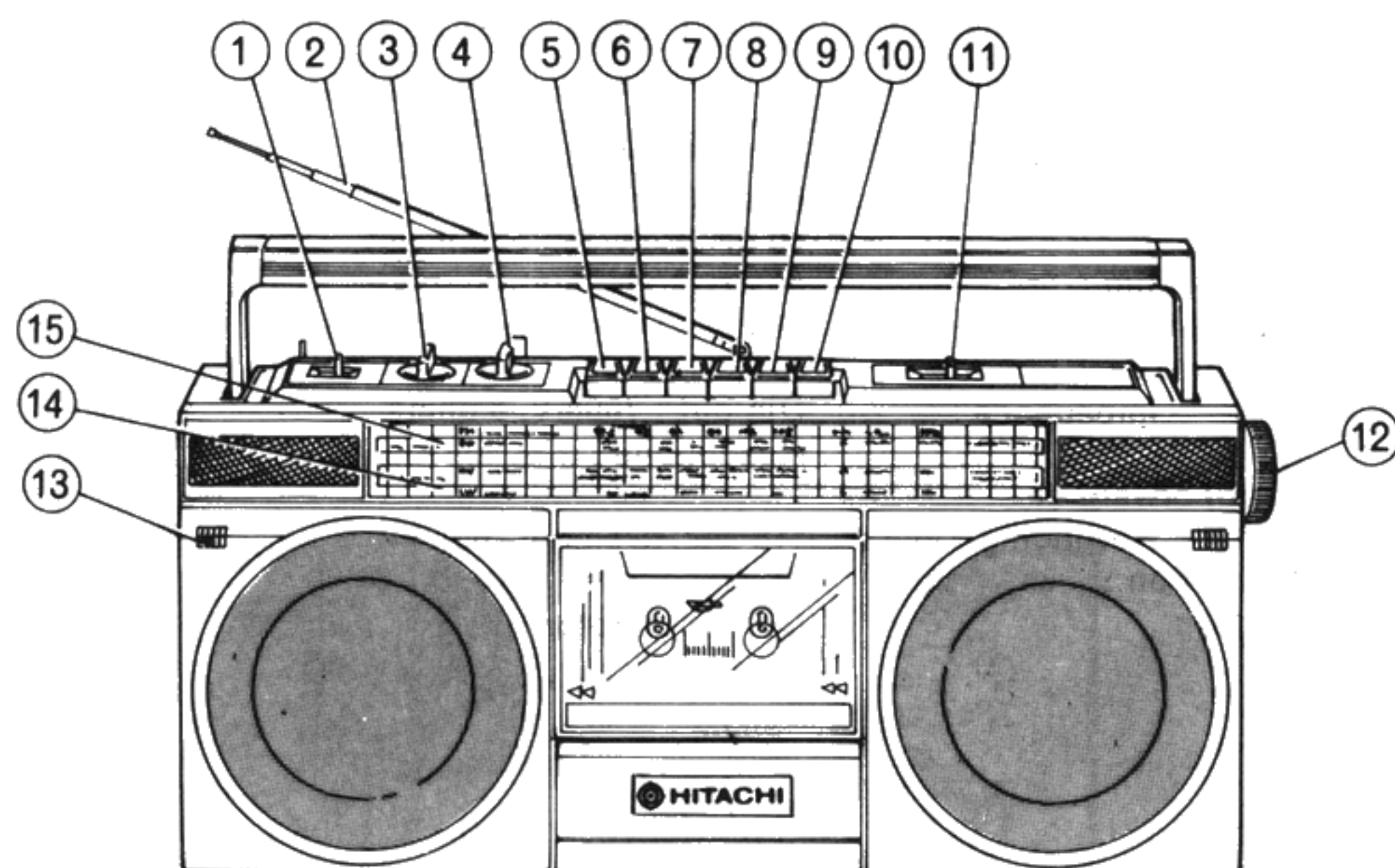




HITACHI

SERVICE MANUAL

TK**No. 2201E****TRK-6830E/E(BS)****TN-33Z chassis**

CONTENTS

Specifications	2
Disassembly	2
Inspection of mechanism	3
Lubrication	3
Adjustment	4
Replacement parts list	6
Schematic diagram	7
Circuit board diagram	9
Wiring diagram	15
Exploded view	19
Dial cord stringing	21

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.

