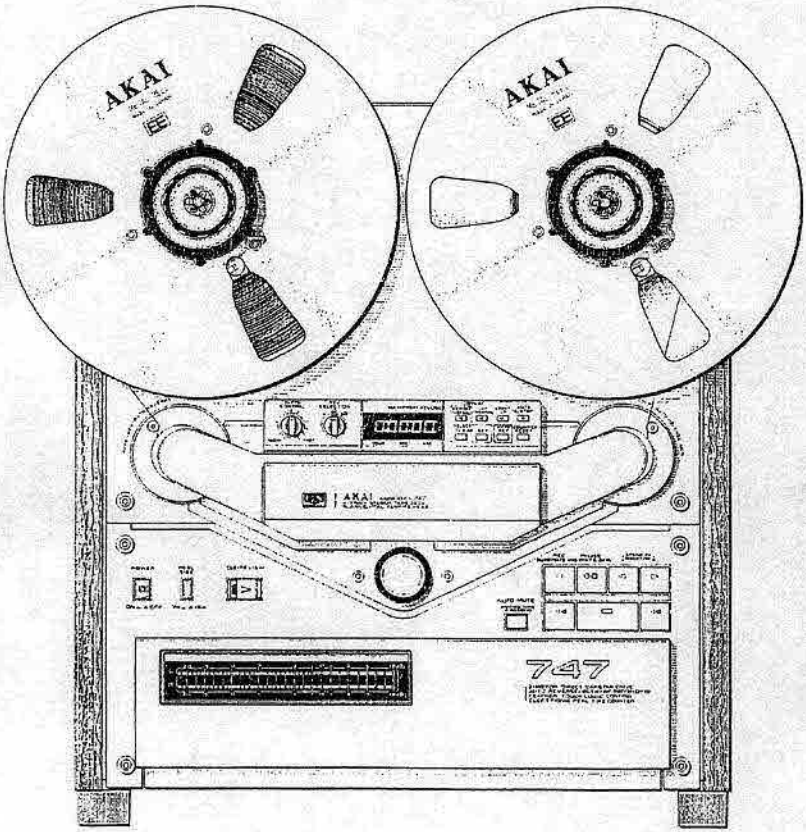
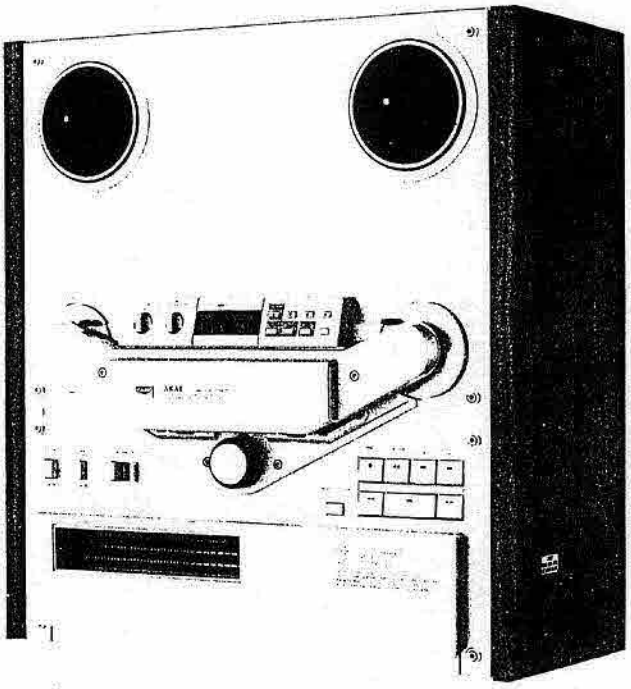
AKAI SERVICE MANUAL



