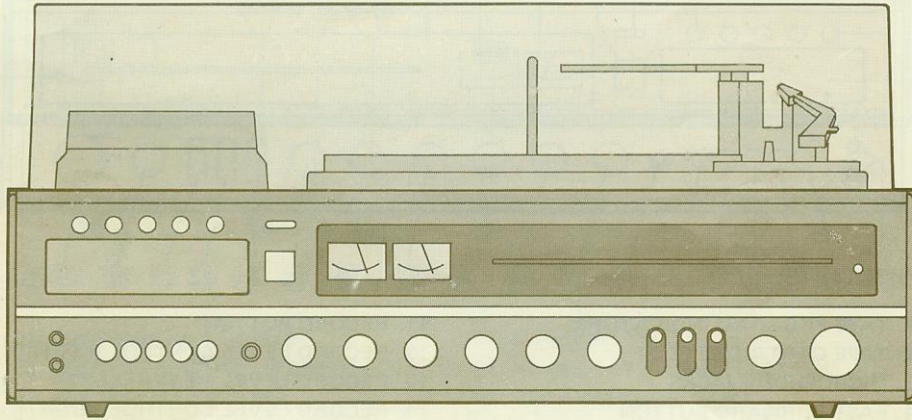


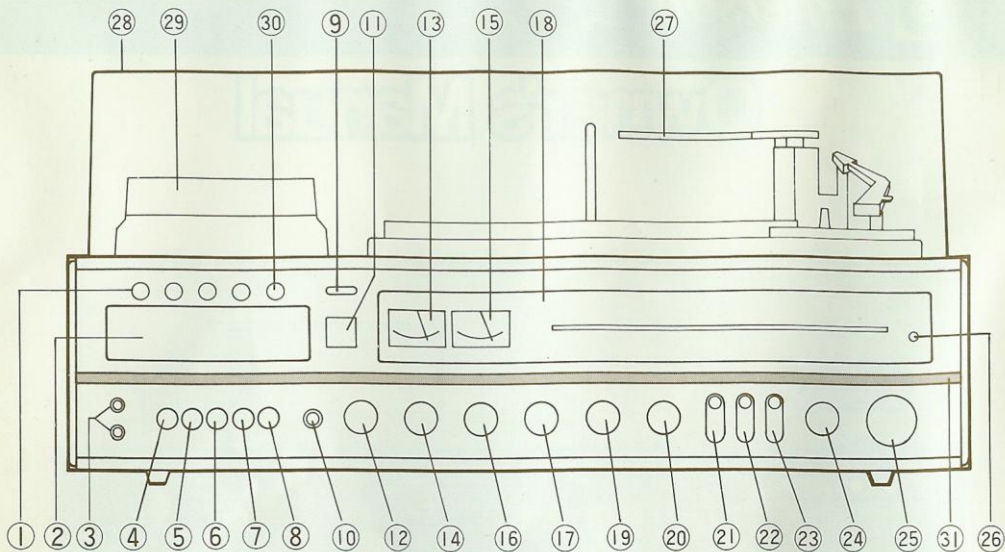
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# Owner's Manual



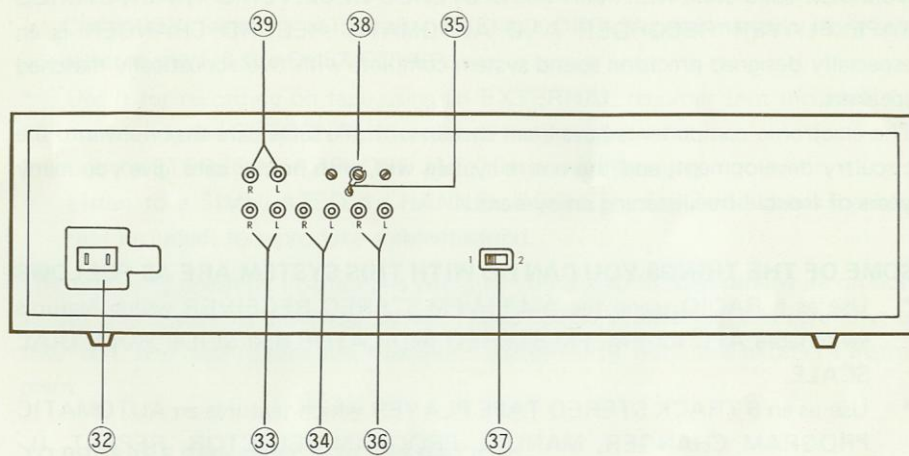
## AM/FM Multiplex Stereo 8 Track Player/Recorder with Stereo Phonograph

