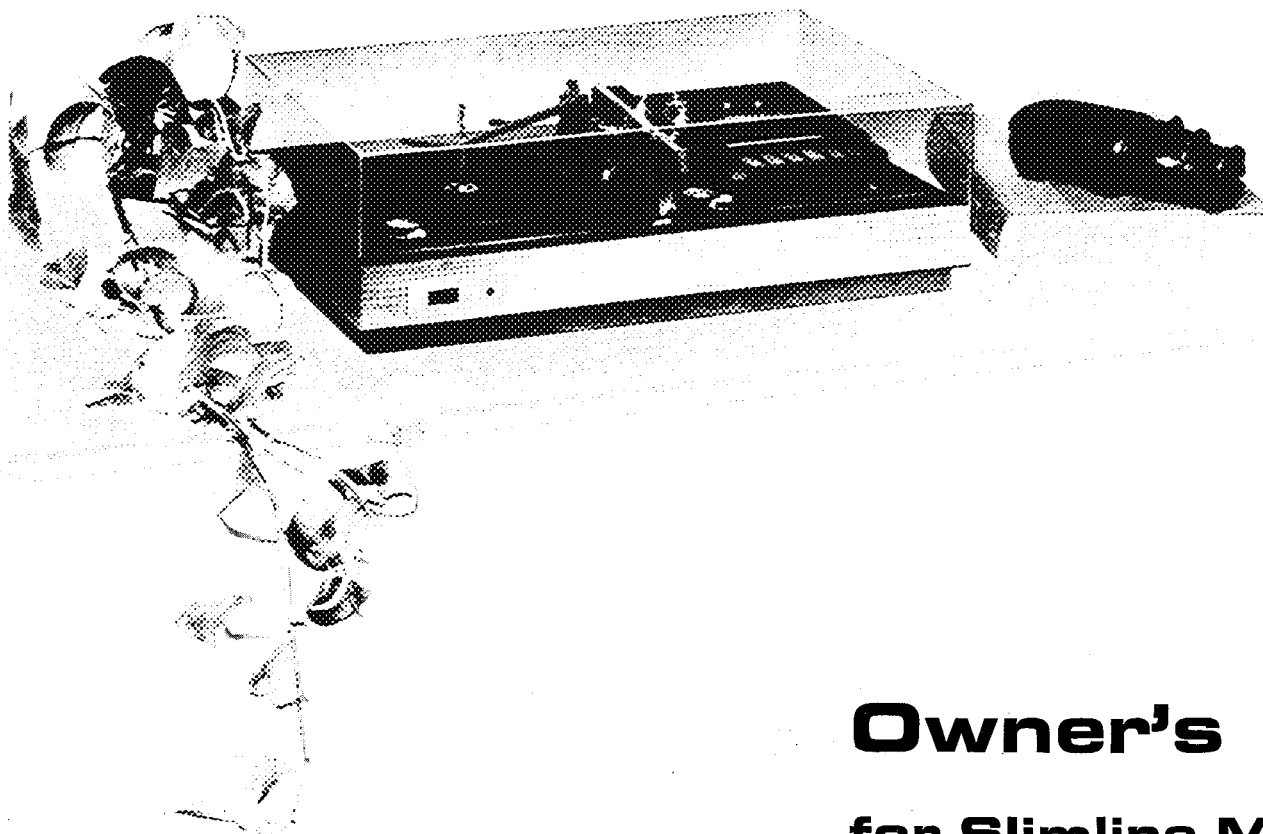


# SLIMLINE

by Harman-Kardon



**Owner's Manual**  
**for Slimline Model PC 13**

# Congratulations

You are now the owner of the first integrated phonograph/cassette combination created for the music enthusiast.

The PC13 contains a totally professional tape cassette deck that has been engineered expressly for the recording enthusiast.

Unlike conventional tape cassette recorders which are designed primarily for playback the PC13 has professional features and performance that is on a par with the most versatile reel to reel recorders.

## WARRANTY and SERVICE POLICY

### POLICY

We warrant each unit to be free from defects in material and workmanship under normal use and service, and in accordance with the conditions set forth below. Should a defect occur within the period specified, and provided that the unit is returned to either HARMAN-KARDON or an authorized HARMAN-KARDON warranty station, transportation prepaid, and which our examination shall disclose to our satisfaction to be defective, we will:

- a) For a period of ninety (90) days from date of purchase either replace or repair and install any defective parts of the automatic record changer and cassette tape recorder free of charge.

### REGISTRATION

To obtain service under the terms of this policy, it is necessary to return the enclosed warranty card for "factory validation" within ten (10) days from the date of purchase.

This card will be assigned a "warranty registration number" and returned to you. If service is required within the warranty period, it is mandatory that the validated card or the warranty registration number be presented or your warranty will not be honored.

### EXCEPTIONS

This warranty does not include any obligation as to:

- a) repair or replacement of the wooden enclosure due to damage incurred after initial delivery;
- b) replacement of the stylus due to normal wear or usage;
- c) normal consumer adjustments of tracking force, tone arm height or dropping position of the automatic record changer;

Each part has been carefully machined to exacting tolerance to provide performance specifications unprecedented in home recorder design.

We know you are eager to install and use your phonograph/cassette combination but we sincerely urge you to read this instruction book. The few minutes that it will take to familiarize yourself with the proper techniques for using the PC13 will prove rewarding and will ensure many years of uninterrupted enjoyment.

