



TANDBERG ^{series} 64

STEREO TAPE DECK

instruction and operation manual

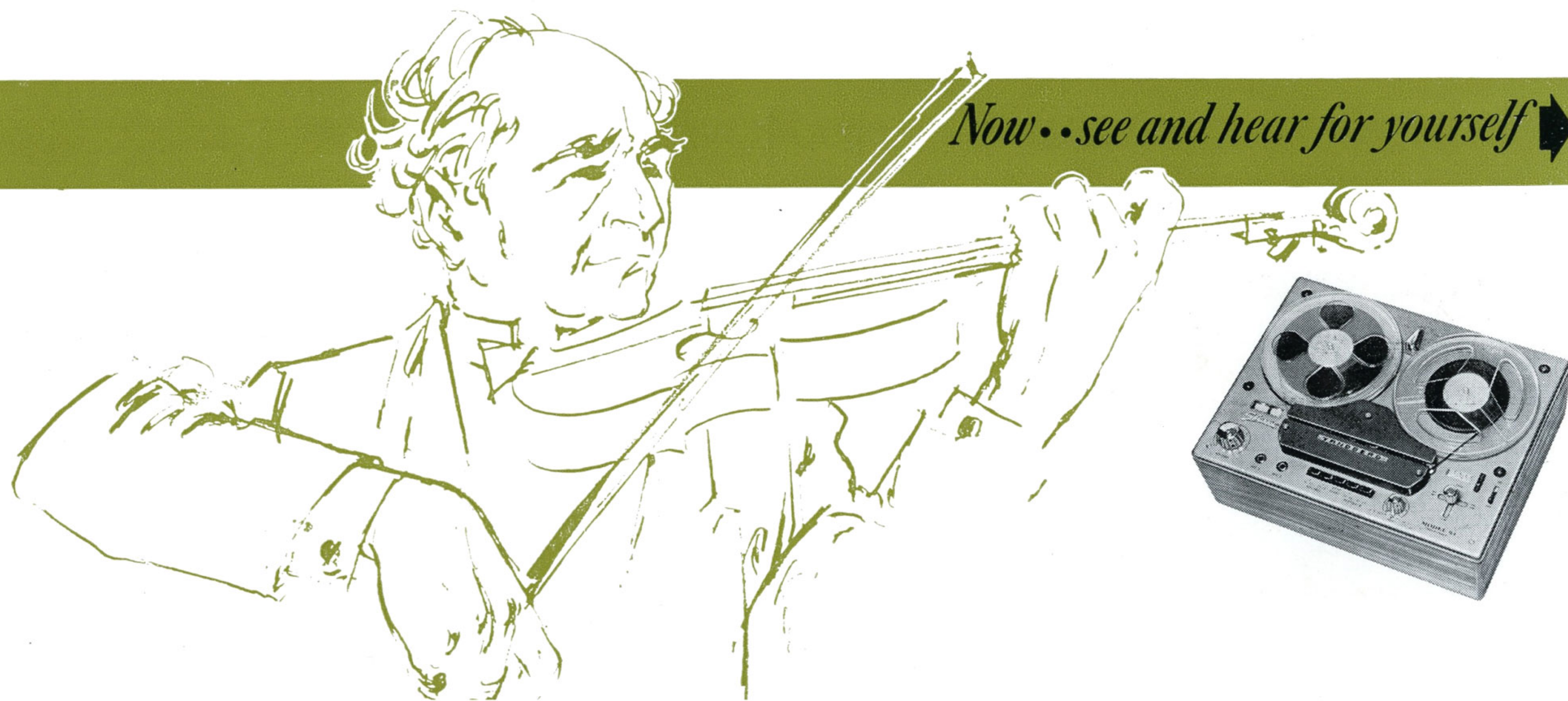


The embodiment of Tandberg excellence in engineering, design and craftsmanship . . . this is the Series 64 Stereo Tape Deck. This is the fine quality instrument you have selected for your personal enjoyment and satisfaction.

This 4 track, 3 speed recorder is primarily intended for application and use by those who would demand the ultimate in fidelity for incorporation into present high fidelity systems. It is also an excellent portable unit thanks to the unusually handsome, modern styled cabinet and the carrying case. In every instance, however, you will always be aware of the sensitive performance and long-term-reliability that will deliver consistently fine professional quality unmatched by others.

You will find your Tandberg Series 64 Stereo Tape Deck most versatile and equally facile for any intended use . . . for music, business conferences, interviews, education, speech and language laboratory courses, idea storage, family gatherings, broadcasting and professional studio tape recording or playback. Yes, in every way an exciting and wonderful new world of purity in sound, simplicity in operation and versatility in use awaits you.

It is respectfully recommended that you read this booklet in full and follow instructions carefully to obtain optimum use from this superior stereophonic recorder/reproducer.



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important

Your Tandberg Recorder has been packaged for maximum protection while in transit. If the outside carton shows signs of mishandling check and test the recorder thoroughly. In case of malfunction, contact the delivering carrier and request an inspection. Obtain an inspection report from them so you can file any necessary claim.

unpacking

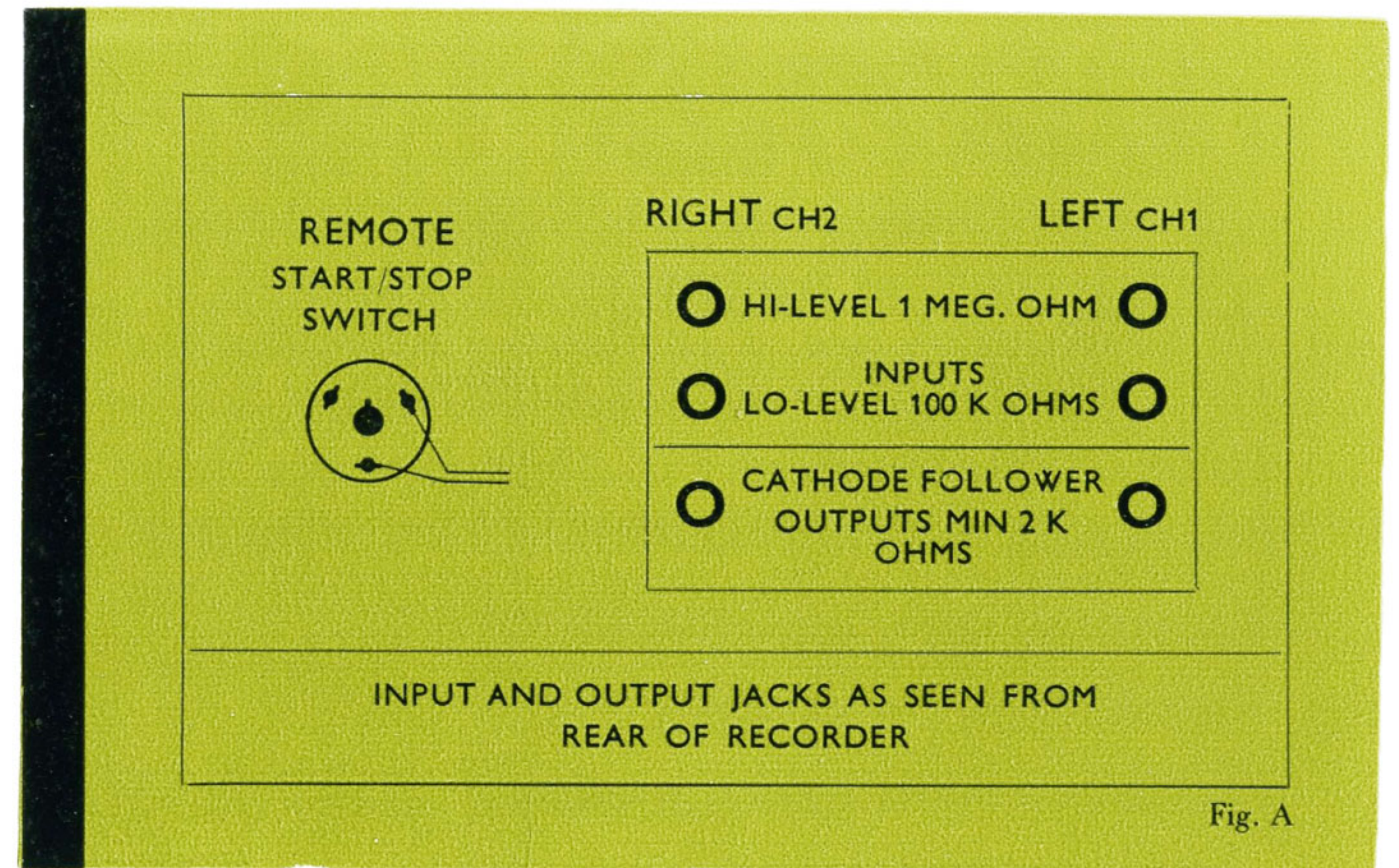
After removing the Recorder from packing, remove the transport securing screw (located underneath the Recorder) loosen the four mounting screws on the top plate, and remove the cardboard strips placed between the plate and the cabinet. Then adjust the screws so that there is only a slight clearance between the cabinet and the top plate.

connecting

Input and output jacks are shown in Figure A. These are located at the back of the recorder. The following describes connections from the recorder to amplifiers, radio-tuners, record changers, turntables.

