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Module V

Audio Aids

Unit 5

Operating Tape Recorders

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Instructional Objectives:

1. Identify the operating controls of a cassette recorder (National Panasonic).
2. Identify the parts and controls of a reel to reel tape deck (Sony).
3. Arrange in the serial order the operations required to operate .
  - a) Stereo cassette recorder (National Panasonic)
  - b) reel to reel tape deck (Sony).
4. Operate a stereo cassette recorder ( National Panasonic).
5. Operate a reel to reel stereo deck ( Sony).

Module V	Audio Aids
Unit 5	Operating Tape Recorders

So far we have been discussing about the generalised tape recorders, principles of their working and how you go about in preparing narrations and precautions in recording and choosing microphones, tapes and other items.

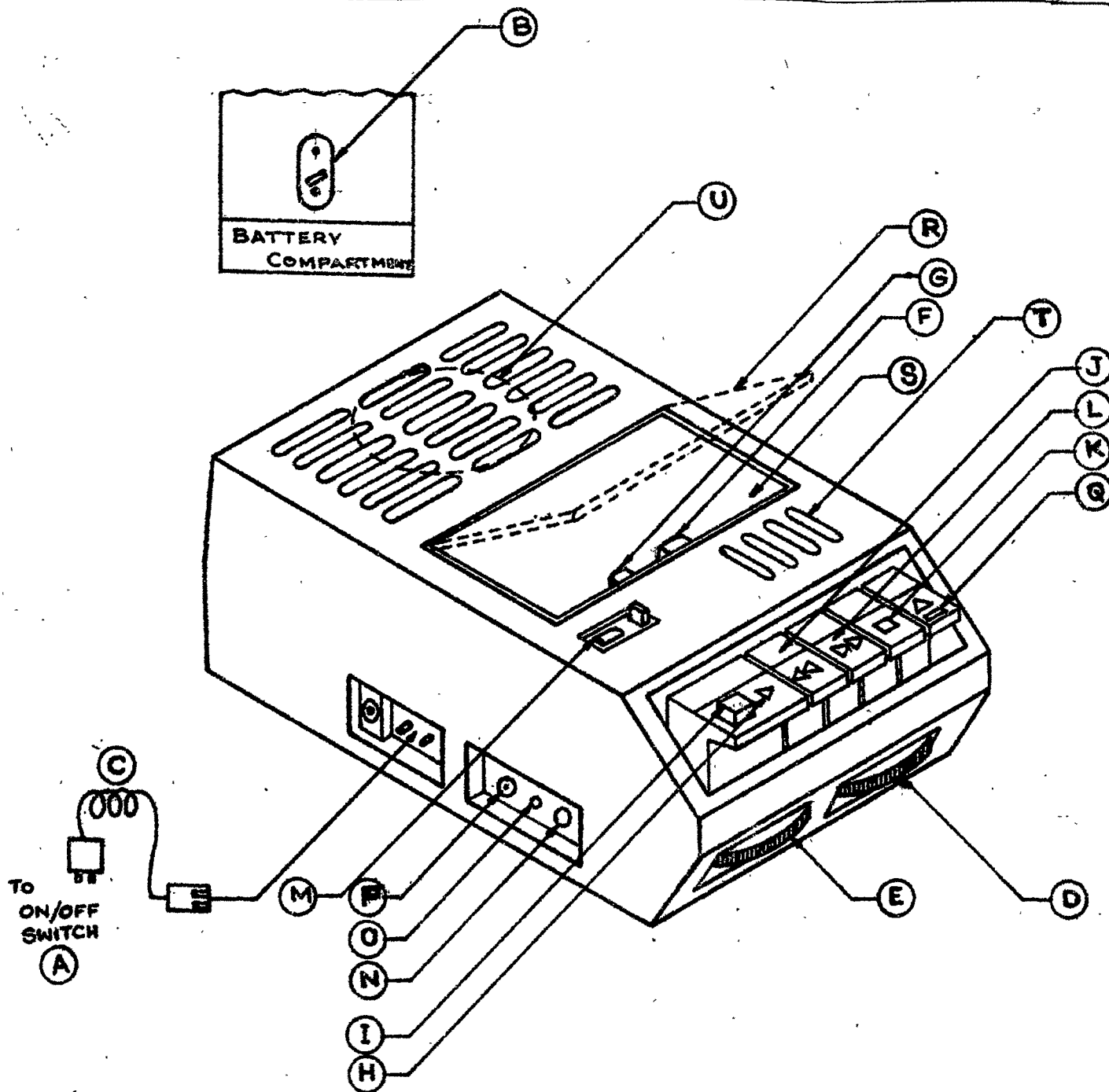
We will now take up specific audio cassette and reel-to-reel tape recorders, so that you can acquaint with the principal parts and how to use them. Operation of tape recorder is very simple and you should with ease do the playback of any tape and also record on the tapes.

As you have been doing in other performance items in Module III and IV, here again it is absolutely essential that you should ensure that you know all the parts. Before operating the recorders, you should fill in the checklist for performance for the particular recorder, which is given in a jumbled form, by writing the order of performance of each time, and hand over to your instructor. If in case you encounter any difficulty, you are strongly advised to report at once to your Training Officer and refrain from meddling with it for doing repairs. We do not expect you to do any repairs, at this stage. Repairs are beyond the scope of this course.

We have with us the following audio cassette tape recorders.

1. National
2. Bush
3. Akai
4. Murphy
5. Sony

We expect you to operate the National or Bush, which is simple and compact. But those who want to take up others, may do so, with the permission of the Training Officer. After going through the drawing and to locate parts of the tape recorder,



- |                    |                |                        |
|--------------------|----------------|------------------------|
| A-To On/Off switch | H-Forward/Play | O-Remote               |
| B-Voltage selector | I-Record       | P-Monitor (ear phone)  |
| C-Power cord       | J-Rewind       | Q-Eject                |
| D-Volume           | K-Stop         | R-Tape drum            |
| E-Tone             | L-Fast Forward | S-Cassette Compartment |
| F-Record head      | M-Index        | T-Condenser Mike       |
| G-Erase head       | N-Mike input   | U-Speaker              |

You should appraise your Training Officer with the performance check list completion in the order and take up operation,. You will have to take a test, after practice on the recorder.

#### CONTROLS OF AUDIO CASSETTE RECORDER:

In the drawing on separate page that follows the parts of audio cassette recorder are given:

#### POWER CONTROL:

1. You have the ON/OFF switch.
2. Some machines have a power source control switch to select battery or AC source.
3. With AC source, there will be a power cord.

#### SOUND CONTROLS:

1. Volume control & tone control normally control the sound only. Volume control functions both during recording and playback, while tone control functions while playing only.
2. A recording level indicator provided gives you the level of recording.

#### RECORD, PLAYBACK UNITS:

1. The record head magnetises the tape to record programme
2. Reacts to the magnetism to play the programme.
3. The erase head, functioning only when the recorder is recording, clears previously recorded programme material from the tape.

#### TAPE TRAVEL CONTROLS:

1. Forward or Play button to play the tape when pressed
2. Record button, when pressed with play button records programme.
3. Rewind button moves the tape in the reverse position to rewind it.
4. Stop button, when pressed, stops the movement of the tape and hence nothing will be heard.
5. Fast forward control, when provided permits skipping the programme material faster than play mode.

6. A pause control, when pressed stops tape travel and when released allows the programme to continue as before.
7. An index counter aids in locating programme segments on the tape.

#### INPUT AND OUTPUT JACKS:

1. A microphone jack is for microphone input.
2. An auxiliary jack permit recording from other sources like radio, phone or other recorders.
3. An output jack connects the recorder to an earphone or speaker or to another recorder for duplicating tapes.

#### OTHER PARTS:

1. Eject button when pressed pops up the
2. Cassette compartment door to insert
3. the cassette and remove when not required
4. A condenser microphone for recording without an external mike.
5. A built in speaker.

#### REEL-TO-REEL STEREO TAPE RECORDER:

We have with us Sony Reel-to-reel tape deck. You may proceed in the same manner with this also, as you have done with the audio cassette recorder.

