

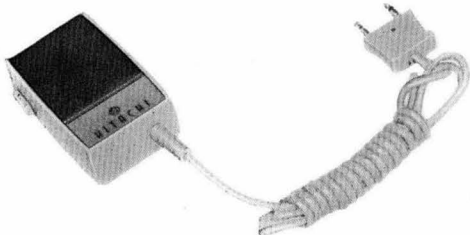
# MODEL TRQ-300

ALL-TRANSISTOR PORTABLE TAPE RECORDER

So simple to operate that anyone can make accurate recordings. Features "Levelmatic" automatic recording level controls. Portable type recorder convenient for carrying with you.



Dynamic microphone  
For TRQ-300



Dynamic microphone For TRQ-300M

## ACCESSORIES

Highly sensitive dynamic microphone 1  
Earphone for playback or monitoring recording 1  
Hitachi Recording Tape permitting over 1 hour of recording 1  
Reel 1  
Splicing tape for connecting tapes 1  
Microphone case 1

## SPECIFICATIONS

Tape	3-inch recording tape
Tape Speeds	$3\frac{3}{4}$ inch/sec (9.5 cm/sec) $1\frac{1}{8}$ inch/sec (4.75 cm/sec)
Motor	6V 0.6W with electric governor
Recording Time	34 min, both ways at $3\frac{3}{4}$ " speed 68 min, both ways at $1\frac{1}{8}$ " speed
Output	500mW
Speaker	4 inch $\times$ 2 $\frac{1}{4}$ inch (10 $\times$ 7 cm) PM speaker
Amplifier	7-transistor amplifier, 3 diodes
Recording System	AC bias system
Erasing System	DC electromagnetic system
Track	Double track
Frequency Characteristics	150~7,000 cycles ( $3\frac{3}{4}$ " speed) 150~4,000 cycles ( $1\frac{1}{8}$ " speed)
Power Source	6V (Four "C" cells)
Dimensions	Width 8 $\frac{3}{8}$ " (224 mm), Height 3 $\frac{3}{8}$ " (85 mm), Depth 6 $\frac{1}{8}$ " (155 mm)
Weight	4.4 lbs (2 kg) including batteries

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## FEATURES

■ **"LEVELMATIC"** (automatic recording level) controls make it possible for anyone to make correct, fool-proof recordings. This unique new feature means that even loud tones (extra large input signals) which would ordinarily become distorted are automatically recorded at the level at which they can best be heard. All that is necessary is to set the optimal recording level once at the beginning, and then TRQ-300 will make all of the necessary adjustments automatically.

■ Has convenient handle for carrying from place to place. For study! For leisure time use! For use with the family at home! A convenient handle is provided so that you can carry the tape recorder around with you easily wherever you go.

■ There is a quick forward device, rare in a Transistorized Portable Tape Recorder.

■ The level meter tells you at a glance whether the recording conditions are right, and how much life is left in the batteries.

■ Recording, playback, rewinding, fast forward, and stop operations can all be done easily with a single level.

■ Large-sized speaker directs sound output towards listener. A large-sized  $4 \times 2\frac{3}{4}$  inch speaker is used. The speaker directs the sound directly towards the listener.

■ Two-way operation: On batteries, or on ordinary electric current.

\* Operates on only four ordinary flashlight cell batteries (6 volts). Since these batteries serve both the amplifier and the motor, there is no need to bother about supplying two different sets of batteries.

\* If a "Hitachi AC Adapter," sold separately, is attached, the tape recorder can be operated on ordinary current from any electric light socket.

■ Recording can be done at two different speeds. The tape speed can be set at either  $3\frac{3}{4}$  inch/sec or  $1\frac{1}{8}$  inch/sec according to the purpose of the recording. The faster  $3\frac{3}{4}$ " speed, which gives more faithful reproduction, can be used in cases when the tone quality is the most important factor, such as when making recordings of music. When recording speeches, conferences, etc., in which recording time is more important than tone quality, the slower  $1\frac{1}{8}$ " speed, which gives you twice as much recording time, can be used.

■ The capstan drive system is used. This makes possible highly stable recording and playback.