For playback — Use the two cords furnished and connect the Tandberg CATHODE FOLLOWER OUTPUTS to your power amplifier inputs marked AUXILIARY or any high level inputs marked RADIO, TV, or CRYSTAL CARTRIDGE (unequalised inputs).

CH 1 or upper track output to left amplifier input,
CH 2 or lower track output to right amplifier input.



for recording

1. *From amplifier* — Connect your amplifier, TAPE OUTPUT or RECORD OUTPUT to Tandberg HI-LEVEL inputs.
2. *Direct from radio-tuner* — Connect radio tuner to Tandberg HI-LEVEL inputs.
3. *Direct from Crystal Phono Pickup* — Connect phono pickup to Tandberg HI-LEVEL inputs.
4. *From equipment with low level output* — Connect the equipment with low level output to Tandberg LO-LEVEL inputs.

controls

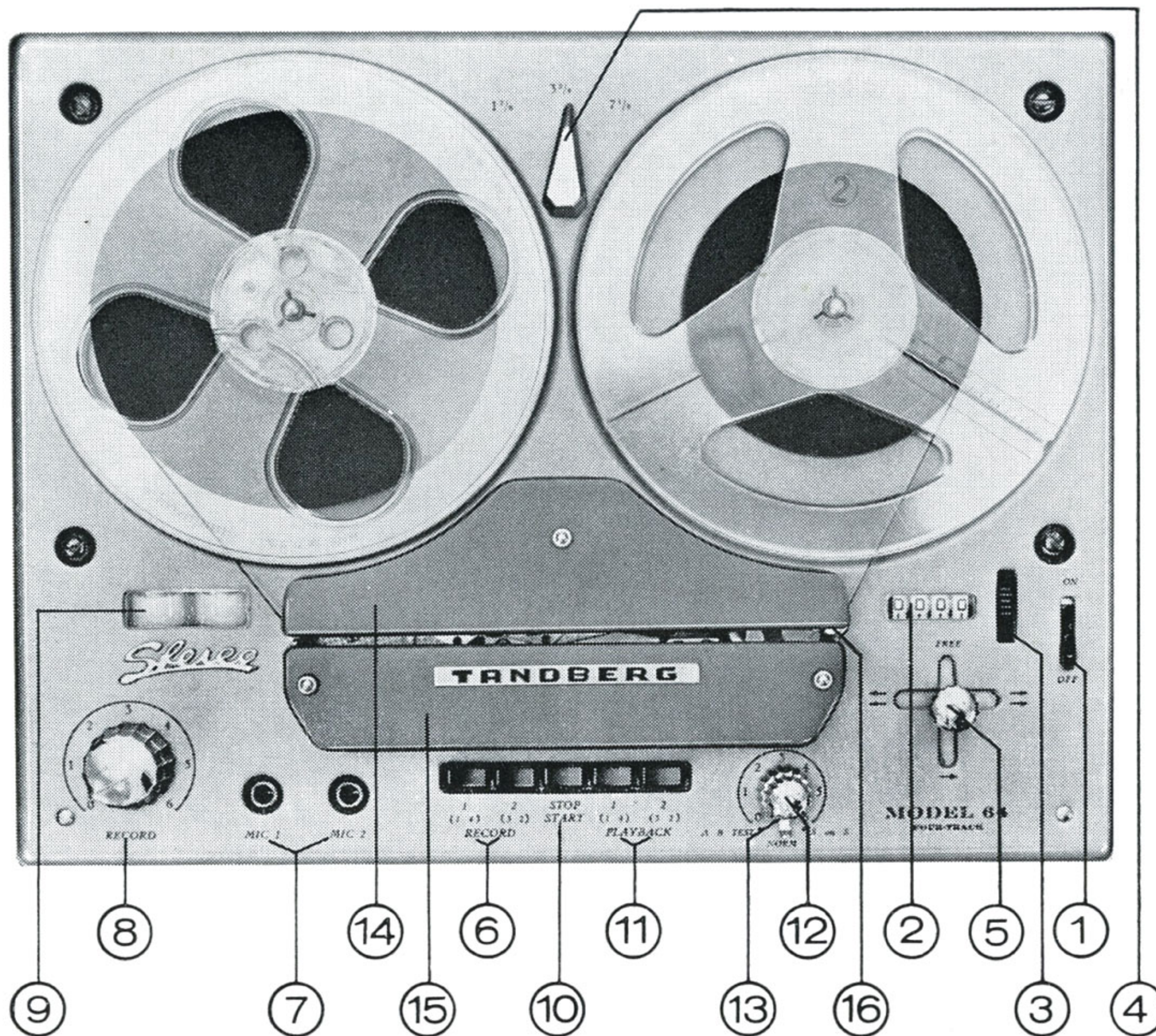


Fig. B

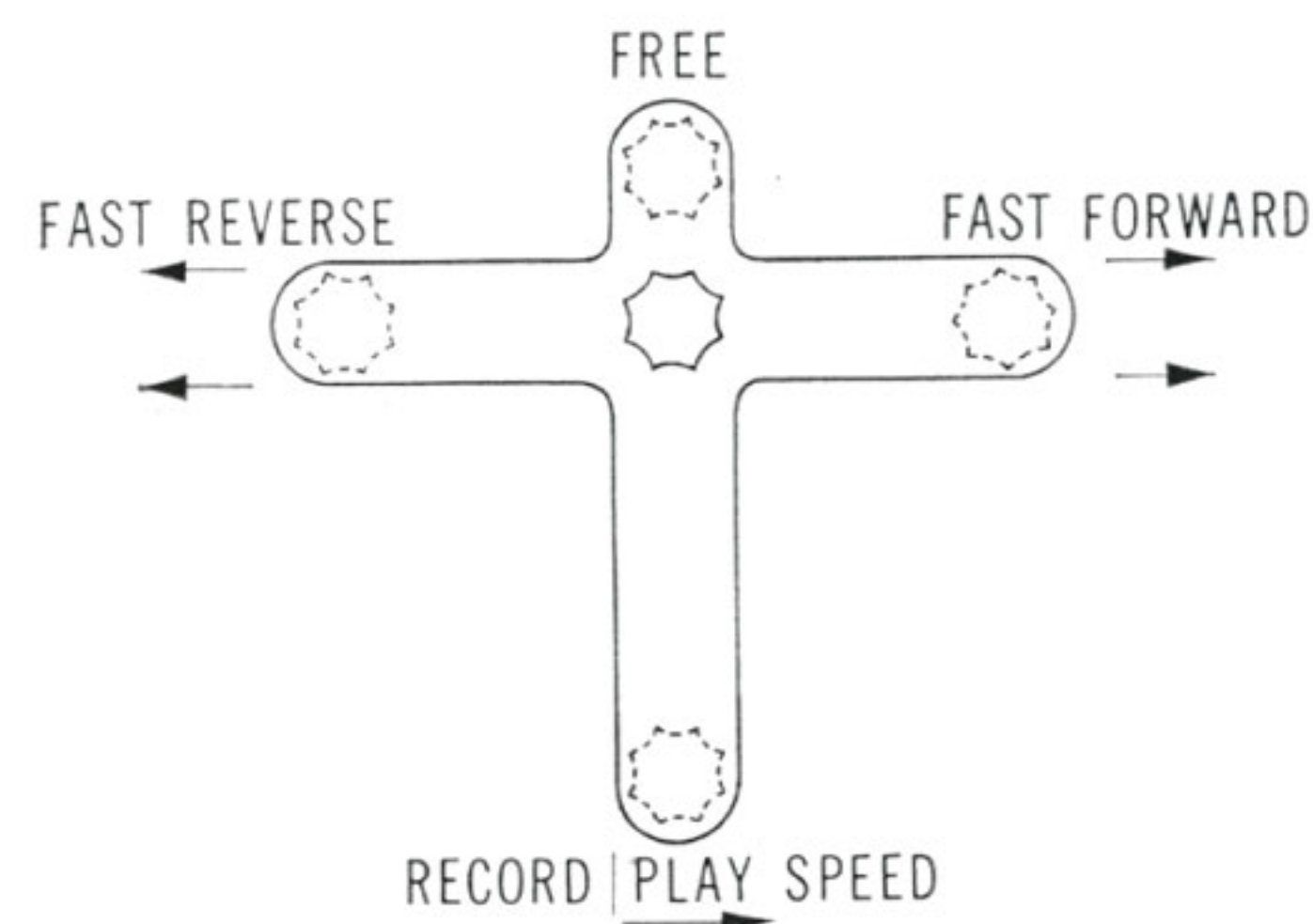


Fig. C

1. ON-OFF Switch — turns on power. (See Fig. B.)
2. 4-DIGIT TAPE COUNTER — indicates position on the tape.
3. RE-SET WHEEL — sets tape counter to zero.
4. SPEED SELECTOR — selects the desired tape speed.
5. TAPE MOTION LEVER — moves tape quickly in forward or reverse direction. Also pre-sets tape motion for RECORD-PLAY speeds. (See Fig. C.) FREE position for easy threading.
6. RECORD PUSH-BUTTON no. 1 and 2: (Interlocked with TAPE MOTION LEVER.) places the recorder in the record mode. Locks in only when TAPE MOTION LEVER is activated for RECORD-PLAY speed. PUSH-BUTTON no. 1 activates record mode for CH 1, no. 2 for CH 2.
7. MICROPHONE INPUTS no. 1 and 2: — microphones connected to these inputs. Use hi-impedance microphones or low impedance with low to high impedance transformers.
8. RECORDING VOLUME CONTROLS: — adjust recording volume of both channels, separately or simultaneously. Upper knob adjusts CH 1, lower knob, CH 2.
9. RECORD LEVEL INDICATORS: — Indicates the recording volume. CH 1 INDICATOR on left; CH 2 INDICATOR on right.
10. START-STOP PUSH-BUTTON: — starts or stops tape motion in record-play mode. After the TAPE MOTION LEVER has been set to RECORD-PLAY, wait for 5 sec. before depressing the START-STOP button to allow the flywheel to reach correct speed.