**M2370**



1. TAPE PROGRAM INDICATORS
2. TAPE CARTRIDGE SLOT
3. MICROPHONE JACKS
4. FAST FORWARD BUTTON
5. PAUSE BUTTON
6. ALL/ONE BUTTON
7. REPEAT BUTTON
8. PROGRAM BUTTON
9. RECORD LIGHT
10. STEREO HEADPHONE JACK

11. RECORD BUTTON
12. RECORD LEVEL CONTROL (LEFT)
13. RECORD LEVEL METER (LEFT)
14. RECORD LEVEL CONTROL (RIGHT)
15. RECORD LEVEL METER (RIGHT)
16. BASS CONTROL
17. TREBLE CONTROL
18. DIAL SCALE
19. BALANCE CONTROL
20. VOLUME CONTROL



- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 21. POWER ON/OFF SWITCH         | 31. GLO-CONTROLS                  |
| 22. SPEAKER MATRIX 2/4 SWITCH   | 32. AC OUTLET (UNSWITCHED)        |
| 23. AFC ON/OFF SWITCH           | 33. REAR SPEAKER JACKS            |
| 24. FUNCTION SELECTOR SWITCH    | 34. AUX-IN JACKS                  |
| 25. TUNING KNOB                 | 35. BUILT IN ANTENNA LEAD         |
| 26. FM STEREO INDICATOR         | 36. TAPE OUT JACKS                |
| 27. RECORD CHANGER              | 37. WHISTLE CUT                   |
| 28. DUST COVER                  | 38. EXTERNAL FM ANTENNA TERMINALS |
| 29. TAPE CARTRIDGE STORAGE RACK | 39. FRONT SPEAKER JACKS           |
| 30. STOP LIGHT                  |                                   |

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Your new solid state with AM/FM/FM STEREO RECEIVER 8 TRACK STEREO TAPE PLAYER RECORDER AND AUTOMATIC RECORD CHANGER is an especially designed precision sound system complete with two acoustically matched speakers.

The electronic components have been chosen with the same care that went into the circuitry development, and the entire system will, with proper care, give you many years of trouble-free listening enjoyment.

**SOME OF THE THINGS YOU CAN DO WITH THIS SYSTEM ARE AS FOLLOWS:**

- \* Use as a RADIO using the AM/FM/FM STEREO RECEIVER which features switchable AFC for FM, FM STEREO INDICATOR and SLIDE RULE DIAL SCALE.
- \* Use as an 8 TRACK STEREO TAPE PLAYER which features an AUTOMATIC PROGRAM CHANGER, MANUAL PROGRAM SELECTOR, REPEAT, ILLUMINATED PROGRAM INDICATORS, and a TAPE CARTRIDGE STORAGE RACK.
- \* Use as an 8 TRACK TAPE RECORDER using the built-in recorder featuring FAST FORWARD, PAUSE, AUTOMATIC STOP AND LIGHT, RECORD LIGHT AND LEVEL METERS AND CONTROLS.
- \* Use as an AMPLIFIER for your auxiliary playback unit, such as a cassette player (not included), by connecting the auxiliary unit to the jacks provided.

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- \* Use as a STEREO PHONOGRAPH using the built-in AUTOMATIC RECORD CHANGER featuring automatic unit SHUT OFF, 3 speed manual record size selector and full size DUST COVER.
- \* Use it for recording on tape using an EXTERNAL recorder (not included) by connecting the EXTERNAL recorder to the jacks provided
- \* Use the STEREO HEADPHONE JACK for private listening.
- \* Listen to a SIMULATED 4 CHANNEL EFFECT using 2 additional speakers (not included) to reproduce ambient sound.