- d) transportation charges to and from the factory or an authorized warranty station.

This warranty is not applicable to any instrument which shall have been repaired or altered in any way so as, in our judgment, to affect its stability or reliability or has been subject to neglect, misuse, abuse, negligence, or accident; or which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any instrument which has been connected other than in accordance with instructions furnished by us.

### SERVICE

HARMAN-KARDON has a special customer service division to answer all questions pertinent to the installation and operation of your unit. Please feel free to write to us at any time and we shall endeavor to offer prompt and complete advice.

If your problem cannot be resolved through our combined efforts, we may wish to refer you to a local authorized repair agency or we may prefer to authorize the return of your unit to the factory. In the event it must be returned, an authorization form and proper packing instructions will be forwarded to you. This authorization form, together with the warranty registration number, **MUST BE RETURNED** with your unit.

**UNDER NO CIRCUMSTANCES SHOULD YOUR UNIT BE SHIPPED TO THE FACTORY WITHOUT PRIOR AUTHORIZATION.**

This warranty is in lieu of all other warranties, expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of this instrument.

# INSTALLATION PROCEDURE

## POWER REQUIREMENTS

Connect the AC line cord into any outlet furnishing 117 volts, 60-cycle AC current. The voltage may vary between 105 and 125 volts.

## POWER SWITCH

The power switch for your PC13 is located on the left front side of the cabinet.

This switch can be operated in three different ways as you prefer.

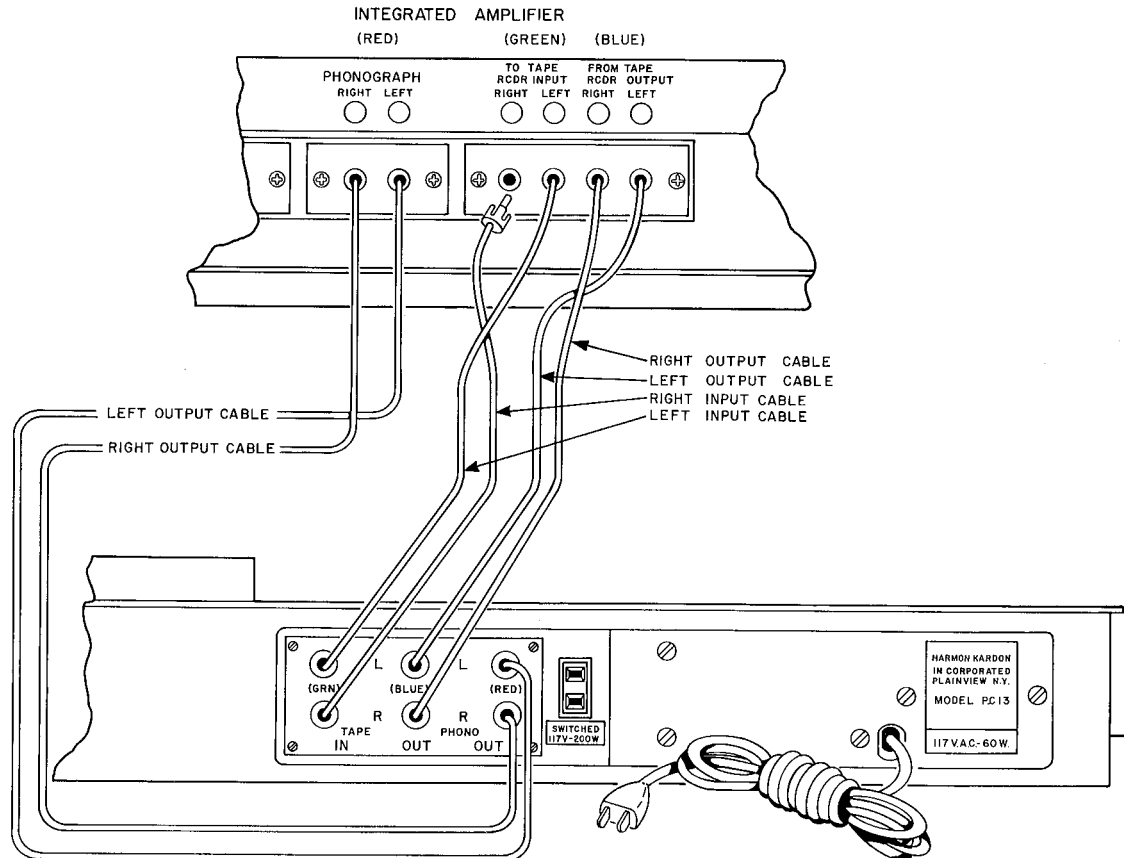
### 1) Cassette Recorder

- when the rocker switch is in the "ON" position power is applied to your recorder, and the indicator jewel will now be illuminated.
- to shut off the recorder simply throw the switch to the "AUTO/OFF" position.

### 2. Automatic record changer

- when the rocker switch is in the "ON" position power is applied to the record changer, however, the record changer will not operate unless the "starting lever" switch on the changer has been activated. In this position power to the record changer will continue to be applied even after the last record has completed its play.
- Should you desire to have the record changer shut off after the last record has played, simply repeat step (a) above, and then place the rocker switch in the "AUTO/OFF" position.

