

SERVICE MANUAL

COLOR TELEVISION

aiwa

S/M Code No. 09-00A-352-2N1



NOTICES BEFORE REPAIRING

To make the best use of this equipment, make sure to obey the following items when repairing (or mending).

1. Do not damage or melt the tunicate of the leading wire on the AC1 side, including the power supply cord.
2. Do not soil or stain the letters on the spec. inscription plates, notice labels, fuse labels, etc.
3. When repairing the part extracted from the conducted side of the board pattern, fix it firmly with applying bond to the pattern and the part.
4. Restore the following items after repairing.
 - 1) Conditions of soldering of the wires (especially, the distance on the AC1 side).
 - 2) Conditions of wiring, bundling of wires, etc.
 - 3) Types of the wries.
 - 4) Attachment conditions of all types of the insulation.
5. After repairing, always measure the insulation resistance and perform the voltage-withstand test (See Fig-1).
 - 1) The insulation resistance must be 6.0 MΩ to 10.0 MΩ when applying 500V per second.
 - 2) In the voltage withstand test, apply 3.0 kV for 1 minute and check that the GO lamp lights.

Insulation resistance: 6.0 MΩ to 10.0 MΩ(500 V/s)
Voltage-withstand: 3.0 kV for 1 minute

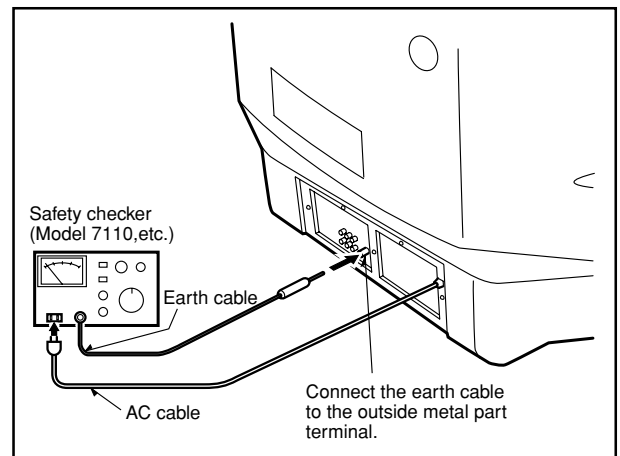


Fig-1

- * Breaking current set to 10 mA.
- * Connect the safety checker as shown in Fig-1, then measure the resistance and perform the test.
- * Do not touch the equipment during testing.
- * For details of the safety checker, refer to the supplied Operation manual.

When servicing and checking on the TV, note the followings.

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 Δ 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 so that these parts 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 of the cathode-ray tube.
By setting 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 do not change the circuit. Repairing except indicates causes rising of high voltage, and the cathode-ray tube emits an X-ray.
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 places serviced.

Safety Components Symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to confirm to special Safety Specifications.
Therefore, when replacing a component with this symbol make absolutely sure that you use a designated part.

SPECIFICATIONS

Tuner System Frequency synthesized tuner
TV System PAL-B, G
Color System(Video Input) PAL, NTSC 3.58, NTSC 4.43
Channel Coverage

BAND	CHANNEL
VHF-L	E2 – E4 S1 – S7
VHF-H	E5 – E12 S8 – S41
UHF	E21 – E69

Program Memory 210 TV stations
Antenna Input 75 ohms, unbalanced
Picture Tube 29"
Screen Size 540 (W) X 405 (H) mm
 676 mm (diagonal)
Video Input / Output 1 Vp-p 75 ohms

Audio Input -8dBs., more than 33 k ohms
Audio Output -8dBs., less than 2.2 k ohms
Speaker 80 X 130 mm : 2
 80 mm round (subwoofer) : 2
Operating Voltage 180 – 240 V AC, 50/60 Hz
Power Consumption 130 W (Standby mode: 8 W)
Phone Jack Stereo-mini jack
Operating Temperature 5°C – 40°C
Operating Humidity 35% – 80%
Dimensions 800 (W) X 571.5 (H) X 506 (D) mm
Weight 42 kg

- Design and specifications are subject to change without notice.

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ACCESSORIES LIST

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-JC5-901-010	IB, KE (E)	SX2950
2	8Z-JB3-951-010	RC UNIT, RC-ZVT13	
3	87-A91-381-010	PLUG, ANT	WEV2220-9001C

DISASSEMBLY INSTRUCTIONS

1. REAR CABINET REMOVAL

- (1) Remove eight screws ① and five screws ②, then remove the rear cabinet in the direction of the arrow

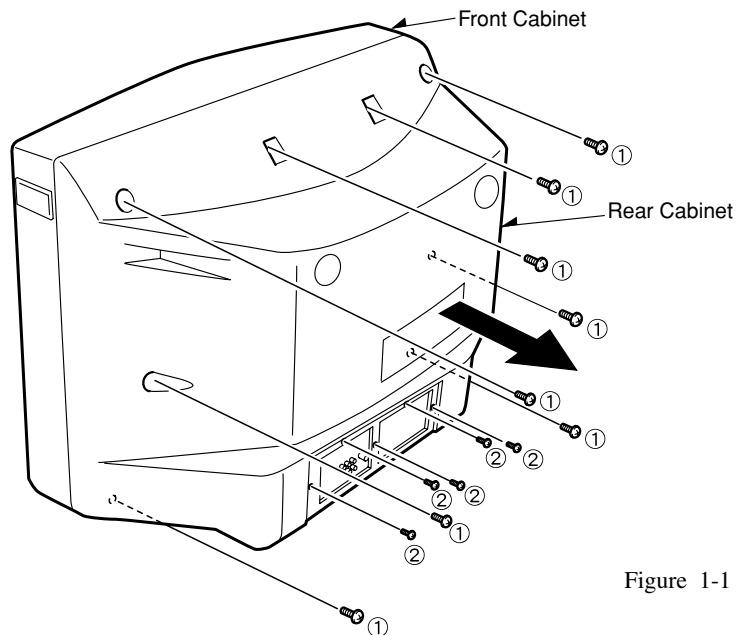


Figure 1-1

2. HIGH-VOLTAGE CAP (ANODE CAP) REMOVAL

2-1. Cautions before Removing

Discharge the anode voltage

- (1) The anode voltage is not discharged completely from the CRT of this unit even after the power is turned off. Be sure to discharge the residual anode voltage before removing the anode cap.

Do not use pliers

- (2) Do not use pliers, etc. to remove the anode cap. If you used pliers and bent the hook to remove the cap, the spring characteristics of the hook could be lost, and when reinstalled, the cap would come off from the CRT anode button easily, causing an accident.

Do not turn the anode cap

- (3) If the anode cap is turned in the direction of its circumference, the hook is likely to come off.

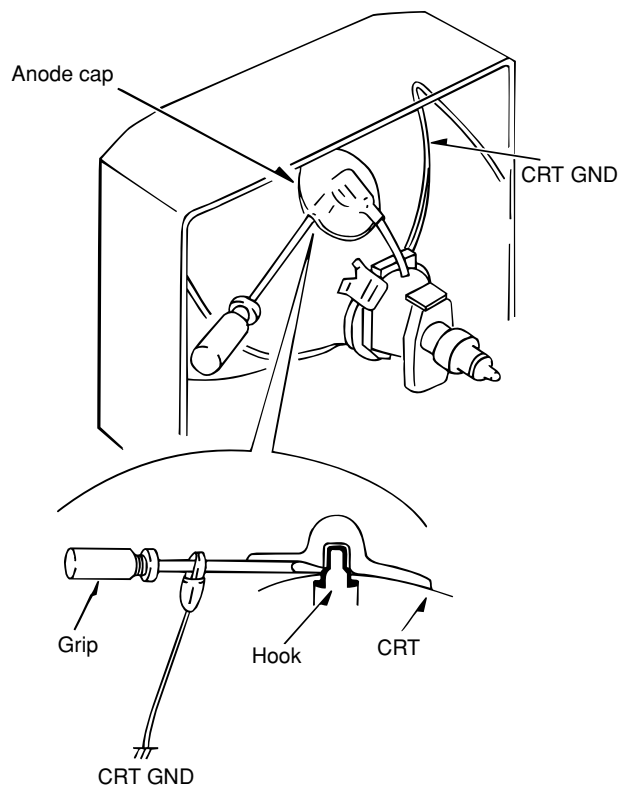


Figure 2-1

2-2. Anode Cap Removal

Discharge the anode voltage. (See Figure 2-1)

- (1) Connect a flat-bladed screwdriver to the CRT GND via an alligator clip.
- (2) Use a tester to check the end of the screwdriver and ground of the TV for continuity.
- (3) Touch the hook with the end of the screwdriver .
Caution : Be careful not to damage the anode cap.
- (4) Turn over the anode cap.

Caution : Be careful not to damage the anode cap.

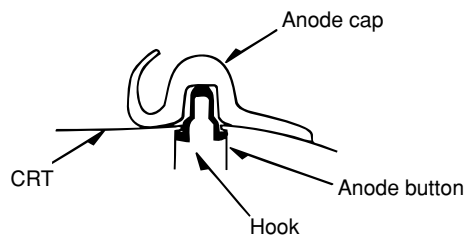


Figure 2-2

- (5) Push the anode cap with your thumb in the direction of arrow ① as shown in the figure, then lift the cap in the direction of arrow ② to release the hook on one side. (See Figure 2-3)

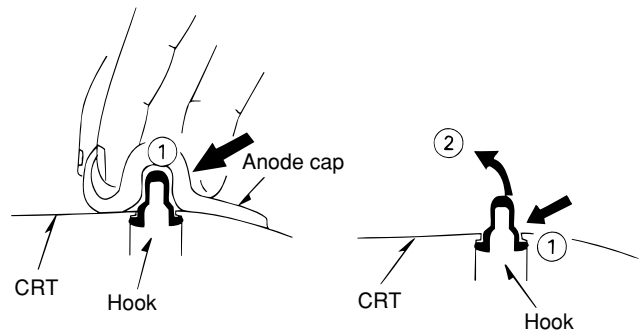


Figure 2-3

- (6) Turn over the anode cap on the side where the hook was released and pull out the cap in the direction opposite to that on which the cap was pushed. (See Figure 2-4)

Caution : Do not pull out the anode cap straight up.
: Do not pull the cap forcibly. After removing the cap, check that the hook is not deformed.

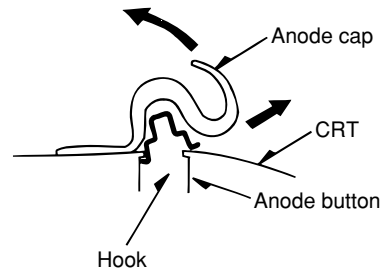


Figure 2-4

3. ANODE CAP REINSTALLTION

Observe the cautions carefully so that no accident occurs due to a defect in installing the anode cap and so it does not come off.

3-1. Caution before Reinstalling

Never turn the anode cap after installing it

Never re-use the hook when it has been deformed

- (1) If the anode cap is turned after it is installed, it may come off. Therefore, arrange the high-voltage cable before attaching the anode cap. (See Figure 3-1)
- (2) If you have attached the anode cap before arranging the high-voltage cable, arrange the cable carefully so the cap does not turn.

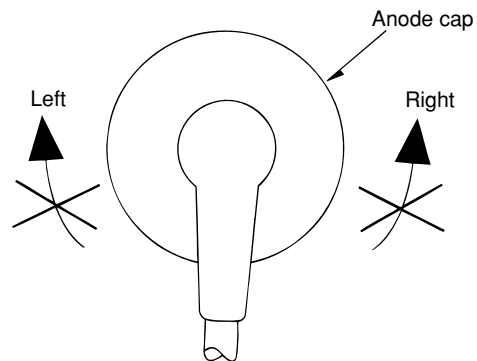


Figure 3-1

3-2. Anode cap reinstallation

- (1) Use a clean cloth moistened slightly with alcohol to clean the installation section. (See Figure 3-2)

Caution : Check that the installation section is free from dust, foreign matter, etc.

- (2) Coat the anode cap installation circumference with an appropriate amount of the specified silicone grease (KS-650N).

Caution : Be careful that silicone grease does not enter the anode button.

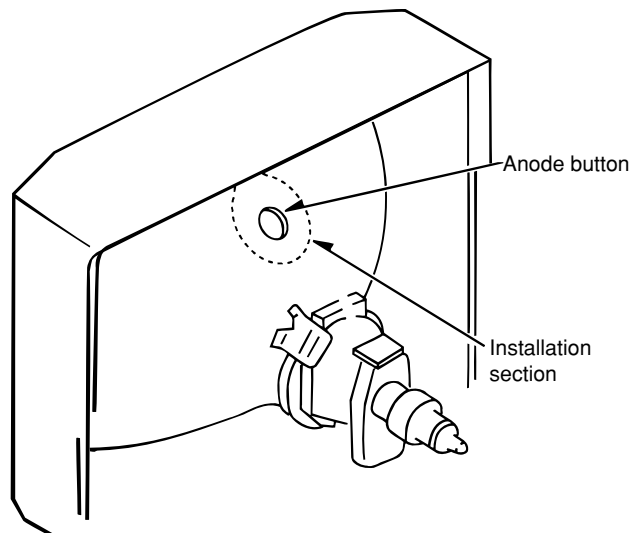


Figure 3-2

- (3) Eliminate twisting, etc. of the high-voltage cable and arrange it so that no twisting occurs. (See Figure 3-3)
Caution : If the cable is not arranged correctly, the anode cap could turn and cause an installation defect.

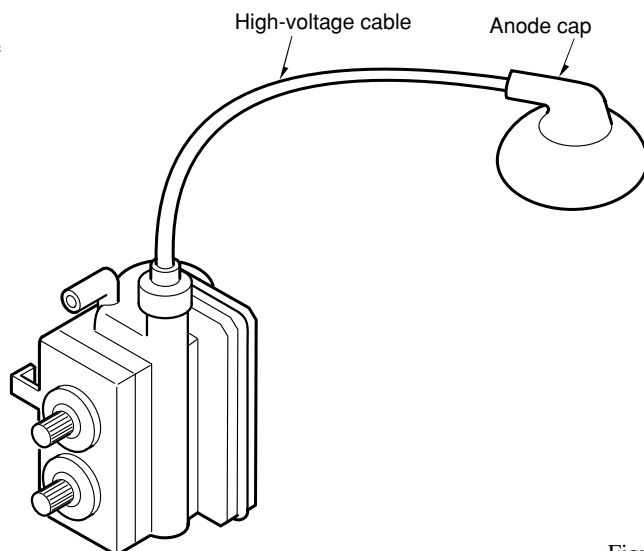


Figure 3-3

- (4) Turn over the rubber cap symmetrically on the left and right. (See Figure 3-4)
Caution : Take great care not to damage the anode cap.

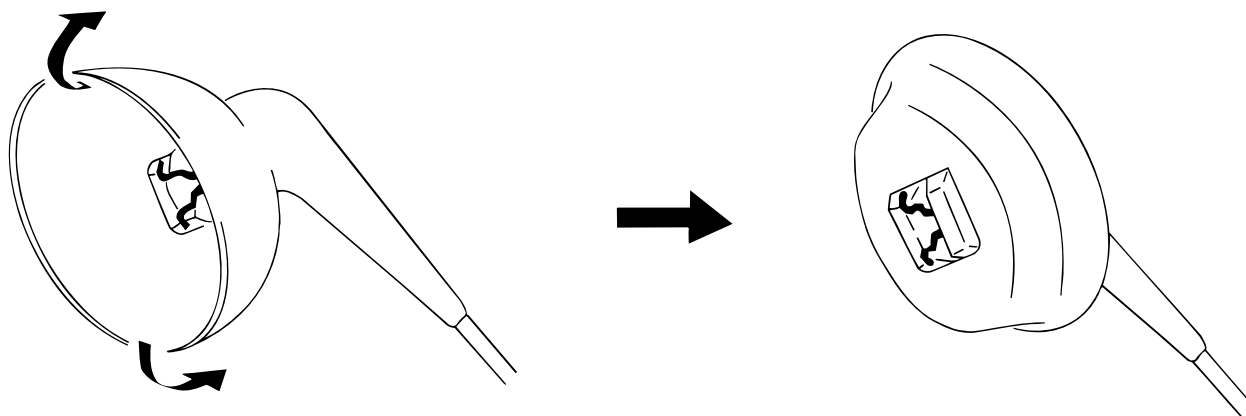


Figure 3-4

- (5) Fit your forefinger over the projection at the center of the cap and hold the cap between your thumb and middle finger. (See Figure 3-5)

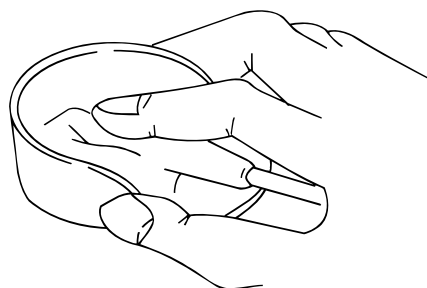


Figure 3-5

- (6) Apply the hook on one side to the anode button as shown on the figure. (See Figure 3-6)
Caution : Check that the hook is held securely.
- (7) Apply the hook on the other side to the anode button as shown in Figure 3-7.

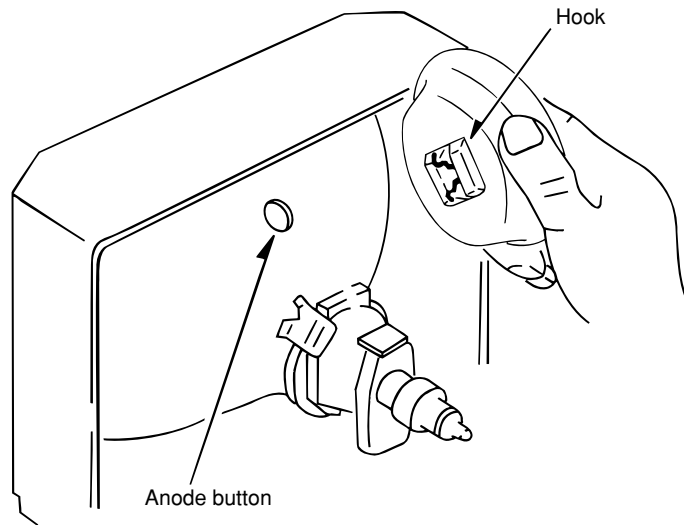
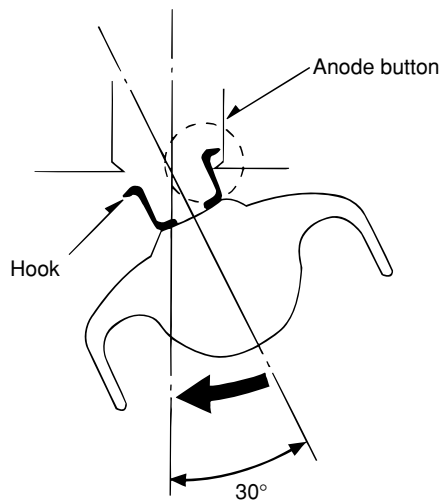


Figure 3-6

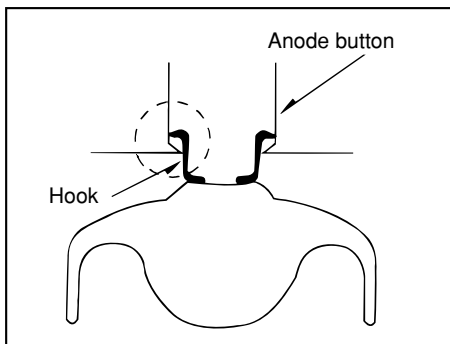


Figure 3-7

- (8) Pull the anode cap slightly with the rubber cap turned over and visually check that the hook is engaged securely.
- (9) Release your hand from the rubber cap of the anode cap.
Caution : Cover the anode cap so that it does not lift.
- (10) Hold the skirt of the anode cap slightly to improve the close contact between the cap and CRT.
- (11) Check that the anode cap is in close contact with the CRT. (See Figure 3-8)

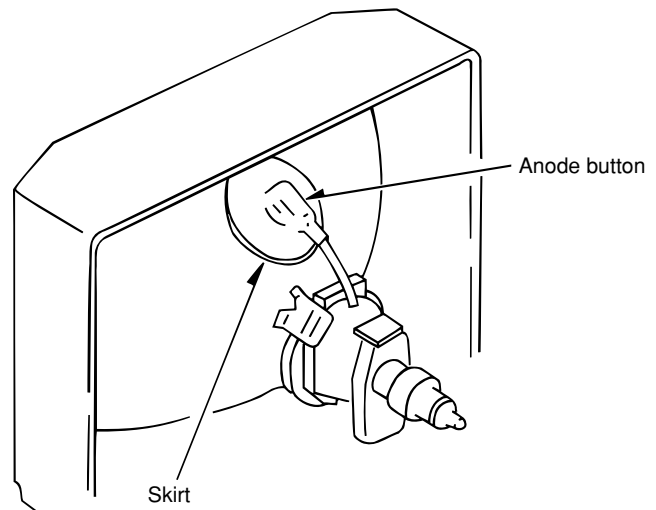


Figure 3-8

4. NK C.B. REMOVAL

- (1) Disconnect CN903 (CRT GND).
- (2) Disconnect CN901, CN902
- (3) Remove the NK C.B. in the direction of arrow ①.
(See Figure 4-1)

5. MAIN, AUDIO C.B REMOVAL

- (1) Remove connector (CN405, CN406).
- (2) Remove connector (CN983).
- (3) Remove connector (CN853).
- (4) Pull out the MAIN, AUDIO C.B. in the direction of the arrow (See Figure 4-1).

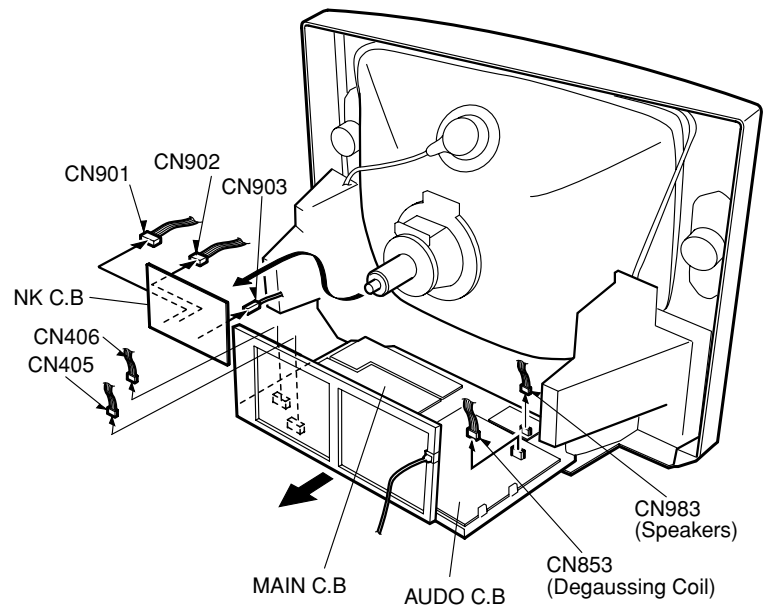


Figure 4-1

ELECTRICAL MAIN PARTS LIST

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C0004	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	8A-JEE-651-010	IC,TMP87CP38N-1N14		C0005	87-010-263-080		CAP,E 100-10 M 11L SME
	87-A21-133-080	IC,BMR-0101D		C0006	87-018-119-080		CAP,TC U 100P-50 K B UP050
	87-A21-434-010	IC,S524C80D81-DIBO		C0008	87-010-405-080		CAP,E 10-50 M 11L SME
	87-A91-538-010	RCR UNIT,SBX1981-72P		C0009	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A21-723-010	IC,TB1240AN AJE-H		C0010	87-018-119-080		CAP,TC U 100P-50 K B UP050
	87-A21-259-010	IC,MM1454XD		C0011	87-018-119-080		CAP,TC U 100P-50 K B UP050
	87-A21-345-010	IC,NJM2150		C0014	87-018-129-080		CAP,TC U 680P-50 K B UP050
	87-A20-312-010	IC,M62420SP		C0015	87-018-149-080		CAP,TC U 15P-50 J CH UP050
	87-027-656-010	IC,TC4066BP		C0016	87-018-149-080		CAP,TC U 15P-50 J CH UP050
	87-A21-299-010	IC,LA6458SLL		C0017	87-010-404-080		CAP,E 4.7-50 M 11L SME
	87-A21-346-010	IC,M5222L		C0101	87-010-404-080		CAP,E 4.7-50 M 11L SME
	87-A21-283-010	IC,AN5277		C0102	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A21-456-010	IC,LA7833		C0103	87-010-384-080		CAP,E 100-25 M 11L SME
	87-070-417-010	IC,NJM4558DD		C0104	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A21-261-010	IC,MSP3417D		C0105	87-010-263-080		CAP,E 100-10 M 11L SME
△	87-A21-551-010	IC,STR-F6676		C0106	87-A10-207-080		CAP,TC U 0.01-50 K B UP050
	87-A21-366-010	IC,NJM7809FA (A)		C0107	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-020-903-010	IC,NJM7805FA		C0108	87-018-132-080		CAP,TC U 2200P-16 N X UP050
	87-A21-776-010	IC,SE130N		C0110	87-018-132-080		CAP,TC U 2200P-16 N X UP050
	87-A21-778-010	IC,SE024N		C0111	87-018-132-080		CAP,TC U 2200P-16 N X UP050
	87-A20-836-010	IC,MM1118XS		C0113	87-010-260-080		CAP,E 47-25 M 11L SME
	87-002-475-010	IC,NJM2234L		C0116	87-010-260-080		CAP,E 47-25 M 11L SME
				C0121	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
				C0122	87-010-260-080		CAP,E 47-25 M 11L SME
TRANSISTOR				C0123	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A30-090-080	FET,2SK2541		C0124	87-010-401-080		CAP,E 1-50 M 11L SME
	87-A30-091-080	FET,2SJ460		C0125	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	89-337-794-580	TR,2SC3779 (D/E)		C0126	87-010-544-080		CAP,E 0.1-50 M 11L SME
	87-A30-066-080	TR,2SA1175FE		C0127	87-018-119-080		CAP,TC U 100P-50 K B UP050
	87-A30-065-080	TR,2SC2785FE		C0128	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-026-218-080	TR,DTC144ES		C0129	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A30-121-080	TR,DTC323TS		C0130	87-010-405-080		CAP,E 10-50 M 11L SME
	87-026-215-080	TR,DTC114YS		C0131	87-010-405-080		CAP,E 10-50 M 11L SME
	87-A30-366-010	TR,2SD2580		C0132	87-010-260-080		CAP,E 47-25 M 11L SME
	89-334-674-580	TR,2SC3467 (D/E)		C0301	87-010-545-080		CAP,E 0.22-50 M 11L SME
	87-A30-363-010	TR,2SD2531		C0302	87-018-132-080		CAP,TC U 2200P-16 N X UP050
	89-324-122-080	C-TR,2SC2412KR		C0303	87-018-148-080		CAP,TC U 12P-50 J CH UP050
	89-318-155-080	TR,2SC1815GR		C0307	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	89-110-155-080	TR,2SA1015GR		C0308	87-016-251-080		CAP,E 220-16 M SMG
	87-A30-344-010	TR,2SC5147D		C0309	87-018-147-080		CAP,TC U 10P-50 J CH UP050
				C0310	87-018-147-080		CAP,TC U 10P-50 J CH UP050
				C0311	87-018-147-080		CAP,TC U 10P-50 J CH UP050
				C0312	87-010-404-080		CAP,E 4.7-50 M 11L SME
				C0313	87-018-119-080		CAP,TC U 100P-50 K B UP050
DIODE				C0314	87-010-401-080		CAP,E 1-50 M 11L SME
	87-070-345-080	DIODE,1N4148		C0315	87-018-196-080		CAP,TC U 1500P-16 N X UP050
	87-070-444-080	ZENER,HZS33-1TA		C0316	87-010-400-080		CAP,E 0.47-50 M 11L SME
	87-A40-235-080	ZENER,MTZJ9.1C		C0317	87-015-997-090		CAP,E 2200-16 M SME
	87-A40-350-080	ZENER,MTZJ4.7C		C0318	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A40-650-080	ZENER,MTZJ6.8A		C0319	87-010-400-080		CAP,E 0.47-50 M 11L SME
	87-070-092-080	DIODE,S5566B		C0320	87-010-384-080		CAP,E 100-25 M 11L SME
	87-A40-318-080	ZENER,RM26 V1		C0321	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A40-286-080	DIODE,RGP10JE-5025		C0328	87-010-400-080		CAP,E 0.47-50 M 11L SME
	87-A40-794-080	DIODE,EGP20G		C0330	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
	87-A40-735-090	DIODE,ERC06-15		C0344	87-010-263-080		CAP,E 100-10 M 11L SME
	87-017-593-090	DIODE,RGP15J		C0501	87-018-195-080		CAP,TC U 1200P-16 N X UP050
	87-017-654-060	DIODE,GBU6JL6131		C0503	87-010-247-080		CAP,E 100-50 M SME
	87-A40-900-080	DIODE,AK03		C0504	87-A10-282-080		CAP,M 820P-50 J
	87-A40-509-080	ZENER,MTZJ6.8C		C0508	87-010-402-080		CAP,E 2.2-50 M 11L SME
	87-A40-948-090	DIODE,RU4AM		C0511	87-A12-372-080		CAP,M 0.047-100 J CP
	87-A40-611-080	ZENER,MTZJ3.9B		C0512	87-A10-011-090		CAP,E 2200-25 SMG
△	87-A90-965-010	VRIS,TNR15G471K		C0513	87-018-127-080		CAP,TC U 470P-50 K B UP050
	87-A40-450-090	DIODE,RU 1P		C0601	87-A10-406-090		CAP,CER 270P-2K K BN DE
	87-A40-911-090	DIODE,RN2Z		C0603	87-A12-189-080		CAP,E 10-250 M SMG
	87-A40-937-010	DIODE,FMN-G12S		C0604	87-A12-376-080		CAP,M 0.1-100 J CP
MAIN C.B				C0606	87-016-515-080		CAP,CER 1000P-1K K B DE
C0001	87-018-151-080	CAP,TC U 20P-50 J CH UP050		C0607	87-010-397-090		CAP,E 1000-35 M SME
C0002	87-A11-073-080	CAP,TC U 22P-50 J CH		C0617	87-010-976-080		CAP,CER 1000P-500 K B DD10
C0003	87-010-405-080	CAP,E 10-50 M 11L SME		C0618	87-010-974-080		CAP,CER 220P-500 K B DD10