Controls and parts of the Stereo tape deck Sony TC 366 are given in the picture, on separate page attached.

1. A is the voltage selector to set your recorder to 220 or other available voltage.
2. B is the power cord to connect to the power source
3. C is the supply reel and D is the tape up reel.
4. E and F are the reel spindle.
5. G is the power switch and above the switch is the lamp H/
6. I is the tape selector, normal or special.
7. J is the speed selector. You have three speeds- 19, 9.5 and 4.8 cm/Sec.
8. K is the tape counter.

9. L is the instant stop lever or the pause control.
10. M is the noise suppressor. It reduces the external hum-noises- recorded.
11. N is the headphone jack.
12.  $O_1$  &  $O_2$  - two Microphone inputs for stereo recording.
13.  $P_1$  &  $P_2$  - two record levers for L and R (left and right channels)
14.  $Q_1$  &  $Q_2$  - two level meters for both L and R channels.
15. R - two reel caps for the reels.
16. S - two auxiliary inputs for both channels.
17. T - Ground terminal.
18. U - five pin record/playback connector.
19. V - two line outputs - connection to amplifier.
20. W - position selector for stop/Forward or Play/Fast Forward & Rewinding.
21.  $X_1$  &  $X_2$  - Monitor Left & Right.
22.  $Y_1$  &  $Y_2$  - Record volume - auxiliary - Left & Right.
23.  $Z_1$  &  $Z_2$  - Record volume - MIC -Left and Right.

#### CONNECTIONS:

- |                           |     |  |
|---------------------------|-----|--|
| Microphone inputs         | : O | : These jacks will accept low impedance microphone.  |
| Auxiliary inputs          | : S | : Connect any external sound source which has an output level of 0.06 volt and input impedance 100 K ohms. |
| Line Outputs              | : V | : This can be connected to stereo amplifier or stereo receiver with 100 K ohms impedance.                  |
| Record/Playback Connector | : U | : To record through this, unplug other input sources. Disconnect microphone inputs also.                   |
| Headphone Jack            | : N | : This output accepts a stereo headphone of 8 Ohms.  |
| Ground Terminal           | : T | : To reduce hum noise, connect this to the ground terminal of the connected amplifier or receiver.         |

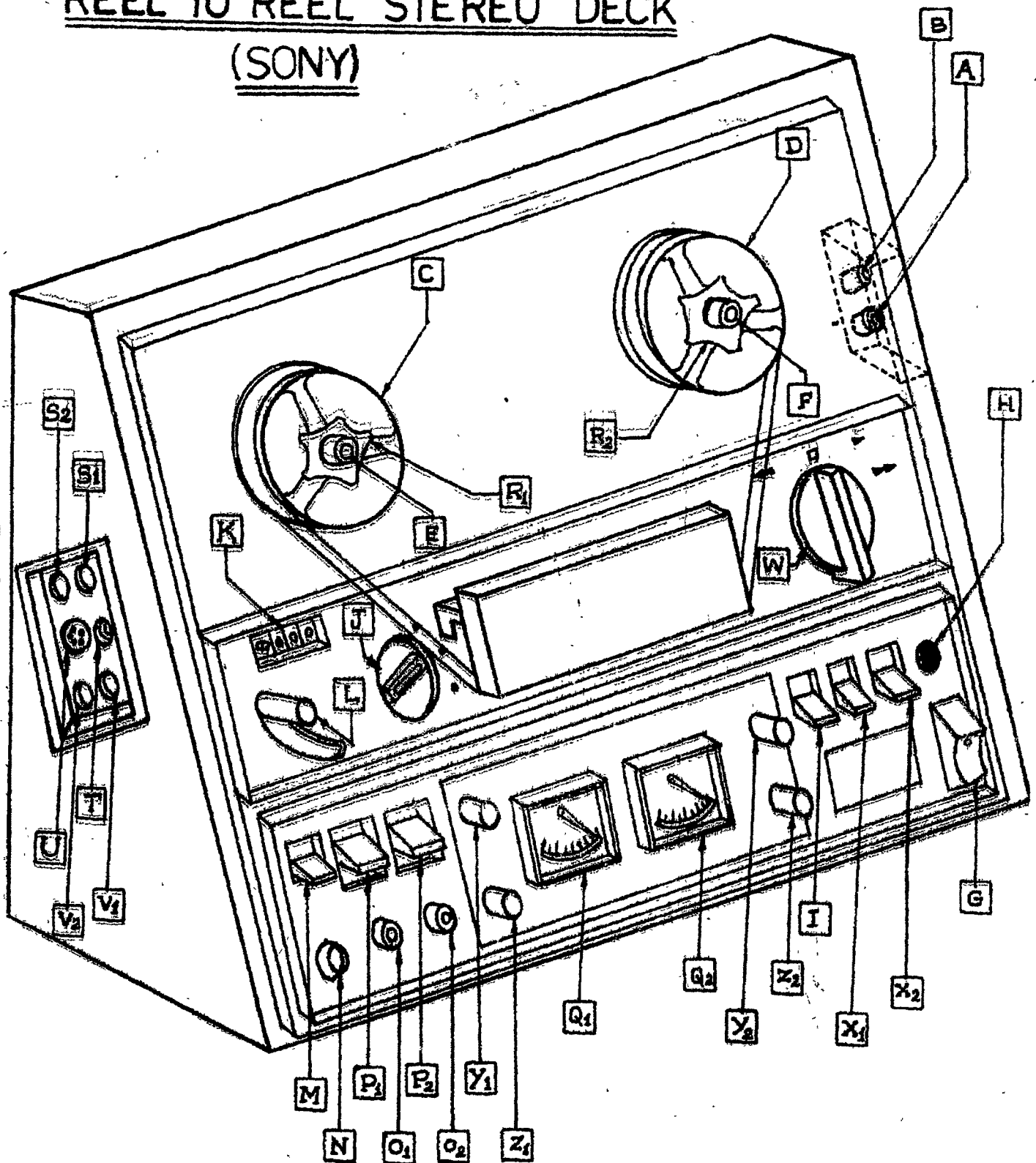
Now to operate the stereo tape recorder, follow the instructions given in the performance check list that follows. You have also been informed about kinds of tapes and splicing them. Now you may, while operating a reel-to-reel tape recorder, end up in breaking a tape. You must be able to mend it. We have given you a demonstration of how to use an audio cassette recorder, the reel-to-reel recorder and how to splice the tape. You are given performance check lists also, which you must keep in front of you for the demonstration.

You may fillup the jumbled list of the performance procedure and hand over to your instructor to ensure that you are thorough with the procedure.

Fix up time for practicals with your Training Officer, Audio Visual Workshop.

# REEL TO REEL STEREO DECK

(SONY)





PARTS OF REEL-TO-REEL STEREO DECK (SONY) TC-366

1. A. VOLTAGE SELECTOR
2. B. POWER CORD CONNECTION
3. C. SUPPLY REEL
4. D. TAKE UP REEL
5. E. SUPPLY REEL SPINDLE
6. F. TAKE UP REEL SPINDLE
7. G. POWER SWITCH
8. H. POWER INDICATOR LAMP
9. I. TAPE SELECTOR
10. J. SPEED SELECTOR
11. K. TAPE COUNTER
12. L. INSTANT STOP LEVER
13. M. NOISE SUPPRESSOR
14. N. HEAD PHONE JACK
15.  $O_1$  &  $O_2$  MICROPHONE INPUTS FOR STEREO RECORDING (L & R)
16.  $P_1$  &  $P_2$  RECORD LEVERS ( L & R CHANNELS)
17.  $Q_1$  &  $Q_2$  LEVEL METERS (L & R CHANNELS)
18.  $R_1$  &  $R_2$  SUPPLY AND TAKEUP REEL CAPS
19.  $S_1$  &  $S_2$  AUXILIARY INPUTS (L & R CHANNELS)
20. T. GROUND TERMINAL
21. U FIVE PIN CONNECTOR (RECORD/PLAY BACK)
22.  $V_1$  &  $V_2$  LINE OUTPUTS ( L & R CHANNELS)
23. W POSITION SELECTOR FOR STOP/FORWARD OR PLAY/FAST FORWARD/REWINDING.
24.  $X_1$  &  $X_2$  MONITOR ( L & R CHANNELS)
25.  $Y_1$  &  $Y_2$  RECORD VOLUME- AUXILIARY (L & R CHANNELS)
26.  $Z_1$  &  $Z_2$  RECORD VOLUME- MICROPHONE ( L & R CHANNELS)

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Module V

Audio Aids

Unit 5

Operating tape recorders.

