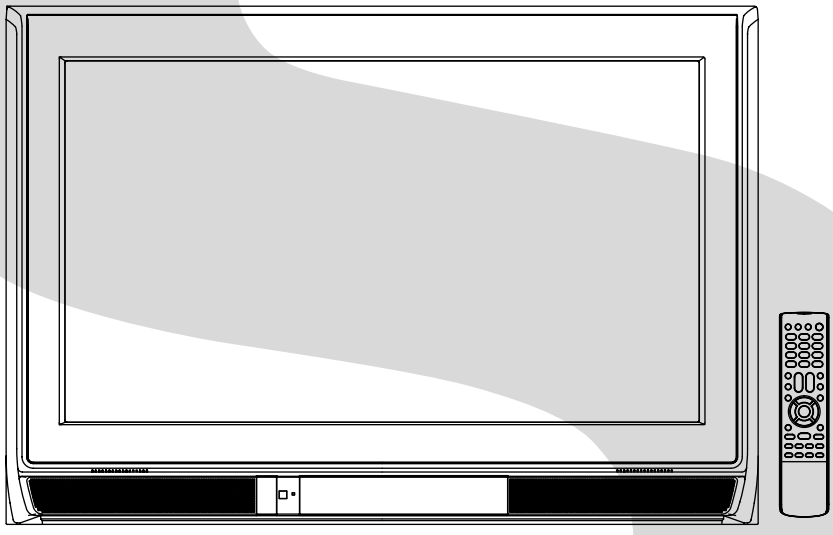
TOSHIBA

FILE NO. 050-200509
(MFR'S VERSION A)

SERVICE MANUAL

COLOR TELEVISION

26HF85



DOCUMENT CREATED IN JAPAN, March, 2005

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Headphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

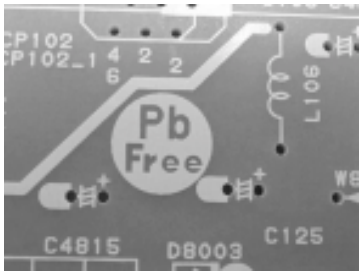
When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

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ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Caution:

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 50°F~70°F(30°C~40°C) higher.
  Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

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GENERAL SPECIFICATIONS

	TV System	CRT	CRT Size / Visual Size	26 inch / 656.7mmV
			CRT Type	Flat (16:9)
			Magnetic Field BV/BH	+0.45G/0.18G
		Color System		NTSC
		Display Capability		1080i/540p
		Speaker		2 Speaker
			Position	Front Bottom
			Size	1.8 x 3.9 Inch
			Impedance	8 ohm
		Sound Output	MAX	5.0W+5.0W
			10%(Typical)	- W
		NTSC3.58+4.43 /PAL60Hz		No
G-2	**Tuning System**	Broadcasting System		US System M
		Tuner and Receive CH	System	1Tuner
			Destination	USA(W/ CABLE)
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate Frequency	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
		Preset CH		No
		Stereo/Dual TV Sound		Yes
		Tuner Sound Muting		Yes
G-3	**Power**	Power Source	AC	120V AC 60Hz
			DC	
		Power Consumption	at AC	
				175 W at AC 120 V 60 Hz
			Stand by (at AC)	1 W at AC 120 V 60 Hz
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
			Safety Circuit	Yes
			IC Protector(Micro Fuse)	Yes
G-4	**Regulation**		Safety	UL
			Radiation	FCC
			X-Radiation	DHHS
G-5	**Temperature**		Operation	+5oC ~ +40oC
			Storage	-20oC ~ +60oC
G-6	**Operating Humidity**			Less than 80% RH

GENERAL SPECIFICATIONS

G-7	**On Screen Display**	Menu			Yes	
			Menu Type		Icon	
			Picture		Yes	
				Mode(Picture preference)	Yes	
				Brightness	Yes	
				Contrast	Yes	
				Color	Yes	
				Tint	Yes	
				Sharpness	Yes	
				Color Temperature	Yes	
				Display Format	Yes	
				Cable Clear	Yes	
				SVM	Yes	
				Reset	Yes	
			Audio		Yes	
				MTS	Yes	
				Bass	Yes	
				Treble	Yes	
				Balance	Yes	
				Stable Sound	Yes	
				Speakers On/Off	Yes	
				Dolby Virtual		No
				WOW SRS 3D		No
				WOW Focus		No
				WOW Tru Bass		No
				BBE	Yes	
				HDMI1	Yes	
				HDMI2		No
				Reset	Yes	
			Setup		Yes	
				Language	Yes	
				Clock Set	Yes	
				TV/CABLE	Yes	
				CH Program	Yes	
				Add/ Erase	Yes	
				Closed Caption	Yes	
				Picture Size	Yes	
				Picture Scroll	Yes	
				Cinema Mode	Yes	
				Aspect	Yes	
				Image Tilt	Yes	
			Option		Yes	
				On/Off Timer	Yes	
				Favorite CH	Yes	
				CH Label	Yes	
				VIDEO Label	Yes	
			Locks		Yes	
				V-Chip	Yes	
				Lock	Yes	
				New Password	Yes	
				Front Panel Lock	Yes	
			Control Level		Yes	
				Volume	Yes	
				Contrast	Yes	
				Brightness	Yes	
				Color	Yes	
				Tint	Yes	
				Sharpness	Yes	
				Bass	Yes	
				Treble	Yes	
				Balance	Yes	
				Image Tilt	Yes	
				Picture Scroll	Yes	
			Stereo, SAP, Mono		Yes	
			Video		Yes	
			Color Stream(Component)		Yes	
			HDMI		Yes	
			Channel(TV/Cable)		Yes	
			CH Label		Yes	
			Video Label		Yes	
			Clock		Yes	
			Game Timer		Yes	
			Front Panel Lock		Yes	
			On Timer/Off Timer		Yes	
			Sleep Timer		Yes	
			Reset		Yes	
			Sound Mute		Yes	
			V-chip Rating		Yes	
			NOT AVAILABLE		Yes	
			Picture Size		Yes	

GENERAL SPECIFICATIONS

G-8	**OSD Language**			English French Spanish
G-9	**Clock and Timer**	Sleep Timer	Max Time	120 Min
			Step	10 Min
		On/Off Timer	Program	Yes
		Wake Up Timer		No
		Timer Back-up (at Power Off Mode) more than		-- Min Sec
G-10	**Remote Control**	Unit		RC-KK
		Glow in Dark Remocon		Yes
		Back Light Remocon		No
		Remocon Format		Toshiba
		Format		Toshiba
		Custom Code		TV:40-BFh
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		44 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100 /+10	Yes
			CH Up	Yes
			CH Down	Yes
			Volume Up	Yes
			Volume Down	Yes
			TV/Video(Input Select)	Yes
			ENT,CH RTN(Quick View)	Yes
			Menu > / FAV Up	Yes
			Menu < / FAV Down	Yes
			Menu Up	Yes
			Menu Down	Yes
			Mute	Yes
			PIC SIZE (16:9)	Yes
			Sleep	Yes
			Exit	Yes
			Light	No
		Multi Brand Keys	TV	Yes
			CBL/SAT	Yes
			VCR	Yes
			DVD	Yes
		(DVD Keys)	Enter	Yes
			DVD Clear	Yes
			Top MENU	Yes
		(TV / DVD Keys)	RECALL(Call) / (Display)	Yes
			Menu/Enter / DVD MENU	Yes
		(DVD / VCR Keys)	Pause/Still	Yes
			FF	Yes
			Rew	Yes
			Play	Yes
			Stop	Yes
			<</Skip / Search Forward	Yes
			>>/Skip / Search Forward	Yes
		(VCR Keys)	Rec	Yes
			TV/VCR	Yes

GENERAL SPECIFICATIONS

G-11	Features	Auto Shut Off	Yes
		CABLE	Yes
		Power On Memory	Yes
		Memory(Last CH)	Yes
		Memory(Last Volume)	Yes
		V-Chip	Yes
		Type	USA, ORION Type
		SRS WOW(SRS 3D/Focus/Tru Bass)	No
		Virtual Dolby	No
		BBE	Yes(Digital)
		Timer(On Timer /Off Timer/Sleep Timer)	Yes
		Aspect	Yes
		Cinema Mode	Yes
		Image Tilt	Yes
		Direct Input Selection	Yes
		Auto Search	No
		CH Lock	Yes
		CH Program	Yes
		CH Label	Yes
		SAP	Yes
		Just Clock Function	No
		VIDEO Label	Yes
		SVM Circuit	Yes
		Comb Filter	Yes
			3 -D
		Super Wide Band AMP	No
		Cable Clear	Yes
		Hotel Lock	No
		Closed Caption	Yes
		Stable Sound	Yes
		FBT Leak Test Protect	Yes
		Video Lock	Yes
		Game Timer(Max Time:120Min)	Yes
		Energy Star	Yes
		Favorite CH	Yes
		Variable Audio Out	Yes
		Picture Size	Yes
		Color Temperature Control	Yes
		Mode(Picture Preference)	Yes
		Front Panel Lock	Yes
		Available Scan Rates (Component/HDMI)	480i/480p/720p/1080i
		Menu=Volume Up+Volume Down	Yes
		Auto Setup(Language/CH Program)	Yes
G-12	Accessories	Owner's Manual Language	English / Spanish
		W/ Warranty	Yes
		Remote Control Unit	Yes
		Rod Antenna	No
		Poles	
		Terminal	
		Loop Antenna	No
		Terminal	-
		U/V Mixer	No
		DC Car Cord (Center+)	No
		Guarantee Card	No
		Warning Sheet	No
		Circuit Diagram	No
		Antenna Change Plug	No
		Service Station List	No
		Important Safety Instruction	No
		Dew/AHC Caution Sheet	No
		AC Plug Adapter	No
		Quick Set-up Sheet	No
		Battery	Yes
		UM size x pcs	UM-4 x 2
		OEM Brand	No
		AC Cord	No
		AV Cord (2Pin-1Pin)	No
		Registration Card (NDL Card)	Yes
		PTB Sheet	No
		ESP Card	No
		300 ohm to 75 ohm Antenna Adapter	No
		Information Sheet(for HDMI)	No

GENERAL SPECIFICATIONS

G-13	**Interface**	Switch	Front	Power	Yes
				Channel Up/Menu Up	Yes
				Channel Down/Menu Down	Yes
				Volume Up/Menu >	Yes
				Volume Down/Menu <	Yes
		Indicator		Power	Yes(RED)
				Stand-by	No
				On Timer	No
		Terminals	Front	Video Input = VIDEO3	RCA
				Audio Input = VIDEO3	RCA x 2
				S Input = VIDEO3	Yes
				Other Terminal	No
			Rear	Video Input(Rear1) = VIDEO1	RCA
				Video Input(Rear2) = VIDEO2	RCA
				S Input = VIDEO1	Yes
				S Input = VIDEO2	Yes
				Audio Input(Rear1) = VIDEO1	RCA x 2
				Audio Input(Rear2) = VIDEO2	RCA x 2
				Video Output	RCA
				Audio Output	RCA x 2 (Variable)
				Component Input1(w/ Analog Audio L/R)	RCA x 5
				Component Input2(w/ Analog Audio L/R)	RCA x 5
				HDMI Input1(w/ Analog Audio L/R)	HDMI x 1(RCA x 2)
				HDMI Input2(w/ Analog Audio L/R)	No
				Diversity	No
				Ext Speaker	No
				VHF/UHF Antenna Input	F Type
				AC Outlet	No
G-14	**Set Size**			Approx. W x D x H (mm)	700 x 502 x 495.5
G-15	**Weight**			Net (Approx.)	36.0 kg (79.4 lbs)
				Gross (Approx.)	41.5kg (91.5lbs)
G-16	**Carton**		Master Carton		No
				Content	---- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
			Gift Box	Material	Double/Brown
				Dimensions W x D x H(mm)	840 x 620 x 627
				Description of Origin	Yes
			Drop Test		Natural Dropping At 1 Corner / 2 Edges / 4 Surfaces
				Height (cm)	60 (ORION SPEC:31)
			Container Stuffing		156 Sets/40' container
G-17	**Cabinet Material**		Cabinet	Cabinet Front	PS 94V0 DECABROM
				Cabinet Rear	PS 94V0 NON-DECABROM
			PCB	Non-Halogen Demand	No
				Eyelet Demand	Yes
G-18	**Environment**		Pb-free Soldering		Yes
			Parts Specificat		Yes

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

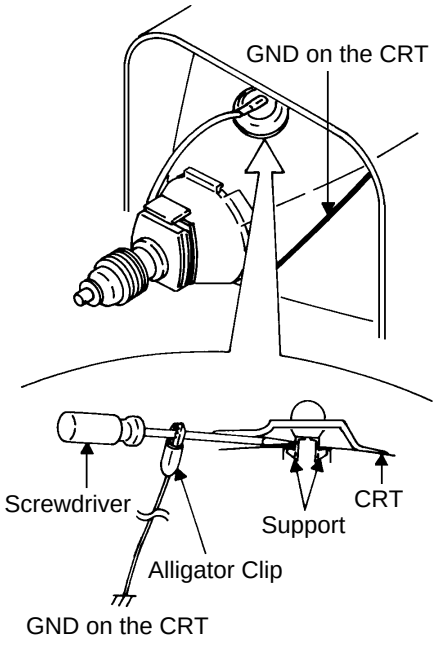


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 1-2.)**

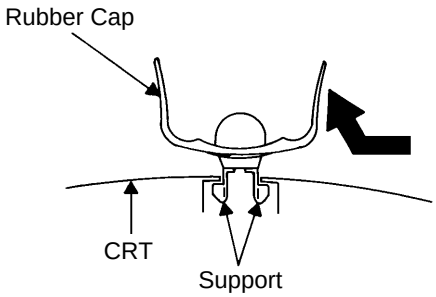


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

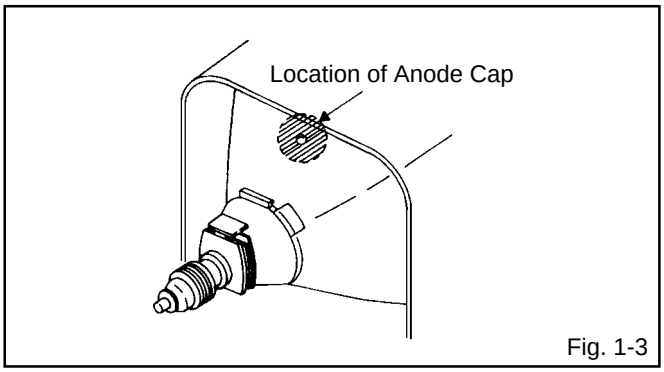
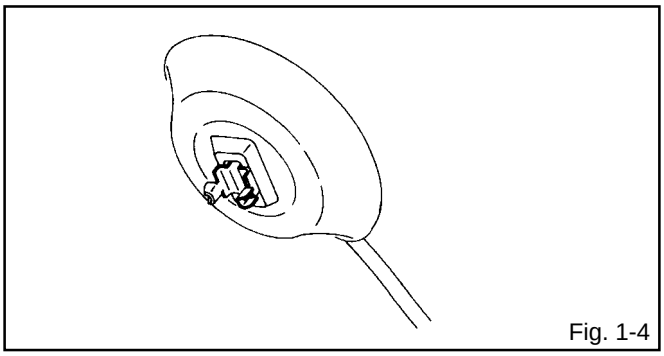


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5**.

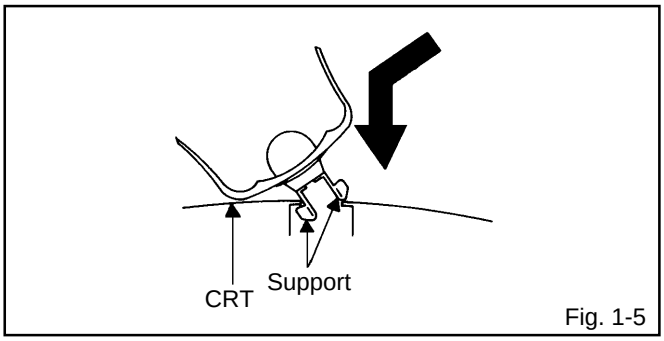


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

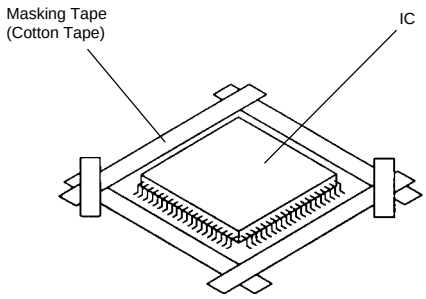


Fig. 2-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

   NOTE

   Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

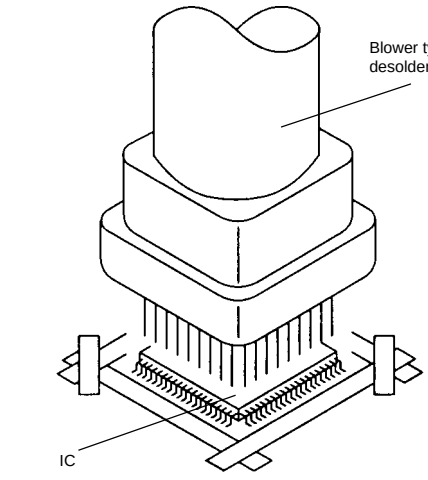


Fig. 2-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

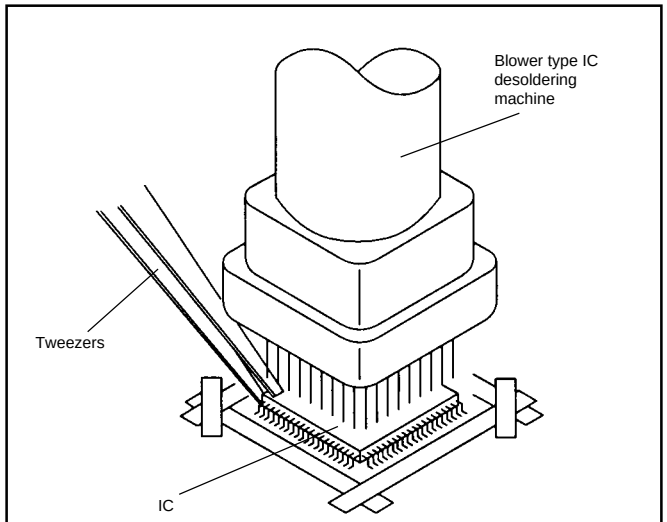


Fig. 2-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

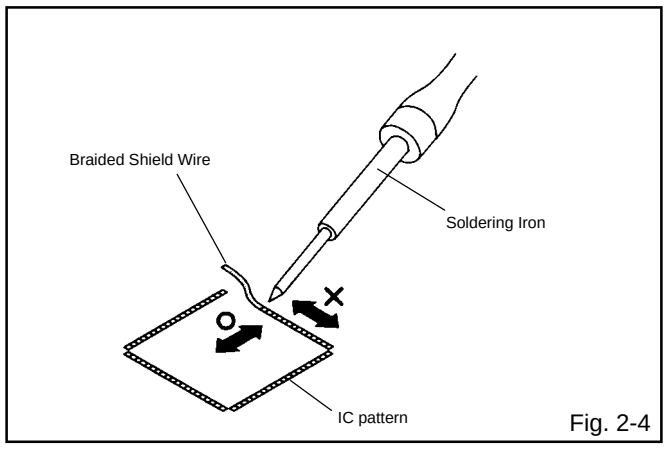


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

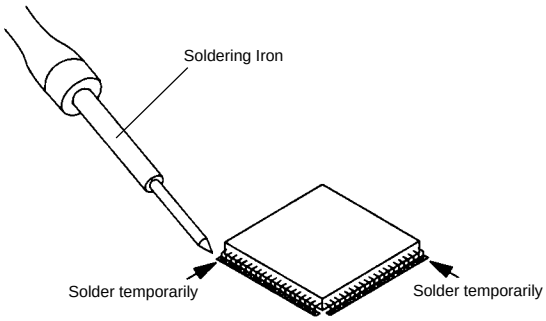


Fig. 2-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

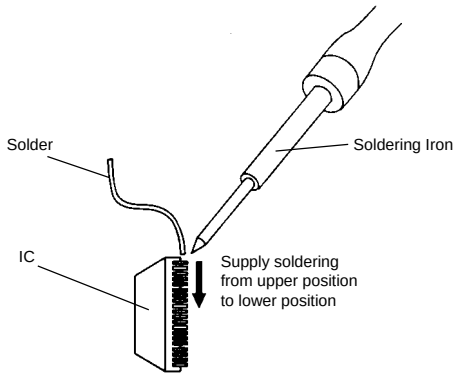


Fig. 2-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

   NOTE

   Do not absorb the solder to excess.

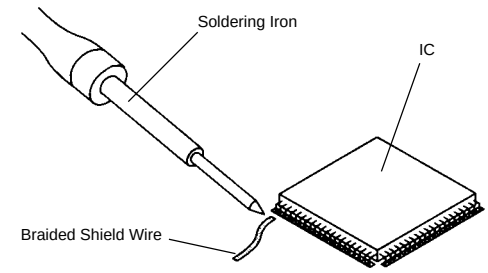


Fig. 2-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**

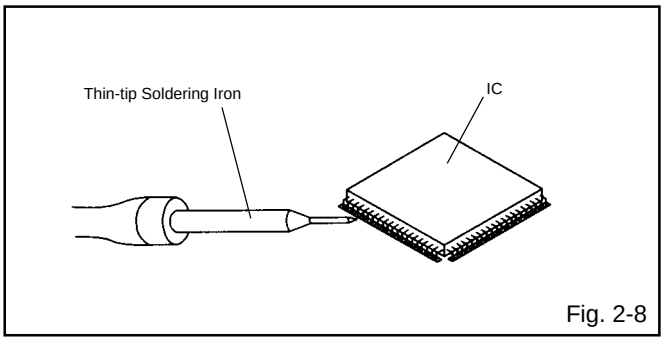


Fig. 2-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter to the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	1	Initialization of factory data. NOTE: Do not use this for the normal servicing. If you set a factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds.
3. After the confirmation of using hours, turn off the power.

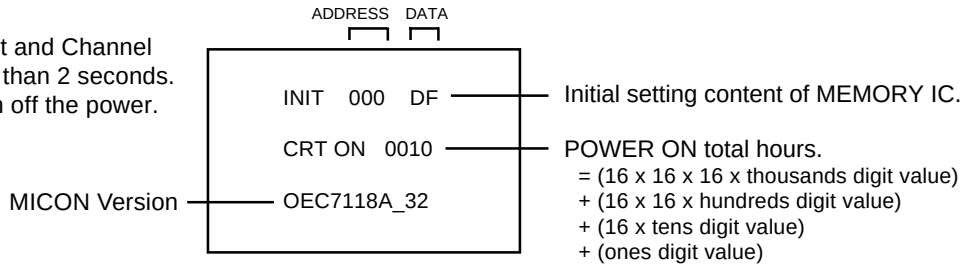


FIG. 1

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

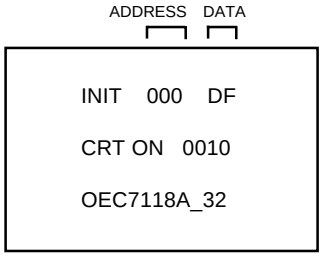


FIG. 1

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	FF	A2	05	C1	E6	1C	87	98	42	E4	B3	03	0D	36	03	05
10	01	05	1F	24	40	45	5D	62	45	4A	67	0F	15	0A	AA	64
20	88	00	00	00	00	00	00	00	00	1A	00	5A	98	33	04	76
30	77	05	07	22	10	07	00	22	74	81	01	07	06	40	40	40
40	8F	C0	40	00	27	0A	0A	00	13	40	00	51	70	72	99	59
50	68	99	59	00	73	14	1F	2D	24	16	00	00	00	00	00	FE
60	08	D6	D9	DB	15	00	00	26	06	07	09	00	C9	C8	E8	BC
70	40	0F	00	21	66	77	00	00	00	0F	1D	6D	FF	FF	FA	FA
80	FF	C0	52	50	8B	00	06	06	22	00	96	8B	6C	90	22	00
90	11	F0	00	07	00	00	00	B6	01	48	33	23	27	2A	2D	30
A0	33	36	39	3C	3F	42	45	48	4B	4E	51	53	55	57	58	59
B0	5A	5B	5C	5D	5E	5F	61	63	65	67	69	6A	6B	6C	6D	6E
C0	6F	70	71	71	72	72	73	73	74	74	75	75	75	75	76	76
D0	76	76	77	77	77	77	78	78	78	78	79	42	00	00	00	0B
E0	15	18	11	14	E0	E6	F5	2B	38	FF	17	31	36	40	00	3F
F0	54	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
100	DC	F1	21	66	66	0C	71	69	33	00	0E	38	22	66	DA	71
110	69	33	00	44	00	77	5E	99	59	03	82	88	88	00	82	01
120	00	03	82	03	82	0F	85	00	82	8D	83	00	82	D0	01	82
130	00	82	00	82	0D	00	05	11	00	11	00	11	1A	00	1C	00
140	00	73	00	00	00	25	1E	F4	05	16	A4	03	03	00	7F	7F
150	00	7E	7E	0E	0A	00	00	00	00	84	00	00	00	00	00	83
160	00	00	00	00	00	20	0F	FF	F3	EC	FF	FF	FF	FF	FF	FF
170	FF	FF	FB	00	10	01	FB	00	20	01	FB	00	4D	01	FB	00
180	2A	01	FB	00	10	01	FB	00	05	01	FB	00	19	01	FB	00
190	42	01	FB	00	27	01	FB	00	05	01	77	77	77	---	---	---

Table 1

WHEN REPLACING EEPROM (MEMORY) IC

1. Enter DATA SET mode by setting VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 1.
3. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
6. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn POWER on.
10. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator

On-Screen Display Adjustment

1. In the condition of NO indication on the screen. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

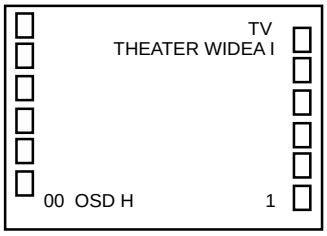


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV, CS and HD-MI mode, press the TV/VIDEO button on the remote control to set to the AV, CS and HD-MI mode. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION	NO.	FUNCTION
00	OSD H	20	CORNER	40	R-Y PHASE
01	CUT OFF	21	C.PARA	41	G-Y GAIN
02	H.POSI	22	C.SAW	42	G-Y PHASE
03	V.POSI	23	V.SYMM	43	BRI.CENT
04	H. SIZE	24	R.BIAS	44	BRI.MAX
05	V. SIZE	25	G.BIAS	45	BRI.MIN
06	V. LIN	26	B.BIAS	46	CONT.CENT
07	V-EHT	27	R/G.DRV	47	CONT.MAX
08	H-EHT	28	B/R.DRV	48	CONT.MIN
09	V-BLK P	29	R.BIAS(C)	49	COL.CENT
10	V-BLK S	30	G.BIAS(C)	50	COL.MAX
11	V.CENT	31	B.BIAS(C)	51	COL.MIN
12	V.LIMIT	32	R/G.DRV(C)	52	SUB CONT
13	V.CORR	33	B/R.DRV(C)	53	TINT
14	V.S.CORR	34	R.BIAS(W)	54	SHARP.CENT
15	EW PARA	35	G.BIAS(W)	55	SHARP.MAX
16	TRAPEZIUM	36	B.BIAS(W)	56	SHARP.MIN
17	COR.TOP	37	R/G.DRV(W)	57	TILT.CENT
18	COR.BTM	38	B/R.DRV(W)	58	TEST STEREO
19	S.CORR	39	R-Y GAIN	59	TEST AUDIO

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CUT OFF

1. Place the set in Aging Test for more than 15 minutes.
2. Place the set in AV MODE without signal.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-2: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 10 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(24)** on the remote control to select “R.BIAS”.
5. Press the CH. UP/DOWN button on the remote control to select the “R.BIAS”, “G.BIAS”, “B.BIAS”, “R/G.DRV”, “B/R.DRV”, “R.BIAS(C)”, “G.BIAS(C)”, “B.BIAS(C)”, “R/G.DRV(C)”, “B/R.DRV(C)”, “R.BIAS(W)”, “G.BIAS(W)”, “B.BIAS(W)”, “R/G.DRV(W)” or “B/R.DRV(W)”.
6. Adjust the VOL. UP/DOWN button on the remote control to whiten the R.BIAS(C), G.BIAS(C), B.BIAS(C), R/G.DRV(C), B/R.DRV(C), R.BIAS(W), G.BIAS(W), B.BIAS(W), R/G.DRV(W) and B/R.DRV(W)”at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-3: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-4: OSD HORIZONTAL

1. Receive the monoscope pattern from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "OSD H".
4. Press the LEFT/RIGHT button on the remote control until the difference of A and B becomes minimum. **(Refer to Fig. 2-1)**

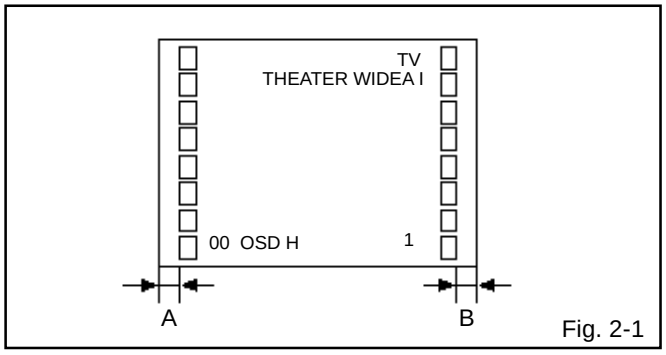


Fig. 2-1

2-5: HORIZONTAL POSITION/ HORIZONTAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "H.POSI".
7. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes becomes minimum.
8. Receive the monoscope pattern.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select “H. SIZE”.
10. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes 7.5%.

