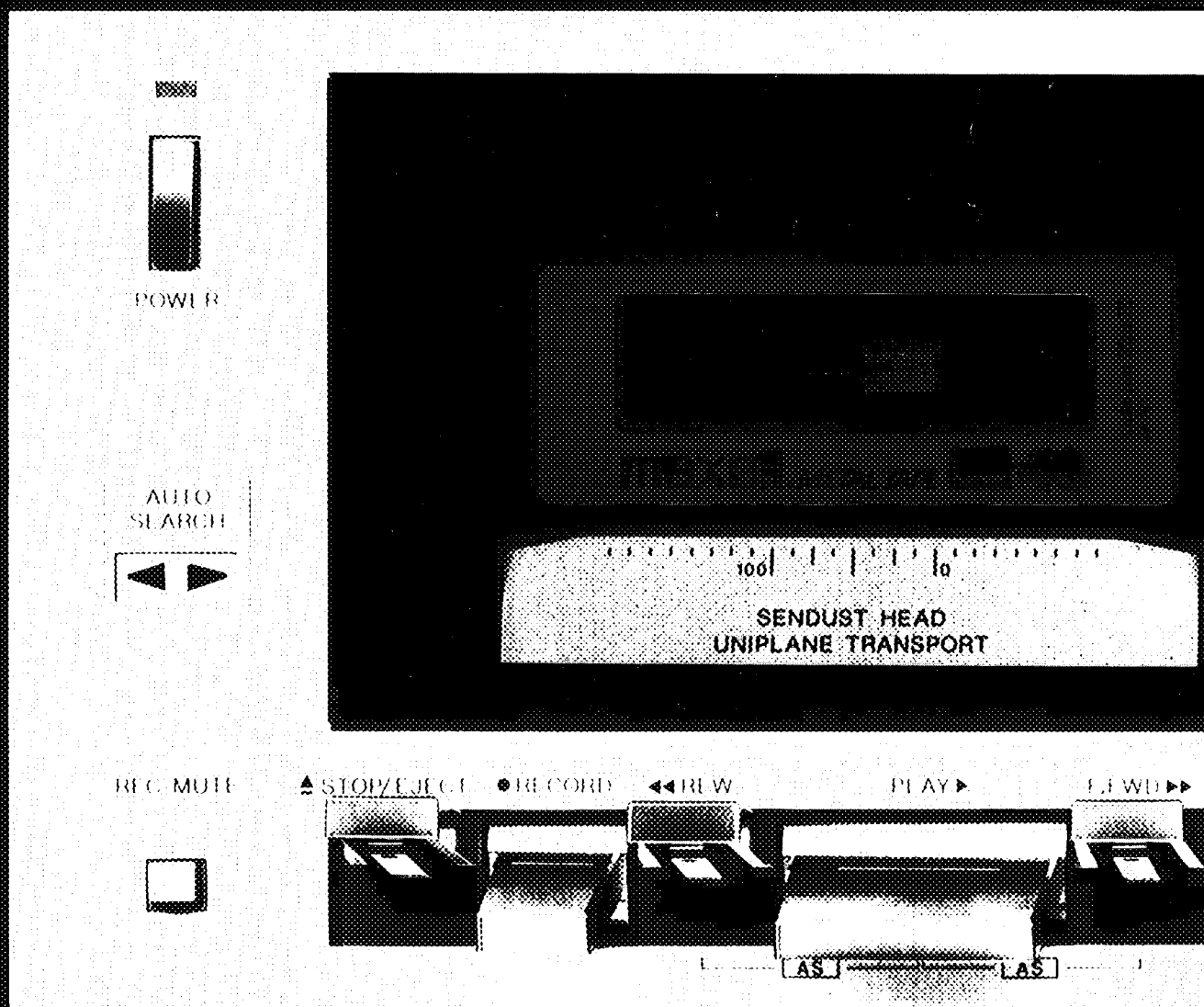
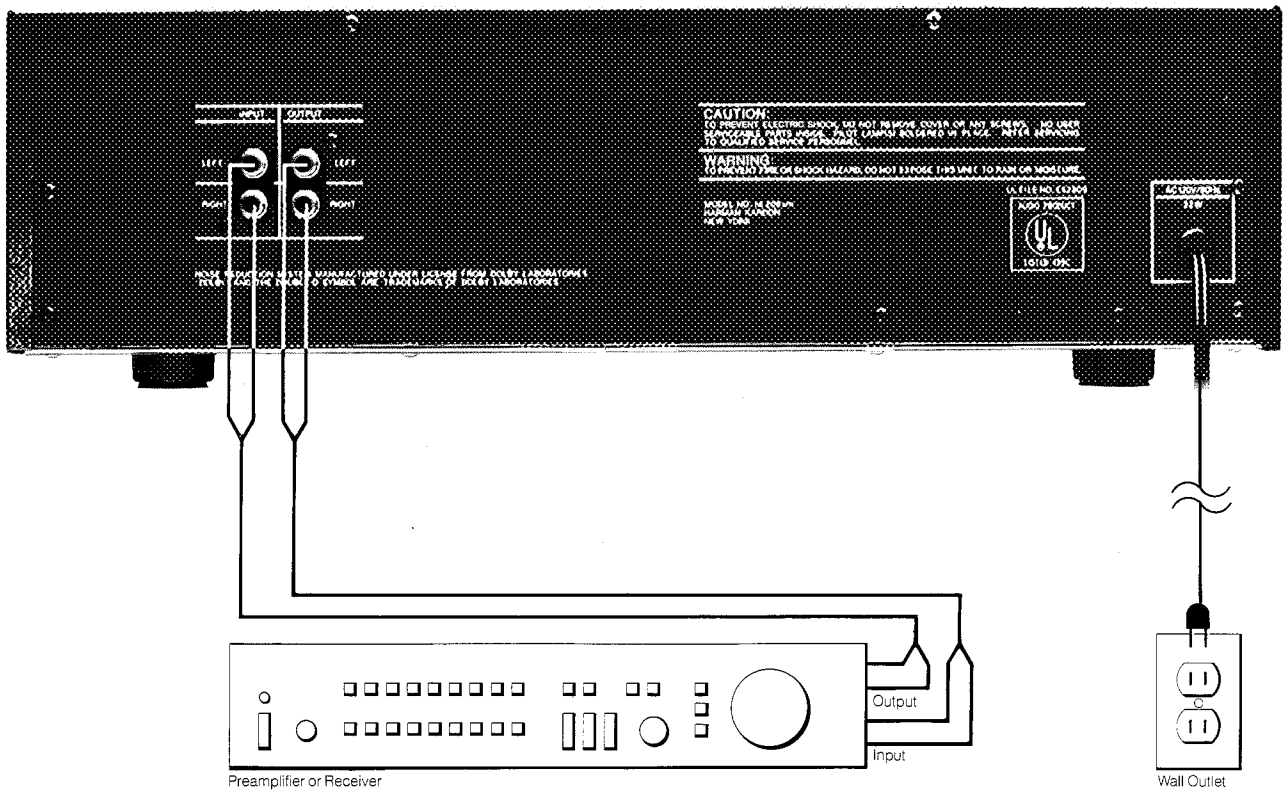
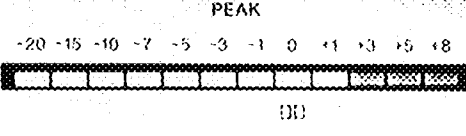
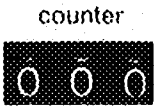