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Time: 10 mts.

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Practical Exercise No: 48, Operating audio cassette tape recorder.

A. PROBLEM

Use the National Panasonic audio cassette recorder, Record your voice for an instructional sequence, and play back the same.

1. Setting up
2. Operating
3. Recording
4. Play back
5. Packing

Handover the jumbled list of the performance check list, after filling in the correct sequence. Follow the instructions given on the performance checklist. Obtain this before starting.

B. EQUIPMENT & MATERIALS

1. Audio cassette recorder.
2. Microphone.
3. Cassette tape.
4. Script for recording.

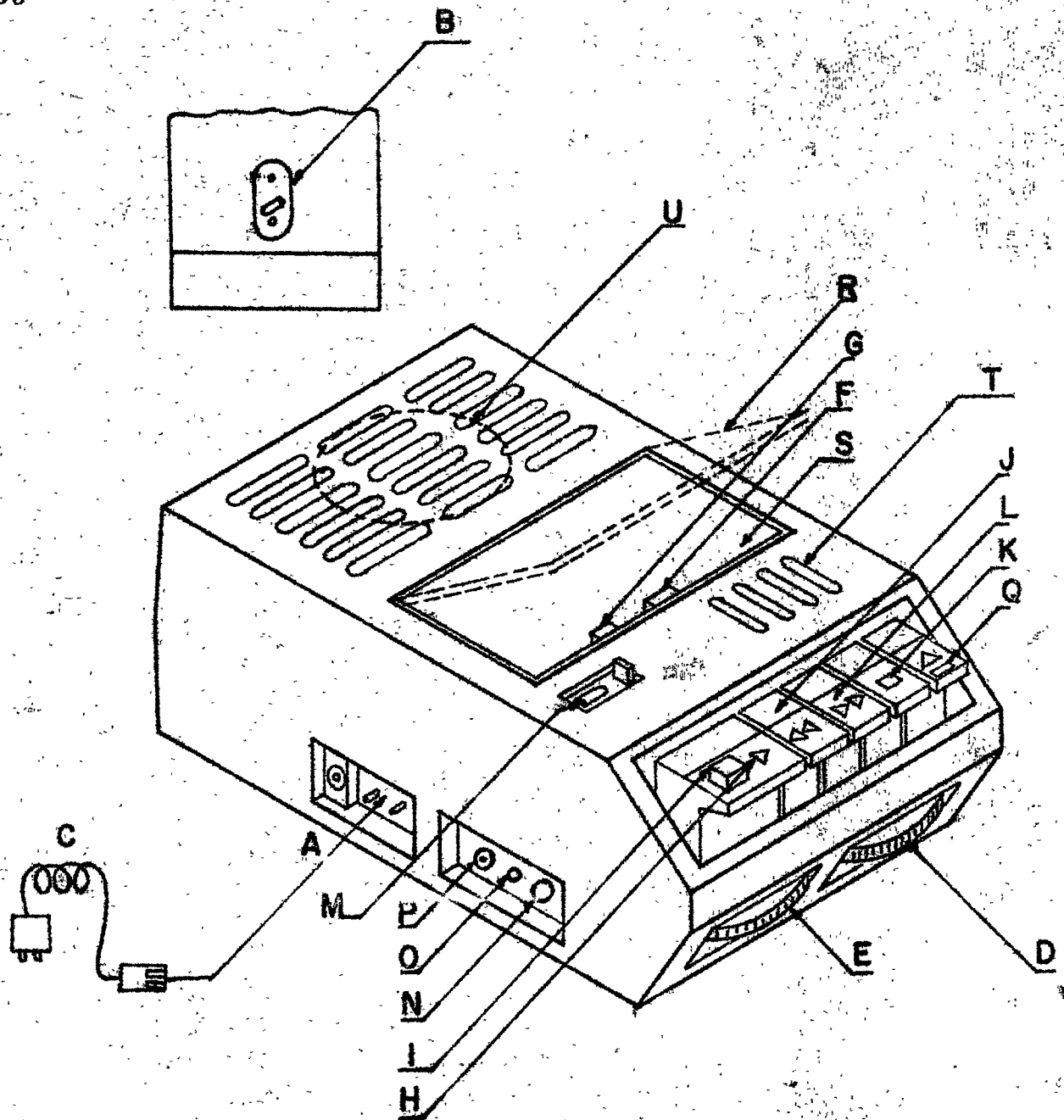
C. POINTS FOR GRADING

1. Setting up.
2. Correct operation procedure.
3. Proper recording.
4. Playback without fault.
5. Packing up.

Time is the essence of the exercise, and it must be strictly adhered to.

D. Deadline for the project: June 15th.

M V/5/Pr.Ex.48



A. To on/off switch  
 B. Voltage selector  
 C. Power cord  
 D. Volume  
 E. Tone  
 F. Record head  
 G. Erase head

H. Forward/play  
 I. Record  
 J. Rewind  
 K. Stop  
 L. Fast forward  
 M. Index  
 N. Mike input

O. Remote  
 P. Monitor (ear phone)  
 Q. Eject  
 R. Tape drum  
 S. Cassette compartment  
 T. Condenser mike  
 U. Speaker

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Module V

Audio Aids

Unit 5

Operating Tape Recorders

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## Practical Exercise No:48

Performance Check list for operating Audio Cassette Tape Recorders.

A. SETTING UP:

1. Locate cassette recorder conveniently both for recording and playback.
2. For recording, place microphone (if separate) from where it will pickup desired sounds with minimum background noise.
3. For playback, place speakers (if separate) for optimum listening.
4. Select power source (Battery/ A.C.)
5. Connect the power cord to socket ( for A.C.).
6. If battery is used, check battery level by reading meter provided.
7. For recording with external microphone, insert cord into the microphone, input jack. If it has a switch, keep it in 'ON' position while recording.

B. OPERATING

1. Check recorder for STOP mode. If not keep it in STOP mode.
2. Press EJECT button, to open cassette compartment.
3. Insert cassette - Tape side should be against the head.
4. REWIND until tape completely goes to start position, and stops.

C. RECORDING

1. Set the index counter at 000 by pressing the button near counter.
2. Engage RECORD and PLAY control.
3. Set microphone and switch to 'ON' position (if there is a separate switch).

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4. Record test sound adjusting volume level as necessary.
5. STOP cassette recorder.
6. REWIND again.
7. SWITCH PLAY button.
8. Listen to play back, adjusting volume and tone levels, if satisfactory.
9. Record programme as described above, under recording in this para.
10. Press PAUSE button if you wish to stop machine briefly, without changing anything else, and release when you want to.
11. If stop mode is used between recordings, engage again RECORD & PLAY buttons to continue recording.
12. REWIND again when recording is complete (until the counter reads 000) (if you bring to starting position, tape will automatically stop).

#### D. PLAYBACK

1. Press Play ( in some machine FORWARD) button.
2. Adjust VOLUME and TONE control.
3. Use FAST FORWARD to skip programme or portion on the tape.
4. Use REWIND to go back to segments for replay.
5. Use index counter to locate correctly segments of programme.
6. Press REWIND to go back to zero position.

#### E. PACKING UP

1. Switch off.
2. REWIND to bring back to starting point.
3. Press EJECT.
4. Remove cassette.
5. Remove accessories.
6. Store accessories and cords in spaces provided.

MODULE	V	AUDIO AIDS	
UNIT	5	Operating Tape Recorders.	(48)

The following performance check list for operating an audio cassette recorder is not in order. You are required to place appropriate numbers in the space provided under each sub-head in the order in which the operations are to be carried out.

#### A. SETTING UP

- \_\_\_ Locate cassette recorder.
- \_\_\_ Place microphone (if there is a separate mike).
- \_\_\_ Switch on mike & place speakers in position if there are separate speakers.
- \_\_\_ Switch ON.
- \_\_\_ Select power source (Battery/AC)
- \_\_\_ Connect power cord, if you select A.C.
- \_\_\_ If battery source is adopted, check battery level.

#### B. OPERATION

- \_\_\_ Check recorder for STOP mode. If not keep it in stop mode.
- \_\_\_ Press Cassette in and close shutter.
- \_\_\_ Press eject button.
- \_\_\_ Rewind tape.

#### C. RECORDING

- \_\_\_ Set index counter to 000.
- \_\_\_ Record sound for testing.
- \_\_\_ Set and switch ON mike.
- \_\_\_ Engage RECORD & PLAY control.
- \_\_\_ Rewind again.
- \_\_\_ STOP.
- \_\_\_ Switch PLAY button.
- \_\_\_ Listen, adjust volume and tone levels.
- \_\_\_ Press pause for stopping machine if necessary and release when you want.
- \_\_\_ For re-recording or recording again, engage PLAY & RECORD controls.

- \_\_\_ Record again!
- \_\_\_ Rewind again!
- \_\_\_ STOP.

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#### D. PLAYBACK

- \_\_\_ Adjust volume and tone controls.
- \_\_\_ Press PLAY and listen!
- \_\_\_ STOP FAST FORWARD for skipping and listen to recording.
- \_\_\_ Press REWIND for going back to zero position.
- \_\_\_ Use index counter to locate correctly segments.

#### E. PACKING UP

- \_\_\_ Switch OFF.
- \_\_\_ REWIND fully
- \_\_\_ Remove cassette.
- \_\_\_ Press EJECT.
- \_\_\_ Close cassette compartment.
- \_\_\_ Store accessories.
- \_\_\_ Remove accessories.

M V/5/48/C 1-2

## AUDIO VISUAL EDUCATION

KEY

Module V

Audio Aids

Unit 5

Operating Tape Recorders

(48)

## Performance Check list: Operating Audio Cassette Tape Recorder

A. SETTING UP

- 1 Locate cassette recorder
- 2 Place microphone (if there is a separate mike)
- 3 Switch on mike and place speakers in position if there are separate speakers.
- 6 Switch ON.
- 4 Select power source (Battery/AC)
- 5 Connect power cord, if you select AC.
- 7 If battery source is adopted, check battery level.

B. OPERATION

- 1 Check recorder for STOP MODE. If not keep it in stop mode.
- 3 Press cassette in and close shutter.
- 2 Press eject button.
- 4 Rewind tape.

C. RECORDING.

- 1 Set index counter to 000.
- 4 Record sound for testing.
- 3 Set and switch 'on' mike.
- 2 Engage RECORD & PLAY control.
- 6 REWIND again.
- 5 STOP.
- 7 SWITCH PLAY button.
- 8 Listen, adjust volume and tone levels.



- 9 press pause for stopping machine if necessary and release when you want.
- 10 For re-recording or recording again, engage PLAY & RECORD controls.
- 11 Record again.
- 12 REWIND again.
- 13 STOP

#### D. PLAYBACK

- 2 Adjust volume and tone control.
- 1 Press play and listen.
- 3,4 STOP FAST FORWARD for skipping and listen to recording.
- 6 Press REWIND for going back to zero position.
- 5 Use index counter to locate correctly segments.

#### E. PACKING UP

- 2 Switch off.
- 1 REWIND fully.
- 4 Remove cassette
- 3 Press Eject
- 5 Close cassette compartment.
- 7 Store accessories.
- 6 Remove accessories.

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Module V

Audio Aids

Time :10 min.

Unit 5

Operating tape recorders.

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## Practical Exercise No.49.

A. PROBLEM

Use Sony reel-to-reel tape deck and available amplifier. Record your voice for an instructional sequence and play back the same.

1. Setting up
2. Operating
3. Recording
4. Play back
5. Packing

Hand over the jumbled list of the performance check list, after filling in the correct sequence. Follow instructions given in the correct performance checklist. Obtain this before starting.

B. EQUIPMENT & MATERIALS

1. Sony reel-to-reel tape deck.
2. Amplifier.
3. Two speakers
4. Microphones
5. Tape with spool and spare spool.
6. Script for recording.

C. POINTS FOR GRADING

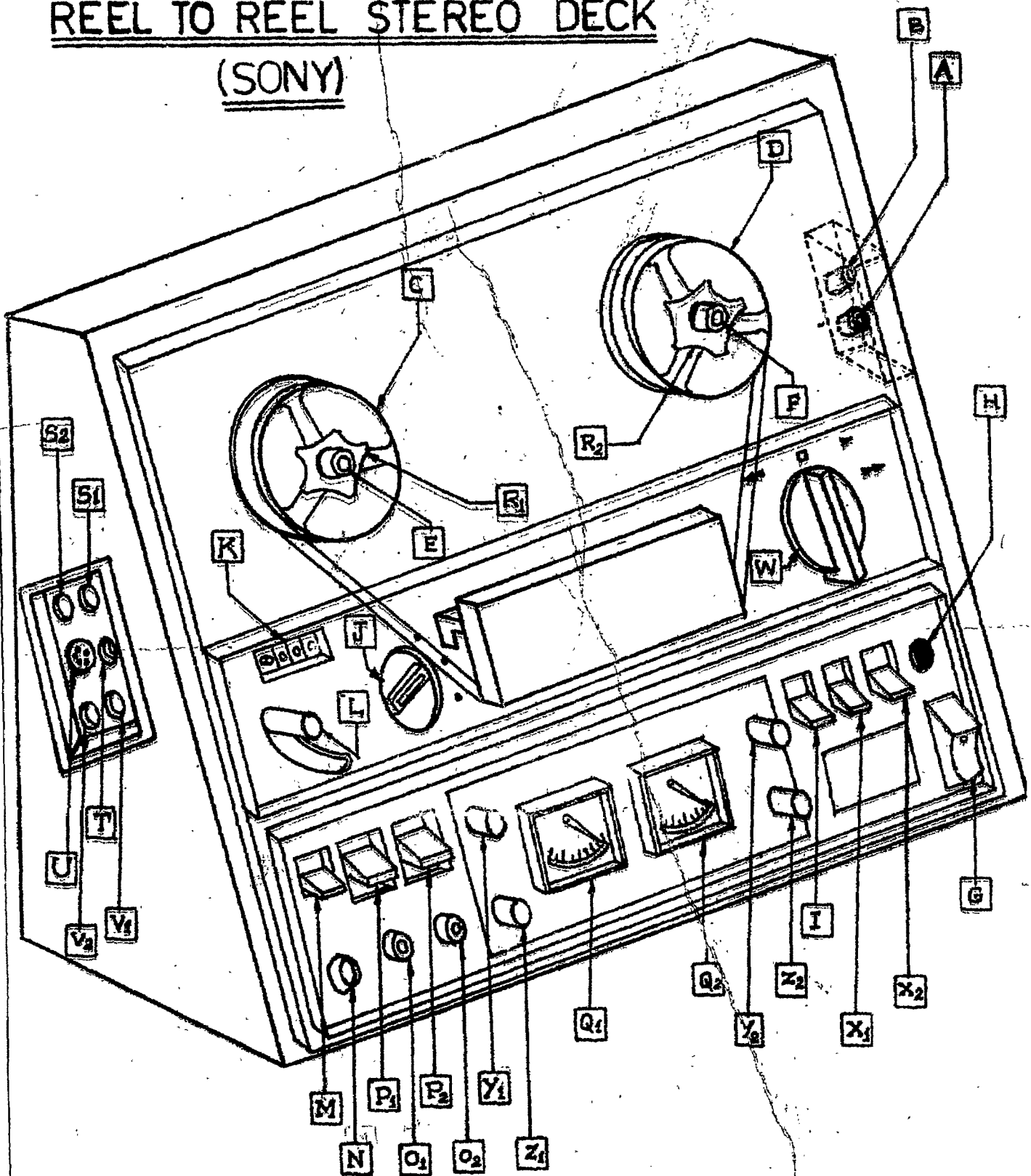
1. Setting up.
2. Correct operation procedure.
3. Proper recording.
4. Playback without fault.
5. Packing up.