STEREO TAPE DECK

MODEL GX-747



STEREO TAPE DECK

MODEL GX-747

THIS MANUAL IS APPLICABLE TO BOTH SILVER AND BLACK PANEL MODELS

SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I . SPECIFICATIONS

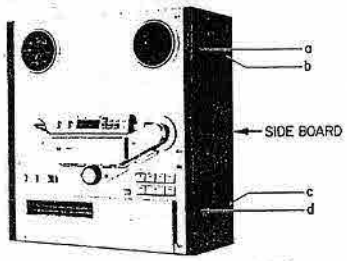
TRACK SYSTEM	4 Track 2 Channel Stereo System
REEL CAPACITY	Up to 10" reel
HEADS	GX head for Recording x 2 GX head for Playback x 2 Erase head x 2
MOTORS	AC Servo motor for capstan drive x 1 AC Eddy current motor for reel drive x 2
TAPE SPEED	19 cm/s ± 0.8% (7-1/2 ips.) 9.5 cm/s ± 1.0% (3-3/4 ips.)
WOW & FLUTTER	Less than 0.03% WRMS, 0.07% DIN 45500 at 19 cm/s Less than 0.04% WRMS, 0.09% DIN 45500 at 9.5 cm/s
TAPE WINDING TIME	75 sec. using 360 m (1,200 ft.) Tape
FREQUENCY RESPONSE	25 to 33,000 Hz ± 3 dB at 19 cm/s 25 to 26,000 Hz ± 3 dB (0 VU) 25 to 25,000 Hz ± 3 dB at 9.5 cm/s 25 to 15,000 Hz ± 3 dB (0 VU)
SIGNAL TO NOISE RATIO	Better than 65 dB at 19 cm/s DIN 45500
HARMONIC DISTORTION	Less than 0.4% at 19 cm/s
INPUT	MIC: 0.25 mV (input impedance 5.0 kohms) Required microphone impedance: 600 ohms Line: 70 mV (input impedance 100 kohms)
OUTPUT	Line: 0.775 V at 0 VU Required load impedance: more than 20 kohms Phone: 100 mV/8 ohms at 0 VU
DIN	Input: 2 mV (input impedance 10 kohms) Output: 0.3 V Required load impedance: more than 20 khoms
POWER REQUIREMENTS	100 V, 50/60 Hz for Japan 120 V, 60 Hz for USA & Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK & Australia 110 V/120 V/220 V/240 V, 50/60 Hz switchable for the other countries.
POWER CONSUMPTION	JPN 80W CSA, AAL 140W U/T 140W
DIMENSIONS	440 (W) x 483 (H) x 256 (D) mm (17.3 x 19.0 x 10.1 inches)
WEIGHT	21 kg (46.4 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

1



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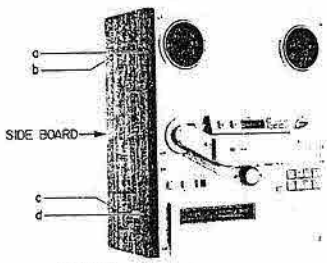

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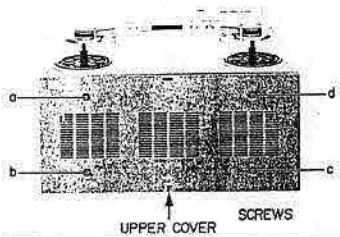

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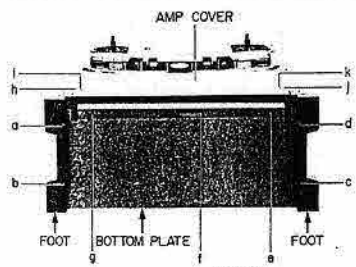

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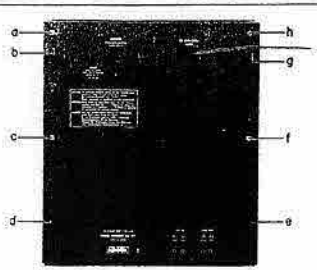

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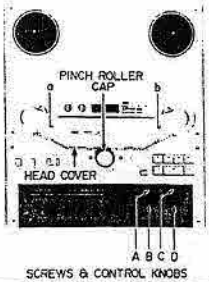

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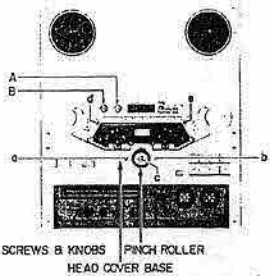

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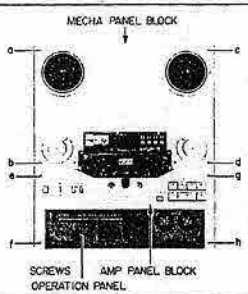