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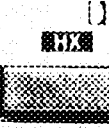
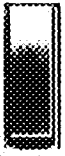
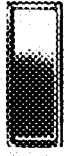


ULTRAWIDE BAND LINEAR PHASE CASSETTE DECK



metal

BIAS/EQUALIZATION



meter



PAUSE II



MICROPHONE S

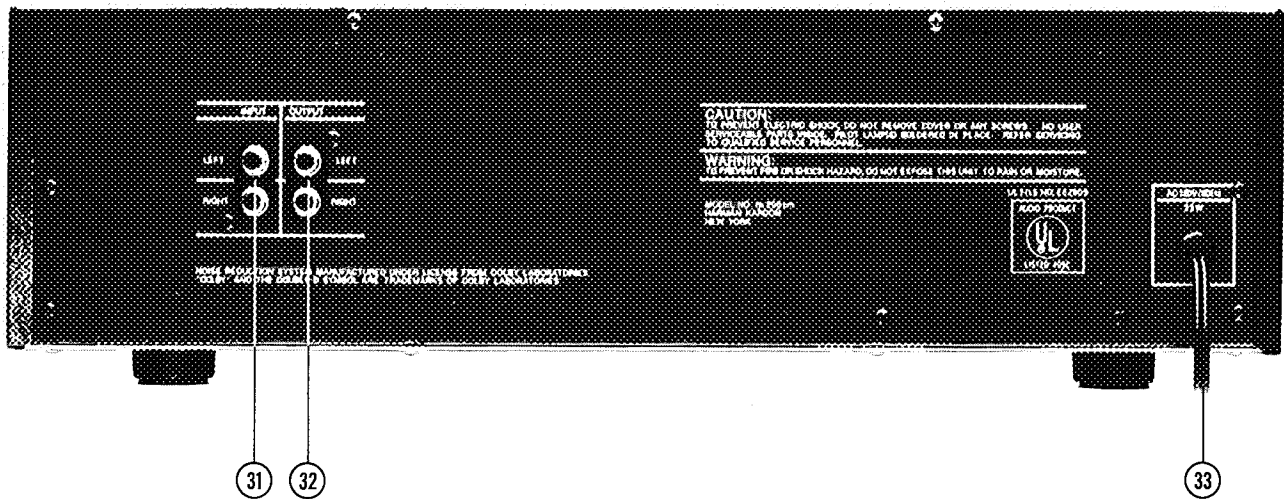
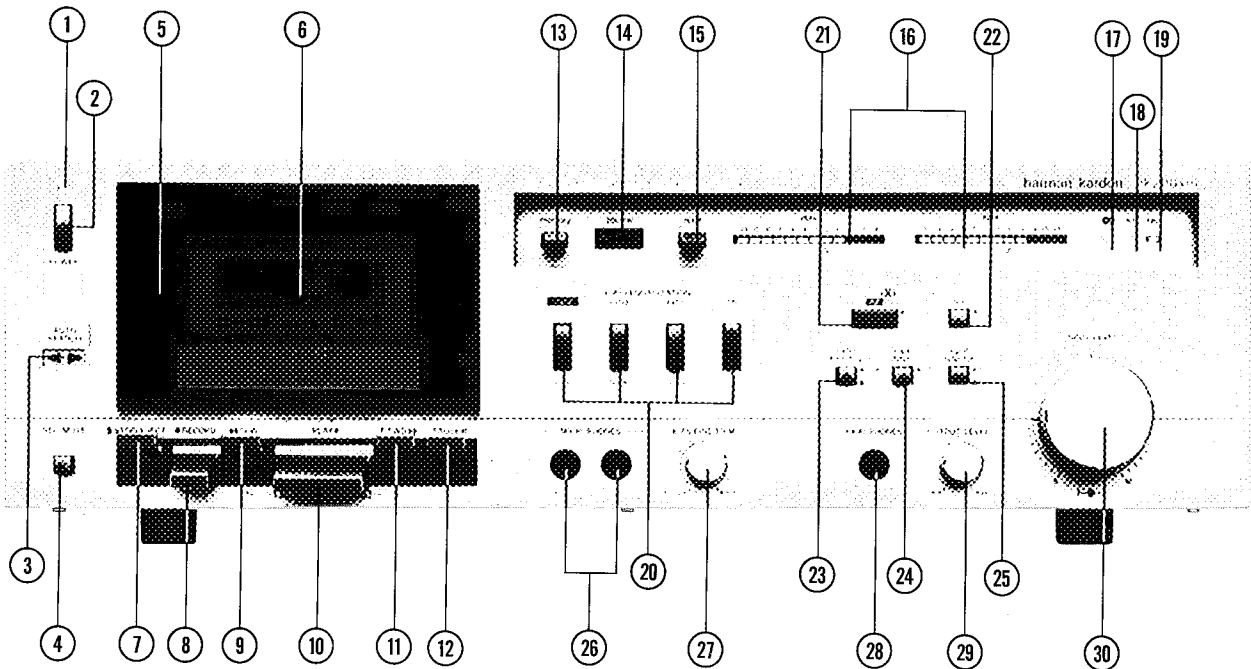


BIAS FINE TRIM



HE ADPHOT





## Owner's manual hk200XM

Your investment in a component high fidelity system indicates that you have a more than average interest in music. The fact that your investment includes a Harman Kardon Ultrawideband Metal Tape Deck shows us your appreciation of uncompromised reproduction of the music you enjoy. Throughout the design and manufacture of this unit, we made every effort to assure it will meet all of your expectations.

To ensure continuing high performance, read this manual carefully before you connect and operate your hk200XM Tape Deck.

## Connections

For the moment, leave the POWER LINE CORD (33) of the 200XM unconnected. Put the unit on the table or shelf where it will be installed. Leave enough working space so you can make all the connections easily.

The 200XM requires adequate ventilation. It should not be installed on a cushion or rug and a minimum of 2 inches (5cm) clearance should be provided.

### Connecting the 200XM to your preamplifier or receiver

Like most stereo equipment, your 200XM is fitted with pin type RCA connectors. Using standard pin type RCA patch cords (provided), connect the left OUTPUT connector (32) on your 200XM with the left tape input connector on your preamplifier or receiver. Connect the right channels similarly.

Using a second set of patch cords, connect the left INPUT connector (31) of the 200XM to the left tape output connector of your preamplifier or receiver. Connect the right channels similarly. Push the plugs in all the way so they are firmly seated, making good electrical contact.

If your preamplifier or receiver does *not* accept pin type RCA connectors, consult your audio dealer for patch cords with proper adapters.

### Power connection

If you have completed the connections above, you are now ready to place the 200XM in its permanent position and plug the POWER LINE CORD (33) into an AC outlet. To turn the unit on and off, press the POWER switch (2). When power is on, the POWER indicator (1) will light.

### Controls on the hk200XM

Before using your cassette deck, it's important that you familiarize yourself with the various controls on the front panel.

### **Tape counter and reset**

The TAPE COUNTER (14) is used for accurate location of particular passages on a tape. At the beginning of a tape, press the TAPE COUNTER RESET button (15) and the TAPE COUNTER (14) will return to "000." By keeping track of the TAPE COUNTER readout (14), you can easily return to any passage you like.

### **Memory rewind**

The 200XM incorporates a special memory rewind that helps you locate a preset point on the tape automatically. If you wish to return to a specific point on the tape, press the TAPE COUNTER RESET button (15) at that point, resetting the TAPE COUNTER (14) to "000." To return to this point automatically at any time, simply press the MEMORY pushbutton (13) before you press the REWIND lever (9). The tape will automatically stop when the TAPE COUNTER (14) reaches "000."

Note: The memory feature on the 200XM retains only one preset point at a time—selecting a new preset point clears the memory of the previous selection.