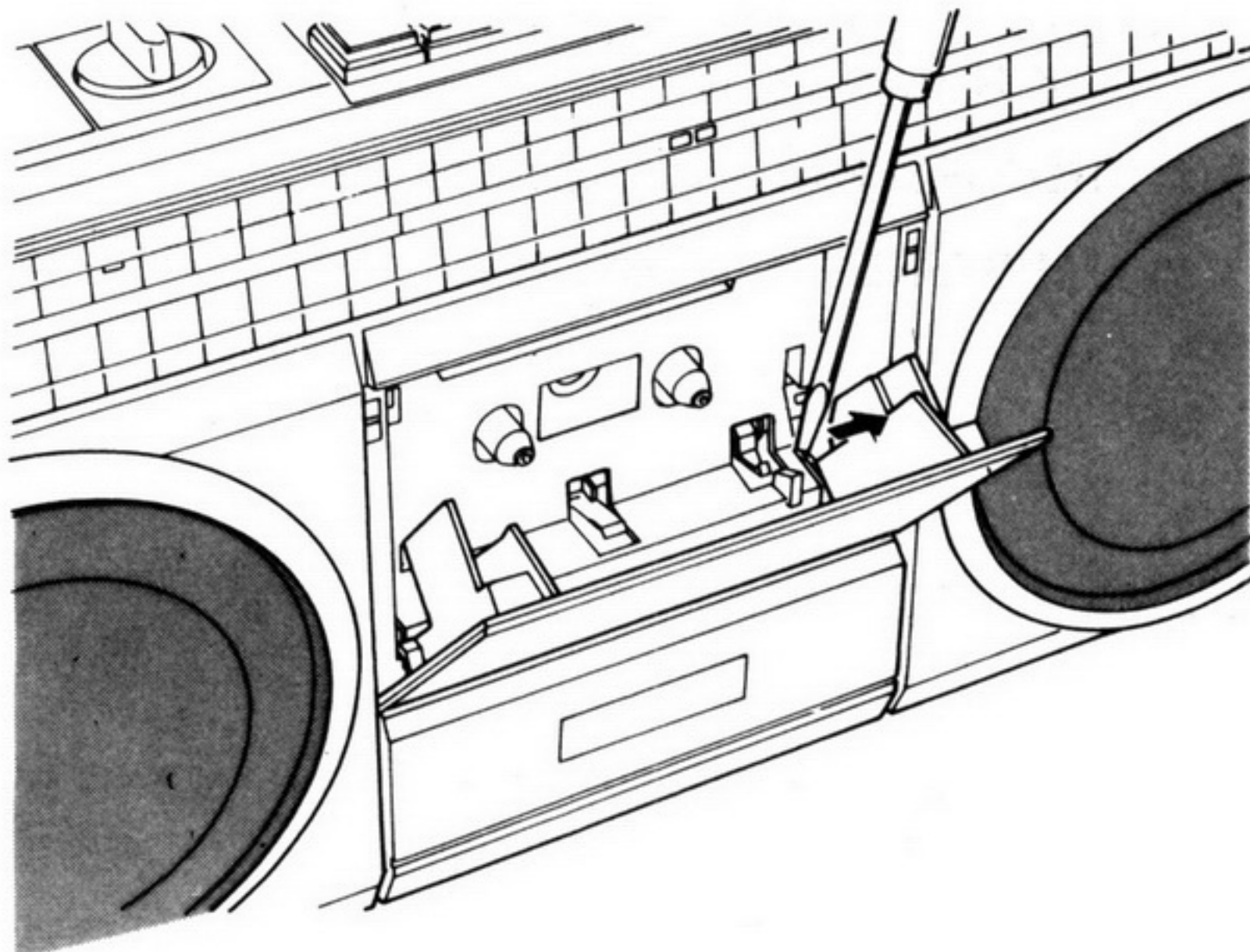


Fig. 1

2. Rear case

Remove (A) (six) screws.

