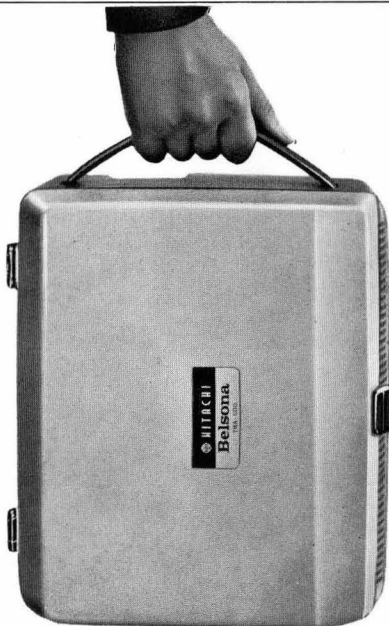


MODEL TRA-500

With "Automatic Recording Level Control," Which assures the best possible recording, free from all distortion and unevenness. Thanks to the handy "One Hand Control" system, anyone can soon learn how to record.



ACCESSORIES

Highly sensitive dynamic microphone.
Extension cord for recording from radio or replaying over radio speaker.
Hitachi 5-inch recording tape.
Belts for carrying recording tapes.

SPECIFICATIONS

Tube Components	12AX7A, 6BM8 Silicon rectifier: 1S314×2 Selenium rectifier: SE026×1 Germanium diode: 1N34A×5
Tape Speed	3 $\frac{3}{4}$ ins./sec. (9.5 cm/sec.) 1 $\frac{1}{4}$ ins./sec. (4.75 cm/sec.)
Recording Time	60 minutes on two tracks at 3 $\frac{3}{4}$ ins./sec. 120 minutes on two tracks at 1 $\frac{1}{4}$ ins./sec.
Track	Double track
Recording System	AC bias system
Erasing System	AC electromagnetic system
Maximum Size of Tape Reel	5 inches
Speaker	6 $\frac{1}{2}$ "×3" oval type PM speaker
Output Power	1.5 watts (maximum)
Frequency Characteristics	100~8,000 cycles (3 $\frac{3}{4}$ ins./sec.) 100~3,500 cycles (1 $\frac{1}{4}$ ins./sec.)
Power Source	40 watts 110/120 or 210/230 Volts, AC 50/60 cycles
Dimensions	Width 10 $\frac{1}{4}$ " (25.5 cm), Height 5 $\frac{3}{8}$ " (14 cm), Depth 8 $\frac{3}{8}$ " (21.5 cm)
Weight	9.9 lbs (4.5 kg)
Case Color	Red or blue (optional)

FEATURES

■ To adjust the recording level, all that is necessary is to set the level once at the beginning. From then on, the "**Automatic Recording Level Control**" takes over, controlling the level automatically. This is a new feature unique to the **Hitachi** tape recorder alone. Thanks to it, even if loud sounds suddenly come in during the recording, the automatic control device will maintain the best recording level at all time.

■ Another new feature is the handy "**one-hand control system**", by which all operations can be performed with one hand. There is only one knob to turn for recording, playback, fast forward, rewind and instant stopping. This convenient feature eliminates mistakes in operation. Even persons who have never operated a tape recorder before will be able to master the operation immediately.

■ Playback with rich Hi-Fi sound is guaranteed by the front sound system with the large $6\frac{1}{2}" \times 3"$ speaker and the high output of 1.5W.

■ This is a handy portable tape recorder of the suitcase type, compact in size and light in weight. It has tape belts for attaching a 5" tape to the recorder, and is designed so that the microphone and other accessories can be put away inside the recorder.

■ There are two tape speeds: $3\frac{3}{4}"$ per sec., and $1\frac{7}{8}"$ per sec. When using a Hitachi 5-inch long play tape, recording can be done for a maximum of three hours.

