



# TOSHIBA TRANSISTOR RADIO

## SERVICE DATA

MODEL IC-70

FILE NO. 115

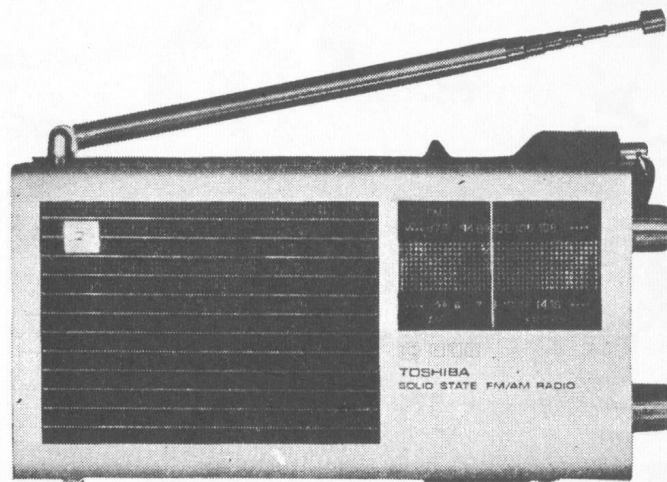
### SPECIFICATIONS

FREQUENCY RANGE : AM 530 - 1600 KHz  
 FM 87.5 - 108 MHz  
 INTERMEDIATE FREQUENCY : AM 455 KHz  
 FM 10.7 MHz  
 POWER SOURCE : UM-3 ("AA") × 4 .....6V  
 POWER OUTPUT : 350 m W (max.)  
 SPEAKER : 3½" × 2¼" P.M.D. Type  
 ANTENNAS : AM Ferrite Core Antenna &  
 Telescopic Antenna  
 JACKS : Earphone, External Power or  
 Battery Charger

### TRANSISTORS & DIODES :

TR1, 2SK 19 FM, RF Amplifier  
 TR2, 2SC 785 FM, Converter  
 TR3, 2SC380A AM, Converter & FM, IF Amplifier  
 TR4, 2SC372 Driver  
 TR5, 2SC735 Power Amplifier  
 TR6, 2SB364 Power Amplifier  
 IC1 TA7046P Integrated Circuits  
 D1 1S86 A.F.C.  
 D2, D3 1N60 (PAIR) FM Detector  
 D4 M8513 DC Bias  
 D5 1S73J Limiter  
 D7 1N60 AM A.G.C.

DIMENSIONS : W...6<sup>5</sup>/<sub>16</sub>" H...3<sup>7</sup>/<sub>16</sub>" D...1<sup>15</sup>/<sub>32</sub>"  
 WEIGHT : 1.1 lbs (With Batteries)  
 ACCESSORY : Earphone



### CHASSIS REMOVAL

1. Remove the knobs (Tune, VRI).
2. Remove the four screws marked (★) and open the rear cabinet shown in Fig. 1.
3. Remove the two studs and one screw marked (※) shown in Fig. 2, and the chassis can be separated from the cabinet. Carefully pull the chassis from the cabinet.

#### Remarks :

When separating the chassis, do not loosen any screw except the ones painted in white enamel.