11. PLAYBACK PUSH-BUTTON no. 1 and 2: — places recorder in playback mode. No. 1 BUTTON activates playback from CH 1; no. 2 button CH 2.
12. OUTPUT VOLUME CONTROLS: Provide individual control of both outputs independent of the positions of the push-buttons. Upper knob adjusts CH 1, lower knob — CH 2. Both knobs are normally set to position 6.
13. SOUND-ON-SOUND-SWITCH. 3 positions: S.on.S, NORMAL, and AB-test, (On the first recorders of Model 64 the switch was located underneath the recorder and had only two positions; NORMAL and S.on.S. The NORMAL was identical with AB-test on the latest model.)
14. UPPER HEAD COVER: Remove to demagnetize or clean heads.
15. LOWER HEAD COVER: Remove to demagnetize or clean heads.
16. AUTOMATIC STOP.

recording with microphone

Step 1. Thread magnetic tape in the recorder as illustrated in Fig. D. Use blank tape or tape that has been pre-recorded in $\frac{1}{4}$ track only. The dull side of the tape should be facing the heads.

Step 2. Push ON-OFF Switch to ON position.

Step 3. Using the RE-SET WHEEL, set the TAPE COUNTER to zero.

Step 4. Set the tape speed, at which you wish to record by means of the SPEED SELECTOR switch.

Step 5. Hold down the no. 1 RECORD PUSH-BUTTON with your left hand and with your right hand move the TAPE MOTION LEVER towards you until it locks in position. (Note: The RECORD PUSH-BUTTON cannot be locked into activated position unless the TAPE MOTION LEVER is pulled towards you and locked in position.)

Step 6. Plug microphone into MICROPHONE INPUT JACK no. 1. Before starting to record adjust for correct recording level by talking or playing music into the microphone. Turn the RECORDING VOLUME CONTROL, clockwise until the RECORDING LEVEL INDICATOR nearly close at signal peaks.

Step 7. Start the tape motion by pressing START-STOP PUSH-BUTTON. You are now recording track no. 1 on the tape overlap, it may be necessary to turn the RECORDING VOLUME CONTROL counter-clockwise to re-adjust for correct recording level.

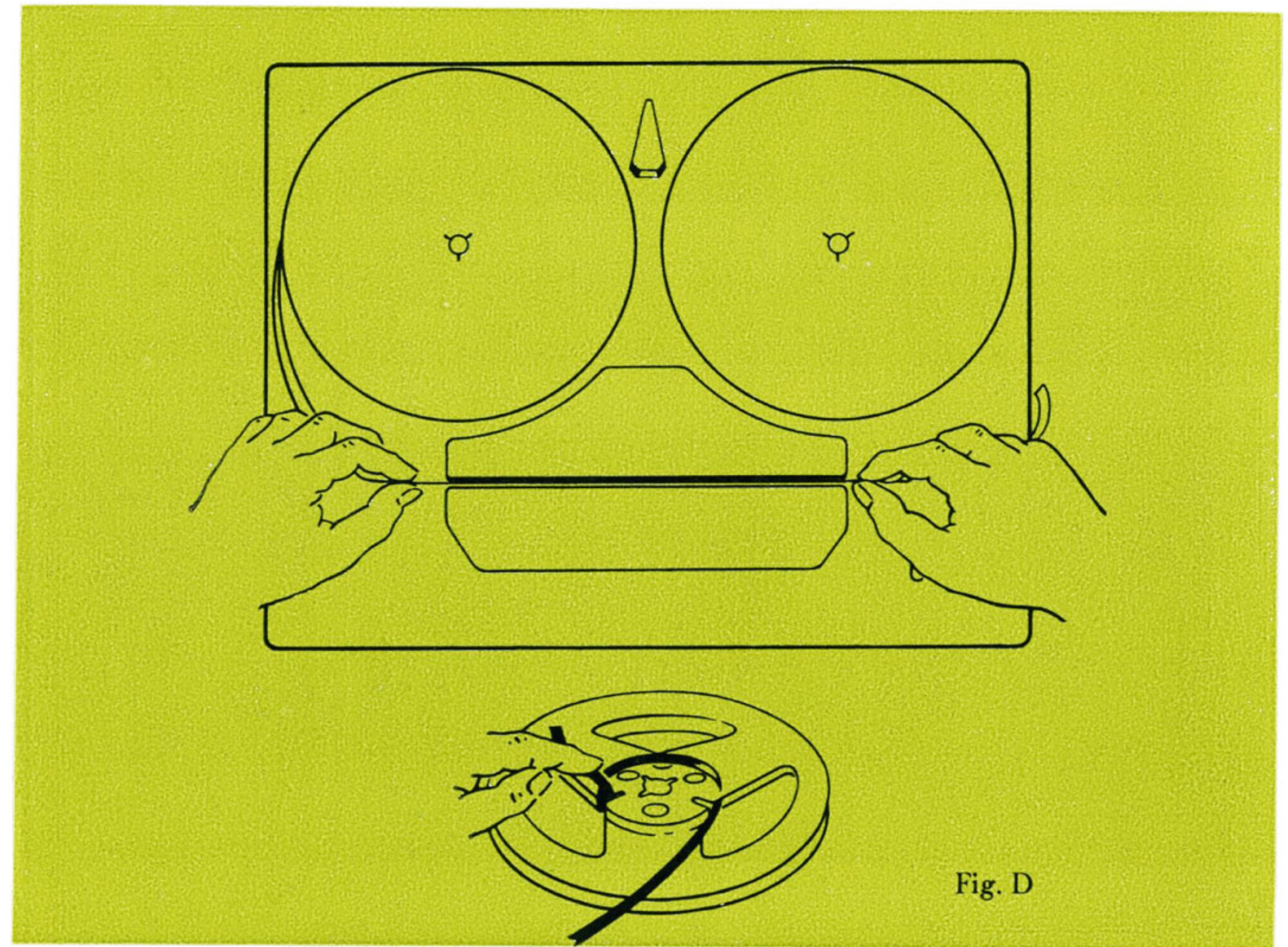


Fig. D

Step 8. To stop recording and tape motion, press the START-STOP PUSH-BUTTON.

