

*as easy as putting on a record!*

How to set up your  
Gramdeck

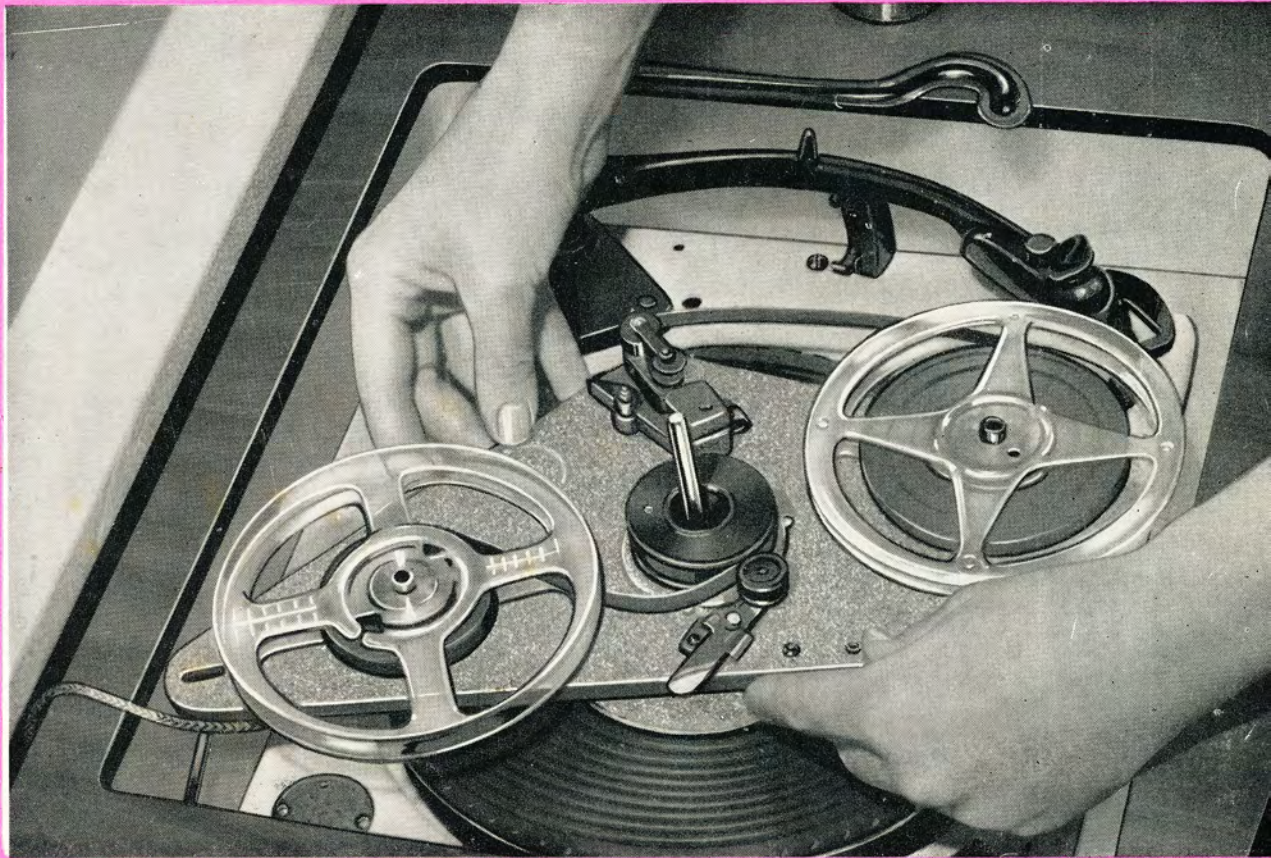
How to record—  
indoors or outdoors

How to play back  
your recording

How to erase

How to edit

. . . in short, every-  
thing you want to  
know for hours of  
pleasure with the  
amazing Gramdeck!



