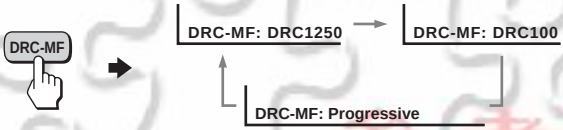
Viewing higher quality pictures

— "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your TV. You can select from among three DRC-MF modes: "DRC1250" to watch super real (higher resolution) pictures, or "DRC100" for moving pictures or "Progressive" for still pictures to reduce flicker if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC100"	reduce flicker on the screen.
"Progressive"	reduce jitter of any small areas or scanning lines (e.g., letters or the edge of objects) on the screen.

Tip

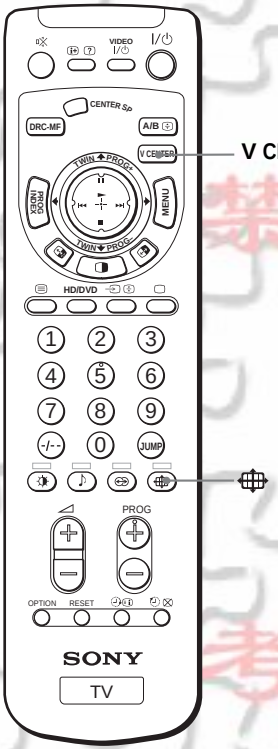
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "Picture" menu and select "Personal" for "Picture" mode, then adjust "Sharpness" under "Picture Adjustment" to reduce the sharpness (see page 41).

Note

- The DRC-MF mode is not selectable when the "Game Mode" is turned "On". The mode is not available for HD (high-definition) or progressive input signal.

Using wide screen mode

The wide screen mode feature allows you to watch the picture filling the 16:9 screen of the TV.



Watching the picture in wide screen mode automatically — AUTO WIDE

The TV automatically selects optimum wide screen mode according to the signal input and displays the picture to fill the 16:9 screen.

Notes

- The AUTO WIDE feature may not work correctly depending on the quality of signal. In this case, select the wide screen mode manually using the button (see page 24).
- The examples in the table on page 23 show the settings preset at the factory; “Auto Wide” is set to “On” and “4:3 Default” is set to “Wide Zoom” in the “Wide Screen” menu (see page 45).

When receiving ...		AUTO WIDE functions to select ...	The picture changes to ...	
normal 4:3 aspect ratio picture with an ID-1 or S1 signal or a signal without ID-1.		Wide Zoom* →		enlarge the 4:3 picture, with the upper and lower parts condensed to fit the 16:9 screen.
4:3 letter box movie or a video or DVD with an ID-1 signal.		Zoom →		enlarge the picture horizontally and vertically in an equal aspect ratio that fills the 16:9 screen**.
4:3 squeezed video camera picture with an ID-1 or S1 signal.		Full →		enlarge the picture horizontally only, to fill the 16:9 screen.
HDTV 16:9 picture		Full →		An HDTV 16:9 picture is always displayed in “Full” mode.

* When a normal 4:3 picture is received, “Wide Zoom” mode is automatically selected with the factory setting. You can display that picture as it is without enlarging it (“Normal” mode) if you set “4:3 Default” in the “Wide Screen” menu to “Normal” (see page 45).

** Black bands may appear on the top and bottom of the screen.

Note

• The 720p / 1080i format signal is always displayed in “Full” mode even if it has no ID-1 signal.

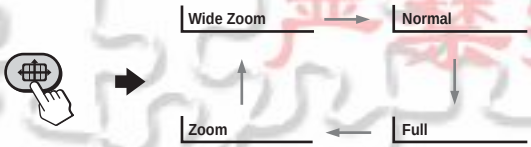
continued

Watching the picture in wide screen mode manually

You can select the desired wide screen mode manually.

Press ⊞ repeatedly until the mode indication you want is displayed on the screen.

For details on each mode, see “Watching the picture in wide screen mode automatically”.



Notes

- You can also select the wide screen mode manually using the menu (see page 45).
- When the wide screen mode is selected by pressing the ⊞ button on the remote or using the menu, the AUTO WIDE feature does not work temporarily.

  The AUTO WIDE feature functions again when:
  – you change a TV channel with PROG +/–.
  – you change the video input with ⊡.
  – the TV is turned off and on again.
- The 720p / 1080i format signal (HDTV 16:9 picture) is always displayed in “Full” mode.
- You can adjust the vertical position of the picture when wide screen mode is set to “Wide Zoom” or “Zoom” (see page 25).

Adjusting the position of the picture

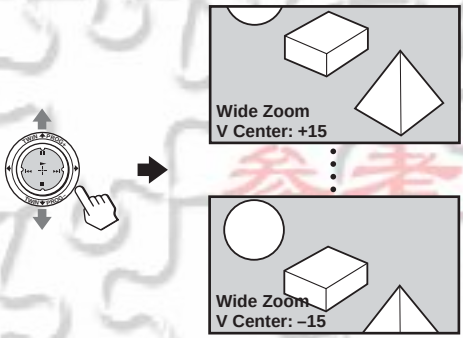
You can adjust the vertical position of the picture when

– the upper or lower part of the picture cannot be seen in “Wide Zoom” mode.
– you want to adjust the vertical position of the picture in the screen for “Zoom” mode.

This feature is available only for “Wide Zoom” and “Zoom” modes.

1 Press V CENTER.

2 Move ⊕ up or down to move the picture up or down.



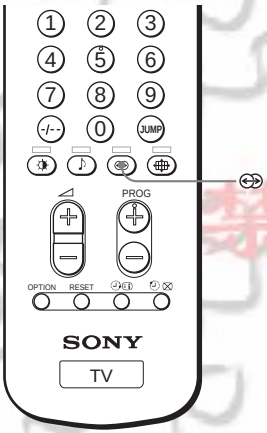
3 Press ⊕.

Notes

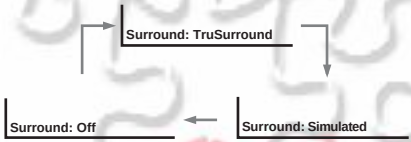
- The adjusted V Center value remains stored even after the TV is turned off.
- You can also adjust the position of the picture in “Wide Zoom” and “Zoom” modes using the menu (see page 45).

Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press ⇔ repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"*	listen to the surround sound that spreads out to the rear of a room.
"Simulated"	listen to monaural sound with a stereo-like effect.
"Off"	turn off the surround sound.

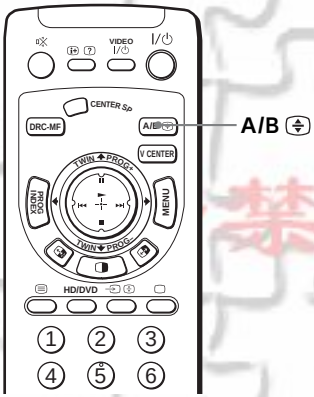
* TruSurround, SRS and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

Note

- You cannot change the surround sound when the TV is in the center speaker mode (page 34).

Enjoying stereo or bilingual programs

You can enjoy stereo sound or bilingual programs of NICAM and A2 (German) stereo systems.



Press A/B repeatedly until you receive the sound you want.

When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → Mono (Regular sound)
NICAM bilingual	NICAM Main (Main sound) → NICAM Sub (Sub sound) → Mono (Regular sound)
NICAM monaural	NICAM Main (Main sound) → Mono (Regular sound)

continued

Enjoying stereo or bilingual programs (continued)

When receiving an A2 (German) program

Broadcasting	On-screen display (Selected sound)
A2 (German) stereo	Mono (Regular sound) → Stereo (Stereo sound)
A2 (German) bilingual	Main (Main sound) → Sub (Sub sound)

Receiving area for NICAM and A2 (German) programs

System	Receiving area
NICAM	New Zealand, Hong Kong, Singapore, Malaysia, Thailand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

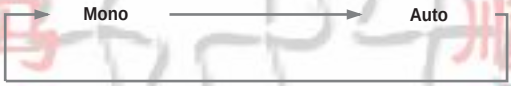
Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "Mono". The sound becomes monaural, but the noise is reduced.
- Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition at your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted or noisy when receiving a monaural program through the ⅂ (antenna) terminal

Press A/B repeatedly until "Mono" appears on the screen.

To cancel the monaural sound setting, press A/B again until "Auto" appears on the screen.