Step 9. Push TAPE MOTION LEVER to NEUTRAL position.

Step 10. (A) In order to play back what has been recorded, push TAPE MOTION LEVER to REWIND Position. Then set the equipment in the playback mode.

(B) If you want to record additional tracks on the same tape: Lift both reels off the spindles and reverse their positions so that the full reel is again on the left turntable. Refer to 'Four Track Recording' P. 8.

Recording from Radio Tuner or Record Player

MODES OF OPERATION		SETTINGS		REMARKS	
OPERATION	CATHODE FOLLOWER OUTPUTS	SOUND-ON-SOUND SWITCH	PUSH - BUTTONS		
			CHANNEL 1		CHANNEL 2
MONO RECORD, mixed inputs	No output.	NORMAL			If the preamp and the poweramp are NOT separated, howling may occur. To prevent this, turn the playback volume control(s) off (or low) for recording and the record gain control(s) off for playback.
	B-test. Same output of both cathode followers.	NORMAL			
	AB-test. Same output of both cathode followers.	AB-TEST	B		
A					
MONO PLAYBACK	Same output of both cathode followers.	NORMAL			
MONO PREAMP	Same output of both cathode followers.	AB-TEST			Operating lever in Normal Forward Drive position.
STEREO RECORD	No output.	NORMAL			If the preamp and the poweramp are NOT separated, howling may occur. To prevent this, turn the playback volume control(s) off (or low) for recording and the record gain control(s) off for playback.
	B-test. Stereo output.	NORMAL			
	AB-test. Stereo output.	AB-TEST	B		
A					
STEREO PLAYBACK	Stereo output.	NORMAL			
STEREO PREAMP	Stereo output.	AB-TEST			Tape stopped.
MONO PLAYBACK-MONO RECORD	B-test in one channel. Mono playback in the other.	NORMAL			The cathode follower for the master track is connected to the high level input of the same channel. (For Ch. 1 master track on upper track, and Ch. 2 on lower track.) See page 13. *
SOUND-ON-SOUND	A-test.	S-on-S			
	B-test.	S-on-S			

* In Sound-on-Sound playback is made with push-buttons IV and V depressed.

A With the external equipment connected to the Tandberg inputs as previously described herein, record exactly as if using a microphone.

B Listening to a programme from a tuner or record player connected to the Tandberg inputs without any intention of recording any portion of the programme: Leave the TAPE MOTION LEVER in NEUTRAL and the START-STOP PUSH BUTTON inactivated. The signal will be pre-amplified through the record pre-amplifiers and routed to the external power amplifiers/speakers.

C By placing the recorder in RECORD MODE but not activating the START-STOP PUSH-BUTTON, you can listen to a programme from the tuner or record player (as above) and simply by activating the START-STOP PUSH-BUTTON start recording any portion of the programme without interrupting 'the listening'.

D If the preamp and the poweramp are not separated, howling may occur. To prevent this, turn playback volume control(s) off (or low) for recording and the record gain control(s) off for playback.

four track recording or playing

Recording techniques have been so refined that it is now possible to quadruple recording time by using only one quarter ($\frac{1}{4}$) of the tape width for a single channel monouaral recording. Thus the tape in actual use is four times as long as when used for single full track recording, and twice as long as when used for two track recording.

After completely recording the first quarter of the tape, lift both reels off the spindles and reverse their positions so that the full reel is again on the left turntable. See Fig. E. This correctly orientates the tape so that the second unrecorded quarter will pass over the record head. By repeating this three times, each quarter of the tape will be recorded giving you four separate tracks.

The stereo magnetic heads on your Model 64 each cover one-quarter of the tape width.

The upper Channel (No. 1) head arrangement (erase recordplay) functions for quarter track No. 1 or quarter track No. 4, and is activated by **RECORD PUSH-BUTTON No. 1** or **PLAYBACK PUSH-BUTTON CH 1**. The lower Channel (CH 2) head arrangement functions for quarter tracks No. 2 or No. 3, and is activated by **RECORD PUSH-BUTTON CH 2**, or **PLAYBACK PUSH-BUTTON CH 2**.

For stereo record or play both head arrangements function simultaneously for quarter tracks 1 and 3, or quarter tracks 2 and 4. Activate both **RECORD PUSH-BUTTONS CH 1** and **CH 2**, or both **PLAYBACK PUSH-BUTTONS CH 1** and **CH 2**.

See Figure F. Note that with side 1 of the tape reel up, tracks 1 and 3 are scanned by the heads. With side 2 of the tape reel up, tracks 2 and 4 are scanned by the heads.

