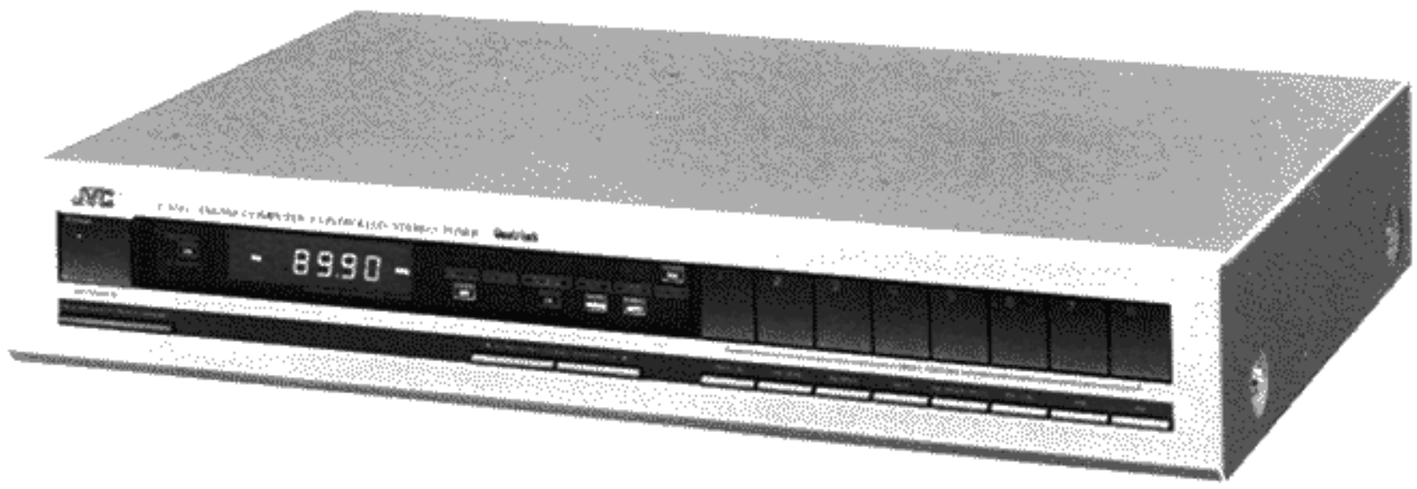
JVC

SERVICE MANUAL

MODEL T-X55

COMPUTER CONTROLLED TUNER



No. 2602
MAR. 1982

Contents

Warning:
When replacing the parts marked with ⚠ , be sure to use the designated parts to ensure safety.

1. Specifications

FM TUNER SECTION

Tuning Range	: See back cover
Usable Sensitivity	: 10.3 dBf (0.9 μV/75 ohms)
50 dB Quieting Sensitivity	
MONO (75 ohms)	: 16.4 dBf (1.8 μV)
STEREO (75 ohms)	: 31.0 dBf (9.8 μV)
Signal-to-Noise Ratio	
MONO/STEREO	: 84 dB/80 dB
Total Harmonic Distortion	
MONO (1 kHz)	: 0.07 %
STEREO (1 kHz)	: 0.07 %
Capture Ratio	: 1.0 dB
Alternate Channel Selectivity	: 80 dB
Image Response Ratio	: 80 dB
IF Response Ratio	: 105 dB
Spurious Response Ratio	: 100 dB
AM Suppression	: 67 dB
Stereo Separation (1 kHz)	: 50 dB
Frequency Response	: 30 Hz — 15 kHz (+0.3, -1.0 dB)
Subcarrier Suppression	: 73 dB
Antenna Input	: 75 ohms unbalanced
Impedance	300 ohms balanced
Output Signal Level	: 600 mV (2.2 kohms)
REC CAL Output Level	: Equivalent to 50 % FM modulation

AM TUNER SECTION

Tuning Range	: See back cover
Usable Sensitivity	: 20 μV (External antenna)
Total Harmonic Distortion	: 0.3 %
Signal-to-Noise Ratio	: 50 dB
Selectivity	: 32 dB
Image Response Ratio	: 40 dB
IF Response Ratio	: 65 dB
Output Signal Level	: 200 mV (2.4 kohms at 30 % MOD)

GENERAL

Dimensions (W x H x D)	: 435 x 77 x 315 mm 17-1/8 x 3 x 12-7/16 inches
Weight	: 3.2 kg (7.1 lbs.)

Design and specifications subject to change without notice.

2. Service Precautions

Note that the following symptoms are not troubles.

(1) Pressing the dB indicator button interrupts sound momentarily.

This unit incorporates a facility to measure the input field strength up to 100 dB. When the field strength exceeds 55 dB and 65 dB, the attenuator is automatically set. Therefore, when the attenuator is automatically set or cleared, the RF signal is irregularly modulated (FM) which comes out as noise. To cancel the noise, the muting facility is momentarily operated to mute the sound.

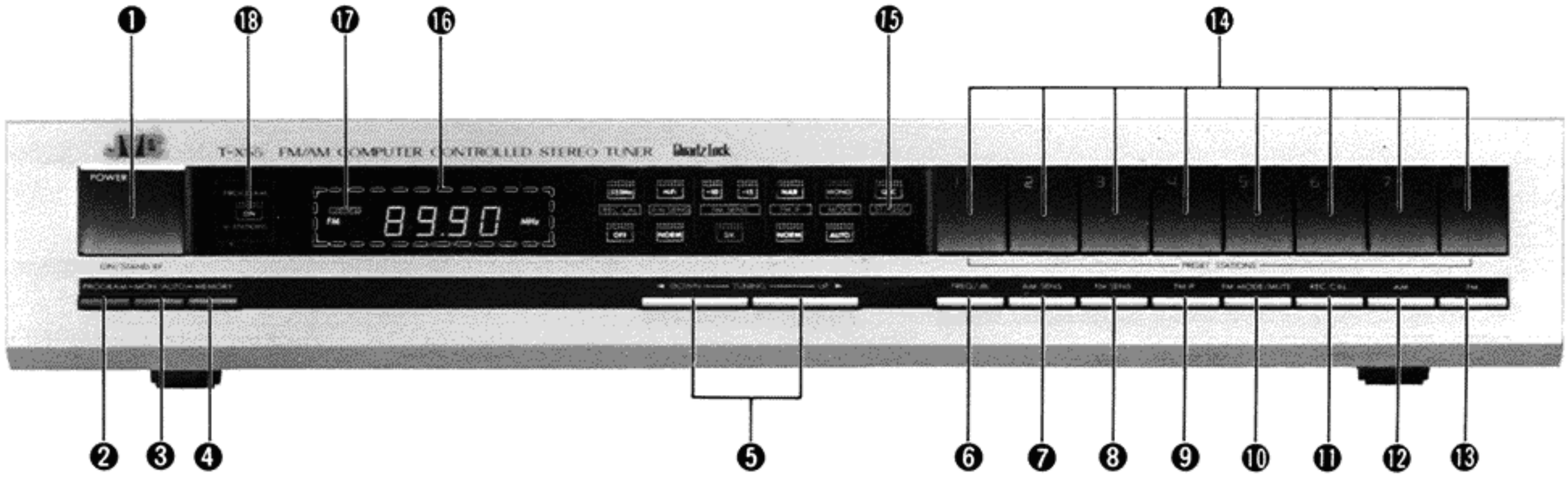
(2) The reception sensitivity of the memorized station is low.

As the attenuator is automatically set according to the field strength, when a station is memorized with strong field strength input, the attenuation level is maintained irrespective of subsequent variation of field strength. Therefore, when the field strength is reduced (due, for example, to shift of antenna direction) after the station is memorized, the attenuator is kept in operation, resulting in seemingly poor sensitivity. At this point, rememorize the station. By so doing, the attenuator is automatically cleared.

(3) **When the PRESET STATION button is pressed, the sound does not come out momentarily (2 – 3 sec.).**
The pulse applied to the microcomputer LSI (logic IC: μPD1407C-527) is generated at a specific timing only. However, this generation is extremely rare and does not affect the performance.

(4) **When power is turned ON, 333 Hz (recording level reference signal) comes out.**
If the power plug is unplugged from the AC outlet for a long period of time, the memory back-up power supply does not work. 333 Hz may thus appear because of unstability of the microcomputer LSI. In such a case, turn the power ON or push the REC CAL button again.

3. Names of Controls and Their Functions



❶ **POWER button**
Press this switch to turn the power on. The orange indicator above the switch will light together with the other indicators. To switch off the power, press this switch again.

Note: The memory circuit of this unit remains in the STANDBY mode even when the POWER switch is set to OFF so that the frequencies of preset stations are retained in memory. When power is switched off, the broadcast being received when the power was switched off will be received when power is switched on again. The preset frequencies will be retained in memory even if the power cord is disconnected, a power failure occurs or an audio timer is used as long as the interruption in the power supply does not exceed about 4 days at normal temperatures.

❷ **PROGRAM button**
It is possible to program up to 6 broadcasts. Press this switch and the MEMORY switch to program for making unattended recording so that the PROGRAM and MEMORY indicators light.

❸ **MON/AUTO button**

In case of PROGRAM-MON
When several broadcasts have been programmed, press the PROGRAM switch and this switch to check the frequencies in order that they are programmed.

In case of AUTO-MEMORY
Press this switch so that the MEMORY indicator lights, and press the desired PRESET STATIONS button while the MEMORY indicator is lit; the received frequency changes in the increasing direction and if there are broadcasts, they will be stored in memory in order. However, the frequency which is displayed previously cannot be stored in memory, therefore, if this frequency is required to be stored in memory, start from a lower frequency. When the upper frequency limit is reached, the frequency returns to the highest frequency previously tuned in and stops. When using the AUTO-MEMORY, the AM SENS is stored in memory as NORM in AM and the FM MODE is stored in memory as AUTO automatically. FM SENS, FM IF and ST/QSC are set automatically corresponding to the reception conditions.

Note: The AUTO MEMORY is impossible if the PRESET STATIONS button is pressed after the MEMORY indicator has gone out.

❹ **MEMORY button**
When this switch is pressed, the MEMORY indicator will light for about 5 seconds to show that the memory is ready to receive preset station information. Press one of the PRESET STATIONS buttons while the MEMORY indicator is lit.

Note: After the MEMORY indicator has gone out, pressing the PRESET STATIONS button will not store the frequency in memory; in this case, press this switch again.

❺ **TUNING buttons**
DOWN (◄): Press to tune to lower frequencies.
UP (►): Press to tune to higher frequencies.

Note: Tapping these buttons changes the frequency in single steps of 9 or 10 kHz in AM and 50 or 100 kHz in FM. Holding either button pressed for more than 1 second and then releasing it starts auto tuning, when a broadcast is received, tuning will stop. But if either button is kept held in, scanning continues even when a broadcast is received. In auto tuning, pressing either button stops scanning. Tapping the button stops changing the frequency when the top or the bottom frequency is reached, while, in auto tuning the frequency changes opposite direction.

❻ FREQ/dB button

When this is pressed, the signal strength is shown by the fluorescent display for about 5 seconds with 0 dB corresponding to 1 μV/75 ohms in FM and 0 dB corresponding to 1 μV/m in AM; after 5 seconds the display returns to frequency. The optimum signal strength is more than 40 dB for FM mono, more than 60 dB for FM stereo and 70 dB for AM. If the signal is too weak or too strong, this display may not indicate the correct value.

Note: If this switch is pressed continuously, the displayed value may change; this is not a malfunction of the T-X55 but is due to momentary changes in signal strength.

❼ AM SENS button

Normally set so that the AM SENS indicator shows NORM (normal); set so that the AM SENS indicator shows HiFi for reception of hi-fi signals in a strong signal strength area.

❽ FM SENS button

Normally set so that the FM SENS indicator shows DX; in areas where the input signal is too strong and there is interference, press this switch so that the "-10" or "-10" and "-15" is indicated according to the signal strength. "-10" indicates about 10 dB attenuation and "-10" and "-15" indicates about 25 dB attenuation.

Note: The T-X55 measures the antenna input, therefore, even if this switch is pressed for 10 or 25 dB attenuation, the signal strength indication may not change.

❾ FM IF button

Normally set so that the FM IF indicator shows NORM; set so that the FM IF indicator shows NAR (narrow) when there is interference in a strong or weak signal strength area.

❿ FM MODE/MUTE button

Normally set so that the MODE indicator shows AUTO; set so that the MODE indicator shows MONO when the reception condition of the signal is bad. When AUTO is displayed, FM stereo broadcasts are received in stereo and FM monaural broadcasts in mono. When MONO is displayed, even if the broadcast is FM stereo, it will be received in mono but noise is reduced so that it sounds better.

⓫ REC CAL button

Press this to check the recording level of an AM or an FM broadcast; the REC CAL indicator shows 333 Hz. When this indicates 333 Hz, the standard signal will be output; adjust the REC LEVEL control on the tape deck so that the recording level meter indicates 0 VU. It is better to change the recording level for different broadcasts or types of tape; for more details, refer to the tape deck's instruction manual.

Note: When the standard signal of 333 Hz is output, it is impossible to listen to broadcast; after checking the recording level, be sure to press this again so that the OFF is indicated.

⓬ AM button

Press this to listen to AM broadcasts.

⓭ FM button

Press this to listen to FM broadcasts.

⓮ PRESET STATIONS buttons (1 – 8)

As each of the PRESET STATIONS buttons can store an AM and an FM frequency, 8 AM and 8 FM stations can be preset. Press one of the PRESET STATIONS buttons while the MEMORY indicator is lit to preset it. Once a frequency has been preset, just press the corresponding button to tune to it. When one of the PRESET STATIONS buttons is pressed, its channel number changes from green to orange.

⓯ ST/QSC indicator

QSC: When a signal strength of an FM stereo broadcast is low, this indicator lights green and the QSC (Quieting Slope Control) circuit is switched on to reduce noise. When the signal strength is sufficiently high, this circuit will be released automatically and this indicator goes out.

ST: When an FM stereo broadcast is being received, this indicator lights. If the FM broadcast is stereo, when the MODE indicator shows MONO, this indicator will not light; press the FM MODE/MUTE switch so that AUTO is shown.

⓰ Fluorescent display

This displays the frequency in MHz for FM and in kHz for AM and the signal strength in dB.

⓱ Memory indicator

When the MON/AUTO or MEMORY switch is pressed, this indicator lights for about 5 seconds.

⓲ PROGRAM indicator

When the PROGRAM switch is pressed, this indicator lights to show that the T-X55 is programmed for unattended recording.

Note: When this indicator lights, switches or buttons other than the MEMORY and MON/AUTO switches cannot be operated.

Notes:

- If interference is too great or the signal is too weak, auto tuning or auto memory may not be possible. In this case, install an external antenna or use manual tuning.
- When the switches from AM SENS to REC CAL are pressed, the indications alternate between one or the other display.
- When tuning to FM broadcasts, FM SENS, FM IF and QSC are set to the best positions automatically to correspond to the reception condition.

4. Explanation of New Technology

4-(1) Introduction to T-X55

Unlike the conventional synthesizer whose circuit configuration places emphasis upon "additional functions", this unit is designed to set it to optimum reception state by providing the microcomputer for PLL synthesizer with an area which controls "functions as a receiver". For this reason, the conditions of RF waves have to be detected at first. As a detection method, this unit adopts a system in which the field strength is measured and then its result appear on the fluorescent display. Furthermore this unit incorporates a function to automatically select RF gain or IF bandwidth, etc. according to the field strength.

Conventionally, the pointer deflection of the signal meter is taken as a standard to detect the field strength. The principle is that the DC voltage (analog value) according to the field strength is applied to the signal meter to obtain meter deflection. In this unit, the DC output (the output of the signal meter) from pin 13 of IC LA1235 (IC201) is entered to the dual-slope A/D converter (consisting of IC501, IC502, Q501, etc.) to convert the DC output into the number of pulses (digital value) to accurately indicate the field strength digitally.

Depending on the field strength, the FM RF gain is automatically switched in three steps (DX/–10 dB/–25 dB), the IF bandwidth in two steps (NORM/NAR), the QSC (ST/QSC) in ON or OFF by microcomputer (IC552: μPD1704C-527). (See Fig. 1.)

