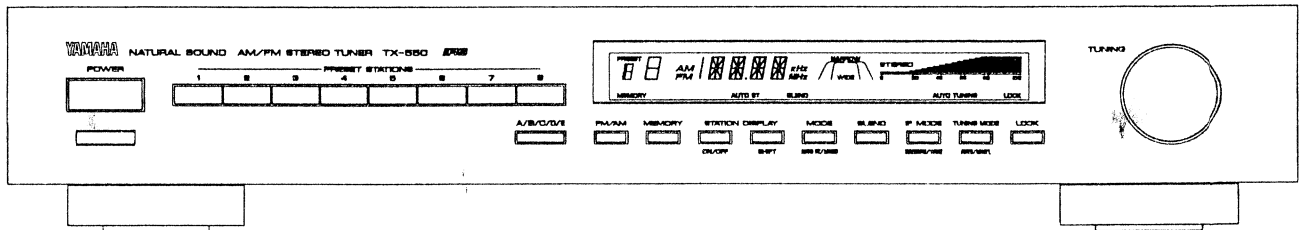


AM/FM STEREO TUNER TX-550

SERVICE MANUAL

FRONT PANEL



IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

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100398


YAMAHA
YAMAHA CORPORATION
P.O. Box 1, Hamamatsu, Japan

3.25K-842 ☐ © Printed in Japan '91.8

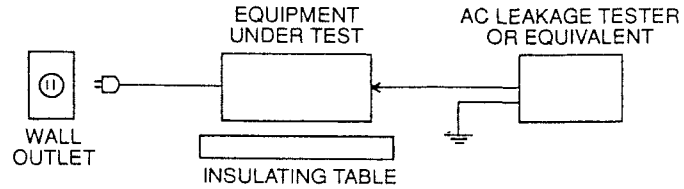
TX-550

■ TO SERVICE PERSONNEL

1. Critical Components Information.

Components having special characteristics are  marked and must be replaced with parts having specifications equal to those originally installed.

2. Leakage Current Measurement (For 120 V Model Only). When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
 - Leakage current must not exceed 0.5 mA.
 - Be sure to test for leakage with the AC plug in both polarities.



• POLARIZATION

This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. (U,C model only)

■ WARNING: CHEMICAL CONTENT NOTICE!

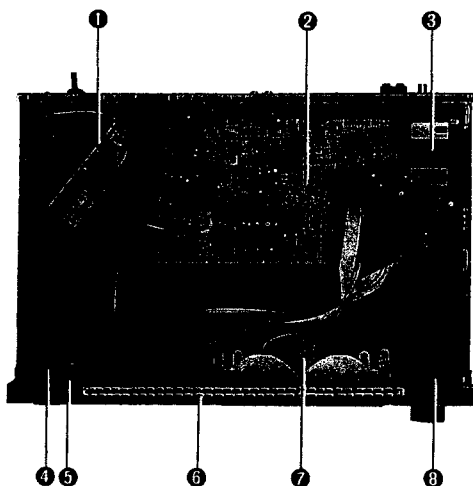
The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

DO NOT PLACE SOLDER. ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

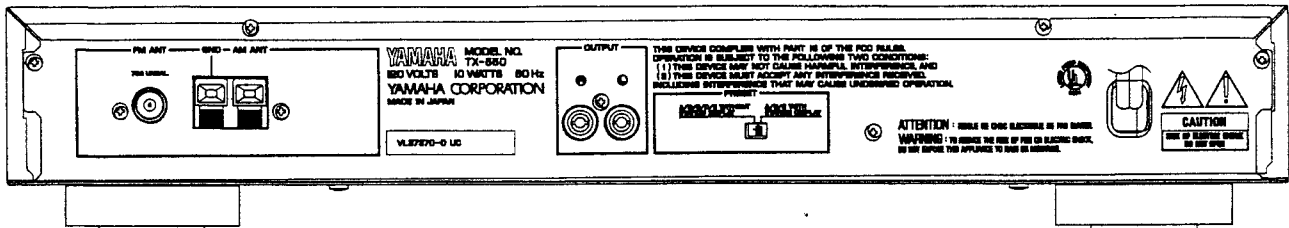
■ INTERNAL VIEW



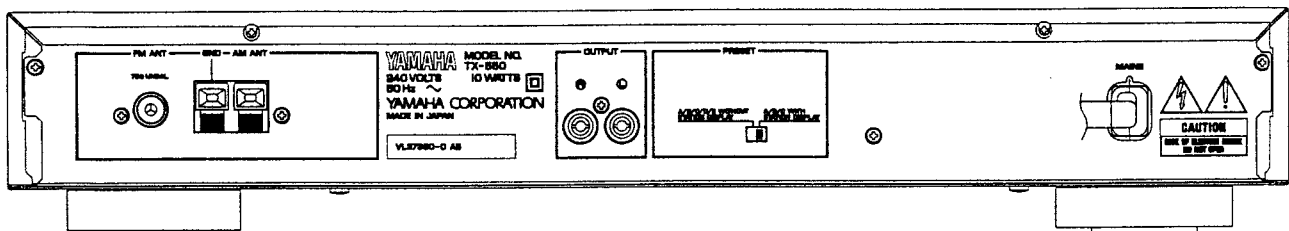
- ① Tuner circuit board (3)
- ② Tuner circuit board (1)
- ③ FM Front-end pack
- ④ Tuner circuit board (6)
- ⑤ Tuner circuit board (4)
- ⑥ Tuner circuit board (2)
- ⑦ LCD circuit board
- ⑧ Tuner circuit board (5)

■ REAR PANELS

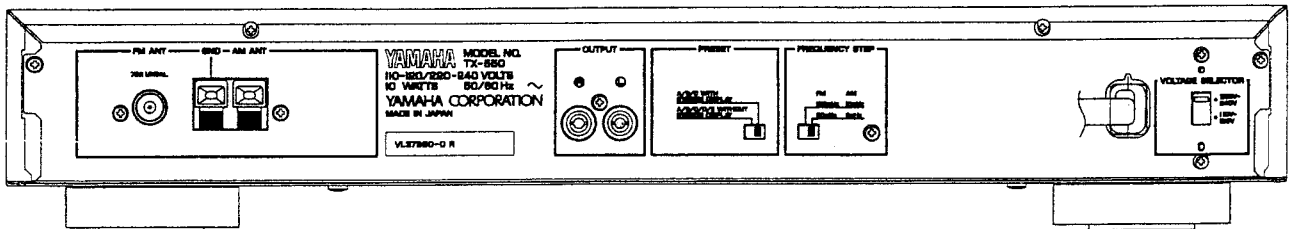
● U.S.A and Canadian Models



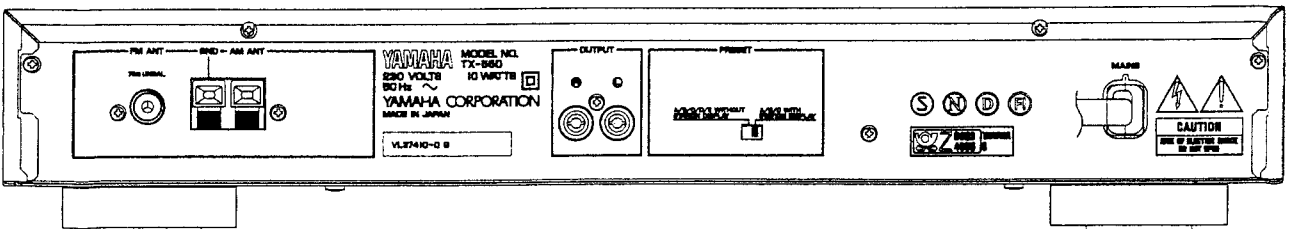
● Australian and British Models



● General Model



● European Model



TX-550

■ SPECIFICATIONS

FM SECTION

Tuning Range	
[U.S.A., Canada and General models]	87.5 to 108 MHz
[U.K., Australia, Europe and General models]	87.5 to 108 MHz
50 dB Quieting Sensitivity (IHF) [Except Europe model]	
75 ohms Mono	1.55 μ V (15.1 dBf)
75 ohms Stereo (NARROW)	21 μ V (37.7 dBf)
Usable Sensitivity	
[Except Europe model]	
75 ohms, 1 kHz, 100% mod. (30 dB S/N Quieting)	0.8 μ V (9.3 dBf)
[Europe model] (DIN)	
75 ohms Mono (S/N 26 dB)	0.8 μ V
75 ohms Stereo (S/N 46 dB)	22 μ V
Image Response Ratio	
[Except Europe model]	40 dB
[Europe model]	75 dB
IF Response Ratio	
[Except Europe model]	90 dB
[Europe model]	75 dB
Spurious Response Ratio	70 dB
AM Suppression Ratio	55 dB
Capture Ratio	1.5 dB

Alternate Channel Selectivity (NARROW)	
[Except Europe model]	85 dB
Selectivity (two signals, 40 kHz Dev., \pm 300 kHz, NARROW)	
[Europe model]	70 dB
Signal-to-Noise Ratio	
[Except Europe model] (IHF)	
Mono	90 dB
Stereo	85 dB
[Europe model] (DIN-NOISE RMS)	
Mono (40 kHz Dev.)	83 dB
Stereo (40 kHz Dev.)	79 dB
Harmonic Distortion (1 kHz, WIDE)	
[Except Europe model]	
Mono/Stereo	0.02%/0.03%
[Europe model] (40 kHz Dev.)	
Mono/Stereo	0.02%/0.03%
Stereo Separation (WIDE)	
[Except Europe model]	1 kHz 52 dB
[Europe model]	1 kHz 45 dB
Frequency Response	
[Except Europe model]	
30 Hz to 13 kHz	0 \pm 0.5 dB
20 Hz to 15 kHz	0 \pm 1.5 dB
[Europe model]	
20 Hz to 15 kHz	0 \pm 0.5 dB

AM SECTION

Tuning Range	
[U.S.A., Canada and General models]	530 to 1,710 kHz
[U.K., Australia and Europe models]	531 to 1,611 kHz
Usable Sensitivity	100 μ V/m
Selectivity	32 dB
Signal-to-Noise Ratio	50 dB
Image Response Ratio	40 dB
Spurious Response Ratio	50 dB
Harmonic Distortion; 400Hz	0.3%

AUDIO SECTION

Output Level/Impedance	
FM (100 % mod. 1 kHz)	
[Except Europe model]	700 mV/2.8 k-ohms
[Europe model]	500 mV/2.8 k-ohms
AM (30% mod. 400 Hz)	180 mV/2.8 k-ohms

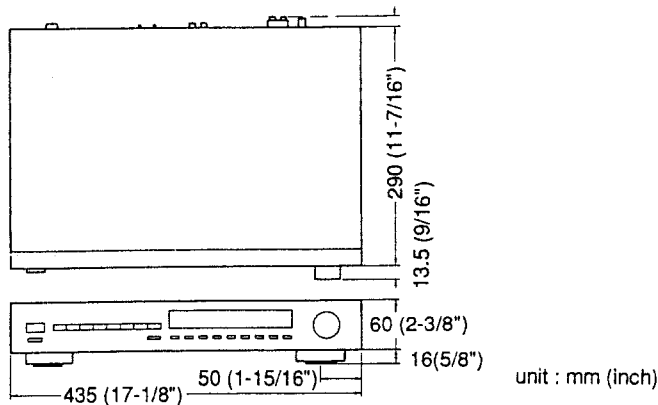
GENERAL

Power Supply	
U.S.A. and Canada models	120V, 60 Hz
Europe model	230V, 50 Hz
U.K. and Australia models	240V, 50 Hz
General model	110-120/220-240V, 50/60 Hz
Power Consumption	10W
Dimensions (W x H x D)	435 x 72.5 x 320 mm (17-1/8" x 2-7/8" x 12-5/8")
Weight	3.1 kg (6 lbs. 13 oz.)
Accessories	Audio connection cord, AM loop antenna/indoor FM antenna

Specifications subject to change without notice.

U U.S.A. model
C Canadian model
A Australian model
G European model
B British model
R General model

■ DIMENSIONS



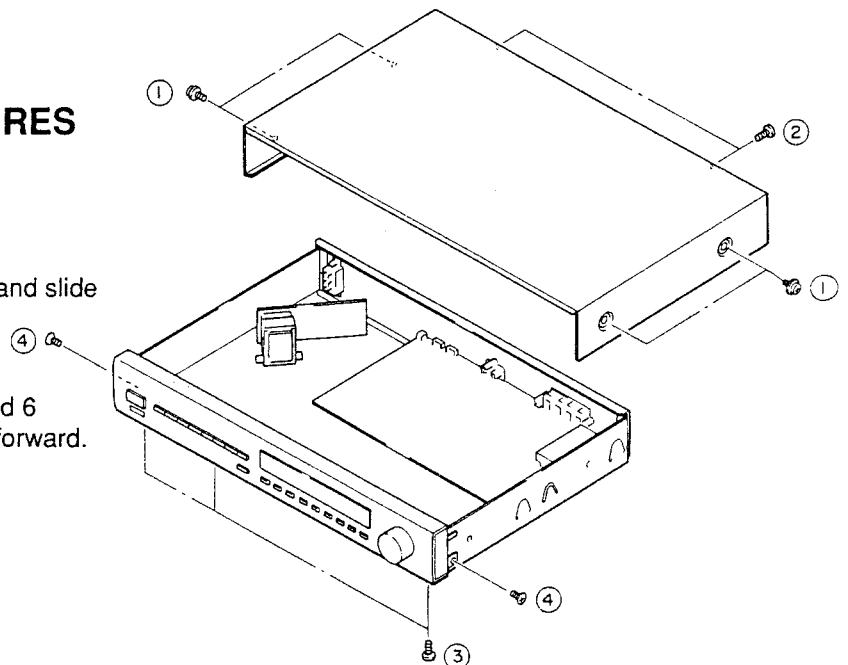
■ DISASSEMBLY PROCEDURES

1. Removal of Top Cover

Remove 4 screws ① and 2 screws ②, and slide the Top Cover back.

2. Removal of Front Panel

a. Remove 3 screws ③, 2 screws ④ and 6 connectors, and pull the Front Panel forward.