**Gramdeck** DIRECTIONS FOR USE

# SOUND ON TAPE . . . This is how it works!

A modern "miracle" and a brilliant British invention provide you with "a sound-recording studio in your own home"

## A FEW 'DOS' AND 'DON'TS'

- ★ **NEVER** try to pull the leads out from the sound-head or you will damage it.
- ★ **NEVER** try to clean the sound-head with a file or anything rough. Use a rag moistened with methylated spirit.
- ★ **DO** make sure that you get no oil onto the drive-belt and that this belt is fixed in an EIGHT-shape.
- ★ **DO** remember that the felt-washers on the reel-spindles are *essential*.
- ★ **NEVER** leave the rewind handle fixed to the reel when playing or recording.
- ★ **IF** you replace a battery fit it into the Control Unit *the right way round*, i.e., make sure the battery does not short against the metal case.
- ★ **NEVER** try to connect any of the Gramdeck leads direct to the mains supply.

**I**N the matter of recording—of putting sound from a microphone, radio, or any other source onto magnetic tape—the Gramdeck works in much the same way as any other high-quality tape-recorder. The real difference lies in the clever way it uses your own equipment, thereby giving you better results and saving many pounds.

Glance quickly at the most important parts on the diagram-drawing opposite and see what happens when we make a recording. First, there is a supply-spool (H) on which is wound 600ft. of magnetic tape. This tape has a very thin non-magnetic base and *one* side of it—the matt or "dull" side—is coated with magnetic material.

With the "shiny" or non-magnetic side outwards the tape first passes between the tape-guide (F) and the erase-magnet (E). This erase-magnet wipes off anything that is already on the tape. From the erase-magnet, the "dull" surface of the tape passes across the face of the record/play head (G), which does the important job of magnetising the part of the tape that is passing at the moment, putting on it a "magnetic pattern" that

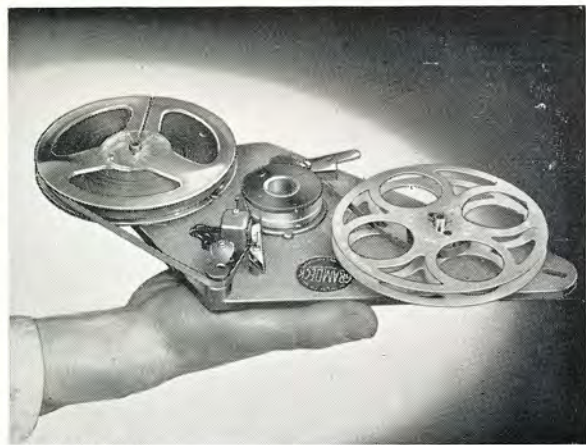
will later be turned into sound when the tape is played back.

The record/play head of the Gramdeck is what is known as a "twin-track" head. This means that, as the tape passes across it, it uses only part of the width of the tape—the top part. You will, therefore, see that when the take-up spool (B) is full, you have only to turn it over and use it as a supply-spool on the opposite spindle in order to record on the other track—previously the lower part of the width of the tape but now, because you have turned it over, the top part.

Naturally, when you play back the tape, you thread it around the *outside* of the tape-guide so that it misses the erase-magnet.

The foregoing simple explanation shows why the "shiny" side of the tape must always face outwards on the spool so that the "dull" side is against the face of the record/play head. You will also readily understand now that twin-track recording *doesn't* mean recording on both sides of the tape but simply on the matt or "dull" side which has an upper and lower track.





THE GRAMDECK

# THIS IS YOUR GRAMDECK

... the wonderful British invention which, for a truly modest outlay, has brought you really *high-quality* tape recording and playback facilities. It is simple to install ... simple to use ... and on this page we show you a diagram-drawing of the

Gramdeck so that you can see for yourself that there's nothing complicated or difficult about it. And, on the following pages, there are clear,

straightforward instructions—mostly in see-at-a-glance pictures—to show you how delightfully easy it is to make your own recordings and play them back almost at once!



CONTROL UNIT

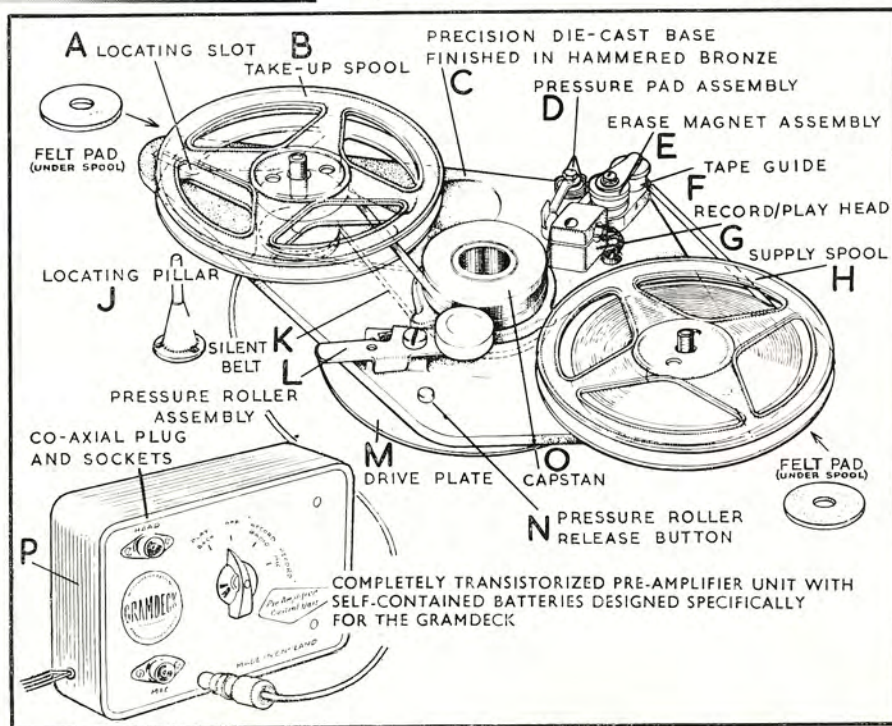


MICROPHONE

**AND DON'T FORGET—THERE'S A FREE INSTALLATION SERVICE IF YOU NEED IT!**

To make a first-class microphone recording, all you need is the Gramdeck (with its Control Unit and microphone) and any gramophone—even a *clock-work* one will do!

To play back your recording, you simply plug the Control Unit Pick-Up lead into the GRAM Pick-Up socket of your radio, or into the Pick-Up socket of your gramophone or radiogram. But don't worry if there's no Pick-Up socket on your set ... we will install one for you, *free of charge*. (See page 10.)



- A Locating Slot (fits over locating-pillar)
- B Take-up Spool
- C Base of Deck
- D Pressure-Pad Assembly
- E Erase-Magnet Assembly
- F Tape-Guide
- G Record/Play Head
- H Supply Spool
- J Locating-Pillar
- K Silent Belt
- L Pressure-Roller Assembly
- M Drive-Plate
- N Pressure-Roller Release Button
- O Capstan
- P Control-Box and Pre-Amplifier

# HOW TO SET UP YOUR GRAMDECK

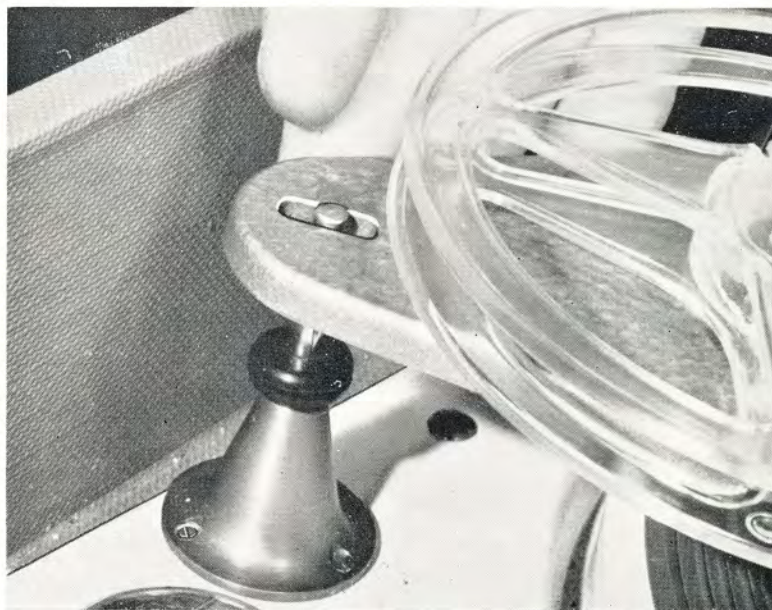


**P**UT the Gramdeck on your turntable in such a way that the deck and spools do not rub against any part of the gramophone unit. The hole in the centre of the capstan (O) fits over the centre-spindle of the gramophone turntable. It doesn't matter whether the spindle is long or short. Put the Gramdeck in the most convenient position—diagonally, straight across...any way you like, as long as the spools are free to revolve. *Don't lose the felt-washers on the spool spindles. The Gramdeck will not work correctly without them.*