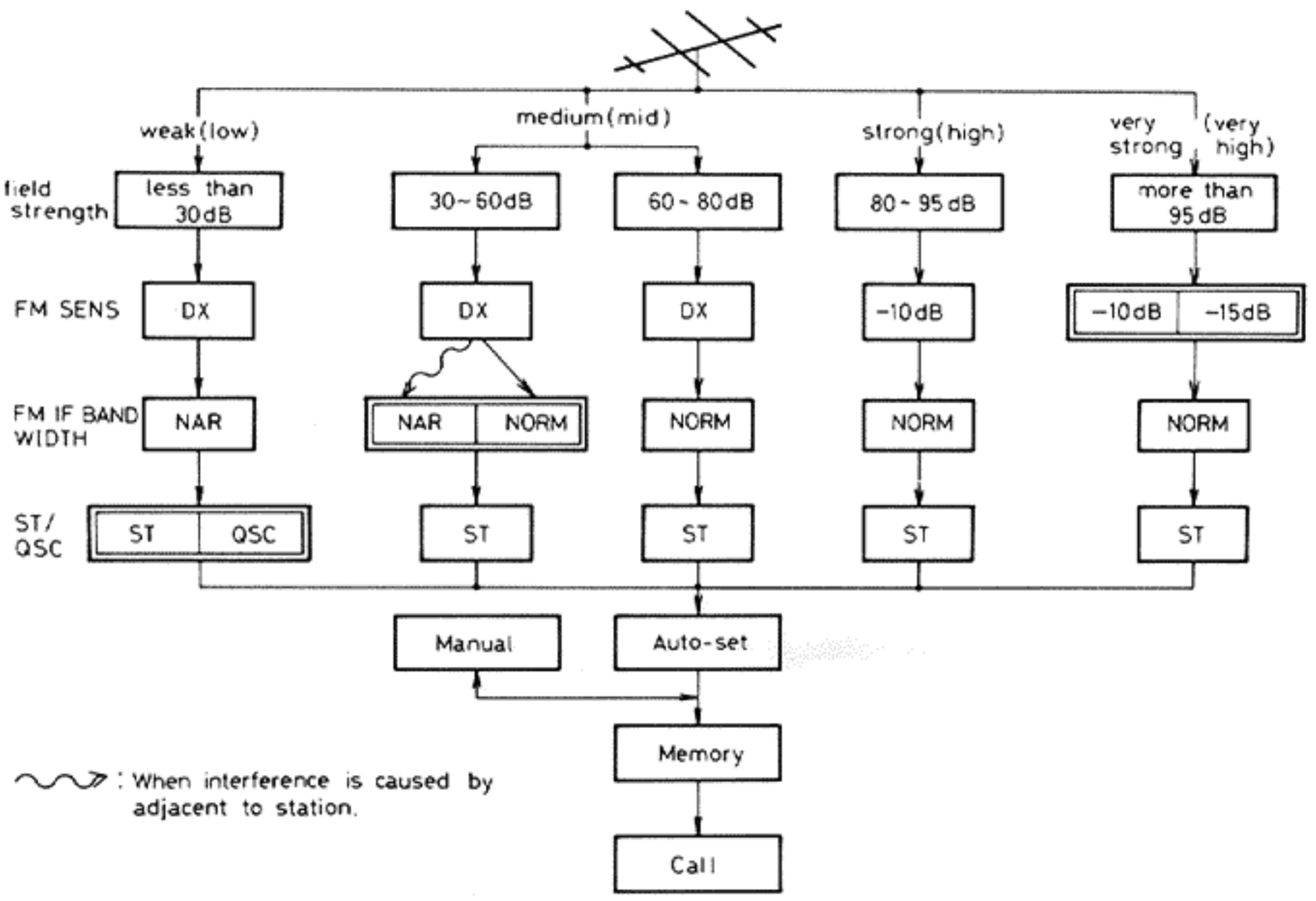


Fig. 1

The explanation of the basic operation principle of the dual-slope A/D converter and of microcomputer functions is given as follows:

4-(2) Operation Principle of Dual-Slope A/D Converter

The basic configuration of the dual-slope A/D converter is mainly made up of "integrator" and the following six functions. The block diagram is shown in Fig. 2.

1. Input Vi and "reference voltage" necessary to integrate in the reverse direction.
2. A "switch" which alternately switches the integrator applied voltage between input Vi and the reference voltage –Vref.
3. A "comparator" to detect the output state of the integrator.
4. A "logic control" which controls switch, counter and latch depending on the output state of the comparator.
5. A "clock generator" which generates the clock pulse required for operating the A/D converter.
6. "Counter and latch" which count and hold A/D converted serial pulses.

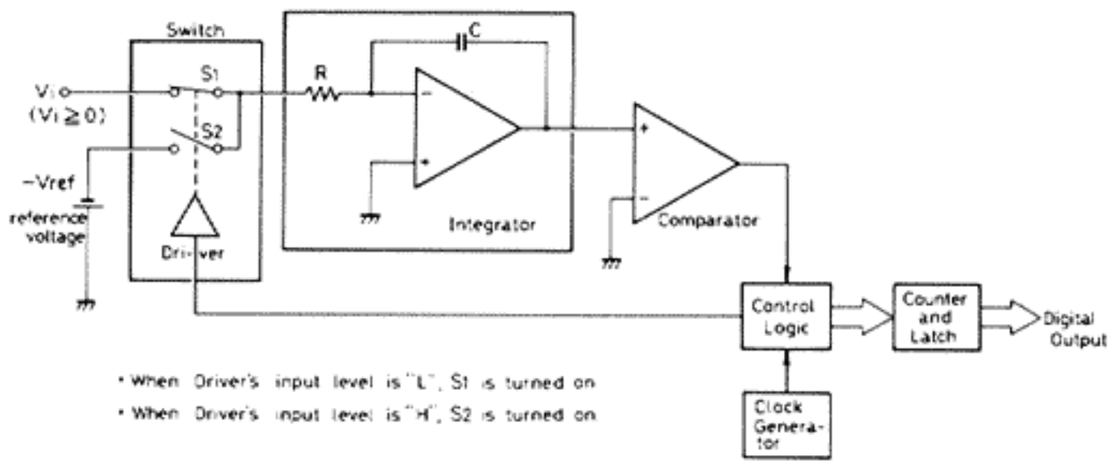


Fig. 2

The operation is as follows. As the initial state, the moment S_2 turns off by the command of the control logic, S_1 turns on. This makes the integrator start integrating in the negative direction and this integration continues for time Ti. The moment time Ti passes, a command is given by the control logic, thereby S_1 turns off and S_2 on. (See Fig. 2) This time, the integrator is integrated by $-V_{ref}$ in the positive direction. After lapse of time T_{ref}, the moment the output of the integrator crosses 0 (Zero), the output of the comparator is inverted, which in turn is transmitted to the control logic as a command of the following operation. Henceforth, this series of operation is repeated. Fig 3 shows this series of operation.

In the dual-slop A/D converter, integration time Ti is constant but the integrating voltage slopes in proportion to Vi. When integration is made in the reverse direction by the reference voltage, constant-current characteristic is applied with the result that the output of the integrator varies at a constant inclination (slope) irrespective of the voltage integrated. This aspect is shown in Fig. 4.

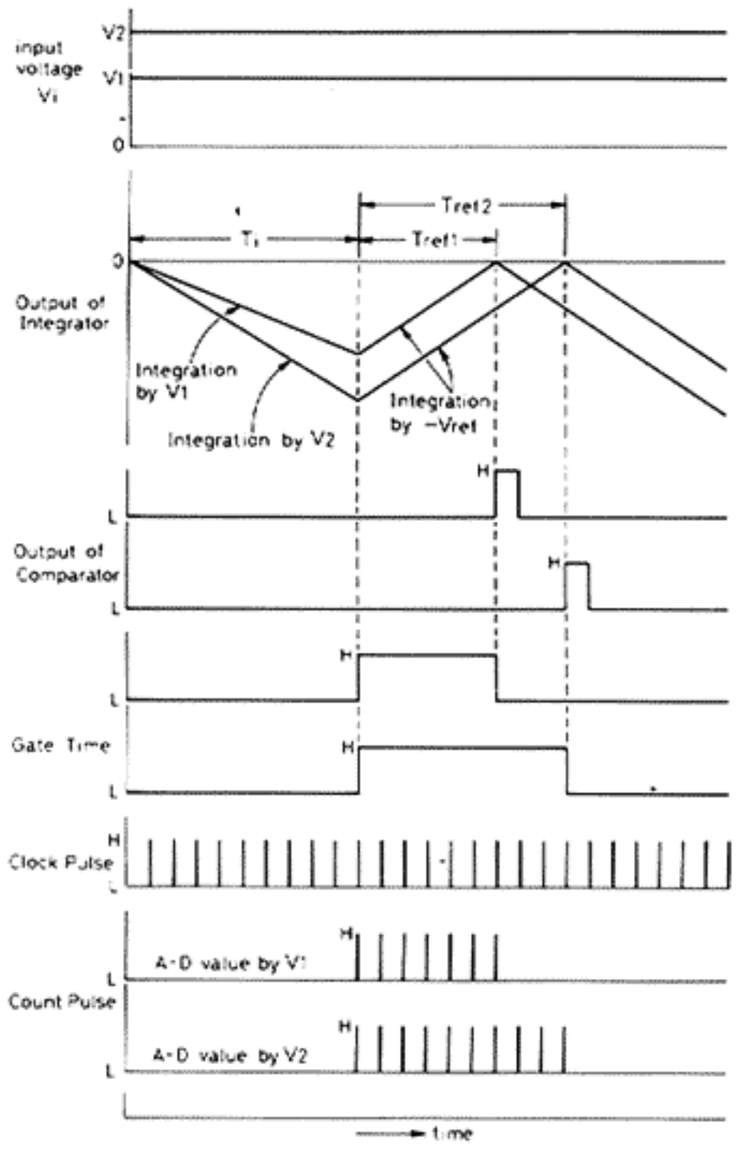


Fig. 3

4-(3) Operation Principle of A/D Converter

The following is the description of the A/D converter of this unit.

Basically, this is the same as the operation of the dual-slope A/D converter. The positive-going input DC voltage (the signal meter output of FM IC or AM IC) is charged for a certain period of time, then the negative-going reference voltage ($-V_{ref}$) separately provided from the input DC voltage is applied for comparison. This result of comparison (time required for discharging) is counted. In actual IC as shown in Fig. 5, the output of the signal meter (DC voltage) has a great variation in input level as well as in maximum output voltage. To compensate for this variation, an imaginary curve is drawn in solid line to approximate the actual value. A positive-going DC voltage is added from outside (positive off-set voltage: a) to the rising portion to justify the starting point. At the same time, the maximum voltage is also adjusted to the direction of the arrow (b) in Fig. 5. If all this operation is observed in logic form, it can be shown in timing chart as in Fig. 6. As the explanation is given in sequence, refer to Fig. 7 as you read.

Step 1: Before measuring the field strength, the gate of Q501 is turned on the short C501 to discharge C501. This sets the integrator output to 0 V.

Step 2: The offset voltage previously described is taken in for about 8 msec to charge C501. As the OP amp. forming the integrator is an inverter amp., its output is charged in the negative direction.

Step 3: Next, the Sg switch is turned on to take in the reference voltage. Consequently, the voltage gradually rises in the direction opposite to that in Step 2, then reaches 0 V. (See Ⓟ .)
In the control logic, a series of pulses are counted in this period and latched as T offset.

Step 4: When the output of the integrator reaches 0 V, the comparator emits an "H" signal to PD3 to stop the count. (See Ⓠ .)

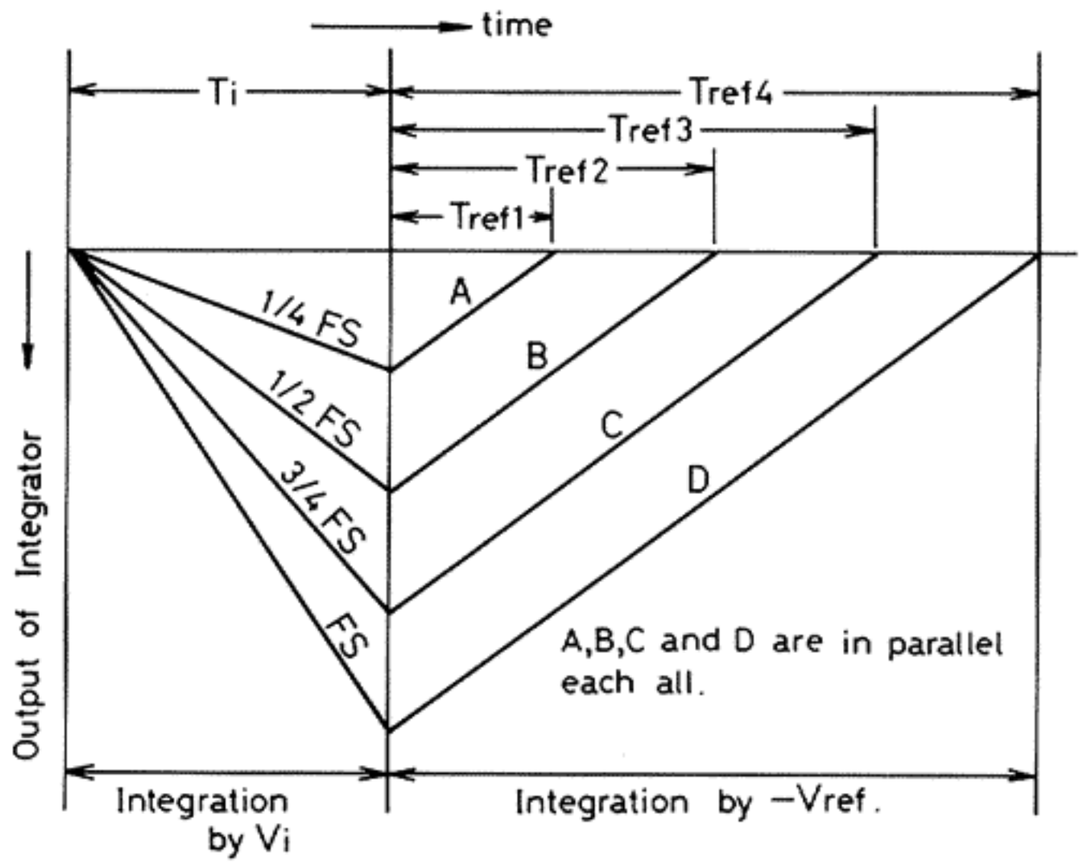


Fig. 4

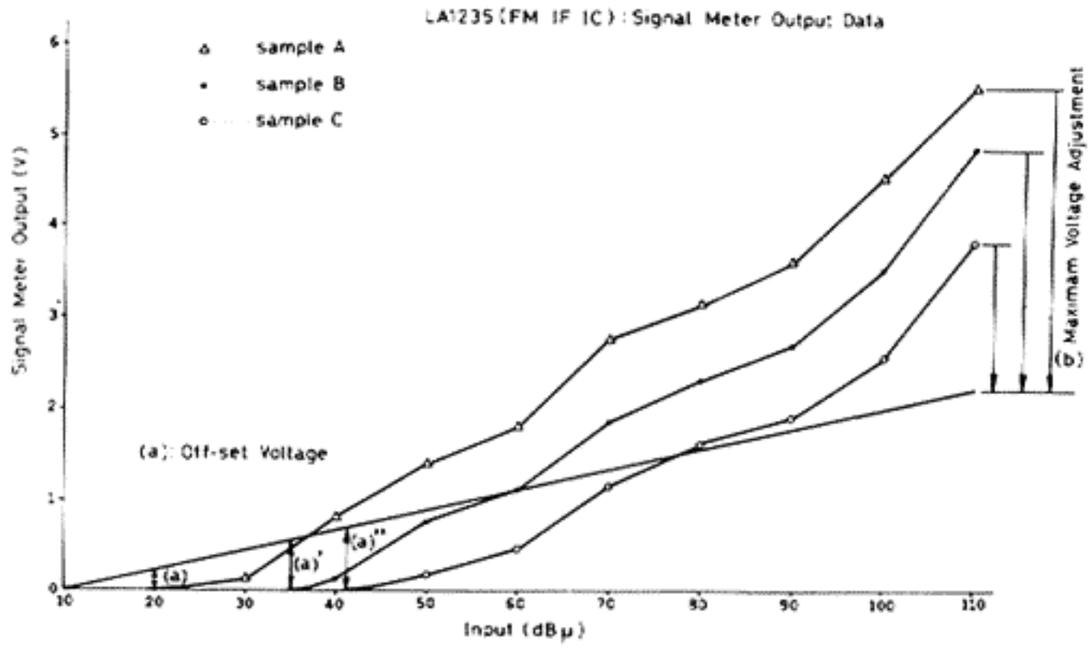


Fig. 5

Henceforth, Steps 1 to 4 are repeated to measure the signal output. In Step 2, the signal meter output is taken in instead of the offset voltage. In Step 3, pulses are counted as T_{FM} (or T_{AM}), whereas in the logic side, T offset is added to T_{FM} (or T_{AM}) and displayed accordingly.

Figs 8 and 9 show a standard display curve of "input vs dB" indication in this unit. For all practical purposes, the error is about ±4 dB.

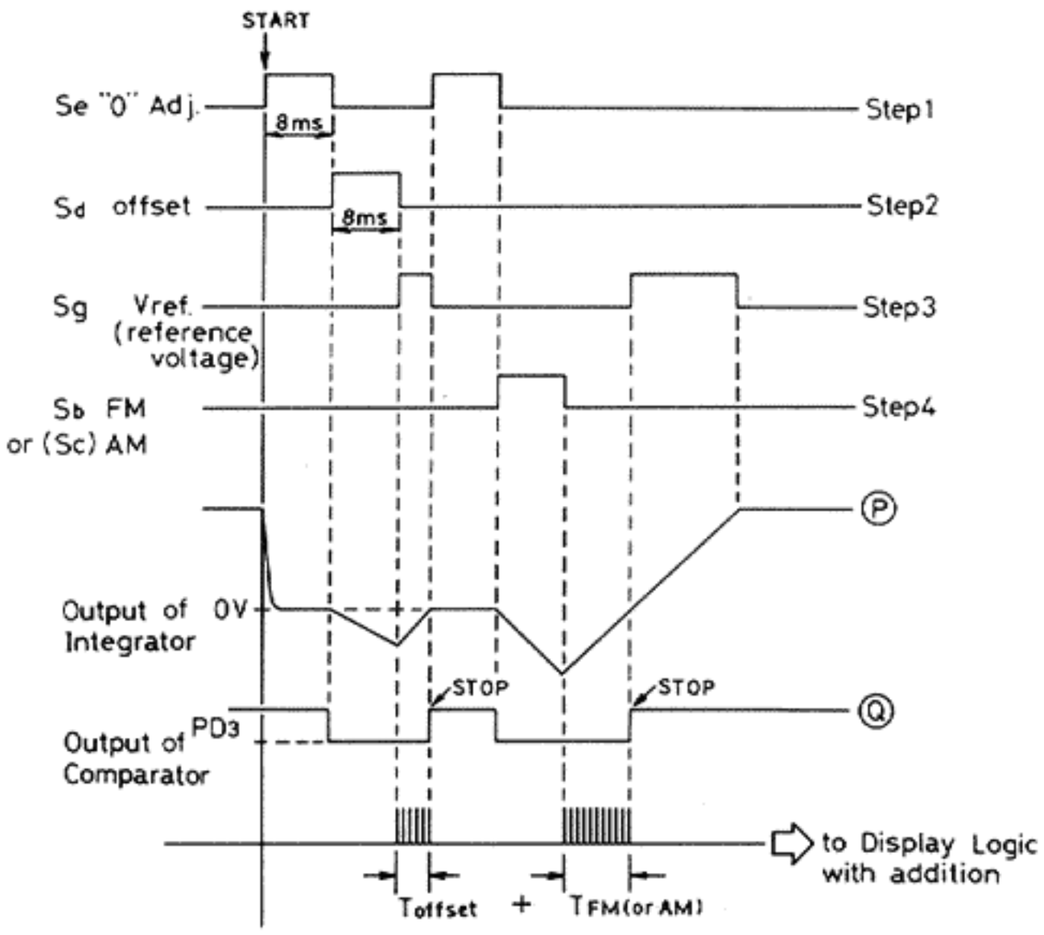


Fig. 6

4-(4) Functions of Microcomputer (μPD1704C-527)

This microcomputer is a custom LSI. The basic functions such as "UP/DOWN", AM/FM band selection, etc. are the same as those of conventionally used microcomputer. As additional functions, this is provided with "auto memory" and "6-station program".
This is also provided with a number of output ports corresponding to the counting section in the A/D converter. The prescaler section used jointly with the microcomputer is μPB553AC. This is a high reliability IC which is hitherto employed in other models. The crystal oscillator for clock is also used in other models. The fundamental pins for these ICs are arranged between pins 18 to 30.

