

BELT-DRIVE TURNTABLE WITH AUTOMATIC RETURN



LAB-300


OWNER'S MANUAL

PLEASE READ BEFORE
USING THIS EQUIPMENT

REALISTIC[®]

CAT. NO.
42-2931

CUSTOM MANUFACTURED FOR

RADIO SHACK  A DIVISION OF TANDY CORPORATION

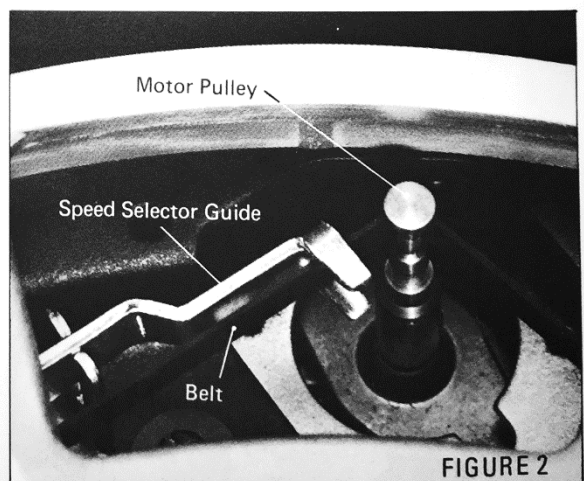
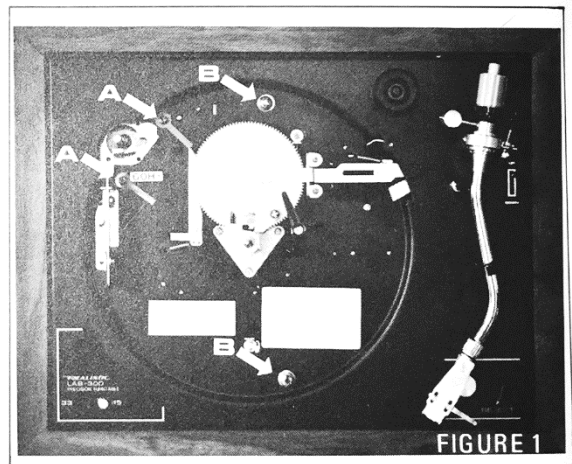
Your REALISTIC LAB-300 Precision Belt Drive Turntable is designed to meet the high standards of performance that audiophiles expect for superior sound reproduction of their disc recording. The turntable employs the powerful Capacitive Leading-Phase 4-pole Synchronous motor for unwavering, perfect speed with instant acceleration. The motor, which turns at 1800 rpm, reduces the primary rumble to 30 Hz. The belt-drive system absorbs the slightest vibration of the motor to give excellent signal-to-noise ratio.

The S-shaped tone arm keeps the stylus of the cartridge perpendicular to the radius of the groove over the full surface of the record—which means low distortion and perfect tracking at less than 1½ grams. The turntable comes complete with a Vertical Moving Magnet type cartridge with 0.7 mil diamond stylus that faithfully produces frequencies between 20 – 20,000 Hz while maintaining good channel separation.

UNPACKING AND PREPARING FOR USE

Carefully remove the turntable assembly (with its styrofoam protectors) from the carton. Remove the box with accessory parts. Take care that you don't drop the platter – it is held separately in the styrofoam protectors. Remove plastic bags from all parts. We recommend that you keep all packing materials, so you can carefully pack it up for safe transit or shipping (should it be required).

1. Remove the two Motor Clamping Screws shown in Figure. 1(A).
2. Loosen the two Transit Screws (B) which clamp the chassis to the base. When sufficiently loosened, the screws will snap up to their maximum position and the chassis will ride freely on its springs. NOTE: If the turntable is to be shipped or transported, the motor clamping screws must be replaced and tightened as well as the chassis clamping screws.
3. Untie the ribbon which restrains the tone arm. Remove the styrofoam blocks from the tone arm. Carefully remove the strip of tape from the plastic gear. Carefully remove the rubber band from the antiskating device.
4. Carefully lower the turntable platter onto the center spindle. Slowly turn the platter in a clockwise direction until the motor shaft is centered in one of the two large openings in the platter. (See Figure 2) Set the speed changeover lever to 33-1/3. Clean your hands of all oil and grease to avoid contamination of the belt. Grasp the belt (See Figure 3) and slip it over the motor pulley as in Figure 2.