- Operating in conjunction with this power switch is an AC convenience outlet on the rear of your PC13. If you connect the AC power cord of your amplifier or receiver to this receptacle, it will be controlled as described above.



NOTE: We have color coded all input and output connections to serve as a guide for making quick and easy plug-in connections of accessory equipment to your PC13, e.g.:

Phonograph — Red Dot

Tape Recorder Input — Green Dot

Tape Recorder Output — Blue Dot

If you have purchased the Harman-Kardon Slimline Receiver combination to complement your Slimline, simply plug the colored plug on the cable supplied into the correspondingly colored female jack located on the rear panel of your Slimline Receiver.

### CONNECTING YOUR RECORD CHANGER (SEE PAGE 1)

For quick and easy plug-in connection of your record changer to your Slimline receiver we have supplied Grey cables (Right Channel) and Black cables (Left Channel). These cables have Red plugs at the ends of each.

To connect to your Slimline receiver simply plug these cables into the appropriate Left (Red Dot) and Right (Red Dot) receptacles located on the rear panel of your receiver. When connecting to an integrated amplifier other than a Slimline receiver, plug the appropriate Left Channel and Right Channel cables into the Phono Ceramic or Auxiliary input only.

### OPERATION PROCEDURE RECORD CHANGER

**IMPORTANT:** Unlock the control arm by pressing down at the top rear near the housing and rotate the front free end toward the center of the turntable.

### AUTOMATIC OPERATION (See Illustration 1)

1. **TO LOAD:** Raise control arm fully, from rear, and swing to right. Stack up to six records, place control arm on stack and remove clip from tone arm.
2. **TO SELECT SPEEDS:** Set lever at left to correct speed—16, 33, 45 or 78 rpm.
3. **TO SELECT STYLUS:** Turn stylus selector to LP for all records except 78 rpm.
4. **TO START:** Move right lever fully to REJ; hold, then release as turntable starts.
5. **TO REJECT RECORD:** Move the starting lever to REJ and release.

Lift control arm fully, swing to right. Place record on turntable, return arm to left. Select speed and stylus, move starting lever to MANUAL, place stylus in groove. Shut-off is automatic.

### SUGGESTIONS

If tone arm stays on rest as record turns, push starting lever fully to REJ. If lever is turned to OFF during changing cycle, control arm will lock; release by rotating turntable clockwise by hand.

### EASY TO ADJUST (See Illustration 2)

This changer has been accurately pre-adjusted for correct stylus setdown, stylus pressure and tone arm height. If new adjustments should ever be needed, make them with a 12" record; then position will be correct for all sizes.

**STYLUS SETDOWN:** Adjust with setdown screw to start  $\frac{1}{8}$ " from record edge.

**STYLUS PRESSURE:** Turn Stylus Pressure Adjusting screw clockwise to reduce stylus pressure; counter-clockwise to increase pressure. **TONE ARM HEIGHT:** To raise, hold plastic nut firmly and turn screw head by hand counter clockwise; to lower, turn screw head clockwise. Adjust stylus to clear a full stack of records by  $\frac{1}{8}$ ". **TO REMOVE TURNTABLE:** Remove C-clip, lift carefully.

**NEEDLE REPLACEMENT:** This unit uses a diamond needle which may be purchased under Tetrad No. 51D from any electronic parts supplier. A replacement cartridge assembly may be ordered from Harman-Kardon under No. 01225469. Grasp needle, pull down and then forward from under the retaining spring. To replace needle, align the base of the needle under the retaining spring and snap into cartridge. Be sure needle rests in center of yoke at front of cartridge.

### LUBRICATION

Do not attempt to lubricate the mechanism. Factory lubrication is normally sufficient for quite some time. However, in order to keep the unit in top operating condition, have it lubricated and checked once a year by a qualified service technician.