Time is the essence of the exercise and it must be strictly adhered to.

D. Deadline for the project: June 15th.

M V/5/Pr.Ex.49.

REEL TO REEL STEREO DECK  
(SONY)



PARTS OF REEL-TO-REEL STEREO DECK (SONY). TC-366

1. A. VOLTAGE SELECTOR
2. B. POWER CORD CONNECTION
3. C. SUPPLY REEL
4. D. TAKE UP REEL
5. E. SUPPLY REEL SPINDLE
6. F. TAKE UP REEL SPINDLE
7. G. POWER SWITCH
8. H. POWER INDICATOR LAMP
9. I. TAPE SELECTOR
10. J. SPEED SELECTOR
11. K. TAPE COUNTER
12. L. INSTANT STOP LEVER
13. M. NOISE SUPPRESSOR
14. N. HEAD PHONE JACK
15.  $D_1$  &  $D_2$  MICROPHONE INPUTS FOR STEREO RECORDING (L & R)
16.  $P_1$  &  $P_2$  RECORD LEVERS ( L & R CHANNELS)
17.  $Q_1$  &  $Q_2$  LEVEL METERS (L & R CHANNELS)
18.  $R_1$  &  $R_2$  SUPPLY AND TAKEUP REEL CAPS
19.  $S_1$  &  $S_2$  AUXILIARY INPUTS (L & R CHANNELS)
20. T. GROUND TERMINAL
21. U FIVE PIN CONNECTOR (RECORD/PLAY BACK)
22.  $V_1$  &  $V_2$  LINE OUTPUTS ( L & R CHANNELS)
23. W POSITION SELECTOR FOR STOP/FORWARD OR PLAY/FAST FORWARD/REWINDING.
24.  $X_1$  &  $X_2$  MONITOR ( L & R CHANNELS)
25.  $Y_1$  &  $Y_2$  RECORD VOLUME- AUXILIARY (L & R CHANNELS)
26.  $Z_1$  &  $Z_2$  RECORD VOLUME- MICROPHONE ( L & R CHANNELS)

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Module V

Audio Aids

Unit 5

Operating Tape Recorders.  
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Practical Exercise No: 49.

Performance Check list for Operating Sony reel to reel tape Deck.

A. SETTING UP

1. Locate tape recorder conveniently for both recording and play back.
2. For recording, place microphones from where it will pickup desired, sounds with minimum background noise. For stereo there will be two mikes. Left and right. connect it (them).
3. For play back, place speaker, for optimum listening, and connect it/them. For stereo there will be two speakers, left and right.
4. Connect to amplifier. For stereo there will be two cords, one for each channel.
5. Select power source (A/c, Battery). Switch 'ON' power.
6. Connect power cord of both deck and amplifier, to proper slots. Switch amplifier.
7. Set speed control (19/ 9.5/4.8 cm per sec.).
8. Check reel rotation with PLAY control.
9. Attach empty reel to the wheel that turns.
10. Attach supply reel to the other spindle.
11. Thread the tape through the RECORD/PLAY head slots.
12. Engage tape end in the slot of take up reel.
13. Rotate both reels by hand for about  $1\frac{1}{2}$  turns.
14. Push in the rubber caps to the spindle of both wheels/reels.

B. OPERATING

1. Check recorder for STOP mode, if not keep it in STOP mode.
2. Switch 'ON' power of recorder/amplifier.
3. REWIND tape completely to starting point. Tape end should not leave take up reel.
4. Set counter to 000 by pressing the button near counter.

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### C. RECORDING

1. Engage the FORWARD & RECORD buttons. Press left button for recording on channel 1 and right for channel 3.
2. Set mike and switch to 'ON' position.
3. Record test sound and adjust mike volume (left mike for channel 1, right for channel 3). Watch needle on recording level meters. Needle should not show red mark.
4. STOP & REWIND.
5. Engage FORWARD control and playback adjusting volume, and listen.
6. If recording is satisfactory, REWIND again, after bringing the STOP mode.
7. If unsatisfactory, repeat test recording process.
8. Complete recording for 1 minute. STOP.
9. Press instant stop (INST STOP) button and lock, if you wish to stop machine briefly, without changing anything else, and release when you want to.
10. If STOP control is used between recordings, engage again RECORD & FORWARD controls to continue recording.
11. REWIND again when recording is complete. (i.e. till counter reading is 000).

### D. PLAY BACK

1. Bring control to FORWARD position.
2. Adjust volume control.
3. Use FAST FORWARD (FF) to skip programme or portion in forward motion.
4. Use REWIND (REW) to go back to segments for replay.
5. Use index counter to locate correctly particular segments of programmes.

### E. PACKING UP

1. Switch OFF deck & amplifier.
2. REWIND to bring back to starting position, tape to completely back in supply reel.
3. Remove reels, tape and store.
4. Remove amplifier connections and store.
5. Remove microphones and store.
6. Remove all cords and accessories and store.

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Module V

Audio Aids

Unit

Operating Tape Recorders

(49)  
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The performance Check list for operating Sony reel to reel Tape Deck given here under is not in a sequence. Number 1,2,3 ... against each step in the correct sequence, for A,B, C,D and E. separately.

A. SETTING UP

- \_\_\_\_\_ Locate tape recorder.
- \_\_\_\_\_ Place microphones properly and plug in. (for stereo, 2 mikes).
- \_\_\_\_\_ Place speaker properly and connect it (them).
- \_\_\_\_\_ Connect deck to amplifier (if recorder is not having amplifier).
- \_\_\_\_\_ Select power source.
- \_\_\_\_\_ Check reel rotation with PLAY control.
- \_\_\_\_\_ Connect power cords to recorder (and amplifier).
- \_\_\_\_\_ Set speed control.
- \_\_\_\_\_ Push in rubber caps, on reels.
- \_\_\_\_\_ Attach supply reel.
- \_\_\_\_\_ Attach empty reel.
- \_\_\_\_\_ Thread tape through slots of heads for record and playback.
- \_\_\_\_\_ Engage tape end to take up reel.
- \_\_\_\_\_ Rotate both reels by hand for about  $1\frac{1}{2}$  turns

B. OPERATING

- \_\_\_\_\_ REWIND TAPE
- \_\_\_\_\_ Check recorder for STOP mode, if not keep it in STOP mode.
- \_\_\_\_\_ Set counter to 000 by pressing the button.
- \_\_\_\_\_ Switch on power of recorder/amplifier.

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C. RECORDING

- \_\_\_\_\_ Record test sound.
- \_\_\_\_\_ Adjust volume control.
- \_\_\_\_\_ Engage FORWARD & RECORD button, for stereo recording.
- \_\_\_\_\_ Set mike and switch to 'ON' position.
- \_\_\_\_\_ STOP after recording test sound and rewind.
- \_\_\_\_\_ PLAYBACK
- \_\_\_\_\_ REWIND, if satisfactory recording is done, after pressing STOP mode.
- \_\_\_\_\_ If unsatisfactory repeat again.
- \_\_\_\_\_ Complete recording for a minute and stop.
- \_\_\_\_\_ REWIND.

D. PLAYBACK

- \_\_\_\_\_ Use FORWARD position.
- \_\_\_\_\_ Listen.
- \_\_\_\_\_ Adjust volume & tone control.
- \_\_\_\_\_ Use fast forward to skip.
- \_\_\_\_\_ Use rewind to go back to particular segment.
- \_\_\_\_\_ Use index counter to locate programme.

E. PACKING

- \_\_\_\_\_ Switch off
- \_\_\_\_\_ REWIND
- \_\_\_\_\_ Remove microphone
- \_\_\_\_\_ Disconnect amplifier cords and accessories.
- \_\_\_\_\_ Keep recorder in original position.
- \_\_\_\_\_ Remove reels, and tape
- \_\_\_\_\_ Remove all other cords, accessories and store.



