



festival

3

MUSIC SYSTEM

AM · FM STEREO
CONTROL CENTER
AUTO TUNING

WITH FESTIVAL
SPEAKER SYSTEMS

Congratulations.

You are now the owner of the most advanced and versatile stereo music system ever designed for home use. It combines superb styling with a performance level never before achieved in a single stereo unit.

Some time ago, Harman-Kardon, set for itself the task of developing an all-in-one music system which would vie with individual components in performance, yet provide ease and convenience of installation and operation. You now can enjoy the results of this effort—the Festival Music System.

The all new Festival 3 control center is equipped with a stereo preamplifier designed for low noise and high gain, a powerful wide-band stereo amplifier, an AM/FM stereo tuner for startlingly clear reception and unique electro-mechanical automatic tuning.

Because cool-operating transistors are used throughout, your Festival may be placed virtually anywhere . . . guided only by decor considerations . . . without the need for special installation precautions.

The all new Harman-Kardon Festival speaker systems are artfully engineered to dramatically fulfill the extraordinary promise of the Festival control center. The moment your set is switched on, these speaker systems will fill your room with the magnificent sound characteristic of the original performance. They are designed to add no character of their own. All you hear is the superlative definition of the original instruments. Your speakers have an exceptionally smooth frequency response with low bass distortion, making the low frequency output of the speaker usable over its full range. The high compliance woofers have multi-layer voice coils enabling them to handle huge amounts of power. The bass response is truly superb, vibrating with a rich resonance that can actually be felt — as though you were at a live performance. The high compliance, wide dispersion tweeters are in their own critically designed acoustic chambers. Wide dispersion provides the extraordinary opportunity to place the speakers where they look best in your room while retaining full stereo pleasure.

Finally, we know you are eager to install and use your Festival. But, we earnestly urge that you read the pages that follow. The few minutes it will take to familiarize yourself with the precision electronic instrument that is the Festival, will ensure many years of deep and uninterrupted pleasure.

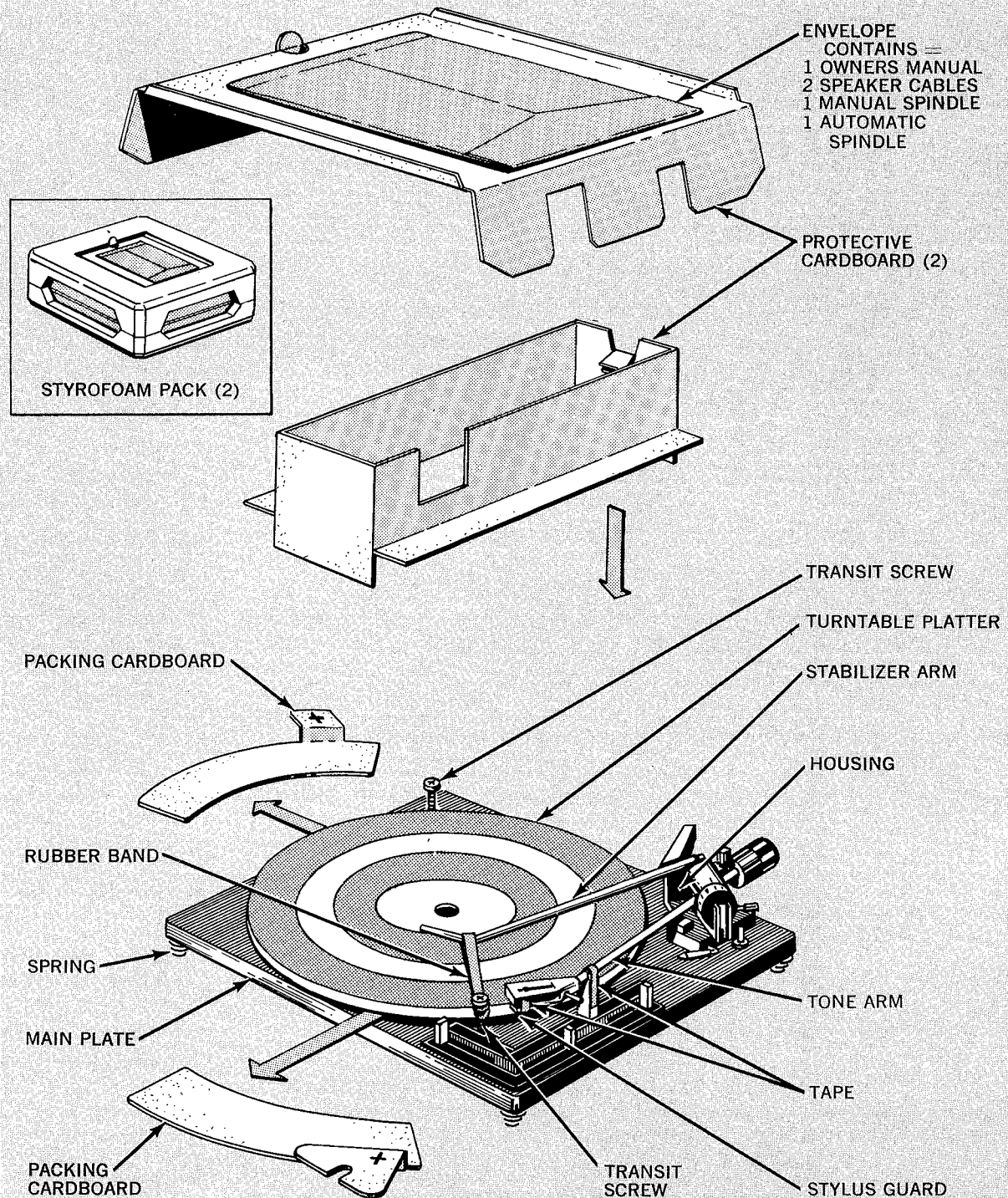
Installation

PREPARATION FOR USE OF RECORD CHANGER

1. Carefully remove the rubber band securing the stabilizer arm to the transit screw.
2. Turn both transit screws clockwise until they are all the way down against the main plate and the turntable is floating freely on its springs.
3. Remove the large piece of protective cardboard which straddles the turntable platter.
4. Remove the two pieces of semi-circular cardboard located underneath the edge of the turntable platter.
5. Unlock the stabilizer arm by pressing down at the top rear near the housing and rotate the front free end toward the center of the turntable.
6. Remove the piece of tape holding the tone arm to the tone arm rest.
7. Remove the piece of tape holding the stylus guard to the cartridge.
8. Remove the stylus guard.

RECORD CHANGER ADJUSTMENTS

The record changer has been accurately pre-adjusted at the factory. No adjustment should be necessary for quite some time. If it becomes evident that adjustment is necessary, complete instructions will be found in the SERVICE AND MAINTENANCE section of this manual.



INSTALLATION

Your FESTIVAL 3 Music System may be placed at any convenient location within your room.

