DENON

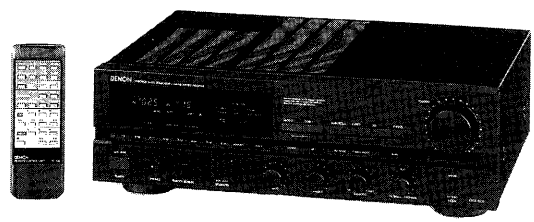
Hi-Fi AM-FM Stereo Receiver

For EUROPEAN, U.K. AND OTHER Models

SERVICE MANUAL

MODEL DRA-625/425

AM-FM STEREO RECEIVER



DRA-625

DRA-425

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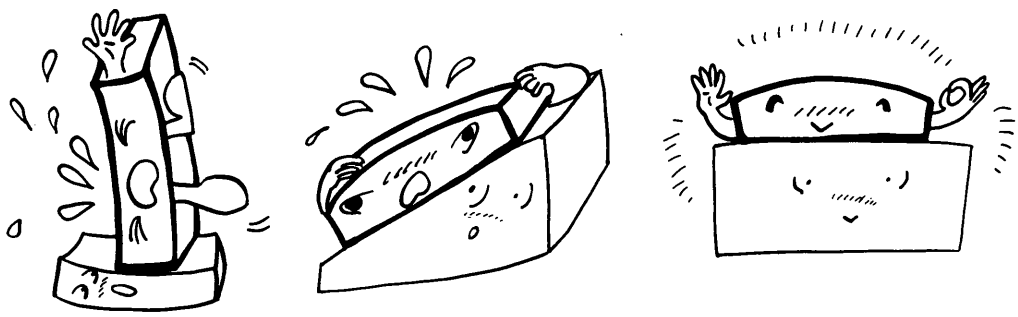
NIPPON COLUMBIA CO., LTD.

PRECAUTIONS FOR INSTALLATION

DRA-625/425 uses a newly developed heat emitting unit by employing heat pipes. Since the heat pipes contain a coolant, the DRA-625/425 must be set level or the desired heat emitting effect cannot be achieved. Always install this unit horizontally.



ADVICE FOR USE

- Do not place the set in direct sunlight, in hot areas such as near heating equipment, with high humidity or dust levels. This may cause damage to the unit.
- Check that all parts are connected correctly before turning on the power source.
- When user is absent for long periods, be sure to remove plug from wall socket.
- Do not use insecticide, benzene or thinner near the unit, or the cabinet color will fade. Avoid using polish: use a soft cloth (e.g. silicon cloth).
- Although the unit is designed to support weight, it is recommended that the user does not place anything too heavy on it. Consider air circulation before placing anything on the unit. If you place any equipment likely to induce hum, make sure there is enough space to between each piece of equipment prevent such hum.

For United Kingdom model only.

WARNING:

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Power Output: **DRA625:** 65 watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz ~ 20 kHz no more than 0.05% total harmonic distortion. 1 kHz (6 ohms load) 75 W + 75 W (THD 0.05%)
DRA425: 50 watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz ~ 20 kHz no more than 0.05% total harmonic distortion. 1 kHz (6 ohms load) 60 W + 60 W (THD 0.05%)

Power Bandwidth (IHF): 5 Hz ~ 40 kHz (T.H.D. 0.05% both channels driven at 8 ohms)

Total Harmonic Distortion (20 Hz to 20 kHz): −3 dB power into 8 ohms 0.009% (DRA-625)
0.01% (DRA-425)

Frequency Response: PHONO RIAA Standard Curve (Recording Output)

MM	20 Hz ~ 20 kHz ±0.5 dB
TAPE-1·2, CD, AUX/VIDEO	20 Hz ~ 50 kHz ±1.5 dB

Input Sensitivity and Impedance:

PHONO MM	2.5 mV	47 k ohms
TAPE-1·2, CD, AUX/VIDEO	150 mV	More than 29 k ohms

Maximum Input Level (at 1 kHz): PHONO MM 110 mV

Signal to Noise Ratio (IHF-A):

PHONO MM	86 dB at 5.0 mV input
TAPE-1·2, CD, AUX/VIDEO	95 dB

Tone Controls: BASS ±8 dB at 100 Hz
TREBLE ±8 dB at 10 kHz

Loudness, Control Effect: VARIABLE LOUDNESS at 10 positions, 50 Hz/10 kHz, +10 dB/+5 dB

Pre-out terminals
Rated out pet power: 1 V (at 100 k ohms load) (DRA-625 only)

TUNER SECTION

[FM] (note: μV at 75 ohms, 0 dBf = 1×10^{-15} W)

Receiving Range:	87.5 ~ 108 MHz	
Usable Sensitivity:	0.9μV (10.3 dBf)	
50 dB Quieting Sensitivity:	MONO	1.6μV (15.3 dBf)
	STEREO	23μV (38.5 dBf)
Signal to Noise Ratio (IHF-A):	MONO	82 dB
	STEREO	78 dB
Total Harmonic Distortion (at 1 kHz):	MONO	0.12% (DRA-625) 0.15% (DRA-425)
	STEREO	0.25% (DRA-625) 0.3% (DRA-425)
Capture Ratio:	1.2 dB	
Image Rejection:	42 dB	
AM Suppression:	60 dB	
Selectivity (±300 kHz):	60 dB	
Frequency Response:	30 Hz ~ 15 kHz	$^{+0.2}_{-1.5}$ dB
Stereo Separation (at 1 kHz):	40 dB	

[AM]

Receiving Range:	522 ~ 1611 kHz
Usable Sensitivity:	18μV
Signal to Noise Ratio:	55 dB

GENERAL

Power Supply:	AC220V, 240V/50 Hz
Power Consumption:	170 W (DRA-625) 140 W (DRA-425)
Power Outlets:	SWITCHED 100 W UNSWITCHED 250 W
Dimensions:	434 mm (17-3/32") W × 140 mm (5-1/2") H × 350 mm (13-25/32") D
Weight:	7.4 kg (16 lbs 5 oz) (DRA-625) 7.3 kg (16 lbs 1 oz) (DRA-425)

REMOTE CONTROL UNIT RC-104

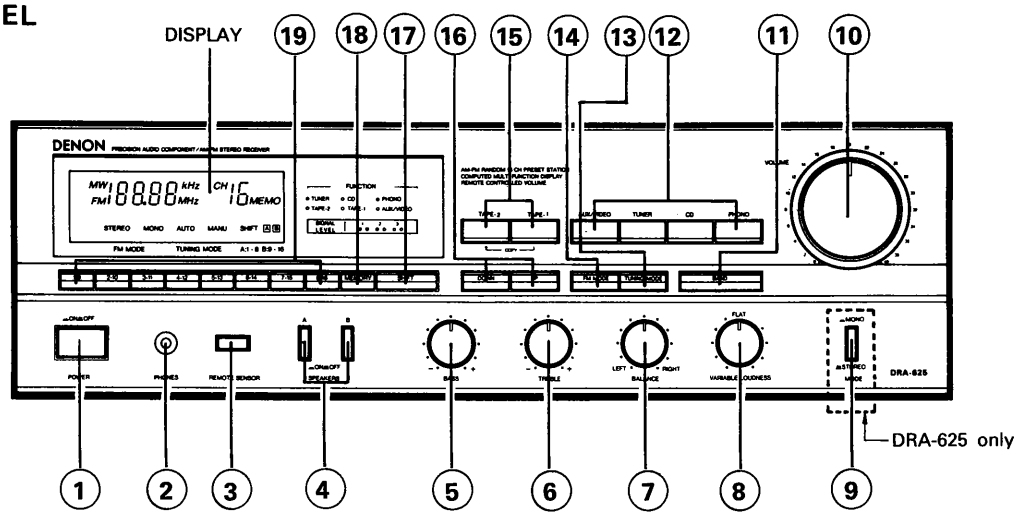
Remote control system:	Infrared pulse system
Power supply:	3 V DC Two size "R03" ("AAA") dry cell batteries
External dimensions:	60 mm (2-23/64") W × 165 mm (6-31/64") H × 16 mm (5/8") D (Includes batteries)
Weight:	80 g (about 2 oz) (Includes batteries)

Design and specifications are subject to change without prior notice.

NOTE: This Service Manual is prepared based on Europe Black Version.

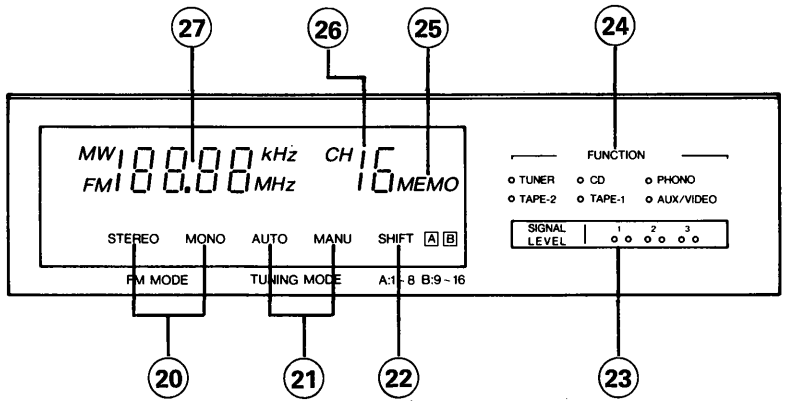
NAME OF EACH PART

FRONT PANEL



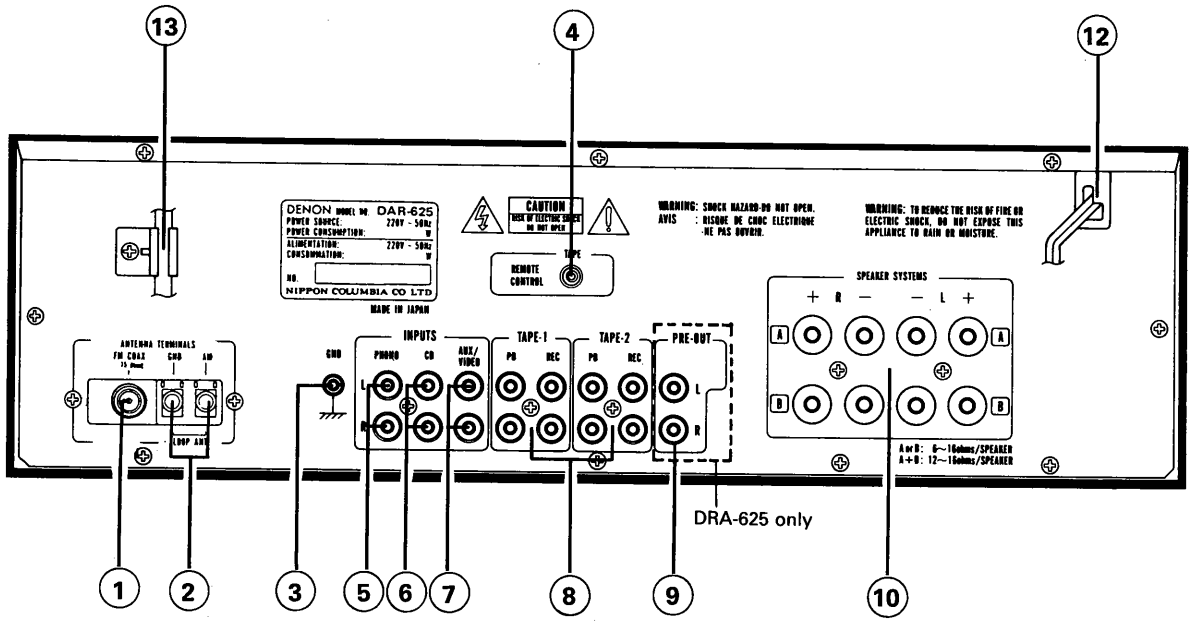
① POWER (Power Switch)
② PHONES (Headphones Jack)
③ REMOTE SENSOR (Remote Control Photosensitive Window)
④ SPEAKERS (Speaker Select Switch)
⑤ BASS (Bass Control)
⑥ TREBLE (Treble Control)
⑦ BALANCE (Balance Control)
⑧ VARIABLE LOUDNESS (Loudness Control)
⑨ MODE (Mode Switch) (DRA-625 only)
⑩ VOLUME (Volume Control)
⑪ BAND SELECT (Band Selector Button)
⑫ INPUT SELECTOR (Input Select Buttons)
⑬ TUNING MODE (Tuning Mode Button)
⑭ FM MODE (FM Mode Button)
⑮ TAPE SELECTOR (Tape Selector Switch)
⑯ TUNING (Tuning Buttons)
⑰ SHIFT (Shift Button)
⑱ MEMORY (Memory Button)
⑲ PRESET CHANNEL 1 ~ 16 (Station Presetting Buttons)

DISPLAY



⑳ STEREO/MONO (Stereo/Mono Indicator)
㉑ TUNING MODE (AUTO/MANUAL)
㉒ SHIFT (Shift Indicator)
㉓ SIGNAL LEVEL (Signal-Level Indicators)
㉔ FUNCTION INDICATOR (Input Selector Indicator)
㉕ MEMORY (Memory Indicator)
㉖ CHANNEL
㉗ FREQUENCY DISPLAY (Frequency Indicator)

BACK PANEL



① FM ANT (FM Antenna Terminals)
② AM ANT (AM Antenna Terminals)
③ GND (Grounding Terminal)
④ TAPE/REMOTE CONTROL
⑤ PHONO (Phono Input Terminals)
⑥ CD
⑦ AUX/VIDEO
⑧ TAPE-1, TAPE-2 (Audio Playback and Recording Terminals)
⑨ PRE-OUT (DRA-625 only)
⑩ SPEAKER SYSTEMS (Speaker Terminals)
⑫ AC CORD (Power Cord)
⑬ AM LOOP ANT (AM Loop Antenna)

ANTENNA INSTALLATION

- FM ANTENNA

  The accessory T-type indoor antenna (300 ohms) can be used inside wooden houses for local FM stations and strong signals. Orient the T-shaped part for optimum reception and mount the antenna on the wall or ceiling. (FM indoor antennas may not consistently ensure stable receiption, due to environment changes. In such cases use an FM indoor antenna temporarily until an outdoor antenna is installed.)

  75 ohm coaxial cable (3C-2V, 5C-2V) is preferable to obtain better performance of the tuner.

  (To use of a 300 ohm FM outdoor antenna, connect to the 300 ohm terminals.)

- AM ANTENNA

  Attach the accessory AM loop antenna to the antenna holder on the back panel.

  Connect the leads to AM and GND terminal. Use this terminal also for an outdoor antenna.

  Orient the loop antenna horizontally to obtain optimum reception. Where broadcast stations are distant and only weak signals are received, or where signals are blocked by obstacles, install an AM outdoor antenna.