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
△C0805	87-012-370-010		CAP,CER 3300P-250 M E ECKD	△R0515	87-A00-197-090		RES,M/F 1.2-1W J RSF(S)
△C0807	87-A12-415-090		CAP,E 220-450 M SMHVNSN25D	△R0612	87-A00-565-090		RES,M/F 1.2K-7W J RSU7
△C0808	87-A10-862-090		CAP,CER 680P-2K K R	△R0802	87-A00-552-010		RES,CEM 1.0-10W J MPC722
C0809	87-018-131-080		CAP,TC U 1000P-50 K B UP050	△R0803	87-A00-552-010		RES,CEM 1.0-10W J MPC722
C0810	87-010-384-080		CAP,E 100-25 M 11L SME	△R0804	87-A00-543-080		RES,SD 8.2M-1W J RCR60
C0811	87-018-127-080		CAP,TC U 470P-50 K B UP050	△R0807	87-A00-715-090		RES,CEM 0.68-5W J RGC5
C0812	87-018-129-080		CAP,TC U 680P-50 K B UP050	△R0808	87-A00-701-090		RES,CEM 0.39-5W J BPR
C0817	87-A10-731-090		CAP,E 220-160 M KMF	△R0827	87-A00-673-090		RES,M/F 82K-5W J RSS5L30
C0818	87-A11-354-090		CAP,E 100-160 M SMG	△R0830	87-A00-307-090		RES,M/F 22-3W J RSF(S)
C0826	87-010-235-080		CAP,E 470-16 M SME	S0501	87-A90-567-010		SW,LVR 4-1-3 EVQRAAL10
C0830	87-010-405-080		CAP,E 10-50 M 11L SME	SWF0201	87-A91-515-010		FLTR,SAW TSB5388P
C0831	87-010-405-080		CAP,E 10-50 M 11L SME	SWF0202	87-A91-586-010		FLTR,SAW OFW-K3957M
C0832	87-010-405-080		CAP,E 10-50 M 11L SME	△T0601	8A-JC5-633-010		FBT,KE NX4015 AJC-5
C0833	87-010-405-080		CAP,E 10-50 M 11L SME	T0602	85-JT2-653-010		PT,HDT-TV141-2
C0841	87-A11-260-090		CAP,M/P 1000P-1.6K H ECWH (VR)	TU0101	87-A91-495-010		TU UNIT, ENV59D58G3-38.0MHZ
C0901	87-010-405-080		CAP,E 10-50 M 11L SME	X0001	87-030-300-080		VIB,XTAL 8.000MHZ HC-49/U
C0902	87-010-401-080		CAP,E 1-50 M 11L SME	X0301	87-A70-054-080		VIB,XTAL 4.43MHZ AQC-1018
C0903	87-010-401-080		CAP,E 1-50 M 11L SME				
C0904	87-010-221-080		CAP,E 470-10 M SME				
C0905	87-010-405-080		CAP,E 10-50 M 11L SME	AUDIO C.B			
C0906	87-010-405-080		CAP,E 10-50 M 11L SME	C0401	87-010-402-080		CAP,E 2.2-50 M 11L SME
C0914	87-018-134-080		CAP,TC U 0.01-16 N Y UP050	C0402	87-010-260-080		CAP,E 47-25 M 11L SME
C0915	87-018-133-080		CAP,TC U 4700P-16 N X UP050	C0403	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
C0916	87-018-133-080		CAP,TC U 4700P-16 N X UP050	C0405	87-010-402-080		CAP,E 2.2-50 M 11L SME
C0917	87-018-134-080		CAP,TC U 0.01-16 N Y UP050	C0406	87-010-405-080		CAP,E 10-50 M 11L SME
C0918	87-010-384-080		CAP,E 100-25 M 11L SME	C0407	87-A11-148-080		CAP,TC U 0.1-50 Z F
CF0204	87-008-577-080		FLTR,TPS5.5MB2	C0408	87-010-367-080		CAP,E 4.7-25 M BP SP
CN0001	87-099-407-010		CONN,7P V WHT EH	C0411	87-010-367-080		CAP,E 4.7-25 M BP SP
CN0101	87-A60-734-010		CONN,8P JL-BT	C0412	87-010-405-080		CAP,E 10-50 M 11L SME
CN0102	87-A60-732-010		CONN,6P JL-BT	C0413	87-A11-148-080		CAP,TC U 0.1-50 Z F
CN0501	87-009-195-010		CONN,5P V WHT EH	C0414	87-010-405-080		CAP,E 10-50 M 11L SME
CN0601	87-099-762-010		CONN,5P V TBL-P BOSS	C0415	87-010-367-080		CAP,E 4.7-25 M BP SP
△CN0805	87-099-448-010		CONN,2P V VT	C0418	87-010-367-080		CAP,E 4.7-25 M BP SP
CNA0101	8A-JC5-657-010		CONN ASSY,6P V PH FRONT-L=80	C0419	87-A11-148-080		CAP,TC U 0.1-50 Z F
CNA0301	8A-JC5-648-010		CONN ASSY,5P V PH RGB-L=400	C0420	87-010-260-080		CAP,E 47-25 M 11L SME
CNA0603	8A-JC5-653-010		CONN ASSY,2P VT SDN	C0421	87-010-260-080		CAP,E 47-25 M 11L SME
CNA0604	8A-JC5-645-010		CONN ASSY,1P SPS P-GND-L=620	C0422	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
CNA0802	8A-JC5-646-010		CONN ASSY,5P V EH NK-L=450	C0426	87-A11-148-080		CAP,TC U 0.1-50 Z F
CNA0804	8A-JC5-649-010		CONN ASSY,5P V EH AU-POW-L=250	C0427	87-010-401-080		CAP,E 1-50 M 11L SME
CNA0901	8A-JC5-651-010		CONN ASSY,9P V PH AU-SIG-L=80	C0428	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
CNA0903	8A-JC5-650-010		CONN ASSY,10P V PH AUSYS-L=200	C0429	87-010-263-080		CAP,E 100-10 M 11L SME
FB0001	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0438	87-010-401-080		CAP,E 1-50 M 11L SME
FB0501	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0445	87-010-401-080		CAP,E 1-50 M 11L SME
FB0601	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0448	87-010-260-080		CAP,E 47-25 M 11L SME
FB0801	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0449	87-A11-148-080		CAP,TC U 0.1-50 Z F
FB0802	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0450	87-010-367-080		CAP,E 4.7-25 M BP SP
FB0806	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	C0451	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
△FR0601	87-A00-063-060		RES,FUSE 2.2-1/2W J R-TYPE	C0452	87-A11-148-080		CAP,TC U 0.1-50 Z F
△FR0603	87-029-150-090		RES,FUSE 3.9-2W J	C0454	87-010-101-080		CAP,E 220-16 M SME
△FR0604	87-A00-486-090		RES,FUSE 1.5-2W J	C0455	87-A11-148-080		CAP,TC U 0.1-50 Z F
△FR0606	87-029-165-060		RES,FUSE 2.7-1W J	C0459	87-A11-148-080		CAP,TC U 0.1-50 Z F
J0901	87-A60-324-110		JACK,PIN 6P Y-W-R W/SW	C0460	87-010-260-080		CAP,E 47-25 M 11L SME
L0001	87-005-688-080		COIL,22UH J LF5.0S	C0461	87-010-367-080		CAP,E 4.7-25 M BP SP
L0101	87-005-444-080		COIL,100UH K FLR50	C0462	87-010-379-080		CAP,E 22-16 M 11L SME
L0102	87-003-152-080		COIL,100UH J LAL02	C0463	87-010-402-080		CAP,E 2.2-50 M 11L SME
L0104	87-003-098-080		COIL,2.2UH K LAL02	C0464	87-010-401-080		CAP,E 1-50 M 11L SME
L0111	87-003-282-080		COIL,12UH J LAL02	C0465	87-A11-148-080		CAP,TC U 0.1-50 Z F
L0112	87-003-149-080		COIL,47UH J LAL02	C0466	87-010-260-080		CAP,E 47-25 M 11L SME
L0113	87-003-098-080		COIL,2.2UH K LAL02	C0476	87-010-404-080		CAP,E 4.7-50 M 11L SME
L0114	87-A50-530-010		COIL,VCO38.0MHZ	C0477	87-010-404-080		CAP,E 4.7-50 M 11L SME
L0301	87-005-444-080		COIL,100UH K FLR50	C0478	87-010-401-080		CAP,E 1-50 M 11L SME
L0302	87-005-474-080		COIL,12UH J FLR50	C0479	87-010-247-080		CAP,E 100-50 M SME
L0801	87-A50-636-010		COIL,390UH RCH110	C0480	87-010-388-080		CAP,E 1000-25 M SME
△PR0801	87-A90-090-080		PROTECTOR,1.5A 491SERIES 60V	C0481	87-010-388-080		CAP,E 1000-25 M SME
△PR0804	87-A90-090-080		PROTECTOR,1.5A 491SERIES 60V	C0482	87-010-401-080		CAP,E 1-50 M 11L SME
△PS0801	87-A91-407-010		P-COUPLER,ON3171-R	C0483	87-010-247-080		CAP,E 100-50 M SME
△PT0801	8A-JC5-631-010		PT,SW AJC-5 KE-TV	C0484	87-A11-148-080		CAP,TC U 0.1-50 Z F
R0101	87-A00-164-090		RES,M/F 12K-2W J RSF(S)	C0485	87-010-247-080		CAP,E 100-50 M SME
R0317	87-A00-308-090		RES,M/F 47-3W J RSF(S)	C0486	87-010-388-080		CAP,E 1000-25 M SME
△R0511	87-A00-541-090		RES,M/F 390-1W J RSF(S)	C0487	87-010-388-080		CAP,E 1000-25 M SME

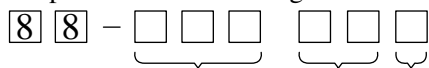
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C0488	87-010-405-080		CAP,E 10-50 M 11L SME	△PR0854	87-A90-090-080		PROTECTOR,1.5A 491SERIES 60V
C0489	87-010-405-080		CAP,E 10-50 M 11L SME	△PS0851	87-A91-407-010		P-COUPLER,ON3171-R
C0490	87-010-405-080		CAP,E 10-50 M 11L SME	△PS0852	87-A91-407-010		P-COUPLER,ON3171-R
C0491	87-A11-148-080		CAP,TC U 0.1-50 Z F	△PT0851	8A-JC5-632-010		PT,SW AJC-5 KE-AU
C0492	87-010-411-090		CAP,E 1000-50 M SME	R0401	87-025-381-080		RES,M/F 18K-1/6W F
C0493	87-010-260-080		CAP,E 47-25 M 11L SME	R0402	87-025-424-080		RES,M/F 10K-1/6W F
C0498	87-010-405-080		CAP,E 10-50 M 11L SME	R0404	87-025-380-080		RES,M/F 15K-1/6W F
C0499	87-010-544-080		CAP,E 0.1-50 M 11L SME	R0405	87-025-381-080		RES,M/F 18K-1/6W F
C0500	87-010-544-080		CAP,E 0.1-50 M 11L SME	△R0652	87-A00-676-090		RES,M/F 100-7W J RSV7
C0501	87-010-380-080		CAP,E 47-16 M 11L SME	△R0653	87-A00-629-090		RES,M/F 5.6-1W J RSF(S)
C0503	87-018-109-080		CAP,TC U 22P-50 J SL UP050	△R0853	87-A00-552-010		RES,CEM 1.0-10W J MPC722
C0505	87-010-260-080		CAP,E 47-25 M 11L SME	R0857	87-A00-703-090		RES,CEM 0.56-5W J BPR
△C0651	87-A12-320-090		CAP,M/P 0.013-1.6K H ECWH(VB)	R0858	87-A00-573-090		RES,CEM 0.33-5W J MPC71
△C0652	87-A11-999-090		CAP,M/P 0.012-800 H ECWH(VB)	△R0874	87-A00-552-010		RES,CEM 1.0-10W J MPC722
△C0654	87-A10-833-090		CAP,CER 1000P-2K K R	△R0877	87-A00-673-090		RES,M/F 82K-5W J RSS5L30
△C0655	87-A10-675-090		CAP,M/P 0.56-250 J	△R0890	87-A00-781-090		RES,M/F 47K-5W J RSS5L30
C0656	87-010-963-080		CAP,E 2.2-160 M 11L SME	△RY0851	87-A91-905-010		RELAY,DC5V G5PA-1-M
C0658	87-016-217-080		CAP,E 4.7-160 M SME	SFR0651	87-024-434-080		SFR,22K H RH063MC
△C0659	87-010-976-080		CAP,CER 1000P-500 K B DD10	SFR0652	87-024-429-080		SFR,1K H RH063MC
C0660	87-018-131-080		CAP,TC U 1000P-50 K B UP050	SFR0653	87-024-434-080		SFR,22K H RH063MC
C0661	87-010-405-080		CAP,E 10-50 M 11L SME	△THP0851	87-A91-405-010		POS-THMS,T209-B80-A10
C0662	87-010-405-080		CAP,E 10-50 M 11L SME	NICAM C.B			
C0663	87-010-395-080		CAP,E 330-35 M SME	C0701	87-010-318-080		C-CAP,S 47P-50 J CH GRM
C0665	87-A11-124-080		CAP,TC U 2200P-50 K B	C0702	87-010-318-080		C-CAP,S 47P-50 J CH GRM
△C0666	87-A11-266-090		CAP,M/P 3300P-1.6K H ECWH(VR)	C0703	87-010-145-080		C-CAP,S 1P-50 C CH GRM
△C0852	87-A11-038-010		CAP,AC M/P 0.22 300 M B81131	C0704	87-010-145-080		C-CAP,S 1P-50 C CH GRM
C0857	87-A12-415-090		CAP,E 220-450 M SMHVNSN25D	C0705	87-010-553-080		CAP,E 47-16 M 5L SRE
△C0858	87-010-968-080		CAP,CER 680P-2K K B	C0706	87-010-197-080		C-CAP,S 0.01-25 K B C2012
C0860	87-010-384-080		CAP,E 100-25 M 11L SME	C0707	87-010-197-080		C-CAP,S 0.01-25 K B C2012
C0861	87-018-127-080		CAP,TC U 470P-50 K B UP050	C0708	87-010-496-080		CAP,E 3.3-50 M 5L SRE
C0862	87-018-129-080		CAP,TC U 680P-50 K B UP050	C0709	87-010-197-080		C-CAP,S 0.01-25 K B C2012
△C0863	87-A12-414-090		CAP,M/P 0.022-1.25K H DKRG	C0710	87-010-197-080		C-CAP,S 0.01-25 K B C2012
△C0864	87-A11-779-090		CAP,M/P 1000P-1.6K J ECWH(VB)	C0714	87-010-555-080		CAP,E 100-10 M 5L MA
C0870	87-010-398-090		CAP,E 2200-35 M SME	C0715	87-010-197-080		C-CAP,S 0.01-25 K B C2012
C0871	87-010-397-090		CAP,E 1000-35 M SME	C0716	87-010-316-080		C-CAP,S 33P-50 J CH GRM
C0876	87-010-235-080		CAP,E 470-16 M SME	C0719	87-010-498-080		CAP,E 10-16 M 5L SRE
C0877	87-010-405-080		CAP,E 10-50 M 11L SME	C0720	87-012-157-080		C-CAP,S 330P-50 J CH GRM
C0878	87-010-405-080		CAP,E 10-50 M 11L SME	C0723	87-010-498-080		CAP,E 10-16 M 5L SRE
△C0881	87-A10-469-080		CAP,CER 2200P-500 K B DD10	C0724	87-010-494-080		CAP,E 1-50 M 5L SRE
△C0885	87-A11-779-090		CAP,M/P 1000P-1.6K J ECWH(VB)	C0725	87-010-197-080		C-CAP,S 0.01-25 K B C2012
△C0886	87-A11-038-010		CAP,AC M/P 0.22 300 M B81131	C0726	87-010-197-080		C-CAP,S 0.01-25 K B C2012
△C0892	87-A11-779-090		CAP,M/P 1000P-1.6K J ECWH(VB)	C0727	87-010-497-080		CAP,E 4.7-35 M 5L SRE
CN0401	87-009-037-010		CONN,9P V WHT PH	C0728	87-010-197-080		C-CAP,S 0.01-25 K B C2012
CN0402	87-009-038-010		CONN,10P V WHT PH	C0729	87-010-555-080		CAP,E 100-10 M 5L MA
CN0405	87-099-043-010		CONN,2P V WHT EH	C0730	87-010-321-080		C-CAP,S 82P-50 J CH
CN0406	87-099-043-010		CONN,2P V WHT EH	C0731	87-012-140-080		C-CAP,S 470P-50 J CH
CN0408	87-009-195-010		CONN,5P V WHT EH	C0732	87-010-189-080		C-CAP,S 8200P-50 K B
CN0651	87-A61-126-080		MALE, 1P TP42097	C0733	87-010-183-080		C-CAP,S 2700P-50 K B GRM
CN0652	87-099-448-010		CONN,2P V VT	C0734	87-012-142-080		C-CAP,S 0.33-16 Z F GRM
△CN0851	87-099-674-010		CONN,2P V VA	C0739	87-012-157-080		C-CAP,S 330P-50 J CH GRM
△CN0852	87-099-448-010		CONN,2P V VT	C0740	87-010-318-080		C-CAP,S 47P-50 J CH GRM
△CN0853	82-481-649-010		CONN,2P V VT-50P	C0741	87-012-140-080		C-CAP,S 470P-50 J CH
CNA0401	8A-JC5-658-010		CONN ASSY,11P V PH HP-L=80	C0742	87-010-189-080		C-CAP,S 8200P-50 K B
CNA0405	8Z-JB3-602-010		CONN ASSY,2P SP-750	C0743	87-010-183-080		C-CAP,S 2700P-50 K B GRM
CNA0406	8Z-JB3-601-010		CONN ASSY,2P SP-850	C0744	87-012-142-080		C-CAP,S 0.33-16 Z F GRM
CNA0653	8A-JC5-652-010		CONN ASSY,5P V EH PIN-L=620	C0745	87-012-157-080		C-CAP,S 330P-50 J CH GRM
△CNA0854	8A-JC5-644-010		CONN ASSY,2P VTR AC-L=600	C0748	87-012-154-080		C-CAP,S 150P-50 J CH GRM
△F0851	87-035-458-010		FUSE,4A 250V T 218	C0752	87-010-553-080		CAP,E 47-16 M 5L SRE
FB0851	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	CN0701	87-A60-722-010		CONN,8P JL-R
FB0854	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	CN0702	87-A60-720-010		CONN,6P JL-R
FB0856	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	L0701	87-005-461-080		COIL,1UH J FLR50
△FC0851	87-033-213-080		FUSE CLAMP,PFC5000	L0702	87-005-461-080		COIL,1UH J FLR50
△FC0852	87-033-213-080		FUSE CLAMP,PFC5000	L0703	87-005-473-080		COIL,10UH J FLR50
△FR0401	87-A00-084-090		RES,FUSE 1-1W J	L0705	87-005-473-080		COIL,10UH J FLR50
△FR0402	87-A00-084-090		RES,FUSE 1-1W J	L0707	87-005-473-080		COIL,10UH J FLR50
L0651	87-A50-607-080		COIL,3.9MH J LHL10	L0708	87-005-485-080		COIL,100UH J FLR50
L0652	8A-JC5-625-010		COIL,HLC AJC-5	L0751	87-003-152-080		COIL,100UH J LAL02
L0653	87-A50-541-010		COIL,1MH 1.5AP-P				
△LF0852	8A-JC5-636-010		FLTR,ELF24V 025A				
△PR0852	87-A90-195-080		PROTECTOR,7A 491SERIES 60V				

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
X0701	87-A70-199-080		VIB,XTAL 18.432MHZ	NK C.B			
KEY C.B				C0901	87-010-405-080		CAP,E 10-50 M 11L SME
C0081	87-010-405-080		CAP,E 10-50 M 11L SME	C0902	87-010-968-080		CAP,CER 680P-2K K B
C0082	87-010-405-080		CAP,E 10-50 M 11L SME	C0906	87-010-400-080		CAP,E 0.47-50 M 11L SME
CN0081	87-009-034-010		CONN,6P V WHT PH	C0907	87-010-235-080		CAP,E 470-16 M SME
△CNA0851	8A-JC5-643-010		CONN ASSY,2P VTR AC-L=530	C0908	87-A11-108-080		CAP,TC U 680P-50 J CH
D0081	87-A40-422-010		LED,SLP-581D-51 Y-G/R	C0909	87-A11-110-080		CAP,TC U 820P-50 J CH
HL0081	8A-JC5-206-010		HLDR,LED	C0910	87-A11-108-080		CAP,TC U 680P-50 J CH
L0081	87-003-152-080		COIL,100UH J LAL02	C0911	87-A11-106-080		CAP,TC U 560P-50 J CH
S0081	87-A91-824-080		SW,TACT KSH0636BTS	C0912	87-A11-106-080		CAP,TC U 560P-50 J CH
S0082	87-A91-824-080		SW,TACT KSH0636BTS	C0913	87-A11-106-080		CAP,TC U 560P-50 J CH
S0083	87-A91-824-080		SW,TACT KSH0636BTS	C0914	87-A10-052-080		CAP,E 2.2-250
S0084	87-A91-824-080		SW,TACT KSH0636BTS	C0915	87-010-260-080		CAP,E 47-25 M 11L SME
S0085	87-A91-824-080		SW,TACT KSH0636BTS	C0916	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
S0086	87-A91-824-080		SW,TACT KSH0636BTS	C0917	87-010-970-090		CAP,CER 4700P-2K K B DE
△S0851	87-A91-410-010		SW,AC PUSH 1-1-1 ESB92SH1B	CN0901	87-009-033-010		CONN,5P V WHT PH
JACK C.B				CN0902	87-009-195-010		CONN,5P V WHT EH
C0981	87-010-405-080		CAP,E 10-50 M 11L SME	CN0903	87-A61-126-080		MALE, 1P TP42097
C0982	87-010-401-080		CAP,E 1-50 M 11L SME	CN0904	87-A61-060-080		CONN,1P V RED TP00706
C0983	87-010-401-080		CAP,E 1-50 M 11L SME	L0901	87-005-608-080		COIL,33UH J LAV35
CN0981	87-009-550-010		CONN,11P V PH	L0902	87-005-608-080		COIL,33UH J LAV35
CN0983	87-049-469-010		CONN,4P V WHT EH	L0903	87-005-608-080		COIL,33UH J LAV35
CNA0983	8A-JC5-654-010		CONN ASSY,4P SP (MAIN)L=650/400	L0904	87-005-611-080		COIL,56UH J LAV35
J0981	87-A61-435-010		JACK,PIN 3P WHT YKC21-5734 A	△R0901	87-A00-242-090		RES,M/F 8.2K-3W J RSF(S)
J0982	87-A61-441-010		JACK,3.5 BLK ST 2SW HTJ03531AB	△R0902	87-A00-242-090		RES,M/F 8.2K-3W J RSF(S)
R0984	87-A00-070-090		RES,M/F 220-1W J	△R0903	87-A00-242-090		RES,M/F 8.2K-3W J RSF(S)
R0985	87-A00-070-090		RES,M/F 220-1W J	SO0901	8A-JE7-670-010		SOCKET,CRT 11P HPS1521-013411