ADJUSTMENTS

1. Before adjustment

- 1) After the power switch is pushed on, wait for 5 minutes before measuring to be sure of the most stable operation.
- 2) Adjust the OSC coil and IFT with non-ferrous screw driver.
- 3) Set the switches to the following positions.
TUNING MODE AUTO
- 4) Make the AM section adjustments after having finished the FM section adjustment.
- 5) $0\text{dB}\mu = 1\mu\text{V}$ Ex: $60\text{dB}\mu = 1\text{mV}$
 $X\text{dB}\mu = (X + 11.2)\text{dBf}$ Ex: $70\text{dB}\mu = 81.2\text{dBf}$

2. Measuring instruments abbreviation

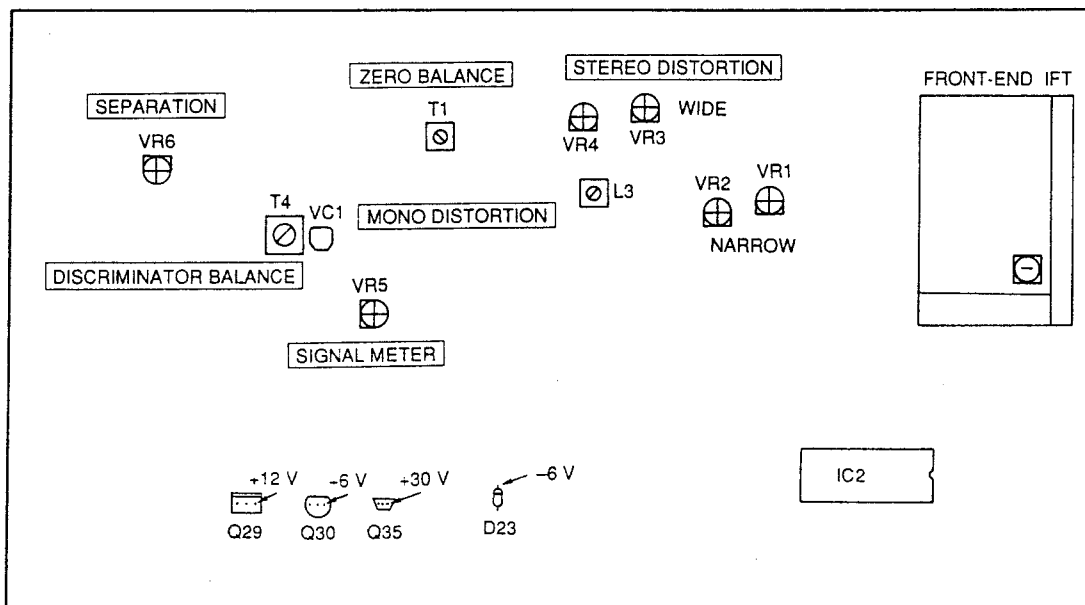
- FM SG : FM signal generator
- SSG : Stereo signal generator
- AM SG : AM signal generator
- DIST. M : Distortion meter
- FC : Frequency counter
- ACVM : AC voltage meter
- DCVM : DC voltage meter

POWER SUPPLY CHECK

Check that the following voltages are obtained respectively across each test point and ground on tuner circuit.

Test Point	Rating or standard	Remark	
+ 12.0 V (Q29 Emitter)	+ 12.5 V ± 0.5 V	Make sure that AC line voltage comes within:	Models
+ 6.0 V (Q30 Emitter)	+ 6.0 V ± 0.5 V		U, C
+ 30.0 V (Q35 Emitter)	+ 28.0 V ± 1.0 V		G
- 6.0 V (D23 Anode)	- 6.5 V ± 0.5 V		A, B
			R
			110/120/220/240V ±10%

TEST POINTS



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Confirmation of preset

CAUTION:

Using a table as shown below, write down the contents of the memory presets in the tuner before setting to the test program mode.

(This is because setting to the test program mode sets the tuner memory content in the state preset by the manufacturer and erases all the memory preset by the user.)

Upon completion of the test program, set to the tuner mode again and enter the preset memory as written in the table.

Preset Group	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

- Turn the POWER switch on while pressing the preset keys "1", "2" and "3" simultaneously. Confirm that the frequencies described below are changed to the preset values. (Press P8 to reset the test mode. To preset, leave the keys as they are.)

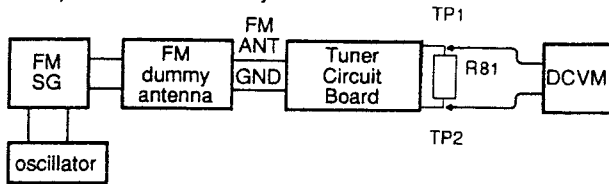
Confirmation of LCD unit

Confirmation of the display

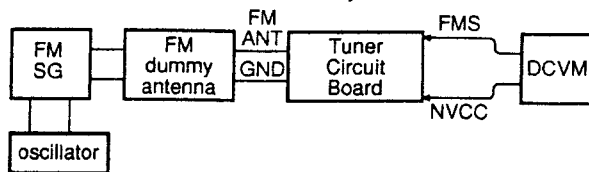
- 1 The test mode is entered and all the segments of the LCD light when the POWER switch is turned on while pressing "P1", "P2" and "P3" simultaneously.
- 2 After 1, the display mode is changed by pressing the following keys.
 - 1 P2 All turned off mode (All the segments are turned off)
 - 2 P3 "8" is lit at the center position.
 - 3 P8 The test mode is switched to normal mode.

Connection diagram (Measuring instruments)

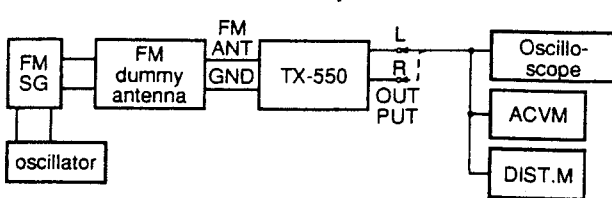
1) Zero balance adjustment



2) Discriminator balance adjustment



3) Monaural distortion adjustment



* Total of 40 stations, P1 to P8 for each A to E are reset to the preset value.

		P1	P2	P3	P4	P5	P6	P7	P8
A/	U, C	87.5M	95.1	98.1	101.5	108.0	88.0	106.0	107.9
C/E	A, B, G, R	87.5M	95.1	98.1	101.5	108.0	88.0	106.0	107.9
B/D	U, C	630k	1080	1440	530	1680	900	1350	1400
	A, B, G, R	630k	1080	1440	531	1680	900	1350	1404
	Station name	ABCD	EFGH	IJKL	MNOP	QRST	UVWX	YZ	

* For the R model, AM frequency step 9 kHz to (from) 10 kHz, and FM frequency step 100 kHz to (from) 50 kHz can be switched.

Setting of the Function

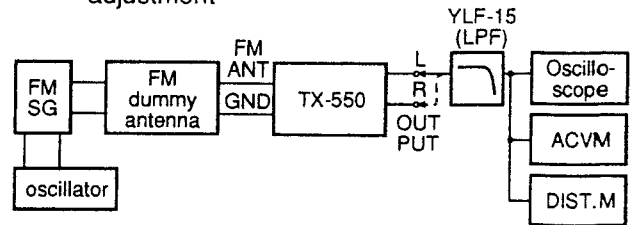
The mode is changed to

MODE → AUTO ST, BLEND → OFF,
IF MODE → WIDE.

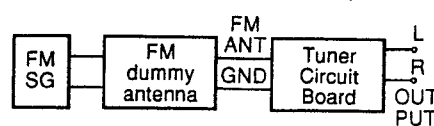
FM TUNER SECTION

- Use 15 kHz L.P.F. to measure the output.
- 100% modulation means that the Frequency Deviation is 75 kHz. (R, U, C, A, B)
- For the G model, Frequency Deviation is 40 kHz.
- For the G, B models, install the Matching Transformer and connect FM SG.

4) Stereo distortion adjustment/separation adjustment



5) Full-scale signal quality meter adjustment



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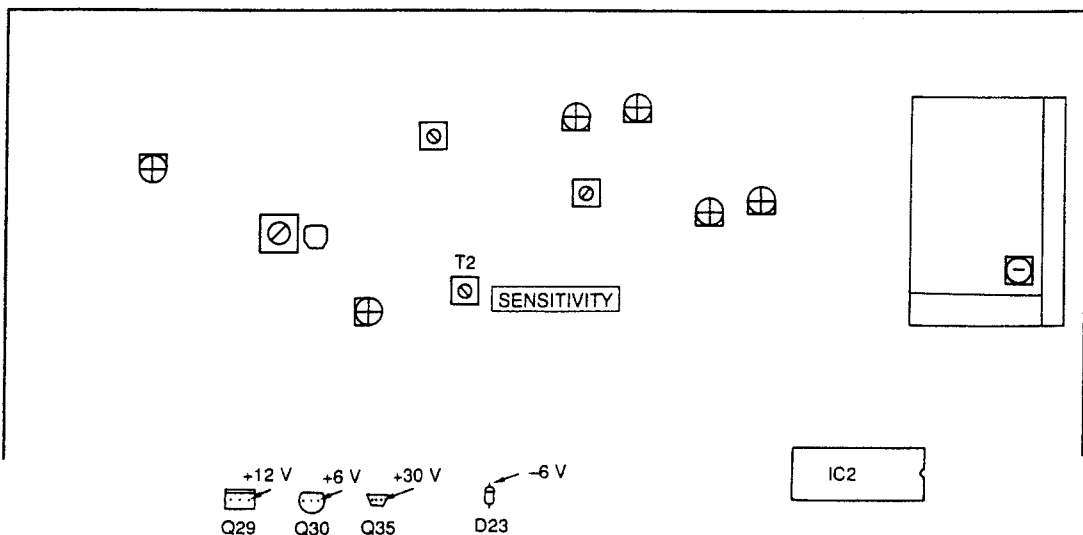
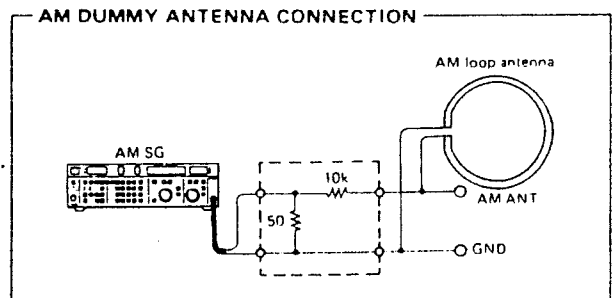
Step	Item to be Adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
1	Zero balance	FM ANT	FM SG, SSG 98.1MHz 70dB μ MONO 100Hz 100% modulation	T1	Adjust T1, so that voltage between TP1 and TP2 may be 0V \pm 50mV when tuned to generator.	
		TP1 \leftrightarrow TP2	DCVM			
2	Discriminator balance	FM ANT	FM SG 88MHz MONO 100Hz 100% modulation	T4	Adjust T4, so that voltage between FMs and NVcc may be 0V \pm 50mV when tuned to generator.	
		FMs \leftrightarrow NVcc	DCVM			
3	Monaural distortion	FM ANT	FM SG 98.1MHz 70dB μ MONO 100Hz 100% modulation	VC1	Reduce distortion to minimum. (WIDE mode)	
		OUTPUT L, R	DIST. M			
4	Stereo distortion WIDE	FM ANT	FM SG, SSG 98.1MHz 70dB μ STEREO L or R 1kHz, 100% modulation	FM Front-end IFT, L3, VR3, 4	Same as step 3 (WIDE mode)	(Less than -52dB) 0.2%
	Stereo distortion NARROW			VR 1, 2	Same as step 3 (NARROW mode)	(Less than -33dB) 2.2%
	OUTPUT L, R			DIST. M		
5	Verification of monaural distortion	FM ANT	FM SG 98.1MHz 70dB μ MONO 1kHz, 100% modulation			Less than -54dB (WIDE mode) 0.16%
		OUTPUT L, R	DIST. M			
6	Separation	FM ANT	FM SG, SSG 98.1MHz 70dB μ STEREO L or R 1kHz, 100% modulation	VR 6	Reduce output level to minimum.	Separation more than 36dB (WIDE mode)
		OUTPUT L, R	ACVM			
7	Verification of zero balance	75 Ω FM ANT	Same as step 1		Same as step 1	If not, return to step1 and readjust

Step	Item to be Adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
8	Verification of Discriminator balance	75Ω FM ANT	Same as step 2		Same as step 2	If not, return to step 2 and readjust.
		FMs ↔ NVcc	DCVM			
9	Full-scale signal quality meter	75Ω FM ANT	FM SG, SSG 98.1 MHz 45dBμ STEREO L, R 1kHz, 100% modulation	VR5	Adjust VR5 until all signal quality indicators light up. (WIDE mode)	
10	Verification of Blend	75Ω FM ANT	FM SG, SSG 98.1MHz 70dBμ STEREO L, R 1kHz, 100% modulation		Check that when blend switch is turned on, separation decreases. (WIDE mode)	
11	Verification of auto tuning	75Ω FM ANT	FM SG 98.1MHz 26dBμ MONO 1kHz 30% modulation	TUNING knob	Automatic reception should be available when the tuning knob is rotated UP and DOWN.	Audio muting should be applied during tuning.

(AM TUNER SECTION)

- Make the AM section adjustments after having finished the FM section adjustment.
- Connect the AM loop antenna to the AM ANT terminal.
- Connect the AM dummy antenna for adjustment to AM SG.
- Check that the AM SG precision is within ±0.1kHz.

• TEST POINTS



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Step	Item to be adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
1	Sensitivity	AM ANT	AM dummy antenna AM SG 630kHz 1080kHz 1440kHz 60dB μ MONO 400Hz 30% MOD.	T2	Adjust T2 at 630kHz, 1080kHz, 1440kHz to make the output reading maximum when the preset CH B-1, B-2 and B-3 are received accordingly.	
		OUTPUT	ACVM			
2	Verification of Signal meter	AM ANT	AM dummy antenna AM SG 1080kHz 100dB μ 400Hz, 30% MOD.		All signal quality indicators light up.	
3	Verification of Signal meter	AM ANT	AM dummy antenna		Check that all the signal meters are turned off.	
4	Verification of auto-search	AM ANT	AM dummy antenna AM SG 1080kHz 60dB μ 400Hz, 30% MOD.		Check that auto search reception is possible with the TUNING knob.	Tuning MODE \rightarrow AUTO

<DIGITAL CONTROL SECTION>

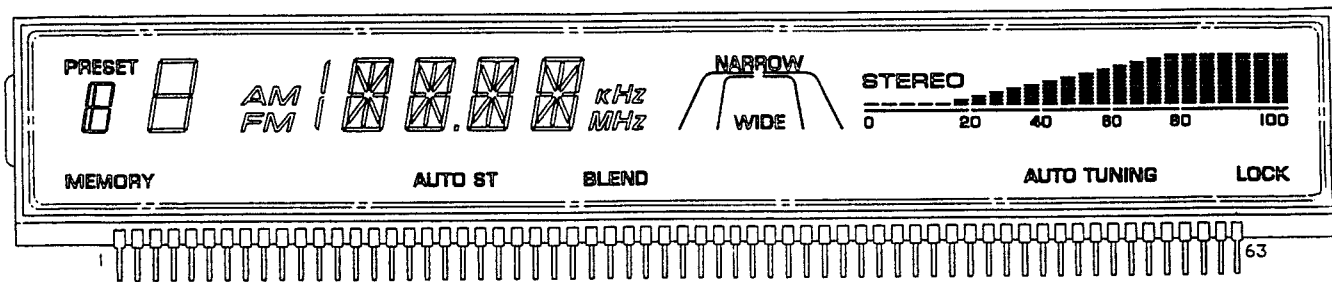
Step	Confirmation Item	Connection terminal	Instrument required	Operation key	Confirmation method
1	Preset memory	75 Ω FM ANT	FM SG, SSG 98.1MHz \pm 1kHz 70dB μ STEREO, L, R 1kHz. 100% MOD.	FM, AM TUNING MODE TUNING (UP or DOWN) MEMORY PRESET STATION P1-P8 A/B/C/D/E	1. Receive FM 98.1MHz by means of auto search. 2. Press MEMORY key \rightarrow MEMORY indicator flashes about 5 seconds. 3. Select A with A/B/C/D/E SW. \rightarrow "A" lights. 4. Press P1 \rightarrow "1" lights and MEMORY indicator goes off. MEMORY indicator goes OFF A1 indicator lights.
		AM ANT	AM SG AM dummy antenna 1080kHz \pm 0.1kHz 80dB μ 400Hz, 30% MOD.		5. Receive AM 1080kHz. 6. Press MEMORY key \rightarrow MEMORY indicator flashes about 5 seconds. 7. Select B with A/B/C/D/E SW. \rightarrow "B" lights. 8. Press P1 \rightarrow "1" lights and MEMORY indica- tor goes off. MEMORY indicator goes OFF B1 indicator lights.
					9. Press A1 and B1 and check that Content is read out properly. \rightarrow A1 and B1 light.
2	Tuning modes	Same as step 1	Same as step 1	FM TUNING MODE TUNING (UP or DOWN)	Tune to FM 98.1MHz and check that during MAN'L/MONO reception FM is forced monaural. \rightarrow AUTO ST indicator goes off. STEREO indicator goes off.

