

MODEL **800A**
800X



MAINTENANCE MANUAL

 **Dokorder[®]**

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GENERAL DESCRIPTION

The Dokorder 800A is a stereo receiver with an SEPP ITL-OTL power amplifier capable of delivering no less than 170 watts in music power and with other performance specifications that rate it among the very best in the world today. It incorporates a large number of design features preferred by quality-minded audio enthusiasts. Also featured is a unique control console which folds away and disappears out of sight when not needed.

The receiver is solid state throughout, utilizing silicon transistors, a field effect transistor and two integrated circuits. It offers a power bandwidth from 10 to 50,000 Hz with a distortion factor of less than 0.5% at rated output, and an exceptionally high 70db S/N ratio. The all solid state circuitry ensures cooler running, maximum dependability and superior performance.

With two stages of RF amplification using the latest field effect transistor and four ganged variable capacitors, the FM tuner section of the 800A sets new standards in FM sensitivity and selectivity; sensitivity is $1.5\mu\text{V}$ (IHF), and selectivity is better than 45db. The S/N ratio for this part of the receiver is better than 60db with 100% modulation, $500\mu\text{V}$ input. IF rejection is better than 100db, while cross modulation and image rejection figures are both better than 90db. And stereo separation is rated at 38db at 1 KHz.

An advanced switching matrix system in the 800A permits the receiver to switch automatically from FM mono to stereo broadcasts, depending on the signal received. The words "FM STEREO" are illuminated in the dial window when the receiver is tuned to an FM stereo broadcast.

Controls used most frequently are all readily accessible on the front panel. They include both the graphic type for Balance and Volume, and the responsive one-touch pushbutton type for power, program selection and tape monitoring. There are also a tuning meter and a unique output muting switch which instantly reduces the amplifier gain to one-tenth that of normal to save the operator the trouble of having to re-adjust volume after such interruptions as a telephone call. In addition, a stereo headphone jack is provided on the front panel.

Then there is the convenient compartment-like control console which can be pulled out for use when needed. It houses bass and treble tone controls, two individual speaker selector switches, high and low filter switches, and mode, loudness, AFC and FM muting switches.

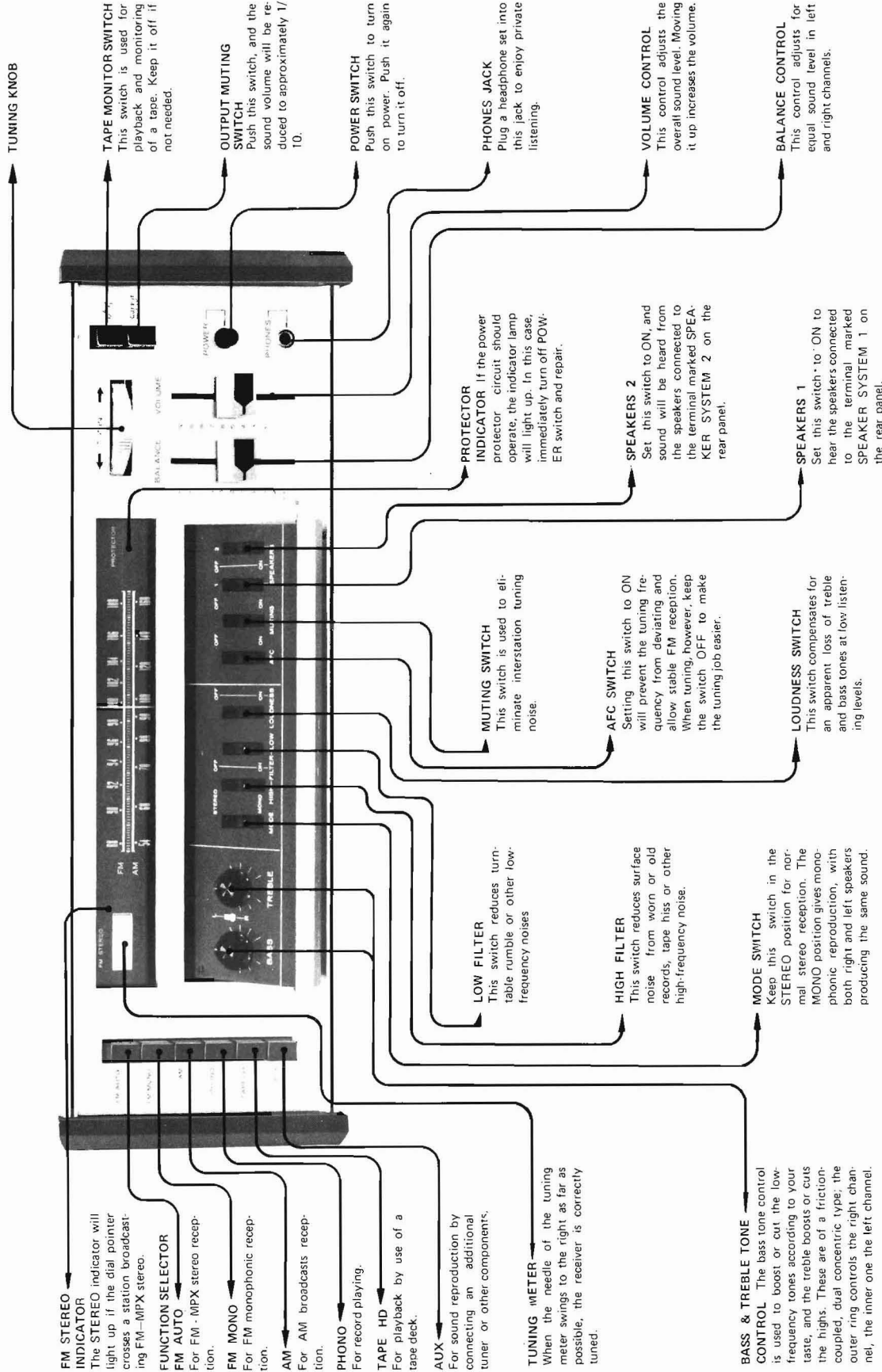
On the rear panel, terminals are provided for two sets of speaker systems the 800A is capable of powering. These may be operated simultaneously with a stereo headphone set if so desired. Other rear panel features include both DIN and pin recording input/output terminals, two AC outlets, a mono output jack for connection to a fifth speaker, and independent terminals for the preamplifier and main amplifier for use in a bi- or tri-amplification system.

A special circuit has been incorporated in the 800A to protect its power transistors from possible damage due to overloads and short circuits. When this circuit is activated, a Protector indicator lamp on the front panel warns the operator to turn the power off.

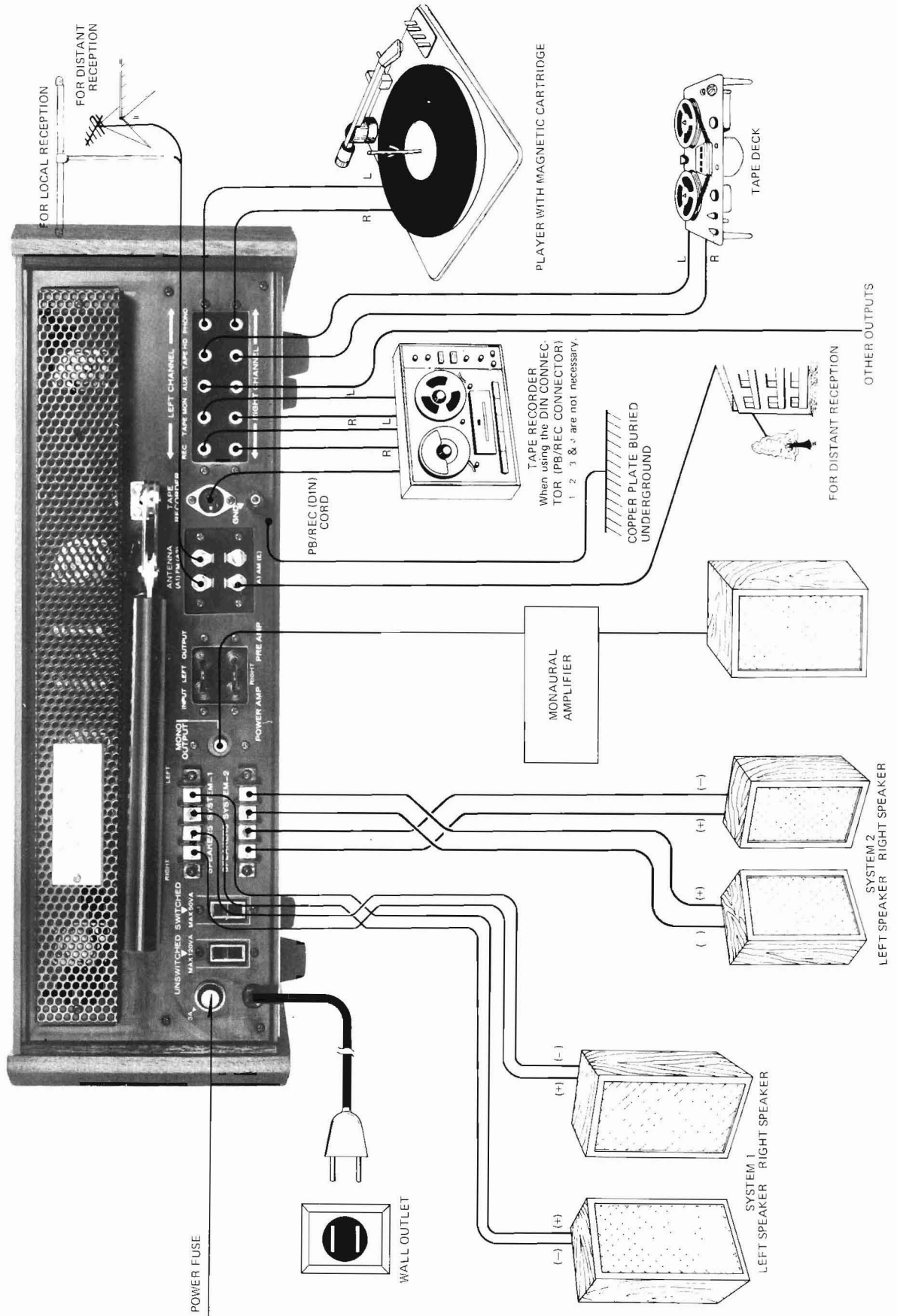
Finally, with a minimum of front panel controls in view, handsome walnut side panels and compact dimensions, the Dokorder 800A adds to the appearance of any quality stereo system.

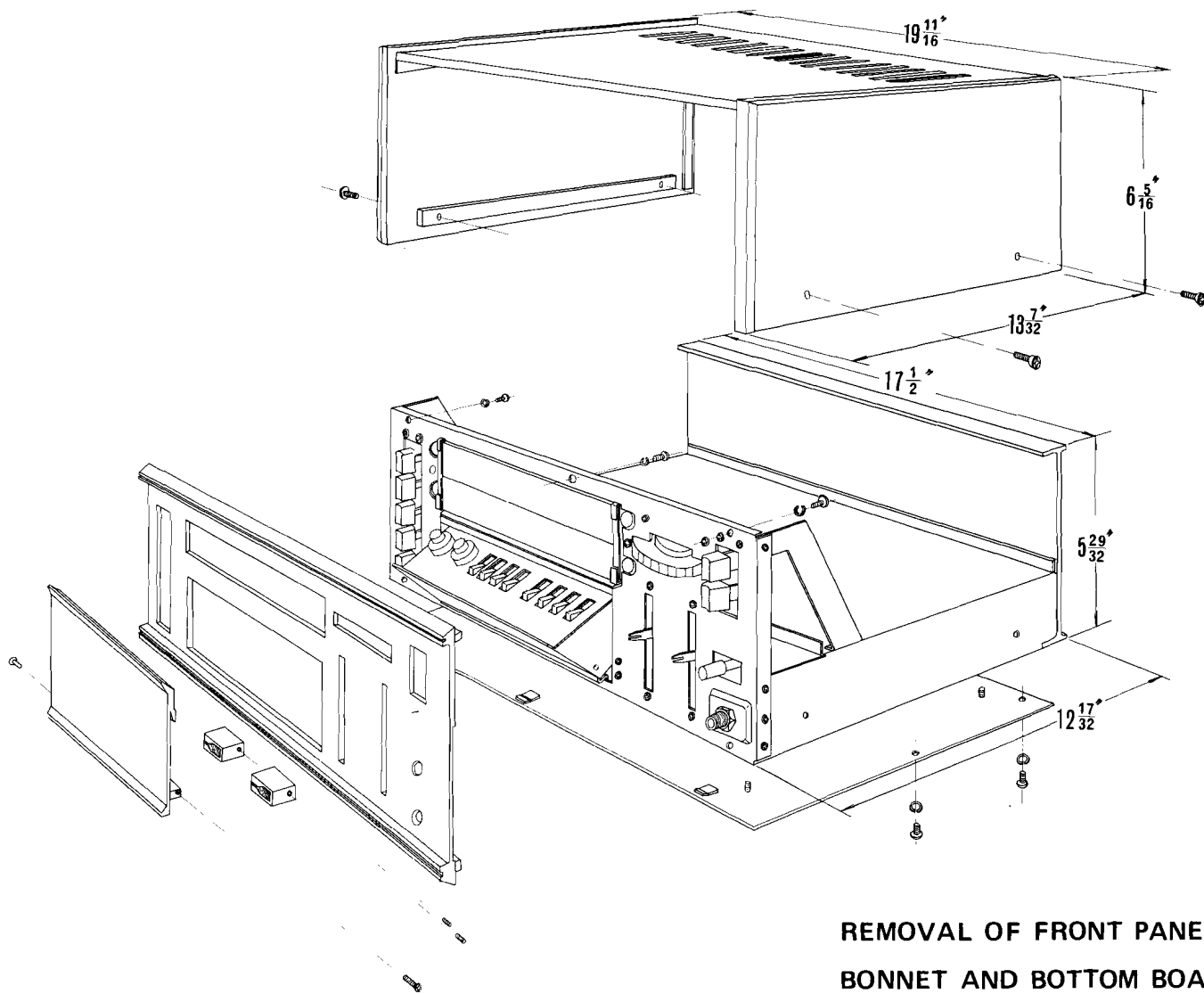
The Dokorder 800X is a companion model of the 800A. It is the same as the 800A in all important respects except the power output and harmonic distortion; its music power output is rated at 200 watts, and harmonic distortion 0.8%. It also has a few extra refinements, such as the gorgeous lustrous metallic gold front panel and new functional black dial window which turns black when functions other than radio reception are selected. And to cap them all, the entire receiver is packaged in a rich walnut cabinet.

FRONT PANEL INFORMATION

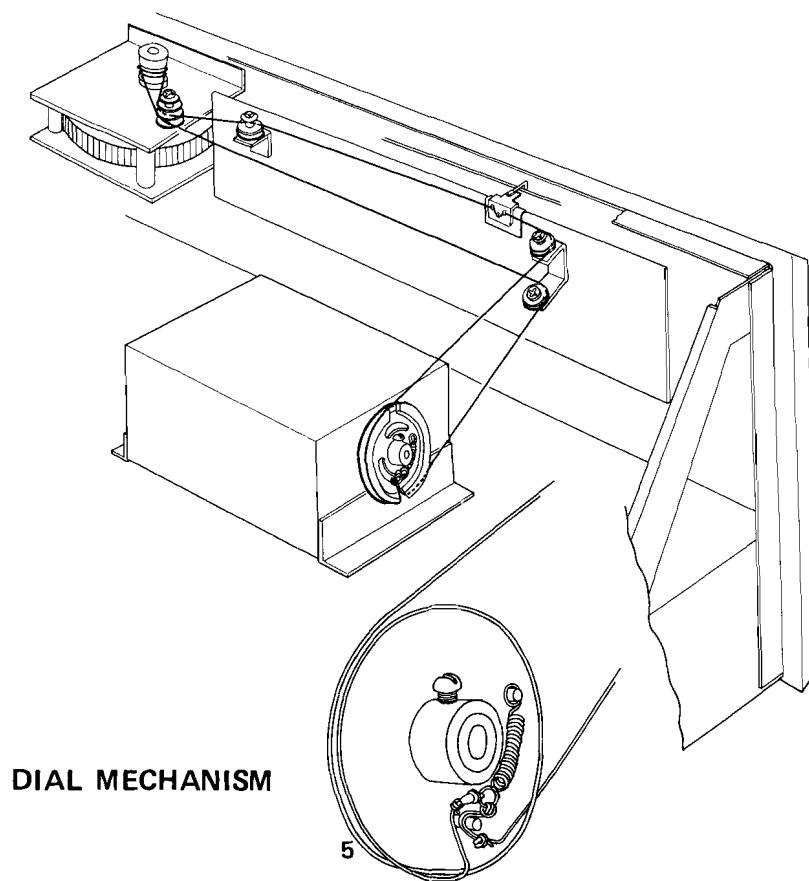


COMPONENT CONNECTIONS



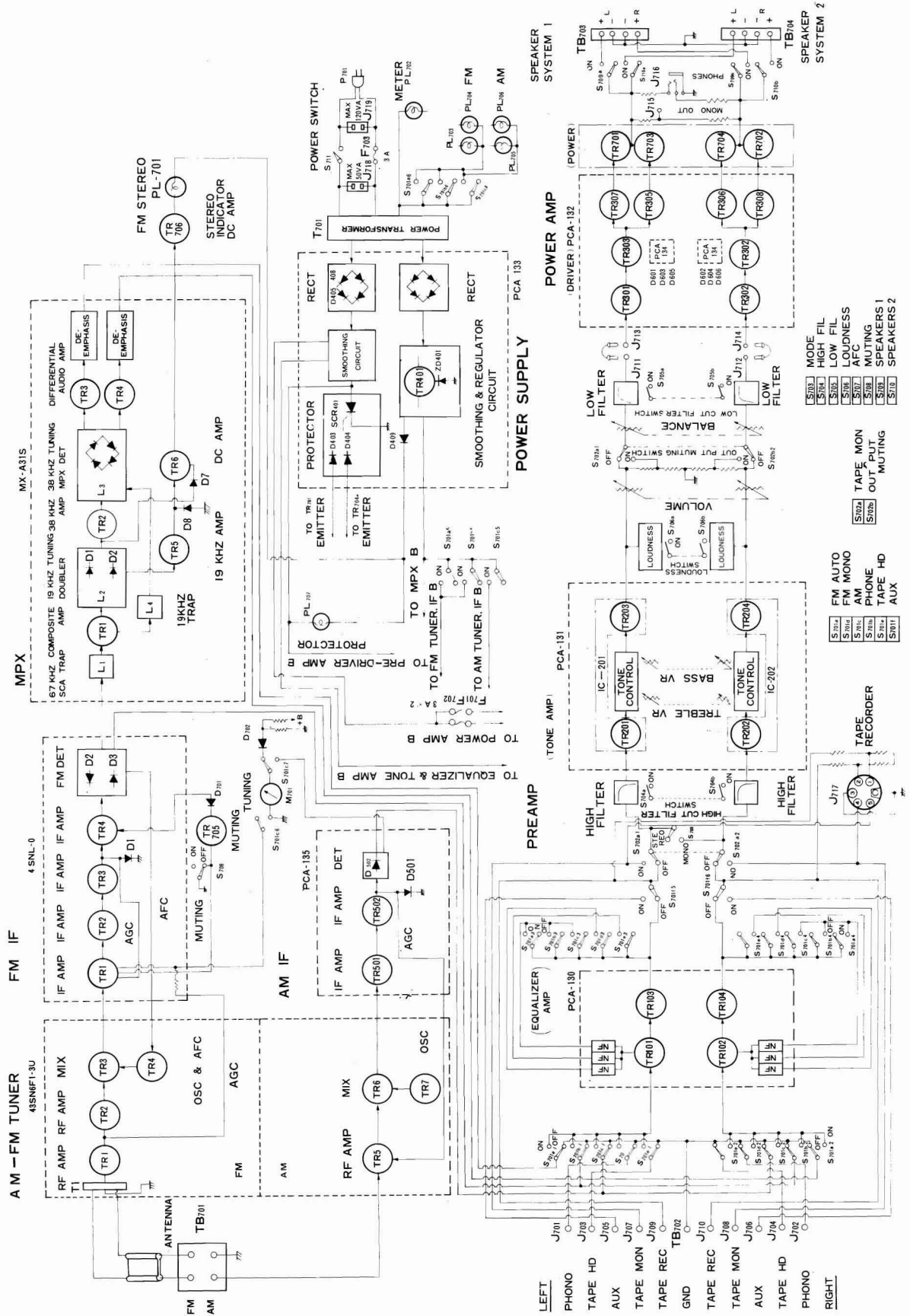


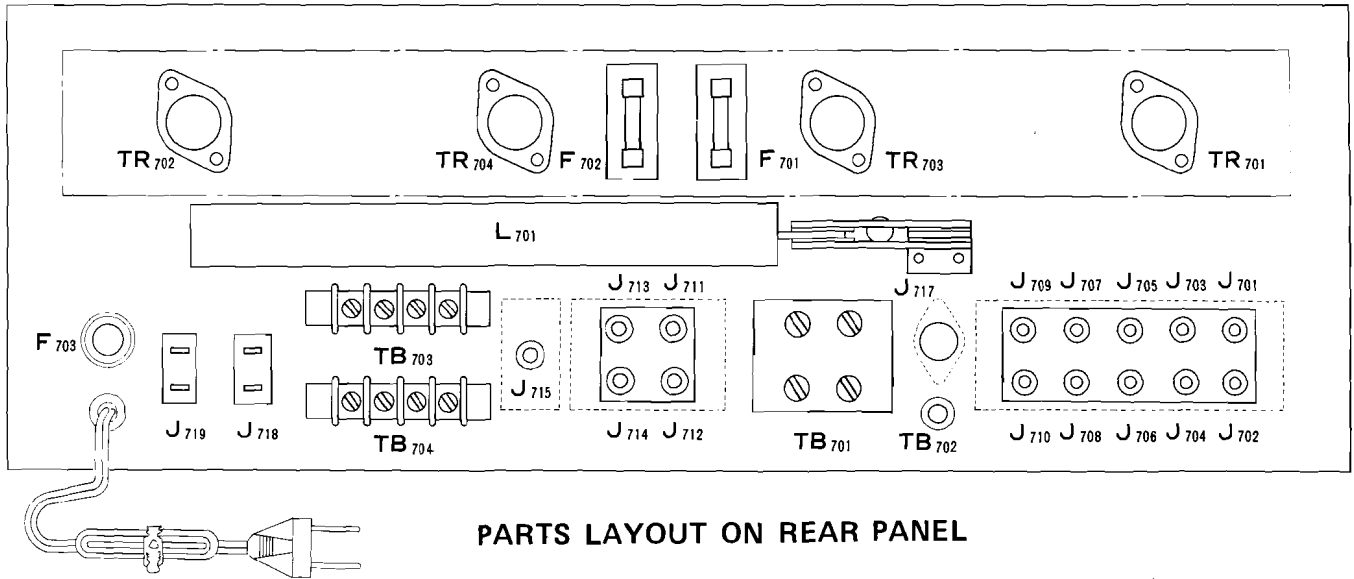
**REMOVAL OF FRONT PANEL
BONNET AND BOTTOM BOARD**



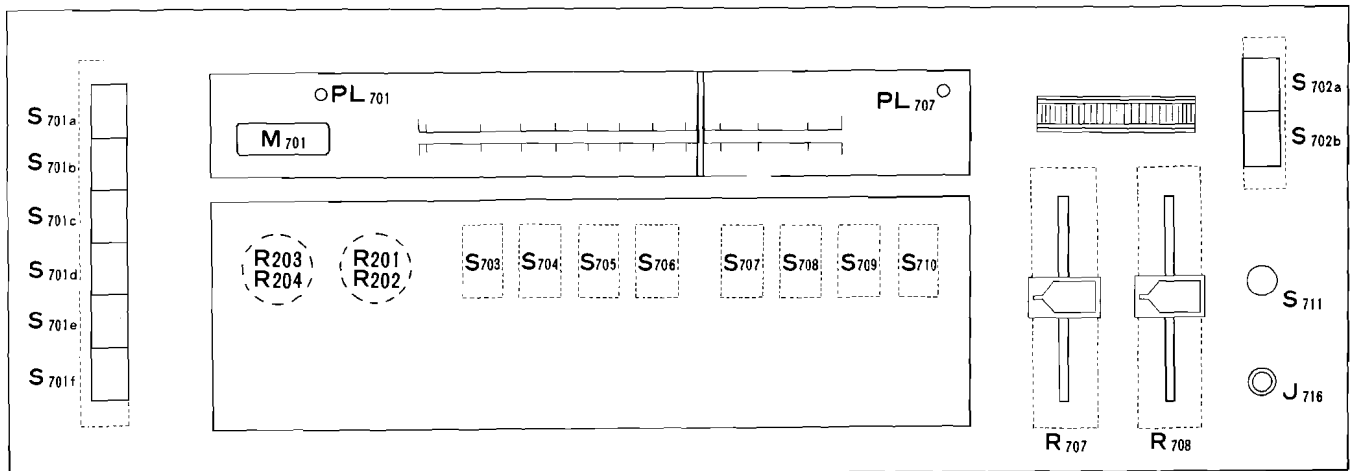
DIAL MECHANISM

BLOCK DIAGRAM

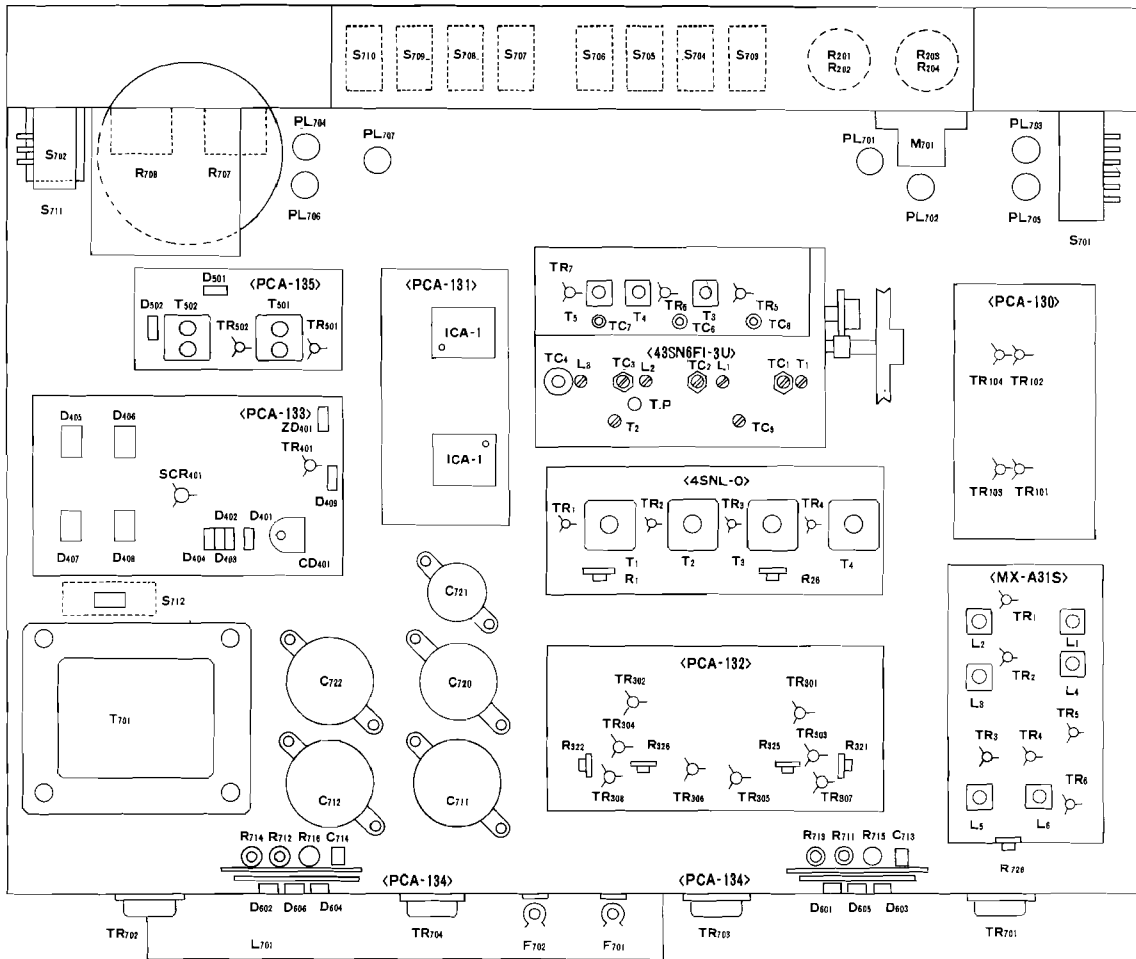




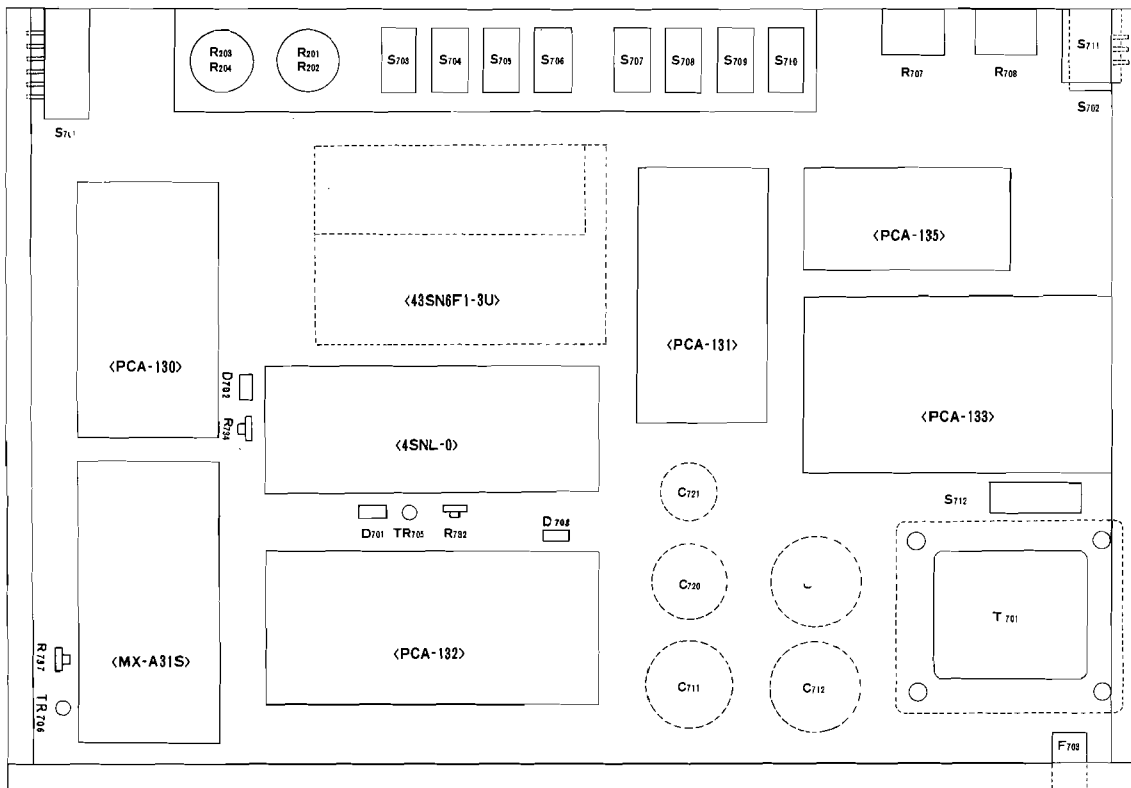
PARTS LAYOUT ON REAR PANEL



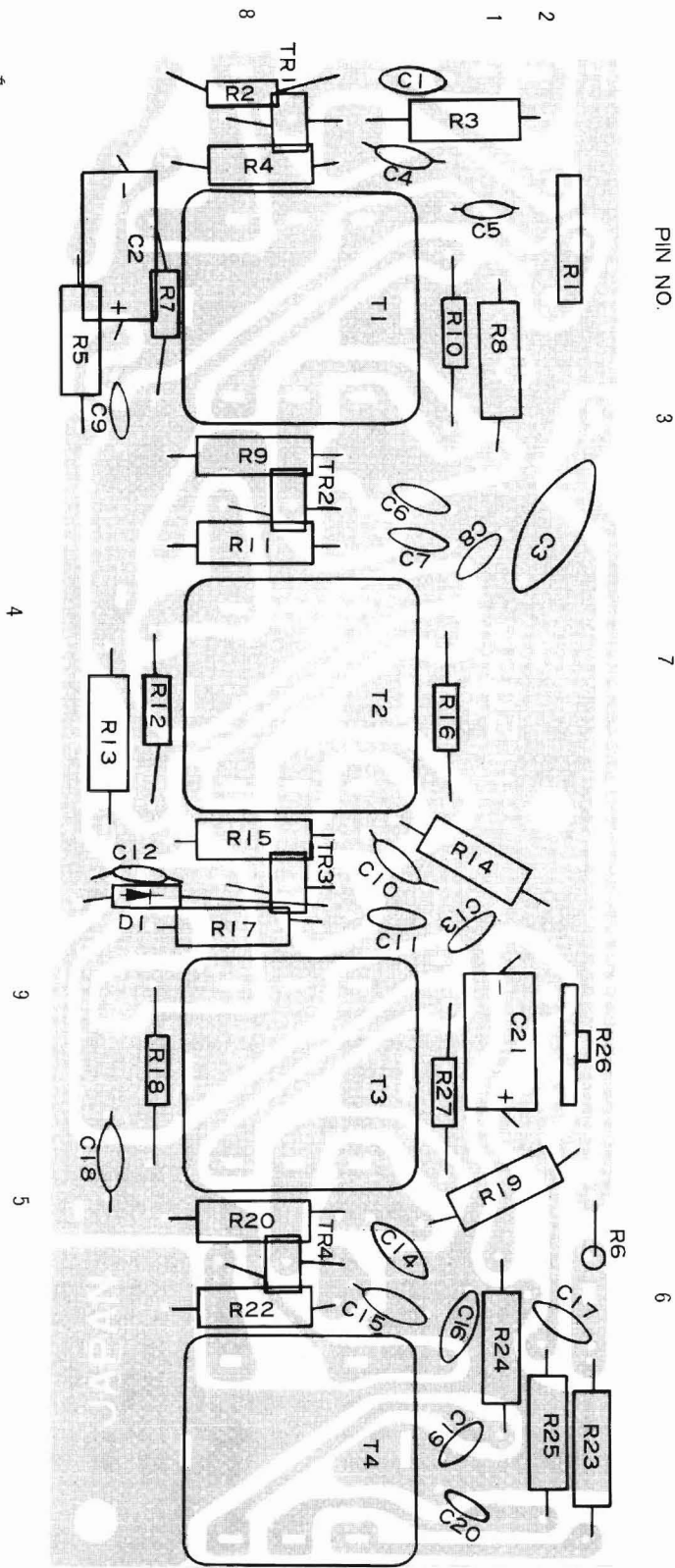
PARTS LAYOUT ON FRONT PANEL



**PARTS LAYOUT INSIDE
(as viewed from top)**



**PARTS LAYOUT INSIDE
(as viewed from bottom)**



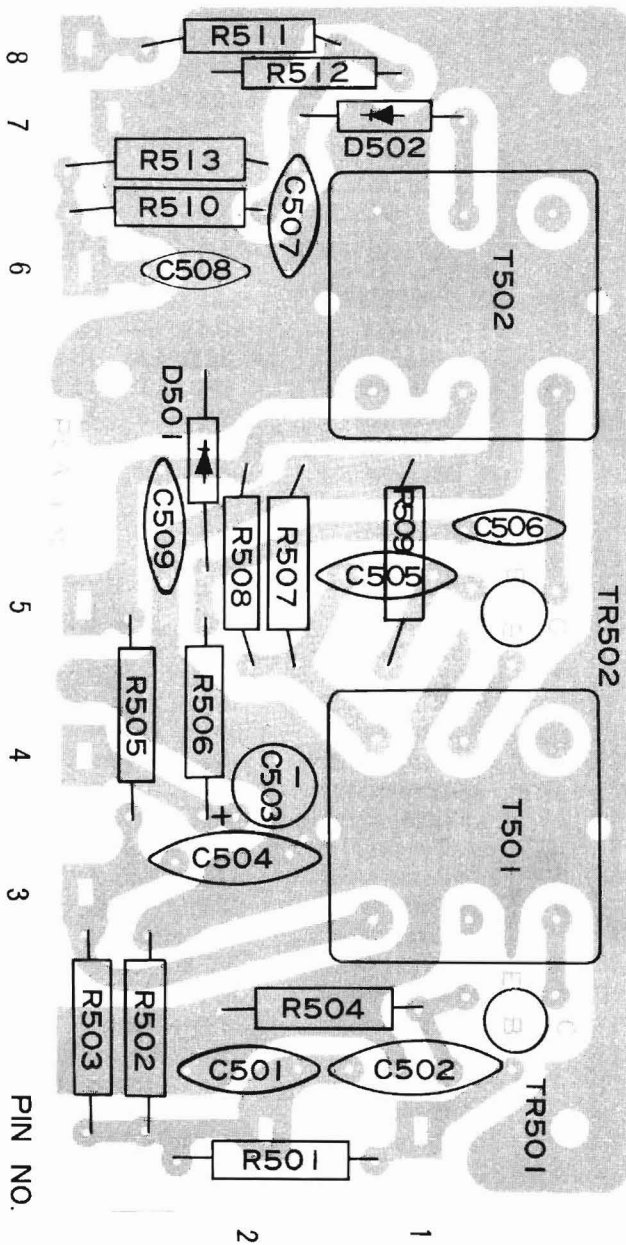
PARTS LAYOUT OF FM IF AMP. 4SNL-0

AM/FM TUNER SECTION

SYMBOL NO.	DESCRIPTION
	43SN6F1-3U, AM/FM Tuner Front End Complete Assy

FM IF AMP. SECTION

SYMBOL NO.	DESCRIPTION
	4SNL-0, FM IF Amp. PC Board Assy
Capacitors	
C1	Ceramic 0.01 uF 12 WV
C2	Electrolytic 5.00 uF 15 WV
C3	Ceramic 0.50 uF 12 WV
C4-8	Ceramic 0.01 uF 12 WV
C9	Ceramic 0.10 uF 50 WV
C10-11	Ceramic 0.01 uF 12 WV
C12	Ceramic 8.20 pF 50 WV
C13-16	Ceramic 0.01 uF 12 WV
C17	Ceramic 220.00 pF 50 WV
C18	Ceramic 0.01 uF 12 WV
C19-20	Ceramic 500.00 pF 50 WV
C21	Electrolytic 5.00 uF 15 WV
Resistors	
R1	Variable 100.0 Kohms (B)
R2	Composition 3.9 Kohms 1/4 W
R3	Composition 3.9 Kohms 1/2 W
R4	Composition 1.8 Kohms 1/2 W
R5	Composition 5.6 Kohms 1/2 W
R6	Composition 47.0 Kohms 1/2 W
R7	Composition 12.0 Kohms 1/4 W
R8	Composition 3.9 Kohms 1/2 W
R9	Composition 20.0 Kohms 1/2 W
R10	Composition 12.0 Kohms 1/2 W
R11	Composition 1.2 Kohms 1/2 W
R12	Composition 12.0 Kohms 1/4 W
R13	Composition 56.0 ohms 1/4 W
R14	Composition 3.9 Kohms 1/2 W
R15	Composition 27.0 Kohms 1/2 W
R16	Composition 12.0 Kohms 1/4 W
R17	Composition 470.0 ohms 1/2 W
R18	Composition 12.0 Kohms 1/4 W
R19	Composition 10.0 Kohms 1/2 W
R20	Composition 3.9 Kohms 1/2 W
R21	Composition 12.0 Kohms 1/4 W
R22	Composition 3.9 Kohms 1/2 W
R23	Composition 68.0 ohms 1/2 W
R24	Composition 2.2 Kohms 1/2 W
R25	Composition 680.0 ohms 1/2 W
R26	Variable 20.0 Kohms (B)
Transformers	
T1-3	FM IF Transformer (153071)
T4	FM DET Transformer (153072)
Transistors and Diode	
TR1-4	N-P-N Transistor 2SC-460
D1	Germanium Diode 1N-60

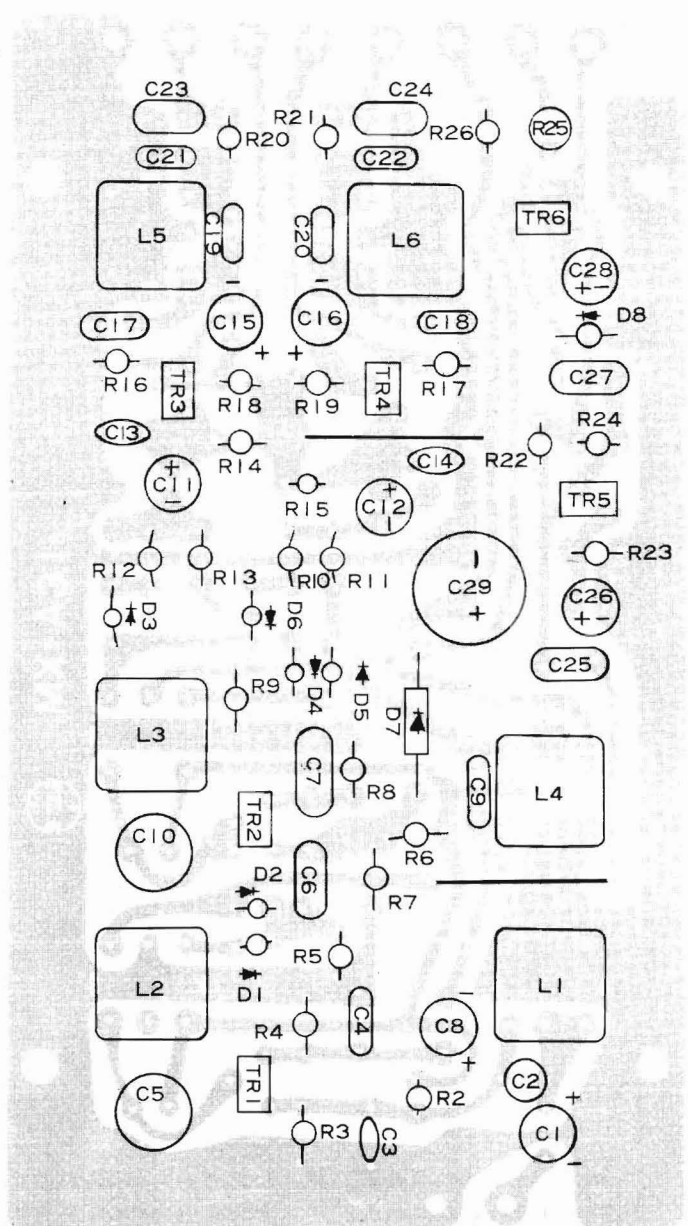


PARTS LAYOUT OF AM IF AMP. PCA-135

AM IF AMP. SECTION

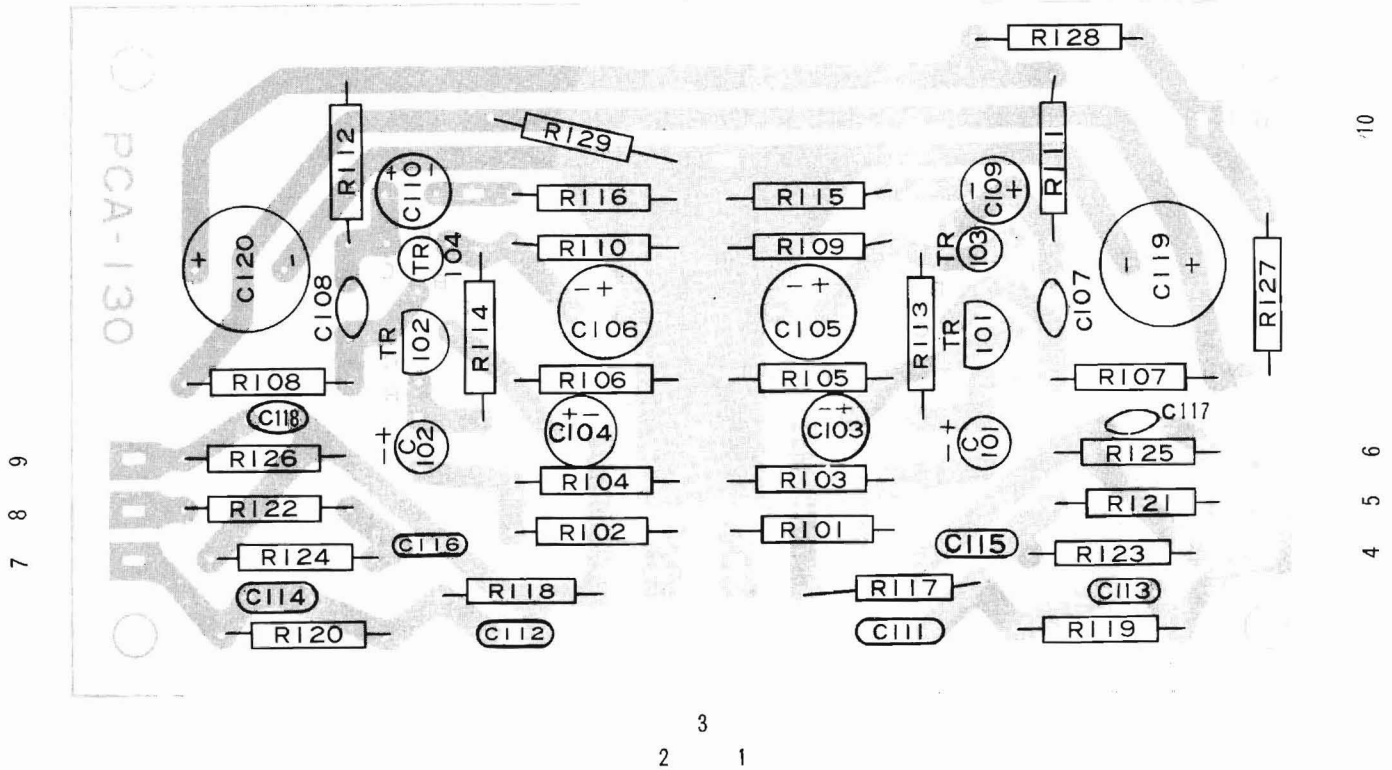
SYMBOL NO.	DESCRIPTION				
	PCA-135, AM IF Amp. PC Board Assy				
	Capacitors				
C502	Ceramic	0.10	uF	50	WV
C503	Electrolytic	4.70	uF	6.3	WV
C504-505	Ceramic	0.05	uF	50	WV
C506	Ceramic	0.68	pF	50	WV
C507	Ceramic	1000.00	pF	50	WV
C508	Ceramic	100.00	pF	50	WV
C509	Ceramic	0.05	uF	50	WV
	Resistors				
R501	Carbon	5.6	ohms	1/4	W
R502	Carbon	10.0	Kohms	1/4	W
R503	Carbon	39.0	Kohms	1/4	W
R504	Carbon	680.0	ohms	1/4	W
R505	Carbon	56.0	ohms	1/4	W
R506	Carbon	10.0	Kohms	1/4	W
R507	Carbon	3.3	Kohms	1/4	W
R508	Carbon	15.0	Kohms	1/4	W
R509	Carbon	390.0	ohms	1/4	W
R510	Carbon	100.0	Kohms	1/4	W
R511-512	Carbon	22.0	Kohms	1/4	W
R513	Carbon	1.8	Kohms	1/4	W
	Transformers				
T501	AM IF Transformer			(22M18-A)	
T502	AM DET Transformer			(22M18-C)	
	Transistors and Diodes				
TR501-502	N-P-N Transistor			2SC-536E	
D501-502	Germanium Diode			74Q16685	

MPX AMP. SECTION



PARTS LAYOUT OF MPX AMP. MX-A31S

SYMBOL NO.	DESCRIPTION			
	MX-A31S, MPX Amp. PC Board Assy			
	Capacitors			
C1	Electrolytic	1.00 uF	6	WV
C2	Styrol	470.00 pF	50	WV
C3	Ceramic	300.00 pF	50	WV
C4-5	Mylar	4700.00 pF	50	WV
C6	Mylar	0.022 uF	50	WV
C7	Mylar	0.033 uF	50	WV
C8	Electrolytic	3.00 uF	6	WV
C9	Styrol	5600.00 pF	50	WV
C10	Styrol	4700.00 pF	50	WV
C11-12	Electrolytic	3.00 uF	6	WV
C13-14	Ceramic	470.00 pF	50	WV
C15-16	Electrolytic	3.00 uF	6	WV
C17-18	Mylar	1200.00 pF	50	WV
C19-20	Mylar	1500.00 pF	50	WV
C21-22	Mylar	1200.00 pF	50	WV
C23-24	Mylar	0.022 uF	50	WV
C25	Mylar	0.01 uF	50	WV
C26	Electrolytic	3.00 uF	6	WV
C27	Mylar	0.022 uF	50	WV
C28	Electrolytic	3.00 uF	6	WV
C29	Electrolytic	100.00 uF	15	WV
	Coils			
L1	SCA Trap Coil		(R-126577-C)	
L2	19KHz		(R-9214)	
L3	38KHz Tuning		(R-9215)	
L4	19KHz Trap		(R-126577-A)	
L5-6	38KHz Trap		(R-126577-B)	
	Transistors and Diodes			
TR1-6	N-P-N Transistor		2SC-458A	
D1-8	Germanium Diode		SD-46	
	Resistors			
R2-3	Carbon	150.0	Kohms	1/4 W
R4	Carbon	2.7	Kohms	1/4 W
R5	Carbon	10.0	Kohms	1/4 W
R6	Carbon	82.0	Kohms	1/4 W
R7	Carbon	100.0	Kohms	1/4 W
R8	Carbon	2.7	Kohms	1/4 W
R9	Carbon	6.8	Kohms	1/4 W
R10-13	Carbon	10.0	Kohms	1/4 W
R14-15	Carbon	390.0	Kohms	1/4 W
R16-17	Carbon	470.0	ohms	1/4 W
R18-19	Carbon	2.7	Kohms	1/4 W
R20-21	Carbon	1.0	Kohms	1/4 W
R22	Carbon	560.0	Kohms	1/4 W
R23	Carbon	100.0	ohms	1/4 W
R24	Carbon	5.6	Kohms	1/4 W
R25	Carbon	220.0	ohms	1/4 W
R26	Carbon	100.0	ohms	1/4 W

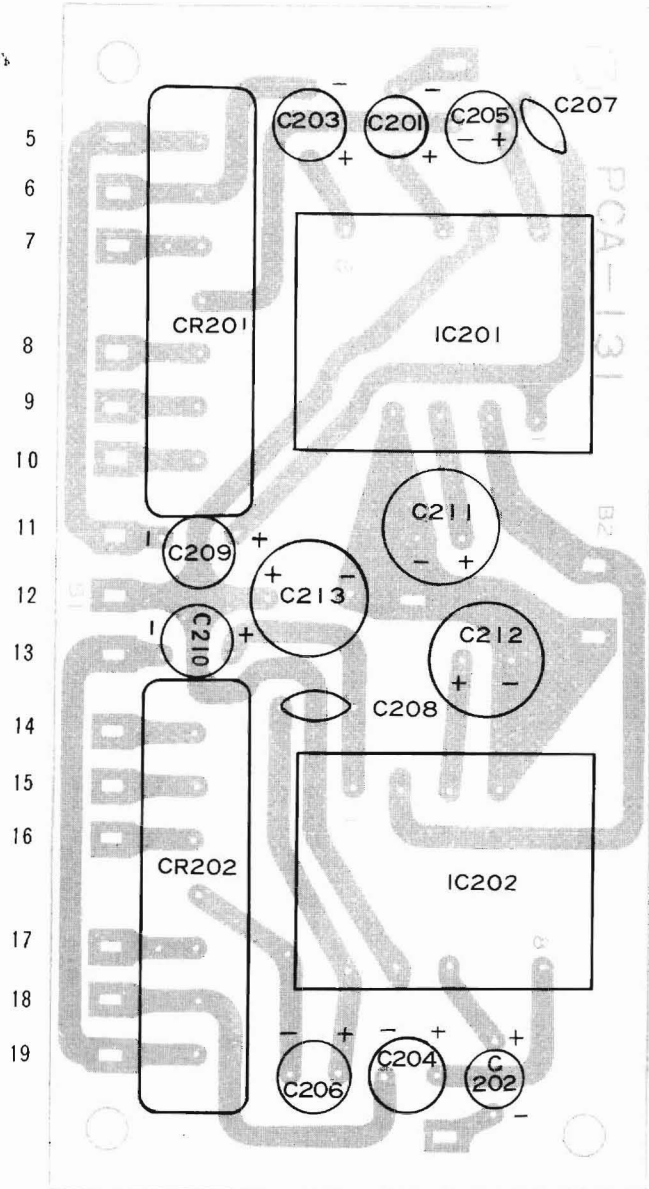


PARTS LAYOUT OF EQUALIZER AMP. PCA-130

EQUALIZER AMP. SECTION

SYMBOL NO.	DESCRIPTION
	PCA-130, Equalizer Amp. PC Board Assy
	Capacitors
C101-102	Tantalum 2.20 uF 3.15 WV
C103-104	Electrolytic 10.00 uF 16.0 WV
C105-106	Electrolytic 47.00 uF 10.0 WV
C107-108	Ceramic 100.00 pF 50.0 WV
C109-110	Electrolytic 10.00 uF 16.0 WV
C111-112	Mylar 0.01 uF 50.0 WV
C113-114	Mylar 3300.00 pF 50.0 WV
C115-116	Mylar 6800.00 pF 50.0 WV
C117-118	Ceramic 100.00 pF 50.0 WV
C119	Electrolytic 100.00 uF 6.3 WV
C120	Electrolytic 47.00 uF 25.0 WV

Resistors				
R101-102	Carbon	2.2	Kohms	1/4 W
R103-104	Carbon	62.0	Kohms	1/4 W
R105-106	Carbon	470.0	ohms	1/4 W
R107-108	Carbon	15.0	Kohms	1/4 W
R109-110	Carbon	820.0	ohms	1/4 W
R111-112	Carbon	5.6	Kohms	1/4 W
R113-114	Carbon	560.0	Kohms	1/4 W
R115-116	Carbon	27.0	Kohms	1/4 W
R117-118	Carbon	560.0	Kohms	1/4 W
R119-120	Carbon	22.0	Kohms	1/4 W
R121-122	Carbon	7.5	Kohms	1/4 W
R123-124	Carbon	1.8	Mohms	1/4 W
R125-127	Carbon	10.0	Kohms	1/4 W
R128	Carbon	470.0	ohms	1/4 W
R129	Carbon	3.9	Kohms	1/4 W
	Transistors			
TR101-102	N-P-N Transistor	2SC-871E		
TR103-104	N-P-N Transistor	2SC-536E		



PIN NO.

2

PARTS LAYOUT OF TONE AMP. PCA-131

TONE AMP. SECTION

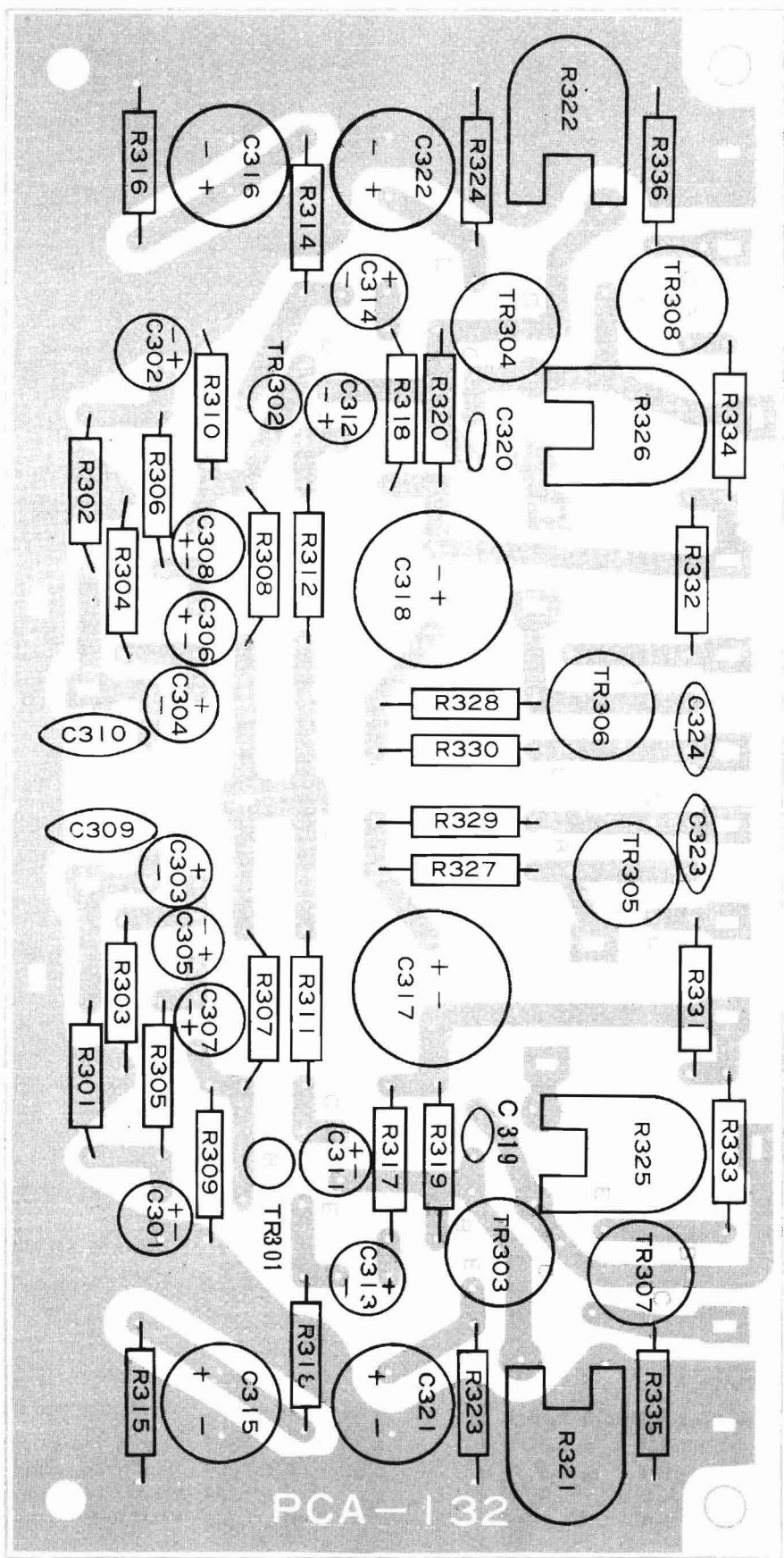
SYMBOL NO.	DESCRIPTION
	PCA-131, Tone Amp. PC Board Assy
	Capacitors
C201-202	Electrolytic 1 uF 50 WV
C203-206	Electrolytic 10 uF 16 WV
C207-208	Ceramic 30 pF 50 WV
C209-210	Electrolytic 10 uF 16 WV
C211-212	Electrolytic 100 uF 6.3 WV
C213	Electrolytic 47 uF 25 WV

C/R Compound Parts		
CR201-202	C/R Compound Parts	7FR01
Integrated Circuits		
IC201-202	Integrated Circuit	ICA-1

DRIVER AMP. SECTION

SYMBOL NO.	DESCRIPTION
	PCA-132, Driver Amp. PC Board Assy
	Capacitors
C301-302	Electrolytic 2.2 uF 25.0 WV
C303-308	Electrolytic 1.0 uF 50.0 WV
C309-310	Ceramic 330.0 pF 50.0 WV
C311-312	Electrolytic 10.0 uF 16.0 WV
C313-314	Electrolytic 1.0 uF 50.0 WV
C315-316	Electrolytic 220.0 uF 6.3 WV
C317-318	Electrolytic 100.0 uF 50.0 WV
C319-320	Ceramic 22.0 pF 100.0 WV
C321-322	Electrolytic 220.0 uF 6.3 WV
C323-324	Ceramic 200.0 pF 100.0 WV
	Resistors
R301-302	Carbon 47.0 Kohms 1/4 W
R303-304	Carbon 22.0 Kohms 1/4 W
R305-306	Carbon 47.0 Kohms 1/4 W
R307-308	Carbon 560.0 Kohms 1/4 W
R309-310	Carbon 100.0 Kohms 1/4 W
R311-312	Carbon 5.6 Kohms 1/4 W
R313-314	Carbon 33.0 ohms 1/4 W
R315-316	Carbon 1.0 Kohms 1/4 W
R317-318	Carbon 5.6 Kohms 1/4 W
R319-320	Carbon 130.0 Kohms 1/4 W
R321-322	Variable V10K4-B10 Kohms
R323-324	Carbon 100.0 ohms 1/4 W
R325-326	Variable V10K4-B500 ohms
R327-328	Carbon 4.7 Kohms 1/4 W
R329-330	Carbon 2.2 Kohms 1/4 W
R331-332	Carbon 330.0 ohms 1/4 W
R333-334	Carbon 56.0 ohms 1/4 W
R335-336	Carbon 330.0 ohms 1/4 W
	Transistor and Diodes
TR301-302	N-P-N Transistor 2SC-536E
TR303-304	N-P-N Transistor 2SC-696A
TR305-306	N-P-N Transistor 2SC-696A or 33E04
TR307-308	P-N-P Transistor 2SA-546A or 31E14
	PCA-134, Protector Circuit PC Board Assy
D601-606	Silicon Diode 74Q36154 or HV-23

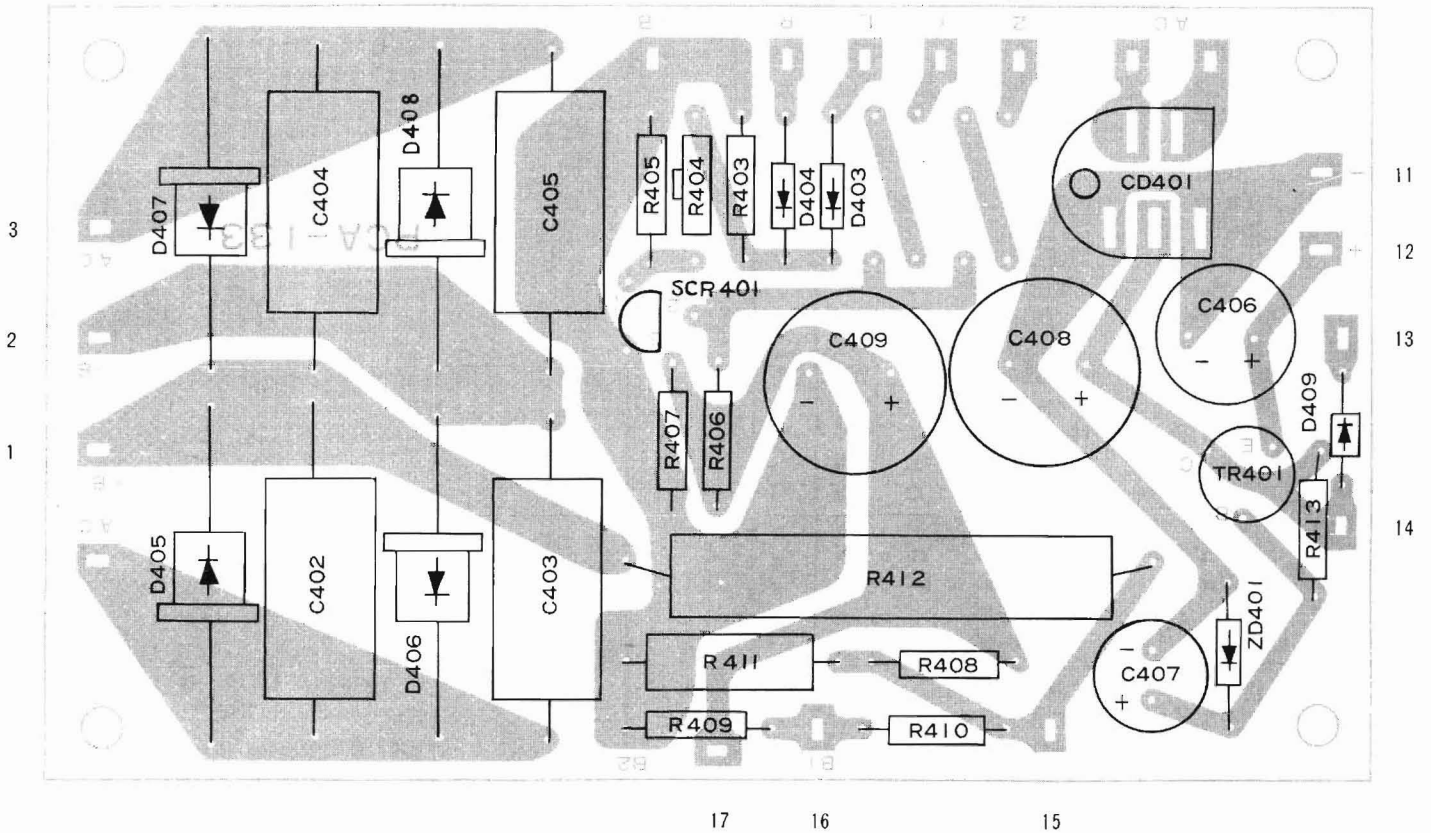
PIN NO. 18 17 22 23 16 24 15 14 13 12 21 11 20 19 10 9



6.7
4 2 1 3

PARTS LAYOUT OF DRIVER AMP. PCA-132

PIN NO. 4 5 6 7 8 9 10



PARTS LAYOUT OF POWER SUPPLY SECTION PCA-133

POWER SUPPLY SECTION

SYMBOL NO.	DESCRIPTION
	PCA-133, Power Supply PC Board Assy
	Capacitors
C401	Electrolytic 220.0 uF 25.0 WV
C402-405	Oil Tubular 0.02 uF 630.0 WV
C406	Electrolytic 220.0 uF 16.0 WV
C407	Electrolytic 100.0 uF 16.0 WV
C408	Electrolytic 470.0 uF 25.0 WV
C409	Mylar 0.033 uF 50.0 WV
	Resistors
R403	Carbon 10.0 Kohms 1/4 W
R404	Variable V10K4-B10 Kohms
R405	Carbon 1.0 Kohms 1/4 W
R406	Carbon 2.2 ohms 1/4 W
R407	Carbon 51.0 Kohms 1/4 W
R408	Carbon 1.5 Kohms 1/4 W

R409	Carbon 4.7 Kohms 1/4 W
R410	Carbon 820.0 ohms 1/4 W
R411	Carbon 2.7 Kohms 1/2 W
R412	Metallic Oxide Film 1.3-1.5 Kohms 5 W
R413	Carbon 1.0 Kohms 1/4 W
	Transistors and Diodes
TR401	N-P-N Transistor 34F14 or 2SC-971
D403-404	Germanium Diode 74Q16685
D405-408	Silicon Diode SA-2Z or DS-2P
D409	Silicon Diode 36K-03
	Diode Bridge Assembly
CD401	Silicon Diodes M204B
	Zener Diode
ZD401	Zener Diode 8A130
	Thyristor
SCR401	Thyristor 2SF-656

OTHER PARTS

SYMBOL NO.	DESCRIPTION				
	Capacitors				
C701-702	Mylar	4700.0	pF	50	WV
C703-704	Mylar	0.1	uF	50	WV
C705-706	Ceramic	560.0	pF	50	WV
C707-708	Mylar	0.1	uF	50	WV
C709-710	Electrolytic	1000.0	uF	80	WV
C711-712	Mylar	0.1	uF	50	WV
C713	Ceramic	130.0	pF	50	WV
C714	Ceramic	1000.0	pF	50	WV
C715-716	Ceramic	0.1	uF	50	WV
C717	Electrolytic	10.0	uF	16	WV
C718	Mylar	0.01	uF	50	WV
719	Ceramic	0.1	uF	50	WV
C720	Electrolytic	1000.0	uF	50	WV
C721	Electrolytic	1000.0	uF	25	WV
C722	Electrolytic	1000.0	uF	100	WV
C723	Oil Tubular	0.01	uF	630	WV
C724	Electrolytic	10.0	uF	16	WV
C725	Ceramic	0.1	uF	50	WV
	Resistors				
R701-702	Carbon	100.0	Kohms	1/4	W
R703-704	Carbon	390.0	Kohms	1/4	W
R705-706	Carbon	10.0	Kohms	1/4	W
R707	Variable	VJ60G25	Kohms	(BH)x2	
R708	Variable	VJ60G50	Kohms	(B)x2	
R709-710	Carbon	4.7	Kohms	1/4	W
R711-714	Wire Wound	0.5	ohms	2	W
R715-716	Carbon	10.0	ohms	1	W
R717-718	Carbon	1.0	Kohms	1/2	W
R719	Carbon	51.0	ohms	1/4	W
R720-721	Carbon	560.0	ohms	1/4	W
R722	Carbon	10.0	Kohms	1/4	W
R723	Carbon	47.0	Kohms	1/4	W
R724	Carbon	47.0	Kohms	1/4	W
R725	Carbon	10.0	Kohms	1/4	W
R726	Variable	V10K4-B2	Kohms		
R727-728	Carbon	33.0	Kohms	1/4	W
R729-730	Carbon	1.8	Kohms	1/4	W
R731	Carbon	10.0	Kohms	1/4	W
R732	Variable	V10K4-B50	Kohms		
R733	Carbon	100.0	Kohms	1/4	W
R734	Variable	V10K5-B10	Kohms		
R735	Carbon	4.7	Kohms	1/4	W
R744	Carbon	56.0	ohms	1/4	W
R737	Variable	V10K4-B5	Kohms		
R738	Carbon	150.0	ohms	1/4	W
R739-740	Carbon	51.0	Kohms	1/4	W
R741-742	Carbon	5.6	Kohms	1/4	W
R743	Carbon	1.0	Mohms	1/2	W
R201-204	Variable	V24L5DG8NB100	Kohms	x 2	

SYMBOL NO.	DESCRIPTION	
	Transistors and Diodes	
TR701-704	N-P-N Transistor	2SD-189A
TR705	N-P-N Transistor	2SC-536E
TR706	N-P-N Transistor	34F14 or 2SC-971
D701-702	Germanium Diode	74Q16685
D703	Germanium Diode	1N34A
	Coils	
L701	Bar Antenna (AM)	L-1448
	Transformer	
T701	Power Transformer (Up to Ser.No. 13800)	PT-96
T701	Power Transformer (From Ser.No. 14001)	PT-106
	Meter	
M701	Tuning Meter	MG-28
	Switches	
S701	Selector, (Push Button) FM AUTO, FM MONO, AM, PHONE, TAPE H.D, AUX	GE-068-E
S702	Push Button Switches, TAPE MON, OUTPUT MUTING	GE-024-E
S703	Rocker Switch, MODE (Stereo/Mono)	X-J0411
S704	Rocker Switch, HIGH FILTER	X-J0411
S705	Rocker Switch, LOW FILTER	X-J0411
S706	Rocker Switch, LOUDNESS	X-J0411
S707	Rocker Switch, AFC	X-J0411
S708	Rocker Switch, MUTING	X-J0411
S709	Rocker Switch, SPEAKERS (1)	X-J0411
S710	Rocker Switch, SPEAKERS (2)	X-J0411
S711	Push Button Switch, POWER	UEH12BF
S712	Slide Switch, VOLTAGE SELECTOR	S-J0408

SYMBOL NO.	DESCRIPTION	
	Miscellaneous	
F701-703	Fuse 3A	S-M1101-03
TB701	Terminal Board, ANTENNA	BS-24HW
TB706	Line Input-Output Jack, PHONO, TAPE H.D, AUX, TAPE MON, TAPE REC.	DSN-2X18W
TB703-704	Terminal Board, SPEAKERS	DE-4P
TB702	GROUND Terminal	NO-3025
J715	Line Output Jack, MONO	NS-2210
J716	Jack, STEREO HEADPHONES	JH-5020H
J717	DIN Socket	S-I8113
J718-719	AC OUTLET	S2-702 or SI-9122
	Control Knob, Dual Inner (4AT2-005259) (Bass & Treble)	
	Control Knob, Dual Outer (4AT2-005283) (Bass & Treble)	
	AM Ferrite Antenna Assy	(3AT2-002664)
	Rubber Foot	(K-28)
	Socket, Power Transistor	(S2-104W)
	Socket, Pilot Lamp	(NO-4108)

	For Model 800A Only	
PL701	Lamp, FM Stereo Indicator	10 V 50 mA
PL702	Lamp, Meter Indicator	6.3V 150 mA
PL703-706	Lamp, Dial Indicator	6.3V 150 mA
PL707	Lamp, Protector Indicator	20 V 50 mA
	Front Panel	(2AT2-002403)
	Dress Cover, Kangaroo Pocket	(3AT2-002659)
	Metal Case (Top Cover)	(2AT2-002348)
	Dial Pointer	(4AT2-005235)
	Tuning Wheel Assy	(4AT2-005282)
	Control Knob, Volume & Balance	(4AT2-005098)
	Side Board	(3AT2-002805)
	Socket, Meter Lamp	(NO-3512)
	Glass Cover, Tuning Dial Plate	(47x278x3t)
	Tuning Dial Plate(Glass)	(3AT2-002794)
	For Model 800X Only	
PL701	Lamp, FM Stereo Indicator	20 V 50 mA
PL702	Lamp, Meter Indicator	6.3 V 150 mA
PL703-706	Lamp, Dial Indicator	6.3 V 150 mA
PL707	Lamp, Protector Indicator	20 V 50 mA
	Front Panel	(X2AT2-002403)
	Dress Cover, Kangaroo Pocket	(X3AT2-002659)
	Extrusion Frame, Side	(X3AT2-002616)
	Tuning Wheel Assy	(X4AT2-005775)
	Control Knob, Volume & Balance	(X4AT2-005098)
	Wood Case Assy	(X1AT2-001868)
	Dress Nut, Jack Headphones	(4AT2-006016)
	Dial Pointer Assy	(X4AT2-006067)
	Smoked Acryl Cover, Tuning Dial Plate	(49x280x3t)
	Tuning Dial Plate(Acryl)	(X3AT2-002936)

ALIGNMENT PROCEDURES

Read the following carefully before starting any attempt at aligning the tuner:

Output levels of signal generators

Always keep the levels of the signal generators used to the minimum needed to obtain a satisfactory output indication.

Alignment tools

A screwdriver type alignment tool with a plastic haft and a similar tool with hexagonal heads are required for alignment of IF transformers.

FM AFC switch

Be sure to place in OFF position.

FM ALIGNMENT PROCEDURE

For the location of the test point (TP), refer to Tuner Section "43SN6F1-3U" in the Schematic Diagrams at the end of this booklet.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1	IF Transformer and Discriminator	10.7 MHz ±150 KHz	Sweep signal is fed to TP via 10 pF ceramic capacitor (TUNER Section)	Oscilloscope at TAPE REC terminal		Primary and secondary sides of I.F.T.(T ₁ , T ₂ , T ₃ , T ₄) (FM IF Section)	S curve
2	OSC	90 MHz 400 Hz 100% modulation	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	90 MHz	OSC coil L ₃ (TUNER Section)	Maximum
3	OSC	106 MHz 400 Hz 100% modulation	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	106 MHz	OSC Trimmer Capacitor TC ₄ (TUNER Section)	Maximum
4	Repeat 2 and 3						
5	RF amp.	90 MHz 400 Hz 100% modulation	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	90 MHz	Antenna Transformer T ₁ , L ₁ and L ₂ (TUNER Section)	Maximum
6	RF amp.	106 MHz 400 Hz 100% modulation	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	106 MHz	Trimmer Capacitors TC ₁ , TC ₂ and TC ₃ (TUNER Section)	Maximum
7	Repeat 5 and 6						

FM MPX ALIGNMENT PROCEDURE

Be sure that you have the following equipment on hand before attempting to align the FM Multiplex Circuit: Multiplex stereo signal generator, oscilloscope, AC V.T.V.M., audio-frequency oscillator, FM signal generator.

Refer to MPX Section "MX-A31S" in the Schematic Diagrams at the end of this booklet.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	ADJUST	ADJUST FOR
1	67 KHz Trap	67KHz Signal Gen.	Terminal 1	V.T.V.M. at junction of R _g and C _g	L1	Minimum
2	19 KHz Trap	19 KHz Audio Signal Gen.	Terminal 1	V.T.V.M. at junction of R _g and C _g	L4	Minimum
3	19 KHz Transformer	FM Signal Gen. 30% Mod. Stereo Gen. Sub-Channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at TR1 Collector	L2	Maximum
4	38 KHz Transformer	FM Signal Gen. 30% Mod. Stereo Gen. Sub-Channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at TR2 Collector	L3	Maximum
5	38 KHz Transformer and Separation VR	FM Signal Gen. 30% Mod. Stereo Gen. L-Channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at Output Load of R-Channel	L3 and Separation VR (R726)	R-Channel Minimum
6	38 KHz Trap	FM Signal Gen. 30% Mod. Stereo Gen. L-Channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at Output Load of L-Channel	L5	Minimum
7	38 KHz Trap	FM Signal Gen. 30% Mod. Stereo Gen. R-Channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at Output Load of R-Channel	L6	Minimum

AM ALIGNMENT PROCEDURE

Do not forget to keep the output levels of the signal generators to the minimum. For the location of the test point (TP), refer to Tuner Section "43SN6F1-3U" in the Schematic Diagrams at the end of this booklet.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1	I.F. Transformer	455 KHz ±30 KHz Sweep Gen. or 400Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at terminal 6 of AM IF Section	Quiet point on band near 1,600 KHz	Primary and secondary sides of I.F.T. T ₄ , T ₅₀₁ , T ₅₀₂	Best I.F.T. wave-form (or maximum)
2	OSC	AM Gen. 600 KHz 400 Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	600 KHz	OSC Transformer T ₅	Maximum
3	OSC	AM Gen. 1400 KHz 400 Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminal	1,400 KHz	OSC Trimmer Capacitor TC ₇	Maximum
4	Repeat 2 and 3						
5	RF amp.	AM Gen. 600 KHz 400 Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminals	600 KHz	RF Transformer T ₃	Maximum
6	Antenna circuit	AM GEN. 600 KHz 400 Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminals	600 KHz	Ferrite Bar Antenna Coil L701	Maximum
7	RF amp.	AM Gen. 1,400 KHz 400Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminals	1,400 KHz	RF Trimmer Capacitor TC ₆	Maximum
8	Antenna circuit	AM Gen. 1,400 KHz 400 Hz 30% Mod.	Antenna terminals	Oscilloscope and V.T.V.M. at TAPE REC terminals	1,400 KHz	Antenna circuit Trimmer Capacitor TC ₈	Maximum
9	Repeat 5, 6, 7, 8						

SPECIFICATIONS

800A

TUNER SECTION

FM

Frequency range	88 – 108 MHz
Sensitivity (I.H.F.)	1.5 μ V \pm 3dB
Harmonic distortion	0.5%
Signal-to-noise ratio	Better than 60dB with 100% modulation

Selectivity	Better than 45 dB
Image rejection	Better than 90 dB

Cross modulation rejection	Better than 90 dB
Stereo separation	Better than 38 dB at 1 KHz
I.F. rejection	Better than 100 dB
Capture ratio	2.3 dB

AM

Frequency range	535 – 1,605 KHz
Sensitivity (I.H.F.)	5 μ V \pm 3 dB
Selectivity	20 dB
Image rejection	Better than 60 dB

AUDIO SECTION

Total music power	170W \pm 1 dB (4 ohms) 140W \pm 1 dB (8 ohms)
Continuous power	60W/60W \pm 1 dB (4 ohms) 55W/55W \pm 1 dB (8 ohms)
Harmonic distortion	Less than 0.5% at rated output
Frequency response	10–100,000Hz \pm 3 dB
Power bandwidth	10–50,000Hz (8 ohms)

Signal-to-noise(hum & noise) ratio	Better than 70dB (PHONO) Better than 75dB (AUX)
Input sensitivity	PHONO 2.5mV(100 Kohms) TAPE HD. 3mV(100 Kohms) AUX 180mV (100 Kohms)

Speaker impedance	4–32 ohms
Damping factor(I.H.F.)	30 (at 8 ohms)
Equalizer	PHONO RIAA, NF Type TAPE HD. NAB, NF Type

Tone control	BASS 50Hz \pm 10dB TREBLE 10KHz \pm 10dB
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Low filter	50Hz –10dB
High filter	10KHz –10dB
Power voltage	110–120V AC 50 or 60Hz 220–240V AC 50 or 60Hz

Semiconductor	38 transistors, 30 diodes, 2 ICs
Power consumption	190VA
Dimensions	19-5/8" Wx13-3/4" Dx6-1/2" H
Weight	30 lbs

800X

TUNER SECTION

FM

Frequency range	88–108MHz
Sensitivity(I.H.F.)	1.5 μ V \pm 3dB at 98MHz
Harmonic distortion	0.5% at 400Hz, 100% mod.
Signal to noise ratio	Better than 60dB, 100% mod.

Selectivity	Better than 45 dB
Image rejection	Better than 90dB

Cross modulation rejection	Better than 90dB
I.F. rejection	Better than 100dB
Capture ratio	2.3dB

Antenna input impedance	300 ohms balanced
Stereo separation	35dB at 1 KHz

AM

Frequency range	535–1,605 KHz
Sensitivity (I.H.F.)	5 μ V \pm 3dB at 1,000 KHz
Selectivity	Better than 25dB
Image rejection	Better than 55dB

AUDIO SECTION

Total music power	200W \pm 1 dB (4 ohms) 170W \pm 1 dB (8 ohms)
Continuous power	75W/75W \pm 1 dB (4 ohms) (per channel) 60W/60W \pm 1dB (8 ohms)
Harmonic distortion	Less than 0.8% at rated output
Frequency response	15–100,000Hz \pm 3dB (AUX)
Power bandwidth(I.H.F.)	20–50,000Hz (8 ohms)(AUX)

Input sensitivity	PHONO 2.5mV (50 Kohms) (for rated output) TAPE HD 3mV (50 Kohms) AUX 180mV (100 Kohms) TAPE play (pin) 180mV TAPE play (DIN) 180mV POWER 140mV
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Recording output	(pin) 150mV (DIN) 33mV
Hum and noise	75dB (AUX) (below rated output, I.H.F.) 70dB (PHONO) 80dB(volume minimum)

Damping factor(I.H.F.)	30 (8 ohms)
Speaker impedance	4, 8 and 16 ohms
Tone control(NF type)	BASS \pm 12dB at 100Hz TREBLE \pm 12dB at 10KHz
Low filter	–10dB at 50Hz
High filter	–10dB at 10KHz
Equalizer	PHONO RIAA, NF type TAPE HD NAB, NF type

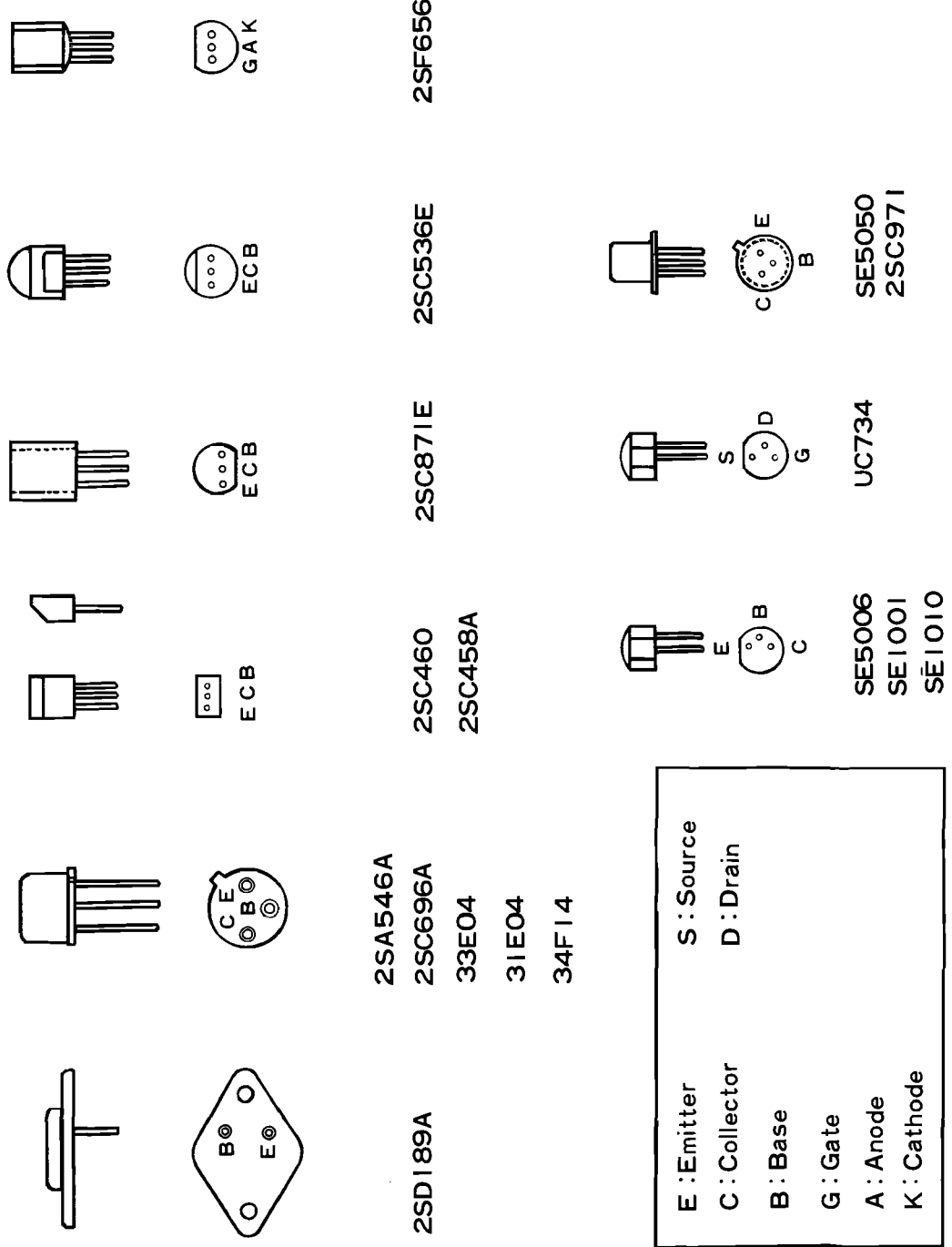
OVERALL

Semiconductor	38 transistors, 31 diodes, 2 ICs
Power voltage	110–120V AC, 50 or 60Hz 220–240V AC, 50 or 60Hz
Power consumption	210VA
Accessories	Pin plug cable, pin plug, 3A fuse, AM antenna, FM antenna
Dimensions	20" Wx14" Dx6- $\frac{3}{4}$ " H
Weight	33 lbs

Specifications and design are subject to change without notice for purpose of improvement.

TRANSISTOR/THYRISTOR TERMINAL DIAGRAM

(Bottom view)



E : Emitter	S : Source
C : Collector	D : Drain
B : Base	
G : Gate	
A : Anode	
K : Cathode	

COLOR CODE CHART

The color code indicates figures 1 to 9 by the use of 10 different colors.
It is in agreement with IEC and JIS.

Color	Common to All Parts			Fixed Resistor	Mica Capacitor				Paper Capacitor		Ceramic Capacitor			
	1st Figure	2nd Figure	Multiplier	Allowance (%)	Grade	Property	Allowance (%)	Rated Voltage (V)	Grade	Rated Voltage (V)	Grade	Property	Allowance (%)	Rated Voltage (V)
black	0	0	1		X	A	±20(M)		±20(M)	100	X		±20	
brown	1	1	10 ¹ (10)			B			±5(J)	200				
red	2	2	10 ² (K)	±2	Y	C	±2(G)		±2(G)	250	Z			250
orange	3	3	10 ³			D		300						
yellow	4	4	10 ⁴			E			±15(L)	400				
green	5	5	10 ⁵ (M)			F	±5(J)	500	+20(V) -15(V)					500
blue	6	6	10 ⁶						+40(X) -15(X)	600			+100 -100	
purple	7	7	10 ⁷											
grey	8	8	10 ⁸		Z				+10(Y) -15(Y)		(Y)			
white	9	9	10 ⁹					1000	±10(X)	1000				
gold			10 ⁻¹ (0.1)	±5								YY YZ		
silver			10 ⁻² (0.01)	±10										
non-colored				±20										

Note				

Property	Temperature Coefficient	Divergence of Capacity	Q tan δ	Insulation Resistance	Grade	Usable Temperature Range	Test Classification	Letter	Allowance
A	Not specified	Not specified	0.5 under	3000MΩ under	X	-55 ~ +85	I or II	G	±2
B	Not specified	Not specified	} 0.5 over	7500MΩ over but 0.1 over 3000MΩ over	Y	-30 ~ +85	I or II	T	±5
C	-20 ~ +200	±(0.5%+0.5PF)			Z	-30 ~ +85	I	K	±10
D	-100 ~ +100	±(0.3%+0.1PF)						M	±20
E	-20 ~ +100	±(0.1%+0.1PF)							
F	0 ~ +70	±(0.05%±0.1PF)							

Warranty

DOKORDER 800A and 800X are fully guaranteed against defects in material (see exceptions *below) for a period of one full year from date of original purchase, and is guaranteed against defects in workmanship for a period of ninety days from date of original purchase.

- * This Warranty does not cover cases.
- * This Warranty does not cover the wooden and metal housing of the receiver.
- * This Warranty shall not apply to any product which has been improperly connected, used, repaired, or altered in any way which the factory believed has affected the stability or reliability of the product.
- * This Warranty is void and of no effect if the product was not purchased from a Franchised Dokorder Dealer.

If any part should prove defective within the warranty period, contact the dealer from whom the receiver was purchased, or an authorized DOKORDER service depot. If examination determines the part is defective in material or workmanship, the part will be replaced at no charge.

The responsibility of Denki Onkyo is limited to making new or factory reconditioned replacement parts available. The dealer is responsible for replacing the defective part by his own service personnel or through a Denki Onkyo Authorized Service Center. This Warranty is in lieu of all others expressed or implied.

This Warranty is effective only when the Warranty Registration Card is fully and properly filled out and returned to the factory within 7 days from date of original purchase.

TROUBLESHOOTING CHART

When searching for the cause of a trouble, it is best to look for it systematically by asking yourself these questions:

- 1) Does the trouble seem to be in the power supply circuit?
- 2) Or, does it seem to be in the power amplifier circuit?
- 3) Or in the preamplifier circuit?
- 4) Or is it more likely to be in the tuner section? If so, is it in the FM mono, FM MPX, or AM receiving part of the tuner section?

Also check to see if the trouble pertains to both the right and left channels or only one of them. Measuring the voltages at various parts of the circuitry to see if they are as specified in the circuit diagram, or comparing the voltages in the right and left channels at various points, is another important thing to do when trying to pinpoint the cause of any trouble.

To help with your servicing work, symptoms of various troubles commonly reported by receiver users are listed in the chart below, along with their most probable causes and their remedies.

TROUBLES OF POWER SUPPLY CIRCUIT

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
No power supply.	Power indicator lamp does not light (primary winding of power transformer is defective).	1) Power cord is broken.	Power cord.	Replace.
		2) Power fuse is blown.	Power fuse and fuse holder.	Replace.
		3) Broken power switch, of faulty contact.	Power switch.	Replace.
		4) Defective power supply voltage selector switch or socket, or faulty contact.	Power supply voltage selector switch or socket.	Replace.
		5) Broken wiring or shorted layers in power transformer.	Test continuity and insulation.	Replace.
		6) Power amplifier circuit is shorted.	Shorting of power transistors.	Replace.
	Power indicator lamp lights (secondary winding of power transformer is defective).	1) Rectifying diode is defective.	Rectifying diodes.	Replace.
		2) Filter capacitor is shorted.	Filter capacitors.	Replace.
		3) Power filter transistor is shorted (check if DC circuit is shorted).	Test continuity.	Replace or repair.
		4) Filter resistor is open.	Filter resistors.	Replace.

TROUBLES OF POWER AMPLIFIER CIRCUIT

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY	
No sound.	DC voltage is normal, and mid point voltage of SEPP circuit is normal.	<ol style="list-style-type: none"> 1) Defective speaker selector switch, or faulty contact. 2) Insufficient capacity of output capacitor. 3) Insufficient capacity of coupling capacitor. 	<p>Speaker selector switches.</p> <p>Check by replacing with capacitor of same capacity.</p> <p>Check by replacing with capacitor of same capacity.</p>	<p>Replace.</p> <p>Replace.</p> <p>Replace.</p>	
	DC voltage is normal, but mid point voltage of SEPP circuit is abnormal.	<ol style="list-style-type: none"> 1) One of transistors is shorted or open. 2) Coupling capacitor is shorted, or current leakage from it. 3) Pre-driver transistor is shorted or open. 4) Bias resistor for pre-driver transistor is open. 	<p>Measure voltage at each electrode and discover defective transistor.</p> <p>Check by replacing with capacitor of same capacity.</p> <p>Test continuity.</p> <p>Bias resistor.</p>	<p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p>	
When there is no signal, overcurrent flows to output stage.	Pre-driver stage.	<ol style="list-style-type: none"> 1) Defective varistor. 2) Thermistor is open. 	<p>Varistors.</p> <p>Thermistor.</p>	<p>Replace.</p> <p>Replace.</p>	
	Driver stage.	<ol style="list-style-type: none"> 1) Short circuit of base and emitter of transistor. 2) Breakdown of opposed output stage due to shorting between base and emitter of transistor. 	<p>Test continuity.</p> <p>Test continuity.</p>	<p>Replace.</p> <p>Replace.</p>	
	Oscillation.		<ol style="list-style-type: none"> 1) Excessive NFB applied. 	<p>Constant of NFB circuit.</p>	<p>Change.</p>
			<ol style="list-style-type: none"> 2) Insufficient capacity of capacitor between base and emitter of transistor. 	<p>Check by replacing with capacitor of same capacity.</p>	<p>Replace.</p>
Distortion is too great.	Nonlinear distortion and saturation distortion.	<ol style="list-style-type: none"> 1) Load impedance is too low (overload for amplifier). 	<p>Test continuity.</p>	<p>Change.</p>	
		<ol style="list-style-type: none"> 2) Excessive input. 	<p>Input signal circuit.</p>	<p>Attenuate.</p>	
		<ol style="list-style-type: none"> 3) Mid point voltage of SEPP circuit is unbalanced. 	<p>Mid point voltage regulator.</p>	<p>Adjust.</p>	
		<ol style="list-style-type: none"> 4) Insufficient DC voltage (due to deterioration of parts). 	<p>Various parts in power supply circuit.</p>	<p>Replace.</p>	
		<ol style="list-style-type: none"> 5) Divergence of bias. <ol style="list-style-type: none"> a) Deterioration of parts. b) Leakage current increased due to defective coupling capacitor. c) Leakage current increased due to defective bypass capacitor. 	<p>Various parts.</p> <p>Coupling capacitor.</p> <p>Bypass capacitor in each stage.</p>	<p>Replace.</p> <p>Replace.</p> <p>Replace.</p>	

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
	Crossover distortion.	1) Unbalance of transistor performance in push-pull circuit. 2) Insufficient idling current. a) Defective varistor. b) Defective thermistor. c) Deterioration of bias resistor. d) Disrupted continuity between of base and emitter of one of transistors in complementary stage.	Check by replacing transistor(s). Varistors. Thermistor. Check voltage at various points. Transistors in complementary stage.	Replace. Replace. Replace. Replace.
Oscillates.	Blocking oscillation. Parasitic oscillation. Excessive NFB. Incomplete grounding.	1) Insufficient capacity of decoupling capacitor. 2) Series resistor in input circuit is shorted. 1) Insufficient capacity of capacitor between collector and base of pre-driver or driver transistor. 2) Deterioration of parts in filter circuit for output terminal. 3) Deterioration of parts in NFB circuit. Deterioration of parts in NFB circuit. Breakage or faulty soldering of ground wire.	Check by replacing with capacitor of same capacity. Test continuity. Check by replacing with capacitor of same capacity. Various parts in filter circuit. Various parts in NFB circuit. Various parts in NFB circuit. Ground wire.	Replace. Replace. Replace. Replace. Replace.
Hum noise.	Residual hum.	1) Line ripple is too great (insufficient capacity of filter capacitor). 2) Push-pull performance is unbalanced (for SEPP circuit, adjust mid point voltage).	Check by replacing with capacitor of same capacity. Mid point voltage regulator.	Replace. Adjust.

TROUBLES OF PREAMPLIFIER CIRCUIT

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
No sound.	No sound from Phono or AUX input.	1) No DC voltage is applied. 2) One of transistors is shorted or open. 3) Coupling capacitor is shorted, or current leakage from it.	Check DC voltage in each stage to find faulty stage. Measure voltage at each electrode of transistors to discover defective transistor. Coupling capacitors.	Replace. Replace.

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
		4) Bias resistor for transistor of each stage is open.	Bias resistors.	Replace.
Noisy.	Noise produced by parts in low level stages.	1) Deterioration of low-noise transistor. 2) Current leakage from coupling capacitor increased due to deterioration. 3) Deterioration of resistor. 4) Faulty contact of leads of parts.	Coupling capacitors. Coupling capacitors. Resistors. Leads of various parts.	Replace. Replace. Replace. Repair.
Hum.	Residual hum. Induced hum.	Lien ripple is too great (insufficient capacity of filter capacitor). Breakage or faulty soldering of ground wire.	Check by replacing with capacitor of same capacity. Ground wire.	Replace. Repair.
Oscillates.	High frequency oscillation. Blocking oscillation. Excessive gain.	Insufficient capacity of capacitor between collector and base of transistor. 1) Insufficient capacity of decoupling capacitor. 2) Series resistor in input circuit is shorted. Equalizer circuit is open.	Check by replacing with capacitor of same capacity. Check by replacing with capacitor of same capacity. Test continuity. Equalizer circuit.	Replace. Replace. Replace. Replace.

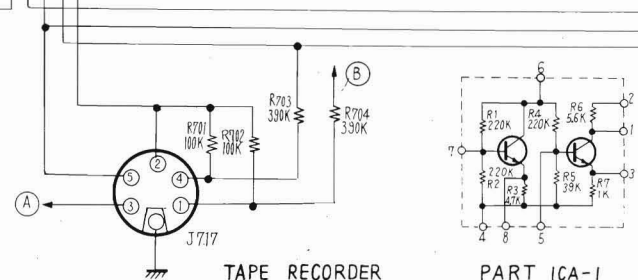
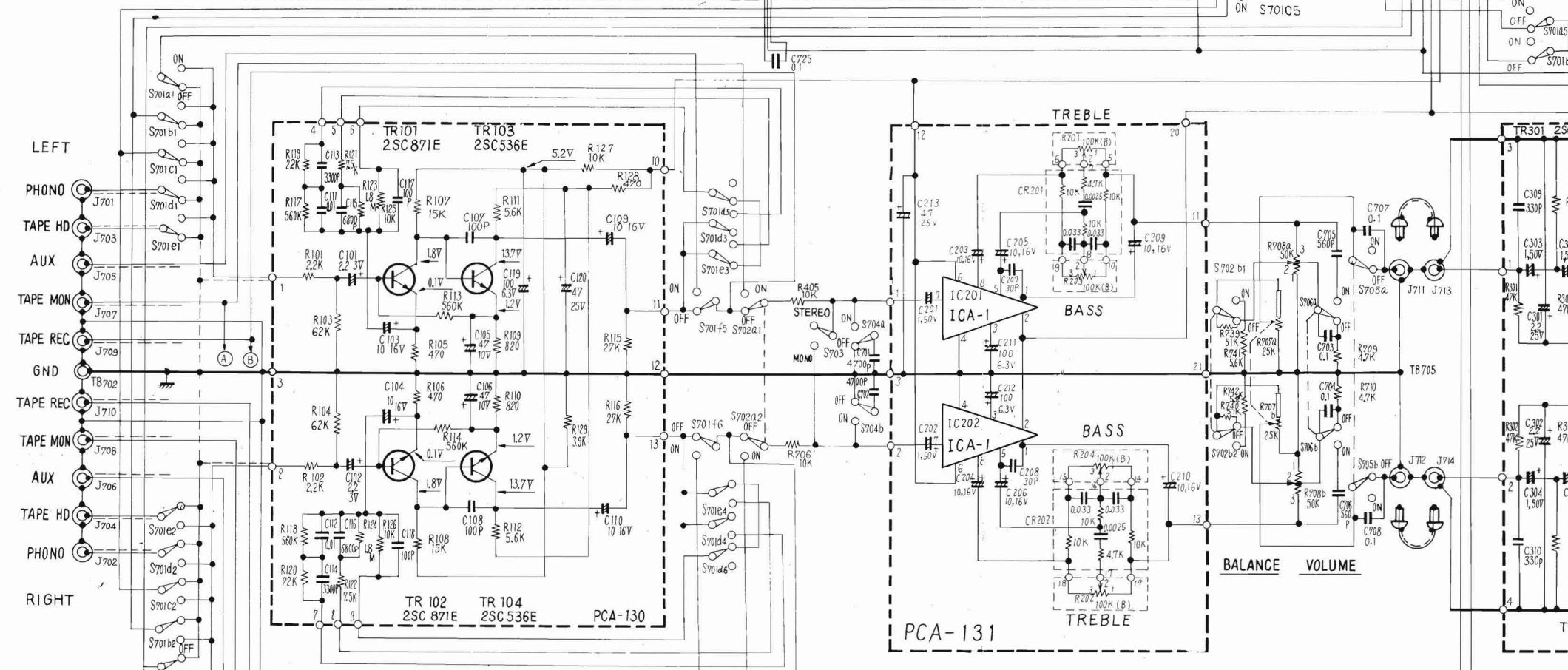
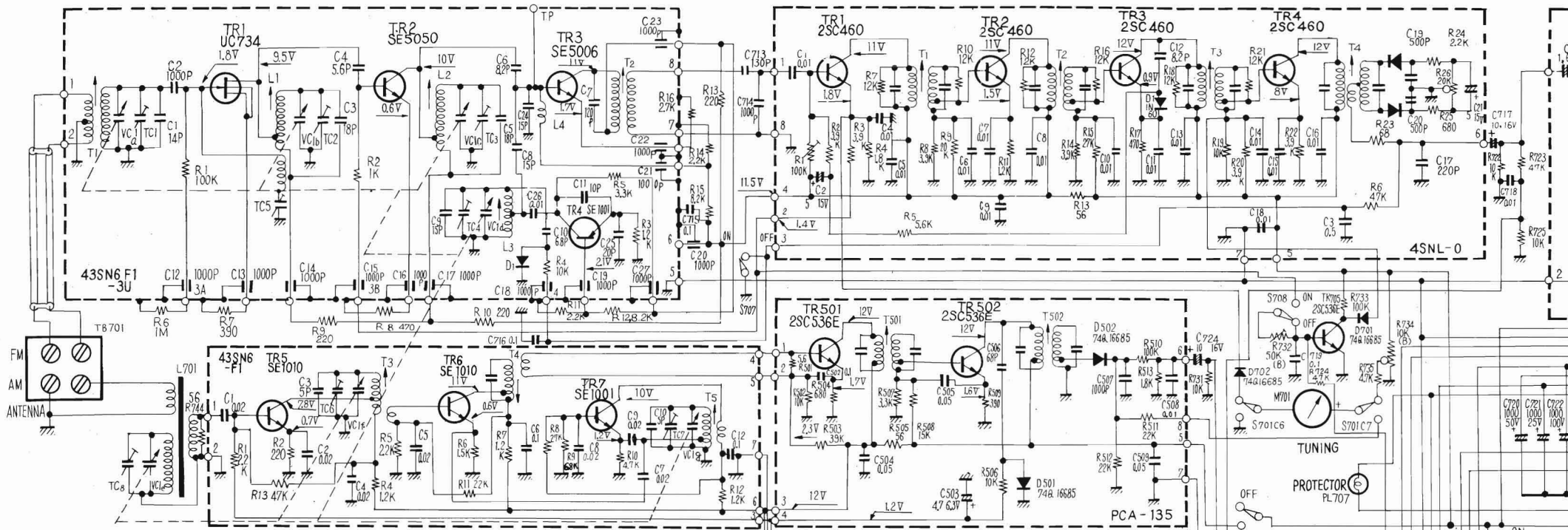
TROUBLES OF TUNER SECTION

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
No sound.	In FM stereo, FM mono and AM modes, tuning meter does not swing and even noise is not heard.	1) Power supply voltage is not applied to front-end. 2) Power supply voltage is not applied to IF section. 3) Bias of some transistor in some section is abnormal. 4) Local OSC has stopped.	Band selector switches. DC power supply circuit. DC power supply circuit. Bias resistors. Short circuit of coupling capacitor. Short circuit of bypass capacitor. Transistors. Variable capacitor. OSC coil. OSC transistor.	Clean contacts. Repair. Repair. Replace. Replace. Replace. Replace and or repair. Replace. Replace.

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
	Noise is made as vibration or shock is given to receiver.	4) Deterioration of transistor (especially for RF or converter stage). 1) Contact of parts. 2) Defective IFT. 3) Screws securing front-end have loosened. 4) Some part of front-end is defective. 5) Faulty wiring.	Transistors. Discover undesirable contact of parts by touching various parts of circuit softly with screw driver.	Replace. Repair. Replace. Tighten. Repair. Repair.
Hum noise is too great.	FM stereo, FM mono and AM modes.	1) Capacitor in power supply circuit is faulty 2) Regulated power supply circuit is faulty. 3) Faulty contact of ground wire.	Filter capacitor and de-coupling capacitor. Transistor. Zener diode. Bias resistor. Test continuity of ground wire.	Replace. Replace. Replace. Repair.
Poor sensitivity.	FM stereo, FM mono and AM modes.	1) Deterioration of transistor. 2) Divergence of IFT alignment. 3) Output of local OSC is low. 4) Divergence of tracking. 5) Antenna feeder is broken. 6) Bar antenna is defective (AM only).	All transistors. OSC coil. Variable capacitor. RF insulator. DC power supply circuit. OSC transistor. Bias resistor. Coupling capacitor. Antenna coil and trimmer capacitor. Mixer coil and trimmer capacitor. Osc coil and trimmer capacitor. Test continuity of feeder. Test continuity of coil.	Replace. Re-align. Clean. Clean. Clean or replace. Repair. Replace. Replace. Replace. Re-align. Re-align. Re-align. Repair or replace. Replace.
Sound is distorted.	FM mono mode.	1) Detector circuit is defective. 2) Divergence of IFT alignment.	Detector diode. Discriminating IFT.	Replace. Re-align or replace.

SYMPTOM	CLASSIFICATION	PROBABLE CAUSE	CHECK POINT	REMEDY
	FM stereo mode.	3) IF stage is oscillating. 4) Divergence of operating point of audio amplifier section. 1) MPX circuit is defective. 2) IF stage is defective. 3) Divergence of operating point of audio amplifier section.	Capacitor. Ground line. Transistor. See Troubles of preamp circuit. Switching diode. 19 KHz and 38 KHz coils. Separation adjuster VR. Transistors. Resistors. Capacitors. Discriminating IFT. Detector diode. Capacitors. Ground wire. Transistors. See TROUBLES OF PREAMP CIRCUIT.	Replace. Repair. Replace. Replace. Replace. Re-align or replace. Re-align or replace. Replace. Replace. Replace. Re-align or replace. Replace. Replace. Repair. Replace. Replace.
	AM mode.	1) Excessive antenna input. 2) AGC circuit is defective. 3) Detector diode is defective. 4) Divergence of IFT alignment. 5) Divergence of operating point of audio amplifier section.	Antenna. Diode for AGC. Short circuit of capacitor. Broken wiring of resistor. 455 KHz IFT. See troubles of preamp circuit.	Adjust. Replace. Replace. Replace. Replace. Re-align.
Oscillates.	FM stereo, FM mono and AM modes.	1) Bypass capacitor in RF of IF stage is defective. 2) Faulty contact of ground wire. 3) Screws securing front-end of IF section have loosened. 4) Divergence of IFT alignment. 5) Power supply voltage is too high.	Bypass capacitors. Test continuity of ground line. IFT. Transistor for power stabilizer. Zener diode. Bias resistor.	Replace. Repair. Tighten. Re-align. Replace. Replace. Replace.

800A SCHEMATIC DIAGRAM

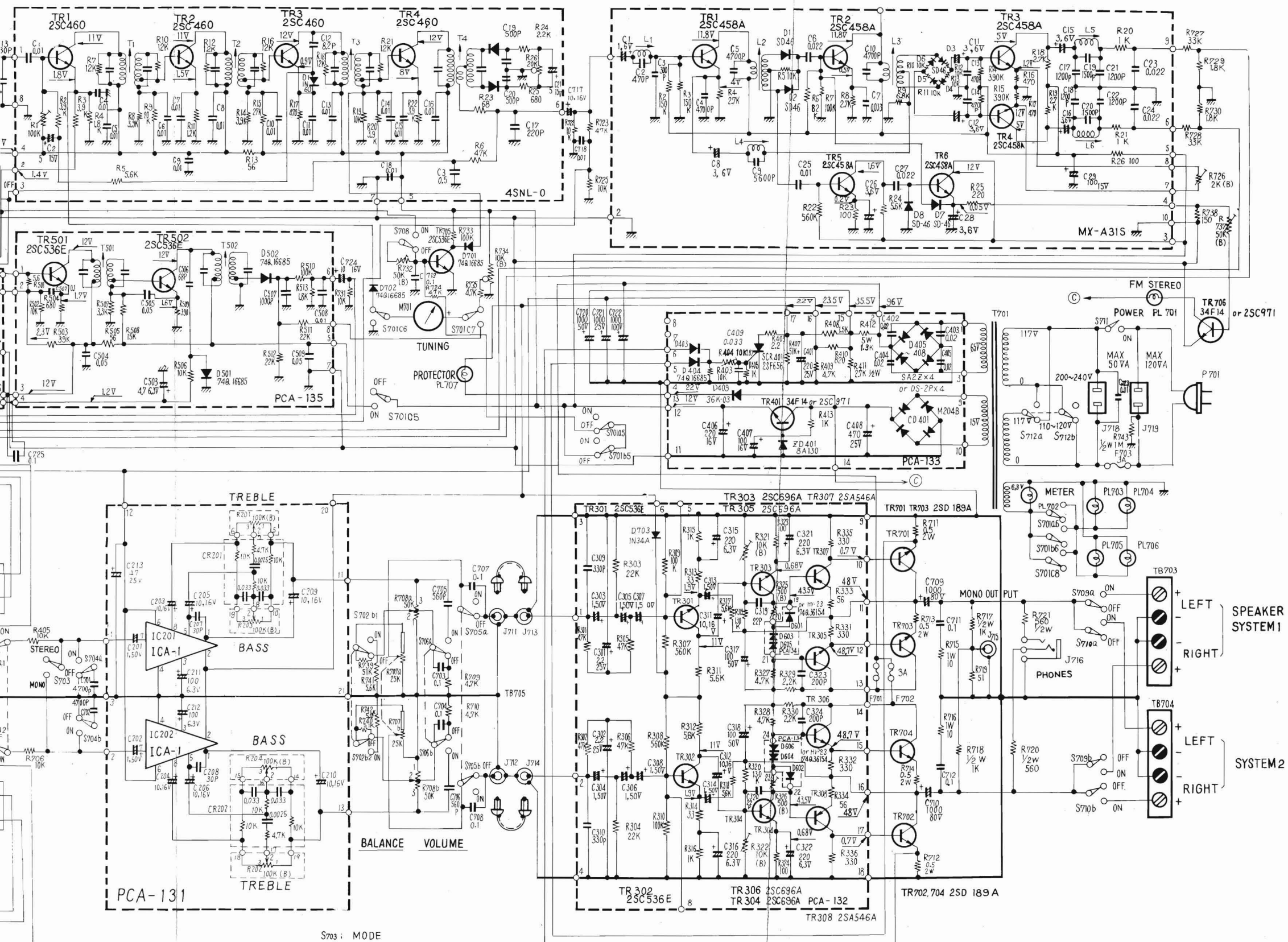


- S701a FM AUTO
- S701b FM MONO
- S701c AM
- S701d PHONO
- S701e TAPE HD
- S701f AUX

- S702a TAPE MON
- S702b OUT PUT MUTING

- S703 : MODE
- S704 : HIGH FIL
- S705 : LOW FIL
- S706 : LOUDNESS
- S707 : AFC
- S708 : MUTING
- S709 : SPEAKERS 1
- S710 : SPEAKERS 2
- S711 : POWER

800A SCHEMATIC DIAGRAM



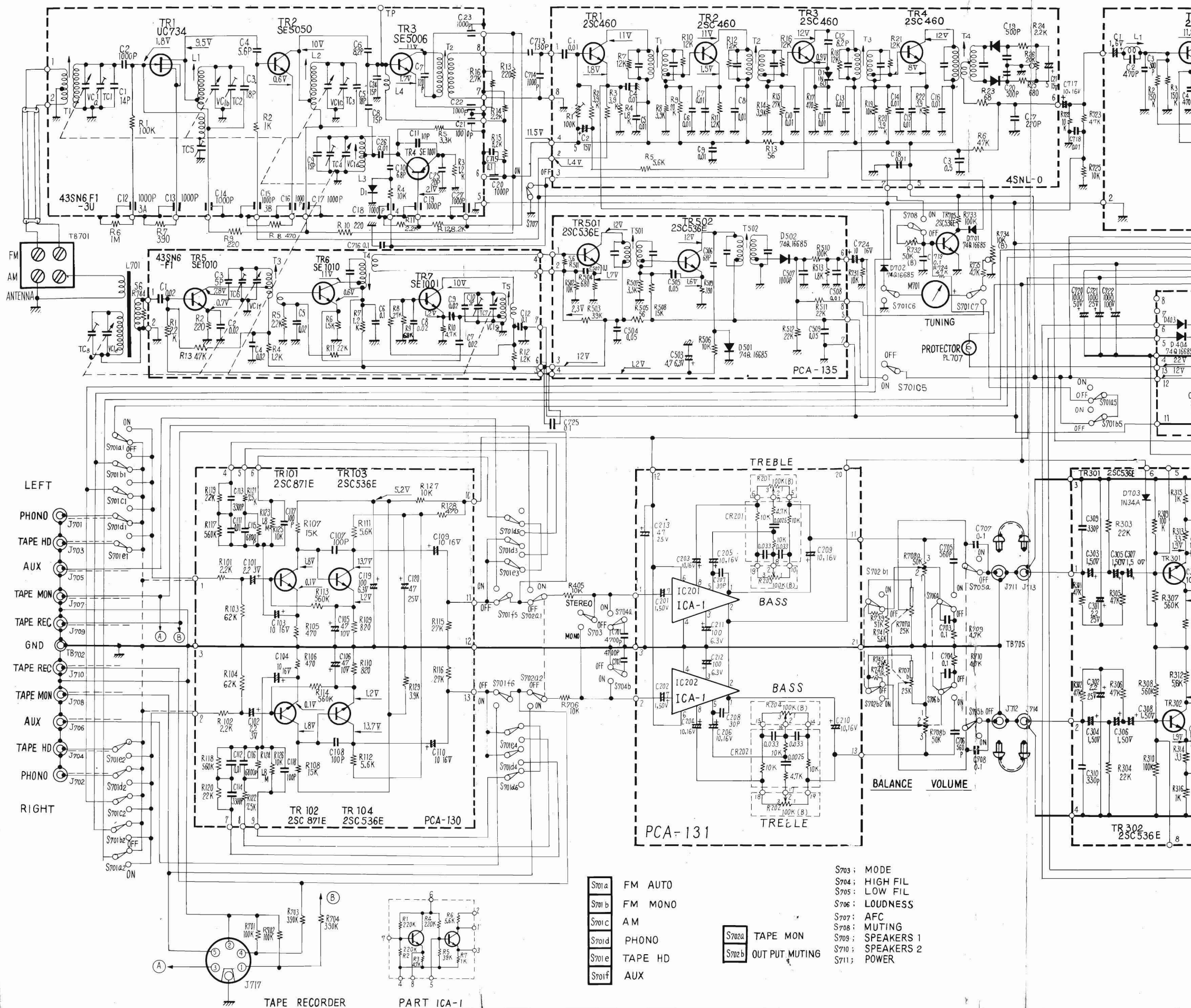
- S701a FM AUTO
- S701b FM MONO
- S701c AM
- S701d PHONO
- S701e TAPE HD
- S701f AUX

- S702a TAPE MON
- S702b OUT PUT MUTING

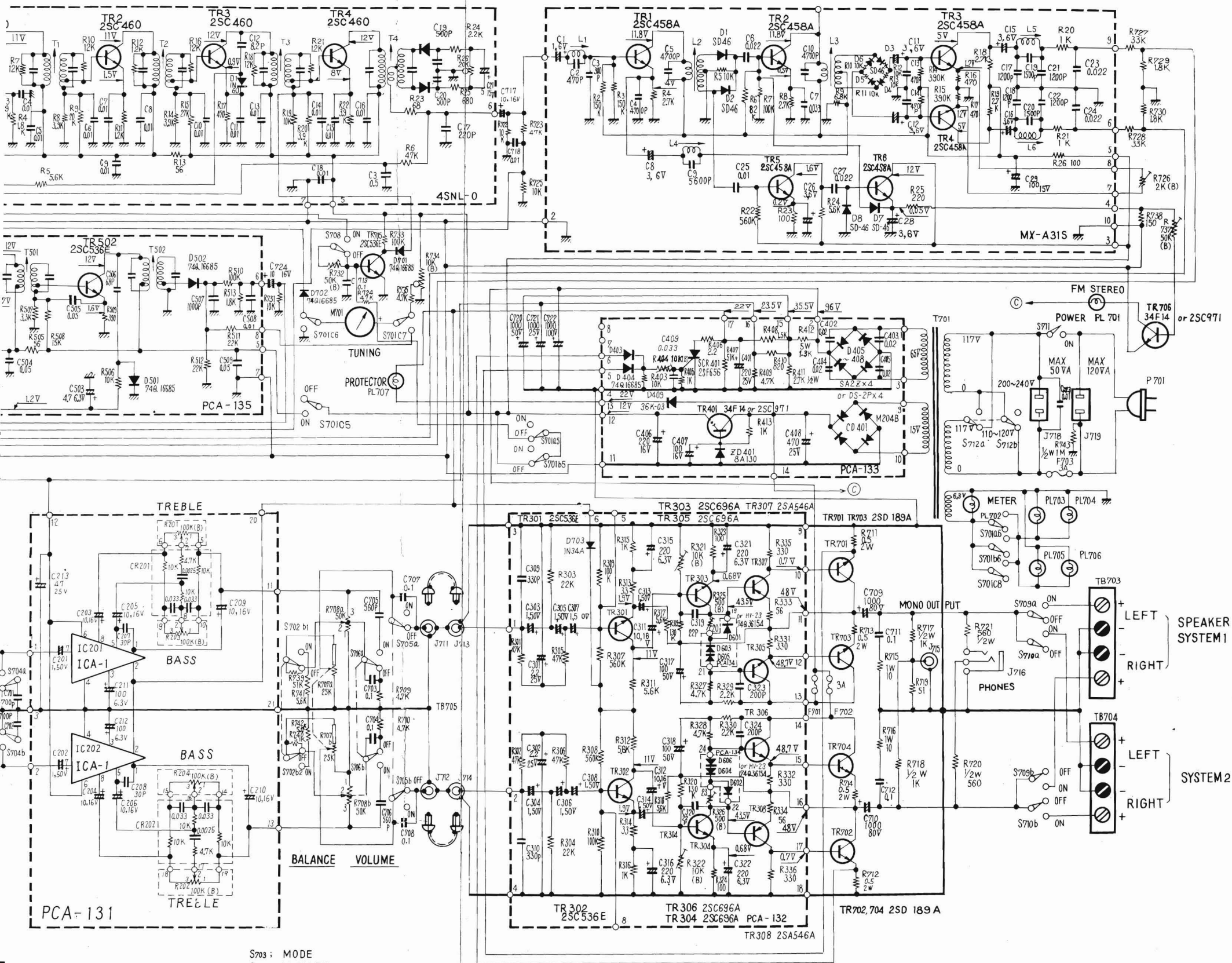
- S703 : MODE
- S704 : HIGH FIL
- S705 : LOW FIL
- S706 : LOUDNESS
- S707 : AFC
- S708 : MUTING
- S709 : SPEAKERS 1
- S710 : SPEAKERS 2
- S711 : POWER

ALL RESISTANCE VALUES IN OHMS K = 1000
ALL CAPACITANCE VALUES IN μ F. P = 10^{-12} F

800X SCHEMATIC DIAGRAM



800X SCHEMATIC DIAGRAM



- FM AUTO
 - FM MONO
 - AM
 - PHONO
 - TAPE HD
 - AUX
- S702a TAPE MON
 S702b OUT PUT MUTING

- S703: MODE
- S704: HIGH FIL
- S705: LOW FIL
- S706: LOUDNESS
- S707: AFC
- S708: MUTING
- S709: SPEAKERS 1
- S710: SPEAKERS 2
- S711: POWER

ALL RESISTANCE VALUES IN OHMS K=1000
 ALL CAPACITANCE VALUES IN μ F. P=10⁻¹²F



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