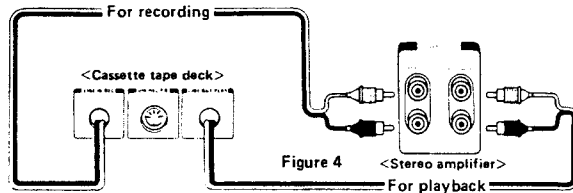


Connections

■ Connecting to stereo amplifier

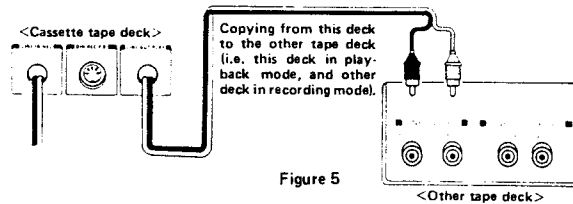


- Connect the connecting cables to the amplifier terminals as shown in the following diagram. Note that the red plugs are used for the right channel.

Note:

- Check that the amplifier power switch is off before making any connections.
- Insert all plugs firmly and securely. Loose connections can result in noise and other failures.

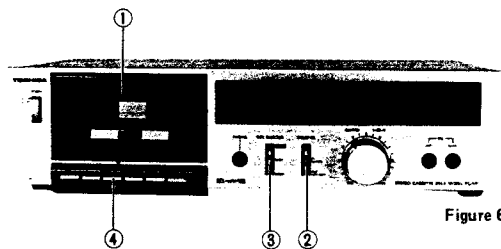
■ Connecting to another tape deck (direct)



- When using another tape deck for dubbing (copying) and editing purposes, connect directly to the rear panel terminals of the other deck as shown in the following diagram. Note, however, that with stereo amplifiers equipped with dubbing facilities, connect via the amplifier according to the amplifier Owner's Manual.

Playback

Operating procedure



- 1 Insert a recorded cassette tape into the cassette compartment.
- 2 Set the Dolby NR switch to <IN> for Dolby recorded tapes. Set to the <OUT> position for the tapes recorded without Dolby NR.
- 3 Also set the [TAPE SELECTOR] switch according to the type of tape. (Refer to Table 1.)
- 4 Press the [▶] Play key.

Table 1

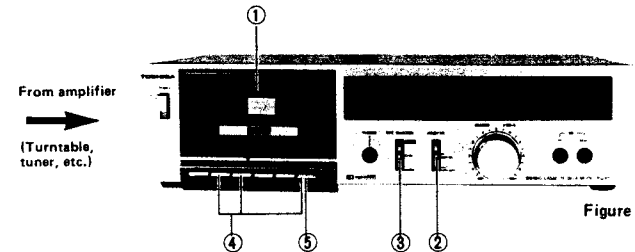
Type of Tape	Position
Metal tape	METAL
Chrome position tape	CrO2
Normal tape	NORM

- Insert the tape with the exposed tape downwards, and the side to be played facing forwards.
- Note that playback will not start if the [▶] Play key is pressed while the [||] Pause key is still depressed.
- The full auto-stop mechanism will stop the tape when the end of the tape is reached during recording, playback, fast forward winding and rewinding. Although the keys will be automatically released, the power will remain on. To switch the power off, press the [POWER] switch.

Recording

■ Recording from phonograph records or tuner

Operating procedure



- 1 Insert a tape which still has its erasure prevention tabs.
- 2 Set the [DOLBY NR] switch to the <IN> position for Dolby NR recording. Set to the <OUT> position to make recordings without Dolby NR.
- 3 Set the [TAPE SELECTOR] switch to the position corresponding to the type of tape being used. (See Table 1 above.)

- 4 To place the deck record standby mode, press the [||] Pause key, then press the [●] Record and [▶] Play keys. Adjust to the correct recording level on the level meters.
- 5 Press the [||] Pause key once again to start recording.

■ Live Stereo Recording with Microphones

For live recordings with microphones, plug the microphones (optional) into the [MIC] jacks, then start recording as explained in steps ① to ⑤.

■ Setting the Recording Level

The correct recording level depends considerably on the type of tape used and the programme material being recorded. The correct tape and recording level should be selected to give the best frequency response yet the lowest noise level.

For the following three tape types, the [RECORD] control should be set so that the peak level meters light at the loudest passage of that programme selection:

Table 2

Type of Tape	Peak level meters
Metal tape	+3 dB or +5 dB
Chrome position tape	0 dB or +3 dB
Normal tape	-3 dB or 0 dB

The high-frequency response, in particular, depends considerably on the type of tape and the recording level. Metal tape, for instance, provides better high-frequency response than normal tape, thus giving much better reproduction of higher pitched instruments and voices. This is illustrated in Fig. 8.

For the same type tape, there is better higher-frequency response at lower recording as shown in Fig. 9.

Therefore to record programme material which contains considerable high-frequency sound, set the recording level somewhat lower. The level meter on this deck is an electronic "digital" indicator, which displays the peaks of the signal, in red over 0 dB and in green below. This allows very precise setting of the recording level.

The Dolby mark and the adres mark indicate the Dolby and adres calibration positions, respectively. The adres mark is for use when the tape deck is connected to an adres unit. The adres system is Toshiba's new noise reduction and dynamic range expansion system.