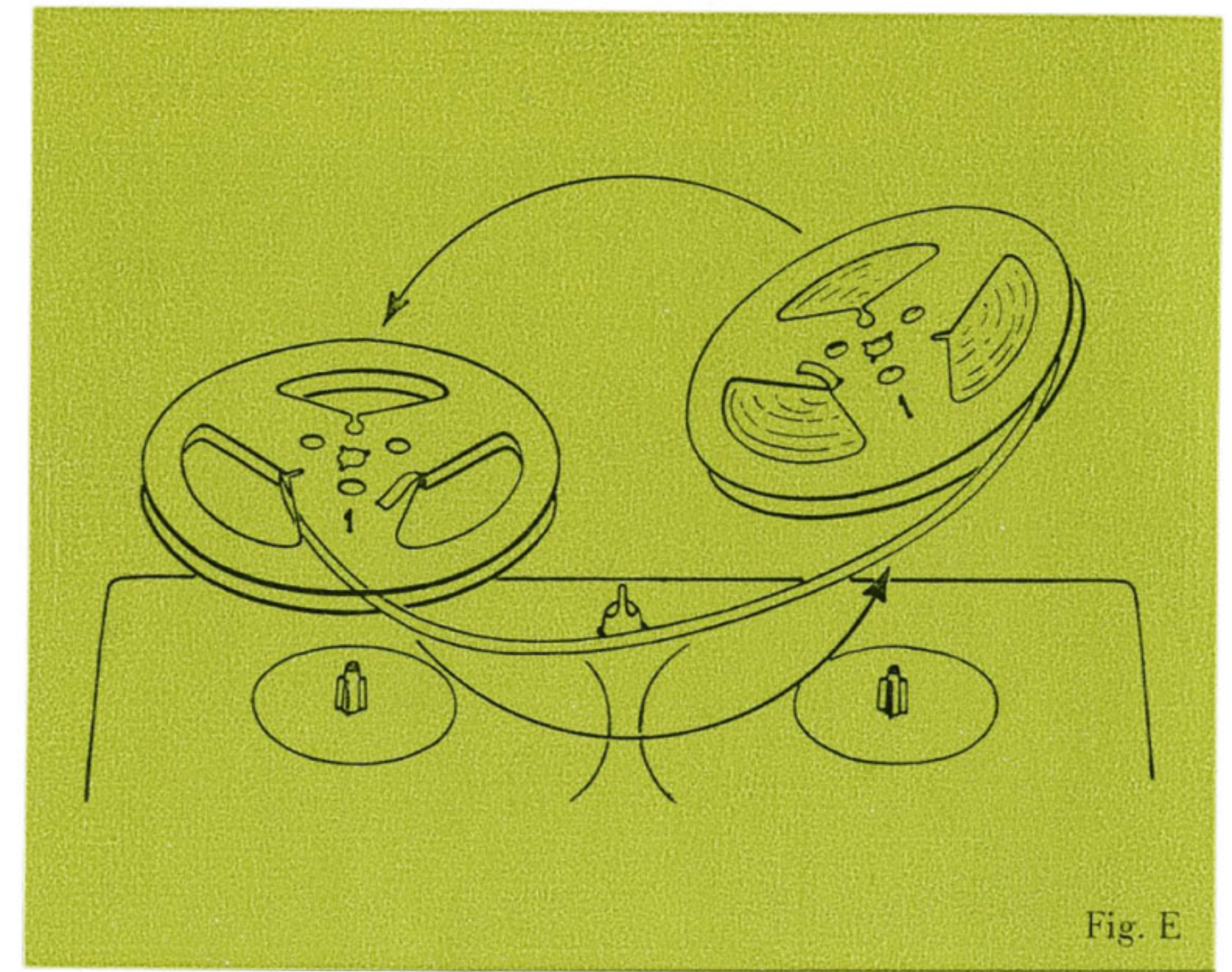


Fig. E

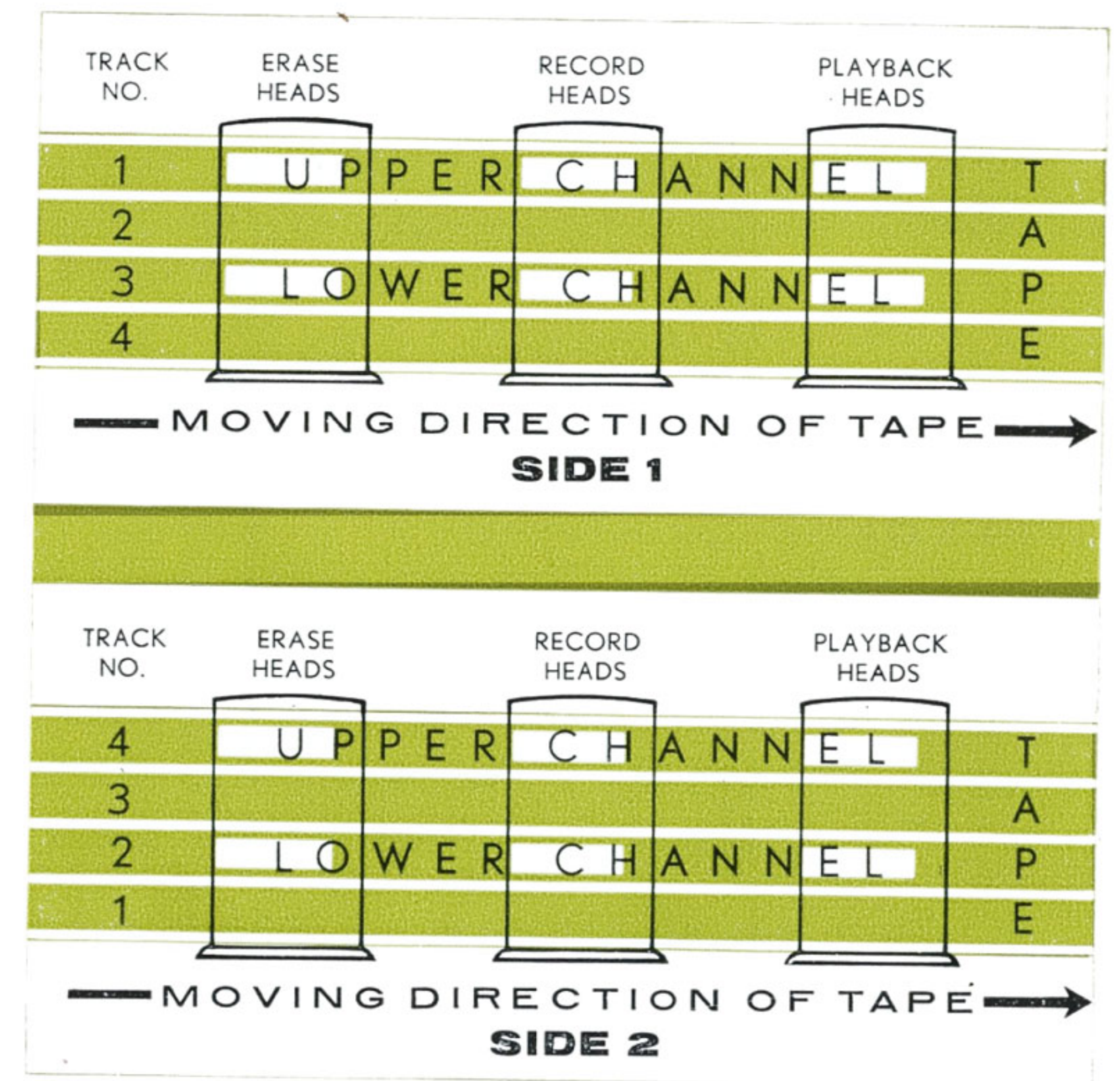


Fig. F

playing recorded tapes

Step 1. Thread the recorded tape on the Model 64 as shown in Fig. E.

Step 2. Push ON-OFF switch to ON position.

Step 3. Set the tape speed to the correct speed at which the recording was made by turning the SPEED SELECTOR.

Step 4. Move the TAPE MOTION LEVER towards you until it locks in position.

Step 5. Monaural tapes: Press one PLAYBACK PUSH-BUTTON. Stereo tapes: Press both PLAYBACK PUSH-BUTTONS.

Step 6. Start tape motion by depressing START-STOP PUSH-BUTTON. You are now playing back the tape. Adjust the volume control on the associated power amplifier to a little higher level than desired and adjust the OUTPUT VOLUME CONTROLS until balance and desired listening level is achieved.

Step 7. To Stop playback and tape motion, press the START-STOP PUSH-BUTTON.

Step 8. Rewind the tape unless you wish to play back the other tracks on a four-track tape. If you want to play back the other tracks, do not rewind the tape but reverse the reels as described in «Four Track Recording or Playing» on the previous page. Always keep the same tape on the same reel to keep track of the recorded programmes when filing.

monitoring

MONITORING. To be sure you are recording exactly what you wish and that it is being properly recorded on the tape, it is highly desirable to listen into, or monitor the recording while recording. Connect stereo headphones to the CATHODE FOLLOWER outputs CH 1 and CH 2, and set the SOUND-ON-SOUND SWITCH to position A-B TEST.

MONO. A-B TEST. The RECORD PUSH-BUTTON for one channel (CH 1 or CH 2) together with the START-STOP PUSH-BUTTON are depressed. The programme is heard through both headphones, as it is being recorded on the tape.

B-TEST. One RECORD PUSH-BUTTON and the corresponding PLAYBACK PUSH-BUTTON (CH 1 or CH 2) together with the START-STOP PUSH-BUTTON are depressed. The programme is heard through both headphones after it has been recorded on the tape.

Because of the mechanical distance between the record head and the playback head the programme will be heard approx 150 m. sek. delayed at $7\frac{1}{2}$ i.p.s. tape speed.

STEREO. A-B TEST. Both RECORD PUSH-BUTTONS (CH 1 and CH 2) and the START-STOP PUSH-BUTTON are depressed. The programme that is fed to the input of CH 1 is heard through the left head phone, and the programme that is fed to the input of CH 2 is heard through the right headphone, as it is being recorded on the tape.

B-TEST. Both RECORD PUSH-BUTTONS and PLAYBACK PUSH-BUTTONS together with the START-STOP PUSH-BUTTON are depressed. The programme from CH 1 is heard through the left headphone while the programme from CH 2 is heard through the right headphone after it has been recorded on the tape.

Because of the mechanical distance between the record head and the playback head the programme will be heard approx. 150 m sek. delayed at 7½ i.p.s. tape speed.

The recorded programme can be compared to the input signal by switching between A-TEST (input signal) and B-TEST (recorded signal) during the actual recording.

mixing

When recording a single channel you can mix the two HI-LEVEL (1 megohm) inputs and along with this, the two LO-LEVEL 100 kohms inputs.

You cannot mix microphone inputs with the HI-LEVEL inputs, or with the LO-LEVEL inputs.

Both RECORDING VOLUME CONTROLS are used to achieve correct mixing and recording level. The total mixed signal registers on the one RECORD LEVEL INDICATOR for the track being recorded.

add a track

ADD A TRACK. This is a technique whereby one may playback a programme on one channel and at the same time record another on the other channel. When playing back in stereo both programmes will be heard simultaneously. **ADD A TRACK** is used when synchronisation of two programmes is desired, or when recording a second programme and using the first as a basis for the second. Due to the position of the separate record and playback heads perfect synchronisation of **ADD A TRACK** is not possible with Model 64, for absolute synchronisation **SOUND ON SOUND** is indicated. For teaching purposes where a second programme based on the first programme is often required Model

64 can be used. There will be a slight time lag between the two programmes of 150 ms. at 7½ ips. and 300 ms. at 3¾ ips.