### **Auto Search System**

The Auto Search System on your 200XM allows you to replay a selection or advance to the next selection automatically. To advance to the next selection, press the PLAY lever (10) and then the FAST FORWARD lever (11) simultaneously. The tape will automatically advance to the next blank space in the tape and play the next selection. To repeat a selection press the PLAY lever (10) and REWIND lever (9) simultaneously and the tape will automatically rewind and replay.

### **Bias/equalization**

The 200XM is equipped to play and record all types of tape formulations presently available, including the new metal tapes. To get the best possible performance from the tape you're using, choose

the appropriate button from the BIAS/EQUALIZATION pushbuttons (20). "Low noise" (LN) for ferric tapes; FeCr for Ferrichrome tapes; CrO<sub>2</sub> for chromium dioxide tapes, metal for metal tapes.

### **Bias fine trim adjustment**

The BIAS FINE TRIM knob (27) allows you to adjust recording bias optimally for different brands and formulations of tape. Adjustment is not necessary for playback.

To determine the proper adjustment, make a trial recording from a record you know well, and compare the record to the tape recording. If the tape provides excessive high frequency response, rotate the BIAS FINE TRIM knob (27) counterclockwise toward the hi cut setting. If the tape lacks high frequency response, rotate the BIAS FINE TRIM knob (27) toward the hi boost position. Continue trial recordings until the high frequency response on the tape recording and record are as close as possible.

This is the correct setting only for the particular formulation and brand of tape in use. If you continue to use the same formulation and brand, readjustment is not necessary. But new adjustments should be made for different tapes.

### **Output level control**

A convenient OUTPUT LEVEL control (29) is incorporated into the 200XM to match the output level of your tape deck with all your other equipment. This prevents sudden bursts of high volume when switching from one program source to another.

### **Headphones**

During recording, you may wish to monitor the program source with headphones. The jack marked HEADPHONES (28) is included for this purpose. We recommend low impedance headphones (less than 1000 ohms). With headphones in use, volume may be adjusted with the OUTPUT LEVEL control (29).

## **Dolby\* HX and Dolby NR**

The 200XM incorporates the new DOLBY HX headroom extension circuitry as well as Dolby NR circuitry. Together, they provide a big improvement in signal-to-noise ratio and dynamic range, and we recommend the use of both on all recordings.

To record with the DOLBY HX process, press the DOLBY HX pushbutton (21) before recording. (The DOLBY HX pushbutton (21) automatically engages the Dolby NR circuitry.)

When playing back a DOLBY HX recorded tape, it is not necessary that the DOLBY HX pushbutton (21) be in its "on" position (in). It is necessary to have the DOLBY NR pushbutton (22) be in its "on" position (in) for proper decoding. The Dolby HX system functions only during the recording process—with no loss of quality.

Tapes recorded with Dolby NR should be labelled so you remember to engage the system during playback.

Note: In some cases, recordings from FM broadcasts may contain more noise than was apparent during the original broadcast. To prevent this, place the MPX FILTER button (24) in its "on" position while recording from FM broadcasts.

## **To listen to cassette tapes**

Set the tape monitor switch of your preamplifier or receiver to the monitor or tape position. Press the STOP/EJECT lever (7) on your 200XM and the CASSETTE DOOR (5) will automatically open. Carefully seat the cassette in the CASSETTE COMPARTMENT (6) with the exposed portion of the tape facing down and the full spool to your left.

Once the CASSETTE DOOR (5) has been closed, press the PLAY lever (10) and the cassette will begin to play.

To rewind the cassette or return to a previous passage, press the STOP/EJECT lever (7), then the REWIND lever (9) and allow the tape to rewind to the appropriate point. Then press the STOP/EJECT lever (7) again before pressing the PLAY lever (10).

To skip passages or to wind the cassette to its end, press the STOP/EJECT lever (7), then the FAST FORWARD lever (11) and allow the tape to wind forward to the appropriate point. Again, make sure you press the STOP/EJECT lever (7) before the PLAY lever (10).