2-6: VERTICAL CENT/ VERTICAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select “V. CENT”.
8. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask.
9. Receive the monoscope pattern.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select “V. SIZE”.
11. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8%.

2-7: VERTICAL LINEARITY

NOTE: Adjust after performing adjustments in section 2-6. After the adjustment of Vertical Linearity, reconfirm the Vertical Position and Vertical Size adjustments.

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select “V. LIN”.
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8%.

ELECTRICAL ADJUSTMENTS

2-8: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "BRI CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 2.7% is starting to be visible
6. Receive the monoscope pattern. (Audio Video Input)
7. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Receive the monoscope pattern.
9. Press the TV/VIDEO button on the remote control to set to the CS mode.Then perform the above adjustments 2~5.
10. Receive the monoscope pattern.
11. Press the TV/VIDEO button on the remote control to set to the HD-MI mode.Then perform the above adjustments 2~5.

2-9: SUB CONTRAST

1. Set the screen mode to FULL.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
3. Check if the step No. SUB CONT is "14".
4. Receive a broadcast and check if the picture is normal.
5. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~4.
6. Receive a broadcast and check if the picture is normal.
7. Press the TV/VIDEO button on the remote control to set to the CS mode.Then perform the above adjustments 2~4.
8. Receive a broadcast and check if the picture is normal.
9. Press the TV/VIDEO button on the remote control to set to the HD-MI mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
11. Check if the step No. SUB CONT is "16".
12. Receive a broadcast and check if the picture is normal.

2-10: E/W PARA

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(15)** on the remote control to select “E W PARA”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Set the screen mode to 4:3.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-11: TRAPEZIUM

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select “TRAPEZIUM”.
8. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-12: COR TOP/BTM

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(17)** on the remote control to select “COR. TOP”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(18)** on the remote control to select “COR. BTM”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-13: SEMSOR SAW

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to select “C.SAW”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

ELECTRICAL ADJUSTMENTS

2-14: SEMSOR PARA

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(21)** on the remote control to select “C.PARA”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.

2-15: TINT/COLOR CENT

1. Receive the color bar pattern.
2. Connect the oscilloscope to **TP806**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line. **(Refer to Fig. 2-2)**
5. Connect the oscilloscope to **TP805**.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(49)** on the remote control to select "COL.CENT".
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 105 ± 10% of the white level. **(Refer to Fig. 2-3)**
8. Please check whether the waveform of TP806 is straight line. If is not a straight line, adjust to TINT again.
9. Receive the color bar pattern. (Audio Video Input)
10. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~8.
11. Receive the color bar pattern.
12. Press the TV/VIDEO button on the remote control to set to the CS mode. Then perform the above adjustments 2~8.
13. Receive the color bar pattern.
14. Press the TV/VIDEO button on the remote control to set to the HD-MI mode. Then perform the above adjustments 2~8.

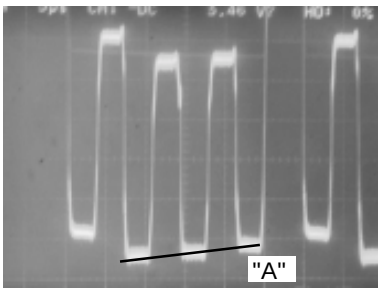


Fig. 2-2

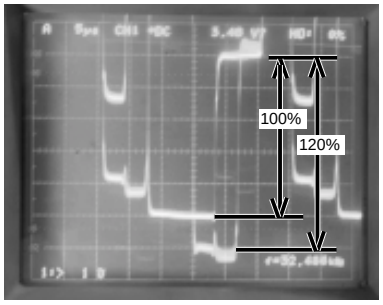


Fig. 2-3

2-16: TILT

1. Connect the digital voltmeter between **W843** and **W844**.
2. Receive the crosshatch signal from the Pattern Generator.
3. Press the PIC SIZE button on the remote control to select the FULL screen mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(57)** on the remote control to select “TILT CENT”.
6. Press the VOL. UP/DOWN button on the remote control until the voltage become minimum(0V).

2-17: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	RF	AV	CS	HD-MI
03	V.POSI	01	01	01	01
07	V-EHT	04	04	04	04
08	H-EHT	03	03	03	03
09	V-BLK P	31	31	31	31
10	V-BLK S	00	00	00	00
12	V.LIMIT	00	00	00	00
13	V.CORR	15	15	15	15
14	C.S.CORR	40	40	40	40
19	S.CORR	16	16	16	16
20	CORNER	15	15	15	15
23	V.SYMM	128	128	128	128
39	R-Y GAIN	08	08	08	08
40	R-Y PHASE	03	03	03	03
41	G-Y GAIN	05	05	05	05
42	G-Y PHASE	00	00	00	00
44	BRI.MAX	240	240	240	240
45	BRI.MIN	50	50	50	50
46	CONT.CENT	70	70	70	70
47	CONT.MAX	90	90	90	90
48	CONT.MIN	50	50	50	50
50	COL.MAX	80	80	110	110
51	COL.MIN	00	00	00	00
54	SHARP.CENT	55	55	64	64
55	SHARP.MAX	100	100	100	100
56	SHARP.MIN	00	00	00	00
58	TEST STEREO	00	00	00	00
59	TEST AUVIO	00	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue color.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

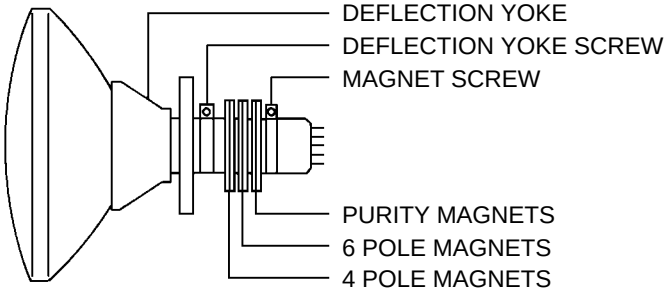


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

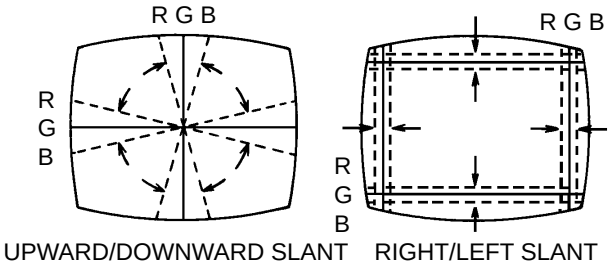
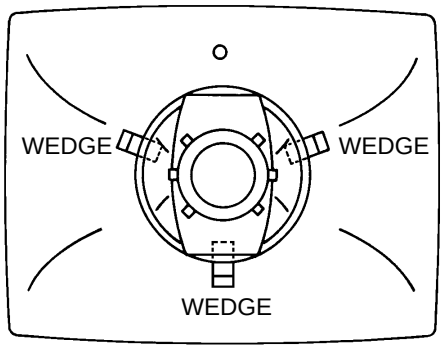


Fig. 3-2-a

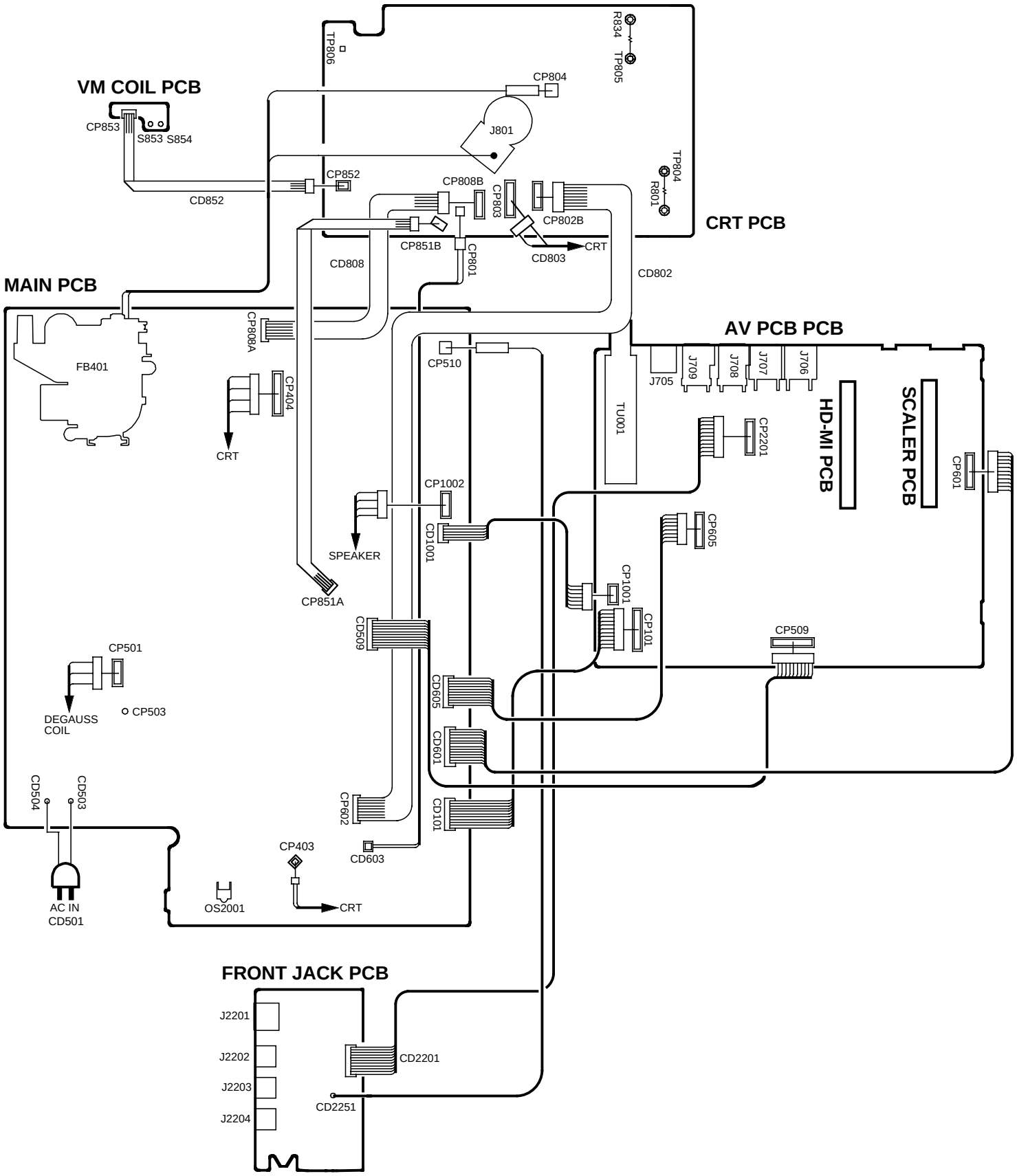


WEDGE POSITION

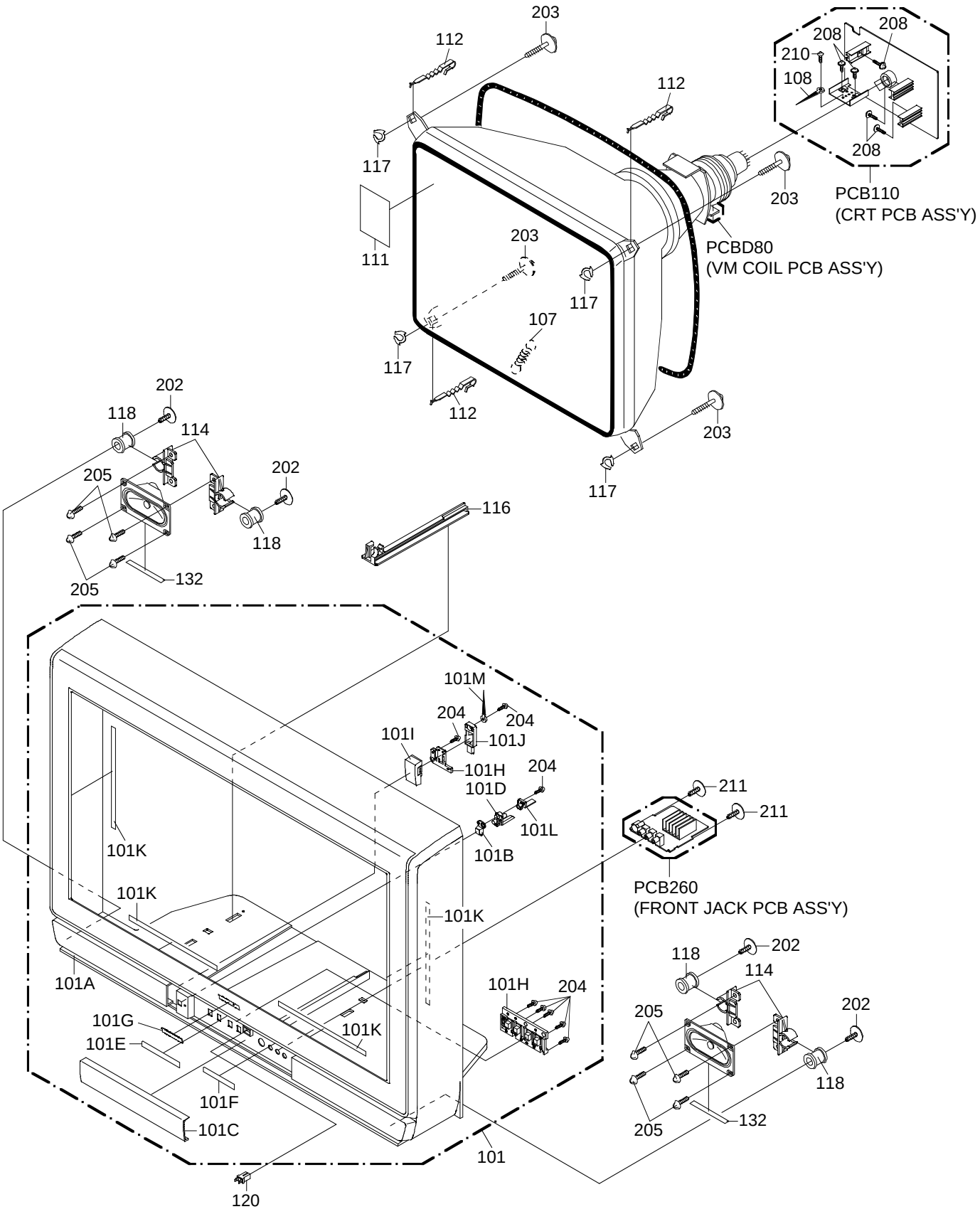
Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

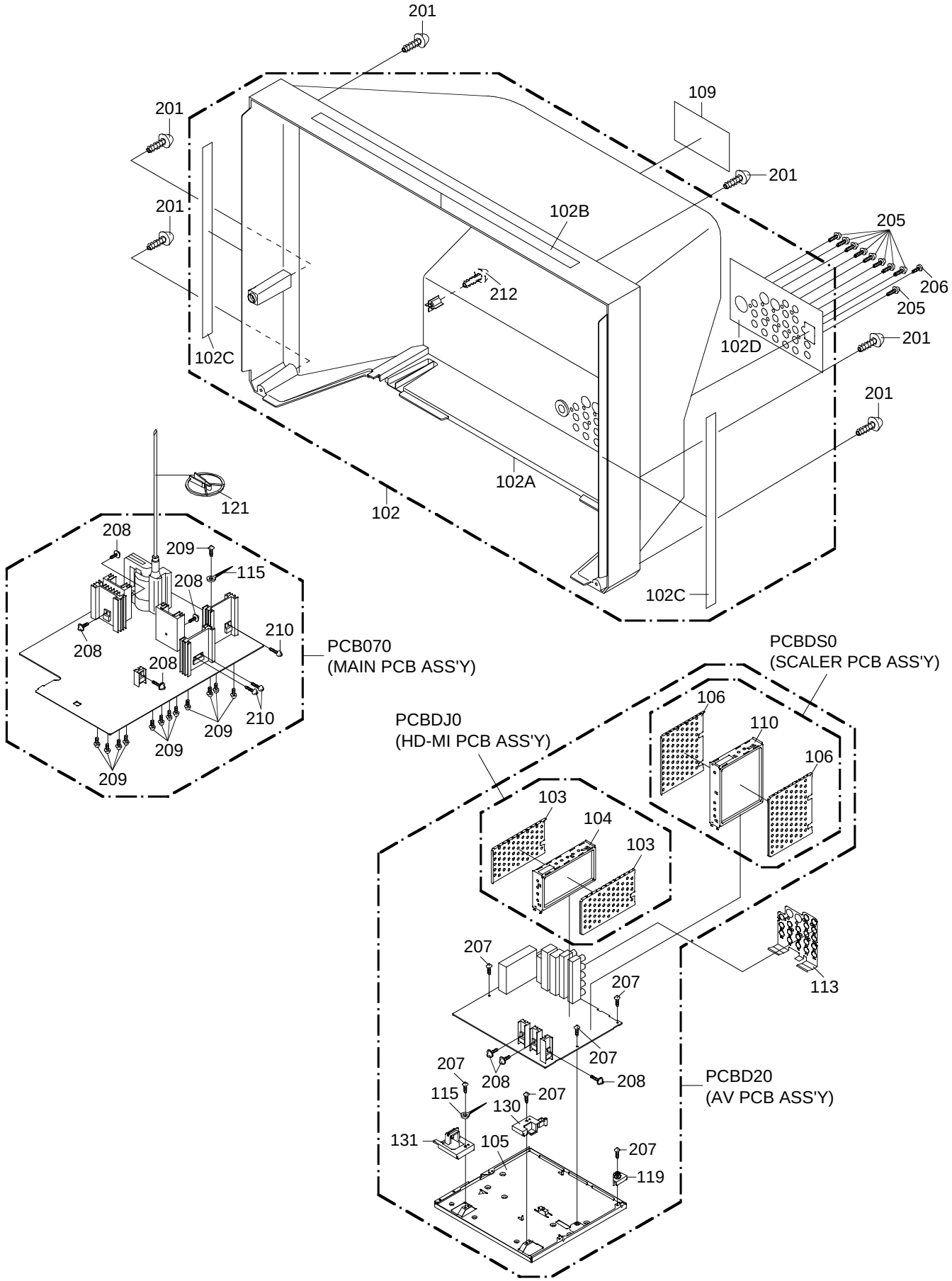
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



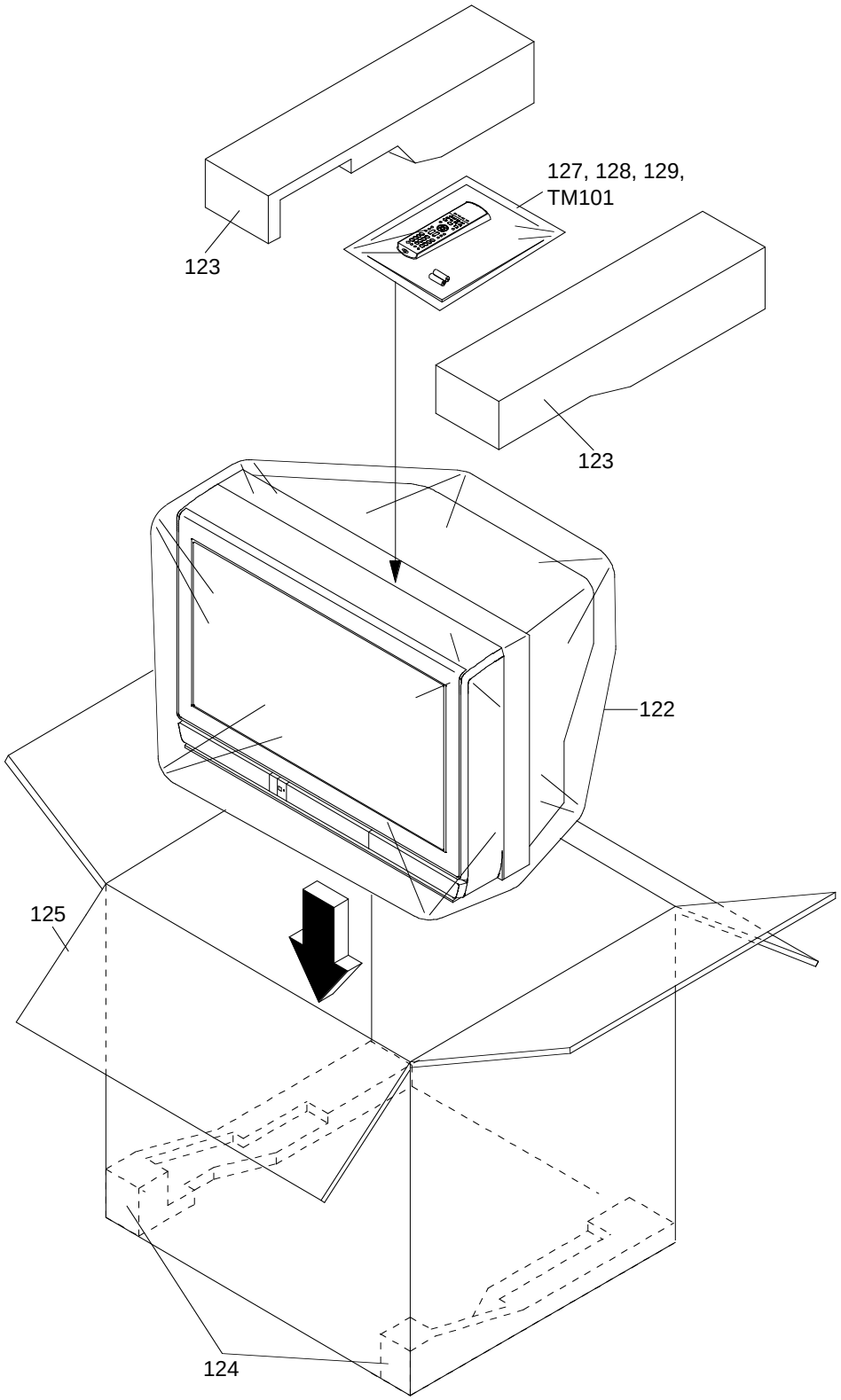
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
101	AE006010	7A7010081A	FRONT CABI ASS'Y	
101A	AE004959	701WPJ1278	CABINET,FRONT	
101B	AE004821	711WPA0210	PLATE,FRONT	
101C	AE006368	712WPJ0902	DOOR	
101D	AE004823	713WPA0334	GUIDE,REMOCON	
101E	AE004824	7230007791	SHEET,BUTTON	
101F	AE004825	7230007792	AV LABEL	
101G	AD302008	7235490036	BADGE,BRAND	
101H	AE004961	735WPB0300	BUTTON,FRAME	
101I	AE004962	735WPJ0244	BUTTON,POWER	
101J	AE004828	738WPA0106	STOPPER,BUTTON	
101K	AE003110	800WQ0A052	FELT SHEET	
101L	AE004963	761WPA0344	HOLDER,LED	
101M	BZ710039	8995034000	CORD CLIP UL CO.	
102	AE006011	7A7020040A	BACK CABI ASS'Y	
102A	AE004965	702WPA1107	CABINET,BACK	
102B	AE003020	800WQ0A050	FELT SHEET	
102C	AE003072	800WQ0A045	FELT SHEET	
102D	AE006371	7230007896	SHEET,JACK	
103	AE004831	752WSA0413	HDMI SHIELD,COVER	
104	AE004832	752WSA0414	HDMI SHIELD,BOTTOM	
105	AE005433	752WSA0448	PLATE,BOTTOM	
106	AE005202	752WSA0429	HDMI SHIELD,COVER2	
107	BZ710660	741WUA0021	SPRING,EARTH	
108	BZ710039	8995034000	CORD CLIP UL CO.	
109	AE006914	7225490195	SHEET,RATING	
110	AE005203	752WSA0430	HDMI SHIELD,BOTTOM2	
111	AE006915	7230007899	POP LABEL	
112	BZ710259	762WPA0011	HOLDER,CRT WIRE	
113	AE004838	752WSA0433	SHIELD,AV JACK	
114	AE005207	761WPAA115	HOLDER,SPEAKER	
115	AD301370	899EFBA002	WIRING-CLIP	
116	AE004840	761WPA0325	HOLDER,PCB RAIL	
117	AE006374	769WSAA008	WASHER,CRT T=0.5	
118	AD300518	801WR00001	DAMPER,SPEAKER	
119	AE005576	761WPA0347	HOLDER,PCB-1	
120	AE004841	890DL20000	DOOR LATCHES(DL2)	
121	BZ710260	899HV3T000	HOLDER,ANODE WIRE	
122	AE006145	791WHAA116	FILM BAG	
123	AE004968	792WHA0548	PACKAGE,TOP	
124	AE004969	792WHA0549	PACKAGE,BOTTOM	
125	AE006916	793WCD1613	GIFT BOX	
126	AE006376	A3S4010975	INSTRUCTION BOOK KIT	
127	AE005582	JA4KD200	POLYBAG,INSTRUCTION(RED CAUTION)	
128	AE004983	J2D60117A	REGISTRATION CARD	
129	AE006377	J3S40121A	INSTRUCTION BOOK	
130	AE005579	761WPA0348	HOLDER,PCB-2	
131	AE005580	761WPA0349	HOLDER,PCB-3	
132	AE005279	800WF00062	CUSHION	55x5xT1
201	AE003522	8117540B0U	SCREW,TAP TITE(B0) TRUSS	4x20
202	AE005398	8162540A6U	SCREW,TAPPING (BO) WASHER 18	
203	AE004848	8141H60D5U	SCREW,TAP TITE(P) GW20	6x45
204	AE003528	8110630A0U	SCREW,TAP TITE(P) BRAZIER	3x10
205	AE003529	811063080U	SCREW,TAP TITE(P) BRAZIER	3x8
206	AE005214	810213080U	SCREW,PAN	M3x8
207	AE003526	810923080U	SCREW,TAP TITE(B) BIND	3x8
208	AE003524	8109I30A0U	SCREW,TAP TITE(B) WH7	3x10
209	AE005917	810963080Q	SCREW,TAP TITE(B) BRAZIER	3x8
210	AE003531	810763080U	SCREW,TAP TITE(S) BRAZIER	3x8
211	AE004850	8159130A0U	SCREW,TAPPING(B) WASHER12 PAN	3x10
212	AE004847	8117540A6U	SCREW,TAP TITE(B0) TRUSS	4x16