Assuming that you have a programme on track 1, and you want to add another programme to this on track 3, the procedure is as follows: —

1. Connect your headset or amplifier to the CATHODE FOLLOWER output CH 1.
2. Connect the microphone to MIC 2.
3. Press the PLAYBACK PUSH-BUTTON CH 1.
4. Press the RECORD PUSH-BUTTON CH 2 and set the TAPE MOTION LEVER to RECORD-PLAY SPEED.
5. Set the output signal (programme 1) using the upper OUTPUT VOLUME CONTROL.
6. The sound level from the microphone is set by the lower knob of the RECORDING VOLUME CONTROLS.
7. Press the START-STOP PUSH-BUTTON.

After recording programme 2, rewind and playback in stereo. You will hear both programmes if a stereo headset or stereo amplifier is connected to the outputs, but programme 1 will have a slight delay in relation to programme 2.

Perfectly synchronised **ADD A TRACK** is available when using Tandbergs Tape Recorder Model 74, with combined record and playback head.

If the two programmes are wanted mixed in both earphones the two tape recorder outputs should be interconnected through an adapter available for the purpose, and a mono headset connected to this.

sound on sound

SOUND ON SOUND. A technique of adding a second part of a programme whilst the first is being played from another track or machine. The result is a recording of the two parts com-

bined on one track, and the resulting programme can be played back as a mono recording. Perfect synchronisation is assured, and consequently it is possible to build up programmes in sequence by adding new instruments or voices as required.

SOUND ON SOUND is one of the special features of the Tandberg Tape Recorder Model 64 and 62, as these models have separate record and playback heads.

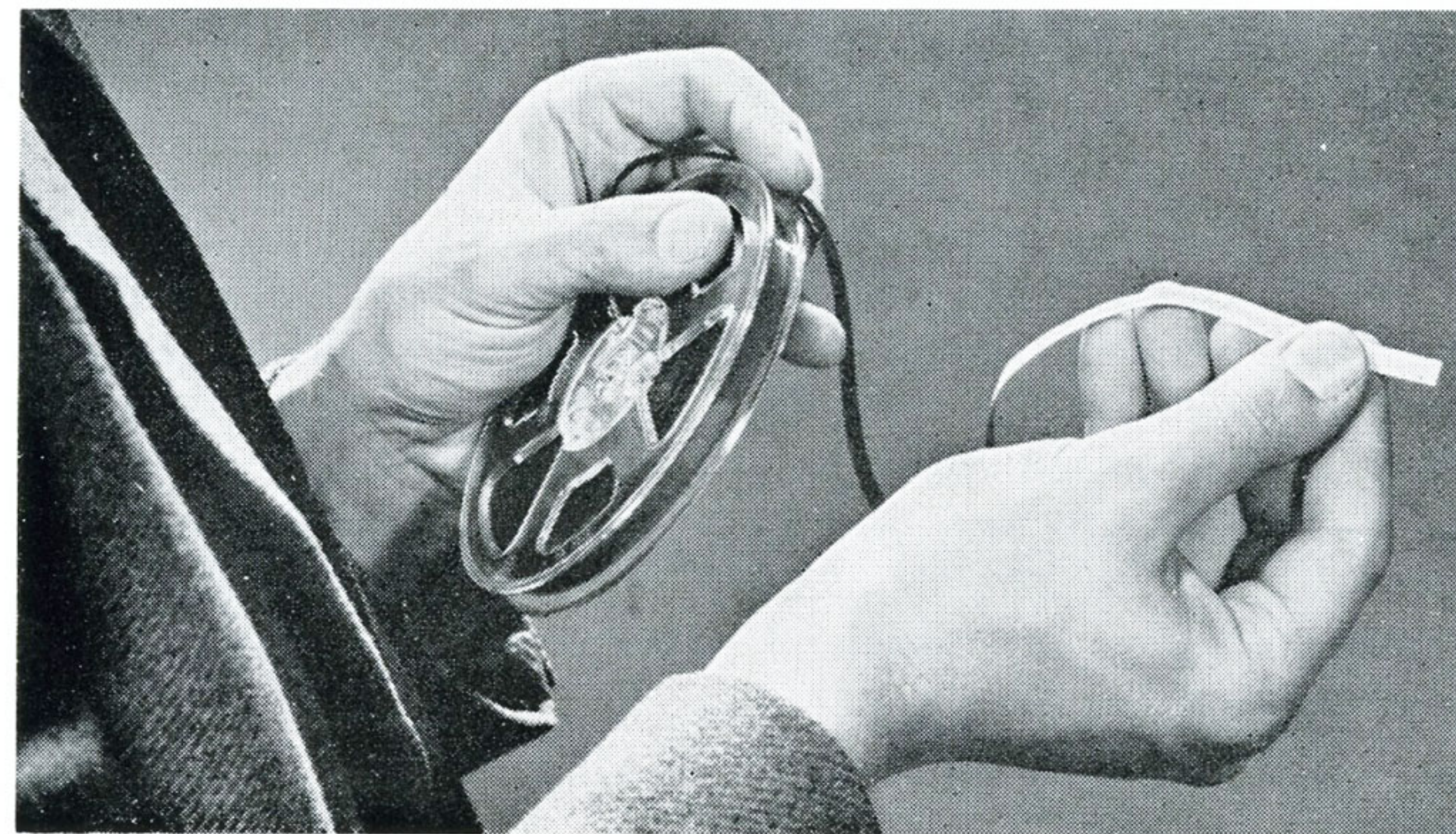
Procedure: — Assuming that you have a programme recorded on track 1.

1. Connect the CATHODE FOLLOWER output CH 1 to the HI-LEVEL input CH 1.
2. Connect microphone to MIC 2.
3. Connect headset to the CATHODE FOLLOWER output CH 2.
4. SOUND ON SOUND switch set to S on S.
5. Press PLAYBACK PUSH-BUTTON CH 1.
6. Turn both OUTPUT VOLUME CONTROLS to max. position.
7. Press RECORD PUSH-BUTTON CH 2.
8. The recording volume for programme 1 is adjusted by turning the upper knob of the OUTPUT VOLUME CONTROL, and for programme 2 by the lower knob.
9. Press the START-STOP PUSH-BUTTON to start the tape.
10. During recording it is possible to hear the A-B test when the PLAYBACK PUSH-BUTTON CH 2 is released/operated.
11. After recording programme 2, rewind, then press the PLAYBACK PUSH-BUTTON CH 2 and the resulting programme will be heard on CH 2.

erasing

Previous recording will automatically be erased during the recording process. Before recording, therefore, be sure the tape does not contain a programme you want to keep.

If you record on a pre-recorded tape and the new recording does not completely overlap the previously recorded programme, some portions of that programme will remain on the tape. Erasing the entire pre-recorded tape before recording will therefore minimize editing.



To completely erase a pre-recorded four-track tape, run the tape in the stereo record mode with both RECORDING VOLUME CONTROLS set to zero thus erasing two of the four tracks. After completely running the tape, lift both reels off the spindles and reverse their positions so that the full reel is again on the left turntable. Then run tape in stereo record mode again, thereby erasing the remaining two tracks.

remote operation

The Model 64 can be started or stopped from a remote location with a FOOT PEDAL available through your Tandberg dealer.

Step 1. Place equipment in record or playback mode.

Step 2. Connect the FOOT PEDAL to three-contact socket at back of the recorder.

Step 3. To start tape motion, depress the FOOT PEDAL. As soon as you release the FOOT PEDAL tape motion stops.

automatic stop

The Model 64 tape recorder has an automatically operated switch which stops the motor (and reels) when a tape breaks or has run all the way through, so that there is no tape in the tape slot. The spring which actuates the stop switch is located next to the tape guide in the right end of the tape slot. The motor will not start unless the tape is threaded properly. The automatic stop will only function if the tape is threaded between the tape guide and actuating spring. (The automatic stop operates during recording and playback as well as rewind and fast forward winding).

splicing, editing and storing your tape

If good quality magnetic tape is used, recorded material can be stored for years without reduction in sound quality.