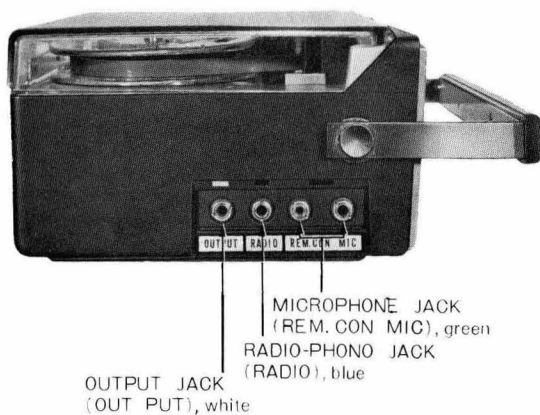
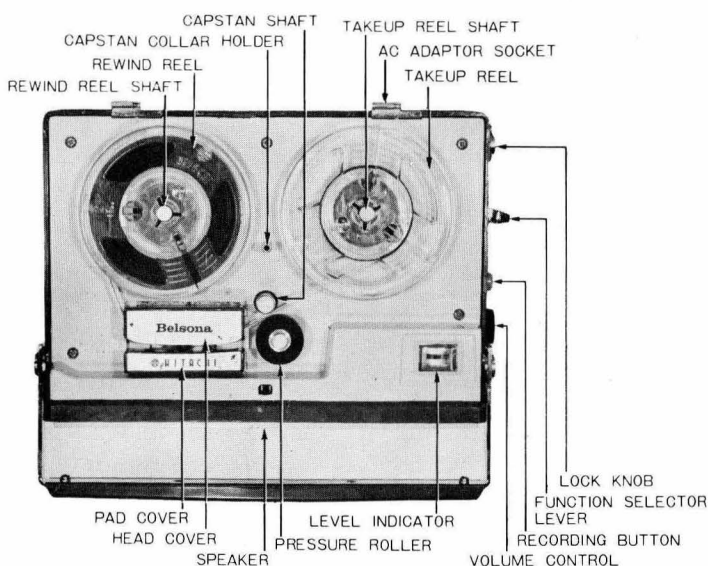
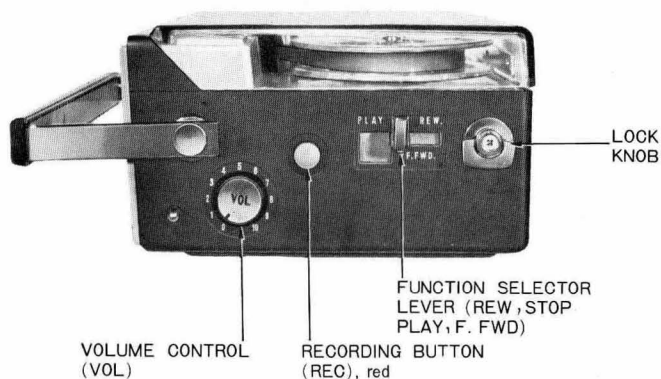
## ADDITIONAL FEATURES

■ There is a Dynamic Microphone which is both compact in size and also extremely sensitive. The microphone has a remote switch by which the microphone can be switched on and off by remote control.

■ Since a printed circuit is used for all inside wiring, there is no danger of circuit failure even under the rigid conditions of use to which portable recorders are subjected.

■ While recording, you can use the attached earphone for monitoring. The same earphone can also be used for quiet listening to the playback without disturbing others.

■ Hi-fi recordings can be made directly from the radio or record player, or the tape can be played back through an outside speaker.



## CONTOROLS

### RECORDING

#### In Recording Microphone Voice :

- (1) Insert the microphone plug into microphone jacks (REM. CON. and MIC.) with the green dot on microphone plug upward. (Then, turn the remote on-off switch on microphone to "ON.")
- (2) Keep pushing in the red recording button and then move the function selector lever from "STOP" to "PLAY."
- (3) Set the suitable recording volume by turning the volume control until the pointer of lever indicator points up to nearly the middle of left back zone.
- (4) For monitoring the recording condition, connect a earphone to the output jack.
- (5) Attach the capstan collar to the capstan shaft with its top screw, and tape speed is  $3\frac{3}{4}$ " /sec. Remove the capstan collar, and tape speed is  $1\frac{7}{8}$ " /sec. (To prevent missing capstan collar, fix it at the capstan collar holder when not in use.)

#### In Recording From Radio, Record Player, Television :

- (1) Be sure that microphone is removed from microphone jacks. Insert the extension cord plug into the radio-phonon jack (RADIO).
- (2) Insert another extension cord plug into earphone jack of TV, radio or record player (or tape recorder jack), and connect alligator clips to those of the same color. (Then, if hum is heard from earphone, reverse clips connection.)
- (3) Keep pushing in the red recording button and move the lever from "STOP" to "PLAY." If the lever indicator pointer points farther to the right than the center of black zone, change radio-phonon jack connection for microphone jack connection.

### REWINDING

Move the function selector lever to "REW."