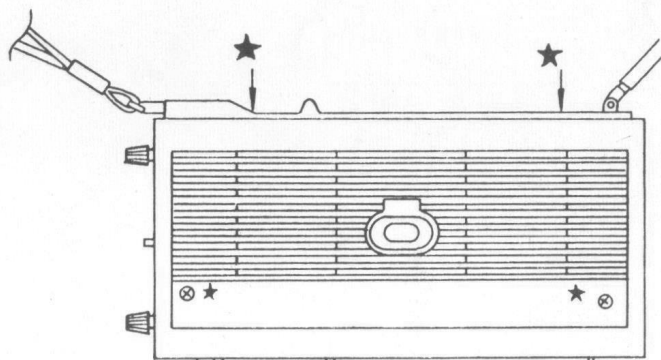


Fig. 1

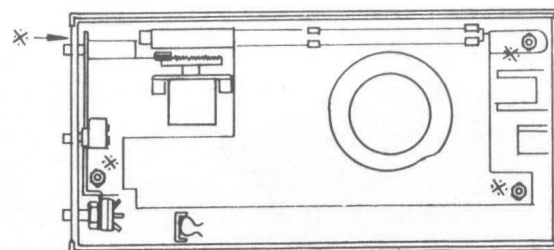


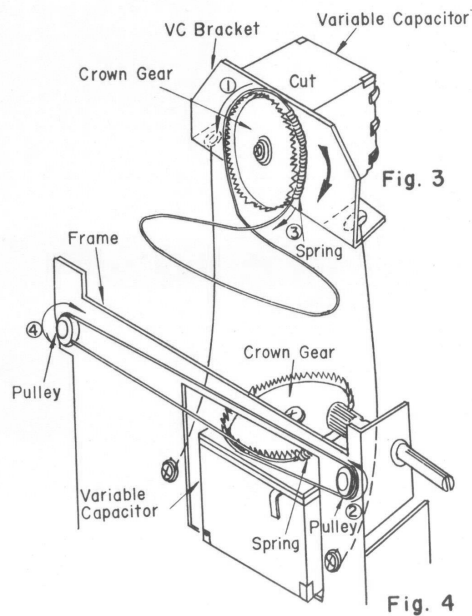
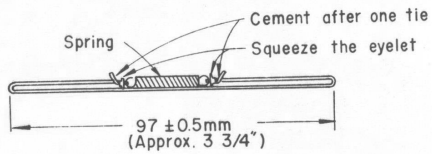
Fig. 2

TOKYO SHIBAU ELECTRIC CO., LTD.

2-1, 5-CHOME, GIYU CHUO-KU, TOKYO, JAPAN

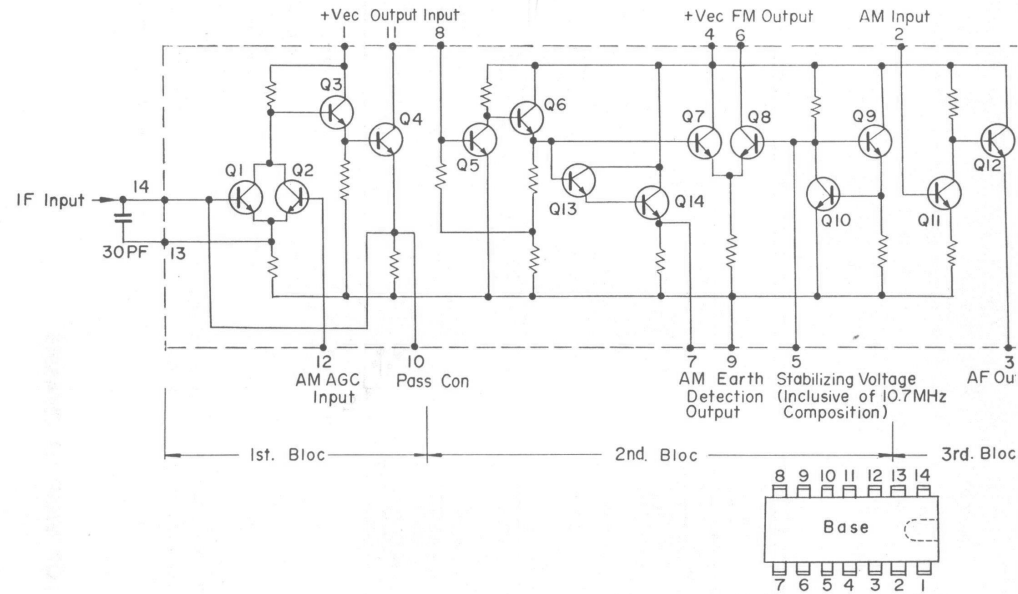
## DIAL CORD STRINGING

- Set the VC bracket on the variable capacitor.
- Turn fully clockwise (arrow direction) the variable capacitor and set the gear on the one at the crown gear's cut as shown in Fig. 3 position.
- Temporarily set the variable capacitor assembly (within VC bracket and crown gear) on the frame.
- Hook the dial cord on the cut of gear and set the cord as number in Figures 3 and 4.



## HOW IC, TA-7046P FUNCTIONS:

TA-7046P consists of fourteen (14) transistors, covering that area of IC 70 which ranges from the intermediate frequency amplifier section to low frequency amplifier section.



The interior of the IC, as illustrated above, comprises three (3) blocks, i.e., 1st block for IF Amplifier, 2nd block for IF Amplifier, AM Detection, FM Limiter and Stable Power Supply, and the 3rd block for the AF Amplifier. The Ceramic Filter is connected to a point between ①P and ③P. Bias voltage is applied to ①P and ④P, and ⑨P represents the overall ground terminal.

IF signals enter ⑧P, are amplified through Q1, Q3, and Q4, and emerge from ⑩P as an output.

IF output, entering ③P via the Ceramic Filter (CF 1), is amplified through Q5 and Q6. Also the AM IF signals are detected through Q13 and Q14, and transmitted as AF signals from ⑦P.

Further, FM IF signals are again amplified through Q7 and limited by Q8, thus resulting in stable FM signals transmitted from ⑥P. FM IF signals become AF signals, by means of FM demodulation through FM IFT (T5).

The AF signals of AM, FM which enter the IC at ②P will be amplified through Q11 and Q12.

Q9 and Q10 compose a stable power supply circuit which feeds each of the existing circuits.