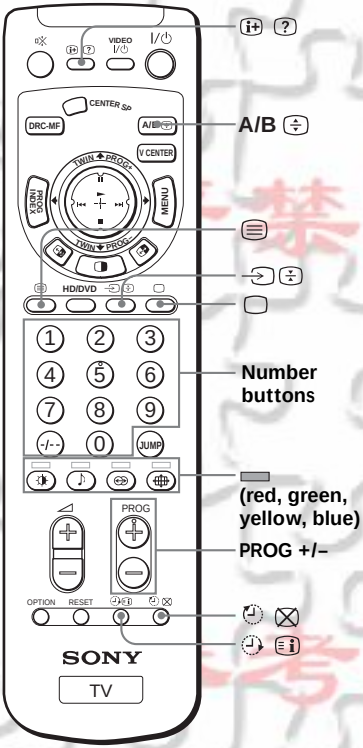


Notes

- The "Mono" or "Auto" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the TV is in the "Mono" setting. Normally, set the TV to "Auto".

Viewing Teletext

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

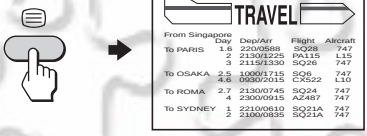


Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ☰ to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, “100” is displayed at the top left corner of the screen.



To turn off Teletext

Press ▢.

continued

Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press ☰. Each time you press ☰, the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press ☰i. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROG +/–.
hold (pause) a Teletext page (stop the page from scrolling)	Press ⊜ to display the symbol "⊜" at the top left corner of the screen. To resume normal Teletext viewing, press ⊜ or ☰.
reveal concealed information (e.g., an answer to a quiz)	Press ?. To conceal the information, press the button again.
enlarge the Teletext display	Press ⊜. Each time you press ⊜, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ☰ to show the text.

* You can also select a Teletext page of any page number that appears in the colored column at the bottom of the screen using the corresponding color-coded button on the remote.

Using FASTEXT

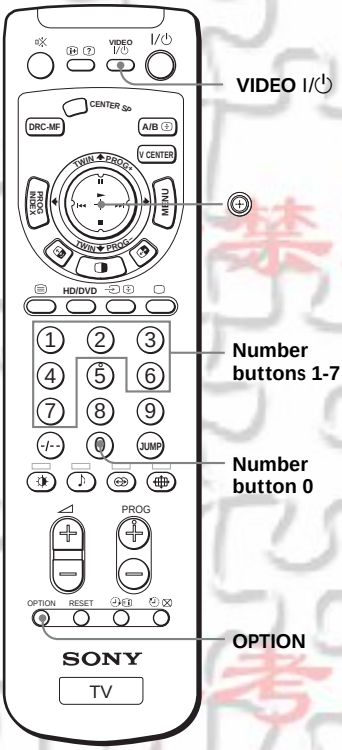
This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red ▬, green ▬, yellow ▬, and blue ▬).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

Operating optional components

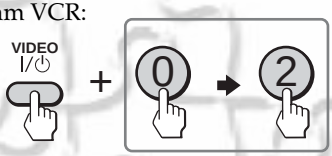
You can use the supplied remote to operate Sony video equipment such as Beta, 8 mm, VHS or DVD.



Setting up the remote to work with other connected equipment

While keeping VIDEO I/⏻ pressed, press the number button 0, then the corresponding number button for the desired equipment (see the chart below).

For example, to operate a Sony 8 mm VCR:



To control	While holding down	First press the number button	Next press the number button
DVD	VIDEO I/⏻	0	0
VTR1 (Beta)	VIDEO I/⏻	0	1
VTR2 (8 mm)	VIDEO I/⏻	0	2
VTR3 (VHS)	VIDEO I/⏻	0	3
MDP	VIDEO I/⏻	0	4
CD	VIDEO I/⏻	0	6
MD	VIDEO I/⏻	0	7

Note

- If the equipment does not have a certain function, the corresponding button on the remote will not operate.

Operating video equipment

Press VIDEO I/⏻, or while keeping OPTION pressed, press ⊕ (►) or move ⊕ up (❚❚), down (■), left (I◄◄) or right (►►I) (see the chart below).

Operating a VCR using the remote

To	Press/Move
turn on/off	VIDEO I/⏻
play	► while keeping OPTION pressed.
stop	■ while keeping OPTION pressed.
fast forward (►►)	►►I while keeping OPTION pressed.
rewind the tape (◄◄)	I◄◄ while keeping OPTION pressed.
pause	❚❚ while keeping OPTION pressed. Press again to resume normal playback.
search the picture forward (►►) or backward (◄◄)	►►I or I◄◄ during playback while keeping OPTION pressed. Release to resume normal playback.

Operating a DVD player using the remote

To	Press/Move
turn on/off	VIDEO I/⏻
play	► while keeping OPTION pressed.
stop	■ while keeping OPTION pressed.
pause	❚❚ while keeping OPTION pressed. Press again to resume normal playback.
step through different tracks of an audio disc	►►I to step forward or I◄◄ to step backward while keeping OPTION pressed.

Operating an MDP using the remote

To	Press/Move
turn on/off	VIDEO I/⏻
play	► while keeping OPTION pressed.
stop	■ while keeping OPTION pressed.
pause	II while keeping OPTION pressed. Press again to resume normal playback.
search the picture forward or backward	►►I or I◄◄ during playback while keeping OPTION pressed. Release to resume normal playback.

Operating a CD or MD player using the remote

To	Press/Move
turn on/off	VIDEO I/⏻
play	► while keeping OPTION pressed.
stop	■ while keeping OPTION pressed.
pause	II while keeping OPTION pressed. Press again to resume normal playback.
step through different tracks	►►I to step forward or I◄◄ to step backward while keeping OPTION pressed.

Using the TV's center speaker

You can use the TV's speakers as the center speaker of your audio system and control its sound volume from the remote of the TV.

Note

- For the speaker connection, see "Connecting an amplifier" on page 16.

To switch to the center speaker mode

1 Press CENTER SP.

2 Press +/– to adjust the volume of the sound from the TV's center speaker.

To return to the normal speaker mode

Press CENTER SP again.

Tip

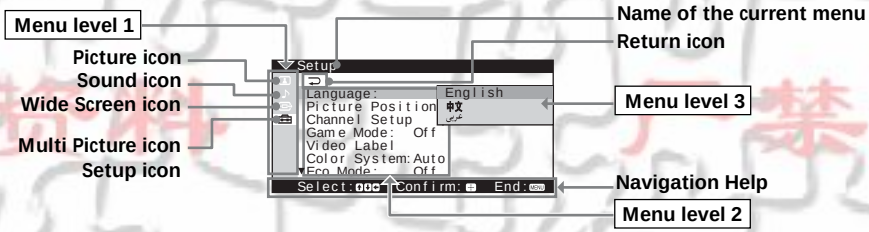
- The center speaker mode is automatically cancelled when you select the video input, or turn the TV off and on again.

Notes

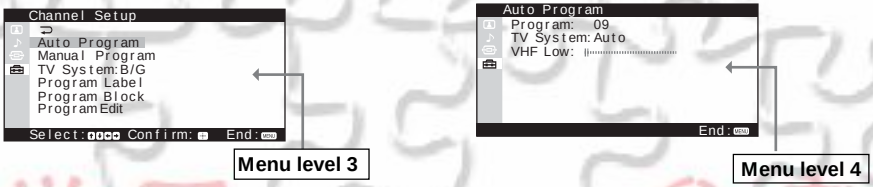
- If "CENTER IN" is selected for "Speaker" in the "Sound" menu and nothing is connected to the center speaker input terminals on the rear of the TV, no sound is heard from the TV's speakers.
- No sound is heard from the TV's center speakers if the sound source emitted from the amplifier does not contain the center speaker channel.
- When the TV is in the center speaker mode, you cannot change the surround sound, the "Intelligent Volume" mode or the "BBE" mode.

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.



Selecting some items in Menu level 2 of Setup menu displays another menu (Menu level 3), and selecting some options in this menu also displays the adjustment menu (Menu level 4).