ILLUSTRATION 1

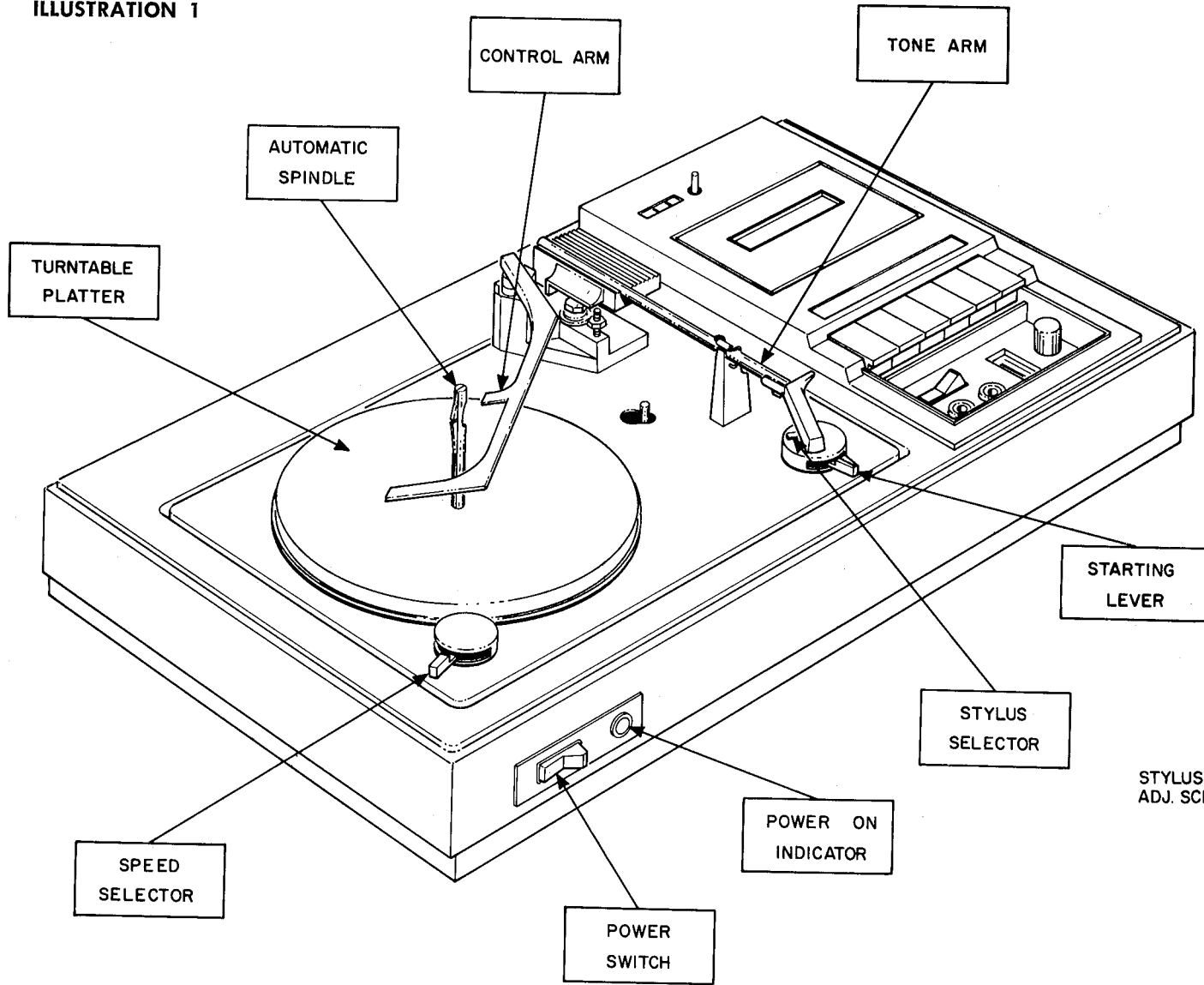
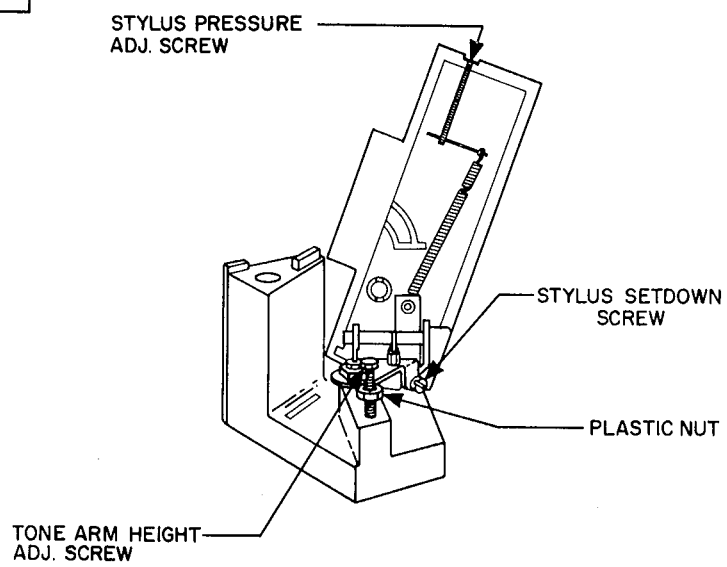


ILLUSTRATION 2



## OPERATION PROCEDURE CASSETTE RECORDER

Every control on this stereo cassette recorder serves a specific function and is important to its operation. PLEASE READ the following section carefully to assure full advantage of the performance capabilities of your tape recorder.

### TAPE COUNTER

The three-digit counter is connected to the supply hub. It indicates the amount of tape expended when recording or playing back. This counter is provided as a guide when winding or re-winding to a pre-determined point on the tape. Push the "TAPE COUNTER RESET" button to return the counter back to its zero or start position.

### RECORD LEVEL METER

This meter is used to visually monitor the recording level of the program material and MUST be used in conjunction with the "RECORD LEVEL CONTROL" to maintain a proper level when making recordings. Further information on the use of level meter is contained in the paragraph "RECORD PROCEDURE".

### MICROPHONE INPUT JACKS

There are two (2) microphone input jacks to permit making either stereophonic or monophonic recordings. To record stereophonically, use both the LEFT and RIGHT "MICROPHONE" input jacks. To record monophonically, place one microphone in EITHER the LEFT or the RIGHT "MICROPHONE" input jacks. Additional data on recording may be found under paragraph entitled "RECORD PROCEDURE".

### RECORD LEVEL CONTROL

The "RECORD LEVEL" control is used to adjust the incoming program information to the proper recording level which is indicated by the VU meter. To increase the recording level, rotate this control in a CLOCKWISE direction.

### STEREO-MONO SWITCH

When making a stereophonic recording this switch must be in the "STEREO" position. Depress this switch to the "MONO" position ONLY when you wish to make a monaural recording.