Pins Sa to Sg are segment output pins and "high" when activated. The corresponding input pins for return signals are K_0 to K_3, between which a specified diode matrix is inserted. Sb to Sg are also used for the control signals of the A/D converter for measuring the field strength.

PA_0 to PD_3 are I/O ports which are used as control signal sources for switching RF gain, IF band, oscillator, etc. All outputs are "high" when activated except for PA2 (FM AUTO/MONO).

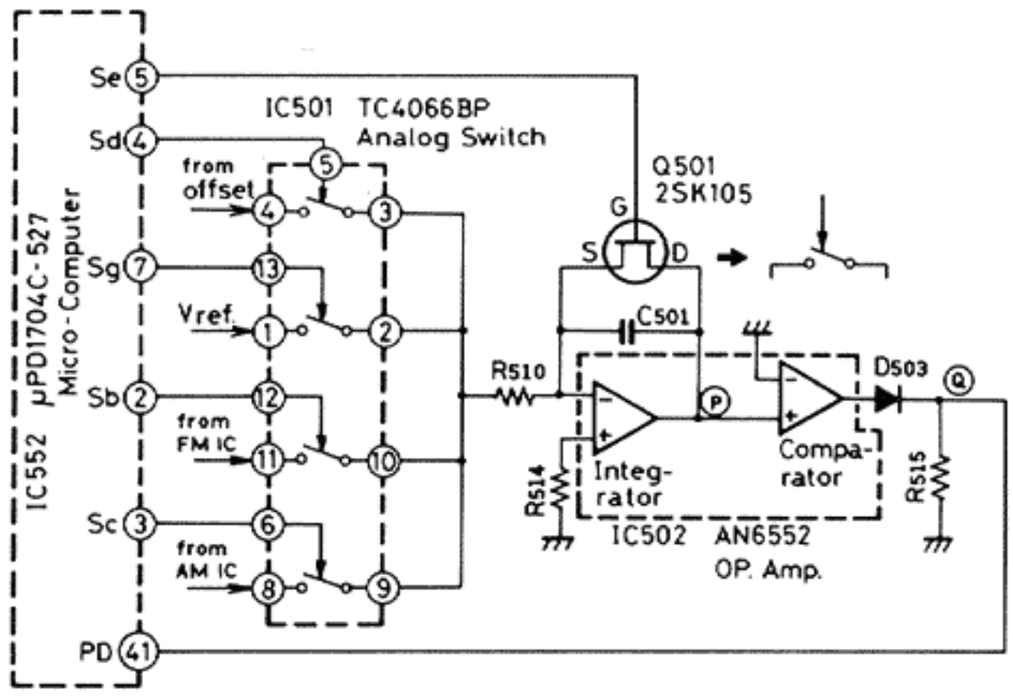


Fig. 7

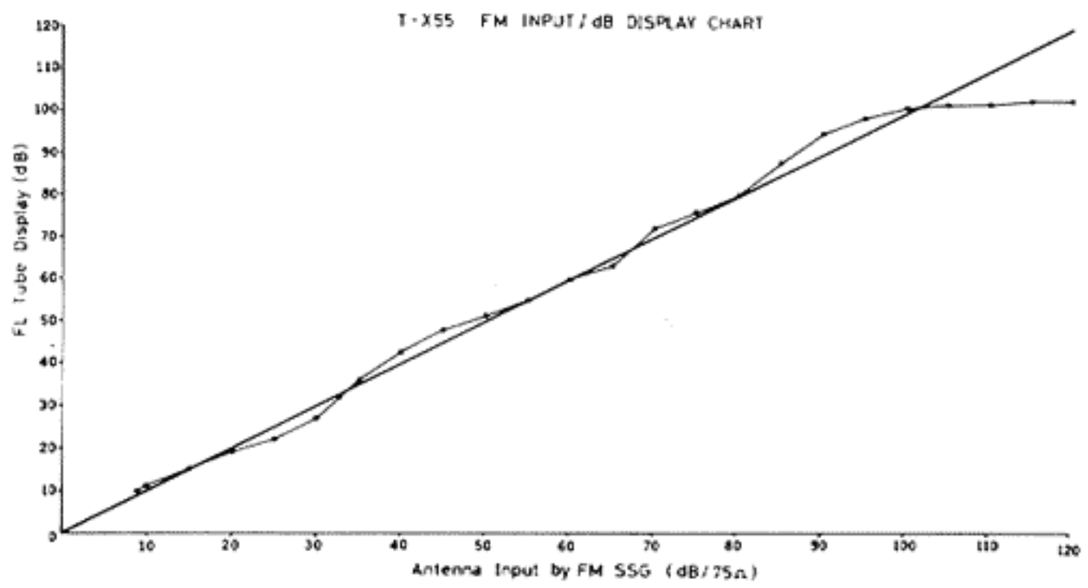


Fig. 8

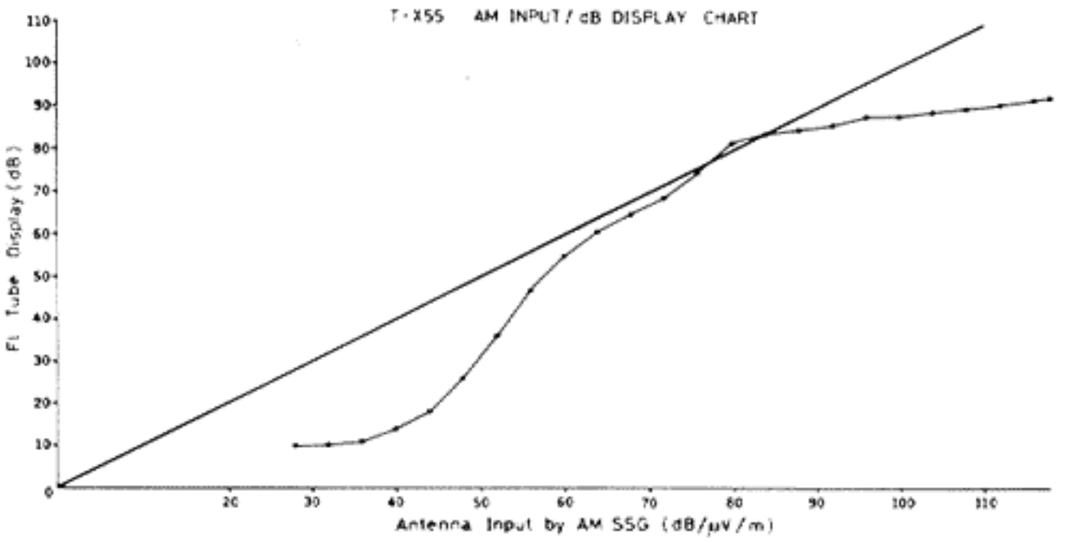


Fig. 9

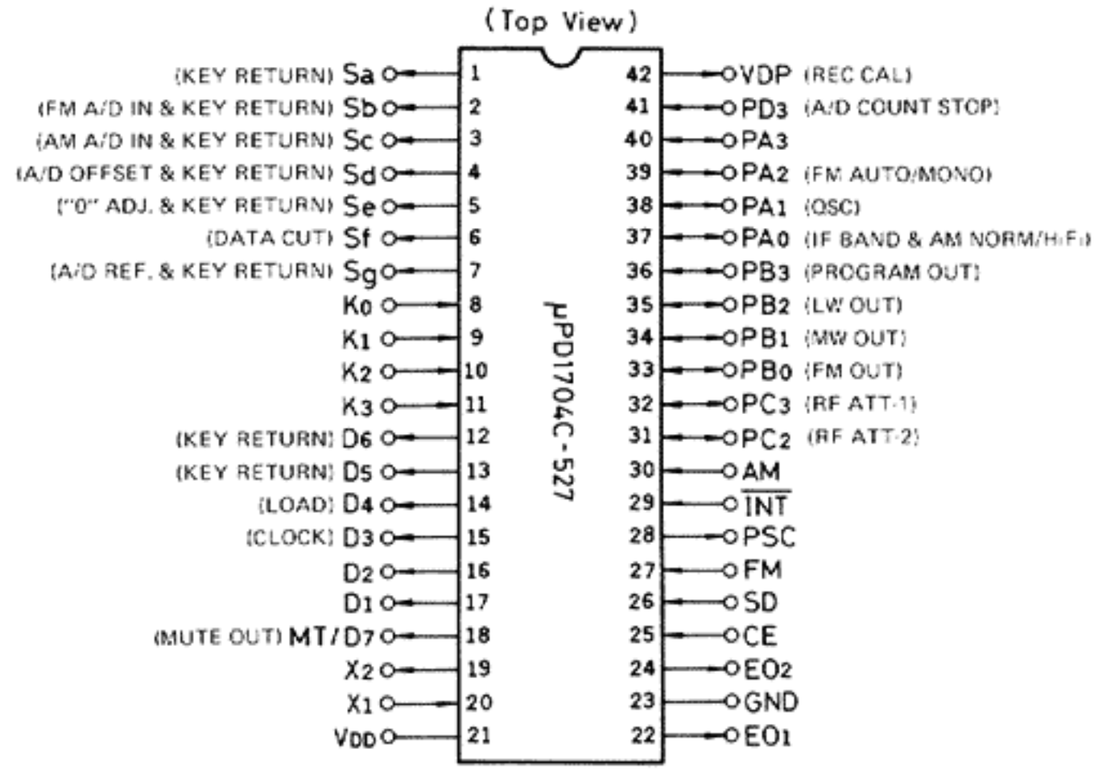


Fig. 10

5. Block Diagram

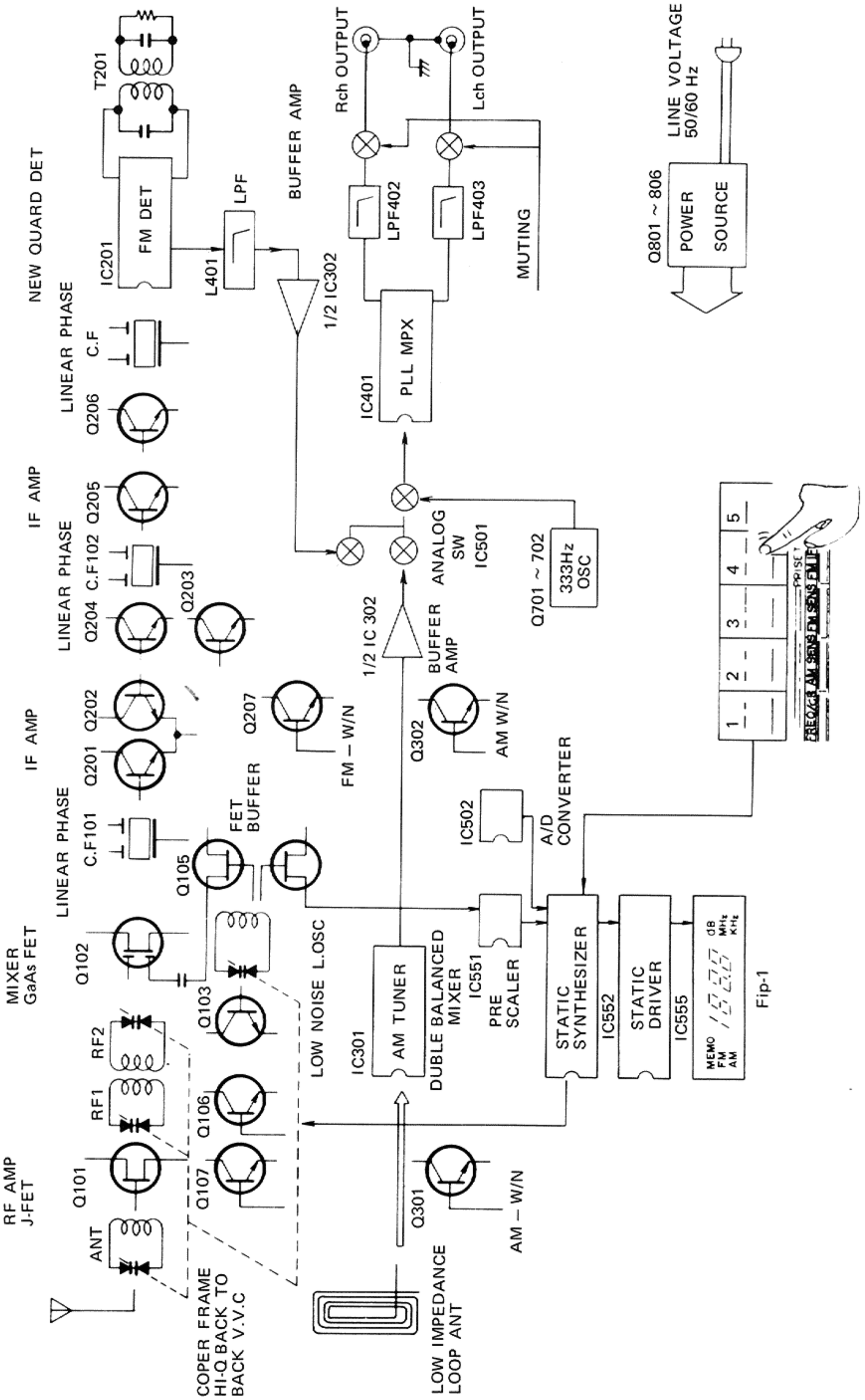
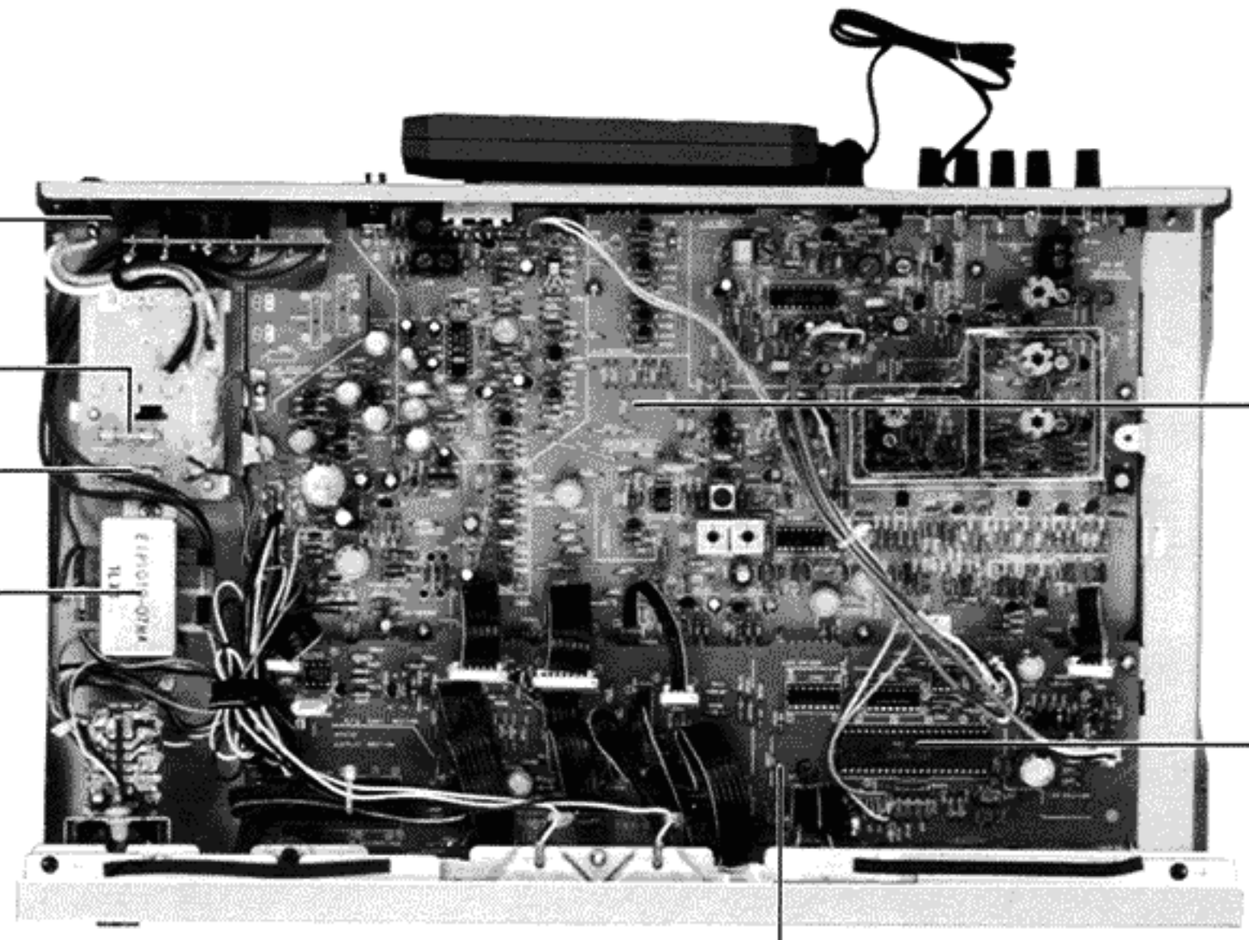