Level 1	Level 2/Level 3	Level 3/Level 4/Function
"Picture"	"DRC-MF"	Selects the "DRC-MF" mode: "DRC1250" → "DRC100" → "Progressive"
	"Picture Mode"	Selects the picture mode: "Dynamic" → "Standard" → "Hi-Fine" → "Personal"
	"Picture Adjustment"	Adjusts the "Personal" option: "Picture" → "Brightness" → "Color" → "Hue" → "Sharpness" → "Color Temperature" → "Reset"
	"3D-NR"	Activates or deactivates picture noise reduction mode.
"Sound"	"Sound Mode"	Selects the sound mode: "Dynamic" → "Drama" → "Soft" → "Personal"
	"Sound Adjustment"	Adjusts the "Personal" option: "Treble" → "Bass" → "BBE"* → "Reset"
	"Balance"	Adjusts the balance between the left and right speaker volume.
	"Intelligent Volume"	Activates or deactivates the Intelligent Volume feature.
	"Surround"	Selects the "Surround" mode: "TruSurround" → "Simulated" → "Off"
	"Speaker"	Selects the speaker mode: "MAIN" or "CENTER IN".

* Licensed by BBE Sound, Inc. under USP4638258, 4482866.
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continued

Introducing the menu system (continued)

Level 1	Level 2/Level 3	Level 3/Level 4/Function
"Wide Screen"	"Wide Mode"	Selects the wide screen mode: "Wide Zoom" → "Normal" → "Full" → "Zoom"
	"Auto Wide"	Selects an optimum wide screen mode automatically.
	"4:3 Default"	Changes the picture to "Wide Zoom" or "Normal" when the normal 4:3 picture with ID-1 or 480i / 480p format signal without ID-1 is received.
	"V Center"	Adjusts the vertical position of the picture in "Wide Zoom" or "Zoom" mode.
	"V Size"	Adjusts the vertical size of the picture in "Wide Zoom" or "Zoom" mode.
"Setup"	"Language"	Changes the menu language: "English" → "中文" (Chinese) → "عربي" (Arabic)
	"Picture Position"	Adjusts the picture position if it is not aligned with the TV screen.
	"Picture Rotation"	Adjusts the declination of the picture.
	"Picture V-Position"	Adjusts the vertical position of the picture.
	"Channel Setup"	Presets channels, or select the TV system.
	"Auto Program"	The "Auto Program" menu is displayed. Presets channels automatically.
	"Manual Program"	The "Manual Program" menu is displayed. Presets channels manually.
	"TV System"	Selects the TV system: "B / G" → "I" → "D / K" → "M"
	"Program Label"	Assigns labels (such as station names) to the preset channels.
	"Program Block"	Locks out specific channels.
	"Program Edit"	Changes the order of the preset channels.
	"Game Mode"	Activates or deactivates GAME MODE feature.
	"Video Label"	Assigns labels to the audio / video equipment connected to the TV.
	"Video Input"	Selects the input to which the audio / video equipment is connected. "Video 1" → "Video 2" → "Video 3" → "Video 4" → "HD / DVD 1" → "HD / DVD 2"

Level 1	Level 2/Level 3	Level 3/Level 4/Function
"Setup"	"Label"	Selects one of the prefixed labels or assign your own label in "Edit" position. "Video 1" → "VCR" → "SAT" → "Game" → "Edit"
	"Color System"	Selects the color system: "Auto" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
	"Eco Mode"	Activates or deactivates ECO MODE feature.
	"S Input"	Selects the S video input mode: "Auto" or "Off".

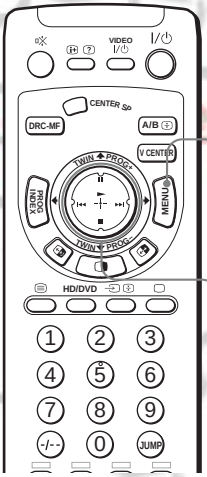
To restore the factory settings

Press the RESET button on the remote.

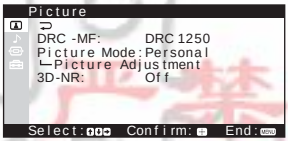
The settings other than the following items in the menu can be reset by using the RESET button:

– "Language"
– "Program" and "Skip" in "Manual Program"
– "Fine" in "Manual Program"
– "TV System"
– "Picture Position"
– "Personal" in "Picture Mode" and "Sound Mode"
– "Program Label"
– "Video Label"

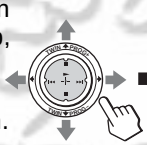
How to use the menu

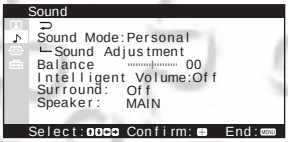


Press MENU to display the menu.

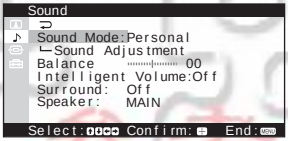


Move the button joystick ( ) up, down, left or right to select the desired item.





Press the button joystick ( ) to confirm the selection and/or go to the next level.



Other menu operations

To	Press/Move
Adjust the setting value	Move up, down, left or right.
Move to the next / previous menu level	Move left or right.
Cancel the menu	Press MENU.

Tips

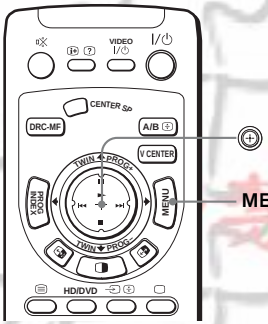
- If you want to exit from Menu level 2 to Menu level 1, move up or down until the return icon ( ) is highlighted, then press .
- The MENU, (Enter), and ↑/↓/←/→ (up / down / left / right) buttons on the TV can also be used for the operations above.

Note

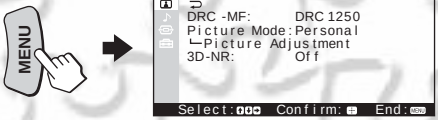
- If more than 90 seconds elapse between entries, the menu screen automatically disappears.

Changing the “Picture” setting

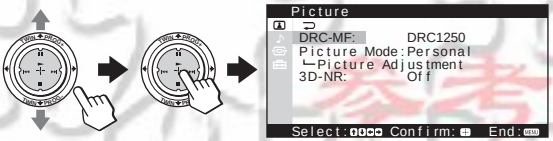
The “Picture” menu allows you to: adjust the picture setting, view higher quality pictures and reduce picture noise.



1 Press MENU.



2 Move ⊕ up or down to select 🎨, then press ⊕.



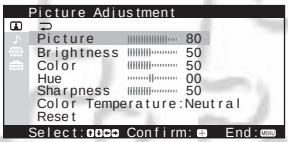
3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.

Select	To
“DRC-MF”	activate the Digital Reality Creation-Multi function feature to display higher quality pictures. Move ⊕ up or down to select “DRC1250”, “DRC100” or “Progressive”, then press ⊕.
“Picture Mode”	receive suitable picture mode. Move ⊕ up or down to select “Dynamic”, “Standard”, “Hi-Fine”, “Personal”*, then press ⊕.

* When the “Personal” mode is selected, the last adjusted picture setting in the “Picture Adjustment” menu is received (see page 41).

continued

Changing the "Picture" setting (continued)

Select	To
"Picture Adjustment"	adjust the picture quality when "Picture Mode" is set to "Personal". 
"3D-NR"	improve the picture quality of TV or video if a signal received is weak. Move ⊕ up or down to select "On", then press ⊕. To cancel, select "Off", then press ⊕.

Tips

- For details on the options under the "DRC-MF" mode, see pages 21.
- When high-definition (HD) or progressive signals are input, "DRC-MF" does not function.

To return to the normal screen

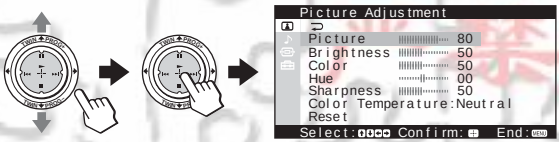
Press MENU.

Adjusting the “Picture Adjustment” options

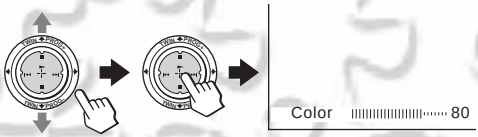
You can access the “Picture Adjustment” menu only when you have selected “Personal” for “Picture Mode”.