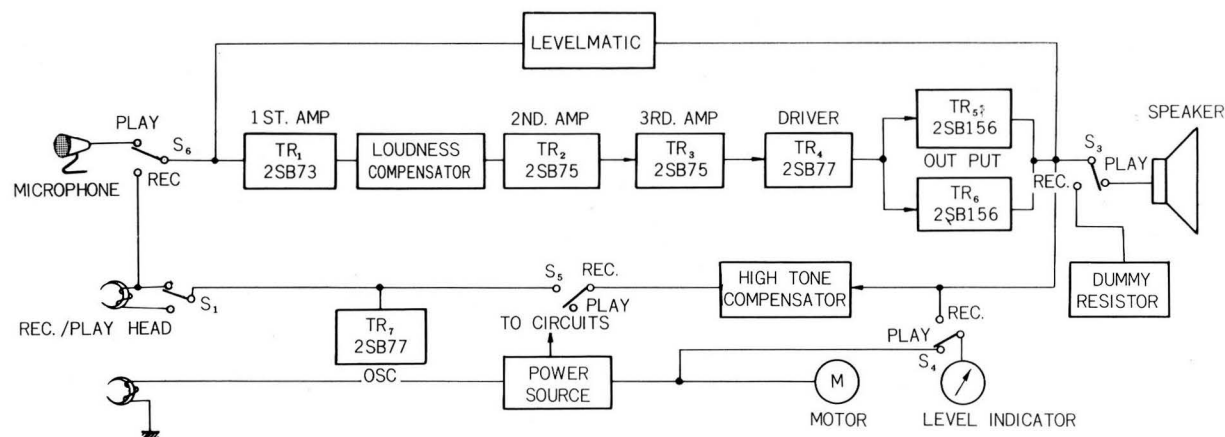
### PLAYING BACK

- (1) Thread tape and move the function selector lever to "PLAY."
- (2) Attach or remove the capstan collar in the capstan shaft to select tape speed.
- (3) For earphone connection, insert earphone plug into the output jack.
- (4) For playing back by external speaker, radio or record player, insert the extension cord plug into the output jack and connect its alligator clips to the voice-coil terminals or the pickup terminals ( $\oplus$  to red clip,  $\ominus$  to black clip.)

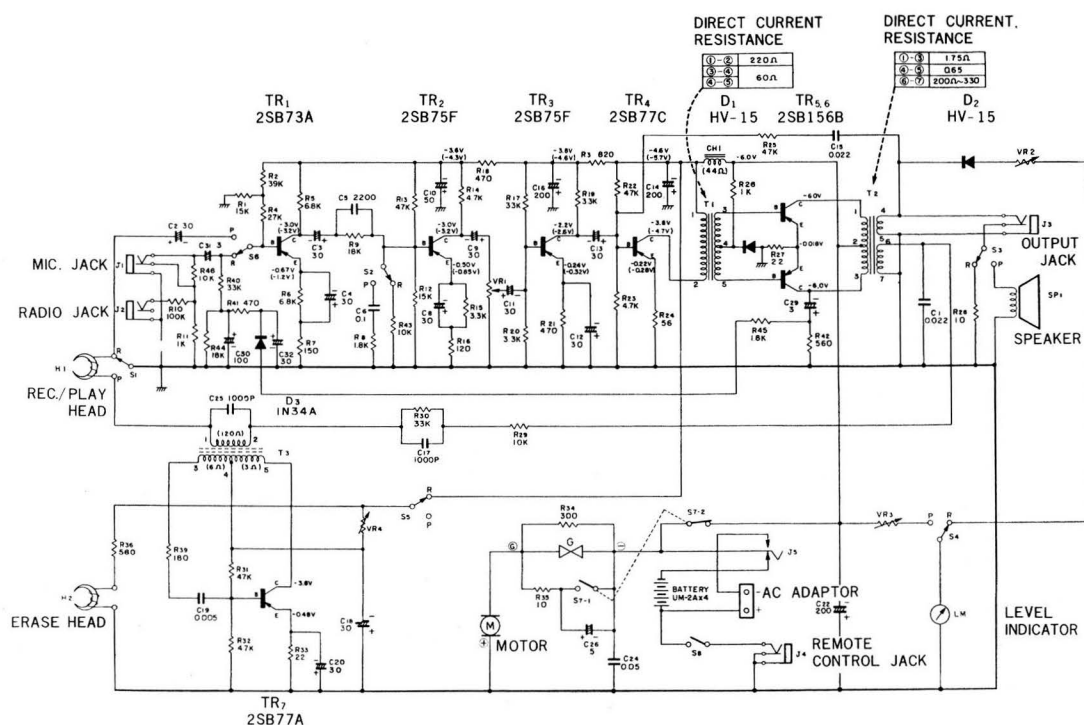
### FAST FORWARDING

To advance the tape at a fast speed, move down the function selector lever to "F. FWD."

