



HITACHI

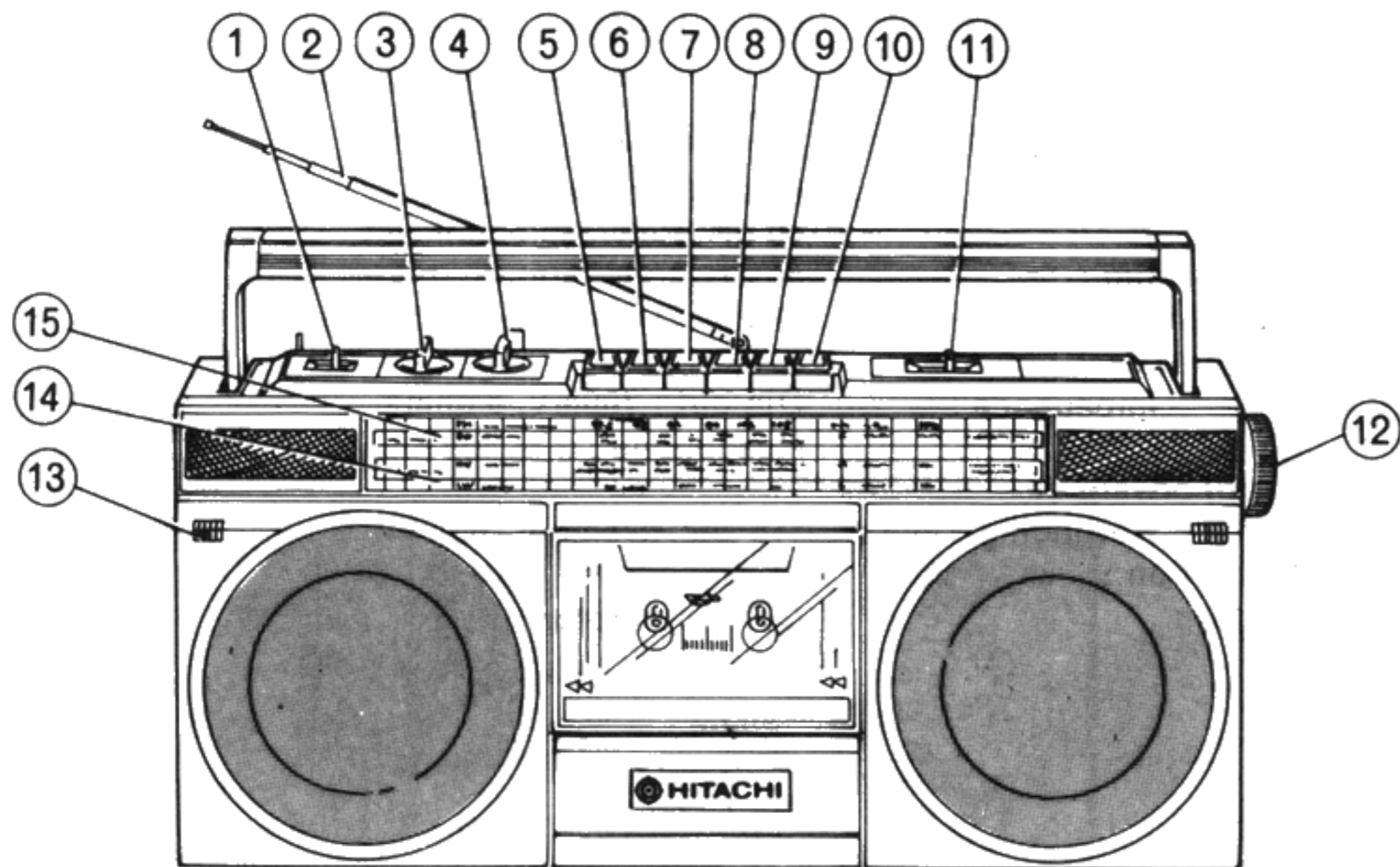
SERVICE MANUAL

TK

No. 2201E

TRK-6830E/E(BS)