## ----- KEY -----

Module V

Audio Aids

Unit 5

Operating Tape Recorders (49)

Performance Check list : Operating Sony reel to reel Tape Deck

A. SETTING UP

- 1 Locate tape recorder.
- 2 Place microphones properly and plug in (for stereo, 2 mikes)
- 3 Place speaker properly and connect, it (them)
- 4 Connect deck to amplifier (if recorder is not having amplifier).
- 5 Select power source
- 8 Check reel rotation with PLAY control.
- 6 Connect power cords to recorder (and amplifier)
- 7 Set speed control.
- 14 Push in rubber caps, on reels.
- 10 Attach supply reel
- 9 Attach empty reel.
- 11 Thread tape through slots of heads for record and playback.
- 12 Engage tape end to take up reel.
- 13 Rotate both reels by hand for about  $1\frac{1}{2}$  turns.

B. OPERATING

- 3 REWIND TAPE
- 1 Check recorder for STOP mode, if not keep it in STOP mode.
- 4 Set counter to 000 by pressing the button.
- 2 Switch on power of recorder/amplifier.

C. RECORDING

- 3 Record test sound
- 4 Adjust volume control
- 1 Engage FORWARD & RECORD buttons, for stereo recording
- 2 Set mikes and switch to 'ON' position.
- 5 STOP after recording test sound and REWIND.
- 6 PLAYBACK.
- 7 REWIND, if satisfactory recording is done, after pressing STOP mode.
- 8 If unsatisfactory repeat again.
- 9 Complete recording for a minute & STOP.
- 10 REWIND.

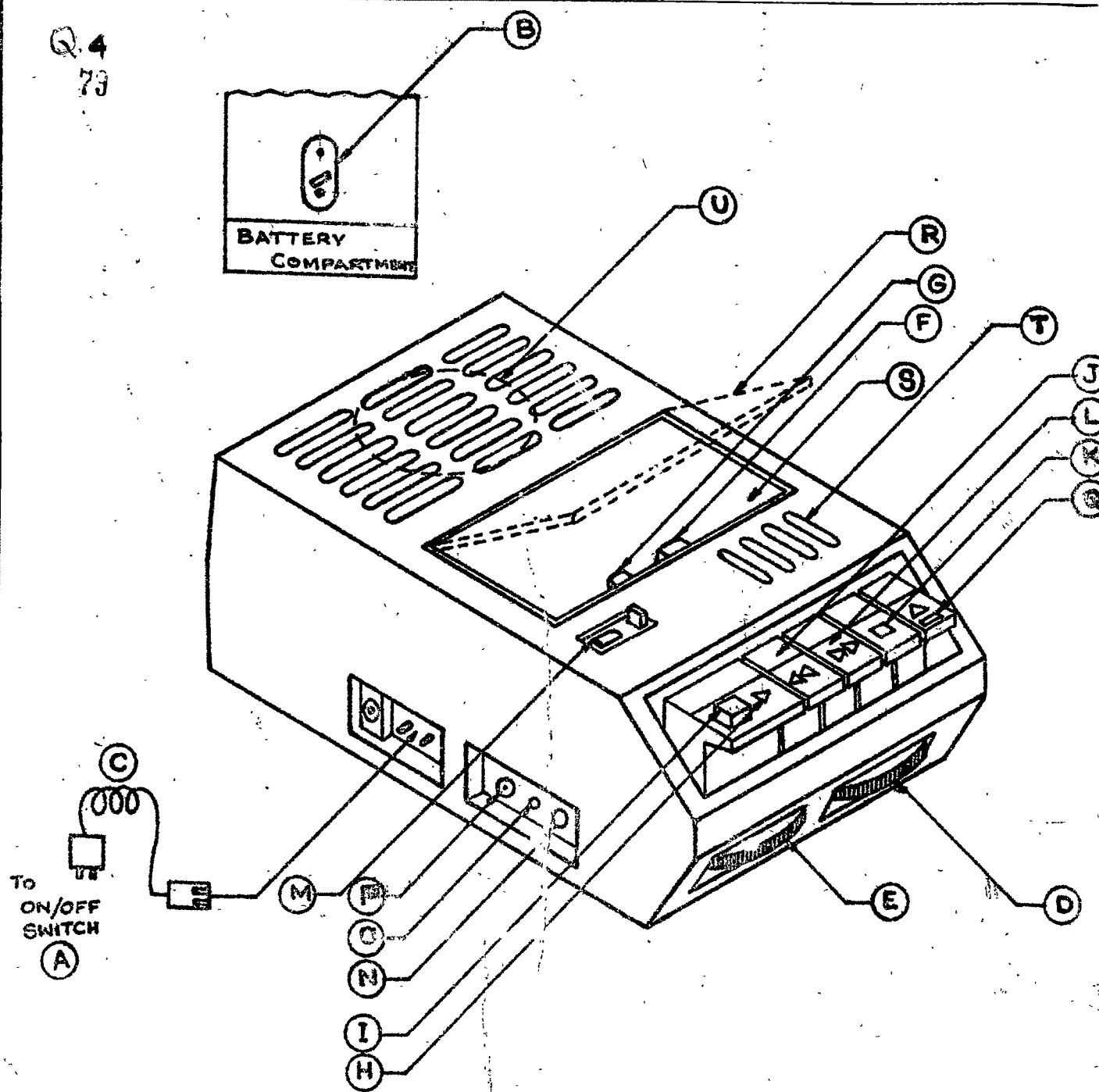
D. PLAYBACK

- 1 Use FORWARD POSITION
- 3 Listen
- 2 Adjust volume and tone control
- 4 Use fast forward to skip.
- 5 Use rewind to go back to particular segment.
- 6 Use index counter to locate programme.

E. PACKING

- 1 Switch off
- 2 REWIND
- 5 Remove microphone
- 4 Disconnect amplifier cords and accessories.
- 7 Keep recorder in original position.
- 3 Remove reels, and tape.
- 6 Remove all other cords, accessories and store.

Q. 4  
73



### Sketch 1

## AUDIO VISUAL EDUCATION

## CRITERION TEST

Module V

AUDIO AIDS

Unit 5

Operating Tape Recorders

1. Cassette tape C 60 played with constant tape speed of 4.75 cm/sec. takes \_\_\_\_\_ minutes playing time for one side.  
(a. 60 minutes, b. 30 minutes, c. 120 minutes, d. none of the above.)
2. What is the function of a pause button in the tape recorder?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
3. How does operating the pause button differ from a stop button?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
4. The sketch I given, is a common type of cassette record player. Identify the parts by placing the correct letter representing the part against the name listed.
- |                      |                             |
|----------------------|-----------------------------|
| _____ Play           | _____ a.c. inlet            |
| _____ record         | _____ cassette compartment. |
| _____ stop           |                             |
| _____ eject          | _____ fastforward           |
| _____ condenser mike | _____ rewind                |
| _____ mike input     | _____ volume                |
| _____ remote         | _____ tone                  |
| _____ d.c. inlet.    | _____ speaker               |

5. The sketch at the end given, is of a reel to reel tape deck with certain parts indicated by letters. Identify the parts by placing the letters against the corresponding names of parts.