Fig. 11

6. Main Parts Locations

6-(1) Top View



⚠ : Safety Parts

Fig. 12

6-(2) Front View

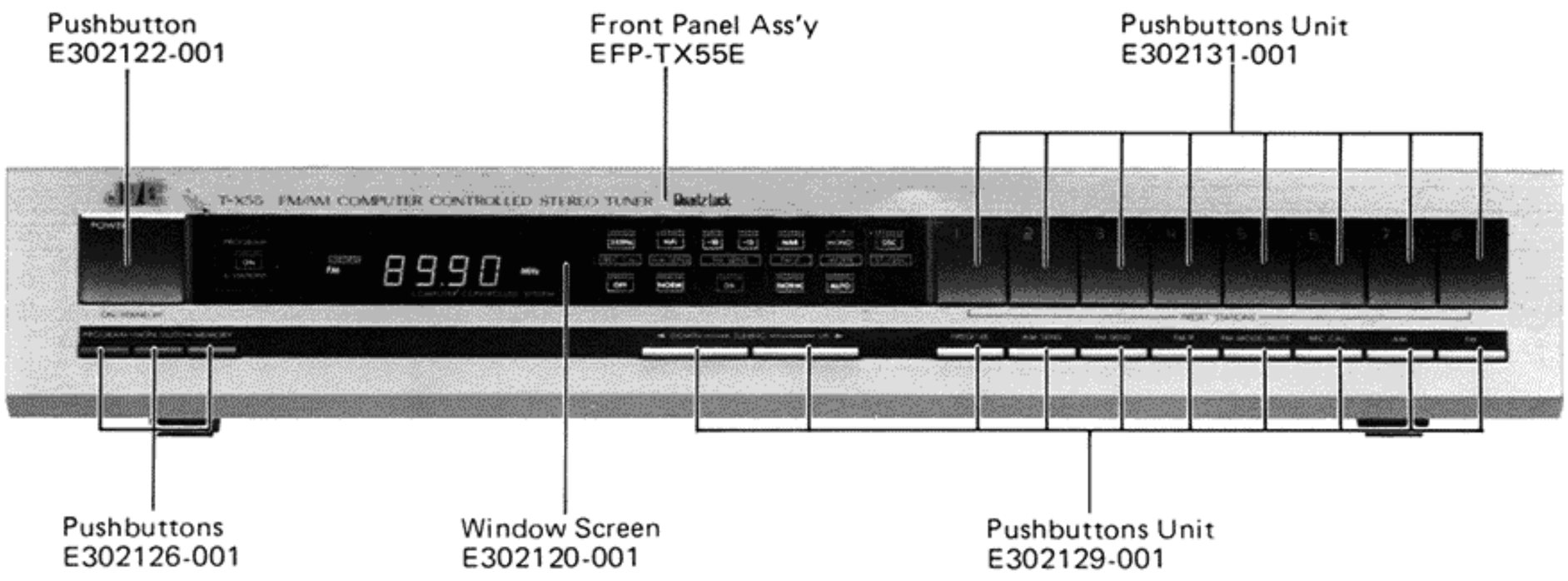


Fig. 13

6-(3) Rear View

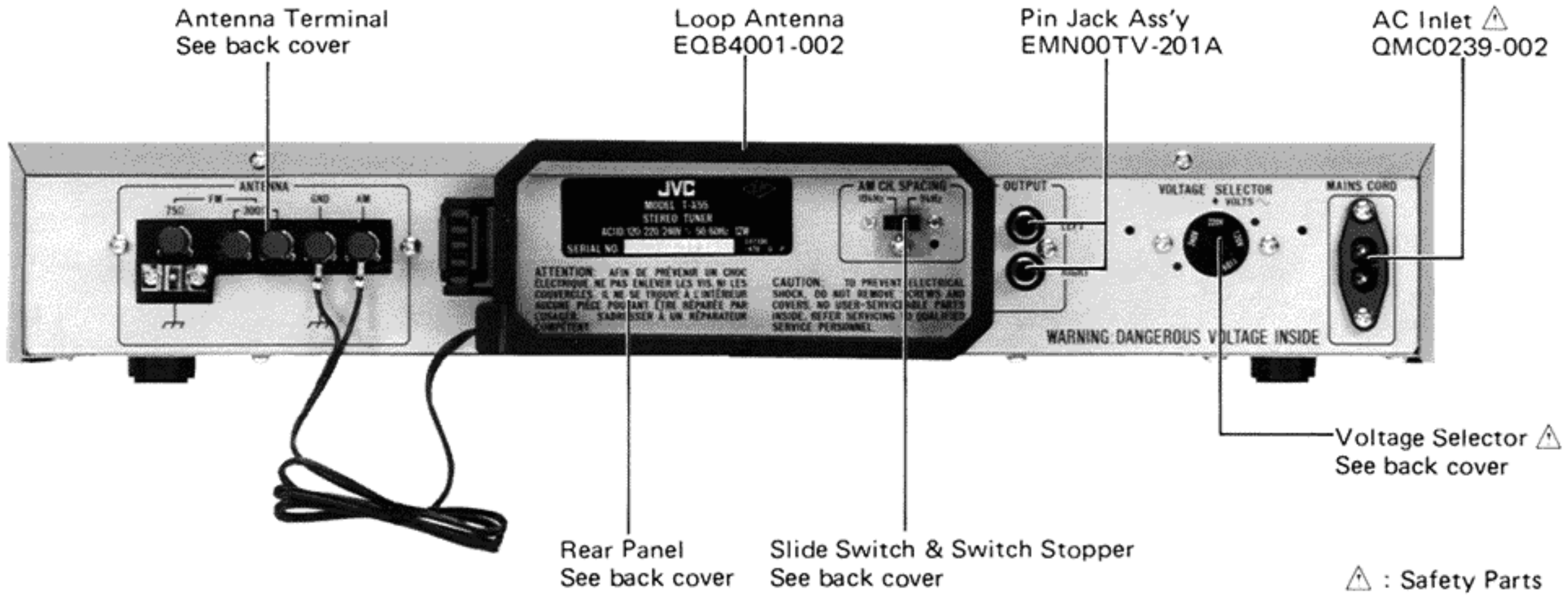
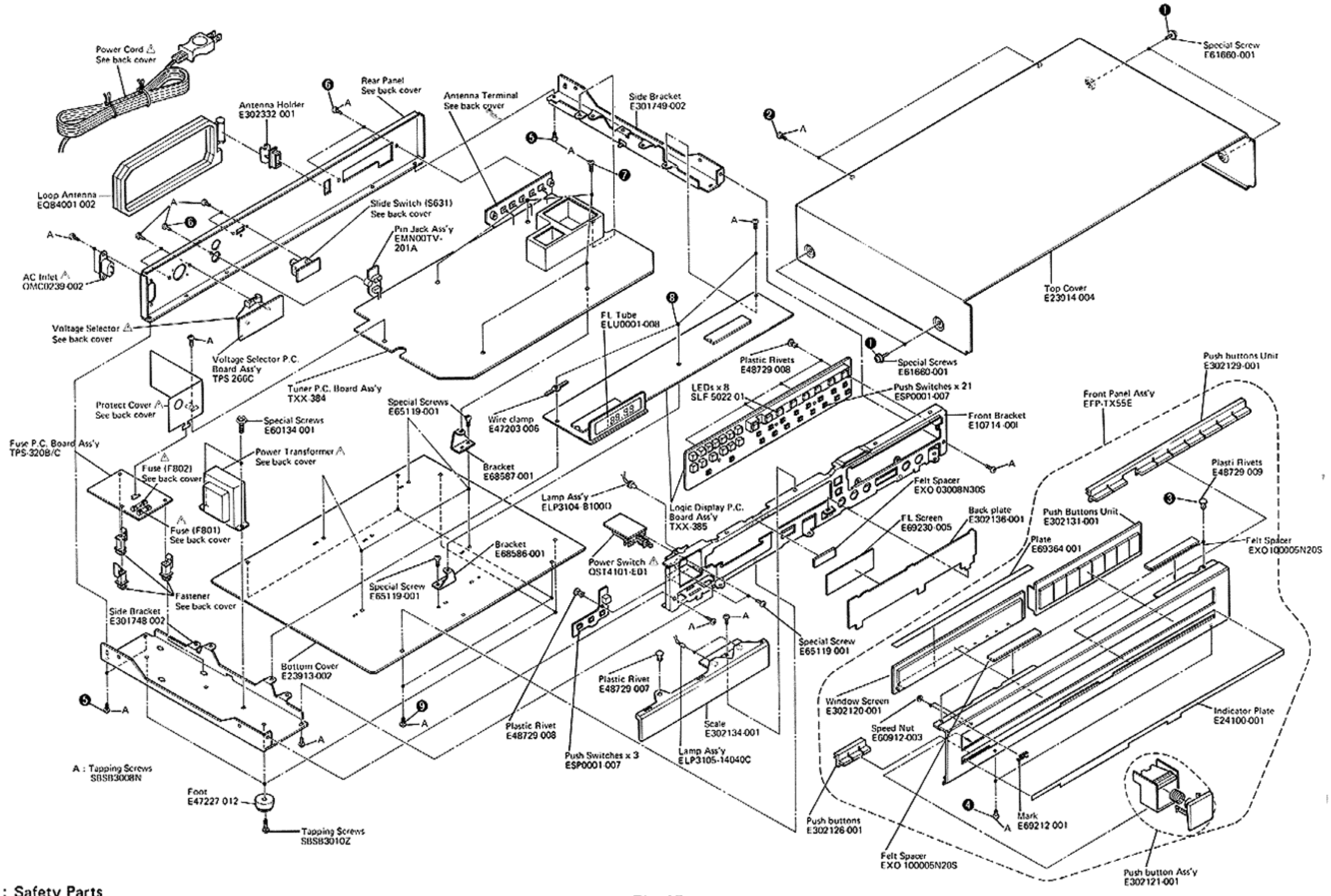


Fig. 14

7. Exploded View and Part Numbers



⚠ : Safety Parts

Fig. 15

Removal of Top Cover

1. Remove 4 screws ❶ with washers and 2 screws ❷.
2. Take out the top cover as lifting up its rear part.

Removal of Front Panel

1. Remove the top cover.
2. Remove 2 plastic revets ❸ in the upper side and 3 screws ❹ in the lower side.

Removal of Rear Panel

1. Remove the top cover.
2. Remove the loop antenna wire from the antenna terminal.
3. Remove 5 screws ❺ in the lower side and 3 screws ❻ in the rear side.

Removal of Bottom Cover

1. Remove the top cover.
2. Remove 4 screws ❼ among the 6 screws mounting the tuner board.
3. Remove 1 screw ❽ among the 3 screws mounting the logic board.
4. Remove 4 screws ❾ mounting the bottom board.

8. Tuner Alignment Procedures

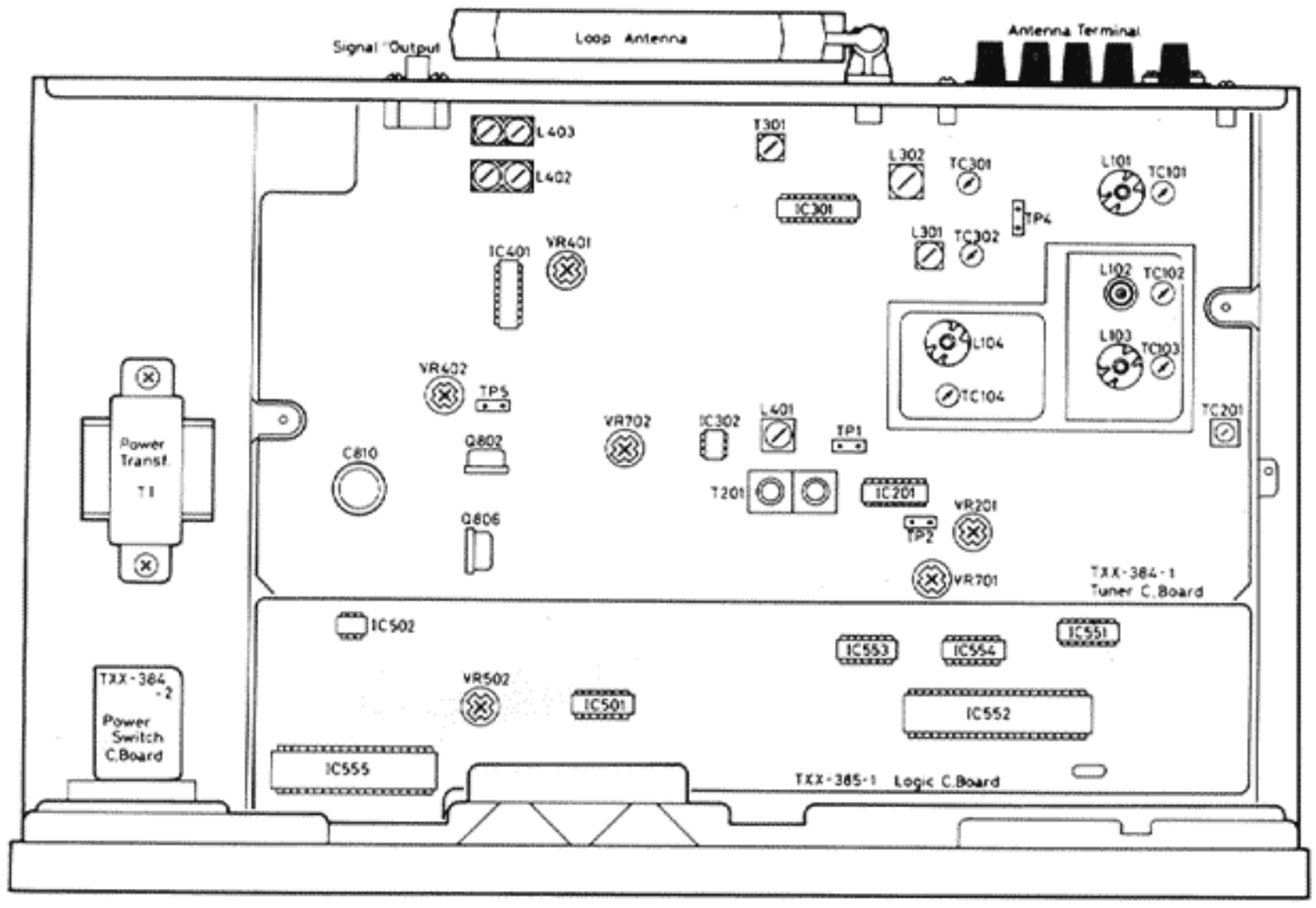
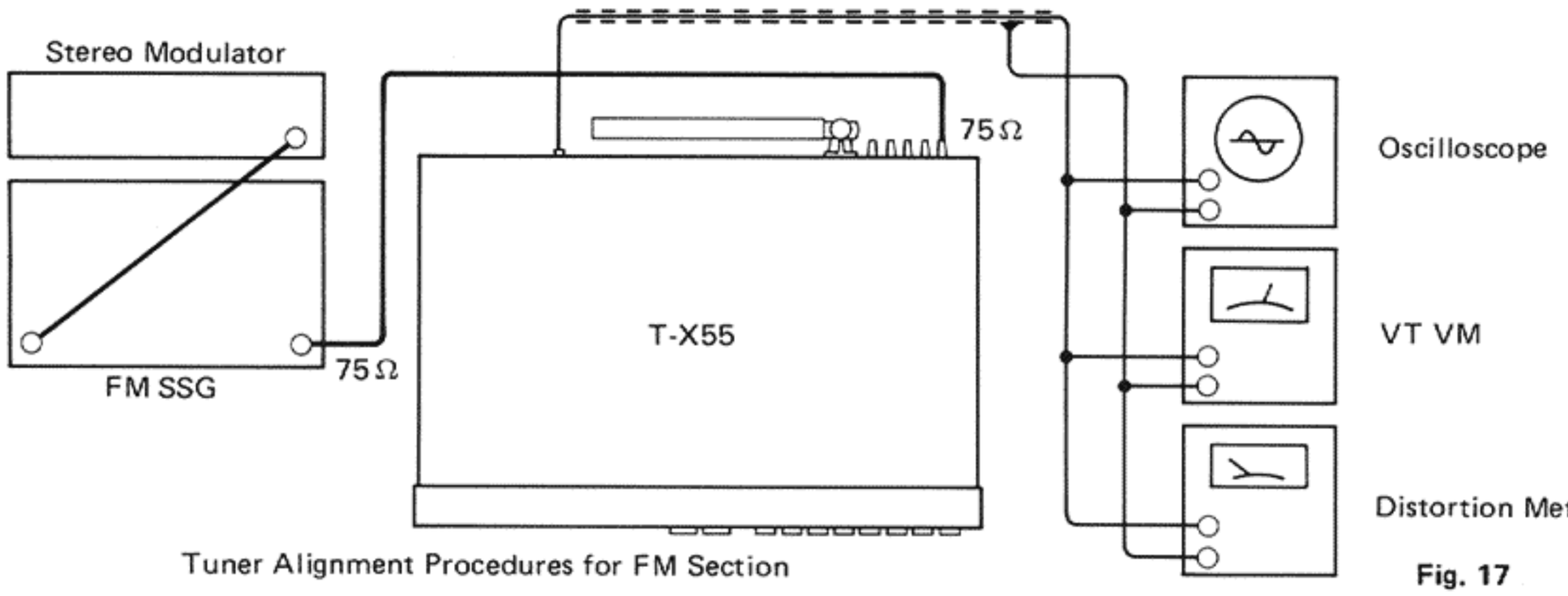


Fig. 16

Alignment Locations

Note:
For adjusting the tuning core, use a non-metal tool such as of Bakelite, polycarbonate, etc.