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



A
抵抗部品コード
Resistor Code

桁表示
Figure
抵抗値
Value of resistor

チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



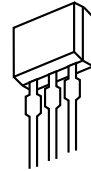
E C B

2SA1015
2SC1815



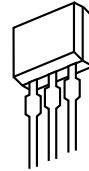
B E C

2SC3779



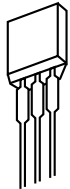
E C B

2SA1175
2SC2785
DTC114YS



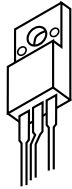
S D G

2SJ460
2SK2541



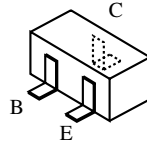
E C B

DTC144ES
DTC323TS



B C E

2SD2531
2SD2580



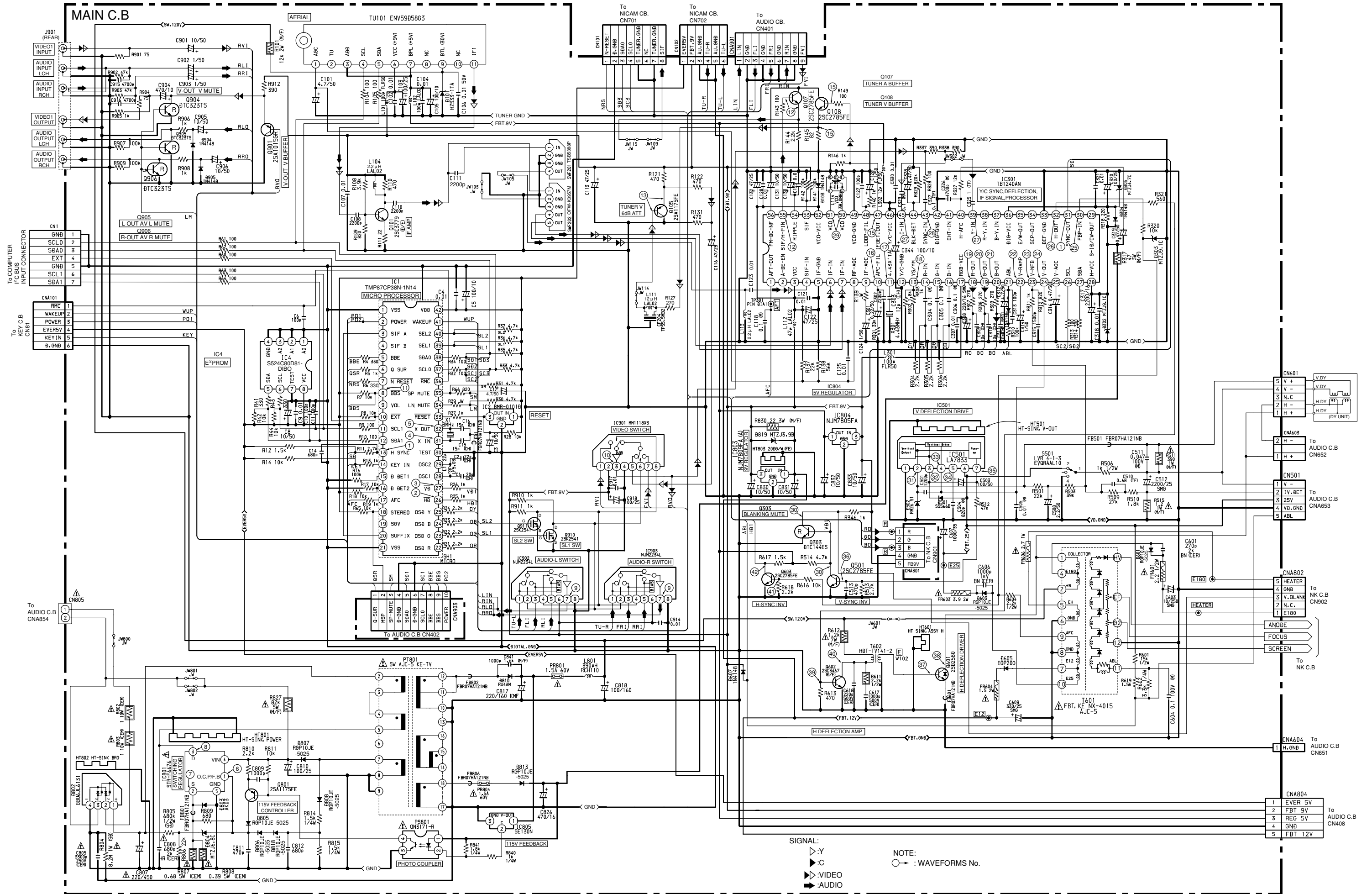
2SC2412

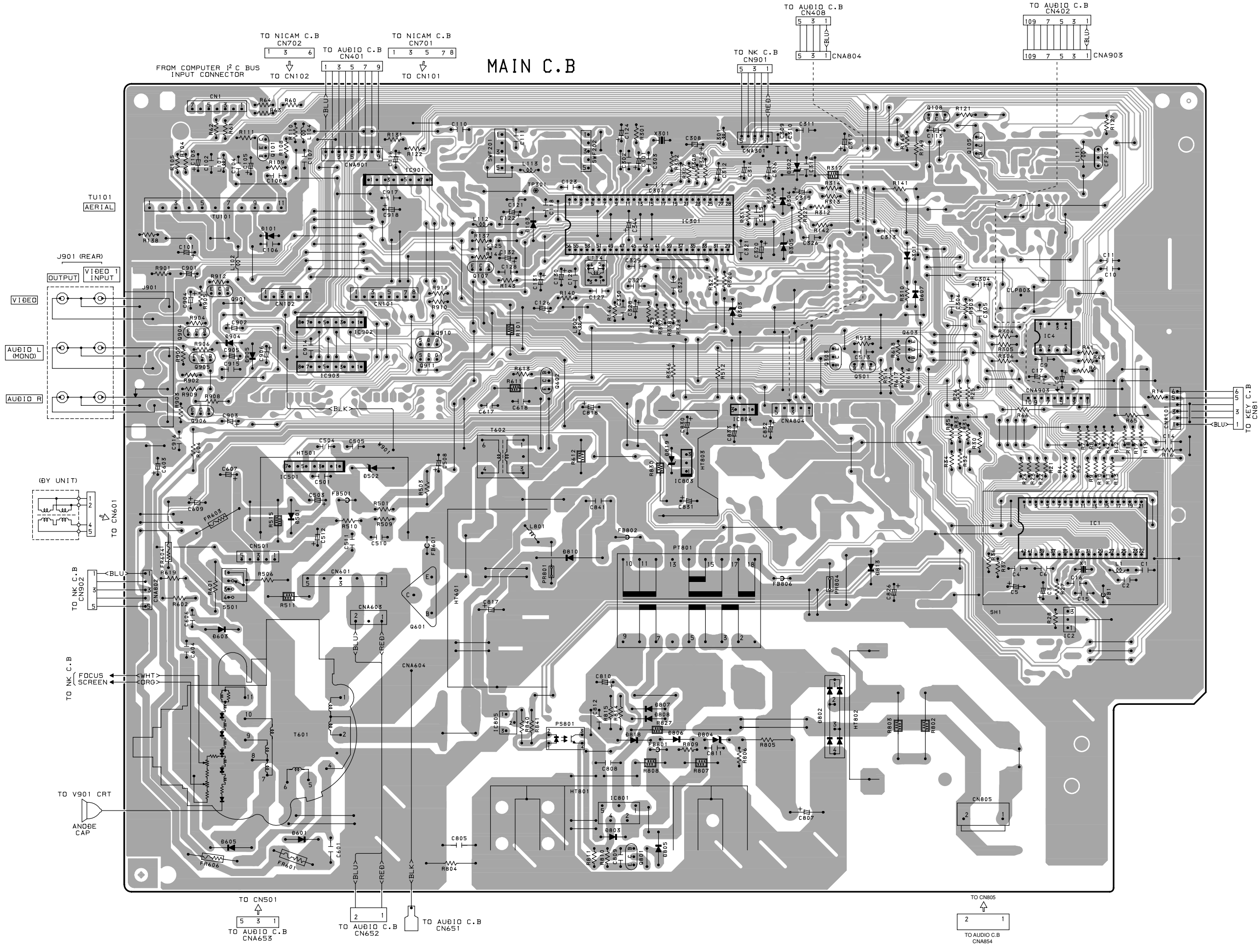


E C B

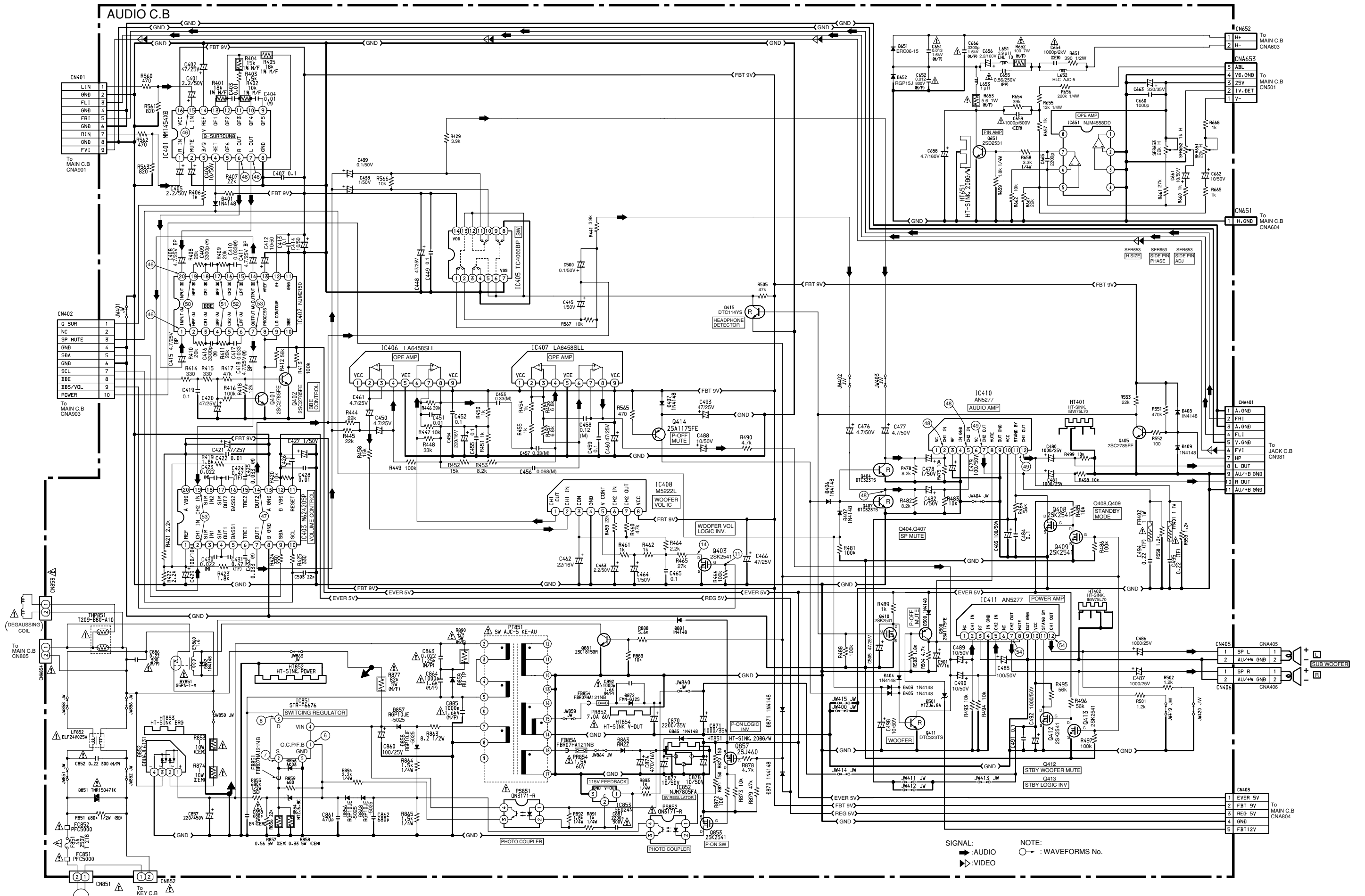
2SC3467

SCHEMATIC DIAGRAM - 1 (MAIN SECTION)





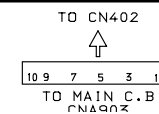
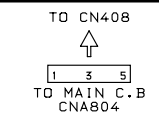
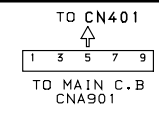
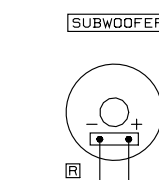
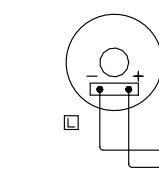
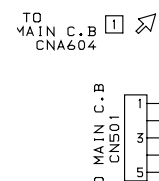
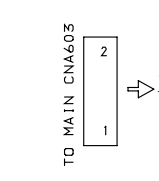
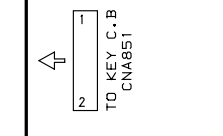
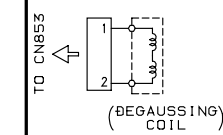
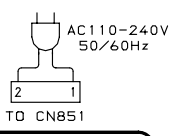
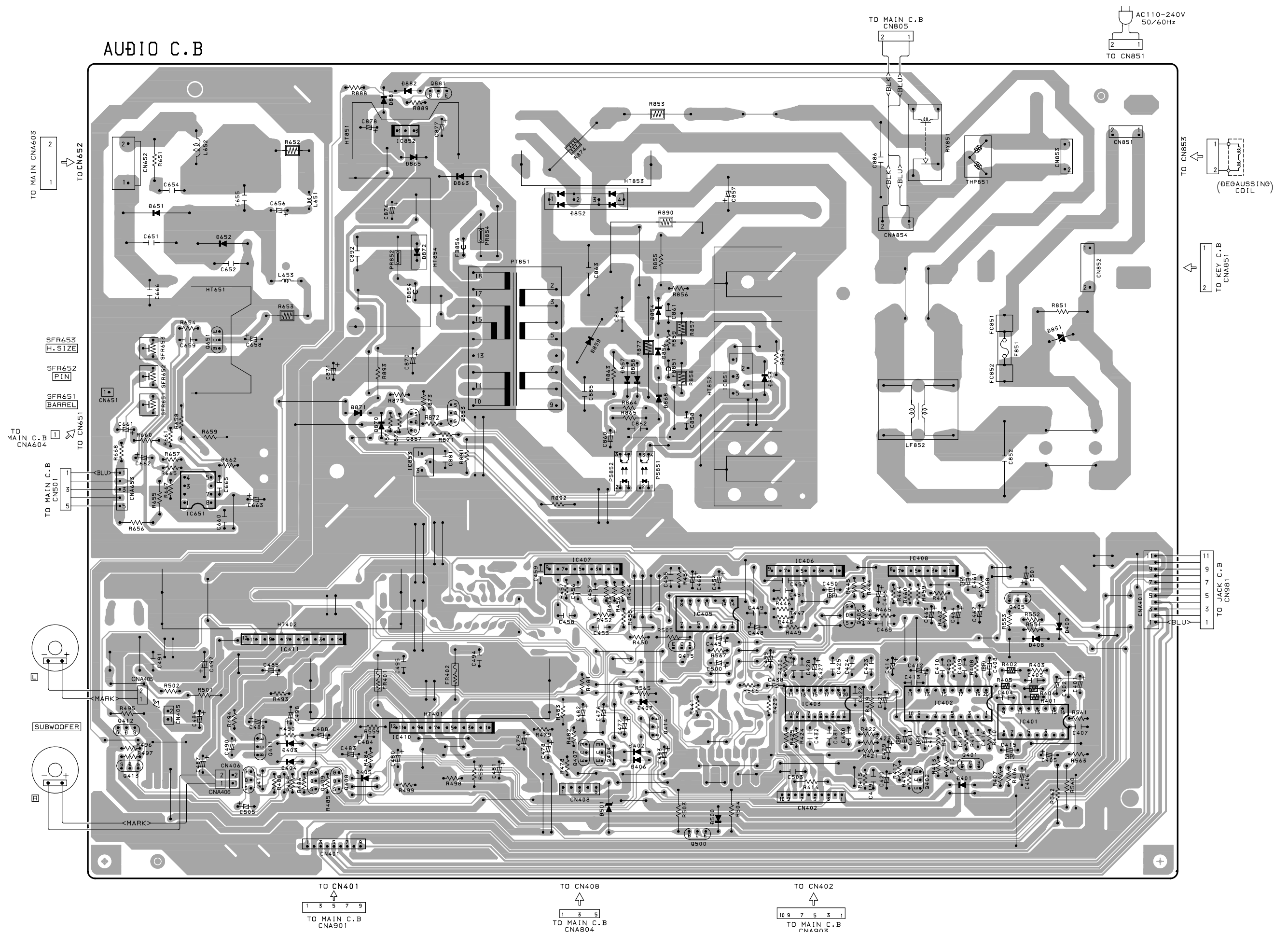
SCHEMATIC DIAGRAM - 2 (AUDIO SECTION)



WIRING - 2 (AUDIO C.B.)

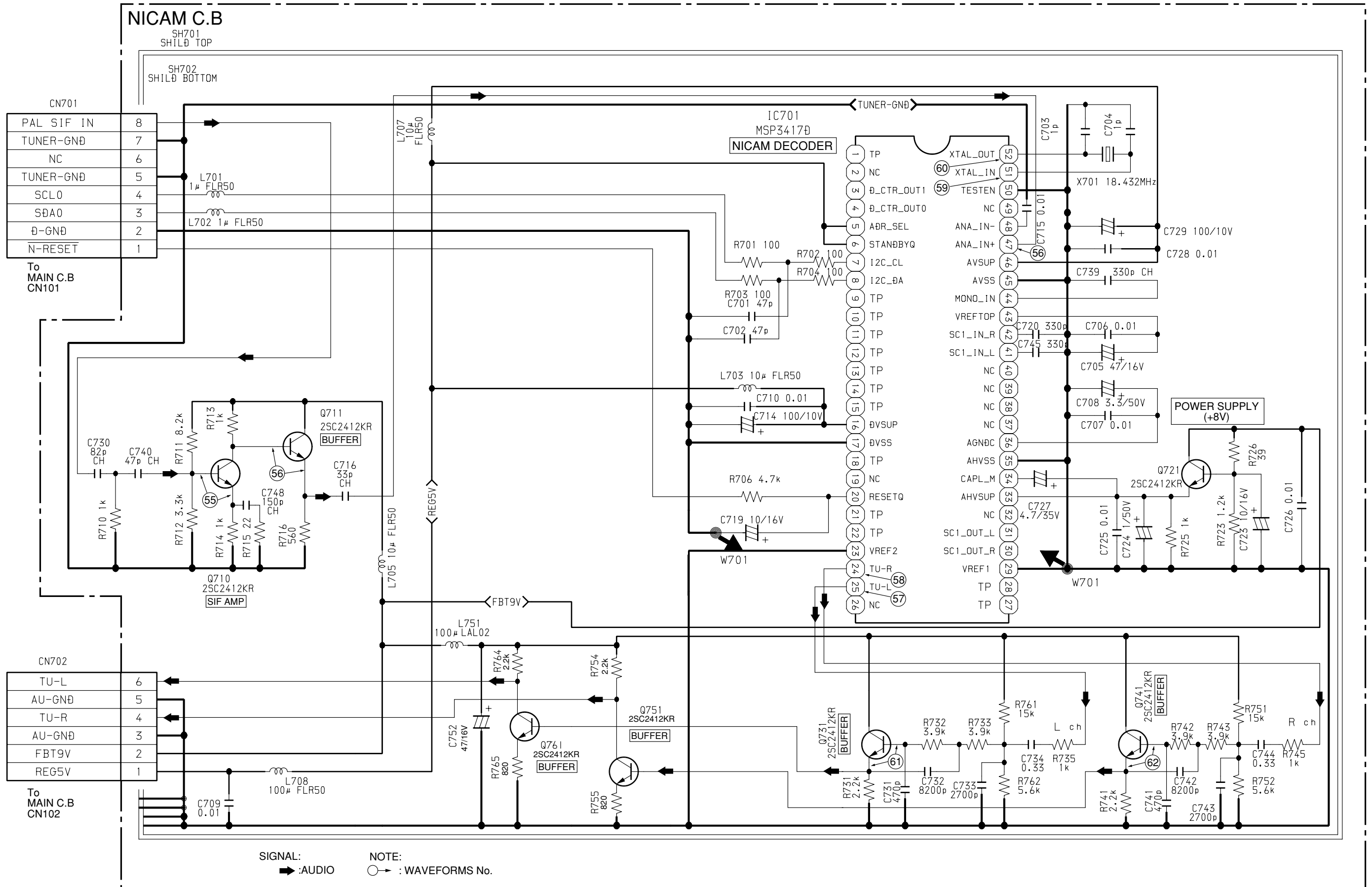
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

AUDIO C.B.

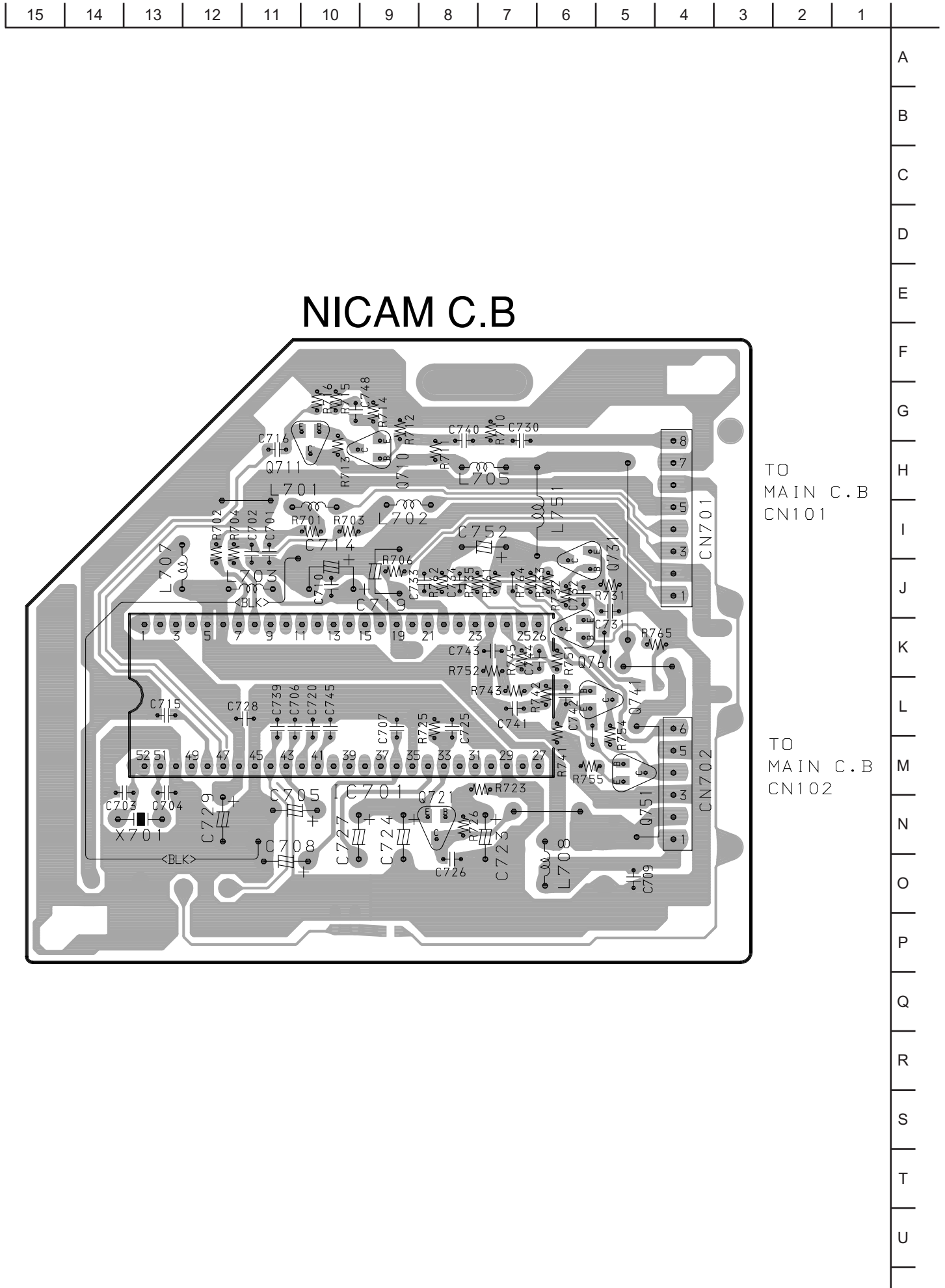


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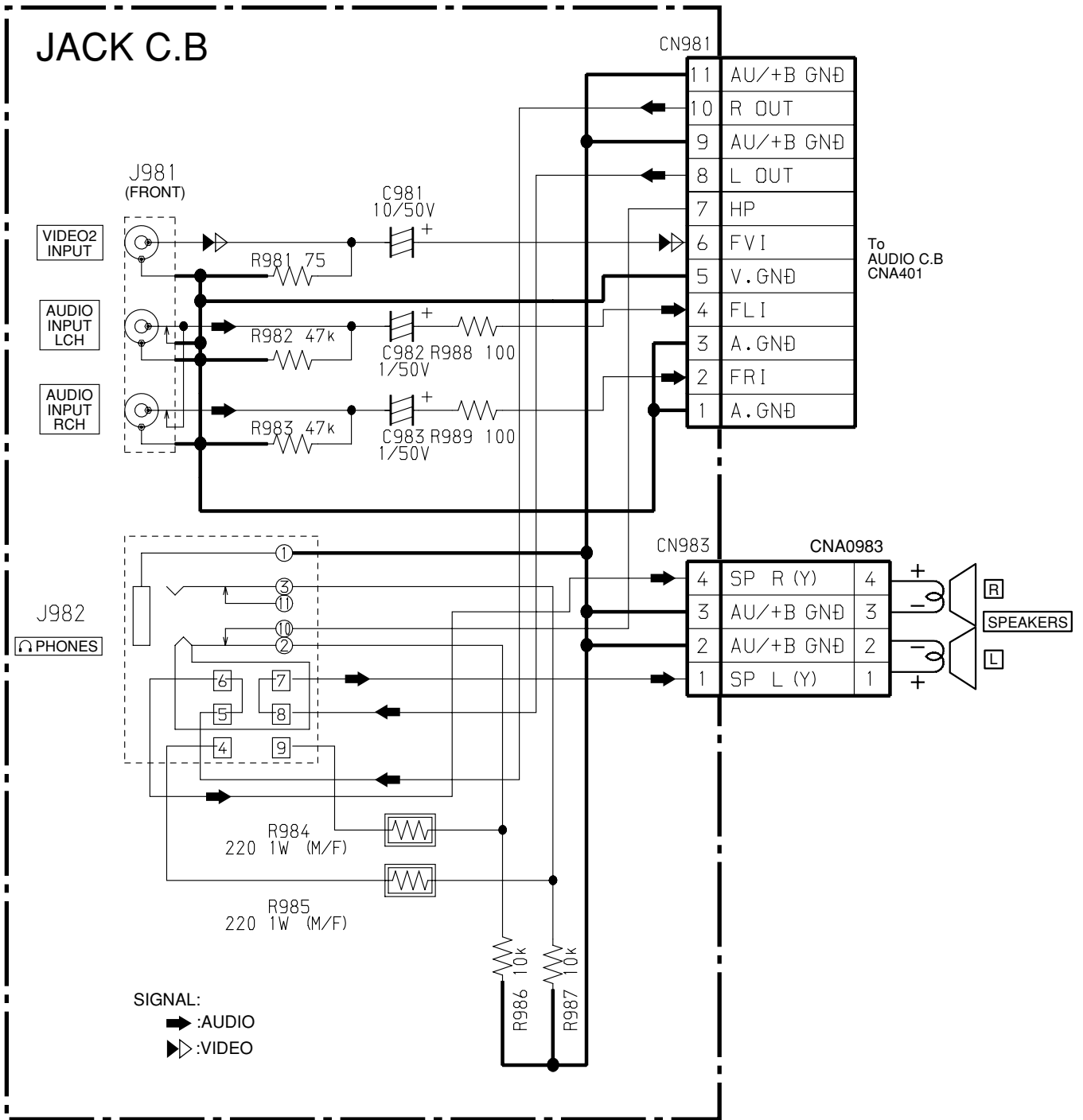
SCHEMATIC DIAGRAM - 3 (NICAM SECTION)



WIRING - 3 (NICAM C.B)



SCHEMATIC DIAGRAM - 4 (JACK SECTION)

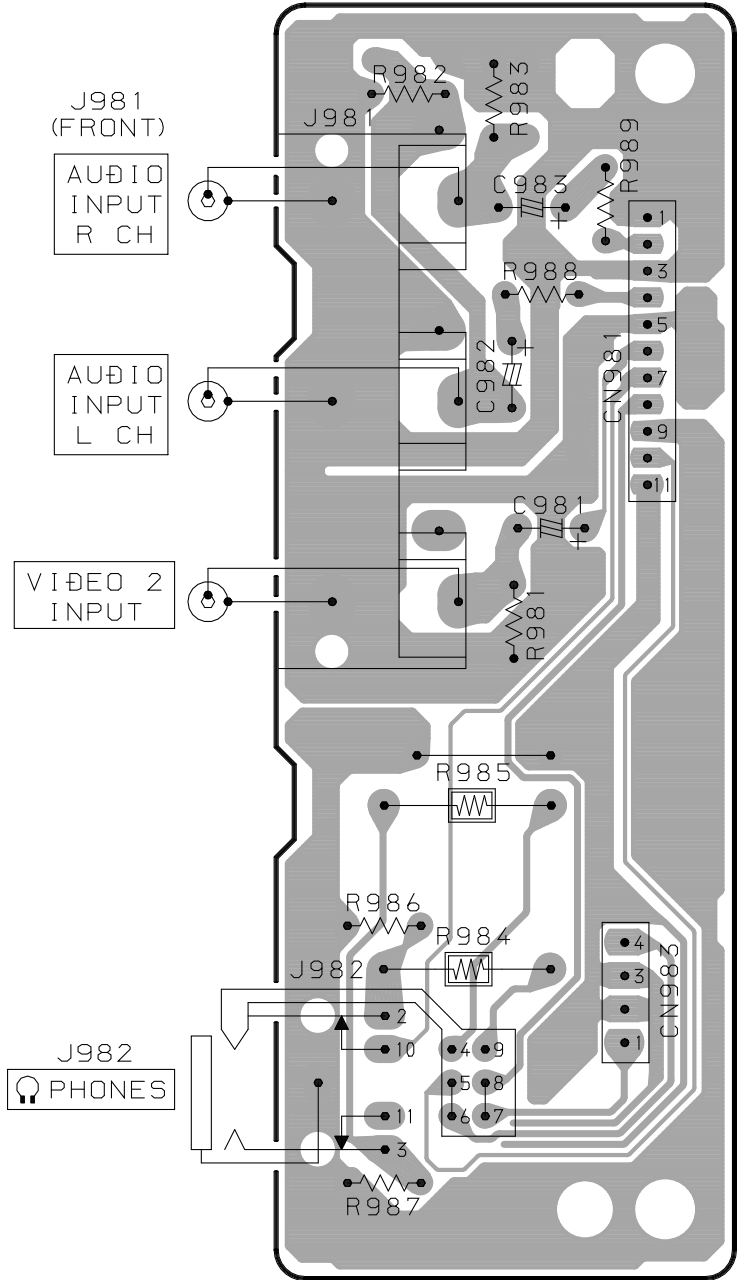


WIRING - 4 (JACK C.B)