1 Display the “Picture” menu and select “Personal” for “Picture Mode”.

2 Move ⊕ up or down to select “Picture Adjustment”, then press ⊕.



3 Move ⊕ up or down to select the desired item (e.g., “Color”), then press ⊕.



4 Adjust the value or select the desired option according to the following table, then press ⊕.

For	Move ⊕ down or left to	Move ⊕ up or right to
“Picture”	decrease picture contrast	increase picture contrast
“Brightness”	darken the picture	brighten the picture
“Color”	decrease color intensity	increase color intensity
“Hue”*	increase red picture tones	increase green picture tones
“Sharpness”	soften the picture	sharpen the picture
“Color Temperature”	Move ⊕ up or down to select “Cool”, “Neutral” or “Warm”.	
“Reset”	Select “Reset” and press ⊕ to reset the picture to the factory preset settings.	

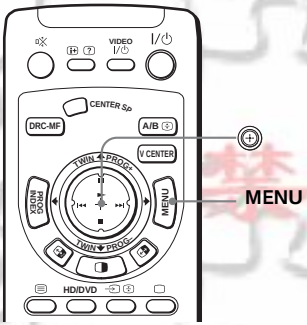
* You can adjust “Hue” for the NTSC color system only.

5 Repeat steps **3** and **4** to adjust other items.

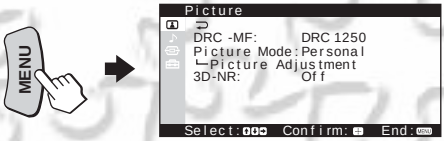
The adjusted settings will be received when you select “Personal”.

Changing the “Sound” setting

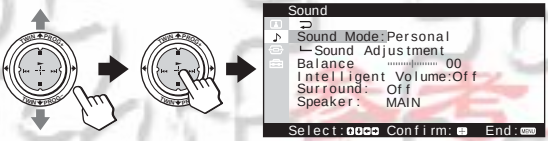
The “Sound” menu allows you to adjust the sound setting and adjust the volume automatically. You can also listen to the sound with surround effect.



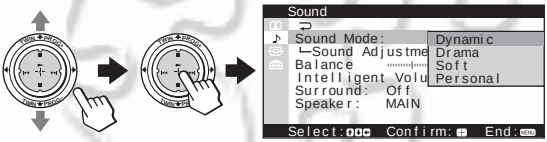
1 Press MENU.



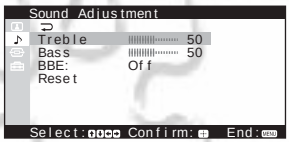
2 Move ⊕ up or down to select ♪, then press ⊕.



3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.



Select	To
“Sound Mode”	select the suitable sound mode. Move ⊕ up or down to select “Dynamic”, “Drama”, “Soft” or “Personal”*, then press ⊕. * When the “Personal” mode is selected, the last adjusted sound setting in the “Sound Adjustment” menu is received (see page 44).
“Sound Adjustment”	adjust the sound quality when “Sound Mode” is set to “Personal”.



Select	To
“Balance”	adjust the balance between the left and right speaker volume. Move ⊕ down or left to increase the left speaker’s volume, up or right to increase the right speaker’s volume, then press ⊕.
“Intelligent Volume”	adjust the volume of all TV programs and video inputs automatically. Move ⊕ up or down to select “On” to activate the Intelligent Volume feature, then press ⊕. To cancel, select “Off”, then press ⊕.
“Surround”	select the Surround mode. Move ⊕ up or down to select “TruSurround”, “Simulated” or “Off”, then press ⊕.
“Speaker”	select if you use the TV’s speakers as the center speaker of your audio system. Normally select “MAIN”. When you want to use the TV’s speakers as the center speaker, move ⊕ up or down to select “CENTER IN”, then press ⊕.

Tip

- For details on the options under the “Sound Mode” and “Surround” modes, see pages 20 and 26, respectively.

To return to the normal screen

Press MENU.

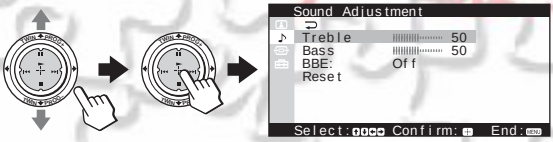
continued

Adjusting the "Sound Adjustment" options

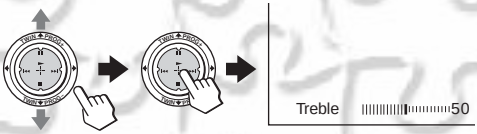
You can access the "Sound Adjustment" menu only when you have selected "Personal" for "Sound Mode".

1 Display the "Sound" menu and select "Personal" for "Sound Mode".

2 Move ⊕ up or down to select "Sound Adjustment", then press ⊕.



3 Move ⊕ up or down to select the desired item (e.g., "Treble"), then press ⊕.



4 Adjust the value or select the desired option according to the following table, then press ⊕.

For	Move ⊕
"Treble"	down or left to decrease the treble, up or right to increase the treble.
"Bass"	down or left to decrease the bass, up or right to increase the bass.
"BBE"	up or down to select "High", "Low" or "Off". "BBE" can produce clear sound.
"Reset"	Select "Reset" and press ⊕ to reset the sound to the factory preset settings.

5 Repeat steps **3** and **4** to adjust other items.

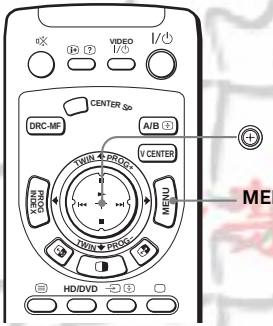
The adjusted settings will be received when you select "Personal".

Note

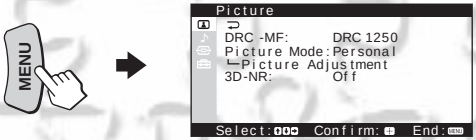
- You cannot change the "BBE" mode when the TV is in the center speaker mode (page 34).

Changing the “Wide Screen” setting

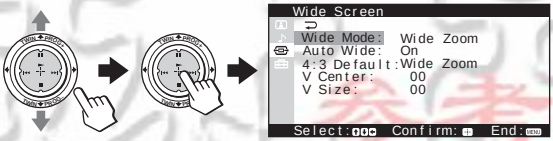
The “Wide Screen” menu allows you to watch the picture filling the 16:9 screen of the TV.



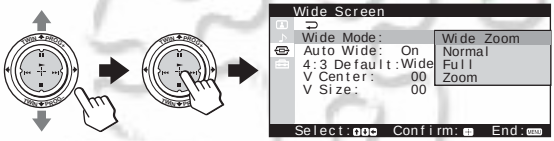
1 Press MENU.



2 Move ⊕ up or down to select ⇔, then press ⊕.



3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.



Select	To
“Wide Mode”	select the desired wide screen mode to fit the 16:9 screen. Move ⊕ up or down to select “Wide Zoom”, “Normal”, “Full” or “Zoom”, then press ⊕. For details on each mode, see “Using wide screen mode” on page 24.
“Auto Wide”	automatically display the picture in optimum wide screen mode. Move ⊕ up or down to select “On” (factory setting), then press ⊕. Select “Off” if you want to display any picture in currently selected wide screen mode.
“4:3 Default”	display a 4:3 picture in “Wide Zoom” (factory setting) or in “Normal” mode. Move ⊕ up or down to select “Wide Zoom” or “Normal”, then press ⊕.

continued

Changing the "Wide Screen" setting (continued)

Select	To
"V Center"	adjust the vertical position of the picture within the screen in "Wide Zoom" or "Zoom" mode. Move ⊕ up or down to move the picture, then press ⊕.
"V Size"	adjust the vertical size of the picture within the screen in "Wide Zoom" or "Zoom" mode. Move ⊕ up to increase the vertical size, or down to reduce it, then press ⊕.

Notes

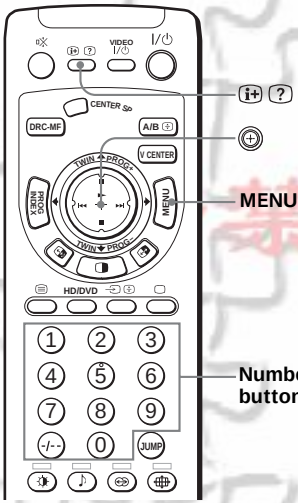
- "4:3 Default" does not function when "Auto Wide" is set to "Off".
- When a 720p or 1080i format signal is received, the picture is always displayed in Full mode.