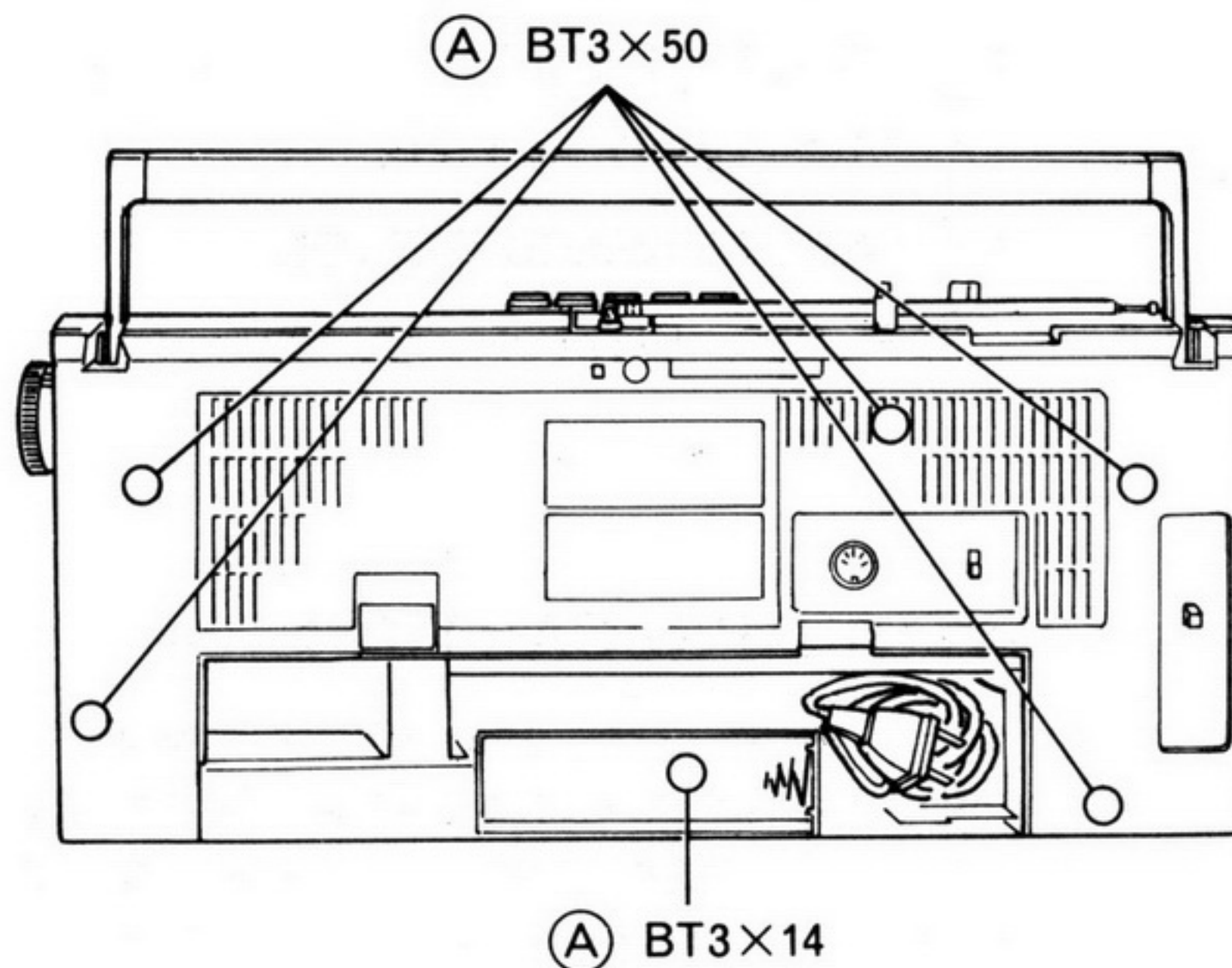