(DIGITAL CONTROL SECTION)

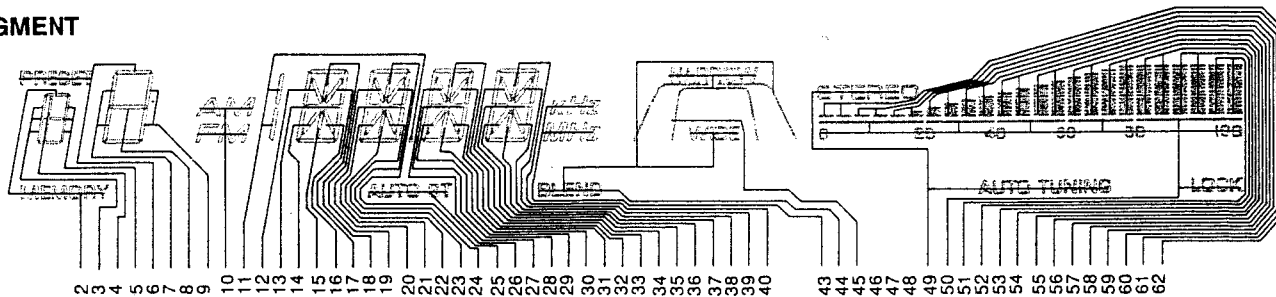
Step	Confirmation Item	Connection terminal	Instrument required	Operation key	Confirmation method
3	Lock confirmation				Confirm that the frequency does not change by turning the TUNING knob when the LOCK SW is pressed during STATION DISPLAY SW OFF mode. → LOCK indicator lights.
4	IF mode confirmation				Confirm that the IF mode switches to MAN'L automatically when the NARROW/WIDE SW is pressed after the preset button 1 is selected and AUTO is selected with the AUTO/MAN'L SW. Confirm that each display changes according to the changed condition. Also, confirm that the mode changes to NARROW when the antenna input is turned down slowly from the AUTO WIDE tuning mode.
5	STATION DISPLAY confirmation				"----" is displayed on the display window when the ON/OFF SW of the STATION DISPLAY is tuned ON. After "----" is displayed, first column flashes and "A" is displayed when the SHIFT SW is pressed (during AUTO or MAN'L tuning). The display changes A, B, C, ... by turning the TUNING knob clockwise, and A, 0, 9, 8, ... by turning the knob counterclockwise. After desired number or character is selected, the second column flashes and "A" is displayed when the SHIFT SW is pressed. Select desired character or number for all four columns and program into the memory. Confirm that the programmed characters and/or numbers are displayed when they are selected. (When the rear panel SW is A, B, or C)
6	Last station memory			PRESET STATION P1 A/B/C/D/E	1. Press A1 → FM 98.1MHz is shown. 2. Turn POWER key OFF. 3. After 5 seconds, turn POWER key on. 4. Check that A1 content is read out. → A1 indicator lights. FM 98.1MHz is displayed.
7	Remote control function confirmation				Confirm that the A/B/C/D/E can be switched and 1 - 8 of the preset station keys can be selected directly with the optional remote control. Confirm that the A/B/C/D/E can be switched and 1 - 8 can be selected (up and down station selection) with the RS remote control (custom code 7A and 7E). Operating distance: more than 7 m (without obstacle).

DISPLAY PIN CONNECTIONS

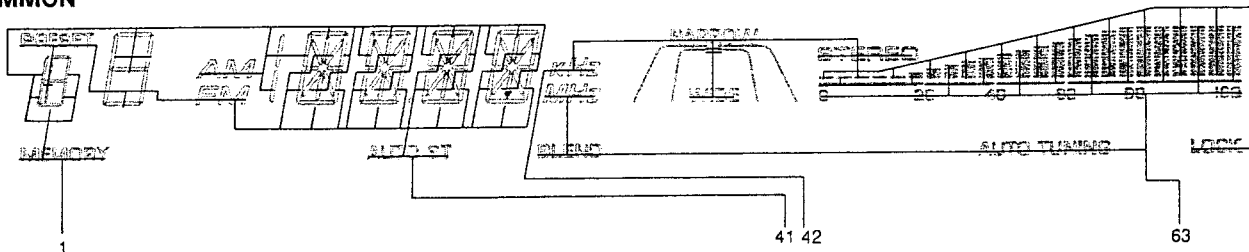
• LCD-8194



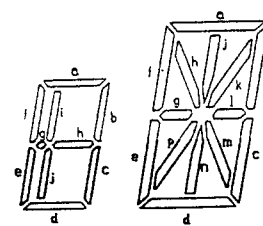
SEGMENT



COMMON



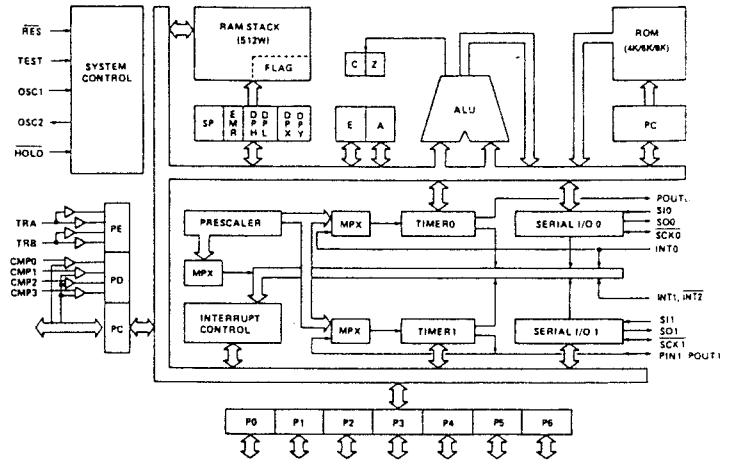
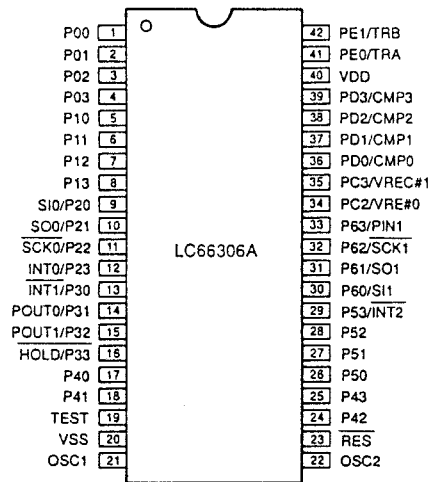
NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
COM1	COM	MEMORY	1ef	1d	1bc	2a	2f	2g	2b	AM	K3	4f	4l	4p	4n	4m	4b	4a	5f	
COM2	—	1a	1g	1ij	1h	PRESET	2e	2d	2c	FM	COL	4h	4g	4e	4d	4c	4k	4j	5h	
NO	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
COM1	5l	5p	5n	5m	5b	5a	—	6f	6l	6p	6n	6m	6b	6a	7f	7l	7p	7n	7m	
COM2	5g	5e	5d	5c	5k	5j	AUTO ST	6h	6g	6e	6d	6c	6k	6j	7h	7g	7e	7d	7c	
NO	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	
COM1	7b	7a	—	COM	kHz	WIDE	NARROW	—	—	—	STEREO	LOCK	SM23	SM21	SM19	SM17	SM15	SM13	SM11	
COM2	7k	7j	COM	—	MHz	BLEND	—	—	—	—	AUTO TUNING	0-100	SM24	SM22	SM20	SM18	SM16	SM14	SM12	
NO	58	59	60	61	62	63														
COM3	SM9	SM7	SM5	SM3	SM1	—														
COM4	SM10	SM8	SM6	SM4	SM2	COM														



TX-550

μ-COM DATA (LC66306A-4725:IC2)

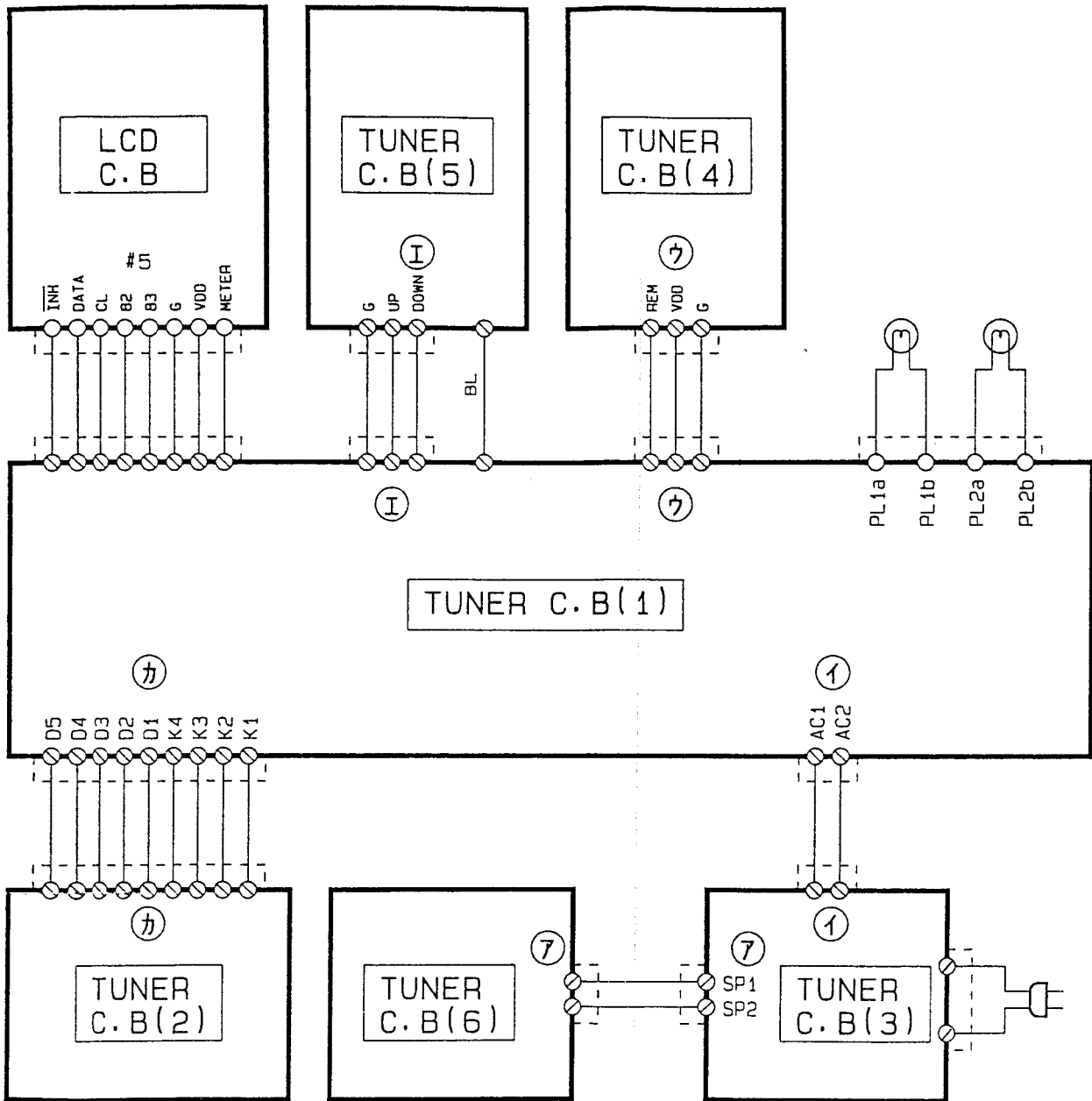
(4-bit Microcomputer)



