



# H. H. SCOTT

## *Gold Bond Guarantee*

You are now the possessor of an H. H. Scott Laboratory Standard Component. This fine instrument has been designed by the H. H. Scott Research Laboratory and is guaranteed to meet or exceed its advertised specifications. The very finest components obtainable are used in the construction of this instrument. Experienced technicians carefully assemble these units, employing the most advanced techniques and equipment.

As with all precision instruments, a thorough understanding of the proper operation is necessary to get best results. Carefully read the instruction booklet before attempting to use the unit. You will find that maximum effectiveness will develop with greater familiarity.

H. H. Scott sells performance, not merely equipment. It is our primary concern that you obtain the results you have every reason to expect from our products. To insure this, your new component has been manufactured under the most stringent quality controls. It received over 100 individual tests before leaving the plant.

However, as with any piece of delicate electronic equipment, it is possible that a minor imperfection may appear during initial usage, possibly from rough handling during shipment or through vacuum tube or component failure.

To protect your investment, H. H. Scott, Inc., unconditionally guarantees your instrument against any defect in material or workmanship for a period of 90 days. The enclosed warranty card must be returned to us within one week of purchase in order for guarantee to become effective. This warranty does not cover abuse, neglect or improper operation. In all cases of in-transit damage, a claim must be filed against the carrier.

Should your H. H. Scott component require servicing, please do one of the following, whichever is most convenient:

1. Return it to the dealer from whom you purchased it.
2. Bring it to one of the Authorized Service Agencies listed on the enclosed sheet or
3. Write to the Service Department, H. H. Scott, Inc., 111 Powder Mill Road, Maynard, Mass., describing the unit's difficulties. If we feel that the unit should be returned to the factory, we will give you written authorization to ship the instrument. **DO NOT RETURN ANY UNIT FOR WARRANTY REPAIRS WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM THE FACTORY.**

Notify us in a letter that you are returning the instrument, give type and serial number, and describe completely the defective operation. Ship via fully insured PREPAID Railway Express, in instrument's SPECIALLY DESIGNED SHIPPING CARTON.

Your instrument will receive prompt and careful attention, and will be returned by express prepaid during Warranty period. There will be no charge for service during the first 90 days. After expiration of warranty, service will be billed to you at cost of parts and labor only.

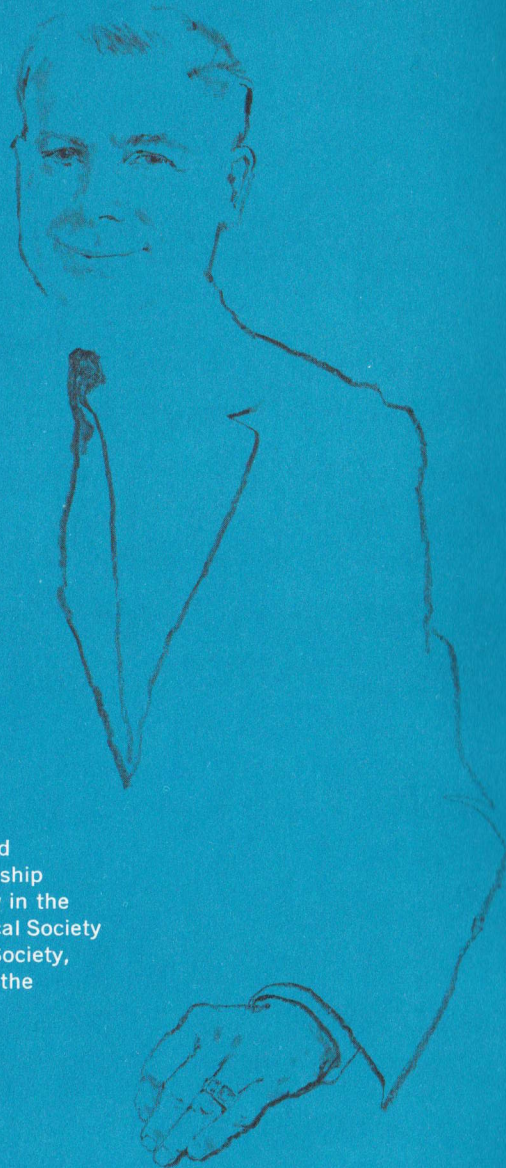
Hermon Hosmer Scott  
President

**OPERATING  
MANUAL**



**MODEL 399**

**H·H·SCOTT**  
LEADER IN AUDIO ENGINEERING AND DESIGN



**HERMON SCOTT . . .  
AUDIO PIONEER**

Hermon H. Scott received B.S. and M.S. degrees from M.I.T. Inventor of the RC Oscillator, RC tuned circuits and filters, the Dynamic Noise Suppressor and other devices, he has many U. S. and foreign patents. His technical leadership was recognized by election as Fellow in the Institute of Radio Engineers, Acoustical Society of America, and Audio Engineering Society, and by numerous awards, including the Potts Medal. He is the author of many technical papers and articles.

**IMPORTANT FIRSTS . . .**

by **H. H. Scott**

First high fidelity AM-FM Stereo tuner using wide range AM design. First to successfully use wide-band circuitry in high-fidelity FM tuners. First to market The Stereo-Daptor, a stereo control unit that prevents obsolescence. First to provide center channel output on Stereo amplifiers for added realism in playback.

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## INSTRUCTIONS FOR THE MODEL 399 STEREO AM-FM TUNER AND 40-WATT AMPLIFIER

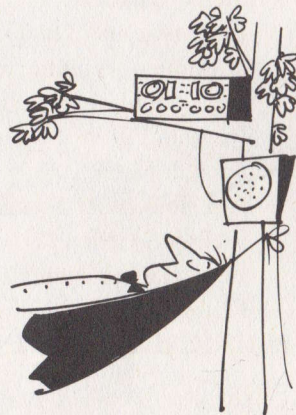
The 399 offers, on one compact chassis, all the superlative features and performance of the famous H. H. SCOTT Model 330-D AM-FM Stereo Tuner and Model 299 Stereophonic Amplifier. No compromise with quality has been permitted in this outstanding instrument.