### RECORD BUTTON

This button activates the record mechanism and MUST be used simultaneously with the "PLAY/RECORD" button to start the tape in motion for recording.

### REWIND BUTTON

This button is used to rewind the tape. To stop at any given place or after the tape is completely rewound, depress the "STOP/EJECT" button.

### FAST FORWARD BUTTON

This button is used to advance the tape forward. To stop at any given place or after the tape is completely wound, depress the "STOP/EJECT" button.

### PLAY/RECORD BUTTON

This button is used to advance the tape for playback or recording. When recording, it is necessary to employ this button in conjunction with the "RECORD" button.

### STOP/EJECT BUTTON

This button serves a dual function. It is used to stop tape advancement and for cartridge ejection.

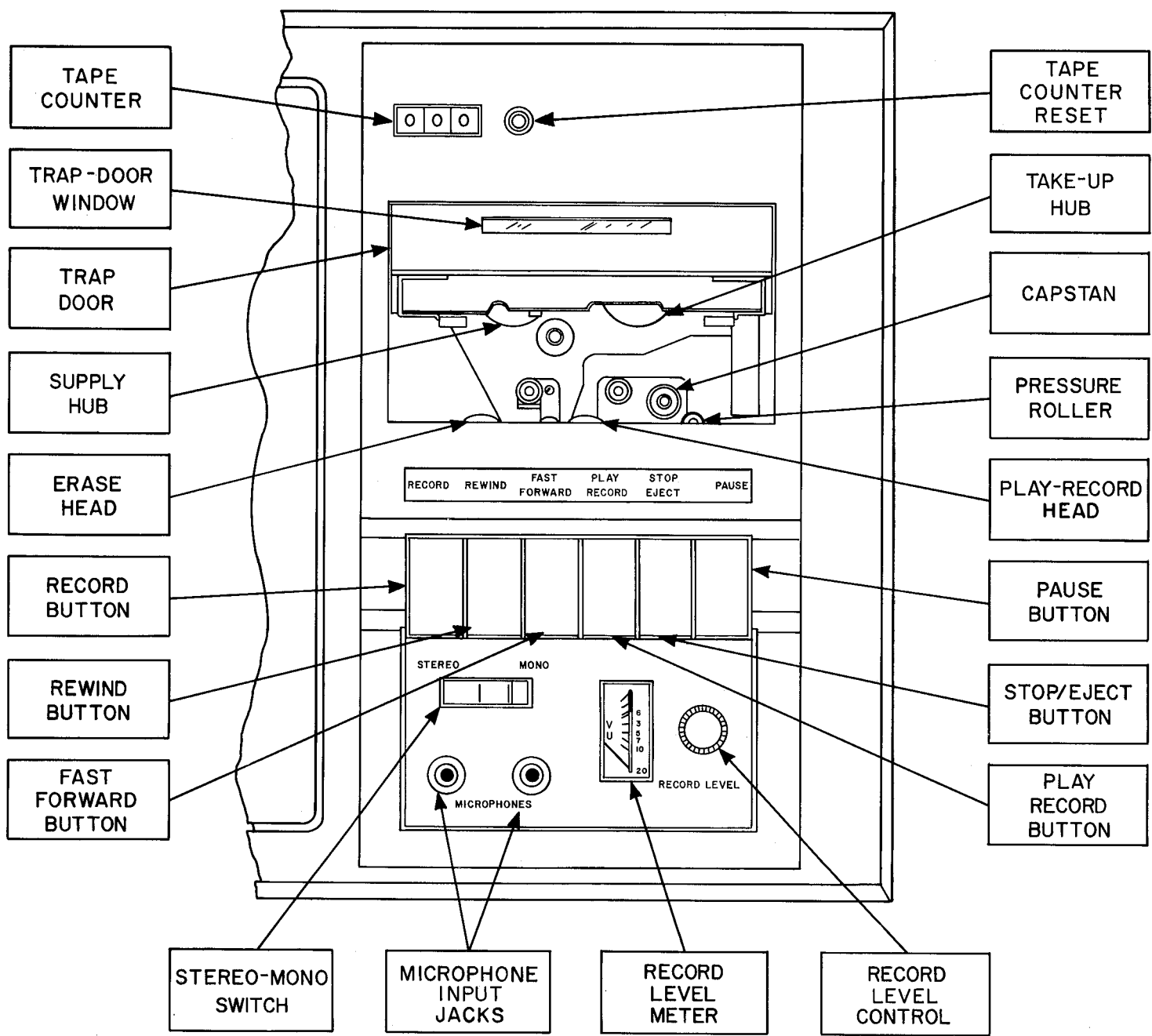
When the button is depressed *half-way down*, it will stop tape advancement. This portion of the button is used to reset all the other tape functions (with the exception of the "PAUSE" button) to their normal positions.

**IMPORTANT:** When changing from function to function using any of the tape buttons — "REWIND", "PLAY/RECORD", or "FAST FORWARD" — it is **IMPERATIVE** that you first depress the "STOP" button to avoid serious damage to the recorder mechanism.

When the button is depressed *all the way down*, the cartridge will be ejected from the recorder trap door. This eject position is also used to open the trap door for insertion of the Cassette.

### PAUSE BUTTON

This button, when depressed, stops the advance of the tape in either the RECORD or PLAYBACK mode WITHOUT resetting any of the other functions. To resume operation, merely depress the "PAUSE" button again. For additional information regarding the operation of the "PAUSE" button, see the paragraphs entitled "RECORD PROCEDURE" and "PLAYBACK PROCEDURE".



## CASSETTE

Cassette is the French word for cartridge. It is a self contained reel to reel tape housed in a plastic enclosure for ease of operation and storage. There are two types of Cassettes available.

- 1) The four-track "prerecorded" type which has a playback time equal to an L. P. album.
- 2) The "blank" tape Cassette which comes in several playing time versions:
  - (a) the C60 with a total playing time of sixty minutes (30 minutes per side)
  - (b) The C90, having a total playing time of ninety minutes (45 minutes per side).

Clear leader tape is attached to each end of the recording tape in the Cassette. The ends of the leader tape are permanently secured to hubs inside the Cassette thereby assuring it from pulling loose. Tape threading is not necessary and the Cassette housing protects the tape from damage. The Cassette can be inserted or removed easily at any time, not just at the beginning or end of the tape.

There is a viewing window on each side of the Cassette, permitting the tape to be seen to enable the viewer a rough estimate of the amount of tape remaining for recording and/or playback.

### ACCIDENTAL ERASURE SAFETY FEATURE

The Cassette is provided with a recording safety feature which protects your pre-recorded Cassette, or one you may have just recorded, against accidental erasure.

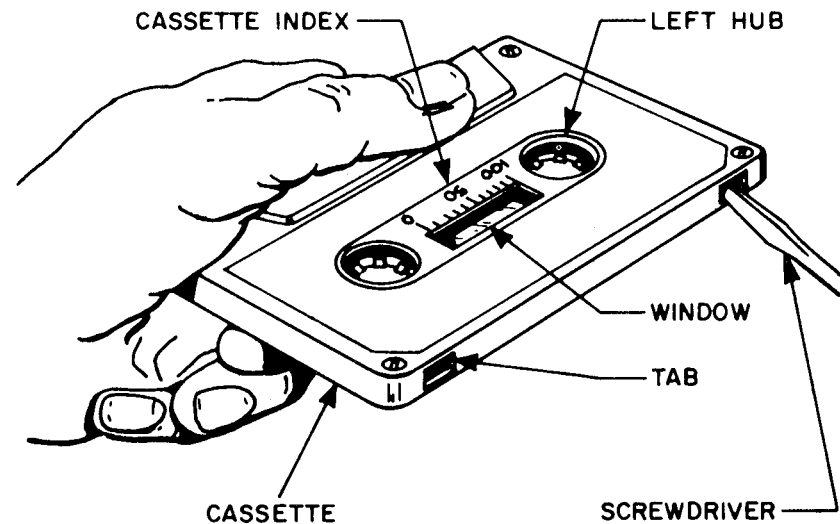
The safety feature employed consists of two removable tabs, one for each side of the tape, appearing in the rear of the Cassette housing. These tabs will have been removed on any prerecorded tapes you may have purchased and evidence of their removal will be the two small square indentations appearing on either side of the rear of the plastic housing.

Once you have made your own recording on a blank Cassette, and you wish to protect against accidental erasure, it will be necessary for you to remove one or both of these tabs to protect either or both sides of your recorded Cassette against accidental erasure, as follows:

(1) *If both sides have been recorded*, merely insert a fine screwdriver in the opening around the tab and gently pry the tab off. Be sure the tab falls free from the Cassette.

(2) *If one side only has been recorded*, place the Cassette on a table as removed from the recorder, with the side just recorded facing up and the exposed tape area facing you. The correct tab to be removed will be in the left hand corner of the Cassette.

**NOTE:** If at some future date you wish to make a recording over a previously protected tape, simply place a piece of adhesive tape over the tab opening. This will permit you to make a new recording. Removal of the adhesive tape following the recording will again insure against accidental erasure.



### CASSETTE INDEX

Directly below the window, in the center of each Cassette, there is a tape index with markings from 0 to 100. When winding or rewinding to a pre-determined point on the tape, use this index together with the Tape Counter as a guide.

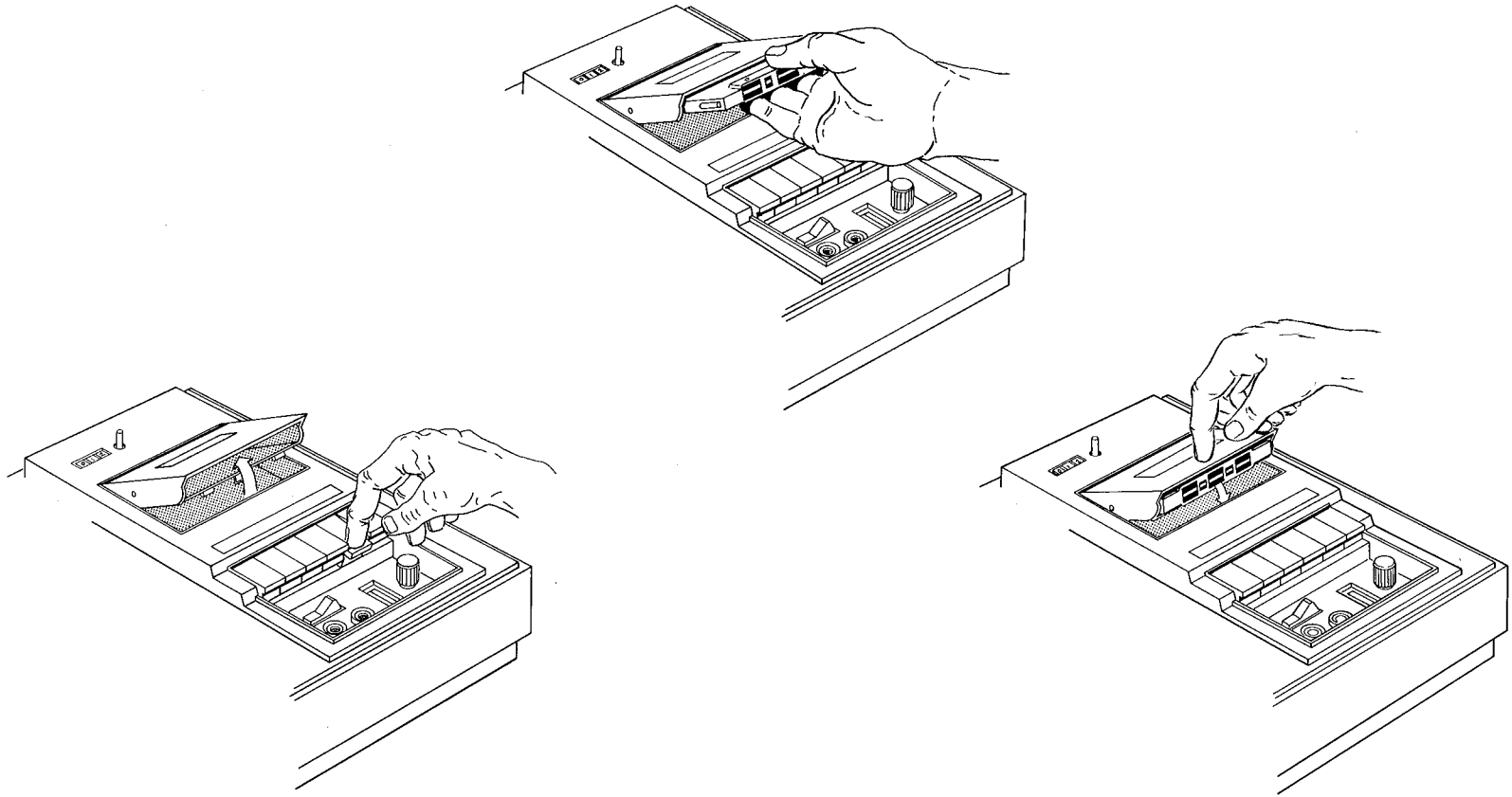
### CASSETTE STORAGE

The plastic storage container supplied when you purchase a Cassette is dust-proof and will keep the tape safely stored for a long period of time. The correct insertion of the Cassette into its storage container is important to avoid damage to the container. The open end of the Cassette should be fitted into the container. The storage container is designed to lock the hubs of the Cassette to keep them from moving, maintaining your tape for instant use.

Store the Cassette at room temperature (not near any source of heat) and in a reasonably dry area. Do not store in an area that could be subject to strong magnetic fields, e.g., loudspeaker magnets, transformers, or electric motors.



## CASSETTE INSERTION



### INSERTING THE CASSETTE

**IMPORTANT:** Before inserting or removing the Cassette from the recorder, depress the "STOP/EJECT" button.

Remove the Cassette from the storage container and position the Cassette so that the front (exposed tape area) is facing you and the full hub of the tape, as viewed through the Cassette window, is on your left. Slide the back of the

cassette all the way into the trap door. Push the door down until it clicks into its closed position.

### REMOVING THE CASSETTE

To remove the Cassette, merely depress the "STOP/EJECT" button all the way down. You will notice that the recorder trap door will open and the Cassette will present itself for easy removal.

## RECORDING PROCEDURE

The procedure outlined below **MUST** be followed when making a recording with your Cassette Recorder:

- 1) Turn your integrated receiver ON.
- 2) Place the function selector switch for the integrated receiver in the mode appropriate to the material you wish to record. Example: PHONO STEREO, FM, AM, etc.
- 3) Carefully check the Cassette you plan to use for recording to be certain that the tabs provided on the rear to protect against accidental erasure are present or that you have placed a piece of adhesive tape in their place in instances where you plan to record over a pre-recorded tape.
- 4) Depress the "STOP/EJECT" button to allow the trap door of the recorder to open.
- 5) Turn the power for the Recorder ON by depressing the Power switch to the ON position.
- 6) Set the "RECORD LEVEL" control to minimum.
- 7) Insert the Cassette into the trap door and close. (See CASSETTE INSERTION DIAGRAMS). Be sure the tape is fully wound on the left side of the Cassette using the rewind function if necessary.
- 8) Depress the "PAUSE" button to hold the tape in position while setting the controls for the record function.
- 9) Depress simultaneously the "RECORD" button and the "PLAY/RECORD" button. **IMPORTANT:** If these buttons fail to depress easily, check Step #3.
- 10) Rotate the "LEVEL" control in a clockwise direction until the meter pointer deflects into the white zone. Increase the setting of the level control until the loudest passages of the program source deflect the VU meter pointer from the white area to the boundary of the red area. If you find the VU meter pointer well into the red area, the recording level is set too high and your recording will be distorted.
- 11) When the "RECORD LEVEL" control is set properly, depress the "PAUSE" button to start your tape in motion.