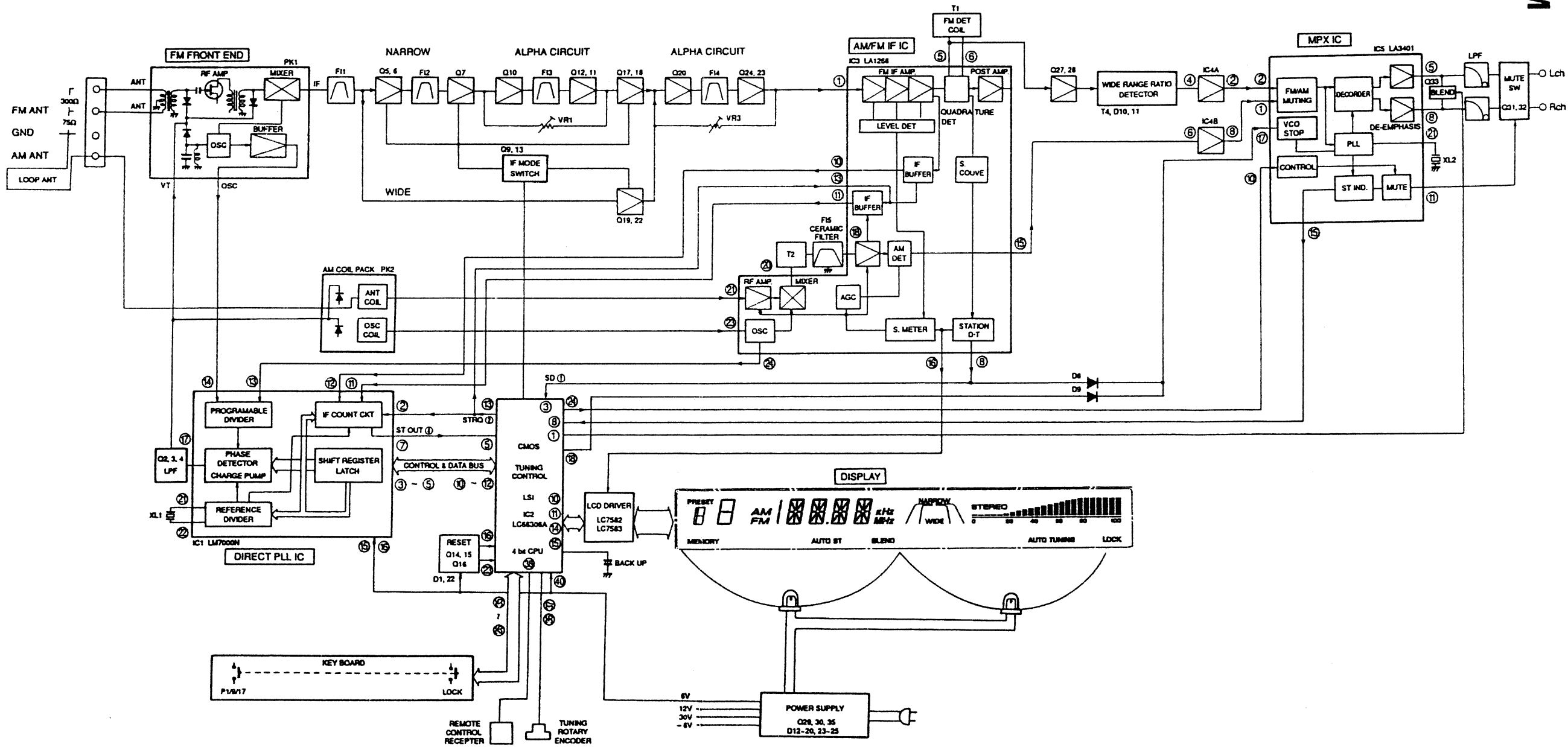
Pin No.	Terminal Name	I/O	Function	Pin No.	Terminal Name	I/O	Function
1	P00	I/O	BLEND	22	OSC2	0	-
2	P01	I/O	MUTE	23	RES	I	-
3	P02	I/O	STIN	24	P42	I/O	FM
4	P03	I/O	WIDE	25	P43	I/O	FM
5	P10	I/O	INH	26	P50	I/O	Key Input (K1)
6	P11	I/O	A0	27	P51	I/O	Key Input (K2)
7	P12	I/O	A1	28	P52	I/O	Key Input (K3)
8	P13	I/O	STEREO	29	P53	I/O	Key Input (K4)
9	P20	I/O	-	30	P60	I/O	Key Input (D1)
10	P21	I/O	DATA	31	P61	I/O	Key Input (D2)
11	P22	I/O	CL	32	P62	I/O	Key Input (D3)
12	P23	I/O	CE	33	P63	I/O	Key Input (D4)
13	P30	I/O	STRQ	34	PC2	I/O	-
14	P31	I/O	CE82	35	PC3	I/O	Key Input (D5)
15	P32	I/O	CE83	36	PD0	I	Tuning DOWN
16	P33	I	HOLD	37	PD1	I	Tuning UP
17	P40	I/O	STO	38	PD2	I	Remote Control Input
18	P41	I/O	MONO	39	PD3	I	24 Preset/40 Preset
19	TEST	I	-	40	VDD	-	VDD
20	VSS	-	-	41	PE0	I	-
21	OSC1	I	-	42	PE1	I	-

TX-550

■ WIRING



■ BLOCK DIAGRAM

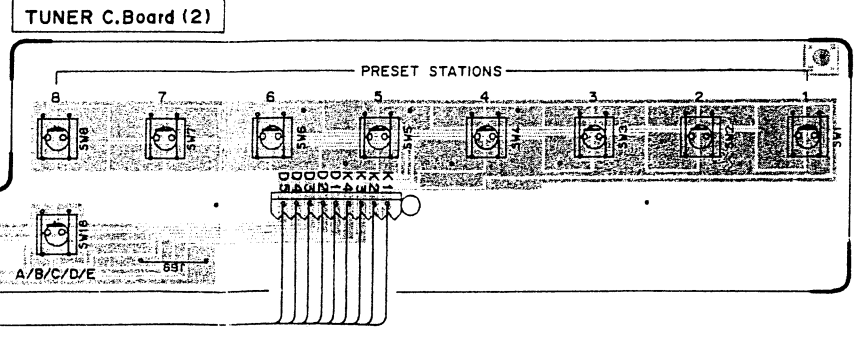
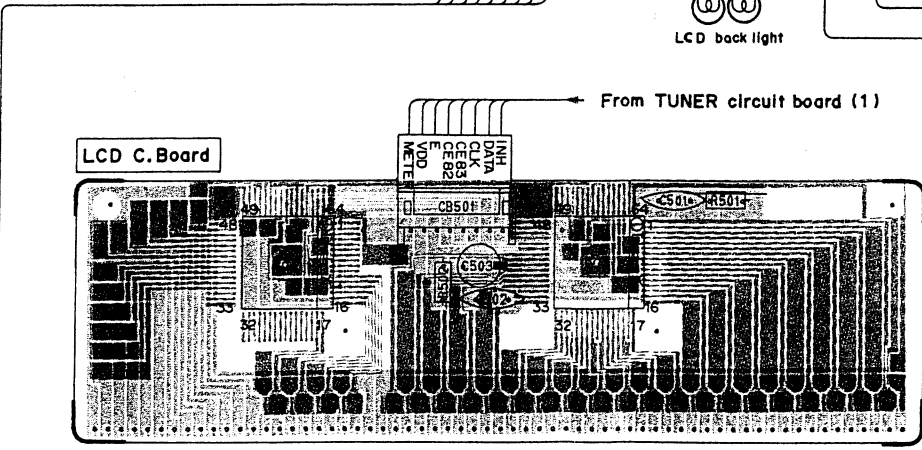
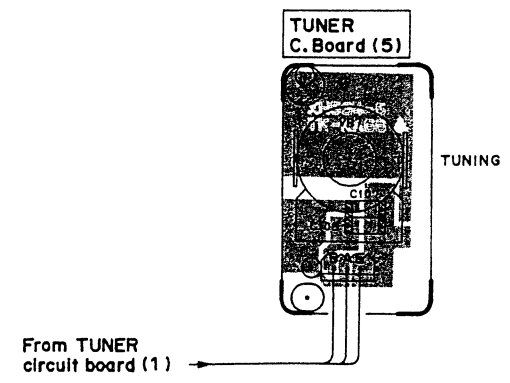
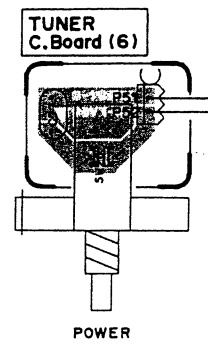
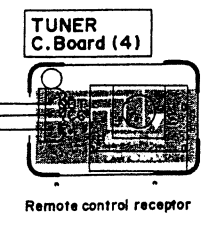
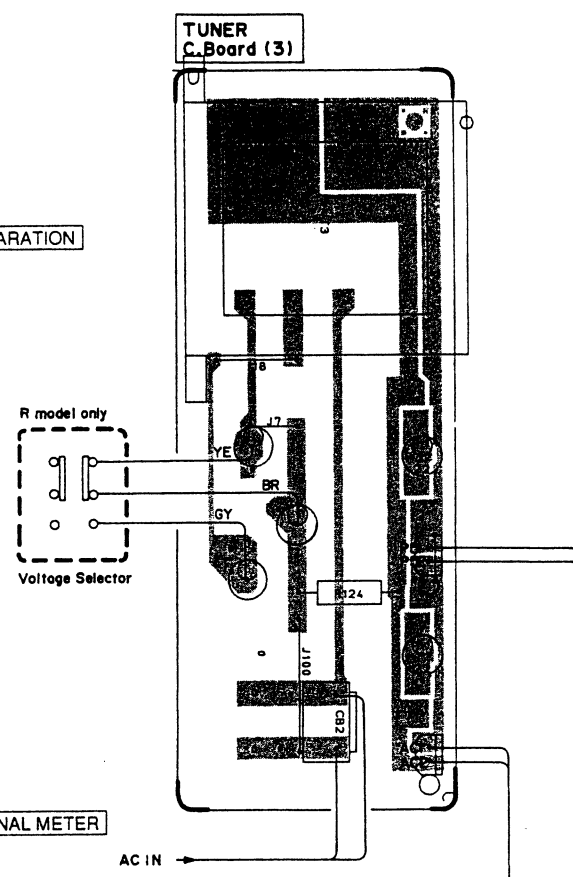
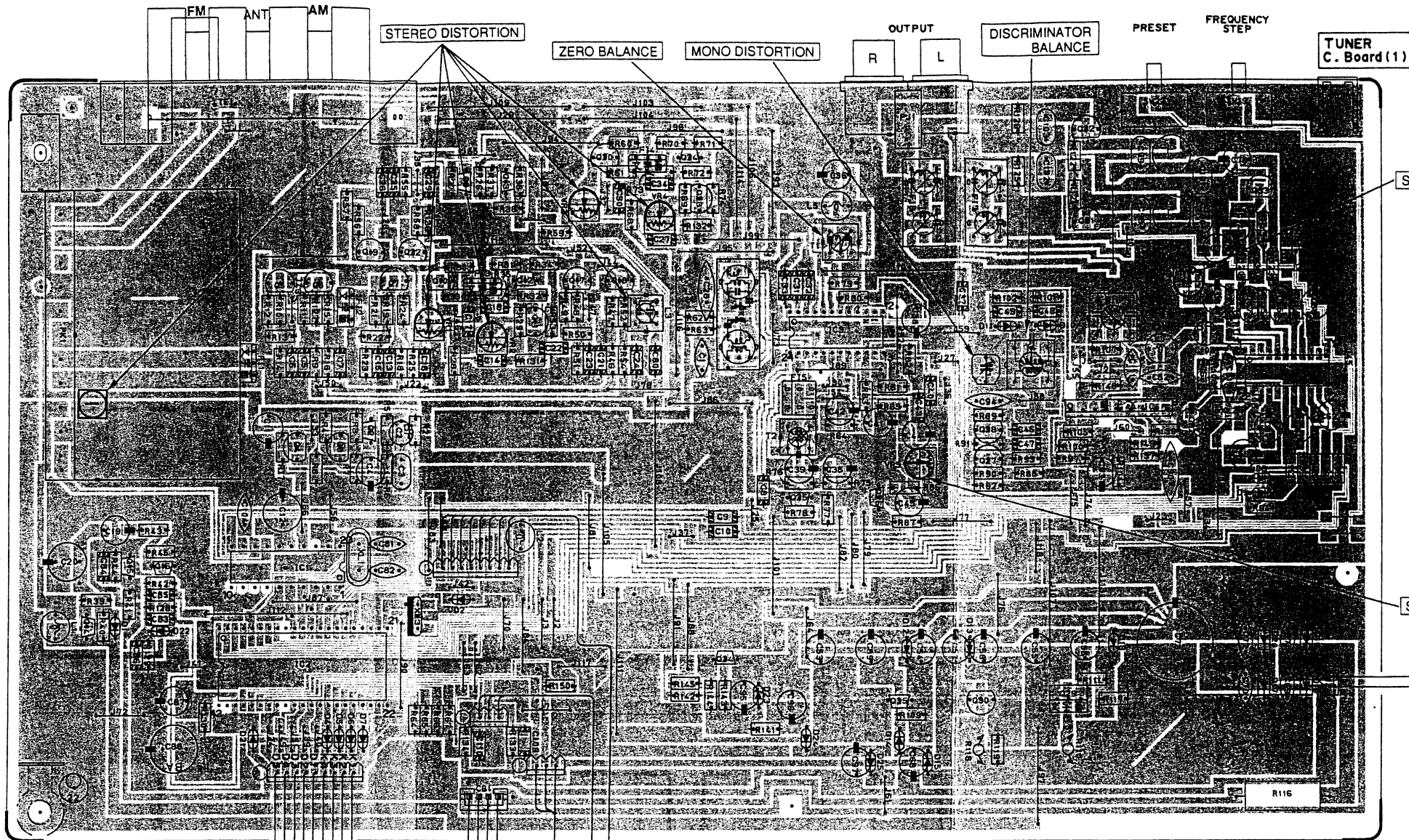


PRINTED CIRCUIT BOARD

● Semiconductors Location

Ref No	Location
D 1	A 4
D 2	C 3
D 4	B 4
D 5	B 4
D 6	B 4
D 7	B 4
D 8	G 3
D 9	G 3
D 10	F 2
D 11	E 2
D 12	E 4
D 13	E 4
D 14	E 4
D 15	E 4
D 16	G 4
D 17	G 4
D 18	F 4
D 19	G 4
D 20	G 4
D 21	B 4
D 22	B 4
D 23	D 4
D 24	D 4
D 25	E 4
IC 1	B 3
IC 2	B 4
IC 3	E 2
IC 4	F 3
IC 5	G 2
IC 501	C 5
IC 502	B 5
Q 2	B 3
Q 3	B 3
Q 4	B 3
Q 5	B 2
Q 6	B 2
Q 7	C 2
Q 9	C 2
Q 10	C 2
Q 11	C 2
Q 12	C 2
Q 13	C 2
Q 14	A 4
Q 15	A 3
Q 16	B 3
Q 17	C 2
Q 18	D 2
Q 19	B 2
Q 20	D 1
Q 22	C 2
Q 23	D 2
Q 24	D 1
Q 25	D 3
Q 26	E 3
Q 27	E 3
Q 28	E 3
Q 29	F 4
Q 30	E 4
Q 31	F 2
Q 32	F 1
Q 33	G 2
Q 34	D 4
Q 35	E 4