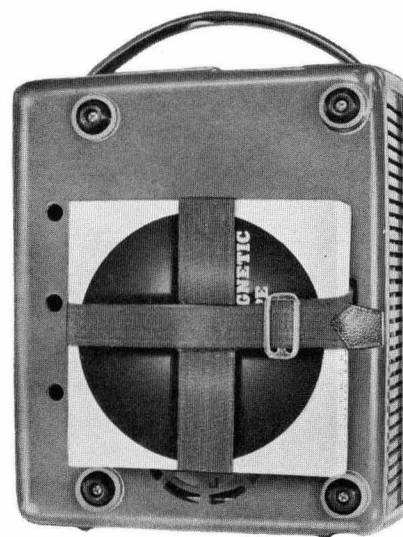
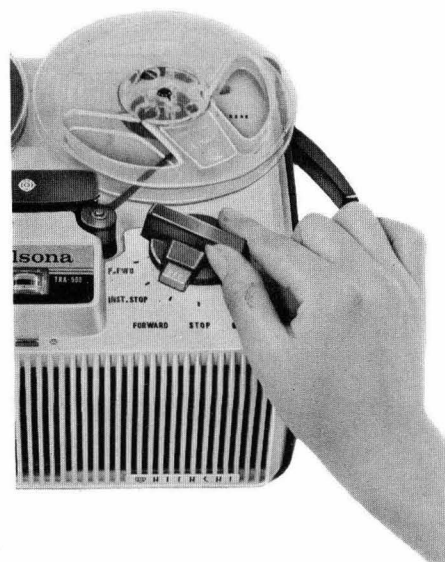
■ Thanks to the high-sensitivity dynamic microphone and recording head, even slight sounds can be accurately caught and recorded on tape.

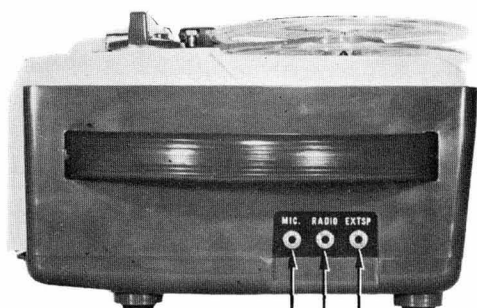
Besides

■ The rectifying circuit, using Hitachi silicon diodes, eliminates disorders and guarantees stability of operation at all times.

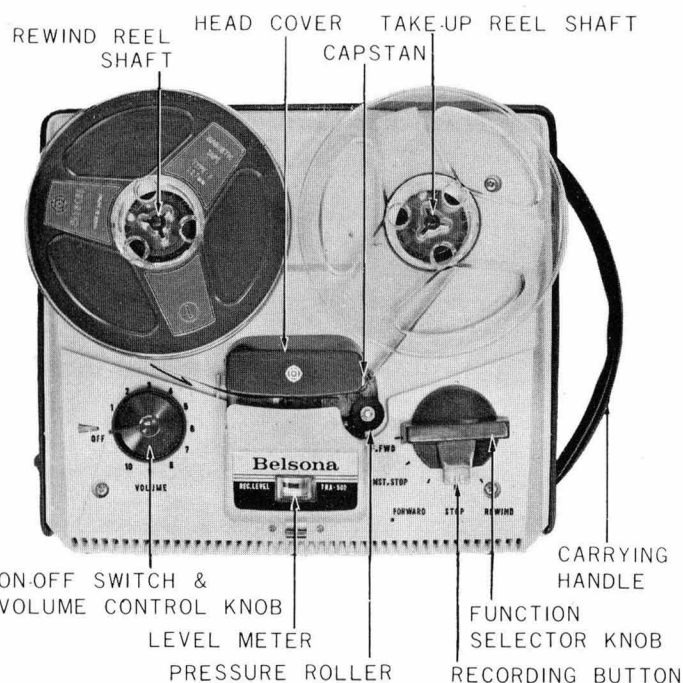
■ The recording level meter tells you exactly how well the recording is being made.

■ By using the attached extension cord, Hi-Fi recording can be done directly from the radio, stereo, or television, without using the microphone.