To remove your cassette from the cassette deck, press the STOP/EJECT lever (7), until the cassette is ejected.

## **To record cassette tapes**

Before recording any tape, it's important to understand the function of the INPUT LEVEL control (30) and the PEAK LEVEL display (16).

When recording any material to any tape, the INPUT LEVEL control ( ) should always be adjusted as high as possible without the PEAK LEVEL display ( ) indicating more than 0 dB (+3 dB for metal tapes).

To record a cassette, place the INPUT SELECTOR BUTTON (25) in the line position (out) and set the function switch of your preamplifier or receiver to the program source you wish to tape from. Load a blank cassette as described above, making sure the cassette is rewound to its beginning. To record, press the PLAY lever (10) and the RECORD lever (8) simultaneously. The record indicator will light any time the cassette is in the record mode.

During recording, there may be passages in your program source you wish to omit from your tape. To edit these pages out, press the PAUSE lever (12) to stop the recording process, then, when you wish to continue recording, press the PAUSE lever (12) again.

\*"Dolby" and the double D symbol are trademarks of Dolby Laboratories.

Pressing the RECORD MUTE button (4) during recording will defeat the program source, but allow the deck to continue recording a blank signal.

### **Meter ballistics**

Occasionally, fast transients in music will make it difficult to get a peak reading on the PEAK LEVEL INDICATORS (16). By pressing the METER BALLISTICS button (23) to the "slow" position (in), the PEAK LEVEL INDICATORS (16) will hold their readings longer without affecting attack response time.

### **Live recording**

The front panel MIC jacks (26) accept low impedance microphones (600 ohms or less) for live recording. For recording with microphones, plug the microphones into the MIC jacks (26), place the INPUT SELECTOR button (25) in the MIC position (in) and adjust the record level control as described above.

### **Record tabs**

The plastic case on every blank cassette features record tabs. These are found on the TOP LEFT side of the cassette when you hold the cassette with the exposed portion of tape facing down and the appropriate side facing you. To preserve a recording from accidental erasure, break off the appropriate record tab with a small screwdriver. To re-record over a cassette where the tabs have been removed, cover the appropriate tab hole with a piece of adhesive tape.

### **To erase recorded material**

Recording new material automatically erases previous material. To erase a cassette without recording new material, remove any microphones attached to the MIC jacks (26) and set the INPUT LEVEL control (30) to "0." Then follow the instructions for recording using no program source.

### **Cleaning capstan and heads**

The capstan and heads on your cassette deck should be cleaned after every 100 hours of use to prevent the accumulation of dirt and other materials that could interfere with recording and playback quality. Press the STOP/EJECT lever (7) to open the CASSETTE DOOR (5). Clean all metal parts that come in contact with the tape with a cotton swab dipped in denatured alcohol. Clean the rubber pinch rollers with an aromatic hydrocarbon, as denatured alcohol will cause them to harden.

### **Maintaining appearance**

Clean the metal panel with mild, diluted detergent applied with a soft cloth or cotton swab. Never use a strong abrasive cleaner.

Remove dust or smudges from the acrylic front window with diluted glass cleaner applied with a soft cloth. Do not use a strong solvent type cleaner or ammonia.

The 200XM cassette deck is a high-quality precision instrument. If the directions in this manual are followed thoughtfully, the cassette deck should provide many years of musical pleasure.

### **Congratulations**

Your new Harman Kardon High Technology Metal Cassette Deck is now properly connected and ready to use. We hope you'll enjoy it for years to come.

If in the future you consider upgrading your present system, we hope you'll consider our new line of High Technology Components. These include 4 receivers, an integrated amp, a preamp and a power amp. Each has been styled to be a perfect mate for our High Technology Metal Cassette Decks. And we're sure you'll find a component with all the power and features you're looking for.

Again, congratulations on your new cassette deck. With a little care it will provide enjoyment for a long, long time.