1
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7



→ To LCD circuit board
→ To TUNER circuit board

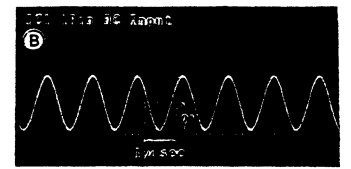
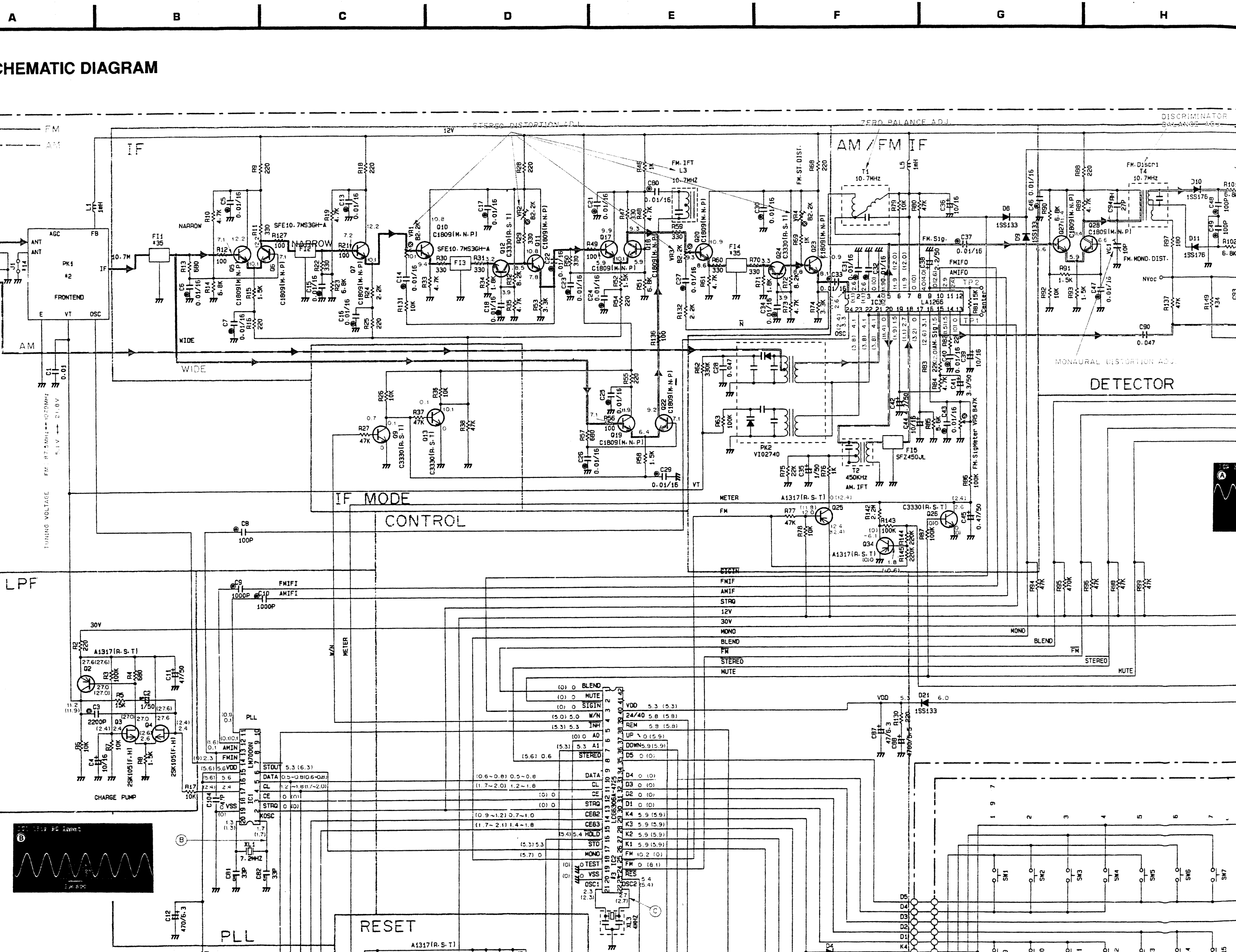
LCD back light

From TUNER circuit board (1)

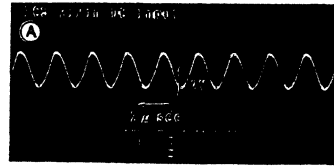
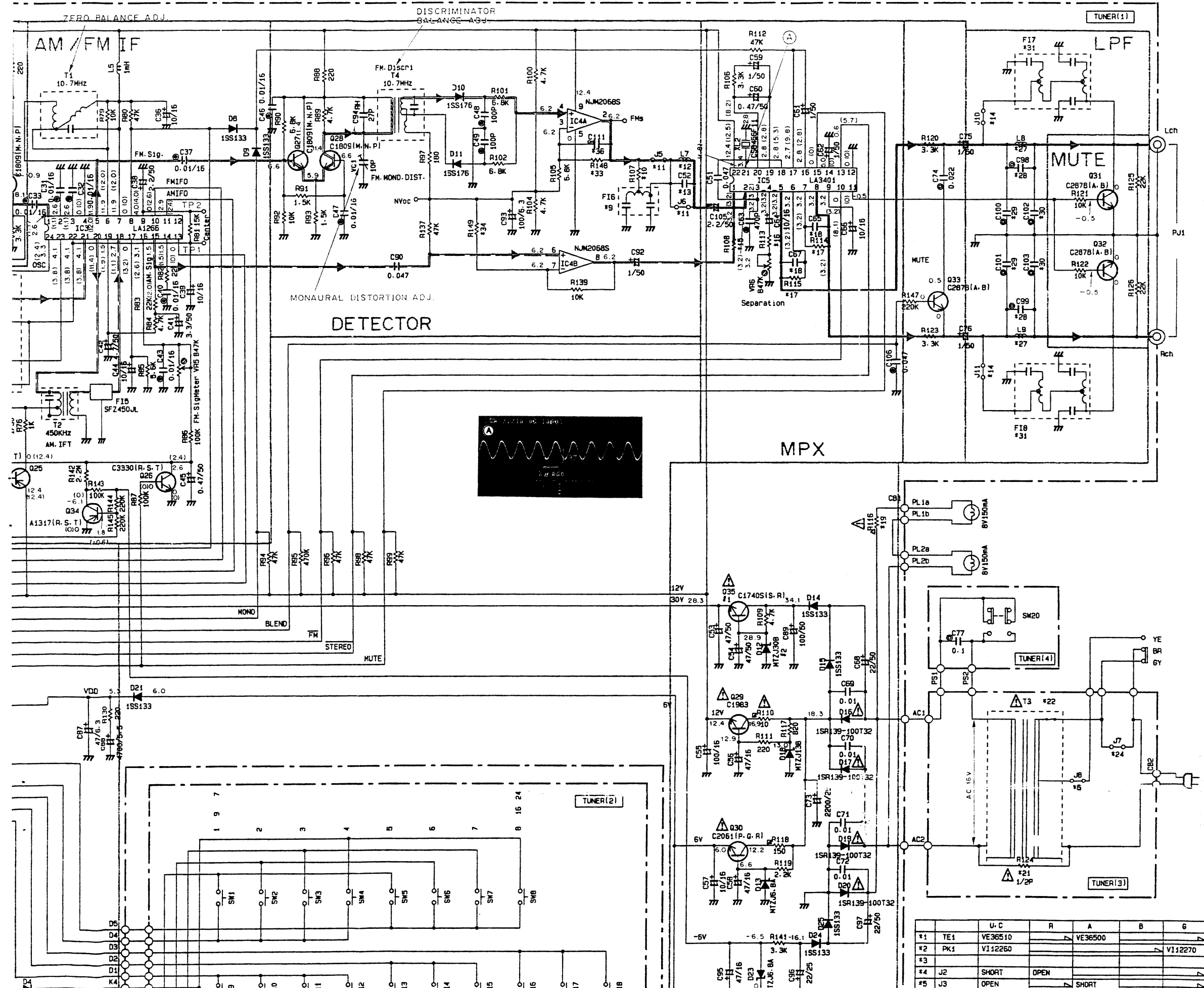
From TUNER circuit board (1)

SCHEMATIC DIAGRAM

1
2
3
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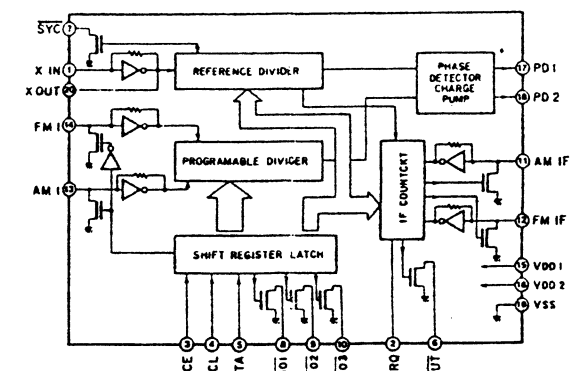


BLEND

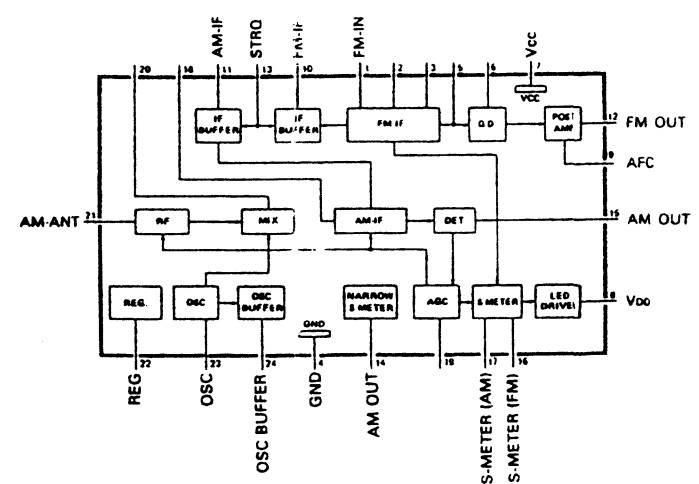


IC BLOCK

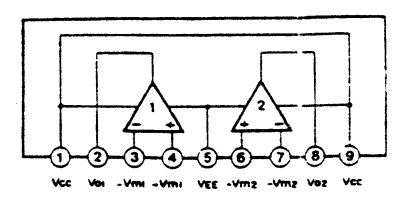
IC1 : LM7000N (PLL)



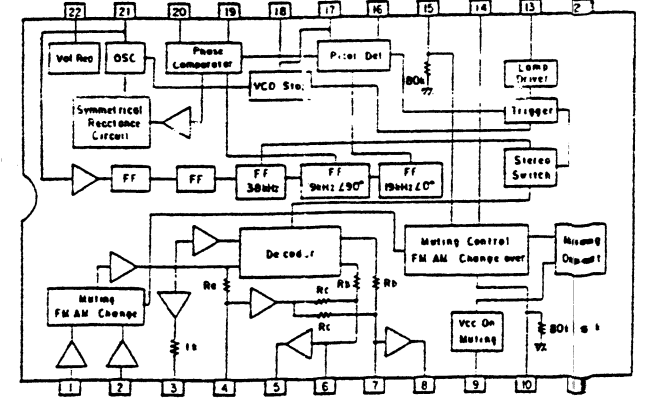
IC3 : LA1266 (AM/FM IF)



IC4 : NJM2068S (DUAL OP-AMP.)



IC5 : LA3401 (MPX)



IC501 : LC7582 (LCD DRIVER)

	U-C	R	A	B	G
#1	TE1	VE36510		VE36500	
#2	PK1	VI12250			VI12270
#3					
#4	J2	SHORT	OPEN		
#5	J3	OPEN		SHORT	

5

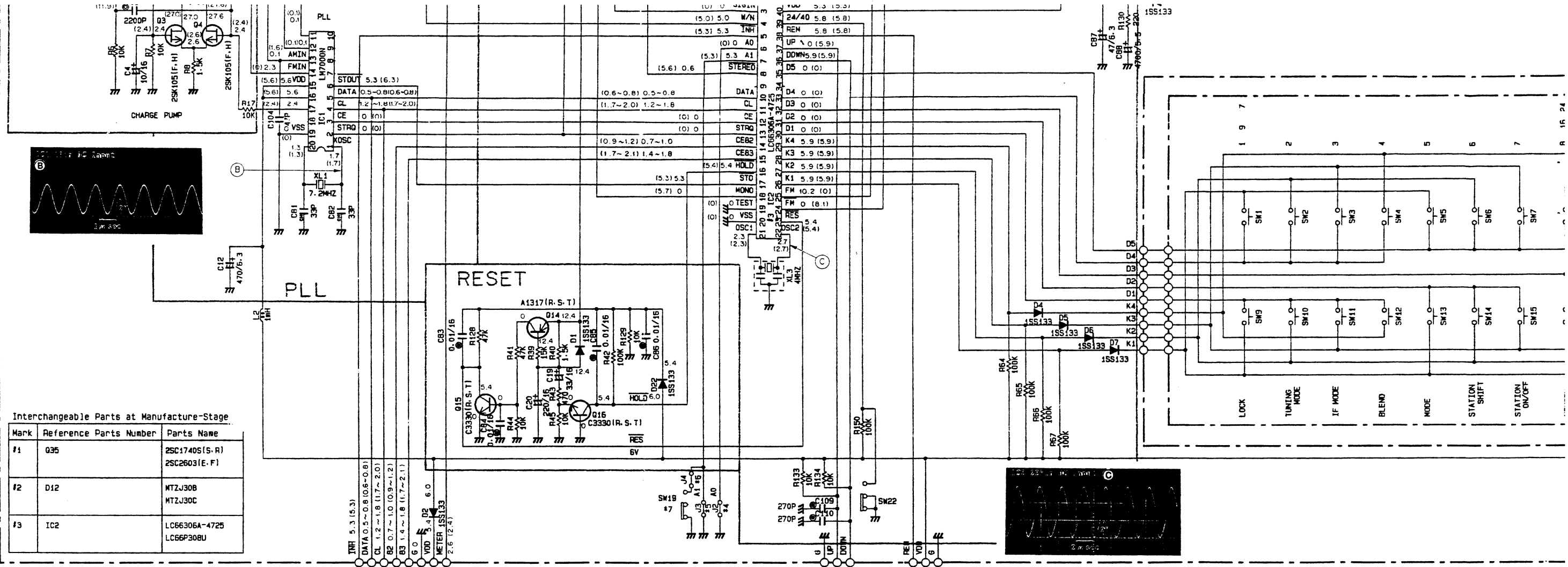
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7