If keeping your tapes over a period of time, it is often desirable to edit them, keeping just the best portions. This may be done by winding them on smaller empty reels or combining them on one large reel. To re-join cut-out portions or combine several parts together the tapes is spliced. In cutting the tape, however, remember that you are cutting the whole tape of four tracks.

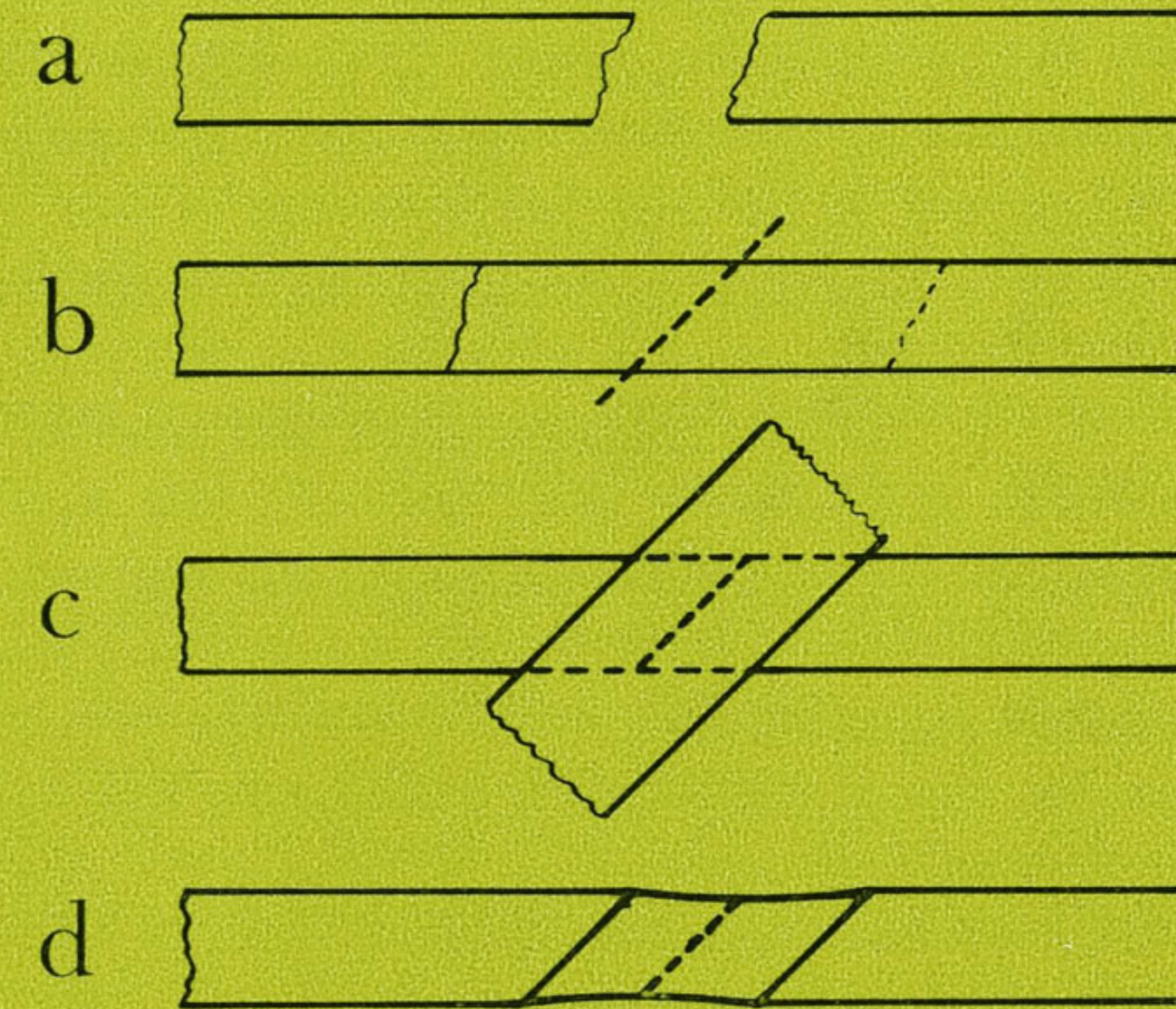


Fig. G

To splice two pieces of tape: (See Fig. G.)

- (A) Place the two ends over each other so they overlap.
- (B) Cut through both together at an angle.
- (C) Place the ends together so that they touch and apply splicing tape to the shiny side of the tape at the same angle as the cut.
- (D) Cut away the excess splicing tape on both sides, cutting a little into the tape to make sure the splice is not wider than the tape itself.

maintenance

Your Tandberg Tape Recorder has been engineered mechanically and electronically to require a bare minimum of service and adjustment. Do NOT lubricate any parts of the mechanism.

Indiscriminate tinkering will result in damage.

Should your tape recorder require service, consult your dealer for the name and address of the nearest Tandberg service station.

demagnetizing the heads

Magnetic heads may occasionally acquire a degree of permanent magnetization which will result in an increase in noise level, distortion, and a partial erasure of high-frequencies on any recorded tape which passes over them.

Built in to the Tandberg model 64 is an automatic demagnetizing circuit for the record and erase heads which is active each time the record buttons are released. In normal use the playback head can never be actuated either from magnetic fields or currents which can magnetize the head. However, should some of the critical points be magnetized by accident (for example, by a magnetized tool) you can demagnetize these points.

to demagnetize

Step 1. Cover the demagnetizer tips with cellophane tape or masking tape to prevent damage to the heads.

Step 2. Remove knurled ornamental threaded nuts holding down upper and lower HEAD COVERS.

Step 3. Lift off upper and lower HEAD COVERS.

Step 4. Bring the tips of the demagnetizer in contact with the head.

Step 5. Start the demagnetization.

Step 6. Move the demagnetizer tips up and down the head several times, then slowly withdraw the demagnetizer upward to about two feet above the recorder.

Step 7. Disconnect demagnetizer.

Head demagnetizers can be obtained at your local Tandberg dealer.

cleaning

All parts in contact with the tape should be cleaned occasionally. Any foreign matter, such as dust, lint or magnetic oxide particles from the tape can sometimes seriously affect the quality of recording or playback.

to clean

- Step 1. Thread tape on the recorder as illustrated in Fig. 1.
- Step 2. Pull **TAPE MOTION LEVER** towards you until it locks in position.
- Step 3. Remove upper and lower **HEAD COVERS**.



- Step 4. Note those parts which the tape touches.
- Step 5. Push **TAPE MOTION LEVER** to **NEUTRAL** and remove tape from recorder.
- Step 6. Using a piece of cotton or soft lintless cloth wrapped around a toothpick or pipe cleaner saturated with alcohol or magnetic head cleaner, clean those parts which the tape touched.
- Step 7. Immediately dry off the rubber roller and the capstan (the part against which the rubber roller presses the tape).
- Step 8. Replace the **HEAD COVERS**.

accessories

The following accessories are for use with the Model 64 and can be obtained at your Tandberg dealer.

Crystal Microphone model TM2H. Manufactured by Tandberg, the TM2H Microphone is matched to the Tandberg Recorder to make live microphone recordings with optimum quality.

It has an omnidirectional pickup characteristic. The frequency response is from 20 to 13 000 cycles \pm 3 dB. It is furnished with a 12-foot microphone cable and plug and microphone stand as shown on the picture.



Monaural Headphones. Comfortable Stetson type for monitoring or private listening without disturbing others.



Telephone Pick-Up. Manufactured by Tandberg it attaches to a telephone easily with a suction cup. No wire connections are necessary. With it you can record a telephone conversation. It is furnished with 12-foot cord and plug to connect to the microphone input.