*(See illustration above)*

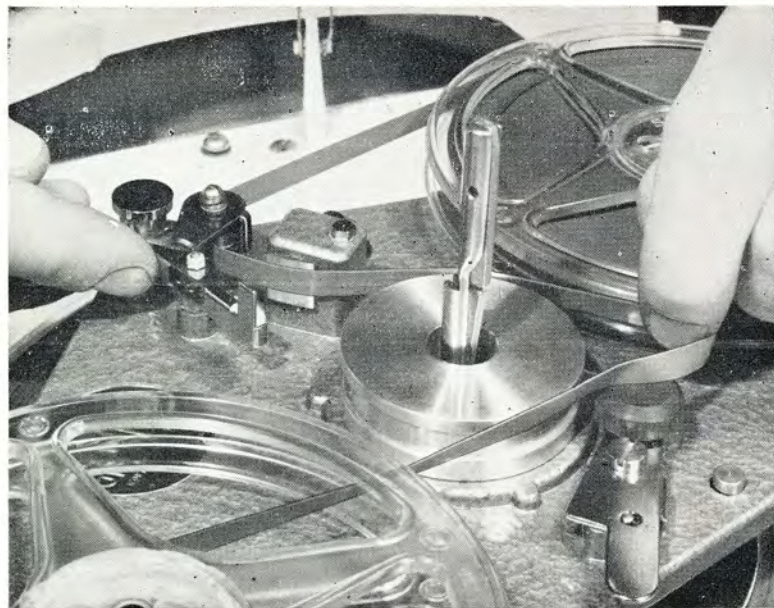
**F**IT the locating-pillar (J) to the motor-board of your gramophone. It can be screwed on or, if you prefer, you can stick it onto the motor-board with any good adhesive. The locating pillar protrudes through the locating-slot (A) which has been cut in the deck for this purpose. This enables the deck to ride with the turntable (which it *should* be able to do) but stops the deck from rotating. Note that a new-style, "one-screw" nylon locating pillar is now supplied, and not the one shown in illustration.

*(See illustration below)*



**ALWAYS SWITCH CONTROL UNIT TO "OFF" WHEN NOT IN USE**

## NOW . . . thread the tape for recording



AS you can see from the picture above, the tape from the supply-spool is led first between the tape-guide (F) and the erase-magnet (E). The tape must come from the supply-spool with the "shiny" side outwards. The safety-gate, which bridges the tape-guide and erase-magnet, is swung to the left in a horizontal position so that the prong on it is *behind* the erase-magnet. You then open the pressure pad (D), and lead the tape over the face of the record/play head, so that the matt or "dull" side of the tape is against the face of the record/play head. *Make sure the tape is flat over the face of the record/play head and not caught underneath it.*

LET the pressure-pad re-engage and take the tape round the capstan, as shown in the picture, making sure it is seating properly in its channel. Then, it is simply a matter of joining the tape to the other spool (by inserting it in the slot at the centre) and giving it one or two turns in an anti-clockwise direction. You may find that a full supply-spool has a tendency to spill while you are threading the tape. In this case, you would find it easier to join the tape from the supply spool to the take-up spool *before* threading the tape. This is simply a matter of putting the spools flat on the table, about nine inches apart, joining them, and then putting them onto their respective spindles.