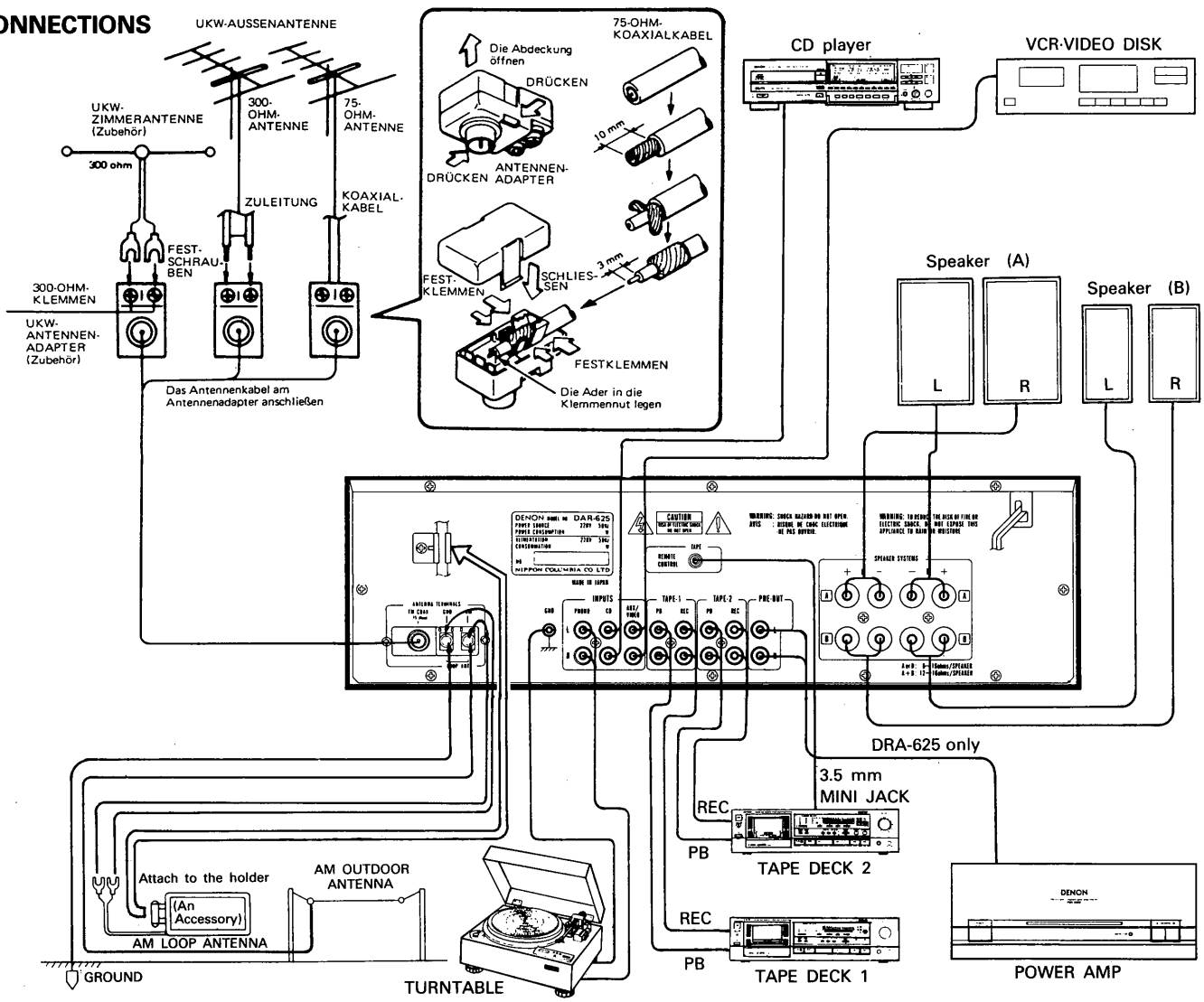
- GROUNDING

  If there is reception noise, use of grounding wire is recommended.

  Connect a thick insulated wire to the "GND" terminal, and attach the unconnected bare end to a metal water pipe, grounding rod, or grounded copper plate.

  * Never connect the grounding wire to a gas pipe. This could cause fire or explosion.

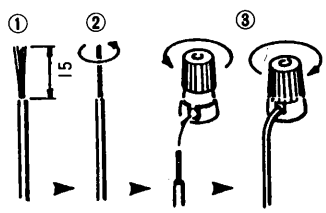
CONNECTIONS



SPEAKER CONNECTION

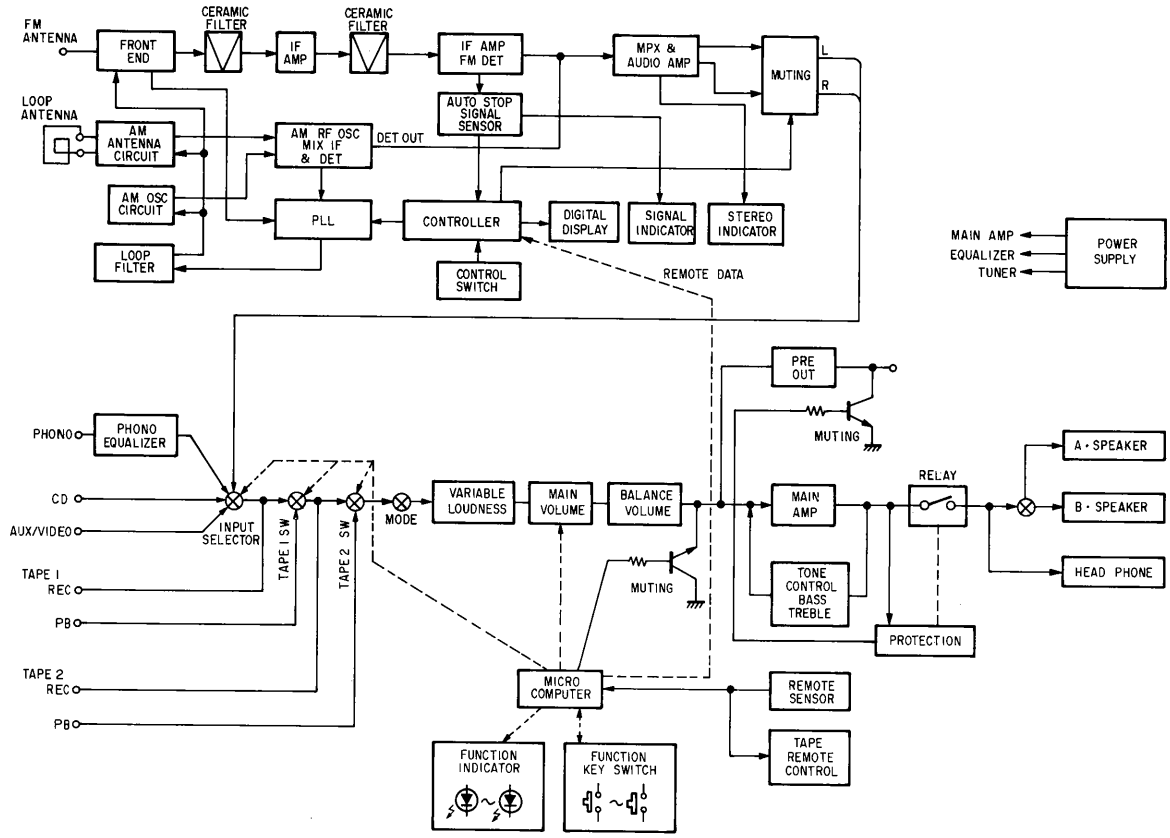
Confirm polarity (+, −) and left and right channels (L, R). Connect the speaker pairs to the SPEAKER terminals A or B on the back panel. Connections must be made with power cord disconnected.

1. Peel off the sheathing from the end of the cord.
2. Twist the wire strands.
3. Loosen the speaker terminal, insert the wire lead portion of the code, and then tighten the terminals.

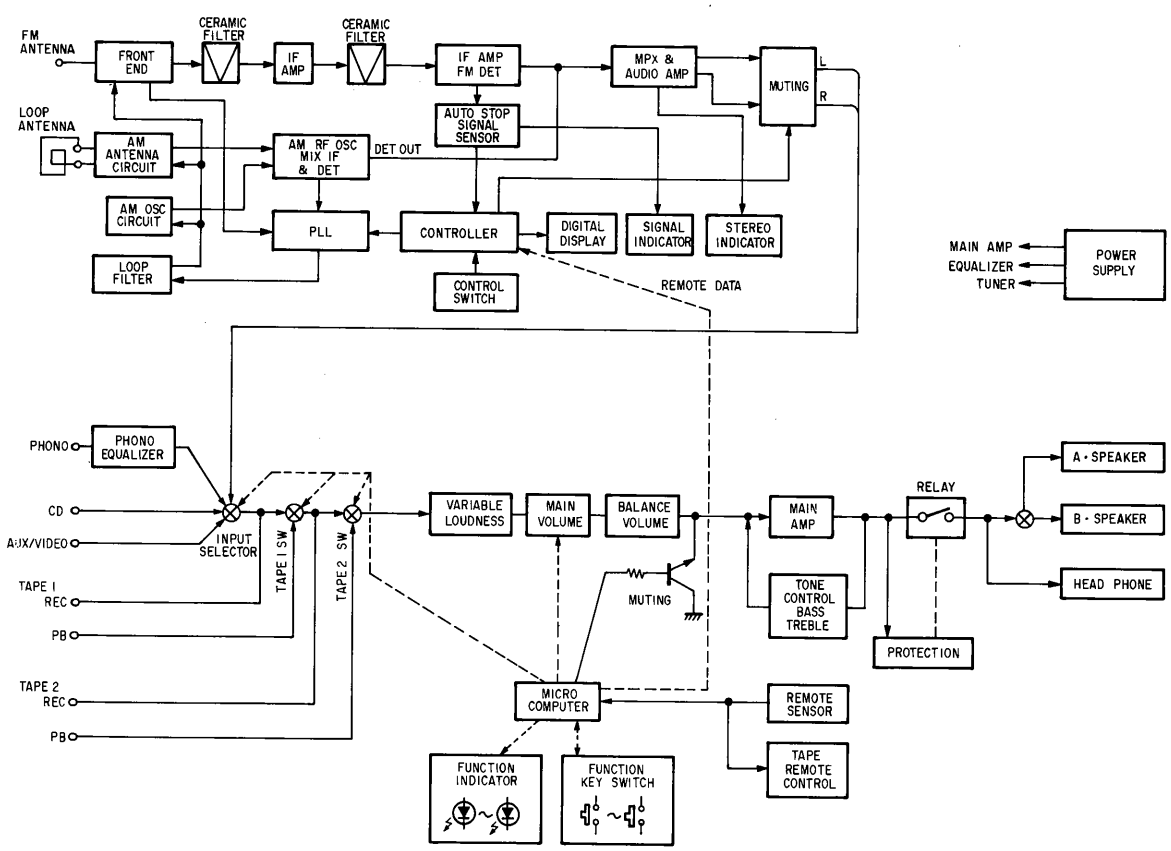


BLOCK DIAGRAM

DRA-625



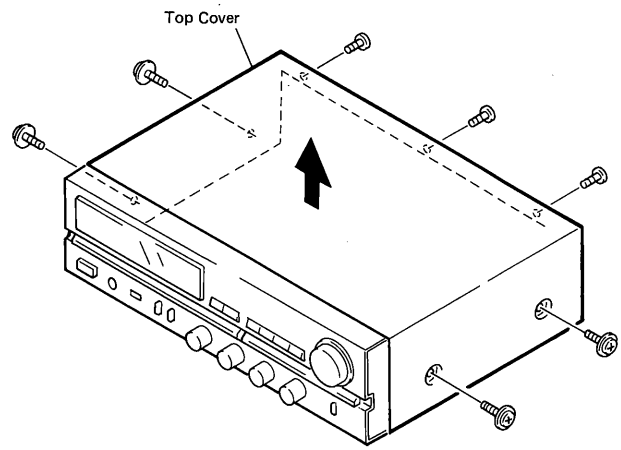
DRA-425



REMOVAL OF EACH SECTION

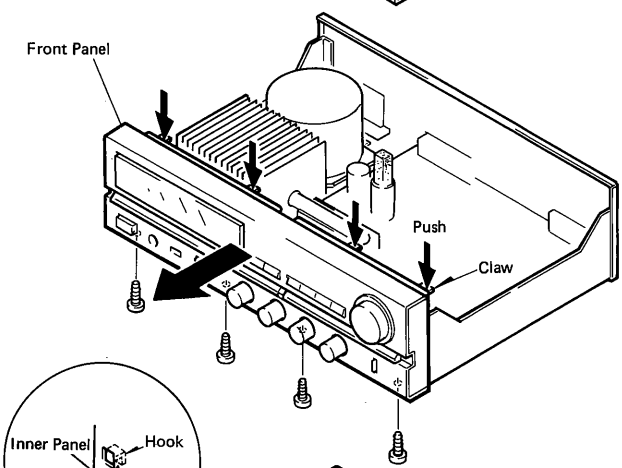
1. Top Cover

1) Unfasten 7 screws.
2) Detach the top cover by means of lifting it upward.



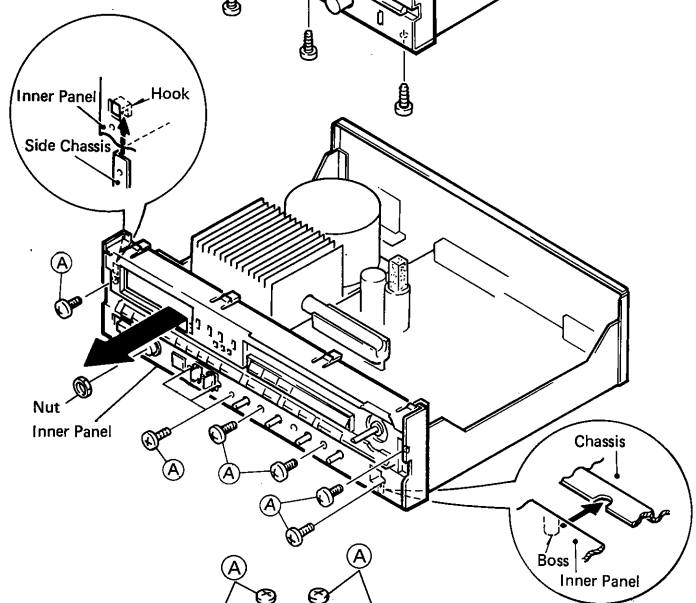
2. Front Panel

1) Remove 4 screws, and push 4 claws in the arrow direction to release the Front panel.
2) Draw out the Front Panel frontward.



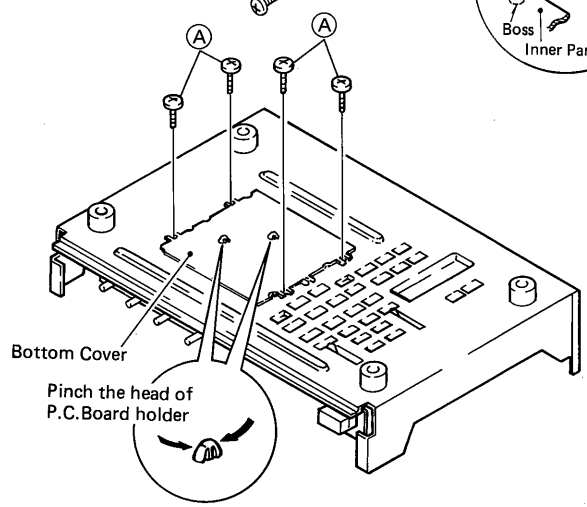
3. Inner Panel

Unfasten 8 screws Ⓐ with nuts, and draw out the Inner Panel frontward.



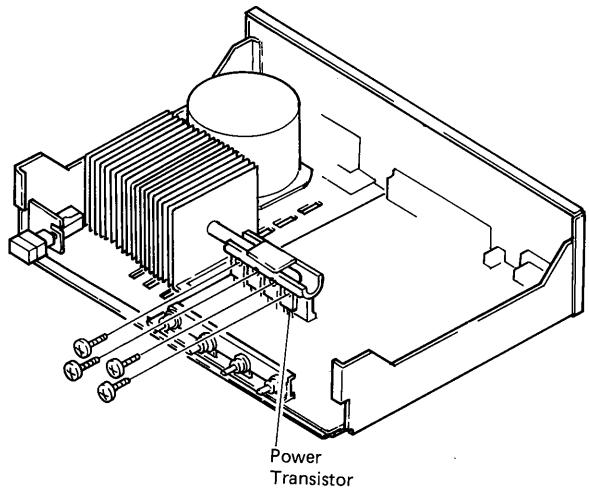
4. Bottom Cover

Remove 4 screws Ⓐ. Then pinch the head of P.C.Board holder at the two places and detach the Bottom Cover.