- 12) If, in the process of recording, you want to interrupt the recording to cut out unwanted program material on your tape, simply depress the "PAUSE" button to stop recording. When you wish to resume recording the program material, depress the "PAUSE" button again.
- 13) When you have completed your recording, depress the "STOP/EJECT" button half-way down.
- 14) To remove the Cassette, depress the "STOP/EJECT" button ALL the way down.
- 15) If you want to record on the other side of your Cassette, turn it over and repeat the RECORDING PROCEDURE.

## HOW TO RECORD WITH MICROPHONES

A Harman-Kardon microphone may be purchased as an added accessory for use with your recorder, but if you prefer using another microphone for recording purposes, it **MUST BE A LOW IMPEDANCE TYPE (BETWEEN 500 AND 1000 OHMS.)**

1. Insert a microphone in either the LEFT or the RIGHT "MICROPHONE" input jack.
2. Place the STEREO-MONO switch in the "MONO" position.
3. If you wish to make a stereophonic recording, insert one microphone into each of the microphone input jacks and place the STEREO/MONO switch to "STEREO".
4. Follow the "RECORDING PROCEDURE" previously outlined, in Steps #3 through #8.
5. As you record, your voice will vary in amplitude and direction and it may be necessary for you to carefully monitor the proper record level prior to making a recording. To accomplish this, follow Step #10 of the "RECORDING PROCEDURE".

**NOTE:** During the recording process, we recommend monitoring the "VU" meter continuously to insure that the program material does not go well into the red zone.

## PLAYBACK PROCEDURE

The procedure outlined below should be followed to insure proper operation of your Cassette Recorder.

- 1) Place the POWER SWITCH of your PC13 in the ON position.
- 2) Turn your integrated receiver ON.
- 3) Place the system function selector switch in the mode to select the recorder for Playback.
- 4) Depress the "STOP/EJECT" button. The trapdoor of the Cassette Recorder will spring open.
- 5) Place a prerecorded Cassette into the trap door and close. Make certain the tape is fully wound on the left side of the Cassette, using the rewind function if necessary.
- 6) Depress the "PLAY/RECORD" button to start the tape moving in a forward direction for playback.
- 7) Adjust the system VOLUME CONTROL to the desired listening level by rotating the control in a clockwise direction.
- 8) If you wish to stop the playback of the tape for a brief period of time without resetting the controls, (e.g., to answer the telephone or the doorbell), merely depress the "PAUSE" button. Depress the "PAUSE" button again to resume normal operation.
- 9) To stop the recorder, depress the "STOP/EJECT" button halfway-down. To remove the Cassette from the recorder, depress this button ALL the way down.

**NOTE:** When playing your recorder be sure that the record changer is off. Also note that in the playback mode the "RECORD LEVEL" control does not serve any function.

## ERASING TAPES

While recording, any previously recorded information on said tape will automatically be erased. It follows, therefore, that no procedure is required to erase a tape prior to re-use.

In the event you want to eliminate a portion of a tape or even the entire tape, the following procedure should be followed:

- 1) Rotate the "RECORD LEVEL" control to its minimum position (full counter-clockwise).
- 2) Depress both the "RECORD" and the "PLAY/RECORD" buttons simultaneously. This will cause the tape to advance and any material previously recorded will be erased from it.

## HUM and NOISE

In any high fidelity installation, hum may be caused by interconnecting associated equipment (T.V. set, etc.) to your music system. If hum is experienced, disconnect everything but the speakers from the system. If hum persists, reverse the AC power plug. Then, plug in remaining associated equipment, one at a time. If hum should occur following connection, reverse the power plug for the particular unit involved.

**CAUTION:** Hum may also be induced by defective connecting cables or by running these cables too close to a strong AC field, such as power lines, transformers, or other electrical equipment.

## MAINTENANCE

Your Cassette Recorder has been designed to require a minimum of maintenance. After a period of use, however, tape oxide and dust particles will inevitably form on the PLAY-RECORD and ERASE heads, the CAPSTAN and the PRESSURE ROLLER. To remove these particles, merely take a cotton-tipped stick that has been moistened with alcohol (common household rubbing alcohol) and lightly wipe these areas.

**CAUTION:** Commercial tape head cleaners may react unfavorably with the encapsulating compounds used in the Record/Playback and Erase heads. NEVER CLEAN THE HEADS WITH A SHARP METAL OBJECT. DO NOT USE A BRUSH WITH A METAL BAND AROUND THE BRISTLES.

## DEMAGNETIZING THE HEADS

Periodical demagnetizing of the recorder heads may be required if a noticeable loss in high frequency response or excessive noise is apparent when playing back your tapes.

Any commercially available head demagnetizer, purchased from your electronic parts distributor, may be used to demagnetize your recorder heads.

**CAUTION:** Be sure to follow instructions supplied with the demagnetizer.

## SERVICE

If this instrument should not perform properly, contact the factory for instructions. The factory has many authorized warranty service stations in the United States. To aid us in selecting a service station convenient to you, it would be helpful if you would indicate what major city is closest to your home. Please write our Customer Service Department, Harman-Kardon, Incorporated, Plainview, New York 11803. Be sure to include the model and serial number of the unit. A brief description of your other components is often of help in answering your questions. DO NOT return this instrument to Harman-Kardon without first receiving authorization.