**NOTE:** *Tape-spill can be entirely avoided by NOT using full reels of tape until you are used to handling them.*



**DO NOT LOSE THE FELT WASHERS . . . THEY ARE IMPORTANT**

# TAPE THREADED FOR RECORDING? . . .

*then here's how to make a microphone recording*

## IT'S SO EASY

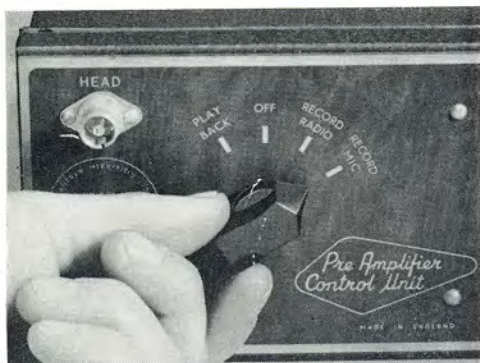
With a good microphone, you can record almost anything. If you are not using the microphone supplied by us, remember that the Gramdeck requires a low-impedance microphone (500-600 ohms). For recording speech, it is not advisable to speak closer than 12" from the microphone—and the nearer you are, the softer you speak. For making a microphone recording of radio or a privately-made gramophone record, set the volume to a normal acceptable level and place the microphone about four feet away. (Direct-from-radio recordings, see page 10.)



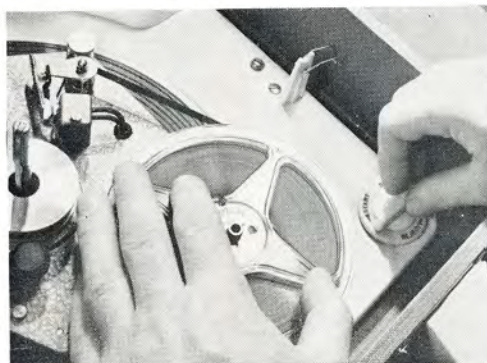
1 You will find that, already attached to the Gramdeck, there is a lead with a plug on the end of it. Insert this plug into the Control Unit socket marked "HEAD."



2 There is a similar plug on the end of the microphone lead. Insert this into Control Unit socket marked "MIC."



3 Set the centre switch on the Control Unit to the position marked "RECORD MIC."



4 Set gramophone turntable speed to 78—or whatever speed you desire. Hold supply spool for a moment, and start turntable manually.\*



5 Allow turntable to gather speed, then press pressure-roller button (N) to engage the pressure-roller, let go of supply-spool. Spools will now be turning. Speak into the microphone.

\*If your gramophone has no hand start, switch on, allow the automatic arm to come across and, as soon as the motor starts, lift the arm gently and swing it back, or part of the way back, to the rest position.

# RECORDING MADE . . .

*now wind back the tape ready for playing*

WHEN you have made your recording, you must, of course, wind the tape back onto the supply-spool before you can play it. The first thing to do is to open the pressure-roller by pushing the pressure-roller lever (L) towards the spool. Then open the pressure-pad (D) and lift the tape clear of the capstan and tape-guide. Thread the tape round the **OUTSIDE** of the tape-guide, as shown in the photograph and fit the re-wind handle onto the supply-spool. (It fits into the centre-hole of the spool and the "pin" into one of the slits at the centre of the spool.)

The hand re-wind is specially useful for winding back *part* of a spool of tape. Your first recording, for example, may use only fifty feet or so.



MOTOR TURNTABLE RE-WIND



HAND RE-WIND

TO re-wind a complete spool of tape, it is quicker and more convenient to use the motor turntable re-wind. You lift the tape from its recording path (as described above), *turn both spools over, and change them to opposite spindles*, putting the re-wind weight on the empty spindle. Thread the tape straight round the *outside* of the tape-guide (and remember, the "shiny" part of the tape must always face outwards), set the gram. speed at 78 r.p.m., and start the gramophone. The tape will re-wind at approx.  $22\frac{1}{2}$ " per second.

When the tape is rewound and you wish to play it back, remove the weight, once again *turn both spools over and change them back to their original spindles*. On the next page, we show you how to thread the tape for playing.

# TAPE RE-WOUND . . .

*this is how you thread it for playback*



BY now, you will have realised that when the tape is threaded *between* the tape-guide and erase-magnet, it will automatically erase anything that is on the tape ahead of the recording you are making, so there is no need to clean a tape before recording on it again. Conversely, when the tape is threaded round the **OUTSIDE** of the tape-guide (as for playback) it does not erase what is on the tape. Therefore, if you wish to superimpose anything on an existing recording, you simply thread the tape as for playback (round the **OUTSIDE** of the tape-guide), and set the Control Unit switch to "record" instead of "Playback."