5. Set the rubber mat on the platter and insert the trim ring into its space after carefully removing the protective surface film.
6. Install the head shell with the mounted cartridge by inserting it into the end of the tone arm as far as it will go. Turn the knurled ring to draw the shell up tightly.
7. Slip the Lateral Weight onto the Lateral Shaft, with the set-screw towards the rear. Position it to the right so it touches the clear plastic tubing. Tighten the set-screw.
8. Mount the counterweight by slipping it onto the rear of the tone arm (See Figure 4) and turning it counter-clockwise (viewed from the front).
9. Adjust the counterweight as follows: With the power cord not plugged in, lift the arm up off the tone arm support and place it to the left of the support. Set the cueing lever to the DOWN position. Turn the counterweight until the tone arm is balanced freely in the horizontal position. Return the arm to its support and clamp it. Turn the black calibration ring on the counterweight so that the "0" is on top. Grasping the metal counterweight, turn it (and the black ring) until the desired stylus force is read out on the black ring opposite the line on the tone arm. The optimum stylus pressure for the Cartridge supplied is 1½ grams.

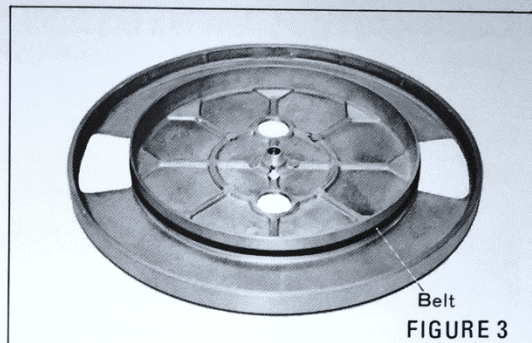


FIGURE 3

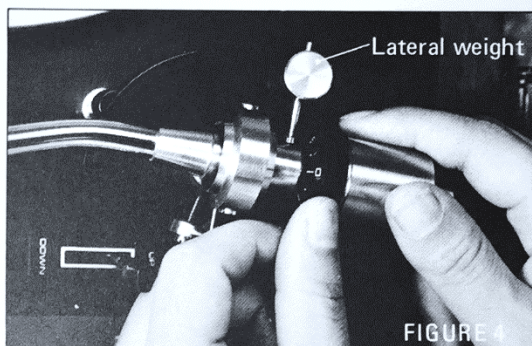


FIGURE 4

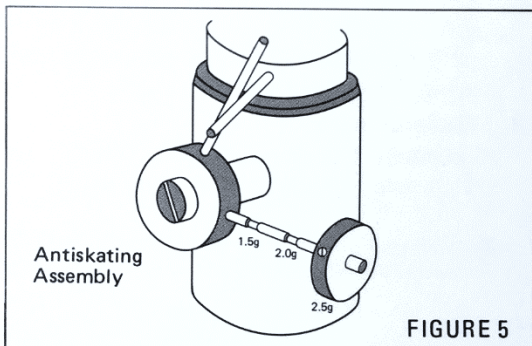


FIGURE 5

10. Adjust the position of the small weight on the antiskating mechanism to one of the three notches. The notch at the end of the bar corresponds to an antiskating force for 2.5 grams stylus force; the middle notch to 2.0 grams and the innermost notch to 1.5 grams. (Figure 5) Select the notch which corresponds closest to the stylus force selected in step 9.