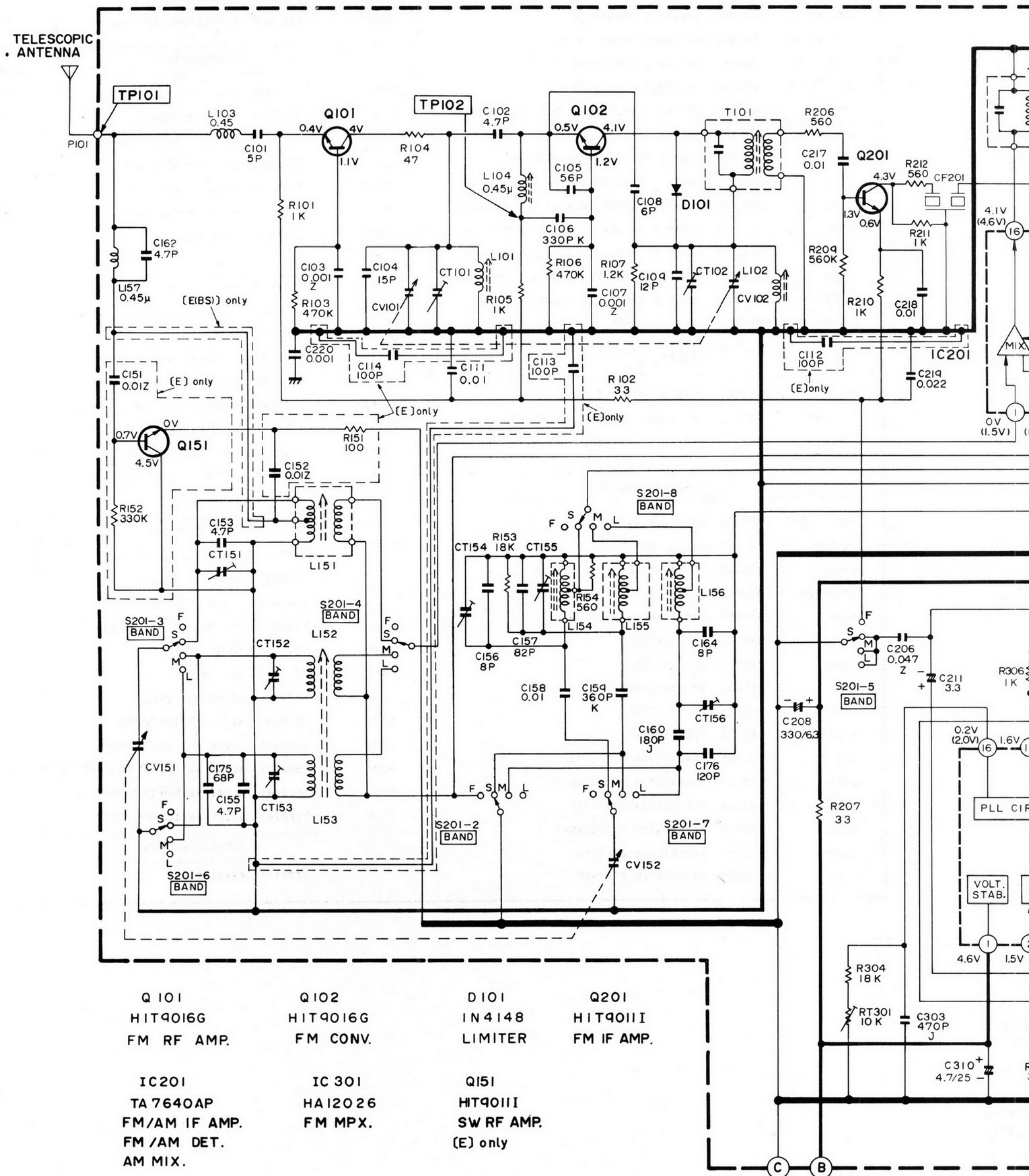