The following operating instructions will give you a step by step procedure on how to use this system as described above. Please follow these directions carefully, as they will help you obtain the maximum performance from this excellent instrument.

#### **TO PREPARE THE UNIT FOR OPERATION**

- \* Unpack carefully and place the main unit on a level surface, away from sources of excessive heat, such as radiators.  
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
- \* Plug each of the two speaker cabinet cords into the FRONT SPEAKER (39) JACKS located on the rear panel of the main unit.  
Note that these JACKS are marked "R" and "L" for right and left, and arrange these speaker cabinets accordingly.  
CAUTION: DO NOT TURN THE SYSTEM ON UNLESS THE SPEAKERS ARE PROPERLY CONNECTED.

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- \* Release the RECORD CHANGER TRANSIT SCREWS by turning them clockwise until the heads are flush with the RECORD CHANGER base plate. Remove all packing material. Refer to the CHANGER INSTRUCTION CARD located on the turntable for more detailed changer information.
- \* Unravel the AC line cord completely and insert the plug into a conveniently located outlet having 120V 60Hz AC only. For minimum hum, try reversing the plug in the outlet.

#### **TO USE AS A RADIO**

1. Turn the unit ON by moving the POWER ON/OFF (21) toggle switch to the ON position.
2. Rotate the FUNCTION SELECTOR (24) switch to either AM, FM, or FM STEREO position.
3. Rotate the VOLUME CONTROL (20) to its midrange position.
4. Check the position of the AFC ON/OFF (23) toggle switch. If it is not in the OFF position, move it to OFF.
5. Select the desired station on the DIAL SCALE (18) using the TUNING (25) knob.
6. After selecting an FM or FM STEREO station, move the AFC ON/OFF (21) toggle switch to ON. This will lock the station in to give you drift free reception.

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When two stations are close together on the dial, the stronger station will be heard when the AFC ON/OFF (23) switch is moved to ON. If this is the case and the desired station is the weaker of the two, leave the AFC ON/OFF (23) switch in the OFF position.

7. Adjust the VOLUME (20) control to the desired level. Then adjust the BASS (16) and TREBLE (17) controls for the most pleasing response. You will probably find that the desired position of these controls will change as you vary program sources such as AM and FM.
8. Adjust the BALANCE (19) control for the best stereo effect, depending on where the listeners are seated.
9. To turn the OFF, move the POWER ON/OFF (21) toggle switch to the OFF position.

#### **FM STEREO INDICATOR**

- \* The receiver is equipped with an automatic FM STEREO INDICATOR (26). When the FUNCTION SELECTOR (24) switch is in the FM or FM STEREO position, the light will glow if the station being received is broadcasting in FM STEREO.
- \* For best performance, the FUNCTION SELECTOR (24) switch should be set to the FM position unless the FM STEREO INDICATOR indicates that the station is broadcasting FM STEREO.

#### **TO USE AS 8 TRACK STEREO TAPE PLAYER**

1. Turn the unit ON by moving the POWER ON/OFF (21) toggle switch to ON.
2. Rotate the FUNCTION SELECTOR (24) switch to the TAPE position.
3. Set the FAST FORWARD (4), PAUSE (5), and REPEAT (7) buttons to their OFF (extended) positions.
4. Set the ALL/ONE (6) button to its ONE (depressed) position.
5. Insert your 8 TRACK TAPE CARTRIDGE (with the label side up) into the TAPE CARTRIDGE SLOT (2) as far as it will go. This will activate the tape motor and the tape will start playing immediately.
6. The PROGRAM INDICATORS (1) indicate which program of the four programs on a tape is playing. The player will automatically advance to the next program once it has reached the end of a program and continue to do this until the tape cartridge is removed.
7. Adjust the VOLUME (20) control to the desired level. Then adjust the BASS (16) and TREBLE (17) controls for the most pleasing response. You will probably find the desired position of these controls will change as you vary the types of tapes you are using.
8. Adjust the BALANCE (19) control for the best stereo effect, depending on where the listeners are seated.
9. To turn the unit Off, remove the tape cartridge and move the POWER ON/OFF (21) toggle switch to OFF.