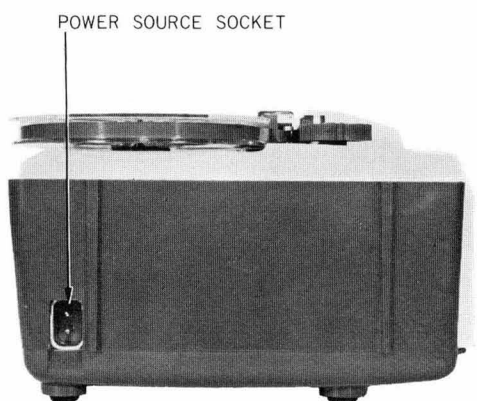




MICROPHONE INPUT
RADIO INPUT
EXTERNAL SPEAKER



REWIND REEL SHAFT
HEAD COVER
TAKE-UP REEL SHAFT
CAPSTAN
VOLUME
ON-OFF SWITCH & VOLUME CONTROL KNOB
LEVEL METER
PRESSURE ROLLER
CARRYING HANDLE
FUNCTION SELECTOR KNOB
RECORDING BUTTON



POWER SOURCE SOCKET

CONTROLS

Function selector knob "One Hand Control" system controls all the action: record, playback, stop rewind and fast forward. The center of the recording button (red) indicates their positions.

Recording button (REC) When recording, press this button while turning function selector knob to "Forward".

ON-OFF switch and volume control knob (VOLUME) This turns the power on or off, adjusts the recording level and controls the playback volume.

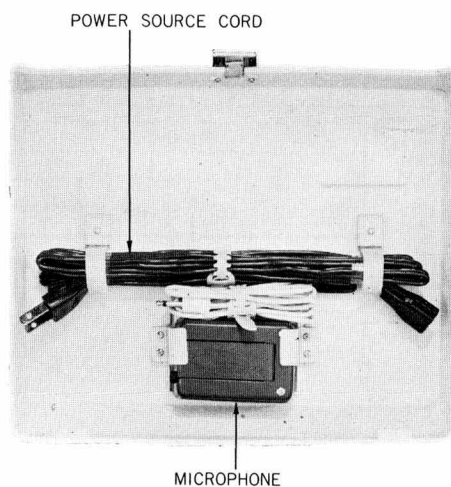
Microphone terminal (MIC.) This is the input terminal when recording with use of the microphone.

Radio terminal (RADIO) Input terminal for use when recording from radio, television set or record player.

External speaker terminal (EXT. SP.) This is an output terminal for connection to other speakers and amplifiers for playback. Its impedance is 8Ω.

Selecting tape speed This is done by changing the capstan. When using at 1 7/8"/sec, remove the head cover and the capstan collar (turn the screw to the left). Hang the removed capstan collar on the collar hanger at left of the erasing head.

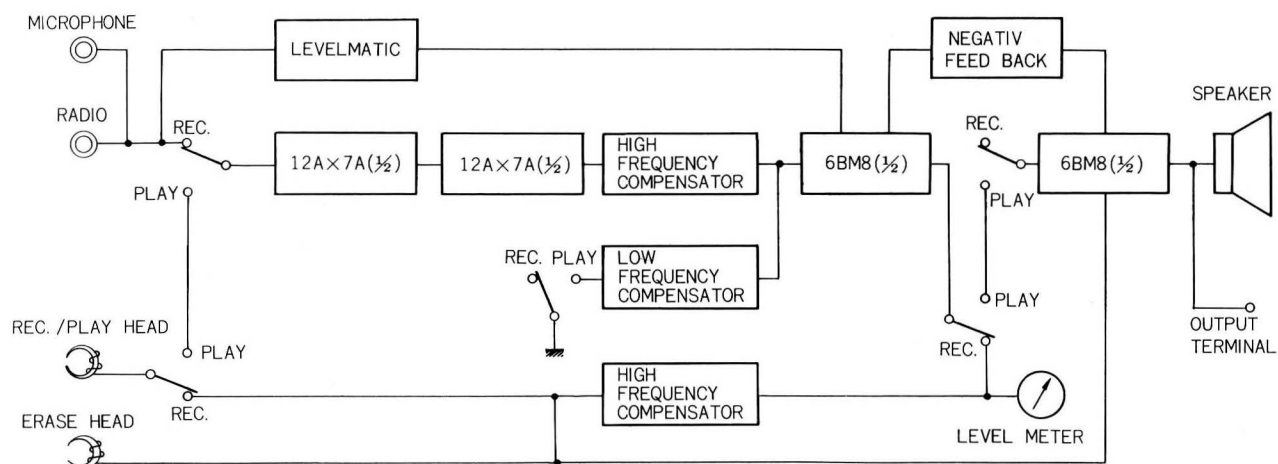
Storing accessories The power source cord (secured with clips) and microphone can be stored inside the upper cover. Tapes and empty reels can be placed in boxes and fastened to the bottom of the case.



