

SERVICE
MANUAL

SR840/SR940

marantz®

model SR840/SR940

Stereophonic Receiver

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1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

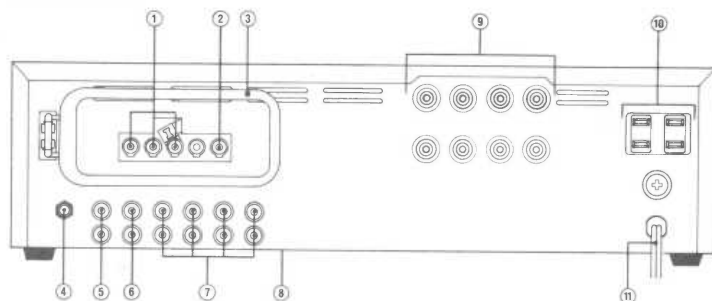
Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

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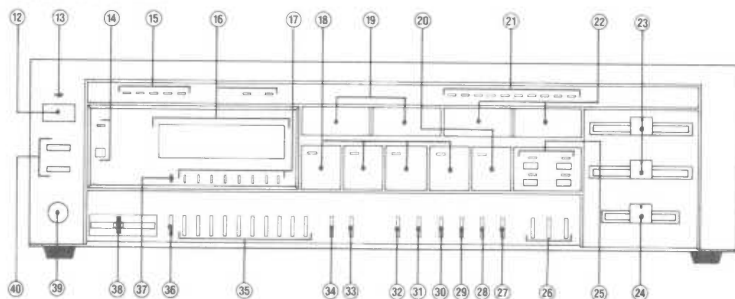
Marantz Model SR840/SR940 Stereophonic Receiver.

REAR PANEL



- ① Outdoor FM Antennas
- ② Outdoor AM Antenna
- ③ AM Loop Antenna
- ④ GND Binding Post
- ⑤ Phono Inputs
- ⑥ CD/VIDEO Inputs
- ⑦ Tape Monitor Jacks
- ⑧ Scan Step Selector (on the bottom board)
- ⑨ Speaker Systems
- ⑩ AC Outlets
- ⑪ AC Power Connections

FRONT PANEL



- ⑫ Power Switch
- ⑬ Standby Indicator
- ⑭ Infrared Sensor and Its Indicator
- ⑮ Signal Strength
- ⑯ Frequency/Clock/Tuner Mode Display
- ⑰ Station/Timer Preset Indicators
- ⑱ Function Switches
- ⑲ Electronic Tuning Switches
- ⑳ Tape Monitor Switch
- ㉑ Volume Level Indicators
- ㉒ Electronic Volume Controls
- ㉓ Bass and Treble Controls
- ㉔ Balance Control
- ㉕ Volume Memory and Preset Switches
- ㉖ Tape Selector and Tape Copy Switches
- ㉗ Loudness Switch
- ㉘ Low Filter Switch (SR940 only)
- ㉙ High Filter Switch
- ㉚ Mono Switch
- ㉛ Muting Switch
- ㉜ Tuning Scan Switch
- ㉝ Clock Call Switch
- ㉞ Sleep Switch
- ㉟ Keyboard Switches
- ㊱ Station Memory Switch
- ㊲ Station Memory Indicator
- ㊳ Timer Switch
- ㊴ Phones Jack
- ㊵ Speaker System Switches

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model SR840/SR940 Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

1. P.C.BOARDS

1. AM Stereo	AMS-569
2. Rectifier	BD-576
3. Back-up Supply	BPS-576
4. Elect. Vol./Function	EVF-571A
5. Function/EQ	FEQ-574A
6. Function LED	FLD-573
7. Volume LED	LVL-573
8. Main Amp L	MAL-575
9. Main Amp R	MAR-575
10. Power Supply	PS-576
11. Remote Control Connector	RCC-572
12. Remote Control	RCM-573
13. Remote/Timer Control	RET-573
14. Standby LED	SBL-573
15. Signal LED	SID-573
16. Speaker Terminal	SP-576
17. Speaker Switch	SPS-576
18. Tuner	TIM-540
19. Timer/PLL	TIP-571
20. Tone Control	TON-571

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Receiver.

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Sound Technology Model 1000A	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700A	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and troubleshooting and ASO alignment
Frequency Counter	Fluke Model 1900A	MPX Oscillator adjustment (VCO)
Circuit Tester		Troubleshooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B-10A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600-ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup
Output Load (8 ohms, ±0.5%, 100W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, ±0.5%, 100W)	Commercial Grade	Provides 4-ohm load for amplifier output termination

3. ALIGNMENT PROCEDURES

3.1 AMPLIFIER

Condition

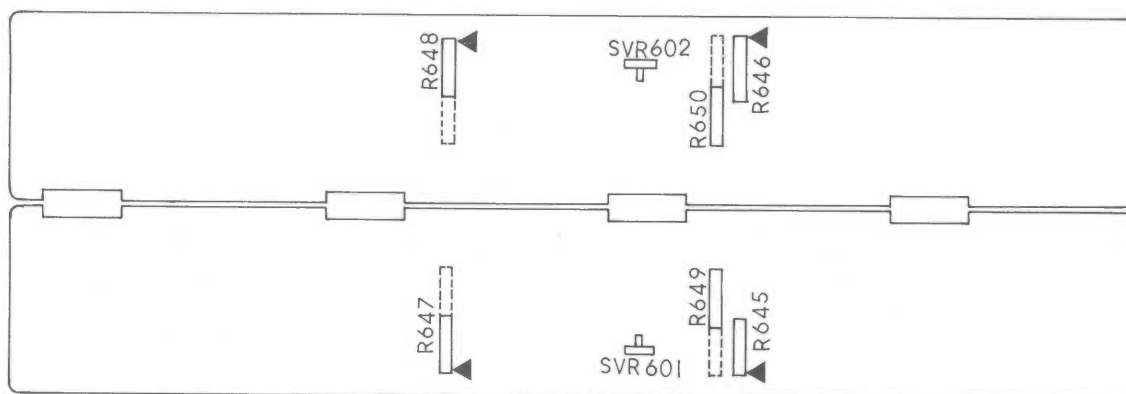
Volume control Minimum

Function CD/VIDEO

Speaker load Non load

Step	Input	Output Indicator Connection	Adjustment	Adjust for
IDLING				
1	Preheat for more than 1 minuts.			
2	No signal	DC digital voltmeter R645/R647 (Lch) R646/R648 (Rch)	SVR601 (Lch) SVR602 (Rch)	13±2mV

Main Amp L and R P.C.Boards



3.2 TUNER

Conditon

AM (Amplitude Modulation)

Function AM

Scan Step Selector 10KHz position.

Input level 74dB/m (5mV/m)

Generator Modulation 30%, 400Hz

IRE loop antenna 24 inches (60cm)
spacing or through IHF dummy

FM (Frequency Modulation)

Function FM

Scan Step Selector 100KHz position.

Input level 60dB (1mV)

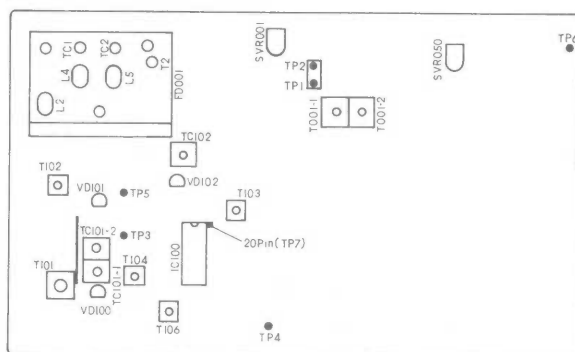
Generator Modulation 1000Hz with 100% of maximum system deviation ($\pm 75\text{KHz}$),
through the matching dummy.

Step	Signal, Sweep Generator		Dial Setting	Output Indicator	Adjustment	Adjust for
	Connection	Frequency		Connection		
AM TUNING VOLTAGE						
1	No signal		530KHz (Low end)	<u>DC digital voltmeter</u> TP5	T103	VD100 – VD102 No mark..... 1.7±0.1V Gold mark.... 1.6±0.1V Silver mark... 1.5±0.1V
2			1620KHz (High end)	Same as step (1)	TC102	18.8±0.1V
3	Repeat steps (1) and (2).					
AM IF						
4	To TP3 through the IHF dummy	450KHz	Point of non- interference	<u>IF sweep generator</u> TP4	T104 T106	Flat and max signal
5				<u>Distortion meter</u> TP4	T104	Minimum
AM TRACKING						
6	To the built-in AM Loop antenna placed at a distance of 24 inches (60cm) from the IRE Loop	600KHz	600KHz	<u>RF sweep generator</u> TP4	T101 T102	Maximum signal
7		1400KHz	1400KHz	Same as step (6)	TC101-1 TC101-2	Maximum signal
8	Repeat steps (6) and (7).					
AM SIGNAL LED						
9	To AM antenna terminals through the IHF dummy	1000KHz (Input 50dB)	1000KHz	SIGNAL LED	SVR201 (On the TIP-PCB)	Full light up
AM MUTING LEVEL						
10	Same as step (9)	1000KHz (Input 23dB)	1000KHz	<u>Oscilloscope</u> TAPE OUT jacks across the 4.7KΩ	T501 (on the FEQ-PCB)	Go out signal
11		1000KHz (Input 28dB)				Come out signal
12	Repeat steps (10) and (11).					
AM STOP SIGNAL						
13	No signal		1000KHz	<u>Frequency counter</u> IC 100 20 pin (TP7)	TC216 (On the TIP-PCB)	1450±0.01KHz
FM TUNING VOLTAGE						
14	No signal		87.90MHz (Low end)	Same as step (1)	T2	3.0±0.5V
15			107.90MHz (High end)	Same as step (1)	T2	21.0±1V
16	Repeat steps (14) and (15).					
FM IF						
17	Preheat for more than 60 seconds.					
18	To FM antenna terminals through the matching dummy	98.00MHz	98.00MHz	<u>DC digital voltmeter</u> TP1, TP2	T001-1	0±1mV
19				<u>Distortion meter</u> TAPE OUT jacks across the 4.7kΩ resistor	T001-2	Less than 0.13%
20	Repeat steps (18) and (19).					

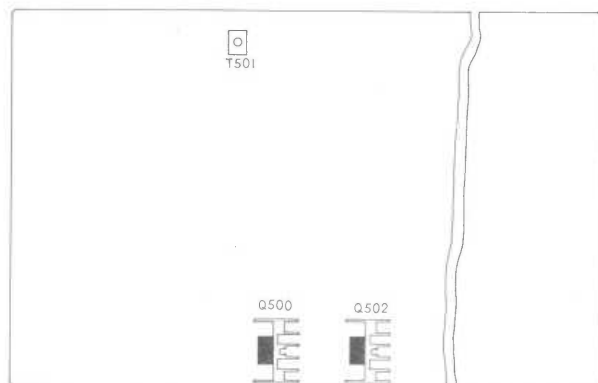
Step	Signal, Sweep Generator		Dial Setting	Output Indicator	Adjustment	Adjust for
	Connection	Frequency		Connection		
FM TRACKING						
21	Same as step (18)	98.00MHz	98.00MHz	Same as step (10)	L2 L4 L5	Maximum signal
22	Same as step (18)	106.00MHz	106.00MHz	Same as step (10)	TC1 TC2	Maximum signal
23	Repeat steps (21) and (22).					
FM MUTING LEVEL						
24	Set the MUTE switch ON.					
25	Same as step (18)	98.00MHz (Input 22dB)	98.00MHz	VTVM TP6	SVR001	5V → 0V
FM SIGNAL LED						
26	Same as step (18)	98.00MHz	98.00MHz	SIGNAL LED	SVR202 (On the TIP-PCB)	Full light up
FM SEPARATION						
27	Preheat for more than 30 seconds.					
28	Same as step (18)	98.00MHz (Mod. Rch only)	98.00MHz	VTVM	SVR050	Minimum output and same separation in both channel
29		98.00MHz (Mod. Lch only)		TAPE OUT jacks across the 4.7K Ω resistor		

3.3 ADJUSTMENT LOCATIONS

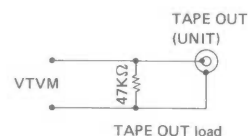
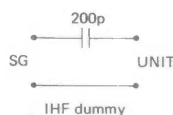
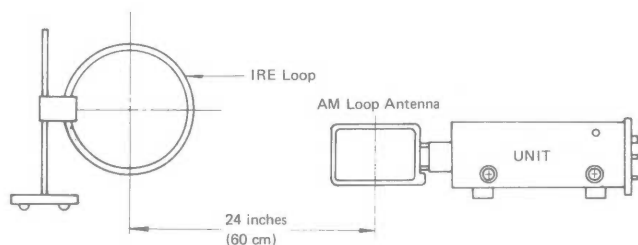
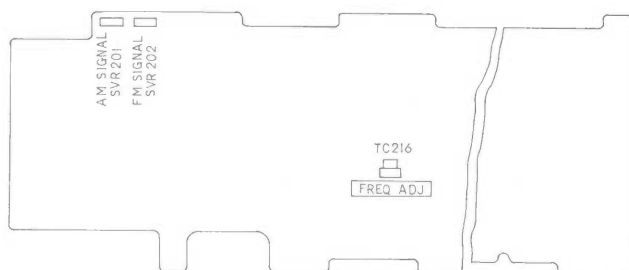
Tuner P.C.Board



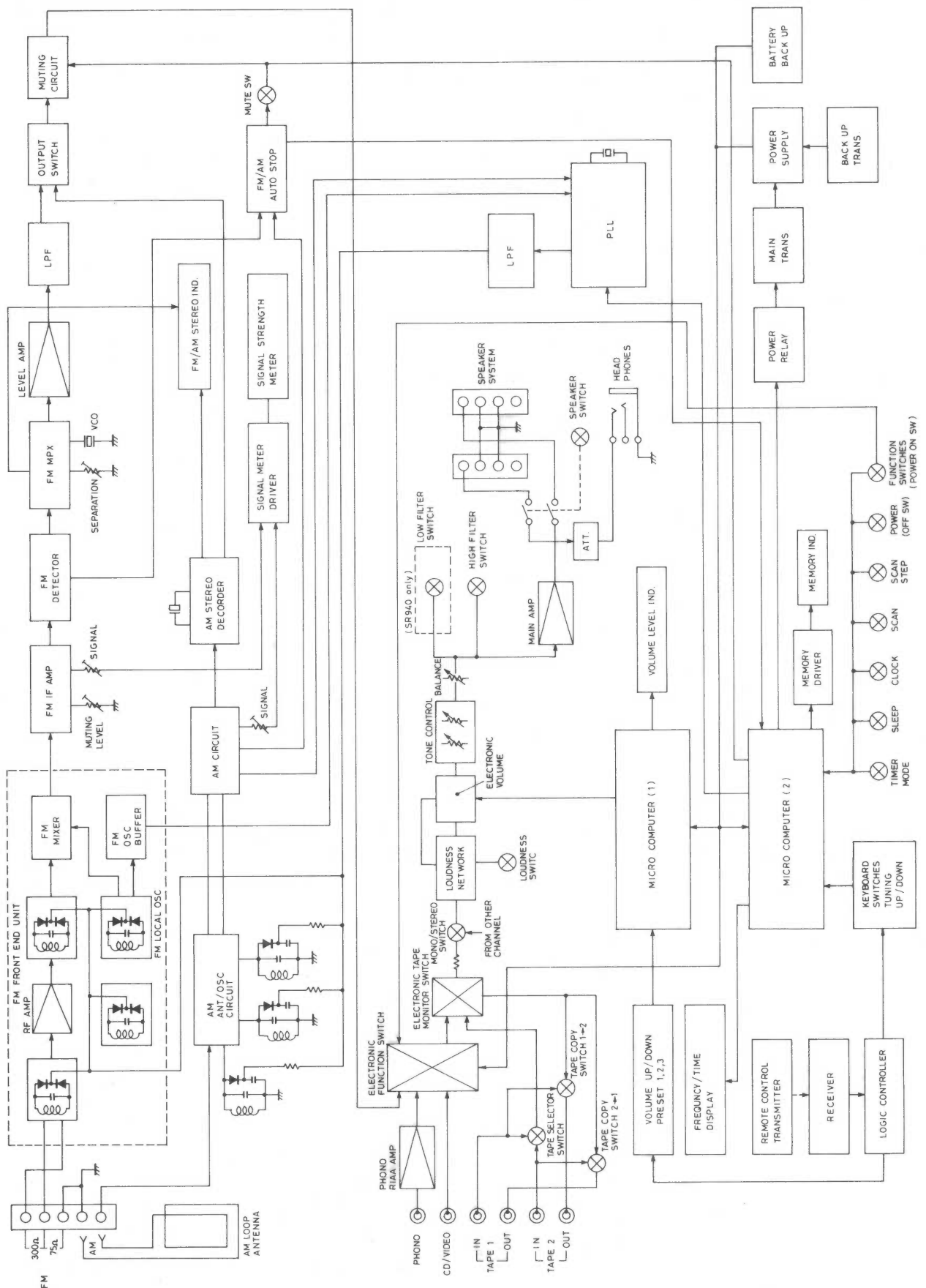
Function/EQ P.C.Board



Timer/PLL P.C.Board

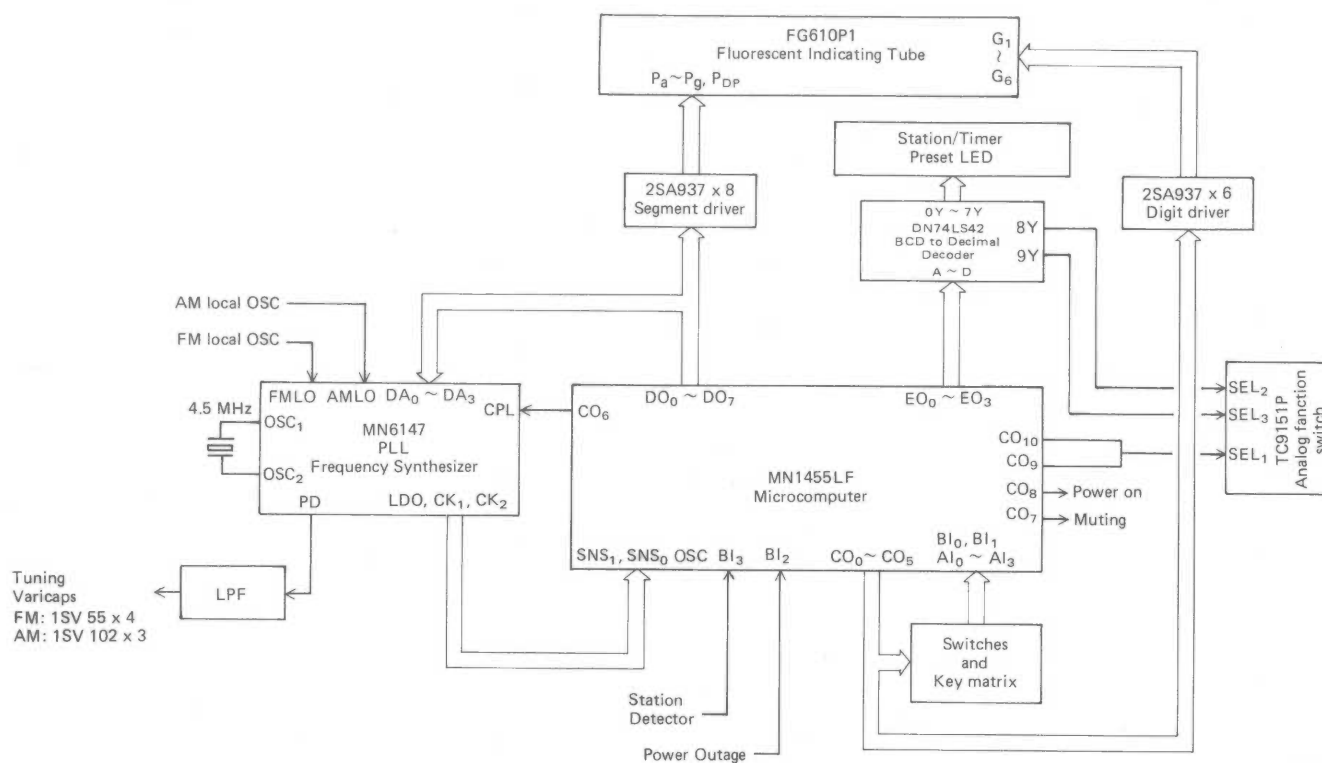


4. BLOCK DIAGRAM



5. CIRCUIT EXPLANATIONS

5.1 PLL Frequency Synthesizer Tuning System



(1) Microcomputer MN1455LF

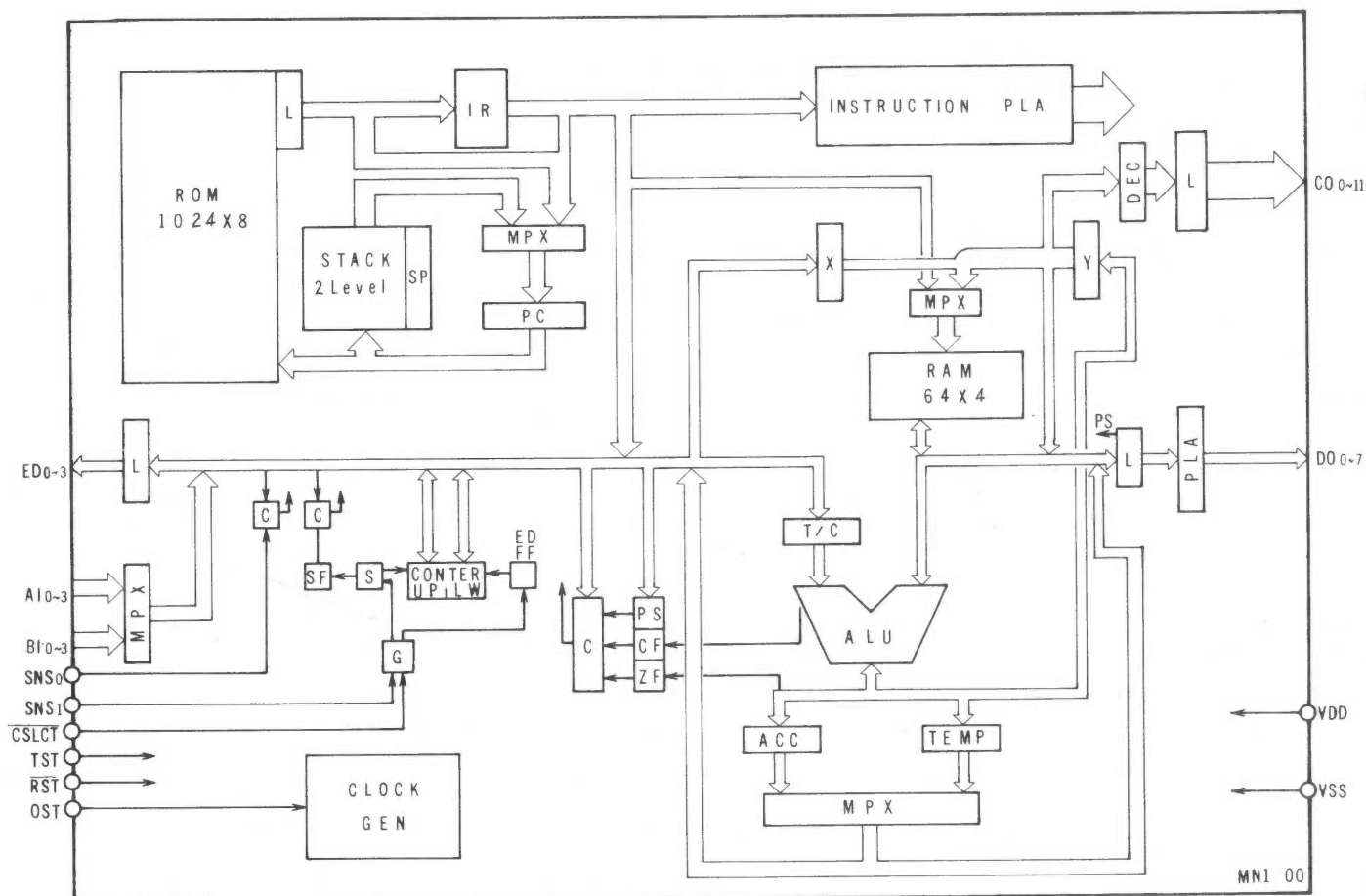
- **Pin assignment**

V _{SS}	1	40	OSC
CO11	2	39	V _{DD}
CO10	3	38	DO7
CO9	4	37	DO6
CO8	5	36	DO5
CO7	6	35	DO4
CO6	7	34	DO3
CO5	8	33	DO2
CO4	9	32	DO1
CO3	10	31	DO0
CO2	11	30	SNS1
CO1	12	29	SNS0
CO0	13	28	CSLCT
AI3	14	27	RST
AI2	15	26	TST
AI1	16	25	EO3
AI0	17	24	EO2
BI3	18	23	EO1
BI2	19	22	EO0
BI1	20	21	BI0

• Absolute maximum ratings ($V_{SS} = 0V$, $T_a = 25^{\circ}C$)

Item	Symbol		Rating	Unit
Power supply voltage	V_{DD}		$-0.3 \sim +10$	V
Input voltage	V_I		$-0.3 \sim V_{DD} + 0.3$	V
Output terminal voltage	V_O		$-0.3 \sim V_{DD} + 0.3$	V
Clock input terminal voltage	V_{OSC}		$-0.3 \sim V_{DD} + 0.3$	V
Peak output current	I_{OH} (peak)	C port	-0.5	mA
		D port		
		E port		
	I_{OL} (peak)	C port	8	mA
		D port		
		E port		
Average output current	I_{OH} (avg)*	C port	-0.25	mA
		D port		
		E port		
	I_{OL} (avg)*	C port	4	mA
		D port		
		E port		
Power dissipation	P_D^{**}		500	mW
Operating ambient temperature	T_{opr}		$-20 \sim +70$	°C
Storage temperature	T_{stg}		$-55 \sim +100$	°C

• Block diagram



• Pin Names

Pin No.	Symbol	Functional description
1	V _{SS}	Ground terminal
2	CO11	LW source control output terminal/ H level output
3	CO10	MW source control output terminal/ H level output
4	CO9	FW source control output terminal/ H level output
5	CO8	AC outlet output terminal/H level output
6	CO7	Muting output terminal/H level output
7	CO6	Data latch clock output terminal for MN6147
8 9 10 11 12 13	CO5 CO4 CO3 CO2 CO1 CO0	Frequency display digit output and switch and key matrix scan port. The scan is low level. CO5 ... G2, CO4 ... G3, CO3 ... G4, CO2 ... G5, CO1 ... G6, CO0 ... G1, G2
14 15 16 17 20 21	AI3 AI2 AI1 AI0 BI1 BI0	Switch and key matrix input terminal. The input signal is always supplied from the microcomputer standard routine.
18	BI3	Station (tuning) detector signal input terminal. Checks the input only in the auto up/ down station seek. Station detector signal — H level input Non station detector signal — L level input. In the normal condition, the muting is released regardless of the station detector signal.
19	BI2	Power outage (battery back-up) detection terminal. In the battery back-up mode, the output of the microcomputer becomes low and only the clock is counted. When the power is recovered, the unit is set to OFF mode (OFF key on condition) and display indicates the current time. Battery back-up mode—L level input Normal power supply—H level input
22 23 24 25	EO0 EO1 EO2 EO3	Data output terminal for BCD driver DN74LS42. Preset memory display LED (M1-M8) and PHONO and CD/VIDEO source LED control terminal.
26	TST	Test terminal. Connected to ground Reset terminal.

Pin No.	Symbol	Functional description
27	RST	When power is supplied to the micro computer, the level is L. In the normal condition, the level is H.
28	CSLCT	To use the SNS1 for counter mode, connect to ground.
29	SNS0	Lock detection input terminal for PLL system. The LDO signal of MN6147 is supplied to this terminal via the filter. This terminal is used for auto up/down station seek. Lock mode — H level input Unlock mode — L level input
30	SNS1	Reference clock (250 Hz) input terminal. Input from the CK2 of MN6147.
31 32 33 34 35 36 37 38	DO0 DO1 DO2 DO3 DO4 DO5 DO6 DO7	MN6147 data output and display segment output terminal. The segment scan is low.
39	V _{DD}	Power supply terminal. (+5V ± 10%)
40	OSC	Microcomputer clock (562.5 KHz) input terminal. Input from the CK1 of MN6147

(2) PLL Frequency Synthesizer MN6147

• Pin assignment

V _{SS}	1	18	FM/AM
LDO	2	17	SW/MW
OSC1	3	16	FMLO
OSC2	4	15	AMLO
CK1	5	14	V _{DD}
CK2	6	13	DA0
V _{CK}	7	12	DA1
PD	8	11	DA2
CPL	9	10	DA3

• Absolute maximum ratings (V_{SS} = 0V, Ta = 25°C)

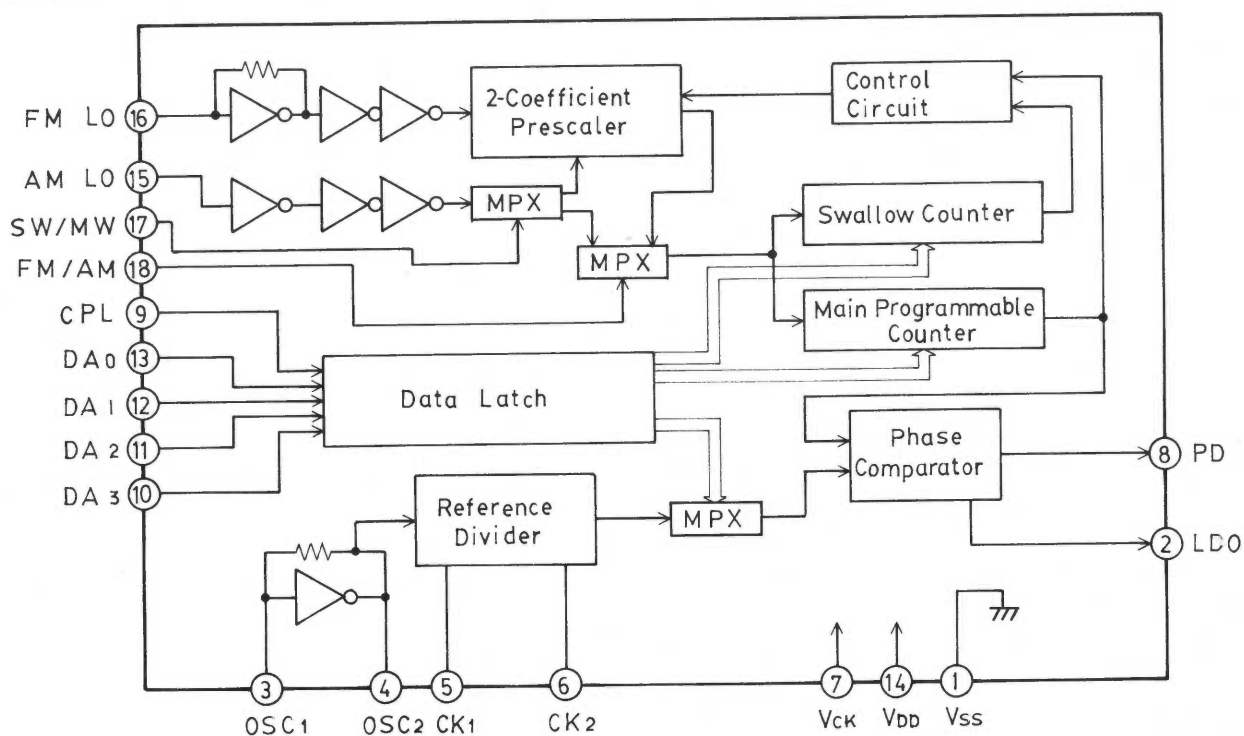
Item	Symbol	Rating	Unit
Power supply voltage	V _{DD}	-0.3 ~ +10	V
Input voltage	V _I	-0.3 ~ V _{DD} + 0.3	V
Output voltage	V _O	-0.3 ~ V _{DD} + 0.3	V
Power dissipation	P _D	250	W
Operating ambient temperature	T _{opr}	-30 ~ +70	°C
Storage temperature	T _{stg}	-55 ~ +100	°C

• Terminal assignments

Pin No.	Symbol	Functional description
1	V _{SS}	Ground
2	LDO	Lock detector output
3	OSC1	Crystal oscillator (4.5MHz)
4	OSC2	
5	CK1	Clock output (562.5 kHz)
6	CK2	Clock output (250 Hz)
7	V _{CK}	Clock circuit back-up
8	PD	Phase comparator output
9	CPL	Latch clock

Pin No.	Symbol	Functional description
10	DA3	Data address input
11	DA2	
12	DA1	
13	DA0	
14	V _{DD}	Main power supply
15	AMLO	AM local oscillator signal input
16	FMLO	FM local oscillator signal input
17	SW/MW	SW/MW selector
18	FM/AM	FM/AM selector

• Block diagram



• PLL Synthesizer Tuning System Theory of Operation

As shown in the Figure, the output frequency of the FM/AM local oscillator is automatically locked to a constant frequency by the PLL network which is operating under microprocessor control.

In the FM mode, part of the local oscillator output is coupled to the FM input terminal of the PLL block via a buffer amplifier (for example, when the received frequency is 98.1 MHz, the local oscillation frequency is $98.1 + 10.7 = 108.8$ MHz).

Meanwhile, the microprocessor accepts frequency data input from the keyboard and provides the data of say, 98.1 MHz to the display. It also provides frequency dividing-ratio data to the PLL block. Since the reference frequency for the FM mode is 25 kHz, dividing ratio N is determined as follows:

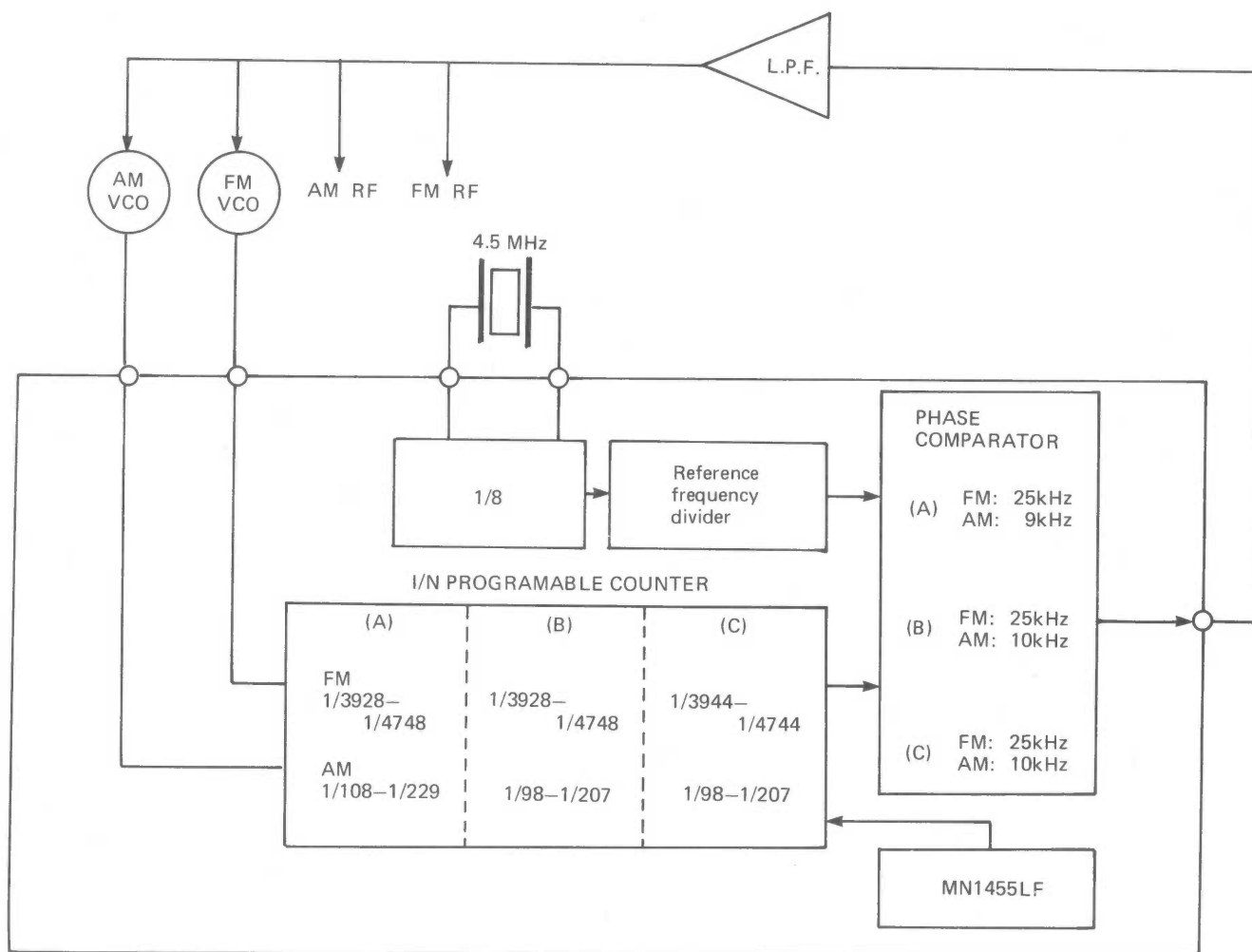
$$N = 108.8 \text{ MHz} \div 0.025 = 4352$$

When the 50 kHz stepping interval is selected in the FM mode, the FM frequency band is between 87.5 and 108.0 MHz, and hence

the local frequency band is between 98.2 and 118.7 MHz. As a result, the dividing ratio is between 3928 and 4748.

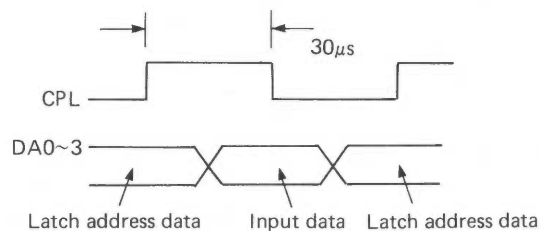
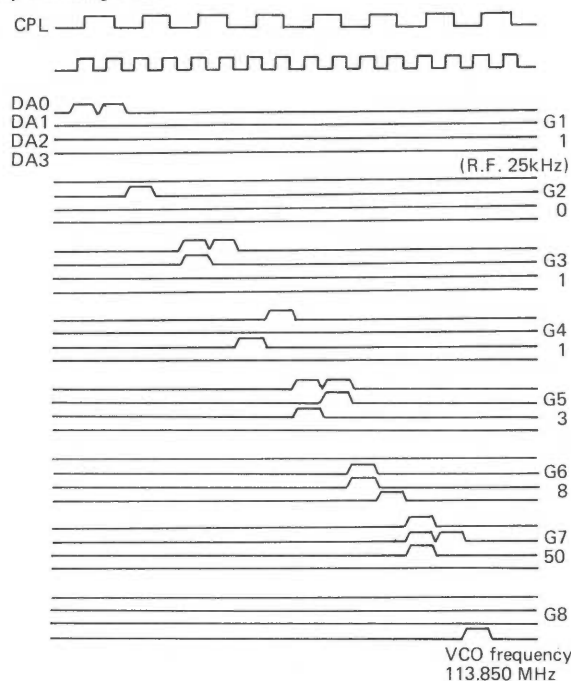
Once dividing ratio is determined, the local oscillation frequency is divided by N, and the resultant signal phase is compared with the reference signal phase. The reference signal is created by dividing the master oscillator output of 4.5 MHz, and its frequency accuracy depends on that of the quartz crystal element used in the master oscillator.

The frequency divided in the PLL block ($108.8 \text{ MHz} \div 435 = 25 \text{ kHz}$) is phase-compared with the reference frequency of 25 kHz, and the phase difference between the two signals is converted by the PLL into a corresponding pulse array. This pulse array is coupled to a low-pass filter, where it is converted into a corresponding DC level, which is then feed back to the local oscillator's control input to control the local oscillator output frequency to a constant.

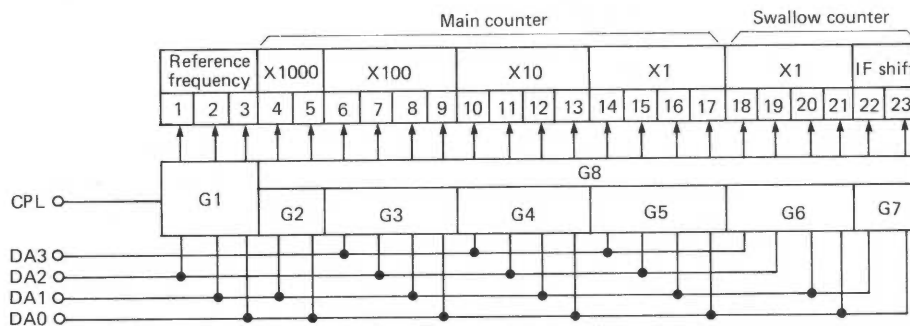


Scan Step			Receiving frequency	Local oscillator frequency	Number of channels
(A)	FM	50 kHz	87.50 ~ 108.0 MHz	98.2 ~ 118.7 MHz	411
	AM	9 kHz	522 ~ 1611 kHz	972 ~ 2061 kHz	122
(B)	FM	50 kHz	87.50 ~ 108.0 MHz	98.2 ~ 118.7 MHz	411
	AM	10 kHz	530 ~ 1620 kHz	980 ~ 2070 kHz	109
(C)	FM	200 kHz	87.9 ~ 107.9 MHz	98.6 ~ 118.6 MHz	101
	AM	10 kHz	530 ~ 1620 kHz	980 ~ 2070 kHz	109

• Data input timing chart



• Relationship between data input terminal and programmable counter



• Latch group code list

Latch Input code	G1	G2	G3	G4	G5	G6	G7	G8
DA3	L	L	L	L	L	L	L	H
DA2	L	L	L	H	H	H	H	x
DA1	L	H	H	L	L	H	H	x
DA0	H	L	H	L	H	L	H	x

• IF shift list

kHz Input code	0	25	50	75
DA1	L	L	H	H
DA0	L	H	L	H

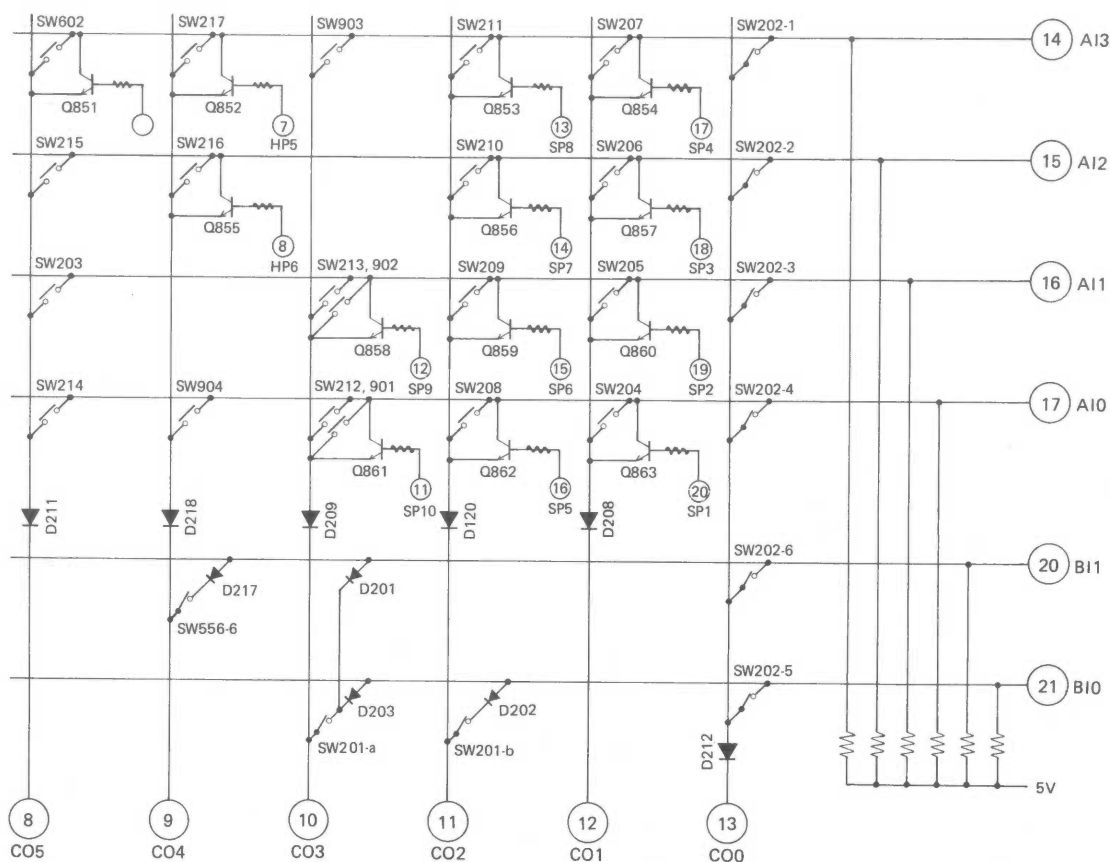
• Reference frequency (r_1) code list

kHz Input code	2.5	25	9	10	5	1
DA2	L	L	L	L	H	H
DA1	L	L	H	H	L	H
DA0	L	H	L	H	x	x

• FM, SW, MW (LW) signal process list

Input signal		Terminal code	
Signal name	Terminal	FM/AM (18)	SW/MW (17)
FM	(16)	H	X
SW	(15)	L	H
MW (LW)	(15)	L	L

(3) Switch and Key Matrix

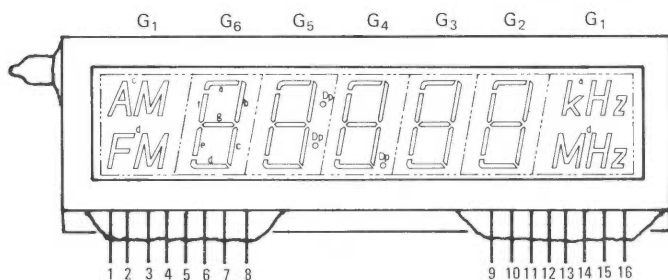


• Description

Symbol	Functional description
SW201	Scan step selector select scan stepping intervals on condition — FM: 100 kHz, AM: 10 kHz off condition — FM: 50 kHz, AM: 9 kHz
SW202	Timer switch (6-position)
—1	CLEAR: Enables the programmed content of the timer to be erased.
—2	SET: Enables the Daily On/Off and Once On/Off times, and also the type of source, to be programmed
—3	RECALL: Calls up the content programmed by the timer.
—4	CLOCK SET: Set the present time using the Keyboard switches.
—5	ON: The unit will operate in accordance with the programmed content of the timer.
—6	OFF: The unit can be operated freely, without any limitation from the timer.
SW203	Station memory switch Used for write operations for memories CH.1-8.

Symbol	Functional description
SW204 { SW213	Keyboard switches These switches are used for timer set-up SW204 ~ SW207 are used for read/write operation for EVERY ON/OFF and ONCE. ON/OFF data. SW204 ~ SW211 are used for read/write operations for station memories CH.1-8, and used for power on.
SW214	Sleep switch which can be preset in 10-minute steps up to a maximum 60-minutes is provided.
SW215	Clock call switch changes Display readout from frequency to clock for approx. 5 seconds
SW216 SW217	Tuning UP/DOWN switches
SW602	Power off switch
SW901 { SW903	Function selector and Power On switch
Q851 { Q863	Switching transistor These transistors are operated in accordance with signal from IC TC9150P.

(4) Flurescent Indicating Tube FG610P1

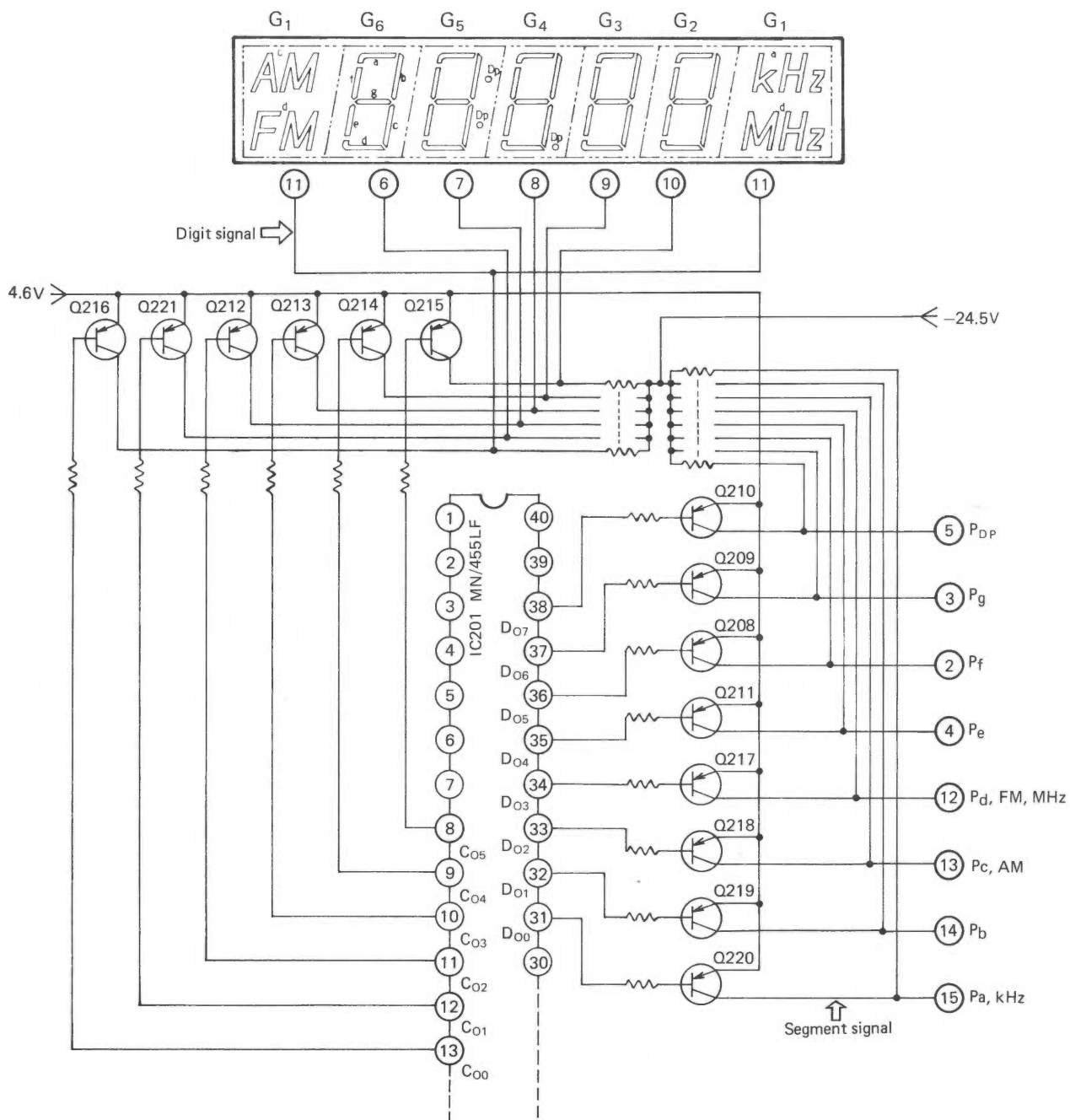


• Pin assignment

Pin No.	1	2	3	4	5	6	7	8
Assignment	F	P _f	P _g	P _e	P _{Dp}	G6	G5	G4

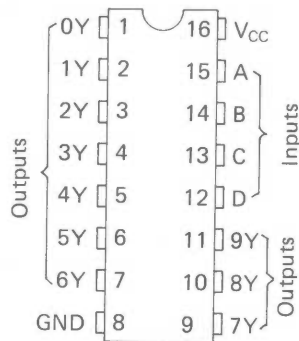
Pin No.	9	10	11	12	13	14	15	16
Assignment	G3	G2	G1	P _d	P _c	P _b	P _a	F

• Details of display



(5) BCD (Binary Corded Decimal number) to Decimal Decoder DN74LS42

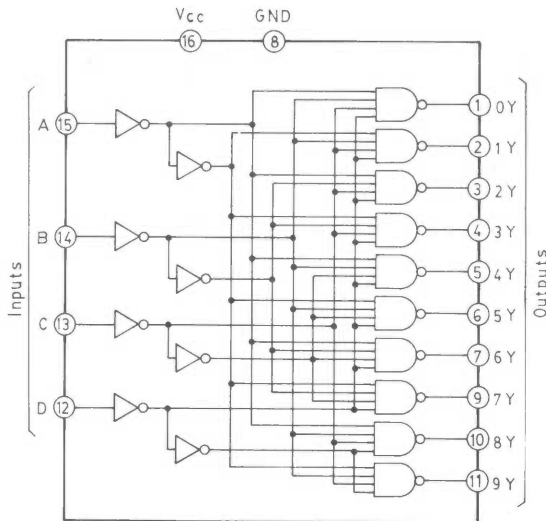
• Pin assignment



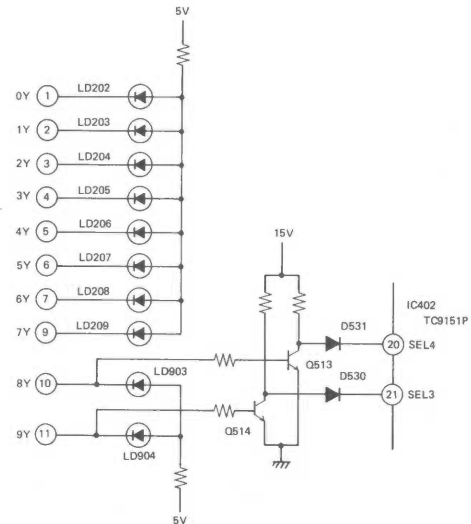
• Absolute maximum ratings

Item	Symbol	Rating	Unit
Power supply voltage	V_{CC}	7.0	V
Input voltage	V_I	$-0.5 \sim +7.0$	V
Output voltage	V_O	$-0.5 \sim +V_{CC}$	V
High level output current	I_{OH}	-400	μA
Low level output current	I_{OL}	8	mA
Power dissipation	P_D	400	mW
Operating ambient temperature	T_{opr}	$-20 \sim +75$	$^{\circ}C$
Storage temperature	T_{stg}	$-65 \sim +150$	$^{\circ}C$

• Logic diagram



• Outputs circuit

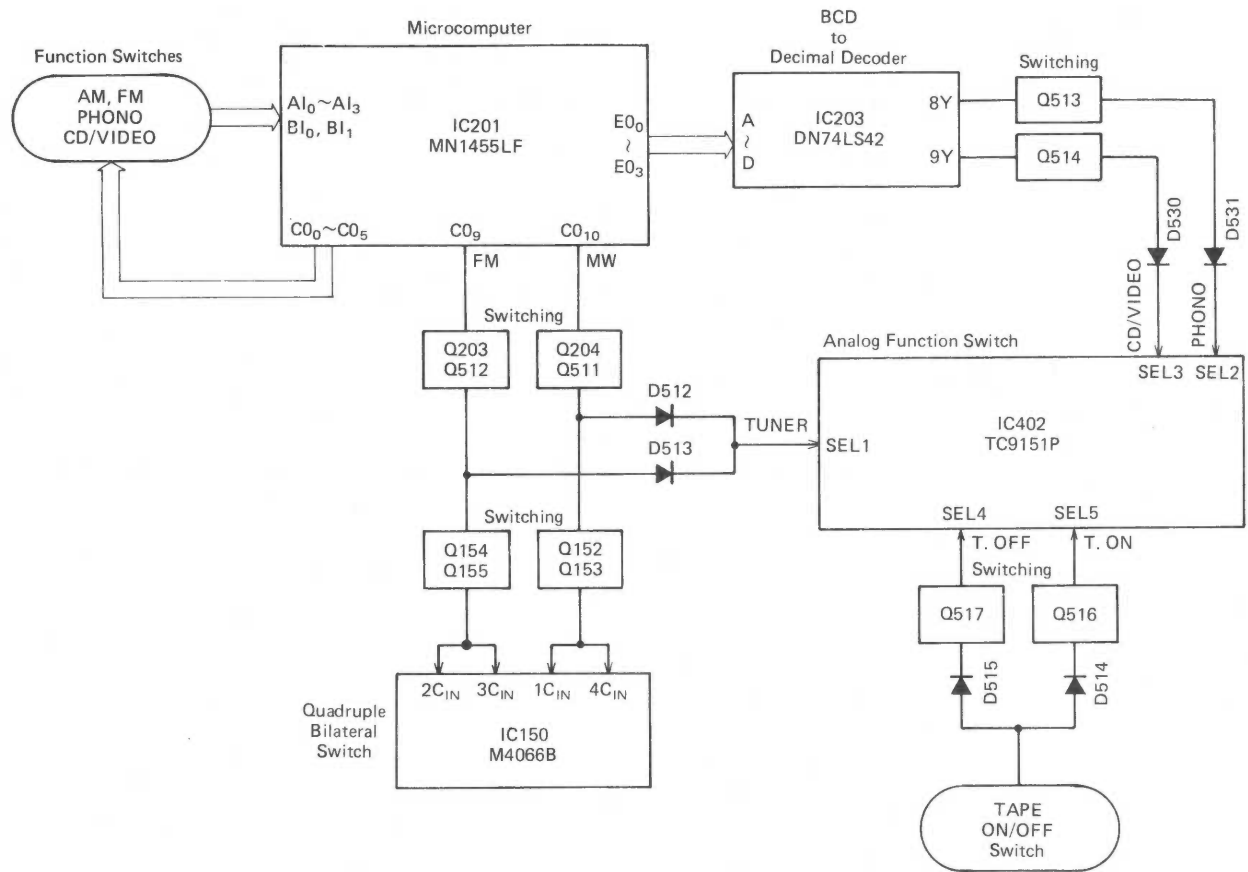


• Truth table

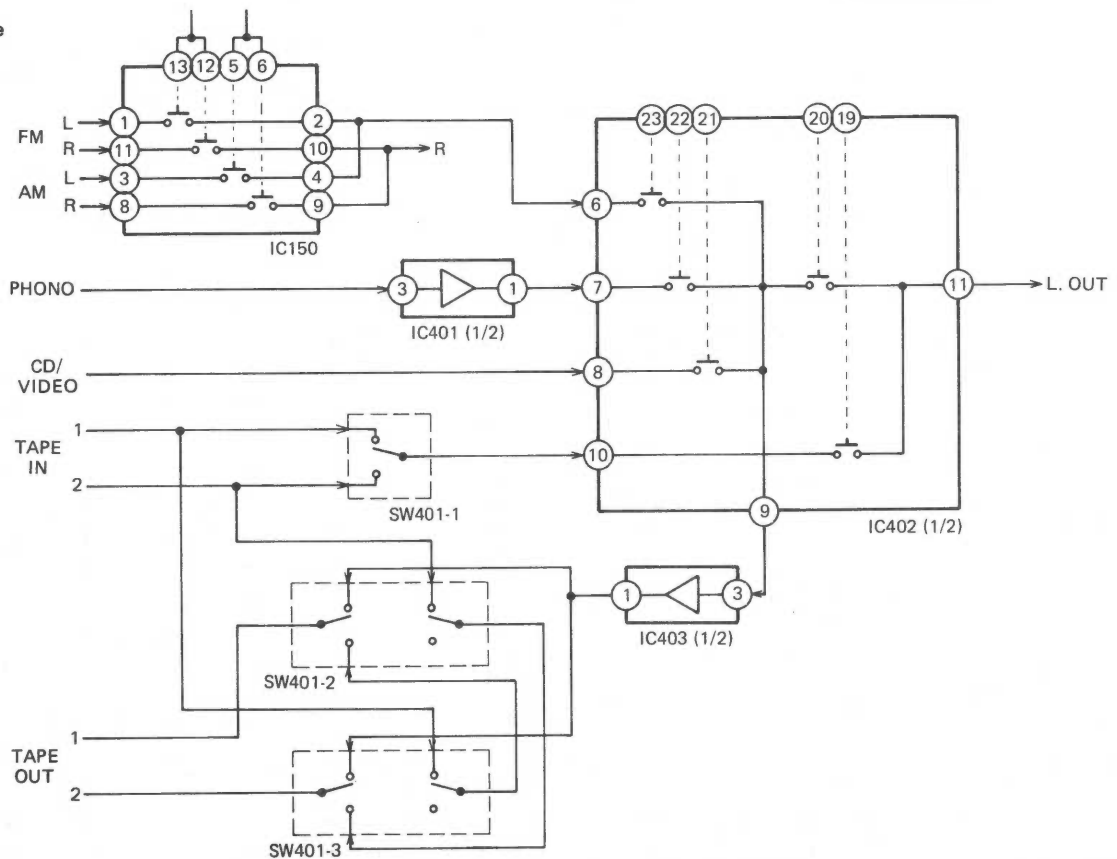
	BCD Input				Decimal Output									
	D	C	B	A	0	1	2	3	4	5	6	7	8	9
0	L	L	L	L	L	H	H	H	H	H	H	H	H	H
1	L	L	L	H	H	L	H	H	H	H	H	H	H	H
2	L	L	H	L	H	H	L	H	H	H	H	H	H	H
3	L	L	H	H	H	H	H	L	H	H	H	H	H	H
4	L	H	L	L	H	H	H	H	L	H	H	H	H	H
5	L	H	L	H	H	H	H	H	H	L	H	H	H	H
6	L	H	H	L	H	H	H	H	H	H	L	H	H	H
7	L	H	H	H	H	H	H	H	H	H	H	L	H	H
8	H	L	L	L	H	H	H	H	H	H	H	H	L	H
9	H	L	L	H	H	H	H	H	H	H	H	H	H	L
INVALID	H	L	H	L	H	H	H	H	H	H	H	H	H	H
	H	L	H	H	H	H	H	H	H	H	H	H	H	H
	H	H	L	L	H	H	H	H	H	H	H	H	H	H
	H	H	L	H	H	H	H	H	H	H	H	H	H	H
	H	H	H	L	H	H	H	H	H	H	H	H	H	H
	H	H	H	H	H	H	H	H	H	H	H	H	H	H

5-2 Input Selection

• Control line

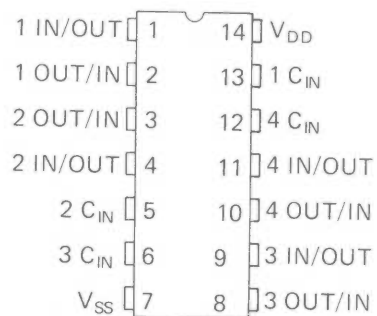


• Signal line



(1) Quadruple Bilateral Switch M4066B

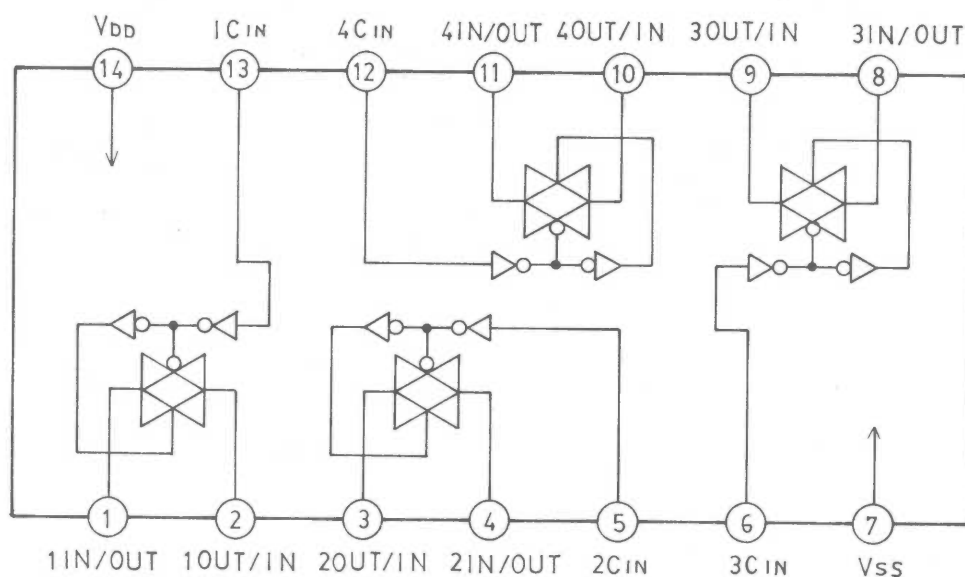
• Pin assignment



• Absolute maximum ratings ($T_a = -40 \sim +85^\circ\text{C}$)

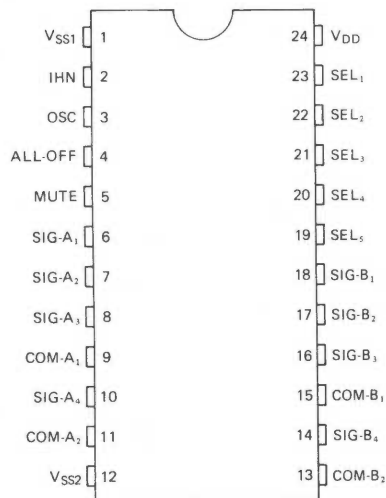
Parameter	Symbol	Limits	Unit
Supply voltage	V_{DD}	$V_{SS}-0.5 \sim V_{SS}+20$	V
Input voltage	V_I	$V_{SS}-0.5 \sim V_{DD}+0.5$	V
IN/OUT defference voltage at ON condition	V_{IO}	± 0.5	V
Input current	I_I	± 10	mA
Operating free-air temperature range	T_{opr}	$-40 \sim +85$	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-65 \sim +150$	$^\circ\text{C}$

• Logic diagram



(2) Feather-touch Analog Function Switch TC9151P

• Pin assingment

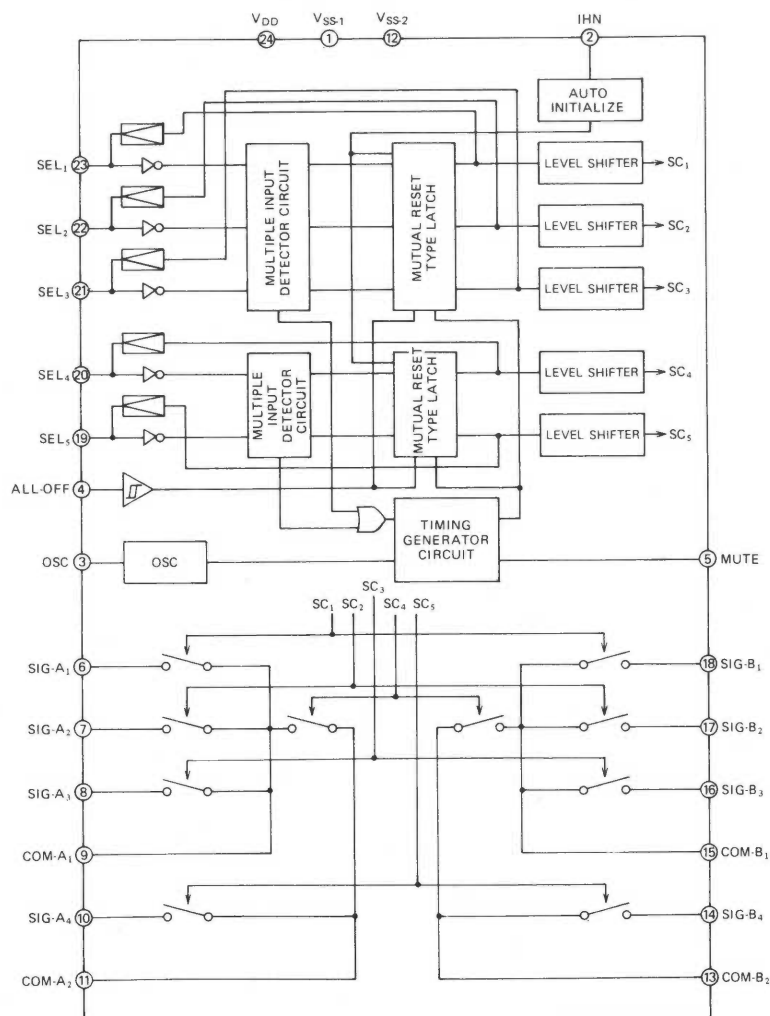


This IC is used for feather-touch function selectors, and incorporates analog switches with a high breakdown voltage.

• Maximum ratings (Ta = 25°C)

ITEM	SYMBOL	RATINGS	UNIT
Supply Voltage (1)	V_{DD} V_{SS1}	16	V
Supply Voltage (2)	V_{DD} V_{SS2}	32	V
Input Voltage (V_{SS1})	$V_{IN (1)}$	$-0.3 \sim V_{DD} + 0.3$	V
Input Voltage (V_{SS2})	$V_{IN (2)}$	$-0.3 \sim V_{DD} + 0.3$	V
Power Dissipation	P_D	800	mW
Operating Temperature	T_{opr}	$-30 \sim 75$	°C
Storage Temperature	T_{stg}	$-55 \sim 125$	°C

• Block diagram

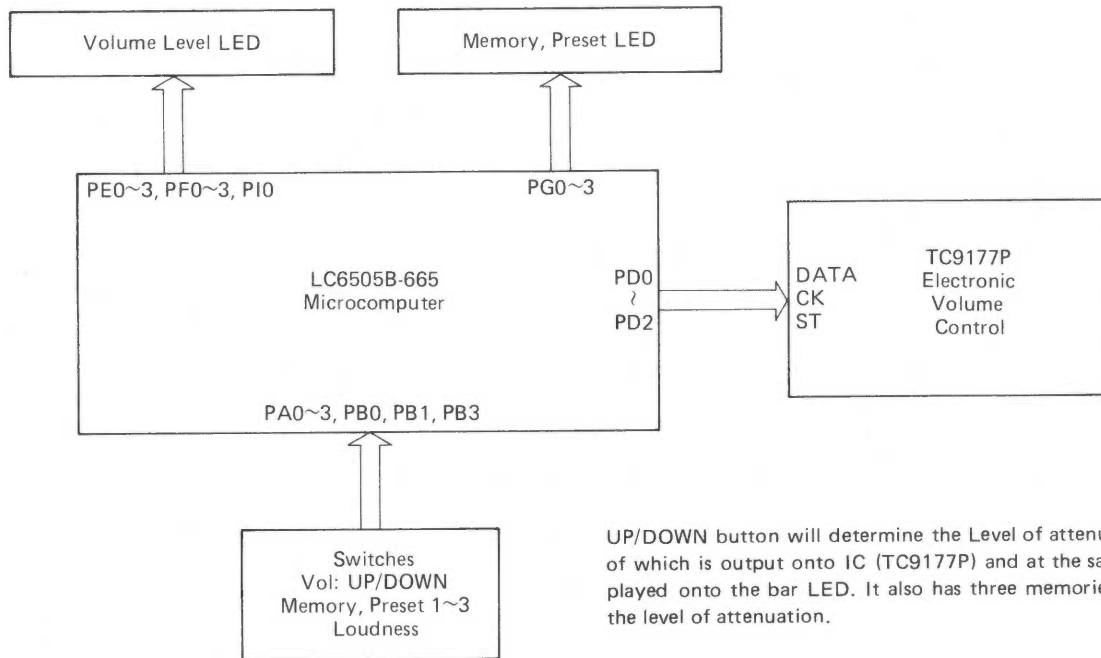


• Functional description of terminal

PIN NO.	SYMBOL	FUNCTIONAL DESCRIPTION
2	INH	Inhibit input terminal. With "H" level signals, permits normal operation. With "L" level signals, inhibits operation.
3	OSC	C, R connection terminal for oscillator. The frequency of this oscillator determines muting time and analog switch selection timing.
4	ALL-OFF	"ALL ANALOG SWITCHES OFF" command input terminal. If an "H" level signal is input to this terminal, all analog switches go OFF.
5	MUTE	Muting signal output terminal. When an "H" level signal is received at the selector input terminals (SEL-1 ~ SEL-5), this terminal goes "H" for a certain time during which the analog switches change over. Muting output time can be set freely by the oscillator frequency.
24 1 12	V _{DD} V _{SS1} V _{SS2}	Power supply voltage terminal. For the control system, connect V _{DD} - V _{SS1} . For the analog switch system, connect V _{DD} - V _{SS2} .
19 20 21 22 23	SEL-5 SEL-4 SEL-3 SEL-2 SEL-1	Analog switch selector input terminals. If an "H" level signal is applied to terminals SEL-1 ~ SEL-5, the analog switch selected goes ON. SEL-1, SEL-2, SEL-3, and SEL-4, SEL-5, are in a mutual reset arrangement, so that in the absence of the selecting input they are OFF.
6, 18	SIG-A ₁ SIG-B ₁	Signal input terminal 1. When SEL-1 is selected, analog switch 1 goes ON, and the terminal and terminal COM-1 then become conducting.
7, 17	SIG-A ₂ SIG-B ₂	Signal input terminal 2. When SEL-2 is selected, analog switch 2 goes ON, and this terminal and terminal COM-1 then become conducting.
8, 16	SIG-A ₃ SIG-B ₃	Signal input terminal 3. When SEL-3 is selected, analog switch 3 goes ON, and this terminal and terminal COM-1 then become conducting.
9, 15	COM-A ₁ COM-B ₁	Analog switch common terminal 1. This is a common terminal for analog switches SIG ₁ ~ SIG ₃ above.
10, 14	SIG-A ₄ SIG-B ₄	Signal input terminal 4. When SEL-5 is selected, analog switch 5 goes ON, and this terminal and terminal COM-2 then become conducting. When SEL-4 is selected, analog switch 4 goes ON, and analog switch 5 goes OFF.
11, 13	COM-A ₂ COM-B ₂	Analog switch common terminal 2. This is a common terminal for analog switches 4, 5 above.

5.3 Electronic Volume Control

(1) Outline of Function

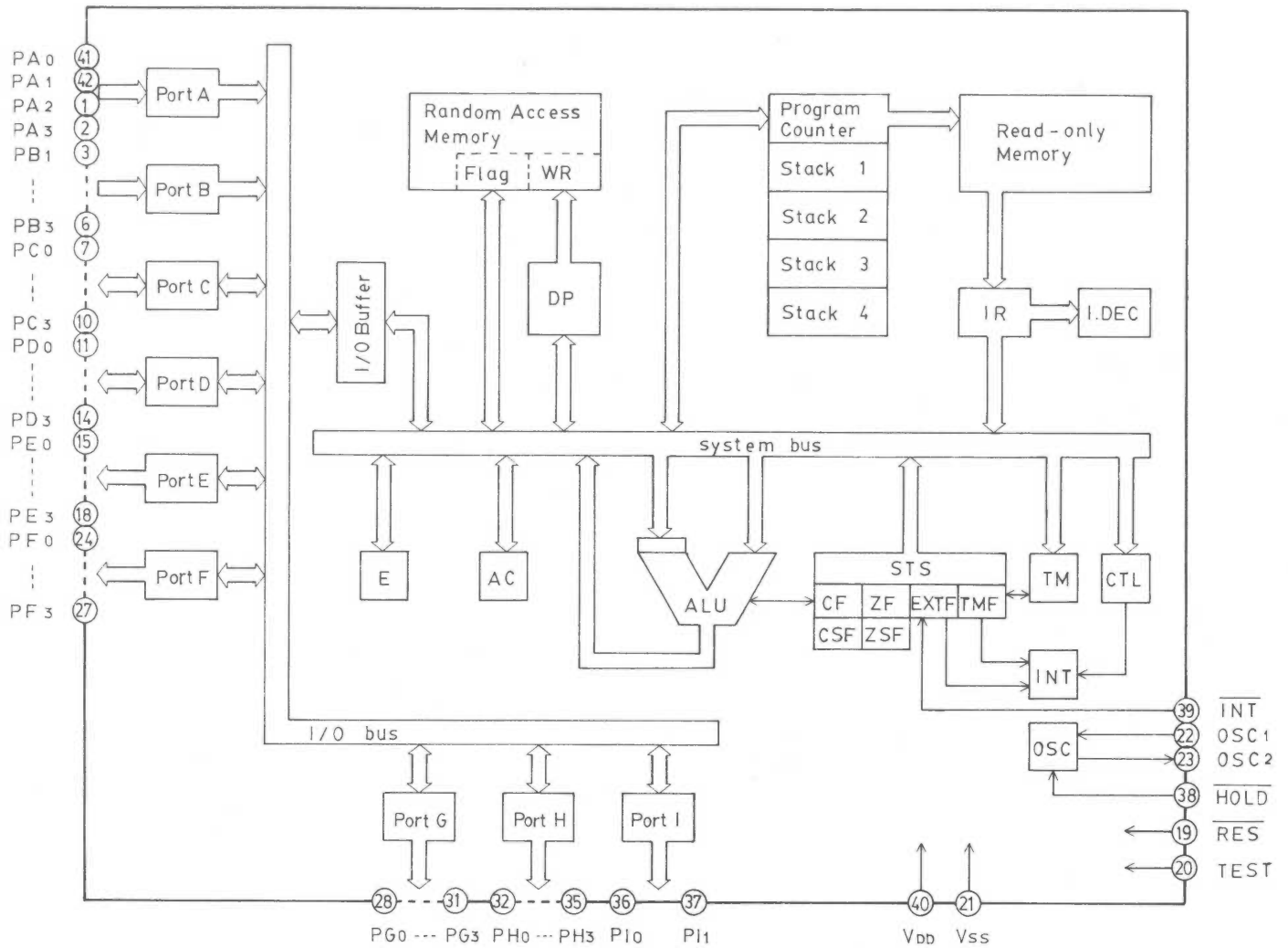


(2) Microcomputer LC6505B-665

- Pin assignment

PA2	1	42	PA1
PA3	2	41	PA0
PB0	3	40	V _{DD}
PB1	4	39	$\overline{\text{INT}}$
PB2	5	38	$\overline{\text{HOLD}}$
PB3	6	37	PI1
PC0	7	36	PI0
PC1	8	35	PH3
PC2	9	34	PH2
PC3	10	33	PH1
PD0	11	32	PH0
PD1	12	31	PG3
PD2	13	30	PG2
PD3	14	29	PG1
PE0	15	28	PG0
PE1	16	27	PF3
PE2	17	26	PF2
PE3	18	25	PF1
$\overline{\text{RES}}$	19	24	PF0
TEST	20	23	OSC2
V _{SS}	21	22	OSC1

• Block diagram



(3) Electronic Volume Control TC9177P

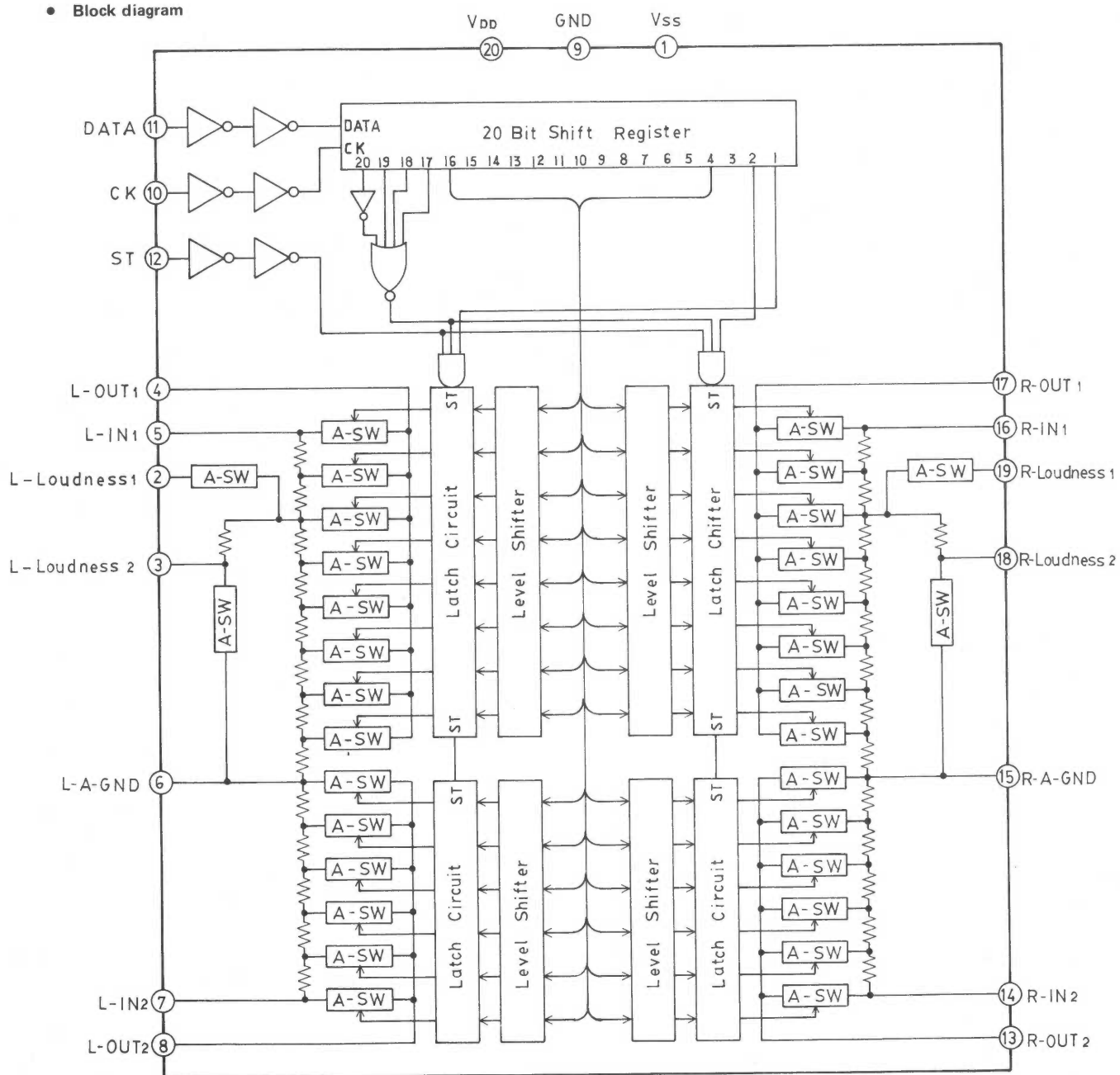
• Pin assignment

V _{SS}	1	20	V _{DD}
L-Loudness ₁	2	19	R-Loudness ₁
L-Loudness ₂	3	18	R-Loudness ₂
L-OUT ₁	4	17	R-OUT ₁
L-IN ₁	5	16	R-IN ₁
A-GND	6	15	A-GND
L-IN ₂	7	14	R-IN ₂
L-OUT ₂	8	13	R-OUT ₂
GND	9	12	ST
CK	10	11	DATA

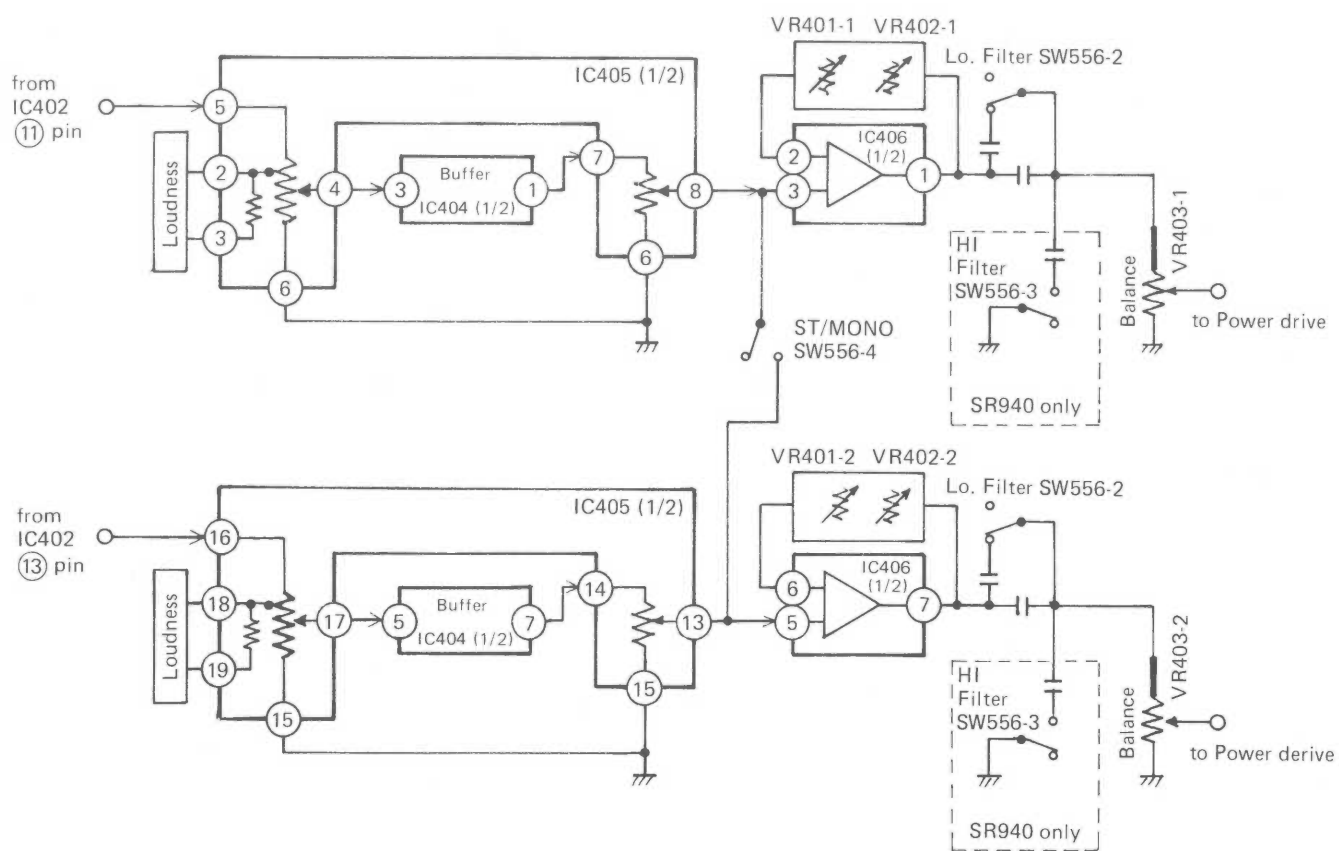
• Maximum rating

Characteristic	Symbol	Rating	Unit
Supply voltage	V _{DD}	V _{SS} -0.3~V _{SS} +36	V
Input voltage	V _{IN}	V _{SS} -0.3~V _{DD} +0.3	V
Power dissipation	P _c	300	mW
Operation temperature	T _{opr}	-30~75	°C
Storage temperature	T _{stg}	-55~125	°C

• Block diagram

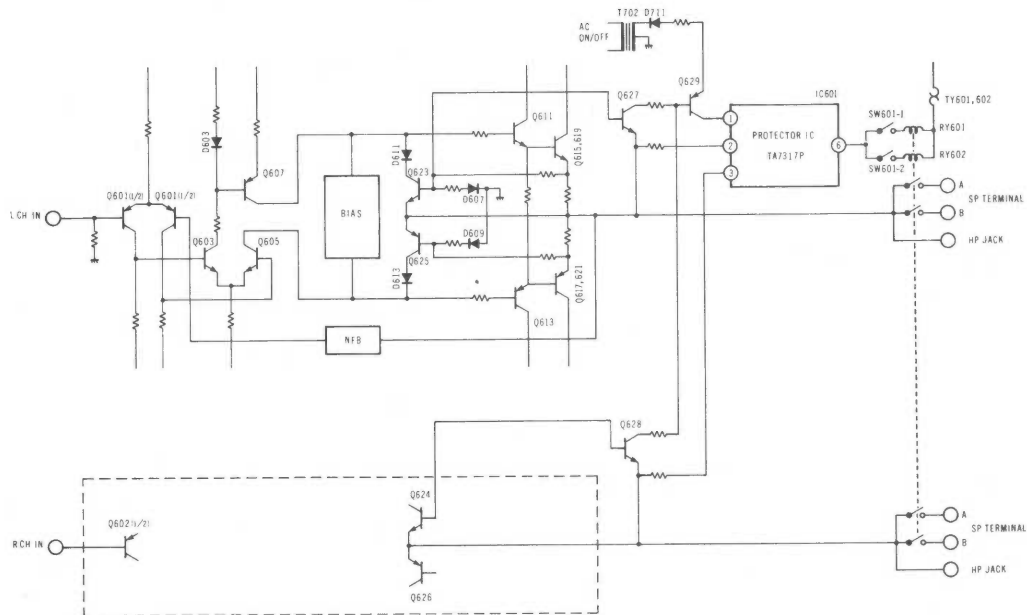


(4) Tone circuit



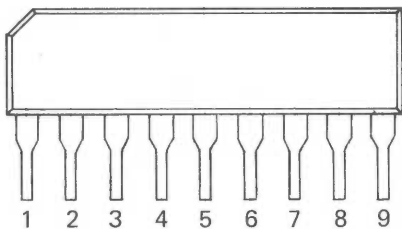
5.4 Main Amp and Protection Circuit

● Outline



(1) Protection Circuit TA7317P

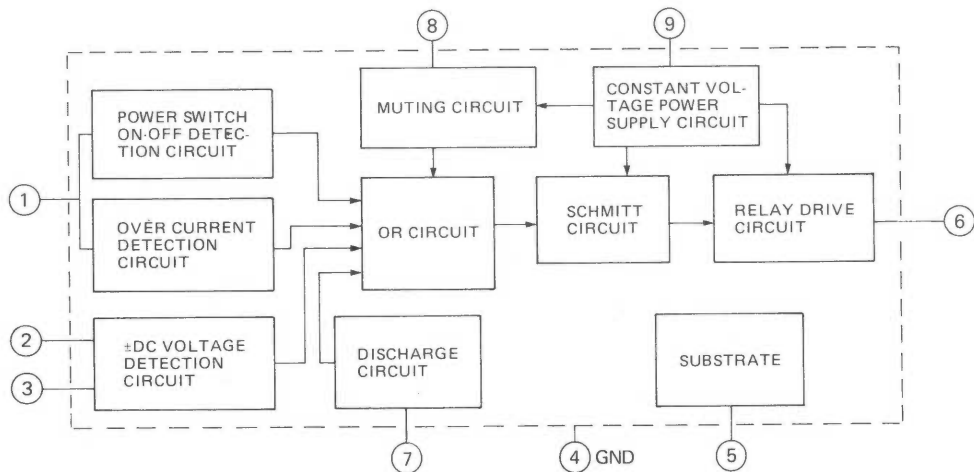
● Pin assignment



● Maximum ratings

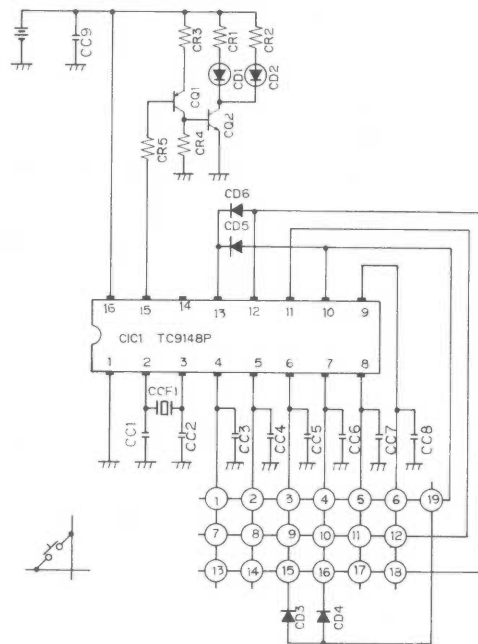
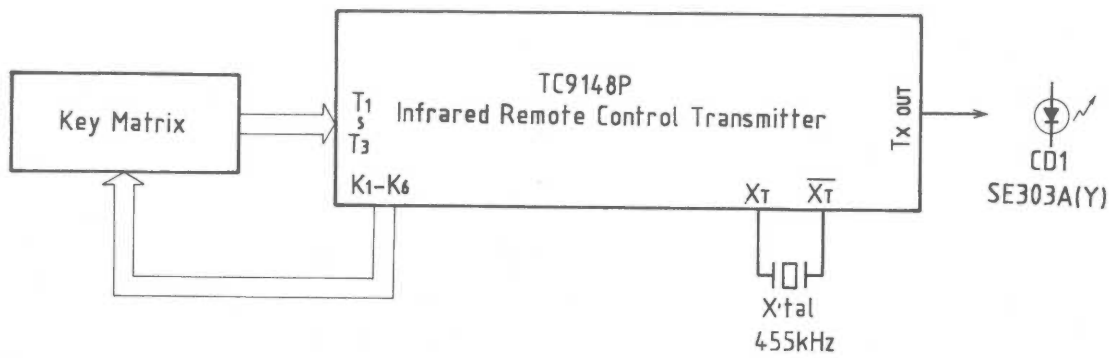
Characteristic	Symbol	Rating	Unit
Supply voltage	V_{CC}	60	V
Relay driver output current	I_{OUT}	130	mA
Power dissipation	P_D	500	mW
Operating temperature	T_{opr}	-20 ~ +75	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

● Block diagram

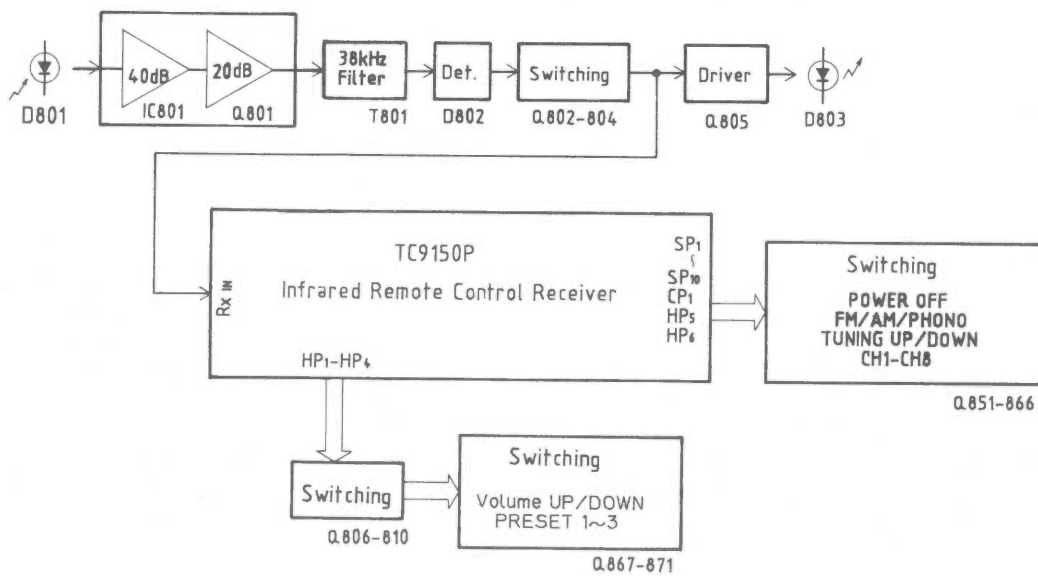


5.5 Remote Control System

• Transmitter

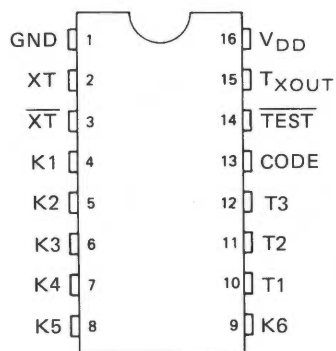


• Receiver RCM-40



(1) Infrared Remote Control Transmitter TC9148P

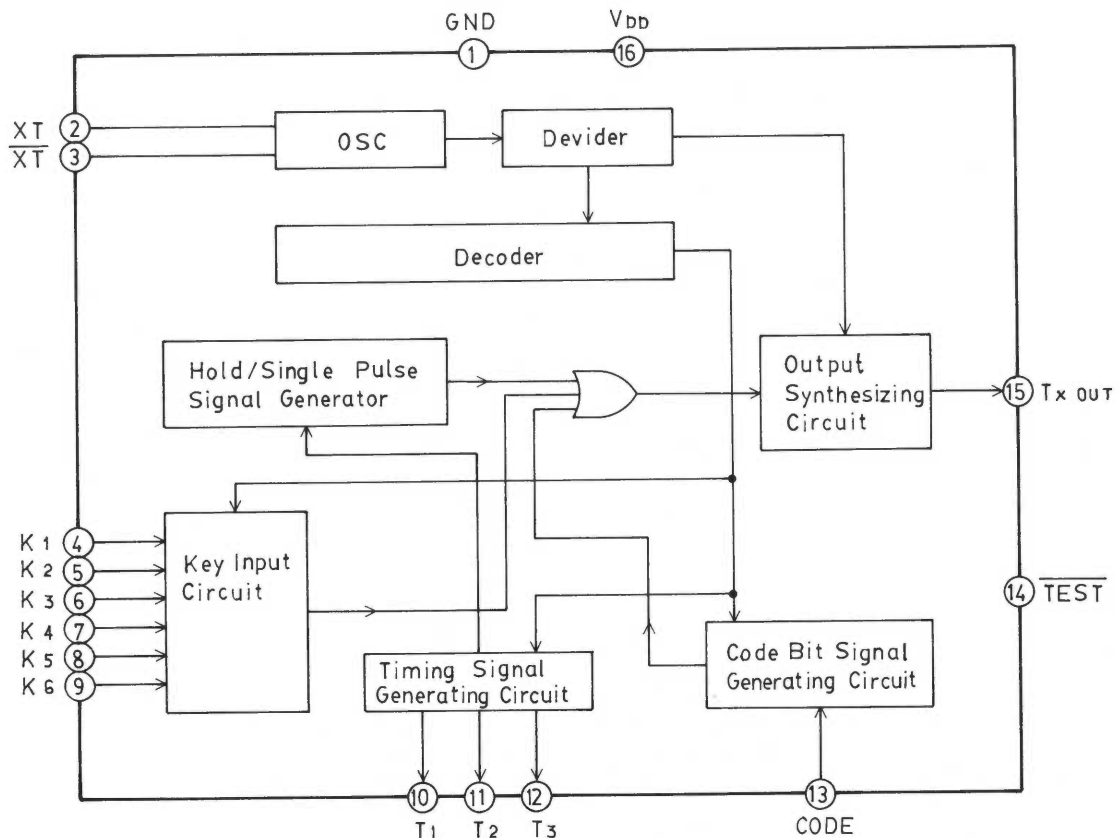
• Pin assignment



• Maximum ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V_{DD}	6.0	V
Input/Output voltage	V_{IN}	$V_{SS}-0.3 \sim V_{DD}+3.0$	V
Power dissipation	P_D	200	mW
Operating temperature	T_{opr}	$-20 \sim +75$	°C
Storage temperature	T_{stg}	$-55 \sim +125$	°C
T_{XOUT} output current	I_{OUT}	-5	mA

• Block diagram



• Description of terminals

PIN NO.	SYMBOL	FUNCTION/OPERATION
1, 16	GND, V_{DD}	GND/Power Supply Voltage Terminal
2, 3	XT, $\overline{XT}$	Terminal for OSC, and used for connecting a 455kHz ceramic resonator etc. (with a built-in feedback resistor)
4~9	$K_1 \sim K_6$	Key input terminal for Key matrix. 18 keys can be connected at $T_1 \sim T_3 \times K_1 \sim K_6$ (with a built-in pull-down resistor)
10~12	$T_1 \sim T_3$	Digit timing output terminal for key matrix.

PIN NO.	SYMBOL	FUNCTION/OPERATION
13	CODE	Code bit Input Terminal Terminal for matching code between transmitting and receiving.
14	$\overline{TEST}$	Test Terminal Keep this terminal open.
15	T_{XOUT}	Transmitting signal output. Modulation is made by 12 bits 1 cycle and 38kHz carrier wave.

• Functional description

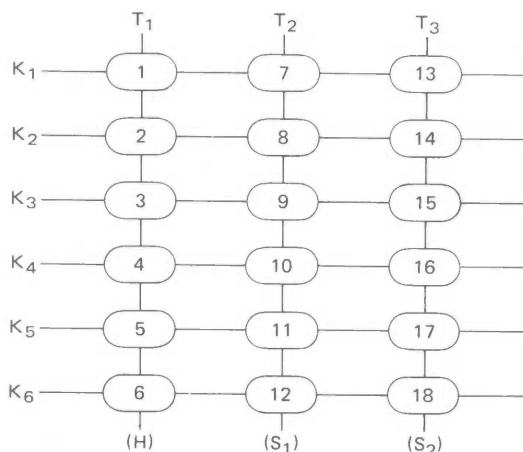
KEY INPUT

18 keys can be connected by Key input $K_1 \sim K_6$ and 6×3 matrix by means of timing signal $T_1 \sim T_3$.

Multiple keying is possible for the keys connected to T_1 line up to sextet, and all key inputs are output. (Output becomes continuous pulses.)

Between the timing signal lines, priority has been decided in order of T_1 , T_2 and T_3 . The keys connected to T_2 and T_3 lines have priority and input is made through more than 2 keys, single signal is preferentially output in order of $K_1 \sim K_6$.

Further, the keys connected to T_2 and T_3 lines are for single signals and no second signal is transmitted unless input is made again after the key is released once.



KEY MATRIX

• Key No. 1 ~ 6

Continuous key output with it pressed, and multiple keying is possible.

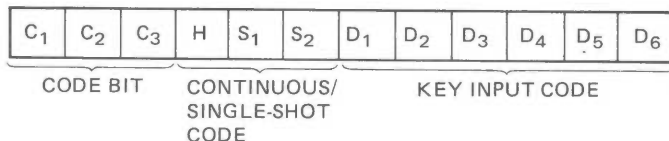
• Key No. 7 ~ 18

These keys are the single-shot keys and when input is made, signal is output only one time.

TRANSMISSION COMMAND

Transmission command is in one word 12-bits configuration.

$C_1 \sim C_3$ are code bits adaptable to many models, H, S_1 and S_2 are continuous signal and single-shot signal codes, and $D_1 \sim D_6$ are Key Input data codes in 6-bits.



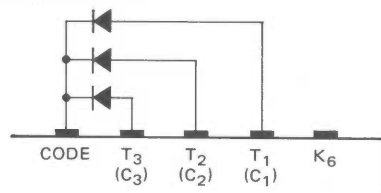
DATA CODE

KEY No.	DATA										OUTPUT FORM
	H	S ₁	S ₂	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆		
1	1	0	0	1	0	0	0	0	0	CONTINUOUS	
2	1	0	0	0	1	0	0	0	0	CONTINUOUS	
3	1	0	0	0	0	1	0	0	0	CONTINUOUS	
4	1	0	0	0	0	0	1	0	0	CONTINUOUS	
5	1	0	0	0	0	0	0	1	0	CONTINUOUS	
6	1	0	0	0	0	0	0	0	1	CONTINUOUS	
7	0	1	0	1	0	0	0	0	0	SINGLE-SHOT	
8	0	1	0	0	1	0	0	0	0	SINGLE-SHOT	
9	0	1	0	0	0	1	0	0	0	SINGLE-SHOT	
10	0	1	0	0	0	0	1	0	0	SINGLE-SHOT	
11	0	1	0	0	0	0	0	1	0	SINGLE-SHOT	
12	0	1	0	0	0	0	0	0	1	SINGLE-SHOT	
13	0	0	1	1	0	0	0	0	0	SINGLE-SHOT	
14	0	0	1	0	1	0	0	0	0	SINGLE-SHOT	
15	0	0	1	0	0	1	0	0	0	SINGLE-SHOT	
16	0	0	1	0	0	0	1	0	0	SINGLE-SHOT	
17	0	0	1	0	0	0	0	1	0	SINGLE-SHOT	
18	0	0	1	0	0	0	0	0	1	SINGLE-SHOT	

As the multiple keying is possible, Key No. 1 ~ 6 are capable of output 63 commands through a combination of $D_1 \sim D_6$ data. Key No. 7 ~ 18 are the single-shot keys for output 12 commands, and 75 commands can be output through a combination of continuous key (multiple keying is possible) and Single-Shot key.

CODE BITS (C_1 , C_2 , C_3)

Code bit can be made at one terminal with diodes connected through $T_1 \sim T_3$ timing terminals.



Data of C_1 , C_2 and C_3 code bit become "1" when diodes are connected to CODE Terminal through Timing Signal. Terminals $T_1 \sim T_3$, and "0" when not connected. (In the above diagram, C_1 , C_2 and C_3 are 1, 1 and 1 data.)

The TC9148P has 3 code bits. However, the TC9150P that is a receiving IC is able to use only C_1 and C_2 2 code bits, respectively.

CODE BIT	
C_1	C_2
1	0
0	1
1	1

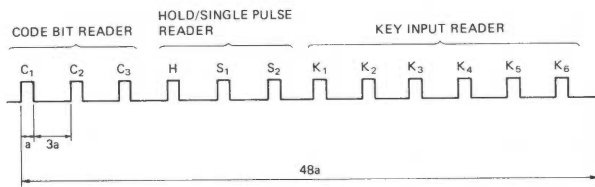
* CODE BIT, "0", "0" CANNOT BE USED.

Note.

For C_3 code bit data not used on the TC9150P, it is necessary to transmit "1" and diodes must be so connected.

TRANSMITTING WAVEFORM

1. Basic transmitting waveform (at $f_{OSC} = 455\text{kHz}$)

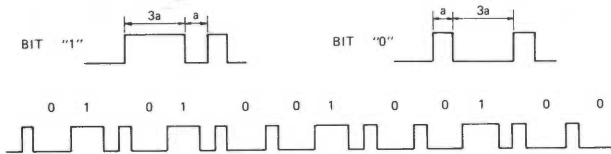


Basic transmitting waveform is 12-bits serial data in configuration as shown above.

The time of each bit "a" is decided as shown below by oscillation frequency f_{OSC} by means of X_T and $\bar{X}_T$.

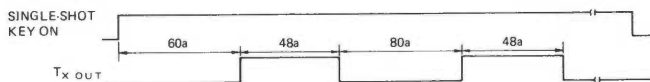
$$a = (1/f_{OSC}) \times 192 \text{ (sec)}$$

2. Distinction of bit "0" and "1"



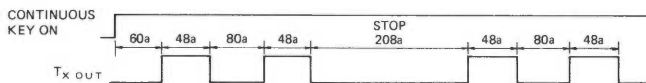
One word of the above transmission command is in the configuration of (010100100100).

3. Shingle-shot signal



When any one of the single-shot keys is depressed, the above single-shot signal is transmitted in 2 cycles, and the transmitting output ends.

4. Continuous signal

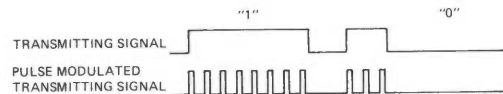


When any one of the continuous keys is depressed, the above continuous signal is 2 cycles output, repeatedly output 208a pause and 2 cycles output is 2 pause of 208a.

5. Carrier wave

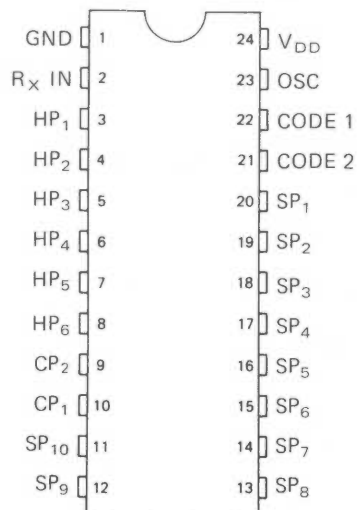
About 50 ~ 100mA current is normally applied through an infrared LED in order to extend an infrared ray reaching distance. Therefore, if a time when LED is ON is shortened as could as possible, it leads to reduction in power consumption. On this IC, when single-shot or continuous signal is transmitting, each bit is switching by a carrier of duty 1/3, output after the pulse modulated. Carrier (f_c) is decided by oscillation frequency f_{OSC} by means of X_T and $\bar{X}_T$.

$$f_c = \frac{f_{OSC}}{12} \text{ (Hz)} \quad f_c \doteq 38\text{kHz at } f_{OSC} = 455\text{kHz}$$



(2) Infrared Remote Control Receiver TC1950P

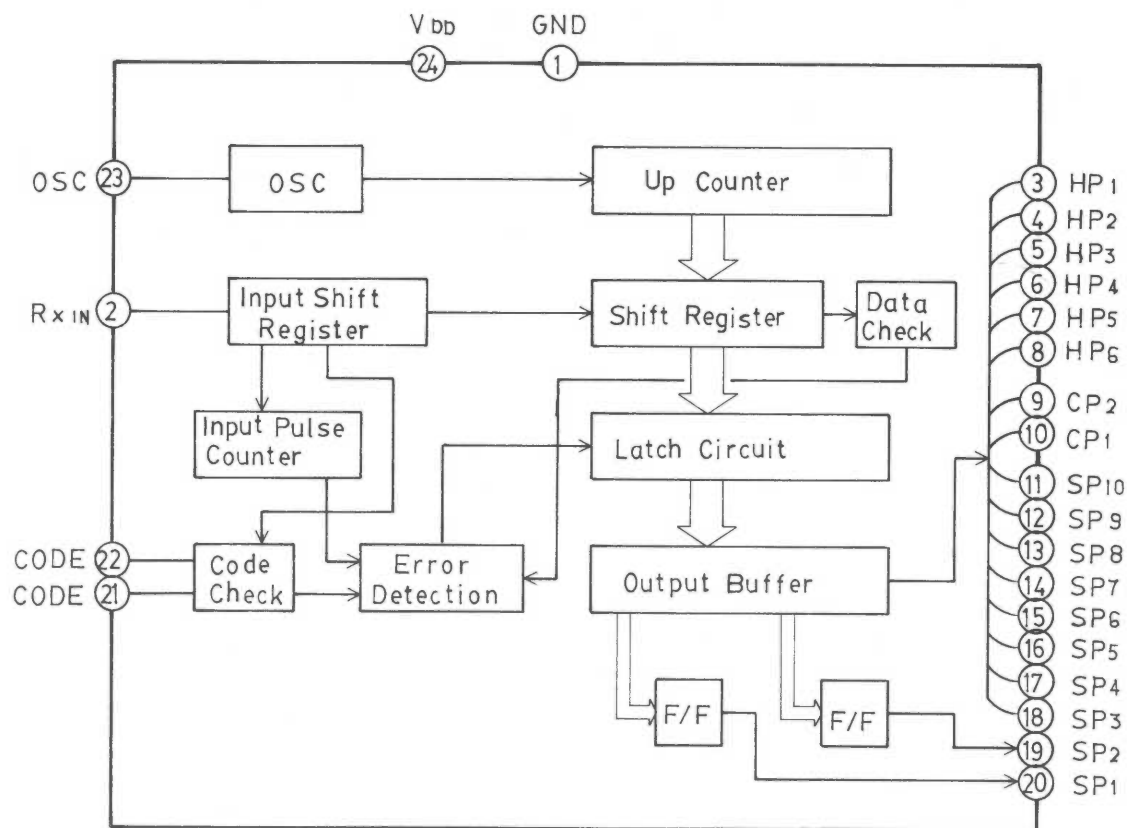
• Pin assignment



• Maximum ratings (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V _{DD}	0~6	V
Input/Output voltage	V _{IN} , V _{OUT}	V _{SS} -0.3~V _{DD} +0.3	V
Power dissipation	P _D	200	mW
Operating temperature	T _{opr}	-20~75	°C
Storage temperature	T _{stg}	-55~125	°C

• Block diagram



● Description of terminals

PIN No.	SYMBOL	FUNCTION/ OPERATION	INPUT/OUTPUT CONFIGURATION
1	GND	GND	
2	R _X IN	Receiving signal Input Instruction signal with carrier signal eliminated is input.	
3~8	HP ₁ ~HP ₆	Continuous signal Input As long as receiving signal is input, this out- put is held at "H" level.	
9-10	CP ₁ ·CP ₂	Cyclic signal output When receiving signal is input, output is re- versed.	
11~20	SP ₁ ~SP ₁₀	Single-shot signal out- put When receiving signal is input, output is placed at "H" level only for a fixed time. (about 107 msec)	
21-22	CODE	Code input Transmitter code is compared with a code set at this terminal and if they agree each other, input is accepted.	
23	OSC	Timing oscillation A resistor and a capaci- tor are parallely con- nected between this terminal and GND.	
24	V _{DD}	Power supply	

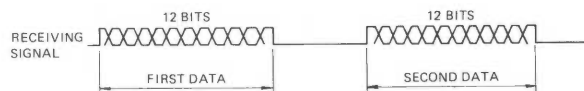
● Functional description

RECEIVING SIGNAL INPUT CIRCUIT

Signal received by the light receiving element is sent through the amplifier to the detector where 38 kHz carrier wave is eliminated and is input into the receiving signal input circuit. The receiving signal input circuit (R_X IN) has a built-in Schmitt circuit for shaping receiving signal waveform to eliminate rounding.

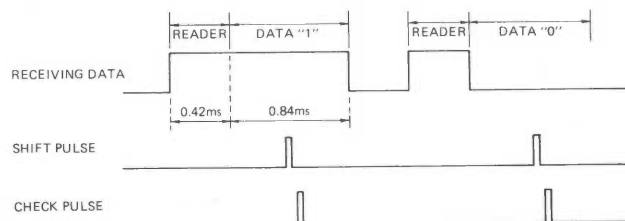
RECEIVING SIGNAL CHECK

The receiving signal check is to check 2 cycle transmitting signal sent from the transmitter to determine if it is normal signal.



First, the first data is stored in the 12-bits shift register. Then, when the second data is put into the shift register, data is forced out of the shift register by one bit, where the first data has been stored. Now pushed out data and incoming data are checked to see if they are same.

If an error is caused in the receiving data 12-bits check, the system is reset at that point of time. Conversely, when all receiving data are OK, output is raised from "L" level to "H" level.



The status of receiving data, shift pulse and check pulse is shown above.

Shift pulse is provided in the data center by taking frequency margins of the transmitter and the receiver into consideration.

Code Comparison

To prevent interference with other models, C₁, C₂ and C₃ code bits are provided for checking whether the transmitter and receiver codes agree each other.

Only when both codes agreed, internal latch strobe pulse is generated to latch receiving data and output is raised from "L" level to "H" level. If both codes do not agree, no latch strobe pulse is generated and output remains at "L" level.

Code bits used differ depending upon receiver as shown below:

CODE BIT	
C ₁	C ₂
C ₃	C ₂
1	0
0	1
1	1

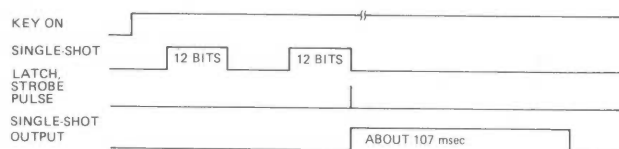
TC9149P C₂, C₃ CODE BIT

TC9150P C₁, C₂ CODE BIT

* CODE BIT "0", "0" CANNOT BE USED.

EXPLANATION OF OUTPUT PULSE SP, HP, CP

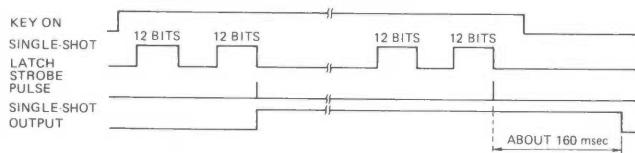
1. SP1-SP10 (Single pulse)



After checking 12-bits receiving data, if data agree and OK, single pulse is output.

Output is raised from "L" level to "H" level and returned again to "L" level after about 107 msec.

2. HP1-HP6 (Hold pulse)



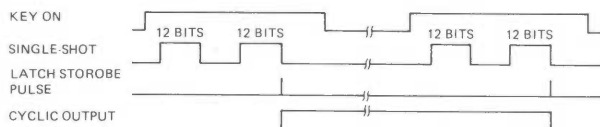
Hold pulse is output by the first latch strobe pulse after key ON.

Output is kept at "H" level as long as Continuous Signal is input.

When the key is released and continuous signal is stopped, about 160 msec later, output is reversed to "L" level by the last latch strobe pulses.

Further, HP1-HP6 are able to parallelly and simultaneously max sextet outputs at "H" level by continuous signal sent from the transmitter.

3. CP1, CP2 (Cyclic pulse)



When single-shot signal is received, cyclic pulse output is reversed. This cyclic pulse is used for power ON/OFF, MUTE, etc.

CODE ALLOCATION (KEY No. is of TC9148P)

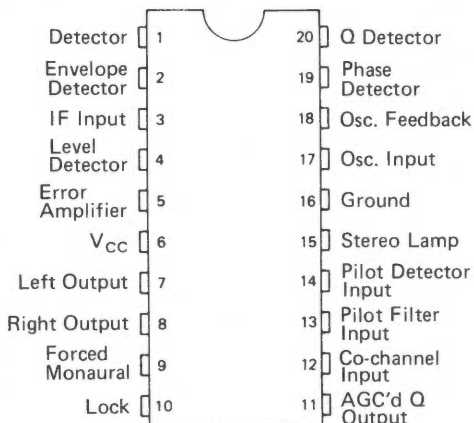
KEY No.	DATA BIT										FUNCTION OF INSTRUCTION
	H	S ₁	S ₂	K ₁	K ₂	K ₃	K ₄	K ₅	K ₆		
1	1	0	0	1	0	0	0	0	0	CONTINUOUS SIGNAL HP ₁	
2	1	0	0	0	1	0	0	0	0	CONTINUOUS SIGNAL HP ₂	
3	1	0	0	0	0	1	0	0	0	CONTINUOUS SIGNAL HP ₃	
4	1	0	0	0	0	0	1	0	0	CONTINUOUS SIGNAL HP ₄	
5	1	0	0	0	0	0	0	1	0	CONTINUOUS SIGNAL HP ₅	
6	1	0	0	0	0	0	0	0	1	CONTINUOUS SIGNAL HP ₆	
7	0	1	0	1	0	0	0	0	0	SINGLESHOT SIGNAL SP ₁	
8	0	1	0	0	1	0	0	0	0	SINGLESHOT SIGNAL SP ₂	
9	0	1	0	0	0	1	0	0	0	SINGLESHOT SIGNAL SP ₃	
10	0	1	0	0	0	0	1	0	0	SINGLESHOT SIGNAL SP ₄	
11	0	1	0	0	0	0	0	1	0	SINGLESHOT SIGNAL SP ₅	
12	0	1	0	0	0	0	0	0	1	SINGLESHOT SIGNAL SP ₆	
13	0	0	1	1	0	0	0	0	0	SINGLESHOT SIGNAL SP ₇	
14	0	0	1	0	1	0	0	0	0	SINGLESHOT SIGNAL SP ₈	
15	0	0	1	0	0	1	0	0	0	SINGLESHOT SIGNAL SP ₉	
16	0	0	1	0	0	0	1	0	0	SINGLESHOT SIGNAL SP ₁₀	
17	0	0	1	0	0	0	0	1	0	CYCLIC SIGNAL CP ₁	
18	0	0	1	0	0	0	0	0	1	CYCLIC SIGNAL CP ₂	

C₁-C₃ code bits are available in addition to the above data bits for optional code selection.

5.6 AM Stereo System

(1) AM Stereo Decoder MC13020P

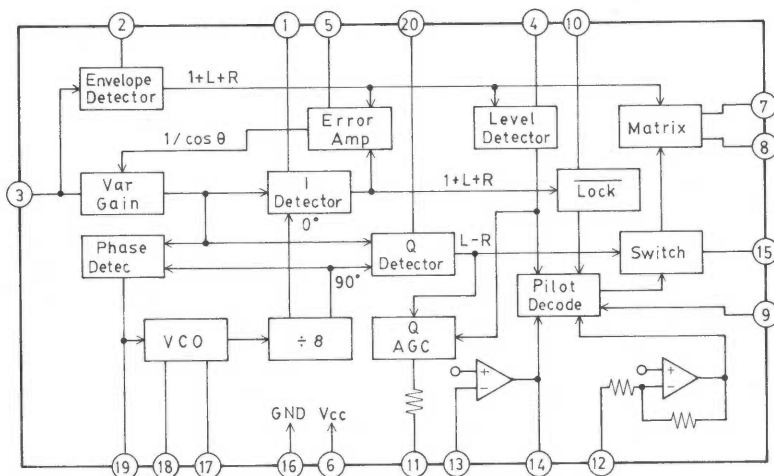
• Pin assignment



• Maximum ratings

Rating	Symbol	Value	Unit
Supply Voltage	V _{CC}	14	Vdc
Pilot Lamp Current, Pin 15		50	mAdc
Operating Temperature	T _A	-40 to +85	°C
Storage Temperature	T _{stg}	-65 to +150	°C
Junction Temperature	T _{J(max)}	150	°C
Power Dissipation Derate above 25°C	P _D	1.25 10	W mW/°C

• Block diagram



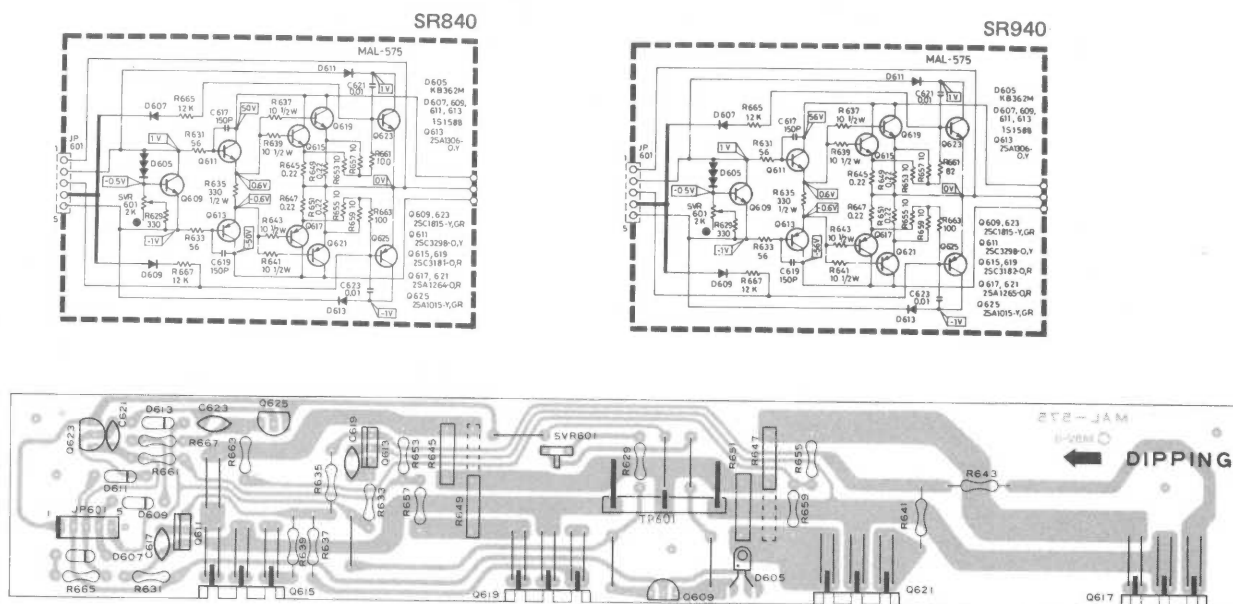
• Pin descriptions

Pin No.	Descriptions
1, 2	Detector Filters, R _{out} = 4.3 k, recommend 0.0033 μF to V _{CC} to filter 450 kHz components and 100 resistors for loop stability.
3	IF Signal input
4	Level Detector filter pin, R _{out} = 8.2 k, 10μF to ground sets the AGC time constant. High impedance output, needs buffer.
5	Error Amp compensation to stabilize the Var Gain feedback loop
6	V _{CC} , 6-12 Vdc, suitable for low V _{batt} automotive operation, but must be protected from "high line" condition.
7, 8	Left and Right Outputs, NPN emitter followers
9	Forced Monaural, MOS or TTL controllable
10	Lock detector filter, R _{out} = 27 k, recommend 2.2 μF to ground.

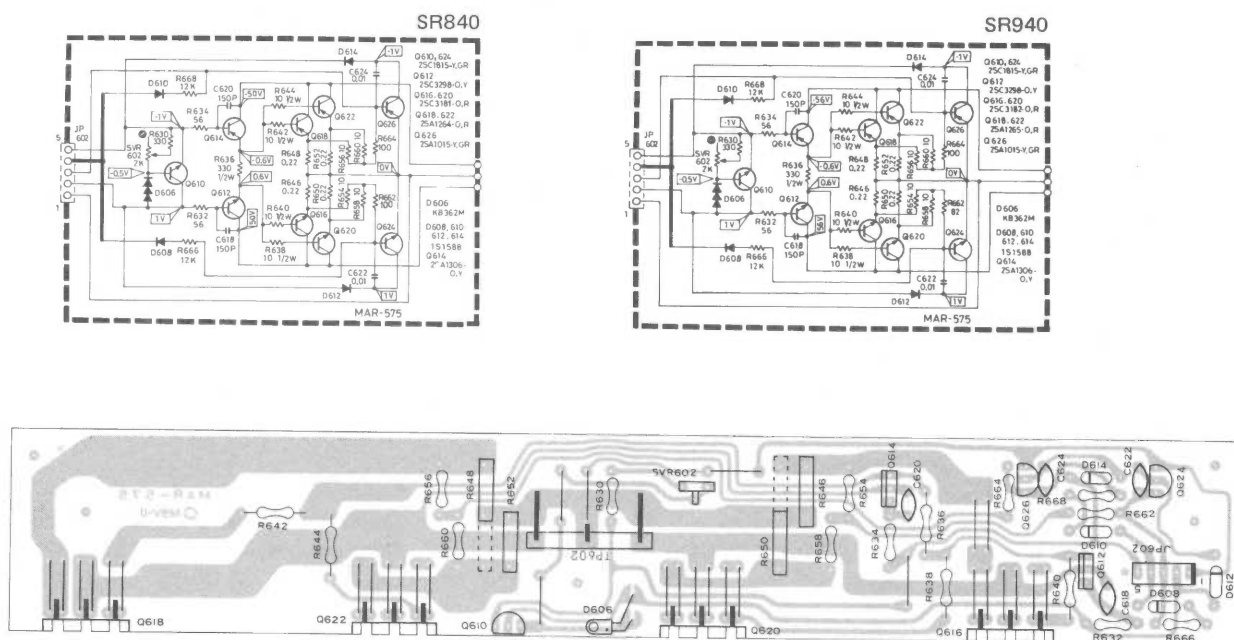
Pin No.	Descriptions
11	AGC'd Q output, NPN emitter follower with 400Ω from emitter to Pin 11
12	Co-channel Input, 2.0 k series in and 47 k feedback
13	Pilot Filter Input to op amp
14	Pilot Decode Input (op amp output) emitter follower, R _{out} = 100Ω
15	Stereo Lamp, open-collector of an NPN common emitter stage, can sink 50 mA, V _{sat} = 3.0 V at 5.0 mA
16	Ground
17	Oscillator input, R _{in} = 10 k, do not dc connect to Pin 18 or ground
18	Oscillator feedback, NPN emitter, R _{out} = 100 Ω
19	Phase Detector Output, current source to filter
20	Detector Filter, R _{out} = 4.3 k, recommend 0.0033 μF to V _{CC} to filter 450 kHz

6. DIAGRAM AND COMPONENT LOCATIONS

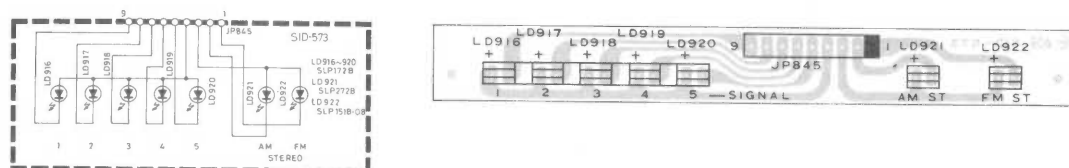
6.1 Main Amp L (MAL-575) Schematic Diagram and Component Locations



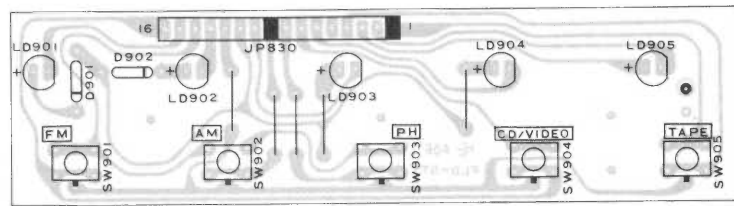
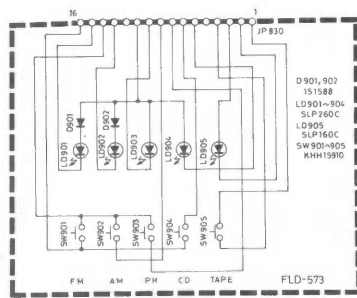
6.2 Main Amp R (MAR-575) Schematic Diagram and Component Locations



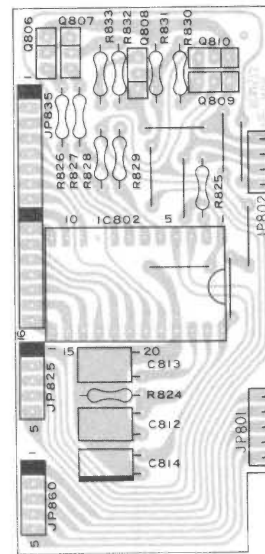
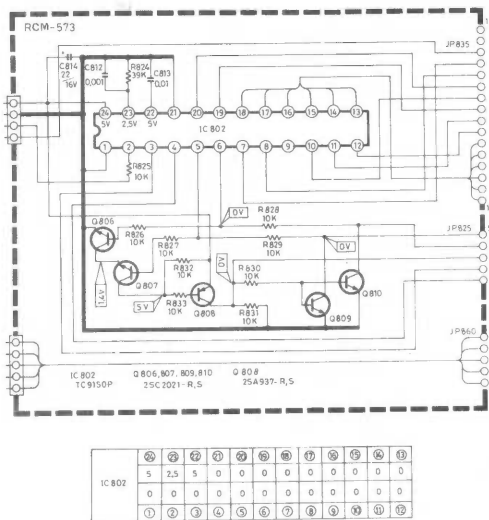
6.3 Signal LED (SID-573) Schematic Diagram and Component Locations



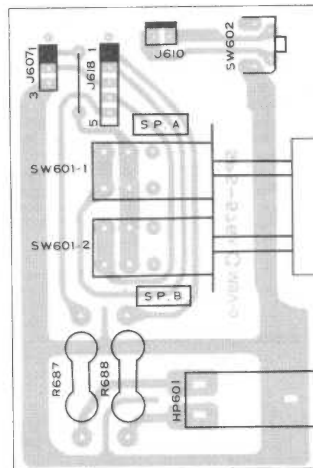
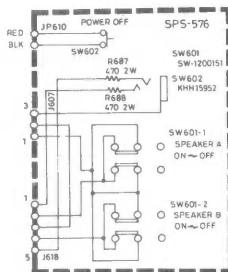
6.4 Function LED (FLD-573) Schematic Diagram and Component Locations



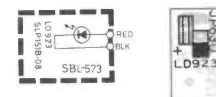
6.5 Remote Control (RCM-573) Schematic Diagram and Component Locations



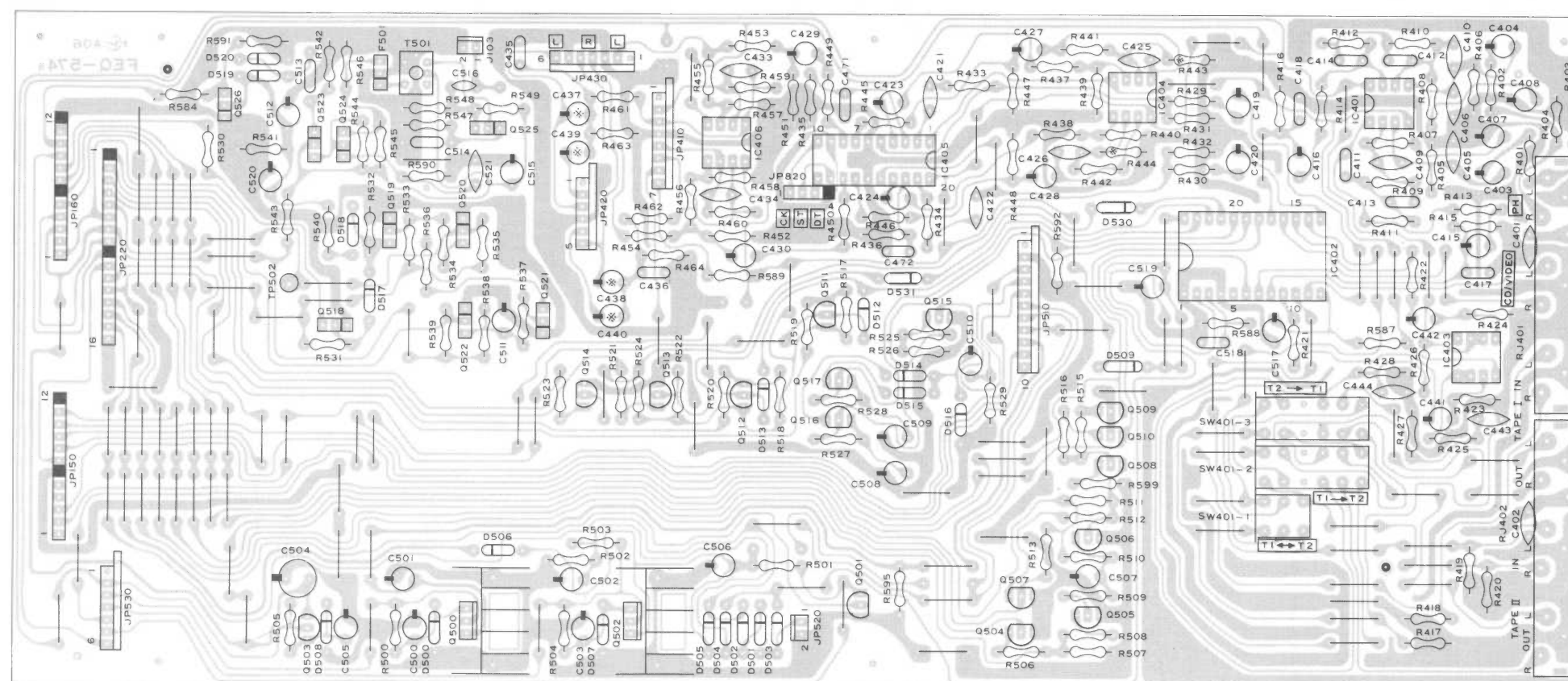
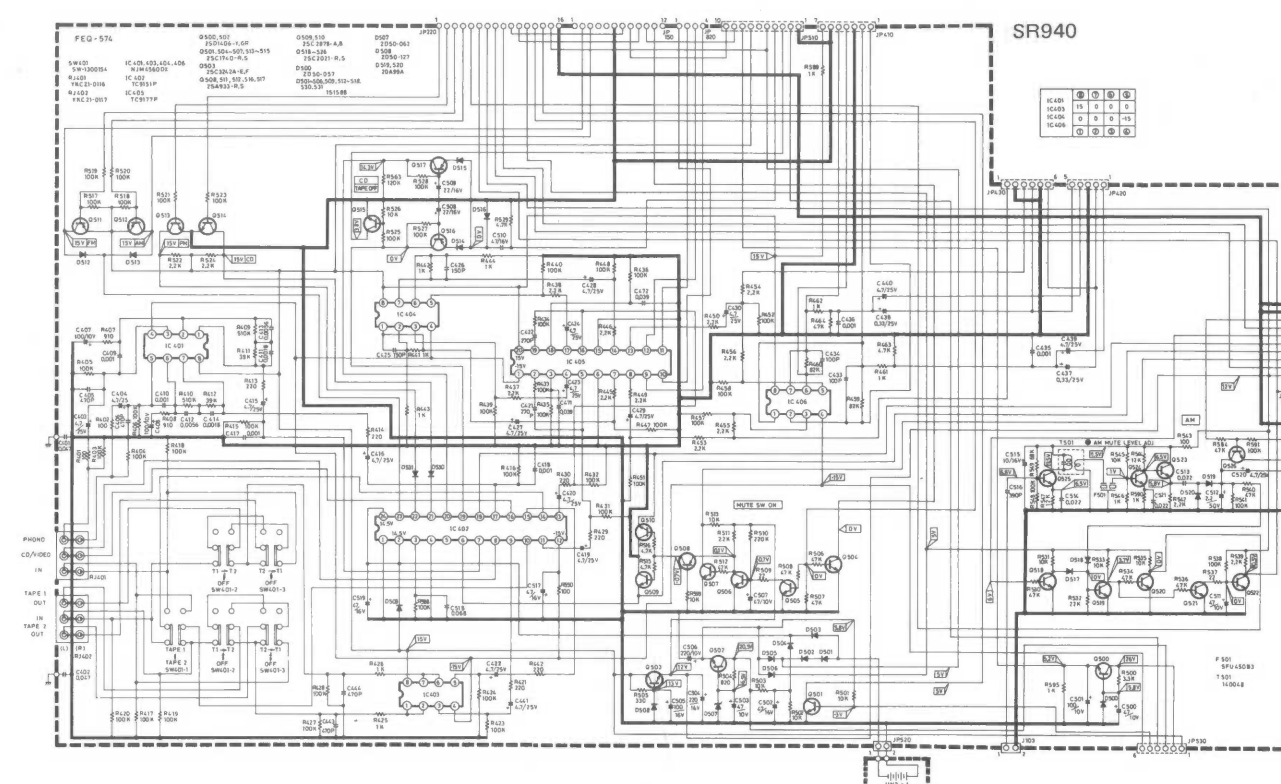
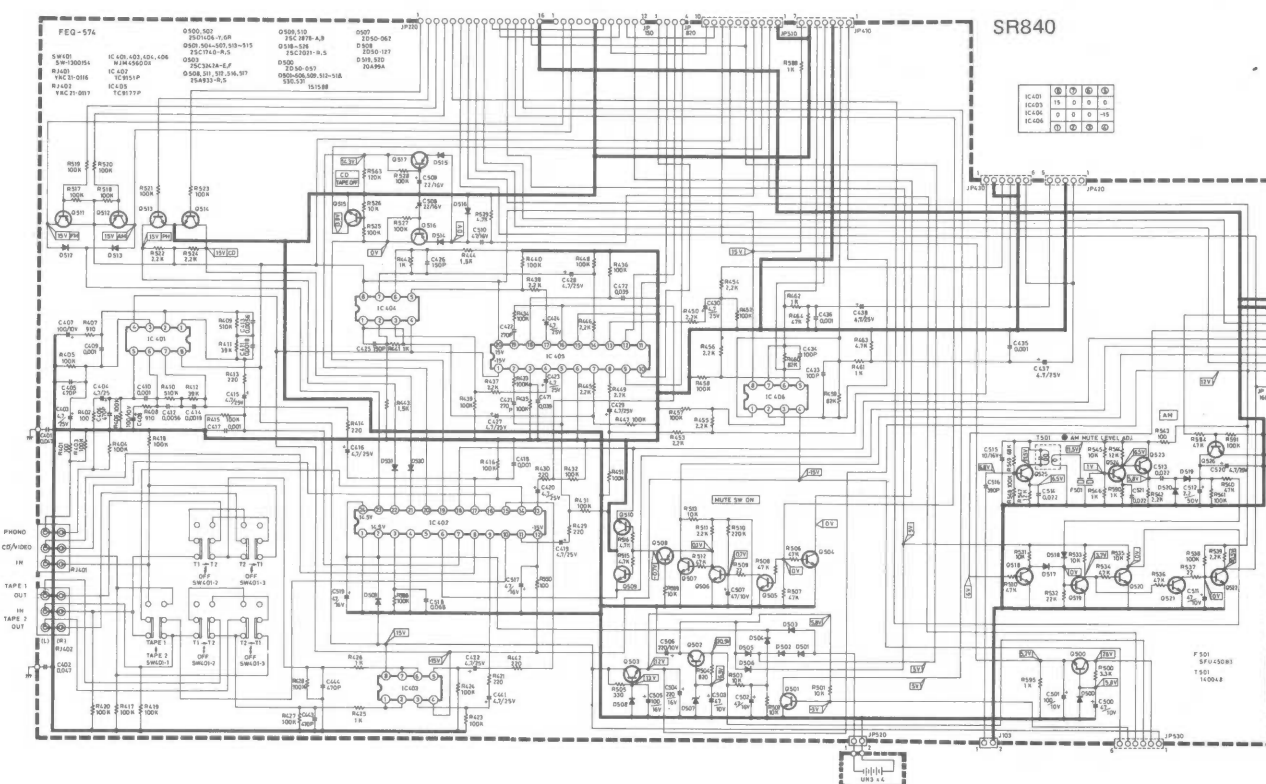
6.6 Speaker Switch (SPS-576) Schematic Diagram and Component Locations



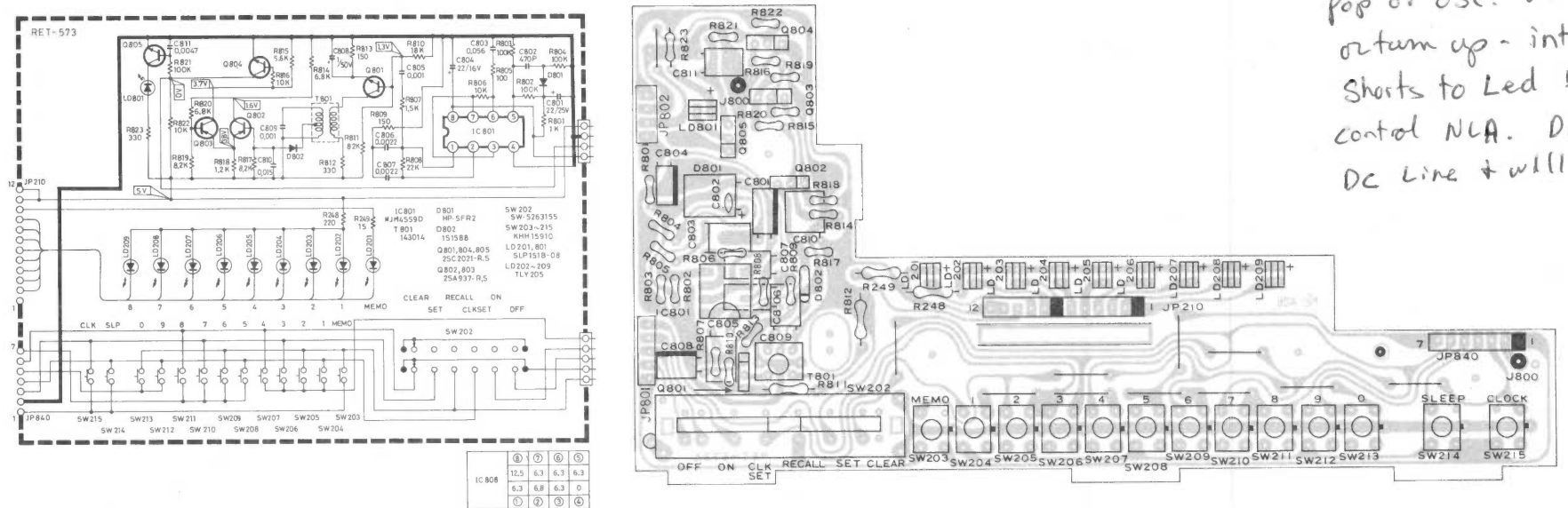
6.7 Standby LED (SBL-573) Schematic Diagram and Component Locations



6.8 Function/EQ (FEQ-574A) Schematic Diagram and Component Locations

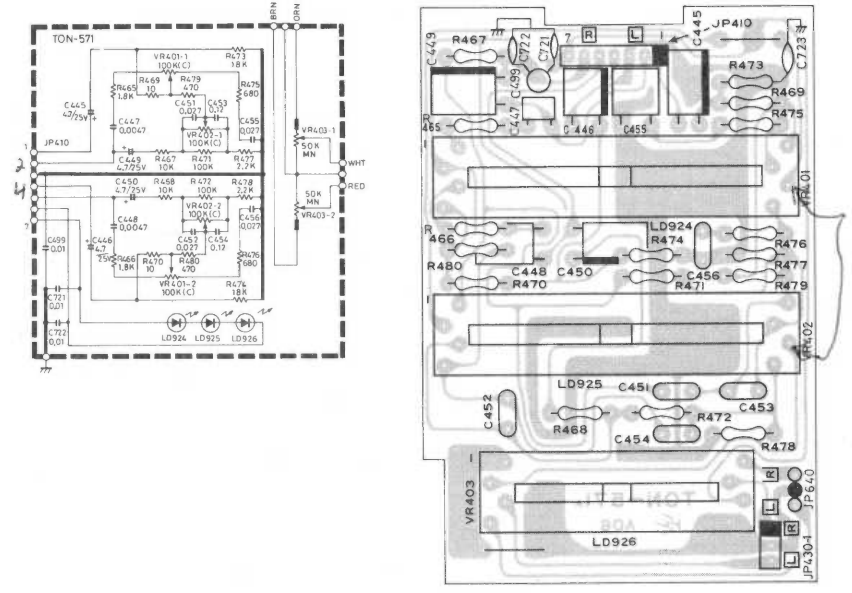


6.9 Remote/Timer Control (RET-573) Schematic Diagram and Component Locations

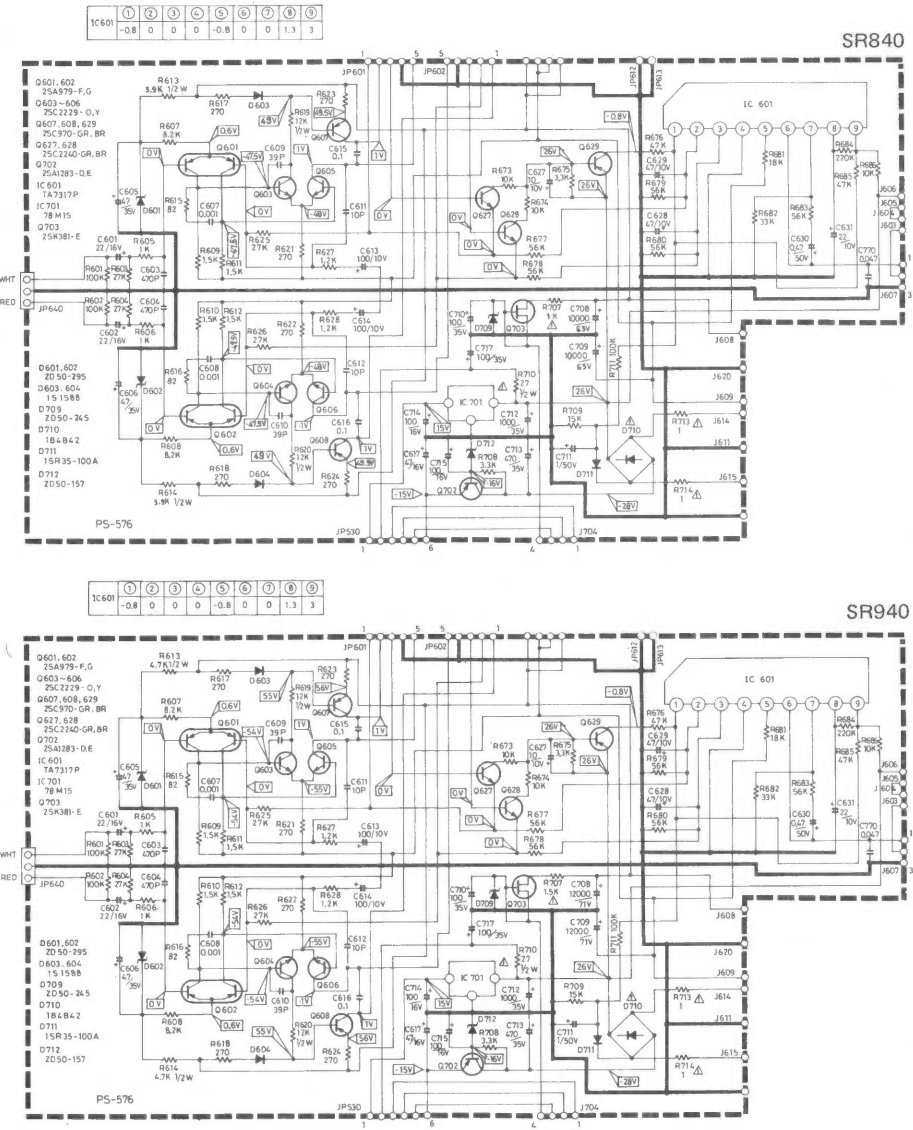


* Treble Control
pop or osc. when more
return up - internally
shorts to Led DC Line,
control NLA. Disconnect
DC Line & will be ok

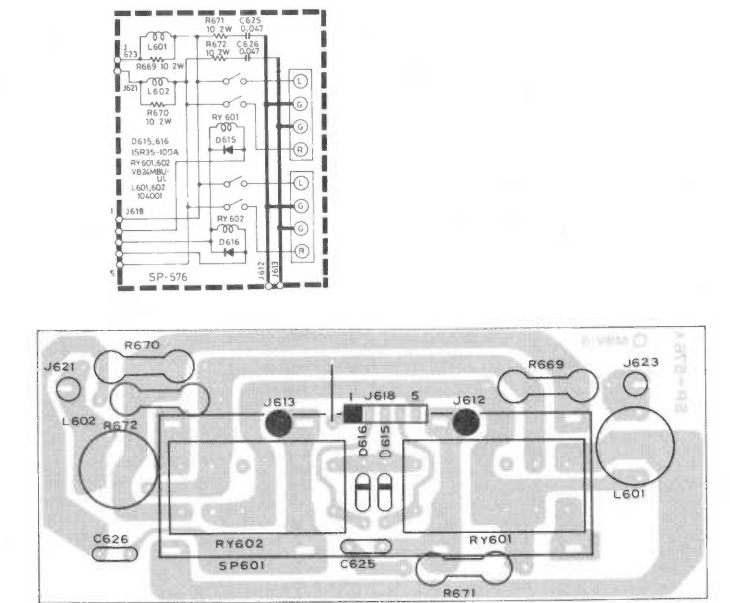
6.11 Tone Control (TON-571A) Schematic Diagram and Component Locations



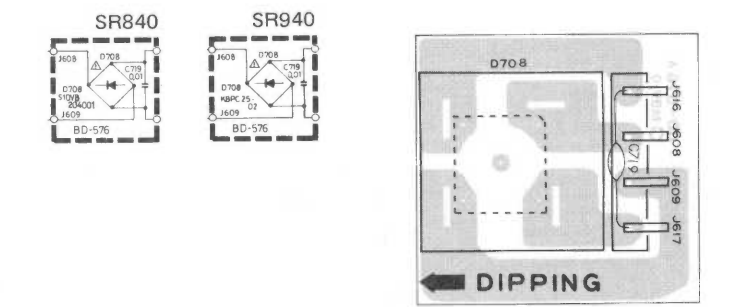
6.10 Power Supply (PS-576) Schematic Diagram and Component Locations



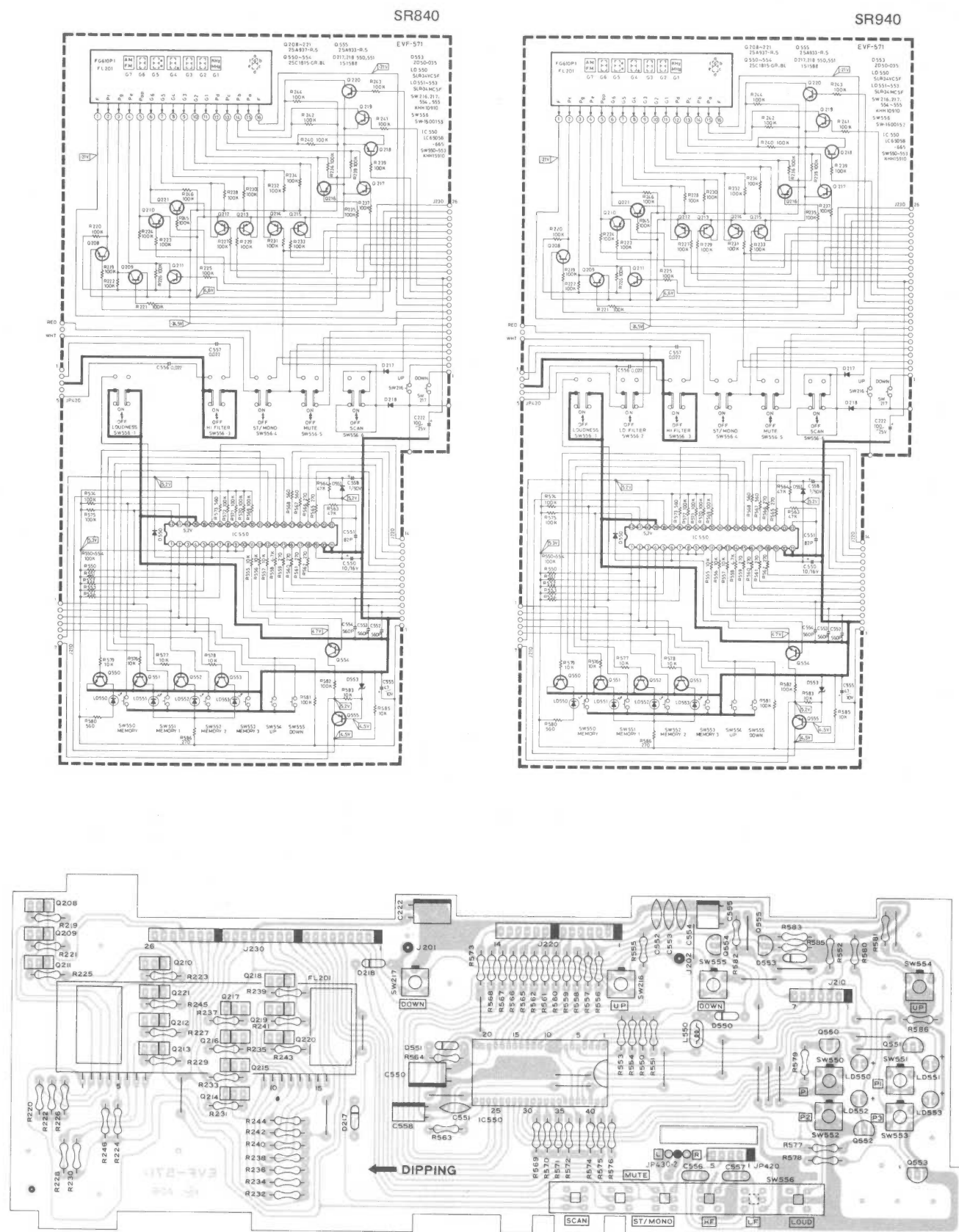
6.12 Speaker Terminal (SP-576) Schematic Diagram and Component Locations



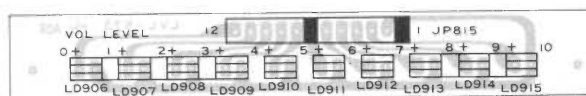
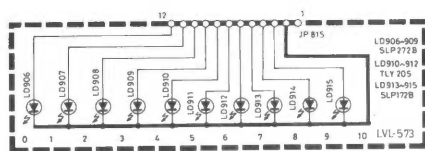
6.13 Rectifier (BD-576) Schematic Diagram and Component Locations



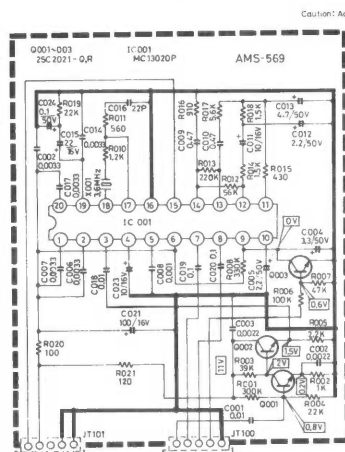
6.14 Elect. Vol./Function (EVF-571A) Schematic Diagram and Component Locations



6.15 Volume LED (LVL-573) Schematic Diagram and Component Locations

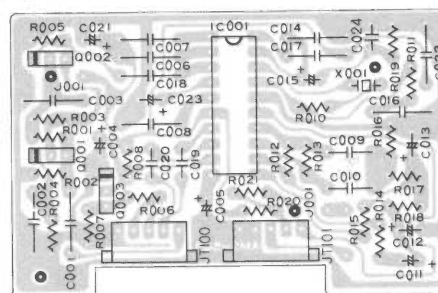


6.16 AM Stereo (AMS-569) Schematic Diagram and Component Locations (SR940 only)

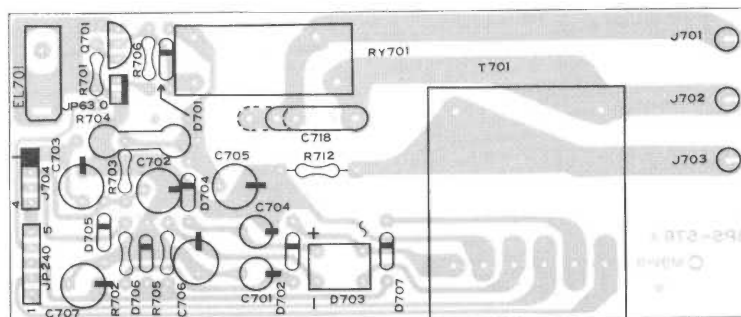
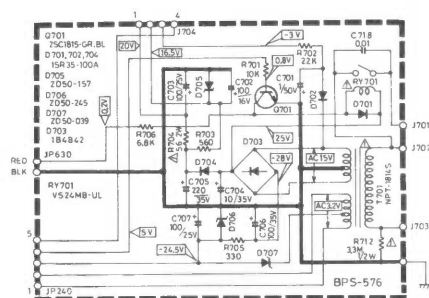


IC001

7.8	4.5	7.2	3	0	3.8	0.6	0.6	0.9	2	AM
7.8	7.8	3.6	1.7	1.6	8.3	0.6	0.6	0	8.3	
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	

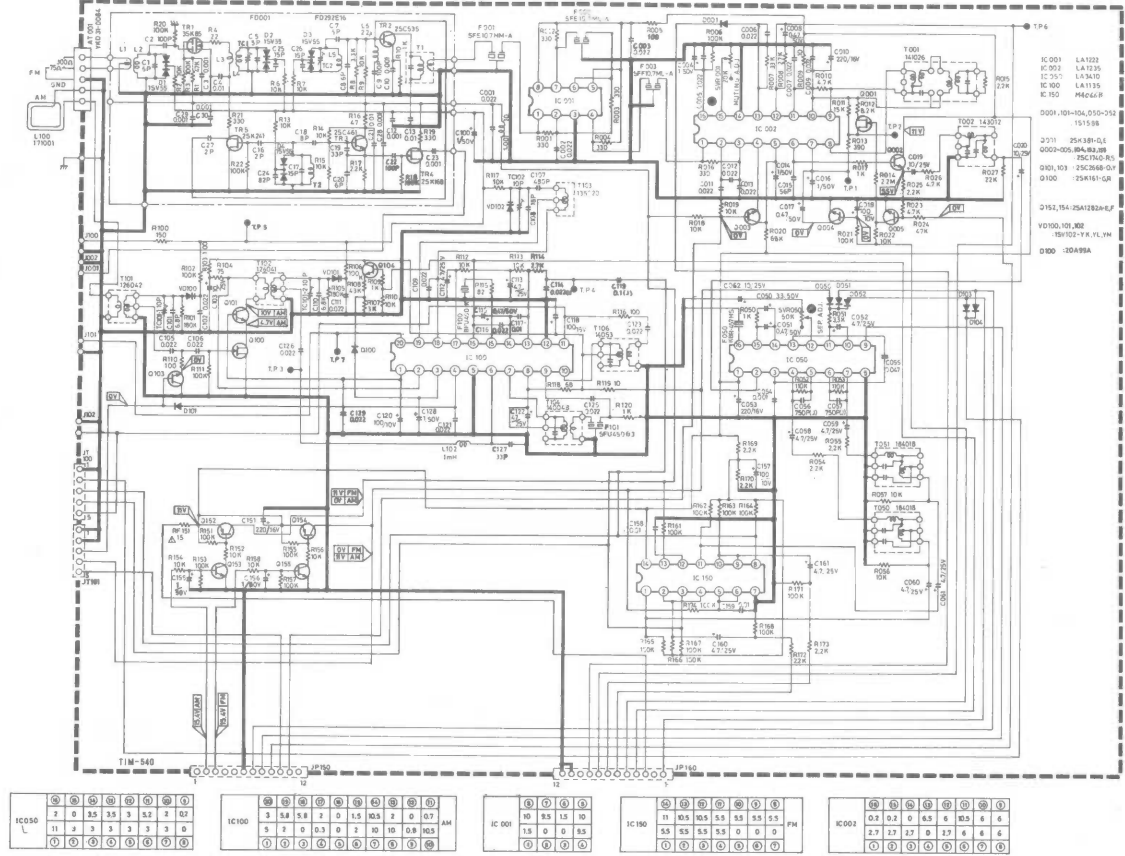


6.17 Back-up Supply (BPS-576) Schematic Diagram and Component Locations

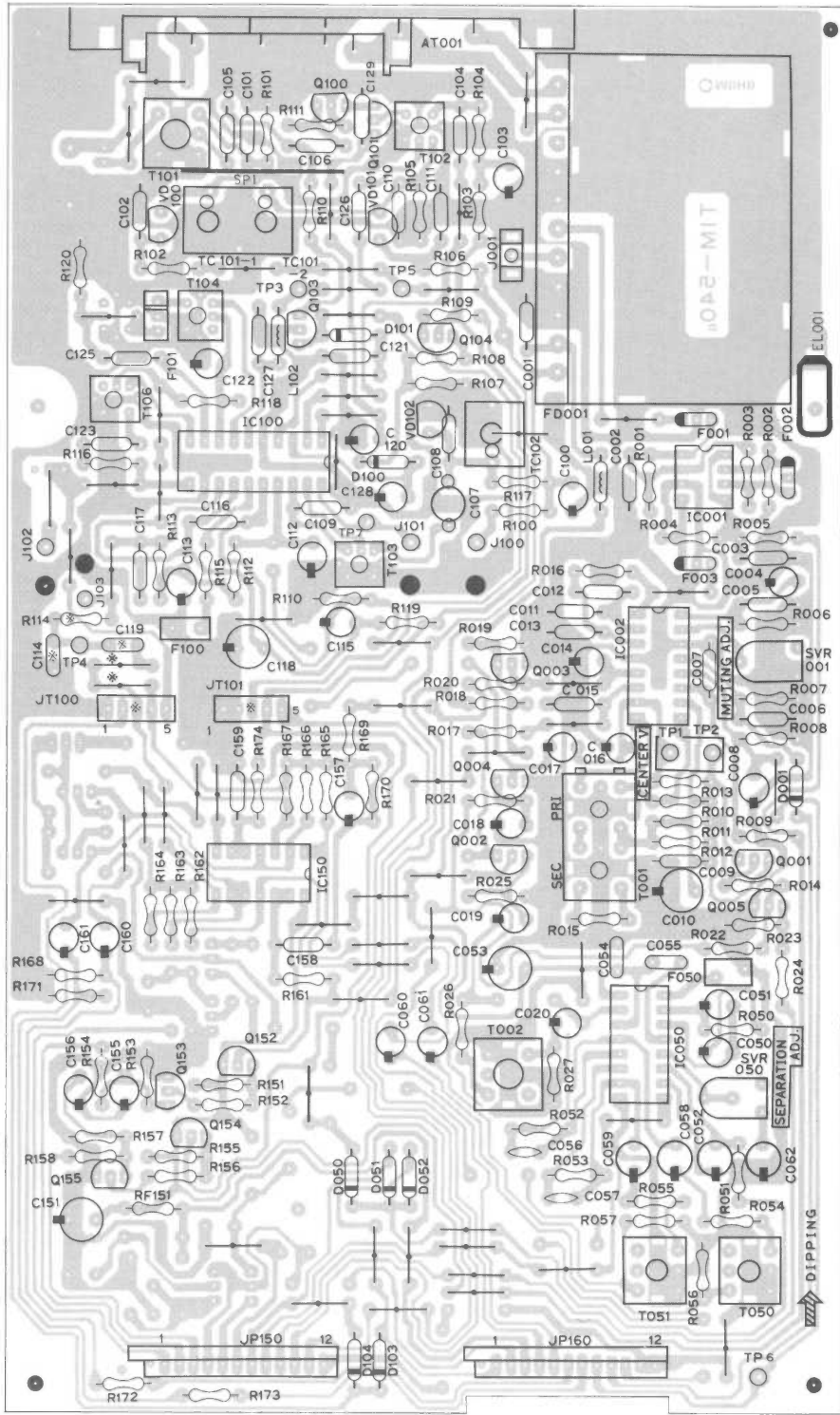
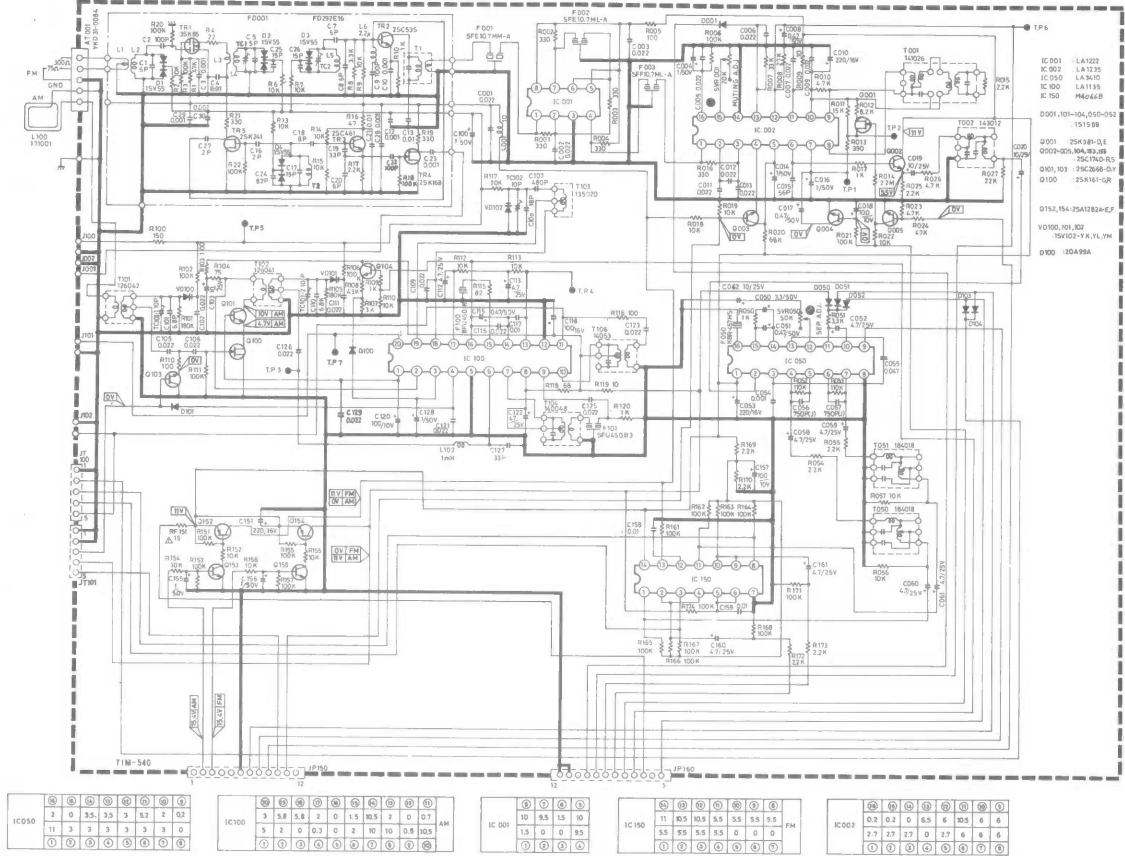


6.18 Tuner (TIM-540B) Schematic Diagram and Component Locations

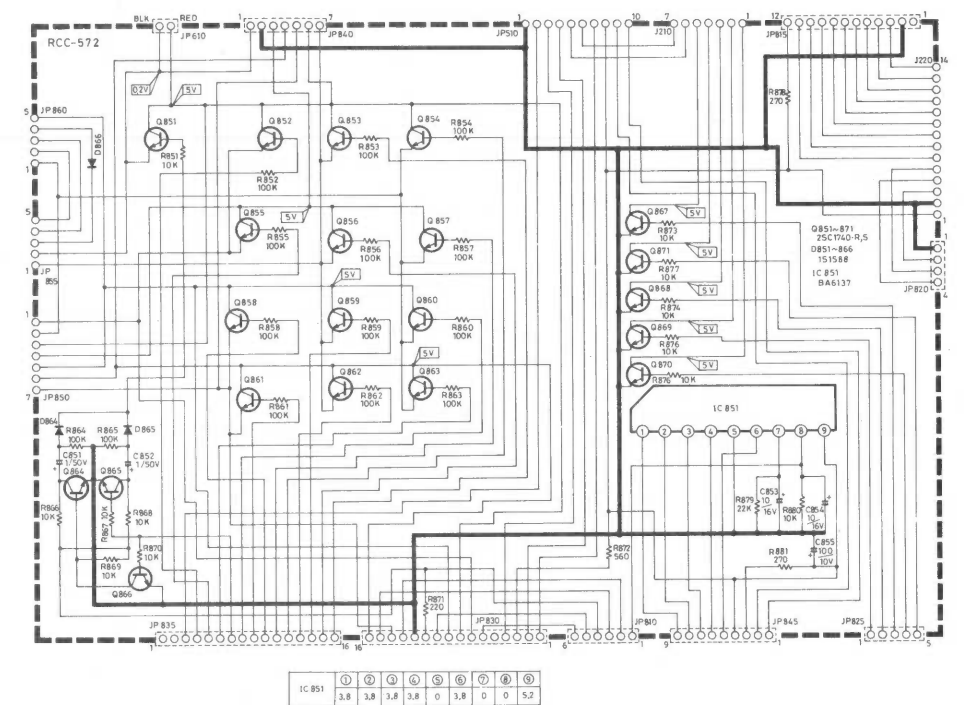
SR840



SR940

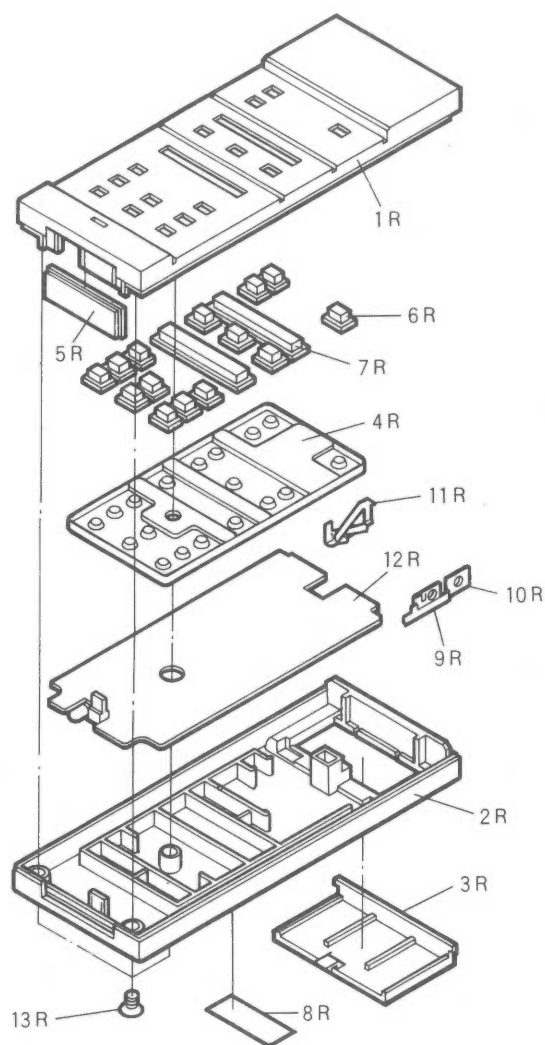


IC203	(16)	(15)	(14)	(13)	(12)	(11)	(10)	(9)	F.N.
	5	3,8	3,8	0	3,8	3,8	3,8	4,3	
	0,2	4,3	4,3	4,3	4,3	4,3	4,3	0	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	



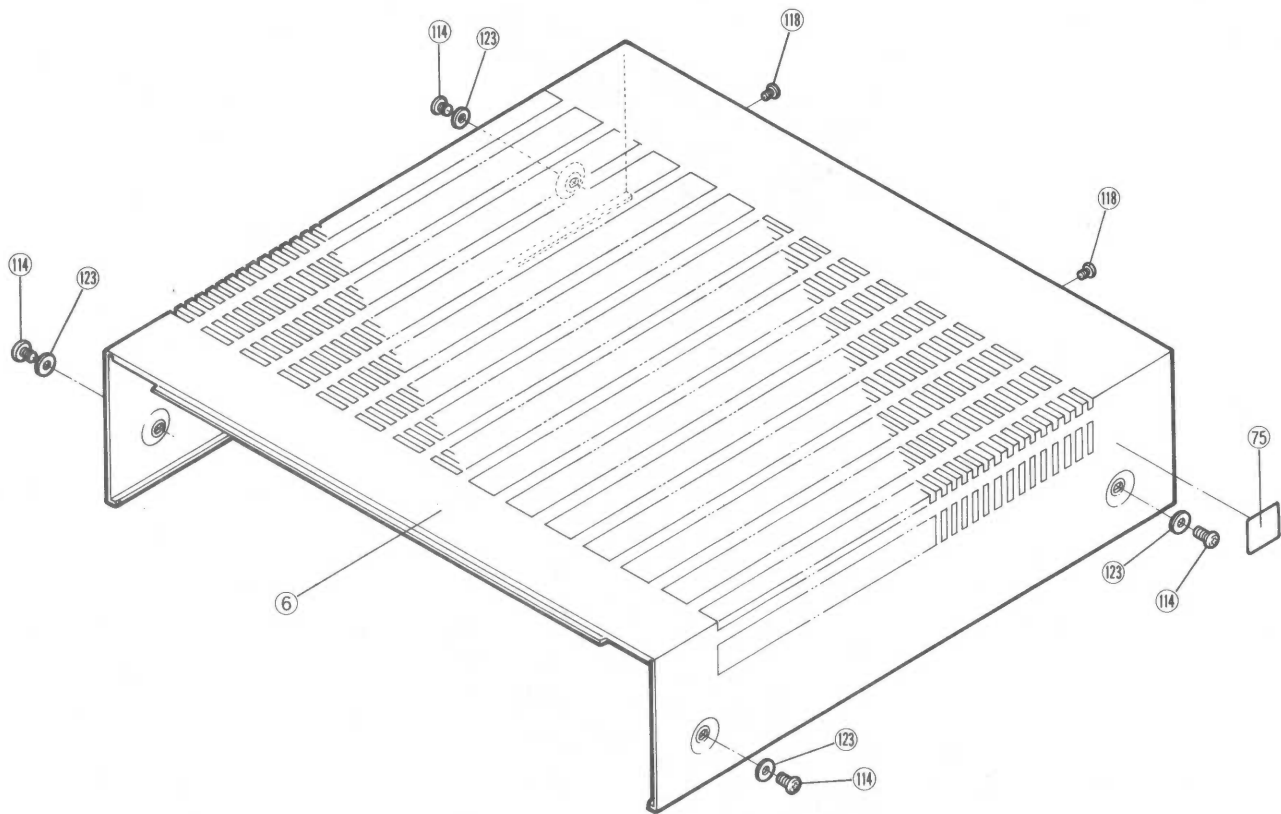
7. EXPLODED VIEW AND PARTS LIST

7.1 Remote Control Transmitter



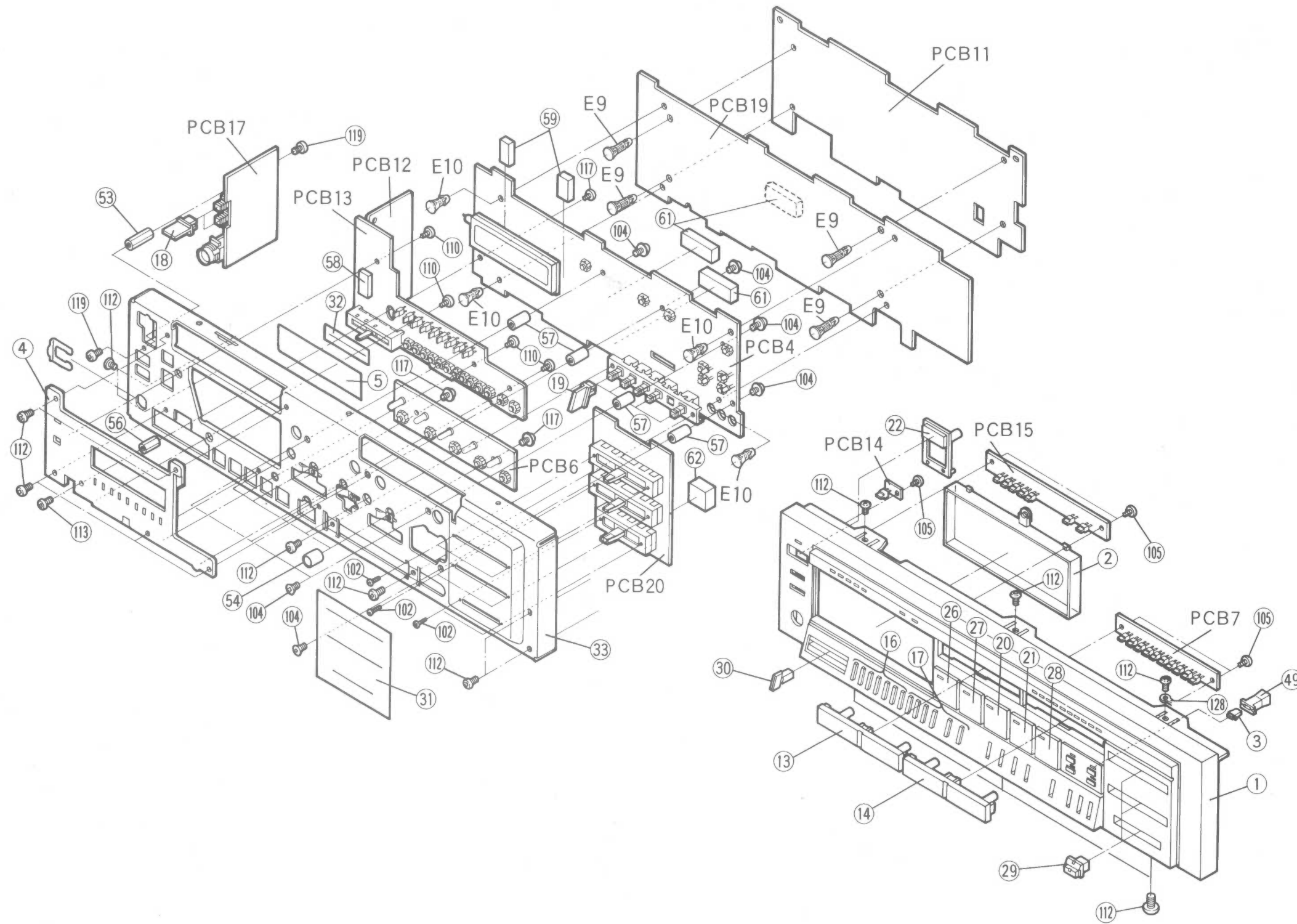
Ref. No.	Q'ty	Part No.	Description
			Remote Control Transmitter
1R	1	UR64CS1	Case, Top
2R	1	UR64CS2	Case, Bottom
3R	1	UR64ES3	Battery Cover
4R	1	UR64CT6	Contact Point
5R	1	UR52SB26	Smoked Glass
6R	14	UR64BT4	Button
7R	2	UR64BT5	Button
8R	1	SL.1024	Serial Plate
9R	1	UR57TD123	+ Terminal
10R	1	UR57TD124	- Terminal
11R	1	URC180TD10B	Common Terminal
12R	1	UR64VPB1	P.C.Board Ass'y (R8741)
13R	3	XTS26+6G	Tapping Screw (P-tight, M2.6)

7.2 Cabinet



- (8):SR840
- (9):SR940

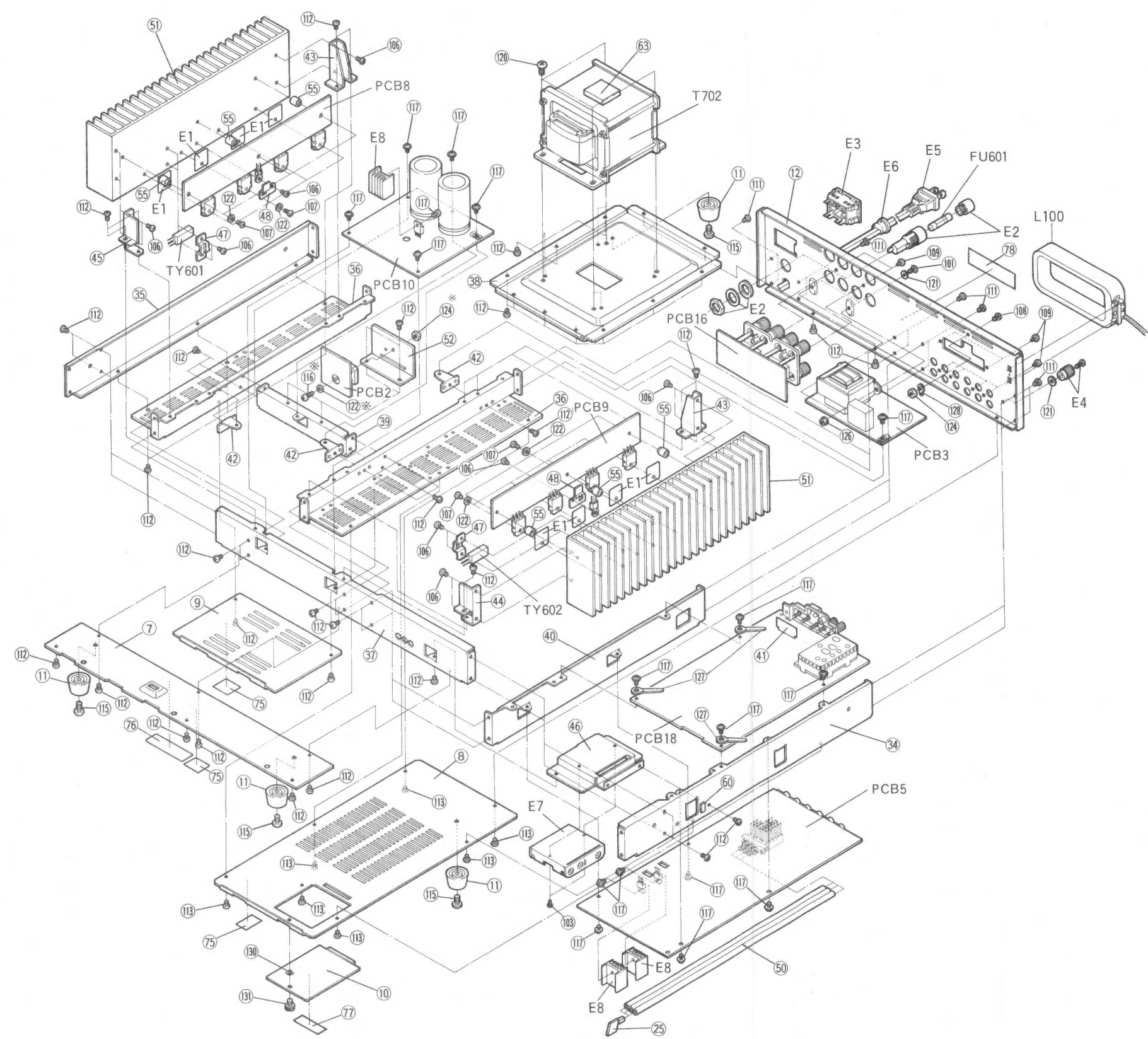
Ref. No.	Q'ty		Part No.	Description
	8	9		
6	1	1	N21204	Cabinet Cabinet Label, SA1965 (Lightning Flash)
75	1	1	N44043	
114	4	4	TSB+40x10B	Tap Screw S, Bind Head, B
118	2	2	TSC+30x08B	Tap Screw S, Washer Faced, B
123	4	4	2AWx1040-B	Plain Washer, B



• (8):SR840
• (9):SR940

Ref. No.	Q'ty		Part No.	Description
	8	9		
1	1	—	N10349ASSY	Front Panel
1	—	1	N10336ASSY	Front Panel Assembly
2	1	1	N30769	Display Window
3	4	4	N44066	LED Chip
4	1	1	N21195A	Display Frame
5	1	1	N44131	Filter
13	1	1	N30765-Z12	Button (TUNING)
14	1	1	N30805-Z12	Push Button (Vol.)
16	1	1	N30789-Z8	Push Button, 7 (M, 1~6)
17	1	1	N30790-Z8	Push Button, 6 (7~0, SL, CL)
18	2	2	N42326-ZG	Push Button (SP A, B)
19	5	6	N43977-Z8	Push Button (SCAN, MUT, MONO, HF, LF, LN)
20	1	1	N43980-Z12	Button Cap (PHONO)
21	1	1	N43981-Z12	Button Cap (CD/VIDEO)
22	1	1	N44050-Z12	Push Button (POWER)
26	1	1	N44132-Z12	Button Cap (FM)
27	1	1	N44133-Z12	Button Cap (AM)
28	1	1	N44134-Z12	Button Cap (TAPE MONITOR)
29	3	3	N44049-Z12	Slide Knob (TR, BASS, BL)
30	1	1	N44068-Z8	Slide Knob (TIMER)
31	1	1	N44135	Cloth (Knob; TR, BASS, BL)
32	1	1	N44136	Cloth (Knob; TIMER)
33	1	1	N10340	Front Chassis
49	4	4	N44067	LED Guide
53	1	1	N44088	Stud 20.5
54	5	5	N4413710BK	Stud
56	1	1	N44196	Stud 14.5
57	4	4	N44200A	Stud 13.5
58	1	1	N43789	FC Cushion
59	2	2	N44040	FC Cushion
61	3	3	N44191	Spacer
62	1	1	N44192	Spacer
102	6	6	SSP+20x03B	Screw, PanHead, B
104	8	8	STR30x06-Y	Tap Screw, Bind Head, Y
105	5	5	TBB+26x05Y	Tap Screw B, Bind Head, Y
110	4	4	TPM+30x08Y	Tap Screw P, Round Head, Y
112	17	17	TSB+30x06Y	Tap Screw S, Bind Head, Y
113	1	1	TSB+30x08Y	Tap Screw S, Bind Head, Y
117	3	3	TSC+30x06Y	Tap Screw S, Washer Faced, Y
119	2	2	TSS+30x06Y	Tap Screw S, Flat Head, Y
128	1	1	2AE-03	Lug
E 9	4	4	KGLS-12R	Spacer
E 10	4	4	KGLS-8R	Spacer
PCB 4	1	—	28R1P05C	P.C.Board Ass'y (EVF-571A)
PCB 4	—	1	28R1P05D	P.C.Board Ass'y (EVF-571A)
PCB 6	1	1	28R1P07C-1	P.C.Board Ass'y (FLD-573)
PCB 7	1	1	28R1P07C-2	P.C.Board Ass'y (LVL-573)
PCB11	1	1	28R1P06C	P.C.Board Ass'y (RCC-572)
PCB12	1	1	28R1P07C-3	P.C.Board Ass'y (RCM-573)
PCB13	1	1	28R1P07C	P.C.Board Ass'y (RET-573)
PCB14	1	1	28R1P07C-4	P.C.Board Ass'y (SBL-573)
PCB15	1	1	28R1P07C-5	P.C.Board Ass'y (SID-573)
PCB17	1	1	28R1P09C-4	P.C.Board Ass'y (SPS-576)
PCB19	1	1	28R1P05C-1	P.C.Board Ass'y (TIP-571A)
PCB20	1	1	28R1P05C-2	P.C.Board Ass'y (TON-571A)

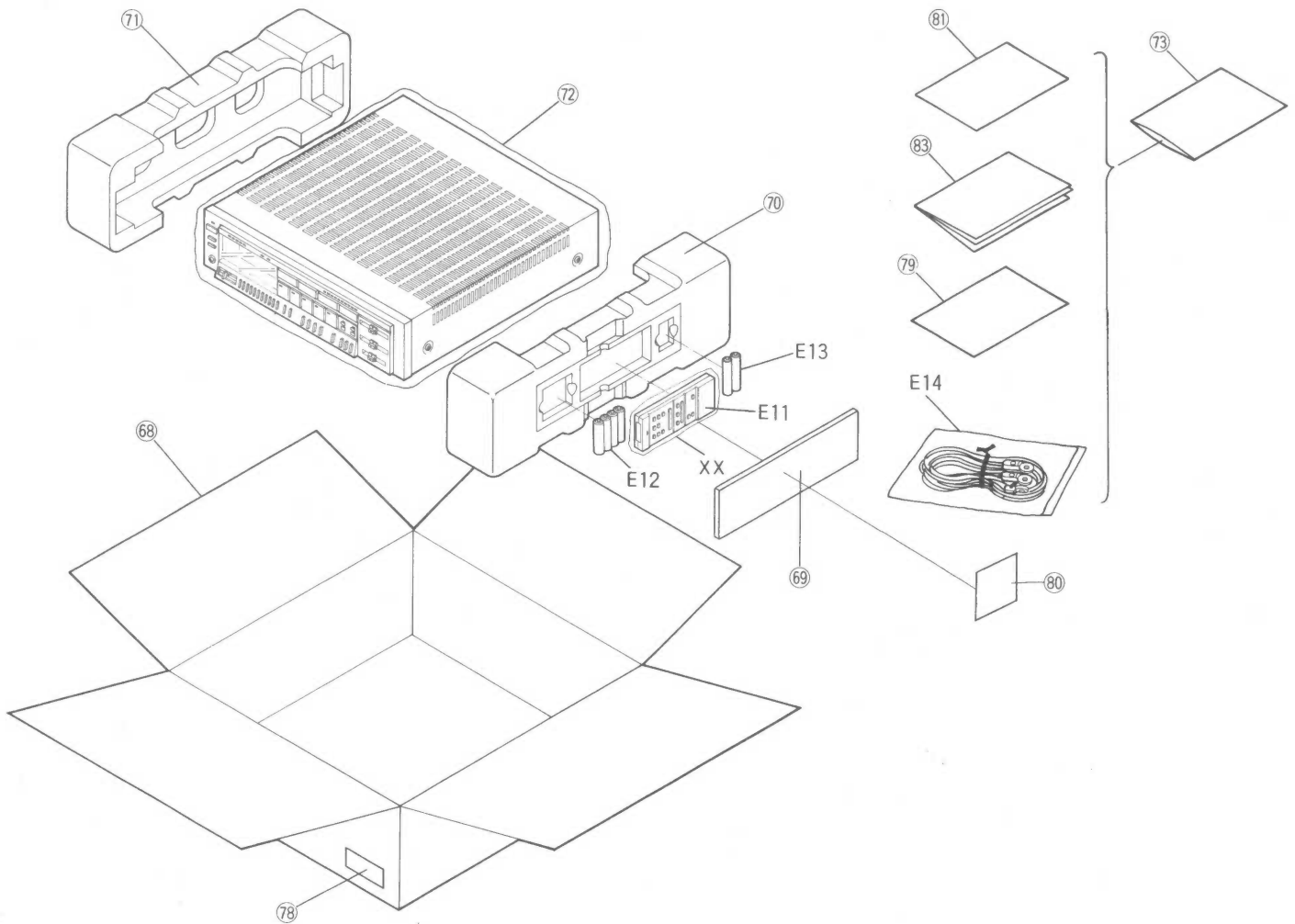
7.4 Chassis and Other Parts



• (8):SR840
• (9):SR940

Ref. No.	Q'ty		Part No.	Description
	8	9		
7	1	1	N21224	Chassis and Other Parts
8	1	1	N21225A	Bottom Board (FRONT)
9	1	1	N30809	Bottom Board (FEQ)
10	1	1	N44108	Bottom Board (P.S)
11	4	4	NO.7108	Battery Cover
				Foot
12	1	1	N21217A	Rear Panel
12	1	1	N21203A	Rear Panel
25	3	3	N44089-28	Push Button (TAPE)
34	1	1	N21197	Side Chassis R
35	1	1	N21198	Side Chassis L
36	2	2	N21221	Center Chassis (P.T)
37	1	1	N21222A	Center Chassis (FRONT)
38	1	1	N21223	Support Chassis (P.T)
39	1	1	N30808	Stay, Support Chassis (P.T)
40	1	1	N21196	P.C.B. Chassis
41	1	1	N43760	Shield Plate 2
42	3	3	N44165	Fittings (P.C.B.)
43	2	2	N44161	Fittings (Heat Sink)
44	1	1	N44163	Angle R (Heat Sink)
45	1	1	N44164	Angle L (Heat Sink)
46	1	1	N30802	Fittings (Battery)
47	2	2	N42222	Fittings (Thermal Relay)
48	2	2	N44171	Spring (Transistor)
50	3	3	N44111	Knob Shaft
51	2	2	N30806-90	Heat Sink
51	2	2	N30806100B	Heat Sink
52	1	1	N44166	Heat Sink
55	6	6	N44195	Stud
60	1	1	N44040-1	FC Cushion
63	1	1	N44205	Cushion
75	3	3	N44043	Label, SA1965
				(Lightning Flash)
76	1	1	N44048	Label, SCAN
77	1	1	N44207	Label (Battery)
78	1	1	SL.1024	Serial Plate
101	2	2	SSB+30x10B	Screw, Bind Head, B
103	2	2	STR23x053B	Tap Screw, Pan Head, B
106	14	14	TBB+30x06Y	Tap Screw B, Bind Head, Y
107	14	14	TBB+30x12Y	Tap Screw B, Bind Head, Y
108	1	1	TCB+30x10B	Tap Screw C, Bind Head, B
109	8	8	TPM+30x08B	Tap Screw P, Round Head, B
111	10	10	TSB+30x06B	Tap Screw S, Bind Head, B
112	51	51	TSB+30x06Y	Tap Screw S, Bind Head, Y
113	7	7	TSB+30x08Y	Tap Screw S, Bind Head, Y
115	4	4	TSB+40x12Y	Tap Screw S, Bind Head, Y
116	1	1	SSB+30x14Y	Screw, Bind Head, Y
116	1	1	TSB+40x16Y	Tap Screw S, Bind Head, Y
117	17	17	TSC+30x06Y	Tap Screw S, Washer Faced, Y
120	4	4	TST+40x08Y	Tap Screw S, Truss, Y
121	3	3	2AWx0830-B	Plain Washer, B
122	15	15	2AWx0830-Y	Plain Washer, Y
124	2	2	2BNx30-2Y	Nut, Hexagonal Head
126	2	2	2FN-30x08S	Flange Nut
127	3	3	VJR-3	Snake Lug
128	1	1	2AE-03	Lug
130	1	1	N44175	Retaining Ring
131	1	1	N44114	Screw
L100	1	1	171001	Loop Antenna
△ T702	1	1	NPT-1784S	Power Transformer
△ T702	1	1	NPT-1794S	Power Transformer
△ FU601	1	1	FU-615024T	Fuse, 5A
△ FU601	1	1	FU-616024T	Fuse, 6A
TY601	1	1	UI2105052A	Thermal Relay
TY602	1	1	UI2105052A	Thermal Relay
E1	8	8	AC238	Mica (Q615~622)
E2	1	1	FH-032C	Fuse Holder
△ E3	1	1	S2T732T104	AC Outlet
E4	1	1	UB-0027	Binding Post
△ E5	1	1	AC-022	Line Cord
E6	1	1	SR-4N-4	Cord Stopper
E7	1	1	TC-7	Battery Case
E8	3	3	SDB25BSANO	Heat Sink
PCB 1	1	1	28R1P10D	P.C.Board Ass'y (AMS-569)
PCB 2	1	1	28R1P09C-1	P.C.Board Ass'y (BD-576)
PCB 2	1	1	28R1P09D-1	P.C.Board Ass'y (BD-576)
PCB 3	1	1	28R1P09C-2	P.C.Board Ass'y (BPS-576)
PCB 5	1	1	28R1P03C	P.C.Board Ass'y (FEQ-574A)
PCB 8	1	1	28R1P08C	P.C.Board Ass'y (MAL-575)
PCB 9	1	1	28R1P08C-1	P.C.Board Ass'y (MAR-575)
PCB10	1	1	28R1P09C	P.C.Board Ass'y (PS-576)
PCB 5	1	1	28R1P03D	P.C.Board Ass'y (FEQ-574A)
PCB 8	1	1	28R1P08D	P.C.Board Ass'y (MAL-575)
PCB 9	1	1	28R1P08D-2	P.C.Board Ass'y (MAR-575)
PCB10	1	1	28R1P09D	P.C.Board Ass'y (PS-576)
PCB16	1	1	28R1P09C-3	P.C.Board Ass'y (SP-576)
PCB18	1	1	28R1P05C-1	P.C.Board Ass'y (TIP-571A)

7.5 Packing Materials



- (8):SR840
- (9):SR940

Ref. No.	Q'ty		Part No.	Description
	8	9		
68	1	—	N21218	Packing Materials
68	—	1	N21211	Shipping Carton
69	1	1	N44172	Packing Pad
70	1	1	N21212A	Packing Pad R
71	1	1	N21213	Packing Pad L
72	1	1	N44138	Polyethylene Bag (Unit)
73	1	1	N40487	Polyethylene Bag (Accessories)
78	1	1	SL.1024	Serial Plate
79	1	1	N21182A	Sheet, Warranty
80	1	1	N44173	Tape, Packing Materials

Ref. No.	Q'ty		Part No.	Description
	8	9		
81	1	1	FS-514A	Flysheet
83	1	1	OM-514A	Instruction Manual
XX	1	1	XZB9X21B05	Polyethylene Bag
E11	1	1	RMC40	Remote Control Transmitter
E12	4	4	UM-3	Battery
E13	2	2	UM-4	Battery
E14	1	1	FM-5002	FM Antenna (Cord)

7.6 Electrical Parts List

Ref. No.	Q'ty		Part No.	Description
	8	9		
—	—	1	AMS-569	AMS-569 AM STEREO CIRCUIT BOARD P.C.Board, AM Stereo
SC001	—	1	T125X103M	Ceramic, 0.01 μ F, $\pm$ 20%
SC002	—	1	E125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
SC003	—	1	E125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
SC004	—	1	LL50T3R3M	Low Leak. Elect, 3.3 μ F, 50V
SC005	—	1	LL50T2R2M	Low Leak. Elect, 2.2 μ F, 50V
SC006	—	1	U125V332K	Ceramic, 3300pF, $\pm$ 10%
SC007	—	1	U125V332K	Ceramic, 3300pF, $\pm$ 10%
SC008	—	1	U125B102K	Ceramic, 1000pF, $\pm$ 10%
SC009	—	1	CQV1H474JZ	Film, 0.47 μ F, $\pm$ 5%
SC010	—	1	CQV1H474JZ	Film, 0.47 μ F, $\pm$ 5%
SC011	—	1	NS16TW100M	Elect, 10 μ F, 16V
SC012	—	1	LL50T2R2M	Low Leak. Elect, 2.2 μ F, 50V
SC013	—	1	LL50T4R7M	Low Leak. Elect, 4.7 μ F, 50V
SC014	—	1	U125V332K	Ceramic, 3300pF, $\pm$ 10%
SC015	—	1	NS16TW220M	Elect, 22 μ F, 16V
SC016	—	1	U125SL220J	Ceramic, 22pF, $\pm$ 5%
SC017	—	1	U125V332K	Ceramic, 3300pF, $\pm$ 10%
SC018	—	1	T125X103M	Ceramic, 0.01pF, $\pm$ 20%
SC019	—	1	CQV1H104JZ	Film, 0.1 μ F, $\pm$ 5%
SC020	—	1	CQV1H104JZ	Film, 0.1 μ F, $\pm$ 5%
SC021	—	1	NS16TW101M	Elect, 100 μ F, 16V
SC022	—	1	E125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
SC023	—	1	NS16TW100M	Elect, 10 μ F, 16V
SC024	—	1	LL50TR10M	Low Leak. Elect, 0.1 μ F, 50V
SR001	—	1	KA20ST274J	Carbon, 270K Ω
SR002	—	1	KA20ST223J	Carbon, 22K Ω
SR003	—	1	KA20ST393J	Carbon, 39K Ω
SR004	—	1	KA20ST102J	Carbon, 1K Ω
SR005	—	1	KA20ST222J	Carbon, 2.2K Ω
SR006	—	1	KA20ST104J	Carbon, 100K Ω
SR007	—	1	KA20ST473J	Carbon, 47K Ω
SR008	—	1	KA20ST334J	Carbon, 330K Ω
SR010	—	1	KA20ST122J	Carbon, 1.2K Ω
SR011	—	1	KA20ST561J	Carbon, 560 Ω
SR012	—	1	KA20ST563J	Carbon, 56K Ω
SR013	—	1	KA20ST224J	Carbon, 220K Ω
SR014	—	1	KA20ST152J	Carbon, 1.5K Ω
SR015	—	1	KA20ST431J	Carbon, 430 Ω
SR016	—	1	KA20ST911J	Carbon, 910 Ω
SR017	—	1	KA20ST562J	Carbon, 5.6K Ω
SR018	—	1	KA20ST152J	Carbon, 1.5K Ω
SR019	—	1	KA20ST223J	Carbon, 22K Ω
SR020	—	1	KA20ST101J	Carbon, 100 Ω
SR021	—	1	KA20ST121J	Carbon, 120 Ω
SQ001	—	3	2SC2021-Q	Transistor
SQ003	—	1	MC13020P	IC
SX001	—	1	U3.600MHZ	Quartz Oscillator Unit
JT100	—	1	IMSA10685Z	Connector
JT101	—	1	IMSA10685Z	Connector
—	—	1	BD-576	BD-576 RECTIFIER CIRCUIT BOARD P.C.Board, Rectifier
C719	1	1	HMSJYE103P	Ceramic Cap., 0.01 μ F, $\pm$ 100% ~ -0%
Δ D708	1	—	S10S204001	Diode
Δ D708	—	1	KBPC25-02	Diode
J608	1/4	1/4	WB-4	Terminal Pin (4P)
J609	1/4	1/4	WB-4	Terminal Pin (4P)
J616	1/4	1/4	WB-4	Terminal Pin (4P)
J617	1/4	1/4	WB-4	Terminal Pin (4P)
—	—	1	BPS-576	BPS-576 BACK-UP SUPPLY CIRCUIT BOARD P.C.Board, Back-up Supply
C701	1	1	MS50TW1R0M	Elect, 1 μ F, 50V
C702	1	1	NS16TW101M	Elect, 100 μ F, 16V
C703	1	1	NS25TW101M	Elect, 100 μ F, 25V
C704	1	1	NS35TW100M	Elect, 10 μ F, 35V
C705	1	1	NS35TW221M	Elect, 220 μ F, 35V
C706	1	1	NS35TW101M	Elect, 100 μ F, 35V
C707	1	1	NS25TW101M	Elect, 100 μ F, 25V
C718	1	1	CQU1A103MH	Film, 0.01 μ F, $\pm$ 20%
R701	1	1	KA25ST103J	Carbon, 10K Ω
R702	1	1	KA25ST223J	Carbon, 22K Ω
R703	1	1	KA25ST561J	Carbon, 560 Ω
Δ R704	1	1	SA-2WT560J	Metal Oxide, 56 Ω , 2W, $\pm$ 5%
R705	1	1	KA25ST331J	Carbon, 330 Ω
R706	1	1	KA25ST682J	Carbon, 6.8K Ω
Δ R712	1	1	KA50ST335J	Carbon, 3.3M Ω , 1/2W, $\pm$ 5%
D701	1	1	1SR35-100A	Diode
D702	1	1	1SR35-100A	Diode
D703	1	1	1B4B42	Diode
D704	1	1	1SR35-100A	Diode
D705	1	1	ZD50-157	Zener, 1/2W, 15.7V
D706	1	1	ZD50-245	Zener, 1/2W, 24.5V
D707	1	1	ZD50-039	Zener, 1/2W, 3.9V
Q701	1	1	2SC1815-Y	Transistor
Δ T701	1	1	NPT-1814S	Power Transformer
JP240	1	1	MC05-365	Micro Socket Ass'y
JP630	1	1	171825-2	Micro Plug
Δ RY701	1	1	VS24MB-UL	Relay
EL701	1	1	59BS1692	GND Lug
—	—	1	BPS-576	BPS-576 MISCELLANEOUS Power Transformer
—	—	1	MC05-365	Micro Socket Ass'y
—	—	1	171825-2	Micro Plug
—	—	1	VS24MB-UL	Relay
—	—	1	59BS1692	GND Lug

Ref. No.	Q'ty		Part No.	Description
	8	9		
—	1	1	EVF-571A	EVF-571A ELECT. VOL./ FUNCTION SELECTOR CIRCUIT BOARD P.C.Board, Elect. Vol./ Function Selector
C222	1	1	NS25TW101M	EVF-571A CAPACITORS Elect, 100 μ F, 25V
C550	1	1	MS16TW100M	Elect, 10 μ F, 16V
C551	1	1	HESJSL820K	Ceramic, 82pF, $\pm 10\%$
C552	3	3	HESJYB561K	Ceramic, 560pF, $\pm 10\%$
C554	1	1	MS10TW470M	Elect, 47 μ F, 10V
C555	1	1	CQV1H223JZ	Film, 0.022 μ F, $\pm 5\%$
C556	1	1	CQV1H223JZ	Film, 0.022 μ F, $\pm 5\%$
C557	1	1	NS50TW1R0M	Elect, 1 μ F, 50V
C558	1	1		
				EVF-571A RESISTORS (All Carbon Resistors are $\pm 5\%$ and $\frac{1}{4}W$)
R219	28	28	KA25ST104J	Carbon, 100K Ω
R246				
R550	5	5	KA25ST104J	Carbon, 100K Ω
R554				
R555	3	3	KA25ST103J	Carbon, 10K Ω
R557	1	1	KA25ST472J	Carbon, 4.7K Ω
R558				
R559	4	4	KA25ST271J	Carbon, 270 Ω
R562				
R563	1	1	KA25ST473J	Carbon, 47K Ω
R564	1	1	KA25ST472J	Carbon, 4.7K Ω
R565	1	1	KA25ST271J	Carbon, 270 Ω
R566	1	1	KA25ST271J	Carbon, 270 Ω
R567	1	1	KA25ST561J	Carbon, 560 Ω
R568	1	1	KA25ST561J	Carbon, 560 Ω
R569	4	4	KA25ST104J	Carbon, 100K Ω
R572	1	1	KA25ST561J	Carbon, 560 Ω
R573	1	1	KA25ST561J	Carbon, 560 Ω
R574	1	1	KA25ST104J	Carbon, 100K Ω
R575	1	1	KA25ST104J	Carbon, 100K Ω
R576	4	4	KA25ST103J	Carbon, 10K Ω
R579	1	1	KA25ST561J	Carbon, 560 Ω
R580	1	1	KA25ST104J	Carbon, 100K Ω
R581	1	1	KA25ST101J	Carbon, 100 Ω
R582	1	1	KA25ST103J	Carbon, 10K Ω
R583	1	1	KA25ST103J	Carbon, 10K Ω
R585	1	1	KA25ST103J	Carbon, 10K Ω
R586	1	1	KA25ST271J	Carbon, 270 Ω
				EVF-571A SEMICONDUCTORS
D217	1	1	1S1588	Diode
D218	1	1	1S1588	Diode
D550	1	1	1S1588	Diode
D551	1	1	1S1588	Diode
D553	1	1	ZD50-035	Zener, $\frac{1}{2}W$, 3.5V

Ref. No.	Q'ty		Part No.	Description
	8	9		
Q208	14	14	2SA937-R,S	Transistor
Q221				
Q550	5	5	2SC1815-Y	Transistor
Q554				
Q555	1	1	2SA933-R,S	Transistor
IC550	1	1	LC6505B665	IC
LD550	1	1	SLR-34VC5F	LED
LD551	3	3	SLR-34MC5F	LED
LD553				
				EVF-571A MISCELLANEOUS
L550	1	1	LAL03100K	Inductor
FL201	1	1	FG610P1	Fluorescence Lamp
SW216	1	1	KHH10910	Touch Switch
SW217	1	1	KHH10910	Touch Switch
SW550	4	4	KHH15910	Touch Switch
SW553				
SW554	1	1	KHH10910	Touch Switch
SW555	1	1	KHH10910	Touch Switch
SW556	1	—	SW-1500153	Push Switch
SW556	—	1	SW-1600152	Push Switch
JP430-2	$\frac{1}{2}$	$\frac{1}{2}$	MC06-366	Micro Socket Ass'y
				FEQ-574A FUNCTION/EQ CIRCUIT BOARD P.C.Board, Function/EQ
—	1	1	FEQ-574A	
				FEQ-574A CAPACITORS
C401	1	1	HCSJZF473Z	Ceramic, 0.047 μ F, +80%~-20%
C402	1	1	HCSJZF473Z	Ceramic, 0.047 μ F, +80%~-20%
C403	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C404	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C405	1	1	HESJSL471K	Ceramic, 470pF, $\pm 10\%$
C406	1	1	HESJSL471K	Ceramic, 470pF, $\pm 10\%$
C407	1	1	NS10TW101M	Elect, 100 μ F, 10V
C408	1	1	NS10TW101M	Elect, 100 μ F, 10V
C409	1	1	HESJYB102K	Ceramic, 1000pF, $\pm 10\%$
C410	1	1	HESJYB102K	Ceramic, 1000pF, $\pm 10\%$
C411	1	1	MY50VS182J	Film, 1800pF, $\pm 5\%$
C412	1	1	MY50VS562J	Film, 5600pF, $\pm 5\%$
C413	1	1	MY50VS562J	Film, 5600pF, $\pm 5\%$
C414	1	1	MY50VS182J	Film, 1800pF, $\pm 5\%$
C415	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C416	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C417	1	1	MY50VS102J	Film, 1000pF, $\pm 5\%$
C418	1	1	MY50VS102J	Film, 1000pF, $\pm 5\%$
C419	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C420	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C421	1	1	HESJSL271K	Ceramic, 270pF, $\pm 10\%$
C422	1	1	HESJSL271K	Ceramic, 270pF, $\pm 10\%$
C423	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C424	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C425	1	1	HESJSL151K	Ceramic, 150pF, $\pm 10\%$
C426	1	1	HESJSL151K	Ceramic, 150pF, $\pm 10\%$
C427				
I	4	4	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C430				

Ref. No.	Q'ty		Part No.	Description
	8	9		
C433	1	1	HESJSL101K	Ceramic, 100pF, ±10%
C434	1	1	HESJSL101K	Ceramic, 100pF, ±10%
C435	1	1	MY50VS102J	Film, 1000pF, ±5%
C436	1	1	MY50VS102J	Film, 1000pF, ±5%
C437	1	—	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C438	1	—	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C437	—	1	LL25TR33M	Low Leak. Elect, 0.33μF, 25V
C438	—	1	LL25TR33M	Low Leak. Elect, 0.33μF, 25V
C439	—	1	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C440	—	1	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C441	1	1	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C442	1	1	LL25T4R7M	Low Leak. Elect, 4.7μF, 25V
C443	1	1	HESJSL471K	Ceramic, 470pF, ±10%
C444	1	1	HESJSL471K	Ceramic, 470pF, ±10%
C471	1	1	MY50VS393J	Film, 0.039μF, ±5%
C472	1	1	MY50VS393J	Film, 0.039μF, ±5%
C500	1	1	NS10TW470M	Elect, 47μF, 10V
C501	1	1	NS10TW101M	Elect, 100μF, 10V
C502	1	1	NS16TW470M	Elect, 47μF, 16V
C503	1	1	NS10TW470M	Elect, 47μF, 10V
C504	1	1	NS16TW221M	Elect, 220μF, 16V
C505	1	1	NS16TW101M	Elect, 100μF, 16V
C506	1	1	NS10TW221M	Elect, 220μF, 10V
C507	1	1	NS10TW470M	Elect, 47μF, 10V
C508	1	3	NS16TW470M	Elect, 47μF, 16V
C510	3	3	NS16TW470M	Elect, 47μF, 16V
C511	1	1	NS10TW101M	Elect, 100μF, 10V
C512	1	1	NS16TW100M	Elect, 10μF, 16V
C513	1	1	EP125Y223N	Ceramic, 0.022μF, ±30%
C514	1	1	EP125Y223N	Ceramic, 0.022μF, ±30%
C515	1	1	NS16TW100M	Elect, 10μF, 16V
C516	1	1	HESJYB391K	Ceramic, 390pF, ±10%
C517	1	1	NS16TW470M	Elect, 47μF, 16V
C518	1	1	MY50VS683J	Film, 0.068μF, ±5%
C519	1	1	NS16TW470M	Elect, 47μF, 16V
C520	1	1	NS25TW4R7M	Elect, 4.7μF, 25V
C521	1	1	HCSJZF223Z	Ceramic, 0.022μF, +80~-20%
FEQ-574A RESISTORS (All Carbon Resistors are ±5% and ¼W)				
R401	1	1	KA25ST101J	Carbon, 100Ω
R402	1	1	KA25ST101J	Carbon, 100Ω
R403	1	4	KA25ST104J	Carbon, 100KΩ
R406	1	1	KA25ST911J	Carbon, 910Ω
R407	1	1	KA25ST911J	Carbon, 910Ω
R408	1	1	KA25ST514J	Carbon, 510KΩ
R409	1	1	KA25ST514J	Carbon, 510KΩ
R410	1	1	KA25ST393J	Carbon, 39KΩ
R411	1	1	KA25ST393J	Carbon, 39KΩ
R412	1	1	KA25ST221J	Carbon, 220Ω
R413	1	1	KA25ST221J	Carbon, 220Ω
R414	1	1	KA25ST104J	Carbon, 100KΩ
R415	1	6	KA25ST104J	Carbon, 100KΩ
R420	6	6	KA25ST104J	Carbon, 100KΩ

Ref. No.	Q'ty		Part No.	Description
	8	9		
R421	1	1	KA25ST221J	Carbon, 220Ω
R422	1	1	KA25ST221J	Carbon, 220Ω
R423	1	1	KA25ST104J	Carbon, 100KΩ
R424	1	1	KA25ST104J	Carbon, 100KΩ
R425	1	1	KA25ST102J	Carbon, 1KΩ
R426	1	1	KA25ST102J	Carbon, 1KΩ
R427	1	1	KA25ST104J	Carbon, 100KΩ
R428	1	1	KA25ST104J	Carbon, 100KΩ
R429	1	1	KA25ST221J	Carbon, 220Ω
R430	1	1	KA25ST221J	Carbon, 220Ω
R431	1	6	KA25ST104J	Carbon, 100KΩ
R436	1	1	KA25ST222J	Carbon, 2.2KΩ
R437	1	1	KA25ST222J	Carbon, 2.2KΩ
R438	1	1	KA25ST104J	Carbon, 100KΩ
R439	1	1	KA25ST104J	Carbon, 100KΩ
R440	1	1	KA25ST102J	Carbon, 1KΩ
R441	1	1	KA25ST102J	Carbon, 1KΩ
R442	1	1	KA25ST152J	Carbon, 1.5KΩ
R443	1	—	KA25ST152J	Carbon, 1.5KΩ
R443	—	1	KA25ST102J	Carbon, 1KΩ
R444	—	1	KA25ST102J	Carbon, 1KΩ
R445	1	1	KA25ST222J	Carbon, 2.2KΩ
R446	1	1	KA25ST104J	Carbon, 100KΩ
R447	1	1	KA25ST104J	Carbon, 100KΩ
R448	1	1	KA25ST222J	Carbon, 2.2KΩ
R449	1	1	KA25ST222J	Carbon, 2.2KΩ
R450	1	1	KA25ST104J	Carbon, 100KΩ
R451	1	1	KA25ST104J	Carbon, 100KΩ
R452	1	1	KA25ST222J	Carbon, 2.2KΩ
R453	1	4	KA25ST222J	Carbon, 2.2KΩ
R456	1	1	KA25ST104J	Carbon, 100KΩ
R457	1	1	KA25ST104J	Carbon, 100KΩ
R458	1	1	KA25ST823J	Carbon, 82KΩ
R459	1	1	KA25ST823J	Carbon, 82KΩ
R460	1	1	KA25ST102J	Carbon, 1KΩ
R461	1	1	KA25ST102J	Carbon, 1KΩ
R462	1	1	KA25ST473J	Carbon, 47KΩ
R463	1	1	KA25ST473J	Carbon, 47KΩ
R464	1	1	KA25ST332J	Carbon, 3.3KΩ
R500	1	3	KA25ST103J	Carbon, 10KΩ
R501	3	3	KA25ST103J	Carbon, 10KΩ
R503	1	1	KA25ST821J	Carbon, 820Ω
R504	1	1	KA25ST331J	Carbon, 330Ω
R505	1	1	KA25ST473J	Carbon, 47KΩ
R506	1	3	KA25ST473J	Carbon, 47KΩ
R508	1	1	KA25ST220J	Carbon, 22Ω
R509	1	1	KA25ST224J	Carbon, 220KΩ
R510	1	1	KA25ST222J	Carbon, 2.2KΩ
R511	1	1	KA25ST473J	Carbon, 47KΩ
R512	1	1	KA25ST103J	Carbon, 10KΩ
R513	1	1	KA25ST472J	Carbon, 4.7KΩ
R515	1	1	KA25ST472J	Carbon, 4.7KΩ
R516	1	1	KA25ST104J	Carbon, 100KΩ
R517	1	5	KA25ST104J	Carbon, 100KΩ
R521	5	5	KA25ST104J	Carbon, 100KΩ

Ref. No.	Q'ty		Part No.	Description
	8	9		
R522	1	1	KA25ST222J	Carbon, 2.2K Ω
R523	1	1	KA25ST104J	Carbon, 100K Ω
R524	1	1	KA25ST222J	Carbon, 2.2K Ω
R525	1	1	KA25ST104J	Carbon, 100K Ω
R526	1	1	KA25ST103J	Carbon, 10K Ω
R527	1	1	KA25ST104J	Carbon, 100K Ω
R528	1	1	KA25ST104J	Carbon, 100K Ω
R529	1	1	KA25ST472J	Carbon, 4.7K Ω
R530	1	1	KA25ST473J	Carbon, 47K Ω
R531	1	1	KA25ST103J	Carbon, 10K Ω
R532	1	1	KA25ST223J	Carbon, 22K Ω
R533	1	1	KA25ST103J	Carbon, 10K Ω
R534	1	1	KA25ST473J	Carbon, 47K Ω
R535	1	1	KA25ST103J	Carbon, 10K Ω
R536	1	1	KA25ST473J	Carbon, 47K Ω
R537	1	1	KA25ST220J	Carbon, 22 Ω
R538	1	1	KA25ST104J	Carbon, 100K Ω
R539	1	1	KA25ST222J	Carbon, 2.2K Ω
R540	1	1	KA25ST473J	Carbon, 47K Ω
R541	1	1	KA25ST104J	Carbon, 100K Ω
R542	1	1	KA25ST222J	Carbon, 2.2K Ω
R543	1	1	KA25ST101J	Carbon, 100 Ω
R544	1	1	KA25ST123J	Carbon, 12K Ω
R545	1	1	KA25ST103J	Carbon, 10K Ω
R546	1	1	KA25ST102J	Carbon, 1K Ω
R547	1	1	KA25ST123J	Carbon, 12K Ω
R548	1	1	KA25ST104J	Carbon, 100K Ω
R549	1	1	KA25ST683J	Carbon, 68K Ω
R584	1	1	KA25ST473J	Carbon, 47K Ω
R587	1	1	KA25ST101J	Carbon, 100 Ω
R588	1	1	KA25ST104J	Carbon, 100K Ω
R589	1	1	KA25ST102J	Carbon, 1K Ω
R590	1	1	KA25ST102J	Carbon, 1K Ω
R591	1	1	KA25ST104J	Carbon, 100K Ω
R592	1	1	KA25ST124J	Carbon, 120K Ω
R595	1	1	KA25ST102J	Carbon, 1K Ω
R599	1	1	KA25ST103J	Carbon, 10K Ω
FEQ-574A SEMICONDUCTORS				
D500	1	1	ZD50-057	Zener, $\frac{1}{2}$ W, 5.7V
D501	6	6	1S1588	Diode
D506	1	1	ZD50-062	Zener, $\frac{1}{2}$ W, 6.2V
D508	1	1	ZD50-127	Zener, $\frac{1}{2}$ W, 12.7V
D509	1	1	1S1588	Diode
D512	7	7	1S1588	Diode
D518	1	1	20A99A	Diode
D519	1	1	20A99A	Diode
D520	1	1	1S1588	Diode
D530	1	1	1S1588	Diode
D531	1	1	1S1588	Diode
Q500	1	1	2SD1406-Y	Transistor
Q501	1	1	2SC1740-R	Transistor
Q502	1	1	2SD1406-Y	Transistor
Q503	1	1	2SC3242A-E	Transistor
Q504	4	4	2SC1740-R	Transistor
Q507	1	1	2SA933-R,S	Transistor
Q508	1	1	2SC2878-A	Transistor
Q509	1	1	2SC2878-A	Transistor
Q510	1	1	2SC2878-A	Transistor

Ref. No.	Q'ty		Part No.	Description
	8	9		
Q511	1	1	2SA933-R,S	Transistor
Q512	1	1	2SA933-R,S	Transistor
Q513	3	3	2SC1740-R	Transistor
Q515	1	1	2SA933-R,S	Transistor
Q516	1	1	2SA933-R,S	Transistor
Q517	1	1	2SA933-R,S	Transistor
Q518	9	9	2SC2021-R	Transistor
Q526	1	1	NJM4560DX	IC
IC401	1	1	TC9151P	IC
IC402	1	1	NJM4560DX	IC
IC403	1	1	NJM4560DX	IC
IC404	1	1	TC9177P	IC
IC405	1	1	NJM4560DX	IC
IC406	1	1	NJM4560DX	IC
FEQ-574A MISCELLANEOUS				
F501	1	1	SFU450B3	Ceramic Filter
J103	1	1	171825-2	Micro Plug
T501	1	1	140048	AM IFT
JP410	1	1	W-D0607	Connector, (7 hole)
JP420	1	1	W-D0605	Connector, (5 hole)
JP430	1	1	171825-6	Micro Plug (6P)
JP520	1	1	171825-2	Micro Plug (2P)
JP530	1	1	W-D0606	Connector, (6 hole)
JP820	1	1	MC04-367	Micro Socket Ass'y
RJ401	1	1	YKC21-0117	RCA Jack (6P)
RJ402	1	1	YKC21-0116	RCA Jack (6P)
SW401	1	1	SW-1300154	Push Switch
FLD-573 FUNCTION LED CIRCUIT BOARD				
—	1	1	FLD-573	P.C.Board, Function LED
D901	1	1	1S1588	Diode
D902	1	1	1S1588	Diode
LD901	4	4	SLP260C	LED
LD904	1	1	SLP160C	LED
LD905	1	1	SLP160C	LED
SW901	5	5	KHH15910	Touch Switch
SW905	1	1	LVL-573	P.C.Board, Volume LED
LD906	$\frac{4}{5}$	$\frac{4}{5}$	SLP272B	LED
LD909	3	3	TLY205	LED
LD910	1	1	SLP172B-03	LED
LD912	1	1	SLP172B-03	LED
LD913	1	1	SLP172B-03	LED
LD915	1	1	SLP172B-03	LED

Ref. No.	Q'ty		Part No.	Description
	8	9		
—	1	1	MAL-575	MAL-575, MAR-575 MAIN AMP CIRCUIT BOARDS P.C.Board, Main Amp L
—	1	1	MAR-575	P.C.Board, Main Amp R
C617 C620 C621 C624	4	4	HMSJSL151K	MAL-575, MAR-575 CAPACITORS Ceramic, 150pF, ±10%
C620 C621 C624	4	4	HESJYF103Z	Ceramic, 0.01μF, +80%~-20%
R629 R630 R631 R634 R635 R636 R637 R644	1	1	KA25ST331J	MAL-575, MAR-575 RESISTORS (All Carbon Resistors are ±5% and ¼W) Carbon, 330Ω
R630 R631 R634 R635 R636 R637 R644	1	1	KA25ST331J	Carbon, 330Ω
R631 R634 R635 R636 R637 R644	4	4	KA25ST560J	Carbon, 56Ω
R635 R636 R637 R644	1	1	FR50PT331J	Flame Proof, 330Ω, ½W, ±5%
R636 R637 R644	1	1	FR50PT331J	Flame Proof, 330Ω, ½W, ±5%
R637 R644	8	8	FR50PT100J	Flame Proof, 10Ω, ½W, ±5%
R645 R652 R653 R660	8	8	MPC71CR22K	Cement, 0.22Ω, 5W ±10%
R652 R653 R660	8	8	KA25ST100J	Carbon, 10Ω
R661 R662	1	—	KA25ST101J	Carbon, 100Ω
R662	1	—	KA25ST101J	Carbon, 100Ω
R661 R662	—	1	KA25ST820J	Carbon, 82Ω
R662	—	1	KA25ST820J	Carbon, 82Ω
R663 R664 R665 R668	1	1	KA25ST101J	Carbon, 100Ω
R664 R665 R668	1	1	KA25ST101J	Carbon, 100Ω
R665 R668	4	4	KA25ST123J	Carbon, 12KΩ
SVR601 SVR602	1	1	SVR-08S202	Semi-Variable, 2KΩ (B)
SVR602	1	1	SVR-08S202	Semi-Variable, 2KΩ (B)
D605 D606 D607 D614	1	1	KB362M	MAL-575, MAR-575 SEMICONDUCTORS Diode
D606 D607 D614	1	1	KB362M	Diode
D607 D614	8	8	1S1588	Diode

Ref. No.	Q'ty		Part No.	Description
	8	9		
Q609	1	1	2SC1815-Y	Transistor
Q610	1	1	2SC1815-Y	Transistor
Q611	1	1	2SC3298-O	Transistor
Q612	1	1	2SC3298-O	Transistor
Q613	1	1	2SA1306-O	Transistor
Q614	1	1	2SA1306-O	Transistor
Q615	1	—	2SC3181-O	Transistor
Q616	1	—	2SC3181-O	Transistor
Q617	1	—	2SA1264-O	Transistor
Q618	1	—	2SA1264-O	Transistor
Q619	1	—	2SC3181-O	Transistor
Q620	1	—	2SC3181-O	Transistor
Q621	1	—	2SA1264-O	Transistor
Q622	1	—	2SA1264-O	Transistor
Q615	—	1	2SC3182-O	Transistor
Q616	—	1	2SC3182-O	Transistor
Q617	—	1	2SA1265-O	Transistor
Q618	—	1	2SA1265-O	Transistor
Q619	—	1	2SC3182-O	Transistor
Q620	—	1	2SC3182-O	Transistor
Q621	—	1	2SA1265-O	Transistor
Q622	—	1	2SA1265-O	Transistor
Q623	1	1	2SC1815-Y	Transistor
Q624	1	1	2SC1815-Y	Transistor
Q625	1	1	2SA1015-Y	Transistor
Q626	1	1	2SA1015-Y	Transistor
TP601	1	1	WC-03	MAL-575, MAR-575 MISCELLANEOUS Terminal Pin
TP602	1	1	WC-03	Terminal Pin
—	1	1	PS-576	PS-576 POWER SUPPLY CIRCUIT BOARD P.C.Board, Power Supply
C601	1	1	LL16T220M	PS-576 CAPACITORS Low Leak. Elect, 22μF, 16V
C602	1	1	LL16T220M	Low Leak. Elect, 22μF, 16V
C603	1	1	HESJSL471K	Ceramic, 470pF, ±10%
C604	1	1	HESJSL471K	Ceramic, 470pF, ±10%
C605	1	1	NS35TW470M	Elect, 47μF, 35V
C606	1	1	NS35TW470M	Elect, 47μF, 35V
C607	1	1	HESJYB102K	Ceramic, 1000pF, ±10%
C608	1	1	HESJYB102K	Ceramic, 1000pF, ±10%
C609	1	1	HESJSL390K	Ceramic, 39pF, ±10%
C610	1	1	HESJSL390K	Ceramic, 39pF, ±10%
C611	1	1	HESJSL100K	Ceramic, 10pF, ±10%
C612	1	1	HESJSL100K	Ceramic, 10pF, ±10%
C613	1	1	NS10TW101M	Elect, 100μF, 10V
C614	1	1	NS10TW101M	Elect, 100μF, 10V
C615	1	1	MY50VS104M	Film, 0.1μF, ±20%
C616	1	1	MY50VU104M	Film, 0.1μF, ±20%
C627	1	1	NS16TW100M	Elect, 10μF, 16V
C628	1	1	MS10TW470M	Elect, 47μF, 10V
C629	1	1	MS10TW470M	Elect, 47μF, 10V
C630	1	1	NS50TWR47M	Elect, 0.47μF, 50V
C631	1	1	MS10TW220M	Elect, 22μF, 10V
C708	1	—	BC63103M63	Elect, 10000μF, 63V, ±20%
C709	1	—	BC63103M63	Elect, 10000μF, 63V, ±20%
C708	—	1	BC71123M63	Elect, 12000μF, 71V, ±20%
C709	—	1	BC71123M63	Elect, 12000μF, 71V, ±20%

Ref. No.	Q'ty		Part No.	Description
	8	9		
C710	1	1	NS25TW101M	Elect, 100 μ F, 25V
C711	1	1	MS50TW1R0M	Elect, 1 μ F, 50V
C712	1	1	NS35TW102M	Elect, 1000 μ F, 35V
C713	1	1	NS35TW471M	Elect, 470 μ F, 35V
C714	1	1	NS16TW101M	Elect, 100 μ F, 16V
C715	1	1	NS16TW101M	Elect, 100 μ F, 16V
C716	1	1	NS16TW470M	Elect, 47 μ F, 16V
C717	1	1	NS35TW101M	Elect, 100 μ F, 35V
C770	1	1	HESJYF473Z	Ceramic, 0.047 μ F, +80%~-20%
PS-576 RESISTORS (All Carbon Resistors are $\pm 5\%$ and $\frac{1}{4}W$)				
R601	1	1	KA25ST104J	Carbon, 100K Ω
R602	1	1	KA25ST104J	Carbon, 100K Ω
R603	1	1	KA25ST273J	Carbon, 27K Ω
R604	1	1	KA25ST273J	Carbon, 27K Ω
R605	1	1	KA25ST102J	Carbon, 1K Ω
R606	1	1	KA25ST102J	Carbon, 1K Ω
R607	1	1	KA25ST822J	Carbon, 8.2K Ω
R608	1	1	KA25ST822J	Carbon, 8.2K Ω
R609	1	1	KA25ST152J	Carbon, 1.5K Ω
I	4	4	KA25ST152J	Carbon, 1.5K Ω
R612	1	1	KA25ST152J	Carbon, 1.5K Ω
△ R613	1	—	FR50PT392J	Flame Proof, 3.9K Ω , $\frac{1}{4}W$, $\pm 5\%$
△ R614	1	—	FR50PT392J	Flame Proof, 3.9K Ω , $\frac{1}{4}W$, $\pm 5\%$
△ R613	—	1	FR50PT472J	Flame Proof, 4.7K Ω , $\frac{1}{4}W$, $\pm 5\%$
△ R614	—	1	FR50PT472J	Flame Proof, 4.7K Ω , $\frac{1}{4}W$, $\pm 5\%$
R615	1	1	KA25ST820J	Carbon, 82 Ω
R616	1	1	KA25ST820J	Carbon, 82 Ω
R617	1	1	KA25ST271J	Carbon, 270 Ω
R618	1	1	KA25ST271J	Carbon, 270 Ω
R619	1	1	KA50ST123J	Carbon, 12K Ω , $\frac{1}{4}W$, $\pm 5\%$
R620	1	1	KA50ST123J	Carbon, 12K Ω , $\frac{1}{4}W$, $\pm 5\%$
R621	1	1	KA25ST271J	Carbon, 270 Ω
I	4	4	KA25ST271J	Carbon, 270 Ω
R624	1	1	MF25ST273G	Metal Film, 27K Ω , $\frac{1}{4}W$, $\pm 2\%$
R625	1	1	MF25ST273G	Metal Film, 27K Ω , $\frac{1}{4}W$, $\pm 2\%$
R626	1	1	MF25ST122G	Metal Film, 1.2K Ω , $\frac{1}{4}W$, $\pm 2\%$
R627	1	1	MF25ST122G	Metal Film, 1.2K Ω , $\frac{1}{4}W$, $\pm 2\%$
R628	1	1	MF25ST122G	Metal Film, 1.2K Ω , $\frac{1}{4}W$, $\pm 2\%$
R673	1	1	KA25ST103J	Carbon, 10K Ω
R674	1	1	KA25ST103J	Carbon, 10K Ω
R675	1	1	KA25ST332J	Carbon, 3.3K Ω
R676	1	1	KA25ST473J	Carbon, 47K Ω
R677	1	1	KA25ST563J	Carbon, 56K Ω
I	4	4	KA25ST563J	Carbon, 56K Ω
R680	1	1	KA25ST183J	Carbon, 18K Ω
R681	1	1	KA25ST333J	Carbon, 33K Ω
R682	1	1	KA25ST563J	Carbon, 56K Ω
R683	1	1	KA25ST224J	Carbon, 220K Ω
R684	1	1	KA25ST473J	Carbon, 47K Ω
R685	1	1	KA25ST103J	Carbon, 10K Ω
R686	1	1	KA25ST103J	Carbon, 10K Ω
△ R707	1	—	FR25PT272J	Flame Proof, 2.7K Ω , $\frac{1}{4}W$, $\pm 5\%$
△ R707	—	1	FR25PT332J	Flame Proof, 3.3K Ω , $\frac{1}{4}W$, $\pm 5\%$

Ref. No.	Q'ty		Part No.	Description
	8	9		
R708	1	1	KA25ST332J	Carbon, 3.3K Ω
R709	1	1	KA25ST153J	Carbon, 15K Ω
△ R710	1	1	FR50PT270J	Flame Proof, 27 Ω , $\frac{1}{4}W$, $\pm 5\%$
R711	1	1	KA25ST104J	Carbon, 100K Ω
△ R713	1	1	FR25PT1R0J	Flame Proof, 1 Ω , $\frac{1}{4}W$, $\pm 5\%$
△ R714	1	1	FR25PT1R0J	Flame Proof, 1 Ω , $\frac{1}{4}W$, $\pm 5\%$
PS-576 SEMICONDUCTORS				
D601	1	1	ZD50-295	Zener, $\frac{1}{2}W$, 29.5V
D602	1	1	ZD50-295	Zener, $\frac{1}{2}W$, 29.5V
D603	1	1	1S1588	Diode
D604	1	1	1S1588	Diode
D709	1	1	ZD50-245	Zener, $\frac{1}{2}W$, 24.5V
△ D710	1	1	1B4B42	Diode
D711	1	1	1SR35-100A	Diode
D712	1	1	ZD50-157	Zener, $\frac{1}{2}W$, 15.7V
Q601	1	1	2SA979-F,G	Transistor
Q602	1	1	2SA979-F,G	Transistor
Q603	1	1	2SC2229-O	Transistor
I	4	4	2SC2229-O	Transistor
Q606	1	1	2SA970-GR	Transistor
Q607	1	1	2SA970-GR	Transistor
Q608	1	1	2SC2240-GR	Transistor
Q627	1	1	2SC2240-GR	Transistor
Q628	1	1	2SA970-GR	Transistor
Q629	1	1	2SA970-GR	Transistor
Q702	1	1	2SA1283-D	Transistor
Q703	1	1	2SK381-E	Transistor
IC601	1	1	TA7317P	IC
IC701	1	1	NJM78M15	IC
PS-576 MISCELLANEOUS				
J603	1	1	RP-001	Terminal Pin
I	4	4	RP-001	Terminal Pin
J606	1	1	RP-001	Terminal Pin
J611	1	1	RP-001	Terminal Pin
J614	1	1	RP-001	Terminal Pin
J615	1	1	RP-001	Terminal Pin
J620	1	1	RP-001	Terminal Pin
EL601	1	1	59BS1692	GND Lug
JP601	1	1	HBRB5S-1J	Connector
JP602	1	1	HBRB5S-1J	Connector
JP640	1	1	171825-3	Micro Plug
RCC-572 REMOTE CONTROL CONNECTOR CIRCUIT BOARD				
—	1	1	RCC-572	P.C.Board, Remote Control Connector
RCC-572 CAPACITORS				
C851	1	1	LL50T1R0M	Low Leak. Elect, 1 μ F, 50V
C852	1	1	LL50T1R0M	Low Leak. Elect, 1 μ F, 50V
C853	1	1	NS16TW100M	Elect, 10 μ F, 16V
C854	1	1	NS16TW100M	Elect, 10 μ F, 16V
C855	1	1	NS10TW101M	Elect, 100 μ F, 10V

Ref. No.	Q'ty		Part No.	Description
	8	9		
				RCC-572 RESISTORS (All Carbon Resistors are ±5% and ¼W)
R851	1	1	KA25ST103J	Carbon, 10KΩ
R852	14	14	KA25ST104J	Carbon, 100KΩ
R865				
R866	5	5	KA25ST103J	Carbon, 10KΩ
R870				
R871	1	1	KA25ST221J	Carbon, 220Ω
R872	1	1	KA25ST561J	Carbon, 560Ω
R873				
R877	5	5	KA25ST103J	Carbon, 10KΩ
R878	1	1	KA25ST471J	Carbon, 470Ω
R879	1	1	KA25ST223J	Carbon, 22KΩ
R880	1	1	KA25ST103J	Carbon, 10KΩ
R881	1	1	KA25ST271J	Carbon, 270Ω
				RCC-572 SEMICONDUCTORS
D864	3	3	1S1588	Diode
D866				
Q851	21	21	2SC1740-R	Transistor
Q871				
IC851	1	1	BA6137	IC
				RCC-572 MISCELLANEOUS
J210	1	1	HBRB7S-1J	Connector
J220	2	2	HBRB7S-1J	Connector
JP510	1	1	W-D0610	Connector
JP610	1	1	MC02-362	Micro Socket Ass'y
JP810	1	1	W-D0606	Connector, (6 hole)
JP815	1	1	W-D0612	Connector, (12 hole)
JP820	1	1	171825-4	Micro Plug
JP825	1	1	W-D0605	Connector, (5 hole)
JP830	1	1	W-D0616	Connector, (16 hole)
JP835	1	1	W-D0616	Connector, (16 hole)
JP840	1	1	W-D0607	Connector, (7 hole)
JP845	1	1	W-D0609	Connector, (9 hole)
JP850	1	1	W-D0607	Connector, (7 hole)
JP855	1	1	W-D0605	Connector, (5 hole)
JP860	1	1	W-D0605	Connector, (5 hole)
				RCM-573 REMOTE CONTROL CIRCUIT BOARD
—	1	1	RCM-573	P.C.Board, Remote Control
				RCM-573 CAPACITORS
C812	1	1	MY50VS102J	Film, 1000pF, ±5%
C813	1	1	MY50VS103J	Film, 0.01μF, ±5%
C814	1	1	MS16TW220M	Elect, 22μF, 16V
				RCM-573 RESISTORS (All Carbon Resistors are ±5% and ¼W)
R824	1	1	KA25ST393J	Carbon, 39KΩ
R825				
R833	9	9	KA25ST103J	Carbon, 10KΩ

Ref. No.	Q'ty		Part No.	Description
	8	9		
				RCM-573 SEMICONDUCTORS
Q806	1	1	2SC2021-R	Transistor
Q807	1	1	2SC2021-R	Transistor
Q808	1	1	2SA937-R,S	Transistor
Q809	1	1	2SC2021-R	Transistor
Q810	1	1	2SC2021-R	Transistor
IC802	1	1	TC9150P	IC
				RCM-573 MISCELLANEOUS
JP801	1	1	IMSA10685L	Mini Terminal Plate
JP802	1	1	IMSA10684L	Mini Terminal Plate
				RET-573 REMOTE/TIMER CONTROL CIRCUIT BOARD
—	1	1	RET-573	P.C.Board, Remote/Timer Control
				RET-573 CAPACITORS
C801	1	1	S716TW220M	Elect, 22μF, 16V
C802	1	1	HESJYB471K	Ceramic, 470pF, ±10%
C803	1	1	CQV1H563JZ	Film, 0.056μF, ±5%
C804	1	1	S716TW220M	Elect, 22μF, 16V
C805	1	1	MY50VS102J	Film, 1000pF, ±5%
C806	1	1	MY50VU222J	Film, 2200pF, ±5%
C807	1	1	MY50VU222J	Film, 2200pF, ±5%
C808	1	1	S750TW1R0M	Elect, 1μF, 50V
C809	1	1	MY50VS102J	Film, 1000pF, ±5%
C810	1	1	MY50VU153J	Film, 0.015μF, ±5%
C811	1	1	MY50VU472J	Film, 4700pF, ±5%
				RET-573 RESISTORS
R248	1	1	KA25ST221J	Carbon, 220Ω, ¼W, ±5%
R249	1	1	KA25ST150J	Carbon, 15Ω, ¼W, ±5%
R801	1	1	KA20ST102J	Carbon, 1KΩ, ⅓W, ±5%
R802				
I	3	3	KA20ST104J	Carbon, 100KΩ, ⅓W, ±5%
R804				
R805	1	1	KA20ST101J	Carbon, 100Ω, ⅓W, ±5%
R806	1	1	KA20ST103J	Carbon, 10KΩ, ⅓W, ±5%
R807	1	1	KA20ST152J	Carbon, 1.5KΩ, ⅓W, ±5%
R808	1	1	KA20ST223J	Carbon, 22KΩ, ⅓W, ±5%
R809	1	1	KA20ST151J	Carbon, 150Ω, ⅓W, ±5%
R810	1	1	KA20ST183J	Carbon, 18KΩ, ⅓W, ±5%
R811	1	1	KA25ST823J	Carbon, 82KΩ, ¼W, ±5%
R812	1	1	KA25ST331J	Carbon, 330Ω, ¼W, ±5%
R813	1	1	KA20ST151J	Carbon, 150Ω, ⅓W, ±5%
R814	1	1	KA20ST682J	Carbon, 6.8KΩ, ⅓W, ±5%
R815	1	1	KA20ST682J	Carbon, 6.8KΩ, ⅓W, ±5%
R816	1	1	KA20ST822J	Carbon, 8.2KΩ, ⅓W, ±5%
R817	1	1	KA20ST822J	Carbon, 8.2KΩ, ⅓W, ±5%
R818	1	1	KA20ST122J	Carbon, 1.2KΩ, ⅓W, ±5%
R819	1	1	KA20ST103J	Carbon, 10KΩ, ⅓W, ±5%
R820	1	1	KA20ST562J	Carbon, 5.6KΩ, ⅓W, ±5%
R821	1	1	KA20ST104J	Carbon, 100KΩ, ⅓W, ±5%
R822	1	1	KA20ST103J	Carbon, 10KΩ, ⅓W, ±5%
R823	1	1	KA20ST331J	Carbon, 330Ω, ⅓W, ±5%

Ref. No.	Q'ty		Part No.	Description
	8	9		
D801 D802	1 1	1 1	HP-5FR2 1S1588	RET-573 SEMICONDUCTORS Photo Diode Diode
Q801 Q802 Q803 Q804 Q805	1 1 1 1 1	1 1 1 1 1	2SC2021-R 2SA937-R,S 2SA937-R,S 2SC2021-R 2SC2021-R	Transistor Transistor Transistor Transistor Transistor
IC801	1	1	NJM4559D	IC
LD201 LD202 I LD209	1 1 8 8	1 1 8 8	SLP151B-08 TLY205	LED LED
LD801	1	1	SLP151B-08	LED
T801	1	1	143014	RET-573 MISCELLANEOUS Filter Coil
SW202 SW203 I SW215	1 1 13 13	1 1 13 13	SW-5263155 KHH15910	Slide Switch Touch Switch
—	1	1	SBL-573	SBL-573 STANDBY LED CIRCUIT BOARD P.C.Board, Standby LED
LD923	1	1	SLP151B-08	LED
JP630	1	1	MC02-360	Micro Socket Ass'y
—	1	1	SID-573	SID-573 SIGNAL LED CIRCUIT BOARD P.C.Board, Signal LED
LD916 I LD920 LD921 LD922	1 1 1/5 1/5 1	1 1 1/5 1/5 1	SLP172B SLP272B SLP151B-08	LED LED LED
—	1	1	SP-576	SP-576 SPEAKER TERMINAL CIRCUIT BOARD P.C.Board, Speaker Terminal
C625 C626	1 1	1 1	MY100V473K MY100V473K	SP-576 CAPACITORS Film, 0.047 μ F, $\pm$ 10% Film, 0.047 μ F, $\pm$ 10%
R669 I R672	4 4	4 4	SA-2WP100J	SP-576 RESISTORS Metal Oxide, 10 Ω , 2W, $\pm$ 5%
D615 D616	1 1	1 1	1SR35-100A 1SR35-100A	SP-576 SEMICONDUCTORS Diode Diode

Ref. No.	Q'ty		Part No.	Description
	8	9		
L601 L602	1 1	1 1	104001 104001	SP-576 MISCELLANEOUS Air-Core Coil Air-Core Coil
RY601 RY602	1 1	1 1	VB24MBU-UL VB24MBU-UL	Relay Relay
SP601	1	1	YKD31-0061	Socket 8P (S.P.)
—	1	1	SPS-576	SPS-576 SPEAKER SWITCH CIRCUIT BOARD P.C.Board, Speaker Switch
R687 R688	1 1	1 1	SA2WT471J SA2WT471J	SPS-576 RESISTORS Metal Oxide, 470 Ω , 2W, $\pm$ 5% Metal Oxide, 470 Ω , 2W, $\pm$ 5%
J610	1	1	171826-2	SPS-576 MISCELLANEOUS Micro Plug
HP601	1	1	YKB215010S	H.P.Jack
SW601 <u>SW602</u>	1 1	1 1	SW-1200151 KHH15952	Push Switch Touch Switch
—	1	1	TIM-540B	TIM-540B TUNER CIRCUIT BOARD P.C.Board, Tuner
C001 I C003 C004 C005 I C007 C008 C009 C010	3 3 1 1 3 3 1 1 1 1	3 3 1 1 3 3 1 1 1 1	EP125Y223N NS50TW1R0M EP125Y223N NS50TW1R0M EP125Y223N NS16TW221M	TIM-540B CAPACITORS Ceramic, 0.022 μ F, $\pm$ 30% Elect., 1 μ F, 50V Ceramic, 0.022 μ F, $\pm$ 30% Elect., 0.1 μ F, 50V Ceramic, 0.022 μ F, $\pm$ 30% Elect., 220 μ F, 16V
C011 I C013 C014 C015 C016 C017 C018 C019 C020	3 3 1 1 1 1 1 1 1 1	3 3 1 1 1 1 1 1 1 1	EP125Y223N NS50TW1R0M U125SL560J NS50TW1R0M NS50TWR47M NS50TWR47M NS10TW101M NS25TW100M NS25TW100M	Ceramic, 0.022 μ F, $\pm$ 30% Elect., 1 μ F, 50V Ceramic, 56pF, $\pm$ 5% Elect., 1 μ F, 50V Elect., 0.47 μ F, 50V Elect., 100 μ F, 10V Elect., 10 μ F, 25V Elect., 10 μ F, 25V
C050 C051 C052 C053 C054 C055 C056 C057	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	NS50TW3R3M NS50TWR47M NS25TW4R7M NS16TW221M MY50VS102M MY50VS473M HESJSL751J HESJSL751J	Elect., 3.3 μ F, 50V Elect., 0.47 μ F, 50V Elect., 4.7 μ F, 25V Elect., 220 μ F, 16V Film, 1000pF, $\pm$ 20% Film, 0.047 μ F, $\pm$ 20% Ceramic, 750pF, $\pm$ 5% Ceramic, 750pF, $\pm$ 5%
C058 I C061 C062	4 4 1 1	4 4 1 1	NS25TW4R7M NS25TW100M	Elect., 4.7 μ F, 25V Elect., 10 μ F, 25V

Ref. No.	Q'ty		Part No.	Description
	8	9		
C100	1	1	LL50T1R0M	Low Leak. Elect., 1 μ F, 50V
C101	1	1	U125SL6R8K	Ceramic, 6.8pF, $\pm$ 10%
C102	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C103	1	1	NS25TW100M	Elect., 10 μ F, 25V
C104	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C106	3	3	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C107	1	1	ST50VS481J	Styrol, 480pF, $\pm$ 5%
C108	1	1	U125SL180J	Ceramic, 18pF, $\pm$ 5%
C109	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C110	1	1	U125SL6R8K	Ceramic, 6.8pF, $\pm$ 10%
C111	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C112	1	1	NS25TW4R7M	Elect., 4.7 μ F, 25V
C113	1	1	NS25TW4R7M	Elect., 4.7 μ F, 25V
C114	1	—	MY50VS223M	Film, 0.022 μ F, $\pm$ 20%
C115	1	1	NS50TWR47M	Elect., 0.47 μ F, 50V
C116	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C117	1	1	T125X103N	Ceramic, 0.01 μ F, $\pm$ 30%
C118	1	1	NS16TW101M	Elect., 100 μ F, 16V
C119	1	—	MY50VS104M	Film, 0.1 μ F, $\pm$ 20%
C120	1	1	NS10TW101M	Elect., 100 μ F, 10V
C121	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C122	1	1	NS25TW470M	Elect., 47 μ F, 25V
C123	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C125	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C126	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C127	1	1	U125SL330J	Ceramic, 33pF, $\pm$ 5%
C128	1	1	NS50TW1R0M	Elect., 1 μ F, 50V
C129	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C151	1	1	MS16TW221M	Elect., 220 μ F, 16V
C155	1	1	NS50TW1R0M	Elect., 1 μ F, 50V
C156	1	1	NS50TW1R0M	Elect., 1 μ F, 50V
C157	1	1	NS10TW101M	Elect., 100 μ F, 10V
C158	1	1	T125X103N	Ceramic, 0.01 μ F, $\pm$ 30%
C159	1	1	T125X103N	Ceramic, 0.01 μ F, $\pm$ 30%
C160	1	1	NS25TW4R7M	Elect., 4.7 μ F, 25V
C161	1	1	NS25TW4R7M	Elect., 4.7 μ F, 25V
TC101	1	1	CTY212D64	Trimmer, 10pF x 2
TC102	1	1	CTY122D362	Trimmer, 10pF
TIM-540B RESISTORS (All Carbon Resistors are $\pm$ 5% and $\frac{1}{4}$ W)				
R001	4	4	KA25ST331J	Carbon, 330 Ω
R004	1	1	KA25ST101J	Carbon, 100 Ω
R005	1	1	KA25ST104J	Carbon, 100K Ω
R006	1	1	KA25ST333J	Carbon, 33K Ω
R007	1	1	KA25ST273J	Carbon, 27K Ω
R008	1	1	KA25ST100J	Carbon, 10 Ω
R009	1	1	KA25ST472J	Carbon, 4.7K Ω
R010	1	1	KA25ST153J	Carbon, 15K Ω
R011	1	1	KA25ST822J	Carbon, 8.2K Ω
R012	1	1	KA25ST391J	Carbon, 390 Ω
R013	1	1	KA25ST225J	Carbon, 2.2M Ω
R014	1	1	KA25ST222J	Carbon, 2.2K Ω
R015	1	1	KA25ST331J	Carbon, 330 Ω
R016	1	1	KA25ST102J	Carbon, 1K Ω
R017	1	1	KA25ST103J	Carbon, 10K Ω
R018	1	1	KA25ST103J	Carbon, 10K Ω
R019	1	1	KA25ST683J	Carbon, 68K Ω

Ref. No.	Q'ty		Part No.	Description
	8	9		
R021	1	1	KA25ST104J	Carbon, 100K Ω
R022	1	1	KA25ST103J	Carbon, 10K Ω
R023	1	1	KA25ST473J	Carbon, 47K Ω
R024	1	1	KA25ST473J	Carbon, 47K Ω
R025	1	1	KA25ST222J	Carbon, 2.2K Ω
R026	1	1	KA25ST472J	Carbon, 4.7K Ω
R027	1	1	KA25ST223J	Carbon, 22K Ω
R050	1	1	KA25ST102J	Carbon, 1K Ω
R051	1	1	KA25ST332J	Carbon, 3.3K Ω
R052	1	1	KA25ST114J	Carbon, 110K Ω
R053	1	1	KA25ST114J	Carbon, 110K Ω
R054	1	1	KA25ST222J	Carbon, 2.2K Ω
R055	1	1	KA25ST222J	Carbon, 2.2K Ω
R056	1	1	KA25ST103J	Carbon, 10K Ω
R057	1	1	KA25ST103J	Carbon, 10K Ω
R100	1	1	KA25ST151J	Carbon, 150 Ω
R101	1	1	KA25ST184J	Carbon, 180K Ω
R102	1	1	KA25ST104J	Carbon, 100K Ω
R103	1	1	KA25SP101J	Carbon, 100 Ω
R104	1	1	KA25ST750J	Carbon, 75 Ω
R105	1	1	KA25ST184J	Carbon, 180K Ω
R106	1	1	KA25ST104J	Carbon, 100K Ω
R107	1	1	KA25ST302J	Carbon, 3K Ω
R108	1	1	KA25ST432J	Carbon, 4.3K Ω
R109	1	1	KA25ST102J	Carbon, 1K Ω
R110	1	1	KA25ST101J	Carbon, 100 Ω
R110	1	1	KA25ST103J	Carbon, 10K Ω
R111	1	1	KA25ST104J	Carbon, 100K Ω
R112	1	1	KA25ST103J	Carbon, 10K Ω
R113	1	1	KA25ST103J	Carbon, 10K Ω
R114	1	—	KA25ST272J	Carbon, 2.7K Ω
R115	1	1	KA25ST820J	Carbon, 82K Ω
R116	1	1	KA25ST101J	Carbon, 100 Ω
R117	1	1	KA25ST103J	Carbon, 10K Ω
R118	1	1	KA25SP680J	Carbon, 68 Ω
R119	1	1	KA25ST100J	Carbon, 10 Ω
R120	1	1	KA25ST102J	Carbon, 1K Ω
R151	1	1	KA25ST104J	Carbon, 100K Ω
R152	1	1	KA25ST103J	Carbon, 1K Ω
R153	1	1	KA25ST104J	Carbon, 10K Ω
R154	1	1	KA25ST103J	Carbon, 1K Ω
R155	1	1	KA25ST104J	Carbon, 10K Ω
R156	1	1	KA25ST103J	Carbon, 1K Ω
R157	1	1	KA25ST104J	Carbon, 10K Ω
R158	1	1	KA25ST103J	Carbon, 1K Ω
R161	8	8	KA25ST104J	Carbon, 100K Ω
R168	1	1	KA25ST222J	Carbon, 2.2K Ω
R169	1	1	KA25ST222J	Carbon, 2.2K Ω
R170	1	1	KA25ST222J	Carbon, 2.2K Ω
R171	1	1	KA25ST104J	Carbon, 100K Ω
R172	1	1	KA25ST222J	Carbon, 2.2K Ω
R173	1	1	KA25ST222J	Carbon, 2.2K Ω
R174	1	1	KA25ST104J	Carbon, 100K Ω
△ RF151	1	1	RF25SX150J	Fusible, 15 Ω , $\frac{1}{4}$ W, $\pm$ 5%
SVR001	1	1	SVR-08T203	Semi-Variable, 20K Ω (B)
SVR050	1	1	SVR10T503C	Semi-Variable, 50K Ω (B)

Ref. No.	Q'ty		Part No.	Description
	8	9		
				TIM-540B SEMICONDUCTORS
D001	1	1	1S1588	Diode
D050				
I	3	3	1S1588	Diode
D052				
D100	1	1	20A99A	Diode
D101	1	1	1S1588	Diode
D103	1	1	1S1588	Diode
D104	1	1	1S1588	Diode
Q001	1	1	2SK381-D	Transistor
Q002				
I	4	4	2SC1740-R	Transistor
Q005				
Q100	1	1	2SK161-GR	Transistor
Q101	1	1	2SC2668-O	Transistor
Q103	1	1	2SC2668-O	Transistor
Q104	1	1	2SC1740-R	Transistor
Q152	1	1	2SA1282A-E	Transistor
Q153	1	1	2SC1740-R	Transistor
Q154	1	1	2SA1282A-E	Transistor
Q155	1	1	2SC1740-R	Transistor
IC001	1	1	LA1222	IC
IC002	1	1	LA1235	IC
IC050	1	1	LA3410	IC
IC100	1	1	LA1135	IC
IC150	1	1	M4066B	IC
VD100				
I	3	3	1SV102-YK	Varicap
VD102				
				TIM-540B MISCELLANEOUS
F001	1	1	SFE10.7MMA	Ceramic Filter
F002	1	1	SFE10.7MLA	Ceramic Filter
F003	1	1	SFE10.7MLA	Ceramic Filter
F050	1	1	KBR-457HS	Ceramic Filter
F100	1	1	BFU450K	Ceramic Filter
F101	1	1	SFU450B3	Ceramic Filter
L001	1	1	LAL03100K	Inductor, 10 μ H
L102	1	1	LAL03102K	Inductor, 1mH
T001	1	1	141026	FM Det Coil
T002	1	1	143012	Filter Coil
T050	1	1	184018	Filter Block
T051	1	1	184018	Filter Block
T101	1	1	126042	MW Ant. Coil
T102	1	1	126041	MW RF Coil
T103	1	1	135020	MW OSC Coil
T104	1	1	140048	AM IFT
T106	1	1	140053	MW IFT
AT001	1	1	YKD31-0084	Ant. Terminal
FD001	1	1	FD292E16	FM Front-end
JT100	1	—	B5P-SHF-1	Min Terminal Plate
JT101	1	—	B5P-SHF-1	Min Terminal Plate
J001	1/3	1/3	MC04-364	Micro Socket Ass'y
J100	1/3	1/3	MC04-364	Micro Socket Ass'y
J101	1/3	1/3	MC04-364	Micro Socket Ass'y
J102	1	1	MC02-359	Micro Socket Ass'y

Ref. No.	Q'ty		Part No.	Description
	8	9		
JP150	1	1	W-D0612	Connector (12 hole)
JP160	1	1	W-D0612	Connector (12 hole)
TP1	1/2	1/2	WE-2	Terminal Pin
TP2	1/2	1/2	WE-2	Terminal Pin
TP3				
I	5	5	RP-001	Terminal Pin
TP7				
EL001	1	1	59BS1692	GND Lug
—	1	1	TIP-571A	TIP-571A TIMER/PLL CIRCUIT BOARD P.C.Board, Timer/PLL
				TIP-571A CAPACITORS
C201	1	1	NS50TWR47M	Elect, 0.47 μ F, 50V
C202	1	1	NS10TW221M	Elect, 220 μ F, 10V
C203	1	1	NS10TW470M	Elect, 47 μ F, 10V
C204	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C205	1	1	NS25TW4R7M	Elect, 4.7 μ F, 25V
C206	1	1	NS50TWR47M	Elect, 0.47 μ F, 50V
C207	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C208	1	1	NS50TWR47M	Elect, 0.47 μ F, 50V
C209	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
C210	1	1	MY50VU103J	Film, 0.01 μ F, $\pm$ 5%
C211	1	1	U125B102K	Ceramic, 1000pF, $\pm$ 10%
C212	1	1	T125X103N	Ceramic, 0.01 μ F, $\pm$ 30%
C213	1	1	U125X103N	Ceramic, 0.01 μ F, $\pm$ 30%
C214	1	1	U125B331K	Ceramic, 330pF, $\pm$ 10%
C215	1	1	U125B331K	Ceramic, 330pF, $\pm$ 10%
C216	1	1	U125SL2R2K	Ceramic, 2.2pF, $\pm$ 10%
C217	1	1	NS25TW470M	Elect, 47 μ F, 25V
C218	1	1	MY50VU153J	Film, 0.015 μ F, $\pm$ 5%
C219	1	1	LL50TR47M	Low Leak, Elect, 0.47 μ F, 50V
C220	1	1	NS10TW101M	Elect, 100 μ F, 10V
C221	1	1	EP125Y223N	Ceramic, 0.022 μ F, $\pm$ 30%
TC216	1	1	CTZ53F113	Trimmer, 30pF
				TIP-571A RESISTORS (All Carbon Resistors are $\pm$5% and 1/4W)
R201	1	1	KA25ST104J	Carbon, 100K Ω
R202	1	1	KA25ST104J	Carbon, 100K Ω
R203	1	1	KA25ST473J	Carbon, 47K Ω
R204	1	1	KA25ST103J	Carbon, 10K Ω
R205	1	1	KA25ST151J	Carbon, 150 Ω
R206	1	1	KA25ST223J	Carbon, 22K Ω
R207	1	1	KA25ST223J	Carbon, 22K Ω
R208	1	1	KA25ST681J	Carbon, 680 Ω
R209	1	1	KA25ST681J	Carbon, 680 Ω
R210	1	1	KA25ST153J	Carbon, 15K Ω
R211	1	1	KA25ST123J	Carbon, 12K Ω
R212	1	1	KA25ST105J	Carbon, 1M Ω
R213	1	1	KA25ST472J	Carbon, 4.7K Ω
R214	1	1	KA25ST103J	Carbon, 10K Ω
R215	1	1	KA25ST331J	Carbon, 330 Ω
R216	1	1	KA25ST272J	Carbon, 2.7K Ω
R217	1	1	KA25ST103J	Carbon, 10K Ω
R218	1	1	KA25ST101J	Carbon, 100 Ω
RA201	1	1	RAIP07104K	Networks Resistor, 100K Ω (x7) $\pm$ 10%
SVR201	1	1	SVR-08S474	Semi-Variable, 470K Ω (B)
SVR202	1	1	SVR-08S474	Semi-Variable, 470K Ω (B)

Ref. No.	Q'ty		Part No.	Description
	8	9		
				TIP-571A SEMICONDUCTORS
D201 D206 D208 D216	6	6	1S1588	Diode
	9	9	1S1588	Diode
Q201	1	1	2SC2668-O	Transistor
Q202	1	1	2SC1740-R	Transistor
Q203	1	1	2SK222-E	Transistor
Q204 Q207	4	4	2SC1740-R	Transistor
IC201	1	1	MN1455LF	IC
IC202	1	1	MN6147	IC
IC203	1	1	DN74LS42	IC
				TIP-571A MISCELLANEOUS
JP210	1	1	W-D0612	Connector, (12 hole)
JP220	1	1	W-D0616	Connector, (16 hole)
JP230	1	1	171825-4	Micro Plug
JP240	1	1	171825-5	Micro Plug
X201	1	1	U4.500MHZ	Quartz Oscillator Unit
SW201	1	1	SW-5222146	Slide Switch
				TON-571A TONE CONTROL CIRCUIT BOARD
—	1	1	TON-571A	P.C.Board, Tone Control
				TON-571A CAPACITORS
C445	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C446	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C447	1	1	MY50VS472J	Film, 4700pF, $\pm$ 5%
C448	1	1	MY50VS472J	Film, 4700pF, $\pm$ 5%
C449	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C450	1	1	LL25T4R7M	Low Leak. Elect, 4.7 μ F, 25V
C451	1	1	CQV1H273JZ	Film, 0.027 μ F, $\pm$ 5%
C452	1	1	CQV1H273JZ	Film, 0.027 μ F, $\pm$ 5%
C453	1	1	CQV1H124JZ	Film, 0.12 μ F, $\pm$ 5%
C454	1	1	CQV1H124JZ	Film, 0.12 μ F, $\pm$ 5%
C455	1	1	CQV1H273JZ	Film, 0.027 μ F, $\pm$ 5%
C456	1	1	CQV1H273JZ	Film, 0.027 μ F, $\pm$ 5%
C499	1	1	HESJYF103Z	Ceramic, 0.01 μ F, +80%~-20%
C721 C723	3	3	HESJYF103Z	Ceramic, 0.01 μ F, +80%~-20%

Ref. No.	Q'ty		Part No.	Description
	8	9		
				TON-571A RESISTORS (All Carbon Resistors are $\pm$ 5% and $\frac{1}{4}$ W)
R465	1	1	KA25ST182J	Carbon, 1.8K Ω
R466	1	1	KA25ST182J	Carbon, 1.8K Ω
R467	1	1	KA25ST103J	Carbon, 10K Ω
R468	1	1	KA25ST103J	Carbon, 10K Ω
R469	1	1	KA25ST100J	Carbon, 10 Ω
R470	1	1	KA25ST100J	Carbon, 10 Ω
R471	1	1	KA25ST104J	Carbon, 100K Ω
R472	1	1	KA25ST104J	Carbon, 100K Ω
R473	1	1	KA25ST183J	Carbon, 18K Ω
R474	1	1	KA25ST183J	Carbon, 18K Ω
R475	1	1	KA25ST681J	Carbon, 680 Ω
R476	1	1	KA25ST681J	Carbon, 680 Ω
R477	1	1	KA25ST222J	Carbon, 2.2K Ω
R478	1	1	KA25ST222J	Carbon, 2.2K Ω
R479	1	1	KA25ST471J	Carbon, 470 Ω
R480	1	1	KA25ST471J	Carbon, 470 Ω
VR401	1	1	VST45-840	Potentiometer, 100K Ω (C)x2
VR402	1	1	VST45-840	Potentiometer, 100K Ω (C)x2
VR403	1	1	VS830-840	Potentiometer, 50K Ω (MN)x2
				TON-571A MISCELLANEOUS
JP430-1	$\frac{1}{2}$	$\frac{1}{2}$	MC06-366	Micro Socket Ass'y
JP640	1	1	MC03-363	Micro Socket Ass'y

9. TECHNICAL SPECIFICATIONS (SR840/SR940)

AMPLIFIER SECTION:

Rated Power Output, Minimum Continuous Watts per Channel	
from 20 Hz to 20 kHz, both Channels driven	
into 8 ohms	100 W/70 W
Total Harmonic Distortion	
at 8 ohms	0.02% / 0.03%
I.M. Distortion	
(IHF method, 60 Hz and 7 kHz mixed 4:1 at rated power output)	
at 8 ohms	0.02%
Damping Factor at 20 Hz	75

PREAMPLIFIER SECTION:

Phono	
Input Overload at 1 kHz	200 mV
Equivalent Input Noise, "A" weighted	0.7 μ V
Input Sensitivity (Input impedance, 47 kohms)	2.5 mV
Frequency Response (RIAA 20 Hz to 20 kHz)	± 0.5 dB
Signal to Noise Ratio "A" weighted	
(at rated output and 10 mV input)	83 dB
High Level Inputs (CD and Tape)	
Input Sensitivity	150 mV
Input Impedance	25 k Ω
Frequency Response	20 Hz — 20 kHz ± 0.25 dB
Signal to Noise Ratio "A" weighted	
(at rated output and 775 mV input)	100 dB
Output Impedance Tape Out	1 k Ω

FM TUNER SECTION:

Sensitivity	
IHF Usable	1.7 μ V (9.84 dBf)
IHF 50 dB Quieting (Mono)	2.5 μ V (13.2 dBf)
(Stereo)	35 μ V (36.1 dBf)
Quieting Slope (Mono)	
RF Input for 30 dB Quieting	1.3 μ V (7.51 dBf)
Quieting at:	
20 dBf (5.5 μ V)	55 dB
25 dBf (10 μ V)	60 dB
40 dBf (55 μ V)	74 dB
65 dBf (1,000 μ V)	85 dB
Quieting Slope (Stereo)	
Quieting at:	
30 dBf (17 μ V)	42 dB
40 dBf (55 μ V)	54 dB
50 dBf (173 μ V)	64 dB
65 dBf (1,000 μ V)	72 dB
Distortion (Mono) at 65 dBf (1,000 μ V)	
100 Hz	0.15%
1,000 Hz	0.1%
6,000 Hz	0.15%
Distortion (Stereo) at 65 dBf (1,000 μ V)	
100 Hz	0.25%
1,000 Hz	0.2%
6,000 Hz	0.25%

Stereo Separation	
100 Hz	43 dB
1,000 Hz	48 dB
10,000 Hz	32 dB
Capture Ratio at 65 dBf (1,000 μ V)	0.9 dB
Frequency Response	
30 Hz to 15 kHz	
Mono	± 0.2 dB
Stereo	-1.0 dB
Alternate Channel Selectivity	65 dB
Spurious Response Rejection	90 dB
Image Response Rejection	80 dB
I.F. Rejection (Balanced)	90 dB
A.M. Suppression	55 dB
Subcarrier Rejection	65 dB

AM TUNER SECTION:

IHF Usable Sensitivity	20 μ V
Signal to Noise Ratio	50 dB
Alternate Channel Selectivity	46 dB
Adjacent Channel Selectivity	30 dB
Image Rejection	50 dB
Spurious Response Rejection	46 dB
I.F. Rejection	46 dB

GENERAL:

Power Requirements	120 V 60 Hz
Power Consumption at rated output, both channels operating	600 W/500 W
Idling Power (Volume Control at zero)	60 W/45 W
Dimensions	
Panel Width	420 mm (16.54")
Panel Height	110 mm (4.33")
Depth	453 mm (17.83")
Weight	
Unit alone	14.4 kg/12.4 kg (31.7 lbs/27.3 lbs)
Packed for Shipment	16.2 kg/14.2 kg (35.7 lbs/31.3 lbs)

Specifications and design are subject to change without notice.



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