To return to the normal screen

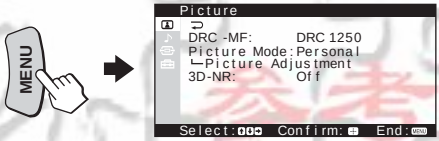
Press MENU.

Changing the “Setup” setting

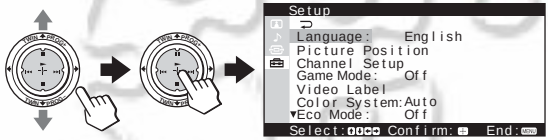
The “Setup” menu allows you to adjust the setup of your TV. For example, you can change the menu language, preset channels, etc.



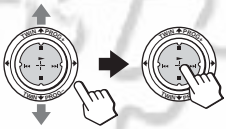
1 Press MENU.



2 Move ⊕ up or down to select 🧰, then press ⊕.



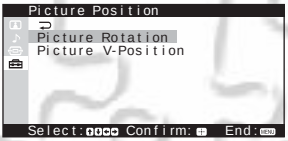
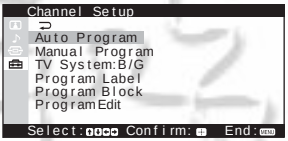
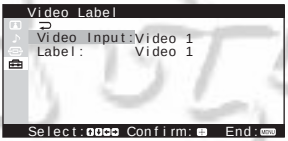
3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.



Select	To
“Language”	change the menu language. Move ⊕ up or down to select “English”, “中文” (Chinese), or “عربي” (Arabic), then press ⊕.

continued

Changing the "Setup" setting (continued)

Select	To
"Picture Position"	adjust the position of the picture if it is not aligned with the TV screen.  See "Adjusting the alignment of the picture" on page 50.
"Channel Setup"	preset channels.  You can select automatic or manual channel presetting. See "Presetting channels manually" on page 51. You can change the TV system by selecting "TV System". For "Program Label" and "Program Block", see "Assigning labels to the preset channels" on page 55 and "Blocking channels" on page 56, respectively. You can also change the order of the preset channels to preference. See "Changing the order of the preset channels" on page 53.
"Game Mode"	adjust the picture setting that is suitable to view video games. Move ⊕ up or down to select "On", then press ⊕. To cancel, select "Off", then press ⊕.
"Video Label"	assign labels to the connected audio / video equipment.  See "Assigning labels to the connected audio / video equipment" on page 57.
"Color System"	select the color system. Normally, set this to "Auto". You can select the color system for each channel or each video input.
"Eco Mode"	reduce power consumption of your TV to save energy. Move ⊕ up or down to select "On", then press ⊕. To cancel, select "Off", then press ⊕.

Select	To
"S Input"	select the S video input mode. Move ⊕ up or down to select "Auto" to receive the S video signal automatically when the signals are input through both the ⇦ (S video input) and ⇦ (video input) jacks of the same video input channel, then press ⊕. To deactivate the S video input, select "Off", then press ⊕.

Notes

- If "Eco Mode" is on, the ECO MODE (ECO) icon will appear at the bottom right corner of the screen when you turn on the TV or when you press i+ on the remote.
- "Game Mode" is available only when receiving signals through the ⇦ (video input), ⇦ (S video input), or ⇦ (component video input) jacks.
- When high-definition (HD) signals or progressive signals are input, "Game Mode" does not function.

To return to the normal screen

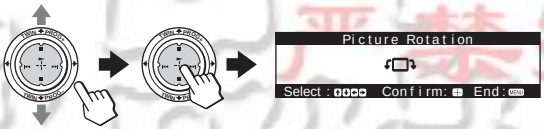
Press MENU.

continued

Adjusting the alignment of the picture

The picture may be out of alignment with the TV screen due to the influence of the earth's magnetic field. You can adjust the position of the picture if it is not aligned.

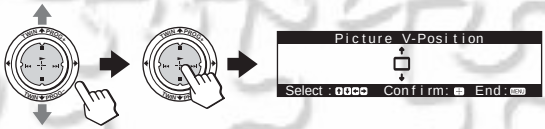
1 After selecting "Picture Position", move ⊕ up or down to select "Picture Rotation", then press ⊕.



2 Move ⊕ left or right to adjust the picture declination.

Adjust so that the upper and lower bars become horizontal, then press ⊕.

3 Move ⊕ up or down to select "Picture V-Position", then press ⊕.



4 Move ⊕ up or down to adjust the picture position.

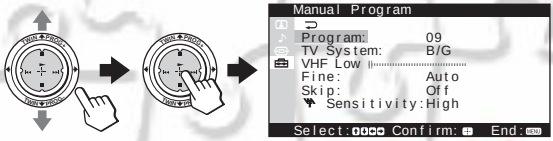
Adjust so that the distance between the upper bar and the top of the screen and that between the lower bar and the bottom of the screen become equal, then press ⊕.

Notes

- If you install the TV to another location, make sure to adjust the alignment of the picture again.
- Before adjusting "Picture Rotation" and "Picture V-Position", keep external speakers or other electrical equipment away from the TV. The magnetic disturbance from these equipment or the direction of the earth's magnetic field may affect the TV.
- When adjusting "Picture Rotation", adjust the value step by step. If you rotate the bars largely at a time, color distortion may occur.
- If you do not succeed in adjusting "Picture Rotation" and "Picture V-Position", turn off the TV and change its location or direction, then try to adjust using the menu. Do not move the TV while the TV is turned on. If you do, abnormal color patches may appear on the picture. Press ⏻ on the TV to turn off the TV for about 15 minutes, then turn it on again to demagnetize the TV.
- You cannot adjust "Picture Rotation" and "Picture V-Position" when HD signals are input.

Presetting channels manually

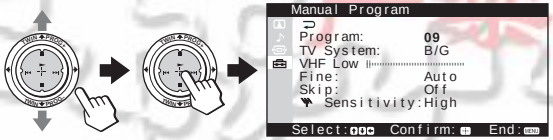
1 After selecting “Channel Setup”, move ⊕ up or down to select “Manual Program”, then press ⊕.



2 Select the program number to which you want to preset a channel.

(1) Make sure “Program” is selected, then press ⊕.

(2) Move ⊕ up or down until the program number you want to preset (e.g., program number “10”) appears on the menu, then press ⊕.



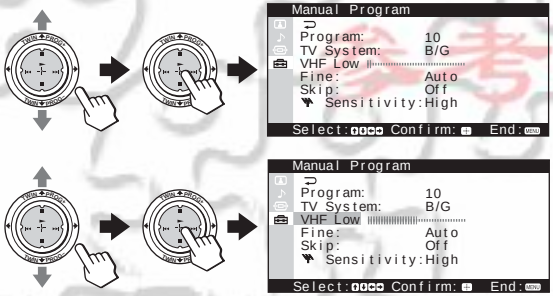
Tip

- You can also select the program number with the PROG +/– or number buttons.

3 Select the desired channel.

(1) Move ⊕ up or down to select either “VHF Low”, “VHF High”, or “UHF”, then press ⊕.

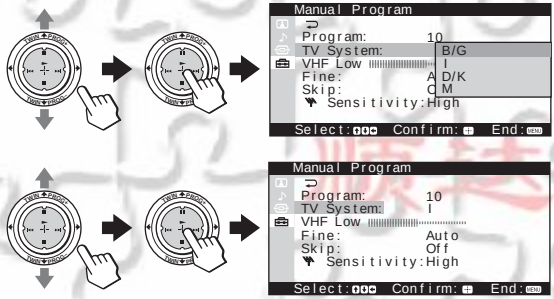
(2) Move ⊕ up or down until the desired channel’s broadcast appears on the TV screen, then press ⊕.



4 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Move ⊕ up or down to select “TV System”, then press ⊕.

(2) Move ⊕ up or down until the sound becomes normal, then press ⊕.

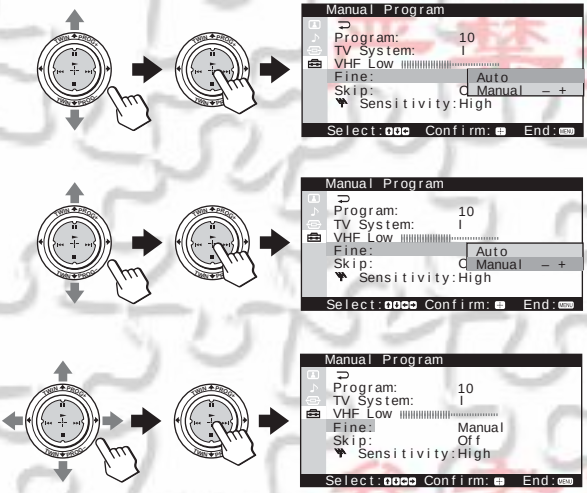


5 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "Fine" tuning feature.