### **PROGRAM (8) BUTTON**

- \* To manually change programs press the PROGRAM SELECTOR (8) button and the player will advance to the next program immediately. Repeated operations of this PROGRAM SELECTOR (8) button will keep changing the programs until you reach the one you desire.
- \* Note: If the ALL/ONE (6) button is in the ALL (extended) position the STOP (30) light will come on when you change from Program 4 to 1. To release this you must remove the cartridge and reinsert it.

### **REPEAT FEATURE**

- \* You can LOCK the unit into a single program by pushing the REPEAT (7) button so it locks into its depressed position. You can still change programs manually using the PROGRAM (8) button.

### **AUTOMATIC STOP FEATURE**

- \* You can set the unit to automatically stop after playing program 4 by setting the ALL/ONE (6) button at its ALL (extended) position. To release the AUTOMATIC STOP you must remove the cartridge from the slot and reinsert it.

### **PAUSE FEATURE**

- \* If you want to TEMPORARILY STOP playing, PUSH the PAUSE (5) button and leave in the depressed position.  
To RELEASE PAUSE, push the PAUSE (5) button again and release it so that it returns to its extended position.

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### **FAST FORWARD FEATURE**

- \* FAST FORWARD (4) can be used to advance the tape quickly to aid in locating some particular part on the tape.  
Fast Forward is activated when the FAST FORWARD (4) button is in its DEPRESSED position. It is disengaged when the FAST FORWARD (4) button is in its EXTENDED position.
- \* The FAST FORWARD feature is also controlled by the ALL/ONE button and the tape will AUTOMATICALLY STOP at the end of Program 4 when the ALL/ONE (6) button is in the ALL (extended) position.

### **TO USE AS AN 8 TRACK TAPE RECORDER**

#### **GENERAL INSTRUCTIONS FOR RECORDING**

Before you start to use the Record feature of this unit, you should familiarize yourself with the the functions of the various buttons, controls, meters and lights associated with the Record mechanism.

#### **PAUSE (5) Button**

- \* This feature makes it possible to temporarily stop the playing or recording process. It is also as a means of holding up the start of the recording process while you are getting ready to record.

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### ONE/ALL (6) Button

- \* This button controls the automatic stop feature built into this unit. It effects the stopping of the tape differently, depending on whether it is in the Play mode or Record mode.

ALL/ONE button setting	ALL	ONE
Play Mode	Will stop at the end of Program 4.	Will not stop.
Record Mode	Will stop at the end of Program 4	Will stop at the end of each program.

To release the Automatic Stop, the cartridge must be withdrawn from the slot. When replacing the cartridge, be sure to hold the RECORD button in if you wish to continue Recording.

### PROGRAM (8) Button

- \* This button allows you to manually change programs.

### RECORD (11) Button

- \* This button is used to place the unit into the RECORD MODE. This button must be depressed before the cartridge is inserted, and held in the depressed position until the cartridge is completely seated.

Note that the unit is always in the PLAY MODE unless it is placed in the RECORD MODE by the above procedure.

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### RECORD (9) LIGHT

- \* This light indicates that the unit is in the RECORD MODE. Unless the PAUSE (5) button is depressed or the STOP (30) light is lit, you are in the process of Recording.

Note that if you have the unit in the RECORD MODE and the FAST FORWARD (4) button depressed, this indicator will not light up.

### STOP (30) LIGHT

- \* When Recording, this light indicates that the Automatic Stop has been activated and you are not longer Recording.  
In either the PLAY or RECORD mode this Automatic Stop indicates the end of a program or the end of Program 4 based on the setting of the ALL/ONE (6) button. (See chart for ALL/ONE switch).

### RECORD LEVEL METERS (13 & 15) and CONTROLS (12 & 14)

- \* This unit includes RECORD LEVEL METERS (13) for left channel and (15) for right channel so that you can judge whether the RECORD LEVEL CONTROLS (12) for left channel and (14) for right channel are set properly. These controls are to be adjusted so that the pointers normally stay in the white area of the scale. Occasional swings of the pointer into the red area are acceptable.

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### **MICROPHONE (3) JACKS**

- \* Two microphones are provided for use in Recording voice or live programs. The jacks for these microphones include switches so that the setting of the FUNCTION (24) switch does not effect the Recording when both microphones are plugged in. Since the RADIO, PHONO, or AUXILIARY will continue to play, the VOLUME (20) control should be turned down, unless you want to include it in the background of your recording.
- \* Note that if the FUNCTION (24) switch is in the TAPE position, the unit will act as a PA system when the microphones are plugged in, the unit is in the RECORD MODE and the VOLUME (20) control turned up. In this condition the microphones should be as far from the speakers as possible to reduce feedback which causes howling.

### **WHISTLE CUT (36) Switch on Rear of Main Unit.**

- \* Under certain conditions, an audible high pitched sound (whistle) will be heard only when Recording directly from the AM RADIO. To eliminate this whistle, slide the WHISTLE CUT (37) switch located on the rear panel of the main unit to the other position.

### **TAPE TO BE USED FOR RECORDING**

A fresh blank tape is generally preferred for use when Recording. However, if you have a tape with recorded information you no longer want, this unit will erase information and record new information in its place.

### **FINDING THE BEGINNING OF A TAPE**

- \* Generally, you will want to start your Recording at the beginning of a program. If you are in doubt as to the status of your tape, use the following procedure for finding the beginning of the tape:
  1. SET the ALL/ONE (6) button in the ALL (extended) position.
  2. OPERATE the PROGRAM (8) button until No. 4 lights up.
  3. INSERT the tape cartridge into the TAPE CARTRIDGE SLOT (2).
  4. SET the FAST FORWARD (4) button in its DEPRESSED position.
  5. When the STOP light comes on, RESET the FAST FORWARD (4) button to its EXTENDED position.
  6. REMOVE the CARTRIDGE and it is now ready for Recording from the beginning of the tape.

### **RECORDING FROM THE BUILT-IN RADIO, PHONOGRAPH, OR AN AUXILIARY INPUT**

1. CHECK MICROPHONE (3) jacks to make sure that the microphones are NOT plugged in.
2. FOLLOW the instructions for PLAYING the UNIT in the mode that you wish to use in recording.
3. PUSH the PAUSE (5) button all the way in so that it remains in its DEPRESSED position.
4. SELECT the desired PROGRAM by pushing the PROGRAM (8) button repeatedly until the proper PROGRAM INDICATOR (1) lights up.

5. SET the AUTOMATIC STOP using the ALL/ONE (6) button. In its EXTENDED position the unit will automatically stop at the end of PROGRAM No 4 ONLY. In its DEPRESSED position the unit will automatically stop at the end of EACH PROGRAM.

6. PUSH in the RECORD (11) button and while holding this button in, INSERT the 8 TRACK TAPE CARTRIDGE into the SLOT (2). Release the RECORD (11) button after the cartridge has been completely seated.

If the above operation has been completed properly, the RECORD LIGHT (9) will remain lit after the RECORD (11) button has been released.

If the RECORD LIGHT (9) does not light up during the above process, check the FAST FORWARD (4) button to be sure it is in its extended position.

7. ADJUST THE LEFT AND RIGHT RECORD LEVEL CONTROLS (12 and 14) while playing a sample of the program you wish to record so that the pointers in the LEFT and RIGHT RECORD LEVEL METERS (13 and 15) fluctuate within the white areas of the scales with only occasional excursions into the red area.

8. START RECORDING by PUSHING the PAUSE (5) button all the way in and releasing it so that it returns to its EXTENDED position.

9. To STOP the recording MANUALLY, REMOVE the CARTRIDGE from the SLOT (2).

10. Be sure to remove the cartridge as soon as possible after it has stopped automatically.

11. Be sure to turn the unit OFF by moving the POWER ON/OFF (21) toggle switch to OFF, since the automatic STOP of the tape deck does not control the power to the main unit.

#### **RECORDING FROM MICROPHONES**

1. INSERT the MICROPHONE plugs into the MICROPHONE (3) jacks.

Arrange the microphones so that the right microphone is plugged into the jack marked R and the left one is plugged into the jack marked L.

2. TURN the unit ON by moving the POWER ON/OFF (21) toggle switch to the ON position.

NOTE: The setting of the FUNCTION (24) switch is not important when recording from microphones when both microphones are plugged in.

Since the unit will continue to play in whatever mode it is in, the VOLUME CONTROL (20) should be turned all the way down unless you want it to play in the background of your recording.

3. Follow operating instructions for RECORDING FROM THE BUILT-IN RADIO ETC. starting with step 3.

4. Adjust the level controls so that when speaking into the microphones the pointers only occasionally enter the red areas of the meters (13 and 15).



### **TO USE A PLAYER FOR YOUR AUXILIARY EQUIPMENT**

You can easily add an auxiliary input, such as another tape player (not included), by using the AUX-IN (34) jacks provided on the rear panel of the main unit.

1. Connect the left and right channel plugs from your auxiliary unit, such as a tape player, into their respective jacks on the rear panel.
2. Rotate the FUNCTION SELECTOR (24) switch to AUX.
3. Turn the main unit ON by moving the POWER ON/OFF (21) toggle switch to the ON position.
4. Operate the auxiliary unit by following the operating instructions issued with it.
5. Adjust the VOLUME (20) control to the desired level.

Then adjust the BASS (16) and TREBLE (17) controls for the most pleasing response. You will probably find the desired position of the controls will change as you vary the type of information you are supplying to these AUX-IN jacks.

6. Adjust the BALANCE (19) control for the best stereo effect, depending on where the listeners are seated.
7. To turn the main unit OFF, move the POWER ON/OFF (21) switch to the OFF position. Also be sure to turn off the auxiliary unit by following the instructions issued with it.

### **TO USE AS A STEREO PHONOGRAPH**

1. Do not turn the unit ON by using the POWER ON/OFF toggle switch. The unit has an automatic shut off feature and the ON/OFF power for the entire system is controlled by the RECORD CHANGER switch when the system is used as a STEREO PHONOGRAPH.
2. Rotate the FUNCTION SELECTOR (24) switch to PHONO.
3. Operate the record changer by following the instruction disc that was on the turntable when you unpacked the unit.
4. Adjust the VOLUME (20) control to the desired level.  
Then adjust the BASS (16) and TREBLE (17) controls for the most pleasing response. You will probably find the desired position of these controls will change as you vary the type of records you are using.
5. Adjust the BALANCE (19) control for the best stereo effect, depending on where the listeners are seated.

### **AUTOMATIC SHUT-OFF**

- \* The system (Record Changer and Amplifier) will automatically shut-off after the last record when the RECORD CHANGER is in the AUTOMATIC PLAY mode. Note: For automatic shut-off, the POWER ON/OFF (21) toggle switch must be in the OFF position.

- \* To manually shut the system off, move the RECORD CHANGER STOP-START-AUTO lever to the STOP position. If the needle is still resting on the record, to prevent possible damage to the record, carefully lift the TONE ARM and place it on the TONE ARM REST. Do not turn the Changer Off when it is in the process of changing a record.

#### **TO USE FOR RECORDING ON AN EXTERNAL TAPE RECORDER (NOT INCLUDED)**

You can easily use this instrument as a signal source for recording on an external tape recorder (not included) by connecting the recorder to the TAPE OUT (36) jacks provided on the rear panel of the main unit. These jacks are always connected and the material being recorded is the same as that you hear on the speakers.