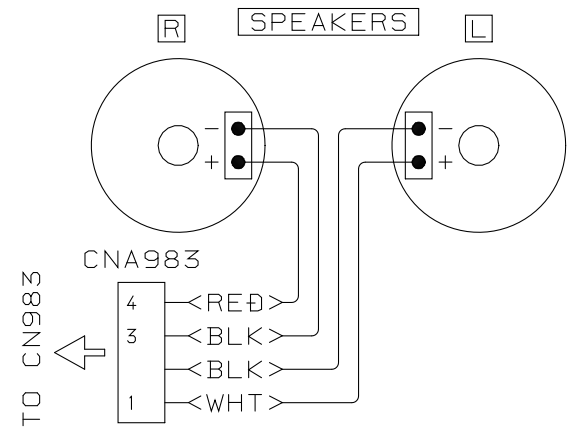
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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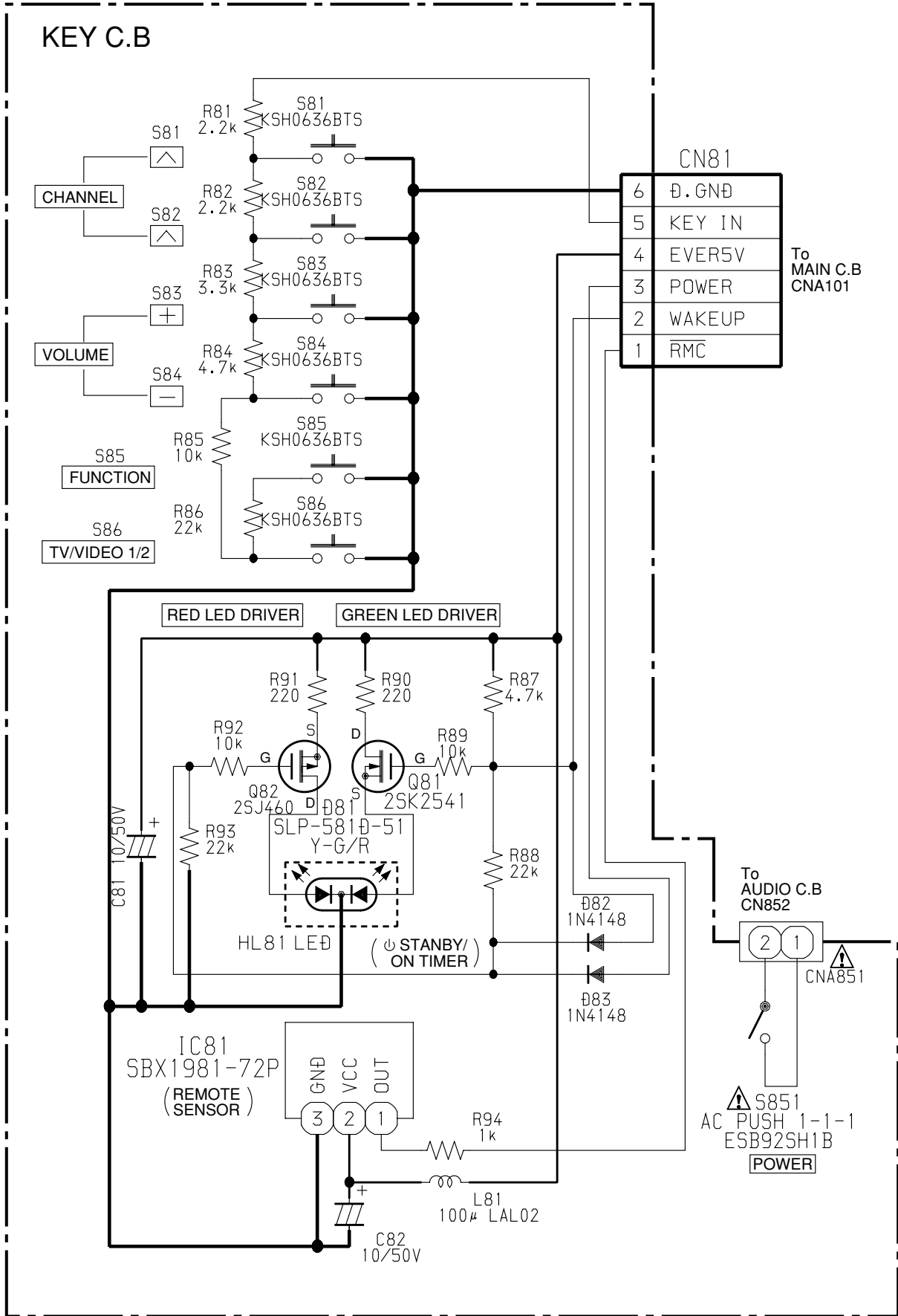
JACK C.B



TO
AUDIO C.B
CNA401



SCHEMATIC DIAGRAM - 5 (KEY SECTION)

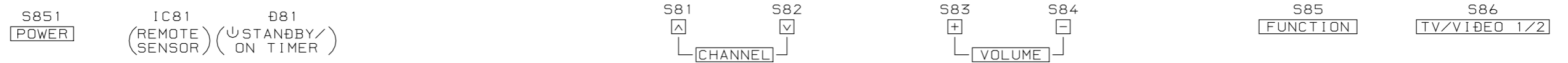
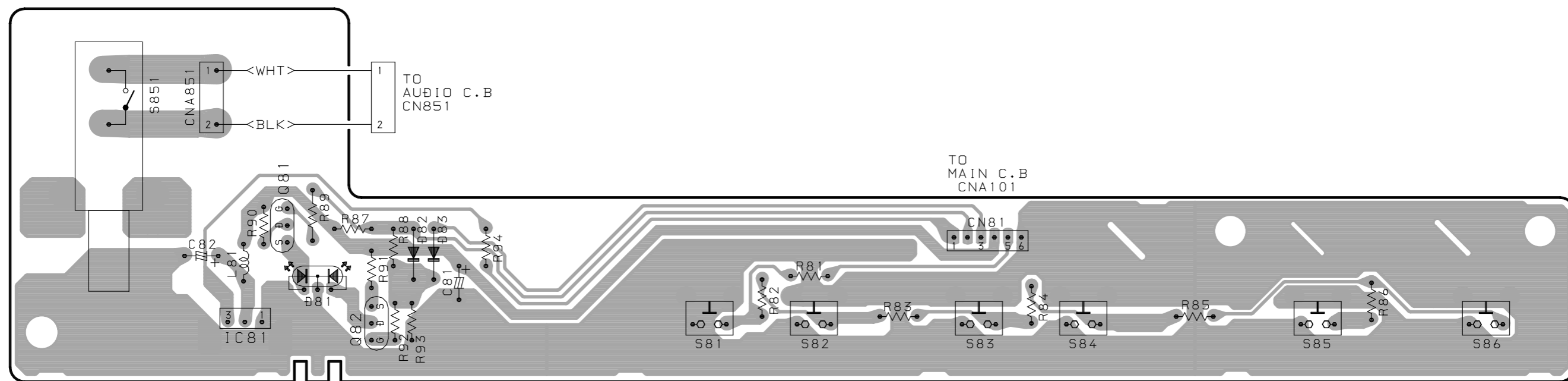


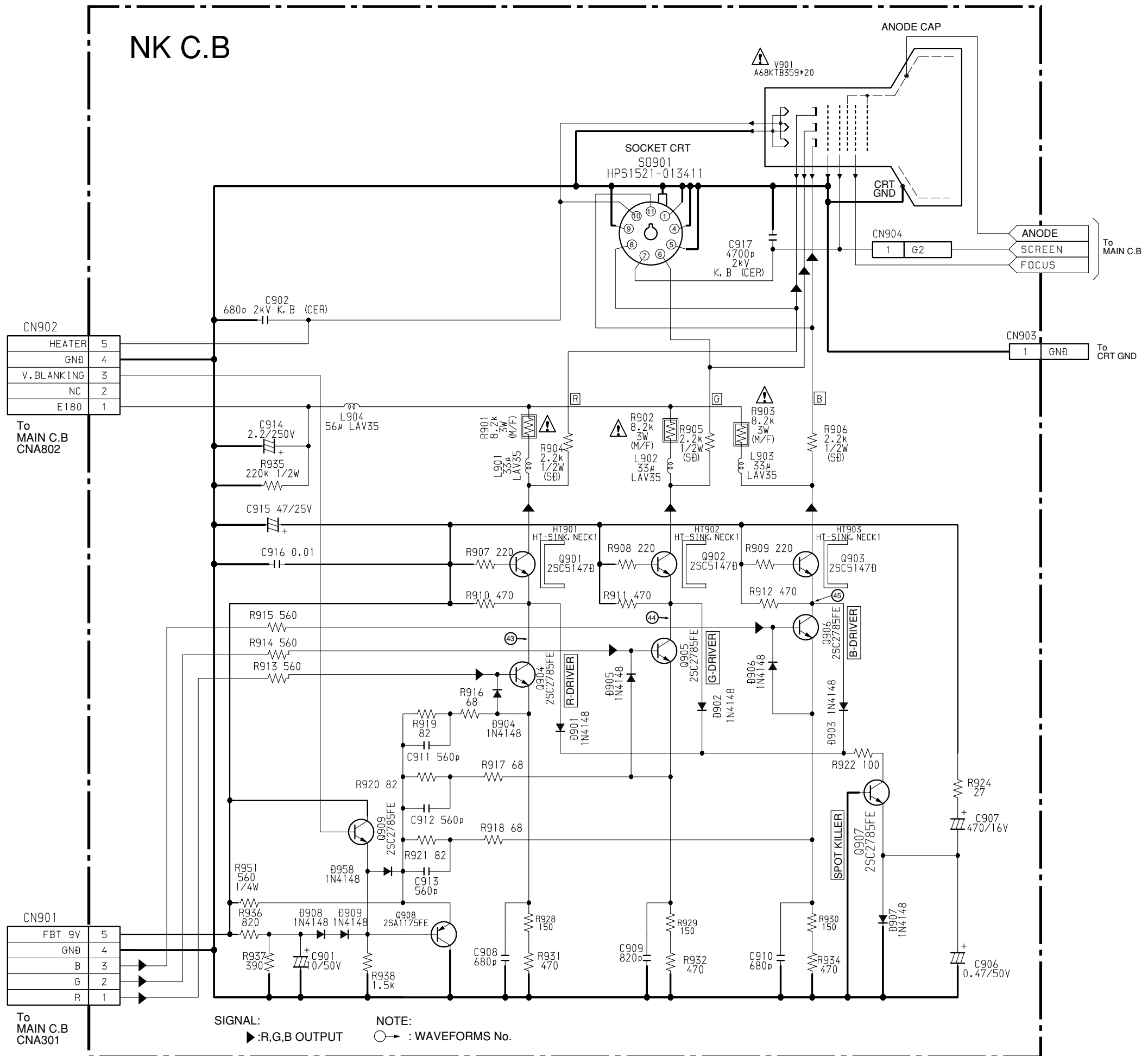
WIRING - 5 (KEY C.B)

32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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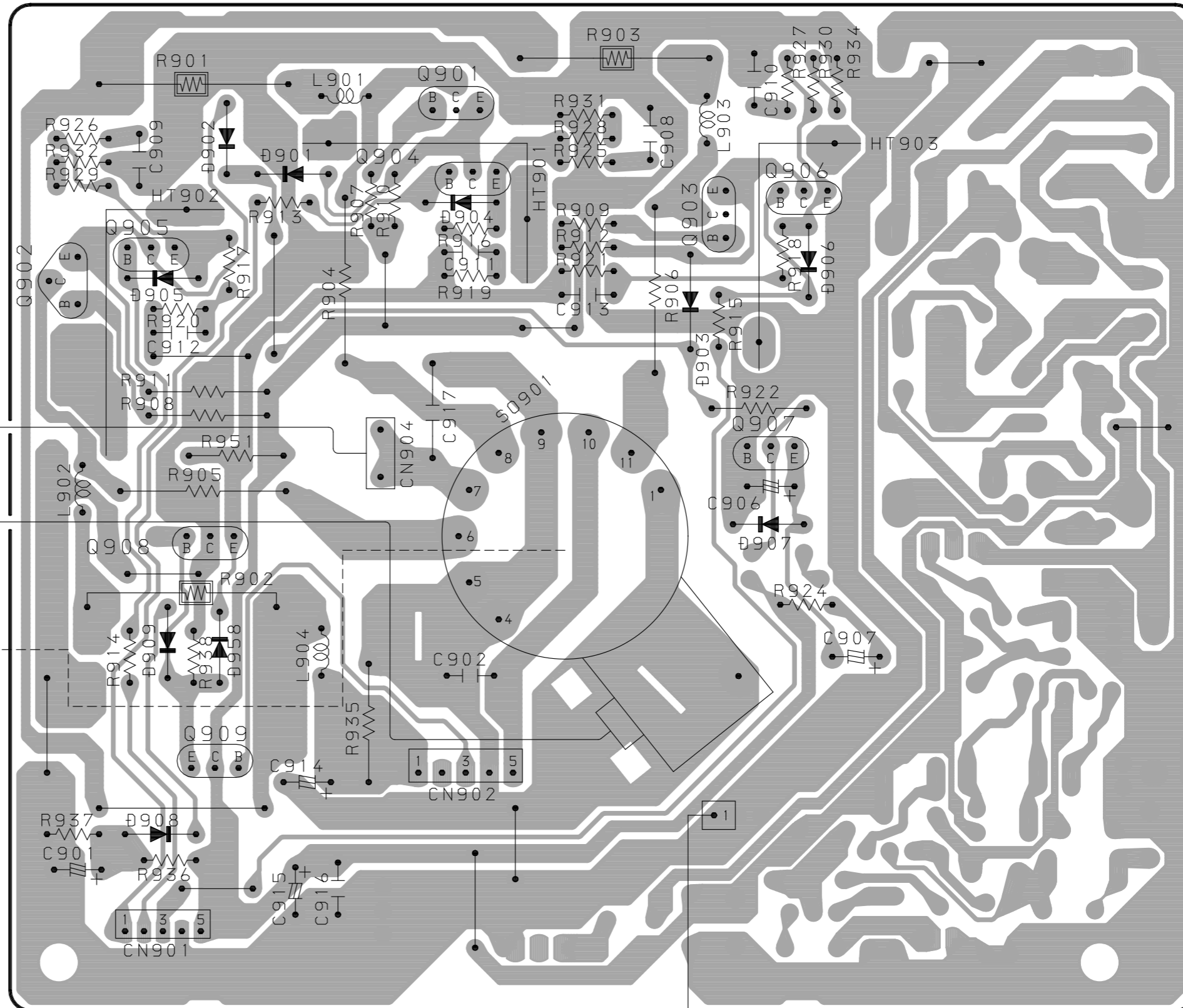
KEY C.B



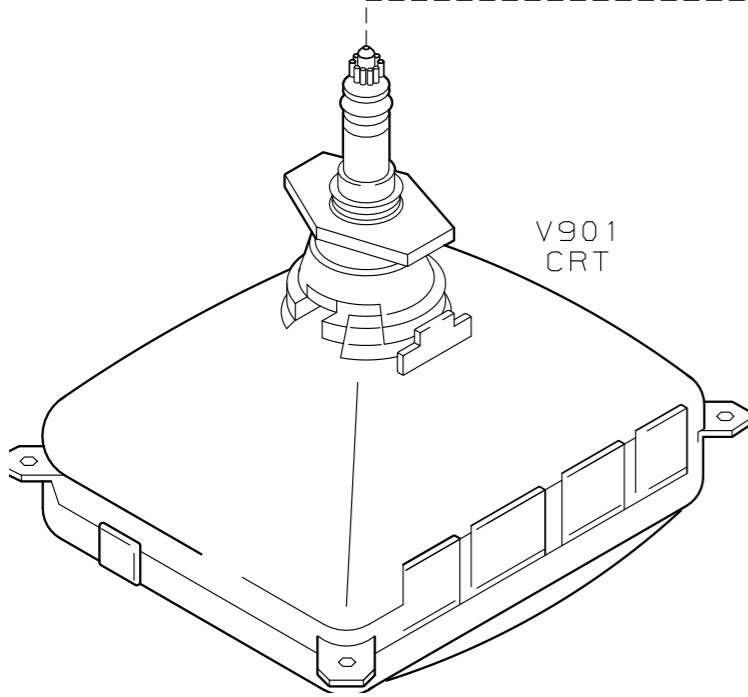


NK C.B

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 <FOCUS>



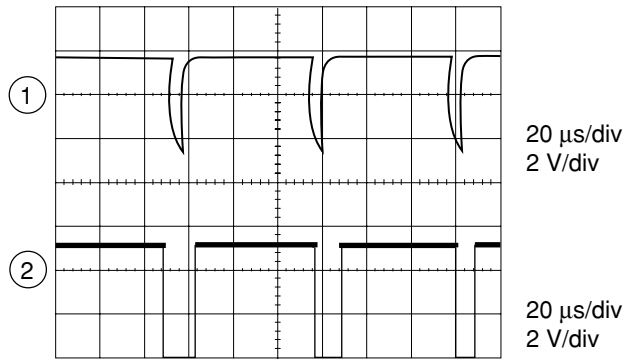
TO MAIN C.B
 CNA301

TO MAIN C.B
 CNA802

TO CRT GND

WAVEFORM

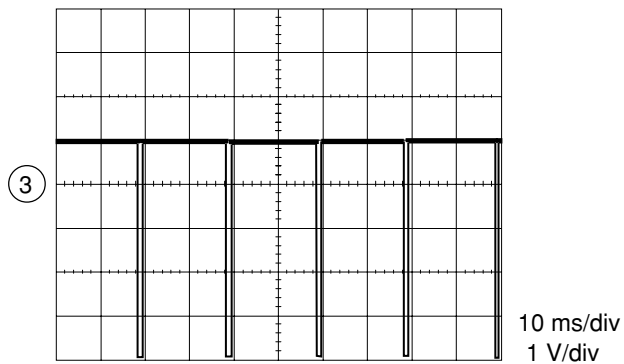
- ① IC1 PIN 13 : H SYNC ① IC301 PIN 31 : SYNC-OUT
- ② IC1 PIN 26 : HD



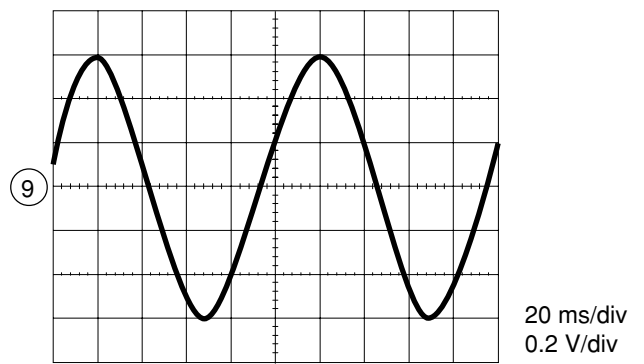
- ⑧ IC801 PIN 3 : D ⑧ IC851 PIN 3 : D



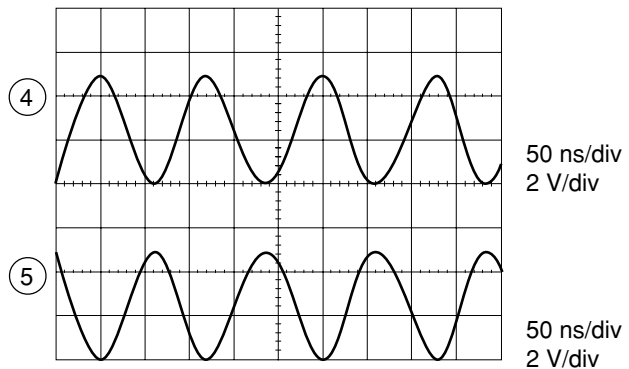
- ③ IC1 PIN 27 : \overline{VD}



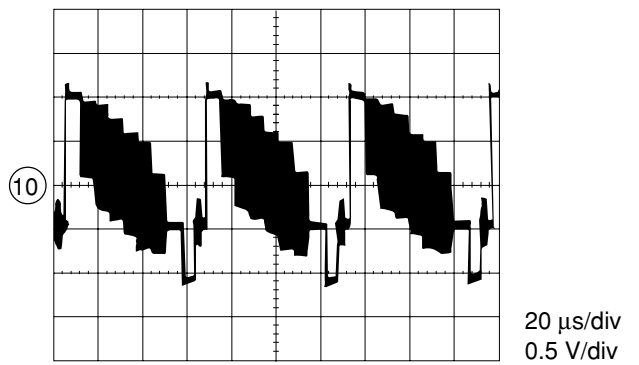
- ⑨ IC902 PIN 7
- ⑨ IC903 PIN 7



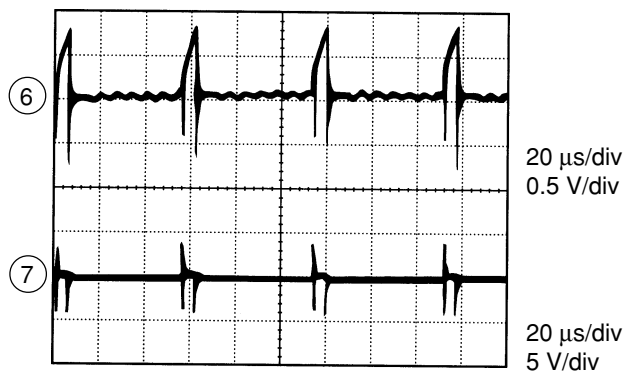
- ④ IC1 PIN 31 : X IN
- ⑤ IC1 PIN 32 : X OUT



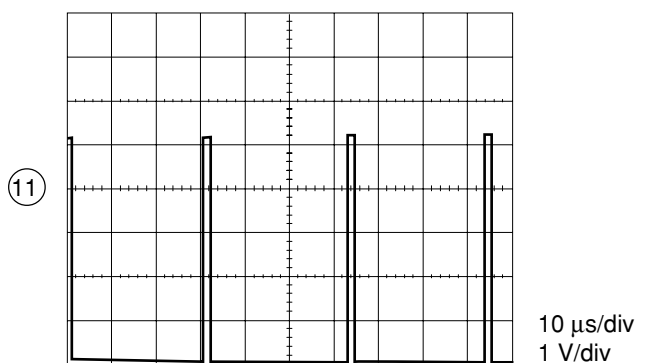
- ⑩ IC901 PIN 3



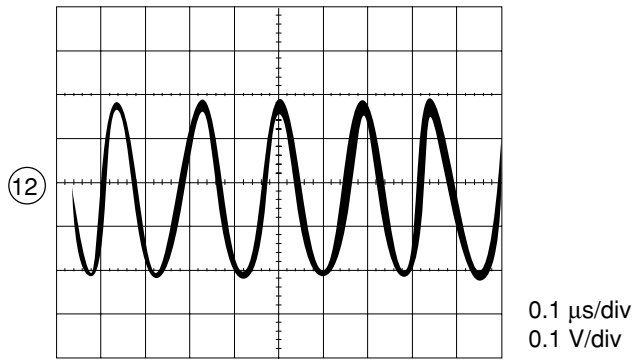
- ⑥ IC801 PIN1 : O.C.P / F.B ⑥ IC851 PIN1
- ⑦ IC801 PIN2 : S ⑦ IC851 PIN2



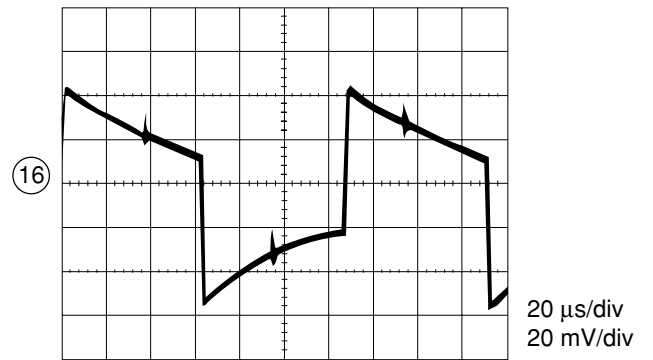
- ⑪ IC1 PIN 8 : \overline{BBS}
- ⑪ Q403 : GAIN



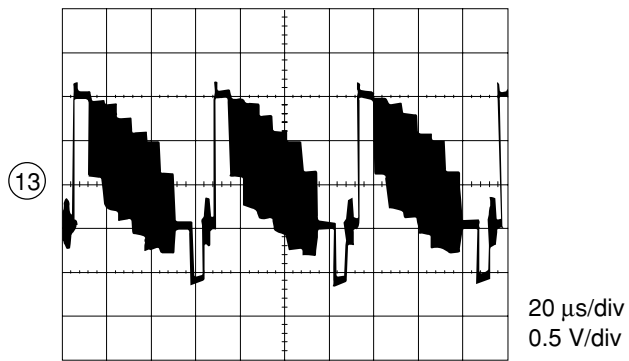
- ⑫ IC301 PIN 55 : SIF/H-PIN
- ⑫ Q107 : BASE, EMITTER



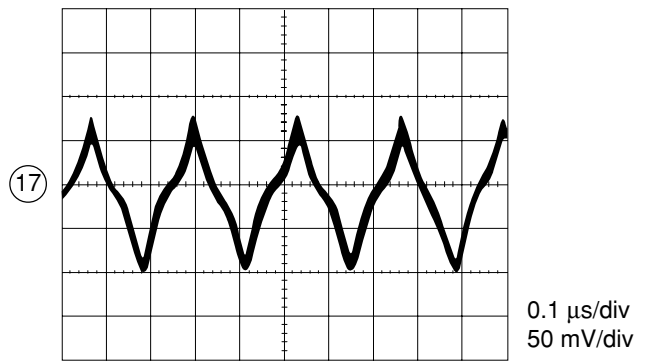
- ⑯ IC301 PIN 10 : APC-FIL



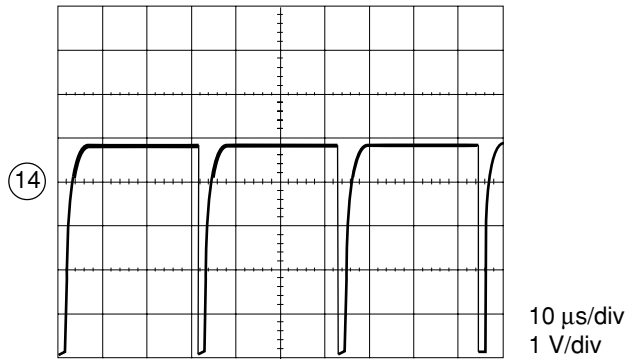
- ⑬ Q105 : BASE, EMITTER



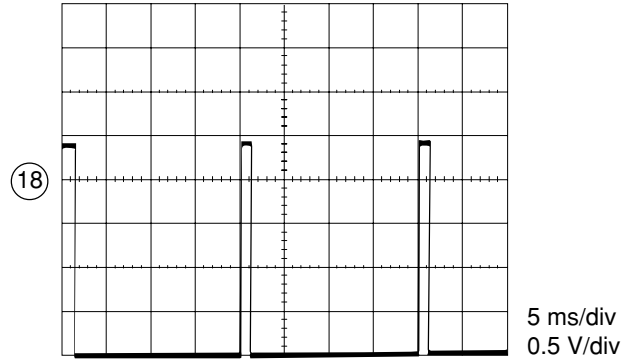
- ⑰ IC301 PIN 11 : XTAL



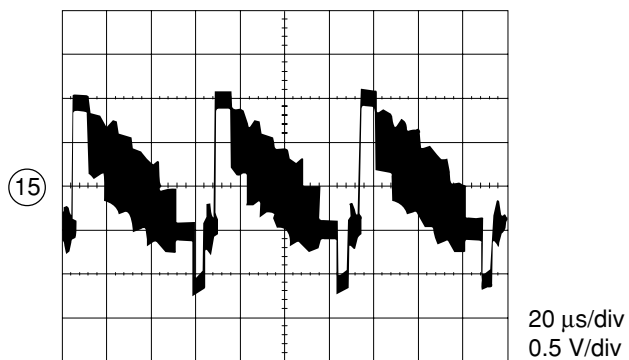
- ⑭ Q403 : DRAIN



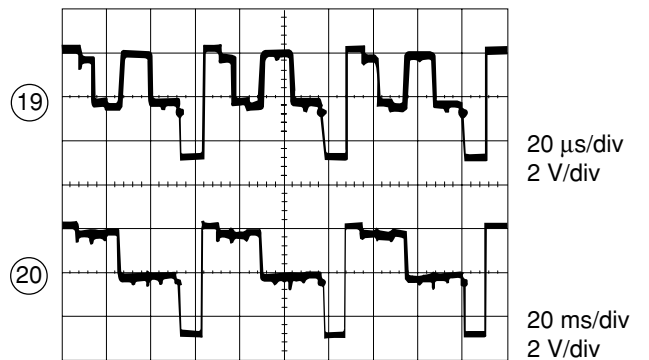
- ⑱ IC301 PIN 13 : YS/YM



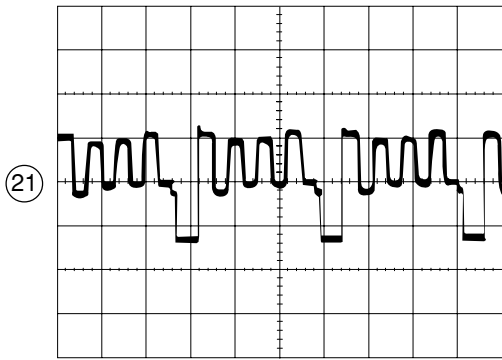
- ⑮ Q108 : BASE, EMITTER
- ⑮ IC301 PIN 47 : IFDET-OUT