Despite the fact that the 399 is extremely flexible and offers a wide variety of operating features, it is not difficult to use. Careful reading of this booklet and occasional reference to the enclosed Photo Guide will enable any member of the family to operate the 399 without difficulty.

### INSTALLATION

The 399 can be placed on a table or bookshelf, in existing furniture like an end-table, buffet, or room divider, or in a specially designed equipment cabinet. A handsome hand rubbed wood accessory case is available from your dealer.

Wherever the 399 is placed, adequate provision should be made for ventilation. If this is not done, drift will occur in the FM section, and the life of the internal components will be appreciably shortened. By adequate ventilation we mean some space above and behind the unit where air may circulate freely, or, if it is installed in a cabinet, an open back. Always remember that this model draws about 200 watts of electricity and if you placed a 200 watt bulb in a cabinet, you would need a fair amount of moving air to keep it from getting too warm.



To help disperse heat rapidly, the 399 employs aluminum in the construction of the chassis, panel, and knobs. Aluminum is an excellent conductor of heat. Therefore, the panel and knobs may seem warm to the touch. As long as the unit is adequately ventilated, this is not of any consequence.

### CONNECTIONS

#### Power

The power cord should be plugged into any 110 or 120 volt, 50 to 60 cycle, AC source. *Do not* attempt to use with DC.



#### Speakers

Terminal strips for making speaker connections are located on the back. . . . The one marked Channel A Speaker is for connecting the left speaker (as you face them). The one marked Channel B Speaker is for the right speaker. Use standard twin lead lamp wire. Simply connect one end of the twin lead wire to the two terminals on the speaker or speaker enclosure, as the case may be, and the other end to the O and High screws respectively on the speaker terminal strip. When making the connections, be extremely careful to prevent any strands of wire from one screw accidentally touching a strand on the other screw, as the speaker will not perform properly.

Each speaker is rated by its manufacturer at a certain "impedance" either 4, 8, or 16 ohms. This information is either marked on the speaker or noted in the literature that comes with the speaker. The cable with the spade lug on the end should be connected to the proper terminal screw marked 4, 8, or 16.

After the speakers are connected, they should be properly phased to give a full stereo effect with good bass. Phasing instructions are to be found under **Phase Switch** operation.

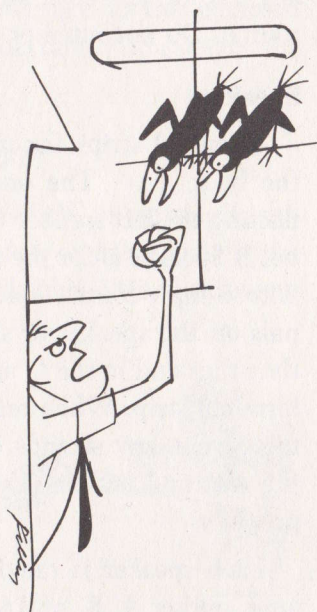
## Antenna

An FM dipole antenna is supplied with the unit. In most strong signal areas this should be more than adequate to pull in all the FM stations available. Antenna connections are made to the terminal strip marked "Antenna" located in the center of the back panel. The dipole leads are connected to the screws marked G and FM 300 ohm respectively. The dipole should then be opened to a full "T" shape. To position the antenna, set the 399 to FM. Tune in a fairly weak station. The dark area in the center of the FM indicator tube will be narrowest when the signal is at its best. Keep rotating the antenna until the signal is strongest.

In fringe areas (or even some nearby areas with interference problems) an external antenna may be necessary. This can be either a standard FM antenna or a presently existing TV antenna. If the TV antenna is used, make certain that it is not one of those designed to avoid the FM band; these will obviously not give satisfactory results. Also a double-pole, double-throw switch should be incorporated in some accessible place so that the TV antenna can be switched either to the television or the 399. Both the 399 and a TV set should not be in operation at the same time on the same antenna.

An AM loop antenna is built in on the top rear of the chassis. This should prove adequate for all AM reception.

Many suggestions for improving AM and FM response in poor signal areas will be found in the special 399 Technical Bulletin.



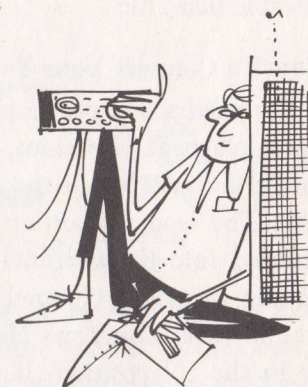
## How To Connect Your Record Player (with magnetic cartridge)

The shielded leads from your stereo changer or turntable should be connected to the inputs marked *Mag 1* on the back of the 399. The lead carrying the left channel information should be inserted in the top (Channel A) jack; the lead carrying the right channel information should be inserted in the bottom (Channel B) jack. If you have both a turntable and a changer, one set of leads should go into *Mag 1* inputs, and the other into *Mag 2 High* inputs. By moving the **Pickup** switch on the front panel, you can select either of the two record players.

Virtually all magnetic stereo cartridges now on the market will have sufficient output to drive the 399 amplifier stage to its full 20 watts. If the cartridge used has an extremely low output so that even with the volume control all the way up there is insufficient volume from the speakers, then, and only then, insert the phono leads in *Mag 2 Low*. This will supply additional gain, but should not be done unless absolutely necessary. Either *Mag 2 High* or *Mag 2 Low* can be used, not both.

If only a monophonic cartridge is being used, the single shielded lead should be inserted in *Mag 2 High*, Channel A input. The **Stereo Selector Control** should then be set to *Channel A*.

If the cartridge is not completely shielded against hum, it is suggested that the two leads be twined around each other. Also, because of the extremely powerful transformers used in the 399, it would be advisable in this case to keep the record player at least two feet away from the unit. If there are any further hum problems in connection with the phono cartridge, refer to the 399 Technical Bulletin.