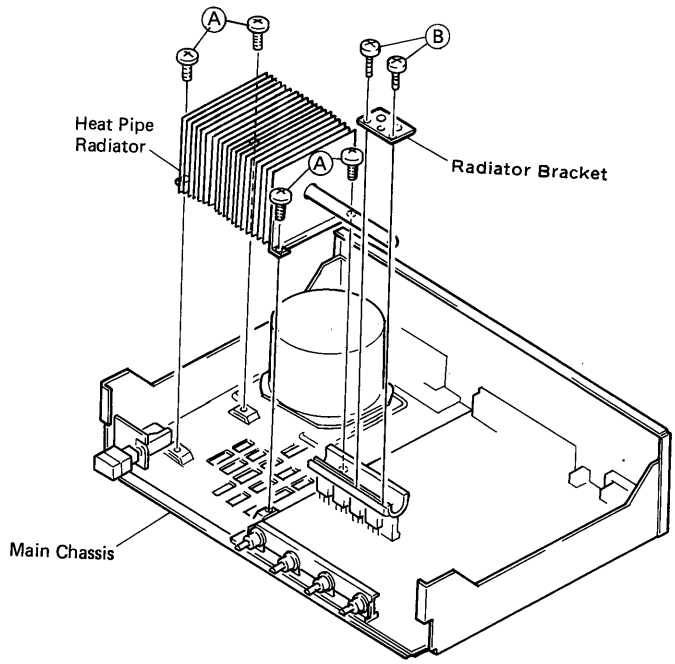
5. Power Transistor

1) Remove screws for the transistor to be exchanged.
2) Unsolder the soldered joint and remove.



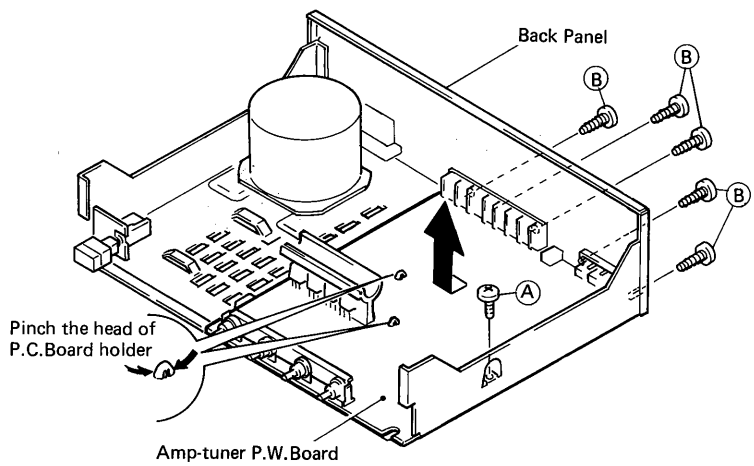
6. Heat Pipe Radiator

Remove 4 screws Ⓐ , and unfasten 2 screws Ⓑ holding the radiator bracket. Then pull the Heat Pipe Radiator upward from the chassis.



7. Amp-tuner P.W.Board

Remove 1 screw Ⓐ securing the Board and 5 screws Ⓑ from the Back Panel side. Then pinch the head of P.C.Board holder at the two places and take out the Board in the direction arrow shows.



METHOD OF ADJUSTMENTS

When making adjustments, be sure the power supply is at the rated voltage and the room air is in normal condition with respect to temperature and humidity.

• Amplifier Section

1. IDLING CURRENT (FIG. 7)

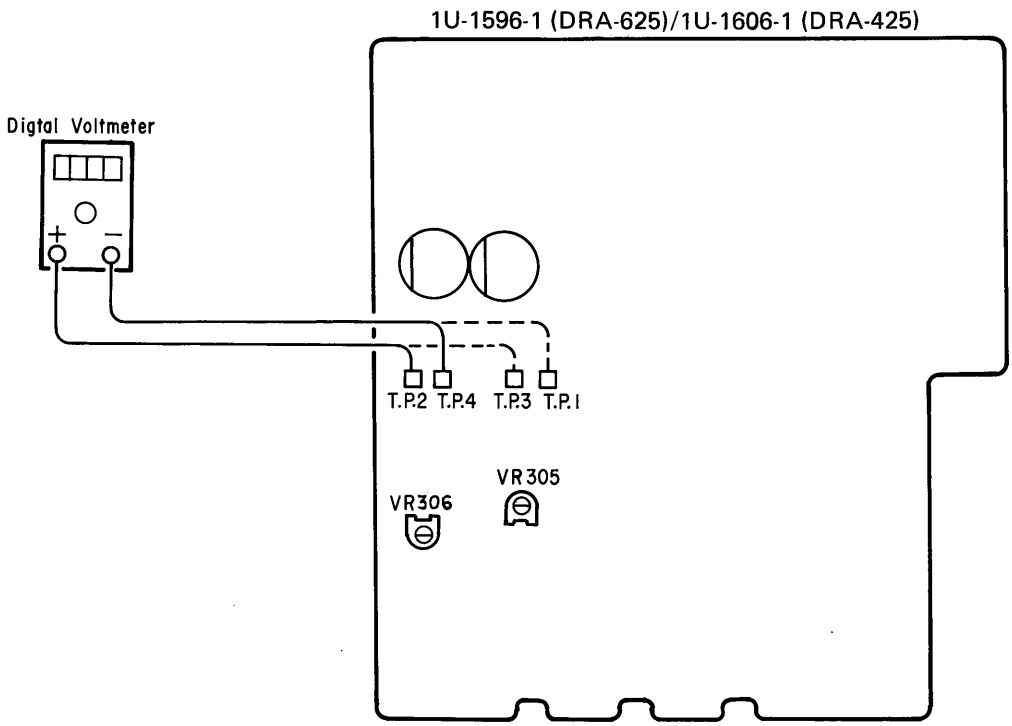
(1) Set controls as follows.

POWER Switch → off (▙)
VOLUME Control → 0 (min.)
SPEAKERS → off (▙)
Temperature → 15°C ~ 30°C
VR305 and VR306 of the 1U-1596-1 (DRA-625) (1U-1606-1, DRA-425) (AMP. TUNER Unit) → Center
Power supply → Rated Voltage ±1%, 50 Hz.

(2) Connect Digital Voltmeter to the test points 1 (-), 3 (+) and 2 (+), 4 (-) of the 1U-1596-1.

(3) Turn the Power Switch on and rotate VR305 clockwise so that the Digital Voltmeter reads 5.0 mV ±0.2 mV DC at the test point 1,3 Follow the same procedure to VR306 for test point 2, 4.

(4) Warm up three minutes, then readjust VR305 and VR306 as in step (3) so that the Digital Voltmeter reads 5.0 mV ±0.5 mV DC.



FM/MPX ALIGNEMENT

Table 1

Step	Alignment Item	Tuning Frequency Setting	Input					Output		Adjust		Remarks
			Type	Frequency	Input Level	Modulation	Coupling	Type	Connect to	Points	Adjust to	
1	Tuning Center	98 MHz	FM SSG, Mono	98 MHz	60 dBμ	None	Antenna Terminal	Center Meter	T.P. 11, 12	T701	Center of Tuning Meter	Function: FM Mode: Auto
2	Distortion (Mono)	98 MHz	FM SSG, Mono	98 MHz	60 dBμ	1 kHz 100%	Antenna Terminal	Distortion Meter	TAPE REC (L)	T702	Minimum Distortion	Function: FM Mode: Auto
3	Distortion (Stereo)	98 MHz	FM SSG Stereo (L)	98 MHz	60 dBμ	Main: 1 kHz L-ch 90% Pilot: 10%	Antenna Terminal	Distortion Meter	TAPE REC (L)	IFT on Front End	Minimum Distortion	Function: FM Mode: Auto
4	Noise Center & Distortion		Repeat 1, 2 and 3 to obtain minimum distortion and same time indicating of center meter at center condition.									

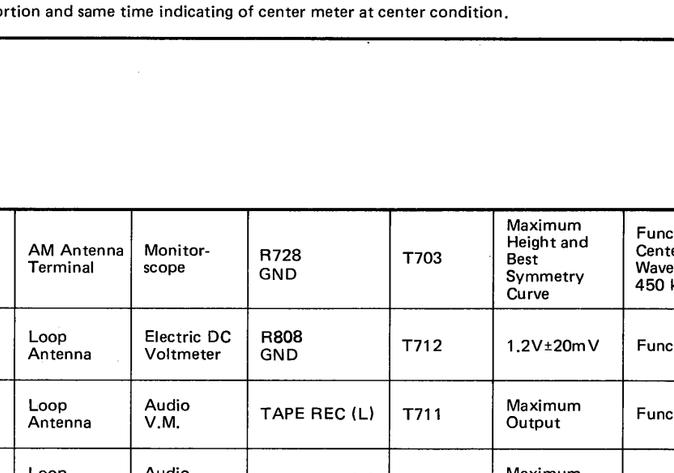
AM ALIGNMENT

Table 2

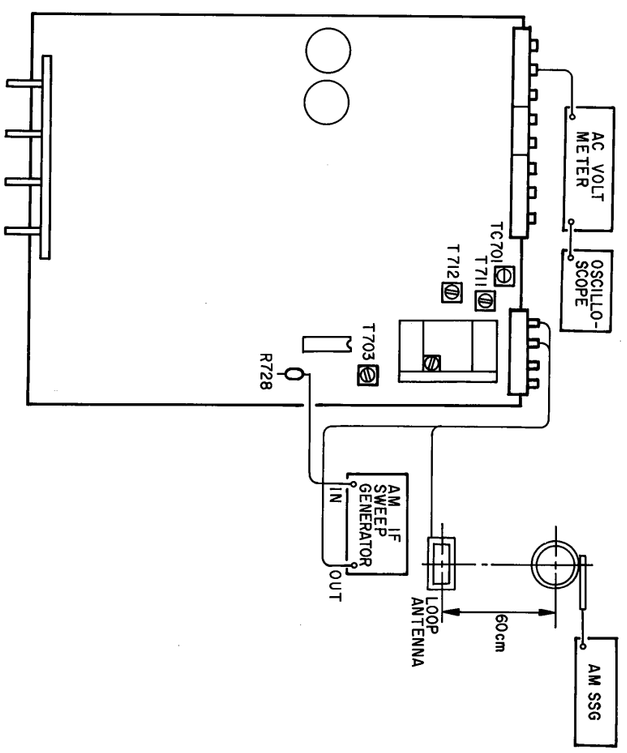
1	AM IF	—	AM IF Sweep	—	Input Level is not over to Works A.G.C.	—	AM Antenna Terminal	Monitor-scope	R728 GND	T703	Maximum Height and Best Symmetry Curve	Function: AM Center of Wave Form: 450 kHz
2	Receiving Band Alignment	520 kHz	AM SSG	520 kHz	Input Level is not over to Works A.G.C.	400 Hz 30%	Loop Antenna	Electric DC Voltmeter	R808 GND	T712	1.2V±20mV	Function: AM
3	Tracking Alignment	600 kHz	AM SSG	600 kHz	Input Level is not over to Works A.G.C.	400 Hz 30%	Loop Antenna	Audio V.M.	TAPE REC (L)	T711	Maximum Output	Function: AM
		1400 kHz	AM SSG	1400 kHz	Input Level is not over to Works A.G.C.	400 Hz 30%	Loop Antenna	Audio V.M.	TAPE REC (L)	TC701	Maximum Output	Function: AM

CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

- FM



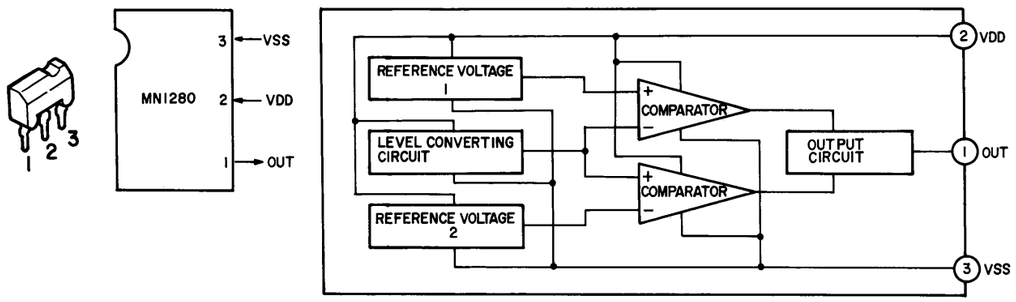
- AM



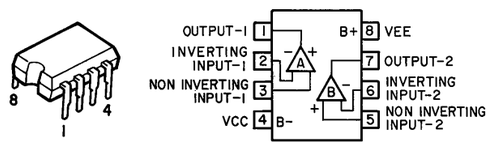
SEMICONDUCTORS

- **IC's**

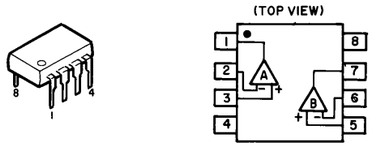
MN1280S
(Matsushita)



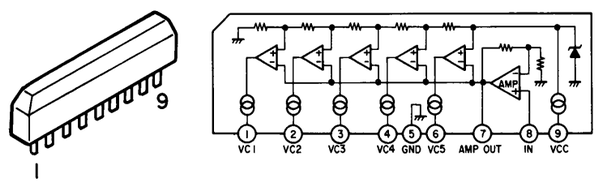
M5238P
(Mitsubishi)



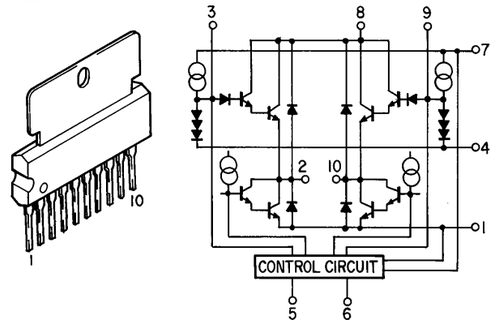
NJM2043DD
(JRC)



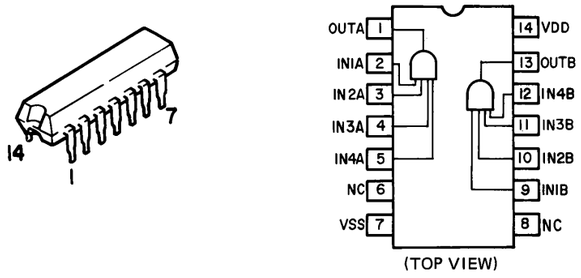
LB1403N
(Sanyo)



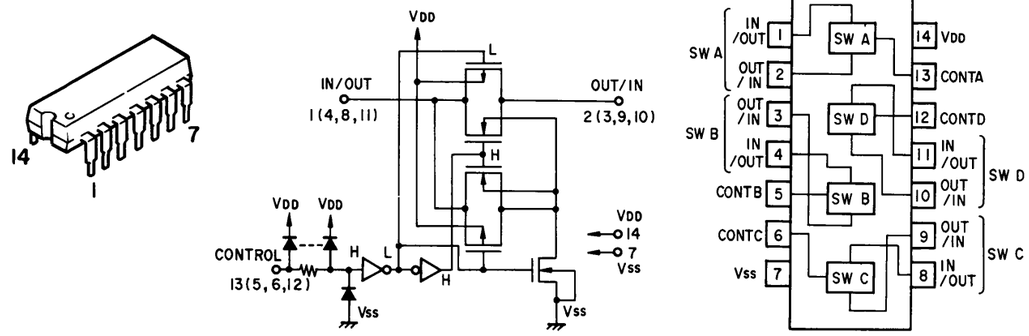
BA6229



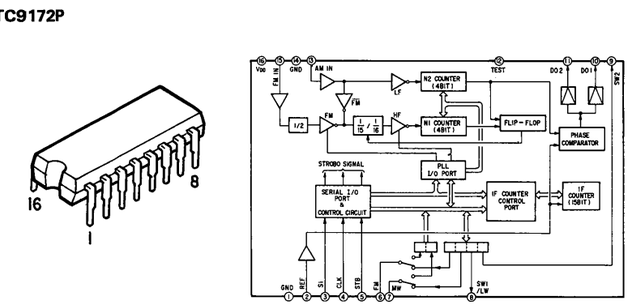
HD14082BP
(Hitachi)



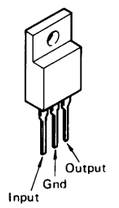
LC4966
(Sanyo)



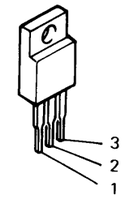
TC9172P



L78M12ML

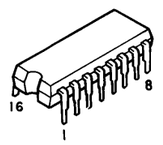


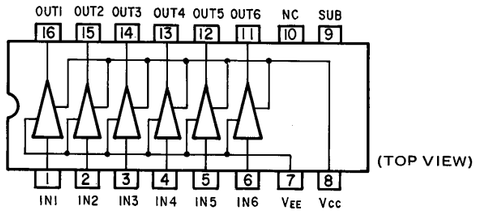
L78M05ML
(Sanyo)



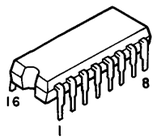
1 (Input)
2 (Common)
3 (Output)

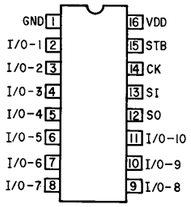
LB1294

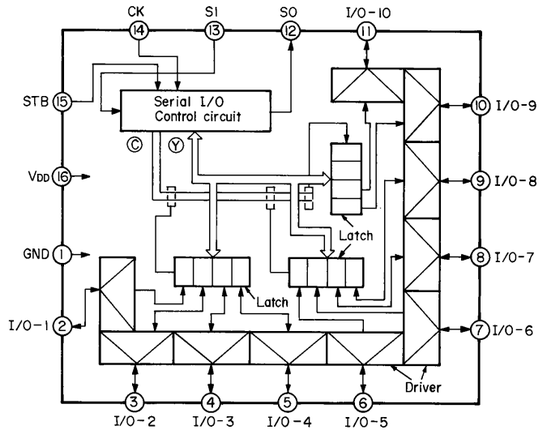




TC9173P

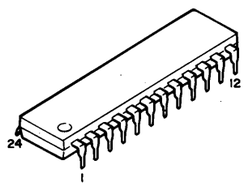


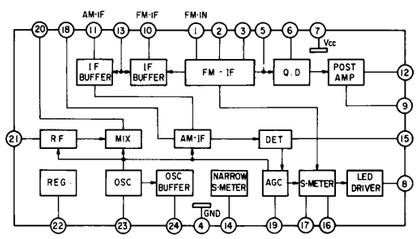




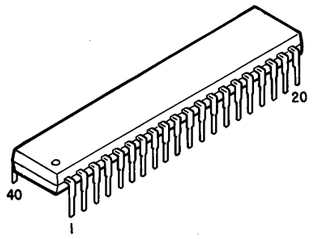
LA3401

LA1266

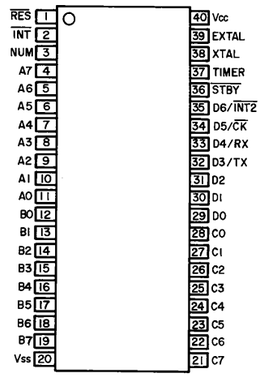


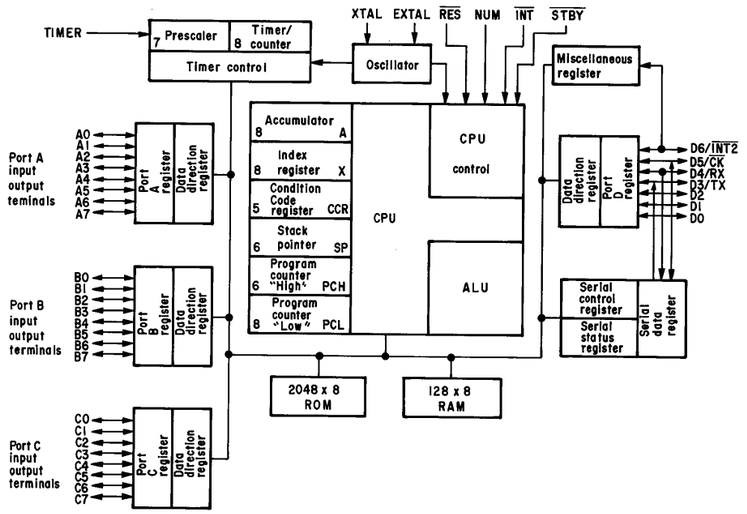


HD6305U0A53P

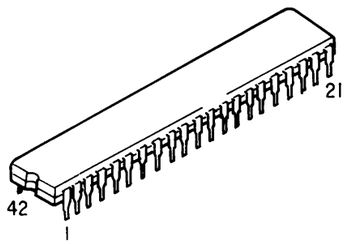


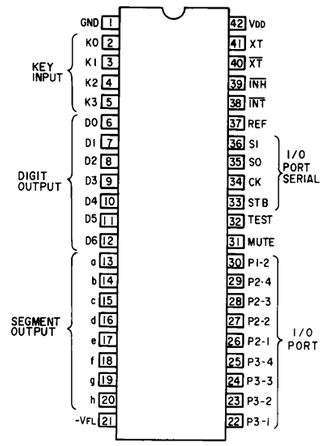
(TOP VIEW)





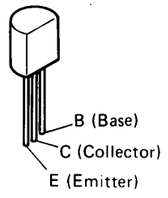
TC9303AN012



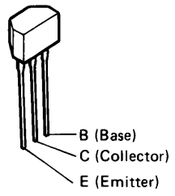


• Transistors

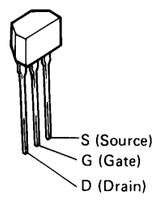
2SA988 (E/F)
2SC461P (C)
2SC1815 (BL)
2SC1841 (E/F)



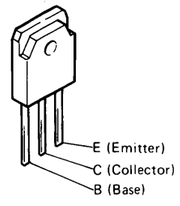
2SA1048(GR)
2SC2458 (BL)
2SC2458 (Y/GR)



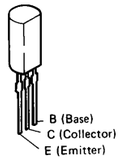
2SK365 (BL/GR)



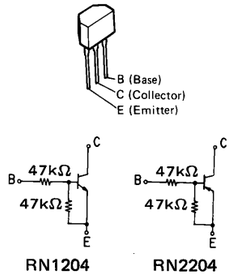
2SA1490 (O/Y) } DRA-425 only
2SC3854 (O/Y)
2SA1491 (O/Y) } DRA-625 only
2SC3855 (O/Y)



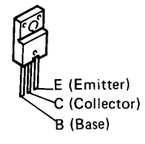
2SA1145 (O/Y)
2SB647A (C)
2SC2705 (O/Y)
2SC2878 (A/B)
2SD667A (C)



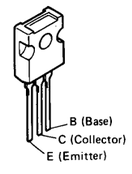
RN1204 (47k-47k)
RN2204 (47k-47k)



2SC3851 (Y)/(G)

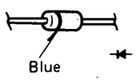


2SA1358 (O)/(Y)
2SC3421 (O)/(Y)

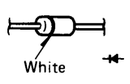


• Diodes & LED

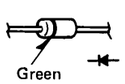
1S2076A



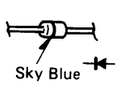
1SS106



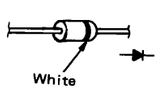
1SS104



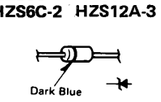
1SS270A



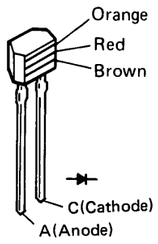
DSM1A2 (type-2)



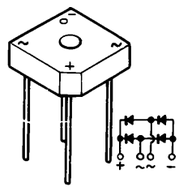
HZS5C-2 HZS7B-3
HZS6C-1 HZS12A-1
HZS6C-2 HZS12A-3



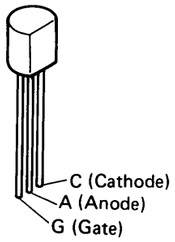
SVC321D2-SP



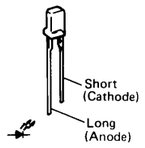
S4VB20F
(DRA-425 only)



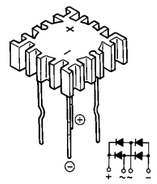
SFOR1A42
Thyristor



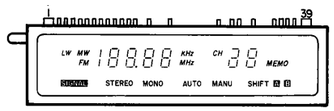
SEL1321G (Green)

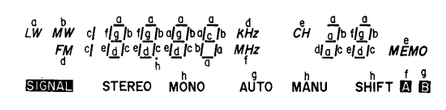


D5FB20
(DRA-625 only)



FLD (FIP10TM7)





TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ELECTRODE	F	F	BG	P(h)	P(g)	P(f)	P(e)	P(d)	BG	P(c)	7G	P(b)	P(a)	6G	NP	5G	NP	NP	4G	NP
TERMINAL NO.	21	22	23	24	25	16	27	28	29	30	31	32	33	34	35	36	37	38	39	
ELECTRODE	NP	NP	NP	NP	NP	4G	NP	P (Z)	3G	NP	2G	NP	NP	P (Z)	1G	P (Stere)	P (Signa)	F	F	

Notes F: Filament NP: No Pin
G: Grid
P: Anode

• Tuner Remote Control

TUNER REMOTE CONTROL **TC9173**

	DATA4	DATA3	DATA2	DATA1	DATA0
1/9	0	0	0	0	1
2/10	0	0	0	1	0
3/11	0	0	0	1	1
4/12	0	0	1	0	0
5/13	0	0	1	0	1
6/14	0	0	1	1	0
7/15	0	0	1	1	1
8/16	0	1	0	0	0
SHIFT	1	1	0	0	0

VOLUME DATA

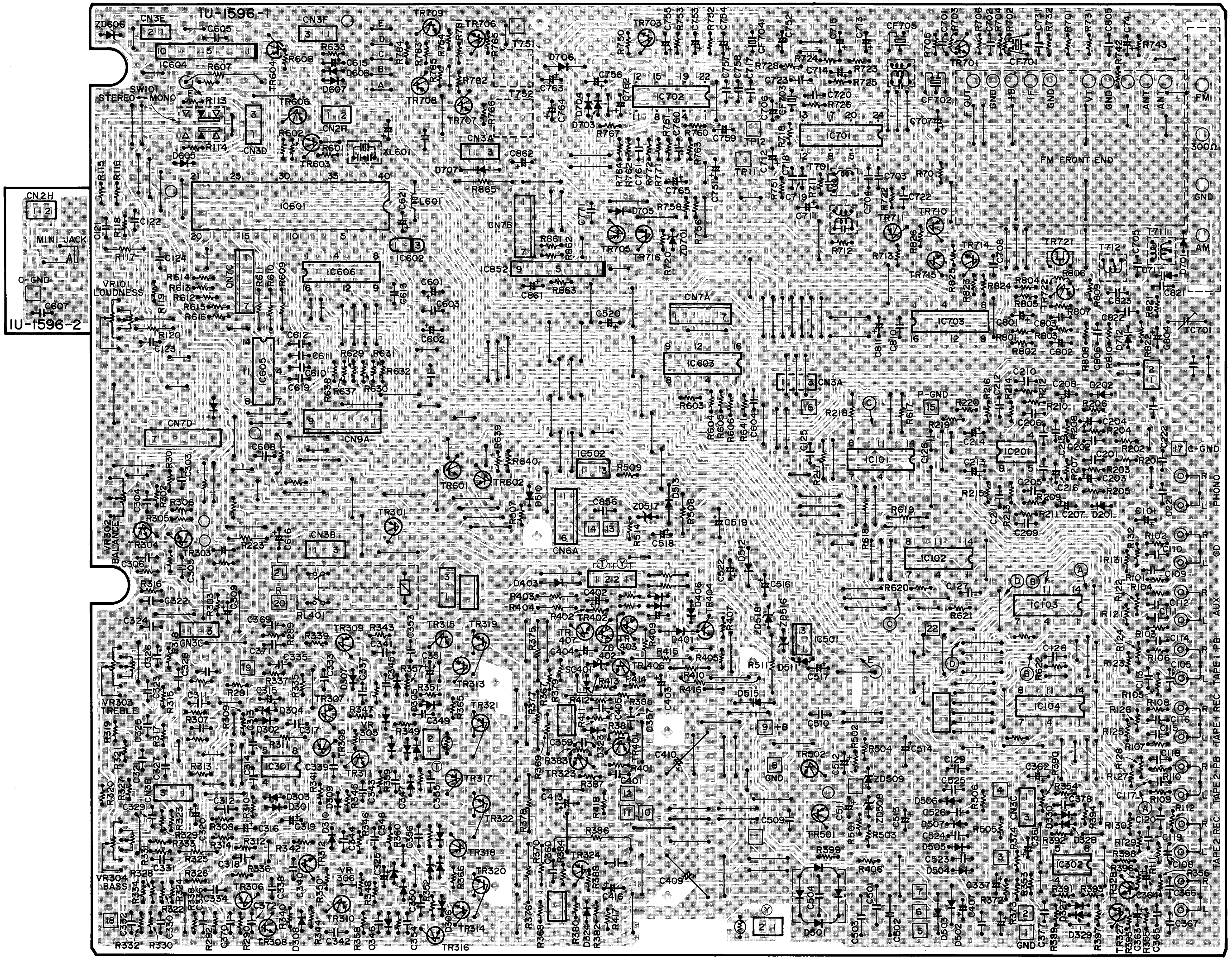
	C_1 (27)	C_2 (26)
VOLUME UP	LOW	HIGH
VOLUME DOWN	HIGH	LOW

CH	C_6	C_7	DATA C_8	C_9	C_{10}	C_{11}	EXPAND C_{12}	C_{13}	C_{14}	K	SYSTEM ADDRESS C_1 C_2 C_3 C_4 C_5 → 0 0 1 1 0 RECEIVER DRA-625	SYSTEM ADDRESS 0 0 1 1 0 RECEIVER DRA-425	SYSTEM ADDRESS 0 0 0 1 0 CD PLAYER EXPAND 1 0	SYSTEM ADDRESS 0 0 1 0 0 DECK EXPAND 1 0
1	1	0	0	0	0	0	1	0	0					
2	0	1	0	0	0	0	1	0	0		1 – 9	1 – 9		
3	1	1	0	0	0	0	1	0	0		2 – 10	2 – 10		
4	0	0	1	0	0	0	1	0	0		3 – 11	3 – 11		
5	1	0	1	0	0	0	1	0	0		4 – 12	4 – 12		
6	0	1	1	0	0	0	1	0	0		5 – 13	5 – 13		
7	1	1	1	0	0	0	1	0	0		6 – 14	6 – 14		
8	0	0	0	1	0	0	1	0	0		7 – 15	7 – 15		
9	1	0	0	1	0	0	1	0	0		8 – 16	8 – 16		
10	0	1	0	1	0	0	1	0	0		SHIFT	SHIFT		
11	1	1	0	1	0	0	1	0	0					
12	0	0	1	1	0	0	1	0	0		VOL ▼	VOL ▼		
13	1	0	1	1	0	0	1	0	0		VOL ▲	VOL ▲		
14	0	1	1	1	0	0	1	0	0					
15	1	1	1	1	0	0	1	0	0					
16	0	0	0	0	1	0	1	0	0					
17	1	0	0	0	1	0	1	0	0					
18	0	1	0	0	1	0	1	0	0					
19	1	1	0	0	1	0	1	0	0					
20	0	0	1	0	1	0	1	0	0					
21	1	0	1	0	1	0	1	0	0					
22	0	1	1	0	1	0	1	0	0					
23	1	1	1	0	1	0	1	0	0					
24	0	0	0	1	1	0	1	0	0		PHONO	PHONO	▶|	
25	1	0	0	1	1	0	1	0	0		TUNER	TUNER	|◀	
26	0	1	0	1	1	0	1	0	0		CD	CD	▶▶	FF ▶▶
27	1	1	0	1	1	0	1	0	0		AUX/VIDEO	AUX/VIDEO	◀◀	◀◀ REW
28	0	0	1	1	1	0	1	0	0				▶ PLAY	▶ PLAY
29	1	0	1	1	1	0	1	0	0		TAPE 1	TAPE 1	II PAUSE	II PAUSE
30	0	1	1	1	1	0	1	0	0		TAPE 2	TAPE 2	■ STOP	■ STOP
31	1	1	1	1	1	0	1	0	0					REC
32	0	0	0	0	0	1	1	0	0					
33	1	0	0	0	0	1	1	0	0					
34	0	1	0	0	0	1	1	0	0					
35	1	1	0	0	0	1	1	0	0					
36	0	0	1	0	0	1	1	0	0					
37	1	0	1	0	0	1	1	0	0					
38	0	1	1	0	0	1	1	0	0					
39	1	1	1	0	0	1	1	0	0					
40	0	0	0	1	0	1	1	0	0					
41	1	0	0	1	0	1	1	0	0					
42	0	1	0	1	0	1	1	0	0					
43	1	1	0	1	0	1	1	0	0					
44	0	0	1	1	0	1	1	0	0					
45	1	0	1	1	0	1	1	0	0					
46	0	1	1	1	0	1	1	0	0					
47	1	1	1	1	0	1	1	0	0					
48	0	0	0	0	1	1	1	0	0					
49	1	0	0	0	1	1	1	0	0					
50	0	1	0	0	1	1	1	0	0					
51	1	1	0	0	1	1	1	0	0					
52	0	0	1	0	1	1	1	0	0					
53	1	0	1	0	1	1	1	0	0					
54	0	1	1	0	1	1	1	0	0					
55	1	1	1	0	1	1	1	0	0					
56	0	0	0	1	1	1	1	0	0					

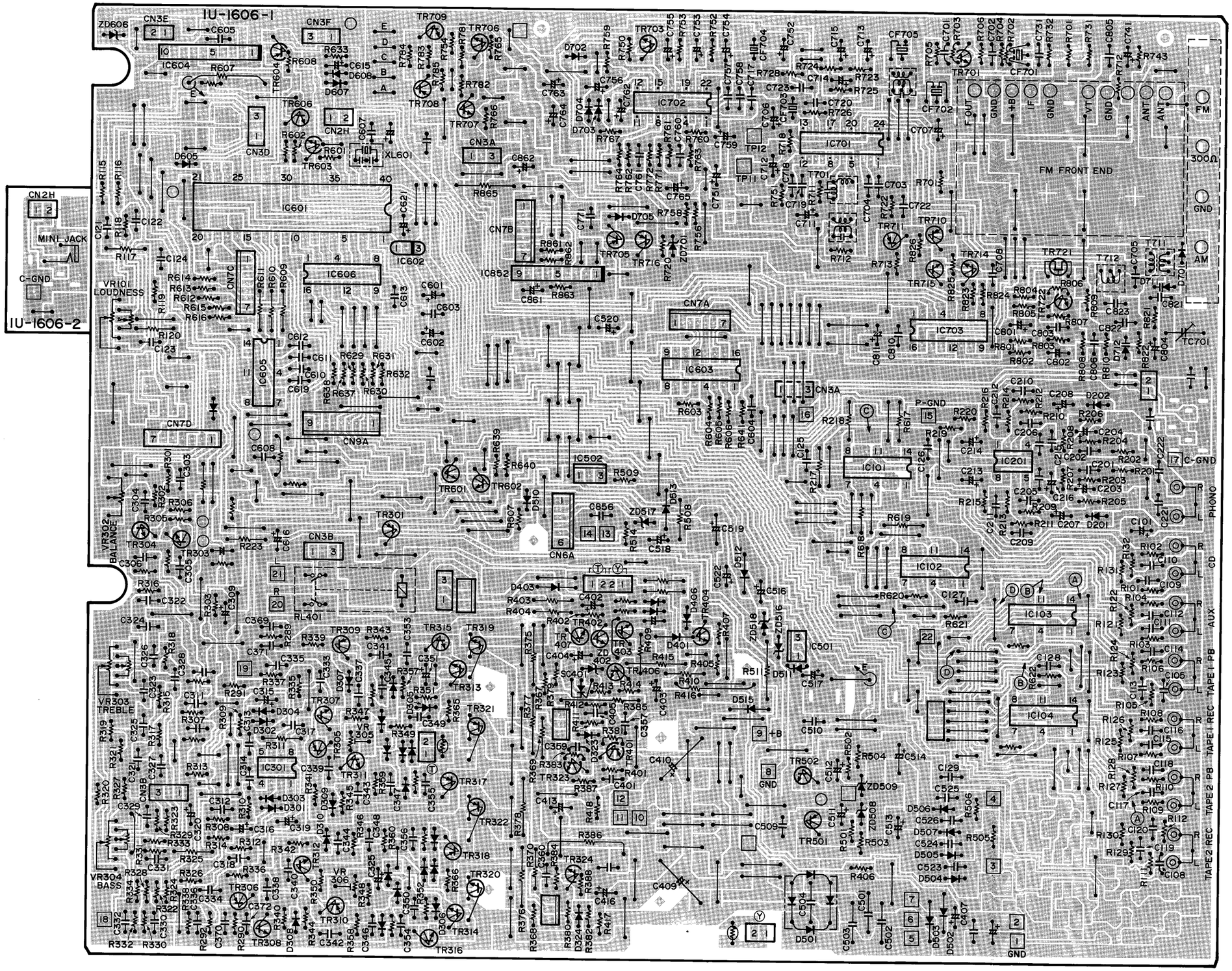
- **IC601: Microcomputer for system controlling HD6305U0A47P 1-chip type 8 bit microcomputer**

Terminal No.	Description	I/O	Function
1	RES	IN	RESET input terminal
2	INT	IN	Interrupt request input terminal
3	NUM	IN	Connected to 0V of power supply
4	A_7	OUT	OUTPUT LATCH "HIGH" ACTIVE PHONO
5	A_6	OUT	OUTPUT LATCH "HIGH" ACTIVE CD
6	A_5	OUT	OUTPUT LATCH "HIGH" ACTIVE TUNER
7	A_4	OUT	OUTPUT LATCH "HIGH" ACTIVE AUX-1
8	A_3	OUT	NC
9	A_2	OUT	OUTPUT LATCH "HIGH" ACTIVE TAPE-1
10	A_1	OUT	OUTPUT LATCH "HIGH" ACTIVE TAPE-2
11	A_0	OUT	NC
12	B_0	OUT	NC
13	B_1	IN	FUNCTION key ASSIGN input terminal
14	B_2	IN	FUNCTION key ASSIGN input terminal
15	B_3	IN	FUNCTION key ASSIGN input terminal
16	B_4	OUT	FUNCTION key STROBE pulse
17	B_5	OUT	FUNCTION key STROBE pulse
18	B_6	OUT	FUNCTION key STROBE pulse
19	B_7	OUT	FUNCTION key STROBE pulse
20	V_{SS}	–	Connected to 0V of power supply
21	C_7	IN	TAPE
22	C_6	OUT	NC
23	C_5	OUT	NC
24	C_4	OUT	NC
25	C_3	OUT	"LOW" ACTIVE LATCH at –∞ MUTING ON
26	C_2	OUT	VOLUME DATA
27	C_1	OUT	VOLUME DATA
28	C_0	OUT	D_5 TUNER REMOTE CONTROL REQUEST SIGNAL
29	D_0	OUT	D_4 TUNER REMOTE CONTROL DATA
30	D_1	OUT	D_3 TUNER REMOTE CONTROL DATA
31	D_2	OUT	D_2 TUNER REMOTE CONTROL DATA
32	D_3	OUT	D_1 TUNER REMOTE CONTROL DATA
33	D_4	OUT	D_0 TUNER REMOTE CONTROL DATA
34	D_5	IN	REMOTE CONTROL DIN INPUT TERMINAL
35	D_6/INT 2	IN	REMOTE CONTROL
36	STBY	IN	Connected to 5V of power supply
37	TIMER	IN	Connected to 0V of power supply
38	XTAL	IN	Input terminal for built-in clock
39	EXTAL	IN	Input terminal for built-in clock
40	V_{CC}	–	Connected to 5V of power supply

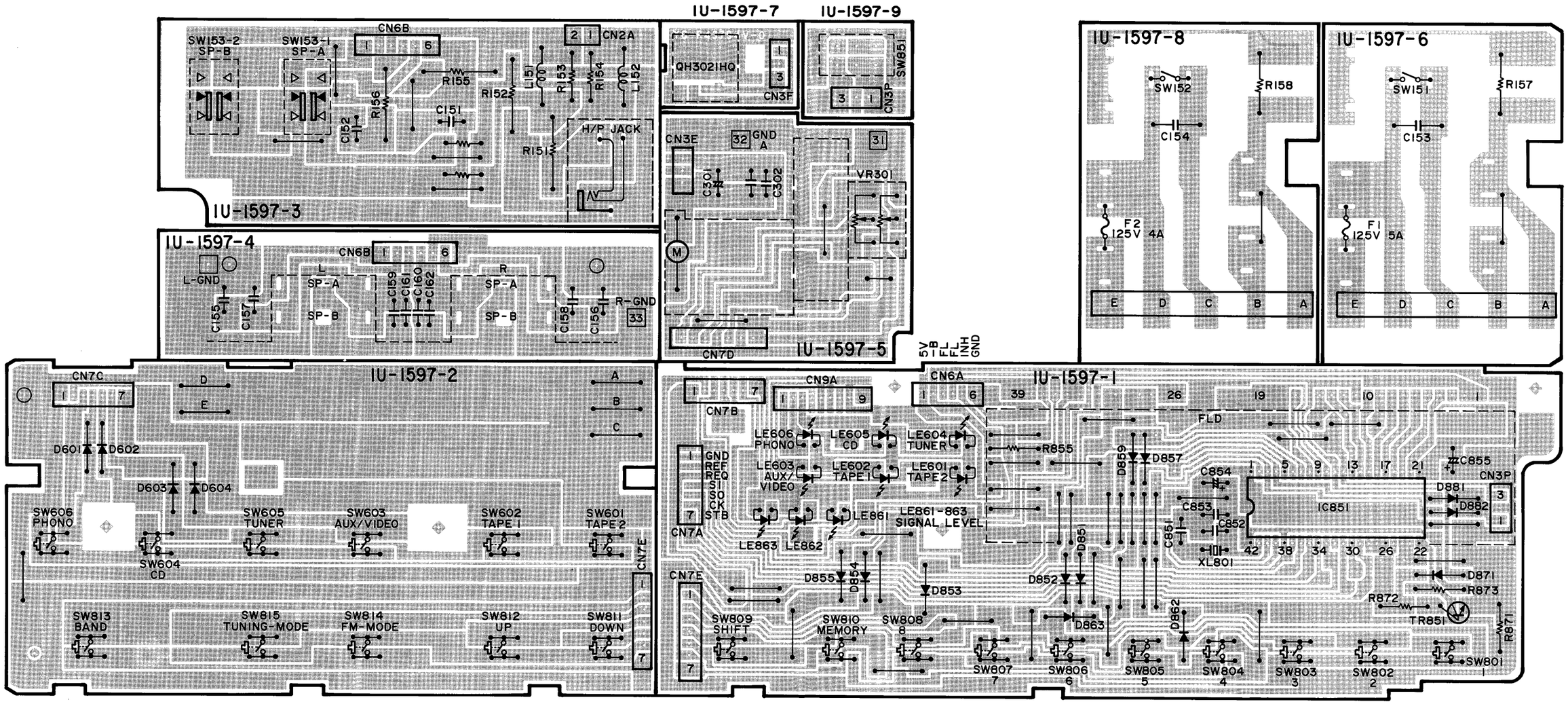
PRINTED WIRING BOARD PATTERNS AND PARTS LIST
1U-1596 MAIN UNIT (DRA-625)



1U-1606 MAIN UNIT (DRA-425)



1U-1597AZ (DRA-625), 1U-1597A (DRA-425) DISPLAY UNIT



PRINTED WIRING BOARD PARTS LIST
1U-1596A MAIN UNIT (DRA-625)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101~104	2630359006	LC4966	
IC201	2650037007	NJM2043DD	
IC301,302	2620679000	M5238P	
IC501	2630459003	L78M05ML	
IC502	2630475003	L78M12ML	
IC601	2620974103	HD6305U0A53P	
IC602	2620678001	MN1280S	
IC603	2620975005	TC9173P	
IC604	2620977003	BA6229	M DRIVE 24V
IC605	2620575007	HD14082BP	
IC606	2680070005	LB1294	
IC701	2630438008	LA1266	
IC702	2630439007	LA3401	
IC703	2620905004	TC9172P	
IC852	2630221008	LB1403N	
TR301	2690030006	RN2204 (47k-47k)	
TR303,304	2730253015	2SC2878 (A/B)	TYPE 2
TR305,306	2710131021	2SA988 (E/F)	
TR307,308	2730235020	2SC1841 (E/F)	
TR309,310	2710131021	2SA988 (E/F)	
TR311,312	2730235020	2SC1841 (E/F)	
TR313,314	2730198015	2SC1815 (BL)	
TR315,316	2730323000	2SC3421 O/Y	
TR317,318	2710195009	2SA1358 O/Y	
TR319,320	2730337009	2SC3855 (O/Y)	
TR321,322	2710205009	2SA1491 (O/Y)	
TR323,324	2730281003	2SC2705 (O/Y)	
TR327,328	2730253015	2SC2878 (A/B)	
TR401	2710168007	2SA1145 (O/Y)	
TR402,403	2730198015	2SC1815 (BL)	
TR404	2730253015	2SC2878 (A/B)	
TR406	2730198015	2SC1815 (BL)	
TR407	2730235020	2SC1841 (E/F)	
TR501	2720053005	2SB647A (C)	
TR502	2730338008	2SC3851 (Y/G)	
TR601~603	2690029004	RN1204 (47k-47k)	
TR604	2690030006	RN2204 (47k-47k)	
TR606	2690029004	RN1204 (47k-47k)	
TR701	2730025023	2SC461 (C)	
TR703	2730317003	2SC2458 (BL)	
TR705	2710191003	2SA1048 (GR)	
TR706,707	2730317003	2SC2458 (BL)	
TR708	2710191003	2SA1048 (GR)	
TR709	2730317003	2SC2458 (BL)	
TR710,711	2710191003	2SA1048 (GR)	
TR714,715	2730317003	2SC2458 (BL)	
TR716	2690030006	RN2204 (47k-47k)	
TR721	2750053004	2SK365 (BL/GR)	
TR722	2730317003	2SC2458 (BL)	
TR725,726	2750051006	2SK161 (GR)	
D201,202	2760432000	1SS270A	
D301~312	2760432000	1SS270A	
D323,324	2760432000	1SS270A	
D327~330	2760432000	1SS270A	
D401	2760049011	1S2076A	
D403	2760049011	1S2076A	
D406	2760432000	1SS270A	
D501	2760356005	D5FB20 (4001)	
D502~507	2760433009	DSM1A2 (TYPE-2)	
D510,511	2760432000	1SS270A	
D512	2760511002	1SS104TP3	
D513	2760049011	1S2076A	
D515	2760433009	DSM1A2 TYPE 2	
D605	2760432000	1SS270A	
D607	2760432000	1SS270A	
D701	2760432000	1SS270A	
D705	2760432000	1SS270A	
D706	2760049011	1S2076A	
D707	2760432000	1SS270A	
D711,712	2760302004	SVC321D2-SP	
ZD402	2760465022	HZS7B-3TD	
ZD508,509	2760473001	HZS12A-1TD	
ZD516	2760473027	HZS12A-3TD	
ZD517	2760463011	HZS6C-2TD	
ZD518	2760473027	HZS12A-3TD	
ZD606	2760463008	HZS6C-1TD	
ZD701	2760460014	HZS5C-2TD	
SC401	2790016001	SF0R1A42	
RESISTORS GROUP (not included Carbon Film ±5% ¼W type)			
⚠R339~342	2412379929	RD14B2E561JNBST	560Ω, ¼W, ±5%
⚠R343~346	2412377947	RD14B2E101JNBST	100Ω, ¼W, ±5%
⚠R357~360	2412379958	RD14B2E751JNBST	750Ω, ¼W, ±5%
⚠R365,366	2412378920	RD14B2E221JNBST	220Ω, ¼W, ±5%
⚠R375~378	2442013080	RS14B3AR22JNBF	0.22Ω, 1W, ±5%
⚠R379,380	2412380950	RD14B2E202JNBST	2kΩ, ¼W, ±5%
⚠R385,386	2440072023	RS14B3D6R8JNBF	6.8Ω, 2W, ±5%
⚠R415	2440049027	RS14B3A472JNBF	4.7kΩ, 1W, ±5%
⚠R416	2440098023	RS14B3D102JNBF	1kΩ, 2W, ±5%
⚠R505,506	2412387908	RD14B2E010JNBST	1Ω, ¼W, ±5%
⚠R509	2412387908	RD14B2E010JNBST	1Ω, ¼W, ±5%
⚠R511	2440044022	RS14B3A182JNBF	1.8kΩ, 1W, ±5%
⚠R607	2412376906	RD14B2E270JNBST	27Ω, ¼W, ±5%
⚠R707	2412375981	RD14B2E220JNBST	22Ω, ¼W, ±5%
⚠R768	2412377947	RD14B2E101JNBST	100Ω, ¼W, ±5%
⚠R802	2412377947	RD14B2E101JNBST	100Ω, ¼W, ±5%
⚠R865	2440027023	RS14B3A680JNBF	68Ω, 1W, ±5%
VR101	2110522007	V1604V20F.....K	VR BLOCK
VR305,306	2116064006	V06PB103	IDLE VR 10kΩ semi-fixed resistor
CAPACITORS GROUP			
TC701	2130022008	TRIMMER CONDENSER	
C102	2531025002	CK45F1H223Z	0.022μF/50V
C105	2531025002	CK45F1H223Z	0.022μF/50V
C108	2531025002	CK45F1H223Z	0.022μF/50V
C121,122	2533645008	CC45SL1H561J	560pF/50V
C125~129	2531025002	CK45F1H223Z	0.022μF/50V
C205,206	2533621006	CC45SL1H560J	56pF/50V
C271~274	2533627000	CC45SL1H101J	100pF/50V
C317,318	2533607004	CC45SL1H150J	15pF/50V
C325,326	2533633007	CC45SL1H181J	180pF/50V
C335,336	2531112902	CK45B1H102K	1000pF/50V
C337~340	2531054057	CK45B2H101K	100pF/500V
C345~348	2531112902	CK45B1H102K	1000pF/50V
C349,350	2531024003	CK45F1H103Z	0.01μF/50V
C353~356	2534285001	CC45SL2H470J	47pF/500V
C365,366	2533627000	CC45SL1H101J	100pF/50V
C367	2531025002	CK45F1H223Z	0.022μF/50V
C369,370	2531112902	CK45B1H102K	1000pF/50V
C377,378	2533627000	CC45SL1H101J	100pF/50V
C401	2531025002	CK45F1H223Z	0.022μF/50V
C405	2531024003	CK45F1H103Z	0.01μF/50V
C417,418	2531053003	CK45E2H103P	0.01μF/500V
C501,503	2531053003	CK45E2H103P	0.01μF/500V
C515	2531025002	CK45F1H223Z	0.022μF/50V
C523~526	2531024003	CK45F1H103Z	0.01μF/50V
C603	2531024003	CK45F1H103Z	0.01μF/50V
C604	2531025002	CK45F1H223Z	0.022μF/50V
C605	2539031027	CK45=1E104K	0.1μF/25V
C607,608	2531025002	CK45F1H223Z	0.022μF/50V
C609~612	2533635005	CC45SL1H221J	220pF/50V
C613	2531025002	CK45F1H223Z	0.022μF/50V
C619,620	2533603008	CC45SL1H100D	10pF/50V ±0.5pF
C701,702	2531024003	CK45F1H103Z	0.01μF/50V
C703,704	2531025002	CK45F1H223Z	0.022μF/50V
C705	2531024003	CK45F1H103Z	0.01μF/50V
C708	2531024003	CK45F1H103Z	0.01μF/50V
C717	2539031001	CK45-1E473K	0.047μF/25V
C718	2533627000	CC45SL1H101J	100pF/50V
C720	2539031001	CK45=1E473K	0.047μF/25V
C722	2531024003	CK45F1H103Z	0.01μF/50V
C731	2531024003	CK45F1H103Z	0.01μF/50V
C757	2539031001	CK45=1E473K	0.047μF/25V
C758	2533639001	CC45SL1H331J	330pF/50V
C760,761	2534350004	CC45SL1H431J	430pF/50V
C771	2531024003	CK45F1H103Z	0.01μF/50V
C803	2531025002	CK45F1H223Z	0.022μF/50V
C805	2531024003	CK45F1H103Z	0.01μF/50V
C810	2531024003	CK45F1H103Z	0.01μF/50V
C821	2531025002	CK45F1H223Z	0.022μF/50V
C822	2533607004	CC45SL1H150J	15pF/50V
C101	2544260045	CE04W1H010M (SME)	1μF/50V
C203,204	2544256017	CE04W1E220M (SME)	22μF/25V
C207,208	2544250026	CE04W0J101M (SME)	100μF/6.3V
C213,214	2544256017	CE04W1E220M (SME)	22μF/25V
C215,216	2544260045	CE04W1H010M (SME)	1μF/50V
C309	2544260045	CE04W1H010M (SME)	1μF/50V
C315,316	2544256017	CE04W1E220M (SME)	22μF/25V
C319,320	2544260045	CE04W1H010M (SME)	1μF/50V
C351,352	2544260045	CE04W1H010M (SME)	1μF/50V
C361~364	2544260045	CE04W1H010M (SME)	1μF/50V
C374	2544260045	CE04W1H010M (SME)	1μF/50V
C391,392	2544260045	CE04W1H010M (SME)	1μF/50V
C402	2544250026	CE04W0J101M (SME)	100μF/6.3V
C403	2544254048	CE04W1C101M (SME)	100μF/16V
C404	2544256004	CE04W1E100M (SME)	10μF/25V
C407	2544263945	CE04W2A010M (SME)	1μF/100V
C409,410	2544216002	CE04W1J922M	9200μF/63V
C413~416	2544263945	CE04W2A010M (SME)	1μF/100V
C511,512	2544256046	CE04W1E101M (SME)	100μF/25V
C513	2544258086	CE04W1V471M (SME)	470μF/35V
C514	2544259001	CE04W1V222M (SME)	2200μF/35V
C516,517	2544260045	CE04W1H010M (SME)	1μF/50V
C518	2544260058	CE04W1H2R2M (SME)	2.2μF/50V
C520	2544254006	CE04W1C100M (SME)	10μF/16V
C522	2544258015	CE04W1V100M (SME)	10μF/35V

Ref. No.	Part No.	Part Name	Remarks
C602	2544254006	CE04W1C100M (SME)	10μF/16V
C615	2544254006	CE04W1C100M (SME)	10μF/16V
C616	2544256046	CE04W1E101M (SME)	100μF/25V
C617	2544250026	CE04W0J101M (SME)	100μF/6.3V
C621	2544250026	CE04W0J101M (SME)	100μF/6.3V
C706	2544254035	CE04W1C470M (SME)	47μF/16V
C707	2544254080	CE04W1C102M (SME)	1000μF/16V
C711	2544254035	CE04W1C470M (SME)	47μF/16V
C712	2544260045	CE04W1H010M (SME)	1μF/50V
C713	2544260074	CE04W1H4R7M	4.7μF/50V
C714	2544254006	CE04W1C100M (SME)	10μF/16V
C715	2544260061	CE04W1H3R3M (SME)	3.3μF/50V
C741	2544254006	CE04W1C100M (SME)	10μF/16V
C751	2544254006	CE04W1C100M (SME)	10μF/16V
C752	2544254048	CE04W1C101M (SME)	100μF/16V
C753	2544260045	CE04W1H010M (SME)	1μF/50V
C754	2544260032	CE04W1HR47M (SME)	0.47μF/50V
C755,756	2544260045	CE04W1H010M (SME)	1μF/50V
C759	2544254006	CE04W1C100M (SME)	10μF/16V
C762	2544260061	CE04W1H3R3M (SME)	3.3μF/50V
C764,765	2544260061	CE04W1H3R3M (SME)	3.3μF/50V
C767	2544260003	CE04W1H0R1M (SME)	0.1μF/50V
C801	2544254048	CE04W1C101M (SME)	100μF/16V
C802	2543056014	CE04D1H010MBP (SME)	1μF/50V
C804	2544260045	CE04W1H010M (SME)	1μF/50V
C806	2544260061	CE04W1H3R3M (SME)	3.3μF/50V
C811	2544250026	CE04W0J101M (SME)	100μF/6.3V
C861	2544254006	CE04W1C100M (MRZ)	10μF/16V
C862	2544254048	CE04W1C101M (SME)	100μF/16V
C123,124	2554199960	CQ92M1H223J (MRZ)	0.022μF/50V
C201,202	2533633007	CC45SL1H181J	180pF/50V
C209,210	2554199999	CQ92M1H243J (MRZ)	0.024μF/50V
C211,212	2554213956	CQ93M1H682J (B)	6800pF/50V
C313,314	2554200008	CQ93P1H101J	100pF/50V
C323,324	2551120013	CQ93M1H122J	1200pF/50V
C327,328	2551121009	CQ93M1H682J	6800pF/50V
C331,332	2551121041	CQ93M1H153J	0.015μF/50V
C333,334	2551212905	CQ93M1H103J (MRZ)	0.01μF/50V
C341~344	2554199960	CQ92M1H223J (MRZ)	0.022μF/50V
C371,372	2551212905	CQ93M1H103J (MRZ)	0.01μF/50V
C823	2554135005	CQ93P1H391J	390pF/50V
C303~305	2561035075	CF93A1H684J	0.68μF/50V
C321,322	2561034047	CF93A1H563J	0.056μF/50V
C329,330	2561034089	CF93A1H124J	0.12μF/50V
C357,358	2561034076	CF93A1H104J	0.1μF/50V
C359,360	2561034005	CF93A1H273J	0.027μF/50V
C502	2561042000	CF93A2E104K	0.1μF/250V
C509,510	2561035075	CF93A1H684J	0.68μF/50V
C856	2561034076	CF93A1H104J	0.1μF/50V
C519	2590004006	SB CAP=223=	
TRANS COIL, FILTERS, RELAY, SWITCH GROUP			
L601	2350016988	INDUCTOR	120μH
RL401	2149003005	RELAY	
T701	2312065003	FM IF DET TRANS(P)	
T702	2312066002	FM IF DET TRANS(S)	
T703	2310056001	AM IFT	
T711	2311127007	MW ANT TRANS	
T712	2311130007	MW OSC COIL	
T751,752	2320085004	LPF	
SW101	2129520003	1P PUSH SWITCH	MODE
CF701,702	2610064007	SFT10.7MS2	
CF703	2610031001	BFU450C4 (C.F)	
CF704	2610079005	CSB456F11	
CF705	2610034008	SFP450H	
XL601	3990034002	CST4.00MG	4MHz
T704	2320121007	ANTI. BIRDIE FILTER	

Ref. No.	Part No.	Part Name	Q'ty	Remarks
OTHER PARTS GROUP				
	4179021107	RADIATOR BLOCK	1	
	4738007009	3x12 CUP SCREW	4	
	4737500044	TAPPING SCREW(P) 3x8 (BLACK)	2	
	2048260004	MINI JACK	1*	3.5mm
	2050346000	4P CONNECTOR BASE	1	
	2050347009	6P CONNECTOR BASE	2	
	2050433007	3P ANT TERMINAL (DIN)	1	
	2160065006	FRONT END	1	
	2050185038	3P WIRE HOLDER	6	
	2050185025	2P WIRE HOLDER	1	
	2050185070	7P WIRE HOLDER	1	
CN6A	2050343061	6P CONN. BASE (KR-PH)	1	
CN7A,B,C	2050343074	7P CONN. BASE (KR-PH)	3	
	2050343090	9P CONN. BASE (KR-PH)	1	
	2050190036	3P NH CONNECTOR BASE	2	
	2050233032	3P EH CONNECTOR BASE	1	

1U-1606A MAIN UNIT PARTS LIST (DRA-425)

[Same as 1U-1596A (for DRA-625) except the followings]

NOTE: A: ADD, C: CHANGE, D: DELETE

Ref. No.	Part No.	Part Name	Remarks	
SEMICONDUCTORS GROUP				
IC302	2620677000	M5238P		D
TR315,316	2740060007	2SD667A (C)		C
TR317,318	2720053005	2SB647A (C)		C
TR319,320	2730336000	2SC3854 (O/Y)		C
TR321,322	2710204000	2SA1490 (O/Y)		
TR323,324	2730235020	2SC1841 (E/F)		C
TR327,328	2730253015	2SC2878 (A/B)		D
TR401	2710131021	2SA988 (E/F)		C
D327~330	2760432000	1SS270A		D
D332	2760432000	1SS270A		D
D501	2760338007	S4VB20F		C
CAPACITORS GROUP				
C271,272	2533627000	CC45SL1H101J	100pF/50V	D
C306	2561035075	CF93A1H684J	0.68μF/50V	A
C365,366	2533627000	CC45SL1H101J	100pF/50V	D
C377,378	2533627000	CC45SL1H101J	100pF/50V	D
C361~364	2544260045	CE04W1H010M (SME)	1μF/50V	D
C374	2544260045	CE04W1H010M (SME)	1μF/50V	D
C391,392	2544260045	CE04W1H010M (SME)	1μF/50V	D
C409,410	2546089004	CE04W==822M	8290μF	C
TRANS, COIL, FILTERS RELAY, SWITCH GROUP				
SW101	2129520003	1P PUSH SWITCH	MODE	D
OTHER PARTS GROUP			Q'ty	
	2050346000	4P CONNECTOR BASE	2	C
	2050347009	6P CONNECTOR BASE	1	C
	2050185038	3P WIRE HOLDER	4	C

1U-1597AZ (DRA-625), 1U-1597A (DRA-425) DISPLAY UNIT PARTS LIST

NOTE: ■ DRA-625 only ● DRA-425 only

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC851	2620906003	TC9303AN012	
TR851	2730322001	2SC2458 (Y/GR)	
D601~604	2760370007	1SS106TD	
D851~855	2760049011	1S2076A	
D857	2760049011	1S2076A	
D859	2760049011	1S2076A	
D862,863	2760049011	1S2076A	
D871	2760049011	1S2076A	
LE601~606	3939261027	LED SEL1321G (D2/3)	
LE861~863	3939261027	LED SEL1321G (D2/3)	
RESISTORS GROUP			
⚠ R151,152	2440033020	RS14B3A221JNBF	220Ω, 1W
R153,154	2412036000	RD14B2E4R7J	4.7Ω, ¼W
⚠ R155,156	2440015022	RS14B3A6R8JNBF	6.8Ω, 1W
R855	2412132001	RD14B2E473J	47kΩ, ¼W
R871~873	2412116001	RD14B2E103J	10kΩ, ¼W
R896~899	2412116001	RD14B2E103J	10kΩ, ¼W
VR301	2110521008	V1620V30FB104R	MOTOR DRIVE
CAPACITORS GROUP			
C151,152	2561034937	CF93A1H473J	0.047μF/50V
⚠ ■C153	2538014003	CK45F2GAC103M	0.01μF/400V AC
⚠ ●C154	2538014003	CK45F2GAC103M	0.01μF/400V AC
C155~158	2551121025	CQ93M1H103J	0.01μF/50V
C159	2531024003	CK45F1H103Z	0.01μF/50V
C162	2531024003	CK45F1H103Z	0.01μF/50V
C301	2543056014	CE04D1H010MBP (SME)	1μF/50V
C302	2539031027	CK45=1E104K	0.1μF/25V
C851,852	2533603008	CC45SL1H100D	10pF/50V
C853	2531024003	CK45F1H103Z	0.01μF/50V
C854	2544250026	CE04W0J101M (SME)	100μF/6.3V
C855	2544258057	CE04W1V101M (SME)	100μF/35V
SWITCHES, COILS GROUP			
L151,152	2359001004	INDUCTOR	
⚠ ■SW151	2124686007	POWER SW TV-5	
⚠ ●SW152	2124686007	POWER SW TV-5	
SW153	2129532004	2P PUSH SW (SP)	SP SW
SW601~606	2124407901	TACT SWITCH (IM)	
SW801~815	2124407901	TACT SWITCH (IM)	

Ref. No.	Part No.	Part Name	Remarks
OTHER PARTS GROUP			
	2020022008	FUSE HOLDER	
⚠ ■F001	2061015061	FUSE 2A	
⚠ ●F002	2061015058	FUSE 1.6A	
	2050149032	5P WRAPPING TERMINAL	
	2048167026	HEADPHONE JACK	
	2050484001	8P SP TERMINAL	(Europe)
	■2050472013	8P SP TERMINAL	(Australia)
	●2050472013	8P SP TERMINAL	(Australia, U.K.)
	4990088002	QH3031H0	REMOCON
	1460921100	LED HOLDER	
XL801	3990040009	X'TAL (7.2MHz)	
	3934043004	FLD (FIP10TM7)	
	4122268302	FLD BRACKET	
	2050185025	2P WIRE HOLDER	
	2050185067	6P WIRE HOLDER	
	2050185070	7P WIRE HOLDER	
	2050233032	3P EH CONNECTOR BASE	
	2050233074	7P EH CONNECTOR BASE	
	4150299000	CONDENSER COVER	
	■5131390008	FUSE LABEL	
	●5131390011	FUSE LABEL	

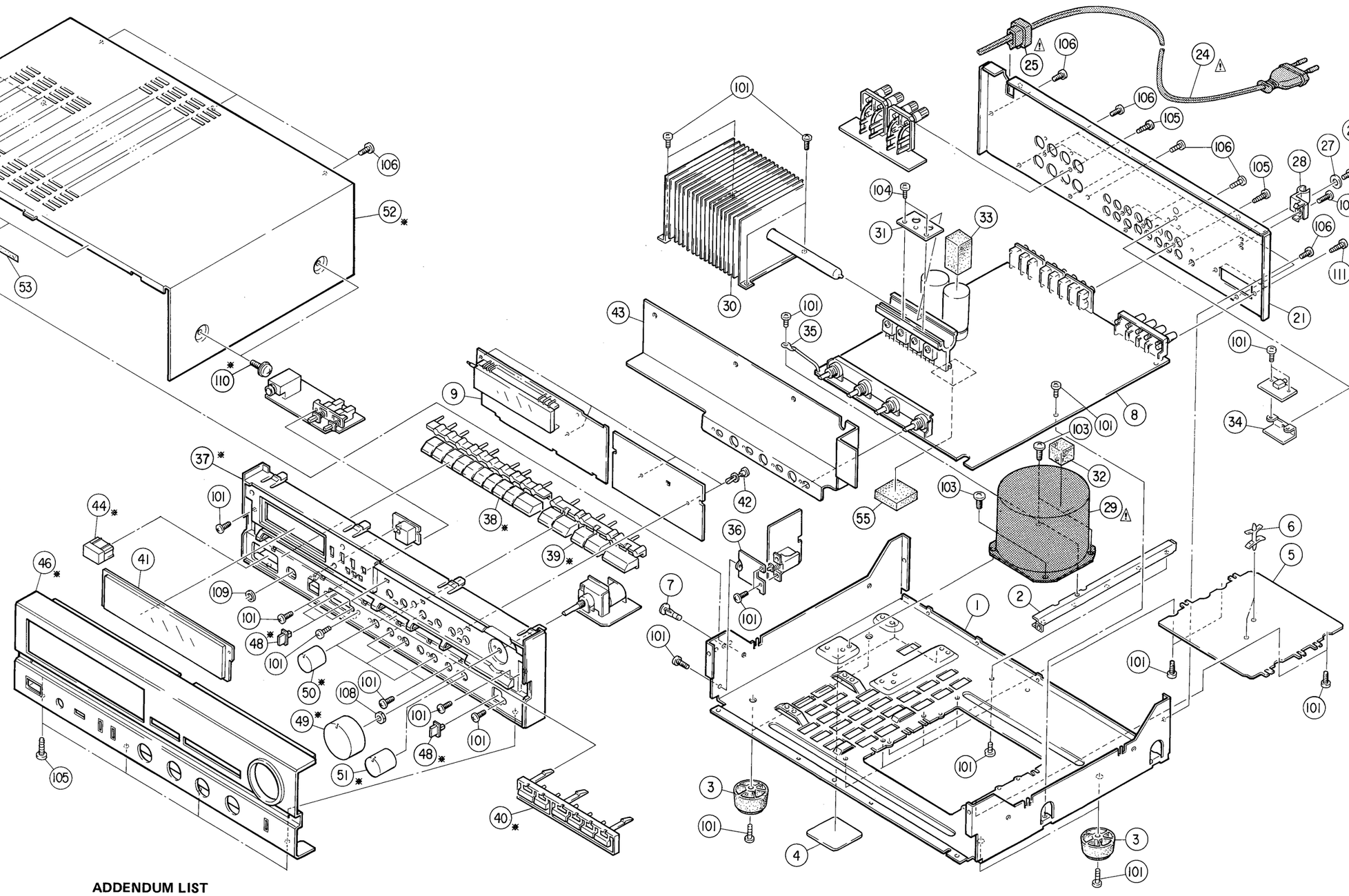
EXPLODED VIEW OF CHASSIS AND CABINET & PARTS LIST
PARTS LIST OF EXPLODED VIEW (DRA-625/425 Europe Black Version)

NOTE: ■ DRA-625 only ● DRA-425 only

Ref. No.	Part No.	Part Name	Remarks
1	4110751203	MAIN CHASSIS	1*
2	4122462108	BRACKET-A	1*
3	1040173103	FOOT Ass'y	4
4	4140478006	SAFETY PLATE	1
5	1050758107	BOTTOM COVER	1
6	4430518003	P.C.B. HOLDER	2
7	4122197017	CARD STAND	1
8■	1U-1596A	MAIN UNIT	1
8●	1U-1606A	MAIN UNIT	1
9■	1U-1597AZ	DISPLAY UNIT	1
9●	1U-1597A	DISPLAY UNIT	1
10	5131286002	FUSE CAUTION LABEL	1
11	4610397002	spacer rubber	1
12	4610346040	SPACER RUBBER	1
13■	4140477007	SHIELD PLATE	1
14■	4140426029	SAFETY PLATE	1
15	4140483004	SAFETY PLATE	1
16	5131144005	MASKING SHEET	1
17			
18			
19			
20			
21■	1050777010	BACK PANEL	1*
21●	1050777007	BACK PANEL	1*
⚠ 22	2538014003	CK45F2GAC103M	1 C-150 0.01μF/ 400V AC
⚠ 23	—	—	
⚠ 24	2062002031	AC CORD WITH PLUG	1
⚠ 25	4450056008	CORD BUSH	1
⚠ 26	2050071016	TERMINAL Ass'y	1
27	4770018001	WASHER (P-87)	1
28	1460925009	ANT. HOLDER	1*
⚠ 29■	2335667103	POWER TRANS	1*
⚠ 29●	2335666104	POWER TRANS	1*
30■	4170322216	H.P RADIATOR	1*
30●	4170322203	H.P RADIATOR	1*
31	4129082002	RADIATOR BRACKET	1
32●	4610346053	SPACER-RUBBER	1
32■	4619001027	RUBBER SHEET	1
33	—	—	—
34	4122463000	BRACKET-B	1
35	2030230097	1PCONNECTOR	1
36	4122431003	BRACKET	1*
37	1460922303	INNER PANEL	1*
38	1131018106	KNOB-TACT-1	1*
39	1131019105	KNOB-TACT-2	1*
40	1131020204	KNOB-FUNCTION	1*
41	1430541109	WINDOW	1*
42	4770288006	PUSH RIVET	4
43	4140453102	SHIELD PLATE	1*
44	1131054005	POWER KNOB Ass'y	1*
45	—	—	—

Ref. No.	Part No.	Part Name	Q'ty	Remarks
46■	1441689209	FRONT PANEL Ass'y	1*	
46●	1441691200	FRONT PANEL Ass'y	1*	
47				
48■	1139071006	PUSH KNOB (T)	3	
48●	1139071006	PUSH KNOB (T)	2	
49	1120529101	VOLUME KNOB	1*	
50	1120530103	KNOB	3*	TONE, BALANCE
51	1120530116	KNOB	1*	LOUDNESS
52	1020314005	TOP COVER	1*	
53	1220146002	HIMERON SHEET	2*	
54	—	—		
55	4610357013	SPACER RUBBER	2	
SCREWS & NUTS				
101■	4737002034	TAPPING SCREW(S) (BLACK) 3x6	24	
101●	4737002034	TAPPING SCREW(S) (BLACK) 3x6	23	
102	4737002021	TAPPING SCREW(S) (BLACK) 3x8	5	
103	4737004016	TAPPING SCREW(S) (BLACK) 4x6	4	
104	4737500044	TAPPING SCREW(P) (BLACK) 3x8	2	
105	4737508017	TAPPING SCREW(P) (BLACK) (3x10)	9	
106	4737015018	TAPPING SCREW(S) (BLACK) 3x8	11	
107	—	9φ WASHER	1	MAIN VOLUME
108		NUT M9	1	
109		NUT M12	1	H/P
110	4770263005	3P SWELLING SCREW	4	
111	4770064107	FIXING SCREW	2	
PACKING & ACCESSORIES (not included EXPLODED VIEW)				
201	5058006019	ENVELOPE	1	
202	5111661003	INST. MANUAL	1*	
203	—	—	1	
204	2311129005	LOOP ANTENNA	1	
205	5290040008	FM ANT ADAPTOR	1	
206	4990091002	RC-104	1*	
207	5050149000	POLY–COVER	1	
208	5059102006	POLY COVER	1	
209	5049102003	STYLEN PAPER	2	
210	5030674003	CUSHION	2*	
211■	5011237100	CARTON CASE	1*	
211●	5011239108	CARTON CASE	1*	
212	5020658013	PAD	1*	
213	5131338002	CONTROL CARD BASE	1	
214	5131349004	THERMAL CARBON FILM	1	

EXPLODED VIEW OF CHASSIS AND CABINET (DRA-625/425)



PARTS LIST OF EXPLODED VIEW
(DRA-625/425 Europe Gold Version)

[Same as parts list (for DRA-625/425 Europe Black Version) except the followings]

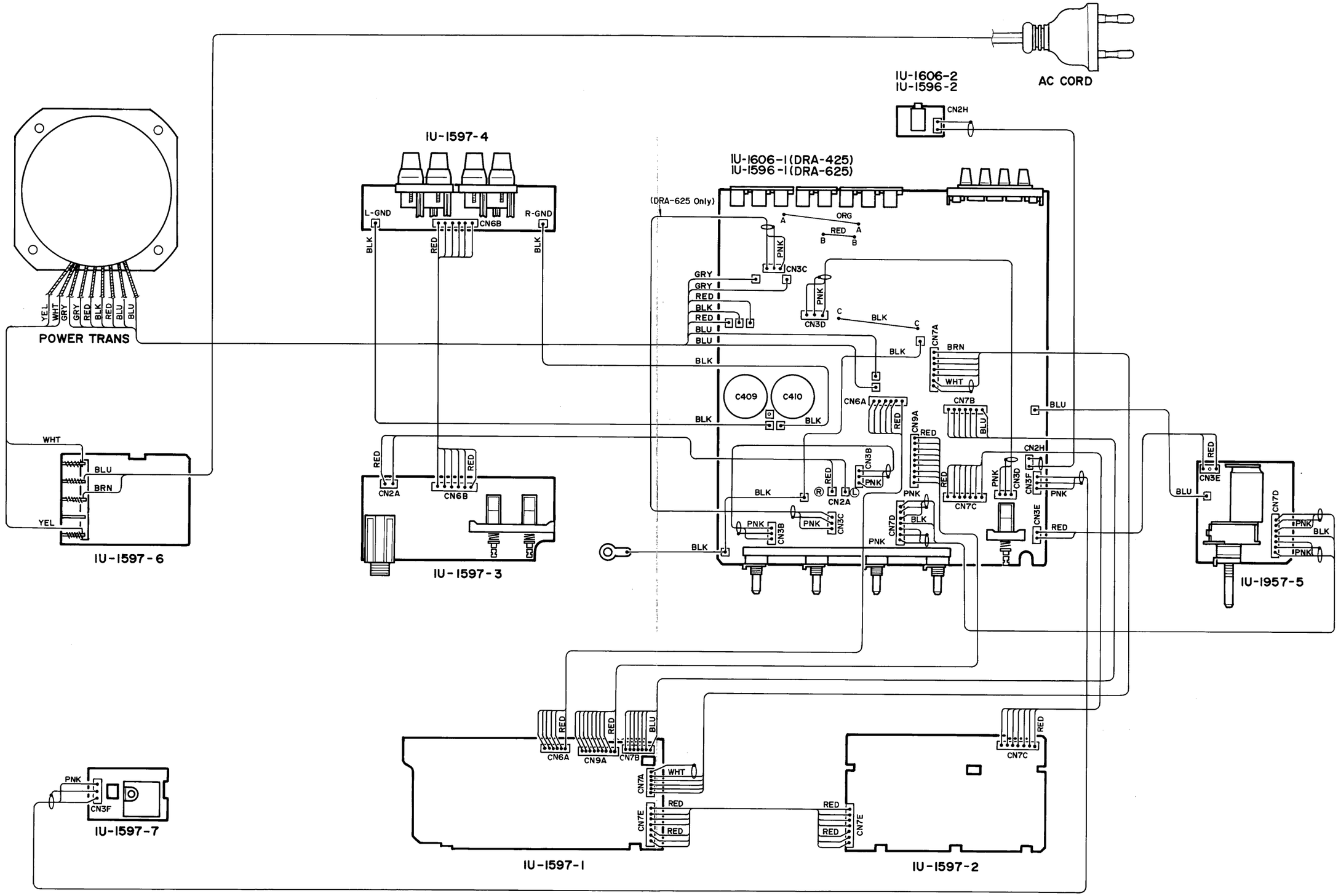
Ref. No.	Part No.	Part Name	Remarks
37	1460922413	INNER PANEL	
38	1131018119	KNOB-TACT-1	
39	1131019118	KNOB-TACT-2	
40	1131020217	KNOB-FUNCTION	
44	1131054018	POWER KNOB-Ass'y	
46■	1441689212	FRONT PANEL Ass'y	
46●	1441691213	FRONT PANEL Ass'y	
48	1139071019	PUSH KNOB (T)	
49	1120529114	VOLUME KNOB	
50	1120530129	KNOB	
51	1120530132	KNOB	
52	1020314018	TOP COVER	
SCREW			
110	4770263018	3P SWELLING SCREW	
PACKING & ACCESSORIES (not included Exploded view)			
211■	5011237113	CARTON CASE	
211●	5011239111	CARTON CASE	
215	5139111001	COLOR LABEL (GOLD)	

NOTE : ■ DRA-625 only
● DRA-425 only

ADDENDUM LIST

Ref. No.	Part Name & Descriptions	DRA625	DRA425	
		Australia	Australia	U.K.
9	DISPLAY UNIT	1U-1597K	1U-1597L	1U-1597L
16	MASKING SHEET	5131144005(3)	5131144005(3)	5131144005(3)
24	AC CORD	2062025005	2062025005	
	AC CORD WITH LABEL			2062024006
29	POWER TRANS(EA)	2335681008	2335680009	2335680009
	VOLTAGE LABEL	5130362008(2)	5130362008(2)	5130362008(2)

WIRING DIAGRAM (DRA-625/425)



SCHEMATIC DIAGRAM (for DRA-625)

1 2 3 4 5 6

IU-1596AZ-1

IU-1597-5

FRONT END

IC701 LA1266

IC702 LA3401

IC852 LB1403N

IC201 NJM2043DD

IC101 LC4966

IC102 LC4966

IC103 LC4966

IC104 LC4966

IC703 TC9172P

IC601 HD6305U0A47P

IC602 MN1280

IC603 TC9173P

IC605 HD14082

IC606 LB1294

IC301 M5238P

IC302 M5238P

TR701 2SC461(C)

TR725,726 2SK161GR

TR710 2SA1048(GR)

TR711 2SA1048(GR)

TR714,715 2SC2458(BL)

TR721 2SK365

TR722 2SC2458(BL)

TR703 2SC2458(BL)

TR705 2SA1048(GR)

TR706,707,709 2SC2458(BL)

TR708 2SA1048(GR)

TR716 RN2204

TR301 RN2204

TR303 2SC2878 (A/B)

TR304 2SC2878 (A/B)

TR601 RN1204

TR602 RN1204

TR603 RN1204

TR604 RN2204

D701 ISS270A

D705 ISS270A

D707 ISS270A

D605 ISS270A

ZD701 HZS5C-2

XL601 CST4.0MG

FM 75Ω

AM LOOP ANTENNA

PHONO

CD

AUX

TAPE 1 PB

TAPE 1 REC

TAPE 2 PB

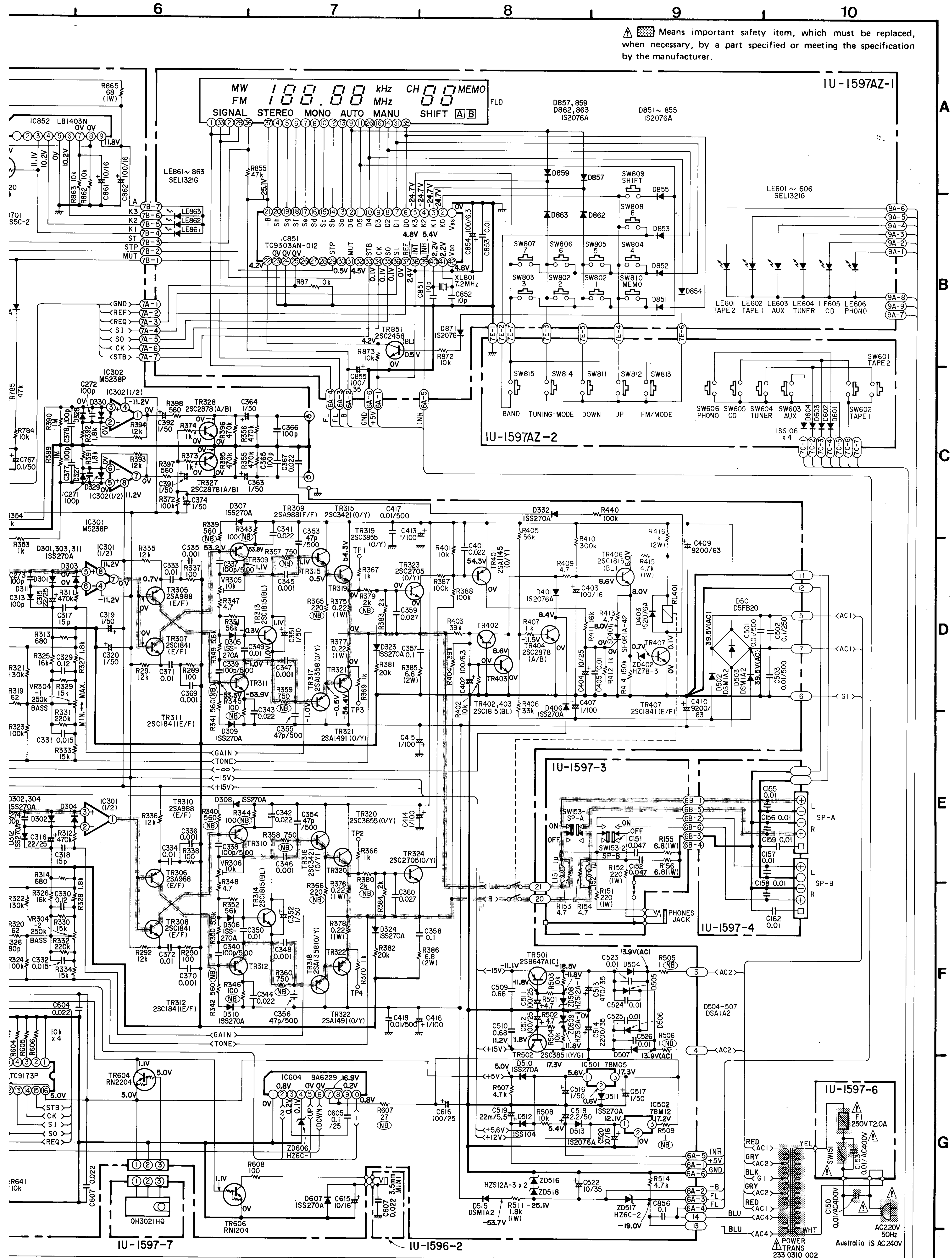
TAPE 2 REC

FTZ CHOKE COIL L201

FTZ CHOKE COIL L202

IU-1597

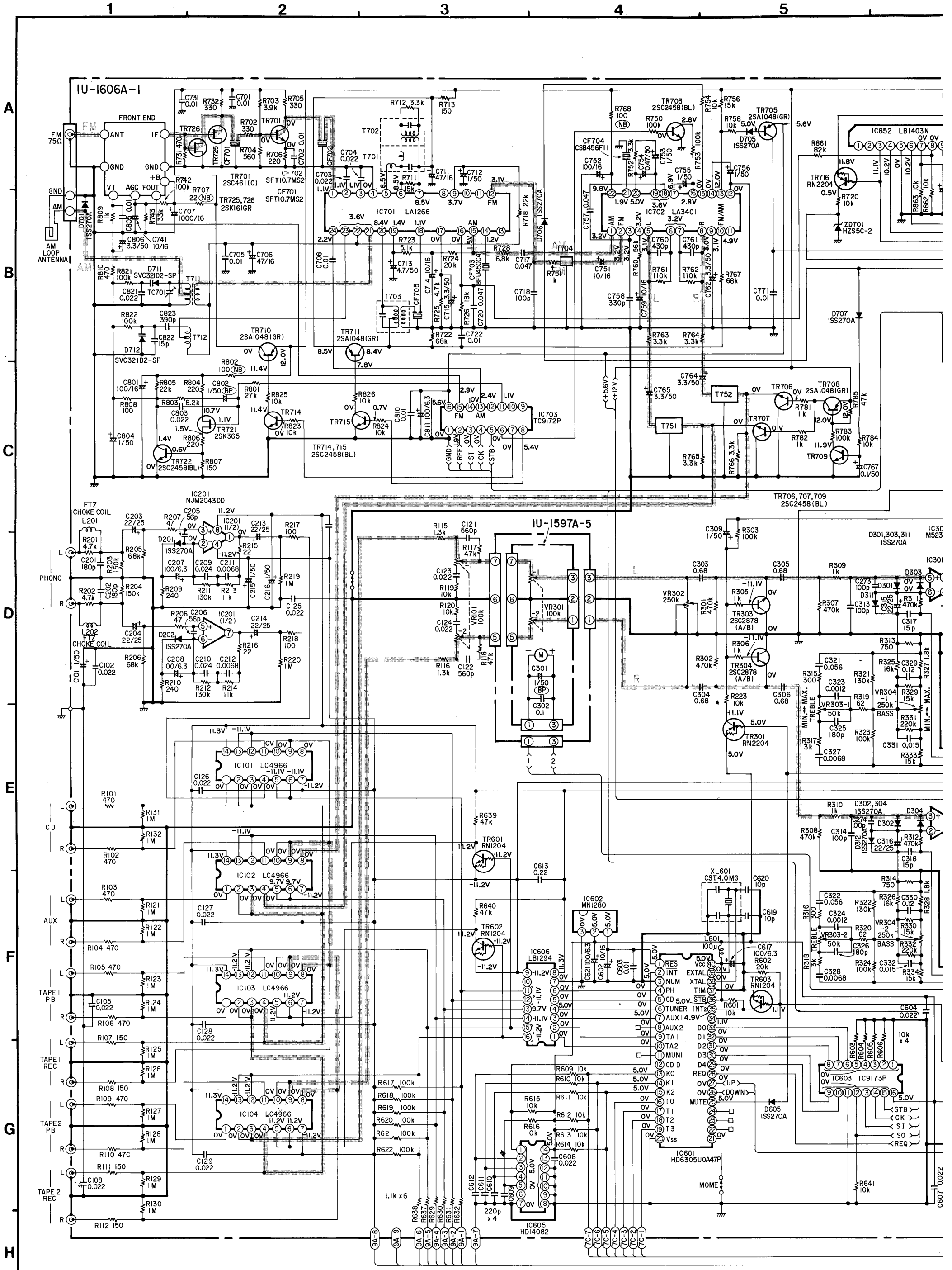
⚠ ▒ Means important safety item, which must be replaced, when necessary, by a part specified or meeting the specification by the manufacturer.



▒ : FM or L-CH SIGNAL LINE
▒ : AM or R-CH SIGNAL LINE

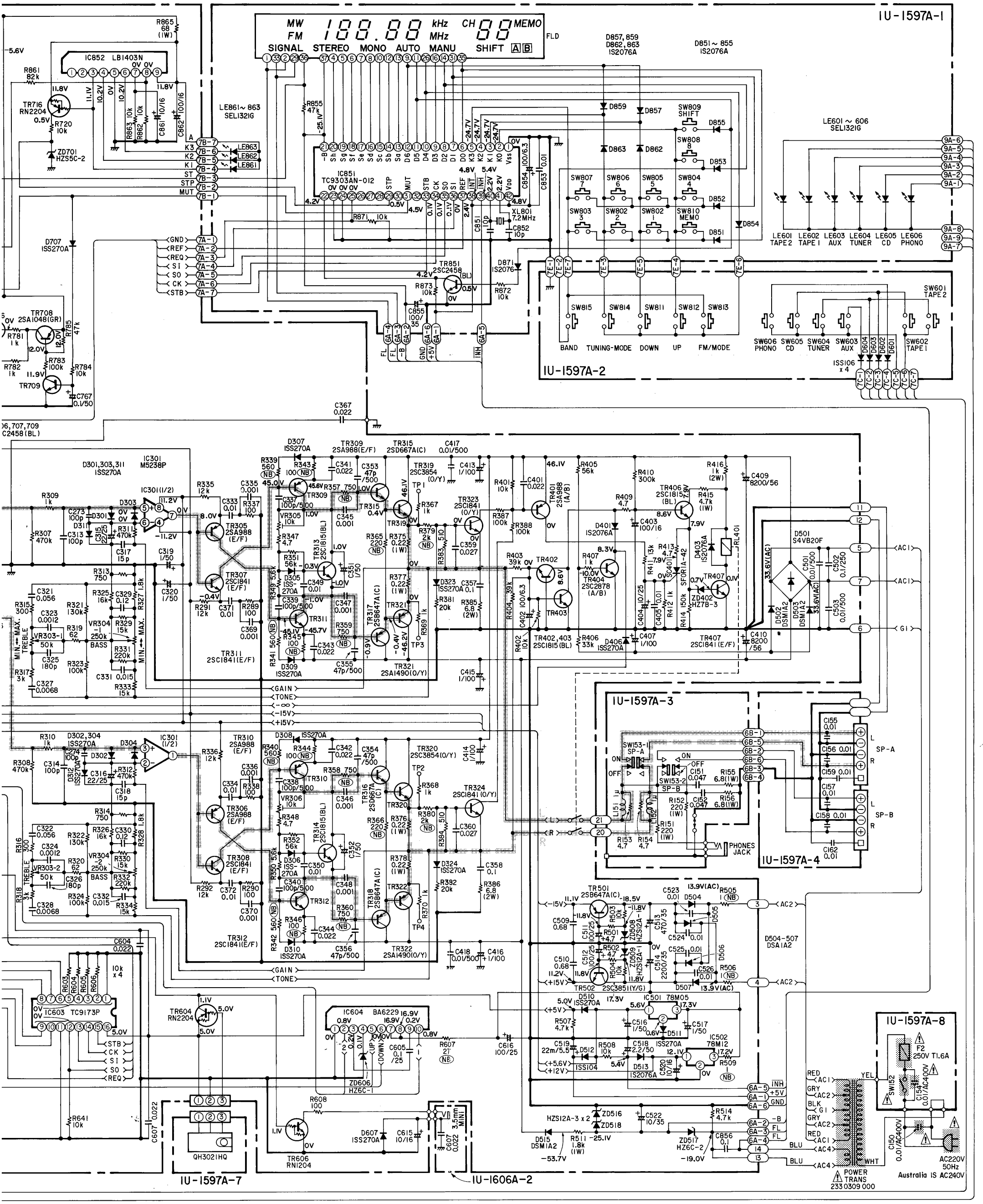
NOTES
ALL RESISTANCE VALUES IN OHM k = 1,000 OHM M = 1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD P = MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

SCHEMATIC DIAGRAM (DRA-425)



6 7 8 9 10

⚠ ▨ Means important safety item, which must be replaced, when necessary, by a part specified or meeting the specification by the manufacturer.



NOTES
ALL RESISTANCE VALUES IN OHM k = 1,000 OHM M = 1,000,000 OHM
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