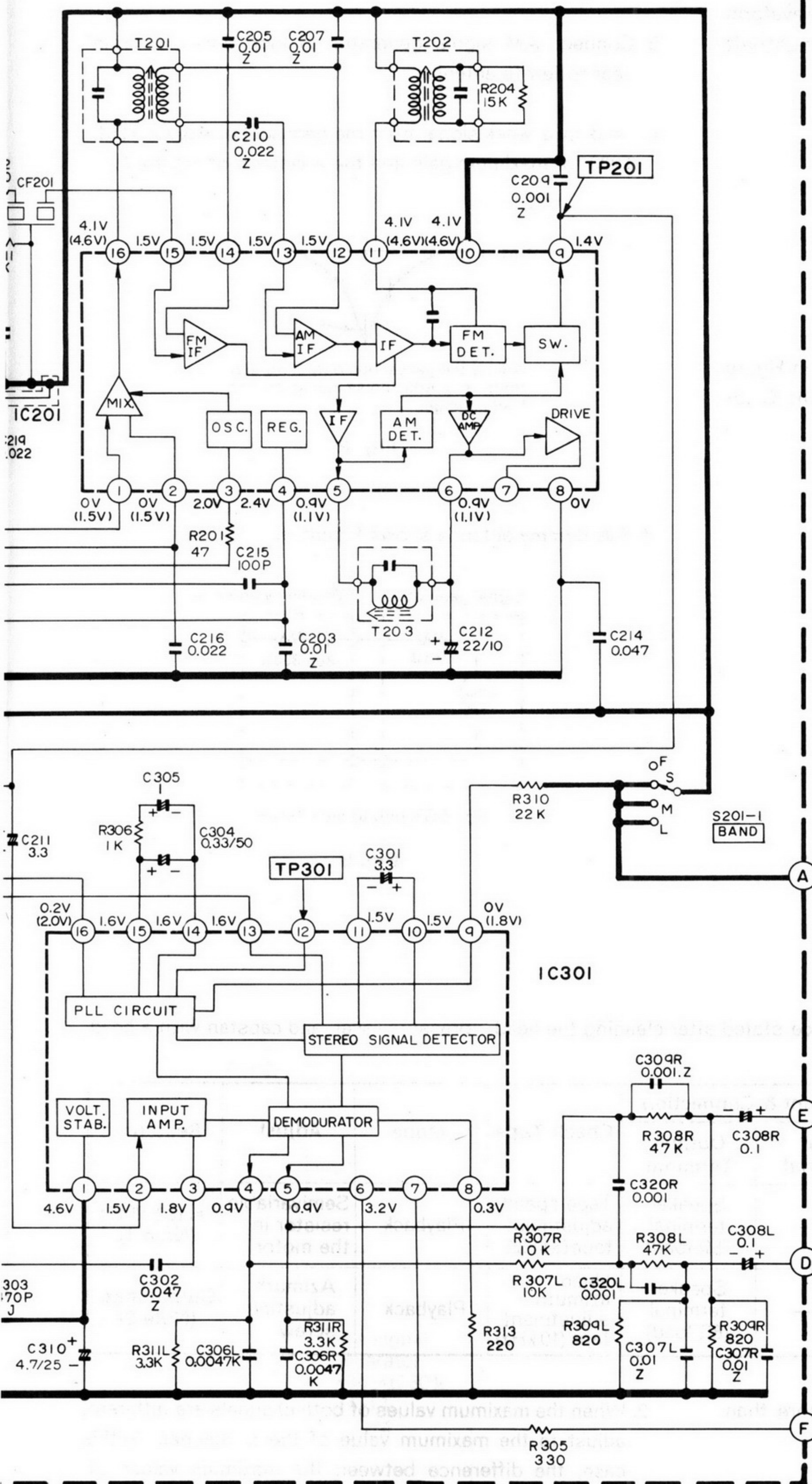