8-(1) Frontend Section



Tuner Alignment Procedures for FM Section

Fig. 17

L104: FM oscillator tuning coil
Tune in to 87.9 MHz and set the FM MODE/MUTE switch to MONO. Thereupon, confirm that noise appears in the output with no input. Next, adjust the voltage at TP-4 (servo voltage) to 6 ±0.1 V.

TC104: FM oscillator tuning trimmer
Tune in to 107.9 MHz and set the FM MODE/MUTE switch to MONO. Thereupon, confirm that noise appears in the output with no input. Next, adjust the voltage at TP-4 (servo voltage) to 22.0 ±0.1 V.

L101: FM ANT tuning coil
L102: FM RF1 tuning coil
L103: FM RF2 tuning coil
} Optimize the sensitivity at 89.9 MHz

TC101: FM ANT tuning trimmer
TC102: FM RF1 tuning trimmer
TC103: FM RF2 tuning trimmer
} Optimize the sensitivity at 105.9 MHz

8-(2) IF Detection Section

T201: FM detection coil
Receive a station, then connect a center meter or digital voltmeter to TP-1 and adjust the primary side of T201 so that the center meter reads "0" or DVM indicates 0 mV. Adjust the secondary side so that the distortion is minimized.

VR201: Muting level adjusting VR
When the FM MODE/MUTE switch is in the AUTO/ON position, adjust the VR so that no sound appears at an SG input of 15 dB and sound appears at an SG input of 16 dB – 20 dB.
Turning this VR clockwise causes the muting level to increase whereas turning counterclockwise causes it to decrease.

8-(3) Alignment of FM dB Indicator

1. Turn VR501 fully clockwise.
2. Receive signal with SSG ATT set to 54 dB, set the dB indication on the fluorescent display to 54 dB by slowly turning clockwise VR701 once turned counterclockwise.
3. With SSG ATT set to 10 dB, if the dB indication on the fluorescent display exceeds 10 dB, the adjustment is completed.
4. With SSG ATT set to 10 dB, if the dB indication on the fluorescent display reads 0 dB, turn VR501 slowly counterclockwise to set to dB indication to 10 dB.
5. Again with SSG ATT set to 54 dB, adjust VR701 to set the dB indication to 54 dB.

During adjustments 1 through 5, make sure that "-10" LED does not flicker with the FREQ/dB knob pressed.
Without SSG:
Use an FM/TV field strength measuring instrument. After checking the field strength, perform the adjustments above.

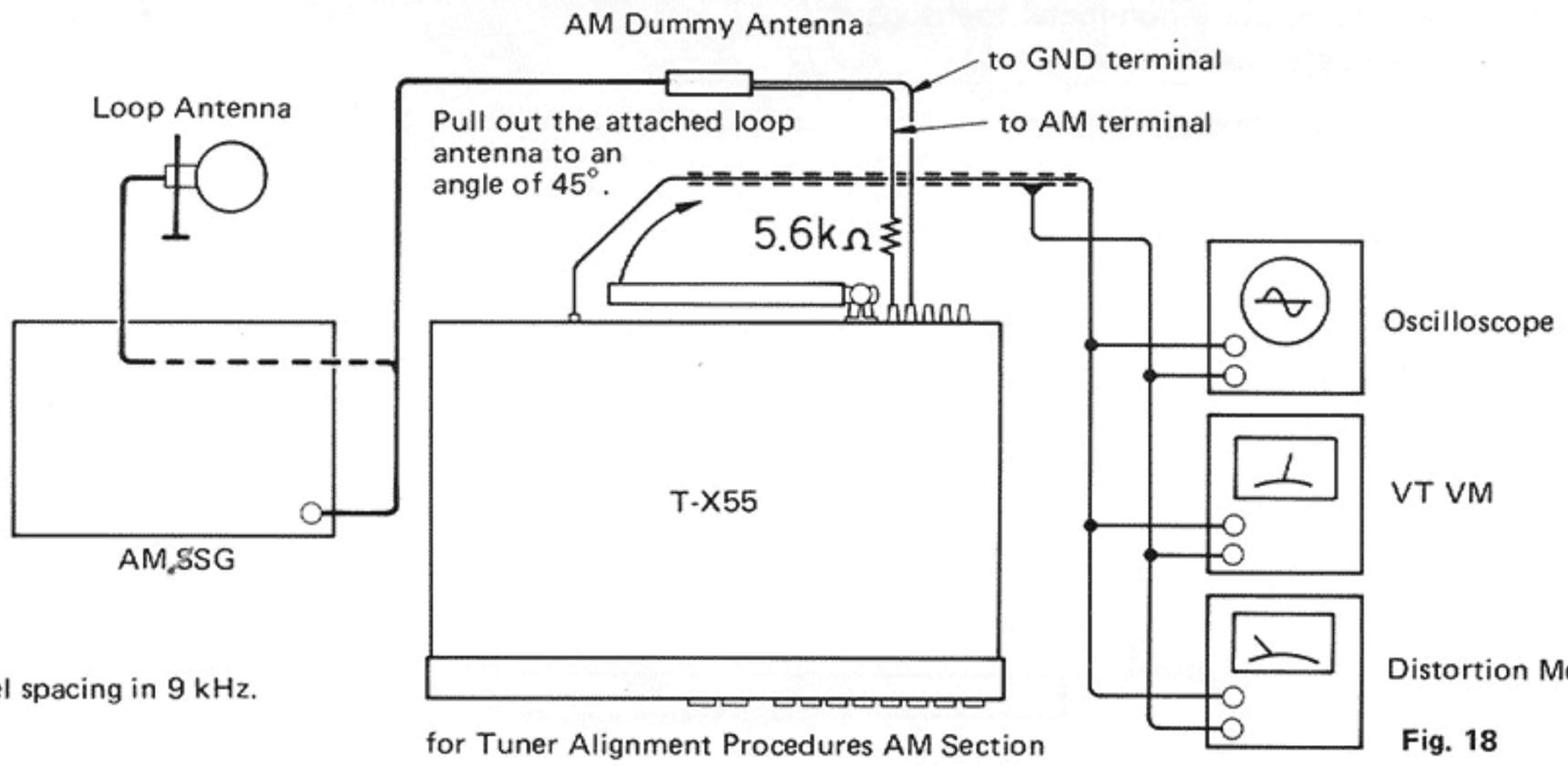
8-(4) MPX section

VR402: MPX VCO free-run frequency adjustment VR
Connect a frequency counter to TP-5, then adjust the free-run frequency to 76 kHz. Turning this VR clockwise causes the free-run frequency to become low, while turning counterclockwise causes it to become high.

VR401: Channel separation adjustment VR
Adjust VR401 so that the crosstalk from R channel to L channel is minimized and that the crosstalk from L to R is equal to that from R to L. Turning the VR clockwise causes the cancel amount to decrrease whereas turning counterclockwise causes it to increase.

Note: L401 (anti-birdie filter) and L402, 403 (MPX LPF) are factory-adjusted. Therefore, no adjustment is required.

8-(5) AM section



for Tuner Alignment Procedures AM Section

Fig. 18

L301: AM oscillator tuning coil
Tune in to 530 (or 531) kHz, then adjust the voltage at TP-4 (servo voltage) to 2.0 ±0.1 V.

TC302: AM oscillator tuning trimmer
Tune in to 1620 (or 1602) kHz, then adjust the voltage at TP-4 (servo voltage) to 22.0 ±0.1 V.

L302: AM bar antenna coil
Optimize the sensitivity at 600 (or 603) kHz.

TC301: AM antenna tuning trimmer
Optimize the sensitivity at 1400 (or 1404) kHz.

T301: AM IFT
CF301: AM IF filter
} As these are factory-adjusted, no adjustment is needed.

8-(6) Alignment of AM dB Indicator

1. With SSG ATT set to 60 dB, tune in to 990 (or 999) kHz. Use an AM dummy antenna.
2. With the FREQ/dB knob pressed, adjust VR702 to set the dB indication on the fluorescent display to 78 dB.

When FM ceramic filters are replaced:
When replacing ceramic filter CF101, CF102 or CF103, be sure to use the same colored E03357-011A, or ECB2118-004R (red). After replacement, adjust TC201 and T201 so that the distortion is minimized and adjust VR401 so that the separation is maximum.

9. Printed Circuit Board Ass'y and Parts List

9-(1) TXX-384 Tuner P.C. Board Ass'y

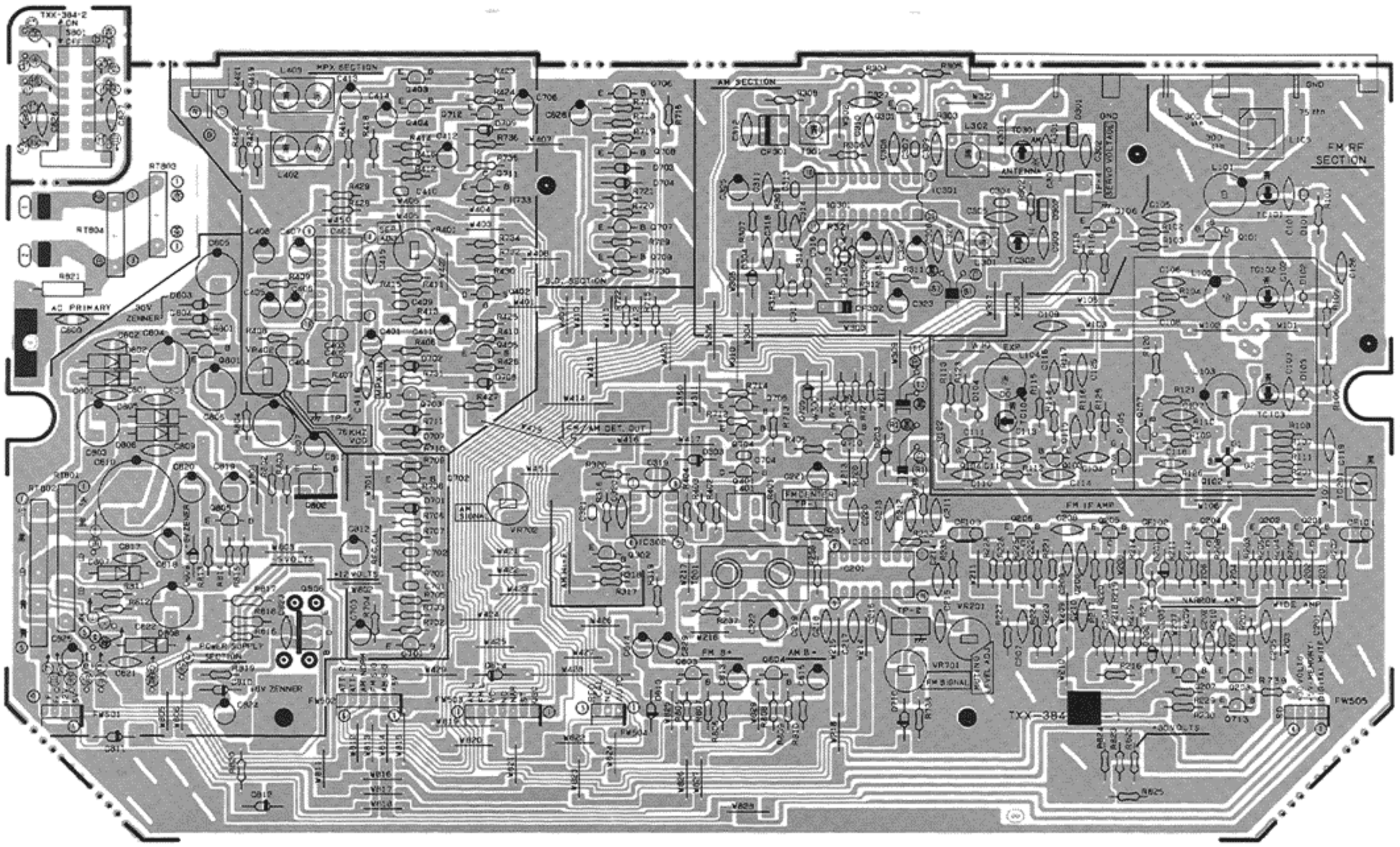


Fig. 19

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q101	2SK168(F)		F.E.T.	Hitachi
Q102	3SK97(Q1)		"	Matsushita
Q103	2SC461(C)		Silicon	Hitachi
Q104	2SK168(E)		F.E.T.	"
Q105	2SK168(E)		"	"
Q106	2SC458(D)		Silicon	"
Q107	2SC458(D)		"	"
Q201	2SC461(C)		"	"
Q202	2SC461(C)		"	"
Q203	2SC461(C)		"	"
Q204	2SC461(C)		"	"
Q205	2SC461(C)		"	"
Q206	2SC461(C)		"	"
Q207	2SC2878(B)		"	Toshiba
Q301	2SC458(D)		"	Hitachi
Q302	2SC458(D)		"	"
Q401	2SK105(F)		F.E.T.	Ryosan
Q402	2SK105(F)		"	"
Q403	2SD655(E)		Silicon	Hitachi
Q404	2SD655(E)		"	"
Q405	2SC458(D)		"	"
Q701	2SC458(D)		"	"
Q702	2SC458(D)		"	"
Q703	2SK105(F)		F.E.T.	Ryosan
Q704	2SC458(D)		Silicon	Hitachi
Q705	2SC458(D)		"	"
Q706	2SC458(C,D)		"	"
Q707	2SC458(C,D)		"	"
Q708	2SA1029(C)		"	"
Q709	2SC458(C,D)		"	"

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q710	2SC458(C,D)		Silicon	Hitachi
Q711	2SC458(C,D)		"	"
Q712	2SA1029(C)		"	"
Q801	2SC2235(Y)		"	Toshiba
Q802	2SD313V(E)		"	Sanyo
Q803	2SC2235(Y)		"	Toshiba
Q804	2SC2235(Y)		"	"
Q805	2SB562(C)		"	Hitachi
Q806	2SD313V(E)		"	Sanyo

Integrated Circuits

Item No.	Part Number	Rating	Description	
				Maker
IC201	LA1235B		I.C.	Sanyo
IC301	LA1245		"	"
IC302	NJM4558D-D		"	Dainichi
IC401	HA12016		"	Hitachi

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D101	KV1320		Varicap	Toko
D102	KV1320		"	"
D103	KV1320		"	"
D104	KV1320		"	"
D201	1S2076-31Y		Silicon	Hitachi
D202	1S2076-31Y		"	"
D203	1S2076-31Y		"	"
D301	KV1226		Varicap	Toko
D302	KV1226		"	"
D303	1S2076-31Y		Silicon	Hitachi
D304	1S2076-31Y		"	"
D701	1S2076-31Y		"	"
D702	1S2076-31Y		"	"
D703	1S2076-31Y		"	"
D704	1S2076-31Y		"	"
D705	1S2076-31Y		"	"
D706	1S2076-31Y		"	"
D707	1S2076-31Y		"	"
D708	1S2076-31Y		"	"
D709	1S2076-31Y		"	"
D710	1S2076-31Y		"	"
D801	ERB12-02RKL1		"	Kyodo
D802	ERB12-02RKL1		"	"
D803	RD30EB3		Zener	Ryosan
D804	1S2076-31Y		Silicon	Hitachi
D805	ERB12-02RKL1		"	Kyodo
D806	ERB12-02RKL1		"	"
D807	ERB12-02RKL1		"	"
D808	ERB12-02RKL1		"	"
D809	RD6.2EB3		Zener	Ryosan
D810	RD6.2EB3		"	"
D811	1S2076-31Y		Silicon	Hitachi
D812	1S2076-31Y		"	"
D813	1S2076-31Y		"	"
D814	1S2076-31Y		"	"

Coils and Transformers

Item No.	Part Number	Rating	Description
L101	EQR2106-005		RF Coil
L102	EQR2106-011		"
L103	EQR2106-008		"
L104	EQR2406-002		"
L105	E03177-005		Balloon
L301	EQR1207-001		RF Coil
L302	EQR1110-001		"
T201	EQT2140-003		I.F. Transformer
T301	EQT1021-001		"

Capacitors

Item No.	Part Number	Rating		Description
C101	QCT25TH-5R0	5 pF	50 V	Ceramic
C102	QCT25TH-100	10 pF	"	"
C103	QCT25TH-100	"	"	"
C104	QCS31HJ-330	33 pF	"	"
C105	QCF31HP-103	0.01 μF	"	"
C106	QCF31HP-103	"	"	"
C107	QCF31HP-223	0.022 μF	"	"
C108	QCF31HP-223	"	"	"
C109	QCS31EM-473	0.047 μF	25 V	"
C110	QCF31HP-103	0.01 μF	50 V	"
C111	QCT25CH-2R0	2 pF	"	"
C112	QCT25TH-2R0	"	"	"
C113	QCT26TH-150	15 pF	"	"
C114	QCT25TH-220	22 pF	"	"
C115	QCT25TH-150	15 pF	"	"
C116	QCF31HP-223	0.022 μF	"	"
C118	QCF21HP-102	1000 pF	"	"
C119	QCF31HP-223	0.022 μF	"	"
C140	QFM31HK-102	1000 pF	"	Mylar
C201	QCF31HP-223	0.022 μF	"	Ceramic

Capacitors

Item No.	Part Number	Rating		Description
C202	QCF31HP-223	0.022 μF	50 V	Ceramic
C203	QCF31HP-223	"	"	"
C204	QCF31HP-223	"	"	"
C205	QCF31HP-223	"	"	"
C206	QCF31HP-223	"	"	"
C207	QCF31HP-223	"	"	"
C208	QCF31HP-103	0.01 μF	"	"
C209	QCF31HP-103	"	"	"
C211	QCC31EM-473	0.047 μF	25 V	"
C212	QCC31EM-473	"	"	"
C213	QCC31EM-473	"	"	"
C214	QCF31HP-223	0.022 μF	50 V	"
C215	QCF31HP-223	"	"	"
C216	QCF31HP-223	"	"	"
C217	QCC31EM-473	0.047 μF	25 V	"
C218	QCF31HP-223	0.022 μF	50 V	"
C219	QCF31HP-223	"	"	"
C220	QCS31HJ-221	220 pF	"	"
C221	QET61HR-225	2.2 μF	"	Electrolytic
C222	QET61AR-227	220 μF	10 V	"
C301	QCS31HJ-5R0	5 pF	50 V	Ceramic
C302	QCF31HP-473	0.047 μF	"	"
C303	QCS31HJ-180	18 pF	"	"
C304	QFP31HJ-431	430 pF	"	Polypropylene
C305	QCS31HJ-220	22 pF	"	Ceramic
C306	QCF31HP-473	0.047 μF	"	"
C307	QFM31HK-102	1000 pF	"	Mylar
C308	QCF31HP-223	0.022 μF	"	Ceramic
C309	QCF31HP-223	"	"	"
C310	QCF31HP-223	"	"	"
C311	QCF31HP-223	"	"	"
C312	QCS31HJ-560	56 pF	"	"
C313	QFM31HK-103	0.01 μF	"	Mylar
C314	QCY31HK-102	1000 pF	"	Ceramic
C315	QCF31HP-223	0.022 μF	"	"
C316	QFM31HK-103	0.01 μF	"	Mylar
C317	QFM31HK-103	"	"	"
C318	QCY31HK-332	3300 pF	"	Ceramic
C319	QFM31HK-683	0.068 μF	"	Mylar
C320	QCY31HK-102	1000 pF	"	Ceramic
C321	QFM31HK-103	0.01 μF	"	Mylar
C322	QET61HR-225	2.2 μF	"	Electrolytic
C323	QET61HR-105	1 μF	"	"
C324	QET61HR-475	4.7 μF	"	"
C325	QET61ER-106	10 μF	25 V	"
C326	QCY31HK-102	1000 pF	50 V	Ceramic
C401	QET61ER-106	10 μF	25 V	Electrolytic
C402	QFM31HK-182	1800 pF	50 V	Mylar
C403	QFM31HK-473	0.047 μF	"	"
C404	QFP31HJ-102	1000 pF	"	Polystyrene
C405	QEB51HM-474	0.47 μF	"	LLC. Electrolytic
C406	QET61HR-475	4.7 μF	"	Electrolytic
C407	QET61HR-475	"	"	"
C408	QET61HR-225	2.2 μF	"	"
C409	QFM31HK-102	1000 pF	"	Mylar (for U.K. and Europe)
C409	QFM31HJ-152	1500 pF	"	Mylar (for Other Areas)
C410	QFM31HK-102	1000 pF	"	Mylar (for U.K. and Europe)
C410	QFM31HJ-152	1500 pF	"	Mylar (for Other Areas)
C411	QET61ER-226	22 μF	25 V	Electrolytic
C412	QET61ER-226	"	"	"
C413	QET61HR-475	4.7 μF	50 V	"
C414	QET61HR-475	"	"	"
C415	QCS31HJ-101	100 pF	"	Ceramic
C416	QCS21HJ-101	"	"	Ceramic (for W. Germany only)
C701	QFM31HK-103	0.01 μF	"	Mylar
C702	QFM31HK-103	"	"	"
C703	QET61HR-225	2.2 μF	"	Electrolytic

Capacitors

Item No.	Part Number	Rating		Description
C704	QFM31HK-103	0.01 μF	50 V	Mylar
C706	QET61HR-474	0.47 μF	"	Electrolytic
C801	QCF31HP-103	0.01 μF	"	Ceramic
C802	QCF31HP-103	"	"	"
C803	QET51VR-227	220 μF	35 V	Electrolytic
C804	QET51HR-107	100 μF	50 V	"
C805	QET51VR-227	220 μF	35 V	"
C806	QET51VR-227	"	"	"
C807	QET51VR-107	100 μF	"	"
C808	QCF31HP-103	0.01 μF	50 V	Ceramic
C809	QCF31HP-103	"	"	"
C810	QET51ER-228	1000 μF	25 V	Electrolytic
C811	QET61CR-226	22 μF	16 V	"
C812	QET61CR-476	47 μF	"	"
C813	QET61ER-106	10 μF	25 V	"
C814	QET61CR-476	47 μF	16 V	"
C815	QET61ER-106	10 μF	25 V	"
C817	QCF31HP-103Z	0.01 μF	50 V	Ceramic
C818	QET61ER-107ZM	100 μF	25 V	Electrolytic
C819	QET61AR-107ZM	"	10 V	"
C820	QET61AR-107ZM	"	"	"
C821	QCF31HP-103Z	0.01 μF	50 V	Ceramic
C822	QET51ER-477	470 μF	25 V	Electrolytic
C823	QCF31HP-103Z	0.01 μF	50 V	Ceramic
C824	QET61AR-107ZM	100 μF	10 V	Electrolytic
C825	QET61AR-107ZM	"	"	"
C826	QCF31HP-103Z	0.01 μF	50 V	Ceramic
C827	QCF31HP-103Z	"	"	"
TC101	ENZ1003-003			Trimmer
TC102	ENZ1003-003			"
TC103	ENZ1003-003			"
TC104	ENZ1003-003			"
TC201	QAT2001-005			"
TC301	ENZ1003-002			"
TC302	ENZ1003-002			"

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-473S	47 k	1/4 W	Carbon
R102	QRD141J-330S	33	"	"
R103	QRD141J-392S	3.9 k	"	"
R104	QRD141J-221S	220	"	"
R105	QRD141J-473S	47 k	"	"
R106	QRD141J-473S	"	"	"
R107	QRD141J-183S	18 k	"	"
R108	QRD141J-272S	2.7 k	"	"
R109	QRD141J-821S	820	"	"
R110	QRD141J-561S	560	"	"
R111	QRD141J-331S	330	"	"
R112	QRD141J-331S	"	"	"
R113	QRD141J-224S	220 k	"	"
R114	QRD141J-822S	8.2 k	"	"
R115	QRD141J-682S	6.8 k	"	"
R116	QRD141J-821S	820	"	"
R117	QRD141J-331S	330	"	"
R118	QRD141J-473S	47 k	"	"
R119	QRD141J-473S	"	"	"
R120	QRD141J-473S	"	"	"
R121	QRD141J-473S	"	"	"
R122	QRD141J-102S	1 k	"	"
R123	QRD141J-562S	5.6 k	"	"
R125	QRD141J-224S	220 k	"	"
R126	QRD141J-331S	330	"	"
R201	QRD141J-101S	100	"	"
R202	QRD141J-102S	1 k	"	"
R203	QRD141J-102S	"	"	"
R204	QRD141J-332S	3.3 k	"	"
R205	QRD141J-392S	3.9 k	"	"

Resistors

Item No.	Part Number	Rating		Description
R206	QRD141J-682S	6.8 k	1/4 W	Carbon
R207	QRD141J-102S	1 k	"	"
R208	QRD141J-102S	"	"	"
R209	QRD141J-331S	330	"	"
R210	QRD141J-332S	3.3 k	"	"
R211	QRD141J-222S	2.2 k	"	"
R212	QRD141J-271S	270	"	"
R213	QRD141J-222S	2.2 k	"	"
R214	QRD141J-331S	330	"	"
R215	QRD141J-272S	2.7 k	"	"
R216	QRD141J-272S	"	"	"
R217	QRD141J-332S	3.3 k	"	"
R218	QRD141J-391S	390	"	"
R219	QRD141J-331S	330	"	"
R220	QRD141J-681S	680	"	"
R221	QRD141J-272S	2.7 k	"	"
R222	QRD141J-471S	470	"	"
R223	QRD141J-272S	2.7 k	"	"
R224	QRD141J-332S	3.3 k	"	"
R225	QRD141J-471S	470	"	"
R226	QRD141J-101S	100	"	"
R227	QRD141J-561S	560	"	"
R228	QRD141J-101S	100	"	"
R229	QRD141J-104S	100 k	"	"
R230	QRD141J-104S	"	"	"
R232	QRD141J-331S	330	"	"
R233	QRD141J-104S	100 k	"	"
R235	QRD141J-821S	820	"	"
R236	QRD141J-103S	10 k	"	Carbon (for U.S.A. and Canada)
R236	QRD141J-153S	15 k	"	Carbon (for Other Areas)
R237	QRD141J-272S	2.7 k	"	Carbon
R238	QRD141J-103S	10 k	"	"
R301	QRD141J-223S	22 k	"	"
R302	QRD141J-473S	47 k	"	"
R303	QRD141J-332S	3.3 k	"	"
R304	QRD141J-104S	100 k	"	"
R305	QRD141J-104S	"	"	"
R306	QRD141J-152S	1.5 k	"	"
R307	QRD141J-151S	150	"	"
R308	QRD141J-221S	220	"	"
R309	QRD141J-331S	330	"	"
R310	QRD141J-820S	82	"	"
R311	QRD141J-103S	10 k	"	"
R312	QRD141J-103S	"	"	"
R313	QRD141J-101S	100	"	"
R314	QRD141J-123S	12 k	"	"
R315	QRD141J-153S	15 k	"	"
R316	QRD141J-103S	10 k	"	"
R317	QRD141J-104S	100 k	"	"
R318	QRD141J-104S	"	"	"
R319	QRD141J-473S	47 k	"	"
R320	QRD141J-103S	10 k	"	"
R401	QRD141J-392S	3.9 k	"	"
R402	QRD141J-103S	10 k	"	"
R403	QRD141J-102S	1 k	"	"
R404	QRD141J-223S	22 k	"	Carbon (for U.K. and Europe)
R404	QRD141J-183S	18 k	"	Carbon (for Other Areas)
R405	QRD141J-224S	220 k	"	Carbon
R406	QRD141J-473S	47 k	"	"
R407	QRD141J-224S	220 k	"	"
R408	QRD141J-682S	6.8 k	"	"
R409	QRD141J-102S	1 k	"	"
R410	QRD141J-224S	220 k	"	"
R411	QRD141J-473S	47 k	"	"
R412	QRD141J-473S	"	"	"
R413	QRD141J-392S	3.9 k	"	"
R414	QRD141J-392S	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R415	QRD141J-223S	22 k	1/4 W	Carbon
R416	QRD141J-223S	"	"	"
R417	QRD141J-332S	3.3 k	"	"
R418	QRD141J-332S	"	"	"
R419	QRD141J-152S	1.5 k	"	"
R420	QRD141J-152S	"	"	"
R421	QRD141J-682S	6.8 k	"	Carbon (for U.K. and Europe)
R421	QRD141J-472S	4.7 k	"	Carbon (for Other Areas)
R422	QRD141J-682S	6.8 k	"	Carbon (for U.K. and Europe)
R422	QRD141J-472S	4.7 k	"	Carbon (for Other Areas)
R423	QRD141J-223S	22 k	"	Carbon
R424	QRD141J-223S	"	"	"
R425	QRD141J-473S	47 k	"	"
R426	QRD141J-104S	100 k	"	"
R427	QRD141J-104S	"	"	"
R428	QRD141J-103S	10 k	"	"
R430	QRD141J-823S	82 k	"	"
R701	QRD141J-562S	5.6 k	"	"
R702	QRD141J-153S	15 k	"	"
R703	QRD141J-563S	56 k	"	"
R704	QRD141J-332S	3.3 k	"	"
R705	QRD141J-103S	10 k	"	"
R706	QRD141J-103S	"	"	"
R707	QRD141J-563S	56 k	"	Carbon (for U.K. and Others)
R707	QRD141J-823S	82 k	"	Carbon (for Other Areas)
R708	QRD141J-153S	15 k	"	Carbon
R709	QRD141J-104S	100 k	"	"
R710	QRD141J-104S	"	"	"
R711	QRD141J-224S	220 k	"	"
R712	QRD141J-104S	100 k	"	"
R713	QRD141J-104S	"	"	"
R714	QRD141J-104S	"	"	"
R715	QRD141J-682S	6.8 k	"	"
R716	QRD141J-392S	3.9 k	"	"
R717	QRD141J-682S	6.8 k	"	"
R718	QRD141J-473S	47 k	"	"
R719	QRD141J-682S	6.8 k	"	"
R720	QRD141J-682S	"	"	"
R721	QRD141J-223S	22 k	"	"
R722	QRD141J-473S	47 k	"	"
R725	QRD141J-104S	100 k	"	"
R726	QRD141J-104S	"	"	"
R727	QRD141J-104S	"	"	"
R728	QRD141J-104S	"	"	"
R729	QRD141J-473S	47 k	"	"
R730	QRD141J-562S	5.6 k	"	"
R731	QRD141J-223S	22 k	"	"
R732	QRD141J-103S	10 k	"	"
R733	QRD141J-473S	47 k	"	"
R734	QRD141J-473S	"	"	"
R735	QRD141J-103S	10 k	"	"
R736	QRD141J-104S	100 k	"	"
R737	QRD141J-563S	56 k	"	"
R738	QRD141J-683S	68 k	"	"
R801	QRD141J-272S	2.7 k	"	"
R802	QRZ0052-100	10	"	Fusible ⚠
R803	QRD141J-562S	5.6 k	"	Carbon
R804	QRD141J-562S	"	"	"
R805	QRZ0052-180	18	"	Fusible ⚠
R806	QRD141J-103S	10 k	"	Carbon
R807	QRD141J-103S	"	"	"
R808	QRZ0052-180	18	"	Fusible ⚠
R809	QRD141J-103S	10 k	"	Carbon
R810	QRD141J-103S	"	"	"
R811	QRD141J-221S	220	"	"

Resistors

Item No.	Part Number	Rating		Description
R812	QRD141J-103S	10 k	1/4 W	Carbon
R813	QRD141J-472S	4.7 k	"	"
R814	QRD141J-221S	220	"	"
R815	QRD141J-221S	"	"	"
R816	QRD141J-102S	1 k	"	"
R817	QRD129J-270	27	1/2 W	UNF. Carbon ⚠
R818	QRD129J-270	"	"	" ⚠
R819	QRD141J-221S	220	1/4 W	Carbon
R820	QRD141J-221S	"	"	"
R821	QRC121K-275EM	2.7 M	1/2 W	Composition ⚠ (for U.S.A. and Canada)
R822	QRD141J-820S	82	1/4 W	Carbon
R823	QRD141J-820S	"	"	"
VR201	QVP4A0B-223	22 k		Variable
VR401	QVP4A0B-104	100 k		"
VR402	QVP4A0B-222	2.2 k		"
VR701	QVP4A0B-473	47 k		"
VR702	AVP4A0B-473	"		"

⚠ : Safety Parts

Others

Item No.	Part Number	Rating	Description
	E10706-102		Circuit Board
	EMN00TV-201A		2P Pin Jack
	E65396-001		Earth Plate
	E66724-001		Shield Cover
L401	EQF0102-001		Filter
L402	E03427-020		Low Pass Filter
L403	E03427-020		"
S801	QST4101-E01		Push Switch (Standby Switch)
CF101	E03357-011A		Ceramic Filter
CF102	ECB2118-004R		"
CF103	E03357-011A		"
CF301	E03613-019		"
CF302	E03613-022		"
RT803	E67764-103		Wraping Terminal ⚠ (for U.S.A. and Canada)
RT804	E67764-103		" (") ⚠
R321	SDT35		Thermistor

9-(2) TXX-385 Logic & Display P.C. Board Ass'y

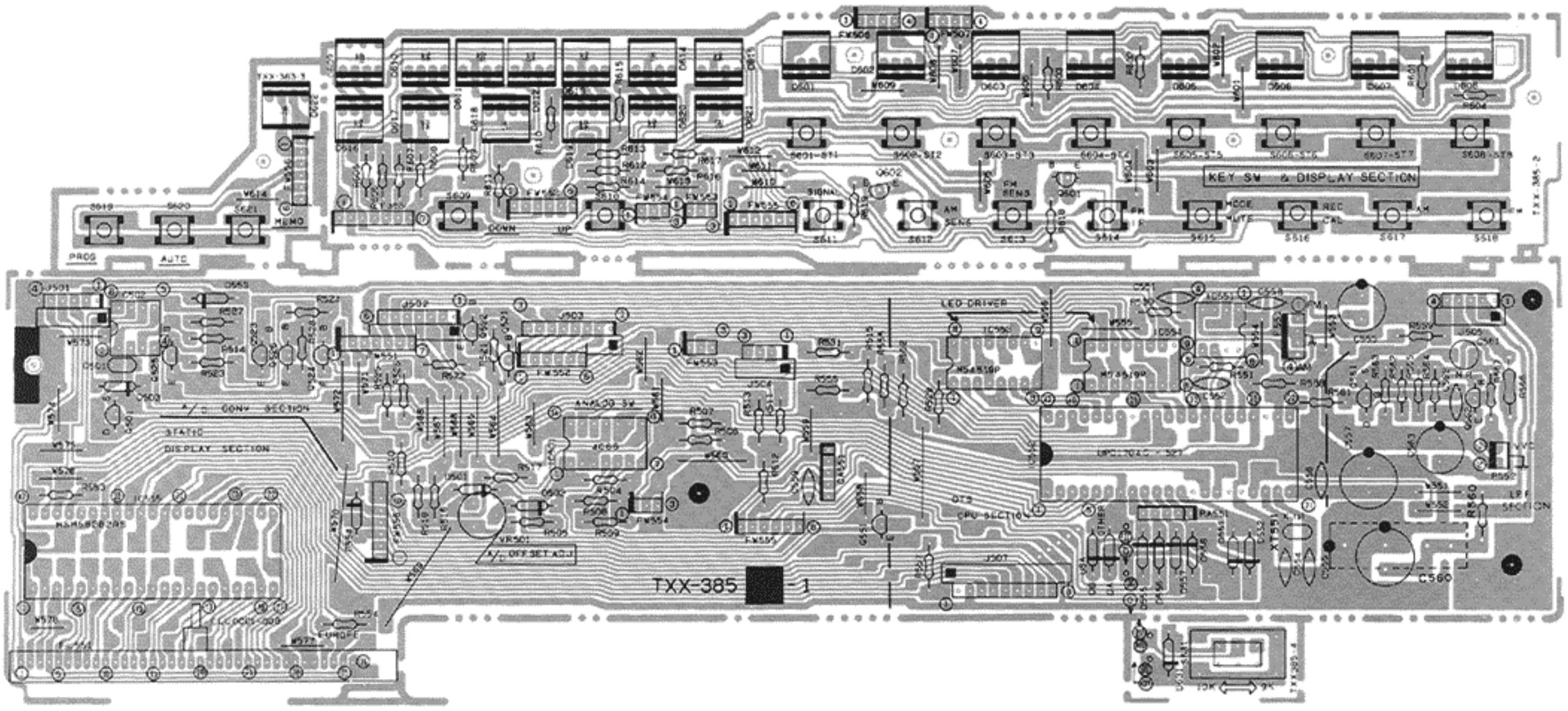


Fig. 20

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q501	2SK105(F)		F.E.T.	Ryosan
Q521	2SC458(D)		Silicon	Hitachi
Q522	2SC458(D)		"	"
Q523	2SB562(C)		"	"
Q524	2SA1029(D)		"	"
Q525	2SC458(D)		"	"
Q526	2SC458(D)		"	"
Q551	2SC458(D)		"	"
Q561	2SK104(F)		F.E.T.	Ryosan
Q562	2SC458(C)		Silicon	Hitachi
Q601	2SC458(C)		"	"
Q602	2SC458(C)		"	"

Integrated Circuits

Item No.	Part Number	Rating	Description	
				Maker
IC501	TC4066BP		I.C.	Toshiba
IC502	AN6552		"	Matsushita
IC551	UPB553AC		"	Ryosan
IC552	UPD1704C-527		"	"
IC553	M54519P		"	"
IC554	M54519P		"	"
IC555	MSM58282RS		"	Oki Denki

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D501	1S2076-31Y		Silicon	Hitachi
D502	1S2076-31Y		"	"
D503	1S2076-31Y		"	"
D551	1S2076-31Y		"	"
D552	1S2076-31Y		"	"
D553	1S2076-31Y		"	"
D554	1S2076-31Y		"	"
D555	1S2076-31Y		"	"
D556	1S2076-31Y		"	"
D557	1S2076-31Y		"	"
D558	1S2076-31Y		"	"
D601	SLF-5022-01		L.E.D.	Sanyo
D602	SLF-5022-01		"	"
D603	SLF-5022-01		"	"
D604	SLF-5022-01		"	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D605	SLF-5022-01		L.E.D.	Sanyo
D606	SLF-5022-01		"	"
D607	SLF-5022-01		"	"
D608	SLF-5022-01		"	"
D609	SLF-402D		"	"
D610	SLF-202D		"	"
D611	SLF-402D		"	"
D612	SLF-202D		"	"
D613	SLF-202D		"	"
D614	SLF-102D		"	"
D615	SLF-202D		"	"
D616	SLF-202D		"	"
D617	SLF-202D		"	"
D618	SLF-102D		"	"
D619	SLF-202D		"	"
D620	SLF-202D		"	"
D621	SLF-102D		"	"
D622	SLF-102D		"	"
D631	1S2076-31		Silicon	Hitachi (Except Europe and U.K)
D-B	1S2076-31		"	Hitachi (for U.S.A. and Canada)
D-A	1S2076-31		"	Hitachi (for Other Areas)

Capacitors

Item No.	Part Number	Rating		Description
C501	QFM81HK-224	0.22 μF	50 V	Mylar
C551	QCF31HP-223	0.022 μF	"	Ceramic
C552	QCY31HK-102	1000 pF	"	"
C553	QET50JR-477	470 μF	6.3 V	Electrolytic
C554	QCS31HJ-150	15 pF	50 V	Ceramic
C555	QCS31HJ-150	"	"	"
C556	QCF31HP-223	0.022 μF	"	"
C557	QET50JR-228H	2200 μF	6.3 V	Electrolytic
C558	QCS31HJ-101	100 pF	50 V	Ceramic
C559	QCY31HK-102	1000 pF	"	"
C561	QEZ0046-225	2.2 μF	"	N.P. Electrolytic
C562	QCY31HK-102	1000 pF	"	Ceramic
C563	QET51VR-107	100 μF	35 V	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R502	QRD141J-102S	1 k	1/4 W	Carbon
R503	QRD141J-102S	"	"	"
R504	QRD141J-103S	10 k	"	"
R505	QRD141J-472S	4.7 k	"	"
R506	QRD141J-334S	330 k	"	"
R507	QRD141J-334S	"	"	"
R508	QRD141J-334S	"	"	"
R509	QRD141J-334S	"	"	"
R510	QRD141J-563S	56 k	"	"
R511	QRD141J-475S	4.7 M	"	"
R512	QRD141J-562S	5.6 k	"	"
R513	QRD141J-563S	56 k	"	"
R514	QRD141J-563S	"	"	"
R515	QRD141J-103S	10 k	"	"
R516	QRD141J-473S	47 k	"	"
R517	QRD141J-223S	22 k	"	"
R518	QRD141J-562S	5.6 k	"	"
R521	QRD141J-103S	10 k	"	"
R522	QRD141J-103S	"	"	"
R523	QRD141J-472S	4.7 k	"	"
R524	QRD141J-472S	"	"	"
R525	QRD141J-103S	10 k	"	"
R526	QRD141J-103S	"	"	"
R527	QRD141J-473S	47 k	"	"
R528	QRD141J-473S	"	"	"
R529	QRD141J-103S	10 k	"	"
R530	QRD141J-103S	"	"	"
R531	QRD141J-473S	47 k	"	"
R551	QRD141J-103S	10 k	"	"
R552	QRD141J-103S	"	"	"
R553	QRD141J-103S	"	"	"
R554	QRD141J-470S	47	"	"
R555	QRD141J-223S	22 k	"	"
R556	QRD141J-104S	100 k	"	"
R557	QRD141J-821S	820	"	"
R558	QRD141J-223S	22 k	"	"
R559	QRD141J-562S	5.6 k	"	"
R561	QRD141J-102S	1 k	"	"
R562	QRD141J-222S	2.2 k	"	"
R563	QRD141J-331S	330	"	"
R564	QRD141J-682S	6.8 k	"	"
R565	QRD141J-392S	3.9 k	"	"
R566	QRD129J-680	68	1/2 W	UNF. Carbon ⚠
R567	QRD141J-473S	47 k	1/4 W	Carbon
R601	QRD141J-470S	47	"	"
R602	QRD141J-470S	"	"	"
R603	QRD141J-331S	330	"	"
R604	QRD141J-331S	"	"	"
R605	QRD141J-271S	270	"	"
R606	QRD141J-121S	120	"	"
R607	QRD141J-121S	"	"	"
R608	QRD141J-121S	"	"	"
R609	QRD141J-121S	"	"	"
R610	QRD141J-121S	"	"	"
R611	QRD141J-121S	"	"	"
R612	QRD141J-271S	270	"	"
R613	QRD141J-121S	120	"	"
R614	QRD141J-271S	270	"	"
R615	QRD141J-121S	120	"	"
R616	QRD141J-391S	390	"	"
R617	QRD141J-391S	"	"	"
R618	QRD141J-334S	330 k	"	"
R619	QRD141J-334S	"	"	"
VR501	QVP4A0B-472	4.7 k		Variable

⚠ : Safety Parts

Others

Item No.	Part Number	Rating	Description
	E10707-002		Circuit Board
	E302137-001		LED Holder
	E65396-001		Earth Plate
J501	E04365-004		4P Socket Ass'y
J502	E04365-006		6P Connector
J503	E04365-007		Formed Wire Socket
J504	E04365-003		"
J505	E04365-004		4P Socket Ass'y
J507	E04365-008		8P Connector
P551	QMV5005-004		4P Plug Ass'y
P552	QMV5005-002		2P Plug Ass'y
P553	QMV5005-002		"
S601	ESP0001-007		Push Switch
S602	ESP0001-007		"
S603	ESP0001-007		"
S604	ESP0001-007		"
S605	ESP0001-007		"
S606	ESP0001-007		"
S607	ESP0001-007		"
S608	ESP0001-007		"
S609	ESP0001-007		"
S610	ESP0001-007		"
S611	ESP0001-007		"
S612	ESP0001-007		"
S613	ESP0001-007		"
S614	ESP0001-007		"
S615	ESP0001-007		"
S616	ESP0001-007		"
S617	ESP0001-007		"
S618	ESP0001-007		"
S619	ESP0001-007		"
S620	ESP0001-007		"
S621	ESP0001-007		"
S631	QSS2201-002		Slide Switch (Except Europe, U.K.)
CA551	ECGS4XM-331		Capacitor Array
CA552	ECGS4XM-102		"
RA551	ERGS4XK-103		Resistor Array
XT551	E03737-010		Crystal (4.5 MHz)
FIP-1	ELU0001-008		FL Tube
W577			Bus Wire (Used for except U.S.A. and Canada)

9-(3) TPS-266C Voltage Selector P.C. Board Ass'y

[except U.S.A., Canada, Europe, U.K., Australia and W. Germany]

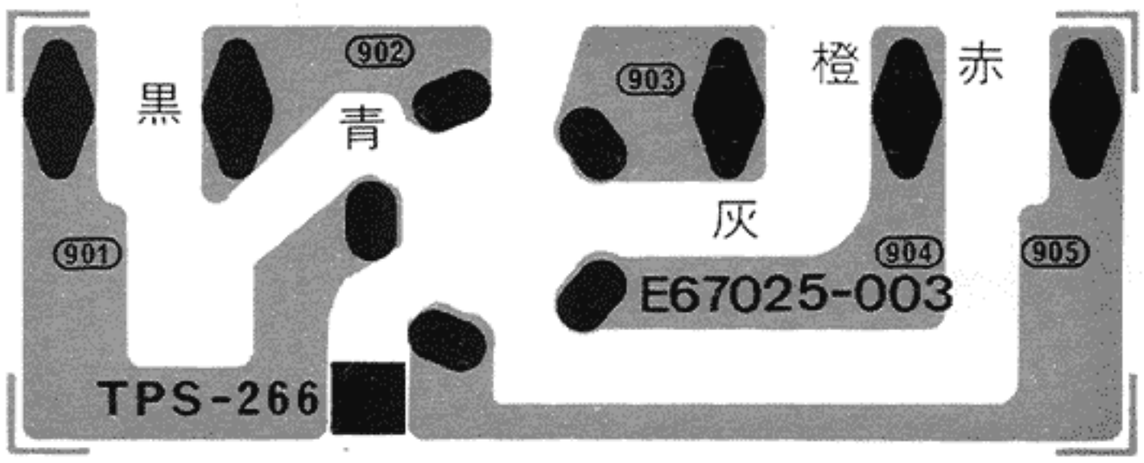


Fig. 21

Part Number	Description
E67025-002	Circuit Board
QSR0074-001	Voltage Selector ⚠
E66342-001	Voltage Selector Holder
E43727-002	Tab

⚠ : Safety Parts

9-(4) TPS-320B/C Fuse P.C. Board Ass'y

[except U.S.A. and Canada]

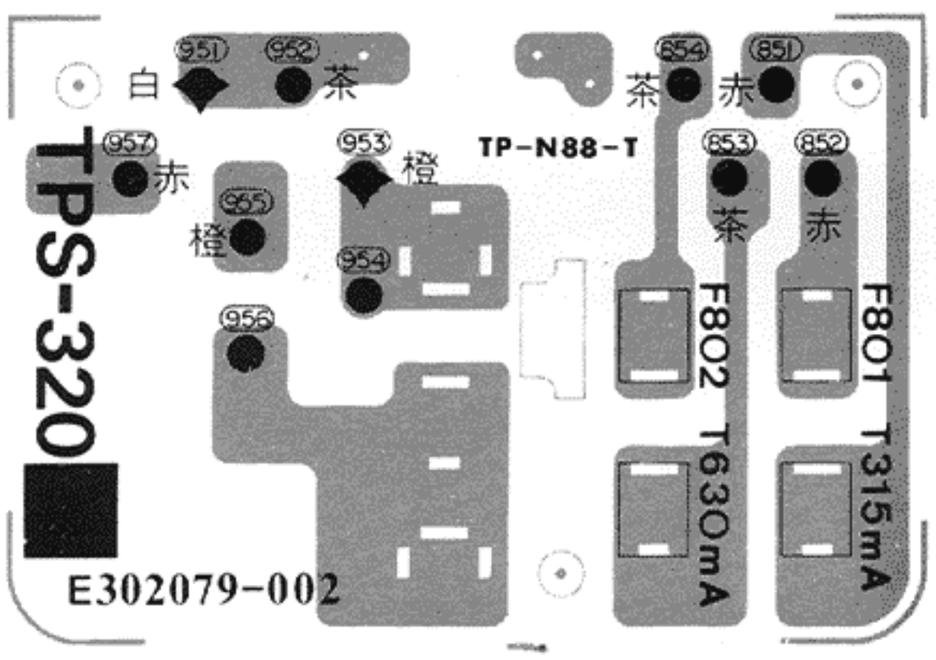


Fig. 22

Part Number	Description
E302079-001	Circuit Board
EMG7331-001	Fuse Clip ⚠
E43727-002	Tab

⚠ : Safety Parts

11. Packing Materials and Part Numbers

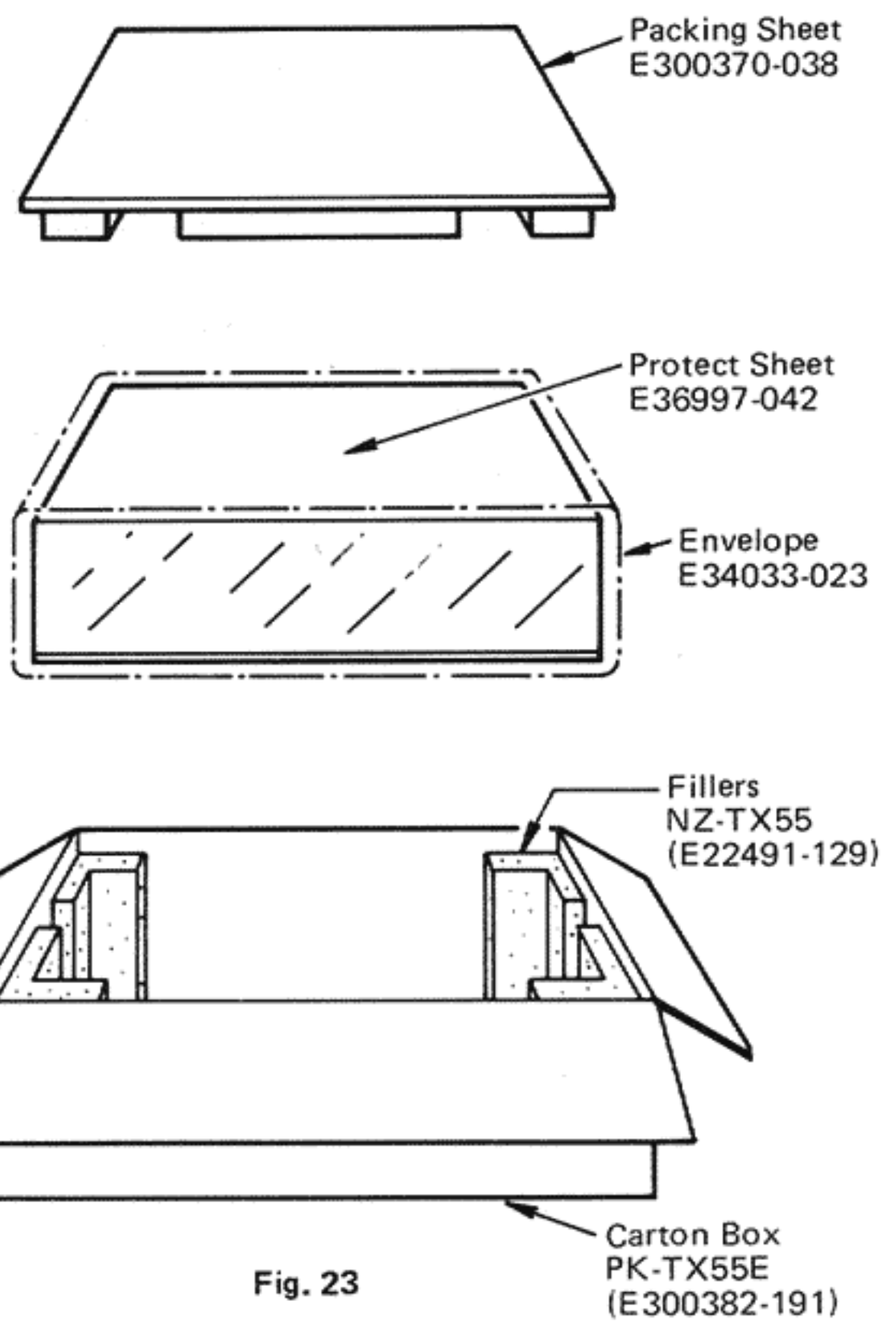


Fig. 23

12. Accessories List

Item No.	Part Number	Description	Q'ty
1	E30580-987A	Instruction Book	1
2	EQB4001-002	AM Loop Antenna	1
3	E03614-002	FM Antenna	1
4	E03479-001B	Signal Cord	1
5	See below	Siemens Plug	1
6	BT20044B	Safety Instruction (for U.S.A. only)	1
7	BT20046A	Service Information Card (for U.S.A. and U.S. Military Market)	1
8	See below	Warranty Card	1
9	BT20054-001A	FTZ Information Sheet (for W. Germany only)	1
10	E41202-2	Envelope for Instruction Book	1
11	E66416-003	Envelope for Safety Instruction (for U.S.A. only)	1