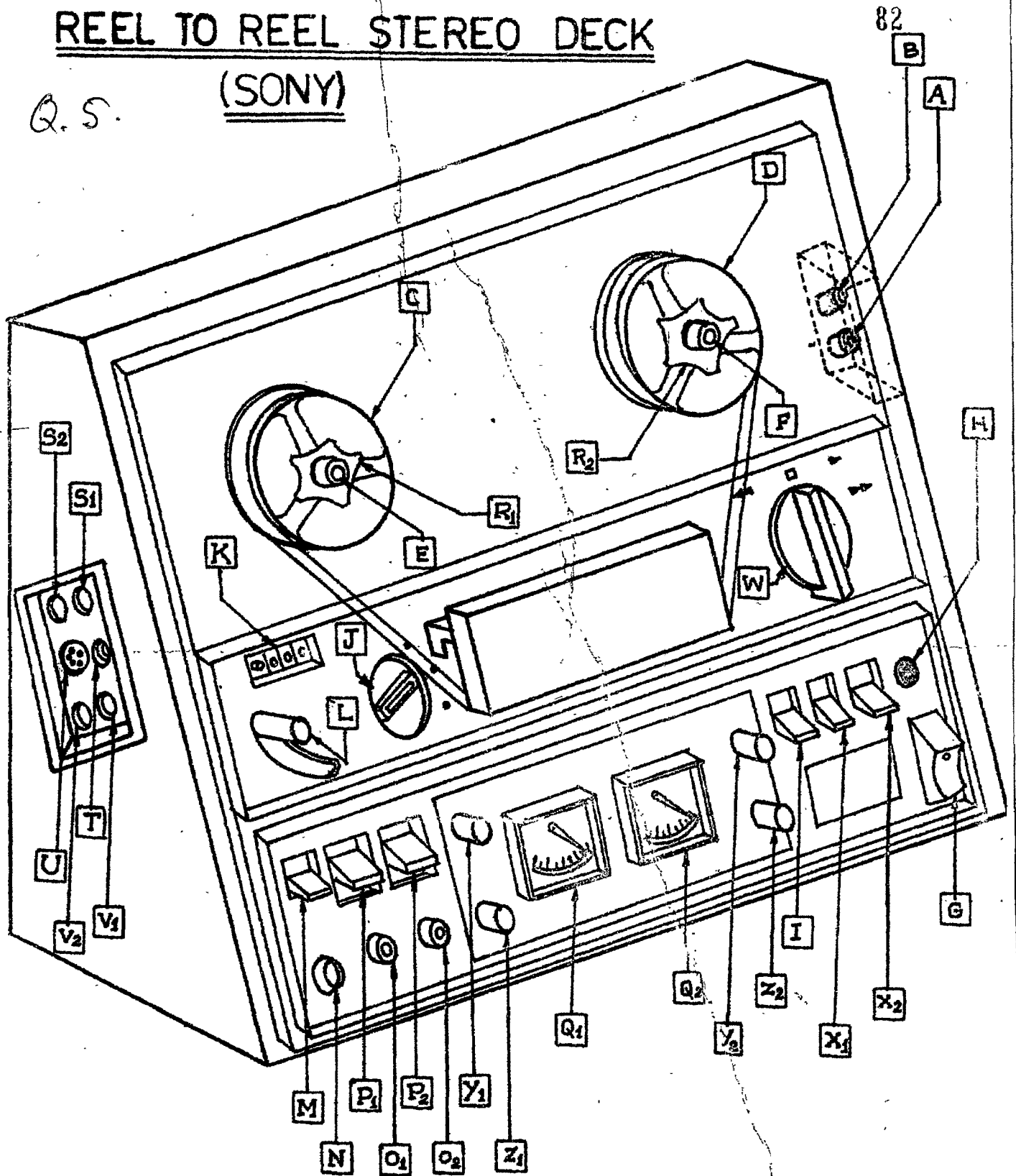
_____ voltage selector	_____ headphone jack
_____ Power cord connection	_____ microphone inputs for stereo recording.
_____ supply reel	_____ record levers
_____ take up reel	_____ level meters.
_____ power switch	_____ supply & take up reels
_____ power indicator	_____ Auxiliary inputs
_____ supply reel spindle	_____ ground terminal
_____ take up reel spindle	_____ 5 pin connector
_____ tape selector	_____ line outputs
_____ speed selector	_____ Position selector for stop/forward/FF/rewinding.
_____ tape counter	_____ Monitor
_____ instant stop	_____ Auxiliary record volume
_____ noise suppressor	_____ record volume

6. Performance check lists for operating audio cassette recorder is given here. Under each heading, separate items which are not in the correct sequence are given. Now number each item in the correct sequence of operation, i.e. in the order in which you would do the operation.
7. Performance check list for operating reel to reel tape deck is given here. Under each heading, separate items which are not in the correct sequence are given. Now number each item in the correct sequence of operation, i.e. in the order in which you would do the operation.
8. Set up, load, and operate an audio cassette recorder by fixing time with your training officer.
9. Set up, load, and operate a reel to reel tape deck by fixing time with your Training Officer.

# REEL TO REEL STEREO DECK

(SONY)

Q. S.



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MODULE    V                    AUDIO AIDS  
UNIT      5                    Operating Tape Recorders.  
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6. The following performance check list for operating an audio cassette recorder is not in order. You are required to place appropriate numbers in the space provided under each sub-head in the order in which the operations are to be carried out.

A. SETTING UP

- \_\_\_ Locate cassette recorder.
- \_\_\_ Place microphone (if there is a separate mike).
- \_\_\_ Switch on mike & place speakers in position if there are separate speakers.
- \_\_\_ Switch ON.
- \_\_\_ Select power source (Battery/AC)
- \_\_\_ Connect power cord, if you select A.C.
- \_\_\_ If battery source is adopted, check battery level.

B. OPERATION

- \_\_\_ Check recorder for STOP mode. If not keep it in stop mode.
- \_\_\_ Press Cassette in and close shutter.
- \_\_\_ Press eject button.
- \_\_\_ Rewind tape.

C. RECORDING

- \_\_\_ Set index counter to 000.
- \_\_\_ Record sound for testing.
- \_\_\_ Set and switch ON mike.
- \_\_\_ Engage RECORD & PLAY control.
- \_\_\_ Rewind again.
- \_\_\_ STOP.
- \_\_\_ Switch PLAY button.
- \_\_\_ Listen, adjust volume and tone levels.
- \_\_\_ Press pause for stopping machine if necessary and release when you want.
- \_\_\_ For re-recording or recording again, engage PLAY & RECORD controls.

- \_\_\_ Record again.
- \_\_\_ Rewind again.
- \_\_\_ STOP.

#### D. PLAYBACK

- \_\_\_ Adjust volume and tone controls.
- \_\_\_ Press PLAY and listen.
- \_\_\_ STOP FAST FORWARD for skipping and listen to recording.
- \_\_\_ Press REWIND for going back to zero position.
- \_\_\_ Use index counter to locate correctly segments.

#### E. PACKING UP

- \_\_\_ Switch OFF.
- \_\_\_ REWIND fully
- \_\_\_ Remove cassette.
- \_\_\_ Press EJECT.
- \_\_\_ Close cassette compartment.
- \_\_\_ Store accessories.
- \_\_\_ Remove accessories.



## AUDIO VISUAL EDUCATION

Module V

Audio Aids

Unit (5)

Operating Tape Recorders

(49)

7. The performance Check list for operating Sony reel to reel Tape Deck given here under is not in a sequence. Number 1,2,3 ... against each step in the correct sequence, for A,B, C,D and E. separately.

A. SETTING UP

- \_\_\_\_\_ Locate tape recorder.
- \_\_\_\_\_ Place microphones properly and plug in. (for stereo, 2 mikes).
- \_\_\_\_\_ Place speaker properly and connect it (them).
- \_\_\_\_\_ Connect deck to amplifier (if recorder is not having amplifier).
- \_\_\_\_\_ Select power source.
- \_\_\_\_\_ Check reel rotation with PLAY control.
- \_\_\_\_\_ Connect power cords to recorder (and amplifier).
- \_\_\_\_\_ Set speed control.
- \_\_\_\_\_ Push in rubber caps, on reels.
- \_\_\_\_\_ Attach supply reel.
- \_\_\_\_\_ Attach empty reel.
- \_\_\_\_\_ Thread tape through slots of heads for record and playback.
- \_\_\_\_\_ Engage tape end to take up reel.
- \_\_\_\_\_ Rotate both reels by hand for about  $1\frac{1}{2}$  turns

B. OPERATING

- \_\_\_\_\_ REWIND TAPE
- \_\_\_\_\_ Check recorder for STOP mode, if not keep it in STOP mode.
- \_\_\_\_\_ Set counter to 000 by pressing the button.
- \_\_\_\_\_ Switch on power of recorder/amplifier.

M V/5/Pr.Ex.49/c1-1.

C. RECORDING

- \_\_\_\_\_ Record test sound.
- \_\_\_\_\_ Adjust volume control.
- \_\_\_\_\_ Engage FORWARD & RECORD button, for stereo recording.
- \_\_\_\_\_ Set mike and switch to 'ON' position.
- \_\_\_\_\_ STOP after recording test sound and rewind.
- \_\_\_\_\_ PLAYBACK
- \_\_\_\_\_ REWIND, if satisfactory recording is done, after pressing STOP mode.
- \_\_\_\_\_ If unsatisfactory repeat again.
- \_\_\_\_\_ Complete recording for a minute and stop.
- \_\_\_\_\_ REWIND.

D. PLAYBACK

- \_\_\_\_\_ Use FORWARD position.
- \_\_\_\_\_ Listen.
- \_\_\_\_\_ Adjust volume & tone control.
- \_\_\_\_\_ Use fast forward to skip.
- \_\_\_\_\_ Use rewind to go back to particular segment.
- \_\_\_\_\_ Use index counter to locate programme.

E. PACKING

- \_\_\_\_\_ Switch off
- \_\_\_\_\_ REWIND
- \_\_\_\_\_ Remove microphone
- \_\_\_\_\_ Disconnect amplifier cords and accessories.
- \_\_\_\_\_ Keep recorder in original position.
- \_\_\_\_\_ Remove reels, and tape
- \_\_\_\_\_ Remove all other cords, accessories and store.

M V/5/Pr.Ex.49/C 1-2

## AUDIO VISUAL EDUCATION

KEY TO  
CRITERION TEST

Module V

AUDIO AIDS

Unit 5

Operating Tape Recorders

1. Cassette tape C 60 played with constant tape speed of 4.75 cm/sec. takes 30 minutes playing time for one side.
2. What is the function of a pause button in the tape recorder ?

The pause button when depressed stops either recording or playback instantaneously when it is held down and when released allows the machine to function without any change of other settings.

3. How does operating the pause button differ from a stop button?

As soon as pause button is released, recording or playback continues, without changing other settings, while in stop button when released all other settings - record and playback buttons- are to be readjusted.

4. The sketch I given, is a common type of cassette record player. Identify the parts by placing the correct letter representing the part against the name listed.

H play  
I record  
K stop  
Q eject  
T condenser mike  
N mike input  
O remote  
B d.c. inlet

A a.c. inlet.  
S Cassette compartment  
L fast forward  
J rewind  
D volume  
E tone  
U speaker

5. The sketch at the end given, is of a reel to reel tape deck with certain parts indicated by letters. Identify the parts by placing the letters against the corresponding names of parts.

<u>A</u> voltage selector	<u>N</u> headphone jack
<u>B</u> power cord connection	<u>O<sub>1</sub>, O<sub>2</sub></u> Microphone inputs for stereo recording
<u>C</u> Supply reel	<u>P<sub>1</sub>, P<sub>2</sub></u> record levers
<u>D</u> take up reel	<u>Q<sub>1</sub>, Q<sub>2</sub></u> Level meters
<u>G</u> power switch	<u>R<sub>1</sub>, R<sub>2</sub></u> supply & take up reels
<u>H</u> power indicator	<u>S<sub>1</sub>, S<sub>2</sub></u> Auxiliary inputs
<u>E</u> supply reel spindle	<u>T</u> ground terminal
<u>F</u> take up reel spindle	<u>U</u> 5 pin connector
<u>I</u> tape selector	<u>V<sub>1</sub>, V<sub>2</sub></u> line outputs.
<u>J</u> Speed selector	<u>W</u> position selector for stop/forward/FF/rewinding
<u>K</u> Tape counter	<u>X<sub>1</sub>, X<sub>2</sub></u> monitor
<u>L</u> instant stop	<u>Y<sub>1</sub>, Y<sub>2</sub></u> Auxiliary record volume
<u>M</u> noise suppressor	<u>Z<sub>1</sub>, Z<sub>2</sub></u> Record volume

6. Performance check list for operating an audio cassette recorder is given here. Under each heading, separate items which are not in the correct sequence are given. Now number each item in the correct sequence of operation, i.e. in the order in which you would do the operation.
7. Performance check list for operating reel to reel tape deck is given here. Under each heading, separate items which are not in the correct sequence are given. Now number each item in the correct sequence of operation, i.e., in the order in which you would do the operation.
8. Set up, load, and operate a audio cassette recorder by fixing time with your Training Officer.
9. Set up, load and operate a reel to reel tape deck by fixing time with your Training Officer.

## AUDIO VISUAL EDUCATION

KEY

Module V

Audio Aids

Unit 5

Operating Tape Recorders

## 6. Performance Check list: Operating Audio Cassette Tape Recorder

A. SETTING UP

- 1 Locate cassette recorder
- 2 Place microphone (if there is a separate mike)
- 3 Switch on mike and place speakers in position if there are separate speakers.
- 6 Switch ON.
- 4 Select power source (Battery/AC)
- 5 Connect power cord, if you select AC.
- 7 If battery source is adopted, check battery level.

B. OPERATION

- 1 Check recorder for STOP MODE. If not keep it in stop mode.
- 3 Press cassette in and close shutter.
- 2 Press eject button.
- 4 Rewind tape.

C. RECORDING

- 1 Set index counter to 000.
- 4 Record sound for testing.
- 3 Set and switch 'on' mike.
- 2 Engage RECORD & PLAY control.
- 6 REWIND again.
- 5 STOP.
- 7 SWITCH PLAY button.
- 8 Listen, adjust volume and tone levels.

- 9 press pause for stopping machine if necessary and release when you want.
- 10 For re-recording or recording again, engage PLAY & RECORD controls.
- 11 Record again.
- 12 REWIND again.
- 13 STOP

#### D. PLAYBACK

- 2 Adjust volume and tone control.
- 1 Press play and listen.
- 3,4 STOP FAST FORWARD for skipping and listen to recording.
- 6 Press REWIND for going back to zero position.
- 5 Use index counter to locate correctly segments.

#### E. PACKING UP

- 2 Switch off.
- 1 REWIND fully.
- 4 Remove cassette
- 3 Press Eject
- 5 Close cassette compartment.
- 7 Store accessories.
- 6 Remove accessories.

## ----- KEY -----

Module V

Audio Aids

Unit 5

Operating Tape Recorders

## 7. Performance Check list : Operating Sony reel to reel Tape Deck

A. SETTING UP

- 1 Locate tape recorder.
- 2 Place microphones properly and plug in (for stereo, 2 mikes)
- 3 Place speaker properly and connect, it (them)
- 4 Connect deck to amplifier (if recorder is not having amplifier).
- 5 Select power source
- 8 Check reel rotation with PLAY control.
- 6 Connect power cords to recorder (and amplifier)
- 7 Set speed control.
- 14 Push in rubber caps, on reels.
- 10 Attach supply reel.
- 9 Attach empty reel.
- 11 Thread tape through slots of heads for record and playback.
- 12 Engage tape end to take up reel.
- 13 Rotate both reels by hand for about  $1\frac{1}{2}$  turns.

B. OPERATING

- 3 REWIND TAPE
- 1 Check recorder for STOP mode, if not keep it in STOP mode.
- 4 Set counter to 000 by pressing the button.
- 2 Switch on power of recorder/amplifier.

### C. RECORDING

- 3 Record test sound
- 4 Adjust volume control
- 1 Engage FORWARD & RECORD buttons, for stereo recording
- 2 Set mikes and switch to 'ON' position.
- 5 STOP after recording test sound and REWIND.
- 6 PLAYBACK.
- 7 REWIND, if satisfactory recording is done, after pressing STOP mode.
- 8 If unsatisfactory repeat again.
- 9 Complete recording for a minute & STOP.
- 10 REWIND.

### D. PLAYBACK

- 1 Use FORWARD POSITION
- 3 Listen
- 2 Adjust volume and tone control
- 4 Use fast forward to skip.
- 5 Use rewind to go back to particular segment.
- 6 Use index counter to locate programme.

### E. PACKING

- 1 Switch off
- 2 REWIND
- 5 Remove microphone
- 4 Disconnect amplifier cords and accessories.
- 7 Keep recorder in original position.
- 3 Remove reels, and tape.
- 6 Remove all other cords, accessories and store.