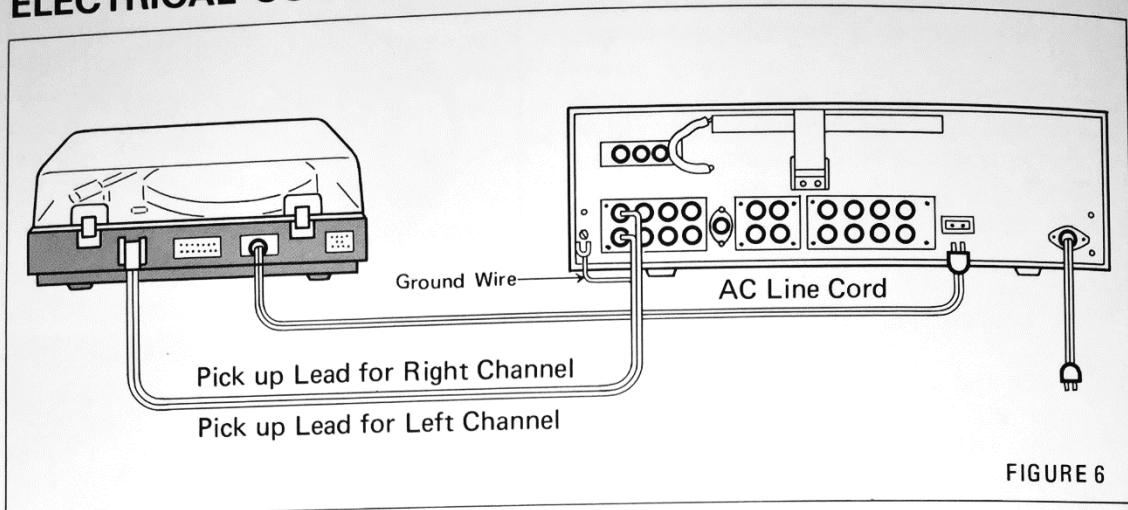
NOTE: The Antiskating device can be set for conical, elliptical or Shibata type cartridges. Each notch-setting corresponds to the following chart (Figure 5).

Conical	Elliptical	Shibata
1.5 g	1.25g	0.7g
2.0 g	1.5 g	0.9g
2.5 g	1.9g	1.2g

To defeat the antiskating force, remove the screw which mounts the Antiskating device and remove the assembly.

To insure top performance, install only on a solid surface, free from vibration. Also, avoid direct sunlight or other sources of heat (heaters, hot air vents, etc.). Also, avoid areas of high humidity. Good air circulation would be helpful.

ELECTRICAL CONNECTION



1. **Pickup leads with RCA type plugs:**

Connect the pickup leads (L and R) coming from the rear of the turntable to the PHONO input jacks of your Amplifier/Receiver — red for right channel and white for left channel.

2. **AC line cord:**

Plug the AC line cord coming from the rear of the Turntable into a convenient source of 120 volts, 60Hz AC power (a wall outlet or an unswitched AC receptacle on your Amplifier/Receiver).

3. **Ground wire:**

Connect the ground wire (black) to the GND terminal on your Amplifier/Receiver. This will reduce or eliminate hum.



OPERATION

Plug the AC line cord into a source of AC power.

1. Speed Selector Lever

Set the speed selector lever to "33" or "45" depending on the type of record to be played. To avoid damage to the turntable's drive belt, change Speed Selector only while the turntable is turning.

2. Cuing

This lever slowly raises or lowers the tone arm. It is viscous-damped and so provides a very gentle means of precisely setting the stylus in exactly the desired groove.

Set the record on the platter. Slowly move Cuing Lever to UP position. Remove the Tone Arm clamp and move the Tone Arm to be directly over the desired selection on the record. Move Cuing Lever to DOWN position and the tone arm will gently set the stylus into the precisely selected groove.

At any time during the play cycle, you can gently lift the Tone Arm from the record just by placing the Cuing Lever in the UP position. If you want to change a record before it has finished its playing cycle, just activate REJECT Lever and release. The Tone Arm will lift and return to its rest and the Turntable will shut off.

3. Tone Arm

The Tone Arm acts as an "on/off" switch for the Turntable. Whenever the tone arm is placed over the platter area, the turntable will start turning. When the Tone Arm is returned to the arm rest the Turntable will stop.

At the end of the record or when the REJECT lever is pulled, the Tone Arm will automatically return to the arm rest and the Turntable will stop.

Notes

- (1) When the tone arm is returning automatically, do not touch it.
- (2) Low capacitance pickup leads are provided, so CD-4 records can be played if a CD-4 cartridge is used.
- (3) Be sure to lock the tone arm into the arm rest whenever not in use.