TN-33Z chassis



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KEY TO ILLUSTRATIONS

- | | |
|------------------------------|-------------------------------------|
| ① FUNCTION SELECTOR | ⑨ PLAYBACK BUTTON |
| ② TELESCOPIC ANTENNA(AERIAL) | ⑩ RECORD BUTTON |
| ③ TONE CONTROL | ⑪ BAND SELECTOR |
| ④ VOLUME CONTROL | ⑫ TUNING CONTROL |
| ⑤ PAUSE BUTTON | ⑬ BUILT-IN MICROPHONE
(MONAURAL) |
| ⑥ STOP/EJECT BUTTON | ⑭ RECORD/BATTERY INDICATOR |
| ⑦ FAST FORWARD BUTTON | ⑮ FM STEREO INDICATOR |
| ⑧ REWIND BUTTON | |

SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with \triangle in the schematic diagram, and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

CASSETTE TAPE RECORDER WITH FM/SW/MW/LW RADIO

SPECIFICATIONS

GENERAL SECTION

Semi-conductors : IC's : 3
 Transistors : 11 (E)
 10 [E(BS)]
 Diodes : 9
 LED's : 2
 Zener diode : 1

Power (Mains) Supply : AC : 220V, 50 Hz (E)
 240V, 50 Hz [E(BS)]
 DC : 9V (IEC R20 × 6 or equivalent)

Power (Mains) Consumption : 8W

Dimensions : 454 (W) × 209 (H) × 121 (D) mm

Weight : 3.4 kg (with batteries)

Power output : 3.5W M.P.O. (AC operation)
 1.2W/ch (T.H.D. 10%)

Speakers : 100mm, 8 ohms × 2
 20mm, 300 ohms × 2

TUNER SECTION

Circuit System : FM/SW/MW/LW 4-band superheterodyne

Tuning Range : FM : 87.5 to 108 MHz
 SW : 6 to 18 MHz
 MW : 530 to 1605 kHz
 LW : 150 to 285 kHz

Sensitivity : FM : 8 dB (pra.), 0 dB (max.)
 SW : 30 dB (pra.), 20 dB (max.)
 MW : 48 dB (pra.), 40 dB (max.)
 LW : 55 dB (pra.), 45 dB (max.)

Intermediate Frequency : FM : 10.7 MHz
 SW/MW/LW : 465 kHz

Antennas (Aerials) : FM/SW : Telescopic antenna (aerial)
 MW/LW : Built-in ferrite-core antenna (aerial)

TAPE RECORDER SECTION

Tape : Cassette tape

Tape Speed : 4.75 cm/s

Recording System : AC bias, 64 kHz

Erasing System : DC erase

Track System : 4 track 2 channel

Frequency Response : Normal : 80 Hz to 10 kHz

S/N (Signal to Noise Ratio) : 43 dB

Wow and Flutter : 0.25% (WRMS)

Crosstalk : 65 dB (Between tracks)
 40 dB (Between channels)

Erase Ratio : 60 dB

Input Impedance : Din in : 1 mV/k ohms, 700 ohms

Output Level and Impedance : Din out : 700mV, 8 ohms
 Headphone : 8 to 100 ohms

Fast Forward or Rewinding Time : 110 sec. (Using C-60)

Distortion : 3%

Motor : DC micromotor

DISASSEMBLY

1. Cassette lid

Push the tab with minus (−) screwdriver in the direction of arrow and pull out the cassette lid.