(1) Move ⊕ up or down to select "Fine", then press ⊕.

(2) Move ⊕ up or down to select "Manual", then press ⊕.

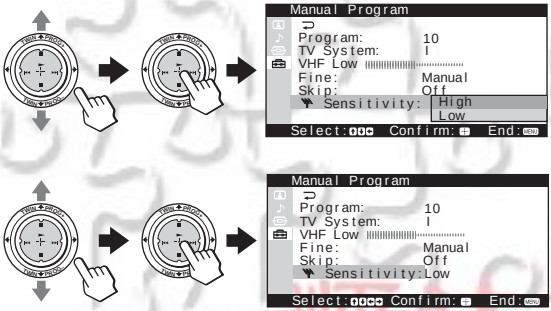
(3) Move ⊕ either up, down, left or right until the picture and sound quality are optimal, then press ⊕. The + or – icon on the menu flashes while tuning.



6 If the TV signal is too strong and the picture is distorted, you can adjust the TV reception sensitivity.

(1) Move ⊕ up or down to select "Sensitivity", then press ⊕.

(2) Move ⊕ up or down to select "Low", then press ⊕.



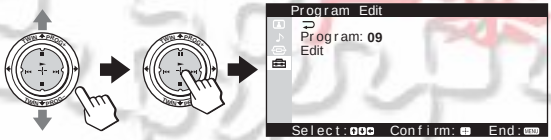
Notes

- The TV system ("TV System") and the TV reception sensitivity ("Sensitivity") settings are memorized for each program number.
- If there is a locked channel (see page 56) while you are presetting in "VHF-Low" and "Fine" mode, that channel will be unlocked automatically.

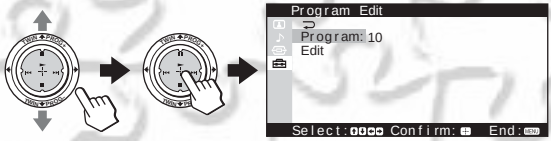
Changing the order of the preset channels (“Program Edit”)

After performing “Auto Program” or “Manual Program”, you can change the preset channel assigned to each program number to preference.

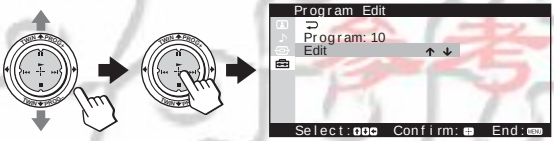
1 After selecting “Program Edit” under “Channel Setup”, make sure “Program” is selected, then press ⊕.



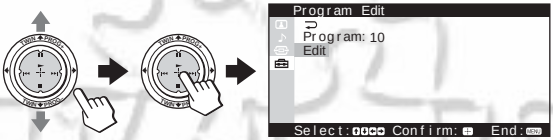
2 Move ⊕ up or down to select the program number to which you want to assign another channel, then press ⊕.



3 Move ⊕ up or down to select “Edit”, then press ⊕.



4 Move ⊕ up or down until your preferred program appears on the screen, then press ⊕ to confirm that channel.



5 To change the channels assigned to other program numbers, select “Program”, then repeat steps **1** to **4**.

To return to the normal screen

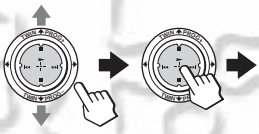
Press MENU.

continued

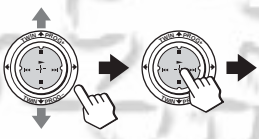
Skipping unwanted or unused channels ("Skip")

After performing automatic channel presetting, you can erase unwanted or unused channels.

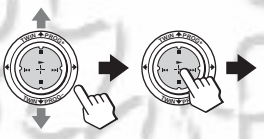
1 After selecting "Manual Program" under "Channel Setup", make sure "Program" is selected, then press ⊕.



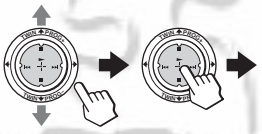
2 Move ⊕ up or down until the unused or unwanted channel number appears, then press ⊕.



3 Move ⊕ up or down to select "Skip", then press ⊕.



4 Move ⊕ up or down to select "On", then press ⊕.



5 To disable other channels, select "Program", then repeat steps **2** to **4**.

To restore the skipped channel

Select "Off" in step 4.

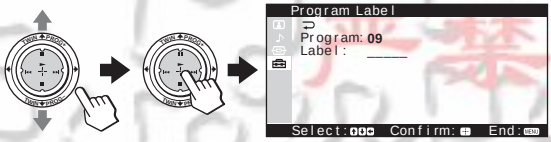
To return to the normal screen

Press MENU.

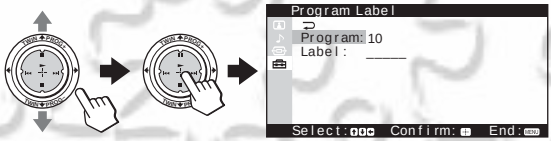
Assigning labels to the preset channels ("Program Label")

You can assign a label (such as station name) of up to 5 characters to each preset channel.

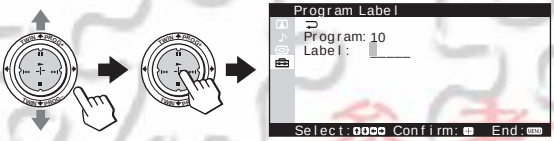
1 After selecting "Program Label" under "Channel Setup", make sure "Program" is selected, then press ⊕.



2 Move ⊕ up or down to select the channel you want to assign a label, then press ⊕.



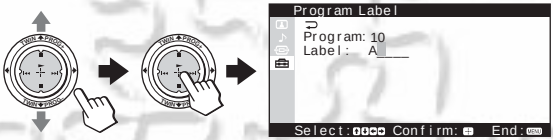
3 Move ⊕ up or down to select "Label", then press ⊕.



4 Move ⊕ up or down to scroll through the label characters (A to Z, 0 to 9, etc.), then press ⊕ to confirm the highlighted character.

To insert a blank, leave "_" and move ⊕ right.

To change the confirmed character, move ⊕ left to highlight it, then move ⊕ up or down to select the correct character.



5 Repeat step **4** to add up to 5 characters to the label.

6 To assign labels to other channels, select "Program", then repeat steps **1** to **5**.

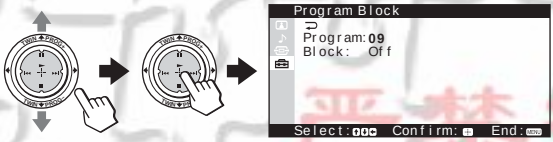
To return to the normal screen

Press MENU.

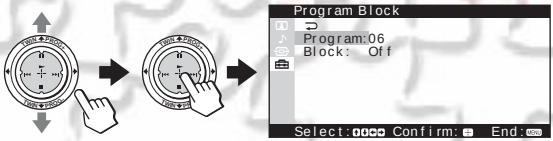
continued

Blocking channels ("Program Block")

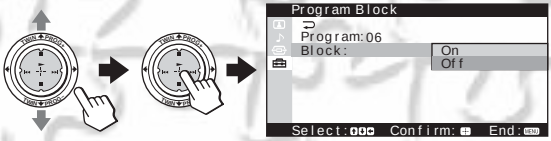
1 After selecting "Program Block" under "Channel Setup", make sure "Program" is selected, then press ⊕.



2 Move ⊕ up or down to select the desired channel (e.g. 06), then press ⊕.



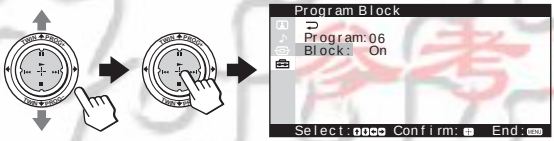
3 Move ⊕ up or down to select "Block", then press ⊕.

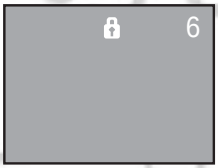


4 Move ⊕ up or down to select "On", then press ⊕.
To unlock the channel, select "Off".

The lock symbol (🔒) appears on the screen when "On" is selected.

If a locked channel is selected, the lock symbol appears on the screen.





5 To lock other channels, select "Program", then repeat steps **2** to **4**.

To return to the normal screen

Press MENU.

Note

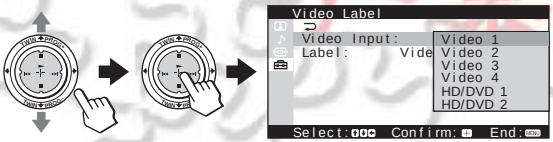
- If you preset a locked channel manually (see page 51), that channel will be unlocked automatically.

Assigning labels to the connected audio/video equipment (“Video Label”)

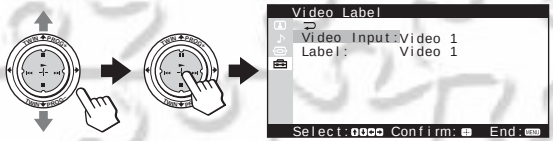
You can assign one of the prefixed labels (such as VCR, SAT, etc.) or your favorite label to the audio / video equipment connected to the video inputs of the TV.

To assign a prefixed label

1 After selecting “Video Label”, make sure “Video Input” is selected, then press ⊕.



2 Move ⊕ up or down to select the video input you have connected the equipment you want to assign a label, then press ⊕.



3 Move ⊕ up or down to select “Label”, then press ⊕.

4 Move ⊕ up or down to select one of the prefixed labels, then press ⊕.

To assign your favorite label, see page 58.

5 To assign labels to other equipment, select “Video Input”, then repeat steps **2** to **4**.

To return to the normal screen

Press MENU.

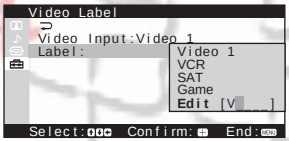
continued

Changing the "Setup" setting (continued)

To assign your favorite label

1 Follow steps 1 to 3 on page 57 and select "Edit" in step 4, then press ⊕.

2 Move ⊕ up or down to scroll through the label characters (A to Z, 0 to 9, etc.), then press ⊕ to confirm the highlighted character.



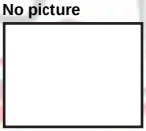
To insert a blank, leave "_" and move ⊕ right.

To change the confirmed character, move ⊕ left to highlight it, then move ⊕ up or down to select the correct character.

3 Repeat step 2 to add up to 5 characters to the label.

Troubleshooting

If you have any problem while viewing your TV, please check the following troubleshooting guide. If the problem persists, contact your Sony dealer.

Symptom	Possible cause	Solutions	Page
Snowy picture  Noisy sound 	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	7
	• Channel presetting is inappropriate or incomplete.	• Display the “Channel Setup” menu under the “Setup” menu and select “Manual Program” to preset the channel again.	51
	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture  Noisy sound 	• Broadcast signals are too strong.	• Display the “Channel Setup” menu under the “Setup” menu and select “Manual Program”. Then, select “ Sensitivity: Low”.	52
		• Turn off or disconnect the booster if it is in use.	–
Good picture  Noisy sound 	• The TV system setting is inappropriate.	• If the sound of all the channels are noisy, display the “Channel Setup” menu under the “Setup”menu and select “Auto Program” to preset the channels again.	48
		• If the sound of some channels is noisy, select the channel, then display the “Channel Setup” menu under the “Setup”menu and select the appropriate TV system (“TV System”).	51
No picture  No sound 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	7, 8
	• The TV is not turned on.	• Press I/⏻ on the remote.	17
		• Press ⏻ on the TV to turn off the TV for about five seconds, then turn it on again.	18

continued

Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Good picture 	• The volume level is too low.	• Press ◿ + to increase the volume level.	18
	• The sound is muted.	• Press 🔇 to cancel the muting.	18
No sound 	• The broadcast signal has a transmission problem.	• Press A / B until a better sound is heard.	27
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts" 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("Fine") function.	– 52
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color 	• The color level setting is too low.	• Display the "Picture" menu and select "Personal" of "Picture Mode", then adjust the "Color" level under "Picture Adjustment".	41
	• The color system setting is inappropriate.	• Display the "Setup" menu and check the color system ("Color System") setting (usually set this to "Auto").	48
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Picture is not aligned to the TV screen.	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "Picture Position" menu under the "Setup" menu and adjust "Picture Rotation" and "Picture V-Position" so that the picture is aligned to the TV screen.	– 50

Symptom	Possible cause	Solutions	Page
Abnormal color patches 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Locate external speakers or other equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about 15 minutes, then turn it on again. • Display the "Picture Position" menu under the "Setup" menu and adjust "Picture Rotation" and "Picture V-Position" so that the picture is aligned to the TV screen.	9 50
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A / B until "Auto" appears on the screen.	28
Stereo broadcast sound switches on and off or is distorted. **or** **The sound switches between stereo and monaural frequently.**	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	7
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• The broadcast signal has a transmission problem.	• Press A / B until a better sound is heard.	27
"100" appears at the top of the screen after approximately 10 seconds and there is no Teletext display.	• The channel carries no Teletext broadcast.	—	29
Teletext display is incomplete (snowy picture or double images).	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR, and at the wall.	7
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is too low.	• Try using a booster. • Use the fine tuning ("Fine") function.	– 52
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("Fine") function.	52

continued

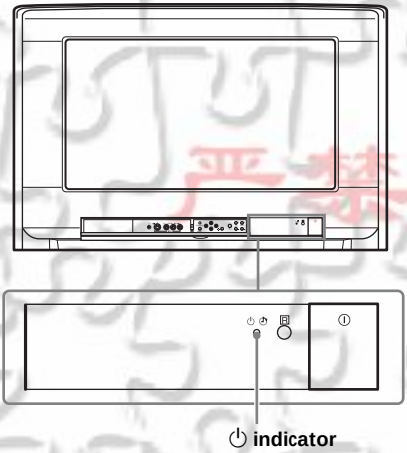
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
The wide screen mode changes spontaneously when "Auto Wide" is "On".	• During a transition between two programs, the TV detects the optimum wide screen mode. During this period, an irregular wide screen mode may appear.	—	22
	• The wide screen mode is switched automatically according to the received signal with an ID-1 or S1 signal.	—	23
	• The AUTO WIDE feature stops working temporarily when you have pressed ⟷, and functions again after a while.	• To fix in the manually selected wide screen mode, set "Auto Wide" to "Off" in the "Wide Screen" menu.	45
Cannot play shooting games.	• Some shooting games which involve pointing a light beam at the TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	–
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	–

Symptom	Possible cause	Solutions	Page
Static discharge is felt when touching the TV cabinet.	• This is the same static discharge that is felt when touching metal door handles or car doors especially when the air is dry, for example in winter. This does not indicate a malfunction.	—	–

Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ (standby) indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

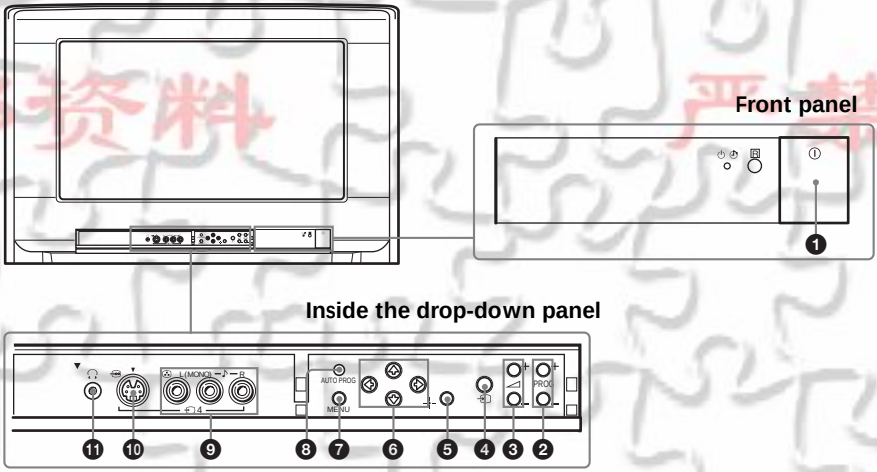
3 Press ⏻ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashed.

Be sure to note the model name and serial number located on the rear of your TV.