4. 45 RPM Spindle Adapter

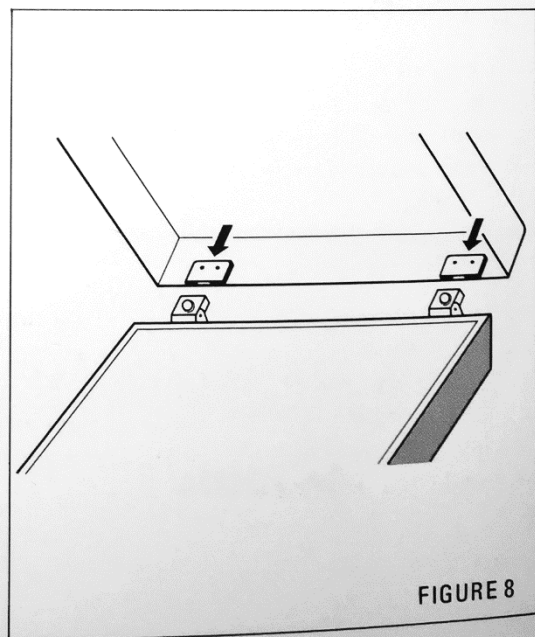
When playing a 45 RPM record, place the adapter over the record spindle.

5. Removal of Dust Cover

The dust cover is designed for easy removal. When the Turntable is to be used without the dust cover, remove it as follows:

Open the dust cover. Grasp the Dust Cover at the rear and lift up and out.

(Figure 8)

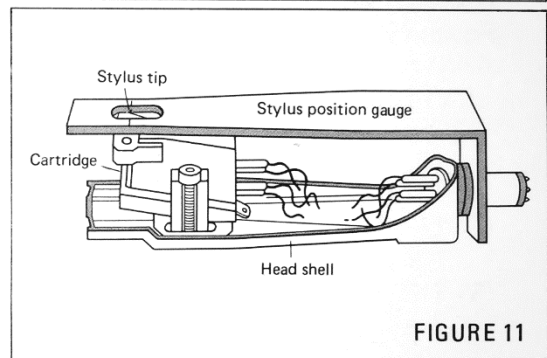
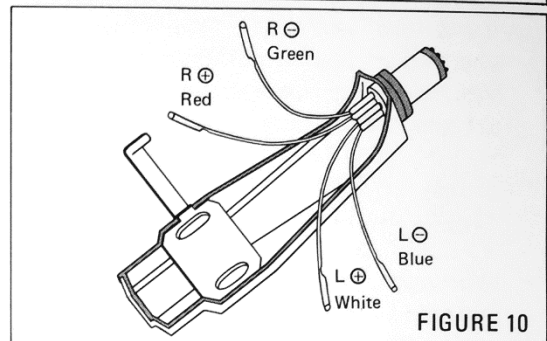
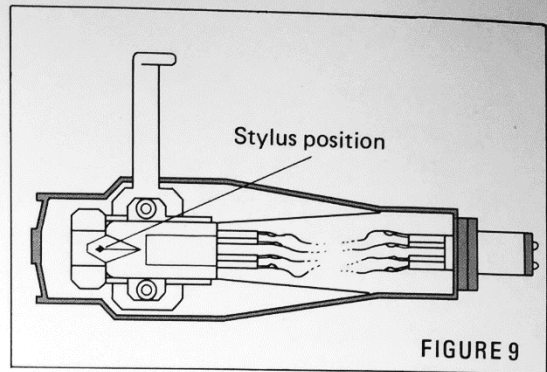


REPLACEMENT OF HEAD SHELL AND CARTRIDGE

1. In most cases, the mounting screws supplied by the cartridge manufacturer will be adequate. Fasten the cartridge into the shell as shown in Figure 9. Be sure that the axis of the cartridge lines up with the axis of the head shell.
2. To wire the cartridge grasp each of the push-on connectors by the lug end with a pair of long-nose pliers and push on to the appropriate pin at the rear of the cartridge. The wires in the head shell are color coded as follows: (Figure 10)

RED	Right Channel Hot (+)
GREEN	Right Channel Ground (-)
WHITE	Left Channel Hot (+)
BLUE	Left Channel Ground (-)

Fasten the cartridge as described and use the stylus position gauge (supplied) for final adjustment of stylus position before tightening the mounting screws. Slip the gauge over the connector ferrule as shown. With the gauge located snugly against the head shell, position the stylus tip in the center of the slot between the two lines. (Figure 11)



HINTS FOR BETTER SOUND

Howling:

Cartridges are very sensitive and may pick up slight sound pressure or vibrations of the speaker coming along the floor or through the air — resulting in howls. Therefore, location of your turntable is very important. Find a location where it will be very stable and free from vibration.

Induction Hum:

Your Turntable utilizes a 4-pole synchronous motor to reduce inductive hum. If you notice annoying hum, it may be caused by an electromagnetic field produced by motors or transformers used in other products. Do not place the Turntable near the product in which a motor or transformer is used. To prevent the Turntable from being affected by the power transformer of your Amplifier, Receiver or Tape Deck, position the Turntable on the side opposite the power transformer.

MAINTENANCE

1. Dust

Playing a dirty record grinds dust against the record walls and wears the record (and stylus) out quickly. Records often carry dust-attracting charges and should be cleaned before use. Occasionally you will need to remove dust and dirt from the stylus to reduce record wear and maintain top performance. Your local Radio Shack store has a complete line of record care accessories.

2. Cabinet and Dust Cover

If the cabinet or dust cover requires cleaning, use a soft, damp cloth (do not use solvents). Don't use insecticide, benzine or thinner near the cabinet. Radio Shack has a special cleaning fluid for plastics such as the dust cover.

3. Stylus Replacement

The diamond stylus of the turntable can normally play 800 to 1500 LP records (one side). However, when sound becomes distorted or noisy, check the stylus for wear. If worn out, replace it (refer to Figure 12). Be careful not to touch the stylus tip when replacing the stylus.

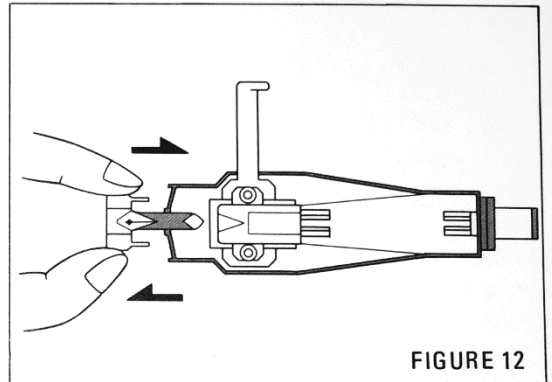


FIGURE 12

4. Lubrication

The motor requires lubricant about twice a year. Remove the platter as described in "Removal of Belt" below and apply three or four drops of the oil provided to the point shown in Figure 13. Be sure to avoid contact with the pulley or belt when lubricating. If these become contaminated, wipe clean with soft cloth dipped in ethyl alcohol.

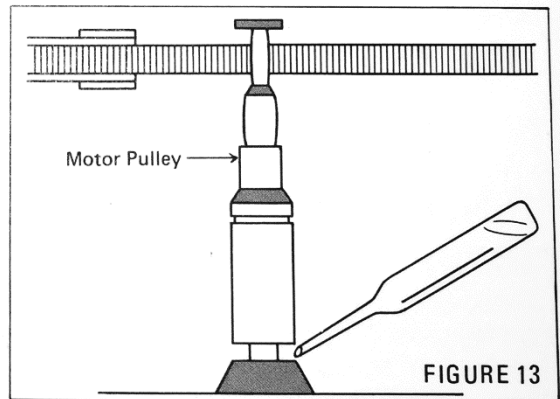


FIGURE 13

5. Cleaning Driving Mechanism

At least once a year clean the motor pulley, belt and rim of platter with soft cloth dipped in ethyl alcohol. Dirt on these parts may cause wow, flutter and rumble.

6. Removal of Drive Belt

Unplug the AC line cord from the outlet.

Note: Handle the drive belt carefully. If any scratch or other injury occurs, the belt life may be reduced.

A) Removal of Belt

- (1) Remove the rubber turntable mat. Disengage the belt from the speed selector guide and motor pulley through the cutout in the platter. (See Figure 14.)

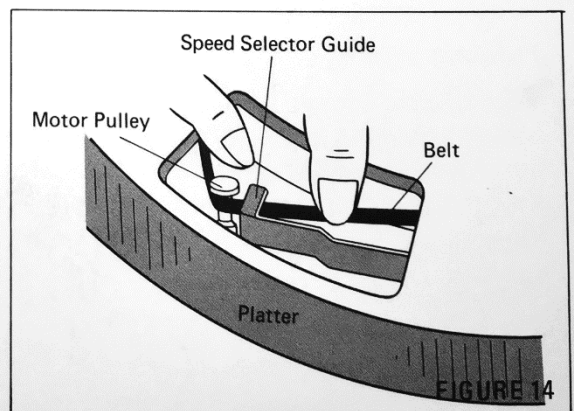


FIGURE 14

(2) Hold the belt with your finger through the cutout in the platter and pull off the platter from the turntable spindle.