- ⑲ IC301 PIN 18 : R-OUT
- ⑳ IC301 PIN 19 : G-OUT



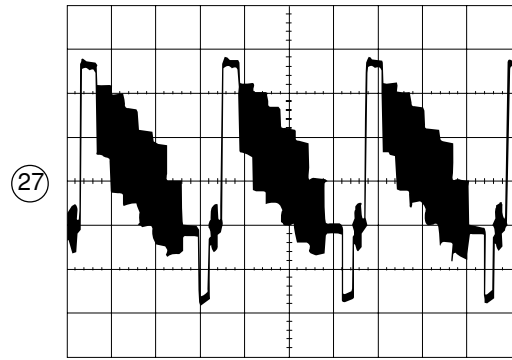
②1 IC301 PIN 20 : B-OUT



20 μs/div
2 V/div

②7 IC301 PIN 39 : Y-IN

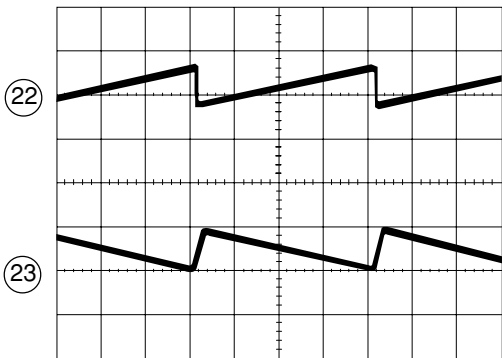
②7 IC301 PIN 45 : C-IN



20 μs/div
0.2 V/div

②2 IC301 PIN22 : V-RAMP

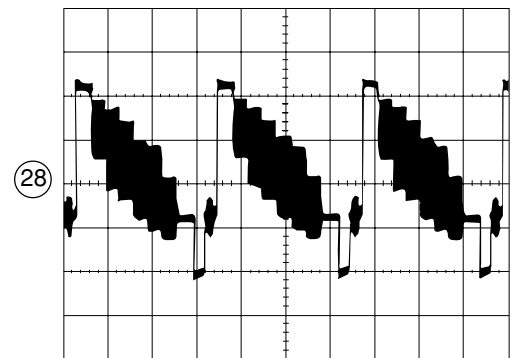
②3 IC301 PIN23 : V-NFB



5 ms/div
2 V/div

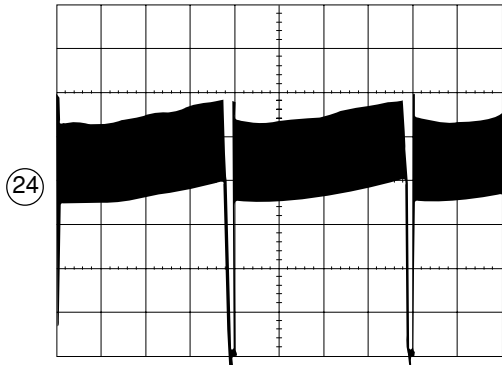
5 ms/div
2 V/div

②8 IC301 PIN 43 : SYNC-IN



20 μs/div
0.5 V/div

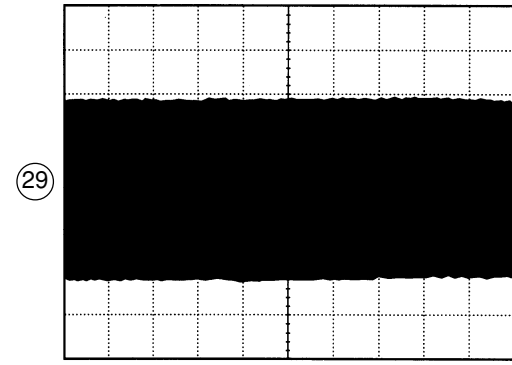
②4 IC301 PIN 24 : V-OUT



5 ms/div
0.2 V/div

②9 IC301 PIN 50 : VCO

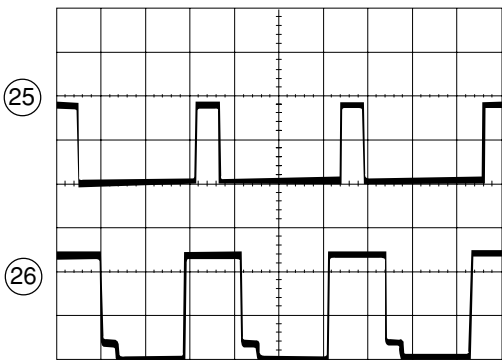
②9 IC301 PIN 51 : VCO



50 ns/div
0.1 V/div

②5 IC301 PIN 30 : FBP-IN

②6 IC301 PIN 32 : H-OUT

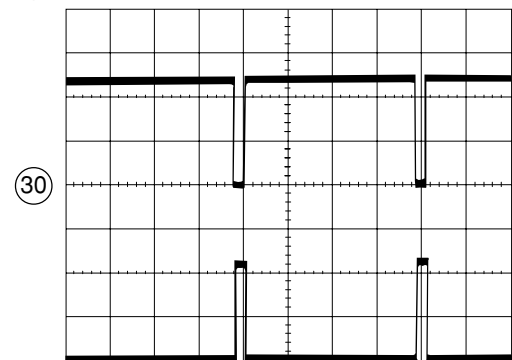


20 μs/div
5 V/div

20 μs/div
2 V/div

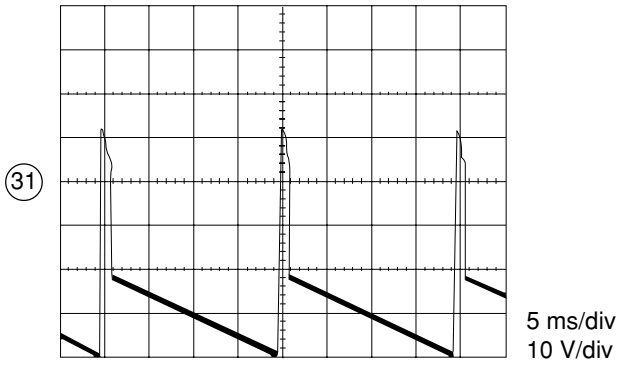
③0 Q303 : BASE, COLLECTOR

③0 Q501 : COLLECTOR

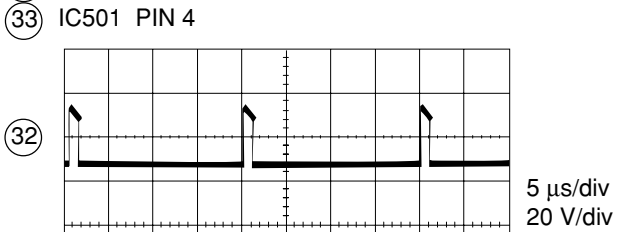


5 ns/div
2 V/div

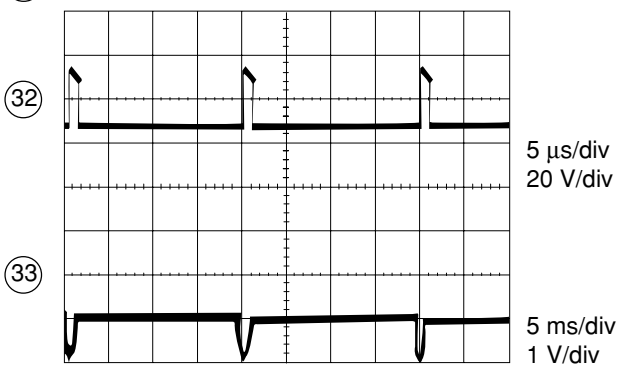
31 IC501 PIN 2



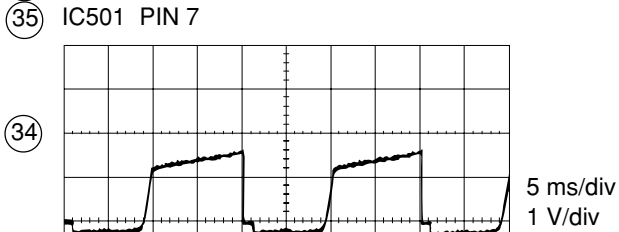
32 IC501 PIN 3



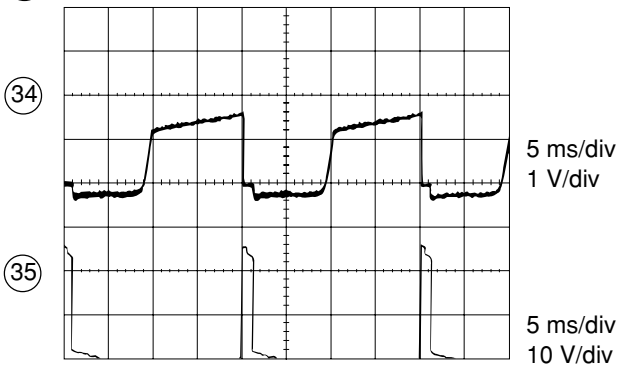
33 IC501 PIN 4



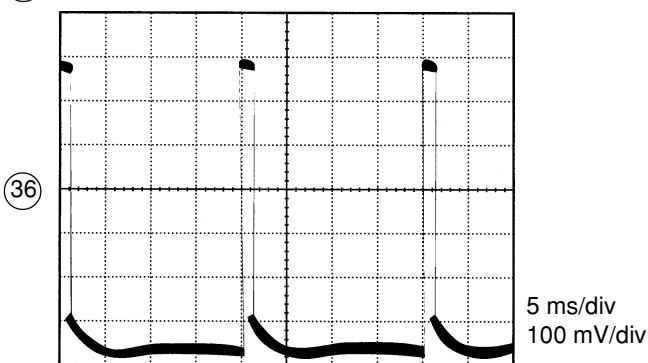
34 IC501 PIN 5



35 IC501 PIN 7



36 Q501 : BASE



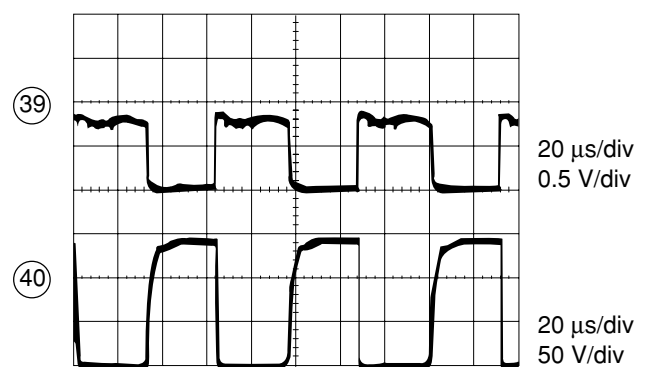
37 Q601 : BASE

38 Q601 : COLLECTOR



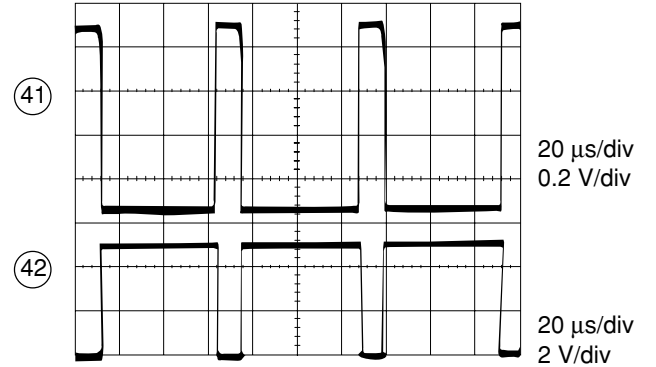
39 Q602 : BASE

40 Q602 : COLLECTOR



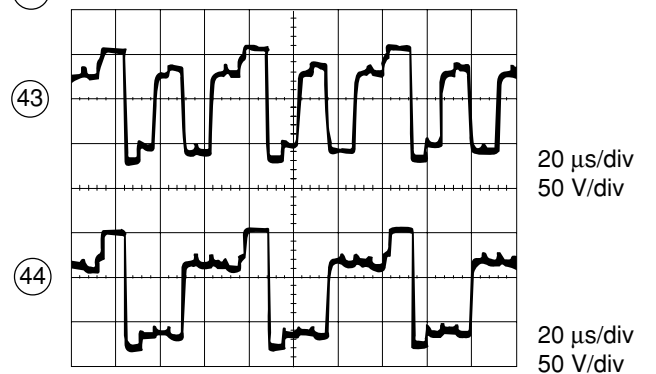
41 Q603 : BASE

42 Q603 : COLLECTOR

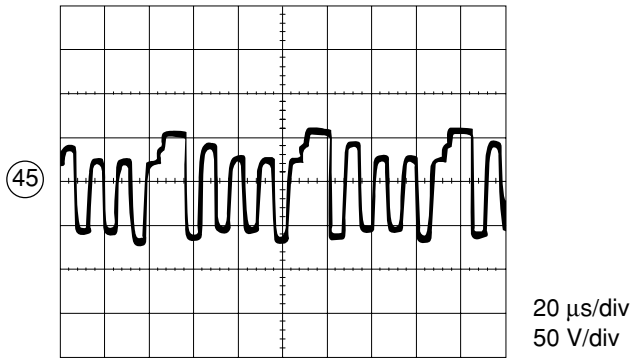


43 Q904 : COLLECTOR

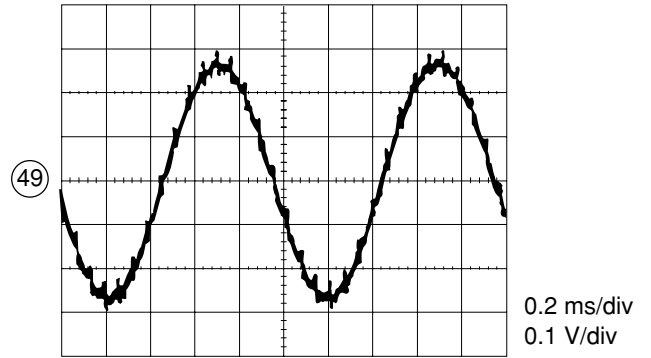
44 Q905 : COLLECTOR



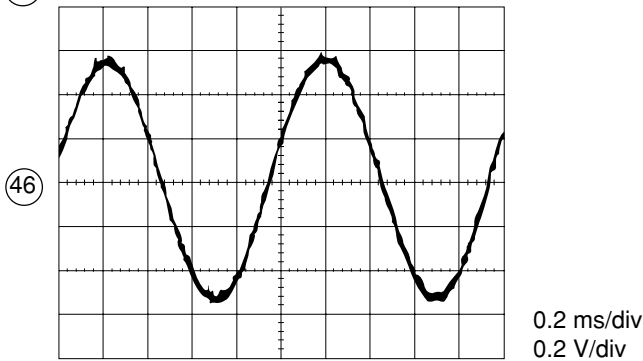
④⑤ Q906 : COLLECTOR



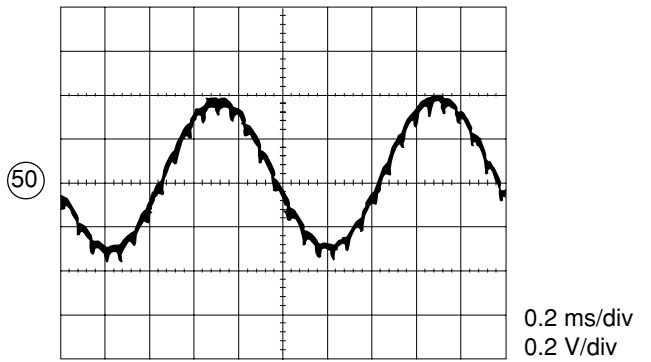
④⑨ IC410 PIN 7 : CH2 OUT ④⑨ IC410 PIN 12 : CH1 OUT



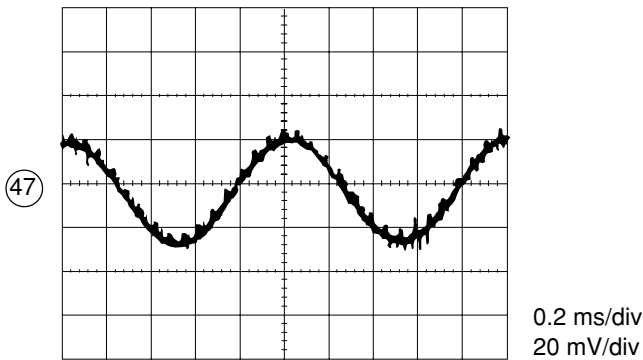
④⑥ IC401 PIN 1 : R IN ④⑥ IC401 PIN 6 : R OUT
 ④⑥ IC401 PIN 7 : L OUT ④⑥ IC401 PIN 15 : L IN
 ④⑥ IC402 PIN 1 : INPUT (A)
 ④⑥ IC402 PIN 20 : INPUT (B)



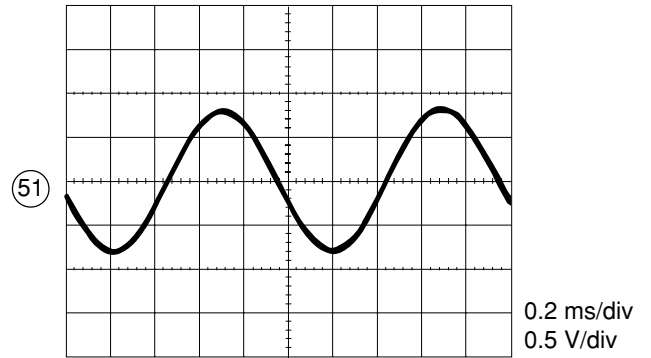
⑤⑩ IC402 PIN 2 : HPF (A)
 ⑤⑩ IC402 PIN 19 : HPF (B)



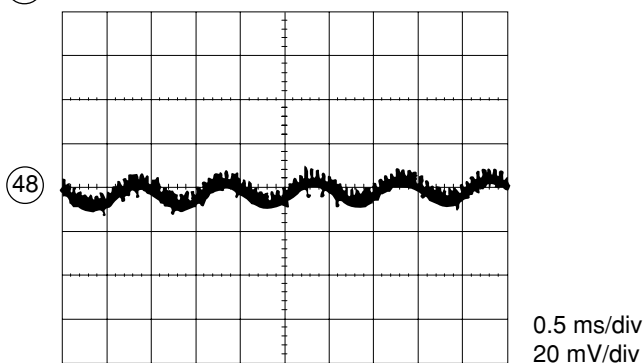
④⑦ IC403 PIN 7 : OUT1
 ④⑦ IC403 PIN 14 : OUT2



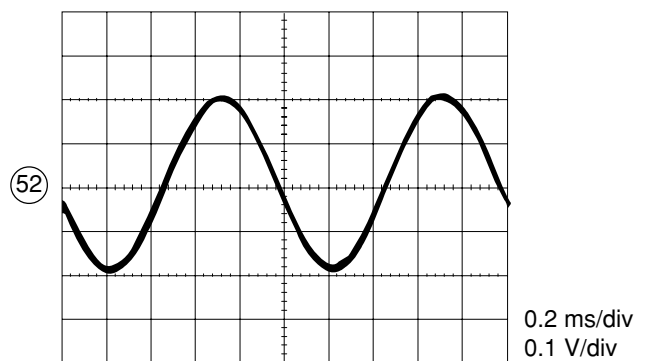
⑤① IC402 PIN 4 : BPF (A)
 ⑤① IC402 PIN 17 : BPF (B)



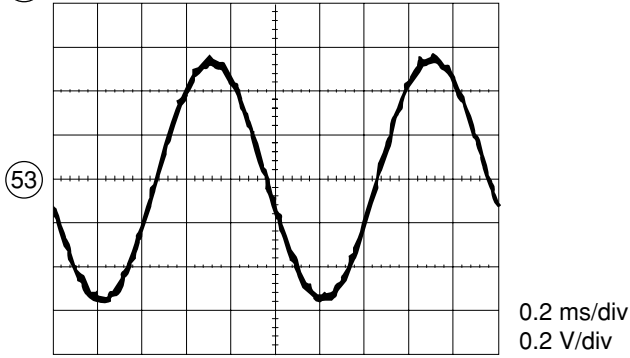
④⑧ IC410 PIN 2 : CH1 IN
 ④⑧ IC410 PIN 5 : CH2 IN
 ④⑧ Q404/407 : COLLECTOR



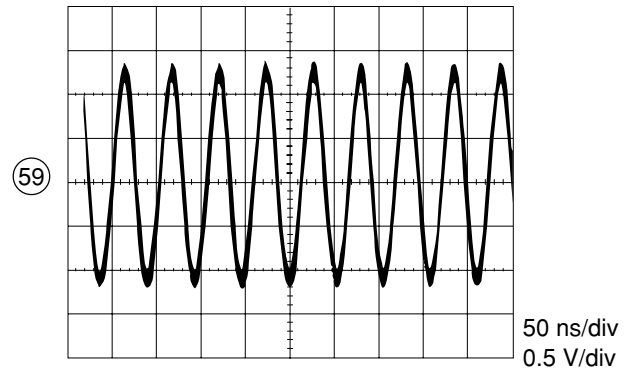
⑤② IC402 PIN 6 : LPF (A)
 ⑤② IC402 PIN 15 : LPF (B)



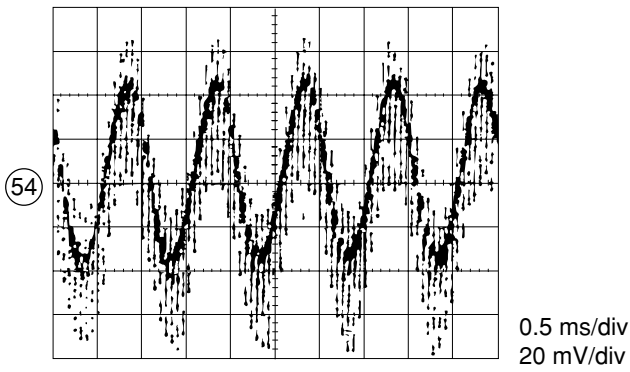
- ⑤③ IC402 PIN 7 : OUTPUT (A)
- ⑤③ IC402 PIN 14 : OUTPUT (B)
- ⑤③ IC403 PIN 2 : CH1 IN
- ⑤③ IC403 PIN 19: CH2 IN



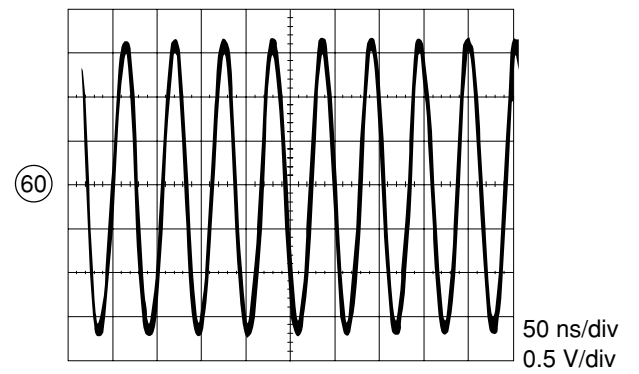
- ⑤⑨ IC701 PIN 51 : XTAL_IN



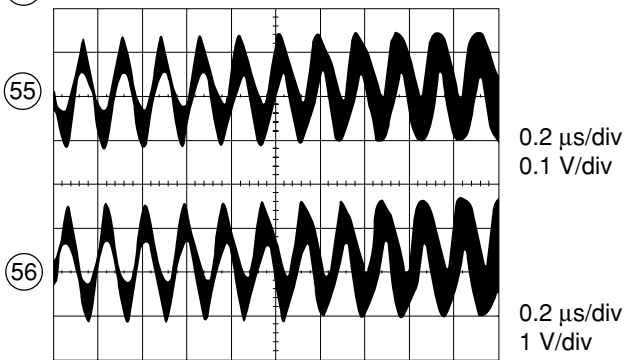
- ⑤④ IC411 PIN 7 : CH2 OUT
- ⑤④ IC411 PIN 12 : CH1 OUT



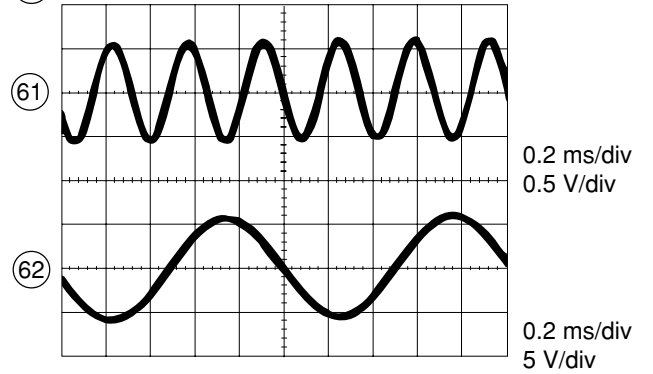
- ⑥⑩ IC701 PIN 52 : XTAL OUT



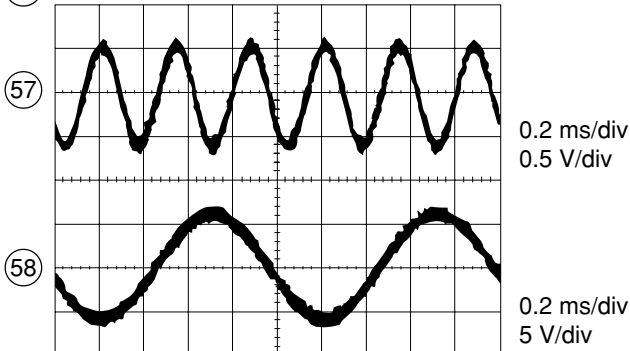
- ⑤⑤ Q710 : BASE, EMITTER
- ⑤⑥ Q710 : COLLECTOR; Q711 : BASE, EMITTER;
- ⑤⑥ IC701 PIN 47 : ANA_IN+



- ⑥① Q731 : BASE, EMITTER
- ⑥② Q741 : BASE, EMITTER



- ⑤⑦ IC701 PIN 25 : TU-L
- ⑤⑧ IC701 PIN 24 : TU-R



VOLTAGE CHART

• AC VOLTAGE : 230V

• INPUT :

1. VIDEO IN (LINE 1 IN)

VIDEO : PAL COLOR BAR

AUDIO : 1kHz, -8dBm

2. RF IN $f_p = 471.25\text{MHz}$, 70dBu

VIDEO : PAL COLOR BAR, 87.5% MOD

AUDIO : 1kHz, 60% MOD (30kHz DEV)