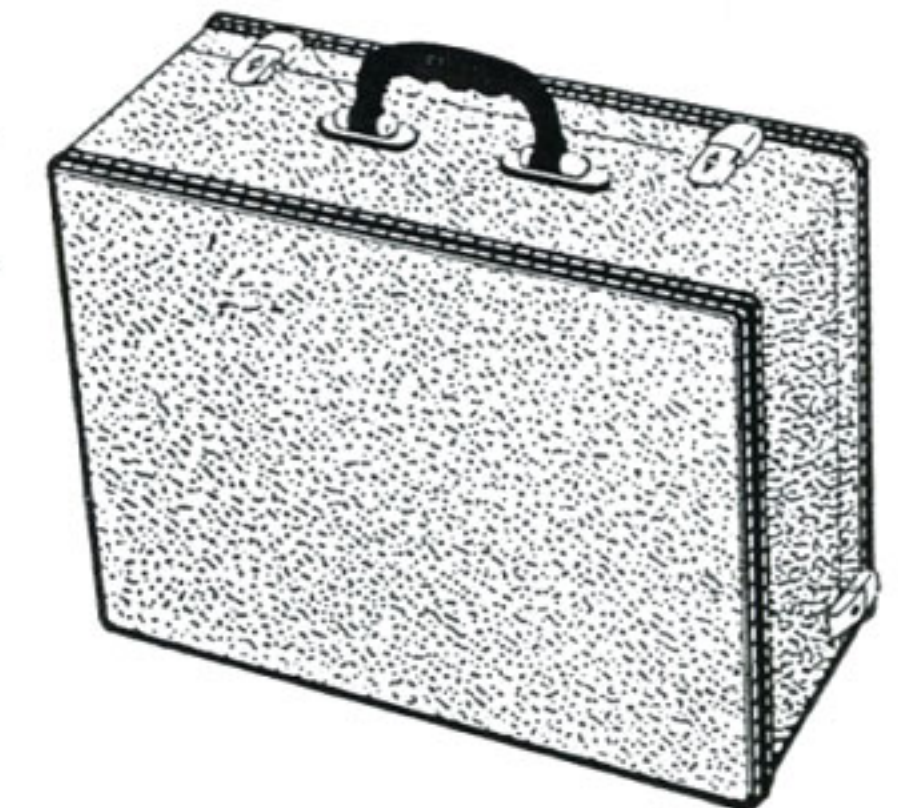


Transport Case. Attractive luggage-type case of simulated leather is exceptionally durable and light. Fitted with chrome plated brass locks and key.

Size - 16½" x 13" x 7"

Weight - 5 lbs.

Color - Grey



Tandberg Series 64... Basic Specifications

INPUTS, SENSITIVITY and IMPEDANCE

Two microphones - .00125 Volt RMS 5 Mohm

Two High Level - .05 Volt RMS 1 Mohm

Two low level - .004 Volt RMS 100 Kohm.

PLAYBACK OUTPUTS

With the output control-knobs set to max (6), the RE-
CORDING LEVEL INDICATOR nearly close in A-test, and 3 %
distortion the Cathode Follower Outputs is adjusted to 1½ Volts.

FREQUENCY RESPONSE, NAB EQUALIZATION

7-½ I.P.S. 30 to 20,000 cycles (± 2 dB, 40 to 16,000 cycles)

3-¾ I.P.S. 30 to 14,000 cycles (± 2 dB, 40 to 10,000 cycles)

1-⅞ I.P.S. 50 to 7,000 cycles (± 2 dB, 55 to 5,000 cycles)

DISTORTION

A recording level 10 dB below maximum level results in 5/10
of 1 % distortion of a 400 cycles signal when played back.

RECORDING AMPLIFIERS DISTORTION: 1/2 of 1 % at
maximum recording level.

PLAYBACK AMPLIFIERS DISTORTION: 2/10 of 1 % at
1.5 V output and with a load impedance of 10,000 ohms or
more.

BIAS AND ERASE CURRENT DISTORTION: 1/2 of 1 %.

NOISE LEVEL

55dB below maximum recording level. Maximum recording
level corresponds to 3 % distortion.

BIAS AND ERASE FREQUENCY

80 kc, common bias supply to each recording channel.

FLUTTER & WOW:

0.1 % RMS 7-½ I.P.S.

0.2 % RMS 3-¾ I.P.S.

0.3 % RMS 1-⅞ I.P.S.

By clever design, maintaining unusually close tolerances in all
moving parts, and custom matching of parts to each recorder,
Tandberg achieves the smoothest tape motion of any 1/4" tape
recorders.

SPEED ACCURACY

$\pm .2$ % or ± 3.6 seconds in 30 minutes, relative accuracy, re-
peated playback.

± 1 % absolute tolerance.

4-TRACK STACKED PLAYBACK HEAD: Designed for ideal
playback characteristics of highest frequency response, plus max-
imum sensitivity, gap width .00012".

CROSS-TALK REJECTION: Better than 60 dB.

TUBE COMPLEMENT

6- ECC-83 Tubes (7025)

3- ECC-82 Tubes (12AU7)

2- SELENIUM RECTIFIERS

2- EAM-86 Tubes

POWER REQUIREMENTS: 110-125-145-200-220-245 Volts, 50
Cycles, 65 Watts.

DIMENSIONS

Teak cabinet 16" long, 12" wide, 6" high.

WEIGHT

Instrument alone 25 lbs. With carrying case 30 lbs.

Model 62 (two-track)

Specifications as Model 64 (four track) except for the following:

2-track stacked erase head: Min. 70 dB erasure. Influence on tracks left on the tape less than 0,5 dB.

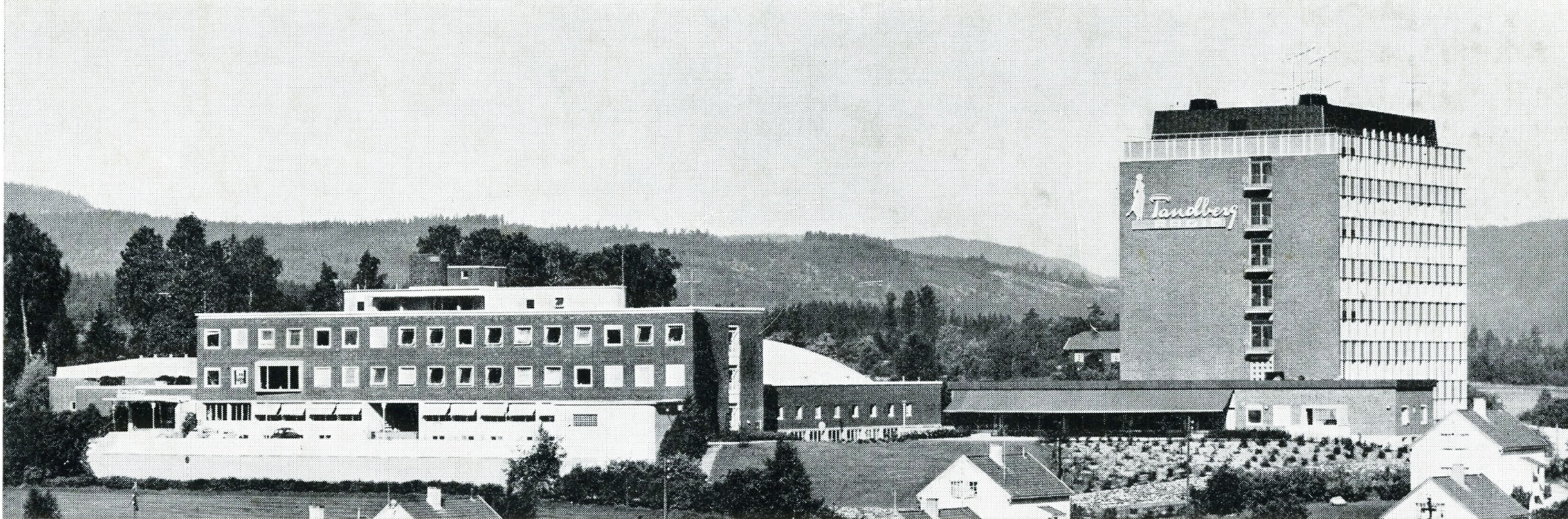
2-track stacked record head: Designed for highest recording performance with ideal airgap for recording, .0006".

2-track stacked playback head: Designed for ideal playback characteristics of highest frequency response, plus max. sensitivity, gap width .00012".

Noise from erased tape reduced 3 dB in playback compared with 4-track system.



FOR NOTES:



Tandberg is uncompromisingly aiming for the highest standards of quality.

The modern buildings with surrounding parks create an attractive frame for the advanced social policy and personnel conditions which justify Tandberg's reputation as a pioneer plant. Under these conditions increasing ability and efficiency have been attained and led to the development of outstanding and world famous products.



TANDBERGS RADIOFABRIKK A/S

OSLO - NORWAY

DEALER: