

# GX-630D-SS

4 CH/ 2 CH SURROUND STEREO TAPE DECK

## OPERATOR'S MANUAL

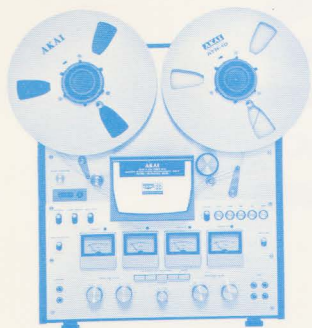


### WARNING:

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

# AKAI

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ACAI  
REEL-TO-REEL TAPE DECK  
OPERATOR'S MANUAL



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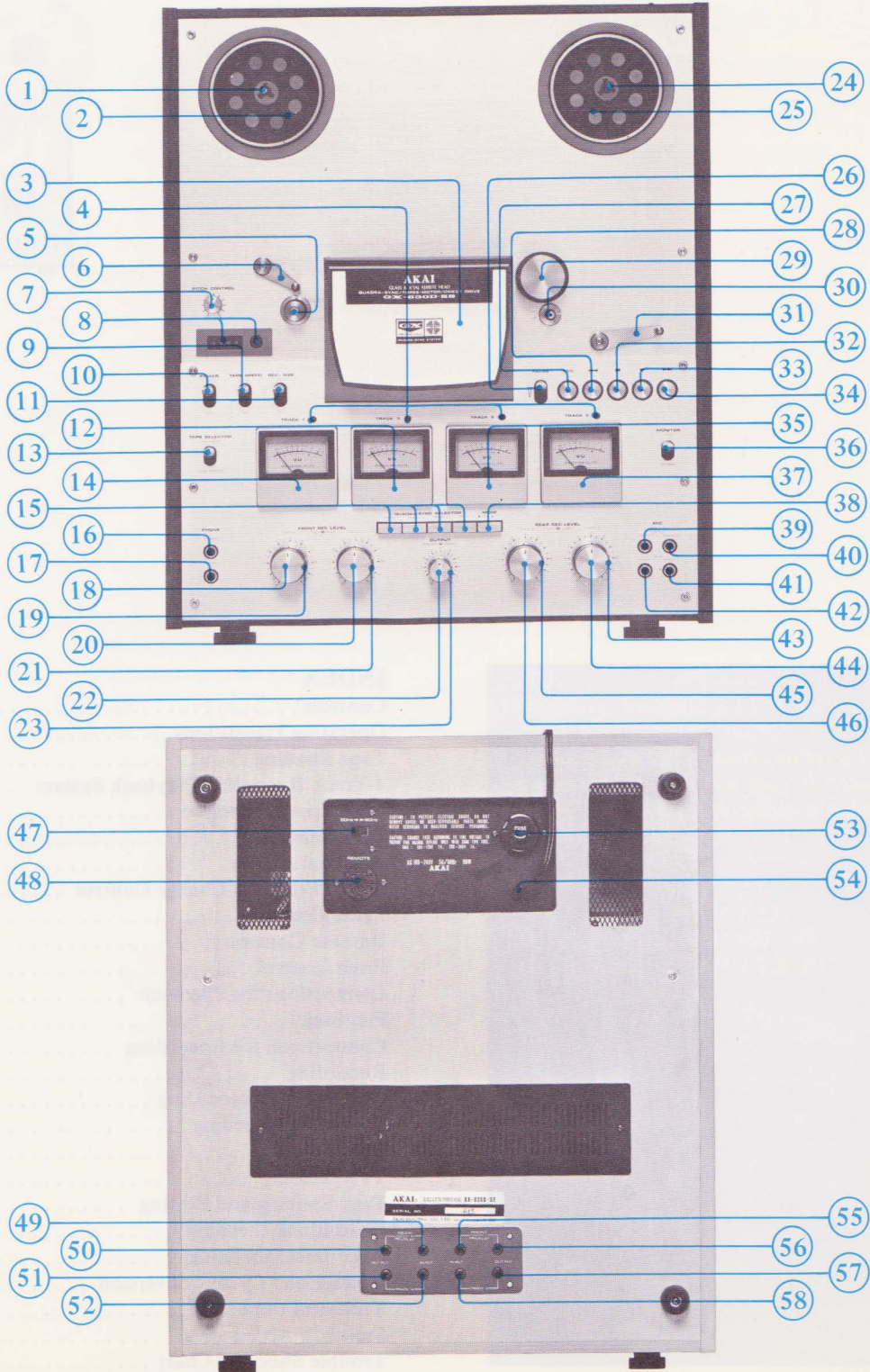
CEE, CSA, BSI, and UL and LA Standard models are not equipped with a Voltage Selector and Cycle Change Switch. Therefore, voltage and cycle conversion is not necessary. If your machine corresponds to any of these standards, please disregard all references to voltage and cycle adjustment throughout this manual.

CEE Models: 220 V, 50 Hz.  
CSA Models: 120 V, 60 Hz.  
BSI Models: 240 V, 50 Hz.  
UL & LA Models: 120 V, 60 Hz.

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# CONTROLS



1. **BUILT-IN REEL RETAINER (left)**  
To lock reel firmly into place, pull tip or retainer outward and turn to left or right.
2. **SUPPLY REEL TABLE**
3. **HEAD COVER**  
Houses (from left) Rear-CH Erase Head, Front-CH Erase Head, 4 TR 2-CH/4-CH GX Recording Head, and 4 TR 2-CH/4-CH GX Playback Head.
4. **INDIVIDUAL TRACK RECORDING INDICATOR LAMPS**  
Lights to indicate recording mode of each respective track.
5. **IMPEDANCE ROLLER**
6. **TAPE TENSION LEVER**  
Provides ideal tape tension.
7. **PITCH CONTROL**  
Refer to PITCH CONTROL.  
\* This Pitch Control must be kept at 12 o'clock position except during pitch control playback.
8. **INDEX COUNTER AND RESET BUTTON**
9. **TAPE SPEED SELECTOR**  
Set to 7-1/2 or 3-3/4 ips according to desired speed.
10. **POWER SWITCH**
11. **REEL SIZE SELECTOR**  
Set to "10 in" when using 10-1/2" reels and to "7 in" when using 7" or 5" reels.
- \*\* 12. **TRACK 3 VU METER**  
Indicates Track 3 recording and playback levels.
13. **TAPE SELECTOR SWITCH**  
WIDE RANGE: Set to this position when using Wide Range Tape.  
LOW NOISE: Set to this position when using Low Noise Tape.  
\* Akai LN-150-7 or Scotch #211 Low Noise Tape is considered standard for this machine. The use of regular tape is not recommended.  
\* Set to Wide Range position only when using special wide range tape of a grade higher than low noise.
- \*\* 14. **TRACK 1 VU METER**  
Indicates Track 1 recording and playback levels.
15. **TRACK 1, 2, 3, & 4 QUADRA-SYNC SELECTOR SWITCHES**  
Refer to QUADRA-SYNC RECORDING, page 10.  
\* These switches must be kept at OFF (out position) except during Quadra-Sync recording.
16. **FRONT CHANNEL HEADPHONE JACK**  
For front channel monitoring or headphone listening.
17. **REAR CHANNEL HEADPHONE JACK**  
For rear channel monitoring or headphone listening. These jacks accommodate any low impedance 8 ohm type stereo headphones.
- \*\* 18. **TRACK 1 MIC INPUT LEVEL CONTROL**  
Controls Track 1 microphone input volume. Adjust while observing Track 1 VU Meter.
- \*\* 19. **TRACK 1 LINE INPUT LEVEL CONTROL**  
Controls Track 1 line input volume. Adjust while observing Track 1 VU Meter.
- \*\* 20. **TRACK 3 MIC INPUT LEVEL CONTROL**  
Controls Track 3 microphone input volume. Adjust while observing Track 3 VU Meter.
- \*\* 21. **TRACK 3 LINE INPUT LEVEL CONTROL**  
Controls Track 3 line input volume. Adjust while observing Track 3 VU Meter.
- \*\* 22. **FRONT CHANNEL OUTPUT LEVEL CONTROL**  
Adjusts front channel output volume during playback.
23. **REAR CHANNEL OUTPUT LEVEL CONTROL**  
Adjusts rear channel output volume during playback.
24. **BUILT-IN REEL RETAINER (right)**  
To lock reel firmly into place, pull tip of retainer outward and turn to left or right.
25. **TAKE-UP REEL TABLE**
26. **PAUSE SWITCH**  
Depress to temporarily suspend tape travel during recording or playback. Especially convenient for editing tape. Simply depress when a certain portion of the program is not desired.  
\* Pause Control does not function during Fast Forward or Rewind Mode.
27. **RECORDING (REC) BUTTON**  
Depress this Button and the Play ► Button simultaneously to effect recording mode.
28. **REWIND ◀◀ BUTTON**  
Rewinds tape at high speed.
29. **PINCH WHEEL**  
Presses against capstan to transport tape.
30. **CAPSTAN**
31. **AUTOMATIC STOP/TAPE TENSION LEVER**
32. **STOP ■ BUTTON**
33. **PLAY ► BUTTON**  
Advances tape for recording or playback mode.
34. **FAST FORWARD ►► BUTTON**  
Advances tape at high speed.
35. **TRACK 2 VU METER**  
Indicates Track 2 recording and playback levels.
36. **TAPE MONITOR SWITCH**  
Set to SOURCE position to monitor source and to TAPE position for playback or private headphone listening.
37. **TRACK 4 VU METER**  
Indicates Track 4 recording and playback levels.
38. **4CH/2CH MODE SELECTOR SWITCH**  
Set to OUT position for 4-CH mode, and to IN position for 2-CH mode. (only FRONT channel functions at 2-CH mode)
- \*\* 39. **TRACK 1 MICROPHONE JACK**
- \*\* 40. **TRACK 3 MICROPHONE JACK**
41. **TRACK 4 MICROPHONE JACK**
42. **TRACK 2 MICROPHONE JACK**
43. **TRACK 4 LINE INPUT LEVEL CONTROL**  
Controls Track 4 line input volume. Adjust while observing Track 4 VU Meter.
44. **TRACK 4 MIC INPUT LEVEL CONTROL**  
Controls Track 4 microphone input volume. Adjust while observing Track 4 VU Meter.
45. **TRACK 2 LINE INPUT LEVEL CONTROL**  
Controls Track 2 line input volume. Adjust while observing Track 2 VU Meter.
46. **TRACK 2 MIC INPUT LEVEL CONTROL**  
Controls Track 2 microphone input volume. Adjust while observing Track 2 VU Meter.
47. **CYCLE CHANGE SWITCH (CEE, CSA, UL and LA models not equipped with this facility)**  
Set to 50 Hz or 60 Hz position according to area power source.
48. **REMOTE CONTROL JACK**  
Remote control of all operating functions can be accomplished with optional accessory Remote Control Unit RC-17.  
\* Absentee recording can also be accomplished by using Remote Control Unit RC-17 together with a timer. (See ABSENTEE RECORDING procedure)
49. **TRACK 2 LINE INPUT JACK**
50. **TRACK 2 LINE OUTPUT JACK**
51. **TRACK 4 LINE OUTPUT JACK**
52. **TRACK 4 LINE INPUT JACK**
53. **UNIVERSAL VOLTAGE SELECTOR (CEE, CSA, UL and LA models not equipped with this facility)**  
For voltage change, refer to VOLTAGE AND CYCLE CONVERSION procedure.
54. **A.C. CORD**
- \*\* 55. **TRACK 1 LINE INPUT JACK**
- \*\* 56. **TRACK 1 LINE OUTPUT JACK**
- \*\* 57. **TRACK 3 LINE OUTPUT JACK**
- \*\* 58. **TRACK 3 LINE INPUT JACK**

\*\*During 2-channel operation, only the Front Channel Controls etc. function. (Track 1 Inputs, Outputs, Indicators and Controls function as the left channel, and Track 3 Inputs, Outputs, Indicators and Controls function as the right channel.)

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## OPERATING PRECAUTIONS

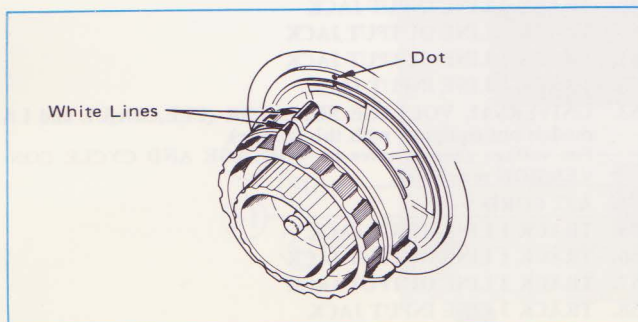
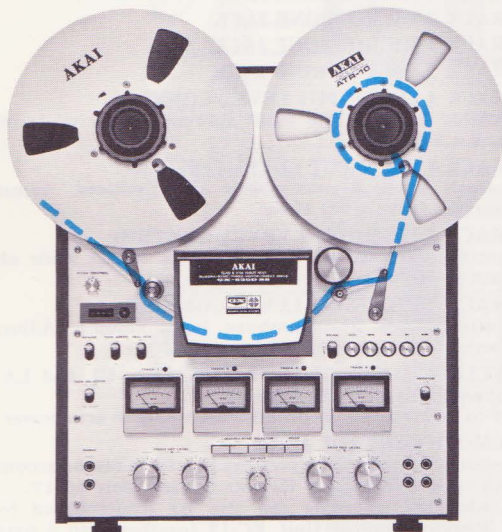
- \* Your machine requires constant voltage for optimum performance. Please refer to VOLTAGE AND CYCLE CONVERSION procedure if change of voltage or cycles is necessary.
- \* As dirty heads and magnetized heads become the source of loss of sound, distortion, sound drop-out, and other recording and playback failures, the heads must be kept clean and demagnetized at all times.
- \* The Quadra-Sync Selector Switches must be at OFF (out) position except during Quadra-Sync recording.
- \* Place machine on a flat level surface. Operate in either vertical or horizontal position.
- \* Do not place anything on top of the unit which will obstruct the ventilator.
- \* If the sound sources are so far away from the microphones that the input level controls must be turned to

maximum, some hum or noise will inevitably be recorded.

A test recording is recommended before making a final recording.

- \* Use good quality tape. New tape gives best results.
- \* As tapes which have not been used for a period of time may have become sticky, run tape once before using.
- \* Always store tapes in a cool, dry place.

Should there be a problem with your machine, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble and contact your nearest authorized Akai Service Station or the Service Department of Akai Company, Tokyo, Japan.



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## TAPE LOADING

1. Place a full reel of tape on the supply reel table and an empty reel on the take-up reel table.
2. Lock both reels into place by pulling tip of reel retainers outward and turning to left or right.
3. Unwind about an 85 cm length of tape from the supply reel and thread the tape as shown by the dotted lines in the figure.
4. Insert end of tape in slot of empty reel and wind around reel hub two or three times.
5. Continue winding tape onto take-up reel until all slack has been taken up.

When using 10½" reels, place the standard accessory reel adapter hubs on the left and right reel tables and lock into place by pulling tip of reel retainers outward and turning to left or right.

### When using 10½" plastic reels

Fit hubs over reel tables so that the white lines on the inner and outer adapter hubs are aligned and match these lines with the dot on reel table.

### When using 10½" metallic reels

Fit hubs over reel tables so that the white lines on the inner and outer adapter hubs are aligned, but do not match with dot on reel table. (This provides the necessary spacing for the difference in plastic and metal reel thickness).

#### 4-track 4-channel stereo

1	→	FRONT L-CH
2	→	REAR L-CH
3	→	FRONT R-CH
4	→	REAR R-CH

#### 4-track 2-channel stereo

→ Side A  
← Side B

1	→	FRONT L-CH
2	←	FRONT R-CH
3	→	FRONT R-CH
4	←	FRONT L-CH

### 4-TRACK RECORDING/PLAYBACK SYSTEM

The GX-630D-SS employs a 4-track system which can be used for either 4-channel or 2-channel stereo recording and playback. Select system with front panel 2-CH/4-CH Mode Selector Switch.

#### 4-CHANNEL STEREO RECORDING/PLAYBACK

4-channel stereo recording and playback requires the simultaneous use of all 4 tracks in one direction. Set Mode Selector to 4-CH position and use front and rear channel controls.

#### 2-CHANNEL STEREO RECORDING/PLAYBACK

2-channel stereo recording and playback requires the simultaneous use of two tracks. Set Mode Selector to 2-CH position and use only front channel controls. The first stereo recording (playback) takes place on tracks 1 and 3 and the second on tracks 2 and 4 after the reels have been inverted.

### TAPE SPEED SELECTION

This model can be operated at  $7\frac{1}{2}$  ips or  $3\frac{3}{4}$  ips tape speed. 2-CH Stereo recording time using an 1,800 ft. tape is 3 hours at  $3\frac{3}{4}$  ips and 1.5 hours at  $7\frac{1}{2}$  ips.

### TAPE SELECTION

A Tape Selector enables the use of low noise or wide range tape.

**LOW NOISE:** Set to this position when using Low Noise Tape.

**WIDE RANGE:** Set to this position when using Wide Range Tape.

\* Akai LN-150-7 or Scotch #211 Low Noise Tape is standard for this machine. The use of regular tape is not recommended.

\* Set to WIDE RANGE only when using special wide range tape of a grade higher than low noise.

### AUTOMATIC STOP

This model is equipped with Automatic Stop which is effected at the end of the tape, i.e., the Automatic Stop/Tape Tension Lever drops, activating the automatic stop mechanism to stop reel movement.

### DIRECT FUNCTION CHANGE CONTROL

This model features feather-touch Full Direct Function Change Control. The necessity of depressing the Stop ■ Button prior to changing modes is eliminated. The inclusion of direct function change to recording mode facilitates easy add-on recording.

### PAUSE CONTROL

This model is equipped with a Pause Switch for momentarily stopping tape travel during recording or playback. This feature is especially convenient for editing tape. Simply set Pause Switch in direction of the arrow when a certain portion of the program is not desired.

Return Pause Switch to normal position to resume recording.

### REMOTE CONTROL

All operating functions of this model can be remote controlled by using Akai Remote Control Unit RC-17 optional accessory. Plugs into Remote Control Jack on rear panel.

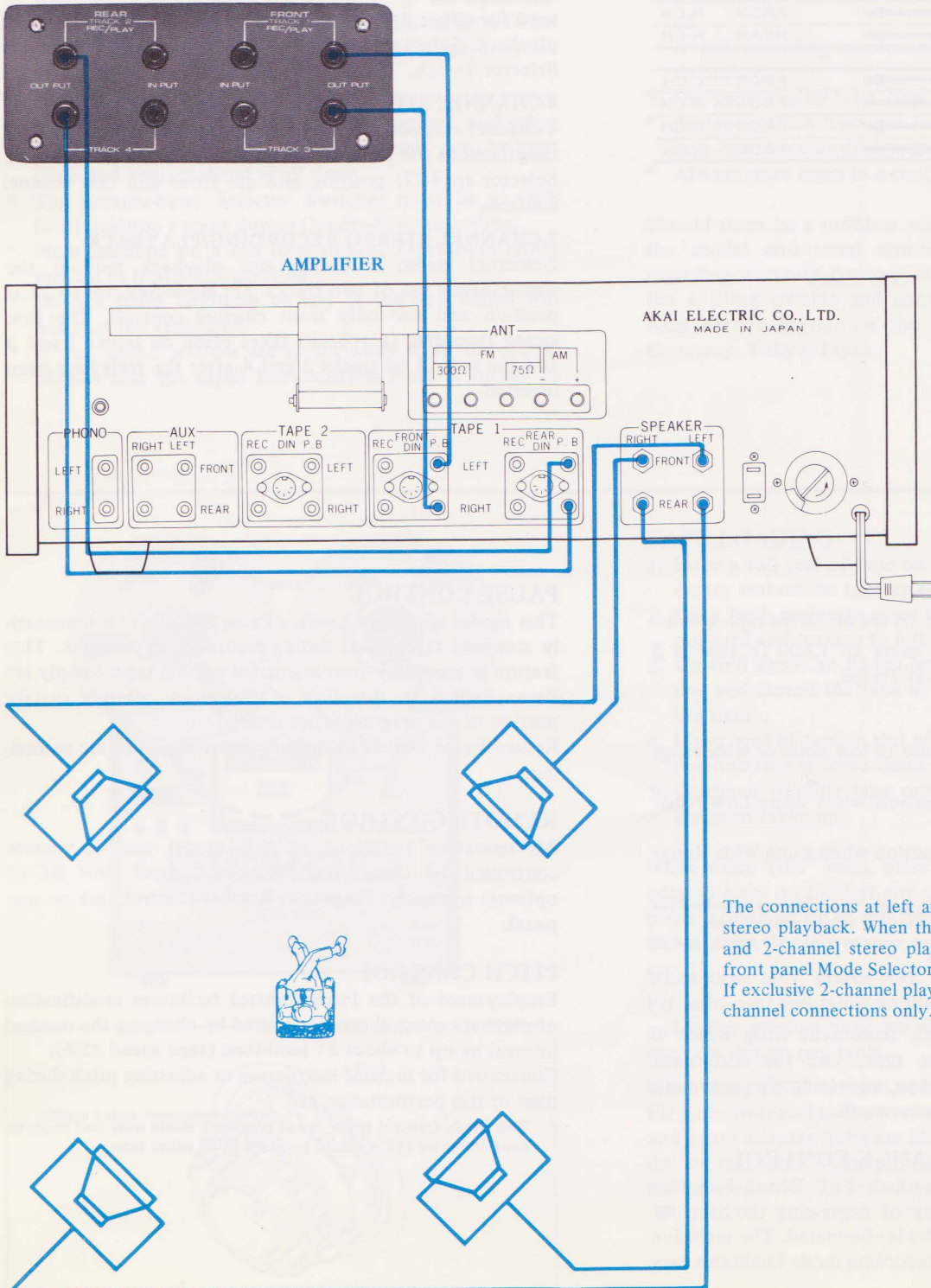
### PITCH CONTROL

Employment of the Pitch Control facilitates modification of playback musical tone as desired by changing the musical interval by up to about  $\pm 1$  semi-tone (tape speed  $\pm 5\%$ ).

Convenient for musical instruction or adjusting pitch during duet or trio performance, etc.

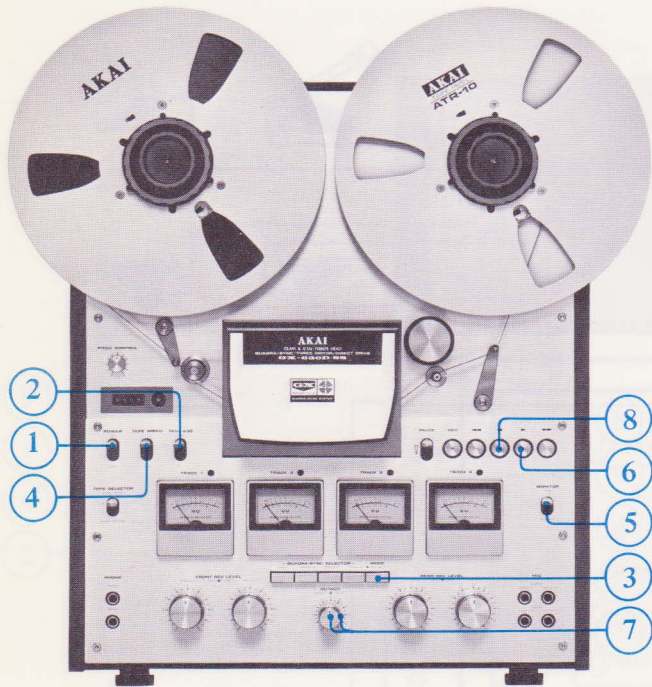
\* This Pitch Control is for use at playback mode only and must be kept at center (12 o'clock) position at all other times.

## CONNECTIONS FOR PLAYBACK



The connections at left are for 4-channel surround stereo playback. When these connections are made and 2-channel stereo playback is desired, depress front panel Mode Selector to 2-CH position. If exclusive 2-channel playback is desired, use front channel connections only.





## PLAYBACK

### 4-CHANNEL PLAYBACK

Make necessary connections for 4-CH playback as shown in CONNECTIONS FOR PLAYBACK and load a 4-CH pre-recorded tape.

1. Connect power cord and turn on Power Switch.
2. Set Reel Size Selector according to size of reel being used.
3. Set Mode Selector Switch 4-CH position.
4. Select tape speed with Tape Speed Selector Switch.
5. Set Monitor Switch to TAPE position.
6. Depress PLAY ► Button to begin playback.
7. Adjust Front and Rear channel Output Level Controls and external amplifier controls.
8. Depress STOP ■ Button to stop playback.

### 2-CHANNEL PLAYBACK

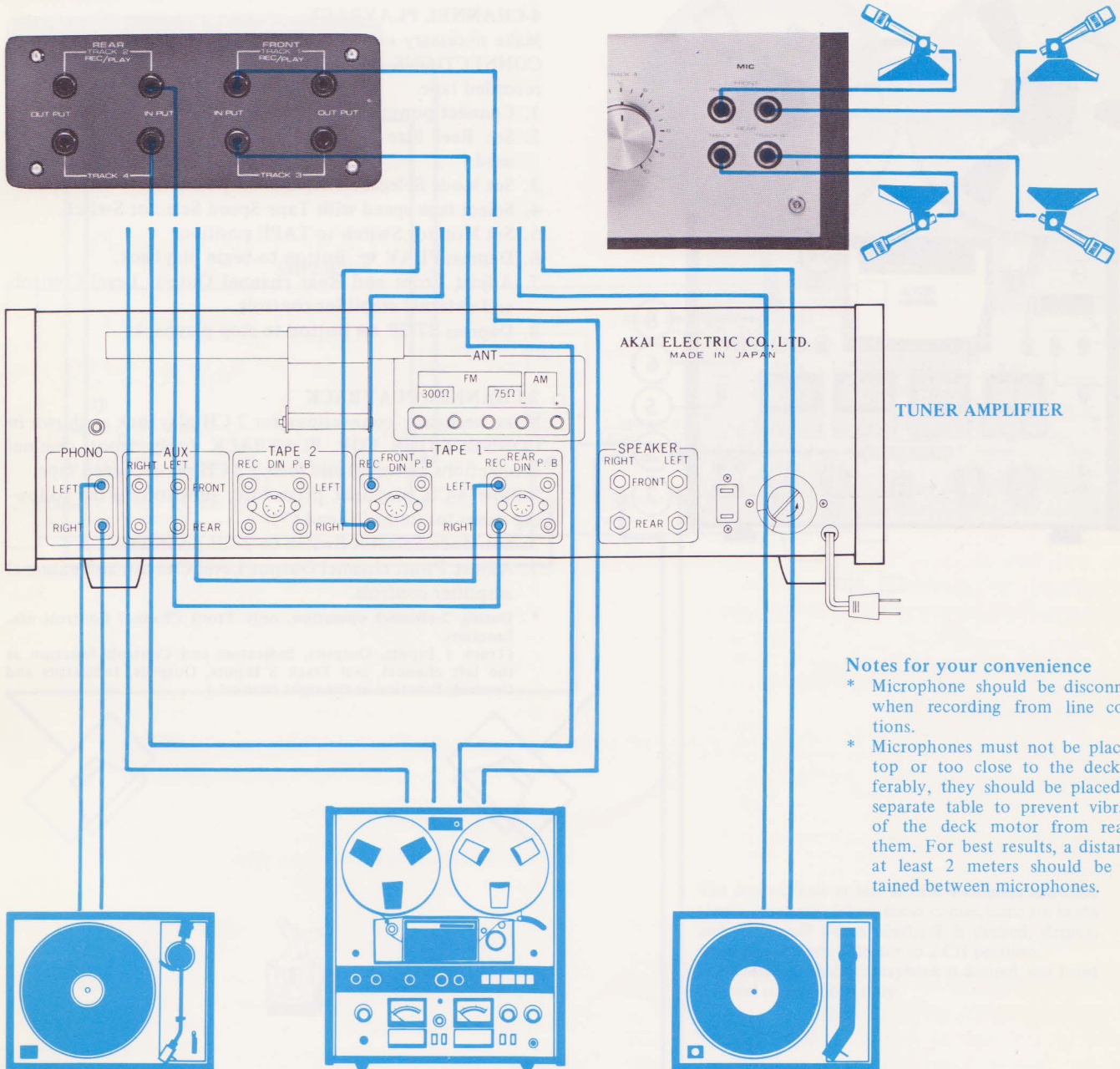
Make necessary connections for 2-CH playback as shown in CONNECTIONS FOR PLAYBACK (only front channel connections are used) and load a 2-CH pre-recorded tape. Follow 4-CH playback procedure, substituting the following items for items (3) and (7).

3. Set Mode Selector Switch to 2-CH position.
7. Adjust Front channel Output Level Control and external amplifier controls.

\* During 2-channel operation, only Front Channel Controls etc. function.

(Track 1 Inputs, Outputs, Indicators and Controls function as the left channel, and Track 3 Inputs, Outputs, Indicators and Controls function as the right channel.)

## CONNECTIONS FOR RECORDING

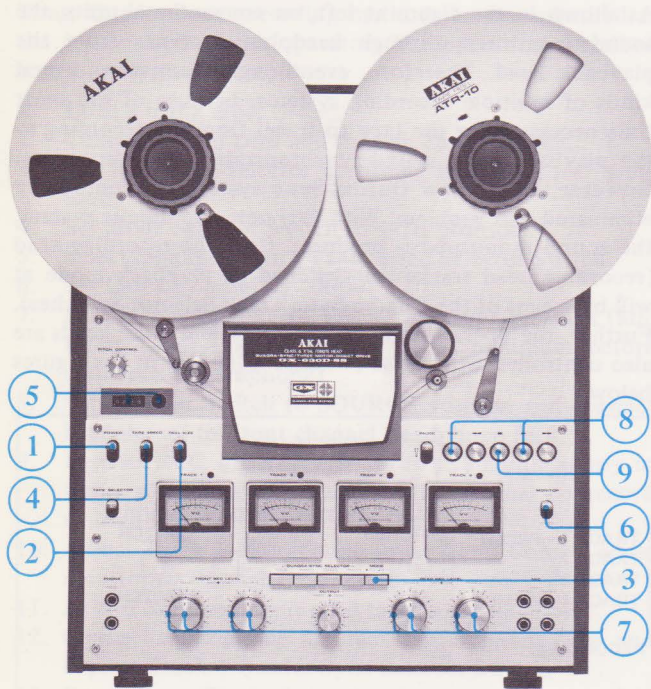


- Notes for your convenience**
- \* Microphone should be disconnected when recording from line connections.
  - \* Microphones must not be placed on top or too close to the deck. Preferably, they should be placed on a separate table to prevent vibrations of the deck motor from reaching them. For best results, a distance of at least 2 meters should be maintained between microphones.

2-channel stereo magnetic cartridge turntable. If a 4-channel stereo magnetic cartridge turntable with built-in 4-channel playback unit is used, connect to the respective front and rear channel input jacks of the GX-630D-SS.

4-channel stereo tape deck or recorder. When connections for 4-channel stereo recording is made and 2-channel stereo recording is desired, depress Mode Selector to 2-CH position. For exclusive 2-channel stereo recording, use front channel connections only.

2-channel stereo crystal or ceramic cartridge turntable. 2-channel stereo crystal or ceramic cartridge turntable. Connect to front channel input jacks of the GX-630D-SS.



## RECORDING

### 4-CHANNEL RECORDING

Make necessary 4-CH program source connections as shown in CONNECTIONS FOR RECORDING, and load a tape.

1. Connect power cord and turn on Power Switch.
2. Set Reel Size Selector according to size of reel being used.
3. Set Mode Selector Switch to 4-CH position.
4. Select tape speed with Tape Speed Selector Switch.
5. With Reset Button, Set Index Counter to "0000".  
(This provides an easy reference for locating positions on the tape).
6. Set Monitor Switch to SOURCE position.
7. While observing the VU Meters, adjust and balance input level with Input Level Controls according to connected source. (Normal recording should not exceed "0" VU on any of the respective VU Meters).
8. When an optimum recording level has been determined, depress the REC and PLAY ► Buttons simultaneously to begin recording.
9. Depress Stop ■ Button to stop recording.

### 2-CHANNEL RECORDING

Make necessary 2-CH program source connections as shown in CONNECTIONS FOR RECORDING, and load a tape. (For 2-CH operation, only the Front Channel connections are used).

Follow 4-CH recording procedure, substituting the following steps for steps (3) and (7) and add step (10).

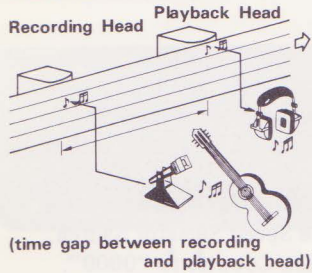
3. Set Mode Selector Switch to 2-CH position.
7. While observing Track 1 and Track 3 VU Meters, adjust and balance input level with Front channel Input Level Controls according to connected source.
10. Invert reels to record on Tracks 2 and 4.

\* During 2-channel operation, only Front Channel Controls etc. function.

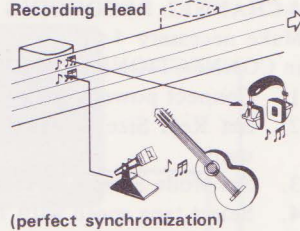
(Track 1 Inputs, Outputs, Indicators and Controls function as the left channel, and Track 3 Inputs, Outputs, Indicators and Controls function as the right channel.)

## QUADRA-SYNC RECORDING

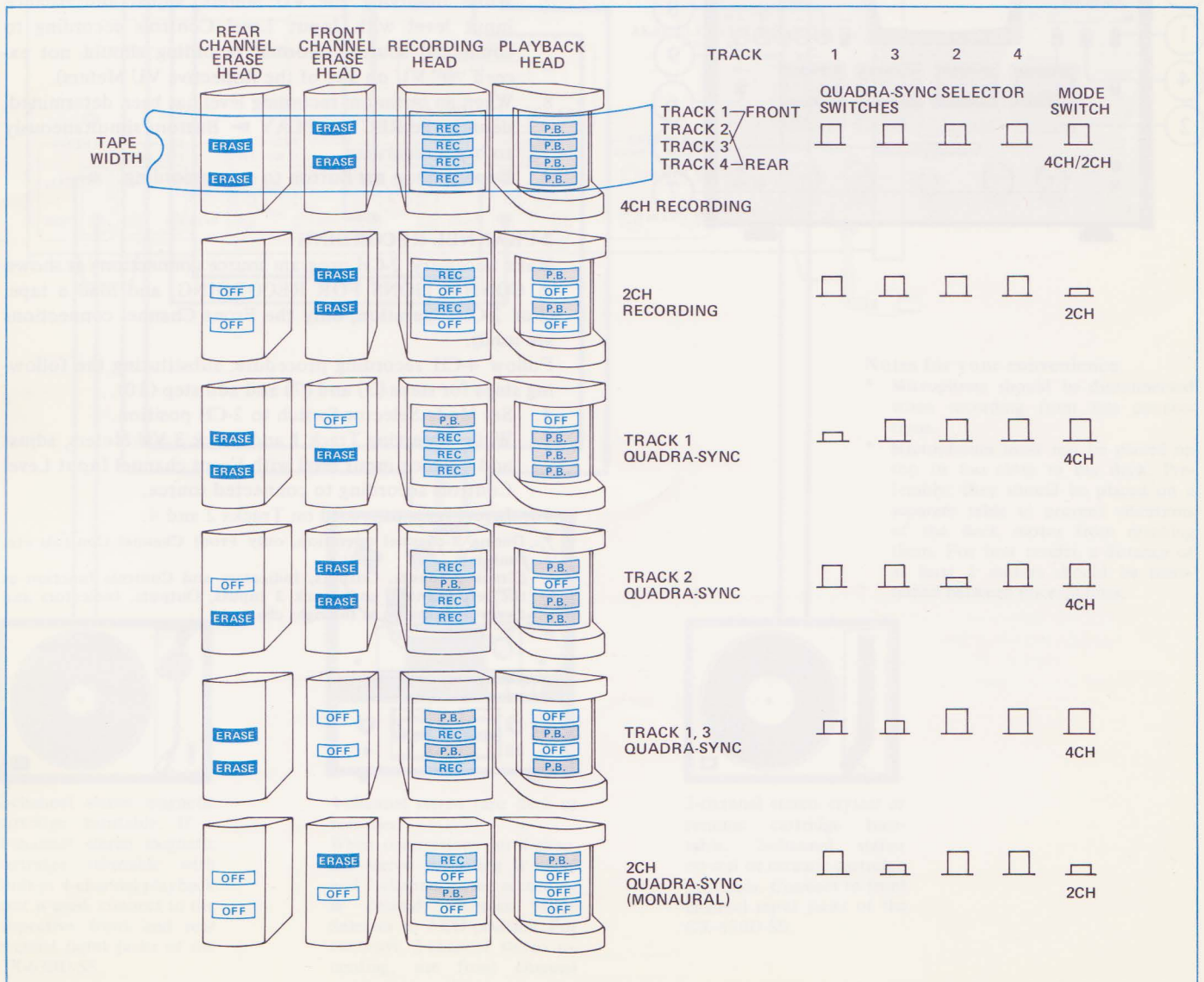
### CONVENTIONAL UNIT



### AKAI'S QUADRA-SYNC SYSTEM



As shown in the figure at left, on conventional units, the sound monitored through headphones comes from the playback head. Therefore, even though there were several kinds of multiple recording systems, because of the short time necessary for the tape to travel from the recording to the playback head, sound synchronization was impossible. However, Akai's new Quadra-Sync system has completely eliminated this problem. With this new and unique system, the sound monitored is produced from the recording head (recording head tracks are switched to playback mode at will by means of the Quadra-Sync Track Selector Switches). Further, the operation of the playback and erase heads are also controlled with these switches as shown in the figures below.



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Thus, Quadra-Sync recording methods are as unlimited as the imagination of the operator. The operation described below is a typical example.

1. Load a blank tape.
2. Connect power cord and turn on Power Switch.
3. Set Reel Size Selector according to size of reel being used.
4. Set Mode Selector Switch to 4-CH position.
5. Select tape speed with Tape Speed Selector Switch.
6. Set Index Counter to "0000".
7. Plug in microphone to Track 1 Microphone Jack (Mic Input Level Control should be at minimum before connecting microphone).
8. Set Monitor Switch to SOURCE position and connect headphones to Front channel Headphone Jack.
9. Depress REC and PLAY ► Buttons simultaneously to begin recording on Track 1. (It is usual to record rhythm first).
10. Adjust Track 1 Microphone Input Level Control while monitoring through headphones.
11. At end of recording, rewind tape to starting point.
12. Connect microphone to Track 3 Microphone Jack, and depress Track 1 Quadra-Sync Selector Switch.
13. Record on Track 3 in the same way as the first recording while monitoring Track 1 through headphones.

14. At end of recording, again rewind tape to starting point.

15. Connect Microphone to Track 2 Microphone Jack, depress Tracks 1 and 3 Quadra-Sync Selector Switches, and continue as in the first and second recordings until all tracks have been recorded.

- \* Each recording will have been completely synchronized with the original recording on Track 1, and therefore with each other.
- \* For stereo Quadra-Sync recording, set machine to 4-CH mode and synchronize Tracks 1 and 3 with Tracks 2 and 4 or vice versa while monitoring front or rear channel through headphones.
- \* During 4-CH Quadra-Sync mode, Tracks 1 and 3 or Tracks 2 and 4 can be monitored simultaneously by depressing both Quadra-Sync Selector Switches.
- \* Any track can be emphasized or de-emphasized at will by input level adjustment during recording. In case of front/rear channel stereo synchronization, this can also be accomplished by separate adjustment of Front and Rear channel Output Level Controls at playback time.
- \* Quadra-Sync Selector Switches and Mode Selector Switch should not be switched during recording or playback. This will cause the heads to become magnetized and noise to occur.
- \* It is normal for the frequency response level to decrease when using the recording head for playback.
- \* The Quadra-Sync Selector Switches must be kept at OFF (out) position except during Quadra-Sync recording.
- \* For playback of Quadra-Sync recording, set machine to normal 4-CH or 2-CH playback mode according to recorded tracks. (Do not operate Quadra-Sync Selector Switches.)

**Caution:** When making a Quadra-Sync recording, keep in mind that the Tracks on which the Quadra-Sync Selector Switches are not depressed will be erased.

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## ABSENTEE RECORDING

By using an external timer together with Akai Remote Control Unit RC-17, absentee recording can be accomplished with this machine. Connect Remote Control Unit to Remote Control Jack and properly load a tape, avoiding tape slack. Plug in AC Cord through the external timer. Adjust input level following recording procedure and with the Power Switch turned ON and the Remote Control Unit REC and FWD Play Keys locked into recording mode positions, set timer, following manufacturers instructions. If timer is set to coincide with source timing, the GX-630D-SS will automatically begin recording according to setting.

- \* This machine features Automatic Stop which is effected at the end of the tape.

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## SOUND MIXING

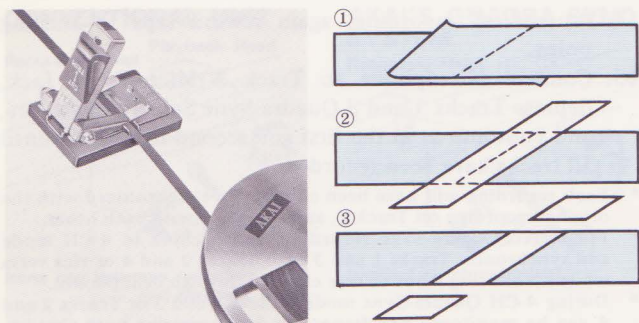
Independent line and microphone jacks and input level controls enable signals from microphone and line sources to be mixed and recorded simultaneously on the tape.

For sound mixing, connect microphones to Microphone Jacks and connect desired source to the Line Input Jacks and follow 4-CH or 2-CH recording procedure.

## TAPE ERASING

Any signals previously recorded on the tape will be automatically erased as a new recording is made. For erasing only, thread tape and set machine to recording mode. No plugs should be connected to the input jacks and the input level controls should be kept at minimum. For quick and complete erasure, a bulk tape eraser is recommended.

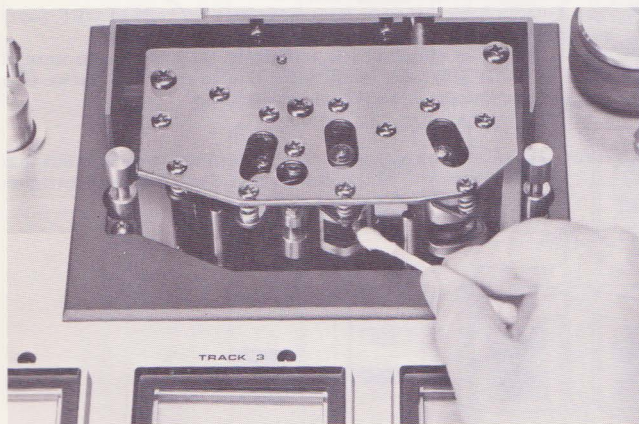
- \* Be sure to set the Mode Selector Switch to 4-CH or 2-CH as required.



### TAPE SPLICING AND EDITING

Cut the tape diagonally with an overlap so that the ends are lined up. Cutting tape on the diagonal eliminates detection of the splice in recording. Cover aligned ends with splicing tape, exerting pressure to secure ends evenly. Trim off excess splicing tape. Cutting into the tape very slightly will eliminate the possibility of a sticky splice. Splicing using scissors requires skillful work. For smooth and easy splicing, Akai Tape Splicer AS-3 is highly recommended.

## MAINTENANCE



### HEAD BLOCK CLEANING

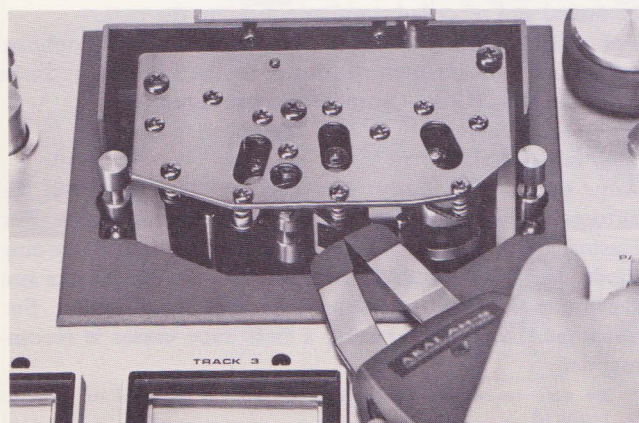
#### Heads

The GX (glass and crystal) Heads do not require a great deal of cleaning. However, if old tapes or tapes which have been spliced are used, GX head cleaning is also recommended. Clean recording, playback, and erase heads with a cotton swab stick which has been dipped in Akai Cleaning fluid from Head Cleaning Kit HC-500.

#### Pinch wheel and capstan

If foreign matter is allowed to accumulate on the pinch wheel and capstan, these particles will come off on the tape causing deterioration of sound quality. Oil adhering to the capstan also causes irregularity in tape transport. Therefore, it is also recommended that these parts be wiped clean periodically. Use Akai cleaning fluid or alcohol.

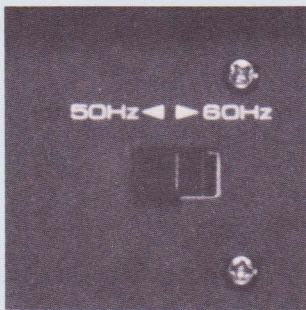
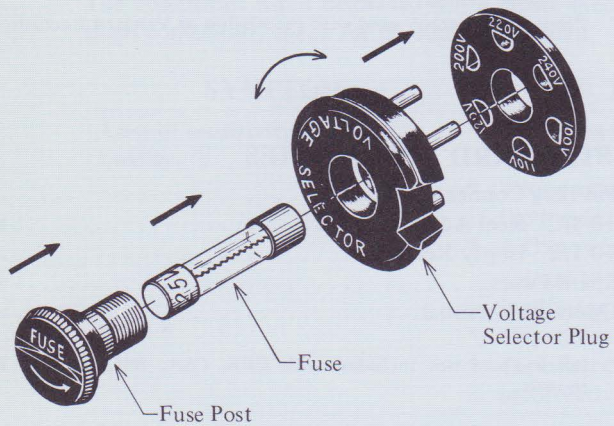
\* Do not use chemicals such as chloroethane, etc. for head block cleaning as the rubber parts will deteriorate.



### HEAD DEMAGNETIZING

Prolonged use of the machine will gradually build up residual magnetism on the heads. The effect of magnetization is that it causes a considerable drop in high frequency response and introduces noise into your recordings. It is therefore, recommended that head demagnetizing be performed periodically. This can be accomplished with a bulk head demagnetizer by bringing the prongs of the demagnetizer close to the heads and making several small circular motions over all head surface areas as well as the head housing.

- \* Turn off the power of the unit prior to demagnetizing the heads.
- \* Do not use magnetized tools in the vicinity of the heads and VU Meters.
- \* Do not bring the magnetizer close to the VU Meters.



**VOLTAGE AND CYCLE CONVERSION (CEE, CSA, UL and LA models are not equipped with voltage and cycle change apparatus).**

**VOLTAGE**

Your machine is equipped with a universal voltage selector offering a selection of voltage from 100V to 240V A.C. Voltage is preset at the factory according to destination. However, the operator is requested to reconfirm setting and, if necessary, readjust as follows:

1. DISCONNECT POWER CORD and remove the Fuse Post by screwing in direction of arrow.
2. Remove the Voltage Selector Plug and reinsert so that proper area voltage shows through the plug cut-out.
3. Change fuse to correspond with voltage and tighten fuse post. (Refer to standard accessory spare fuse tag instructions for proper fuse).

To maintain optimum performance and prolong the life of your machine, it is important that the line voltage be held within 10% of standard area voltage.

**CYCLE**

Correct tape speed cannot be obtained if the Cycle Change Switch located on the rear panel is not properly set. Set to 50 Hz or 60 Hz position according to area power source.

## TECHNICAL DATA

Track System	4 track 4/2 channel compatible stereo system.
Reel Capacity	Up to 10-1/2" reel.
Tape Speed	7-1/2 and 3-3/4 ips. ( $\pm 0.7\%$ )
Pitch Control	$\pm 5\%$
Wow and Flutter	Less than 0.06% RMS at 7-1/2 ips. Less than 0.09% RMS at 3-3/4 ips.
Frequency Response	30 to 21,000 Hz $\pm 3$ dB at 7-1/2 ips. 30 to 15,000 Hz $\pm 3$ dB at 3-3/4 ips.
Distortion	Less than 0.5% at 7-1/2 ips. (1,000 Hz "0" VU)
Signal to Noise Ratio	Better than 54 dB (measured via tape with peak recording level of +6 VU).
Erase Ratio	Better than 70 dB.
Bias Frequency	100 k Hz.
Heads	(4): One 4 TR, 2-CH/4-CH GX playback head. One 4 TR, 2-CH/4-CH GX recording head. One Front CH erase head. One Rear CH erase head.
Motors	(3): One AC Servo motor for capstan drive, two eddy current motors for reel drive.
Fast Forward and Rewind Time	120 sec. using 2,400 ft tape.
Output Jacks	Line (2): 0.775 V (0 VU) Required load impedance: More than 20 k ohms. Phone (1): 30 mV/8 ohms.
Input Jacks	Microphone (2): 0.25 mV/10 k ohms. Line (2): 70 mV/150 k ohms.
Semi-conductors	Transistors 65, Diodes 63, ICs 4.
Power Requirements and Power Consumption	U.S.A. and Canada Models: 120 V, 60 Hz only. 90 W. CEE Models: 220 V, 50Hz only. 100 W. BSI Models: 240 V, 50 Hz only. 100 W. Other Models: 100 to 240 V, 50/60 Hz. 90 W. (Switchable)
Dimensions	440 (W) x 527(H) x 240(D) mm (17.3 x 20.7 x 9.4")
Weight	20.7 kg (45.5 lbs)

- \* Specifications determined with Scotch #211 tape.
- \* For improvement purposes, specifications and design are subject to change without notice.
- \* "Surround Stereo" used with permission of Vanguard Records.

## STANDARD ACCESSORIES

Pin Plug Connection Cords	2
10 1/2" Reel Adapters	1 set
10 1/2" Empty Reel	1
Spare Fuses	1 set
Operator's Manual	1

- \* Spare Fuses not included with CEE, CSA, BSI, UL and LA models.

## HEAD DEMAGNETIZING

Proper use of the machine will virtually eliminate the need for manual degaussing of the heads. The effect of magnetic tape is that it causes a considerable drop in high frequency response and introduces noise into your recordings. It is therefore recommended that head demagnetizing be performed periodically. This can be accomplished with a built-in head demagnetizer by moving the covers of the demagnetizer close to the heads and making several small circular motions over all head surface areas as well as the head housing.

- \* Turn off the power of the tape drive or demagnetizing the heads.
- \* Do not use magnetized tools in the vicinity of the heads and VU meters.
- \* Do not approach the demagnetizer close to the VU meters.



## TROUBLE SHOOTING CHART

The conditions listed below do not indicate mechanical failure of your unit. If your machine exhibits any of these conditions, check for trouble as indicated.

SYMPTOM	TROUBLE	REMEDY
Loss of sensitivity and tone quality.	* Dirty Heads.	* See HEAD BLOCK CLEANING.
	* Wrong side of tape facing the heads.	
	* A.C. power lower than the voltage to which your machine is adjusted.	
	* Magnetized head.	* See HEAD DEMAGNETIZING.
	* Tape Selector Switch is set incorrectly.	
Machine will not record or playback.	* Check positions of controls and input/output.	
	* Check position of the Automatic Stop/Tape Tension lever.	
	* Output Level Control at minimum.	
Irregularity in tape transport.	* Oil or magnetic particles adhering to the Capstan or Pinch Wheel.	* See HEAD BLOCK CLEANING.
	* Sticky or dirty tape surface.	
	* Improperly loaded tape.	* See TAPE LOADING.
	* A.C. power lower than the voltage to which your machine is adjusted.	
Tape will not run.	* Blown fuse.	
	* Power is not being supplied.	* Check power cord, Power Switch, and Automatic Stop/Tape Tension Lever.
	* Twisted or sticky tape.	
Previously recorded program will not erase.	* Erase head is dirty.	* See HEAD BLOCK CLEANING.
Distorted or noisy sound.	* Recording level is too high.	* Normal recording level is zero VU.
	* Check external source controls and connections.	







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MANUFACTURED & DISTRIBUTED BY

**AKAI ELECTRIC CO., LTD.**  
**AKAI TRADING CO., LTD.**

12-14, 2-chome, Higashi-Kojiya,  
Ohta-ku, Tokyo, Japan

**AKAI AMERICA, LTD.**

2139 E. Del Amo Blvd., Compton, Calif., 90220, U.S.A.  
TELEPHONE: (213) 537-3880  
TELEX: 67-7494

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Printed in Japan

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# WARRANTY CARD GARANTIE-KARTE FICHE DE GARANTIE CERTIFICADO DE GARANTIA

Model **GX-630DSS**

Serial No.  
Seriennummer  
Numero de serie  
No. de serie

Owner's Name & Address (please write in block letters) Name und Adresse des Eigentümers (in Blockschrift)		Nom et adresse de l'acheteur (Ecrire en majuscules, S.V.P.) Nombre y dirección del comprador (en mayúsculas)	
Name Name Nom Nombre			
Address Adresse Adresse Dirección			

- We, Akai Electric Company, take this opportunity to express our appreciation and to congratulate you on your purchase choice.  
We guarantee this unit against defects due to faulty manufacture or other relative faults of this nature for a period of six months from date of purchase, subject to stipulations printed on reverse side.
- Die Firma Akai Electric Co., Ltd., möchte Ihnen bei dieser Gelegenheit ihren Dank aussprechen, dass Sie, durch Kauf eines neuen Akai Gerätes, jetzt zu ihrem Kundenkreis gehören.  
Sollte Ihr Gerät Material-oder Fabrikationsmängel aufweisen, so erklären wir uns bereit, die umstehenden Bedingungen voll zu erfüllen.
- La société Akai Electric Co., Ltd. saisit cette occasion pour vous remercier d'avoir choisi un produit Akai. Au cas où l'appareil que vous avez acheté serait défectueux, nous vous signalons que la garantie de nos produits couvre une période de 6 mois, à compter de la date d'achat. Veuillez vous référer aux stipulations mentionnées au verso.
- La compañía Akai Electric Co., Ltd. aprovecha esta oportunidad para agradecerle la elección que acaba de hacer de este producto Akai. Si éste presentara algún defecto o malfuncionamiento debidos a su construcción o material empleado, nosotros saldremos garantes por un período de seis meses a partir de la fecha de adquisición por usted, sin que usted deba resarcir gasto alguno.

Date Purchased: Kaufdatum: Date d'achat: Fecha de compra:	
Dealer's Name: Name des Händlers: Nom du négociant: Concesionario:	
Dealer's Address: Adresse des Händlers: Adresse du negociant: Dirección concesionario:	
Dealer's Signature: Unterschrift des Händlers: Signature du negociant: Firma del concesionario:	

Name and address of your country's agent: Name und Adresse der Landesvertretung: Agents du pays: Nom et Adresse Agente del país: Nombre y Dirección	
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**IMPORTANT:** Presentation of this warranty slip is kindly requested in case repairs are required.  
**WICHTIG:** Bei Inanspruchnahme der Garantie, muss diese Garantie-bescheinigung vorgelegt werden.  
**IMPORTANT:** Prière de présenter cette fiche de garantie, dès que vous faites une réclamation.  
**IMPORTANTE:** Se ruega presentar esta garantía en el momento de solicitar el servicio.



## AKAI ELECTRIC CO., LTD.

12-14, 2-chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan

**GUARANTEE PERIOD:** This guarantee is effective for a period of six months after the purchasing date.

**GARANTIE FRIST:** Die Garantie tritt in Kraft am Tage, an dem das Gerät gekauft wurde unwährend einer Zeitdauer von 6 Monaten. Folglich wird nach dem Kauftage ungültig.

### PROVISIONS OF GUARANTEE

1. The guarantee is fully effective both for labour and free parts only in the country of purchase. The country's agents indicated on the reverse side will honour the guarantee in that country.
2. The guarantee covers only free parts outside the country of purchase. Labour charge is, therefore, to be the owner's responsibility, outside the country of purchase.
3. The guarantee will cover original failure of parts and other natural defects due to manufacturing causes. Otherwise, repair charges are to be for the owner's account.

### THE GUARANTEE IS VOID IF

1. The guarantee card is not properly completed.
2. Alterations have been made in this guarantee.
3. Damages or troubles are due to rough handling or transportation after purchase.
4. The article has not been handled in accordance with the operating instructions or has been repaired inexpertly by unauthorized shops.
5. The serial number removed or defaced.

### GARANTIEBEDINGUNGEN

1. Im Lande, in dem das Gerät gekauft wurde, schliesst die Garantie Reparaturkosten sowie die Kosten der zur Reparatur notwendigen Teile mit ein. Die Landesvertretung, (Name und Adresse auf der Rückseite aufgestempelt), übernimmt alle Reparaturen und liefert die zur Reparatur notwendigen Teile kostenlos, solange sich das Gerät im Lande des ursprünglichen Kaufs befindet.
2. Befindet sich das Gerät ausserhalb des ursprünglichen Kauflandes, schliesst die Garantie nur die Kosten der zur Reparatur notwendigen Teile ein. Die Reparaturkosten, ausschliesslich der Ersatzteilkosten, fallen folglich zu Lasten des Käufers.
3. Die Garantie schliesst nur ursprüngliche Material- und Funktionsschäden ein. Die Reparatur anderer Schäden fällt zu Lasten des Käufers.

### DIE GARANTIE WIRD UNGÜLTIG, WENN:

1. die Garantiekarte nicht richtig ausgefüllt ist;
2. Änderungen auf der Garantiekarte vorgenommen wurden;
3. Schäden auf unsachgemässe Behandlung oder unfachmännischen Versand nach dem Kauf des Gerätes zurückzuführen sind;
4. das Gerät nicht gemäss den Bedienungsvorschriften behandelt, oder früher von nicht bevollmächtigten Personen repariert wurde; und
5. wenn die Fabrikationsnummer entfernt wurde oder unleserlich ist.

**PERIODE DE GARANTIE:**

La garantie est valable pour une durée de 6 mois à compter de la date d'achat du magnétophone. La garantie est nulle et non avenue à l'expiration de la durée de validité.

**PERIODO DE VALIDEZ:**

El certificado de garantía que usted recibe en el momento de comprar el magnetófono de Akai Electric, es valioso por seis meses. Pasado este tiempo, usted no podrá hacer reclamación alguna por los defectos que pudieran ocurrir al magnetófono.

### STIPULATIONS DE GARANTIE

1. Les réparations et remplacement de certaines pièces se font à notre charge, uniquement dans le pays où nos produits sont vendus. Voir au verso le nom de notre agent.
2. Le remplacement de certaines pièces se fait à notre charge, en dehors du pays d'achat. Les frais de réparation sont donc à la charge de l'acheteur.
3. Cette garantie couvre tout dommage résultant d'un vice de fabrication.

### LA GARANTIE N'EST PAS VALABLE, SI

1. la fiche de garantie n'est pas dûment remplie.
2. la fiche de garantie a fait l'objet de certaines modifications.
3. les dommages sont attribuables à un défaut de maniement ou à un transport trop brutal.
4. les dommages sont dus à une négligence de votre part ou bien l'appareil a été réparé par quelqu'un d'inexpérimenté et ce sans l'autorisation de l'usine.
5. Le numéro de série n'y figure plus ou est illisible.

### PROVISIONES

1. La garantía cubre tanto las partes de repuesto como el trabajo de reparación, pero solamente en el país de adquisición del producto. Aquí nuestros agentes se harán un deber de cumplir con toda responsabilidad lo estipulado en el certificado de garantía.
2. Fuera del país en que ha sido adquirido el producto, la garantía cubre solamente las partes de repuesto necesarias.
3. Objeto de garantía son los defectos que pudieran ocurrir debido a un material deficiente, u otras fallas debidas a causas naturales.

### NOS CONSIDERAREMOS DESLIGADOS DE TODA RESPONSABILIDAD SI:

1. El certificado de garantía no ha sido debidamente rellenado.
2. Se hubieran hecho correcciones o cambios en él.
3. Los daños o averías se deben a un mal trato en la expedición del producto después de su adquisición.
4. Las fallas se deben a no haber manejado el producto según las explicaciones dadas, o ha sido reparado por personas inexpertas, no autorizadas por Akai Electric.
5. El número de serie no consta o ha sido borrado.

# DIRECTORY OF AKAI FIELD SERVICE STATIONS

Tokyo, Apr. 1975

# AKAI

**U.S.A.**

*Akai America, Ltd.	2139 East Del Amo Blvd., Compton, California 90220 Tel: 213-537-3880
*Akai America, Ltd.	6 Kilmer Rd., Box 561, Edison N.J. 08817 Tel: 201-985-3760

**CANADA**

Vancouver	Center Electronic Service (Audio)	945 Granville St., Vancouver B.C., Tel: 681-5108
Tronto Ont.	Central Electronic Service (Audio)	63 Advance Rd., Toronto Ont., M8Z 2S6 Tel: 233-5412
Montreal	Central Electronics Service (Audio)	4987 Buchan St., Montreal Tel: 737-4594
Mississauga Ont.	Braun Electric Canada Ltd. (Video)	3269 American Drive, Mississauga, Ontario Tel: 416-678-9200

**MEXICO**

Mexico City	*Mexic International Imports, S.A.	Dr. Vertiz 530, Mexico 12, D.F. Tel: 530-7786, 538-0152
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**CENTRAL AMERICA**

Guatemala	J. Antonio Arzu & Cía., Ltda. (Foto Centro Colorama)	6a. Avenida 9-37, Zona 1 Tel: 28625
Belize	Maya's	57 Albert St., P.O. Box 125, Belize City Tel: 2271
El Salvador	Kismet, S.A. de C.V.	Calle Ruben Dario No. 526 P.O. Box 1287, San Salvador Tel: 21-7920
Honduras	Rivera y Compañía, S. de R.L. de C.V.	6a. Avenida, 6a. Calle, No. 513 P.O. Box 27, Tegucigalpa Tel: 22-8753
Nicaragua	Roberto Terán G.	P.O. Box 2820, Managua, D.N. Tel: 2-4675, 2-6553
Costa Rica	Foto Sport, S.A.	P.O. Box 727, San José Tel: 21-49-03
Curaçao	*Delvalle Hermanos & Cía., Inc.	P.O. Box 150, Curaçao, N.A. Tel: 11638, 13810, 12750
	*Cinefoto Trading Co., Inc.	P.O. Box 150, Curaçao, N.A. Tel: 11638, 13810, 12750
Panama	*Akai Audio Stereo de Panamá, S.A.	P.O. Box 281, Edificio Avesa, Via España, Panamá 1 Tel: 64-3904
	Akai Audio Stereo de Zone Libre, S.A.	P.O. Box 407, Colon, Free Zone Tel: 47-1970, 47-1971

**SOUTH AMERICA**

Venezuela	*Delvalle Hermanos C.A.	P.O. Box 62242 Del Este, Caracas Tel: 34-96-56, 34-19-87
Colombia	Humberto A. Garcia y Asociados	P.O. Box 15448, Bogotá Tel: 494045
Perú	Casa Hindú S.A.	P.O. Box 4874, 2988, Pasaje Nueva Rosita 160, Lima Tel: 286025
Bolivia	Prudencio Arnal y Cía. (Casa Tudor)	P.O. Box 106, Avenida Camacho, 1393-1399, La Paz Tel: 2-9625
Chile	Redi Ltda.	P.O. Box 4084, Santiago Tel: 32031
Brasil	(Audio) Comercial e Importadora Tropical Ltda.	Rua General Julio Marcondes Salgado 56, Sao Paulo Tel: 220-5422, 5194
	(Video) Foto Electronica Internacional Ltda.	Rua General Julio Marcondes Salgado 56, Sao Paulo Tel: 220-5422, 52-6947
Argentina	(Audio) Enrique Udenio y Cía. S.A.	Paraguay 577, Buenos Aires Tel: 32-9271, 6993
	(Video) Trans-Argen S.A.C.I.	Cerviño 4728, Buenos Aires Tel: 7737987
Uruguay	Fridge S.A.	Paraguay 1547 AP-1001, Montevideo Tel: 98-33-28
Paraguay	Audiotec S.R.L.	Piribebuy 338, Asunción Tel: 41478

## SOUTHEAST ASIA

Ceylon	Elite Radio & Engineering Co., Ltd.	26, Keyzer Street, Colombo 11 Tel: 79744
Hong Kong	*P.H. Shek Ltd.	31-37, Des Voeux Road, Central Tel: 245005
India	Gardners International	158, Golf Links, New Delhi-3 Tel: 43350
	Union Radio & Appliances (P) Ltd.	K-3, South Extension Part 1, New Delhi-49 Tel: 622607
	Xaca (India) Private Ltd.	P.O. Box 2154, Bombay-2 Tel: 319907
Indonesia	*P.T. Amateur Photo Stores Indonesia Djaya Ltd.	Djalan Gadjah Mada No. 90A Tingkat 111 Djakarta P.O. Box 2419 GMB Tel: 270477
Khmere Republic	Cambodia Motor & Electric Corp.	278, Vithei Charles de Gaulle Phom Penh, P.O. Box 783 Tel: 25016
Korea	Korean Scientific Promotion Co., Ltd.	130, Chongro 3-ka, Chongro-ku, Hwa-young bldg. Seoul Tel: 25-5404, 6752, 8368
Laos	Ets Ngo Quoc Khanh	85, Khoun Boulom Vientiane P.O. Box 107 Tel: 3104
Malaysia	Amateur Photo Stores (M) Sdn. Bhd.	54, Jalan Raja Laut, Kuala Lumpur Tel: 84567, 21747 84, Bishop Street, Penang Tel: 23983
Okinawa	*Akai Okinawa Co., Ltd.	1535-1, Oyama, Ginowan-City, Tel: 7-4388, 3293
Philippines	Sigma-Mariwasa, Inc.	717 Aurora Blvd., Quezon City. Tel: 70-18-10/19
Singapore	*Amature Photo Stores (PTE) Ltd.  (Showroom & Service Dept.)	Room 503, Chinese Chamber of Commerce Bldg., 47, Hill Street, Singapore 6 Tel: 363722 69 Victoria Street, Singapore 7 Tel: 363711
Taiwan	*Te Ming Trading Co., Ltd. (Showroom & Service Dept.)  (Showroom & Store)	26, Kang Ding Road, Taipei Tel: 311-6331 12, 2 Sec., Wu Chang St., Taipei Tel: 330519
Thailand	G. Simon Radio Co., Ltd.	30, Patpong Ave., Suriwong, Bangkok Tel: 30991/3
T.P.N.G.	S.O. Svensson (N.G.) Ltd.	P.O. Box 705, Port Moresby Tel: 2275
Vietnam	Barclay and Company, Inc. (Ba Loi Cong Ty)	456, Hong Thap Tu, Saigon P.O. Box R-2 Tel: 99611, 92251

## OCEANIA

Australia N.S.W.	Akai Australia Pty., Ltd.	276 Castlereagh St., Sydney N.S.W. 2000 Tel: 61-9881
Victoria	*Akai Australia Pty., Ltd.	146 Burwood Rd., Hawthorn Tel: 81-0574
Queensland	*Akai Australia Pty., Ltd.	39 Montagne Rd., West End, Brisbane Tel: 4-0171
S. Australia	*Akai Australia Pty., Ltd.	8 Arthur St., Unley Tel: 74-1162
W. Australia	*Akai Australia Pty., Ltd.	11-13 B Belmont Avenue, Belmont Tel: 65-5833
A.C.T.	Sonny Cohen & Son	20 Isa Street, Gyshwick Tel: 9-1551
New Zealand	*Pye Ltd, Consumer Product Division	110 Mt. Eden Rd., Mt. Eden, Auckland Tel: 686-437
Fiji Islands	*Burns Philip (South Sea) Co., Ltd.	P.O. Box 355, Suva, Tel: 22661 P.O. Box 61, Lautoka, Tel: 60777
Samoa Islands	Burns Philip (Scuth Sea) Co., Ltd.	P.O. Box 1057, Pago Pago, Americant Samoa Apia, Western Samoa
Norfolk Island	Burns Philip (Norfolk Island) Co., Ltd.  Burns Philip (New Hebrides) Co., Ltd.	P.O. Box 21, Norfolk Island  Port Vila
New Caledonia	Ménard Frères	P.O. Box 123, Noumea Tel: 22-41
Tahiti	Etablissements Comimpex	P.O. Box 200, Papeete Tel: 477
British Solomon	Security Electrical Co., Ltd.	P.O. Box 174, Honiara Tel: 881
Republic of Nauru	Nauru Co-operative Society	Nauru Island
Cook Islands	N.T. NAPA (AVARUA) Ltd.	P.O. Box 12 & 124, Rarotonga
Mariana Island	J.C. Tenorio Enterprises	P.O. Box 137, Saipan Tel: 6444/8
Timor	Sang Tai Hoo	Sang Tai Building, Dili Tel: 2365

Note: Stations marked "\*" are equipped to repair V.T.R. models.