### How To Connect Your Record Player (*with crystal or ceramic cartridge*)

Magnetic cartridges produce low outputs. Crystal and ceramic cartridges produce stronger signals on the order of  $\frac{1}{4}$  to over 1 volt. With record players using these cartridges, the shielded leads should be inserted in the Extra inputs. The lead carrying the left channel information should go into the A or middle input, while the lead carrying the right channel information should go into the B or bottom input. The **Input Selector** on the front panel should, of course, be set to *Extra* whenever you want to listen to the phonograph.

Otherwise, the information given in the previous section is applicable here, too.

### How To Connect Your Tape Recorder

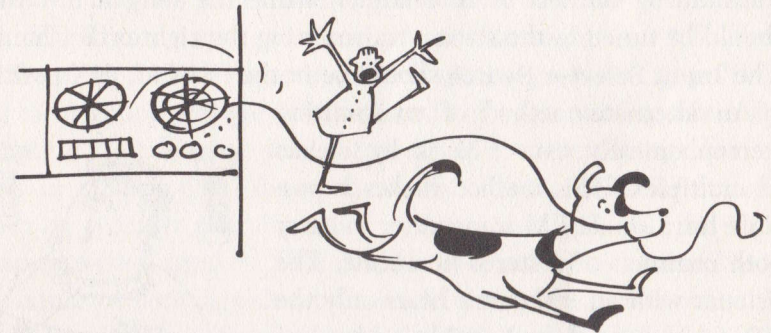
For playback of pre-recorded tape on a regular tape recorder with stereo playback provisions, the shielded leads from the tape machine should be inserted in the Playback input jacks on the back of the 399. The lead containing the left channel information should be inserted into the Channel A or middle jack, while the lead containing the right channel information goes to the Channel B or bottom jack. The **Tape Monitor Switch** on the front panel should be in the *IN* position. It now will make no difference where the **Input Selector** is set; the pre-recorded tape will be heard through the speakers regardless. *Remember, unless you are listening to tape, the "Tape Monitor Switch" must be in the OUT position.*

If the pre-recorded tape is to be played on a Tape Deck, a different system should be employed. A tape deck is a mechanism which consists simply of the tape transport and heads with no recording or playback amplifiers or pre-amplifiers whatsoever. Such a device produces a very small electrical signal similar to that obtained from a magnetic phonograph cartridge. Because of this, the connections are made to Mag 2 Low\* on the back panel.

*\*Mag 2 Low and Mag 2 High cannot be used at the same time. Use either one or the other.*

The system is then considered identical to a standard phonograph and the same rules apply as outlined before, with one exception. The **Equalization Switch** on the front panel should be placed in the *NARTB Tape* position.

If monophonic tape is being played on a stereo tape recorder or tape deck, the connections described above still apply. The only change is that the **stereo selector** is set to either *Channel A* or *Channel B* as the case may be. If a monophonic tape deck or tape recorder is used there is only one shielded lead to connect, and this should go into the Channel A input.



To record directly from the 399, a special set of outputs is available on the back panel. These are the Rec. Output jacks. Connect a shielded wire from the Channel A or middle jack to the Radio or high level input of the tape recorder. The tape recorder will automatically record directly off the 399 whatever is playing over Channel A of the system (be it FM, phonograph, etc.) completely unaffected by the loudness and tone controls. If the lead is connected from the Channel B or bottom jack of the Rec. Output, then the tape recorder will receive whatever is on Channel B of the system (be it AM, phonograph, etc.). If a *stereo record* tape recorder is used, then a pair of leads will be required . . . one from Channel A and one from Channel B of the Rec. Output. It is now possible to record stereophonically any program material being carried by the 399.

If your tape recorder has separate erase, record, and playback heads you can take advantage of the special monitoring provision of the 399. This will be discussed under **Tape Monitor** operation.

### FM-FM or FM-Multiplex

In some communities, two separate FM stations combine forces to present stereophonic broadcasts over their joint facilities. Receiving these transmissions requires the additional use of a separate FM tuner. This tuner should be connected to the 399 with a shielded wire inserted into the jack on the rear panel marked MX.FM Channel B. The FM section of the 399 should be tuned to the station transmitting the left or A Channel, while the remote FM tuner should be tuned to the station transmitting the right or B Channel. The **Input Selector Switch** should be in the *FM-FM, MX* position.

An alternate method of transmitting stereophonically over FM is by means of multiplex. This method makes it possible for a single FM transmitter to carry both channels of a stereo broadcast. The listener with an FM tuner hears only the left (A) channel, or possibly a blend of both channels (depending on the multiplex system employed). However, with the addition of a special multiplex adapter, the broadcast is decoded into its two component parts, and the listener hears a true stereophonic transmission.

At the time this manual is being prepared, several methods of multiplexing are being considered by the Federal Communications Commission. The 399 will be readily adaptable to whichever method is eventually approved. If and when this occurs, write to the factory for instructions on properly adding an adapter to receive these broadcasts.

Experimental multiplex broadcasts are being transmitted in a few cities. The Technical Bulletin describes them in more detail.



### Extra

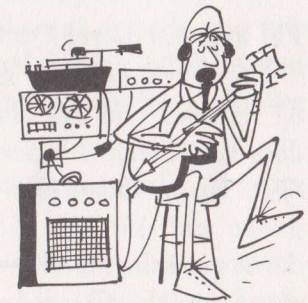
The extra input can be used for any high level source such as tape, recorder, TV, crystal microphone, phonograph with crystal or ceramic cartridge, etc. Instructions for connections were given under the section for connecting a record player with crystal or ceramic cartridge.

### Center Channel Output

One of the many exclusive stereo features pioneered by H. H. Scott is the third (or middle) channel. This extra output is used in conjunction with an auxiliary amplifier to fulfill several important needs: 1 It gives fuller sound, particularly in large rooms where it is desired to separate speakers by more than eight feet. 2 It allows ideal seating for full stereo in a much greater portion of your listening room giving you greater freedom in placement of speakers and furniture. 3 It lets you feed a full signal to extension speaker systems in other rooms like kitchen, den, porch, bedroom or bath. With an ordinary two channel system you feed just half the signal to an extension speaker. This new H. H. Scott center channel feeds a mixture of *both* signals into a single extension speaker when desired. For further information see the 399 Technical Bulletin.

### Accessory Outlet

An accessory switched 117 volt output is available on the back panel to supply current for a phonograph or tape recorder motor. If more than one device is used, a 3 way plug should be inserted into the outlet, permitting the use of up to three devices. The outlet is rated at 2½ amperes so the total current drain of all the devices connected should not exceed this amount. When the 399 is turned off, all items plugged into this outlet will also be turned off.



## DESCRIPTION AND USE OF CONTROLS

### On - Off Switch

The unit is turned on by rotating the loudness control clockwise. **IMPORTANT:** Unless the 399 is being used to play back tape, **tape monitor** switch must be in "OUT" position.

### FM and AM Tuning Controls

These large knobs on the front panel permit the user to select any AM or FM station desired. The logging scales included on the dials will assist you in locating stations that are extremely close to each other. Next to each dial are the tuning indicators which are illuminated when that part of the tuner is in operation. When the FM is on, the FM indicator will light; when the AM is on, the AM indicator will light; when both AM and FM are on for stereo operation, both indicators will be illuminated. These indicators are also valuable as a means of tuning stations properly. When the black band in the center is at its absolute narrowest, the station is at its strongest point on the dial. The size of the black band will vary from station to station depending on signal strength.



### FM and AM Level Controls

These two controls are found on the back panel. They should be set once and not altered thereafter. They insure that volume does not change drastically when switching from records to FM or AM. To set them, play a record. Switch **Input Selector** between *phono* and *AM-FM*. If the volume jumps up, turn the FM level down until the sound level is identical to the record. Once these are equal, use the FM to balance the AM. If there is a station transmitting AM-FM stereo broadcasts in the area, use that station on AM with its FM counterpart to balance for equal loudness.

If the 399 is not being used with a record player, set the loudness control to position 4 and adjust the FM and AM level controls so that the sound is at a normal listening level.

### Input Selector

This control selects the sound source for your system.

*Phono*—Switches on *Mag 1* or *Mag 2* (high or low) depending on the position of the **pickup** switch.

*AM-FM Stereo*—Switches in the tuner section of the unit.

*FM-FM, MX Stereo*—If the 399 is being used as described in "FM-FM or FM Multiplex" in the previous section on Connections, this is the position to be used.

*Extra*—Switches in anything connected to the Extra inputs on the back panel.

### Stereo Selector

Controls the mode of operation of the 399.

*Bal A*—Both channels coming into the 399 are combined and sent only to the left speaker.

*Bal B*—Both channels coming into the 399 are combined and sent only to the right speaker.

Use of these positions for balancing output will be discussed under **Stereo Balance**.

*Monophonic Records*—If a stereophonic cartridge is being used to play monaural (or, more properly, monophonic) records, use this position. It automatically combines the dual outputs of the stereo cartridge, effectively cancelling out any vertical rumble and noise in the signal.

*Stereo*—Whenever the 399 is being used stereophonically, the control should be in this position.

*Stereo Reverse*—Basically this is identical with the above position except that it permits the user to "move the violins from the left side of the orchestra to the right, and the drums from the right side to the left" if he desires.

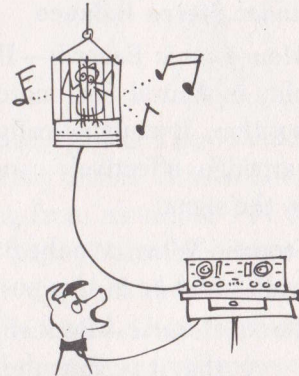
*Channel A, FM*—When switch is in this position the Channel A signal source you selected with the **Input Selector** switch will play over both power sections and speakers. In other words, if the **Input Selector** is set to phono, Channel A of the phono will go through both amplifiers and into both speakers. If the **Input Selector** is set to AM-FM stereo, then Channel A which in this case is the FM, will pass through both channels of the amplifier and into both speakers. Use this position for listening to FM.

*Channel B, AM*—Same as above, except that now the Channel B input source will be transmitted to both amplifiers and speakers. Use this position for listening to AM.

### Channel A and B, Treble and Bass

These controls modify the sound to suit the user's taste, the room acoustics, and the program material being used. H. H. Scott provides a separate set of controls for each channel, permitting the operator to adjust for differences between speakers, and differences due to room placement. The bass control modifies the low frequencies, while the treble control modifies the high notes. Rotating the controls clockwise causes an increase in the amplitude frequencies, while rotating counter-clockwise causes a reduction.

Feel free to use these controls as you see fit. You are the one who must be satisfied with the overall sound, and the tone controls are the principal way of seeing that you are. Boosting the treble will accent surface noise on phonograph records and hiss on tapes, while boosting the bass will emphasize record player motor noise.



### Stereo Balance

Whether the system is being used stereophonically or monophonically, it is important that the sound from the two speaker systems be of equal volume. They may sound different because of any of the following reasons: room acoustics, differences in speaker efficiencies, differences in output between the two channels of a stereo cartridge, speaker placement, slight discrepancies between the two channels of the source material, and a multitude of other possibilities. The **stereo balance** is designed to correct this. By rotating the knob clockwise, the right or B channel will be increased in volume in comparison to the left or A channel. Rotating counter-clockwise will have the opposite effect. By moving the control to its extreme position, it is possible to completely eliminate one channel if desired.

To simplify the balancing operation, the 399 incorporates the unique H. H. Scott balancing circuit. Unlike other methods, this insures that you will *hear* equal sound level from each speaker system. Turn on any program material and rotate the **Stereo Selector** switch to *Bal A* and then to *Bal B*. Quickly switch back and forth between these two positions, while at the same time varying the **Stereo Balance**. At the position of the **Stereo Balance** where *Bal A* and *Bal B* sound equally loud, the system is in balance. Unless there are discrepancies introduced by faulty program material or cartridges, the control should not have to be varied appreciably.

### Loudness and On/Off

Rotating this control clockwise will turn on the 399. This control also varies the volume of sound emanating from the system. As the knob is turned clockwise, the volume will increase. Ordinarily, the control should be pointing to 3 or higher at normal

listening level. The actual position is not important as long as it is at least 3. If the control cannot be turned past 1 or 2 without the sound becoming too loud, it would be advisable to make sure that the proper inputs are being used (refer to the section on Connections), and that the FM and AM level controls are set properly.

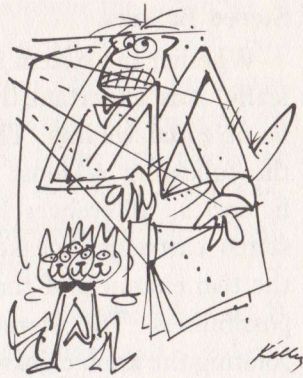
### Loudness-Volume Switch

It is a phenomenon of the human hearing mechanism that when volume is low, the ear is less sensitive to extreme low notes and extreme high notes. Thus, whenever the system is being operated at a low level, the sound will not seem to be as good as it is at higher levels. To compensate for this deficiency, the 399 incorporates a special circuit which automatically boosts the extreme lows and highs, whenever the volume is reduced. To introduce this compensating network into the system, move the slide switch to *L*. When the sound level is increased, this compensation automatically decreases since it is no longer needed. When the switch is in the *V* position the compensation network is out of the circuit.

### Tape Monitor Switch

This switch should always be in the *OUT* position except when you are listening to the playback of tape, in which case it would be moved to *IN*.

If your tape recorder incorporates a separate playback head it is possible to listen to the recording a fraction of a second after it is made as a quality check. Let us assume that a recording is being made off the AM-FM tuner. The **Input Selector** will be in the *AM-FM* position. With the **Tape Monitor** switch in the *OUT* position, the system will be playing the actual broadcast. With the switch moved to *IN*, the system will now be listening to the tape recording of the broadcast as it is being recorded. By moving the



switch back and forth it is possible to hear whether the recording is equivalent to the actual broadcast.

This method will work only for recorders with separate record and playback heads.

### Rumble Filter

All turntable motors make some noise. If the noise is so prominent that it can be clearly heard through the speakers, move the rumble switch to *IN*. Use of this switch will reduce the low frequencies.

### Scratch Filter

If the surface noise of a phonograph record is particularly objectionable, move the scratch filter to *IN*. It will reduce the high frequencies. On especially old records (such as 78's) it may be necessary to turn down the treble controls.

### AM Selectivity

The 399 is designed to reproduce the complete band of frequencies being transmitted by many good AM stations. With this switch in the *Wide* position, many AM stations will be difficult to distinguish from FM. On local AM-FM stereo transmissions this is the position to use. However, when interference is present, or when a weak station is desired, it will probably be necessary to move the switch to the *Distant* position.

It should always be remembered that the 399 was designed to offer the finest sound possible on AM. It was not designed for listening to far distant stations, when to have such design would necessitate a compromise with our standards of sound quality.



### Pickup Switch

In position 1 this switch will select the record player that is connected to Mag 1 on the rear panel. In position 2 the switch will select the record player connected to Mag 2 High or the tape deck connected to Mag 2 Low (Mag 2 High and Mag 2 Low cannot be used simultaneously).

### Equalization Switch

When using a record player, this switch should be in the *RIAA*, *NARTB*, *ORTHO* position. When using tape deck, the switch should be in the *NARTB Tape* position.

### Phase Switch

A loudspeaker produces sound by moving back and forth, pushing the air in such a manner that our ears detect sound. When two loudspeakers are in operation in a stereo system, it is essential that the speakers move back and forth at the same time. If the right speaker is moving forward at the same instant that the left speaker is moving backward, there will be a noticeable reduction in bass response as well as a poor stereophonic effect.

To insure that the system is in phase at all times, the 399 incorporates a phase reversal switch on the front panel. To set this switch properly, the following method is suggested:

Set **Input Selector** to *AM-FM Stereo* and **Stereo Selector** to *Channel A, FM*. Tune in a monophonic broadcast with a male voice speaking. Turn the volume to full room level. Stand in front of the two speaker systems and midway between them. Have someone slide the **Phase Switch** back and forth. In one position, the voice will sound full and appear to be coming from directly between the two speakers. In the other position, the voice will lose some of its bass response, and will appear to be coming from both speakers. The first is the correct position, the second is the incorrect one. If the correct position occurs when the slide switch is in the *Rev* position, reverse the speaker wire connections on *one* of the speakers. The correct phase position will now be *Norm*.

Once the speakers are properly phased, it should not be necessary to move the **phase switch** for most records or broadcasts. Occasionally a phonograph record will be recorded out of phase accidentally, or an AM-FM stereo broadcast will be transmitted out of phase. This can be corrected by simply moving the **Phase Switch** to *Rev*. After some experience in listening to stereo broadcasts it will not be hard to detect when the program material is in or out of phase. Having the control on the front panel makes it easier to keep your system in phase.



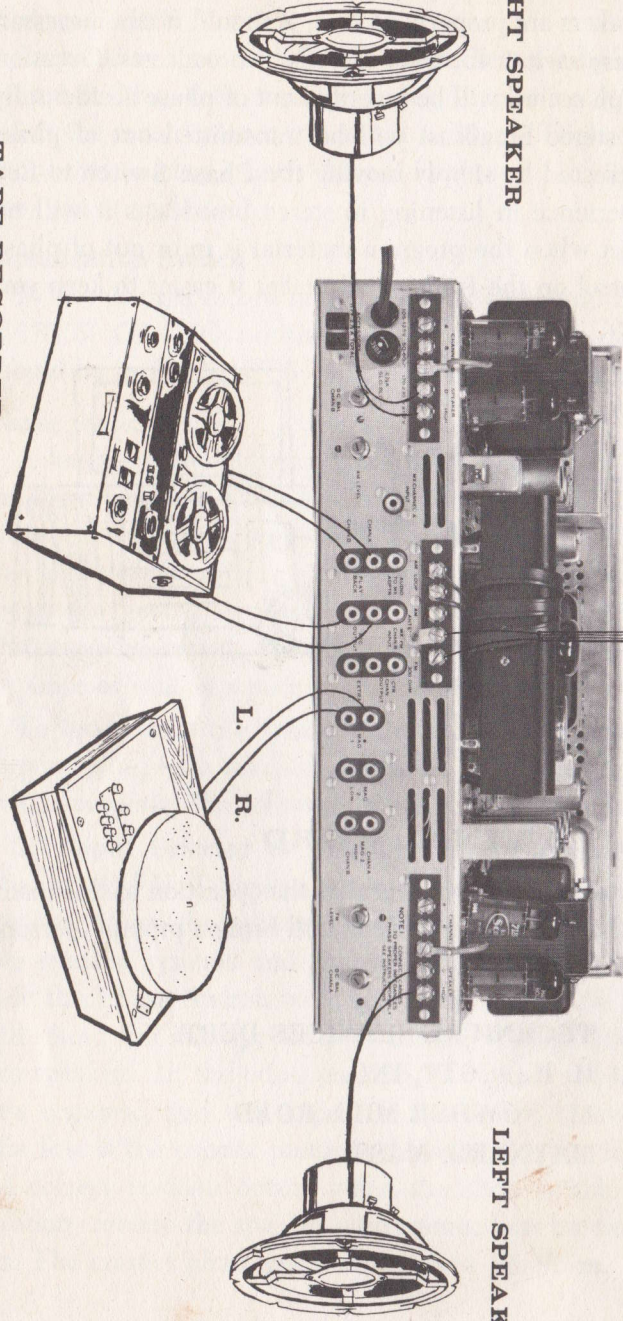
### A FINAL WORD...

If you have any questions concerning the operation of this instrument, a letter to the following address will bring a prompt, personal reply.

**TECHNICAL SERVICES DEPT.  
H. H. SCOTT, INC.  
111 POWDER MILL ROAD  
MAYNARD, MASS.**

TURNTABLE

TAPE RECORDER



LEFT SPEAKER

RIGHT SPEAKER

Connect Your New  
**H. H. SCOTT 399**  
 Easy as 1...2...3!

1000

Over-weight  
 adjusted at factory  
 the proper stylus  
 ure.

Controlled lateral  
 ing minimizes  
 vity of arm to  
 al vibration.

All height of arm  
 be adjusted from  
 to 2½" so that  
 will work with any  
 able.

Precision ground needle  
 bearing reduces vertical  
 friction to an absolute  
 minimum.

Convenient handle give  
 positive control of arm  
 when placing on record.

Precision ball bearings  
 reduce friction as arm  
 moves laterally across  
 record.

Arm constructed of  
 chrome anodized  
 aluminum to reduce  
 weight and minimize  
 record wear.

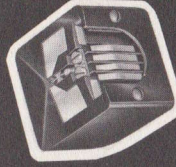
Lowest moving tip mass  
 of any stereo cartridge.  
 Reduces record wear  
 and results in extended  
 high frequency response.

Integrated arm and  
 cartridge design assures  
 proper alignment of  
 stylus on record so that  
 cross-talk is kept to  
 unmeasurable levels.

Balanced-Coil  
 construction and  
 controlled air gap  
 assures hum levels  
 lower than with  
 conventional designs.

Simple contact  
 arrangement makes  
 possible instant  
 removal of cartridge  
 for ease in cleaning.

.5 mil stylus assures  
 minimum distortion,  
 minimum record wear.



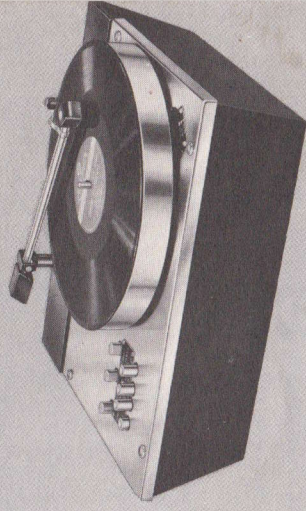
Bottom view of  
 cartridge showing  
 positive contact  
 arrangement and  
 precision stylus  
 construction.

**technical specifications**

- Tip Mass: Less than 1 mg. This tip mass is at least 50% lower than cartridges of conventional design.
- Frequency Response: 20 CPS to 20,000 CPS.
- High Vertical Compliance: Minimizes record wear and prevents damage even if cartridge is dropped on record.
- Tracking Pressure: 3.5 grams for optimum response and minimum wear.
- Output: 7 millivolts.
- Cross-Talk: Better than -20 db.

**London-Scott  
 Matched Arm  
 and Cartridge**

710A



**Stroboscopic Turntable**

Description: The 710A is an integrated turntable system with built-in provisions for pickup arm mounting and scientific vibration isolation. Acoustic Filtering: Torsional and mechanical filtering completely isolate the turntable from all extraneous acoustic, motor and room vibrations.

Rumble: 60 db below recording level.  
 Wow and Flutter: Less than 0.1% of rated speed.

Speed Controls: Push button selection of 33⅓, 45 or 78 rpm speeds.

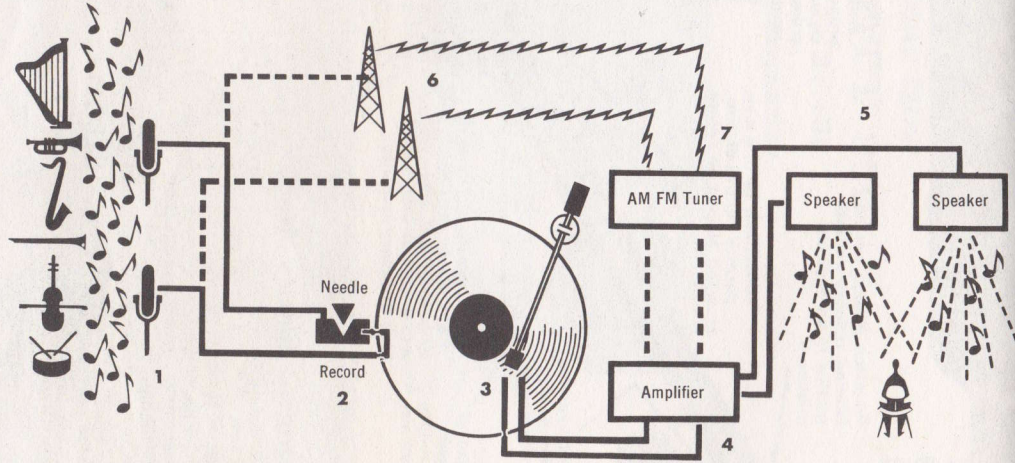
Dimensions: (Including pickup arm mounting board): 16⅞" x 14½"; depth from top of spindle to bottom of mechanism 7⅛".

Power: 105-125 volts, 60 cycles AC.

Accessory Base: Hand-rubbed mahogany base available from your dealer.

how  
**STEREO**  
works

1 Two separate microphones are placed at opposite sides of the orchestra. 2 The separate signals from the microphones are recorded on two separate sides of a record groove. 3 The stereo cartridge senses the two signals, separates them and feeds them into a dual stereo amplifier. 4 The amplifier strengthens the weak signal from the cartridge and provides you with controls to tailor the sound to your room and your ears. 5 The two separate signals are fed into two speakers placed at opposite sides of your room. This gives you 3-D sound . . . two slightly different sound pictures, one for each ear, that create a dimensional effect. 6 As an alternate system the sound can be fed from the two microphones to separate AM and FM stations. 7 These separate signals are then picked up by a dual stereo AM-FM tuner and fed to the stereo amplifier.



There are two principal ways to purchase H. H. Scott stereo. If you already have a monophonic system, or prefer to start with monophonic and expand to stereo later, you can add the H. H. Scott Stereo-Dapter. If you want to go into stereo from the start you can purchase H. H. Scott components designed specifically for stereo.

## H. H. SCOTT . . . a history of leadership in the Acoustic field

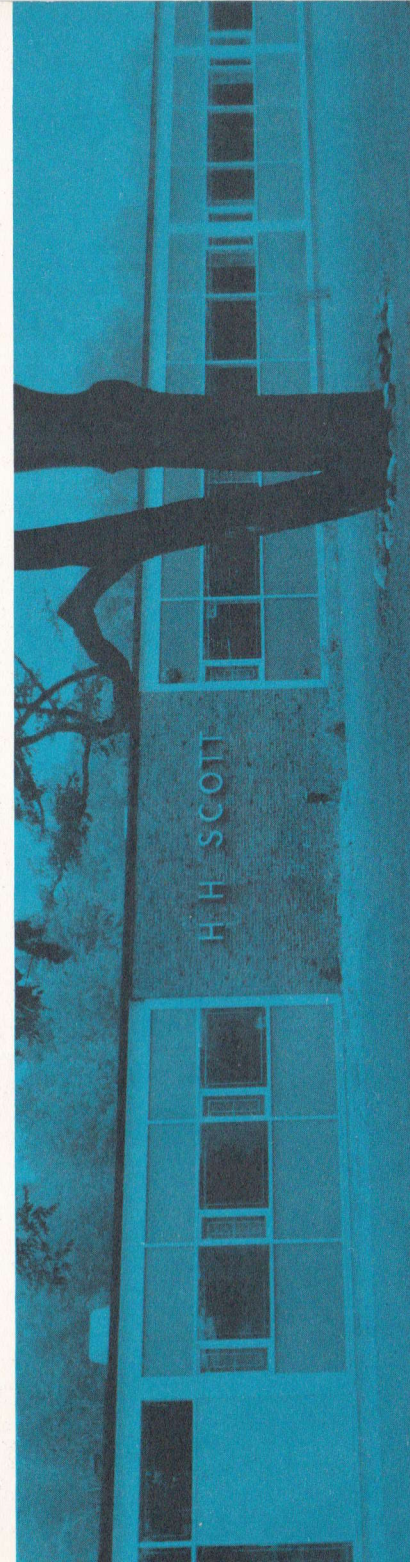
To insure that every H. H. Scott component meets the highest standards of quality, H. H. Scott maintains this ultra modern plant for the design and manufacture of all its components.

This new plant, located in Maynard, Massachusetts, includes a machine shop, sheet metal facilities, coil and transformer department, electrical assembly department and fully equipped laboratories for design and research.

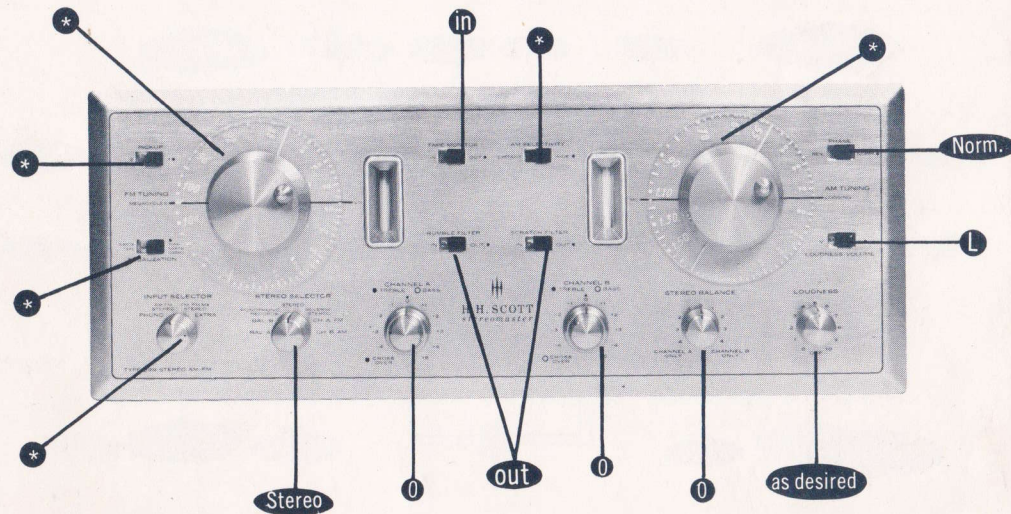
The engineering department is staffed by 12 graduate engineers who are primarily concerned with developing new and better components for high fidelity sound.