Note: The TAPE OUT jacks are internally wired in such a manner that they are not effected by the settings of the VOLUME, BASS, BALANCE and TREBLE controls on the front of the main unit. This means that you can set these controls for your listening pleasure while recording without having any effect on the quality of your recording.

#### **TO USE THE STEREO HEADPHONE JACK**

A STEREO HEADPHONE (10) jack is provided on the front of the set. To use this jack, plug in low impedance stereo headphones (not included) and adjust the VOLUME, BALANCE, and TONE controls for your listening pleasure. Special internal switches will turn off the speakers when you plug in the stereo headphones.

#### **TO LISTEN TO SIMULATED 4 CHANNEL**

A special circuit is included in this instrument that makes it possible to enhance the acoustical performance by adding two speakers (not included) which reproduce the ambient sounds not normally reproduced in stereo systems. This gives an effect of being surrounded by sound, not much different than the 4 channel effect.

1. Plug the two additional speaker boxes (not included) into the REAR SPEAKER (33) jacks located on the rear panel of the main unit. Note that these jacks are marked "R" and "L" for right and left and arrange these speakers accordingly.
2. Locate these speakers so they will be behind the listener when he is seated facing the MAIN SPEAKERS.
3. Play the instrument in any function that has stereo. There is no simulated 4 channel effect when playing monaural programs, such as AM.
4. Move the SPEAKER 2/4 (22) toggle switch to 4 and note the simulated 4 channel effect.

#### **SPECIAL HINTS ON HOW TO GET MORE OUT OF YOUR SYSTEM**

AM - You may find that you can improve the reception to your favorite AM station by turning the set a small amount.

FM - Be sure to unravel the line cord fully since this receiver uses the line cord for a built-in FM antenna.

**ANTENNA TERMINALS** (38) are provided on the rear panel of the main unit so that an external antenna can be attached.

Since the range of FM signals is not very great, you may find significant FM reception improvement by adding an external antenna. It may be necessary to consult your dealer or service station for he is familiar with the antenna needs of your area.

The BULLT-IN FM ANTENNA (35) lead should be disconnected when adding an external antenna.

**FM STEREO** - The addition of an external antenna may improve the quality of FM STEREO reception, particularly in fringe areas.

Due to the nature of FM STEREO, you may find weak signals excessively noisy. If this is the case, some improvement will be obtained by switching from FM STEREO to FM.

**8 TRACK STEREO TAPE** - The head should be periodically cleaned with a special cleaning tape cartridge (available in music and hi-fi stores) to remove the particles of brown oxide coating from the tapes that collect on the magnetic head. These particles fill the gap in the head and degrade the performance.

Never leave an 8 track cartridge in the unit when it is not in operation. This will cause flat spots on the drive wheel or stretch the tape, causing poor performance.