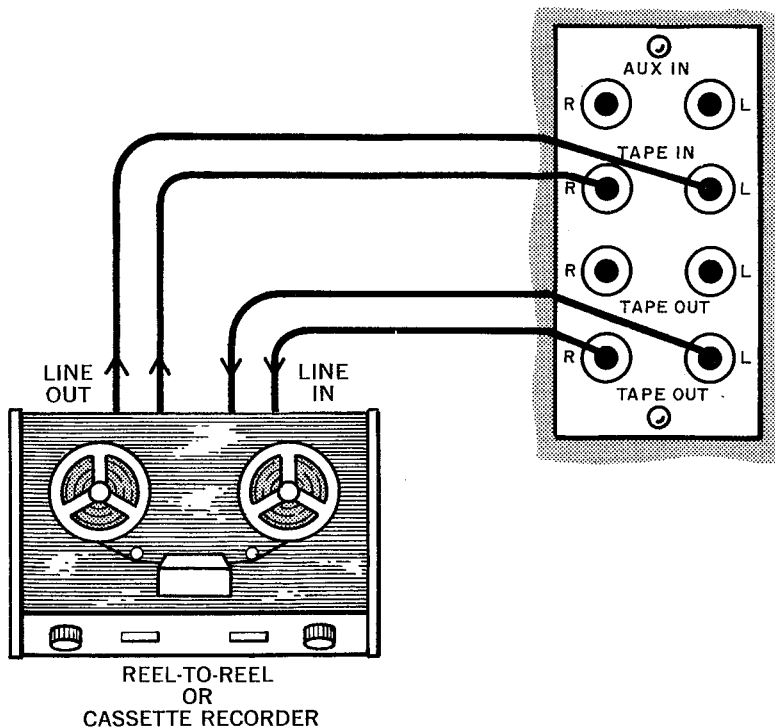
The output transistors of your FESTIVAL 3 are operated conservatively for maximum frequency response, low heat dissipation and long life. It is therefore not essential to observe special precautions when installing the Music System. Merely allow two or three inches behind the control center when installing into a closet or bookshelf.

POWER CONNECTIONS

Connect the AC line cord into any outlet furnishing 117 volts, 60 hertz AC current. The voltage may vary between 105 and 125 volts. An auxiliary AC convenience outlet is provided on the rear panel of your control center. Any accessory equipment (TV set, Reel to Reel tape recorder, etc.) may be connected to this receptacle and will be controlled by the power switch on the front panel of your system.

OVERLOAD PROTECTION CIRCUIT

In the event of a speaker short circuit or a very low impedance load, the protective circuit in your Music System will interrupt operation and prevent possible damage to the unit. In such event, it is no longer necessary to insert replacement fuses since the resetting circuit breakers will automatically resume operation when the overload condition has been eliminated. Continue activation of this circuit breaker indicates an abnormal condition and should be investigated. **Do not continue to operate under these conditions.**



HUM AND NOISE

In any high fidelity installation, hum may be caused by interconnecting associated equipment (TV 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.

FUSES

Your FESTIVAL 3 uses one fuse to protect its circuits. The fuse labeled FUSE 3A-3AG is used to protect the entire system. In the event of fuse failure replace **ONLY** with the same type used. Replacing with a fuse of a higher rating will not protect the instrument and may result in severe damage.

AUX RECEPTACLES

The AUX receptacles are provided for use with any other high level program source such as Reel-to-Reel tape recorder, cassette tape recorder, TV or a record stereo tuner.

TAPE IN RECEPTACLES

Just as the AUX Receptacles, these may be used for any high level program source. They may also be used for tape monitoring if you have an external recorder with a monitoring feature. For complete details see the paragraph TAPE MONITOR SWITCH.

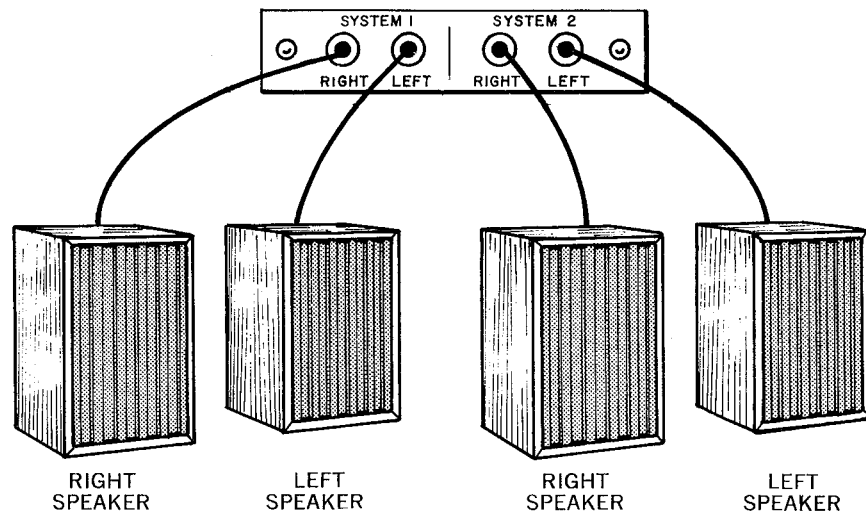
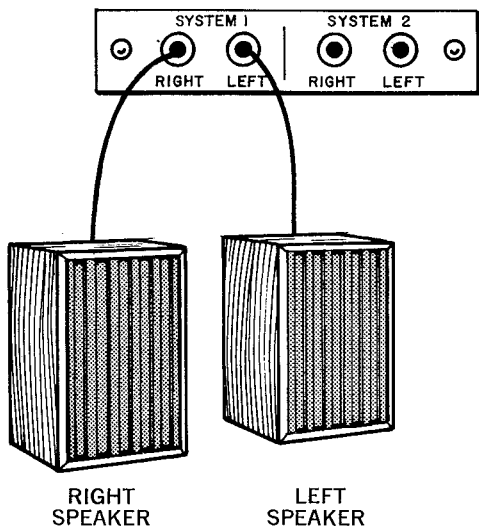
TAPE OUTPUT RECEPTACLES

We have provided two pair of TAPE OUT Receptacles on the rear of your FESTIVAL 3. This will permit you to record on any external Reel-to-Reel or cassette recorder, either individually or simultaneously, any program material connected to your Control Center. The signals appearing at the TAPE OUT receptacles are unaffected by any of the front panel controls with the exception of the Function Switch. The tape recorders may be connected as shown in the drawing.

Speaker connections

You may connect either two speakers (one system) or four speakers (two systems) to the rear of your FESTIVAL 3 Music System.

For your convenience we have provided RCA plug-type connectors for quick, trouble-free speaker connections. To connect your speakers, simply plug them into the Speaker System 1 receptacles. Two speaker cables are supplied with your system with a phono plug connector at each end for this simple plug-in connection to your unit. (Please refer to the diagrams supplied in this instruction manual which indicate the exact location of these speaker connection receptacles.)



CONNECTING THE SPEAKERS FOR STEREO OPERATION (1 SYSTEM)

The cables supplied may be easily dressed around the molding for an inconspicuous and neat installation. Do not drive the staples or tacks through the center of the wire for this may short out the two sections and will decrease the overall volume or short out the speakers entirely.

1. Plug one end of the speaker cable into the receptacle on the rear of your left speaker (this is the speaker on the left as you face the speakers.)
2. Plug the other end of the speaker cable into the LEFT speaker receptacle on the rear of the system.
3. Similarly connect the other speaker cable to your right speaker.

4. Attach the other end of the speaker cable to the receptacle marked RIGHT on the rear of the system.
5. Your music system is now connected for 1 system stereo operation and is operative when the speaker system 1 switch is in the "ON" position.

CONNECTING THE SPEAKERS FOR STEREO OPERATION (2 SYSTEMS)

1. Connect all 4 speakers for your two system operation as shown in the diagram.
2. You may now select either system 1, system 1 and 2, or system 2 by the use of the speaker selector switches located on the front panel of your FESTIVAL 3.