Every high fidelity component receives over 50 electrical and mechanical tests before it leaves the factory. Special electrically shielded "screen rooms" are used for aligning FM tuners. There are life test facilities where components are run for thousands of hours under strict controls to test their durability.

These extensive investments in facilities back up H. H. Scott's philosophy that there will never be any compromise with quality.



## DIAL SETTINGS FOR PLAYING STEREO TAPES under normal conditions

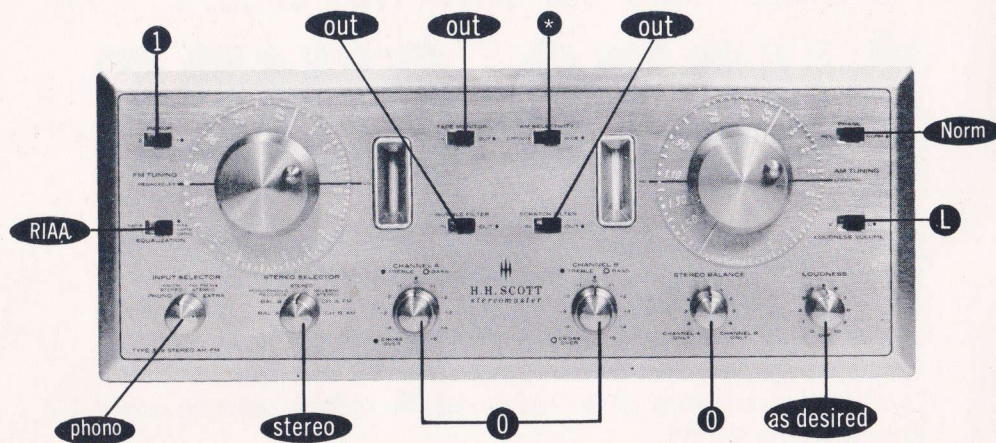


To play stereo tapes on a tape deck (without preamps) set Pickup Switch to "2", Equalization Switch to "NARTB TAPE"; Input Selector to "PHONO"; Tape monitor to "OUT".

\*switch not in operation

To play monophonic tape set Stereo Selector to "CH A — FM".

## DIAL SETTINGS FOR PLAYING STEREO RECORDS under normal conditions



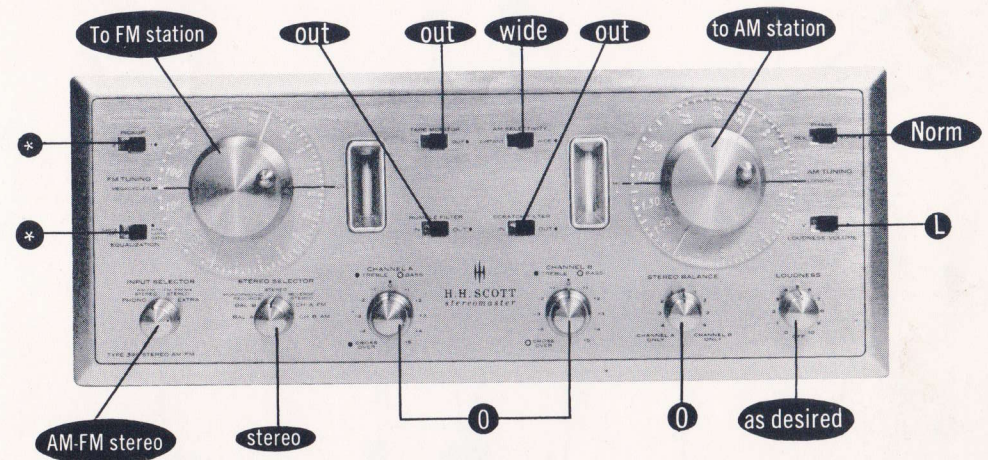
To play monophonic records with a stereo cartridge set Stereo Selector to "MONOPHONIC RECORDS".

To play monophonic records with a monophonic cartridge set Pickup switch to "2" and Stereo Selector to "CH A — FM".

\* switch not in operation

To play stereo records with a ceramic or crystal cartridge set Input Selector to "EXTRA".

## DIAL SETTINGS FOR PLAYING AM/FM STEREO under normal conditions



To play FM station only set Stereo Selector switch to "CH A — FM".

To play AM only set Stereo Selector switch to "CH B — AM".

\*switch not in operation

IT'S EASY TO PLAY YOUR NEW H. H. SCOTT  
STEREOMASTER 399 WITH THIS SPECIAL...

# PHOTO-GUIDE

To help you and your family learn to use the H.H.Scott 399, our engineers have pre-selected basic switch positions. To operate, you simply set the switches exactly as indicated in the photo-guides. As you use your new system you will find that varying the setting on some of the controls will give even better sound. Remember, you are the final judge! Set the controls where you like them best. **IMPORTANT:** To assure maximum enjoyment, be sure to study the complete operating manual before using your new 399.



**H. H. SCOTT**

111 POWDERMILL ROAD MAYNARD, MASS.

WARRANTY CARD	
MODEL NO. _____	SERIAL NUMBER _____
<p style="text-align: center;">This Precision-Made H.H.Scott instrument is guaranteed to be free from defective components for a period of 90 days from date of purchase. See instruction book for complete statement of guarantee.</p>	
PURCHASER _____	DATE PURCHASED _____
STREET _____	TYPE _____
CITY AND STATE _____	SERIAL NUMBER _____
DEALER PURCHASED FROM _____	
WHAT ADVERTISING PROMPTED PURCHASE _____	
OTHER FACTORS INFLUENCING PURCHASE _____	
COMMENTS _____	
WHAT ASSOCIATED HI FI EQUIPMENT ARE YOU USING (MAKE & MODEL)? _____	
<p>If you believe any of your friends would like to receive our new free booklet on high fidelity, please print their name and address below:</p>	
NAME _____	STREET _____ CITY _____
NAME _____	STREET _____ CITY _____
<p>DO NOT PIN, FOLD, OR MUTILATE - THIS CARD IS YOUR GUARANTEE - IT MUST BE RETURNED WITHIN 10 DAYS OF DATE OF PURCHASE</p>	
<p style="font-size: small;">MORLEY 45402*</p>	