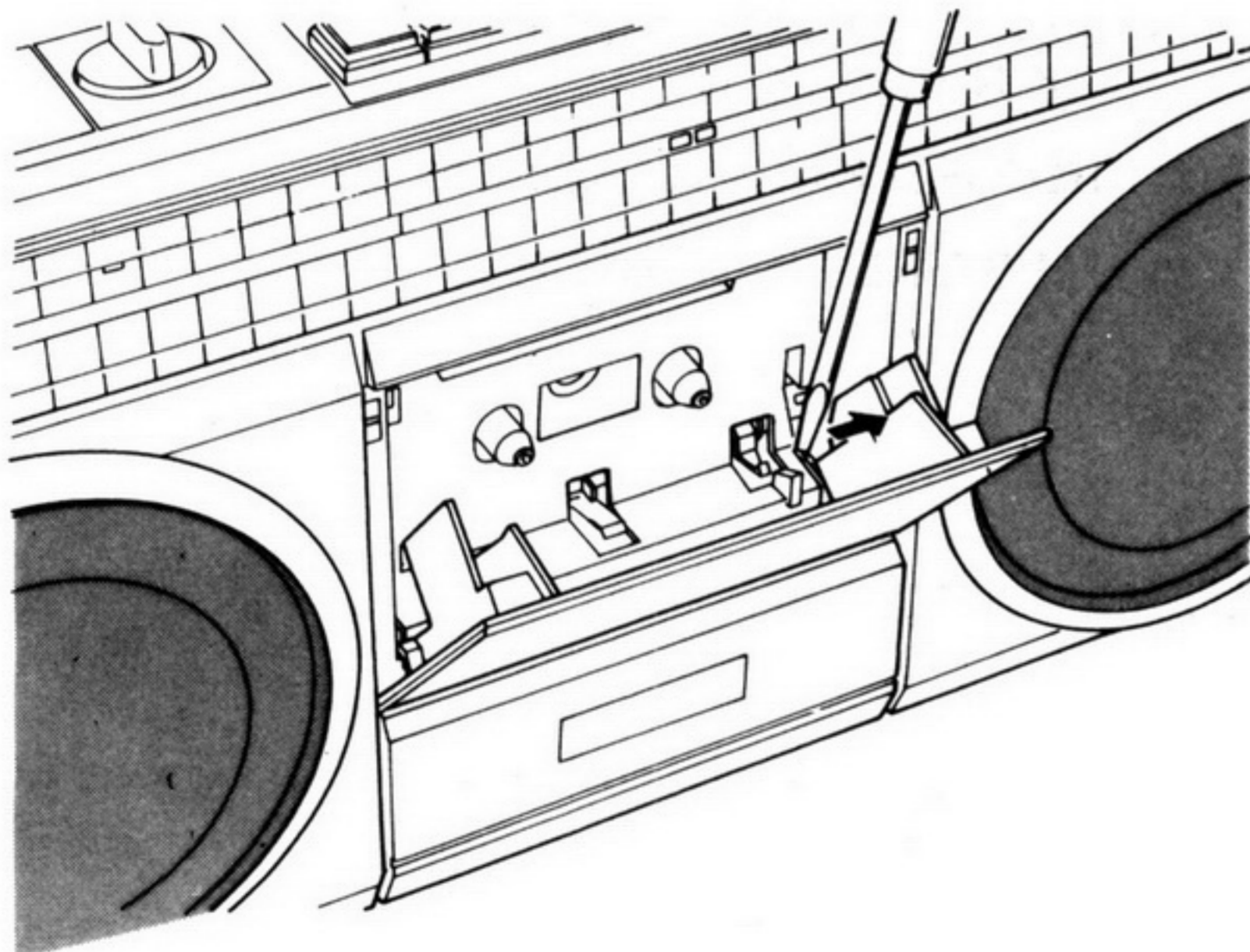


Fig. 1

2. Rear case

Remove (A) (six) screws.

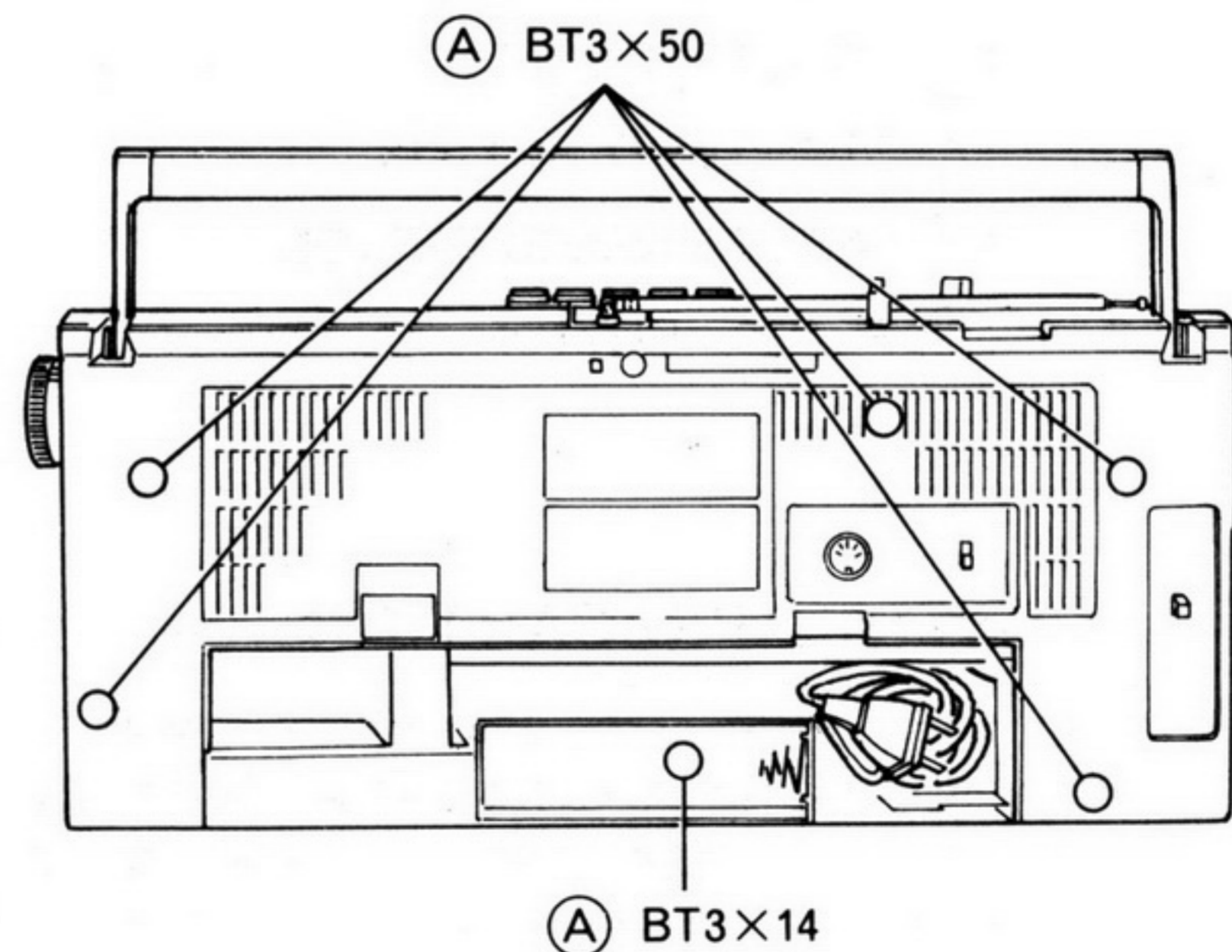
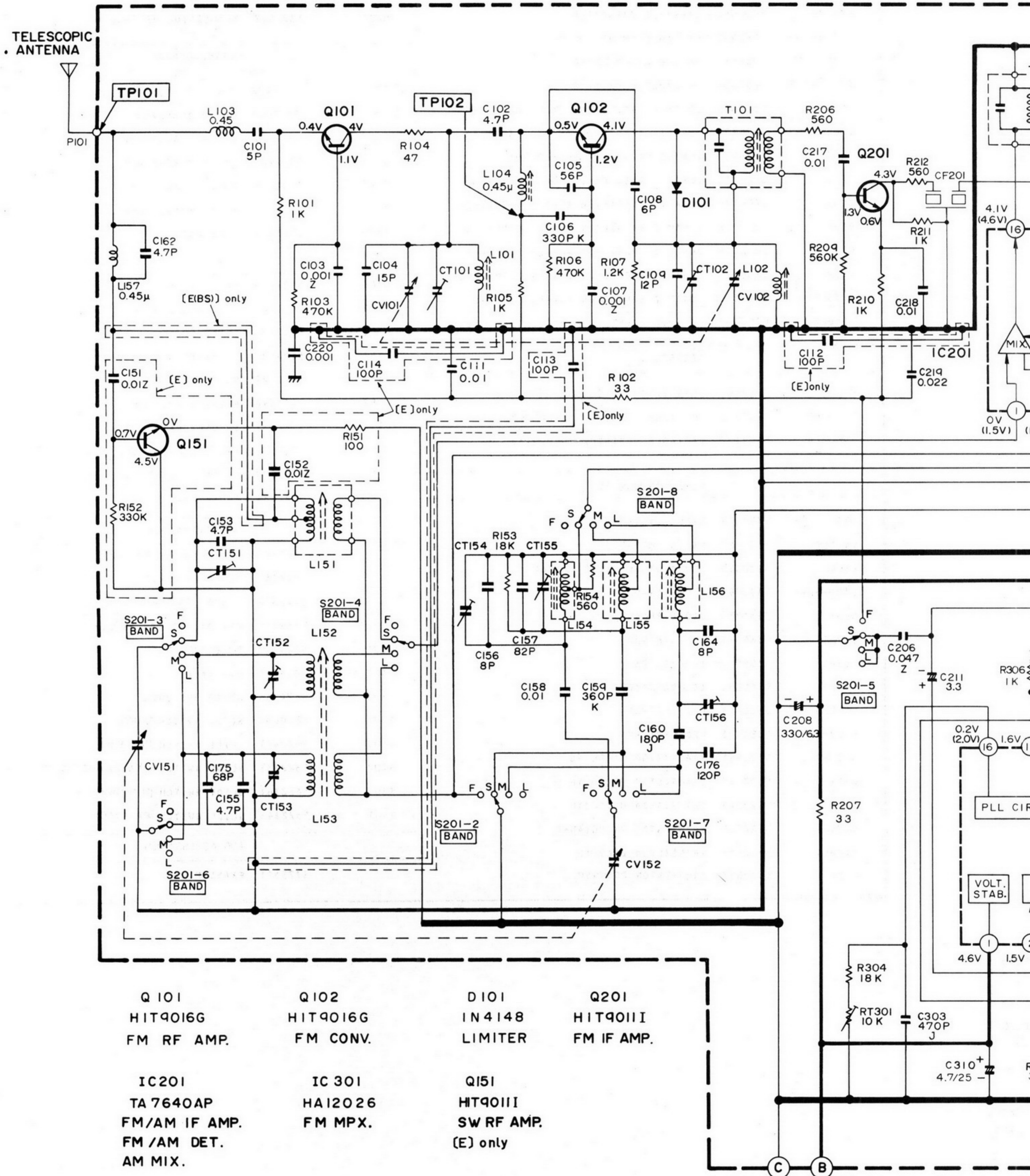


Fig. 2

SCHMATIC DIAGRAM (Tuner Section)



Q 101
HIT9016G
FM RF AMP.

Q 102
HIT9016G
FM CONV.

D 101
IN 4148
LIMITER

Q 201
HIT90111
FM IF AMP.

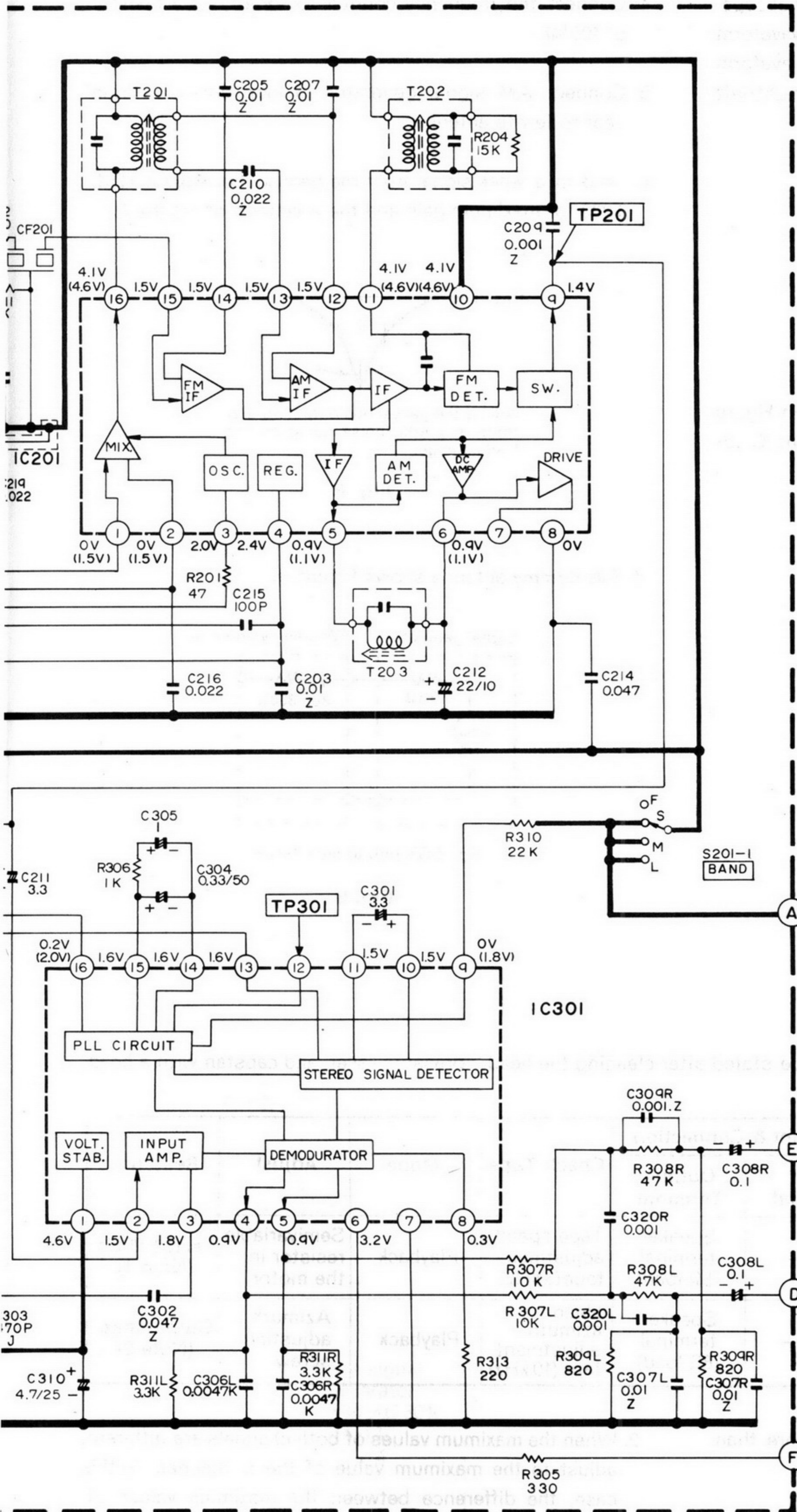
IC 201
TA 7640AP
FM/AM IF AMP.
FM/AM DET.
AM MIX.

IC 301
HA12026
FM MPX.

Q 151
HIT90111
SW RF AMP.
(E) only

C B

NOTE: VOLTAGES ARE MEASURED IN FM MODE.
VOLTAGES IN () ARE MEASURED IN AM MODE.