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
⚠R401	AE002516	R4X5T6222F	R,METAL	2.2K OHM 1/6W
⚠R403	BZ210105	R4X5T6183F	R,METAL	18K OHM 1/6W
⚠R405	BZ210231	R4X5T6153F	R,METAL	15K OHM 1/6W
⚠R406	AD300039	R3X18A680J	R,METAL OXIDE	68 OHM 2W
⚠R408	BZ210063	R3X181R22J	R,METAL OXIDE	0.22 OHM 1W
⚠R413	AD300600	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R416	AD300600	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R417	BZ210211	R3X28B221J	R,METAL OXIDE	220 OHM 3W
⚠R429	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
⚠R430	AD300421	R5X2CF1R8J	R,CEMENT	1.8 OHM 10W
⚠R434	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
⚠R438	AE004809	R3X181332J	R,METAL	3.3K OHM 1W
⚠R445	AD300600	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R462	BZ210211	R3X28B221J	R,METAL OXIDE	220 OHM 3W
⚠R468	BZ210003	R3K181102J	R,METAL OXIDE	1K OHM 1W
⚠R472	AD302347	R3X181120J	R,METAL OXIDE	12 OHM 1W
⚠R473	AD302347	R3X181120J	R,METAL OXIDE	12 OHM 1W
⚠R492	AE002520	R3X181100J	R,METAL OXIDE	10 OHM 1W
⚠R501	BZ210233	R4X5T6272F	R,METAL	2.7K OHM 1/6W
⚠R503	BZ210206	R002T2155J	RC	1.5M OHM 1/2W
⚠R508	AD301203	R002T4101J	RC	100 OHM 1/4W
⚠R510	BZ210080	R0G3K2275K	RC	2.7M OHM 1/2W
⚠R515	AE001883	R3X28A104J	R,METAL OXIDE	100K OHM 2W
⚠R516	AD301143	R3X181R27J	R,METAL OXIDE	0.27 OHM 1W
⚠R517	AE005735	R63881R22J	R,FUSE	0.22 OHM 1W
⚠R518	AD301143	R3X181R27J	R,METAL OXIDE	0.27 OHM 1W
⚠R520	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
⚠R524	AE001073	R3X18A331J	R,METAL OXIDE	330 OHM 2W
⚠R525	AE000415	R3X1811R5J	R,METAL OXIDE	1.5 OHM 1W
⚠R530	AE004810	R5X2CF010J	R,CEMENT	1 OHM 10W
⚠R545	AE003270	R3X28B2R7J	R,METAL OXIDE	2.7 OHM 3W
⚠R548	BZ210051	R3X18AR47J	R,METAL OXIDE	0.47 OHM 2W
⚠R560	BZ210010	R3X28B1R2J	R,METAL OXIDE	1.2 OHM 3W
⚠R801	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R834	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R842	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R855	BZ210185	R65582151J	R,FUSE	150 OHM 1/2W
⚠R881	AD302132	R3X18A271J	R,METAL OXIDE	270 OHM 2W
⚠R3411	AD301597	R3X18AR39J	R,METAL OXIDE	0.39 OHM 2W
⚠R3412	AD301597	R3X18AR39J	R,METAL OXIDE	0.39 OHM 2W
		CAPACITORS		
⚠C403	BZ110195	E02LU8220M	CE	22 UF 100V
⚠C404	AE004798	E61DFB470M	CE	47 UF 160V
C412	AD301144	P4J7F3274J	CMPP	0.27 UF 250V PMS
C417	AD300049	P3N1F5153J	CPP	0.015 UF 630V
⚠C418	AE004932	P4N8FK822H	CMPP	0.0082UF 1.5KV
C425	AE004367	P4J7F3335J	CMPP	3.3 UF 250V PMS
C426	BZ110204	E0ELFD220M	CE	22 UF 250V
⚠C429	AD301434	E02LU4101M	CE	100 UF 35V
⚠C430	BZ110101	E5EZF3222M	CE	2200 UF 25V
C433	BZ110183	C03L0R7W2K	CC	820 PF 2KV R
⚠C434	BZ110124	E5EZF4222M	CE	2200 UF 35V
C438	AE004933	P4J7F3333J	CMPP	0.033 UF 250V PMS
⚠C446	BZ110225	E5EZFD220M	CE	22 UF 250V
⚠C502	BZ110025	P2122B224M	CMP	0.22 UF 275V ECQUL
⚠C505	BZ110035	P2122B104M	CMP	0.1 UF 275V ECQUL
C506	AE002229	P411F4393J	CMPP	0.039 UF 400V ECWF
⚠C509	BZ110084	E5EZFC220M	CE	22 UF 200V
C512	BZ110202	C0PLRR713K	CC	0.001 UF 2KV R
⚠C517	AE004934	CD39B0MH2K	CC	220 PF 250V
⚠C519	AE000950	CD39E0ME3M	CC	0.0015UF 250V
⚠C525	BZ110222	CD39E0MH3M	CC	0.0022UF 250V
⚠C528	BZ110226	C0JBB07H3K	CC	0.0022UF 2KV B
⚠C529	BZ110226	C0JBB07H3K	CC	0.0022UF 2KV B
⚠C530	AE003883	E51DFC102M	CE	1000 UF 200V
⚠C536	BZ110224	E5EZF3332M	CE	3300 UF 25V
C541	AE001065	E5EZ01222M	CE	2200 UF 10V
⚠C542	BZ110053	E02LF3102M	CE	1000 UF 25V
C543	AE000874	C0PLRR7E3K	CC	0.0015 UF 2KV R
⚠C545	AE004799	E61SFC221M	CE	220 UF 200V
⚠C548	BZ110055	E5EZF4102M	CE	1000 UF 35V

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C549	BZ110203	C0PLRR7W2K	CC	820 PF 2KV RR
C572	AE005174	E61FF1222D	CE	2200 UF 10V
C808	AE003828	C13DB0713K	CC	0.001 UF 2KV B
C809	AD301347	E0ELFD330M	CE	33 UF 250V
C870	AE000272	E50HU2470M	CE	47 UF 16V
C1003	BZ110124	E5EZF4222M	CE	2200 UF 35V
C3406	AE004935	E02LF0332M	CE	3300 UF 6.3V
		DIODES		
D001	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D101	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D102	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D103	BZ410064	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D104	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D105	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D106	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D107	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D108	BZ410064	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D109	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D110	BZ410064	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D111	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D112	BZ410012	D28TQS04N0	DIODE,SCHOTTKY	11EQS04N-TA1B2
⚠ D402	BZ410063	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠ D403	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠ D404	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠ D405	AE004792	DCBFMQ3GU0	DIODE	FMQ-3GULF027-102
D406	BZ410103	D2WXGP10J0	DIODE,RECTIFIER	RGP10J-EIC
D407	BZ410094	D97U01501B	DIODE,ZENER	MTZJ15B T-77
⚠ D408	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D409	BZ410094	D97U01501B	DIODE,ZENER	MTZJ15B T-77
D410	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠ D411	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
⚠ D412	AD300731	D2WXN49370	DIODE,SILICON	1N4937
D413	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D414	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
⚠ D415	BZ410063	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
D417	AE004359	D97U03901B	DIODE,ZENER	MTZJ39B T-77
D418	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D420	BZ410094	D97U01501B	DIODE,ZENER	MTZJ15B T-77
D423	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D424	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D501	BZ410031	D6CE24110A	DIODE,VARISTA	ENE241D-10A-Q6
D502	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D503	AD302208	D97U03R31B	DIODE,ZENER	MTZJ3.3B T-77
D504	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D505	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D506	BZ410085	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠ D507	BZ410085	D2WXN40050	DIODE,SILICON	1N4005-EIC
D508	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D510	BZ410085	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠ D511	BZ410085	D2WXN40050	DIODE,SILICON	1N4005-EIC
D512	BZ410114	D2WXGP10K0	DIODE,RECTIFIER	RGP10K-EIC
D514	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D515	AE006060	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D517	AD300671	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D519	AD300731	D2WXN49370	DIODE,SILICON	1N4937
⚠ D520	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D521	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D522	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D523	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D524	AD300731	D2WXN49370	DIODE,SILICON	1N4937
⚠ D525	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D526	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D527	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠ D528	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
D529	AD300671	D97U01801B	DIODE,ZENER	MTZJ18B T-77
⚠ D530	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D531	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D532	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
⚠ D533	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
⚠ D534	AE003872	DOU002720M	DIODE,VARISTA	DSS-272M-S00B
D535	BZ410064	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		DIODES		
⚠D536	AD301980	D2CF2016L0	DIODE,SILICON	FE201-6L49
D537	BZ410091	D230PF6DT0	DIODE,SILICON	FEPF6DT
⚠D539	BZ410111	D28F30DF60	DIODE,RECTIFIER	30DF6-FC
D540	AD300731	D2WXN49370	DIODE,SILICON	1N4937
⚠D541	AD301980	D2CF2016L0	DIODE,SILICON	FE201-6L49
D543	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D544	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D546	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D547	BZ410084	D97U01101B	DIODE,ZENER	MTZJ11B T-77
D548	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D549	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D550	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
⚠D551	AE004936	D6E027110A	DIODE,VARISTA	ENE271D-10A
D554	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D556	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D557	AE006060	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D601	AE006394	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D606	AE004358	D97U02R01B	DIODE,ZENER	MTZJ2.0B T-77
D607	AD300069	D97U02701B	DIODE,ZENER	MTZJ27B T-77
D608	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D609	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D610	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D611	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D612	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D613	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D614	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D615	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D616	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D617	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D618	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D619	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D621	BZ410034	D97U01301B	DIODE,ZENER	MTZJ13B T-77
D622	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D701	BZ410022	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D702	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D703	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D704	BZ410022	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D705	BZ410084	D97U01101B	DIODE,ZENER	MTZJ11B T-77
D801	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D802	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D803	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D807	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D808	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D809	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D853	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D854	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D855	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D856	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D901	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D2001	BZ410012	D28TQS04N0	DIODE,SCHOTTKY	11EQS04N-TA1B2
D2009	BZ410054	0021721150	LED	SLR-342VCT32
D2101	AE004795	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D2102	AE004795	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D2103	AE004795	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D3401	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
D3403	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D3404	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D3451	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3601	AE004937	D77R1A1R10	DIODE,VARISTA	AVRL161A1R1NT
D3602	AE004795	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D3603	AE004937	D77R1A1R10	DIODE,VARISTA	AVRL161A1R1NT
D3604	AE004793	DD7R60L400	DIODE,SCHOTTKY	RB160L-40-TE25
D3605	AE004793	DD7R60L400	DIODE,SCHOTTKY	RB160L-40-TE25
D3609	AE004794	DE7RB3R32B	DIODE,ZENER	UDZS3.3B TE-17
D3613	AE004794	DE7RB3R32B	DIODE,ZENER	UDZS3.3B TE-17
		ICS		
IC101	AE005608	I56F57118A	IC	OEC7118A
IC102	79097849	I9UF032290	IC	PST3229NR
IC103	79097849	I9UF032290	IC	PST3229NR
IC199	AE006904	S3S3010E01	MEMORY DATA	AT24C256N-10SU-2.7
⚠IC401	BZ611117	I03TD80410	IC	LA78041

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		ICS		
⚠IC402	AD302356	I03S065100	IC	LA6510
⚠IC501	AE002809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC502	AE005178	I0BD0159M0	IC	STR-A6159M
⚠IC503	AE002809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC504	AD302211	I1KJ9A431A	IC	KIA431A-AT
⚠IC505	AD301929	I1KA78R090	IC	KIA278R09PI
⚠IC506	AD302211	I1KJ9A431A	IC	KIA431A-AT
IC602	AE004361	I05DD13170	IC	TA1317ANG
IC603	AE004362	I05DE13600	IC	TA1360ANG
IC701	AE002728	I01F05853B	IC	AN15853B-E1
IC702	AE004651	I0QF025840	IC	NJM2584AM(TE1)
IC705	AE004800	I05FE13830	IC	TA1383FG
IC706	AE004651	I0QF025840	IC	NJM2584AM(TE1)
IC707	BZ611104	I0QF02533V	IC	NJM2533V(TE2)
IC902	AE006396	I19FFP3440	IC	MSP3440G-QA-C12-001(BBE)
⚠IC1001	AD300056	I0FSP52760	IC	AN5276
IC1501	AE005607	I55FE0A920	IC	TC90A92AFG
IC2101	AE005610	IFSK0883C0	IC	MST9883C-LF-110
⚠IC3400	BZ611089	I1KA98R09A	IC	KIA78R09API
⚠IC3401	AD301931	I1KA78R050	IC	KIA278R05PI
⚠IC3402	AE003914	I1KA98R330	IC	KIA278R33PI
IC3451	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
IC3452	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
IC3601	AE004654	I1KF98D330	IC	KIA78D33F
IC3602	AE004654	I1KF98D330	IC	KIA78D33F
IC3604	AE001295	I0QJ045800	IC	NJM4580M(TE1)
IC3605	AE004805	I5PF099930	IC	SII9993CTG100
IC3606	AE006401	S3S4010E02	MEMORY DATA	BR24L02F-WE2
IC3607	AE004802	I1FF043340	IC	CS4334-KSZR
IC3608	AE006402	S3S4010E03	MEMORY DATA	BR24L32F-WE2
IC3611	AE006399	ICMF08RD20	IC	SST89E58RD2-40-C-TQJE
IC3612	AE003923	I5CF01G080	IC	SN74AHC1G08DCKR
IC3901	AE005611	IFTK023010	IC	FLI2301-LF-BD
IC3902	AE005609	IF6J032B26	IC	MT48LC2M32B2P-6(Y14W)
		TRANSISTORS		
Q101	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q102	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q103	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q104	AE006306	TNRAB05005	COMPOUND TRANSISTOR	RT1N140C-T1
⚠Q401	AE004385	TC5TC3328Y	TRANSISTOR,SILICON	2SC3328_Y(TPE6_F)
⚠Q402	AE004814	T250029200	FET	2SK2920(Q)
⚠Q403	AE004386	TCKF059040	TRANSISTOR,SILICON	2SC5904000LI
Q405	AE005876	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T1
Q407	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q408	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q413	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q501	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q502	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q503	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q504	AE004387	TJXG15NK50	FET	STP15NK50ZFP
⚠Q505	BZ510070	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q506	BZ510105	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q507	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
⚠Q508	BZ510004	TA3T016240	TRANSISTOR,SILICON	2SA1624-AA
⚠Q509	BZ510105	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q510	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q601	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q602	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q603	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q604	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q605	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q606	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q607	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q608	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q611	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q612	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q613	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q615	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q616	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q617	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q701	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		TRANSISTORS		
Q702	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q703	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q704	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q705	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q706	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q708	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q709	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q710	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q716	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q717	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
⚠Q801	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q802	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q803	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
Q804	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
⚠Q810	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q811	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q812	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q814	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q852	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q853	AE004818	TCUT0752GY	TRANSISTOR,SILICON	2SC752(G)TM_Y(TP2
Q854	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q855	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q856	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q857	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q858	AE004815	TA10021400	TRANSISTOR,SILICON	2SA2140
Q859	AE004816	TC10059930	TRANSISTOR,SILICON	2SC5993
Q860	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q1098	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1099	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1501	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1502	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q1503	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1504	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q1505	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q2001	AE005938	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T1
⚠Q3403	AD301934	TBA0013660	TRANSISTOR,SILICON	KTB1366(O,Y)
Q3404	AE006306	TNRAB05005	COMPOUND TRANSISTOR	RT1N140C-T1
Q3603	BZ510113	T27T030180	FET	2SK3018T106
Q3604	BZ510113	T27T030180	FET	2SK3018T106
Q3605	BZ510113	T27T030180	FET	2SK3018T106
Q3606	BZ510113	T27T030180	FET	2SK3018T106
Q3607	BZ510113	T27T030180	FET	2SK3018T106
Q3608	BZ510081	TPYJA05001	COMPOUND TRANSISTOR	DTA143EKAT146
Q3609	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q3610	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3611	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3612	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q3613	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3901	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3902	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3903	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3904	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3905	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3906	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
		COILS &TRANSFORMERS		
L002	BZ310117	021LA6330K	COIL	33 UH
L402	AE004941	022R00043A	COIL,LINEARITY	ELH5L7151N
L406	AE004329	02D3000063	COIL,CHOKE	ELC18B151LK
L407	AE004329	02D3000063	COIL,CHOKE	ELC18B151LK
L408	AE004751	02D3000069	COIL,CHOKE	ELC18B103LM
⚠L502	AE005594	029X000122	COIL,LINE FILTER	SS28V-R22110-CH
⚠L503	AE005594	029X000122	COIL,LINE FILTER	SS28V-R22110-CH
L504	BZ310150	02167E220K	COIL	R7 22 UH
L505	BZ310118	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L506	BZ310150	02167E220K	COIL	R7 22 UH
L508	AD301785	02167E100K	COIL	R6-1 10 UH
L602	BZ310039	02167F220J	COIL	22 UH
L603	BZ310039	02167F220J	COIL	22 UH
L604	BZ310039	02167F220J	COIL	22 UH
L606	BZ310183	021LA6220J	COIL	22 UH
L607	BZ310039	02167F220J	COIL	22 UH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		COILS &TRANSFORMERS		
L701	BZ310040	02167F470J	COIL	47 UH
L702	BZ310040	02167F470J	COIL	47 UH
L703	BZ310040	02167F470J	COIL	47 UH
L705	BZ310041	02167F101J	COIL	100 UH
L706	BZ310040	02167F470J	COIL	47 UH
L707	BZ310040	02167F470J	COIL	47 UH
L708	BZ310040	02167F470J	COIL	47 UH
L710	BZ310040	02167F470J	COIL	47 UH
L712	BZ310041	02167F101J	COIL	100 UH
L805	BZ310002	021673101K	COIL	100 UH
L806	BZ310002	021673101K	COIL	100 UH
L807	BZ310002	021673101K	COIL	100 UH
L808	AD300613	02167F150J	COIL	15 UH
L809	AD300613	02167F150J	COIL	15 UH
L810	AD300613	02167F150J	COIL	15 UH
L901	BZ310141	02167F100J	COIL	10 UH
L904	BZ310141	02167F100J	COIL	10 UH
L905	BZ310141	02167F100J	COIL	10 UH
L1501	AE005592	0216S8330K	COIL	F 33 UH
L1502	AE005285	0216S8470K	COIL	F 47 UH
L1503	AE005591	0216S81R5M	COIL	F 1.5 UH
L1504	AE005285	0216S8470K	COIL	F 47 UH
L1505	AE005589	0216S8100K	COIL	F 10 UH
L1506	AE005589	0216S8100K	COIL	F 10 UH
L1507	AE005589	0216S8100K	COIL	F 10 UH
L1508	AE005590	0216S8150K	COIL	F 15 UH
L1509	AE005590	0216S8150K	COIL	F 15 UH
L1511	AE005590	0216S8150K	COIL	F 15 UH
L1512	AE005590	0216S8150K	COIL	F 15 UH
L1513	AE005058	0216S4220J	COIL	22 UH
L1514	AE005592	0216S8330K	COIL	F 33 UH
L2101	AE005285	0216S8470K	COIL	F 47 UH
L2103	AE005285	0216S8470K	COIL	F 47 UH
L2104	AE005593	0216SD5R6J	COIL	5.6 UH
L2105	AE005593	0216SD5R6J	COIL	5.6 UH
L2106	AE005593	0216SD5R6J	COIL	5.6 UH
L3401	BZ310150	02167E220K	COIL	R7 22 UH
L3402	BZ310150	02167E220K	COIL	R7 22 UH
L3601	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3602	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3603	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3604	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3901	AE005285	0216S8470K	COIL	F 47 UH
L3903	AE005588	0216S4270J	COIL	27 UH
L3907	AE005285	0216S8470K	COIL	F 47 UH
L3908	AE005285	0216S8470K	COIL	F 47 UH
L3909	AE005590	0216S8150K	COIL	F 15 UH
T401	AE004332	0450190181	TRANS,HORIZONTAL DRIVE	ETH19K208AZ
⚠T501	AE004942	048119003S	TRANSFORMER,SWITCHING	8119003S
T502	AE006905	0481490034	TRANSFORMER,SWITCHING	81490034
		JACKS		
J705	AE002759	060J431020	RCA JACK	MSP-213V2-432_NI_LF
J706	AE004759	060Q431019	RCA JACK	YKC21-7306N
J707	AE004759	060Q431019	RCA JACK	YKC21-7306N
J708	AE004760	063D000078	JACK PLATE	MSP-803V-BBA-432_NI_LF
J709	AE004760	063D000078	JACK PLATE	MSP-803V-BBA-432_NI_LF
⚠J801	AE007205	066C130024	SOCKET,CATHODE RAY	TUBE CVT3205-5101FSZ
J2201	AE004761	063D700010	JACK	MDC-012V1-A_LF
J2202	AE004756	060J401104	RCA JACK	MTJ-032-03A-30FE
J2203	AE004758	060J401106	RCA JACK	MTJ-032-03A-32FE
J2204	AE004757	060J401105	RCA JACK	MTJ-032-03A-31FE
J3601	AE002950	060J421037	RCA JACK	MTJ-032-05A-32-FE
J3602	AE002951	060J421030	RCA JACK	MTJ-032-05A-31-FE
		SWITCHES		
SW2001	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2002	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2003	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2004	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2005	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		P.C.BOARD ASSEMBLIES		
PCB070	AE006906	A3S3010070	PCB ASS'Y	CME018A
PCB110	AE006907	A3S3010110	PCB ASS'Y	CCD002A
PCB260	AE006908	A3S3010260	PCB ASS'Y	CEE040A
PCBD20	AE006909	A3S3010D20	PCB ASS'Y	CED019A
PCBD80	AE006910	A3S3010D80	PCB ASS'Y	CED012A
PCBDJ0	AE006911	A3S3010DJ0	PCB ASS'Y	CED011A
PCBDS0	AE006912	A3S3010DS0	PCB ASS'Y	CED020A
		MISCELLANEOUS		
B403	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B404	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B405	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B851	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B852	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B853	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B1501	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B2102	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3601	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3602	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3603	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3604	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3608	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3609	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3610	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B3611	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
BT001	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
CD101	AE005945	06C32B3303	CORD,CONNECTOR	C32B3303
⚠CD501	AE004781	1209415909	CORD,AC BUSH	9415909
⚠CD507	AE004950	028R260002	COIL,DEGAUSS	8R260002
CD509	AE003641	06CU2D2501	CORD,CONNECTOR	CU2D2501
CD601	AE005597	06CU294002	CORD,CONNECTOR	CU294002
CD603	AE004338	06CU225201	CORD,CONNECTOR	CU225201
CD605	AE005422	06CU273302	CORD,CONNECTOR	CU273302
CD802	AE005282	WEL6854038	FLAT CABLE AWM2468 A	WG26 7C GRAY 540MM
CD803	AE005222	06C383037A	CORD,CONNECTOR	C383037A
CD808	BZ614392	WCL6830038	FLAT CABLE AWM2468 A	WG26 5C GRAY 300MM
CD852	AD301043	06CU232001	CORD,CONNECTOR	CU232001
CP101	BZ614214	069S2B0629	CONNECTOR PCB SIDE	A2001WV2-11P
CP103	AE001188	069S270639	CONNECTOR PCB SIDE	A2001WR2-7P
CP403	BZ614365	069S120419	CONNECTOR PCB SIDE	A2502WV2-2P
⚠CP404	AE006075	069X460109	CONNECTOR PCB SIDE	B06B-DVS-L (LF)
⚠CP501	BZ614283	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP503	BZ614444	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP504	BZ614444	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP506	BZ614444	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP509	BZ614420	069S2D0629	CONNECTOR PCB SIDE	A2001WV2-13P
CP510	BZ614444	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP601	BZ614458	069S290629	CONNECTOR PCB SIDE	A2001WV2-9P
CP602	AD301997	067U007029	WIRE HOLDER	B2013H02-7P
CP605	BZ614485	069S270629	CONNECTOR PCB SIDE	A2001WV2-7P
CP801	BZ614416	069S220629	CONNECTOR PCB SIDE	A2001WV2-2P
CP803	AD301996	069S330010	CONNECTOR PCB SIDE	A2361WV2-3P
CP804	BZ614058	069W010010	CONNECTOR PCB SIDE	005P-2100
CP852	BZ614350	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP853	BZ614349	067U003029	WIRE HOLDER	B2013H02-3P
CD1001	AE005290	06CU241001	CORD,CONNECTOR	CU241001
CD1002	AE006913	06C3146805	CORD,CONNECTOR	C3146805
CD2201	AE004775	06CU283001	CORD,CONNECTOR	CU283001
CD2251	AE005223	06CU013502	CORD,CONNECTOR	CU013502
CP1001	AD301998	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP1002	AD301045	069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP2201	AD301796	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
CP3601	AE004763	069HYJ3010	CONNECTOR PCB SIDE	DC1R019JDA
CP3602	AE004769	069J1K0048	CONNECTOR	IMSA-9130S-20L
CP3604	BZ614239	069S290639	CONNECTOR PCB SIDE	A2001WR2-9P
CP802B	AD300098	069R270589	CONNECTOR PCB SIDE	52147-0710
CP808A	BZ614276	067U005049	WIRE HOLDER	B2013H02-5P
CP808B	BZ614212	069R250589	CONNECTOR PCB SIDE	52147-0510
CP851A	BZ614349	067U003029	WIRE HOLDER	B2013H02-3P
CP851B	AD300101	069R230589	CONNECTOR PCB SIDE	52147-0310
CP3604A	AE004768	069J1K0038	CONNECTOR PCB SIDE	IMSA-9130B-20

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		MISCELLANEOUS		
CP3901A	AE006384	069R2Y0720	CONNECTOR PCB SIDE	79107-7016
CP3901B	AE005595	069R2Y0700	CONNECTOR PCB SIDE	87760-3416
EL0701	BZ614043	124116281A	EYE LET	XRY16X28BD
EL0702	BZ614044	124120301A	EYE LET	XRY20X30BD
EL1101	BZ614043	124116281A	EYE LET	XRY16X28BD
EL1102	BZ614044	124120301A	EYE LET	XRY20X30BD
⚠F501	BZ614422	081PC6R305	FUSE	51MS063L
⚠F502	AE004346	0835A07005	MICRO FUSE	20N_7000FSW
⚠FB401	AE004955	043226001F	TRANSFORMER,FLYBACK	3226001F
FH501	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
FH502	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
NR1501	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR1502	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR2101	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2102	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2103	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2104	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2105	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2106	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2107	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR3901	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3902	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3903	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3904	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3905	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3906	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3907	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3908	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3909	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3910	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3911	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3912	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3913	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
OS2001	AD301048	0773071001	REMOTE RECEIVER	RPM7138-WH5
⚠RY501	AE006070	0560X20118	RELAY	G5PA-1-SA(WEC)
⚠RY502	AE003621	0560V50118	RELAY	ALKS329
⚠SP1001	AE006459	070N546012	SPEAKER	YDP4010-2
⚠SP1002	AE006459	070N546012	SPEAKER	YDP4010-2
TH502	BZ410079	DF5EL3R0A0	DEGAUSS ELEMENT	ZPB45BL3R0A
TM101	AE006385	076D0KK010	TRANSMITTER	ORT204N7404359-U
⚠TU001	AE005631	0163300016	RF UNIT	115-V-KA35AR
⚠V801	AE004957	0981260901	CRT W/DY	W66MAF183X81
X103	AE004780	100WT01611	CRYSTAL	HC-49/U-S
X603	AE004348	1002R01502	CERAMIC OSCILLATOR	CSBLA503KECZF30-B0
X701	AE004348	1002R01502	CERAMIC OSCILLATOR	CSBLA503KECZF30-B0
X702	AE004349	100CT3R536	CRYSTAL	HC-49/U
X901	BZ613042	100CT01803	CRYSTAL	HC-49/U-S
X1501	AE004628	100DT04201	CRYSTAL	SMD-49
X3601	AE004779	100CT01101	CRYSTAL	HC-49/U-S
X3901	AE005598	100DT01303	CRYSTAL	SMD-49

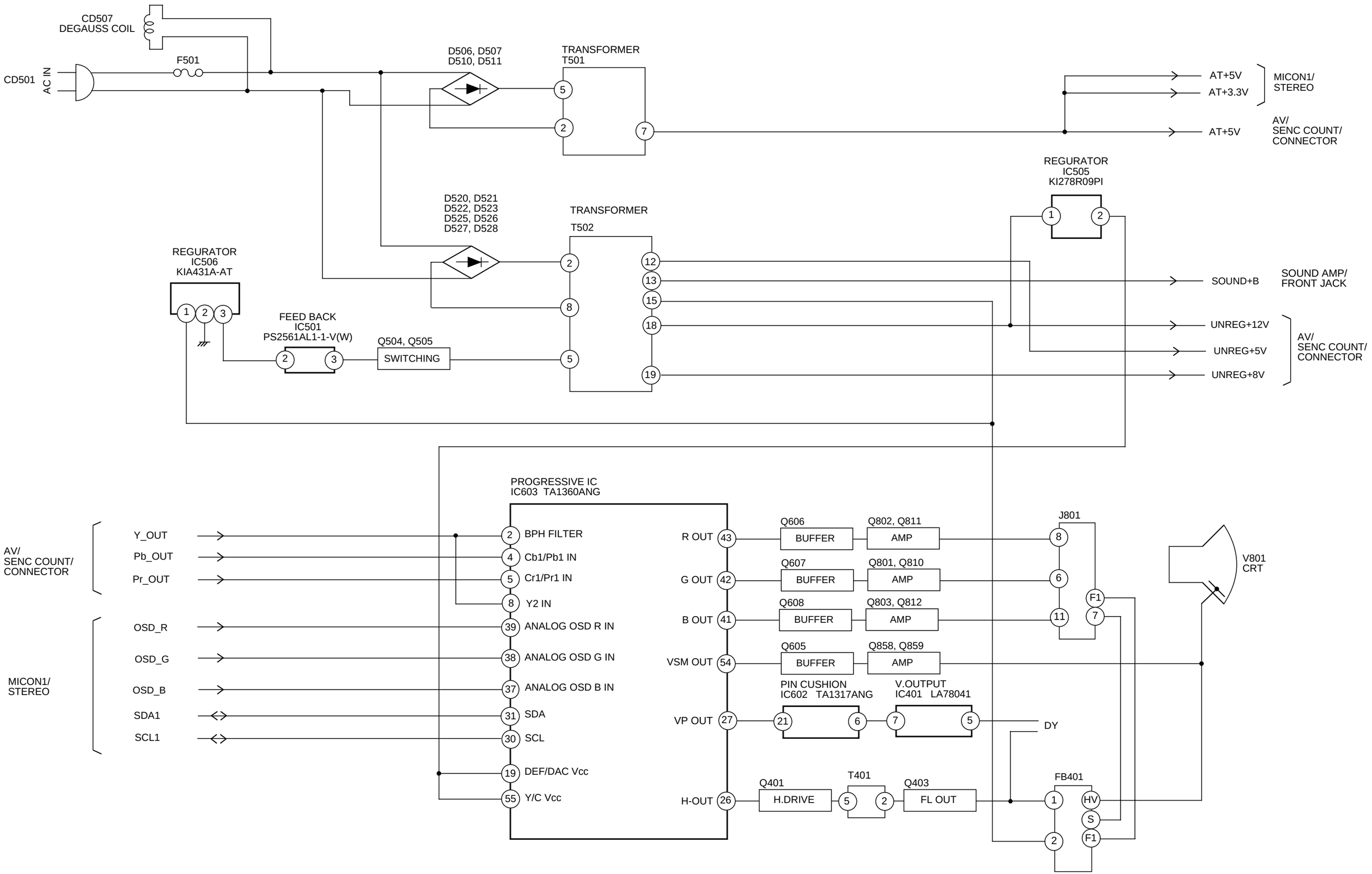
RESISTOR

RC..... CARBON RESISTOR

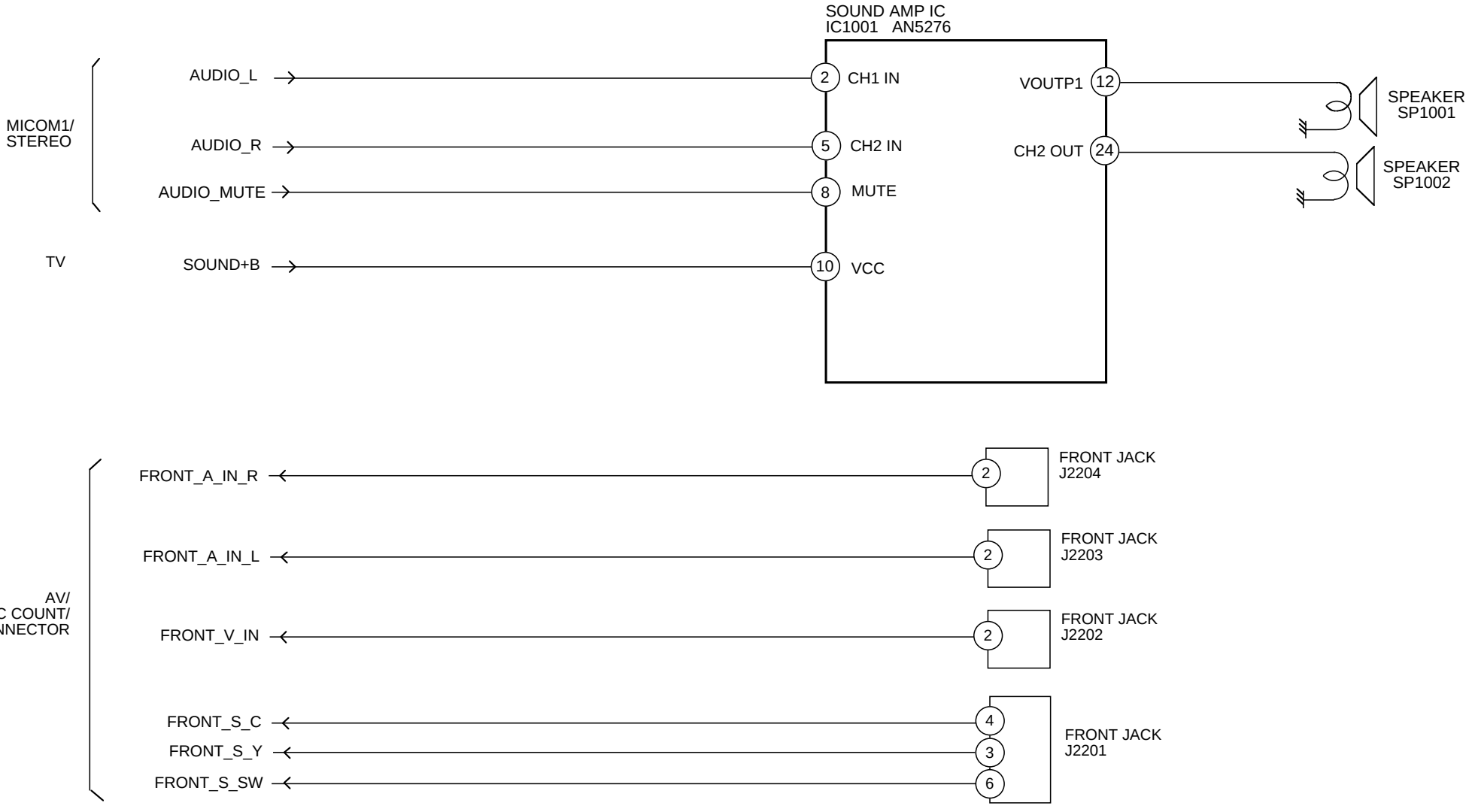
CAPACITORS

CC..... CERAMIC CAPACITOR
CE..... ALUMI ELECTROLYTIC CAPACITOR
CP..... POLYESTER CAPACITOR
CPP..... POLYPROPYLENE CAPACITOR
CPL..... PLASTIC CAPACITOR
CMP..... METAL POLYESTER CAPACITOR
CMPL..... METAL PLASTIC CAPACITOR
CMPP..... METAL POLYPROPYLENE CAPACITOR

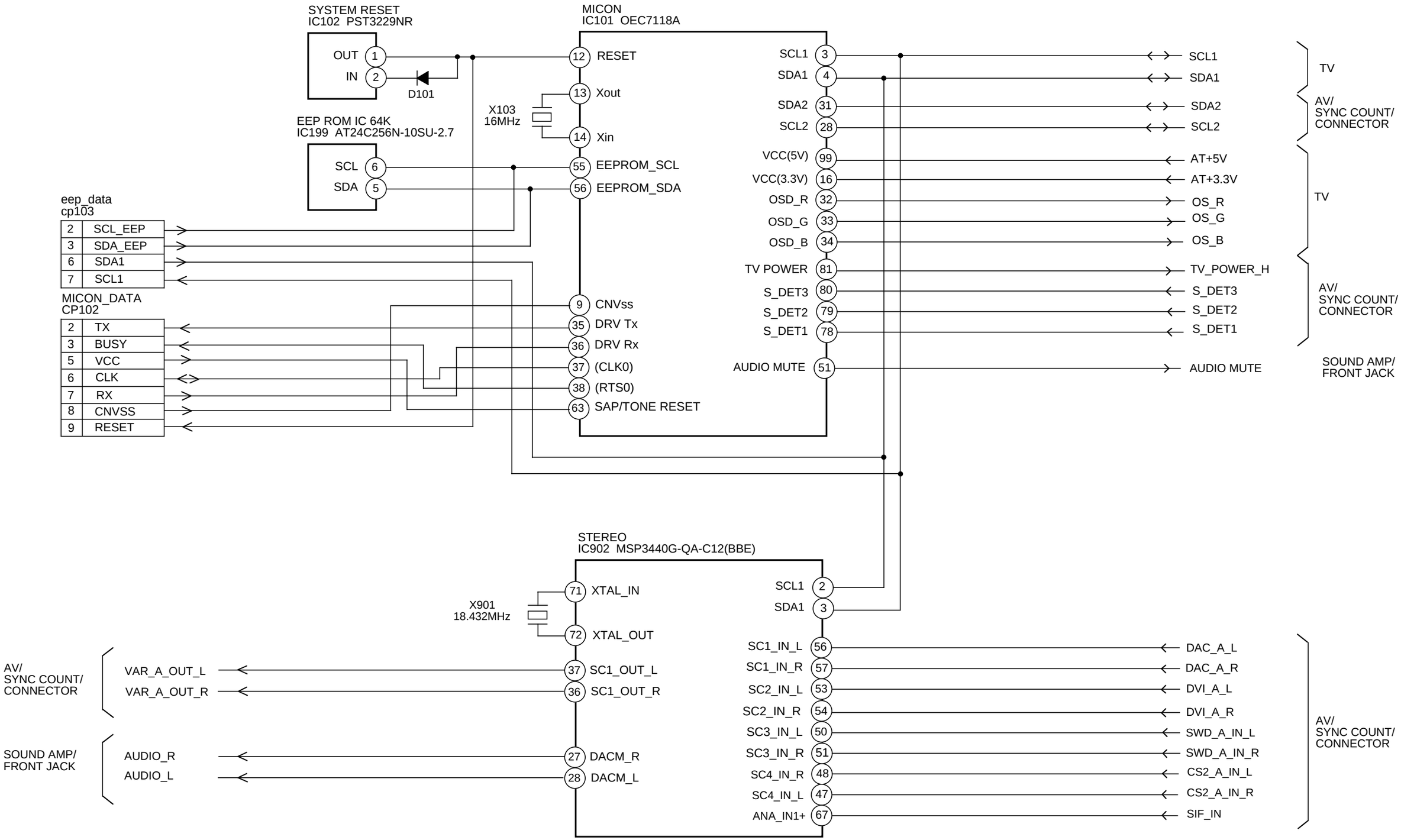
TV BLOCK DIAGRAM



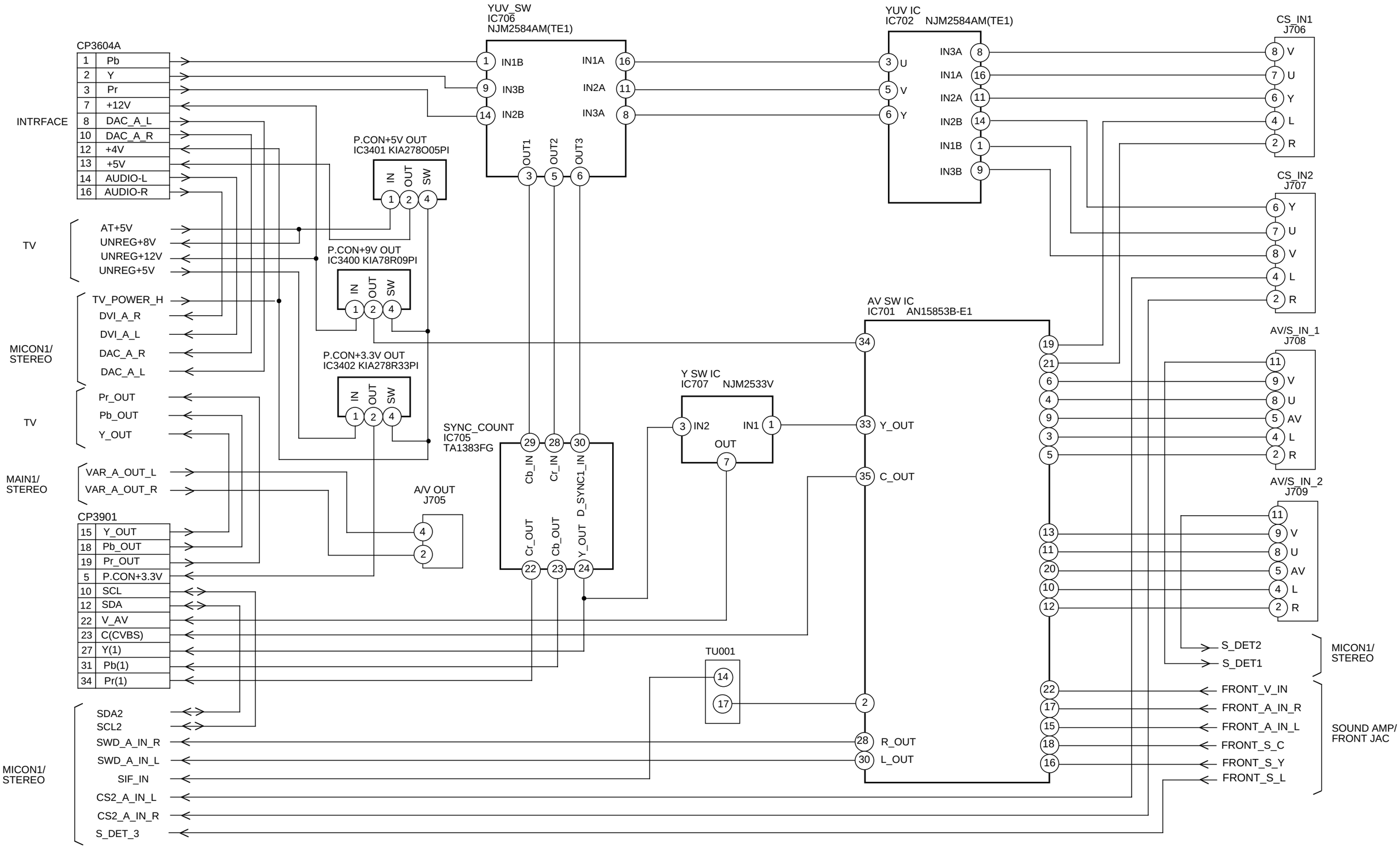
SOUND AMP/FRONT JACK BLOCK DIAGRAM



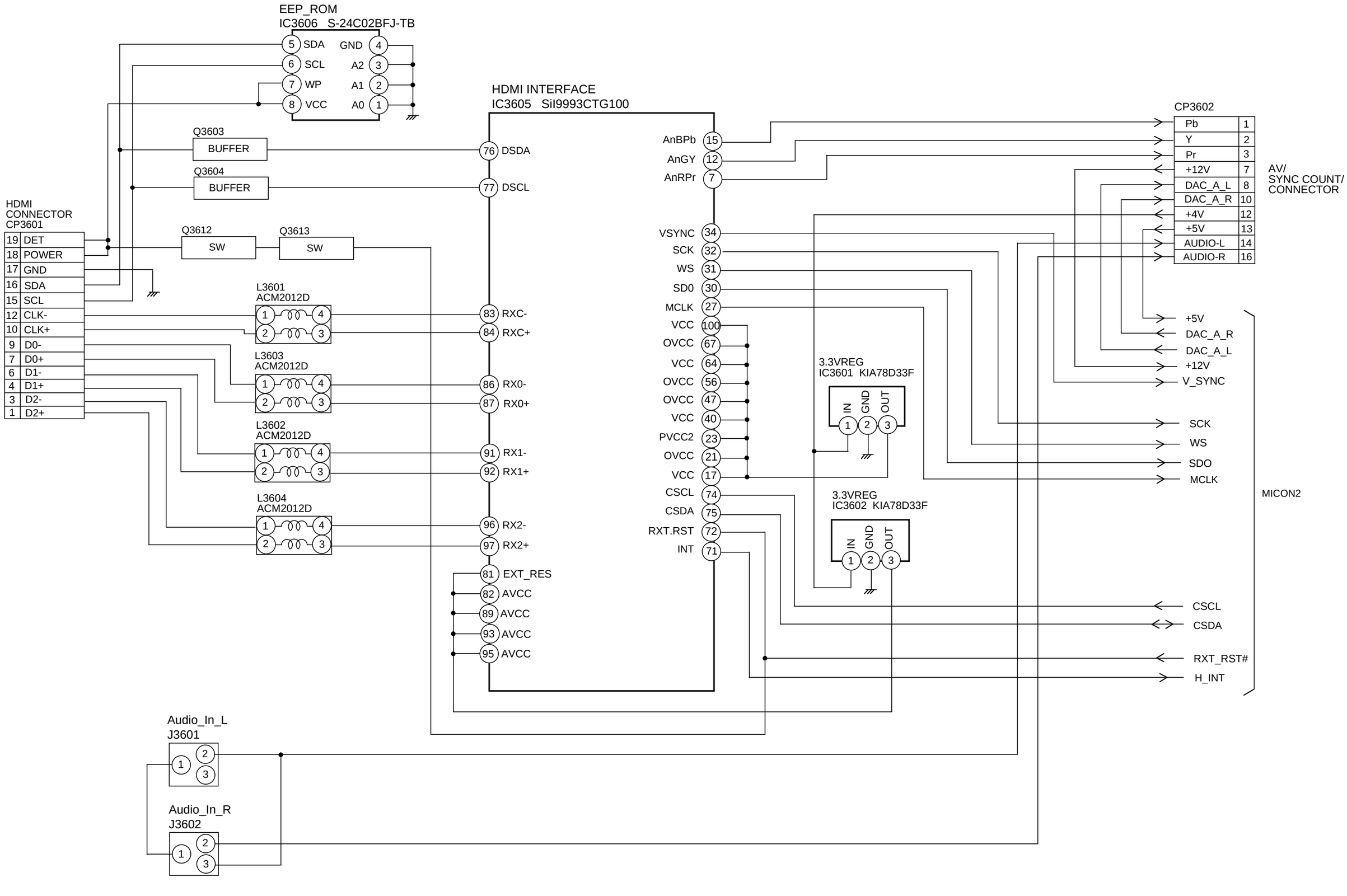
MICON1/STEREO BLOCK DIAGRAM



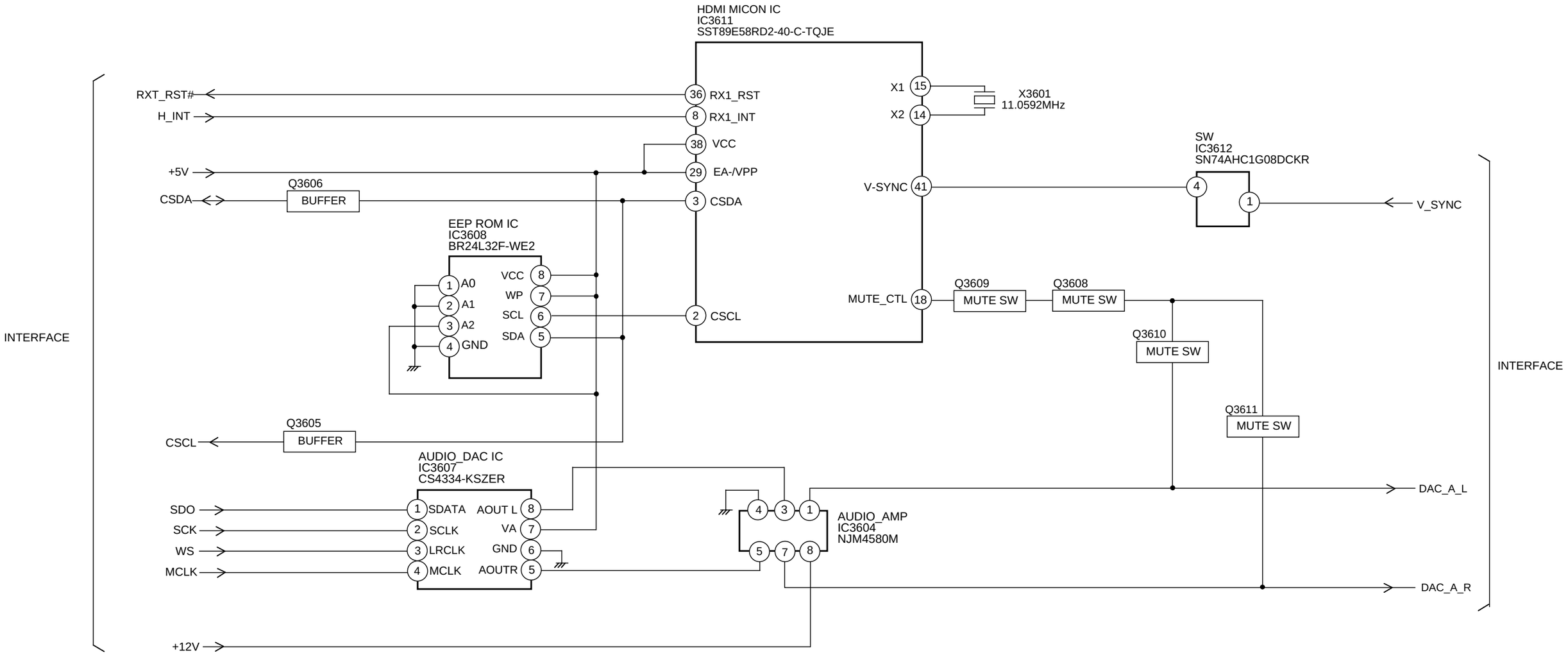
AV/SYNC COUNT/CONNECTOR BLOCK DIAGRM



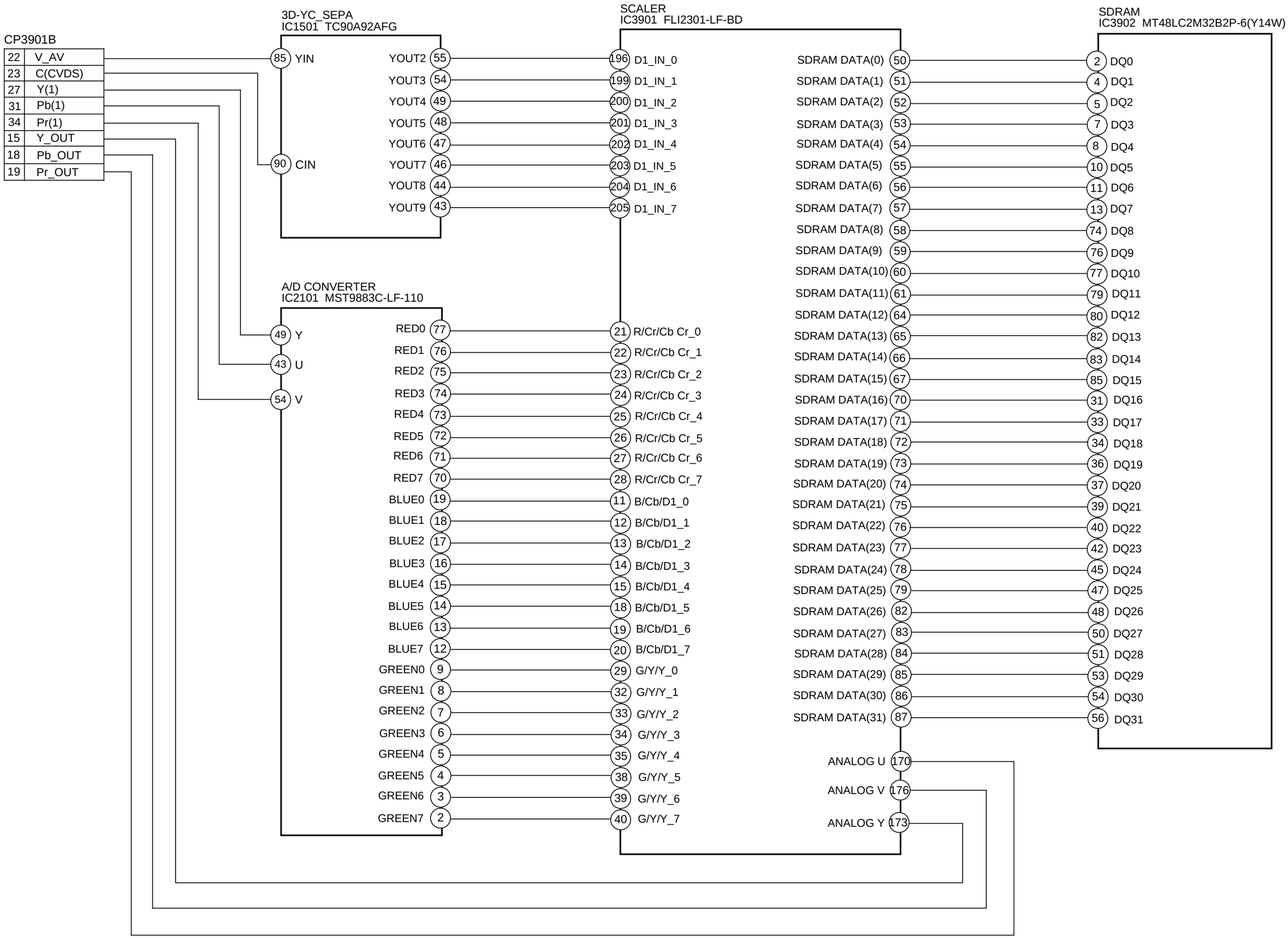
INTERFACE BLOCK DIAGRAM



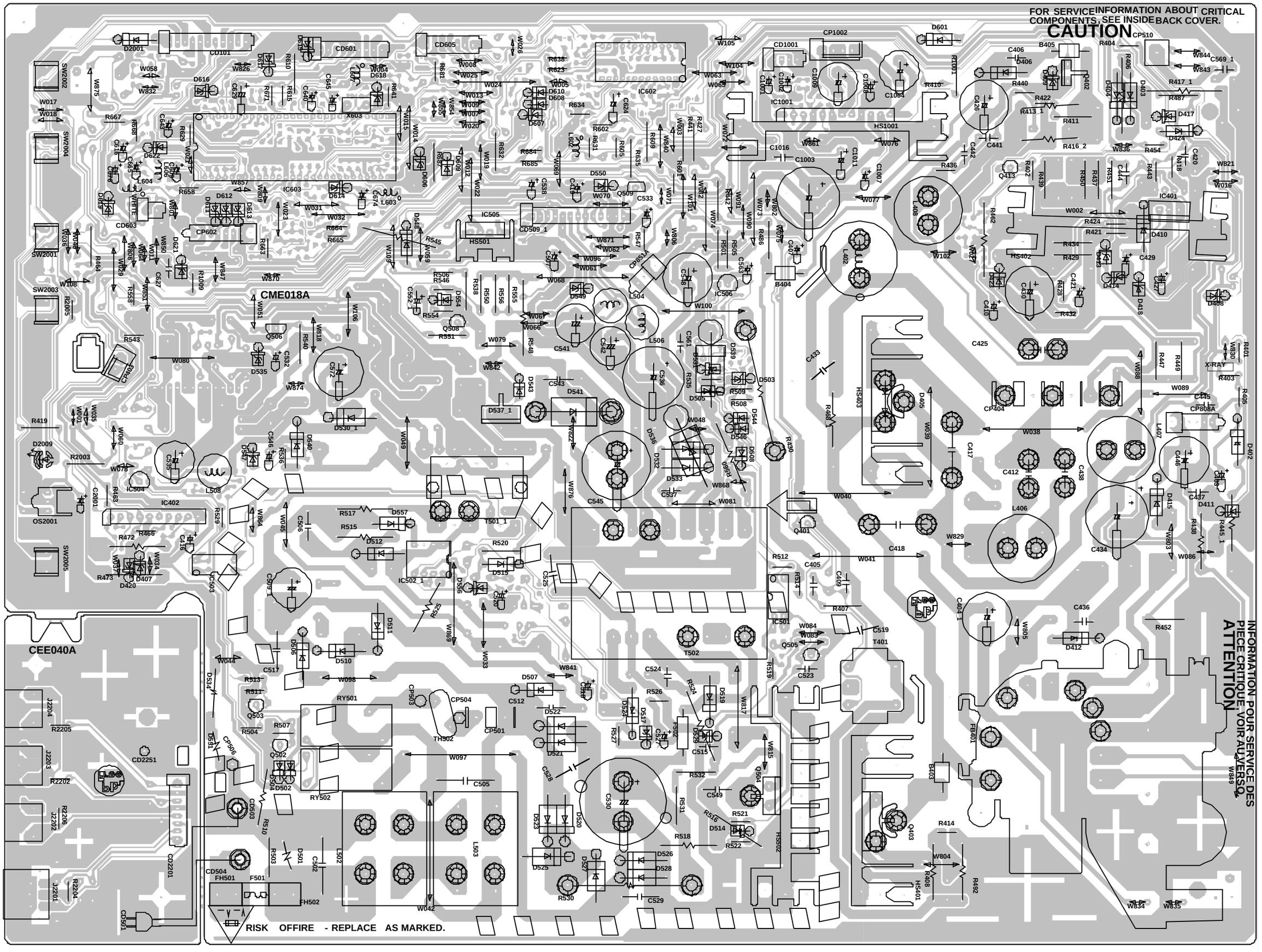
MICON2 BLOCK DIAGRAM



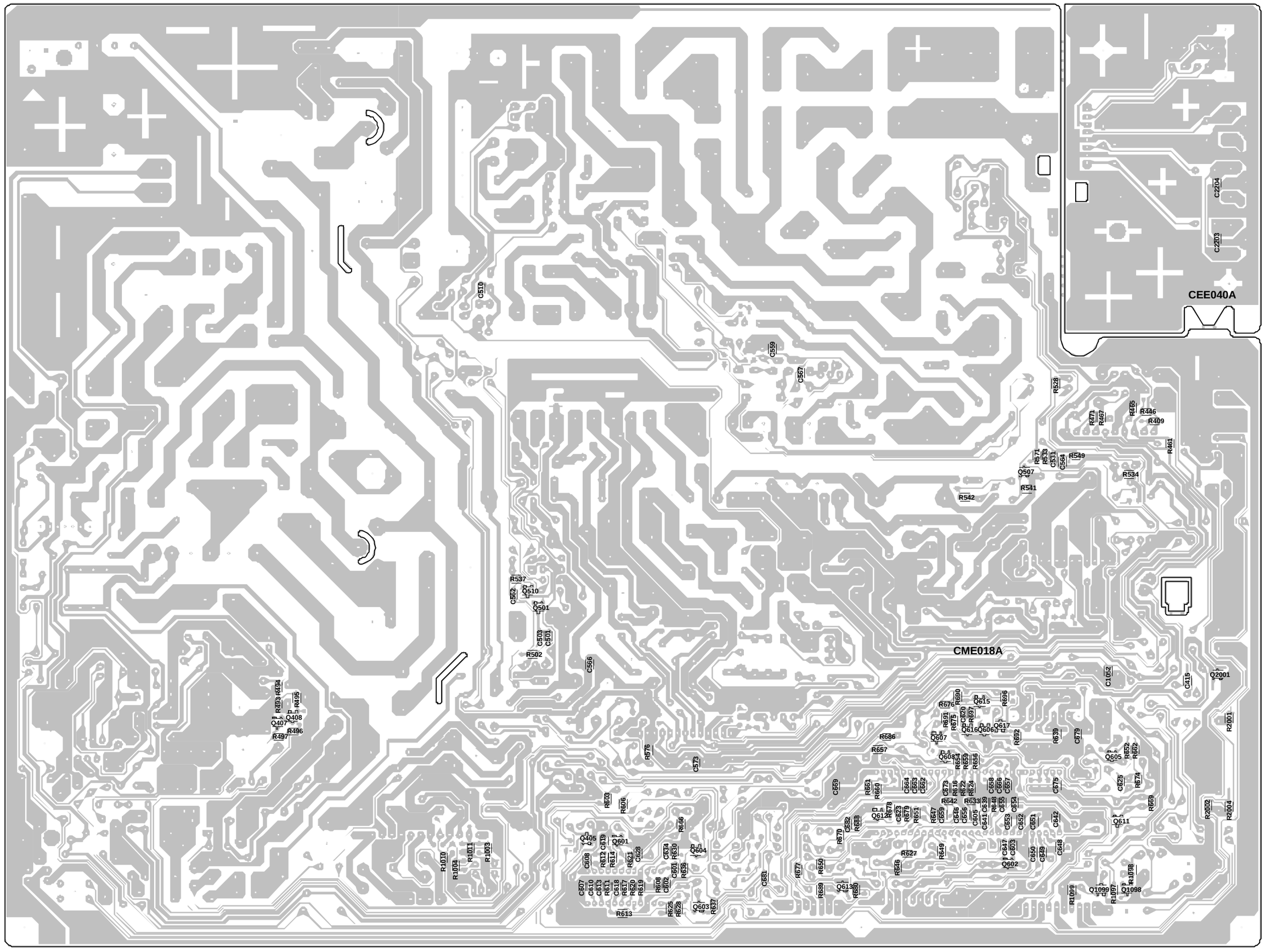
SCALER BLOCK DIAGRAM



PRINTED CIRCUIT BOARDS
MAIN/FRONT JACK (INSERTED PARTS)
SOLDER SIDE

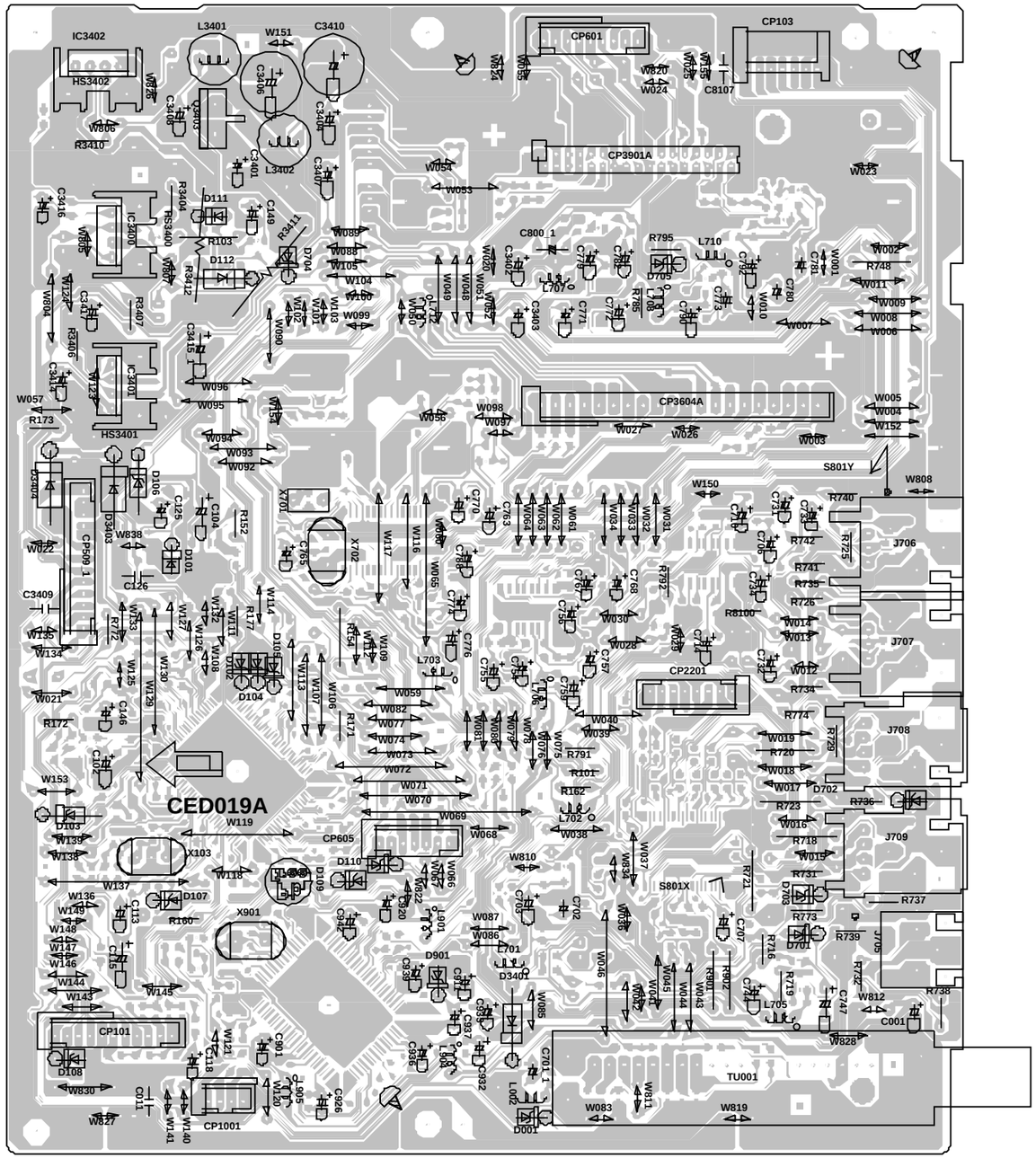


PRINTED CIRCUIT BOARDS
MAIN/FRONT JACK (CHIP MOUNTED PARTS)
SOLDER SIDE

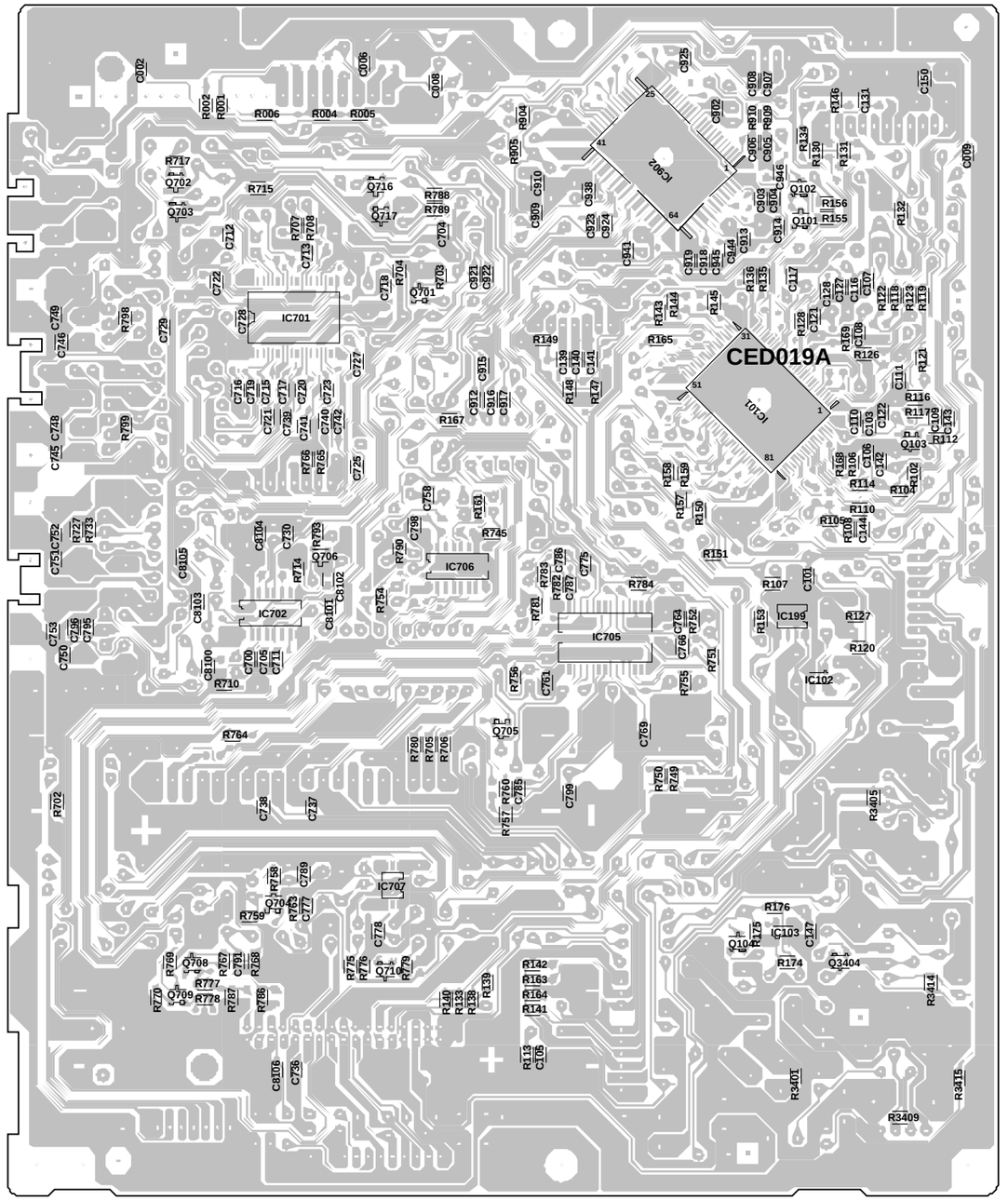


PRINTED CIRCUIT BOARDS

AV (INSERTED PARTS)
SOLDER SIDE

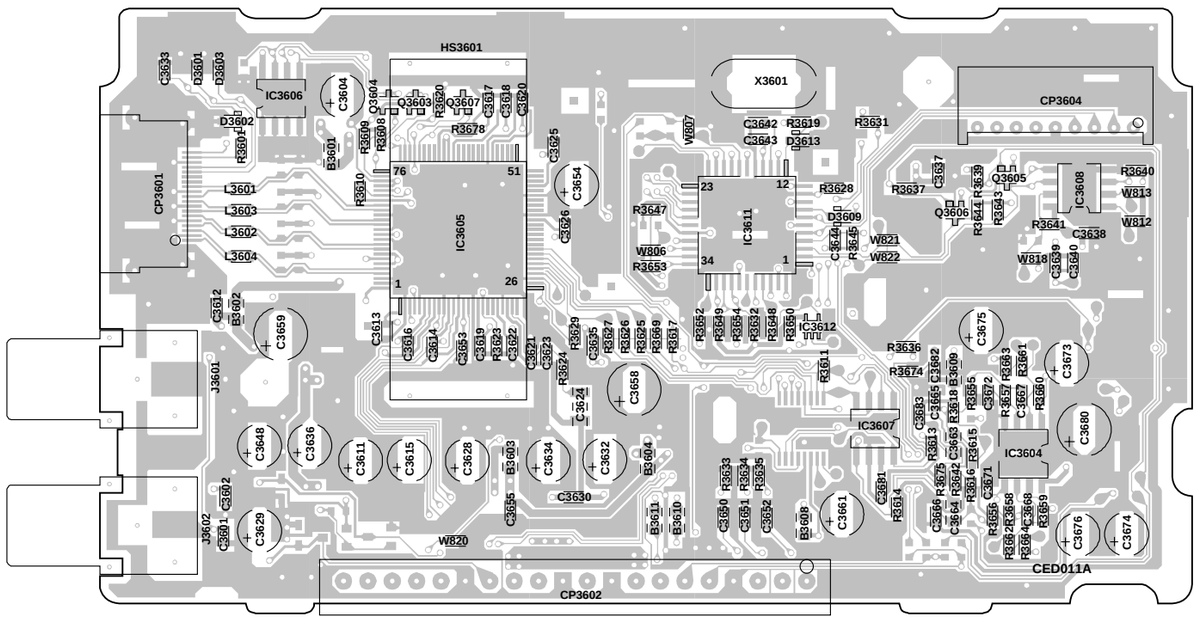


AV (CHIP MOUNTED PARTS)
SOLDER SIDE

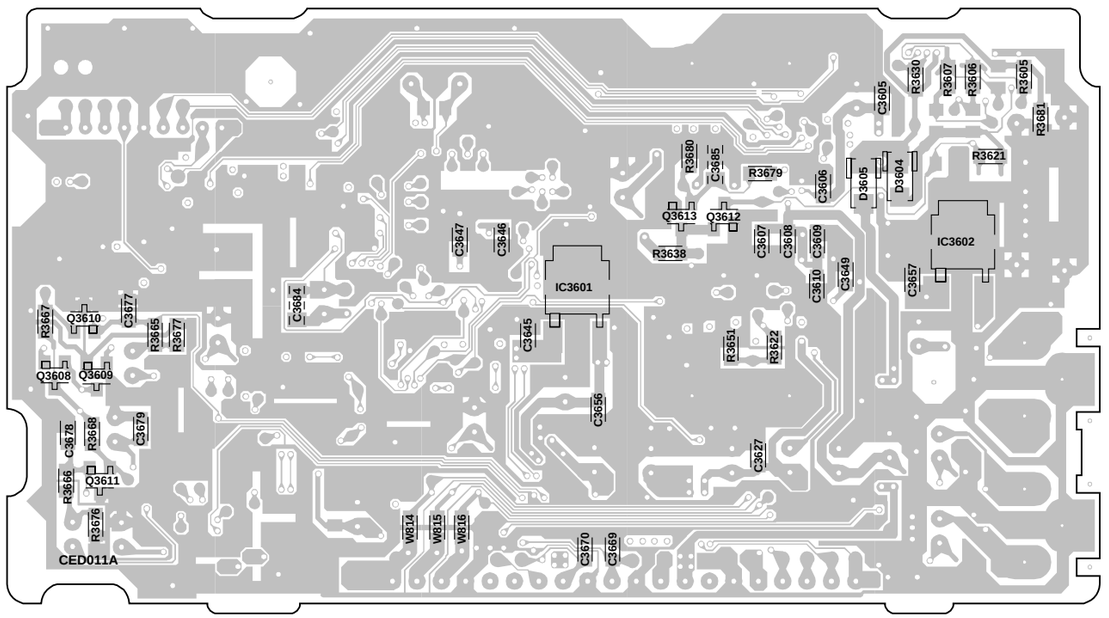


PRINTED CIRCUIT BOARDS

HD-MI (TOP SIDE)

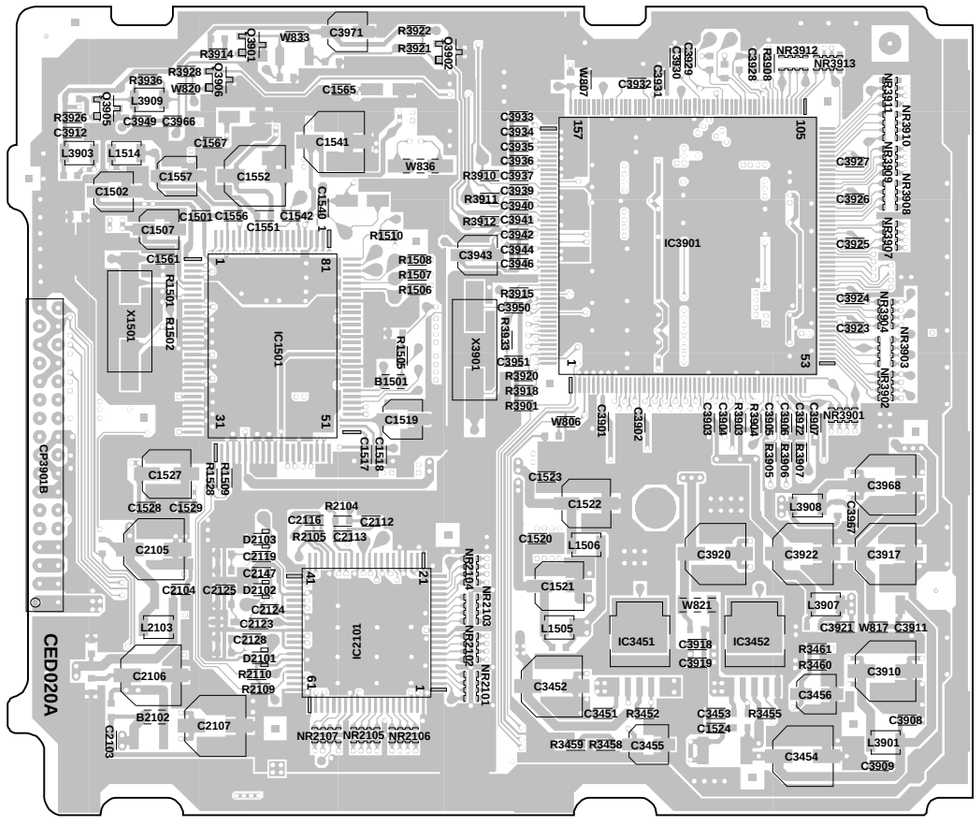


HD-MI (BOTTOM SIDE)

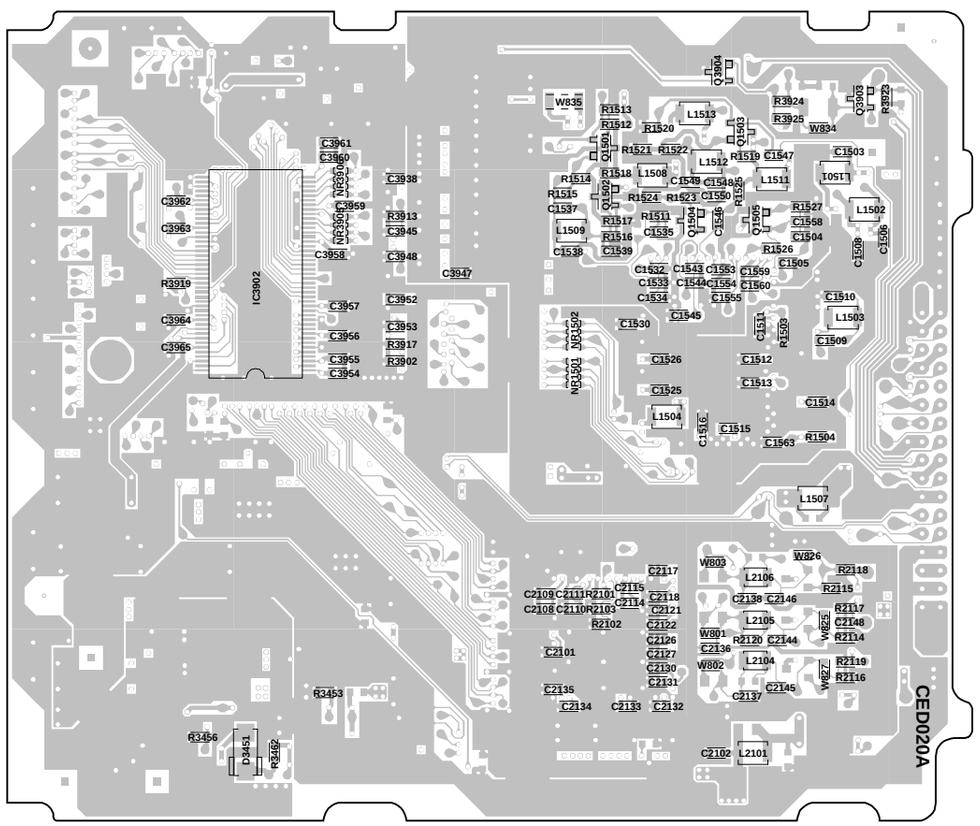


PRINTED CIRCUIT BOARDS

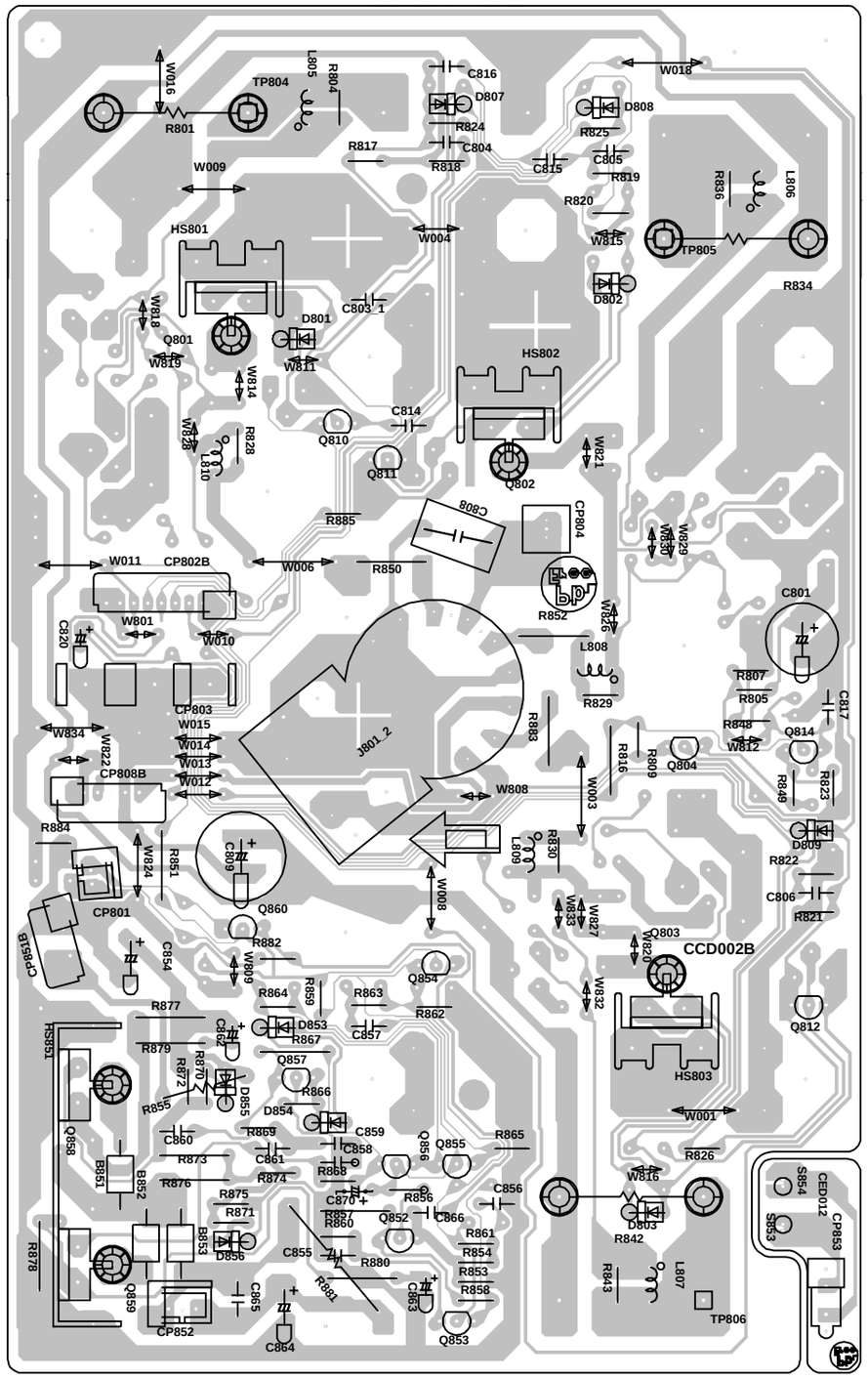
SCALER (TOP SIDE)



SCALER (BOTTOM SIDE)



CRT/VM COIL
SOLDER SIDE



CHROMA/PROGRESSIVE/PIN SCHEMATIC DIAGRAM (MAIN PCB)

FROM/TO OPERATION

PROTECT
SCL1
SDA1
Y_OUT
PB_OUT
PR_OUT

FROM/TO TV POWER

GND
P.CON+5V
UNREG+12V
P.CON+9V
GND2

FROM/TO DEFLECTION

ACL
ACL_PIN
H_DRV+B
V_F/B
EW_F/B
CENTER_DAC
EW_OUT
AFC
H.OUT

FROM/TO CRT/SVM

CP602 (CP802B) B2013H02-7P

CUT OFF(9V)	7
GND(SIGNAL)	6
R.OUT	5
G.OUT	4
B.OUT	3
CLAMP_OFF	2
P.CON+12V	1

FROM/TO CRT/SVM

CD603 (CP801) CU225201

VM COIL	1
GND	2

FROM/TO OPERATION

OSD_BLK1
OSD_BLK2
OSD_R
OSD_G
OSD_B
H_SYNC
V_SYNC

FROM/TO DEFLECTION

ABL_SW1

PROGRESSIVE IC IC603 TA1360ANG

1	DARK AREA DET FILTER	0.5
2	BPH FILTER	5.4
3	Y1 IN	1.0
4	Cb1/Pb1 IN	0.7
5	Cr1/Pr1 IN	0.7
6	Y/C GND	0
7	LIGHT AREA DET FILTER	2.0
8	Y2 IN	1.0
9	Cb2/Pb2 IN	0.7
10	Cr2/Pr2 IN	0.7
11	COLOR LIMITER	8.2
12	VSM FILTER	7.7
13	H-FREQ SW1	8.0
14	SYNC IN	1.2
15	VD IN	5.1 NC
16	HD IN	5.1 NC
17	SCP IN	0
18	CP OUT	5.0 NC
19	DEF/DAC Vcc	9.0
20	AFC FILTER	6.5
21	H VCO	5.3
22	H-FREQ SW2	3.2
23	H CURVE CORRECTION	2.8
24	FBP IN	6.4
25	DEF/DAC GND	0
26	H-OUT	2.0
27	VP OUT	5.0
28	DAC1(SYNC OUT)	5.0
56	APL FILTER	5.6
55	Y/C Vcc	9.0
54	VSM OUT	4.3
53	ABCL IN	6.4
52	Ym/P-MUTE/BLK	1.6
51	Ys1(ANALOG OSD)	3.0
50	Ys2(ANALOG OSD)	3.0
49	Ys3(ANALOG RGB)	0
48	R S/H	4.5
47	G S/H	4.5
46	B S/H	4.5
45	Ik IN	9.0
44	RGB GND	0
43	R OUT	6.0
42	G OUT	6.0
41	B OUT	6.0
40	RGB Vcc	9.0
39	ANALOG OSD R IN	0.7
38	ANALOG OSD G IN	0.7
37	ANALOG OSD B IN	0.7
36	DAC2 (ACB PLUSE)	0.5
35	ANALOG R IN	4.0
34	ANALOG G IN	4.0
33	ANALOG B IN	4.0
32	I2L GND	0
31	SDA	5.0
30	SCL	5.0
29	I2L Vdd	2.0

PIN CUSHION IC602 TA1317ANG

1	Vref	5.0
2	CENTER DAC	0.9
3	BHT IN	3.0
4	V DRIVE	0.6
5	V-DC REF	5.0 NC
6	V NF	5.0
7	Vcc	9.0
8	EW PWM	2.6
9	ANALOG GND	0
10	EW FD	6.6
11	EW FILTER	2.4
12	FBP IN	6.6
13	SDA	5.0
14	SCL	5.0
15	DIGITAL GND	0
16	H-DF OUT	NC
17	LVP IN	NC
18	V-DF OUT	NC
19	CENTER OUT	7.2
20	BLK OUT	4.8
21	Vin	5.6
22	TC FILTER	4.8
23	V RAMP FILTER	4.0
24	AGC FILTER	5.2

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCB070
CME018

G-1 G-2

DEFLECTION SCHEMATIC DIAGRAM (MAIN PCB)

TO TILT COIL
CP403 A2502WV2-2P
1 TILT_DR[+]
2 TILT_DR[-]
T1 NC W843
T2 NC W844
TILT TEST
R464 10 1/2W
C415 0.33 B
OP AMP IC402 LA6510
VSENCE1 OUT1 -VIN1 +VIN1 VEE +VIN2 -VIN2 OUT2 VSENCE2 VCC
11.5 11.9 4.2 2.9 0 4.5 4.2 11.9 11.5 13.5
R409 2.2
R446 180K
R463 15K 1/4W
R466 10K 1/4W
R467 120K
R471 2.2
C416 16V 100 YK
R472 12 1W
R473 12 1W
R461 18K
R465 3.3K
R419 1K 1/4W
D407 MTZJ15B
D420 MTZJ15B
V.OUTPUT IC401 LA78041
THERMAL PROTECTION
AMP
PUMP UP
VCC GND
1 2 3 4 5 6 7
4.0 25.0 2.0 0 12.0 25.0 4.0
C427 35V 100 YK
R418 1K 1/4W
D410 11E1-EIC
R443 680 1/4W
R424 18K +-1%
R432 18K 1/4W
R421 18K +-1%
R428 680 1/4W
C421 50V 4.7 YK
C430 25V 2200 MHE
D414 MTZJ33B
R429 2.2 1/2W
R434 2.2 1/2W
C429 35V 100 YK
D418 MTZJ33B
HS402 763WAA0175 HS33V2
R454 1K 1/4W
C420 0.047 B
D413 MTZJ33B
C444 100V 0.22 MKT
R447 820 1/2W
R449 820 1/2W
R451 1 1/2W
R448 220 3W
R439 1.5K 1/2W
R437 680 1/2W
R450 680 1/2W
R402 10 1/4W
AMP Q413 KTC3198
9.9
0.7
0.1
13
FROM/TO DY
CP404 B06B-DVS-L (LF)
6 5 NC 4 3 NC 2 1
L402 ELH5L7151N C433 2KV 820P R
R468 1K 1W
CD803 (CP803) C383037A
1 2 3
TO CRT
11 6 8 10 9
B G R
5 7 1
V801 W66MAF183X81
FROM/TO CHROMA/PROGRE/PIN
V_F/B
H.OUT
H_DRV+B
CENTER_DAC
AFC
ACL_PIN
ACL
EW_OUT
EW_F/B
C410 50V 10 YK
R494 10K
D423 1SS133
R493 47K
R495 1K
Q408 SW 2SC3052
R496 1K
Q407 SW 2SC3052
R497 1K
0.1 5.0 0 0 5.0 0
W802
T401 ETH19K208AZ
H.DRIVE Q401 2SC3328_Y(TPE6_F)
17.3 0.4 0
C409 330P B
C405 0.039 M
R407 330 1/2W
C407 50V 22 MHE
R408 0.22 1W
W804
12
1320 FL OUT Q403 2SC5904000LI
20 0
R492 101W
R414 220 1/4W
HS8V HS401 763WAA0165
B403 W5RH3.5X5X1.0
D405 FMQ-3GULF027-102
HS403 763WAA0165 HS8V
C418 1.5KV 0.0082 MPP
C417 630V 0.015 PP
W829
C412 250V 0.27 PMS
C438 250V 0.033 PMS
L406 ELC18B151LK
FROM/TO OPERATION
TILT_DRIVE
X-RAY
D424 1SS133
FROM/TO TV POWER
GND2
P.CON+5V
UNREG+12V
H_GND
GND
+B
R406 68 2W
D403 11E1-EIC
D404 11E1-EIC
R417_1 220 3W
C406 500V 220P B
D406 RGP10J-EIC
B404 W5RH3.5X5X1.0
B405 W5RH3.5X5X1.0
R416_2 2.2 1W
R413_1 2.2 1W
L408 ELC18B103LM
14
L407 ELC18B151LK
E/W SWITCHING
Q402 2SK2920(Q) 55 D 4.5 0 S
R410 1001/4W
R411 39K1/4W
R422 4.7K 1/4W
C441 100V 0.047 MMTS
R436 10K1/4W
C425 250V 3.3 PMS
C426 250V 22 YK
D409 MTZJ15B
C442 100V 0.082 MKT
R440 1K1/4W
C436 500V 0.001 B
D412 1N4937
C434 35V 2200 MHE
D411 MTZJ9.1B
R438 3.3K 1W
C437 500V 100P B
W805
W834 NC
W835 NC
PROTECT TEST
R445_1 2.2 1W
FB401 3226001F FUHT
1320 COL
203 E180
135.0 B+
NC DAF
105.0 AFC
6.2 HEATER
0 GND
NC E15
27 E25
F2 NC
F1
S
13 NC
11 NC
14 NC
12
ABL 7 13.5
TO CRT
ANORD
FOCUS 1
SCREEN
R430 1.8 10W
FROM/TO CHROMA/PROGRE/PIN
ABL_SW1
R427 56K1/4W
4.6 0 SW Q405 RT1N141C
R486 33K 1/2W
R442 22K 1/2W
R441 5.6K 1/4W
D417 MTZJ39B
R404 220K 1/4W
W840
D408 MTZJ5.6B
W830
R403 18K +-1%
R405 15K +-1%
D402 AU02A-EIC
R401 2.2K +-1%
C403 100V 22 YK
C404_1 160V 47 ED
W803
D415 AU02A-EIC
C446 250V 22 MHE
R452 270K 1/2W
C445 250V 0.01 MMTS
FROM/TO CRT/SVM
CP808A (CP808B) B2013H02-5P
180V 1
NC 2
NC 3
GND 4
HEATER 5
R487 10K1/2W
PCB070 CME018

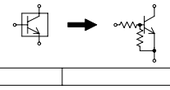
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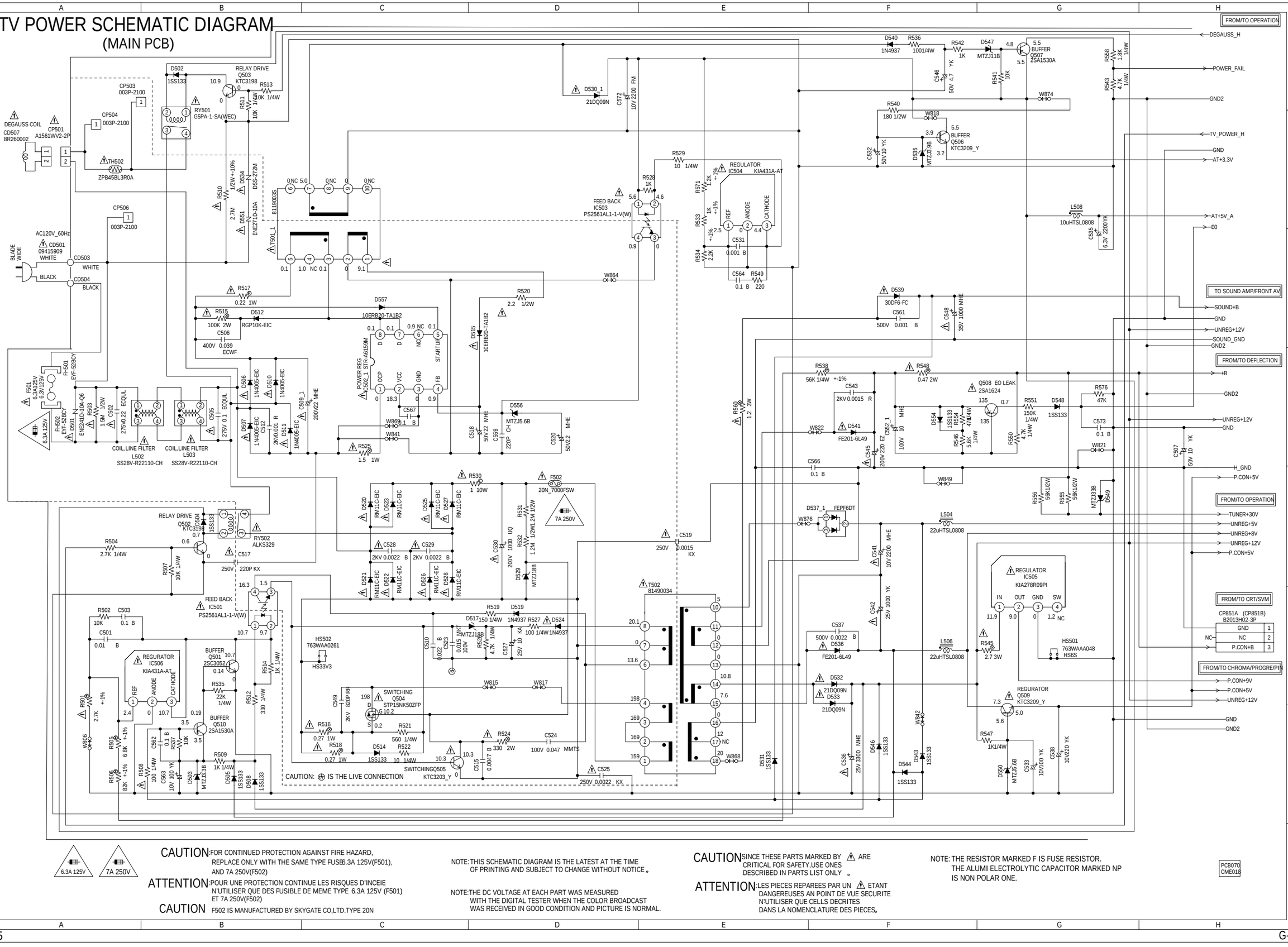
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CAUTION: DIGITAL TRANSISTOR



TV POWER SCHEMATIC DIAGRAM

(MAIN PCB)



6.3A 125V　7A 250V

CAUTION FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F501), AND 7A 250V(F502)

ATTENTION POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V (F501) ET 7A 250V(F502)

CAUTION F502 IS MANUFACTURED BY SKYGATE CO,LTD.TYPE 20N

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NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

PCB070
CME018

OPERATION SCHEMATIC DIAGRAM

(MAIN PCB)

FROM/TO REGULATOR
CD509_1 (CP509_1) CU2D2501

E0	13
GND	12
GND	11
AT+5V	10
AT+3.3V	9
UNREG+8V	8
UNREG+12V	7
UNREG+5V	6
TUNER+30V	5
POWER_FAIL	4
STANDBY_L	3
DEGAUSS_H	2
TV_POWER_H	1

L505
W5T29X7.5X19

FROM/TO TV POWER
AT+5V_A
AT+3.3V
UNREG+8V
UNREG+12V
UNREG+5V
TUNER+30V
POWER_FAIL
W871
DEGAUSS_H
TV_POWER_H
P.CON+5V
E0
GND
GND2

FROM/TO DEFLECTION
TILT_DRIVE
X-RAY

C419 22 50V YK

FROM/TO SYNC COUNT/CONNECTOR
CD601 (CP601)
CU294002

1	Y_OUT
2	GND
3	Pb_OUT
4	GND
5	Pr_OUT
6	GND
7	VD_UP → NC
8	HD_UP → NC
9	HBLK → NC

D615 MTZJ9.1B
D616 MTZJ9.1B
D617 MTZJ9.1B

FROM/TO MICON1
CD605 (CP605)
CU273302

1	H_SYNC
2	V_SYNC
3	OSD_R
4	OSD_G
5	OSD_B
6	SDA1
7	SCL1

FROM/TO CHROMA/PROGRE/PIN
SCL1
SDA1
OSD_B
OSD_G
OSD_R
V_SYNC
H_SYNC
PR_OUT
PB_OUT
Y_OUT
PROTECT
OSD_BLK1
OSD_BLK2

FROM/TO MICON1
CD101 (CP101)
C32B3303

11	OSD_BLK2
10	OSD_BLK1
9	X-RAY
8	H_CONTROL → NC
7	PROTECT
6	TILT_DRIVE
5	GND
4	AUDIO_MUTE
3	KEY_B
2	KEY_A
1	REMOCON

CP510

1	GND

003P-2100

C569_1 100P CH

W832 W875
R1098 1K
R1097 1K
MUTE_SW Q1098 2SC3052
R1099 1K
MUTE_SW Q1099 2SC3052
W808
TO SOUND AMP/FRONT AV
AUDIO_MUTE

R2001 560
R2002 2.7K
R2004 560
CH UP SW2001 EVQ21505R
VOL UP SW2002 EVQ21505R
CH DOWN SW2003 EVQ21505R
VOL DOWN SW2004 EVQ21505R
POWER SW2005 EVQ21505R

OS2001
RPM7138-WH5
B+ 5.0
GND 0
Vout 4.9

R2003 47 1/4W
C2001 25V10 KA
D2001 1JEQS04N
LED SW
Q2001 RT1N241C1-T1
0.2
4.9
POWER ON
SLR-342VCT32 D2009 RED LED
R2005 1/4W 270

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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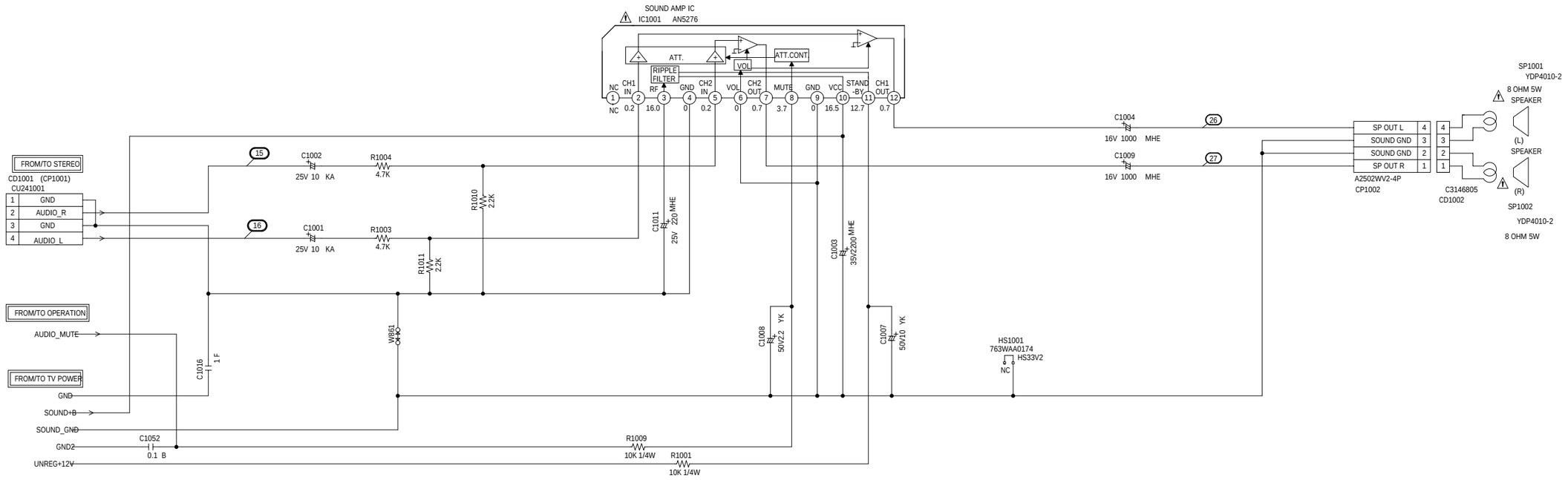
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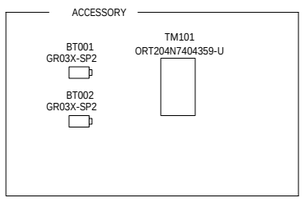
CAUTION: DIGITAL TRANSISTOR

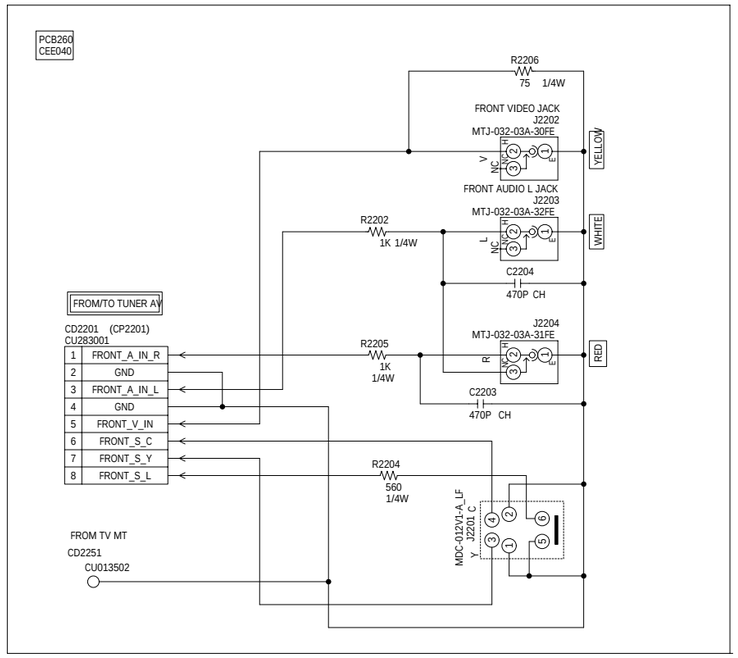
PCB070
CME018

SOUND AMP/FRONT AV SCHEMATIC DIAGRAM

(MAIN PCB)







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PCB070
CME018

MICON1 SCHEMATIC DIAGRAM (AV PCB)

EEP ROM IC 256K
IC199 AT24C256N-10SU-2.7

MICON
IC101
OEC7118A

SYSTEM RESET
IC103 PST3229NR

SYSTEM RESET
IC102 PST3229NR

RESET SW
Q104
RT1N140C

SW
Q101
2SC3052-T1

SW
Q102
2SC3052-T1

Q103
2SA1530A1
BUFFER

EEP_DATA
CP103 A2001WR2-7P

	GND	1
	SCL_EEP	2
	SDA_EEP	3
	IIC_OFF	4
NC	NC	5
	SDA1	6
	SCL1	7

FROM/TO TUNER/AV
VIDEO_MUTE
EXT_MUTE
AFT_MAIN
S_DET_3
S_DET_2
S_DET_1
AV2
SDA1
SCL1

FROM/TO STEREO
STEREO_RESET
SDA1
SCL1

FROM/TO SYNC COUNT/CONNECTOR
CVIN_MAIN
AV4
AV3
SDA2
SCL2
C_SYNC
SDA1
SCL1
3D_Y/C_RESET
SCALER_RESET

FROM/TO OPERATION
CP605 (CD605)
A2001WV2-7P

	H_SYNC	1
	V_SYNC	2
	OSD_R	3
	OSD_G	4
	OSD_B	5
	SDA1	6
	SCL1	7

CP101 (CD101)
A2001WV2-11P
FROM/TO OPERATION

	OSD_BLK2	11
	OSD_BLK1	10
	X-RAY	9
	H_CONTROL	8
	PROTECT	7
	TILT_DRIVE	6
	GND	5
	AUDIO_MUTE	4
	KEY_B	3
	KEY_A	2
	REMOCON	1

FROM/TO REGULATOR
GND
AT+5V
POWER_FAIL
AT+3.3V
STANDBY_L
TV_POWER_H
DEGAUSS_H
E0
P.CON+3.3V_GHYPER
P.CON+5V

79.S_DET_2
80.S_DET_3
81.TV POWER
82.P.CON DET.

52.EXT MUTE
51.AUDIO MUTE
50.(FLASH ADD.15)
49.(FLASH ADD.14)
48.(FLASH RESET)

99.VCC(5V)
100.CVIN_MAIN
1.V.HOLD_MAIN
2.HLF_MAIN

32.OSD R
31.SDA2
30.HDMI Tx
29.HDMI Rx

CAUTION: DIGITAL TRANSISTOR

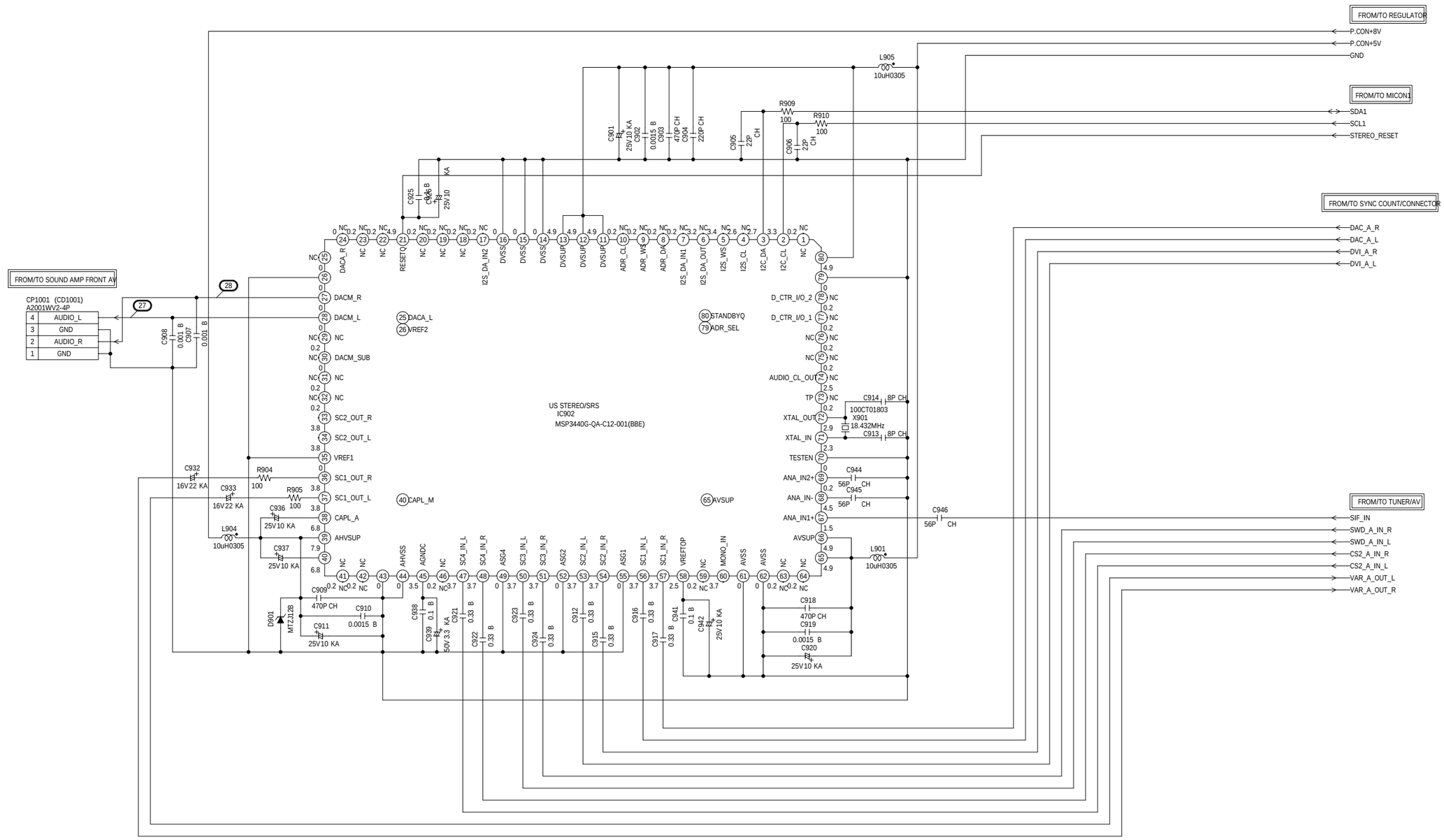
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PCBD20
CED019

STEREO SCHEMATIC DIAGRAM

(AV PCB)



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PCBD20
CED019

TUNER/AV SCHEMATIC DIAGRAM (AV PCB)

TU001 115-V-KA35AR

IC702 NJM2584AM(TE1) YUV SW

IC701 AV_SW AN158538-E1

FROM/TO SYNC COUNT/CONNECTOR
SWD_U
SWD_V
SWD_Y
C_OUT
Y_OUT

FROM/TO MICON1
AFT_MAIN
AV2
VIDEO_MUTE
S_DET_1
S_DET_2
S_DET_3
EXT_MUTE
SCL1
SDA1

FROM/TO REGULATOR
TUNER+30V
P.CON+5V
P.CON+9V
GND

FROM/TO STEREO
SIF_IN
VAR_A_OUT_L
VAR_A_OUT_R
CS2_A_IN_L
CS2_A_IN_R
SWD_A_IN_R
SWD_A_IN_L

FROM/TO SOUND AMP FRONT AV

CP2201 (CD2201) A2001WV2-8P

FRONT_A_IN_R	1
GND	2
FRONT_A_IN_L	3
GND	4
FRONT_V_IN	5
FRONT_S_C	6
FRONT_S_Y	7
FRONT_S_L	8

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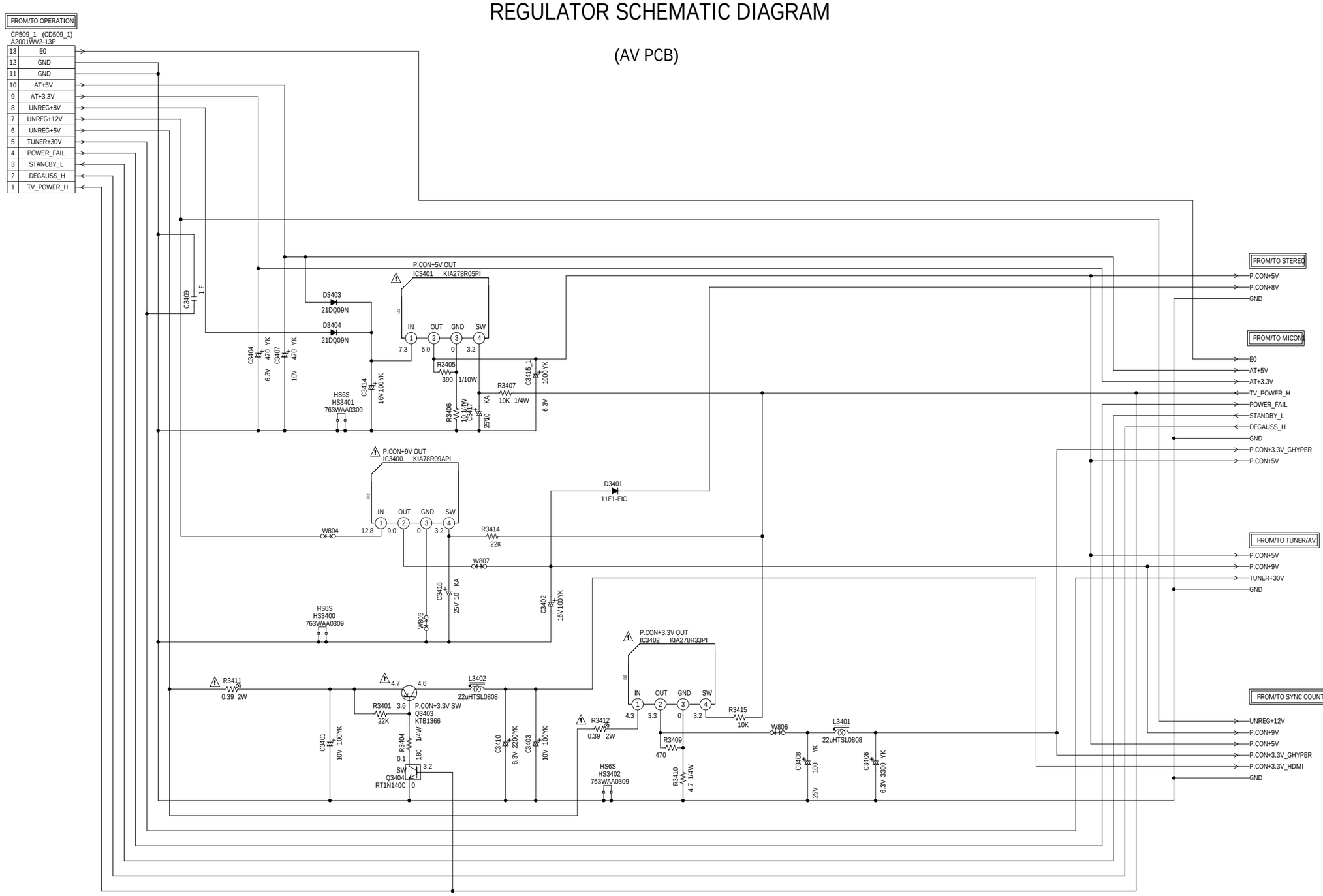
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CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

PCBD20 CED019

REGULATOR SCHEMATIC DIAGRAM

(AV PCB)



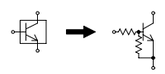
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CAUTION: DIGITAL TRANSISTOR



PCBD20
CED019

SYNC COUNT/CONECTOR SCHEMATIC DIAGRAM

(AV PCB)

FROM/TO MICON1

3D_Y/C_RESET

SCALER_RESET

FROM/TO OPERATION

CP601 (CD601)
A2001WV2-9P

1	Y_OUT
2	GND
3	Pb_OUT
4	GND
5	Pr_OUT
6	GND
7	VD_UP
8	HD_UP
9	HBLK

W820

FROM/TO INTERFACE

CP3604A (CP3602)
IMSA-9130B-20

1	Pb
2	Y
3	Pr
4	GND
5	TX
6	RX
7	+12V
8	DAC_A_L
9	GND
10	DAC_A_R
11	GND
12	+4V
13	+5V
14	AUDIO_L
15	GND
16	AUDIO_R
17	GND
18	HDMI_1/2
19	V-SYNC
20	H-SYNC

R706 100, R705 100, R780 100, C737, C738 0.1 B, 0.1 B

FROM/TO REGULATOR

P.CON+3.3V_HDMI
P.CON+3.3V_GHYPER
P.CON+9V
P.CON+5V
GND
UNREG+12V

FROM/TO STEREO

DVI_A_R
DVI_A_L
DAC_A_R
DAC_A_L

FROM/TO MICON1

CVIN_MAIN
AV3
AV4
SDA1
SCL1
SDA2
SCL2
C_SYNC

FROM TUNER/AV

SWD_U
SWD_V
SWD_Y
Y_OUT
C_OUT

YUV SW
IC706 NJM2584AM(TE1)

C756 25V10 KA, C798 10P CH, C757 25V10 KA, C758 0.01 B, L706 47uH 0305, C759 16V47 YK, C754 25V10 KA, C755 25V10 KA, R745 1M, C767 25V10 KA, R754 1M, C788 50V0.22 KA

Y_SW707 NJM2533V

C771 50V10 YK, C772 25V10 KA, C782 16V22 KA, C778 0.01 B, C779 16V47YK, L707 47uH0305, R775 15K, R776 22K, R779 470, BUFFER Q710 2SC3052-T1, D704 MTZJ6.8B, S801Y

L708 47uH 0305, D705 MTZJ11B, C736 0.1 B, C8106 0.1 B

R758 6.8K, C773 10V22, AMP Q704 KANP 2SC3052-T1, R759 15K, R763 10 1/4W, C777 39P CH, R785 470, C789 0.01 B, C790 25V100YK

C800_1 16V47 KANP

R781 100, R795 10 1/4W

L712 100uH0305, C761 0.01 B, C763 25V 100 YK, R755 470, C770 50V1 KA, R756 6.8K, X701 CSBLA503KEZ530-B0, C769 0.01 B, C774 50V0.1 KA, C785 0.1 B, BUFFER Q705 2SC3052-T1, R764 10K, R760 1K, R757 1K, R749 100, R750 100

L710 47uH 0305, R769 10K, C781 16V10 KANP, AMP Q709 2SC3052-T1, C791 0.01 B, C792 25V 100 YK, R778 10, R770 12K, R786 470

R767 10K, C780 16V10 KANP, AMP Q708 2SC3052-T1, R777 10, R768 12K, R787 470

L703 47uH 0305, R748 4.7K 1/4W, R751 4.7K, R752 33K, C765 50V 0.22 KA, C766 X702 3.579545MHz 12P CH 100CT3R536, C764 0.0022 B, C775 0.01 B, C776 10V100YK, C786 0.1 B, C787 0.01 B, C788 0.1 B, R784 10K, R782 100, R783 100, R772 1K 1/4W, C799 330P B

C8107 0.001 B, W824, W826

FROM/TO IO/REGULATOR

CP3901A (CP3901B)
79107-7016

P.CON+5V	1
P.CON+5V	2
GND	3
GND	4
P.CON+3.3V	5
P.CON+3.3V	6
GND	7
GND	8
3D_Y/C-RESET	9
SCL	10
SOFT RESET	11
SDA	12
GND	13
GND	14
Y_OUT	15
GND	16
GND	17
Pb_OUT	18
Pr_OUT	19
GND	20
VSYNC	21
V_AV	22
C(CVBS)	23
HSYNC	24
GND	25
HD_UP	26
Y(1)	27
GND	28
GND	29
VD_UP	30
Pb(1)	31
GND	32
GND	33
Pr(1)	34

PCBD2C
CED019

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CRT/SVM SCHEMATIC DIAGRAM (CRT PCB)

FROM/TO CHROMA/PROGRE/PIN

CP802B (CP602)
52147-0710

7	CUT_OFF(9V)
6	GND(SIGNAL)
5	R.OUT
4	G.OUT
3	B.OUT
2	CLAMP_OFF
1	P.CON+12V

FROM/TO TV POWER

CP851B (CP851A)
52147-0310

GND	1
NC	2
P.CON+B	3

PCB110
CCD002

FROM/TO DEFLECTION

CP808B (CP808A)
52147-0510

HEATER	5
GND	4
NC	3
NC	2
180V	1

CP803 (CD803)
A2361WV2-3P

GND	3
GND	2
GND	1

FOCUS 1

CP804
0582-2100
SCREEN 1

FROM/TO CHROMA/PROGRE/PIN

CP801(CD803)
A2001WV2-2P

GND	2
VM COIL	1

CP851B (CP851A)
52147-0310

GND	1
NC	2
P.CON+B	3

FROM/TO VM COIL

CP852 (CP853)
A2001WV2-3P

VM1	1
NC	2
VM2	3

(VM COIL PCB)

PCBD80
CED012

FROM/TO CRT/SVM

CP853 (CP852)
B2013H02-3P

CD852_1
CU232001

FROM/TO VM COIL

S853

S854

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

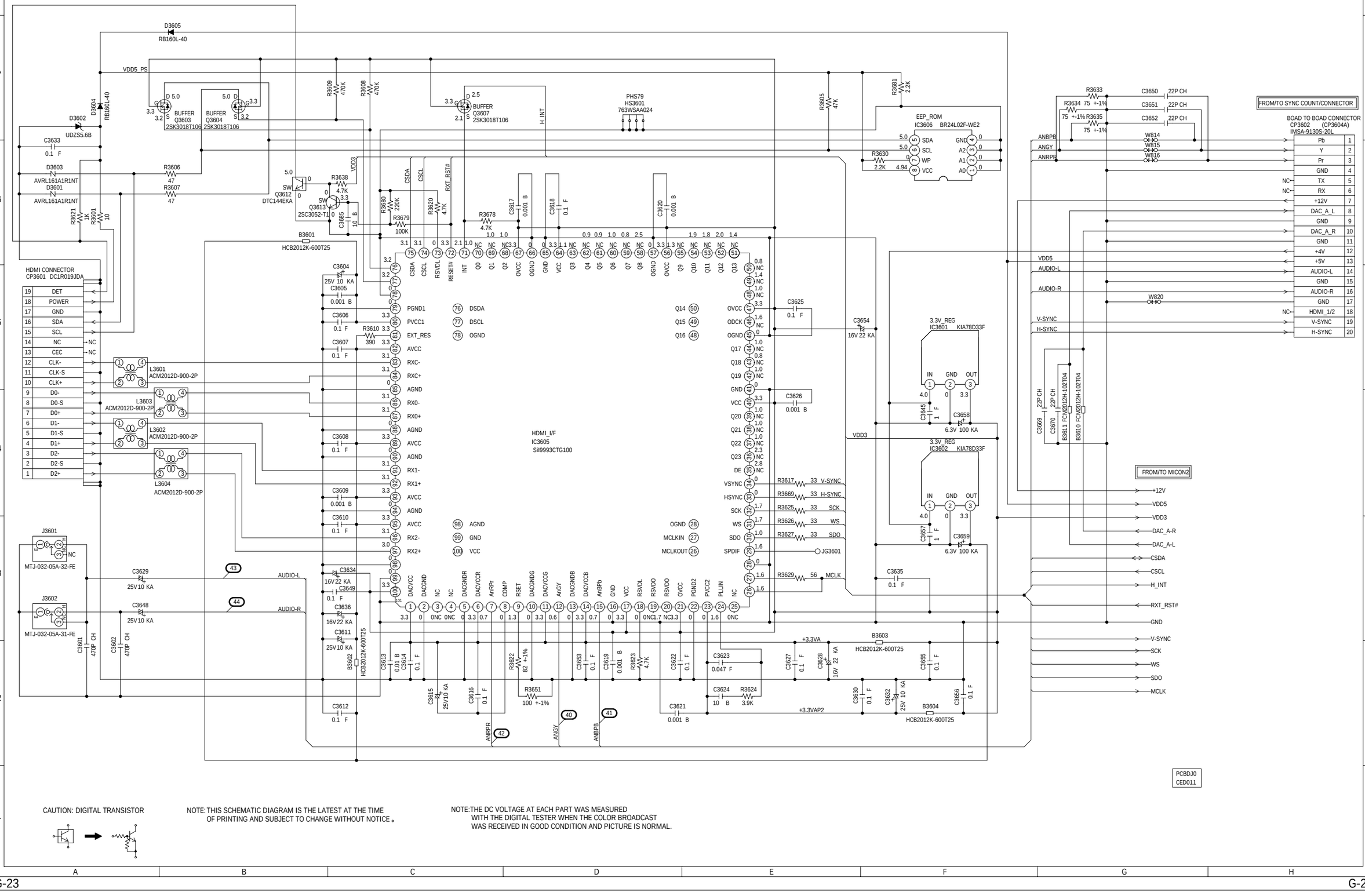
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION:SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

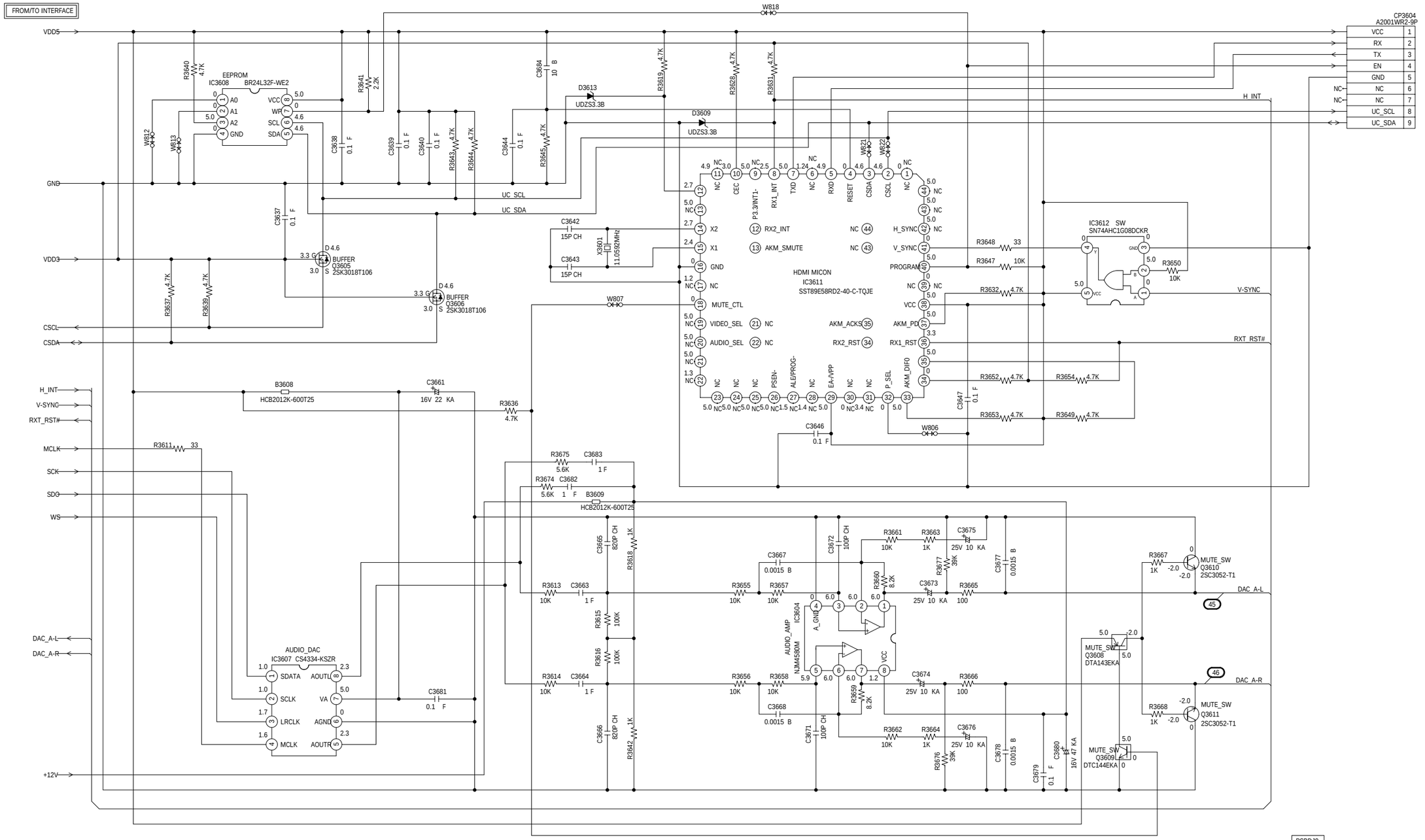
INTERFACE SCHEMATIC DIAGRAM

(HD-MI PCB)

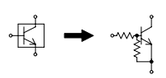


MICON2 SCHEMATIC DIAGRAM

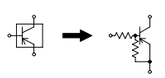
(HD-MI PCB)



CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR

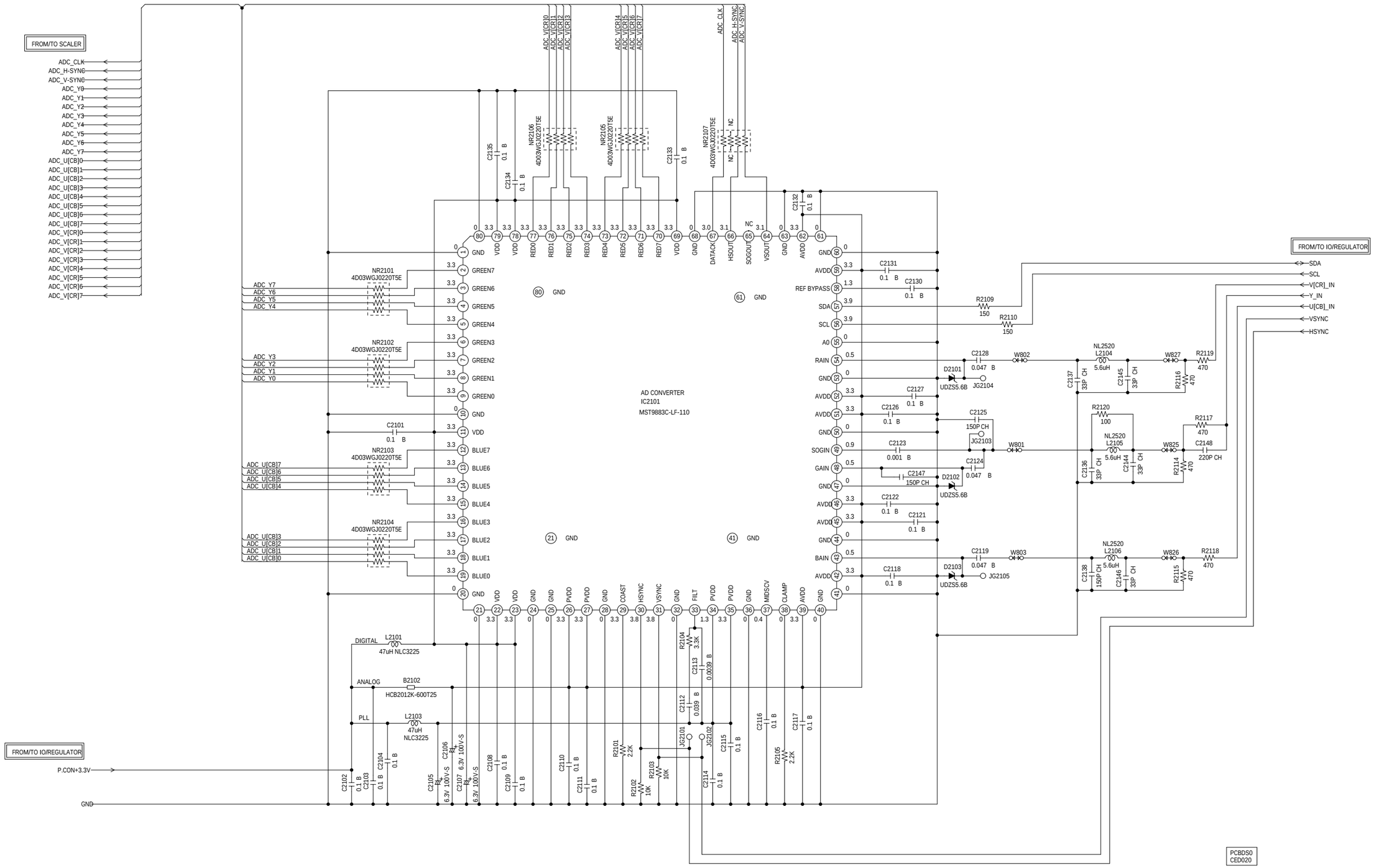


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ANALOG/DIGITAL CONVERTER SCHEMATIC DIAGRAM

(SCALER PCB)

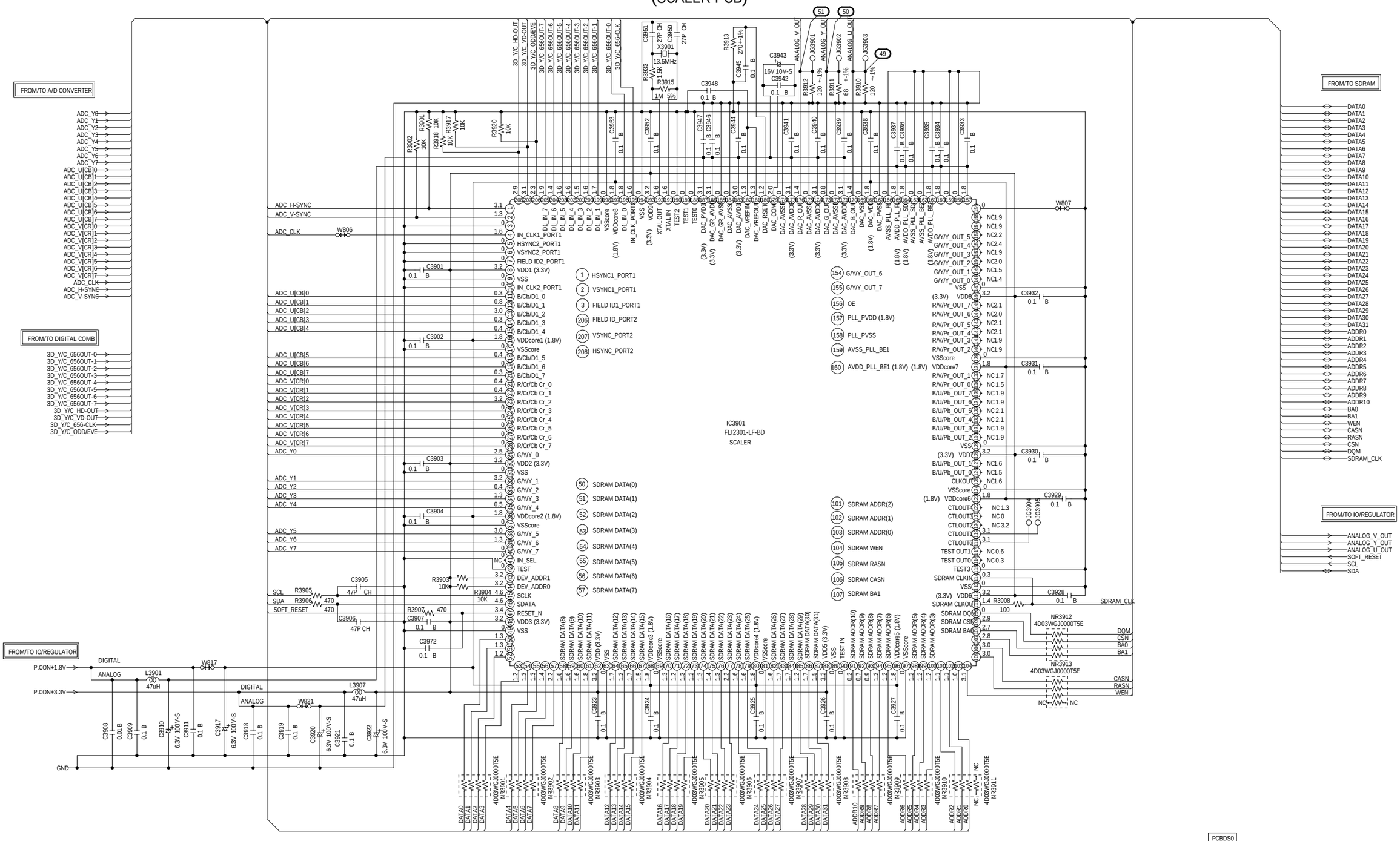


NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

SCALER SCHEMATIC DIAGRAM

(SCALER PCB)



NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

DIGITAL COMB SCHEMATIC DIAGRAM

(SCALER PCB)

FROM/TO IO/REGULATOR

P.CON+5V
P.CON+3.3V
P.CON+1.5V
P.CON+2.5V

L1507 10uH
L1506 10uH
L1505 10uH
L1504 47uH

C1527 10V 47 V-S
C1528 0.01 B
C1529 0.01 B
C1520 0.01 B
C1521 10V 47 V-S
C1522 10V 47 V-S
C1523 0.01 B
C1524 0.01 B
C1530 0.01 B
C1526 0.01 B
C1525 0.01 B
C1518 0.01 B
C1519 16V 10 V-S
C1517 0.01 B

FROM/TO SCALER

R1508 100 — 3D_Y/C_ODD/EVE
R1507 100 — 3D_Y/C_VD-OUT
R1506 100 — 3D_Y/C_HD-OUT
R1505 180 — 3D_Y/C_656-CLK

B1501 HCB2012K-600T25

NR1502 4D03WGJ0101T5E
3D_Y/C_656OUT-0
3D_Y/C_656OUT-1
3D_Y/C_656OUT-2
3D_Y/C_656OUT-3

NR1501 4D03WGJ0101T5E
3D_Y/C_656OUT-4
3D_Y/C_656OUT-5
3D_Y/C_656OUT-6
3D_Y/C_656OUT-7

JG1505 JG1506 JG1507 JG1503 JG1504 JG1502 JG1501

R1510 560
R1511 18K
R1518 1.5K
R1525 1.5K

C1565 1 B
L1508 15uH
R1512 2.7K
R1513 8.2K
R1514 1K
R1515 680
R1516 180
R1517 560
C1537 15P CH
L1509 15uH
C1538 27P CH
C1539 120P CH
W836
BUFFER Q1501 2SC3052-T1
BUFFER Q1502 2SA1530A1
C1540 0.47 B
C1535 100P CH
W835
C1541 6.3V 100 V-S
C1542 0.1 B
C1543 0.01 B
C1544 0.01 B
C1545 0.01 B
L1513 22uH
C1552 6.3V 100 V-S
C1551 0.1 B
C1553 0.01 B
C1554 0.01 B
C1555 0.01 B
L1514 33uH
C1556 0.1 B
C1557 6.3V 22 V-S
BUFFER Q1505 2SC3052-T1
C1559 0.01 B
C1560 0.01 B
C1504 0.01 B
R1526 1.5K
R1527 1.2K
C1558 4P CH

C1532 0.01 B
C1533 0.01 B
C1534 0.01 B

62	VRMYAD	0.9 / 1.7 / 1.2
63	VSSYAD	0
64	YIN(CVBS)	1.2
65	VDDYAD(2.5V)	2.4
66	VRBYAD	0.7
67	BIASACAD	0.8
68	VRTCAD	1.7
69	CIN	1.2
70	VDDCAD(2.5V)	2.4
71	CR IN	1.2
72	VSSCAD	0
73	CB IN	1.2
74	VRBCAD	0.7
75	VDDDA(2.5V)	2.5
76	DAOUT	2.0 / 0
77	VSSDA	

79	VB1 READY	
80	VCLAMPP	
81	BIASYAD	
82	VRTYAD	

3D-Y/C_SEPA
IC1501
TC90A92AFG

1	VDDPLL(2.5V)	1.2
2	PLL IN	0
99	BIASDA	1.6
100	VREFDA	2.3

3	VCOFIL	2.5
4	VSSPLL	1.2
5	VDDXO(3.3V)	0
6	XOIN	3.2
7	XOOUT	1.6
8	VSSXO	1.6
9	BUSSEL	0
10	DVDD1(1.5V)	1.5
11	DIN9	0
12	DIN8	0
13	DIN7	0
14	DVSS12	0
15	DIN6	0
16	DIN5	0
17	DVDD2(1.5V)	1.5
18	DIN4	0
19	DIN3	0
20	VSSRAM1	1.5
21	VDDRAM1(1.5V)	0
22	DIN2	0
23	DIN1	0
24	VDDIO1(3.3V)	3.2
25	DIN0	0
26	CC141N	0
27	VSSIO1	0
28	TEST IN	0
29		0
30		3.4

29	TESTM0	
30	RESET	
31	SDA	
32	SCL	

49	YOUT4	0
50	VSSRAM2	1.6
51	VDDRAM2(1.5V)	1.5
52	VDDRAMD1	1.6
53	VDDRAMD1(2.5V)	1.2
54	YOUT3	0
55	YOUT2	1.5
56	YOUT1	1.9
57	YOUT0	3.2
58	CKOUT	0
59	DVDD4(1.5V)	1.6
60	COUT0	0
61	COUT1	1.5
62	DVSS4	0
63	COUT2	0
64	VDDIO3(3.3V)	3.2
65	COUT3	0
66	COUT4	0
67	VSSIO3	0
68	COUT5	0
69	COUT6	0
70	DVDD5(1.5V)	1.5
71	COUT7	0
72	COUT8	0
73	DVSS5	0
74	COUT9	0
75	HDOUT	3.2
76	VDOUT	2.9
77	OEPK	3.2
78	UVFLAG	2.3
79		1.6
80		0
81		1.2

49	YOUT5	1.5
48	YOUT6	1.6
47	YOUT7	1.2
46	VSSIO2	0
45	YOUT8	1.5
44	YOUT9	1.9
43	VDDIO2(3.3V)	3.2
42	TESTM6	0
41	TESTM5	0
40	DVSS3	0
39	CSYNC IN	0
38	TESTM4	0
37	DVDD3(3.3V)	1.5
36	TESTM3	0
35	TESTM2	0
34	TESTM1	0
33		4.6
32		4.6
31		

C15160.01 B
C15150.01 B

R1509 100 — SCL
R1528 100 — SDA
3D_Y/C-RESET

R1504 470

C1563 0.01 B

FROM/TO IO/REGULATOR

C_IN
Y/CVBS_IN

C1567 1 B
L1511 15uH
R1519 2.7K
R1520 8.2K
R1521 1K
R1522 680
C1548 15P CH
L1512 15uH
C1547 0.1 B
C1546 0.01 B
C1549 27P CH
C1550 390PCH
R1523 180
R1524 560
BUFFER Q1503 2SC3052-T1
BUFFER Q1504 2SA1530A1

C1501 0.1 B
C1502 6.3V
L1501 33uH
C1503 0.01 B
L1502 470uH
C1507 16VDV-S
C1508 0.01 B
C1510 0.001 B
C1506 0.01 B
C1511 0.01 B
C1512 0.01 B
C1513 0.01 B
C1514 0.01 B
R1501 270K
X1501 42MHz
C1561 22P CH
L1503 1.5uH
C1509 18P CH
R1502 100
R1503 3K

GND

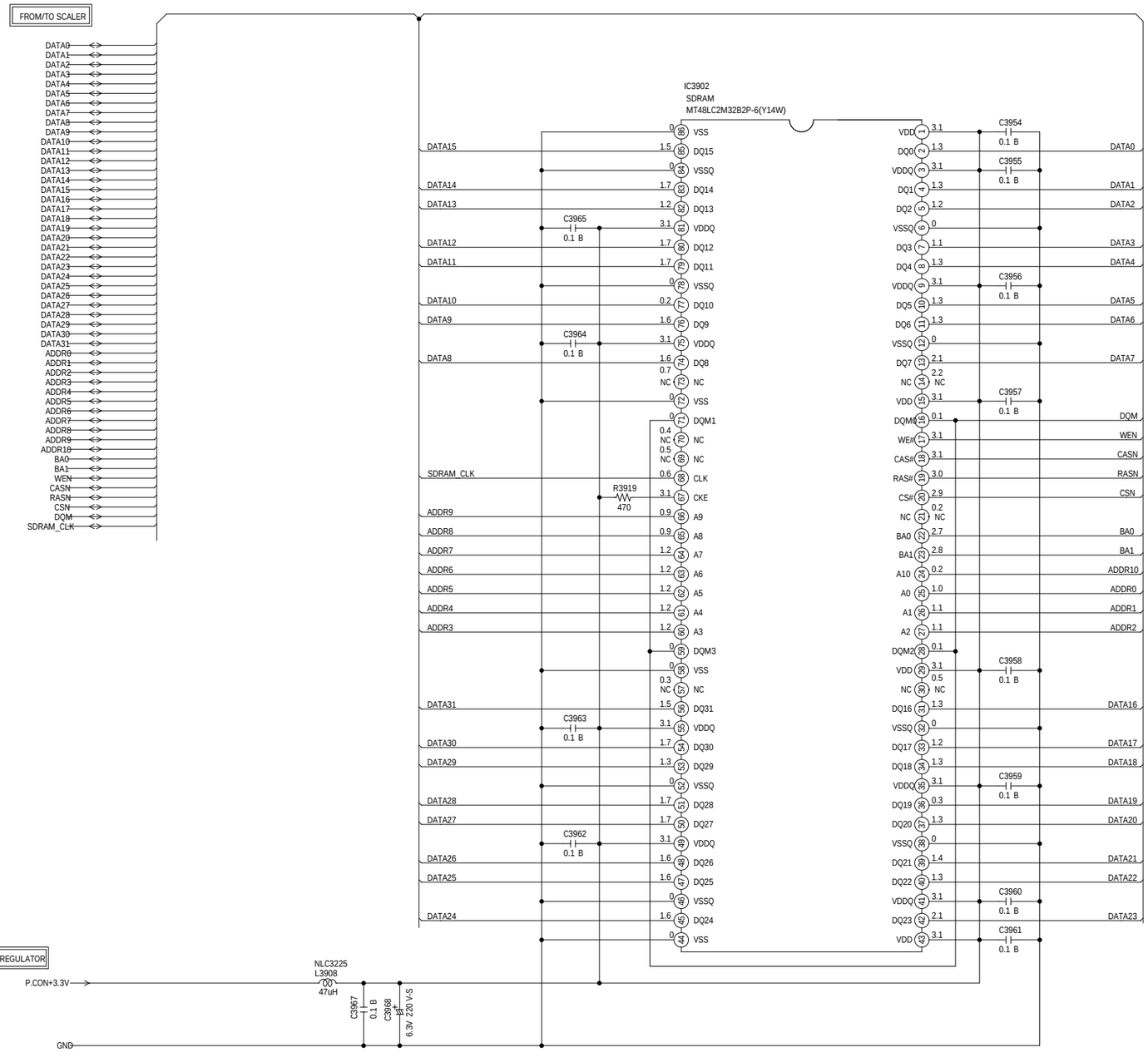
PCBDS0
CED020

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

SDRAM SCHEMATIC DIAGRAM

(SCALER PCB)



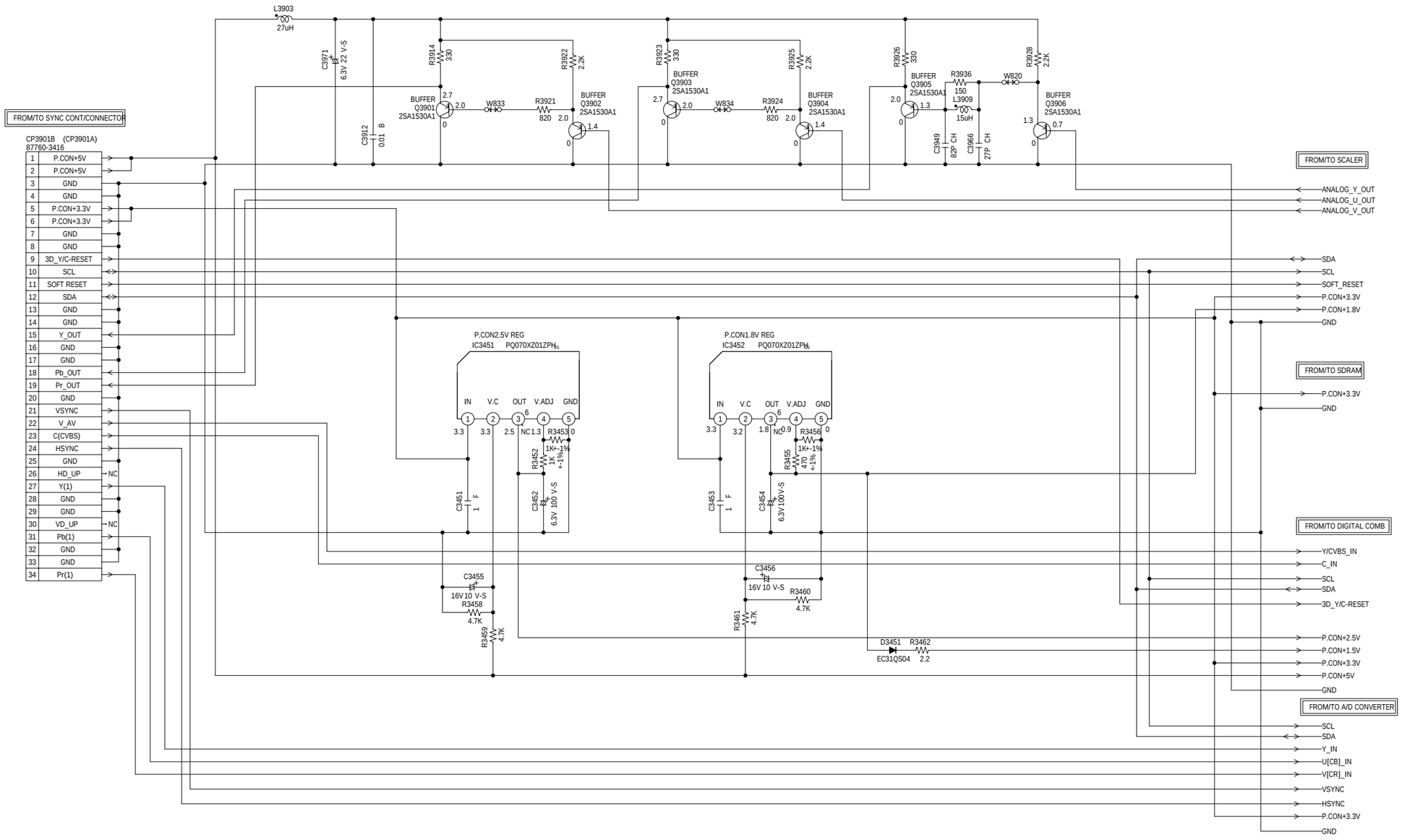
PCBDS0
CED020

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

IN//OUT/REGULATOR SCHEMATIC DIAGRAM

(SCALER PCB)



NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

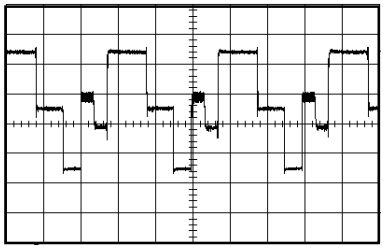
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

WAVEFORMS

CHROMA/PROGRESSIVE/ PIN CUSHION

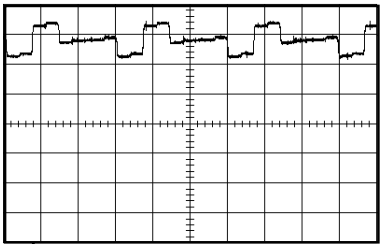
10µs
1.0V

①



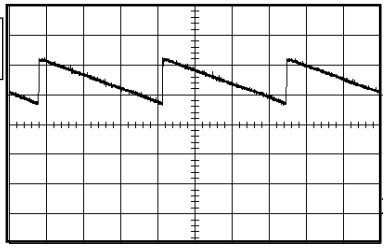
10µs
0.5V

⑥



5ms
1.0V

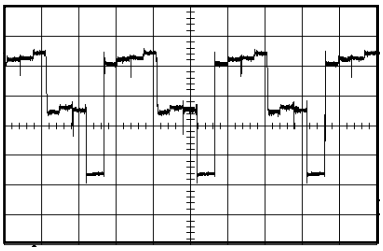
⑪



DEFLECTION

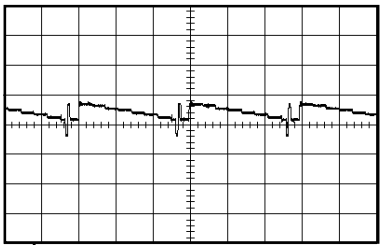
10µs
1.0V

②



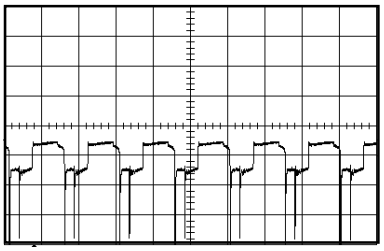
10µs
1.0V

⑦



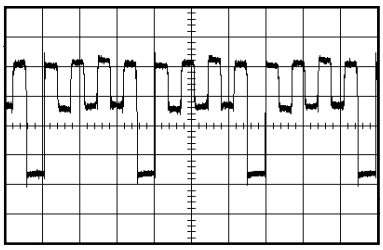
20µs
2.0V

⑫



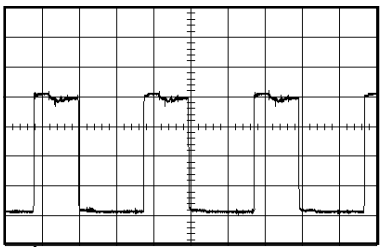
10µs
1.0V

③



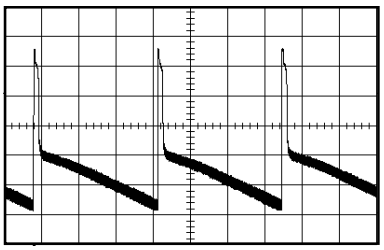
10µs
0.5V

⑧



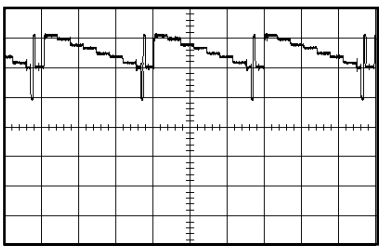
5ms
1.0V

⑬



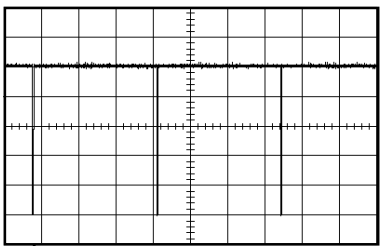
10µs
0.5V

④



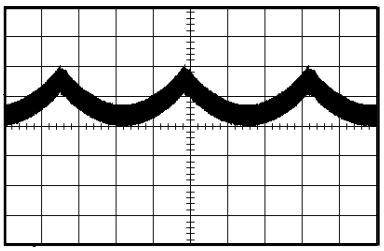
5ms
1.0V

⑨



5ms
5.0V

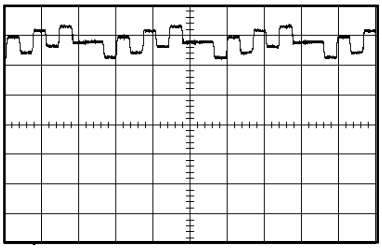
⑭



SOUND AMP/ FRONT AV

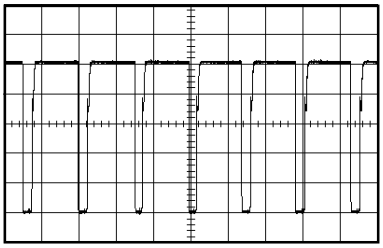
10µs
0.5V

⑤



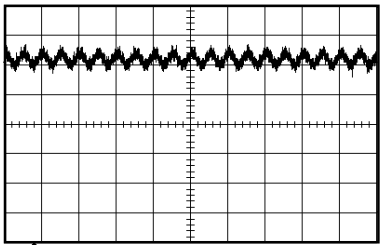
20µs
1.0V

⑩



5ms
200m

⑮



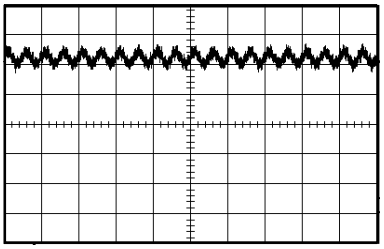
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

MICON1

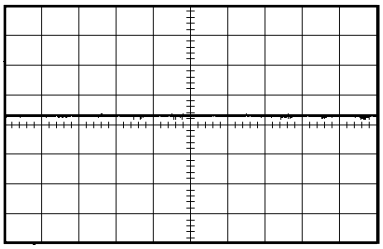
5ms
200m

⑯



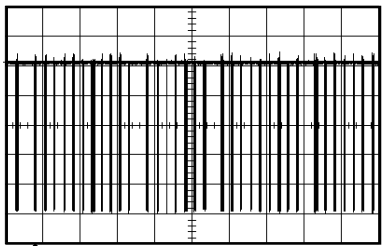
5ms
1.0V

㉑



20ms
1.0V

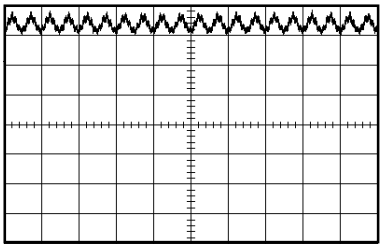
㉖



STEREO

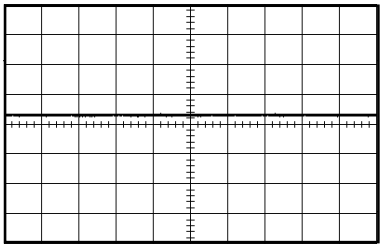
5ms
1.0V

⑰



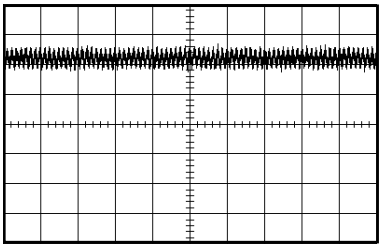
0.5ms
1.0V

㉒



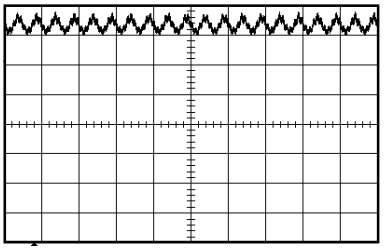
20ms
200mV

㉗



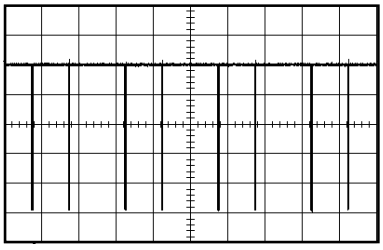
5ms
1.0V

⑱



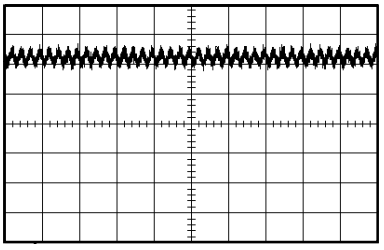
20ms
1.0V

㉓



10ms
200mV

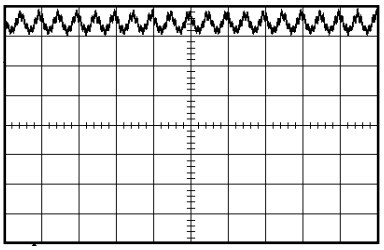
㉘



SYNC COUNT/ CONNECTOR

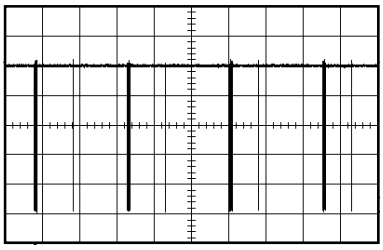
5ms
1.0V

⑲



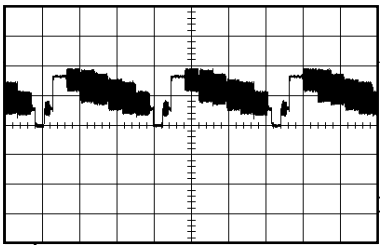
20ms
1.0V

㉔



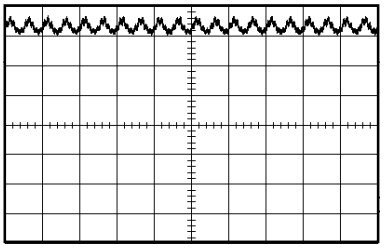
20µs
1.0V

㉙



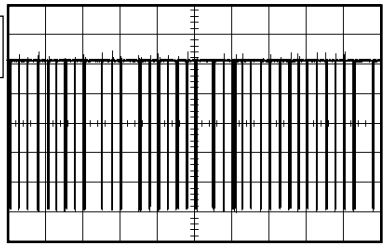
5ms
1.0V

⑳



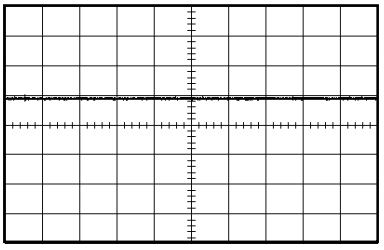
20ms
1.0V

㉕



20µs
1.0V

㉚

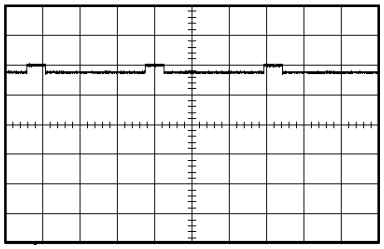


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

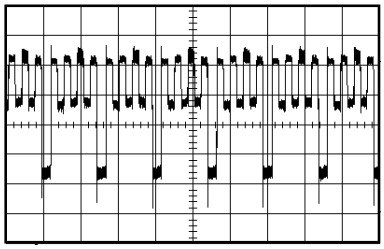
20µs
1.0V

(31)



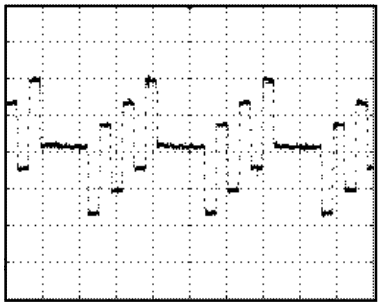
20µs
1.0V

(36)



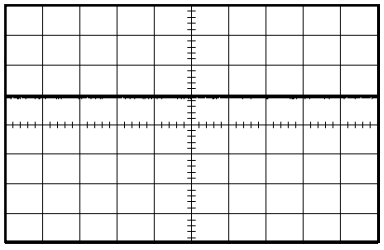
10µs
200mV

(41)



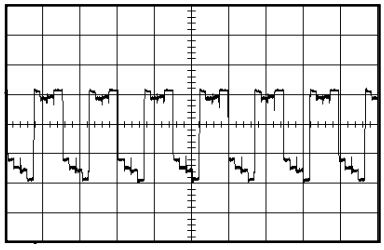
20µs
1.0V

(32)



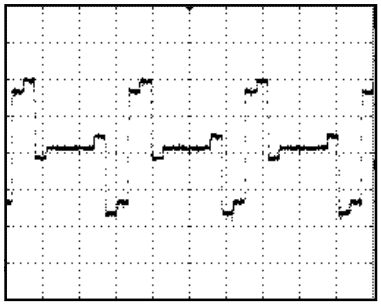
20µs
50V

(37)



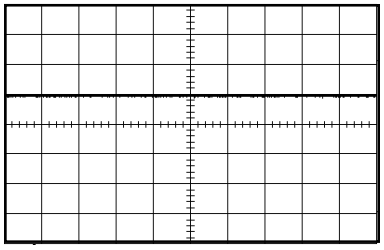
10µs
200mV

(42)



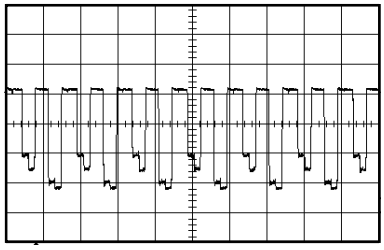
20µs
1.0V

(33)



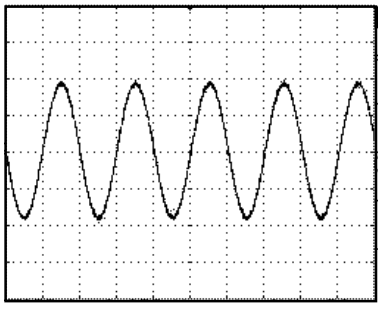
20µs
50V

(38)



500µs
200mV

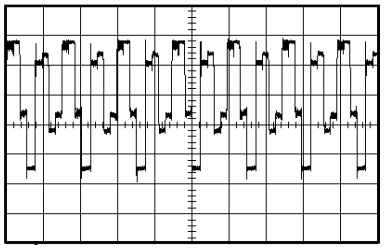
(43)



CRT/CVM

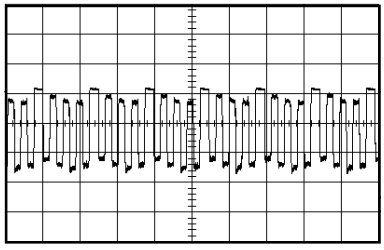
20µs
1.0V

(34)



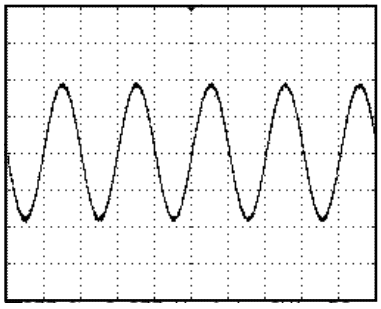
20µs
50V

(39)



500µs
200mV

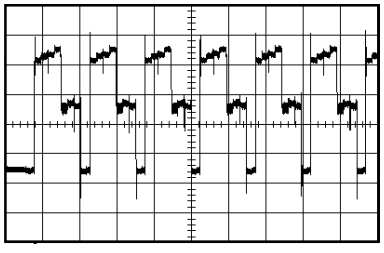
(44)



INTERFACE

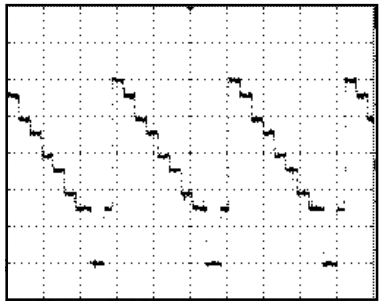
20µs
1.0V

(35)



10µs
200mV

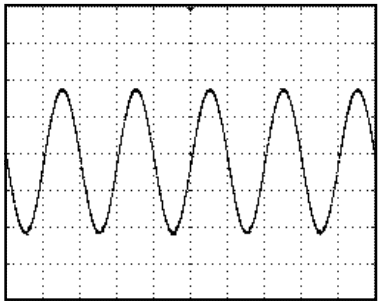
(40)



MICON2

500µs
1.0V

(45)

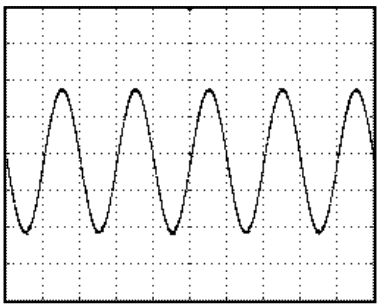


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

500µs
1.0V

㊻



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN