

**Clarion Co., Ltd.**

Export Division - 3, Kojimachi 5-chome, Chiyoda-ku, Tokyo, 102 Japan Tel: 03-265-2931

Telex: J22908, J22152, J25550 CLARISHO

Service Dept. - 50 Kamitoda, Toda-shi, Saitama, 335 Japan Tel: 0484-43-1111 Telex: J2962628 CLAFAC-J

Service Manual

Overseas Sales Branch Offices**Clarion Corporation of America**

5500 Rosecrans Ave., Lawndale, Calif., 90260 U.S.A. Tel: 213-973-1100 Telex: CLARIONLSA 66-4447

Clarion Corporation of America (Eastern Division)

100 Thirteenth Avenue, Ronkonkoma, New York 11779 U.S.A. Tel: 516-467-1120 Telex: 64-0787

Clarion Shoji (EUROPA) G.m.b.H.

Rudolf-Diesel-Strasse 2, 6236 Eschborn 2, West Germany Tel: 06173-61036 Telex: 415414

Clarion (HONG KONG) Co., Ltd.

526, Ocean Centre, Canton Road, Tsimshatsui, Kowloon, Hong Kong Tel: 3-690528 Telex: HX64293 CLAHK

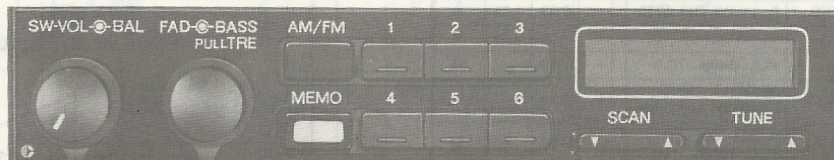
Clarion Canada Inc.

1401 Meyerside Dr. Mississauga, Ontario L5T 1G8, Canada Tel: 416-678-1367 Telex: 216968573 CLARION MSGA

Clarion Shoji (U.K.) Ltd.

4-6, Faraday Road, Dorcan Industrial Estate, Dorcan, Swindon, Wiltshire, SN3.5HQ United Kingdom Tel: (0793) 24081 Telex: 44689

MAZDA Automobile Genuine Electronic Radio Model RT-9034C



TUNER # 880 - 1412 C \$38.80

SPECIFICATIONS:

Tuning system: Electronic tuning
Receive range: AM 531~1,602kHz (C-A)
530~1,620kHz (C-B)
FM 87.5MHz to 107.9MHz
Intermediate frequency: AM 450kHz
FM 10.7MHz
Quieting sensitivity: AM Less than 32dB
(at 20dB S/N)
FM Less than 15dB
(at 30dB S/N)
Selectivity: AM More than 45dB
(at ± 9 kHz detune)
Separation: FM More than 20dB
Auto tuning stop sensitivity: AM DX 29dB to 41dB
FM DX 23dB to 39dB

Load impedance: $4\Omega \times 4$
Power output: 5W $\times 4$ (at 3% distortion)
Power supply voltage: DC 13.2V, Negative ground
Current consumption: Less than 5A
Dimensions: Width 180mm
Height 35mm
Depth 160mm
Weight: 1.0kg

COMPONENT:

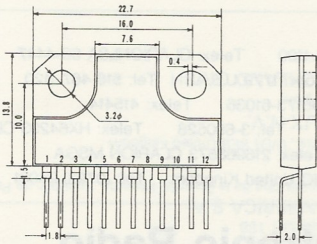
● RT-9034C-A Main unit 1
● RT-9034C-B (Use only SOUTH AMERICA) Main unit 1

EXPLANATION OF IC's:

TA7270P	051-0655-00	
TA7270PCL	051-0655-01	19W BTL/5.8W+5.W
TA7271P	051-0656-00	AF Power Amp.
TA7271PCL	051-0656-01	

TA7270P, TA7271P'S fixing holes are $\phi 3.2\text{mm}$.
TA7270PCL, TA7271PCL'S fixing holes are $\phi 3.6\text{mm}$.

Figure



Absolute Maximum Ratings

Supply Voltage	V_{CC} (opr)	18V
Output Current	I_o peak	4.5A
Power Dissipation	P_D	25W

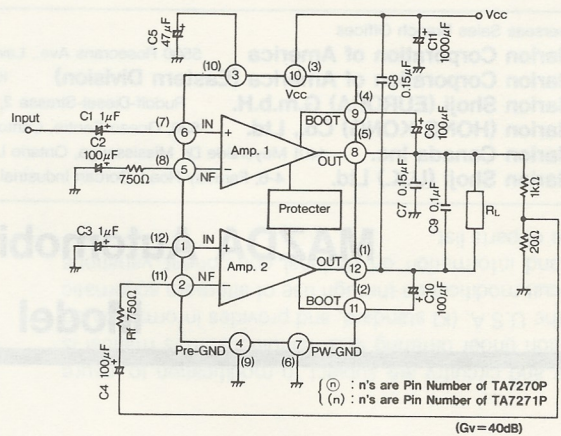
Electrical Characteristics

($V_{CC}=13.2\text{V}$, $R_L=4\Omega$, $R_g=600\Omega$, $f=1\text{kHz}$, $T_a=25^\circ\text{C}$)

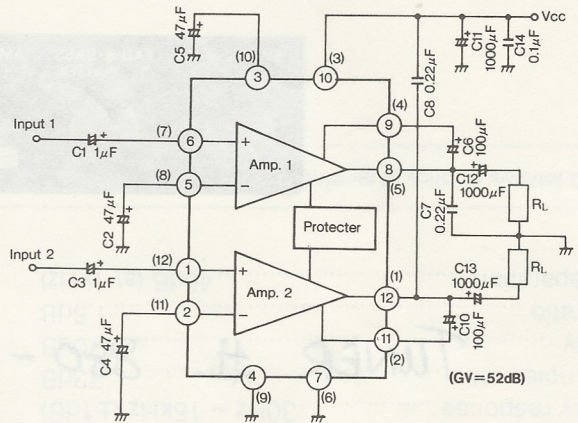
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
No Signal Supply Current	I_{CCQ}	$V_{IN}=0$	—	80	145	mA
BTL	Output Power	$P_{OUT(1)}$ THD=10%	16	19	—	W
		$P_{OUT(2)}$ THD=1%	12	15	—	W
	Tortal Harmonic Distortion	THD ₍₁₎ $P_{OUT}=4\text{W}$, $G_V=40\text{dB}$	—	0.03	0.25	%
	Output Offset Voltage	V_{OFF} $V_{IN}=0$	—	0	0.35	V
	Voltage Gain	$G_{V(1)}$ $V_{OUT}=0\text{dBm}$	—	40	—	dB
	Noise Output Voltage	$V_{NOC(1)}$ $R_g=0$ DIN45405 noise filter	—	0.14	—	mV _{rms}
DUAL	Ripple Reduction Ratio	$R \cdot R_{(1)}$ $f_{ripple}=100\text{Hz}$ $V_{ripple}=0\text{dBm}$	—	-52	-40	dB
	Output Power	$P_{OUT(3)}$ THD=10%	5	5.8	—	W
	Tortal Harmonic Distortion	THD ₍₂₎ $P_{OUT}=1\text{W}$	—	0.06	0.30	%
	Voltage Gain	$G_{V(2)}$ $V_{OUT}=0\text{dBm}$	50	52	54	dB
	Noise Output Voltage	$V_{NOC(2)}$ $R_g=10\text{k}\Omega$ $BW=20\text{Hz} \sim 20\text{kHz}$	—	0.7	1.5	mV _{rms}
	Ripple Reduction Ratio	$R \cdot R_{(2)}$ $f_{ripple}=100\text{Hz}$ $V_{ripple}=0\text{dBm}$	—	-52	-40	dB
	Cross Talk	$C \cdot T$ $V_{OUT}=0\text{dBm}$	—	-57	—	dB
	Input Impedance	R_{IN} $f=1\text{kHz}$	—	33	—	k Ω

Block Diagram

(1) BTL



(2) DUAL



PARTS LIST:

Electrical section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
101,102,103,104 D501,502,508 511,512,513,514 515,516,507,508	001-0330-00	Diode (1SS119)	20
D510,602,604,605	001-0360-00	Diode (S5566B)	4
D105	001-0365-00	Diode (ZNR)	1
D501,606,610,611	001-0377-47	Diode (MA4091)	4
D609	001-0377-49	Diode (MA4100L)	1
D603	001-0379-00	Diode (S5566G)	1
D509	001-0423-19	Diode (MA4056)	1
D601	001-0429-00	Diode (S3V10)	1
CHOKE _{602,701}	009-0470-02	Choke	2
CHOKE ₆₀₁	009-0633-00	Choke	1
L101	010-1960-32	Coil	1
L201	010-2053-00	Coil	1
RY ₆₀₁	014-0509-00	Relay	1
PL ₁₀₁	017-0321-01	Pilot lamp	1
CCT ₅₀₁	050-0093-03	Component circuit (33k Ω x6)	1
IC ₁	051-0633-00	IC (NC/MPX)	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
IC ₄	051-0655-01	IC (TA7270P)	1
IC ₃	051-0656-01	IC (TA7271P)	1
IC ₅	051-0713-00	IC (μ PD1708G)	1
IC ₂	051-0743-00	IC (Bass/Treble)	1
X ₅₀₁	061-1037-00	Crystal (4.5MHz)	1
Q _{102,503}	100-1048-50	Transistor (2SA1048)	2
Q _{604,605}	102-1846-00	Transistor (2SC1846)	2
Q _{501,502,503,504,505 506,508,606}	102-2458-25	Transistor (2SC2458Y)	11
Q _{602,603}	102-3402-00	Transistor (2SC3402AC)	2
Q ₆₀₁	103-1225-18	Transistor (2SD1225M)	1
Q _{301,401}	103-1450-50	Transistor (2SD1450ST)	2
Q ₅₀₇	125-0003-02	Transistor (RN2202)	1
R ₇₀₁	111-1201-81	Film resistor ($\frac{1}{2}$ W12 Ω)	1
R ₆₀₃	111-4711-82	Film resistor ($\frac{1}{2}$ W470 Ω)	1
C _{308,407}	160-5612-05	Ceramic capacitor (560pF B) HD	2
C ₁₀₇	160-6822-05	Ceramic capacitor (6800pF B) HD	1
C _{204,207,502,507}	171-1033-06	Ceramic capacitor (0.01 μ F SR) SC	4

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY	REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
C _{512,513}	171-2233-06	Ceramic capacitor (0.022 μ F SR) SC	2	C ₅₁₀	179-1073-22	Electrolytic capacitor (10V100 μ F) S	1
C ₁₀₄	171-3323-06	Ceramic capacitor (3300pF SR) SC	1	C _{119,603}	179-1073-32	Electrolytic capacitor (16V100 μ F) S	2
C _{111,112}	171-3333-06	Ceramic capacitor (0.033 μ F SR) SC	2	C _{113,114,115,116,302,402}	179-2253-62	Electrolytic capacitor (50V2.2 μ F) S	6
C ₂₀₅	171-4733-06	Ceramic capacitor (0.047 μ F SR) SC	1	C ₁₀₅	179-2273-22	Electrolytic capacitor (10V220 μ F) S	1
C _{503,509}	173-1032-10	Polyester capacitor (0.01 μ F) S	2	C ₅₀₁	179-3363-22	Electrolytic capacitor (10V33 μ F) S	1
C _{317,415,418,601,602,604}	173-1042-10	Polyester capacitor (0.1 μ F) S	6	C ₅₁₁	179-3363-32	Electrolytic capacitor (16V33 μ F) S	1
C _{206,316,318,414,416}	173-1542-10	Polyester capacitor (0.15 μ F) S	5	C ₃₀₃	179-3373-33	Electrolytic capacitor (16V330 μ F) S	1
C ₁₀₃	173-6811-10	Polyester capacitor (680pF) S	1	C _{102,202}	179-4763-22	Electrolytic capacitor (10V47 μ F) S	2
C ₁₀₁	174-1800-13	Ceramic capacitor (18pF CH) TC	1	C ₇₀₁	179-4763-32	Electrolytic capacitor (16V47 μ F) S	1
C _{201,505,506}	174-2200-13	Ceramic capacitor (22pF CH) TC	3	C ₆₀₅	179-4773-33	Electrolytic capacitor (16V470 μ F) S	1
C _{307,406}	042-0334-00	Electrolytic capacitor (63V0.1 μ F)	2	C ₁₁₀	182-1056-62	Electrolytic capacitor (50V1 μ F NP) SS	1
C _{309,408}	042-0334-08	Electrolytic capacitor (63V2.2 μ F)	2	C ₁₀₆	182-1066-22	Electrolytic capacitor (10V10 μ F NP) SS	1
C ₆₀₈	042-0334-22	Electrolytic capacitor (16V10 μ F)	1	C _{606,607}	182-1073-22	Electrolytic capacitor (10V100 μ F) SS	2
C _{312,417}	042-0338-00	Electrolytic capacitor (16V2200 μ F)	2	C _{306,405}	182-2243-62	Electrolytic capacitor (50V0.22 μ F) SS	2
C _{310,311,313,314,315,409,410,411,412,413}	042-0342-00	Electrolytic capacitor (10V100 μ F)	10	C ₁₀₈	182-2246-62	Electrolytic capacitor (50V0.22 μ F NP) SS	1
C _{109,304,403,508}	179-1053-62	Electrolytic capacitor (50V1 μ F) S	4	C ₅₀₄	182-2256-52	Electrolytic capacitor (35V2.2 μ F NP) SS	1
C _{117,118,301,401,609}	179-1063-32	Electrolytic capacitor (16V10 μ F) S	5	C _{305,404}	182-3343-62	Electrolytic capacitor (50V0.33 μ F) SS	2

Note : OM (Oxidized Metal)
S (Small)
HD (Higher Dielectric)
SC (Semi-Conductor)
SS (Super Small)
TC (Temperature-Compensating)
LL (Low Leak)
USS (Ultra Super Small)

● How to read resistor

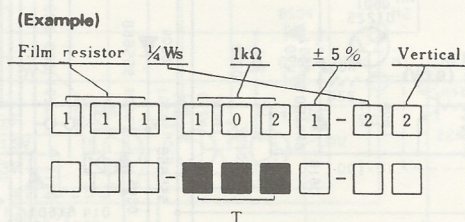
Resistors are deleted from the table of electric components, (except metal film resistors and special resistors). They can be converted to product Nos. as follows.

Film resistor (Carbon film resistor)

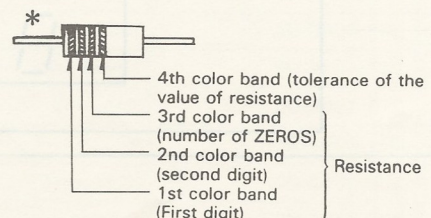
Classification	Resistance*	Tolerance of the value of resistance	Rated power	Shape
1 1 1		0	0	0
	Example	1	± 5 %	1
	33 Ω =330	2		2
	33k Ω =333	3		3
		4		4
			7	
			8	
			9	

Example of conversion of resistance		Note) R : Resistance, T : Converted value	
R	T	R	T
0.1	108	1.0	109
0.15	158	1.5	159
1.0	100	10	101
1.5	150	15	151
1.0	102	10	103
1.5	152	15	153
1.0	104	10	105
1.5	154	15	155
1.0	106	10	107
1.5	156	15	157

COLOR	BLK	BRN	RED	ORG	YEL	GRN	BLU	PUR	GRY	WHT	GOLD	SILVER	NO COLOR
1st color band	0	1	2	3	4	5	6	7	8	9			
2nd color band	0	1	2	3	4	5	6	7	8	9			
3rd color band	10 ⁰	10 ¹	10 ²	10 ³	10 ⁴	10 ⁵	10 ⁶				10 ⁻¹	10 ⁻²	
4th color band											± 5 % (J)	± 10% (K)	± 20% (M)

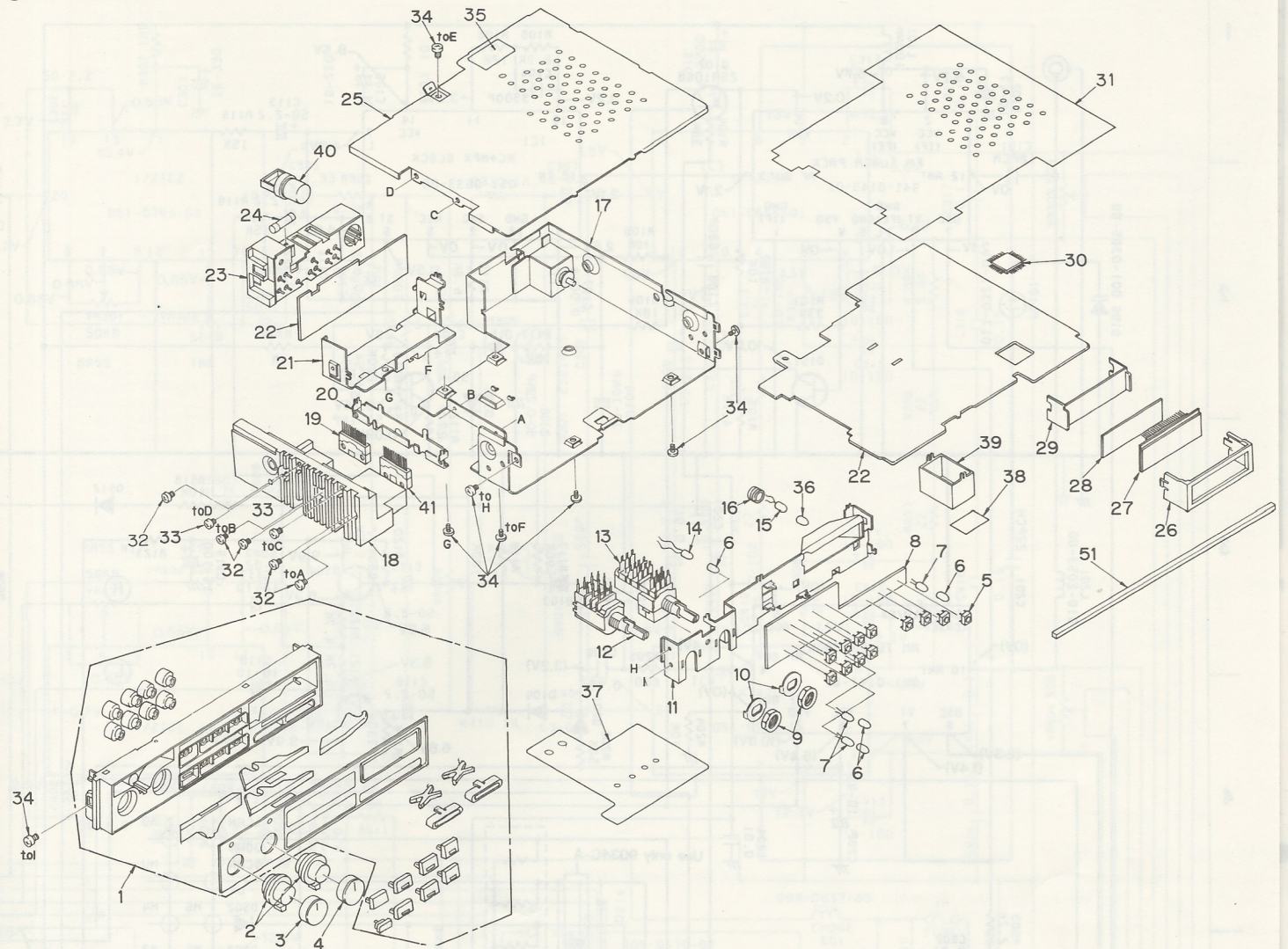


Note 1. The first two of three digits representing resistance are effective digits and the last one represents number of "0" following this.
Unit is given in ohm (Ω).



EXPLODED VIEW • PARTS LIST:

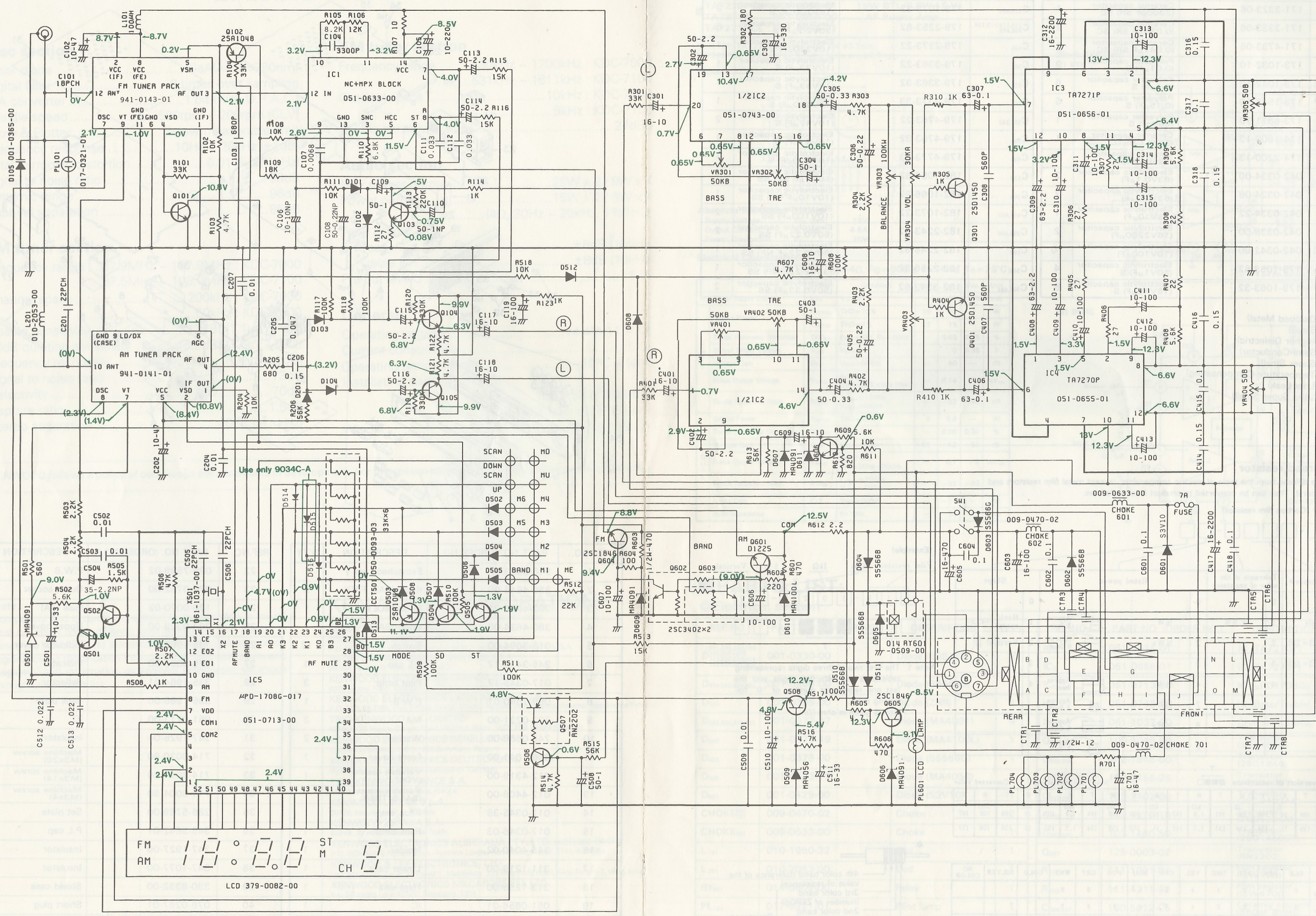
©Main section



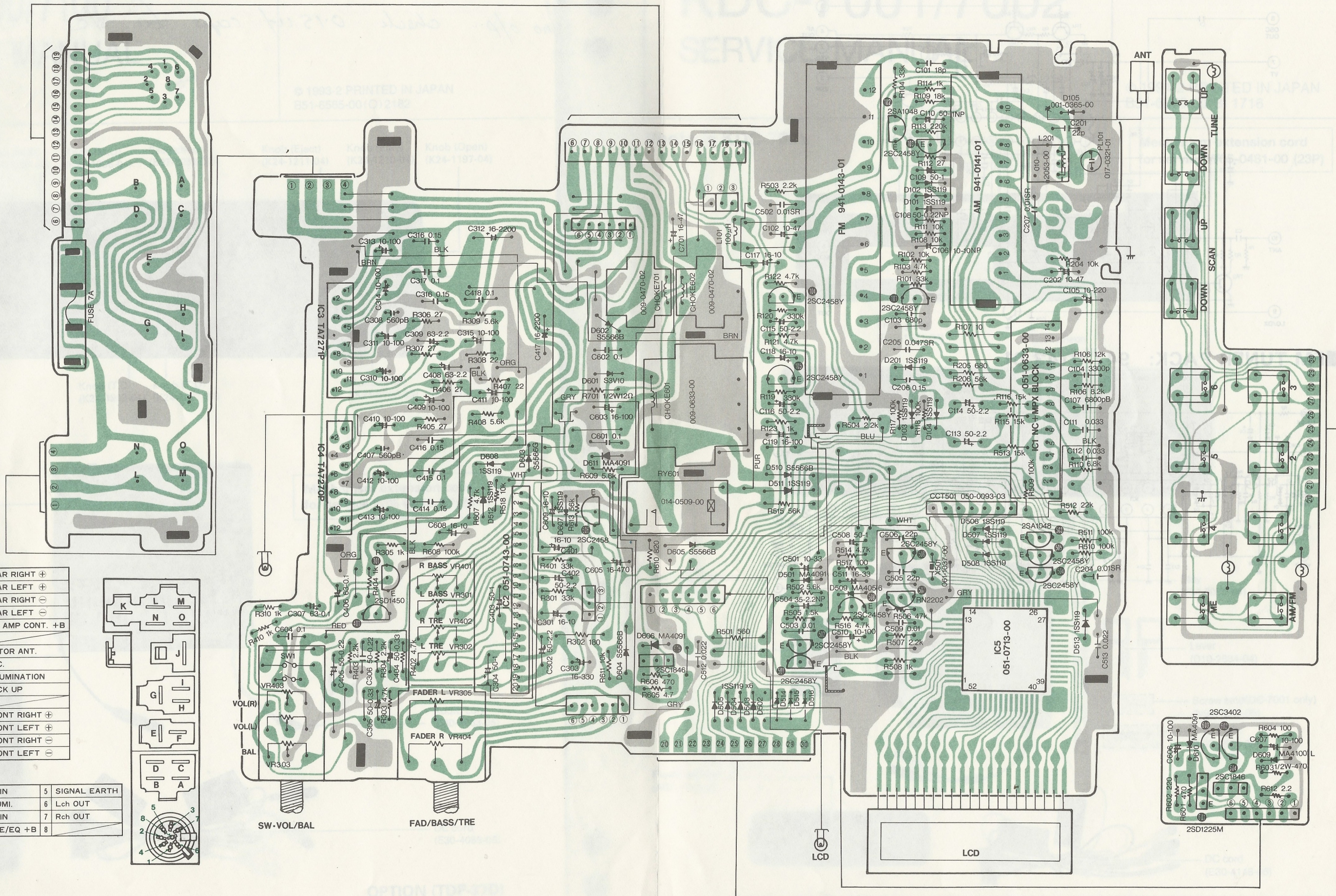
REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	940-0593A	Escutcheon ass'y	1
2	380-4646-00	Knob (BAL, FAD)	2
3	380-4635-01	Knob (VOL)	1
4	380-4634-00	Knob (BASS)	1
5	013-3694-00	Switch	12
6	345-3436-17	P.L cap	4
7	017-0345-17	Pilot lamp	3
8	099-7540-01	P.W.B	1
9	722-0231-00	Nut	2
10	745-0668-00	Washer	2
11	308-1041-00	Front cover	1
12	012-4319-00	Variable resistor (VOL)	1
13	012-4408-00	Variable resistor (BASS/TREB)	1
14	017-0345-35	Pilot lamp	1
15	017-0346-03	Pilot lamp	1
16	345-4040-02	Holder	1
17	311-1219-00	Lower case	1
18	313-1255-00	Heat sink	1
19	051-0656-01	IC	1
20	330-8353-00	IC bracket	1
21	330-8351-00	Bracket	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
22	099-7539-02	P.W.B	1
23	074-0782-00	Outlet socket	1
24	120-0070-02	Fuse (7A)	1
25	303-0329-00	Upper cover	1
26	335-1963-01	Indicator cover	1
27	379-0082-00	Indicator	1
28	335-1964-01	Reflector	1
29	335-1965-00	Back plate	1
30	051-0713-00	IC	1
31	347-1926-04	Insulator	1
32	714-3020-80	Machine screw (M3x20)	5
33	714-3014-80	Machine screw (M3x14)	2
34	714-3004-80	Machine screw (M3x4)	8
35	286-5769-00	Set plate	1
36	345-3842-01	P.L cap	1
37	347-1927-00	Insulator	1
38	347-1077-00	Insulator	1
39	330-8352-00	Shield case	1
40	076-0267-01	Short plug	1
41	051-0655-01	IC	1

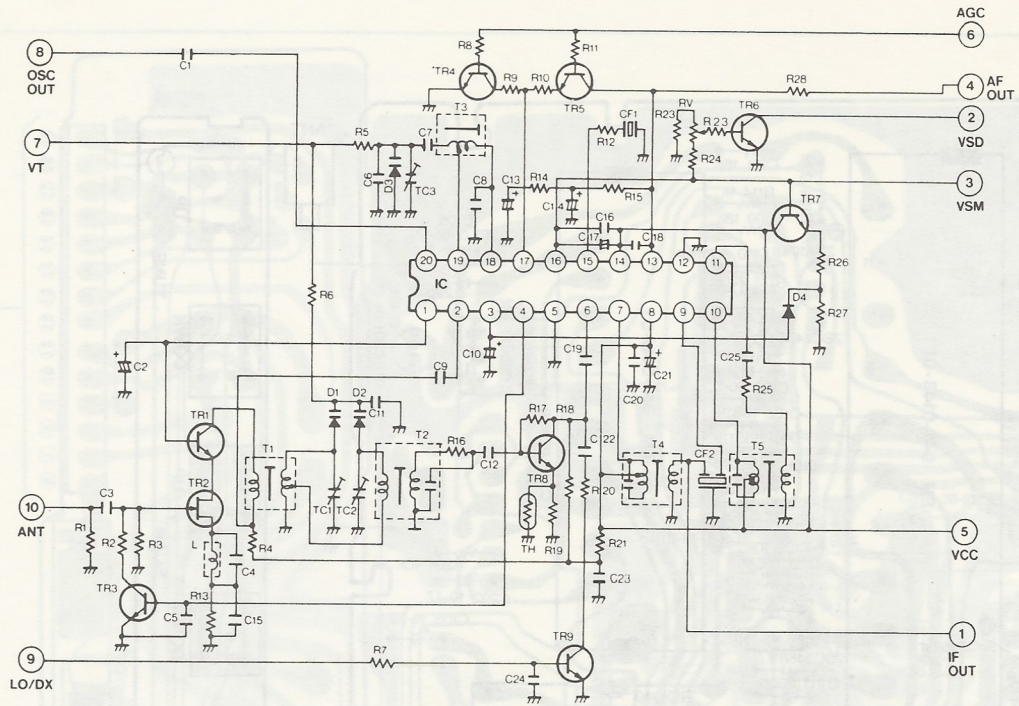
CIRCUIT DIAGRAM:



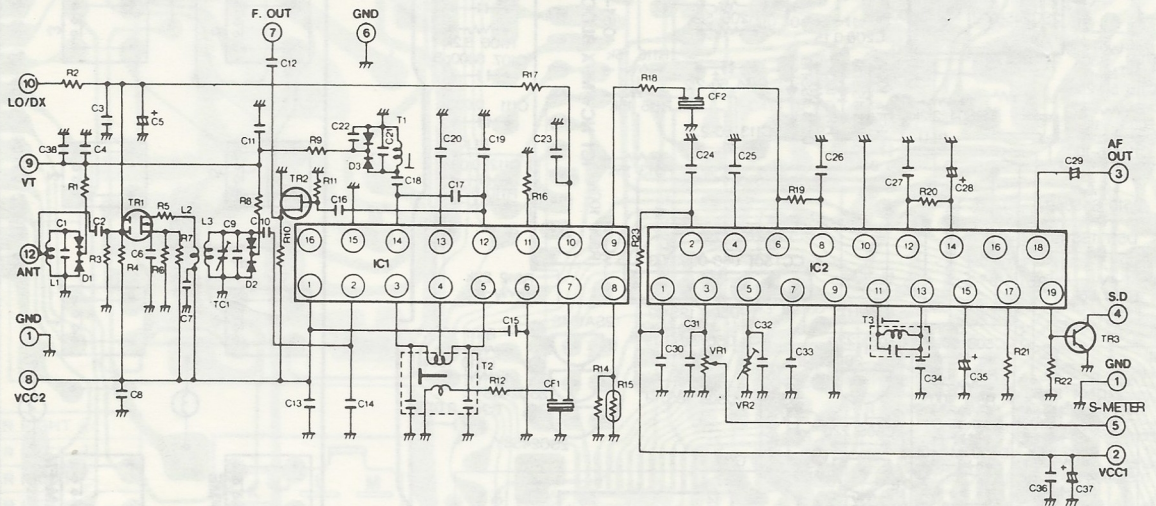
PRINTED WIRING BOARD:



■ AM TUNER PACK: 941-0141-01



■ FM TUNER PACK: 941-0143-01



no o/p - check 0.15 uf caps for s/c