Fig. 2

SCHEMATIC DIAGRAM (Tuner Section)



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



Note

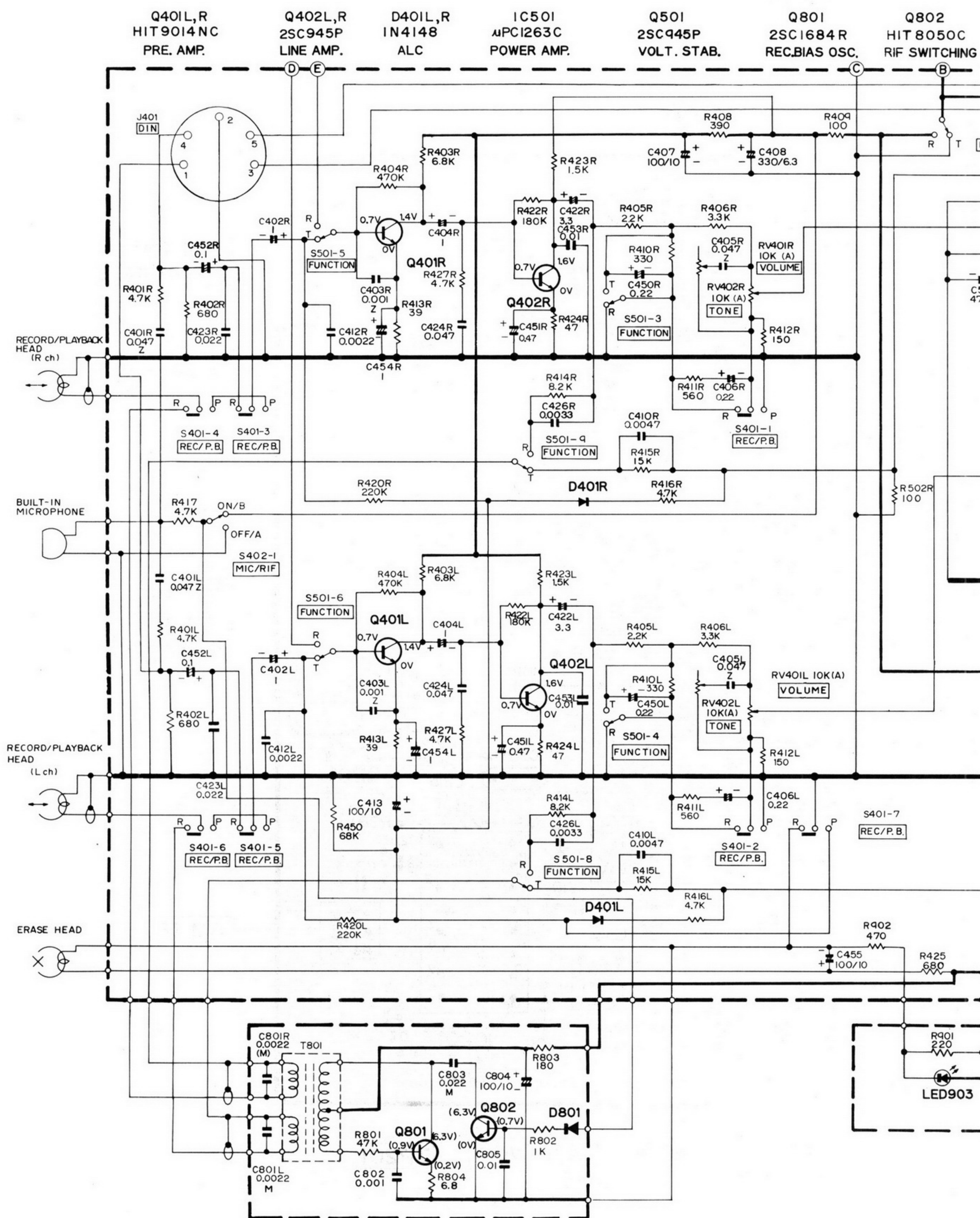
1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

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.