THE picture above shows you that the method for threading the tape when you wish to play it back is similar to threading it for recording—but with this important difference—the *tape is led round the outside of the tape-guide* and *NOT* between the tape-guide and erase-magnet. And to make sure you do not accidentally erase the recording, you put the safety-gate in the "closed" position, so that it bridges the gap between the erase magnet and the tape-guide. Once again, make sure that the matt or "dull" surface of the tape is flat against the face of the record/play head and not caught up underneath it, and that it is seated properly in the channel of the capstan.



# TAPE THREADED FOR PLAYBACK . . .

*now you can play your recording*

## FREE INSTALLATION OF PICK-UP SOCKETS

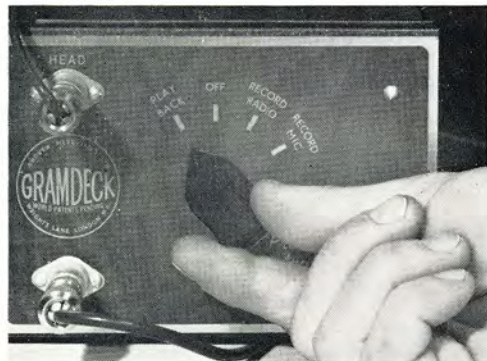
The first picture on this page tells you that, to play back your recording, you plug the Control Unit Pick-Up lead into the Gram. Pick-Up sockets of your radio, or into the Pick-Up sockets of your gramophone or radiogram. If you have no Pick-Up sockets on your set, we do **not** advise you to try to fit them yourself as it may be dangerous, especially where AC/DC or "transformerless" equipment is in use. Your local radio engineer can do the job for you, easily and quickly, at a comparatively trifling cost. Alternatively, we will install Pick-Up sockets for you, **free of charge**. Details are on page 10.



**1** The lead from Control Unit marked PICK-UP should be plugged into Gram Pick-Up sockets of radio or into Pick-Up sockets of gramophone or radiogram. If, when you play back, there is hum or "hush," reverse the wander plugs at the end of Pick-up lead.



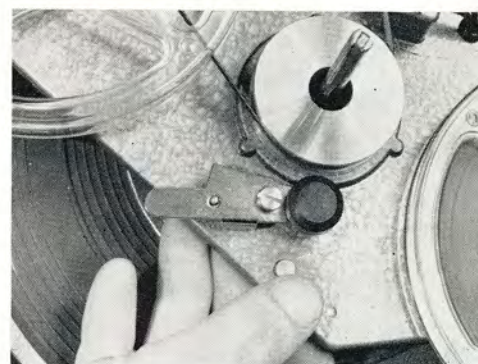
**2** Already attached to the Gramdeck there is a lead with a plug on the end of it. Insert this plug into the Control Unit socket marked "HEAD."



**3** Set the centre switch on the Control Unit to the position marked "PLAY BACK."



**4** Set gramophone turntable speed to speed at which tape was recorded. (If you are playing back through radio or radiogram, set to GRAM position.) Hold supply-spool for a moment and start turntable manually.



**5** Allow turntable to gather speed, then press pressure-roller button (N) to engage pressure-roller. Let go of supply-spool. Adjust volume and tone controls to suit your taste.

## FREE INSTALLATION SERVICE AT YOUR DISPOSAL

**A**LL you have to do, to play back your Gramdeck recordings is to plug the Control Unit Pick-Up lead into the gramophone Pick-Up sockets of your radio-set—or into the Pick-Up sockets of your radiogram or gramophone. Most modern radio-sets have these sockets but, if they are not on your radio or gramophone, you simply do one of two things:

(1) If you want to have the pleasure of Gramdeck quickly, get your local radio engineer to install the sockets for you (the cost is comparatively trifling).

(2) Alternatively, our country-wide service organisation will install the sockets **FREE OF ANY CHARGE**. A Free Installation Card is sent with the Gramdeck for this purpose—return it to us and an engineer will call by arrangement at your house to install the necessary sockets at our expense. This usually takes about 10 days from the date of our receiving the card.