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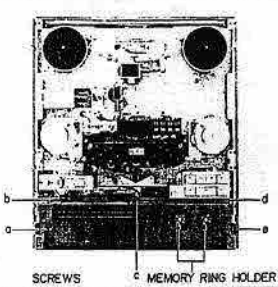

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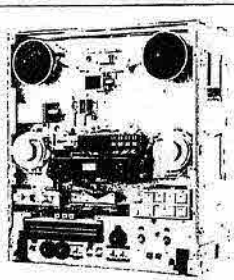

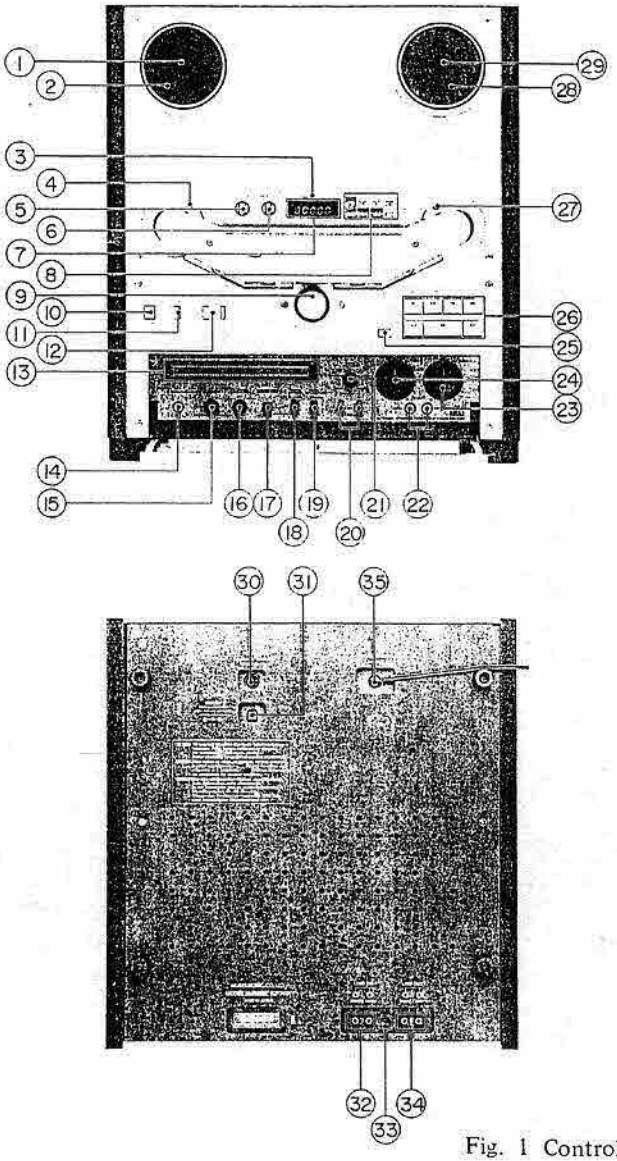

Fig. 1 Controls

1. BUILT-IN REEL RETAINER
2. SUPPLY REEL TABLE
3. MEMORY REVERSE INDICATOR
4. LEFT TENSION ARM (SENSING PIN)
5. PITCH CONTROL
6. REVERSE SELECTOR SWITCH
7. ELECTRONIC DIGITAL REAL TIME COUNTER
8. AUTO TIME COUNTER SYSTEM
9. PINCH ROLLER
10. POWER SWITCH
11. REEL SIZE SELECTOR
12. CUE/REVIEW LEVER
13. LED BAR METERS (JPN MODEL VU METERS)
14. HEADPHONE JACK
15. OUTPUT LEVEL CONTROL
16. TIMER START SWITCH
17. MONITOR SELECTOR
18. TAPE SPEED SELECTOR
19. TAPE SELECTOR SWITCH
20. TRACK SELECTOR SWITCHES
21. BIAS ADJUSTMENT VOLUME
22. MICROPHONE JACKS
23. LINE INPUT CONTROLS
24. MICROPHONE INPUT CONTROLS
25. AUTO MUTE BUTTON
26. OPERATING BUTTONS
27. RIGHT TENSION ARM (SENSING PIN)
28. TAKE-UP REEL TABLE
29. BUILT-IN REEL TABLE
30. REMOTE CONTROL JACK
31. AC ADAPTER JACK
32. LINE IN JACKS
33. DIN JACK (Some Models do not have this facility)
34. LINE OUT JACKS
35. POWER CORD