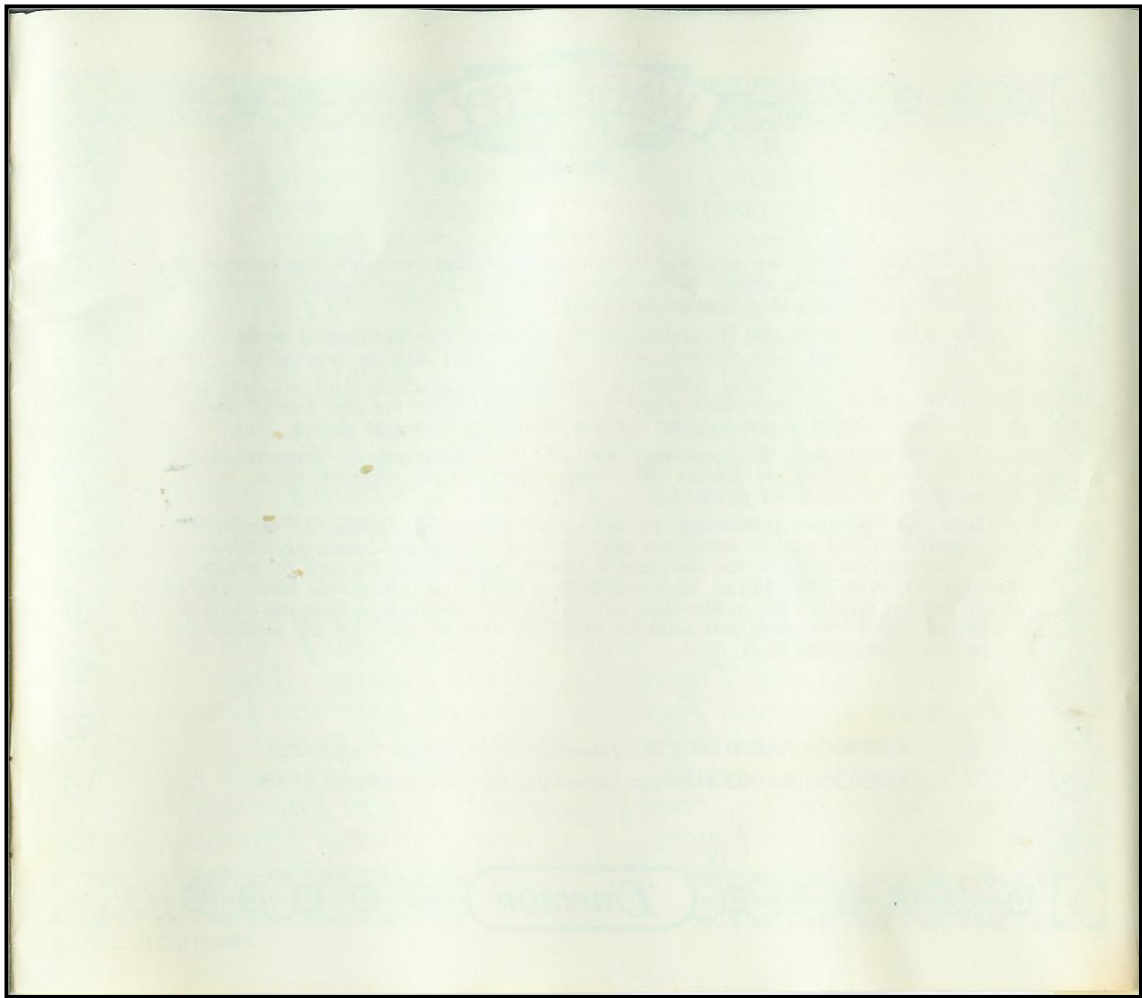
**RECORDING SING-A-LONG** - When recording with microphones, the receiver or phonograph can be played in the background so that it will also be recorded through the microphones.

In this manner you can record yourself singing-a-long with your favorite orchestra.

#### **STEREO PHONOGRAPH**

Care should be exercised in handling the PICKUP and TONE ARM to avoid damaging the NEEDLE and CARTRIDGE.

Do not leave the NEEDLE resting on a stationary record for a period of time as this may cause a depression which will become an objectionable sound. Carefully lift the TONE ARM and place it on the TONE ARM REST.



**WARRANTY**

EMERSON RADIO warrants this instrument to be free from defective material or factory workmanship and will repair or exchange it or any part thereof, provided the defect has developed in normal use or service.

Our obligation under this Warranty is limited to repairing or exchanging the defective instrument or any part thereof, within 90 days from date of original purchase. Also, under the Warranty, should a part become defective after 90 days and less than one year from date of purchase, we will replace the part free of charge. The cost of repair is not included for this 90 days to one year period.

This Warranty will be considered void if the instrument is tampered with, improperly serviced, or subject to misuse, negligence, or accident, so as, in our judgment, to injure its reliability.

Send the defective instrument to an Authorized Service Center for repair. We suggest that you contact either the store from which you purchased the instrument or our Service Manager for the Service Center nearest you. Be sure to include a copy of your sales slip so that the Service Center can determine whether the instrument qualifies for In-Warranty service. All instruments sent after the warranty period and instruments sent without proof of date of sale will be serviced on an Out-of-Warranty basis.

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**Emerson**

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