13. Parts List with Specified Numbers for Designated Areas

Item No.	Description	U.S.A. & Canada	Europe & West Germany	U.K.	Australia	U.S. Military Market & Other Countries
T1	Power Transformer ⚠	ETP1010-07JA	ETP1010-07HA	ETP1010-07HA	ETP1010-07HA	ETP1010-07HA
	Power Cord ⚠	QMP1230-183	QMP3950-183	QMP9017-009	QMP2530-200	QMP7630-183
	Siemens Plug ⚠	–	–	–	–	E04056
	Voltage Selector ⚠	–	–	–	–	QSR0074-001
F801	Fuse (Secondary) ⚠	–	QMF51A2-R315L	QMF51A2-R315L	QMF51A2-R315L	QMF51A2-R315L
F802	Fuse (Secondary) ⚠	–	QMF51A2-R63L	QMF51A2-R63L	QMF51A2-R63L	QMF51A2-R63L
	Fastener	–	E34455-001	E34455-001	E34455-001	E34455-001
S631	Slide Switch	QSS2201-002	–	–	QSS2201-002	QSS2201-002
	Switch Stopper	E67911-001	–	–	E67911-001	E67911-001
	Antenna Terminal	E03572-021	E03572-021 (for Europe) EMB01YV-401A (for W.Germany)	E03572-021	E03572-021	E03572-021
	AC Inlet Cover ⚠	–	–	E68603-001	–	–
	Protect Cover ⚠	–	E69245-001	E69245-001	E69245-001	–
	Rear Panel	E24101-002	E24101-004	E24101-004	E24101-002	E24101-002
	Warranty Card	BT20048 (for U.S.A) BT20025E (for Canada)	BT20057 (for W.Germany) only)	BT20013C	BT20029B	BT20048 (for U.S.Military Market only)

⚠ : Safety Parts

14. Power Specifications and Tuning Range

Areas	Line Voltage & Frequency	Power consumption
U.S.A., Canada	AC 120 V, 60 Hz	12 watts
U.K., Australia	AC 240 V~, 50 Hz	
Continental Europe	AC 220 V~, 50 Hz	
Other Areas	AC 110/120/220/ 240 V~, selectable, 50/60 Hz	

	U.K., Continental Europe, Australia	U.S.A., Canada, Other Areas
AM	522 – 1,611 kHz	522 – 1,611 kHz 530 – 1,620 kHz

	U.S.A., Canada	U.K., Continental Europe, Australia, Other Areas
FM	87.9 – 107.9 MHz	87.50 – 108.00 MHz

JVC

VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN

Printed in Japan
2003-V

T-X55 Schematic Diagrams (Logic & Display Section)

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-384	Tuner P.C. Board Ass'y	12
TXX-385	Logic & Display P.C. Board Ass'y	16

Notes:

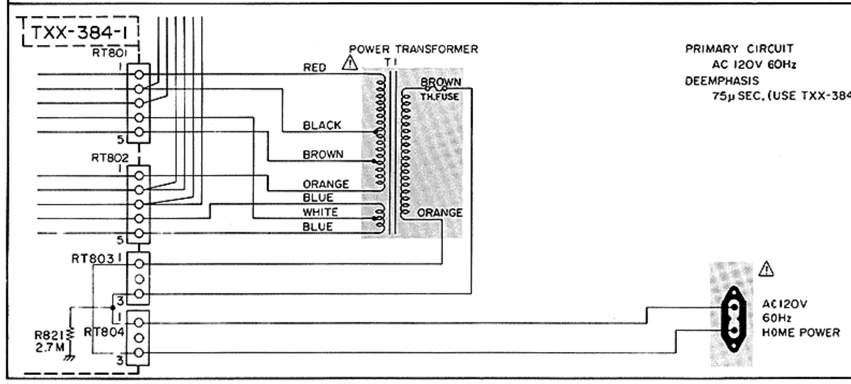
1. ☐ shows DC voltage to the chassis with no signal input at FM position.
2. *☐ shows DC voltage to the chassis with FM stereo signal input.
3. [ ] shows DC voltage to the chassis with no signal input at AM position.
4. —— indicates positive B power supply.
5. —— indicates negative B power supply.
6. ▬ indicates signal path.
7. When replacing the parts in the darkened area ( ) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
8. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

Specifiec

Item No.
D – A
D – B
D631
S631

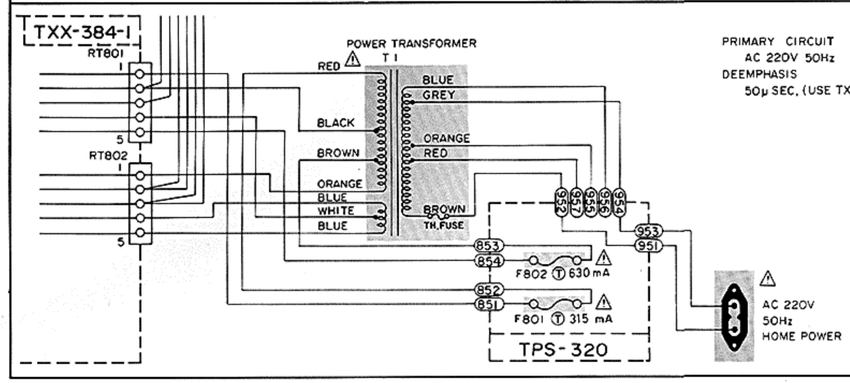
T-X55
No. 2602

T-X55 (J) FOR U.S.A. & (C) FOR CANADA



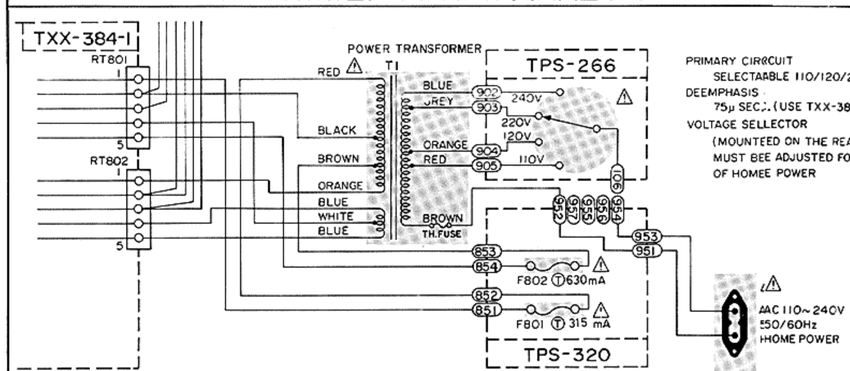
PRIMARY CIRCUIT
AC 120V 60Hz
DEEMPHASIS
75μ SEC. (USE TXX-384B)

T-X55 (E) FOR EUROPE & (G) W.GERMANY



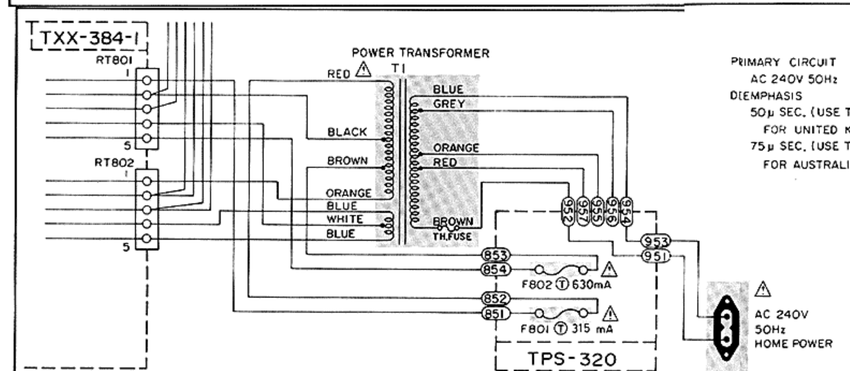
PRIMARY CIRCUIT
AC 220V 50Hz
DEEMPHASIS
50μ SEC. (USE TXX-384D or F)

T-X55 (P) U.S.MILITARY MARKET & (U) OTHER COUNTRIES

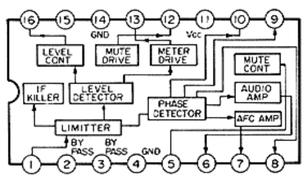


PRIMARY CIRCUIT
SELECTABLE 110/120/220/240V 50/60Hz
DEEMPHASIS
75μ SEC. (USE TXX-384C)
VOLTAGE SELECTOR
(MOUNTED ON THE REAR PANEL)
MUST BEE ADJUSTED FOR THE PROPER VOLTAGE OF HOMEE POWER

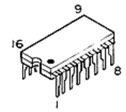
T-X55 (BS) FOR UNITED KINGDOM & (A) FOR AUSTRALIA

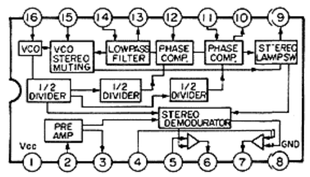


PRIMARY CIRCUIT
AC 240V 50Hz
DEEMPHASIS
50μ SEC. (USE TXX-384EBS)
FOR UNITED KINGDOM
75μ SEC. (USE TXX-384C)
FOR AUSTRALIA

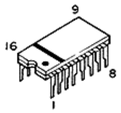


IC201 LA1235

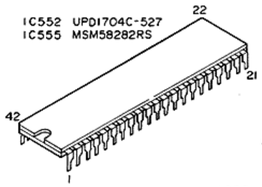


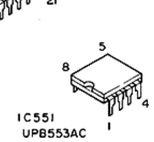


IC401 HAI2016



IC552 UPD1704C-527
IC555 MSM58282RS

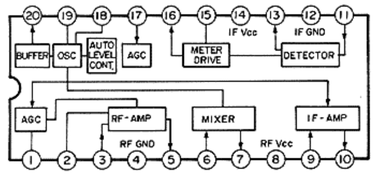




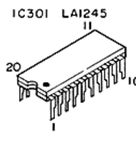
IC551 UPB553AC

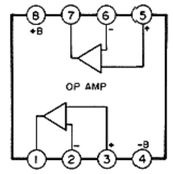
AC INLET (SOT-15Y)

AC SOCKET (KS-15)



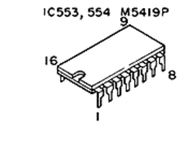
IC301 LA1245



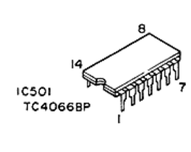


IC302 NJM4558DD
IC502 AN6552

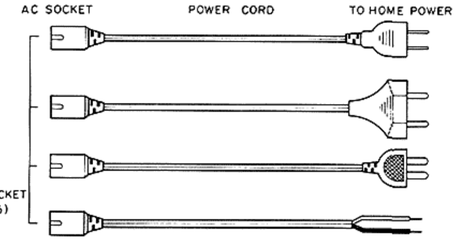
IC553, 554 M5419P



IC501 TC4066BP



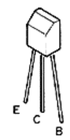
AC SOCKET — POWER CORD — AC PLUG TO HOME POWER



- (J) FOR U.S.A.
- (C) FOR CANADA
- (U) FOR OTHER COUNTRIES
- (P) FOR U.S. MILITARY MARKET
- (E) FOR EUROPE
- (G) FOR W. GERMANY
- (A) FOR AUSTRALIA
- (B) FOR UNITED KINGDOM

•Q101 2SKI68(F)

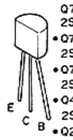
•Q103, 201~206 2SC461(C)



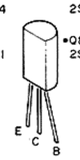
•Q401,402,703 2SKI05(F)

•Q104,105 2SKI68(E)

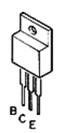
•Q106,107,301,302 Q405,701,702,704 Q705 2SC458(D)
•Q706,707,709~711 2SC458(C,D)
•Q708,712 2SAI029(C)
•Q403,404 2SC2878(A)
•Q207 2SC2878(B)



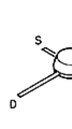
•Q801~804 2SC2235(Y)
•Q805 2SB562



•Q806 2SD313V(E)



•Q102 3SK97(QI)



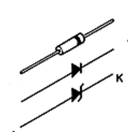
•D101~104 KVI320

•D301,302 KVI226

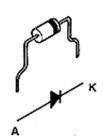
•D201~203, 303, 304
D701~711, 804
D811~814
IS2076-31

•D803 RD30EB3

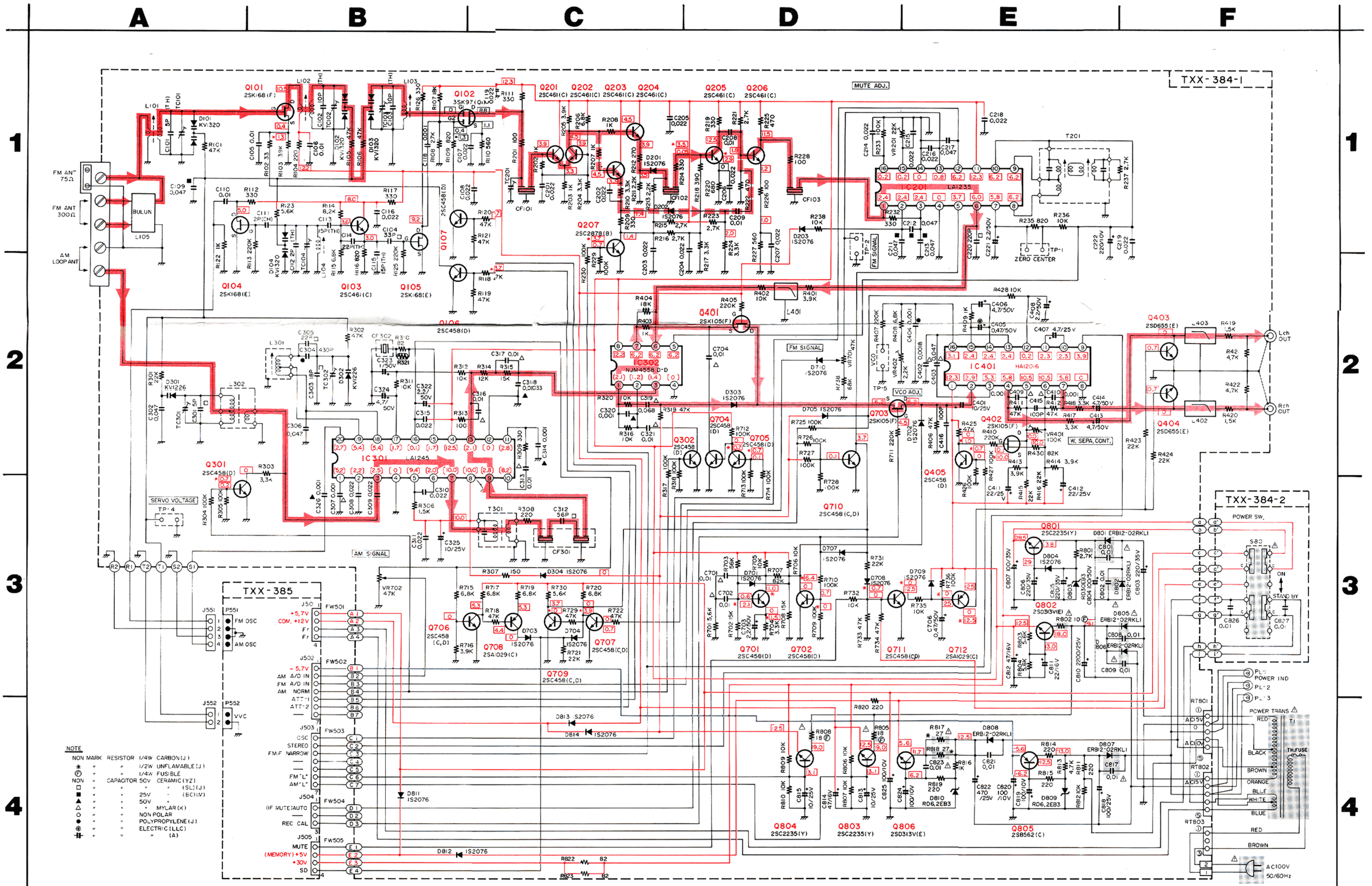
•D809, 810 RD6.2EB3



•D801, 802, 805~808 ERB12-02RKLI



10. T-X55 Schematic Diagrams (Tuner Section)



Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-384	Tuner P.C. Board Ass'y	12
TXX-385	Logic & Display P.C. Board Ass'y	16

Notes:

1. ▭ shows DC voltage to the chassis with no signal input at FM position.
2. * ▭ shows DC voltage to the chassis with FM stereo signal input.
3. [ ] shows DC voltage to the chassis with no signal input at AM position.
4. —— indicates positive B power supply.
5. —— indicates negative B power supply.
6. ▭ indicates signal path.
7. When replacing the parts in the darkened area (▭) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
8. This is the standard circuit diagram. The design and contents are subject to change without notice.

Specified Numbers for Designated Areas

Item No.	Description	USA & Canada	Europe & West Germany	U.K.	Australia	US Military Market & Other Countries
R236	Carbon Resistor (1/4 W)	10 kΩ	15 kΩ	15 kΩ	15 kΩ	15 kΩ
R404	" (1/4 W)	18 kΩ	22 kΩ	22 kΩ	18 kΩ	18 kΩ
R421/R422	" (1/4 W)	4.7 kΩ	6.8 kΩ	6.8 kΩ	4.7 kΩ	4.7 kΩ
R707	" (1/4 W)	82 kΩ	56 kΩ	56 kΩ	82 kΩ	82 kΩ
R821	Composition Resistor (1/2 W)	2.7 MΩ	–	–	–	–
C409/C410	Mylar Capacitor (50 V)	1500 pF	1000 pF	1000 pF	1500 pF	1500 pF
C416	Ceramic Capacitor (50 V)	–	100 pF (for West Germany only)	–	–	–

T-X55
No. 2602