8

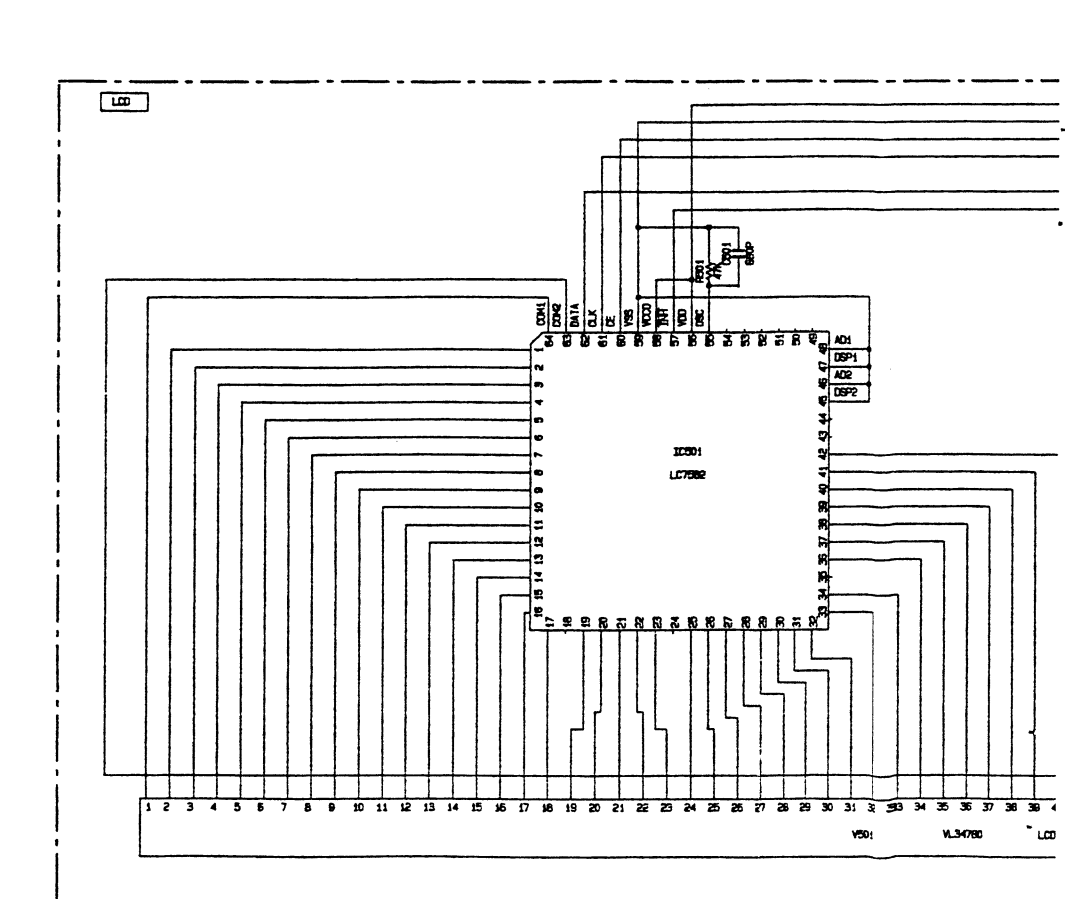
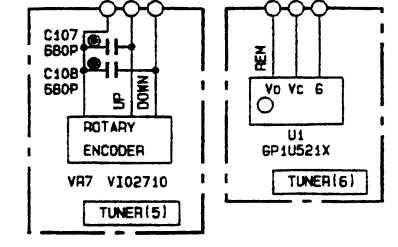
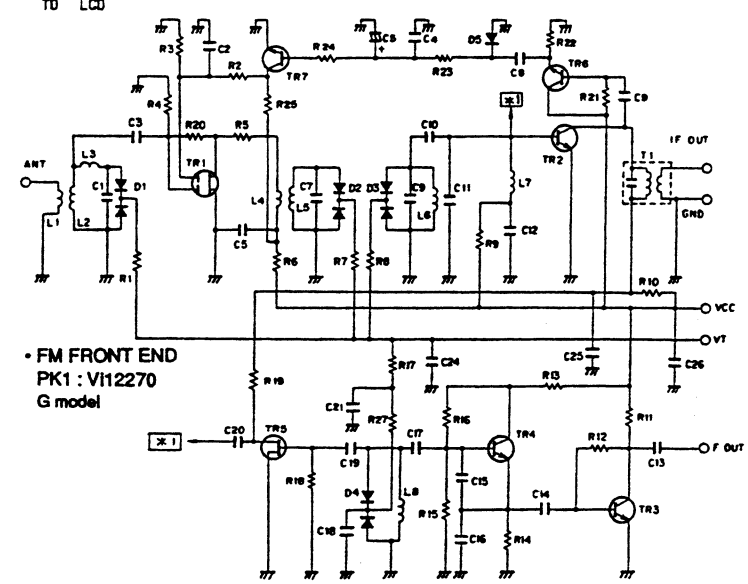
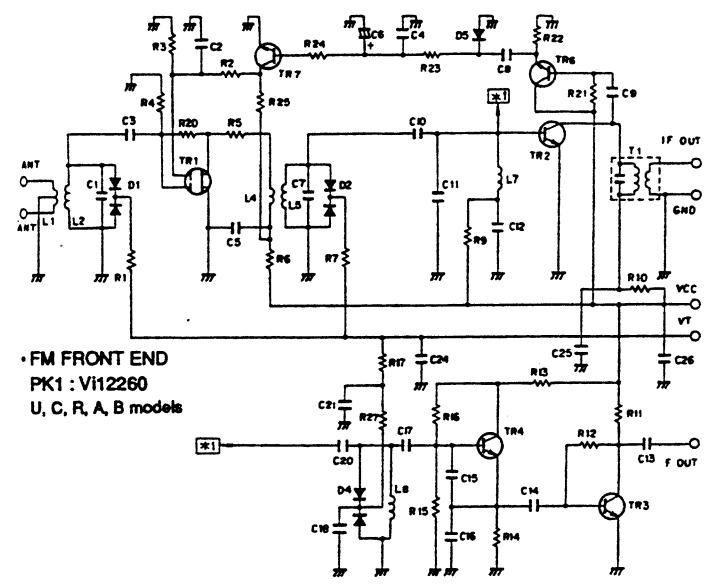
9

10

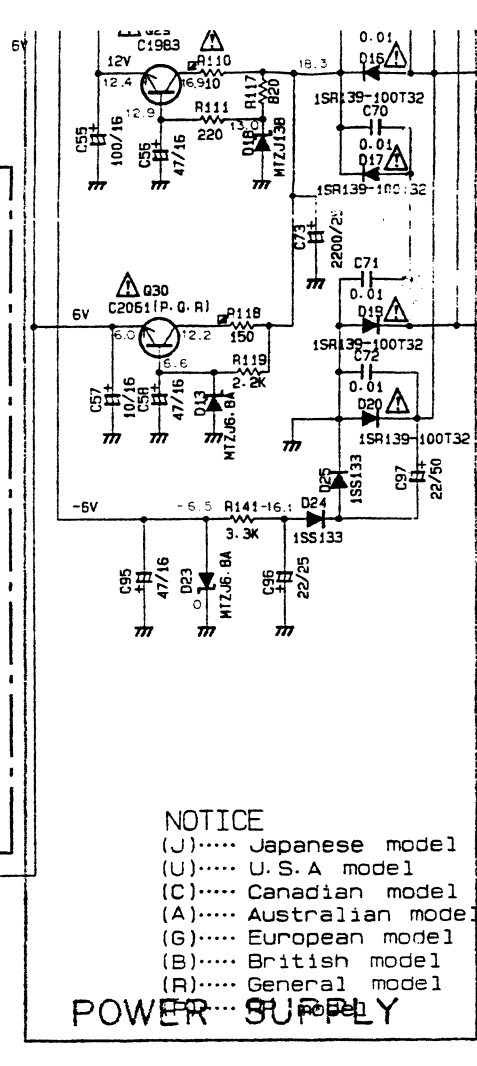
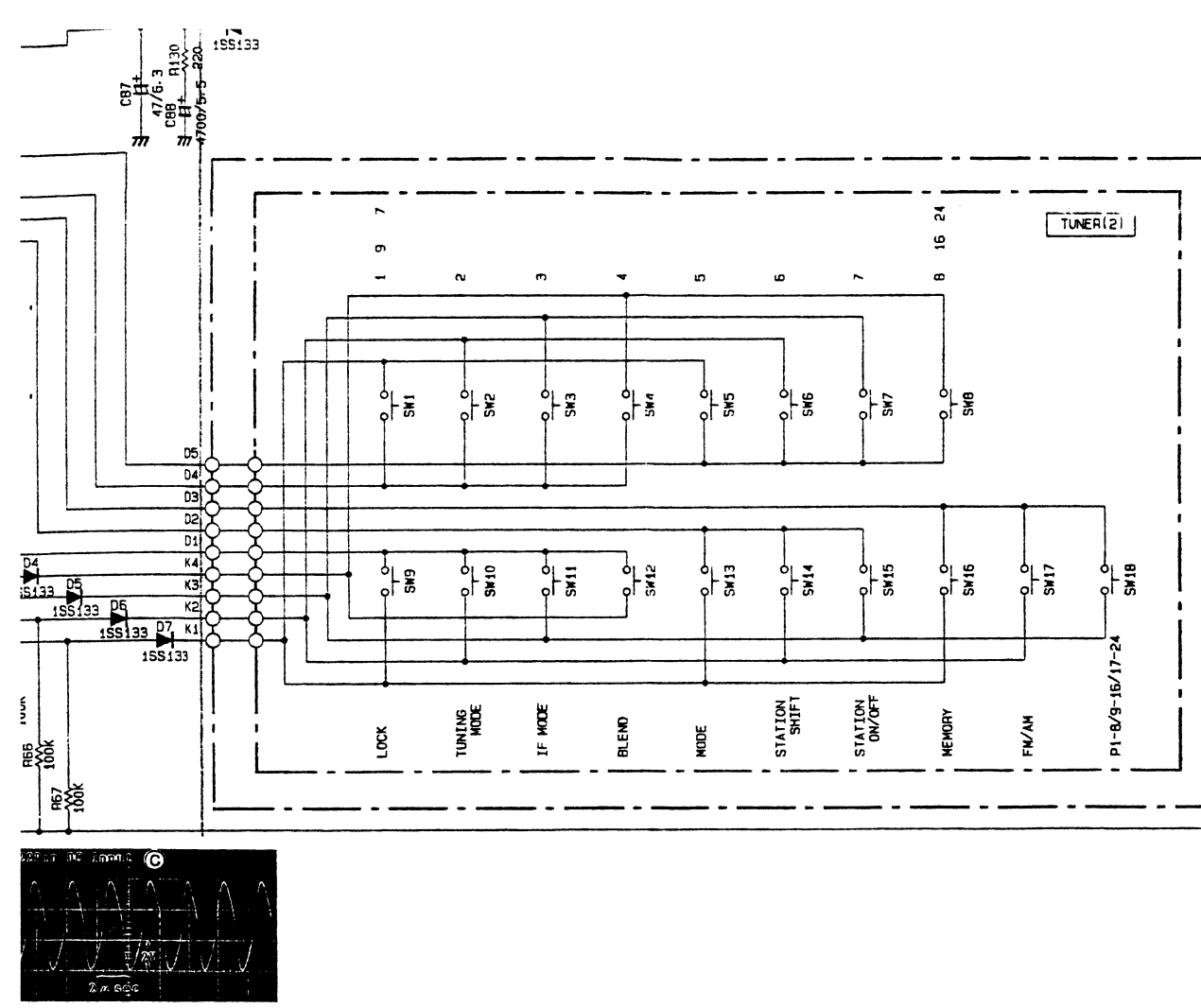


Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
#1	Q35	2SC1740S(S-R) 2SC2603(E-F)
#2	D12	MTZJ30B MTZJ30C
#3	IC2	LC66306A-4725 LC66P308U

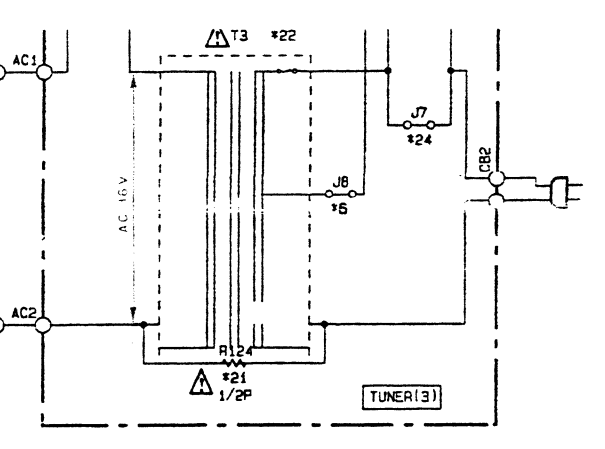


<p>2SC2878 2SC1805 2SC2603 2SC1740 2SC2061</p>	<p>2SA1317 2SC3330 (2SK105)</p>	<p>2SC1983</p>	<p>LC7582 LC7583</p>	<p>NJM2068S</p>
<p>LC66306A</p>	<p>LA1266</p>	<p>LA3401</p>	<p>LM7000N</p>	



NOTICE
 (J)..... Japanese model
 (U)..... U.S.A model
 (C)..... Canadian model
 (A)..... Australian model
 (G)..... European model
 (B)..... British model
 (R)..... General model

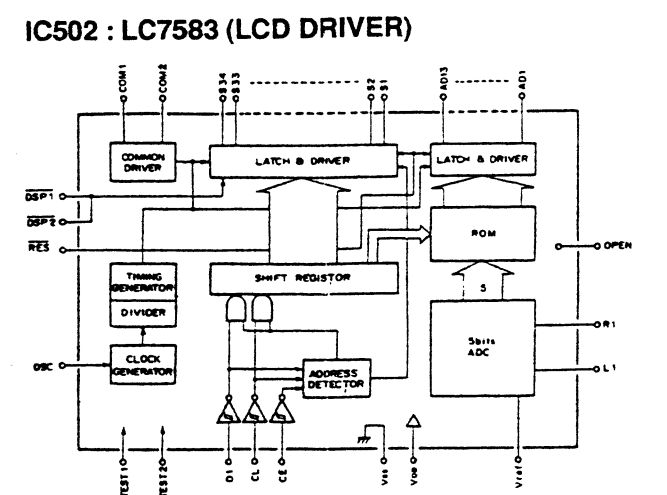
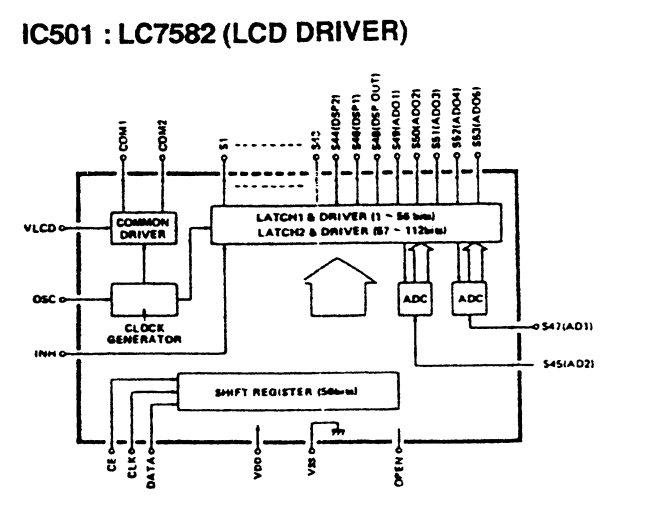
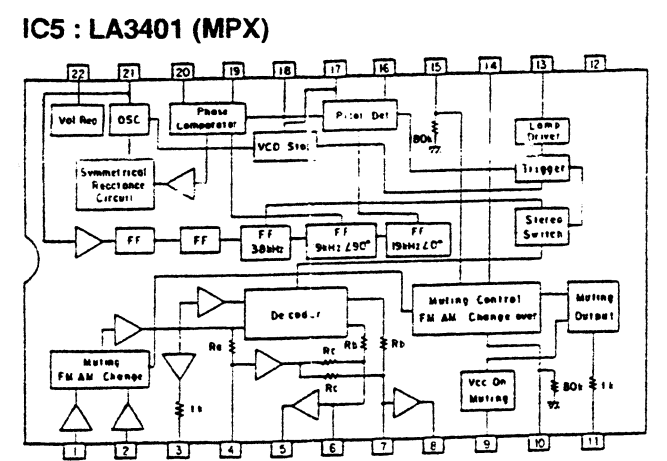
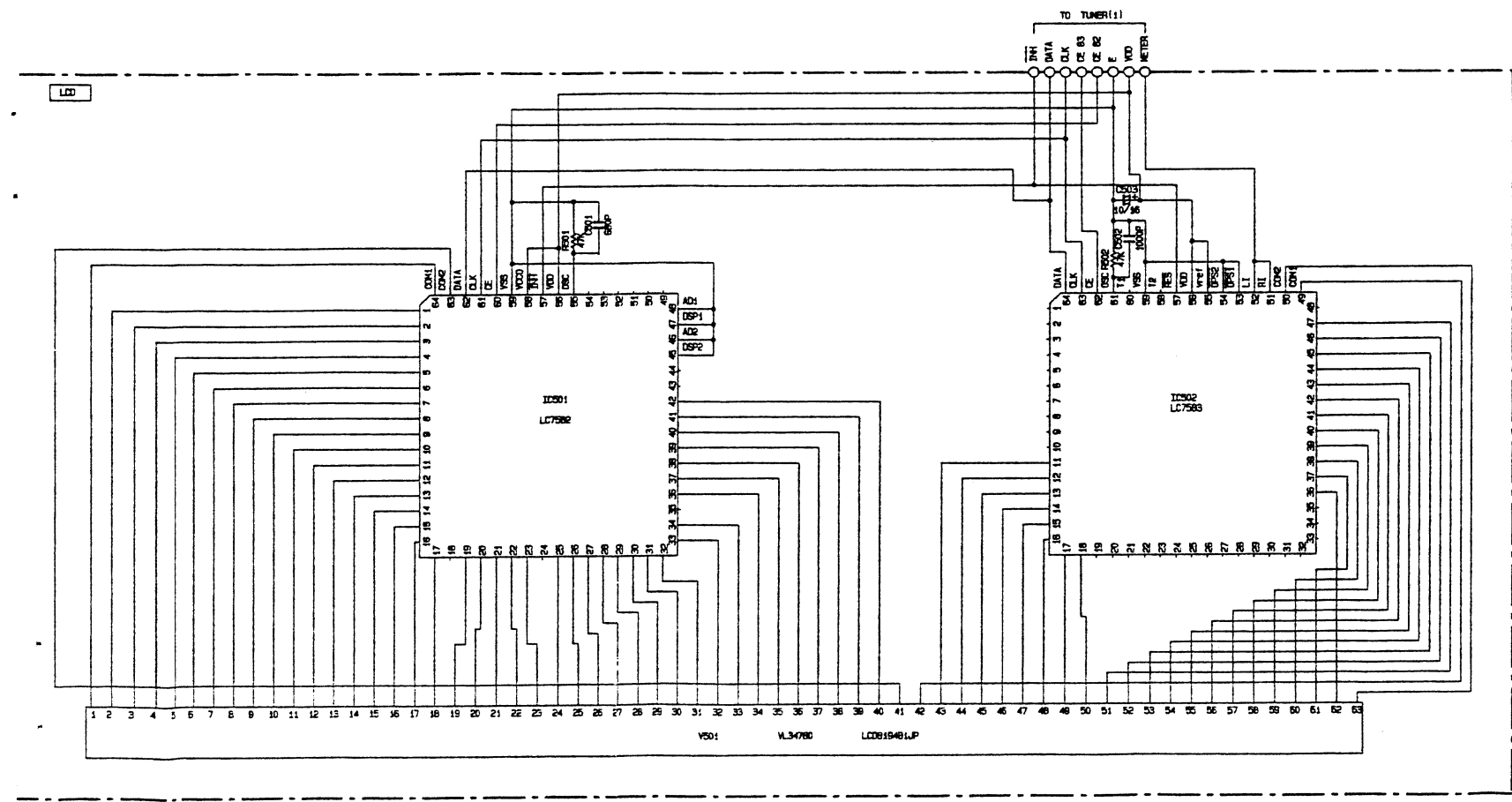
POWER SUPPLY