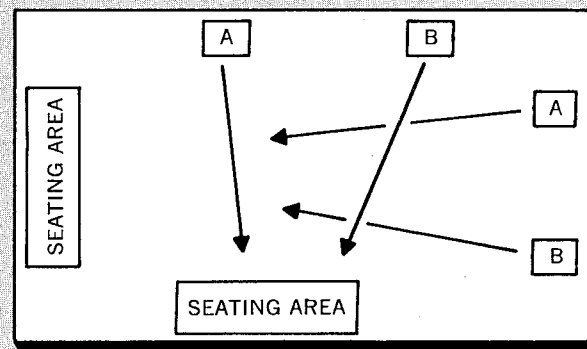
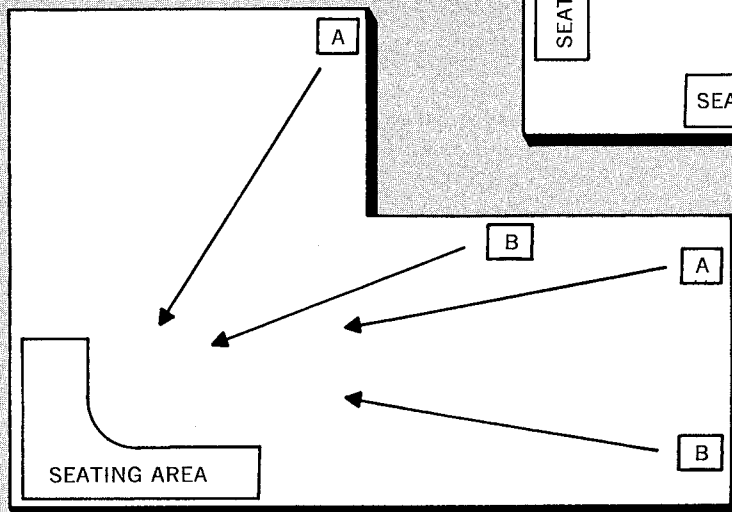
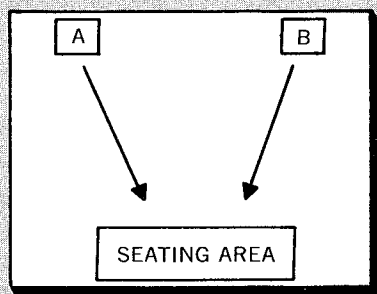
SPEAKER PHASING

When more than one speaker is used in a music reproducing system, the speakers must be connected in a manner which will allow them to work together. Both left and right speakers must operate in perfect unison, moving back and forth together. If the speakers are moving in opposite directions, the result will be diminished bass response and decreased realism of sound. When this occurs, the speakers are said to be out of phase.

The use of plug in receptacles on both your Music System and your speakers insure that your system will always be in phase.

If you connect a second pair of speakers to your system which use screw terminals instead of plug in connections, you may check if they are properly phased. If correction is required it is quite simple.

1. Place the FUNCTION switch in the MONO FM position.
2. Select an FM broadcast which has a single speaking or singing voice, or a solo instrument.
3. The voice or instrument should appear to be coming from an area directly between the two speakers. If the speakers are out of phase, the sound will appear to be coming from the two individual speakers.
4. If you determine that the speakers are out of phase, simply disconnect the leads from only one of the speakers and reverse them. The system will then be in phase.



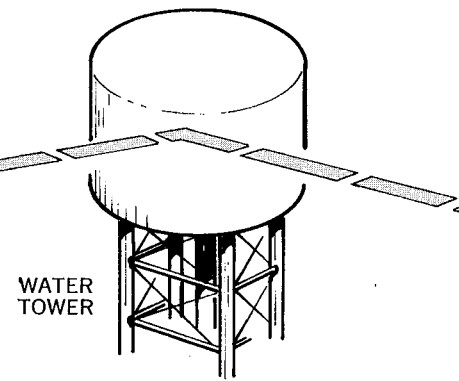
SPEAKER PLACEMENT

In order to achieve the best stereo performance, proper speaker positioning is important. The room diagrams will give you some idea of where the speakers should be placed with relation to the main seating area. The speakers should be off the floor 3 or 4 feet if possible and approximately 9 feet

apart. Since all rooms are different in size or shape a little experimenting with placement will be worthwhile. You will notice that rooms 2 and 3 have alternate suggested positions. As a general guide you should be seated opposite the speakers for maximum spaciousness and concert hall effect. There should never be the impression of two separated sound sources,

neither should the speakers be so close to each other that you never experience the depth and separation of stereo. If you should require further help in solving a specific unusual room problem please write and include a simple drawing of your room layout and it's dimensions and we will advise you of the best location for your speakers.

Antenna (FM and AM)



CONNECTING THE FM ANTENNA

Due to the exceptionally high sensitivity of your system the 48" wire supplied is sufficient for all but the most difficult locations. The balanced antenna input is designed to accept a 300 Ω antenna, indoor or outdoor type. When using the antenna supplied connect one end of the 48" wire to either of the FM antenna terminals. Horizontal placement of the antenna will yield optimum reception. The antenna may be tacked to the back of the molding behind the equipment or to the shelf you use.

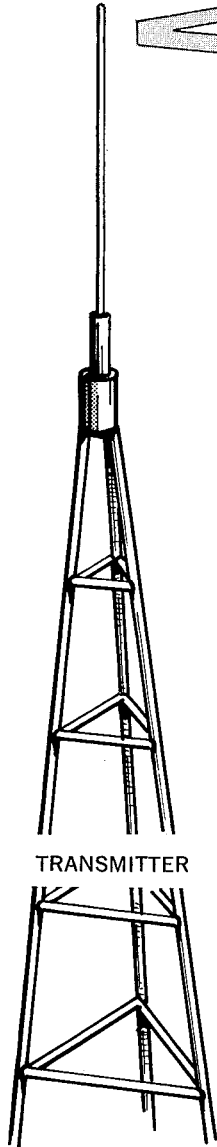
As FM signals are in the same broadcast frequency range as TV signals, they are affected by the same external conditions. Just as TV reception is improved, you can improve your FM reception with an external antenna.

When using an external antenna connect both leads of the antenna wire to the two FM antenna terminal posts on the rear of your Music System.

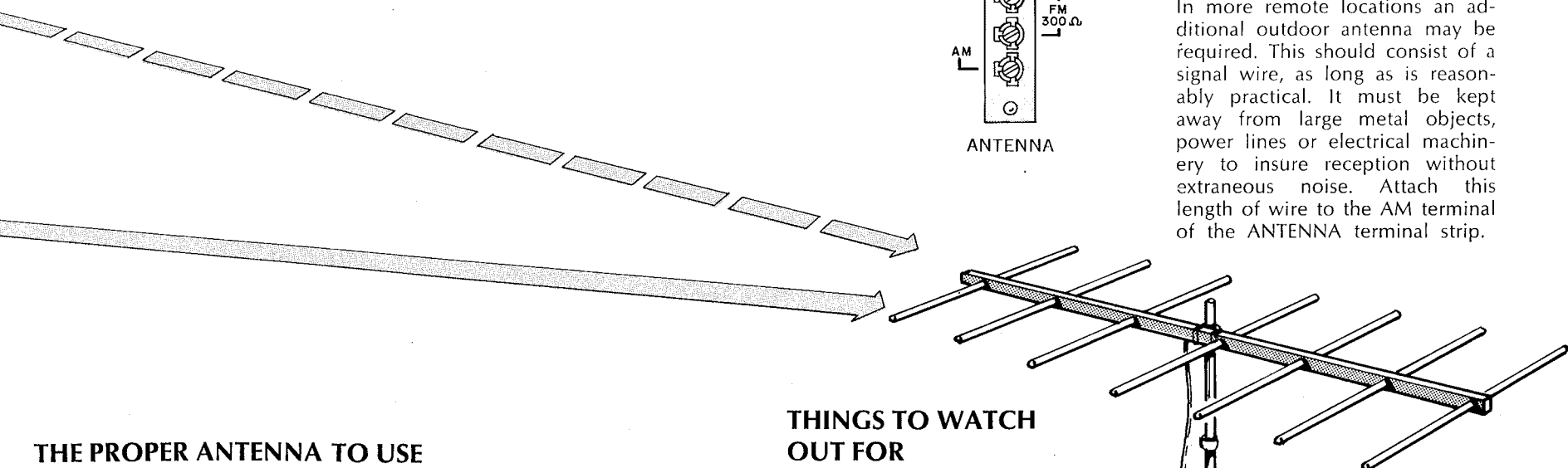
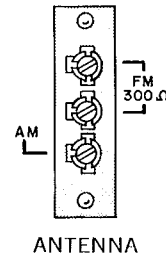
If installed properly, an outside antenna will reject unwanted signals, local noise, multipath interference, and will provide greater signal strength than any elementary type. Increased signal strength usually results in the reception of additional stations with amazing clarity.

A GOOD FM ANTENNA INSTALLATION CALLS FOR:

1. The proper antenna for any given location. The further you are located from the FM transmitter, the more gain the antenna must offer.
2. The antenna should have uniform signal level across the entire frequency range it covers.
3. Antenna placement is extremely important for maximum signal reception.
4. The installation must be rigid without damage to the roof, chimney, wall or other property.
5. Careful routing of the lead-in line to avoid pick up of local interference. A poorly routed lead-in line (which touches metal portions of the house, etc.) will reduce signal strength by a significant margin.



The AM loopstick antenna built internally within your FESTIVAL 3 comprises all the antenna usually required for normal signal areas. In more remote locations an additional outdoor antenna may be required. This should consist of a signal wire, as long as is reasonably practical. It must be kept away from large metal objects, power lines or electrical machinery to insure reception without extraneous noise. Attach this length of wire to the AM terminal of the ANTENNA terminal strip.



THE PROPER ANTENNA TO USE

If you live in a metropolitan area, or if you wish to receive signals from many directions, an ordinary crossed dipole, conical or three element in-line antenna could serve adequately. The three or four element in-line (uni-directional) type is the most satisfactory of the group, but due to its high directivity, it becomes necessary to include an antenna rotator to change the direction of the antenna for best reception.

For near-fringe and fringe reception, a six-to-eight-element log-periodic or Yagi is recommended. Both types are excellent and offer superior front-to-back ratio (ratio

of forward pickup to that at the rear), greater gain and rejection of noise. Both types are highly directional and require a rotator. Far fringe reception requires an antenna with eight or ten elements. This type antenna is usually quite heavy and requires extra support and bracing, when installed.

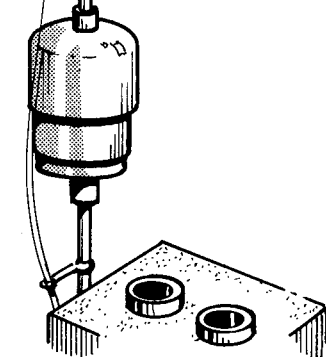
Remember, FM stereo reception requires greater gain than standard monophonic FM. It is, therefore, advisable to always purchase the antenna which can "pull in" a station with the greatest gain and lowest possible noise.

THINGS TO WATCH OUT FOR

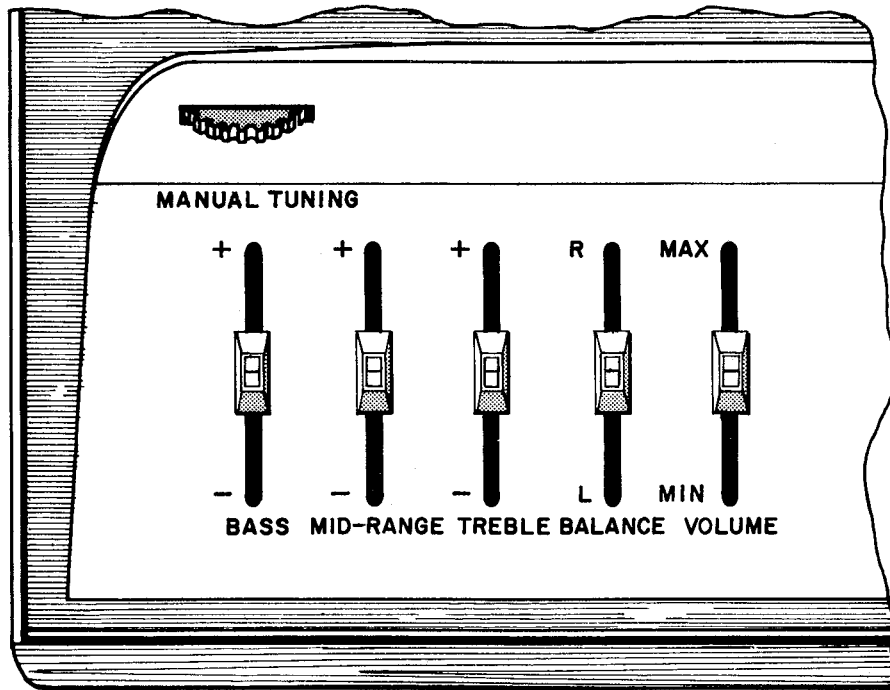
Are there high-rise buildings in your area? Water towers? Gas tanks? Mountains? They can all cause serious reception problems by reflecting FM signals which, when received, will result in audible distortion. This form of distortion is known as multipath interference (more than one signal reaching your receiver a split second apart), which is quite similar to "ghosts" on your TV set.

Multipath interference can be reduced or eliminated by purchasing a highly directional antenna with a rotator. Proper orientation of the antenna may tune out multipath completely, or alternate it below audibility.

HOUSE ANTENNA



Operation



CONTROL DESCRIPTION

Every control on your FESTIVAL 3 Music System has been designed to perform a specific useful function. In designing five of these controls, volume, balance, and three audio equalizers, we have departed from the conventional rotary type controls and have now provided a new professional type of slide control for ease of operation. In order to utilize the capability of these controls we suggest you read the following descriptions so you may have a better understanding of their use.

TONE CONTROLS

Your FESTIVAL 3 uses three individual tone controls as compared to two on conventional hi-fidelity equipment. In addition to the normal bass and treble controls we have incorporated a mid-range control which offers wide latitude of adjustment over the entire mid-range of frequencies. You may now add greater depth and dimension to the low, mid-range or high frequencies or mask excessive harshness in a recording that is excessively bright.

The normal operating position of the three tone controls would be in the center or "flat" position. The controls provide a range of adjustment of ± 12 dB at 50 Hz, 1K Hz and 10K Hz.

BALANCE CONTROL

The nature of stereo reproduction is such that it requires two iden-

tical channels to attain the highest degree of faithfulness and spatial distribution. Any variation in the efficiency of one channel as compared to the other will disturb this relationship. Since there may be slight differences between the two speakers, the tape heads, etc., your Music System includes a control to balance one channel against the other. Sufficient range is covered by this control to permit rebalancing of the overall system even in cases where major unbalance exists. This control may be set anywhere within its range to attain system balance. It does not necessarily have to be set in the exact center position.

When the BALANCE control is properly set, the apparent sound source will lie in a broad area between the two speakers. When the BALANCE control is raised the sound will move to the right and when the control is lowered, the sound will move to the left.

VOLUME CONTROL

The VOLUME control adjusts the signal level of any program material connected to your music system. It is a two section control which simultaneously adjusts both channels, and its close tracking specifications insure that the relative volume level of each channel will be identical.

As you raise the control the volume level will increase, as you lower the control the volume level will decrease.

TAPE MONITOR SWITCH

As explained previously the TAPE IN Receptacles may be used to monitor tapes from an external tape recorder.

If your tape recorder is of the professional type and has a third head for "monitoring", it is possible to compare the recording with the original while it is being made. Simply push the TAPE MONITOR switch in the IN position to listen to the recording after it has been made and back to the OUT position to listen to the program material you are recording.

LOUDNESS/CONTOUR SWITCH

One of the limitations of human hearing is its tendency to lose sensitivity to the very low pitched sounds as the program sound level is reduced. It is this characteristic (known as the Fletcher-Munson effect) which causes one to play music programs at high listening levels in order to experience the full rich tone available from fine modern recordings.

The CONTOUR switch compensates for this effect; thereby eliminating high listening levels as a requisite for full enjoyment of reproduced music. For warm, full-bodied reproduction at low listening levels, push the CONTOUR switch IN. At high listening levels, the contour switch has no effect.

SPEAKER SYSTEM 1/ SYSTEM 2 SWITCHES

Two independent speaker selector switches have been provided with your FESTIVAL 3 Music System to permit the selection of stereo speakers in one or two rooms independently or simultaneously.

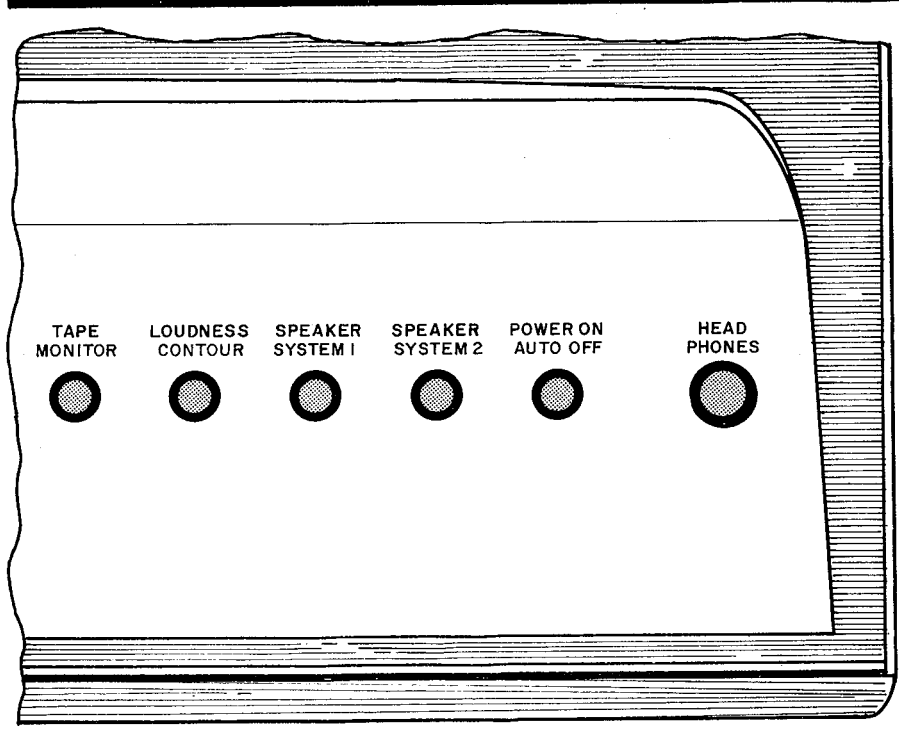
When connecting 2 speakers to the System 1 speaker terminals, the speaker system 1 selector switch must be in the "ON" position.

When connecting 4 speakers to the System 1 & 2 speaker terminals, both speaker system 1 & 2 selector switches must be in the "ON" position for all 4 speakers to operate.

Should you desire to listen to stereo-headphones alone, either or both speaker systems, may be turned off at your discretion.

POWER ON/AUTO OFF SWITCH

Your FESTIVAL 3 is equipped with a unique feature which shuts off the system after the last record has played. To accomplish this, place the power switch, located on the front panel of your music system, to the "AUTO-OFF" position. The Automatic shutoff feature is operative in the Phono position and in either the Manual or Automatic Mode. To defeat this feature or to operate your music system using any other function, push the power switch in the Power "ON" position.



STEREO HEADPHONE RECEPTACLE

The stereo headphone receptacle located on the front panel will accept any headphone with any

impedance rating. The headphone receptacle is "ON" at all times. If you wish to listen to the headphones alone, simply place both speaker selector switches to the "OFF" position.

FUNCTION SWITCH

The FUNCTION switch has six positions and is used to select the desired type of program source.

1. AUX: Selects any high level program source, connected to the AUX input receptacles on the rear of your Music System.
2. PHONO: Selects your record player for stereophonic operation and includes RIAA equalization.
3. TAPE: Selects the tape Cassette recorder for playback.
4. AUTO FM: This is the normal listening position for all monophonic or stereophonic FM broadcasts. In this position the stereo indicator and automatic switching circuit built into your FESTIVAL 3 Music System are operative. For further details see the paragraph on "SELECTING MONOPHONIC OR STEREO FM BROADCASTS".
5. MONO FM: Selects the FM section of your system. In this position you can listen to stereo phonic broadcasts monophonically while monophonic broadcasts will appear unchanged.
6. AM: Selects the AM section of your Music System for AM reception.

RIAA EQUALIZATION

In order to assure good reproduction of the wide range of frequencies in music and to make necessary adjustments for the limitations of the recording technique, record manufacturers have found it necessary to modify the actual frequency response of the music while it is being recorded. Thus, to avoid overcutting and consequent distortion, a measured and deliberate reduction is effected in low frequency response by selecting a "turnover frequency" and by recording attenuated response below that point. To assure optimum signal to noise ratio at the high frequency and when the record is played at home, the highs are deliberately exaggerated during the recording process. A measured and deliberate boost is effected above a certain frequency. This combination of deliberate exaggeration at the low and high ends of the frequency range can be expressed in a "recording curve". When the record is played a mirror image of that curve should be available so that the ideal "flat" response may be achieved. This recording curve has been incorporated in the PHONO position of the function switch.

FUNCTION INDICATOR LIGHTS

Your FESTIVAL 3 Music System is equipped with a bank of indicator lights which visually indicate the position of the function switch as you select your program source.

STEREO INDICATOR

A stereo indicator is located adjacent to the function lights and operates in conjunction with the AUTO FM position of the function switch.

As you tune from station to station with the manual tuning control, the stereo indicator will show if you are tuned to a stereo program. If the indicator is off, the program you are listening to is being broadcast monophonically. As you tune from station to station with the automatic tuning control, the stereo indicator will *not* indicate as you pass over a stereo station, but only if the station you STOP at is being broadcast stereophonically.

MANUAL TUNING

Your FESTIVAL 3 also incorporates a manual tuning control for the selection of any desired stations in the AM or FM broadcast band. When using the manual tuning system, the muting circuit is inoperative and all audible interstation noise will be heard.

AUTOMATIC STATION SELECTOR

Your FESTIVAL 3 Music System incorporates an automatic motorized tuning system for ease of operation in the selection of AM or FM stations. Located on the center of the front panel is an automatic station selector bar. When you push the right side of the tuning bar, the AM and FM dial scale will rotate to the right. When you push the left side of the tuning bar the AM and FM dial scale will rotate to the left. When you release the tuning bar the tuner will search for the nearest station in the direction it was moving and then stop and "lock in" on that station.

At this time the "ON" station indicator will be illuminated and if the particular station happens to be transmitting in stereo, the STEREO beacon will also be illuminated.

If, as you search for a station you should reach the end of the tuning range, your automatic tuning system will automatically reverse and continue moving in the opposite direction. Again, when you release the tuning bar, the tuner will search out the nearest station in the direction it was moving. During the entire operation of your automatic tuning system your FESTIVAL 3 incorporates a "muting" circuit which eliminates all audible signals while tuning from station to station.



DIAL SCALE

Your FESTIVAL 3 utilizes a rotary dial scale to provide sharp illumination of AM and FM stations.

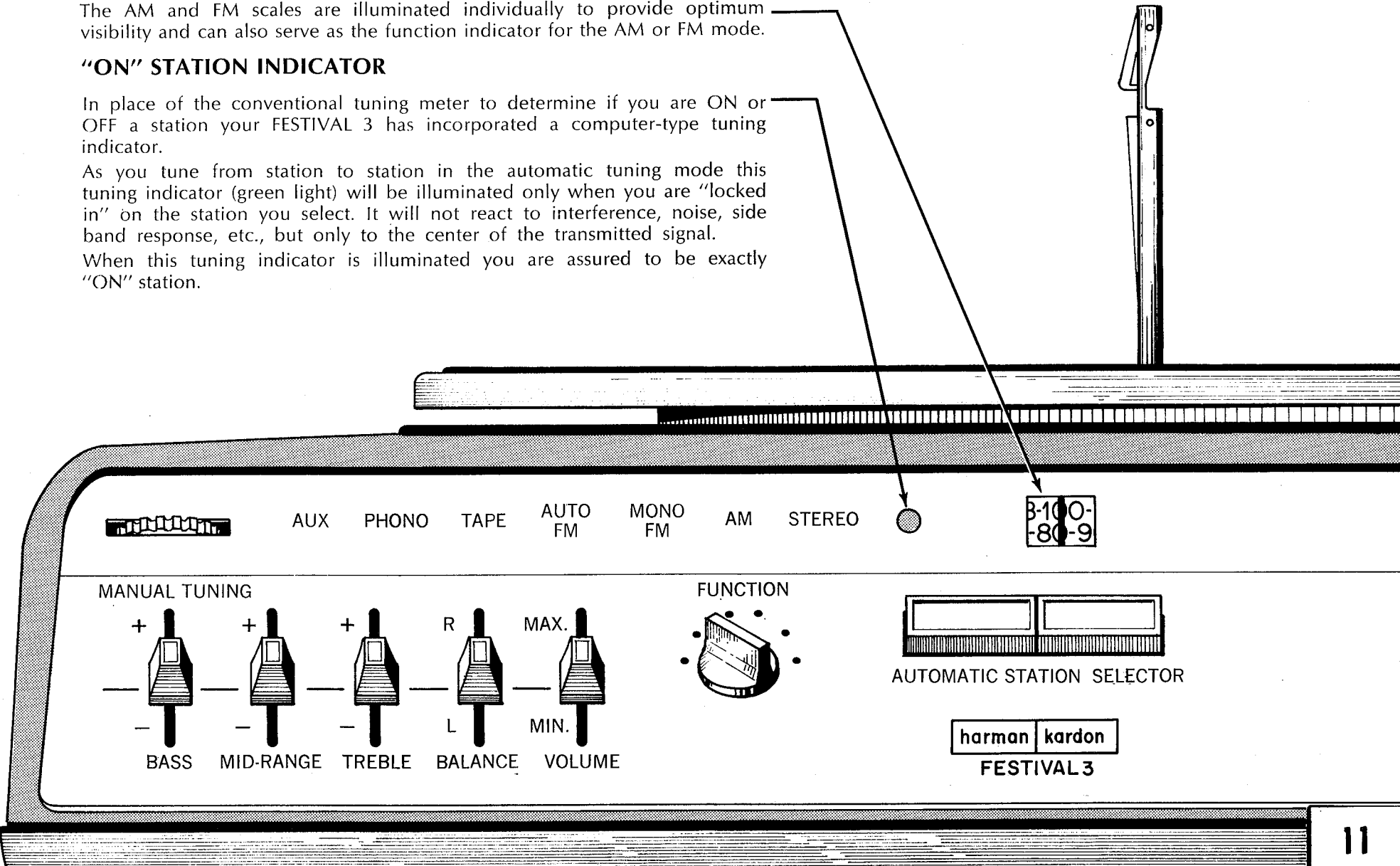
The AM and FM scales are illuminated individually to provide optimum visibility and can also serve as the function indicator for the AM or FM mode.

"ON" STATION INDICATOR

In place of the conventional tuning meter to determine if you are ON or OFF a station your FESTIVAL 3 has incorporated a computer-type tuning indicator.

As you tune from station to station in the automatic tuning mode this tuning indicator (green light) will be illuminated only when you are "locked in" on the station you select. It will not react to interference, noise, side band response, etc., but only to the center of the transmitted signal.

When this tuning indicator is illuminated you are assured to be exactly "ON" station.



Selecting monophonic or FM stereo broadcasts

SELECTING MONOPHONIC OR FM STEREO BROADCASTS

Under normal use for all FM broadcasts, the function Selector Switch should be placed in the AUTO FM position.

Your system is equipped with a stereo sensing circuit which can automatically determine if your unit is receiving monophonic or stereophonic broadcasts, and then automatically adjust the mode of operation.

If the station is transmitting stereo, your system will automatically switch in the multiplex section and you will hear the broadcast in full stereo. Should the station conclude broadcasting in stereo, your system will automatically switch back to monophonic reception.

Should you receive a weak signal whose quality has been degraded by noise or poor signal conditions, and you wish to listen to this stereo broadcast, monophonically, place the function selector switch in the MONO FM position.

ADDITIONAL STATIONS (AM and FM)

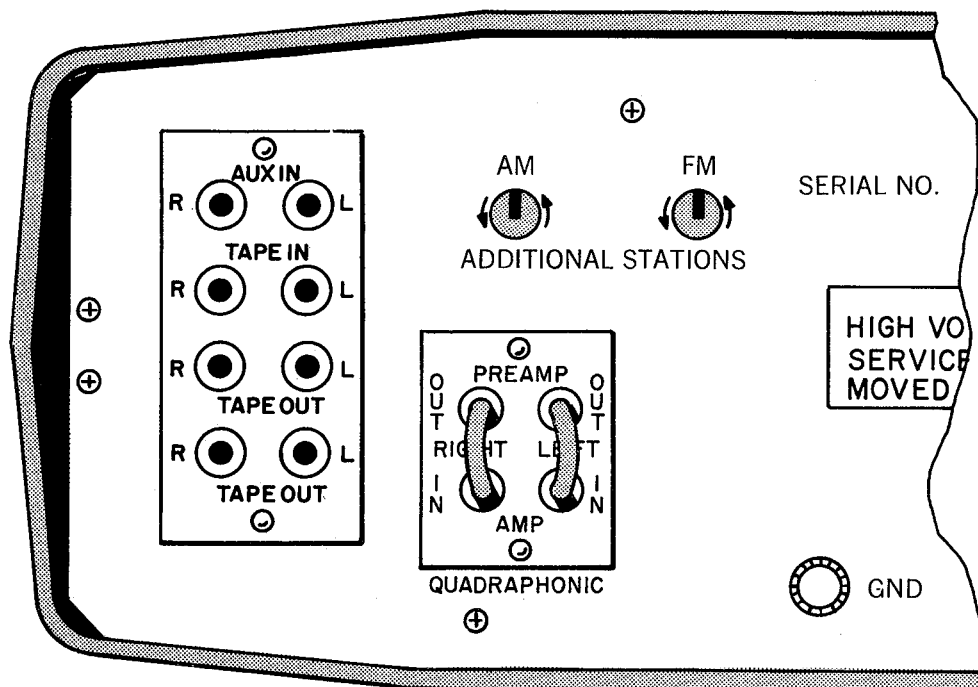
Located on the rear panel of your FESTIVAL 3 Music System are two level set controls marked AM and FM which have been preset at the factory. The purpose of these controls is to adjust the "acceptability level" of your automatic tuning system. If the signal strength of the incoming program is above this pre-set level it will be accepted by your automatic tuning system. If the signal strength of the incoming program is below this preset level it will be rejected by your automatic tuning system and will be passed over as automatic tuner goes thru the search process.

If you wish to increase the number of stations accepted by your system, either AM or FM, even though it might be with decreased performance, simply rotate the appropriate level control in a counter-clockwise direction.

QUADRAPHONIC RECEPTACLES

These receptacles are intended for use with any accessory equipment designed to be installed between a preamplifier and power amplifier. This includes such equipment as electronic audio equalizers, reverberation units, and a new quadrasonic processor offered by Harman-Kardon. In order to make use of this facility, simply disconnect the two patch cords connected to these receptacles and follow the instructions supplied with the accessory equipment.

NOTE: When no accessory equipment is being used, the two patch cords MUST be installed in order to use your Music System.



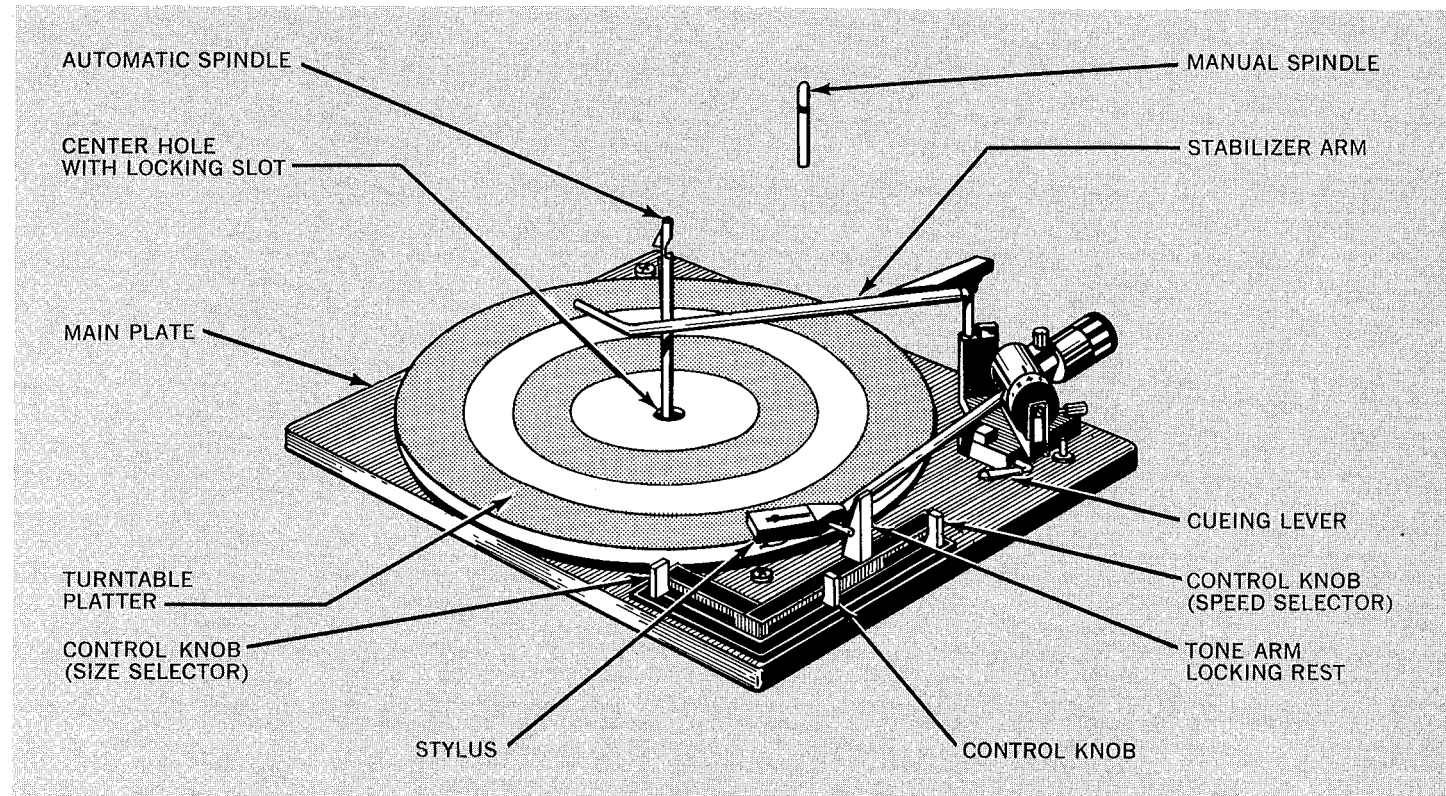
AUTOMATIC PLAY

1. Insert the automatic spindle fully into the center hole by rotating the spindle until the side projection is engaged in the locking slot.
2. Lift the stabilizer arm and swing it to the right.
3. Stack up to six records on the spindle, holding the records with the left hand while positioning the stabilizer arm over the records.
4. Set the control knobs for the correct record size and speed.
5. Make sure the cueing lever is in the down position.
6. Slide the control knob from the OFF position to the REJ position, holding it there momentarily until the turntable starts to revolve.
7. After the last record has finished playing, the tone arm will return to its locking rest and the changer will shut off automatically.

MANUAL PLAY

1. Lift the stabilizer arm and swing it to the right.
2. Insert the short manual spindle.
3. Place a single record on the turntable.
4. Return the stabilizer arm to the center of the turntable.
5. Slide the control knob from the OFF position to the Man/ON position.
6. Using the cueing lever, raise the tone arm and position the stylus over the desired point on the record.
7. Lower the cueing lever gently until the stylus enters the assigned groove.

Record changer



8. When the record has finished playing, the tone arm will return to its locking rest and the changer will shut off automatically.
9. If you wish to have the record repeat continuously, omit step 4.

Service and maintenance

MAINTENANCE

If it is necessary to clean the dial glass, the metal insert on the escutcheon or the control knobs it is recommended that you use a very mild detergent and water solution applied with a soft cloth or cotton swab. **NEVER** use a strong abrasive cleaner or scouring powder as this could damage the finish of these parts.

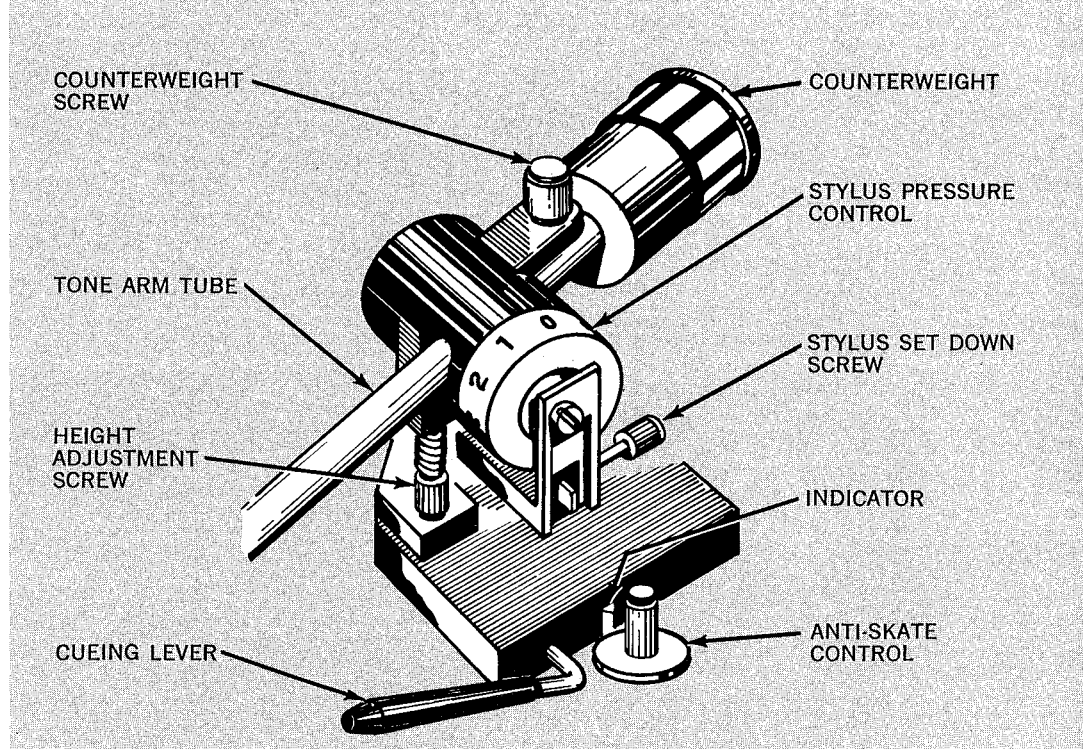
The five variable slide controls have been manufactured with a special silicone lubricant for smooth and easy operation. These controls should **NEVER** be cleaned with any commercial cleaner or solvent.

STYLUS REPLACEMENT

1. Raise the tone arm as far as it will go without resistance.
2. Grasp the stylus assembly as shown in the illustration and pull forward, away from the 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, we suggest you have it inspected once a year by a qualified service technician.



RECORD CHANGER ADJUSTMENTS

TONE ARM BALANCE

1. Rotate the stylus pressure control dial to 0.
2. Release the counterweight screw and slide the counterweight to the approximate point where the tone arm floats in a horizontal position. Re-tighten the counterweight screw.
3. The fine adjustment for tone arm balance will be achieved by rotating the counterweight until the tone arm is in the exact horizontal position.

STYLUS PRESSURE

When the tone arm is properly balanced, set the stylus pressure control dial to 3 grams.

ANTI-SKATE

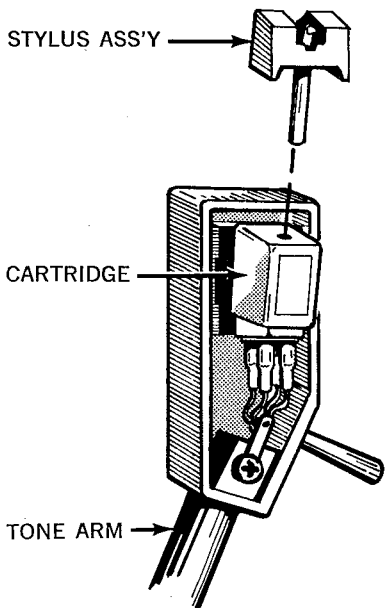
The anti-skate control dial should always be set for the same value as the stylus pressure. Set the dial so the indicator points to the area between the 2 and 4 markings.

TONE ARM HEIGHT

The tone arm should be adjusted so that the tone arm tube clears the top of the locking rest by $\frac{1}{8}$ " before setting into the rest. Turn the height adjustment screw clockwise to lower the tone arm and counterclockwise to raise it.

STYLUS SETDOWN

With a single 12" record on the turntable, turn the stylus setdown screw until the stylus enters the record grooves $\frac{1}{8}$ " from the edge of the record.

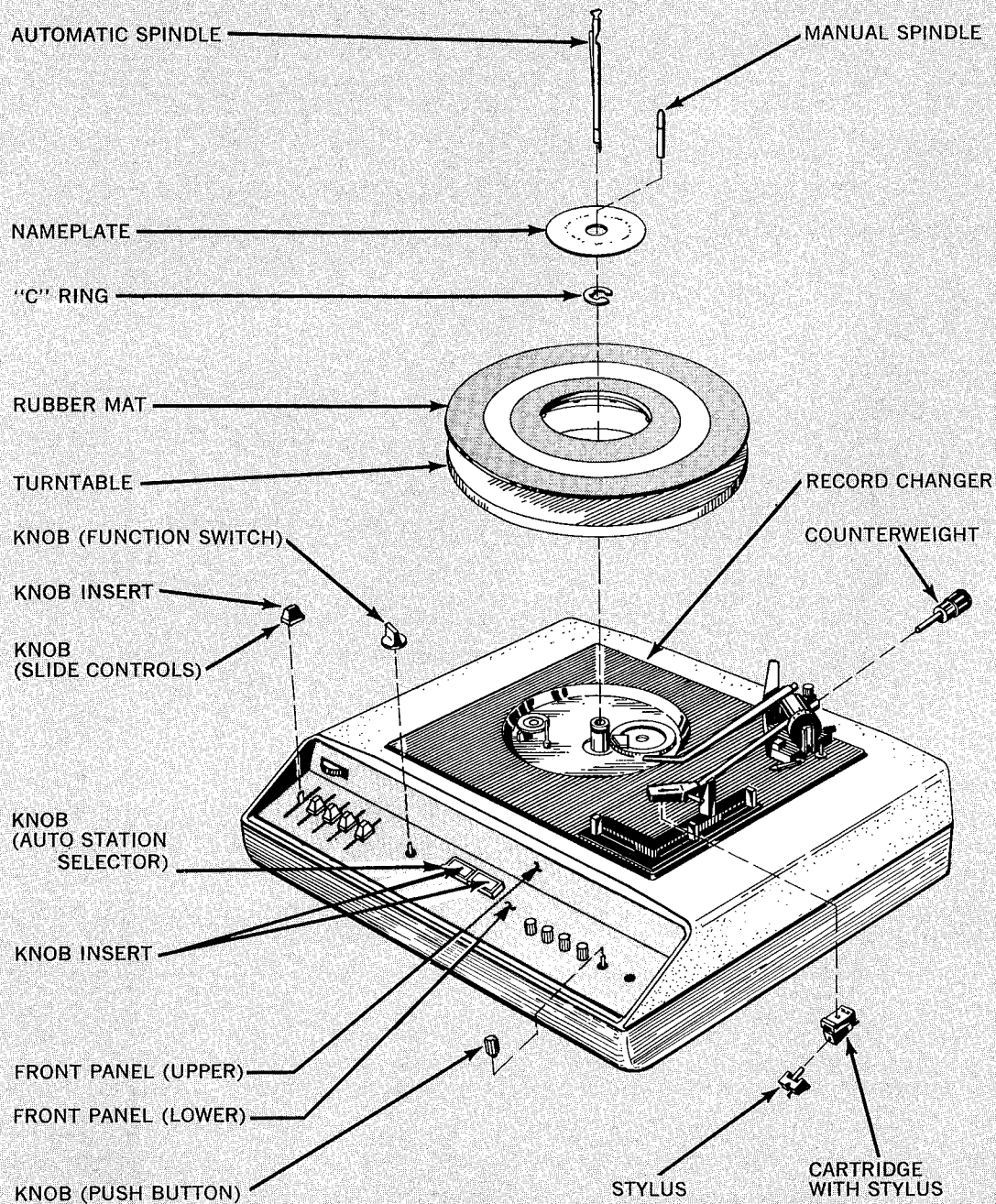


Replacement parts list

DESCRIPTION

PART NO.

Automatic Spindle	A107043
Manual Spindle	A106174
50 Hz Pulley	A106719
Cartridge w/stylus	01225346
Stylus	01225347
Record changer w/cartridge & stylus ...	01026471
Knob, (Automatic Station Selector)	63226549
Knob, Insert	63026684
Knob, Pushbutton	63226688
Knob, Slide Control	63226540
Knob, Insert Slide Control	63026690
Knob, Function Switch	63226681
Front Panel, Upper	61626579
Front Panel, Lower	63026650
Owners Manual	90726980
Technical Manual	90726981



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 two (2) years from date of purchase either replace or repair and install any defective parts of the stereo control center free of charge *with the exception of the automatic record changer and its associated parts.*

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

c) For a period of one (1) year from date of purchase either replace or repair and install any defective parts of the speakers free of charge.

d) After the first year, until five (5) years from date of purchase either replace or repair any defective parts of the speakers charging only for labor.

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 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;
- d) Repair or replacement of the speaker cabinet or grill cloth.
- e) 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.