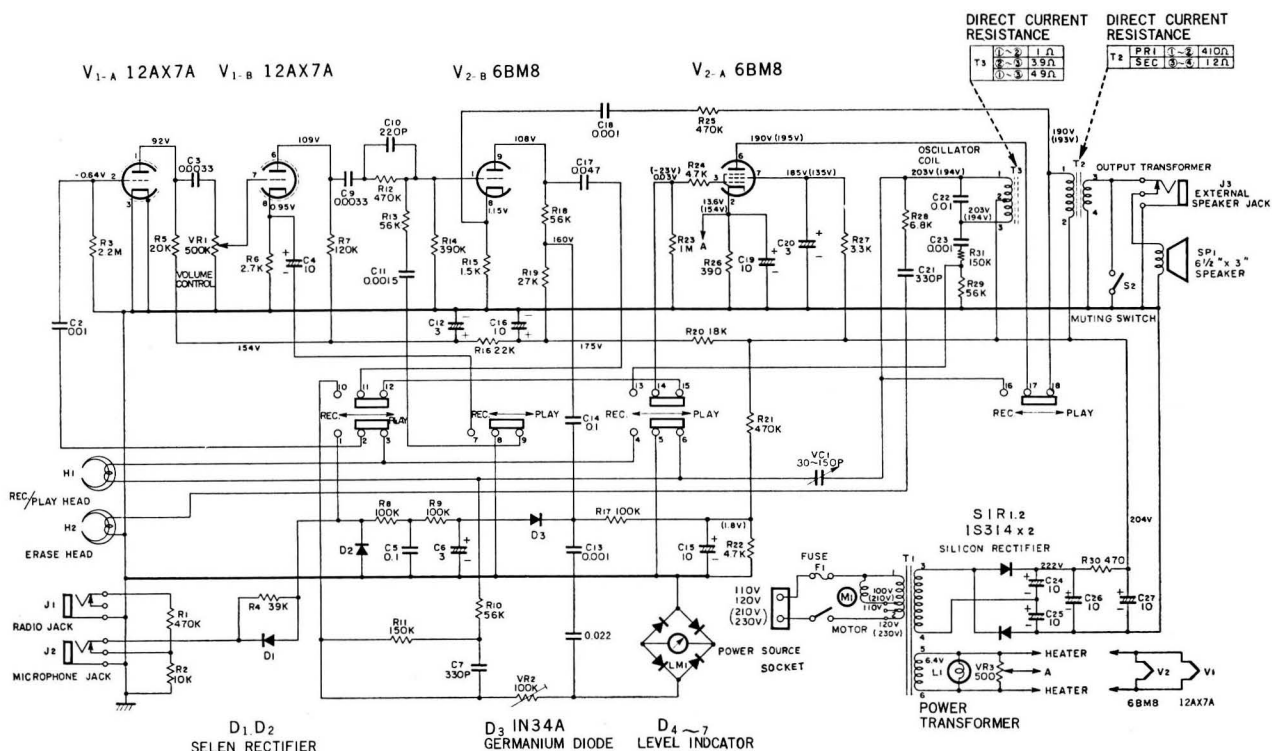
POWER SOURCE CORD

MICROPHONE

BLOCK DIAGRAM



CIRCOIT DIAGRAM TRA-500



Parts Name	Stock No.	No./100 unit	Parts Name	Stock No.	No./100 unit
Power transformer for 210/230V	411020	1	Power source cord assembly	257528	
(Power transformer for 110/120V	411015	1)	Extension cord	968206	1
Output transformer	453090	1	Brush for head cleaning	593114	1
Variable resistor	253536	1	Record/play head	611141	1
Semi variable resistor	159011	1	Erase head	513092	1
Semi variable resistor	159023	1	Muting switch assembly	513069	1
Level meter	514201	1	Speaker	630380	1
Lamp socket	541042	1	(HVA-5 induction motor for 110/120V	526095	1
Pilot lamp	594004	1	HVA-5 induction motor for 210/230V	514120	1)
Power source socket	542132	1	Case cover assembly	514119	1
Semi variable capacitor	283088	1	Case cover rock	968118	1
Fuse	591005	1	Cord holder	950037	1
4 pole terminal plate	544984	1	Screw	968123	1
6 pole terminal plate	544404	1	Volume control knob	711416	1
Rubber cushion	596044	1	Head cover	968253	1
Eyelet	852030	1	Screw	968066	1
Jack cellar	635593	1	Upper pannel assembly	745412	1
Jack (with rod point mark)	543082	1	Rubber base	968072	1
Slide switch	532115	1	Case assembly	968039	1
Vacuum tube	572724	1	Case assembly	968194	1
Vacuum tube	572447	1	Tape carrying belt	968195	gray red 120V
Oscillator coil	313033	1	Pressure roller arm assembly	968196	gray red 230V
9 pin socket for miniature tube	541221	1	Washer for pressure roller arm	968197	
9 pin socket for miniature tube (with clamp)	541211	1	Brake lever assembly	969689	1
Composition resistor 1/2W 2.2MΩ K	133537	1	Tape guide	948227	1
1/2W 1MΩ K	133533	1	Pad spring	630218	1
1/2W 470kΩ K	133529	1	Pad plate assembly	948449	1
1/2W 390kΩ K	133528	1	Switch pushing plate	639450	1
Composition resistor 1/2W 120kΩ K	133522	1	Washer for brake lever shaft	638786	1
1/2W 100kΩ K	133521	1	Cellar for switch pushing plate	948302	1
1/2W 56kΩ K	133450	1	Lag eyelet	940068	1