• VOLUME : 32

• BASS / TREBLE / BALANCE : CENTER

• Q SURROUND / BBE : OFF

• MSP : FLAT

• SUB-WOOFER : INITIALIZE VALUE

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
IC1			
1	0	0	0
2	5.1	5.1	0
3	Not Used		
4	Not Used		
5	5.1	5.1	0
6	0	0	0
7	5.1	5.1	0
8	* (11)	* (11)	4.6
9	5.1	5.1	5.1
10	5.1	5.1	5.1
11	5.1	5.1	5.1
12	5.1	5.1	5.1
13	* (1)	* (1)	0
14	5.1	5.1	5.1
15	0	0	0
16	2.6	2.6	2.6
17	3.1	3.1	0
18	—		
19	—		
20	—		
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	* (2)	* (2)	0
27	* (3)	* (3)	0
28	5.1	5.1	5.1
29	5.1	5.1	5.1
30	0	0	0
31	* (4)	* (4)	* (4)
32	* (5)	* (5)	* (5)
33	5.1	5.1	5.1
34	0	0	1.7

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
35	0	0	2.3
36	5.1	5.1	5.1
37	0~5.1	0~5.1	5.1
38	0~5.1	0~5.1	5.1
39	5.1	5.1	1.6
40	5.1	0	1.6
41	0	0	0
42	5.1	5.1	5.1
IC2			
1	5.1	5.1	5.1
2	0	0	0
3	5.1	5.1	5.1
IC4			
1~4	0	0	0
5	5.1	5.1	5.1
6	5.1	5.1	5.1
7	0	0	0
8	5.1	5.1	5.1
IC81			
1	5.1	5.1	5.1
2	5.1	5.1	5.1
3	0	0	0
IC301			
1	3.0	3.0	0
2	Not Used		
3	8.9	8.9	0
4	5.0	5.0	0
5	0	0	0
6	0	0	0
7	1.9	1.9	0
8	4.2	4.2	0
9	3.9	3.9	0
10	* (16)	* (16)	0
11	* (17)	* (17)	0
12	0	0	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
13	* (18)	* (18)	0
14	2.8	2.8	0
15	2.8	2.8	0
16	2.8	2.8	0
17	9.1	9.1	0
18	* (19)	* (19)	0
19	* (20)	* (20)	0
20	* (21)	* (21)	0
21	6.0	6.0	0
22	* (22)	* (22)	0
23	* (23)	* (23)	0
24	* (24)	* (24)	0
25	1.7	1.7	0
26	0~5.1	0~5.1	5.1
27	0~5.1	0~5.1	5.1
28	9.1	9.1	1.5
29	Not Used		
30	* (25)	* (25)	0
31	* (1)	* (1)	0
32	* (26)	* (26)	0
33	0	0	0
34	Not Used		
35	Not Used		
36	4.9	4.9	1.3
37	Not Used		
38	Not Used		
39	* (27)	* (27)	0
40	7.1	7.1	0
41	Not Used		
42	0	0	0
43	* (28)	* (28)	0
44	2.4	2.4	0
45	* (27)	* (27)	0
46	5.1	5.1	0
47	* (15)	* (15)	0
48	3.9	3.9	0
49	0	0	0
50	* (29)	* (29)	0
51	* (29)	* (29)	0
52	9.2	9.2	0
53	4.64	4.64	0.4

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
54	5.8	5.8	0.4
55	* (12)	* (12)	0
56	5.9	5.9	0.6
IC401			
1	* (46)	* (46)	0
2	4.2	4.2	0
3	0	0	0
4	0	0	0
5	4.2	4.2	0
6	* (46)	* (46)	0
7	* (46)	* (46)	0
8	0	0	0
9	4.2	4.2	0
10	4.2	4.2	0
11	4.2	4.2	0
12	4.2	4.2	0
13	4.2	4.2	0
14	4.2	4.2	0
15	* (46)	* (46)	0
16	9.0	9.0	0
IC402			
1	* (46)	* (46)	0.2
2	* (50)	* (50)	0
3	4.5	4.5	0
4	* (51)	* (51)	0
5	4.5	4.5	0
6	* (52)	* (52)	0
7	* (53)	* (53)	0
8	0	0	0.8
9	0	0	0.8
10	0	0	0.8
11	0	0	0
12	9.0	9.0	0
13	4.5	4.5	0.5
14	* (53)	* (53)	0.3
15	* (52)	* (52)	0.2
16	4.5	4.5	0.2
17	* (51)	* (51)	0.2
18	4.5	4.5	0.2
19	* (50)	* (50)	0.2
20	* (46)	* (46)	0.2

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
IC403			
1	4.6	4.6	0.1
2	* (53)	* (53)	0.1
3	4.6	4.6	0.1
4	4.6	4.6	0
5	4.0	4.0	0.2
6	4.0	4.0	0.2
7	* (47)	* (47)	0.2
8	0	0	0
9	0~5	0~5	5.1
10	0~5	0~5	5.1
11	5.1	5.1	0
12	5.1	5.1	0
13	0	0	0
14	* (47)	* (47)	0.2
15	4.0	4.0	0.2
16	4.0	4.0	0.2
17	4.5	4.5	0
18	4.5	4.5	0.1
19	* (53)	* (53)	0.1
20	9.1	9.1	0.2
IC405			
1	0.4	0.4	0
2	0.3	0.3	0
3	4.5	4.5	0
4	0	0	0
5	7.3	7.3	0
6	7.3	7.3	0
7	0	0	0
8	4.5	4.5	0
9	4.5	4.5	0
10	0.3	0.3	0
11	0.3	0.3	0
12	7.3	7.3	0
13	7.3	7.3	0
14	9.0	9.0	0
IC406			
1	9.0	9.0	0
2	4.4	4.4	0
3	4.4	4.4	0
4	4.4	4.4	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
5	0	0	0
6	4.4	4.4	0
7	4.4	4.4	0
8	4.4	4.4	0
9	8.9	8.9	0
IC407			
1	9.0	9.0	0
2	4.5	4.5	0
3	4.5	4.5	0
4	4.5	4.5	0
5	0	0	0
6	4.5	4.5	0
7	4.5	4.5	0.4
8	4.5	4.5	0.4
9	8.9	8.9	0
IC408			
1	4.4	4.4	0
2	4.4	4.4	0
3	4.4	4.4	0
4	0	0	0
5	4.4	4.4	0
6	4.4	4.4	0.3
7	4.4	4.4	0
8	8.9	8.9	0
IC410			
1	Not Used		
2	* (48)	* (48)	0
3	27.3	27.3	0.6
4	0	0	0
5	* (48)	* (48)	0
6	Not Used		
7	* (49)	* (49)	0
8	0	0	1.7
9	0	0	0
10	28.6	28.6	28.6
11	12.0	12.0	0
12	* (49)	* (49)	0
IC411			
1	Not Used		
2	0	0	0
3	28.7	28.7	0.5

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
4	0	0	0
5	0	0	0
6	Not Used		
7	* (54)	* (54)	0
8	0	0	0
9	0	0	0
10	30.3	30.3	30.3
11	12	12	0
12	* (54)	* (54)	0
IC501			
1	0	0	0
2	* (31)	* (31)	0
3	* (32)	* (32)	0
4	* (33)	* (33)	0
5	* (34)	* (34)	0
6	24.1	24.1	0
7	* (35)	* (35)	0
IC651			
1	-	-	0
2	0	0	0
3	0	0	0
4	0	0	0
5	4.9	4.9	0
6	5.0	5.0	0
7	2.9	2.9	0
8	26.0	26.0	0.2
IC801 * GND is C807 negative side			
1	* (6)	* (6)	0
2	* (7)	* (7)	0
3	* (8)	* (8)	0
4	16.1	16.1	0
5	0	0	0
IC803			
1	12.4	12.4	0
2	0	0	0
3	9.3	9.3	0
IC804			
1	5.2	5.2	0
2	0	0	0
3	9.3	9.3	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
IC805			
1	130	130	130
2	110	110	110
3	0	0	0
IC851 GND is C857 negative side			
1	1.6	1.6	0.2
2	0.1	0.1	0
3	-	-	-
4	16.2	16.2	12.7
5	0	0	0
IC852			
1	5.1	5.1	5.1
2	0	0	0
3	11.5	11.5	9.7
IC853			
1	24.2	24.2	25.9
2	7.1	7.1	6.2
3	0	0	0
IC901			
1	2.7	2.7	1.5
2	8.8	8.8	1.6
3	2.7	4.9	0.8
4	0	0	0
5	3.8	3.8	0.6
6	0.1	0.1	0
7	2.4	2.4	0
8	7.7	0.1	0
IC902			
1	5.3	5.3	1.6
2	0.1	0.1	0
3	5.4	5.4	1.1
4	7.7	0.1	0
5	5.4	5.4	1.1
6	8.8	8.8	1.6
7	4.6	4.6	0
8	0	0	0
IC903			
1	5.2	5.3	1.6
2	0.1	0.1	0
3	5.4	5.4	1.1

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
4	7.7	0.1	0
5	5.4	5.4	1.1
6	8.8	8.8	1.6
7	4.7	4.7	0
8	0	0	0
Q81			
G	0	0	0
D	5.1	5.1	5.1
S	0	0	0
Q82			
G	4.1	4.1	0
D	1.4	1.4	1.8
S	0	0	2.6
Q101			
B	1.4	1.4	0
C	9.1	9.1	0
E	0.6	0.6	0
Q105			
B	* (13)	* (13)	0
C	0	0	0
E	* (13)	* (13)	0
Q107			
B	* (12)	* (12)	0
C	9.0	9.0	0.1
E	* (12)	* (12)	0
Q108			
B	* (15)	* (15)	0
C	9.2	9.2	0
E	* (15)	* (15)	0
Q303			
B	* (30)	* (30)	0
C	* (30)	* (30)	0
E	0	0	0
Q401			
B	0.6	0.6	0
C	0	0	0.8
E	0	0	0
Q402			
B	0.6	0.6	0
C	0	0	0.8
E	0	0	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
Q403			
G	* (11)	* (11)	4.6
D	* (14)	* (14)	0
S	0	0	0
Q404 / Q407			
B	0	0	1.3
C	* (48)	* (48)	0
E	0	0	0
Q405			
B	0.1	0.1	0
C	3.0	3.0	0
E	0	0	0
Q408 / Q412			
G	0	0	5.16
D	11.74	11.74	0
S	0	0	0
Q409 / Q413			
G	4.7	4.7	0
D	0	0	5.1
S	0	0	0
Q410			
G	3.0	3.0	0
D	0.1	0.1	0
S	0	0	0
Q411			
B	0	0	3.3
C	0	0	0
E	0	0	0
Q414			
B	9.3	9.3	0
C	0	0	0.6
E	9.0	9.0	0.6
Q415			
B	0.6	0.6	0.86
C	0.7	0.7	0
E	0	0	0
Q500			
B	0	0	4.2
C	0.7	0.7	4.2
E	6.5	6.5	3.4

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
Q501			
B	* 36	* 36	0
C	* 30	* 30	0
E	0	0	0
Q601			
B	* (37)	* (39)	0
C	* (38)	* (38)	122
E	0	0	0
Q602			
B	* (39)	* (39)	0
C	* (40)	* (40)	115
E	0	0	0
Q603			
B	* (41)	* (41)	0
C	* (42)	* (42)	0
E	0	0	0
Q651			
B	0.6	0.6	0
C	13.9	13.9	0
E	0	0	0
Q801 * GND is C807 negative side			
B	14.6	14.6	11.1
C	0.6	0.6	0.7
E	15.1	15.1	10.5
Q853			
G	0	0	5.0
D	5.4	5.4	0.1
S	0	0	0
Q857			
G	4.6	4.6	0
D	0	0	5.1
S	5.1	5.1	5.1
Q881			
B	0.8	0.8	0
C	1.0	1.0	6.1
E	0	0	0
Q901			
B	2.7	4.9	0.8
C	-	-	-
E	0	0	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
Q904			
B	0	0	1.7
C	-	-	0
E	0	0	0
Q905 / Q906			
B	0	0	1.7
C	-	-	0
E	0	0	0
Q910			
G	5.9	5.1	0
D	0.1	0.1	0
S	0	0	0
Q911			
G	0.1	5.1	0
D	7.7	0.1	0
S	0	0	0

NICAM SETTING

RF IN fp = 471.25MHz, 70dBu
 VIDEO : PAL COLOR BAR, 87.5% MOD
 AUDIO : Lch-3kHz
 Rch-1kHz

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
IC701			
1	Not Used		
2	Not Used		
3	Not Used		
4	Not Used		
5	5.0	5.0	0
6	5.0	5.0	0
7	0~5.1	0~5.1	5.2
8	0~5.1	0~5.1	5.2
9	Not Used		
10	Not Used		
11	Not Used		
12	Not Used		
13	Not Used		
14	Not Used		
15	Not Used		
16	4.9	4.9	0
17	0	0	0
18	Not Used		
19	Not Used		
20	5.2	5.2	0
21	Not Used		
22	Not Used		
23	0	0	0
24	* (58)	* (58)	0
25	* (57)	* (57)	0
26	Not Used		
27	Not Used		
28	Not Used		
29	0	0	0
30	Not Used		
31	Not Used		
32	Not Used		
33	8.0	8.0	0
34	6.2	6.2	0
35	0	0	0
36	3.7	3.7	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
37	Not Used		
38	Not Used		
39	Not Used		
40	Not Used		
41	3.7	3.7	0
42	3.7	3.7	0
43	2.6	2.6	0
44	3.7	3.7	0
45	0	0	0
46	4.9	4.9	0
47	* (56)	* (56)	0
48	1.5	1.5	0
49	Not Used		
50	0	0	0
51	* (59)	* (59)	0
52	* (60)	* (60)	0
Q710			
B	* (55)	* (55)	0
C	* (56)	* (56)	0
E	* (55)	* (55)	0
Q711			
B	* (56)	* (56)	0
C	9.0	9.0	0
E	* (56)	* (56)	0
Q721			
B	8.5	8.5	1.6
C	9.0	9.0	1.6
E	8.0	8.0	1.0
Q731			
B	* (61)	* (61)	0
C	9.0	9.0	0
E	* (61)	* (61)	0
Q741			
B	* (62)	* (62)	0
C	9.0	9.0	0
E	* (62)	* (62)	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
Q751			
B	0.9	0.9	0
C	5.6	5.6	1.6
E	0.3	0.3	0
Q761			
B	0.9	0.9	0
C	5.6	5.6	1.6
E	0.3	0.3	0
Q901			
B	8.8	8.8	1.7
C	145	145	1.3
E	8.3	8.3	1.7
Q902			
B	8.8	8.8	1.7
C	143	143	1.3
E	8.3	8.3	1.7
Q903			
B	8.8	8.8	1.7
C	140	140	1.3
E	8.3	8.3	1.7
Q904			
B	3.3	3.3	0
C	8.3	8.3	1.7
E	2.9	2.9	0.4
Q905			
B	3.4	3.4	0.9
C	8.3	8.3	1.6
E	3.0	3.0	0.4
Q906			
B	3.4	3.4	0.9
C	8.3	8.3	1.6
E	3.0	3.0	0.4
Q907			
B	0	0	0
C	8.9	8.9	1.6
E	0.2	0.2	0.4
Q908			
B	1.9	1.9	0
C	0	0	0
E	2.5	2.5	0

PIN NO.	MODE		
	VIDEO IN	RF IN	STANDBY
Q909			
B	0.6	0.6	1.6
C	8.8	8.8	1.6
E	1.8	1.8	0

Note: * refers to waveform no.

IC DESCRIPTION
IC, TMP87CP38N-1N14

Pin No.	Pin Name	I/O	Description												
1	VSS	-	GND.												
2	POWER	O	Power control output (H = ON).												
3	SIF A	O	Sound IF SW A. (Not used)												
4	SIF B	O	Sound IF SW B. (Not used)												
5	BBE	O	BBE select output.												
6	Q SUR	O	Q Surround switching (H = ON).												
7	$\overline{\text{N RESET}}$	O	NICAM reset (L = Reset).												
8	$\overline{\text{BBS}}$	O	S-woofer volume.												
9	VOL	O	Main volume control output. (Not used)												
10	$\overline{\text{EXT}}$	I	I ² C switching.												
11	SCL1	O	I ² C-Bus CH1 clock output.												
12	SDA1	O	I ² C-Bus CH1 data output.												
13	H SYNC	I	SYNC detect input.												
14	KEY IN	I	Key input.												
15	D DET1	I	Power condition 1 (Mid = Good, L/H = Bad).												
16	D DET2	I	Power condition 2 (Mid = Good, L/H = Bad). (Not used)												
17	AFC	I	Tuner AFT voltage input.												
18	STEREO	I	MSP key input.												
19	SGV	O	Video signal generate (Factory) output.												
20	SUFFIX	I	Feature select (initial) input. (Not used)												
21	VSS	-	GND.												
22	OSD R	O	OSD red output.												
23	OSD G	O	OSD green output.												
24	OSD B	O	OSD blue output.												
25	OSD Y	O	OSD blanking output.												
26	$\overline{\text{HD}}$	I	OSD H SYNC input.												
27	$\overline{\text{VD}}$	I	OSD V SYNC input.												
28	OSC1	-	OSD dot clock.												
29	OSC2	-	OSD dot clock.												
30	TEST	-	GND.												
31	XIN	I	8 MHz clock input.												
32	XOUT	O	8 MHz clock output.												
33	$\overline{\text{RESET}}$	I	Reset input.												
34	LN MUTE	O	Line out mute output (H = Mute).												
35	SP MUTE	O	Speaker mute output (H = Mute).												
36	$\overline{\text{RMC}}$	I	Remote control signal input.												
37	SCL0	O	I ² C-Bus CH2 clock output.												
38	SDA0	O	I ² C-Bus CH2 data output.												
39 ~ 40	SEL1, SEL2	O	Selecting tuner receiving band. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>TUNER</th> <th>VIDEO 1</th> <th>VIDEO 2</th> </tr> </thead> <tbody> <tr> <td>SEL1</td> <td>H</td> <td>H</td> <td>L</td> </tr> <tr> <td>SEL2</td> <td>H</td> <td>L</td> <td>H</td> </tr> </tbody> </table>		TUNER	VIDEO 1	VIDEO 2	SEL1	H	H	L	SEL2	H	L	H
	TUNER	VIDEO 1	VIDEO 2												
SEL1	H	H	L												
SEL2	H	L	H												
41	WAKEUP	O	LED (wakeup timer). H = ON timer, L = Standby												
42	VDD	-	Power supply.												

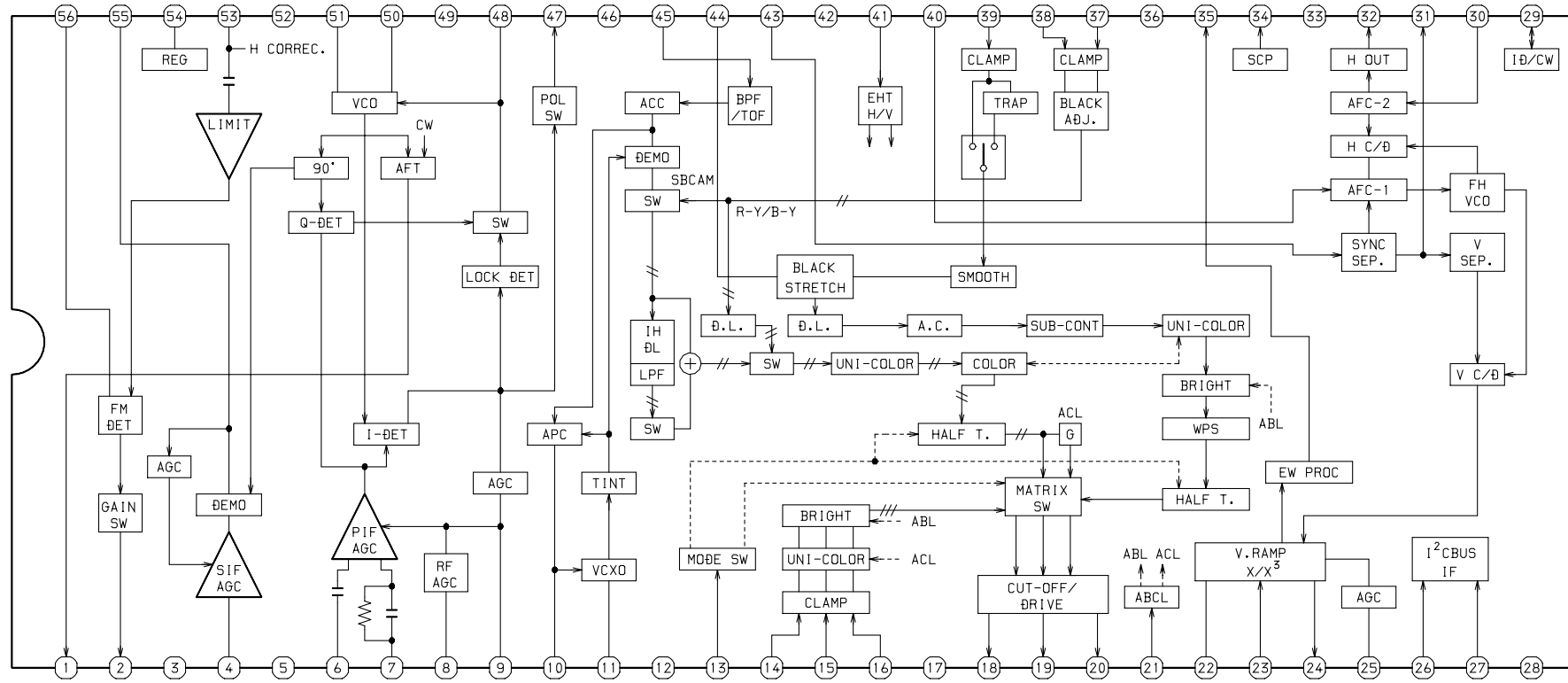
IC, MSP3417D

Pin No.	Pin Name	I/O	Description
1	TP	–	Test pin (not used).
2	NC	–	Not connected.
3	D_CTR_OUT1	O	Digital control output 1 (not used).
4	D_CTR_OUT0	O	Digital control output 0 (not used).
5	ADR_SEL	I	I ² C bus address select.
6	STANDBYQ	I	Standby (low active).
7	I ² C_CL	I/O	I ² C clock.
8	I ² C_DA	I/O	I ² C data.
9	TP	–	Test pin (not used).
10	TP	–	Test pin (not used).
11	TP	–	Test pin (not used).
12	TP	–	Test pin (not used).
13	TP	–	Test pin (not used).
14	TP	–	Test pin (not used).
15	TP	–	Test pin (not used).
16	DVSUP	–	Digital power supply +5V.
17	DVSS	–	Digital GND.
18	TP	–	Test pin (not used).
19	NC	–	Not connected.
20	RESETQ	I	Power-on-reset.
21	TP	–	Test pin (not used).
22	TP	–	Test pin (not used).
23	VREF2	–	Reference GND 2 high voltage part.
24	TU-R	O	Loudspeaker out, right.
25	TU-L	O	Loudspeaker out, left.
26	NC	–	Not connected.
27	TP	–	Test pin (not used).
28	TP	–	Test pin (not used).
29	VREF1	–	Reference GND 1 high voltage part.
30	SC1_OUT_R	O	Scart output 1, right. (not used)
31	SC1_OUT_L	O	Scart output 1, left. (not used)
32	NC	–	Not connected.
33	AHVSUP	–	Analog power supply 8.0V.
34	CAPL_M	–	Volume capacitor main.
35	AHVSS	–	Analog GND.
36	AGNDC	–	Analog reference voltage high voltage part.
37	NC	–	Not connected.
38	NC	–	Not connected.
39	NC	–	Not connected.
40	NC	–	Not connected.
41	SC1_IN_L	I	Scart input 1 in, left.

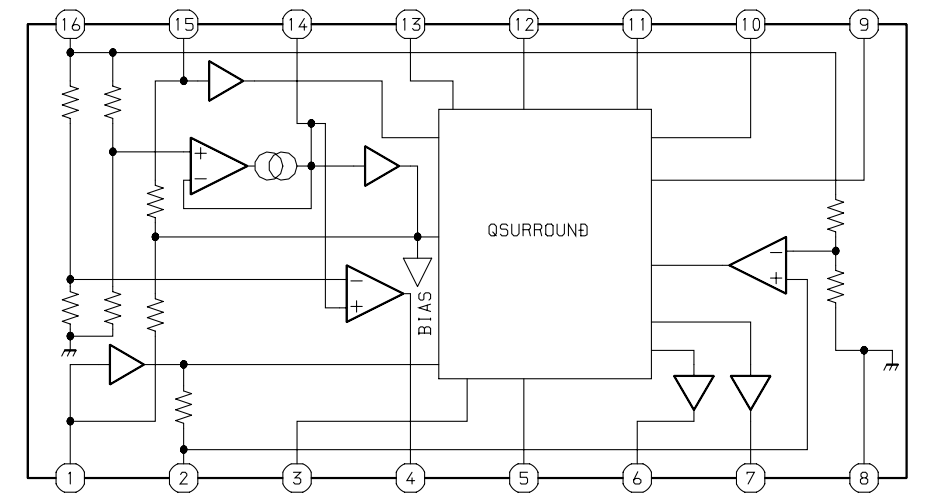
Pin No.	Pin Name	I/O	Description
42	SC1_IN_R	I	Scart input 1 in, right.
43	VREFTOP	-	Reference voltage IF A/D converter.
44	MONO_IN	I	Mono input.
45	AVSS	-	Analog GND.
46	AVSUP	-	Analog power supply +5V.
47	ANA_IN+	I	IF input.
48	ANA_IN-	-	IF common.
49	NC	-	Not connected.
50	TESTEN	-	Test pin. (Connect to GND).
51	XTAL_IN	I	Crystal oscillator.
52	XTAL_OUT	O	Crystal oscillator.