Note

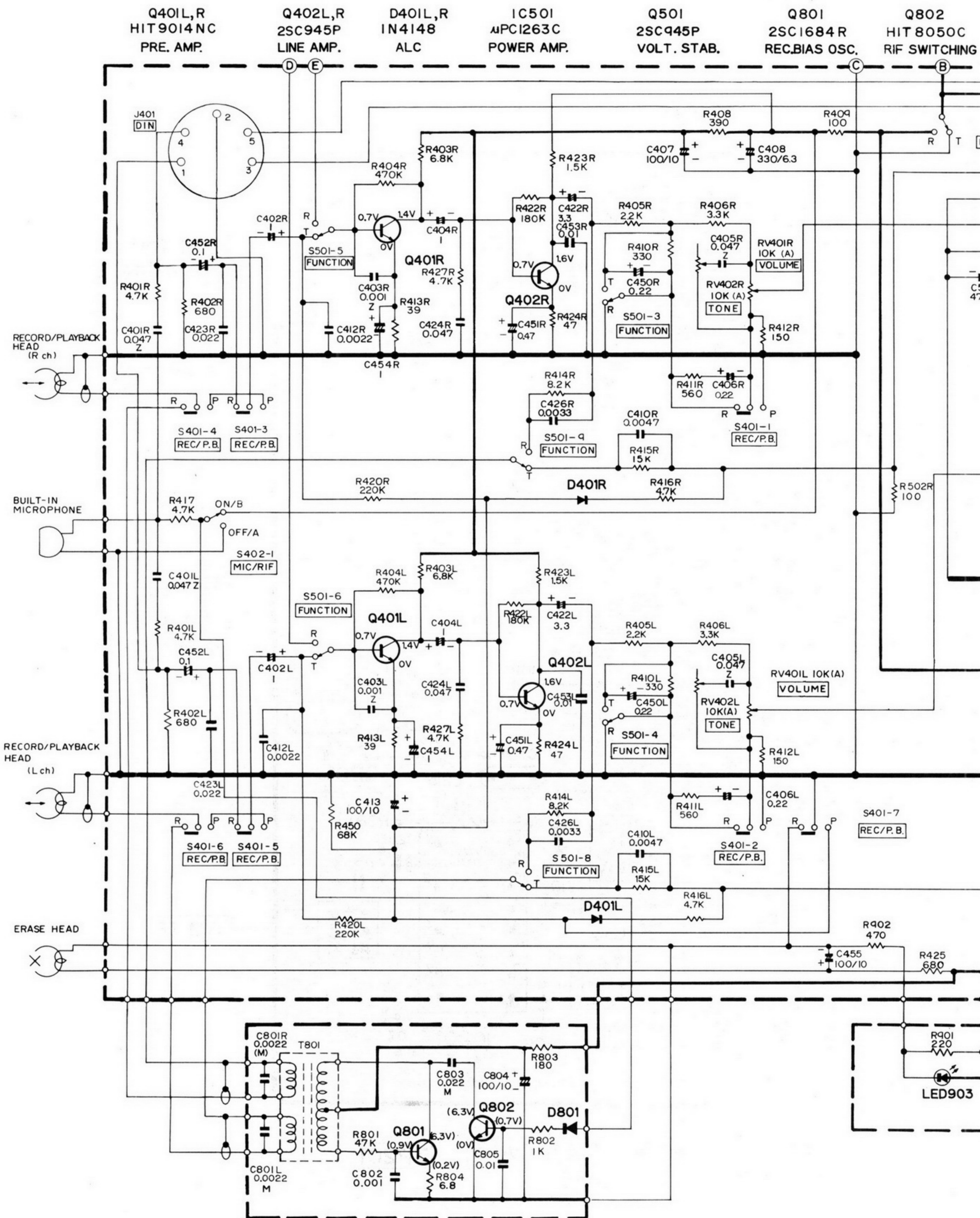
1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

Circuit No.	
Value	No indicated Ω (Ohm) M : 1000 k Ω
Tolerance	No indicated $\pm 5\%$ K : $\pm 10\%$ M : $\pm 20\%$
Wattage	No indicated $\frac{1}{4}W$
Sort	No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film

Circuit No.	
Value	No indicated μF P : PF
Tolerance	No indicated $\pm 10\%$ J : $\pm 5\%$ M : $\pm 20\%$ Z : +80%, -20% D : $\pm 0.5pF$ C : $\pm 0.25pF$
Sort	Ceramic
	Electrolytic
	Mylar
	Polyester
	Styrol
Voltage	No indicated 50WV

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with *, use specified ones stated on parts list since required temperature characteristics.

SCHEMATIC DIAGRAM (Tape Recorder Section)



NOTE: VOLTAGES ARE MEASURED IN PLAY BACK MODE.
 VOLTAGES IN () ARE MEASURED IN RECORDING MODE.

