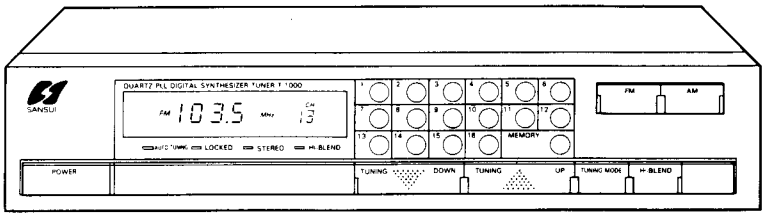
SANSUI

SERVICE MANUAL

T-1000
T-1000L

QUARTZ PLL DIGITAL SYNTHESIZER TUNER



*** This service manual applies to T-1000 and T-1000L with NEW SANSUI MARK on the front panel and also F-6000 main board in the unit.**

CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety.
   Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

•SPECIFICATIONS

FM Section

Tuning range ..... 88 to 108 MHz
Usable sensitivity
Mono IHF ..... 10.8 dBf (1.9 μV : T100)
DIN ..... 0.9 μV
50 dB quieting sensitivity
Mono ..... 16.5 dBf
Stereo ..... 37.0 dBf
Signal to noise ratio at 65 dBf
Mono ..... 75 dB
Stereo ..... 70 dB
Distortion at 65 dBf
Mono ..... less than 0.2% at 1,000 Hz
Stereo ..... less than 0.25% at 1,000 Hz
Alternate channel selectivity (at 400 kHz)
..... 55 dB
Stereo separation ..... 40 dB at 1,000 Hz
Frequency response ..... 30 to 15,000 Hz
+1.0 dB, −1.5 dB
Antenna input impedance (300 ohms balanced)
75 ohms unbalanced

AM Section

Tuning range ..... 530 to 1,600 kHz
Usable sensitivity ..... 52 dB/m (398 μV/m)
Signal to noise ratio ..... 45 dB
Image response ratio ..... 40 dB at 1,000 kHz

LW Section <T-1000L only>

Tuning range ..... 153 to 281 kHz
Usable sensitivity ..... 62 dB/m
Signal to noise ratio ..... 45 dB
Image response ratio ..... 35 dB at 220 kHz

Others

Power requirements 120/220/240V
50/60 Hz
For U.S.A. and Canada 120V (60 Hz)
Power consumption ..... 10 Watts
Dimensions ..... 430 mm (16-15/16″)W
92 mm (3-5/8″)H
227 mm (8-15/16″)D
Weight ..... 2.7 kg (6.0 lbs) net
3.5 kg (7.7 lbs) packed

* Design and specifications subject to changes without notice for improvements.
* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.

NOTE

1. The symbols, EG, EI, EF and EU on the parts list and the schematic diagram mean followings respectively.

   EG ..... Manufactured for F.R. Germany market.
   EI ..... Manufactured for Italian market.
   EF ..... Manufactured for French market.
   EU ..... Manufactured for European (Except F.R. Germany, Italian and French) market.
   NON MARK ..... Common Parts.

2. Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.

3. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.

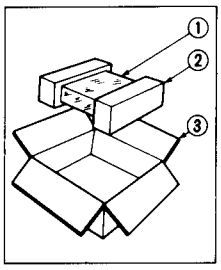
4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	M.M.C.	: Metalized Mylar Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

1. PACKING LIST

Parts No.	Stock No.	Description
1	84519200	Vinyl Bag (T-1000)
	27306000	Vinyl Bag (T-1000L)
2	84519300	Styrofoam Packing (T-1000)
	27652900	Styrofoam Packing (T-1000L)
3	84566200	Carton Case (T-1000)
	27622100	Carton Case (T-1000L)

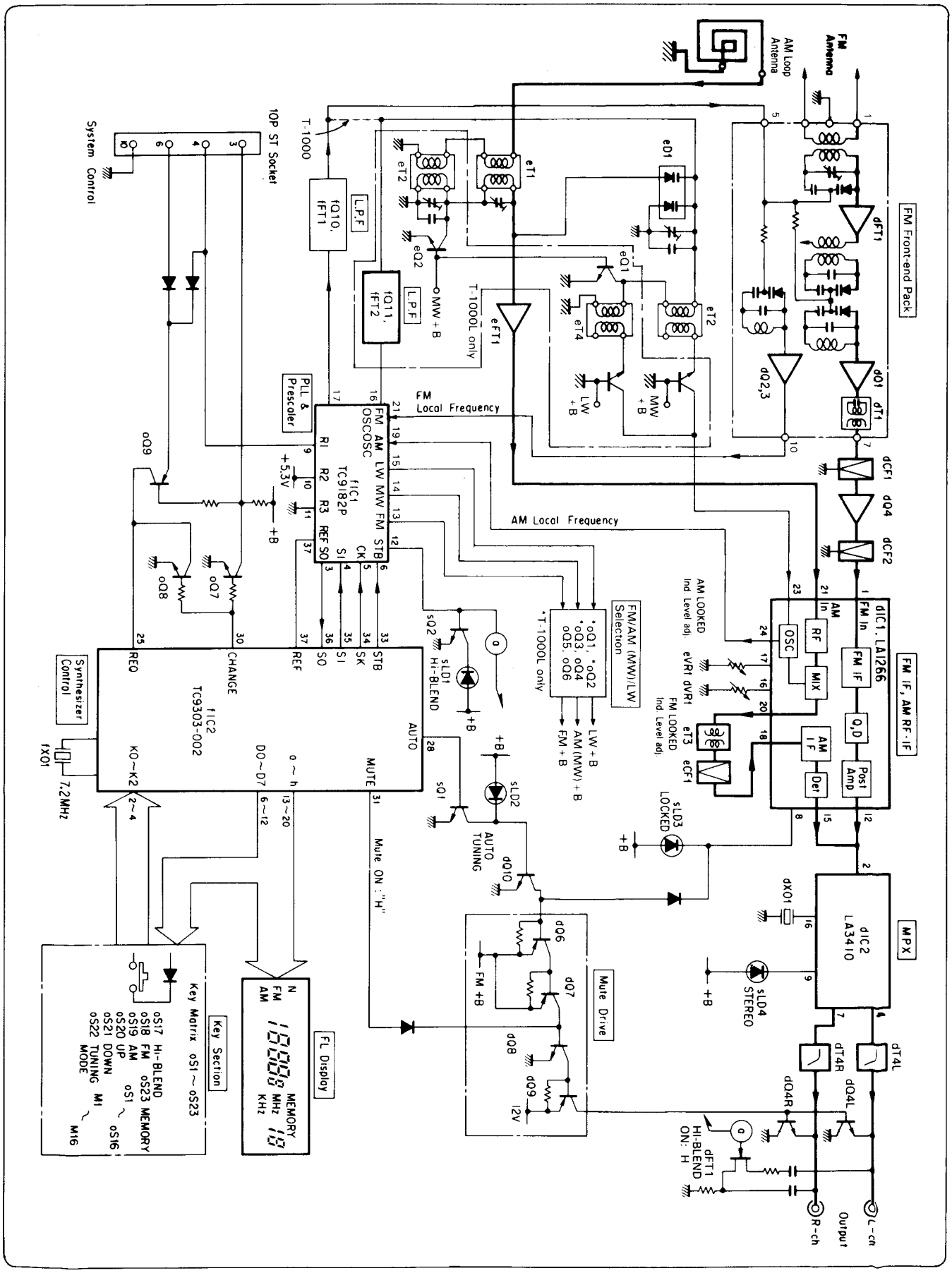


2. ACCESSORY LIST

Stock No.	Description
48835500	AM Loop Antenna
07563000	AM Antenna Holder
46051700	FM Antenna
46118600	PJP Cord
or 38103200	PJP Cord
or 48802200	PJP Cord
84453600	T-1000/T-1000L Operating Instruction (*E•F•S•I)
84453700	T-1000/T-1000L Operating Instruction (*G•Sw)

*Note:
E•F•S•I: English•French•Spanish and Italian Version
G•Sw: German and Swedish Version

3. BLOCK DIAGRAM

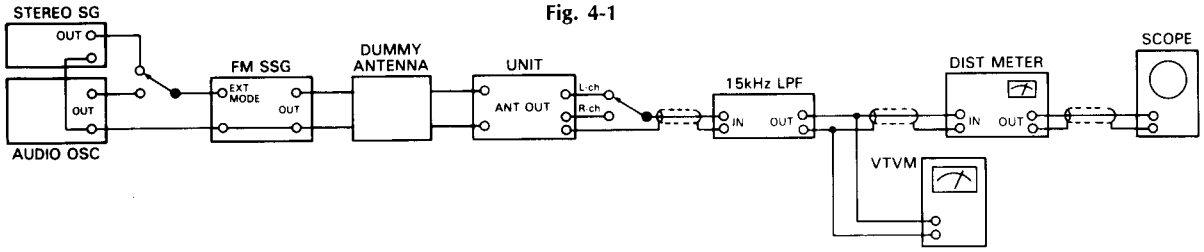


4. ADJUSTMENTS (See F-6000 Parts Location on page 8)

4-1. FM Adjustment

Note: 1. FM Switch ..... ON
2. Hi-BLEND Switch ..... OFF
3. Connect as shown Fig. 4-1.

Fig. 4-1



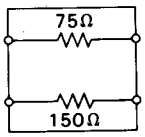
STEP	SUBJECT		FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.		98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG	FM ANT Terminal	Between Point Ⓐ (Pin 16 of dIC1) & GND (F-6000), DC Volt Meter	IFT Coil (Front-end Pack)	Max. DC Volt	
2.	Discriminator Coil Adj.	1)	98MHz ANT Input 65dBf (59.8dB), No MOD., FM SSG	FM ANT Terminal	Between Point Ⓑ & Ⓒ (Across the dR23) (F-6000) DC Volt Meter	dT1 (F-6000)	DC 0V ± 30mV	•Repeat procedures as stated in subject 1) & 2).
		2)	98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	Same as above	Output L or R-ch, Dist Meter & SCOPE	dT2 (F-6000)	Min THD	
3.	LOCKED Indicator Level Adj.		98MHz ANT Input 23dBf (17.8dB), 1kHz (100% MOD.), FM SSG	FM ANT Terminal	LOCKED Indicator	dVR1 (F-6000)	LOCKED Indicator turns ON.	

◆ Technical Hint for FM Adjustment

There are two kind in indication of FM SSG output attenuator.
1. Attenuator with marking of 75Ω open ..... open indication type.
2. Attenuator with marking of 75Ω load or close ..... load or close indication type.

FM SG output level in this FM adjustment are described as open indication type.
To feed FM signal, a dummy antenna circuit as Fig. 4-2 must be connected between FM SG output and ANT terminal (300Ω) of the unit.

Fig. 4-2



Dummy antenna

- The following table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

	FM SG Attenuator Indication	Available Power Ratio	Antenna Terminal Voltage
Open indication type	0 dB 66 dB	−0.8 dBf 65.2 dBf	−6 dB/μV 60 dB/μV
Load or close indication type	0 dB 60 dB	5.2 dBf 65.2 dBf	0 dB/μV 60 dB/μV

4-2. AM Adjustment

Note: 1. T-1000: AM Switch ..... ON, T-1000L: MW/LW Switch ..... MW
2. Connect AM loop antenna to AM antenna terminal.
3. Connect as shown Fig. 4-3.

Fig. 4-3

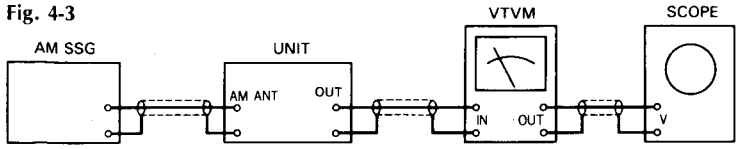
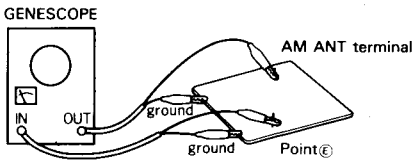
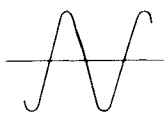
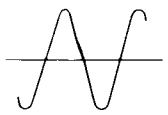


Fig. 4-4

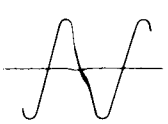


1) AM IF Adjustment & MW (AM) Tuning Adjustment

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.	Genescope Output 60dB	AM ANT terminal	Between Point Ⓔ (Pin 17 of dIC1) & GND (F-6000)	eT5 (eCF1) (F-6000)	MAX, Waveform	
2.	531kHz (or 530kHz) Tuning Adj.	No Input	—	FL Display	TUNING UP, DOWN Button	531kHz (or 530kHz)	•Repeat procedures as stated in STEP 1 and 2
				Between Point Ⓕ (eR1, F-6000) & GND, DC Volt Meter	eT3 (F-6000)	1.0V±0.1V	
3.	1602kHz (or 1610kHz) Tuning Adj.	No Input	—	FL Display	TUNING UP, DOWN Button	1602kHz (or 1610kHz)	
				Between Point Ⓕ (eR1, F-6000) & GND, DC Volt Meter	eTC3 (F-6000)	8.0V±0.1V	
4.	603kHz (or 600kHz) RF Adj.	603kHz (or 600kHz) ANT Input 55dB 400Hz (30% MOD.), AM SSG	AM ANT Terminal	FL Display	TUNING UP, DOWN Button	603kHz (or 600kHz)	
				Output L or R-ch, VTVM, SCOPE	eT1 (F-6000)	MAX. Output	
5.	1404kHz (or 1400kHz) RF Adj.	1404kHz (or 1400kHz) ANT Input 55dB 400Hz (30% MOD.), AM SSG	Same as above	FL Display	TUNING UP, DOWN Button	1404kHz (or 1400kHz)	
				Output L or R-ch, VTVM, SCOPE	eTC1 (F-6000)	MAX. Output	
6.	LOCKED Indicator Level Adj.	999kHz (or 1000kHz) ANT Input 60dB 400Hz (30% MOD.), AM SSG	Same as above	FL Display	TUNING UP, DOWN Button	999kHz (or 1000kHz)	
				LOCKED Indicator	eVR1 (F-6000)	LOCKED Indicator turns ON.	

2) LW Tuning Adjustment (T-1000L only)

Note: MW/LW switch ..... LW

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	153kHz Tuning Adj.	No Input	—	Between Point Ⓕ (eR1, F-6000) & GND DC Volt Meter	eT4 (F-6000)	1V±0.1V	•Repeat procedures as stated in subject 1 & 2.
2.	360kHz Tuning Adj.	No Input	—	Same as above	eTC4 (F-6000)	5.4V±0.1V	
3.	170kHz RF Adj.	170kHz ANT Input 30dB 400Hz (30% MOD.), AM SSG	AM ANT terminal	Output Terminal L-CH or R-CH VTVM & Scope	eT2 (F-6000)	Max. Output	
4.	300kHz RF Adj.	300kHz ANT Input 30dB 400Hz (30% MOD.), AM SSG	Same as above	Same as above	eTC2 (F-6000)	Max. Output	

5. PARTS LIST OF BOARD

Note

- Symbols, EG, EI, EF and EU in parts list specify the area.

symbol	area
EG	F.R. Germany
EI	Italy
EF	France
EU	Europe (Except F.R. Germany, Italy and France)

- Parts without these symbols can be used for all (EG, EI, EF and EU) area.

5-1. F-5724 PLL Synthesizer Control Board

<Stock No. 01123205 = T-1000L·EF/01112005 = T-1000L·EU/01123408 = T-1000·EG/01123605 = T-1000·EI>

Parts No.	Stock No.	Description
•Transistor		
fQ2	46367101	2SC2603
	or 48058801	2SC1740S
fQ3	48230200	DTC124XS
•IC		
fIC2	48367800	TC9303AN-002
fXO1	07237700	Quartz Element NR-18 for T-1000L (EF)
	83004400	Quartz Element RX-005 for T-1000L (EU)
	83004400	Quartz Element RX-005 for T-1000 (EG)
	83004400	Quartz Element RX-005 for T-1000 (EI)
•Diode		
fD1 ~ 21	03117600	1S2473T77
	or 83000100	1N4148
fD24	03117600	1S2473T77
	or 83000100	1N4148
fD40	03117600	1S2473T77 (T-1000L)
	or 83000100	1N4148 (T-1000L)
oS1 ~ 16	46708100	Push SW., Memory 1 ~ 16
	or 83000300	Push SW.,
	or 83032400	Push SW.,
oS17	48240500	Tact SW., HI-BLEND
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS18	48240500	Tact SW., FM
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS19	48240500	Tact SW., AM (MW/LW)
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS20	48240500	Tact SW., TUNING UP
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS21	48240500	Tact SW., TUNING DOWN
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS22	48240500	Tact SW., TUNING MODE
	or 83004000	Push SW.,
	or 83032600	Push SW.,
oS23	46708100	Push SW., MEMORY
	or 83000300	Push SW.,
	or 83032400	Push SW.,
•Transistor		
sQ1, 2	46367101	2SC2603
	or 48058801	2SC1740S
sFL1	48182610	FL. Display Tube FG78M1
	or 83003400	FL. Display Tube 7-MT-79G
sLD1	48835400	SEL2910A, HI-BLEND
sLD2	48835400	SEL2910A, AUTO
sLD3	48835400	SEL2910A, LOCKED
sLD4	48835400	SEL2910A, STEREO
sC2	48103400	1μF 50V E.B.

5-2. F-6000 Main Board

<Stock No. 01123305 = T-1000L·EF/01112105 = T-1000L·EU/01123508 = T-1000·EG/01123705 = T-1000·EI>

Parts No.	Stock No.	Description
dZ1	48729600	FM Frontend Pack
•Transistor		
dQ1	46393201	2SC2786
dQ3	46367101	2SC2603
	or 48058801	2SC1740S
dQ4	46540801	2SC2878
	or 46604301	2SC3327
dQ5	46367101	2SC2603
	or 48058801	2SC1740S
dQ6,7	46367001	2SA1115
	or 48058601	2SA933S
dQ8	46367101	2SC2603
	or 48058801	2SC1740S
dQ9	46367001	2SA1115
	or 48058601	2SA933S
dQ10, 11	46367101	2SC2603
	or 48058801	2SC1740S
•FET		
dFT1	46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643601	2SK117-Y
	or 46643602	2SK117-GR
•IC		
dIC1	48715100	LA1266
dIC2	48491000	LA3410A
dXO1	48272800	Ceramic OSC Element CSB456
	or 83000200	Ceramic OSC Element
•Diode		
dD3 ~ 13	03117600	1S2473T77
	or 83000100	1N4148
dC22	48102400	4.7μF 25V E.B.
dC33	48103400	1μF 50V E.B.
dC35	48102400	4.7μF 25V E.B.
dCF1, 2	46202500	Ceramic Filter SFE10.7MS2 (T-1000L)
	or 83000000	Ceramic Filter SFE10.7MS2 (T-1000L)
	48064800	Ceramic Filter SFE10.7MS3G (T-1000)
	or 83043800	Ceramic Filter SFE10.7MS3G (T-1000)

<F-6000>

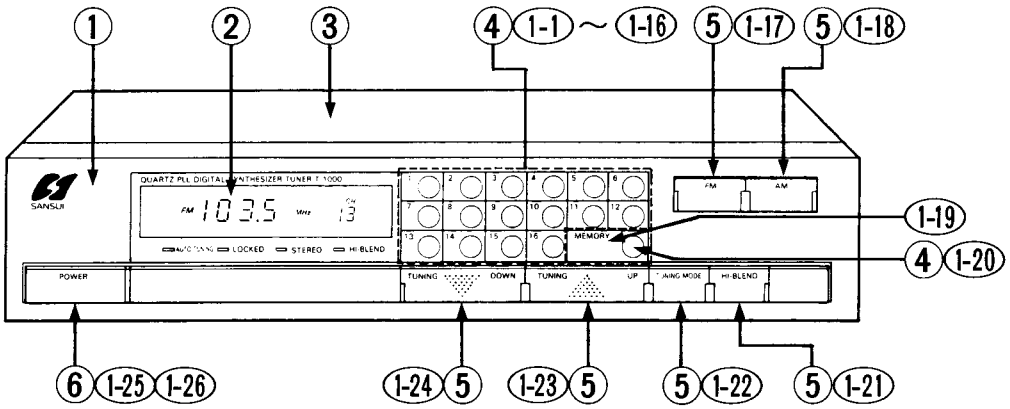
Parts No.	Stock No.	Description
dT1	48718700	FM IF Coil for T-1000L (EF)
	83005900	FM IF Coil for T-1000L (EU)
	83005900	FM IF Coil for T-1000 (EG)
	83005900	FM IF Coil for T-1000 (EI)
dT2	48718600	FM IF Coil for T-1000L (EF)
	83006000	FM IF Coil for T-1000L (EU)
	83006000	FM IF Coil for T-1000 (EG)
	83006000	FM IF Coil for T-1000 (EI)
dT3	48791700	CH Filter (T-1000)
dT4	49344800	Low Pass Filter
	or 83006600	Low Pass Filter
	or 83049300	Low Pass Filter
dT5	49324300	FM VHF Balwn (T-1000L)
dVR1	07241600	100kΩ (B) S.V.R., FM Locked Ind.
	or 83007500	100kΩ S.V.R., Level Adj.
•Transistor		
eQ1, 2	46540801	2SC2878 (T-1000L)
	or 46604301	2SC3327 (T-1000L)
eQ3, 4	46367101	2SC2603 (T-1000L)
	or 48058801	2SC1740S (T-1000L)
•FET		
eFT1	46393000	2SK192A-Y
	or 46393001	2SK192A-GR
•Diode		
eD1	46146300	KV1236Z2 (Variable Capacitance)
eD2	03117600	1S2473T77
	or 83000100	1N4148
eTC1	46095700	Trimmer Capacitor 30pF
	or 46162900	Trimmer Capacitor 30pF
eTC2	46095700	Trimmer Capacitor 30pF (T-1000L)
	or 46162900	Trimmer Capacitor 30pF (T-1000L)
eTC3	46095700	Trimmer Capacitor 30pF
	or 46162900	Trimmer Capacitor 30pF
eTC4	46095700	Trimmer Capacitor 30pF (T-1000L)
	or 46162900	Trimmer Capacitor 30pF (T-1000L)
eCF1	48069900	Ceramic Filter CFM2-450BL
eL1	46091910	Inductor 39mH
	or 83020300	Inductor 39mH
eT1	46394600	AM ANT Coil
	or 49323900	AM ANT Coil
	or 83005600	AM ANT Coil
	or 83048000	AM ANT Coil
eT2	48577500	LW ANT Coil (T-1000L)
	or 49324000	LW ANT Coil (T-1000L)
	or 83045300	LW ANT Coil (T-1000L)
	or 83048100	LW ANT Coil (T-1000L)
eT3	48568800	AM OSC Coil
	or 49324100	AM OSC Coil
	or 83005700	AM OSC Coil
	or 83048200	AM OSC Coil
eT4	48074410	LW OSC Coil (T-1000L)
	or 49324200	LW OSC Coil (T-1000L)
eT5	48072000	AM IF Coil
	or 49323800	AM IF Coil
	or 83013400	AM IF Coil
	or 83047900	AM IF Coil
eVR1	07241500	50kΩ (B) S.V.R., AM Locked Ind.
	or 83007400	50kΩ S.V.R., Level Adj.
•Transistor		
fQ10	46367101	2SC2603
	or 48058801	2SC1740S
fQ11	46367101	2SC2603 (T-1000L)
	or 48058801	2SC1740S (T-1000L)
•FET		
fFT1	46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643601	2SK117-Y
	or 46643602	2SK117-GR

<F-6000>

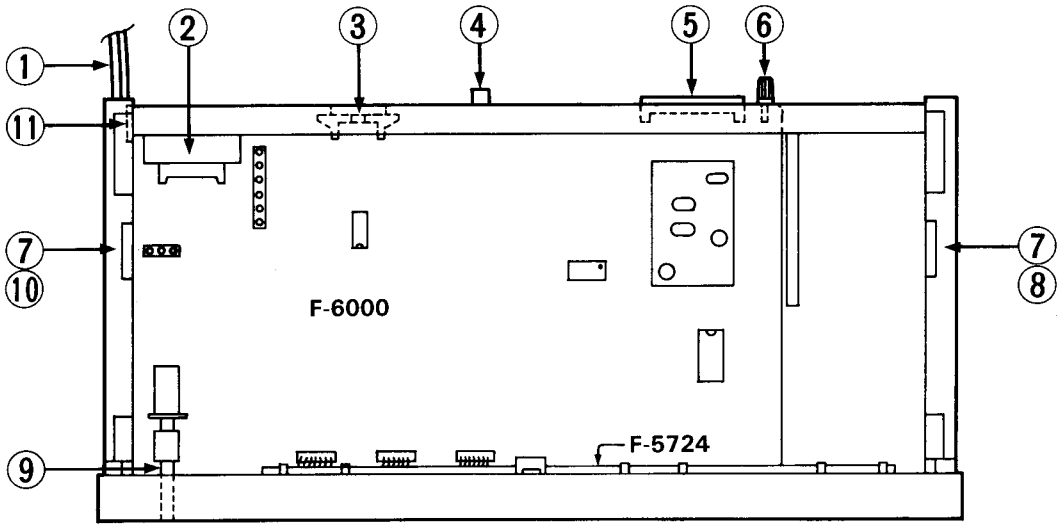
Parts No.	Stock No.	Description
fFT2	46643501	2SK163-K2 (T-1000L)
	or 46643502	2SK163-L1 (T-1000L)
	or 46643601	2SK117-Y (T-1000L)
	or 46643602	2SK117-GR (T-1000L)
•IC		
fIC1	49295600	TC9182P
•Diode		
fD51~53	03117600	1S2473T77
	or 83000100	1N4148
⚠fR50	46228800	68Ω 1/2 W N.I.R.
fC20	48485800	4700μF 6.3V E.C.
fC25	48103500	2.2μF 50V E.B.
fC27	48103400	1μF 50V E.B.
•Transistor		
mQ1	46367101	2SC2603
	or 48058801	2SC1740S
⚠mQ2, 3	03083901	2SD313HP
⚠	or 46546701	2SD880
mQ4	46367001	2SA1115
	or 48058601	2SA933S
•Diode		
⚠mD1~8	03117700	10E-2
⚠	or 83005000	1N4002
mD9, 10	03117600	1S2473T77
	or 83000100	1N4148
•Zener Diode		
mDZ1	46828000	RD15E-B1
	or 49306000	05AZ15-X
mDZ2	46825500	RD6.8E-B1
	or 49303500	05AZ6.8-X
mDZ3	46829600	RD22E-B4
	or 49307600	05AZ22-R
⚠mR6	46227600	6.8Ω 1/2W N.I.R.
⚠mR7	46249600	180Ω 1W N.I.R.
⚠mR11	46229500	270Ω 1/2W N.I.R.
mC8	48103500	2.2μF 50V E.B.
⚠mC16	48733500	0.01μF 400V C.C.
⚠mS1	48847800	Push SW., POWER
⚠	or 83004200	Push SW., POWER
•Transistor		
oQ1	46367101	2SC2603 (T-1000L)
	or 48058801	2SC1740S (T-1000L)
oQ2	46367001	2SA1115 (T-1000L)
	or 48058601	2SA933S (T-1000L)
oQ3	46367101	2SC2603 (T-1000L)
	or 48058801	2SC1740S (T-1000L)
oQ4	46367001	2SA1115
	or 48058601	2SA933S
oQ5	46367101	2SC2603
	or 48058801	2SC1740S
oQ6	46367001	2SA1115
	or 48058601	2SA933S
oQ7	46367101	2SC2603
	or 48058801	2SC1740S
oQ8	46367101	2SC2603
	or 48058801	2SC1740S
oQ9	46367001	2SA1115
	or 48058601	2SA933S
•Diode		
oD1, 2	03117600	1S2473T77 (T-1000L)
	or 83000100	1N4148 (T-1000L)
oD3, 4	03117600	1S2473T77
	or 83000100	1N4148
oZ3	48313900	10P ST Socket, System Control
	or 83044700	10P ST Socket, System Control
oZ2	48528400	2P Pin Jack Terminal, OUTPUT
oZ1	46547300	4P Antenna Terminal (T-1000L)
	46410200	2P Antenna Terminal (T-1000)
•LED		
sLD5	48849300	SEL3913K

6. OTHER PARTS

•Front View



•Top View



Parts List <Front View>

Parts No.	Stock No.	Description
1	37504201	Front Panel Ass'y (T-1000)
	37502905	Front Panel Ass'y (T-1000L)
1-1	84568800	1•Knob
1-2	84568900	2•Knob
1-3	84569000	3•Knob
1-4	84569100	4•Knob
1-5	84569200	5•Knob
1-6	84569300	6•Knob
1-7	84569400	7•Knob
1-8	84569500	8•Knob
1-9	84569600	9•Knob
1-10	84569700	10•Knob
1-11	84569800	11•Knob
1-12	84569900	12•Knob
1-13	84570000	13•Knob
1-14	84570100	14•Knob
1-15	84570200	15•Knob
1-16	84570300	16•Knob
1-17	84568400	FM•Knob
1-18	84568500	AM•Knob (T-1000)
	84585300	MW/LW•Knob (T-1000L)
1-19	84566400	MEMORY Knob Cover
1-20	84567100	Knob, MEMORY
1-21	84563600	HI-BLEND•Knob
1-22	84563500	TUNING MODE•Knob
1-23	84568200	TUNING UP•Knob
1-24	84568300	TUNING DOWN•Knob
1-25	84567010	POWER•Knob
1-26	84505100	Spring, POWER•Knob
2	48182610	FG78M1 FL Display Tube
	or 83003400	7-MT-79GK FL Display Tube
3	84504000	Bonnet
4	46708100	Push SW. } Memory 1 ~ 16•
	or 83000300	Push SW. } MEMORY
	or 83032400	Push SW. }
5	48240500	Push SW. } FM•AM (MW/LW)•
	or 83004000	Push SW. } HI-BLEND•TUNING MODE•
	or 83032600	Push SW. } TUNING UP•TUNING DOWN
⚠ 6	48847800	Push SW., POWER