B) Replacement of Drive Belt

(1) Place the belt with unshiny (mat) side against the inside rim of the platter. See Figure 15.

(2) Hold the platter horizontally, insert it into the spindle carefully and engage the belt over the motor pulley making sure that the belt is not twisted. (Figure 16)

Note: Do not rotate the platter counter-clockwise.

(3) Engage the belt into the speed selector guide.

(4) Put the turntable mat and trim in place.

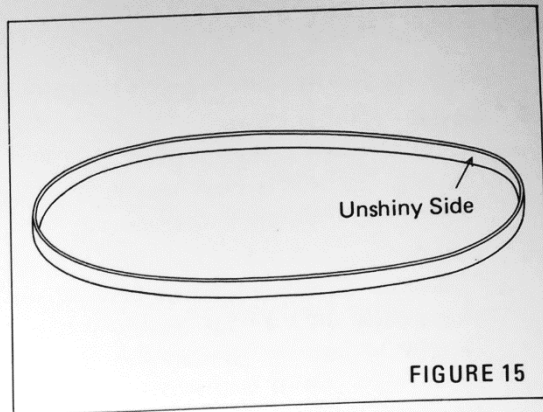


FIGURE 15

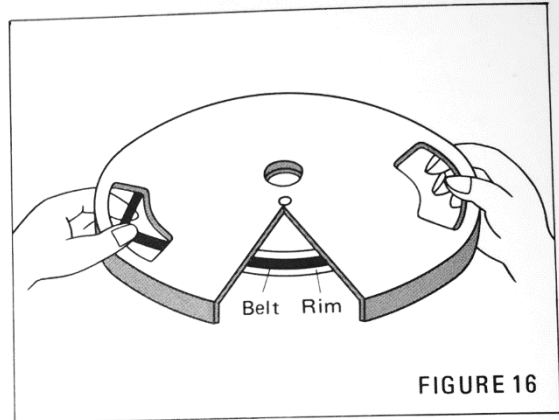


FIGURE 16

CHOOSING ASSOCIATED EQUIPMENT

While the LAB-300 can be used with any Amplifier/Receiver which has PHONO MAG inputs, the Realistic SA-1000A or STA-2000 is a perfect mate.



SA-1000A



STA-2000

SPECIFICATIONS

Type	2-speed, belt drive, auto-return system
Platter	Aluminum alloy die-cast, 11-13/16" (300mm) outer diameter
Motor	Capacitor lead-phase, 4-pole synchronous
Speed	2 speeds; 33-1/3 and 45 rpm
S/N	Better than 50 dB
Wow & Flutter	Less than 0.08% WRMS
Tone arm	Static balance type, tubular
Head shell	Plug-in type
Overall length	11-7/8" (302mm)
Effective length	8-7/16" (215mm)
Overhang	9/16" (15mm)
Stiffness	Vertical 0.035 oz (0.3g) or less Horizontal 0.035 oz (0.3g) or less
Adjustable force range (scale)	0 to 4 g/1 turn of the scale ring (directly readable in 0.5g steps)
Acceptable cartridge weight	4 to 12 g
Cartridge	Realistic/Shure Model R-1000E
Frequency response	20 – 20,000Hz
Output voltage	2.5 – 4.5 mV at 1kHz 50 mm/sec.
Channel difference	2 dB at 1kHz
Channel separation	23 dB at 1kHz
Tracking force	1-1/4 grams
Stylus tip	0.7 mil diamond stylus
Power source	117 Volts, 60 Hz AC
Power consumption	12 watts
Dimension	6-5/8" (H) x 17-5/8" (W) x 13-15/16" (D) 168 (H) x 448 (W) x 354 (D) mm
Weight	16.5 lbs (7.5 kg)

ACCESSORIES

Head Shell with Cartridge
Counterweight
Lateralweight
45 RPM adapter
Tube of lubricating oil
Screwdriver
Stylus Position Gauge

RADIO SHACK LIMITED WARRANTY

This equipment is warranted against defects for 1 year from date of purchase. Within this period, we will repair it without charge for parts and labor. Simply **bring your sales slip** as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover equipment subjected to misuse or accidental damage.

This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

We Service What We Sell

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