Identifying parts and controls

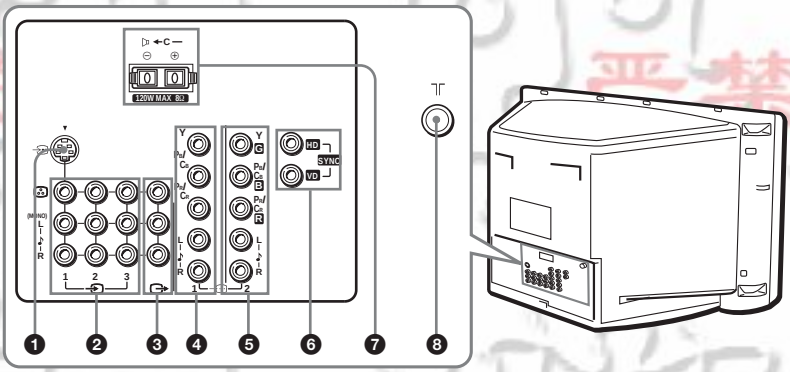
Front and inside the drop-down panel



Button/connector	Function	Page
❶ ⏻	Turn off completely or turn on the TV.	18
❷ PROG +/–	Select program number.	17
❸ +/–	Adjust volume.	18
❹	Select TV or video input.	18
❺	Confirm selected items.	38
❻ ↑/↓/←/→	Select items in the menu.	38
❼ MENU	Display the menu.	38
❽ AUTO PROG	Preset channels automatically.	36
❾ 4 (, L(MONO) /R)	Connect to video / audio outputs of equipment.	11
❿ 4 ( )	Connect to S video output of video equipment.	11
⓫ 🎧	Headphone jack	–

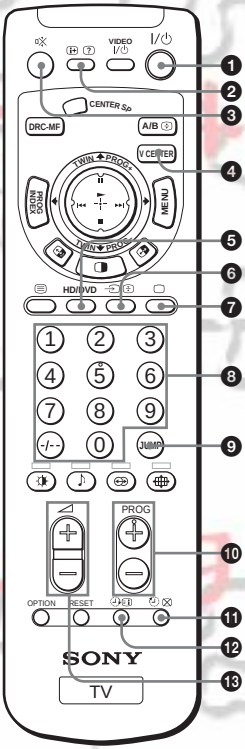
continued

Rear



Connector	Function	Page
❶ S VIDEO	Connect to S video output of video equipment.	8
❷ VIDEO 1/VIDEO 2/VIDEO 3	Connect to video / audio outputs of video equipment.	8
❸	Connect to video / audio inputs of audio / video equipment.	12
❹ COMPONENT VIDEO 1	Connect to component video outputs on a DVD player.	13
❺ COMPONENT VIDEO 2	Connect to component video outputs on a DVD player. Connect to a digital TV receiver equipped with the G / B / R / HD / VD outputs.	13 15
❻ SYNC HD/VD	Connect to HD / VD outputs on a digital TV receiver.	15
❼ SPEAKER	Connect to speaker terminals on an amplifier.	16
❽	Connect the antenna cable.	7

Remote control



The names / symbols of buttons on the remote are indicated in different colors to represent the available functions.

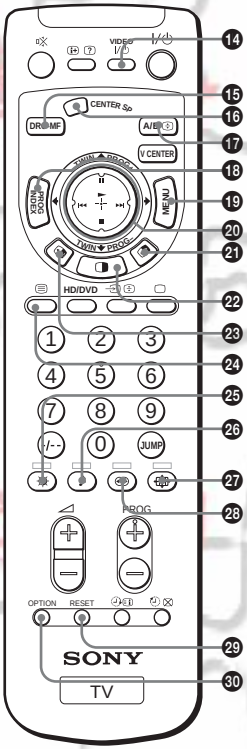
Label color	Button function
White	For general TV operations
Green	For Teletext operations
Yellow	For TWIN picture operations*
Pink	For optional components operations

Button	Function	Page
❶ I/⏻	Turn off temporarily or turn on the TV.	17
❷ ⓘ+ ?	• Display on-screen information. • Reveal Teletext concealed information.	18 30
❸ 🔇	Mute the sound.	18
❹ V CENTER	Adjust the vertical position of the picture.	25
❺ HD/DVD	Select component input.	18
❻ ⇄ ⇪	• Select TV or video input. • Stop Teletext page from scrolling.	18 30
❼ ▭	• Display the TV program. • Turn off Teletext.	18 29
❽ 0 – 9, -/--	Input numbers.	17
❾ JUMP	Jump to previous channel.	18
❿ PROG +/–	Select program number.	17
⓫ ⏲ ⊠	• Set the TV to turn off automatically. • Show TV screen while waiting for Teletext page.	19 30
⓬ ⏲ ☰	• Set the TV to turn on automatically. • Display Teletext service contents.	19 30
⓭ 🔊 +/–	Adjust volume.	18

* TWIN picture operations are not available with this TV.

continued

Identifying parts and controls (continued)



Button	Function	Page
⓮ VIDEO I/⏻	• Power. • Use with the number buttons to set up the remote.	37 36
⓯ DRC-MF	Select DRC-MF mode.	21
⓰ CENTER SP	Select TV's center speaker mode.	34
⓱ A/B	• Select stereo / bilingual mode. • Enlarge the Teletext display.	27 30
⓲ PROG INDEX	This button does not function with this TV.	–
⓳ MENU	Display the menu.	38
⓴	• Select, adjust and confirm selected items in the menu. • Operate optional components.	38 32
㉑	This button does not function with this TV.	–
㉒	This button does not function with this TV.	–
㉓	This button does not function with this TV.	–
㉔	Display Teletext page on the TV picture.	29
㉕ (red)	• Select picture mode. • Access a FASTEXT menu.	20 30
㉖ (green)	• Select sound mode. • Access a FASTEXT menu.	20 30
㉗ (blue)	• Select wide mode. • Access a FASTEXT menu.	24 30
㉘ (yellow)	• Select surround mode. • Access a FASTEXT menu.	26 30
㉙ RESET	Reset items in the menu to the factory preset values.	37
㉚ OPTION	Use with ⊕ to operate optional components.	32

Specifications

	KV-HX32 M31
Power requirements	220–240 V AC, 50/60 Hz
Power consumption (W)	Indicated on the rear of the TV.
Television system	B/G, I, D/K, M
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58
Available language for Teletext	English, Farsi, French
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I, D/K; A2 Stereo/Bilingual (German) B/G
Channel coverage	
B/G	VHF : 0 to 12, 5A, 19A / UHF : 28 to 69 / CATV : S01 to S03, S1 to S41 (Australia only) VHF : 1 to 11 / UHF : 21 to 69 / CATV : S01 to S03, S1 to S41 (New Zealand only) VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41
I	UHF : B21 to B68 / CATV : S01 to S03, S1 to S41
D/K	VHF : C1 to C12, R1 to R12 / UHF : C13 to C57, R21 to R60 / CATV : S01 to S03, S1 to S41, Z1 to Z39
M	VHF : A2 to A13 / UHF : A14 to A79/ CATV : A-8 to A-2, A to W+4, W+6 to W+84
(Antenna)	75-ohm external terminal
Audio output (Speaker)	7.5W + 7.5W
Number of terminal	
(Video)	Input: 4 Output: 1 — Phono jacks; 1 Vp-p, 75 ohms
(Audio)	Input: 6 Output: 1 — Phono jacks; 500 mVrms
(S Video)	Input: 2 — Y: 1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms
(Component Video)	Input: 2 — Phono jacks Y: 1 Vp-p, 75 ohms, sync negative P_B/C_B: 0.7 Vp-p, 75 ohms P_R/C_R: 0.7 Vp-p, 75 ohms Audio: 500 mVrms
(G/B/R/HD/VD Video)	Input: 1 — Phono jacks G: 0.7 Vp-p, 75 ohms, B: 0.7 Vp-p, 75 ohms, R: 0.7 Vp-p, 75 ohms HD: 0.7 Vp-p, 75 ohms, VD: 0.7 Vp-p, 75 ohms
(Center Speaker)	Input:1 — 120 W max., 8 ohms
(Headphones)	Output: 1 — Stereo minijack
Picture tube	32in.
Tube size (cm) (measured diagonally)	82
Screen size (cm) (measured diagonally)	76
Dimensions (w/h/d, mm)	898 × 607 × 563
Mass (kg)	66.5

Design and specifications are subject to change without notice.

http://www.sony.net/
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