IC BLOCK DIAGRAM

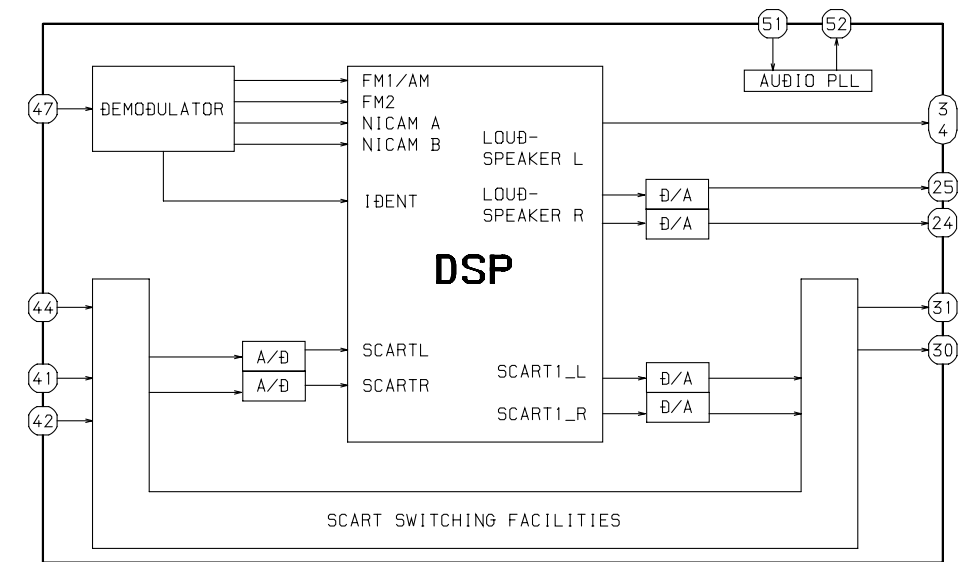
IC, TB1240AN



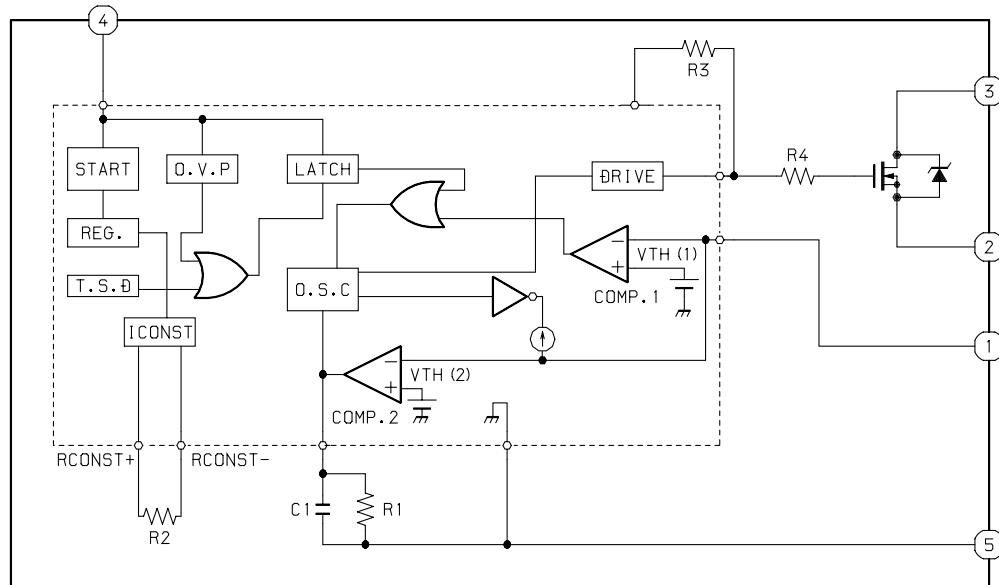
IC, MM1454XD



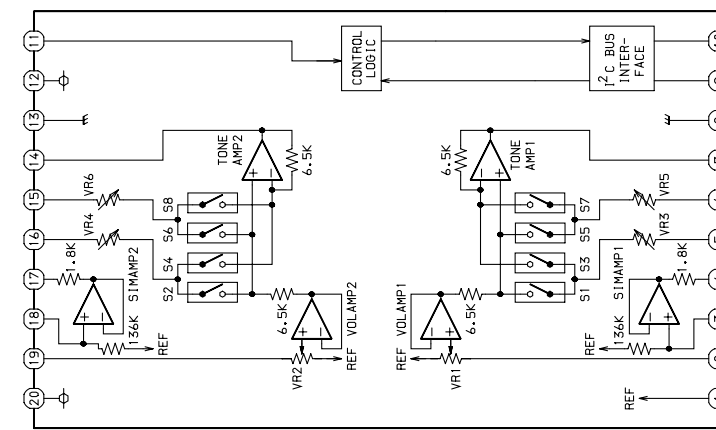
IC, MSP3417D



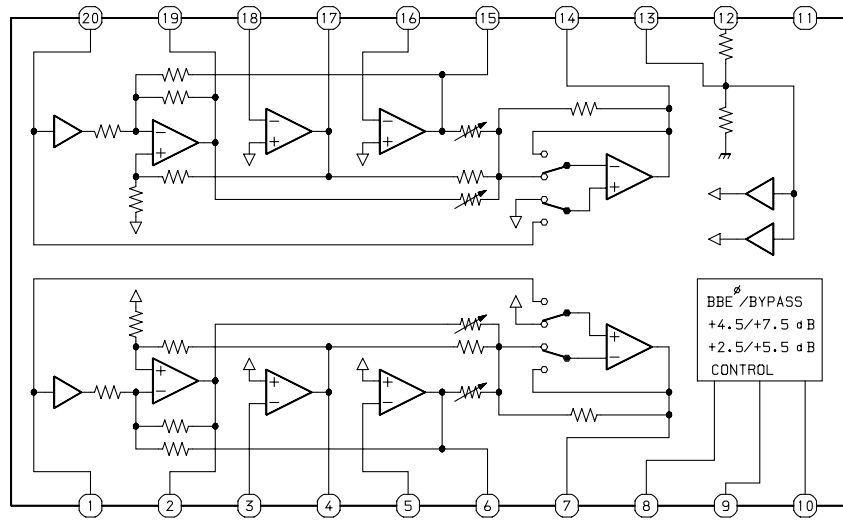
IC, STR-F6676



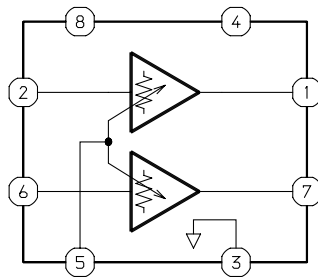
IC, M62420SP



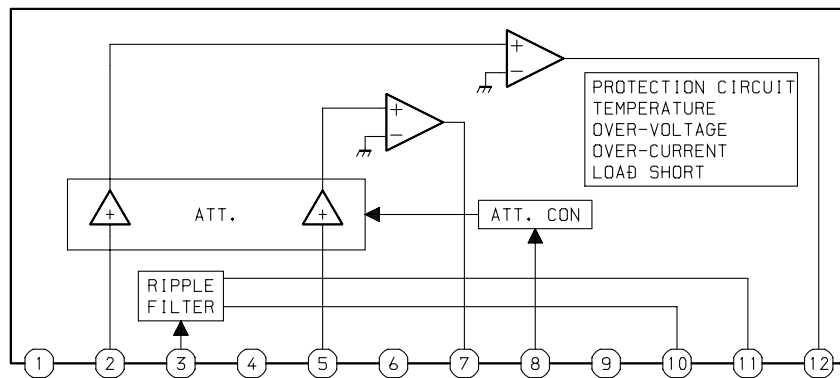
IC, NJM2150



IC, M5222L



IC, AN5277

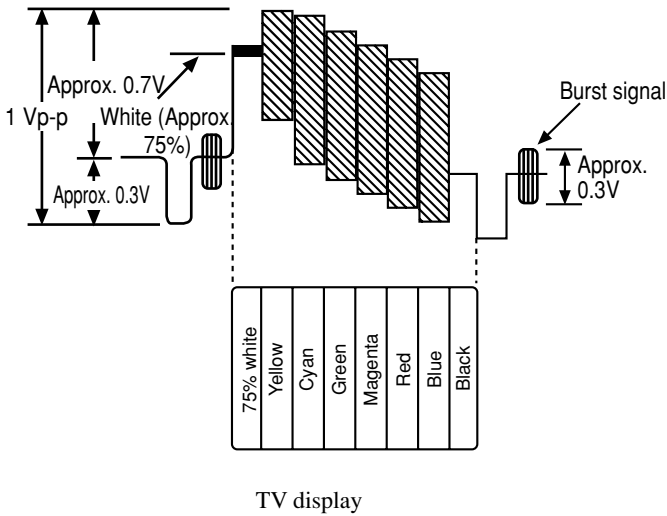


ADJUSTMENT

SET-UP FOR ADJUSTMENT

Because the video signal output from a pattern generator is used as the adjustment signal input during adjustment, the video signal output from the pattern generator must conform with the specifications. Measure the output waveform across 75 Ω load. Confirm that the synchronizing signal has an amplitude of about 0.3 V, the video signal portion has an amplitude of about 0.7 V and the burst signal has an amplitude of about 0.3 V with flat envelope. Confirm that ratio of the burst signal amplitude and the red signal amplitude is 0.30 : 0.66. If the output signal does not conform with the specifications, calibrate the pattern generator. (Refer to pattern generator operation manual.)

Use the LEADER: LCG 404 for the pattern generator.



Color bar signal of a pattern generator

PRECAUTIONS BEFORE STARTING ADJUSTMENT

Satisfy the following setting conditions before starting adjustment.

- Allow warm-up of 20 minutes or longer. (Do not turn off during warm-up.)
- Set all picture quality controls of users' setting to initial set-up, unless otherwise specified.
- Picture quality reset
 1. Select "Picture" on the screen menu and press enter button.
 2. Select "Normal" and press enter button.
 3. Select "Reset" and press enter button.
- Set the pattern generator's output level to 1.0Vp-p (across 75Ω load).

1. CRT ADJUSTMENT

1-1. Precautions

- (1) Receive the white raster signal, and then perform aging for at least 20 minutes.
- (2) Demagnetize the area surrounding the CRT with a degausser before making adjustments.
- (3) Set the picture quality for each mode to the factory setting.
- (4) Position the front screen facing the east as much as possible.

1-2. Purpose

- (1) Beam landing adjustment (purity magnet)

Set the left/right balance of beam landing. If there is a discrepancy in this adjustment, a color irregularity will occur. After completion of the landing adjustment, it is necessary to perform convergence adjustment.

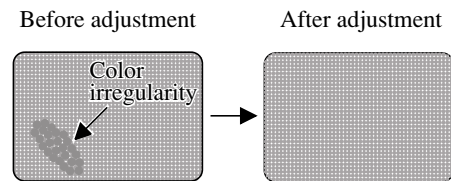
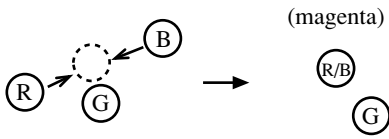


Fig. 1-1

(2) Beam convergence adjustment (4-pole magnet)

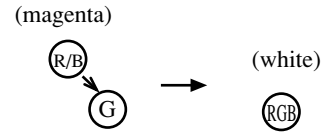
Align the R beam with the B beam. The G beam does not move with this adjustment.



Align the R beam with the B beam
Fig. 1-2

(3) Beam convergence adjustment (6-pole magnet)

With a 4-pole magnet align the G beam with the already aligned R/B beam.



Align the G beam with the R/B beam
Fig. 1-3

(4) The composition of each magnet is as shown in Fig. 1-4.

In making adjustments, rotate the lock ring clockwise (looking from the CRT's back screen) and disengage.

Be careful not to loose the lock ring too much. If the magnet assembly has become shifted during adjustments, secure it to the position in Fig. 1-4.

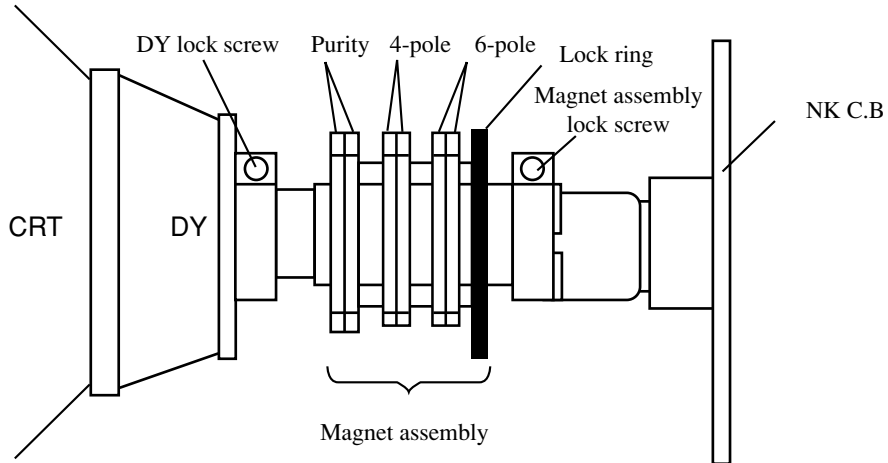


Fig 1-4

1-3. Beam Landing Adjustment

- (1) Receive the green raster signal from the pattern generator.
- (2) Loosen the magnet lock screw, and shift the magnet assembly backward (toward the neck).
- (3) Loosen the DY lock screw, and shift the DY deflecting yoke backward (toward the neck).
- (4) After opening the two purity magnets to the same angle, adjust the color width of the bands on both sides of the screen so that they are equal. (refer to Fig. 1-5 (a)).

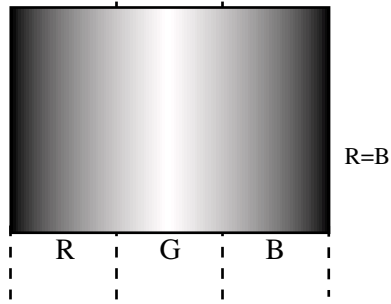


Fig 1-5 (a)

As shown in Fig. 1-5 (b), the purity magnet functions in relation to the electron beam.

- (5) Gradually shift the deflecting yoke toward the front (toward the CRT funnel). Stop movement at the point when the screen has become completely green.

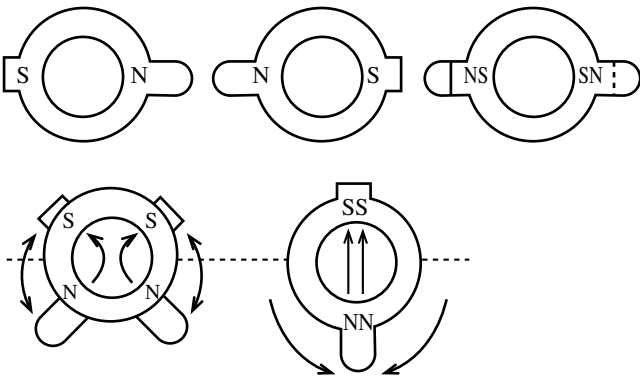


Fig 1-5 (b)

- (6) Also, verify the respective monochromatics of red and blue.
- (7) While looking at the screen, adjust the tilt of the deflecting yoke and tighten the DY lock screw.
- (8) Shift the magnet assembly to the front (toward the CRT funnel), stop movement before the adjustment position and then tighten the magnet lock screw.
At this time, be careful not to shift the position of the purity magnet.

As there is occurrence of convergence distortion after completing the landing adjustments, be sure to carry out convergence adjustments.

If the color irregularities in the screen's corner section are not improved, correct them with the landing magnet. After using the landing magnet, be sure to demagnetize the CRT with degausser and verify that there is no occurrence of color irregularity. (refer to Fig. 1-6)

Landing magnet: 81-JTI-710-010
(two-sided adhesive tape) : 80-XVI-218-010 Cushion

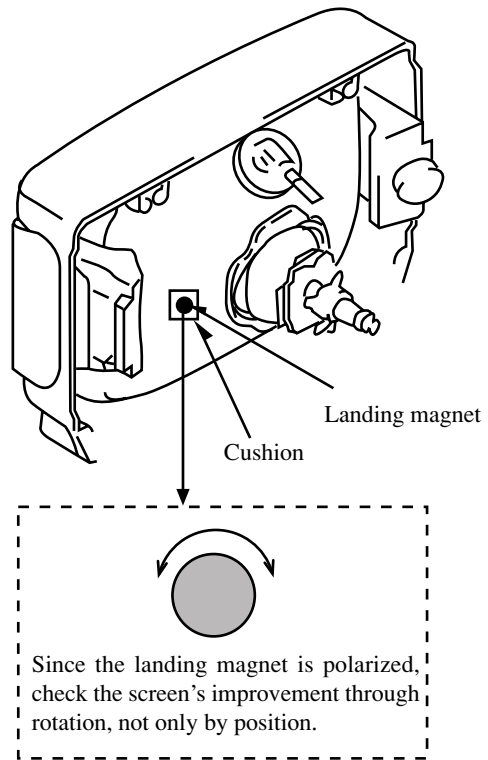


Fig 1-6

1-4. Beam Center Convergence Adjustment

Make adjustments on the convergence with 4-pole and 6-pole magnets. Operate each magnet in relation to the electron beam as shown in Figs. 1-7 and 1-8. When performing this adjustment, verify whether there is distortion in the focus adjustment. If necessary, carry out adjustments again.

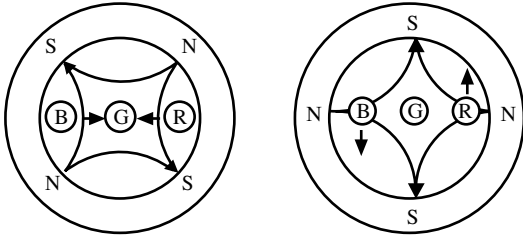


Fig 1-7

In Fig. 1-7, two 4-pole magnets are stacked together so as to be of the same polarity. Move the B and R beams to their respective direction, by rotating the two 4-pole magnets together. By adjusting the opening of the two magnets, it is possible to adjust the amount of the beam's movement.

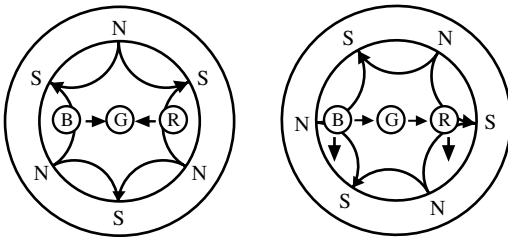


Fig 1-8

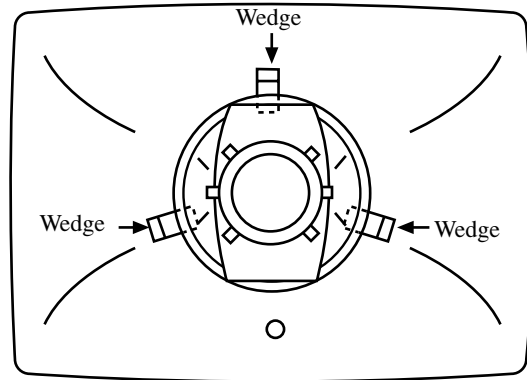
In Fig. 1-8, the two 6-pole magnets are stacked together so as to be of the same polarity. Move the B and R beams to their respective direction, by rotating the two 6-pole magnets together. By adjusting the opening of the two magnets, it is possible to adjust the amount of the beam's movement.

- (1) Receive the dot pattern signal from the pattern generator.
- (2) Pay attention to the center of the screen, and perform adjustments with two 4-pole magnets so that the R beam and B beam are perfectly aligned and become a magenta color. (Refer to Fig. 1-2)
- (3) In the same way, pay attention to the screen, and perform adjustments with a 6-pole magnet so that the magenta beam and G beam are aligned and become a white dot. (Refer to Fig. 1-3)
- (4) After adjustments are completed, secure all magnets with the lock link. (Refer to Fig. 1-4)

1-5. The Surrounding Convergence Adjustment

Perform this adjustment after completion of adjustment 1-4.

- (1) Shake the deflecting yoke up, down to the right and left, and adjust any discrepancies in the screen's surroundings.
- (2) Insert wedges in three locations in the gap between the deflecting yoke and the surface of the CRT funnel in order to secure the deflecting yoke. (Refer to Fig. 1-9)



Position of wedge

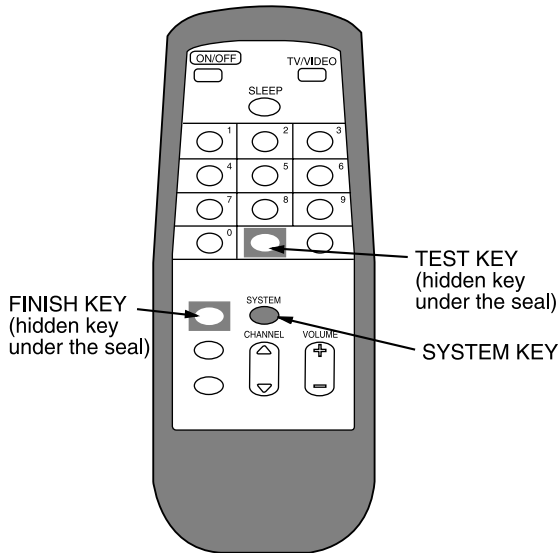
Fig. 1-9

Setting of IIC BUS Data

This model is designed with the ability to adjust most parts of the image projection and deflection system by using the jig remote controller.

Preparations :

- Modify the hidden keys on the RC-6VT06 jig remote controller (TV-C142/86-LB4-951-010) so that they can easily be pressed. 2 keys to be modified. (Refer to the below illustration)



Starting the "Service Mode" :

Hidden key / "TEST"

- Press the "TEST" key on the jig remote controller once to enter to the "Aging Mode" (Refer Fig. 1).
- Press the "CHANNEL" key on the jig remote controller to enter to the "Adjustment Mode".

Hidden key / "FINISH"

- The accumulated hours in the "Aging Mode" will be reset by pressing the "FINISH" key on the jig remote controller.
- Avoid to press this key during general repairs.

Aging Mode Operation Method :

Make sure that confirmation is done after replacing the EEPROM.

1. Enter to the aging mode by pressing the "TEST" key on the remote controller. (Fig. 1)
2. Press the "SYSTEM" key and confirm the condition of the distinction switch.
 - In case the contents are different, press "4" key and select [INDO2] for the destination (Refer Fig. 2).
 - In case the data is different use the "CHANNEL" key to scroll through 0~1F and set to the correct data value of "0" or "1" by the volume key.
 - All the settings are stored when the "TEST" key is pressed to complete the correction. There will not be a problem even though these changes are done after completing all the adjustments.

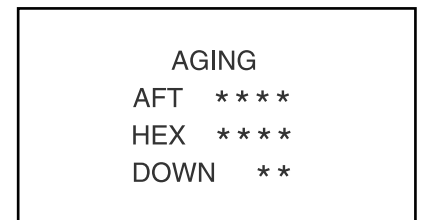
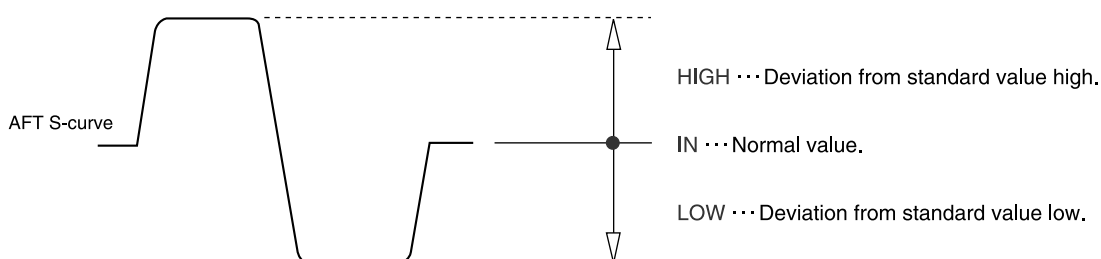


Fig. 1

Contents of Aging Mode :

1. Release "Auto Power Off" function
Release "Auto Power Off" function when no input is supplied.
Use this mode for warming up (aging) during CRT adjustment.
2. AFT S-curve status indication
The condition of AFT S-curves are indicated by "IN" for suitable tuning, "HIGH" for too high or "LOW" for too low. "OUT" is indicated when no signal is supplied.



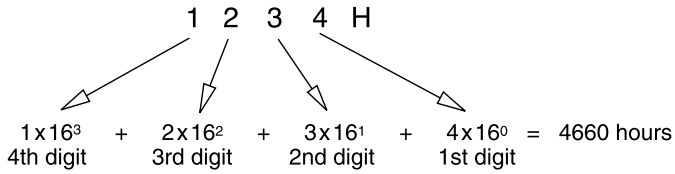
1	KE1	5	SH1												
2	KE2	6	SH2												
3	INDO1	7	SH3												
4	INDO2	8	SH4												
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	1	0	1	1	0	0	0	1	1	1	1	0	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	0	1	1	0	0	1	0	1	0	1	1	1	1	0	0

Fig. 2

3. Display of "CRT ON" accumulated hours

The CRT usage time is accumulated on an hourly basis and is displayed in hexadecimal figures.

Sample calculation of displayed hexadecimal figures : HEX 1 2 3 4



- The display will be reset to 0000H when the accumulated hours exceed 7FFFH(32768 hours).

Adjustment Mode Operation Method :

- Return to the aging display by pressing the "TEST" key and press "CHANNEL" key to display the adjustment menu screen.

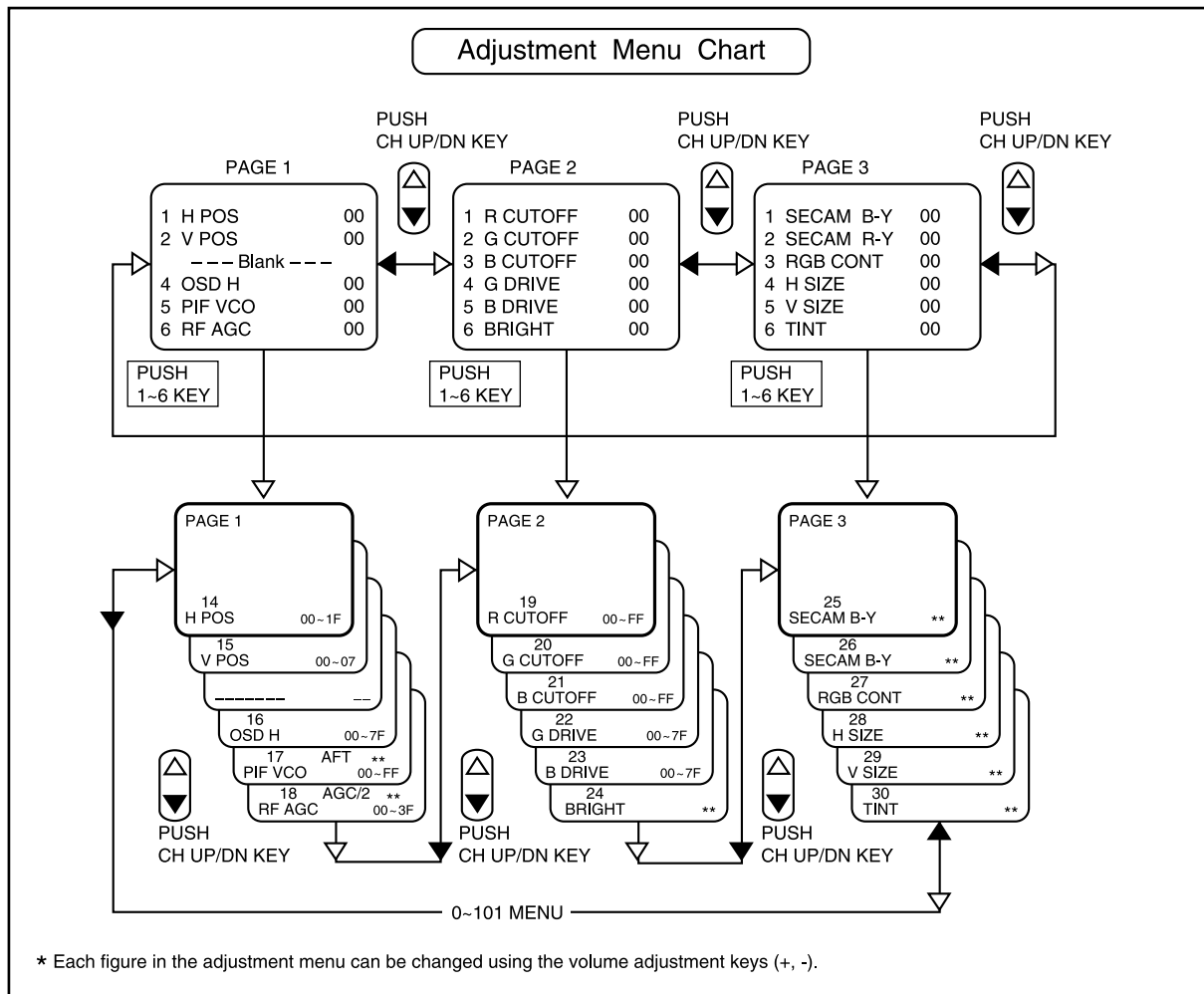


Fig. 3

The menus from No.0 to 105 inclusive of PAGE 1 to 3 serve as the “Adjustment Menu” . (Refer to the following tables)

No.	Menus	Reference Values
0	CONT	20
1	COLOR	10
2	SHARPNESS	20
3	SUB CONTRAST	0A
4	V LINEA	06
5	V S CORR	05
6	ABL START	01
7	IF FEAQ	04
8	BGP P	00
9	PARABOLA	–
10	TRAPEZIUM	–
11	V. EHT	–
12	CORNER	–
13	H. EHT	–
14	H POS	08
15	V POS	03
16	OSD H	0F
17	PIF VCO	80
18	RF AGC	3F
19	R CUTOFF	80
20	G CUTOFF	80
21	B CUTOFF	80
22	G DRV GAIN	40
23	B DRV GAIN	40
24	BRIGHT	40
25	SEGAM B-Y	08
26	SEGAM R-Y	08
27	RGB CONT	20
28	H SIZE	–
29	V SIZE	25
30	TINT	3F
31	TEXT H	–
32	TEXT V	–
33	BRIGHT MIN	00
34	BRIGHT STEP	00
35	BRIGHT MAX	7F

No.	Menus	Reference Values
36	CONT MIN	00
37	CONT MAX	3F
38	COLOR NTSC	40
39	COLOR MIN	00
40	COLOR SECAM	00
41	COLOR MAX	00
42	RG CONT MAX	2D
43	SHARP MIN	00
44	SHARP MAX	3F
45	SHARP NT	20
46	SHARP NT VIDEO	20
47	TINT VIDEO	20
48	TINT MIN	00
49	TINT MAX	7F
50	TXT RGB MAX	2D
51	ABL GAIN	00
52	V AGC	00
53	WHITE PEAK	00
54	MUTE	00
55	AF GAIN	00
56	VIDEO POL	00
57	BPF/TOF	00
58	CHROMA TRAP	0
59	HALF TONE	00
60	COLOR SYS	00
61	CW SW	00
62	AFT MUTE	00
63	BLUE BACK	00
64	DC NF SPEED	01
65	V FREQ	00
66	NTSC COMB	01
67	BLACKING	00
68	H OUT STOP	00
69	FORCED ID	00
70	SELF ADJ	00
71	ID SENSITIV	00

No.	Menus	Reference Values
72	SECAM ADJ	00
73	AFT ON	00
74	YM EMB	00
75	YUV SW	00
76	AFC GAIN	00
77	V LINEA 60	07
78	H SIZE 60	–
79	PARABOLA 60	–
80	TRAPEZIUM 60	–
81	V EHT 60	–
82	CORNER 60	–
83	H. EHT 60	–
84	V S CORR 60	05
85	V SIZE 60	20
86	V POS 60	00
87	H POS 60	0B
88	OSD H 60	0E
89	OSD V	08
90	G VSIZE SHIFT	02
91	G HSIZE SHIFT	00
92	G VPOS SHIFT	00
93	G HPOS SHIFT	00
94	OSD V	0
95	VOL LOUDSPK	73
96	FM MATRIX	00
97	PRESCALE FM/AM	19
98	PRESCALE NICAM	3B
99	PRESCALE SCART	19
100	NICAM IDL	03
101	NICAM IDH	0A
102	PARABOLA ZOOM	00
103	PARABOLA 16:9	00
104	PARABOLA ZOOM 60	00
105	PARABOLA ZOOM 16:9 60	00

*1. The indicated reference values are different from the actual data values.