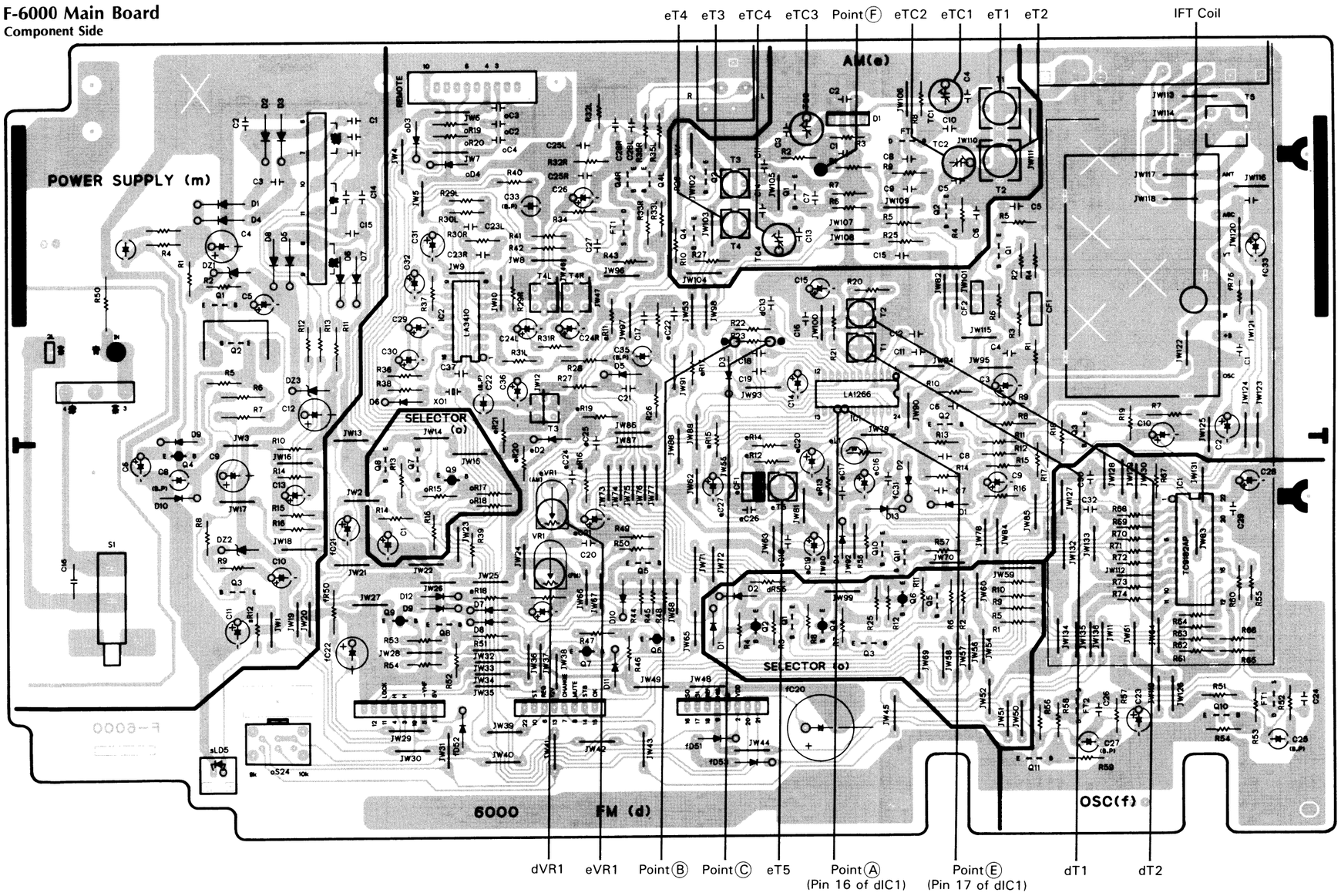
Parts List <Top View>

Parts No.	Stock No.	Description
⚠ 1	49299300	Power Supply Cord
⚠	or 83000600	Power Supply Cord
⚠ 2	15032705	Power Transformer
⚠	or 83045405	Power Transformer
3	48313900	10P ST Socket } System Control
	or 83044700	10P ST Socket }
4	48528400	2P Pin Jack Terminal, OUTPUT
5	46410200	2P Antenna Terminal (T-1000)
	46547300	4P Antenna Termnal (T-1000L)
6	84528300	Ground Terminal
7	84527700	Leg Packing, Side Panel
8	84512200	Side Panel (R)
9	84502900	Joint Shaft, Power SW.
10	84512300	Side Panel (L)
11	84514000	AC Cord Cover

7. PARTS LOCATION ON BOARD

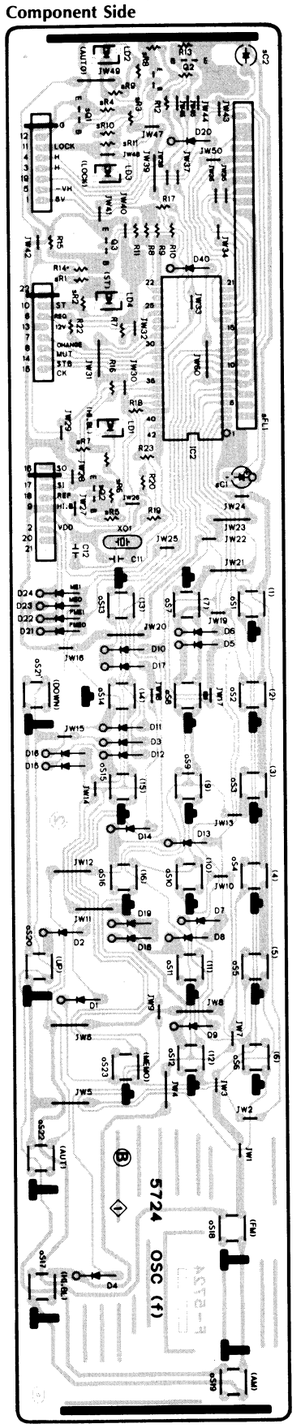
7-1. F-6000 Main Board

Component Side



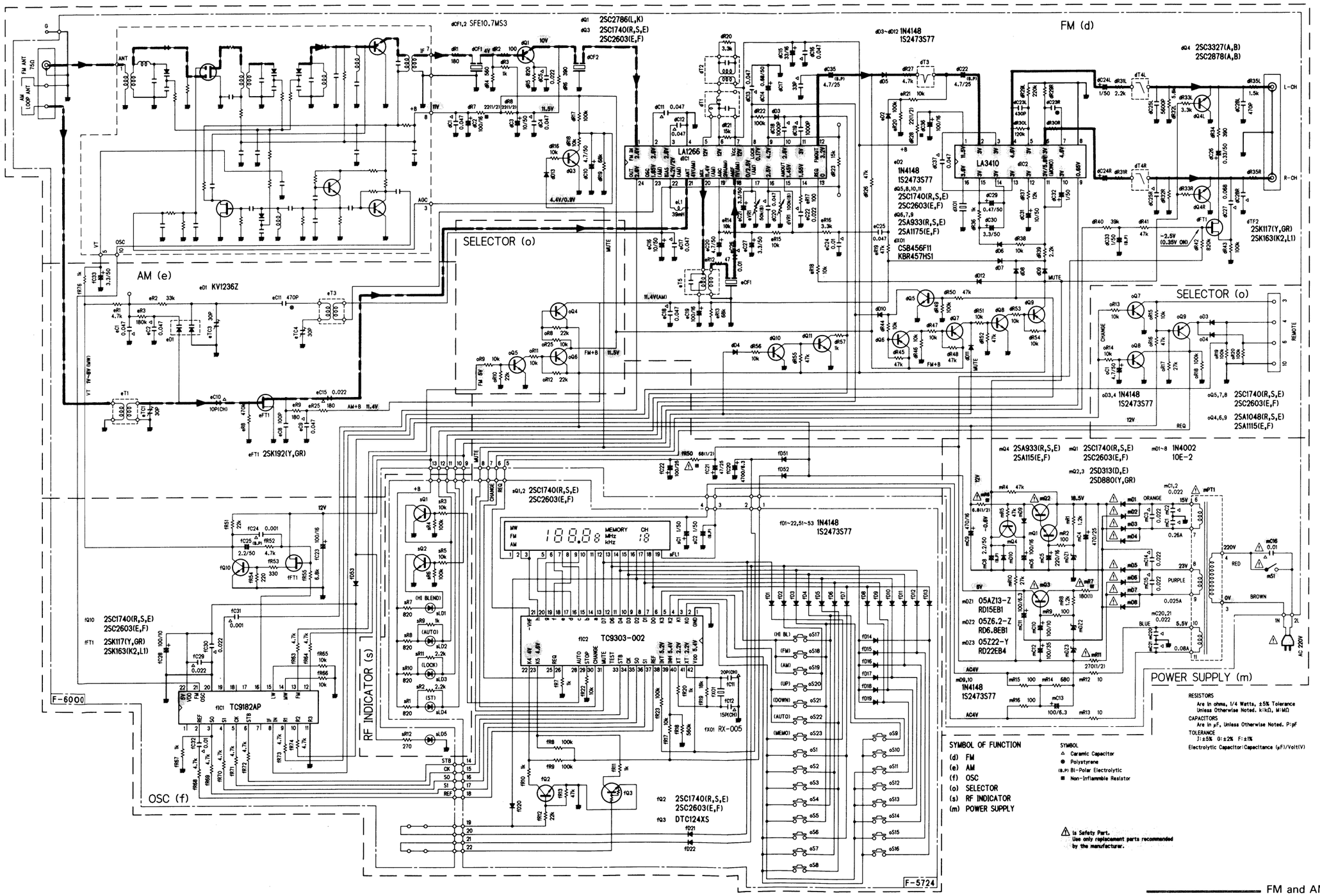
7-2. F-5724 PLL Synthesizer Control Board

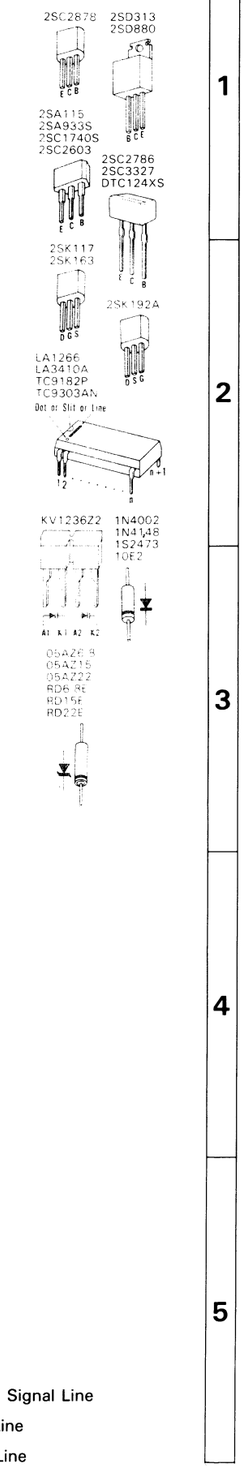
Component Side



8. SCHEMATIC DIAGRAM 8-1. T-1000

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

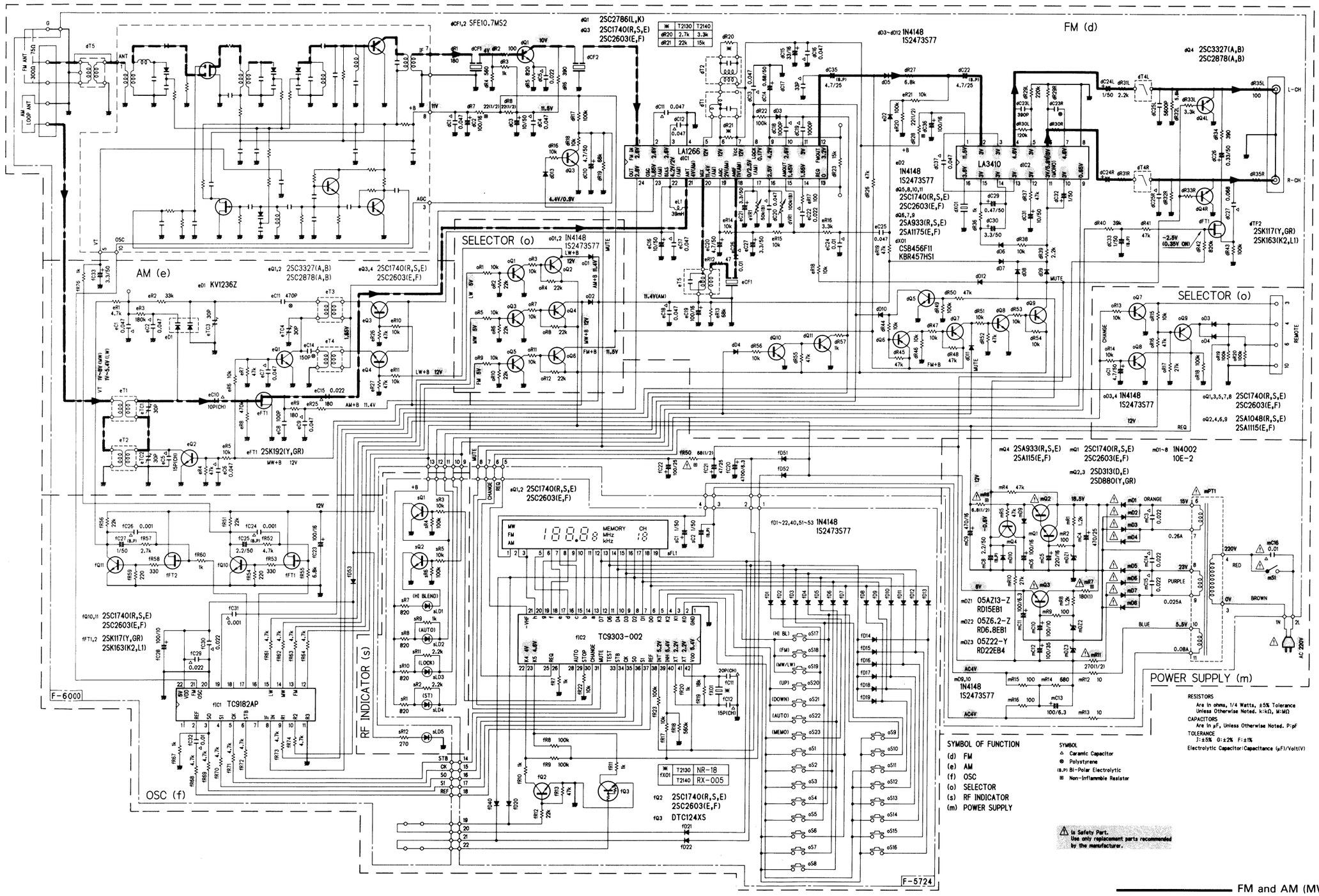


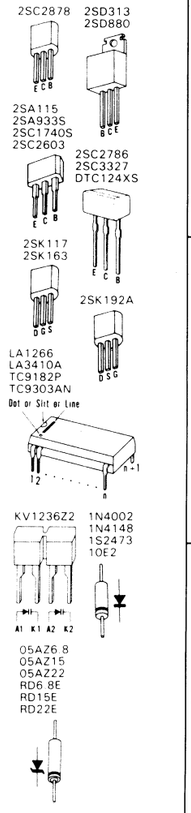


A	B	C	D	E	F	G	H

8-2. T-1000L

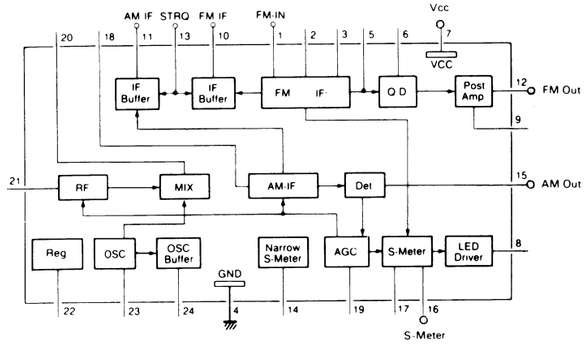
* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



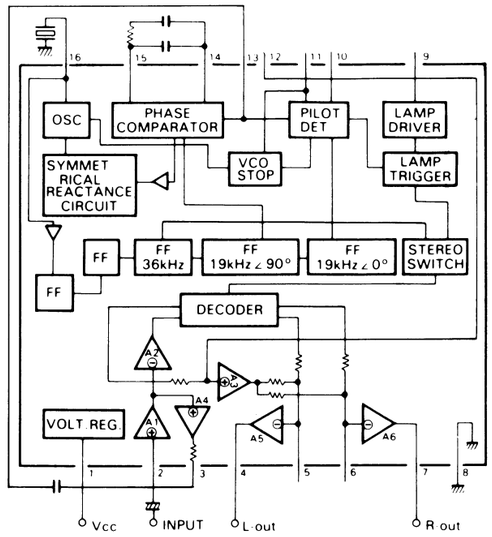


9. INTERIOR BLOCK DIAGRAM AND TERMINAL FUNCTION OF IC

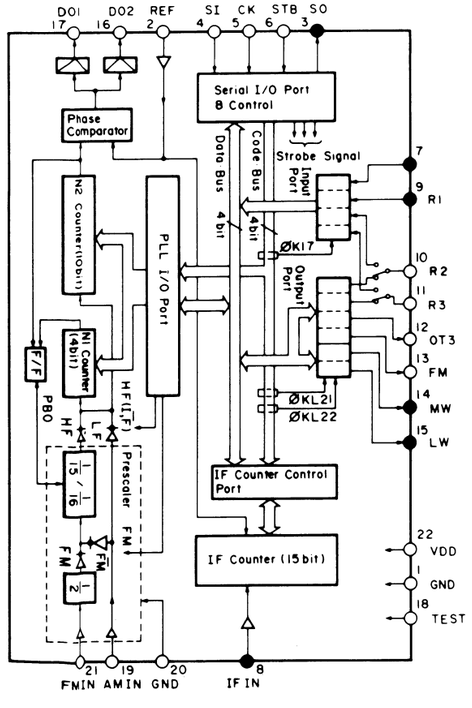
•LA1266 (FM IF, AM RF·MIX·IF)



•LA3410 (MPX)



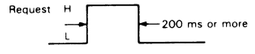
•TC9182P (PLL Synthesizer)



◆Terminal Function <TC9182P>

Pin No.	Symbols on substate	Functions
2	REF	Reference frequency signal input terminal
3 4 5 6	SO SI CK STB	Serial data output terminal Serial data input terminal Clock signal input terminal Strobe signal input terminal •Terminals to input/output serial data for frequency divider, IF counter and I/O port controller from/to TC-9303N-002 PLL synthesizer control IC.
8	IF_{IN}	Terminal to input IF signal for performing the automatic search stop.
9 10 11	R1 R2 R3	Terminals to input signals from the remote controller. 7-kind key input instructions are available in combination with TC-9303N-002.
13 14 15	FM MW LW	Band selector signal output terminal
16 17	DO_2 DO_1	Terminals to output a signal from a phase comparator.
18	TEST	Terminal to input a signal of test mode.
19	AM_{IN}	Terminal to input a signal from the AM local OSC.
20	GND	Ground terminal for prescaler
21	FM_{IN}	Terminal to input a signal from the FM local OSC.
22	V_{DD}	Power supply terminals. 5V±0.5V
1	GND	Ground terminal

◆Terminal Function of TC9303N <Tuning Controller>

Pin No.	Pin Name	Input/Output	Description
2~7 22,23	K0~K3 K4,K5	Input	Ports for inputting a key matrix signal. On the other hand, key return timing signals are outputted from output parts D0~D7.
6~12	D0~D7	Output	Ports for outputting digit signals to FL display and a key return signal source.
13~20	a~h	Output	Ports for outputting segment signals to FL display.
21	−VFL	—	Terminal for a device supply −voltage.
25	REQ.	Input	Terminal for inputting a request signal for remote controller. Whern a "H" level signal is applied, remote control data is accepted.
28	AUTO	Output	Terminal for outputting LED driver signal for indicating AUTO during auto search tuning operation. "H" level when active.
29	STOP	Input	Terminal to input a signal for performing the automatic search stop. When a "H" level signal is applied during automatic search operation, the scanning operation stop.
30	CHANGE	Output	Terminal for outputting a changing signal. (For Computer selector signal) In changing, the terminal becomes a "H" level signal. Changing signal is outputted in the following cases: 1.When INH changes from "L" to "H".
30	CHANGE	Output	2.When each input key is depressed normally. 3.When a band key corresponding to the presently received band is depressed. 4.When remote control REQUEST changes to "H" (inclusive NOP.)  Note: CHANGE is not outputted when INH changes from "H" to "L".
31	MUTE	Output	Terminal to output the muting signal. The kept in "L" level in ordinary state, and in "H" level in muting. The muting signal is outputted in the following. •When "INH" terminal changes from "L" to "H". •When band is switched. •When memory is accessed (in the same band). •In FM manual tuning. •In MW and LW manual tuning. •In AUTO-tuning stop. •When "INH" terminal changes from "H" to "L".

Pin No.	Pin Name	Input/Output	Description
32	TEST	Input	Terminal for inputting a test mode control signal. The device is returned to the ordinary operation at "L" level or NC status. This terminal is fixed at "L" level usually.
33 34 35 36	STB CK SO SI	Output Output Output Input	Serial interfaces for STB (strobe pulse output), CD (serial clock output), SO (serial data output) and SI (serial data input). TC9182P PLL IC is controlled by executing SIO instruction.
37	REF	Output	Terminal for outputting a reference frequency signal supplied to TC9182P PLL IC. **Note:** This output is fixed at "L" level automatically when $\overline{INH}$ input is at "L" level.
38	$\overline{INT}$	Input	Terminal for inputting a system resetting signal to device. When $\overline{INT}$ is at "L" level, the device is reset; when at "H" level, program starts beginning from address No.0. This terminal is usually fixed at "H" level, because the device is reset when a voltage of 4.5V is applied to V_{DD}. (power-on reset)
39	$\overline{INH}$	Input	Port for inputting a radio mode selection signal. Radio-on mode is set at "H" level; radio-off mode is set at "L" level. When this terminal at "L" level, the REF output is fixed at "L" level automatically.
40 41	X_T $\overline{X_T}$	— —	Terminals for connecting a quartz oscillator of 7.2 MHz.
42	V_{DD}	—	Terminal for applying a device supply voltage. In the normal operation, a voltage of 5V±10% is applied; but in back-up condition, the voltage can be reduced to 2V. Further, when a voltage of 4.5V is applied to this terminal, the device is reset and then program start beginning from address No.0 (power-on reset).

SANSUI

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
3036 Koapaka Street. Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS G.M.B.H.: Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany
山水電気株式会社 東京都杉並区和泉2-14-1(〒168)

(SM2-77) Printed in Japan (1988.06.M) <Stock No. 36539500>

SANSUI

März 1989

An alle

Servicestationen

Aufnahmepegel zu gering / System 1000
(T-1000/G-1000/B-1000/D-1000)
hier: T-1000

Fehler: Bei den Geräten ist der Aufnahmepegel des Tunersignals nicht aussteuerbar;
hier: Tuner T-1000

Grund: **Fehl**anpassung im Netzwerk

Abhilfe: C23 (390 pF) auf 270 pF ändern
(linker u rechter Kanal)

R30 (15o KOhm) auf 180 KOhm ändern
(linker u. rechter Kanal)

Merke: Diese Änderung bewirkt eine Erhöhung des Ausgangspegels um 3 dB

Es müssen im die Geräte T-100/C-1000 eines Systems gleichzeitig geändert werden.

Sansui Electronics GmbH

B. Regl
Kundendienstleiter