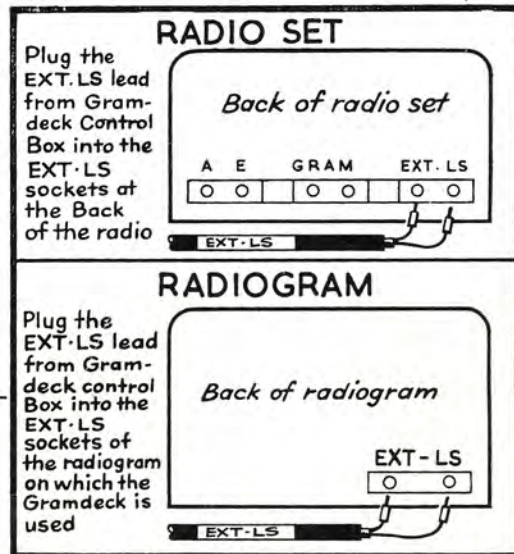
If Pick-Up sockets are not installed in your equipment as a standard fitting, *we do not recommend that you insert the sockets yourself, unless you have some expert knowledge*, as it can be dangerous—especially with AC/DC or “transformerless” equipment. Either get a radio engineer to do it—or let us do it for you, without charge.



## HOW TO RECORD DIRECT FROM RADIO

**I**F your radio-set or radiogram has extension loud-speaker sockets, it is a simple matter to record direct-from-radio. (If, of course, your set does not have these sockets, you can record from radio by putting the microphone a suitable distance from the radio-set.) To record direct, you simply plug the Control Unit lead marked EXT.LS. into the EXT.LS. sockets of your radio, and set the centre switch on the Control Unit to “RECORD RADIO.” The tape is threaded for recording, in the usual way.

If, when you try to play back your recording, you get no sound at all, reverse the plugs of the Pick-Up lead in the GRAM sockets. If you still get no sound, put the plugs back in the GRAM sockets just as they were previously, and reverse the plugs of the EXT.LS. lead in the EXT.LS. sockets. Record again and play back. Make a mental note for the future of which colour plug goes to the left and which to the right.



## HOW TO ERASE —

**H**AVE a look at the illustrations on page 5 and you will note that, when the tape is threaded for recording, it *first* passes between the tape-guide and the erase magnet ("F" and "E" on diagram, page 3). It does this *before* it passes the playing and recording head (G). This means that when the tape is threaded for recording, anything already recorded on the tape will automatically be erased before the tape reaches the recording-and-playing head. *There is, therefore, no need to clean a tape when you wish to make a new recording—you simply record 'over' the old recording.*

If you wish to erase a recording without making a new one, you thread the tape as for recording, and just run the tape through with the central switch on the Control Unit set at "OFF." Just as there is twin-track recording, as explained on page 2, so there is "twin-track erasing." In other words, you erase only one track at a time—the top track—so that you can if you wish erase one track and leave the other one on.

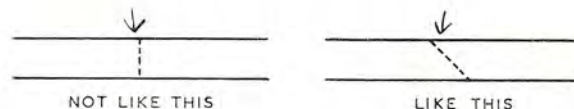
## Outdoor Recording

**O**UTDOOR recordings can easily be made with Gramdeck. All you need is a portable clockwork gramophone or turntable, the Gramdeck with its Control Unit, and a suitable microphone. As long as you remember to set the gramophone turntable speed to 78 r.p.m. (or whatever speed you propose to use for the playback), and wind up the gramophone fairly frequently to ensure that it does not lose speed, you can record outdoors with a microphone in exactly the same way as you would record with a microphone indoors, and the procedure is identical. You can have a lot of fun doing this and, if you cannot borrow a clockwork gramophone, it will be well worth your while to pick one up inexpensively at a second-hand shop.

**NOTE: ALWAYS switch Control Unit to "OFF" when not in use.**

## HOW TO EDIT TAPES

**F**OR editing purposes, tapes may be cut and spliced together with sellotape. The important thing is to make *diagonal* cuts:



## Sound Tracks for Home Movies

**B**ECAUSE you can record outdoors with Gramdeck—using an ordinary clockwork motor gramophone—it is obviously ideal for location work and enables you to record the actual background sounds while you are shooting outdoors. Gramdeck is also extremely useful to ciné enthusiasts as a 'second recorder' for transferring special effects, etc., to another sound track.