	U-C	R	A	B	G
*1	TE1	VE36510		VE36500	
*2	PK1	VI12260			VI12270
*3					
*4	J2	SHORT	OPEN		
*5	J3	OPEN		SHORT	
*6	J4, B	OPEN	SHORT	OPEN	
*7	SW19	OPEN	VF54120	OPEN	
*8					
*9	F16	OPEN			GE20053 or VL52370
*10	R107	OPEN			4.7K
*11	J5, 6	SHORT			OPEN
*12	L7	OPEN			8.2mH
*13	C52	OPEN			82P
*14	J1, 10, 11	OPEN			SHORT
*15	R108	470			2.2K
*16	R113	22K			SHORT
*17	R114, 115	39K			68K
*18	C65, 67	1800P		1200P/100	750P/100
*19	R116	2P39		2P56	2P33
*20	C78, 79	OPEN			0.01
*21	R124	2.2M 1/2P	OPEN		
*22	T3	XJ628	XJ629		
*23					
*24	J7	SHORT	OPEN	SHORT	
*25					
*26					
*27	L8, 9	39mH			OPEN
*28	C98, 99	1000P			OPEN
*29	C100, 101	2700P			OPEN
*30	C102, 103	3900P			OPEN
*31	F17, 8	OPEN			VJ12310
*32					
*33	R148	27K			33K
*34	R149	22K			OPEN
*35	F11, 4	SFE10.7mH-A			SFE10.7mH
*36	C111	OPEN			68P

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	
⊗	TANTALUM CAPACITOR	⊗
NO MARK	CERAMIC CAPACITOR	
⊙	AXIAL LEAD CERAMIC CAPACITOR	
⊖	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⊕	MICA CAPACITOR	
⊗	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR (1/6W)	
⊗	CARBON FILM RESISTOR (1/4W)	
△	METAL OXIDE FILM RESISTOR	
▲	METAL FILM RESISTOR	
⊗	METAL PLATE RESISTOR	
⊗	FIRE PROOF CARBON FILM RESISTOR	
□	CEMENT MOLDED RESISTOR	
⊖	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	



FM: Voltage value at the time of tuning 98.1 MHz (A-P3) without parenthesis.
 AM: Voltage value at the time of tuning 1080 kHz (B-P2) in parenthesis.

CAUTION
 * All voltages are measured with a 10MΩ/DC electric volt meter.
 * Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
 * Schematic diagram is subject to change without notice.

PARTS LIST

ELECTRICAL PARTS

WARNING

Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to last page.

Ref. NO.	PART NO.	Description			部 品 名	Remarks	Markets	注
+	VL497500	TUNER CIRCUIT BOARD			チューナーシート		UC	
+	VL497600	TUNER CIRCUIT BOARD			チューナーシート		R	
+	VL497700	TUNER CIRCUIT BOARD			チューナーシート		AB	
+	VL497800	TUNER CIRCUIT BOARD			チューナーシート		G	
	FA153100	MYLAR FILM CAP	1000pF	50V	マイラーコン	C98,99	UCRAB	
	FA153180	MYLAR FILM CAP	1800pF	50V	マイラーコン	C65,67	UCR	
	UT453120	POLYPROPYLENE FILM CAP	1200pF	100V	PPコン	C65,67	AB	
	UT452750	POLYPROPYLENE FILM CAP	750pF	100V	PPコン	C65,67	G	
	FA153220	MYLAR FILM CAP	2200pF	50V	マイラーコン	C3		
	FA153270	MYLAR FILM CAP	2700pF	50V	マイラーコン	C100,101	UCRAB	
	FA153390	MYLAR FILM CAP	3900pF	50V	マイラーコン	C102,103	UCRAB	
	FA154220	MYLAR FILM CAP	0.022uF	50V	マイラーコン	C74		
	FA155100	MYLAR FILM CAP	0.1uF	50V	マイラーコン	C77		
	FG211470	CERAMIC CAP	47pF	50V	セラコン	C104		
	FG211820	CERAMIC CAP	82pF	50V	セラコン	C52	G	
	FG244100	CERAMIC CAP	0.01uF	50V	セラコン	C1,69-72		
	FG244470	CERAMIC CAP	0.047uF	50V	セラコン	C28,51,90		
	VI026900	CERAMIC CAP	27pF	50V	セラコン	C94		
	VA761200	CERAMIC CAP	33pF	50V (CH)	セラコン	C81,82		
	VA761600	CERAMIC CAP	68pF	50V (CH)	セラコン	C111	G	
	VF466800	CERAMIC CAP	100pF	50V	円筒セラコン	C8,48,49		
	VG278500	CERAMIC CAP	270pF	50V	円筒セラコン	C109,110		
	VF466900	CERAMIC CAP	470pF	50V	円筒セラコン	C63		
	VG278900	CERAMIC CAP	680pF	50V	円筒セラコン	C107,108		
	VF467000	CERAMIC CAP	1000pF	50V	円筒セラコン	C9,10		
	VF467300	CERAMIC CAP	0.01uF	16V	円筒セラコン	C5-7,13-18,21-27,29-34, .37,40,43,46,47,80, 83-86		
	VI101300	CERAMIC CAP	0.047uF	50V	円筒セラコン	C106		
	UJ817470	ELECTROLYTIC CAP	47uF	6.3V	ケミコン	C87		
	UJ818100	ELECTROLYTIC CAP	100uF	6.3V	ケミコン	C93		
	UJ818470	ELECTROLYTIC CAP	470uF	6.3V	ケミコン	C12		
	UJ837100	ELECTROLYTIC CAP	10uF	16V	ケミコン	C4,36,39,44,57,64,66		
	UJ737330	ELECTROLYTIC CAP	33uF	16V	ケミコン	C19		
	UJ837470	ELECTROLYTIC CAP	47uF	16V	ケミコン	C56,58,95		
	UJ738100	ELECTROLYTIC CAP	100uF	16V	ケミコン	C55		
	UJ738220	ELECTROLYTIC CAP	220uF	16V	ケミコン	C20		
	UJ847220	ELECTROLYTIC CAP	22uF	25V	ケミコン	C96		
	UJ865470	ELECTROLYTIC CAP	0.47uF	50V	ケミコン	C45,60		
	UJ766100	ELECTROLYTIC CAP	1uF	50V	ケミコン	C35,59,61,82,75,76,92		
	UJ766220	ELECTROLYTIC CAP	2.2uF	50V	ケミコン	C38		
	UJ866330	ELECTROLYTIC CAP	3.3uF	50V	ケミコン	C41		
	UJ866470	ELECTROLYTIC CAP	4.7uF	50V	ケミコン	C42		
	UJ867220	ELECTROLYTIC CAP	22uF	50V	ケミコン	C68,97		
	UJ867470	ELECTROLYTIC CAP	47uF	50V	ケミコン	C11,53,54		
	UJ868100	ELECTROLYTIC CAP	100uF	50V	ケミコン	C89		
	UH149220	ELECTROLYTIC CAP	2200uF	25V	ケミコン	C73		
	UK166100	ELECTROLYTIC CAP	1uF	50V	BPケミコン	C2		
	UK166220	ELECTROLYTIC CAP	2.2uF	50V	BPケミコン	C105		
	VB170100	ELECTROLYTIC CAP	4.7uF	5.5V	バックアップケミコン	C88		

* : New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
*	VF431300	TRIMMER CAP	VC.T51A712A 10P	トリマーコンデンサ	VC1	
	XJ028A00	POWER TRANSFORMER		電源トランス	T3	UC
	XJ029A00	POWER TRANSFORMER		電源トランス	T3	RABG
	GE100470	AM COIL	450KHz	AM I F T コイル	T2	
	VC085400	COIL, FM DETECTOR	10.7MHz	F M 検波コイル	T1	
	VI020800	COIL	10.7MHz	F M ディスクリコイル	T4	
	VC362000	COIL	1mH ELO606	コイル	L1,2,5	
	VB100300	COIL	8.2mH ELO607	コイル	L7	G
	GE901850	COIL, INDUCTOR	39mH	固定インダクター	L8,9	UCRAB
	VB100700	FM COIL	10.7MHz	F M I F T コイル	L3	
	HV454100	FLAME PROOF CARBON RESISTOR	10 Ω 1/4W	不燃化カーボン抵抗	R110	
	HV455150	FLAME PROOF CARBON RESISTOR	150 Ω 1/4W	不燃化カーボン抵抗	R118	
	HL324390	METAL OXIDE RESISTOR	39 Ω 2W	酸化金属被膜抵抗	R116	UCR
	HL324580	METAL OXIDE RESISTOR	56 Ω 2W	酸化金属被膜抵抗	R116	AB
	HL324330	METAL OXIDE RESISTOR	33 Ω 2W	酸化金属被膜抵抗	R116	G
	IG158100	IC	LA3401	I C	IC5	
	XA956A00	IC	NJM2068S	I C	IC4	
	XB700A00	IC	LA126B	I C	IC3	
	XJ532A00	IC	LC6B306A-4725	I C	IC2	
	XB818A00	IC	LM7000N	I C	IC1	
	VG090800	LIGHT DETECTING MODULE	GP1U521X	リモコン受光ユニット	U1	
	VF541200	SLIDE SWITCH	SSSF11	スライド SW	SW22	
	VF541200	SLIDE SWITCH	SSSF11	スライド SW	SW19	R
	VF541300	PUSH SWITCH	SPUP12	プッシュ SW	SW20	
	KA006380	PUSH SWITCH		プッシュ SW	SW1-18	
	VI027100	ROTARY ENCODER	EVQ-VQV F20 24B	ロータリーエンコーダ	VR7	
	VE365100	ANTENNA TERMINAL	F3P	アンテナ端子	TE1	UCR
	VE365000	ANTENNA TERMINAL	3P DIN	アンテナ端子	TE1	ABG
	VE366700	PIN JACK	2P	ピンジャック	PJ1	
	VD004700	BASE PIN	PH I-TYPE 4P TE	ベースピン	CB1	
	VG870900	BASE PIN	VH 2P TE	ベースピン	CB2	
	VI027400	AM COIL PACK		AMコイルパック	PK2	
	VI122800	FRONT-END PACK		フロントエンドパック	PK1	UCRAB
	VI122700	FRONT-END PACK		フロントエンドパック	PK1	G
	VJ123100	FILTER, MPX	TFB-2D	MPXフィルター	F17,8	G
	GE200530	FILTER	114KHz	LCフィルター	F10	G
	GG000750	CERAMIC RESONATOR	18.95MHz CSB456F11	セラミック振動子	XL2	
	QU003800	QUARTZ CRYSTAL UNIT	7.2MHz	水晶振動子	XL1	
	VE906000	CERAMIC RESONATOR	4MHz CST4.00MGW	セラミック振動子	XL3	
	GG000560	CERAMIC FILTER	SFE10.7MS3GHY-A	セラミックフィルタ	Fi2,3	
	GG000670	CERAMIC FILTER	SFE10.7MHM-A	セラミックフィルタ	Fi1,4	UCRAB
	VJ801500	CERAMIC FILTER	SFE10.7MH9	セラミックフィルタ	Fi1,4	G
	VC219000	CERAMIC FILTER	SFZ450JL3	セラミックフィルタ	Fi5	
	VB861200	PRE-SET POTENTIOMETER	B2.2K Ω	半固定 V R	VR1-4	
	VB861800	PRE-SET POTENTIOMETER	B47K Ω	半固定 V R	VR5,6	
	VC218700	TRANSISTOR	2SA1317 R,S,T	トランジスタ	Q2,14,25,34	
	VC218900	TRANSISTOR	2SC3330 R,S,T	トランジスタ	Q9,12,13,15,16,24,26	
	IC287820	TRANSISTOR	2SC2878 A,B	トランジスタ	Q31-33	
	VB433300	TRANSISTOR	2SC1809 H,N,P	トランジスタ	Q5-7,10,11,17-20,22,23,27,28	

* : New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名		Remarks	Markets	ランク
	IC174020	TRANSISTOR	2SC1740S R.S	トランジスタ	Q35		△
	IC206110	TRANSISTOR	2SC2061 P,Q,R	トランジスタ	Q30		△
	IC198300	TRANSISTOR	2SC1983	トランジスタ	Q29		△
	IE101280	FET	2SK105 F,H	F E T	Q3,4		
	IF004600	DIODE	1SS133	ダイオード	D1,2,4-9,14,15,21,22,		
	VB236300	DIODE	1SS176	ダイオード	24,25		
	VH770800	DIODE	1SR139-100 T-32	ダイオード	D10,11		△
	VG438200	ZENER DIODE	MTZJ6.8A	ツェナーダイオード	D16,17,19,20		
	VG440500	ZENER DIODE	MTZJ13B	ツェナーダイオード	D13,23		
	VG443300	ZENER DIODE	MTZJ30B	ツェナーダイオード	D18		
	VL494300	SWITCH ASS'y		SW ASSY		R	
	BB069510	GROUND METAL		ランド金具			
	BB066290	WASHER, GROUND		アースワッシャー			
	BB071360	SCREW TERMINAL	8.3x13	ネジ端子			
	VL497400	LCD CIRCUIT BOARD		LCDシート			
	FG212680	CERAMIC CAP	680pF 50V	セラコン	C501		
	FG213100	CERAMIC CAP	1000pF 50V	セラコン	C502		
	UJ837100	ELECTROLYTIC CAP	10uF 16V	ケミコン	C503		
	XB417A00	IC	LC7582	I C	IC501		
	XB764A00	IC	LC7583	I C	IC502		
	VB858700	BASE PIN	PH 8P SE	ベースピン	CB501		

* : New Parts (新規部品)

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A

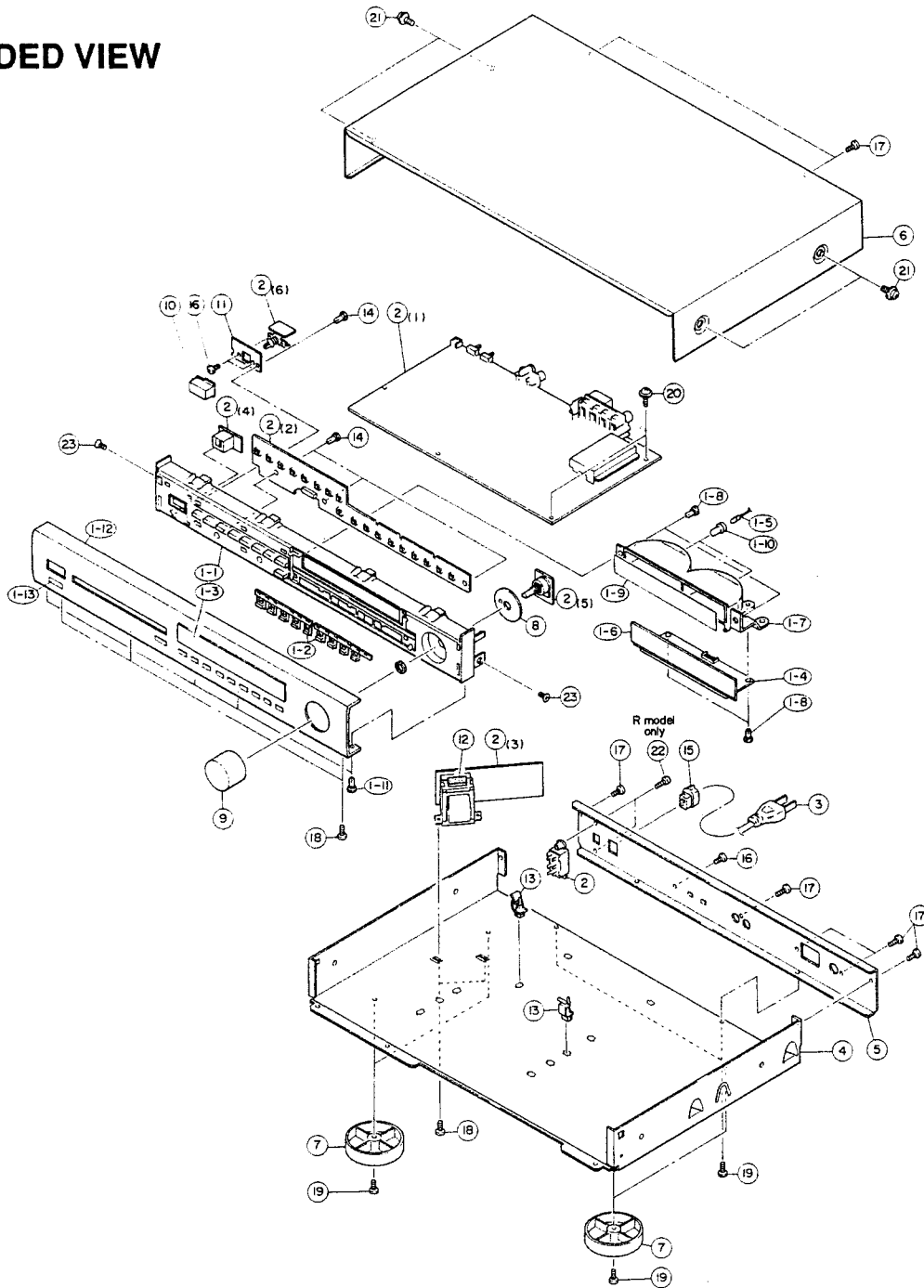
B

C

D

TX-550

EXPLODED VIEW



Ref. NO.	PART NO.	Description	部品名		Remarks	Markets	ランク
21	EX601150	BW HEAD S-TITE SCREW	4x8-10	FNW3-BL	BWヘッドSタイトネジ	T	
22	EJ320806	PAN HEAD P-TITE SCREW	2.0x8	FCRH3-BL	鉄ナベPタイトネジ	PACK	R
23	E0330066	FLAT HEAD B-TITE SCREW	3x6	FCRH3-BL	皿Bタイトネジ	PACK	B
	CB069250	BINDING TIE	BK-1		束様止め		
		ACCESSORIES	付属品				
*	VL499300	LOOP ANTENNA	FH/AM	1.4m	ループアンテナ		UCR
*	VL499200	LOOP ANTENNA	FH/AM	1.4m	ループアンテナ		ABG
	VG718700	PIN-PLUG CORD	2P	1.0m	ピンプラグコード		

20

* : New Parts (新規部品)

ランク : Japan only

MECHANISM PARTS

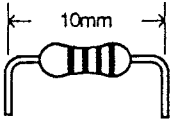
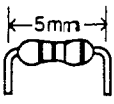
Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ラック
1-1	VH901900	SUB CHASSIS	サブシャーシ	BL		
1-1	VH902000	SUB CHASSIS	サブシャーシ	T		
1-2	VH901400	BUTTON	ボタン	BL		
1-2	VH901500	BUTTON	ボタン	T		
1-3	VL373600	WINDOW PANEL	ウインドウ			
* 1-4	VL497400	LCD CIRCUIT BOARD	LCDシート			
1-5	VC218200	LAMP	150mA 8V ランプ			
* 1-6	VL347800	LCD	LCD-8194B1JP LCD表示器			
1-7	VF206800	REFLECTOR	リフレクター			
1-8	CB605620	PLASTIC RIVET	NO.1057 プラスチックリベット			
1-9	VF211000	SHEET	DIFFUSION シート			
1-10	VF444500	LAMP CAP	AG-4015 ランプキャップ			
1-11	CB609260	PLASTIC RIVET	NO.6206 プラスチックリベット			
* 1-12	VL374200	FRONT PANEL	フロントパネル	BL		
* 1-12	VL374300	FRONT PANEL	フロントパネル	T		
1-13	VH897500	LENS	レンズ			
* 2	VL497500	TUNER CIRCUIT BOARD	チューナーシート		UC	
* 2	VL497600	TUNER CIRCUIT BOARD	チューナーシート		R	
* 2	VL497700	TUNER CIRCUIT BOARD	チューナーシート		AB	
* 2	VL497900	TUNER CIRCUIT BOARD	チューナーシート		G	
3	VL012900	POWER CORD ASS'y	パワーコードASSY		UC	
3	VL238100	POWER CORD ASS'y	パワーコードASSY		R	
3	VL238400	POWER CORD ASS'y	パワーコードASSY		A	
3	VL238600	POWER CORD ASS'y	パワーコードASSY		B	
3	VL238900	POWER CORD ASS'y	パワーコードASSY		G	
4	VH898600	CHASSIS	シャーシ			
* 5	VL373700	REAR PANEL	リヤパネル		UC	
* 5	VL373800	REAR PANEL	リヤパネル		R	
* 5	VL373900	REAR PANEL	リヤパネル		AB	
* 5	VL374100	REAR PANEL	リヤパネル		G	
6	VH898400	TOP COVER	トップカバー	BL		
6	VH898500	TOP COVER	トップカバー	T		
7	VI615300	LEG	レグ			
8	VH900300	SHIELD PLATE	RE シールドプレート			
9	VH877400	KNOB	TUNING ノブ	BL		
9	VH877500	KNOB	TUNING ノブ	T		
10	VH841900	BUTTON	POWER ボタン	BL		
10	VH842000	BUTTON	POWER ボタン	T		
11	VI031500	SUPPORT	SV サポート			
12	VH105200	DAMPER	ダンパー		ABG	
13	VA772900	P.C.B SUPPORT	基板サポート			
14	CB605620	PLASTIC RIVET	NO.1057 プラスチックリベット			
15	VD778200	CORD STOPPER	コードストッパー		UC	
15	VD375900	CORD STOPPER	コードストッパー		RABG	
16	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL バインド小ネジ			
17	EH301010	BIND HEAD BONDING TAP. SCREW	3x8 FCRM3-BL ボンディングBタイトネジ			
18	E1330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL バインドBタイトネジ	PACK		
19	E1330066	BIND HEAD B-TITE SCREW	3x6 FCRM3-BL バインドBタイトネジ	PACK		
20	EK365080	BW HEAD TAPPING SCREW	3x8 ZMC2-BL BWヘッドタッピングネジ			
21	EK365090	BW HEAD SCREW	4x8 ZMC2-BL BWヘッド小ネジ	BL		

* : New Parts (新規部品)

ラック : Japan only

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF853100	12 K Ω	HJ35 7120	HF85 7120
1.8 Ω	HJ35 3180	*	15 K Ω	HJ35 7150	HF85 7150
2.2 Ω	HJ35 3220	HF853220	18 K Ω	HJ35 7180	HF85 7180
3.3 Ω	HJ35 3330	HF853330	22 K Ω	HJ35 7220	HF85 7220
4.7 Ω	HJ35 3470	HF853470	27 K Ω	HJ35 7270	HF85 7270
5.6 Ω	HJ35 3560	HF853560	33 K Ω	HJ35 7330	HF85 7330
10 Ω	HJ35 4100	HF854100	39 K Ω	HJ35 7390	HF85 7390
15 Ω	HJ35 4150	HF854150	47 K Ω	HJ35 7470	HF85 7470
22 Ω	HJ35 4220	HF854220	56 K Ω	HJ35 7560	HF85 7560
27 Ω	HJ35 4270	HF854270	68 K Ω	HJ35 7680	HF85 7680
33 Ω	HJ35 4330	HF854330	82 K Ω	HJ35 7820	HF85 7820
39 Ω	HJ35 4390	HF854390	91 K Ω	HJ35 7910	HF85 7910
47 Ω	HJ35 4470	HF854470	100 K Ω	HJ35 8100	HF85 8100
56 Ω	HJ35 4560	HF854560	120 K Ω	HJ35 8120	HF85 8120
68 Ω	HJ35 4680	HF854680	150 K Ω	HJ35 8150	HF85 8150
82 Ω	HJ35 4820	HF854820	180 K Ω	HJ35 8180	HF85 8180
100 Ω	HJ35 5100	HF855100	220 K Ω	HJ35 8220	HF85 8220
110 Ω	HJ35 5110	HF855110	270 K Ω	HJ35 8270	HF85 8270
120 Ω	HJ35 5120	HF855120	330 K Ω	HJ35 8330	HF85 8330
150 Ω	HJ35 5150	HF855150	390 K Ω	HJ35 8390	HF85 8390
160 Ω	HJ35 5160	*	470 K Ω	HJ35 8470	HF85 8470
180 Ω	HJ35 5180	HF855180	560 K Ω	HJ35 8560	HF85 8560
220 Ω	HJ35 5220	HF855220	680 K Ω	HJ35 8680	HF85 8680
270 Ω	HJ35 5270	HF855270	820 K Ω	HJ35 8820	HF85 8820
330 Ω	HJ35 5330	HF855330	1.0 M Ω	HJ35 9100	HF85 9100
390 Ω	HJ35 5390	HF855390	1.2 M Ω	HJ35 9120	*
470 Ω	HJ35 5470	HF855470	1.5 M Ω	HJ35 9150	HF85 9150
510 Ω	*	HF855510	1.8 M Ω	HJ35 9180	HF85 9180
560 Ω	HJ35 5560	HF855560	2.2 M Ω	HJ35 9220	HF85 9220
680 Ω	HJ35 5680	HF855680	3.3 M Ω	HJ35 9330	HF85 9330
820 Ω	HJ35 5820	HF855820	3.9 M Ω	HJ35 9390	*
910 Ω	HJ35 5910	HF855910	4.7 M Ω	HJ35 9470	HF85 9470
1.0 K Ω	HJ35 6100	HF85 6100			
1.2 K Ω	HJ35 6120	HF85 6120			
1.5 K Ω	HJ35 6150	HF85 6150			
1.8 K Ω	HJ35 6180	HF85 6180			
2.0 K Ω	HJ35 6200	HF85 6200			
2.2 K Ω	HJ35 6220	HF85 6220			
2.4 K Ω	HJ35 6240	HF85 6240			
2.7 K Ω	HJ35 6270	HF85 6270			
3.0 K Ω	HJ35 6300	HF85 6300			
3.3 K Ω	HJ35 6330	HF85 6330			
3.6 K Ω	HJ35 6360	HF85 6360			
3.9 K Ω	HJ35 6390	HF85 6390			
4.7 K Ω	HJ35 6470	HF85 6470			
5.1 K Ω	HJ35 6510	HF85 6510			
5.6 K Ω	HJ35 6560	HF85 6560			
6.8 K Ω	HJ35 6680	HF85 6680			
8.2 K Ω	HJ35 6820	HF85 6820			
9.1 K Ω	HJ35 6910	HF85 6910			
10 K Ω	HJ35 7100	HF85 7100			

<p>1/4W Type</p> <p>HJ35 ○○○○</p> 	<p>1/6W Type</p> <p>HF85 ○○○○</p> 
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