1/2W 22kΩ K	133445	1	Switch pushing plate cellar	635594	1
1/2W 18kΩ K	133444	1	"E" ring for function selector lever shaft	638812	1
1/2W 4.7kΩ K	133369	1	"E" ring for pressure roller arm shaft	544186	1
1/2W 2.7kΩ K	133366	1	Rewind roller	944024	1
1/2W 150kΩ K	133523	1	Washer	637445	1
Carbon film resistor 1/2W 470kΩ J	123190	1	Clip ring	638399	1
1/2W 6.8kΩ K	123387	1	Supply reel base assembly	638825	1
1/2W 1.5kΩ J	123097	1	Take-up pulley	630020	1
1/2W 470kΩ J	112168	1	Take-up reel base assembly	630347	1
1/2W 56kΩ J	112149	1	Rewind washer	948298	1
1/2W 27kΩ J	112145	1	Washer for motor cushion	948169	1
1/2W 470kΩ K	123563	1	Capstan cellar	944213	1
1/2W 10kΩ K	123441	1	Belt	636553	1
1W 390kΩ K	125302	1	Belt	645201	1
1W 3.3kΩ K	125380	1	Switch spring	944313	1
1/2W 56kΩ J	123831	1	Pressure roller	638858	1
1/2W 150kΩ J	123171	1	"E" ring for pressure roller shaft	630014	1
Carbon film resistor 1/8W 56kΩ J	181169		Pressure roller spring	639233	1
(single ended type)			Power source socket cellar	638821	1
1/8W 39kΩ K	181658		Rubber cushion	637443	1
Oxide metal resistor 2W 470Ω K	176749		Motor pulley for 50c/s	638794	1
Oil paper capacitor 0.1μF M 400WV	216021		Motor pulley for 60c/s	639848	1
0.047μF M 400WV	215529		Pad spring for brake lever	690755	1
0.01μF M 400WV	215521		Rewind cellar	630400	1
0.01μF K 400WV	215071		Lamp cover	944171	1
0.0033μF M 400WV	214527		Washer for brake lever and motor pulley	638867	1
0.0015μF M 400WV	214573		Level meter cushion	630375	1
0.001μF M 400WV	214521		Spring for slide switch	635588	1
0.001μF M 400WV	214571		Jack name plate	645587	1
0.001μF M 400WV	214021		Function selector can assembly	918325	1
0.022μF M 400WV	215525		Tape guide	662071	1
Mylar capacitor 0.1μF M 50WV	276111			638878	1
Ceramic capacitor 220pF K 500WV	233467			940472	1
330pF K 500WV	233814			944199	1
Electrolytic capacitor 10μF 350WV	258011				
10+10+10+10μF 350WV	258557				
10μF 3WV	258516				
10μF 25WV	258005				
3μF 350WV	257016				