ADJUSTMENT PROCEDURES

No.	Description	Nominal Specs	Test Tape	Volume Control REC	Switch Position TAPE DOLBY	Adjustment Points	Test Points	Test Freq. ATT	Remarks
1	Head Azimuth Adjustment	MAX.	MTT-111		NOR OUT	Head Azimuth Adjustment Screw	LINE OUT		MTT-114, at 10 kHz. Adjust for maximum output. (After adjustment, apply a lock paint on the screw)
2	Tape Speed Measurement	3000 ± 30 Hz	MTT-111		NOR OUT	Semi-fixed resistor in the Motor	LINE OUT		Adjust for 3000 ± 15 Hz unless specified value is obtained at tape end.
3	Playback Sensitivity Adjustment	580 ± 10mV	MTT-150		NOR OUT	R505 R506	TP103 TP104		MTT-150, at 400 Hz. Adjust for 580mV at test point in play mode.
4	Playback Frequency Response Measurement (Normal)	+3 dB -1 dB	MTT-215C		NOR OUT		LINE OUT		Read level difference at 10 kHz to 315 Hz.
5	Playback Frequency Response Measurement (Chromé)	-4 ± 2 dB	MTT-215C		NOR OUT		LINE OUT		Change for 10 kHz Normal tape
6	Output Noise Level	Under 3.0mV	Blank Tape		NOR OUT		LINE OUT		
7	Bias Freq. Adjustment	85 ± 0.5 kHz	Blank Tape		NOR OUT	L403	TP109		Adjust bias OSC coil for 85 kHz in record mode.
8	Line Input Level Adjustment	600 ± 10mV	Blank Tape	Adjustment	NOR OUT	REC Volume-L REC Volume-R	LINE OUT		Adjust REC-VR (L/R) for line output 600mV.
9	Meter Adjustment	Meter +4 dB		Adjustment	NOR OUT	R533 R534	LED Meter		Adjust for 2nd red LED from the left to begin lighting.
10	Record Playback Frequency Response Adjustment	0 + 2 dB -0	AC-512	Adjustment	CrO ₂ OUT	R535 R536	LINE OUT		Adjust bias current for 0 ~ +2 dB at 10 kHz to 400 Hz.
11	Record/Playback Sensitivity Adjustment	0 ± 1 dB	AC-512	Adjustment	CrO ₂ OUT	R527 R528	LINE OUT		Adjust output level for ±1 dB to input level.

Power Supply TE: 220V TU, AY: 240V
 • Input: 0 dB = 1V rms • LINE IN (Input Impedance): 600 ohm • LINE OUT (Load Impedance): 47K ohm
 • Test Point Load Impedance: No Load

TEST EQUIPMENTS

1. VTVM (Vacuum Tube Voltmeter)
2. Signal Generator
3. Resistance Attenuator
4. Screwdriver
5. Test Tapes:
MTT-114 (10 kHz)
MTT-150 (400 Hz)
AC-511 (CHROME TAPE)

Adjust for Maximum Output.

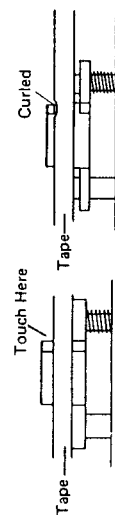


Figure 27

RECORD/PLAYBACK HEAD ADJUSTMENT

ADJUSTMENT

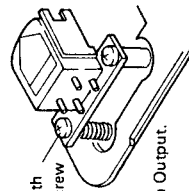
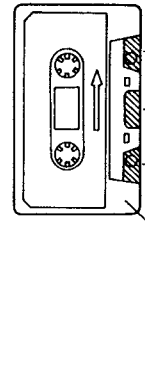


Figure 26

ERASE HEAD HEIGHT ADJUSTMENT

1. Temporally mount the erase head so that it will be even by eye measurement.
2. Set in PLAY position with setting a mirror cassette tape, MC-09C.
3. Adjust the height adjusting screw so that the upper edge of the tape will touch at the upper tape guide of the erase head. See Figure 23.
4. Confirm whether the upper edge of the tape is not curled.
5. Paint the adjusting screw with lock paint.

P.S. When the mirror cassette is not available, please re-model a normal tape, type C-90 as shown below.



C-90 Cassette Tape
 The oblique lined part must be taken off.

Figure 28

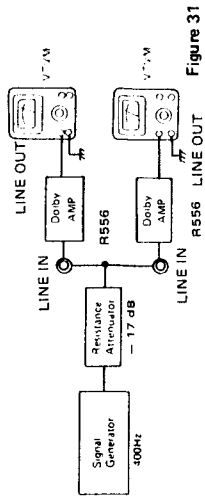


Figure 31

(Rec/Play Sensitivity Adjustment)

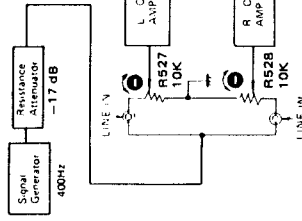


Figure 32

(Rec/Play Frequency Response Adjustment)

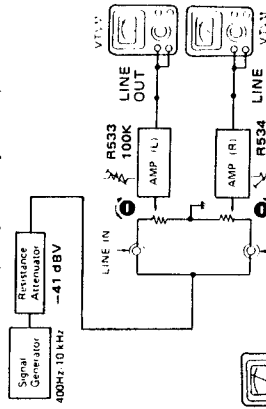


Figure 33

(Playback Sensitivity Adjustment)

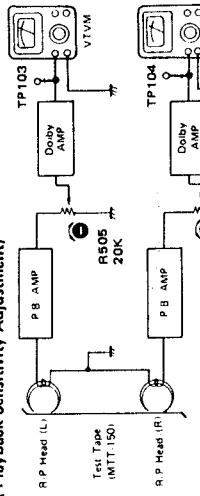


Figure 29

(Bias Freq. Adjustment)

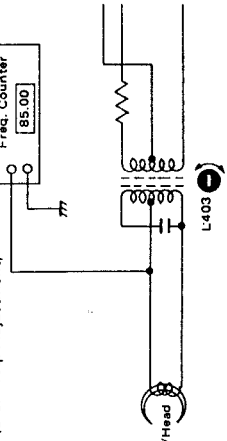


Figure 30