## BLOCK DIAGRAM



## CIRCUIT DIAGRAM TRQ-300



Parts Name	Stock No.	No./100	unit	Parts Name	Stock No.	No./100	unit
Electrolytic Capacitor (tubular type) 30 $\mu$ F 6WV	258023	1		Plus contact plate assembly	636599	1	
Electrolytic capacitor 3 $\mu$ F 6WV	257031	1		Function selector lever assembly	639620	1	
30 $\mu$ F 6WV	258518	3		Rewind pulley stand assembly	630510	1	
100 $\mu$ F 6WV	259019	1		Micro switch assembly	636536	1	
200 $\mu$ F 6WV	259020	1		Pad lever switch	539057	1	
Mylar capacitor 0.022 $\mu$ F 50WV M	275113	1		Recording button plate assembly	637210	1	
0.01 $\mu$ F 50WV M	275111	1		Motor holding pin	639615	2	
0.001 $\mu$ F 50WV K	274011	1		Motor sleeve	639831	2	
0.0022 $\mu$ F 50WV K	274013	1		Ceramic-capacitor 0.05 $\mu$ F P	245015	1	
Paper capacitor 0.1 $\mu$ F 400WV K	216071	1		Electrolytic capacitor 5 $\mu$ F 10WV (tubular type)	257021	1	
Mica capacitor 0.001 $\mu$ F J	291106	1		Case assembly	950043	1	
Carbon film resistor SRD 1/16PL 33k $\Omega$ K	117407	1		Lid case stopping spring assembly	968171	1	
15k $\Omega$ K	117403	1		Jack label	659005	1	
39k $\Omega$ K	117408	1		Handle shaft	642577	1	
27k $\Omega$ K	117406	1		Handle assembly	659002	1	
6.8k $\Omega$ K	117361	1		Knob	960040	1	
150 $\Omega$ K	117303	1		Ornament washer	950038	1	
47k $\Omega$ K	117409	1		Ornament washer	950039	1	
10k $\Omega$ K	117401	1		Knob shaft	970008	1	
180 $\Omega$ K	117304	1		Lock spring	950009	1	
1.8k $\Omega$ K	117354	1		Lock plate assembly	944079	1	
Carbon film resistor 18k $\Omega$ K	117404	1		Handle stopper	954005	1	
Composition resistor RC $\frac{1}{2}$ BE 560 $\Omega$ K	133290	1		Square washer	950011	1	
100k $\Omega$ K	133521	1		"E" ring	637444	5	
3.3k $\Omega$ K	133367	1		Rec./Play head	513097	1	
1k $\Omega$ K	133361	1		Erase head assembly	513091	1	
4.7k $\Omega$ K	133369	1		Tape guide	639635	1	
470 $\Omega$ K	133289	1		Stand nut for circuit board	636926	1	
47k $\Omega$ K	133449	1		Split nut for circuit board	636925	1	
2.2 $\Omega$ K	133201	1		M2 $\times$ 6 Pan screw	715106	1	
10 $\Omega$ K	133209	1		Handle washer	626207	1	
22 $\Omega$ K	133214	1		Hide washer	625431	1	
Variable carbon resistor 10k $\Omega$ A type	152005	1		Handle seat	629002	1	
Semi-variable resistor 1k $\Omega$ B type	159017	1		Handle plate	659006	1	
10k $\Omega$ B type	159019	1		Spring	662011	1	
50k $\Omega$ B type	159022	1					
Transformer-Input	430008	1					
Transformer-Output	451045	1					
Coil-Choke	421006	1					
Coil-Oscillator	313031	1					
Switch-Function selector	532115	1					
Micro Motor	514025	1					
Jack Holder	612303	1					
Jack (A)	543112	1					
Jack (B)	543113	1					
Jack	543180	1					
Case lid assembly	958165	1					
Dressing Plate assembly	968090	1					
Case button plate assembly	630248	1					
Speaker baffle board assembly	613146	1					
2.6 $\times$ 6 bind m/m screw	746306	4					
2.6 $\times$ 10 bind screw	746310	4					
2.6 $\times$ 22 bind screw	625797	4					
Head cover assembly	611286	1					
Pad cover assembly	611283	1					
Recording button	636529	1					
Volume knob	611285	1					
Function selector lever	970025	1					
Battery case assembly	626194	2					
Motor collar assembly	636443	1					
Pressure roller	639127	1					
Capstan screw	637688	2					
Rubber belt	637043	1					
Thrust washer	638354	1					
Take up pulley stand assembly	944179	1					
Capstan screw	638364	1					
Capstan	637479	1					
Flywheel rubber assembly	948157	1					
Pad spring	948096	1					
Pad arm assembly	639170	1					