*2. Depending on the model, all items which are described in the “Adjustment Mode” may not be always applicable. Refer to each adjustment.

Menu screen adjustment:

- Operate after inputting the following initial figures when replacing EEPROM.
- These initial figures are only for reference purposes and meant for rough adjustment.
- Check the condition and adjust the area where the general repair is carried out.

TV-FT2588	Initial Figures
PAGE 1	
1. H POS	08
2. V POS	03

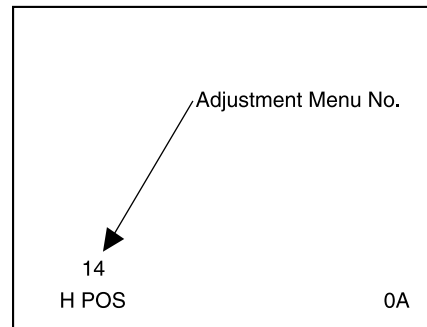
4. OSD H	0F
5. PIF VCO	80
6. RF AGC	3F

PAGE 2	
1. R CUT OFF	80
2. G CUT OFF	80
3. B CUT OFF	80
4. G DRV GAIN	40
5. B DRV GAIN	40
6. BRIGHT	40

PAGE 3	
1. SECAM B-Y	08
2. SECAM R-Y	08
3. RGB CONT	20
4. H SIZE	00
5. V SIZE	25
6. TINT	3F

Fig. 1

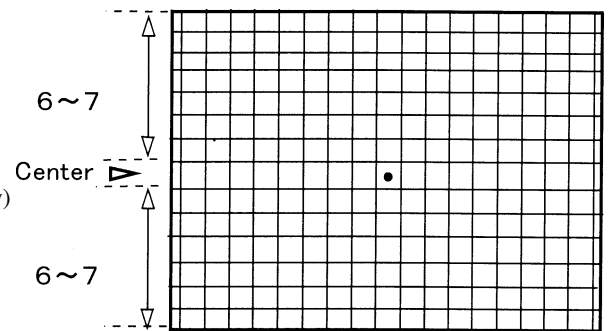
Sample Indication for Adjustment Menu No.



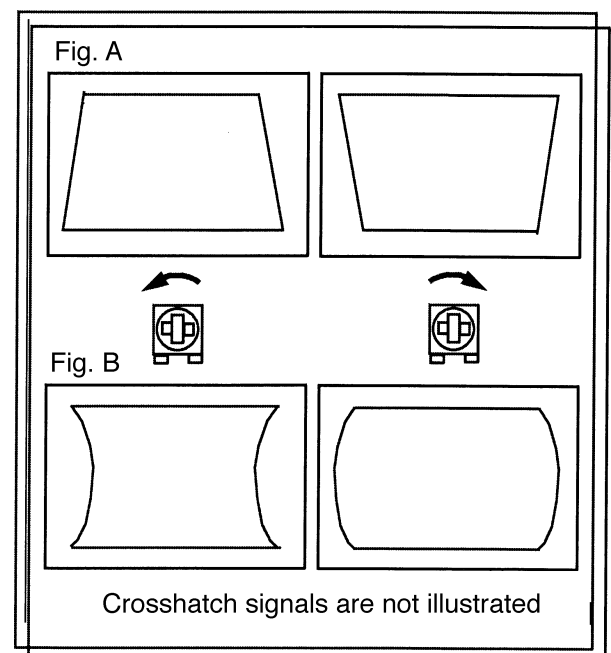
Each adjustment should be carried out after checking the adjustment menu no. (Refer to the above Fig.)

PWB Adjustment / Do before entering the adjustment mode

1. **H SIZE** Horizontal Size Crosshatch
 Input signal : Crosshatch
 Adjustment point : SFR653
 Measuring instrument : Pattern generator / PAL
 - Use SFR653 to adjust the dot mark of the crosshatch to the center.
 (So that the number of measure become the same horizontally and vertically)



2. **PIN & BARREL** Pin Phase & Pin Amplitude (Barrel) Adjustment (Linearity).
 Input signal : Crosshatch
 Adjustment point : SFR652 / **PIN** (Fig. A)
 SFR651 / **BARREL** (Fig. B)
 Measuring instrument : Pattern generator / PAL
 - Adjust the crosshatch distortion.
 - a. Use SFR652 to adjust the vertical distortion (Fig. A).
 - b. Use SFR651 to adjust the horizontal distortion (Fig. B).
 - Repeat 1~2 until the vertical lines become straight.



PAGE 1

1-1. **H POS** Horizontal Positioning Adjustment

PAL

Adjustment Menu No. 14 (Page 1-1)

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Use the volume keys on the jig remote controller to adjust the dot mark in the centre of crosshatch screen to the exact centering position by allocating an equal number of squares on the left and right side of the dot. $A=B$ (Fig. 1-1)

NTSC

Adjustment Menu No. 87

Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Using the "CHANNEL" key, scroll through the adjustment menu and select No.87. To adjust, follow the same procedure as PAL.

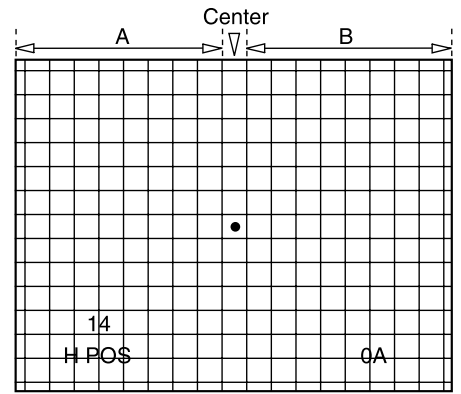


Fig. 1-1

1-2. **V POS** Vertical Positioning Adjustment

PAL

Adjustment Menu No.15 (Page 1-2)

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Using the volume keys on the jig remote controller, adjust the dot mark to the exact vertical centre position in the crosshatch screen. (Fig. 1-2)
- * In case of being unable to adjust by the above mentioned procedure, adjust S501.

NTSC

Adjustment Menu No. 86

Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Use the "CHANNEL" key to scroll through the adjustment menu and select No. 86. To adjust, follow the same procedure as PAL.
- * Do not adjust S501 for NTSC.

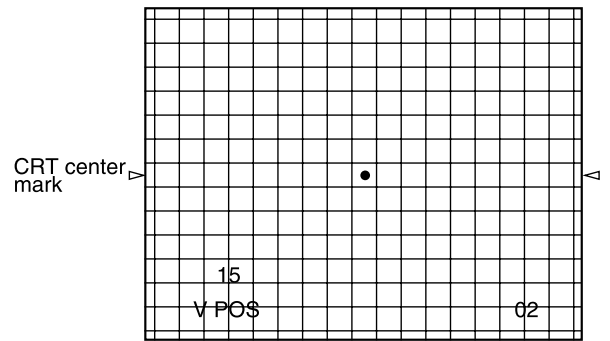


Fig. 1-2

1-3. **OSD H** OSD Horizontal Positioning Adjustment

PAL

Adjustment Menu No. 16 (Page 1-4)

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Use the volume keys on the jig remote controller to adjust each A and B positions on both left and right in the equal distance towards the screen edge in the OSD display. $A = B$ (Fig. 1-3)

NTSC

Adjustment Menu No. 88

Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Use the "CHANNEL" key to scroll through the adjustment menu and select No.88. To adjust, follow the same procedure as PAL.

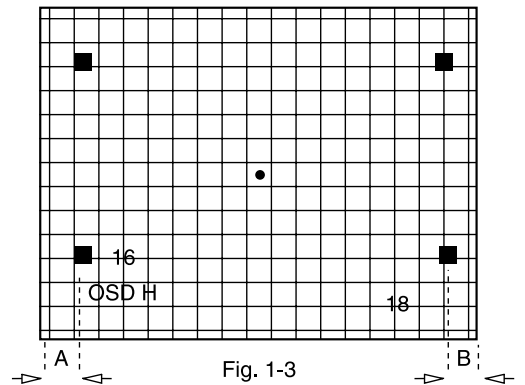


Fig. 1-3

1-4. **OSD V** OSD Vertical Positioning Adjustment

PAL

Adjustment Menu No. 94

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Use the “CHANNEL” key to scroll through the adjustment menu screen and select No.94.
- Using the volume keys on the jig remote controller, adjust A and B on both top and bottom shown in the OSD screen to be equidistant from the screen edges. A = B (Fig. 1-4)

NTSC

Adjustment Menu No. 89

Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Use the “CHANNEL” key to scroll through the adjustment menu and select No. 89. To adjust, follow the same procedure as PAL.

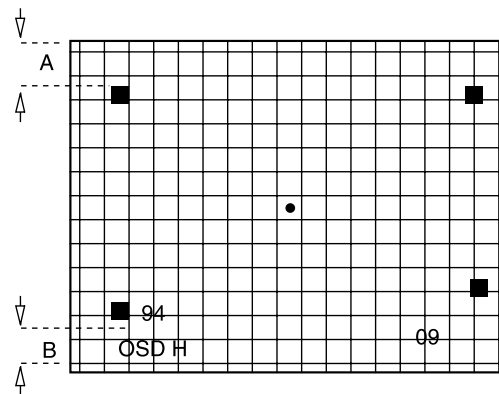


Fig. 1-4

1-4. **PIF VCO** Video IF • VCO Adjustment

Adjustment Menu No.17 (Page 1-5)

Input signal : No signal

Test point : IC301①PIN

- Use volume keys on the jig remote controller and adjust the test point voltage value to $2.5 \pm 0.5\text{VDC}$.

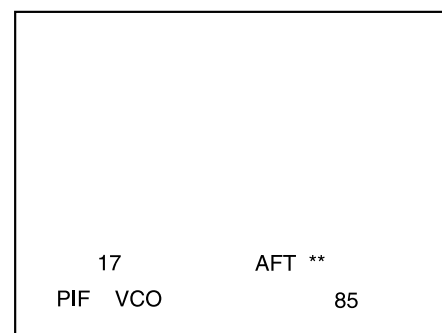


Fig. 1-5

1-5. **RF AGC** RF - AGC

Adjustment Menu No.18 (Page 1-6)

Input signal : Color bar (ANT RF - INPUT)

Test point : TP301.

Measuring instrument : Oscilloscope

1. Connect oscilloscope to TP301.
2. Using the volume keys on the jig remote controller, set the value to [3F]. At this point, measure the voltage on the test point.
3. Use the volume keys on the jig remote controller and reduce the value.(3E 3D...) At this point, confirm the reduction of the test point voltage value.
4. Complete the adjustment when the difference of the voltage value when compared to [3F] becomes less than 0.2 V.

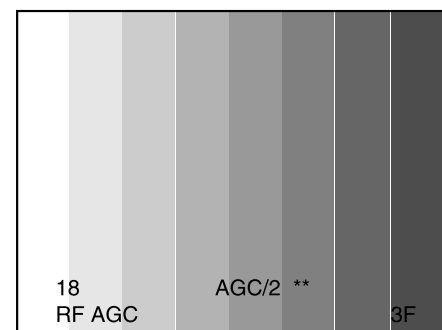


Fig. 1-6

White Balance Adjustment : Adjustment Menu No. 19-24 (PAGE 2 - 1 to 2 - 5)

*User's picture quality will be cleared when the adjustment menu screen appears.

Input signal : White raster

- Contents of Adjustment :
- | |
|--------------|
| 1. R CUT OFF |
| 2. G CUT OFF |
| 3. B CUT OFF |
| 4. G DRIVE |
| 5. B DRIVE |

* More than 20 minutes of aging is required before the adjustment.

* The whole process should be repeated several times for the adjustment.

Measuring instrument : Pattern generator

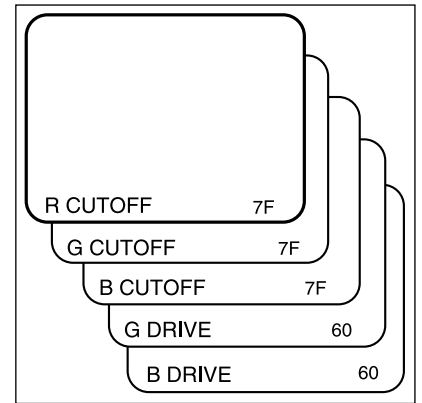


Fig. 2-1

Cut Off Adjustment :

- 2-1. Use the pattern generator to input the white raster signal.
- 2-2. Using the volume keys on the jig remote controller, fix the figure of the strongest color on the screen to 7F and adjust the other 2 cut off figures until a white picture appears on the screen. (Fig.2-1)

Drive Adjustment :

- 2-3. Using the volume keys on the jig remote controller, bring the figure of the **4. G DRIVE** up to more than 60 (in hexadecimal figure) till the color becomes greenish.
- 2-4. Then reduce the numeric figure to the point where the greenish color disappears completely.
- 2-5. Use the volume keys on the jig remote controller to increase the numeric figure of the **5. B DRIVE** up to more than 60 (in hexadecimal figure) till the color becomes bluish.
- 2-6. Then reduce the numeric figure to the point where the bluish color disappears completely.
- 2-7. Repeat the process of 2-1 to 2-6 for several times and adjust for whiter look.

2-2. **BRIGHT** Sub-brightness Adjustment

Adjustment Menu No.24 (Page 2-6)

Input signal : Stair step

Measuring instrument: Pattern generator

1. Using the volume keys on the jig remote controller, adjust the scale of the second last from right to be slightly brightened. (Fig. 2-2)

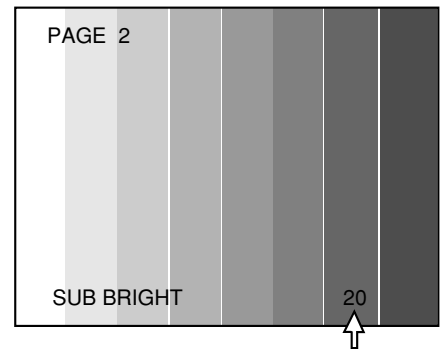


Fig. 2-2 2nd from right

Focus Adjustment :

Input signal : Dot pattern

Adjustment point : SFR located at upper part of FBT (T601)

Measuring instrument : Pattern generator

- Adjust SFR which is located at upper part of FBT (T601) in order to get the best focus for the dot.

Screen Adjustment :

Input signal : No signal (No Raster)

Adjustment point : SFR located at lower part of FBT (T601)

1. Enter to the "Aging Mode Screen" by pressing "TEST" key on the jig remote controller once.
2. Press "10" key of the numeric channel keypad to get a horizontal single line screen. (Fig. 2-3)
3. Adjust SFR located at lower part of FBT (T601) until the horizontal line starts to be slightly brightened.
4. Repeat the process of step 2 and return to the "Adjustment Menu Screen".

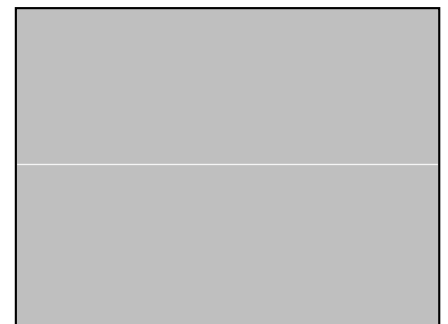


Fig. 2-3

- 3-1. **SECAM B - Y** SECAM Video, Chroma Adjustment
Adjustment Menu No. 25 (Page 3-1)
This model does not support this function.
Set the data value to "08".

- 3-2. **SECAM R - Y** SECAM Video, Chroma Adjustment
Adjustment Menu No. 26 (Page 3-2)
This model does not support this function.
Set the data value to "08".

- 3-3. **RGB CONT** Sub-Contrast Adjustment
Adjustment Menu No. 27 (Page 3-3)
This model does not support this function.
Set the data value to "20". (Fig. 3-3)

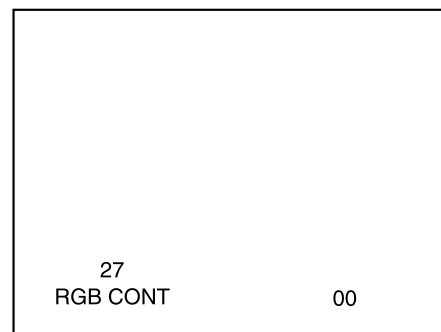


Fig. 3-3

- 3-4. **H SIZE** Horizontal Size Adjustment
Adjustment Menu No. 28 (Page 3-4)
This model does not support this function.
Set the data value to "00". (Fig. 3-4)

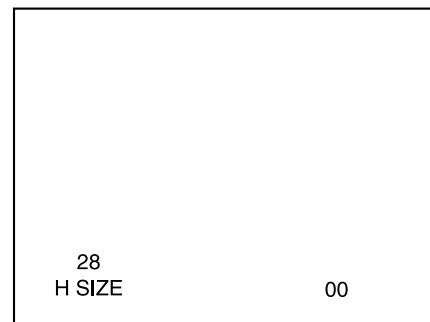


Fig. 3-4

3-5. **V SIZE** Vertical Size Adjustment

PAL

Adjustment Menu No. 29 (Page 3-5)

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Use the volume keys on the jig remote controller and adjust A to position the dot mark in the center to the exact vertical centre of the crosshatch pattern on the screen and regularize the squares of the crosshatch pattern. (Fig. 3-5)

NTSC

Adjustment Menu No. 85

Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Using the “CHANNEL” key, scroll through the adjustment menu and select No. 85. To adjust, follow the same procedure as PAL.

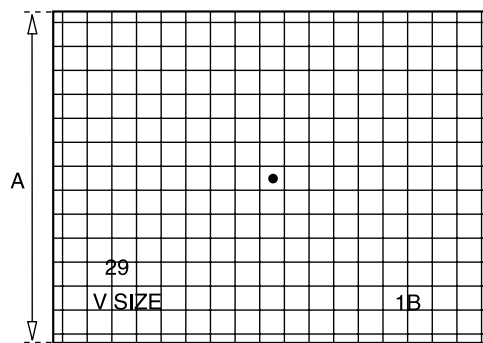


Fig. 3-5

3-6. **SUB TINT** Sub-Tint Adjustment

Adjustment Menu No. 30 (Page 3-6)

Input signal : Color bar (VIDEO IN)

Measuring instrument : Oscilloscope

Pattern generator / NTSC

Test point : CNA3013 PIN **B OUT**

1. Connect oscilloscope to the test point.
2. Using the volume keys on the jig remote controller, adjust the top excursions of waveform to be linear. (Fig. 3-6)

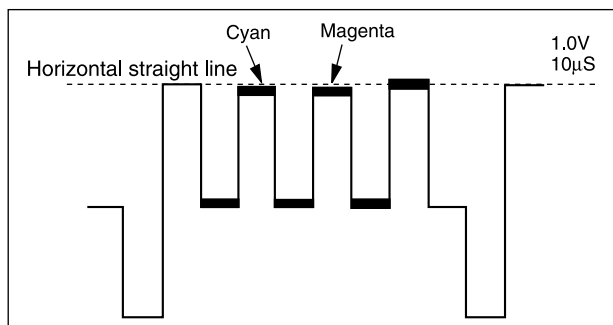


Fig. 3-6

4. **V LINEARITY** Vertical Linearity Adjustment

PAL

Adjustment Menu No. 4

Input signal : Monoscope (LION MARK)

Measuring instrument : Monoscope / PAL

- Use the volume keys on the jig remote controller to adjust the circular figures on monoscope to be true circles. (Fig. 4)

[Simple Adjustment]

Adjustment Menu No. 4

Input signal : Crosshatch

Measuring instrument : Pattern generator / PAL

- Use the volume keys on the jig remote controller make crosshatch patterns square.

* Check V POS (PAGE 1-2 / PAL) and V SIZE (PAGE 3-5 / PAL) after completing the adjustment. Re-position each dot in case it is not at the right points.

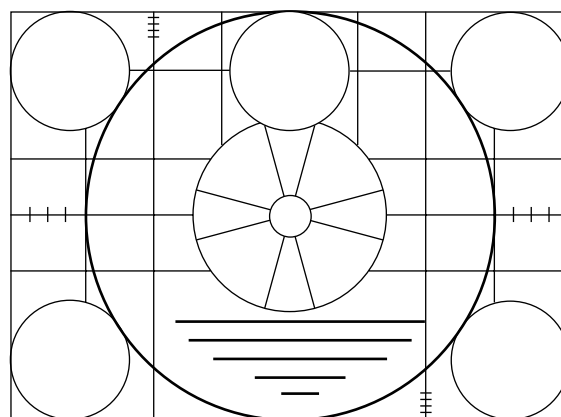


Fig. 4

NTSC

Adjustment Menu No. 77

Input signal : Monoscope (LION MARK)

Measuring instrument : Monoscope / NTSC

- Use the volume keys on the jig remote controller to adjust the circular figures on monoscope to be true circles. (Fig. 4)

[Simple Adjustment]

Adjustment Menu No. 77

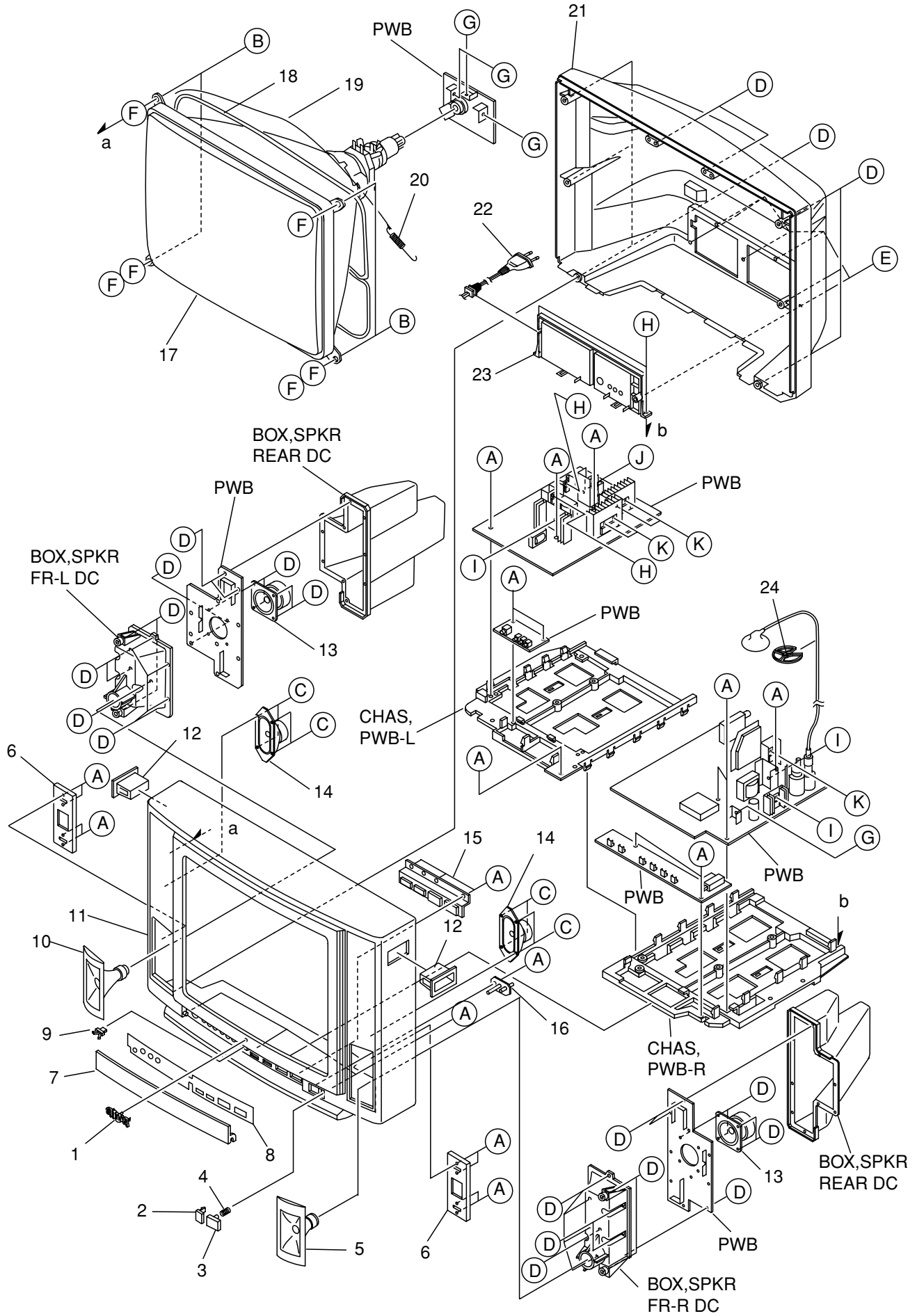
Input signal : Crosshatch

Measuring instrument : Pattern generator / NTSC

- Use the volume keys on the jig remote controller make crosshatch patterns square.

* Check V POS (PAGE 1-2 / NTSC) and V SIZE (PAGE 3-5 / NTSC) after completing the adjustment. Re-position each dot in case it is not at the right points.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL MAIN PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-JE7-008-010		BADGE,AIWA ST 52.5
2	8A-JC5-007-010		COVER, SESR
3	8A-JC5-006-010		BTN,POWER
4	8A-JC5-204-010		SPR-C,POWER
5	8A-JC5-013-010		PANEL,DUCT-R
6	8A-JC5-207-010		HLDR,DUCT
7	8A-JC5-004-010		PANEL,DOOR
8	8A-JC5-009-010		PLATE,DISPLAY
9	87-064-174-010		HLDR,LOCK,PUSH 29K0
10	8A-JC5-012-010		PANEL,DUCT-L
11	8A-JC5-015-010		CABI ASSY,FR
12	8A-JC5-014-010		HLDR,HANDLE
13	8Z-JB3-621-010		SPKR,8 80HM 15W
14	8A-JC5-621-010		SPKR,8*13 80HM 15W
15	8A-JC5-005-010		KEY,MAIN
△	16	8A-JC5-008-010	LENS,LED
	17	8A-JC5-610-010	CRT,A68KTB359x035(B)
	18	8A-JC5-635-010	DGC,29" 22 OHM-TYPE 8
	19	8A-JC5-659-010	CONN ASSY,1P CRT GND 29
	20	83-JT1-217-010	SPR-E,EARTH
△	21	8A-JC5-002-110	CABI,REAR
	22	8A-JC5-634-010	AC CORD ASSY,AJC-5 KE IND BLK
	23	8A-JC5-003-010	PANEL,REAR
	24	87-A90-332-010	HLDR,SF-2001 HV CABLE
A	87-067-680-010		BVIT3B+3-10
B	8A-JC5-215-010		S-SCREW,ASSY TV6-30 W20
C	87-078-070-010		BVIT3B+4-12
D	87-067-844-010		BVT2+4-16 BLK
E	87-067-690-010		BVIT3B+3-12 BLK
F	8A-JC5-220-010		W-P,11.6-19-0.5
G	87-067-579-010		BVT2+3-8 W/O SLOT
H	87-067-703-010		BVT2+3-10 W/O SLOT
I	87-B10-090-010		BVIT3B+3-12 GOLD
J	87-067-641-010		UTT2+3-8 W/O SLOT BLK
K	87-067-761-010		BVT2+3-10 BLK

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue				

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