Gramdeck may be used very successfully to achieve music-and-commentary synchronisation in conjunction with a variable-speed turntable, a fixed speed projector, and a strobo-disc. Ciné enthusiasts will, no doubt, find other and even simpler ways to use Gramdeck for, even if it is not used to achieve synchronisation, it can certainly provide continuous music of your own choice during a film show. There are many helpful books on the subject of synchronisation and some excellent articles appear fairly regularly in *Amateur Ciné World*.

A unique feature of the Gramdeck lies in the fact that *you are able to superimpose speech, etc., on an already recorded tape.* To do this, you thread the recorded tape for recording in the usual way, but pass the tape round the **OUTSIDE** of the tape-guide, instead of between the tape-guide and the erase-magnet. Otherwise, you proceed in the usual manner for recording. You could, for example, have a musical background already recorded, and then record speech or a commentary over it, so that when the tape is played back, you hear both the music and the speech.

## SIMPLE MAINTENANCE

**NOTE: ALWAYS PUT THE CENTRAL SWITCH ON THE CONTROL UNIT TO "OFF" when not in use, otherwise you will exhaust the battery.**

**P**ROVIDED it is treated with reasonable care, there is little or nothing to go wrong with your Gramdeck and it should give you many years of faithful service. Maintenance is very simple as all you need to do is to put an occasional drop of light machine oil on the take-up and supply-spool spindle bearings and two or three drops on the capstan ball-race. (Do this carefully by turning the deck on its side and putting oil in the gap between the capstan and the metal deck casting. Make sure *no oil gets onto the capstan itself or onto the deck.*)

The face of the record/playback head (G) should occasionally be cleaned with a rag moistened with Thawpit or methylated spirit.

The battery has an exceptionally long life—600 to 800 hours—but when quality of recording or playback begins to fade, replace the battery with a new one (Ever Ready type PP9). **SWITCH THE CONTROL UNIT TO "OFF."** Remove outer case *gently*, being careful not to strain the cables that are joined from the outer case to the inside. Replace the battery, using the press-stud fasteners, *and make absolutely sure that the new battery is fitted in precisely the same way as the old one.* The wire to the negative side of the battery (marked with a "minus" sign) has a *male* press-stud attached to it, and the wire to the positive side (marked with a "plus" sign) has a *female* press-stud attached to it. If you try to put them on the wrong way round you will quickly and permanently ruin the transistors in the Control Unit.

### A WORD ABOUT MICROPHONES

**J**UST any old microphone will not do. You require a good quality low-impedance microphone (500 ohms). The Microphone supplied by us has been selected by our experts as being in every way suitable for use with the Gramdeck.

### A WORD ABOUT TAPES

**W**E supply standard tape on 5" spools, but the Gramdeck has a double-track recording and playing head. This means that when you record with Gramdeck, you use only half the width of the tape, and you can then turn the spool over and use the other half of it. At a gram. speed of 78 r.p.m., you get half an hour's playback at the 'quality' tape-speed of  $7\frac{1}{2}$ " per second. This is the accepted international standard for high-quality musical reproduction. In most cases, however, you will get excellent results and longer playing-time if you set the gram. speed at 45 r.p.m. *You must always play back at the same speed at which you recorded.* For even longer playing and recording times on 5" spools (several hours) you can buy "Extended Play" tape which gives you 50% more playing time, or "Double Play" tapes, which give twice the playing time of standard tapes.

### OUR SERVICE DEPT.

**A**NY faults that develop with Gramdeck are likely to be only very minor ones but we want you to know that you have an expert Service Dept. at your disposal, to carry out any necessary inspection or repairs. You will not often need any spares (drive-belts, felt washers, etc.) but these are always available. Details of this service, our Guarantee, etc., are given on the Special Service Form sent to you with your Gramdeck. Please note, the address of the Service Dept. is:

**GRAMDECK SERVICE DEPT., Walkern Road, Stevenage, Herts.**

Requests for Free Installation and any other correspondence should be addressed to our **HEAD OFFICE** at 29, WRIGHT'S LANE, LONDON, W.8.

**NOW ENJOY FULL TAPE-RECORDING AND PLAYING FACILITIES**

 **Gramdeck**

**GRAMOPHONE TAPE RECORDER**

**ANDREW MERRYFIELD LTD. . 29/31, WRIGHT'S LANE . KENSINGTON . LONDON . W.8.**

**WESTern 3603**