IV. PRINCIPAL PARTS LOCATION

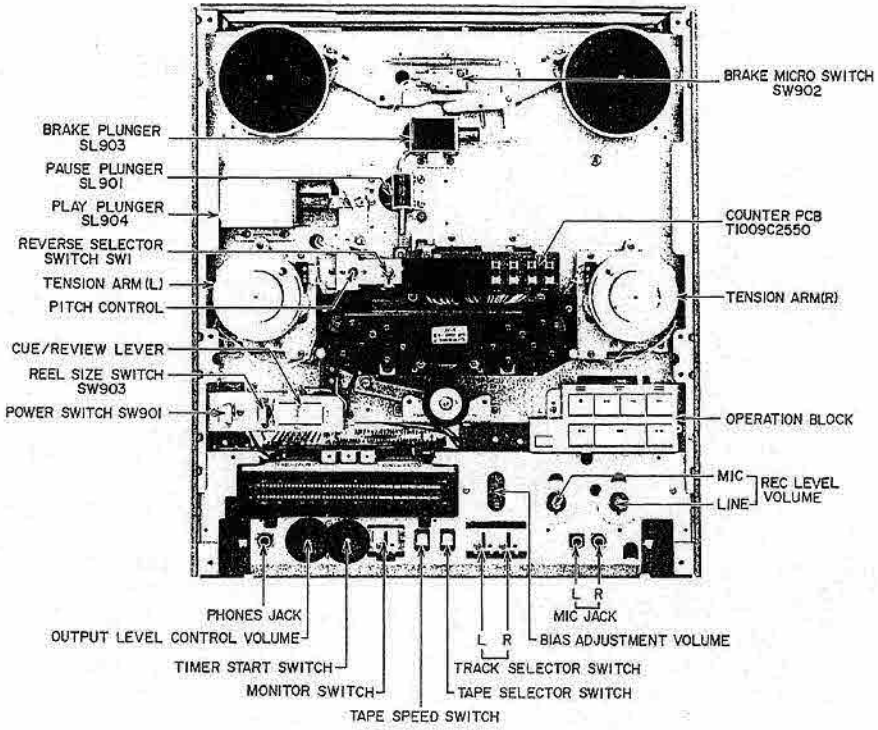

Fig. 2 Front View

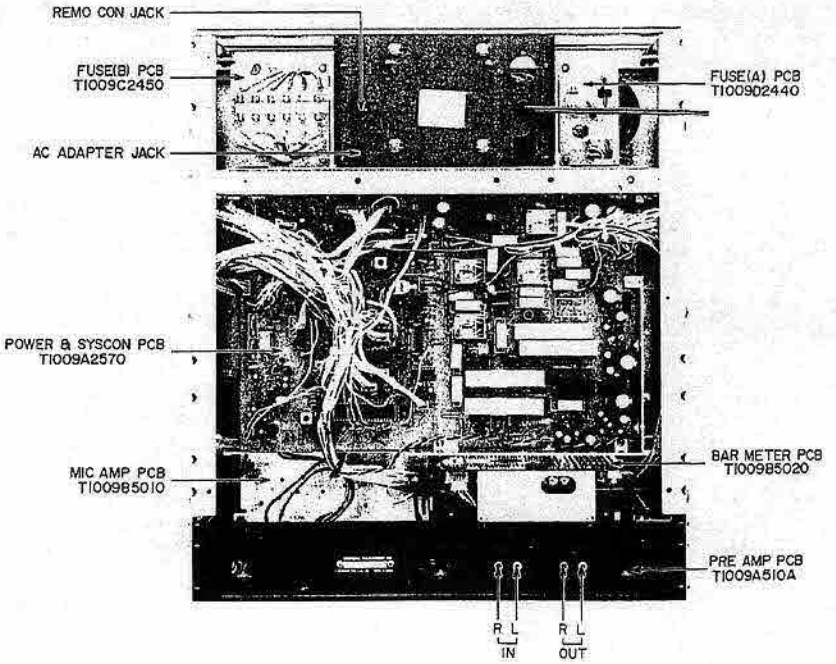

Fig. 3 Rear View

V. VOLTAGE AND CYCLE CONVERSION

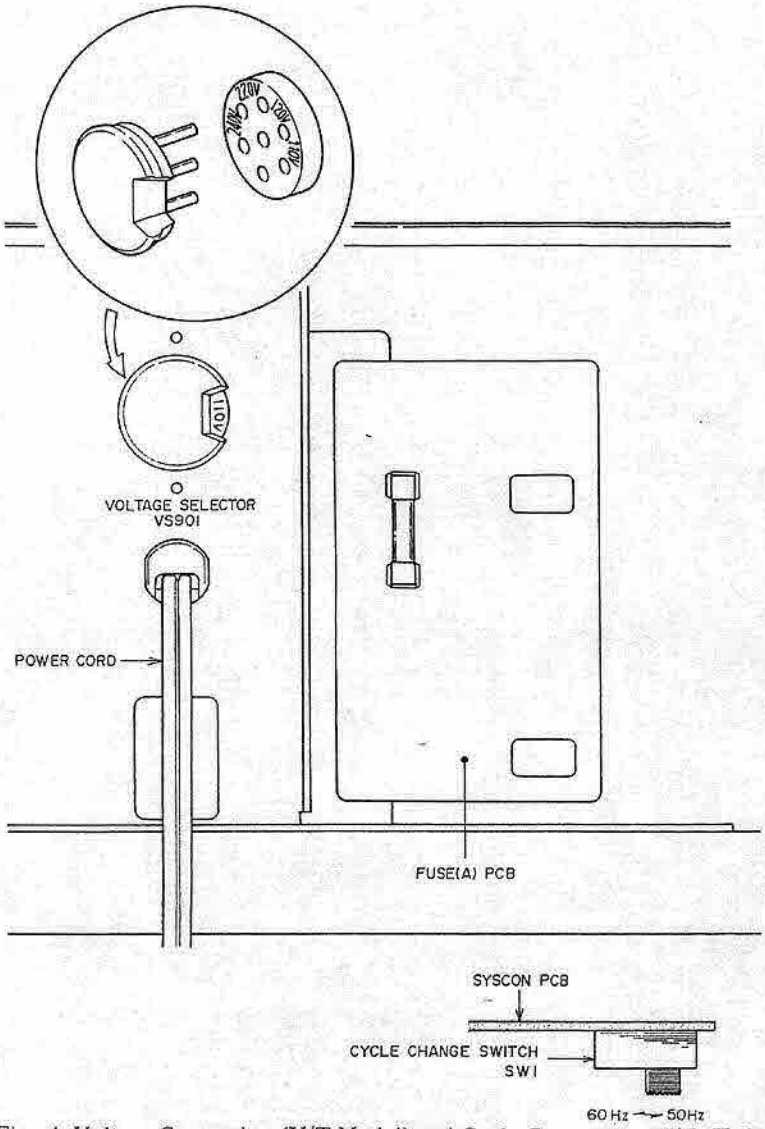

Fig. 4 Voltage Conversion (U/T Model) and Cycle Conversion (U/T, JPN Model)

1. VOLTAGE CONVERSION (Refer to Fig. 4)

1) JPN Model (100V, 50/60 Hz)
CSA, AAL Model (120V, 60 Hz)
CEE Model (220V, 50 Hz)
UK, SAA Model (240V, 50 Hz)
Voltage can not be switched.

2) U/T Model (110V/120V/220V/240V, 50/60 Hz)
Remove the back board and look for the voltage selector on the upper right portion of the machine. Change the position of voltage selector plugs so that the voltage to be used coincides with the voltage shown through the opening of voltage selector plug. Fuse change is not necessary.

2. CYCLE CONVERSION (Refer to Fig. 4)

Cycle can be converted only in U/T, JPN Model.
Remove the back board and select the position of switch located in the recess at right portion of Syscon P.C Board to correspond to the frequency of power to be used. Move the switch to the right for 50 Hz and to the left for the 60 Hz.