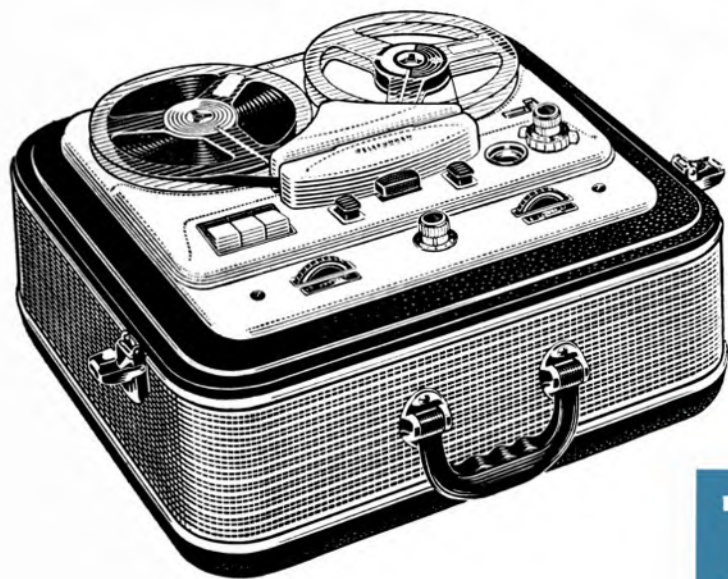


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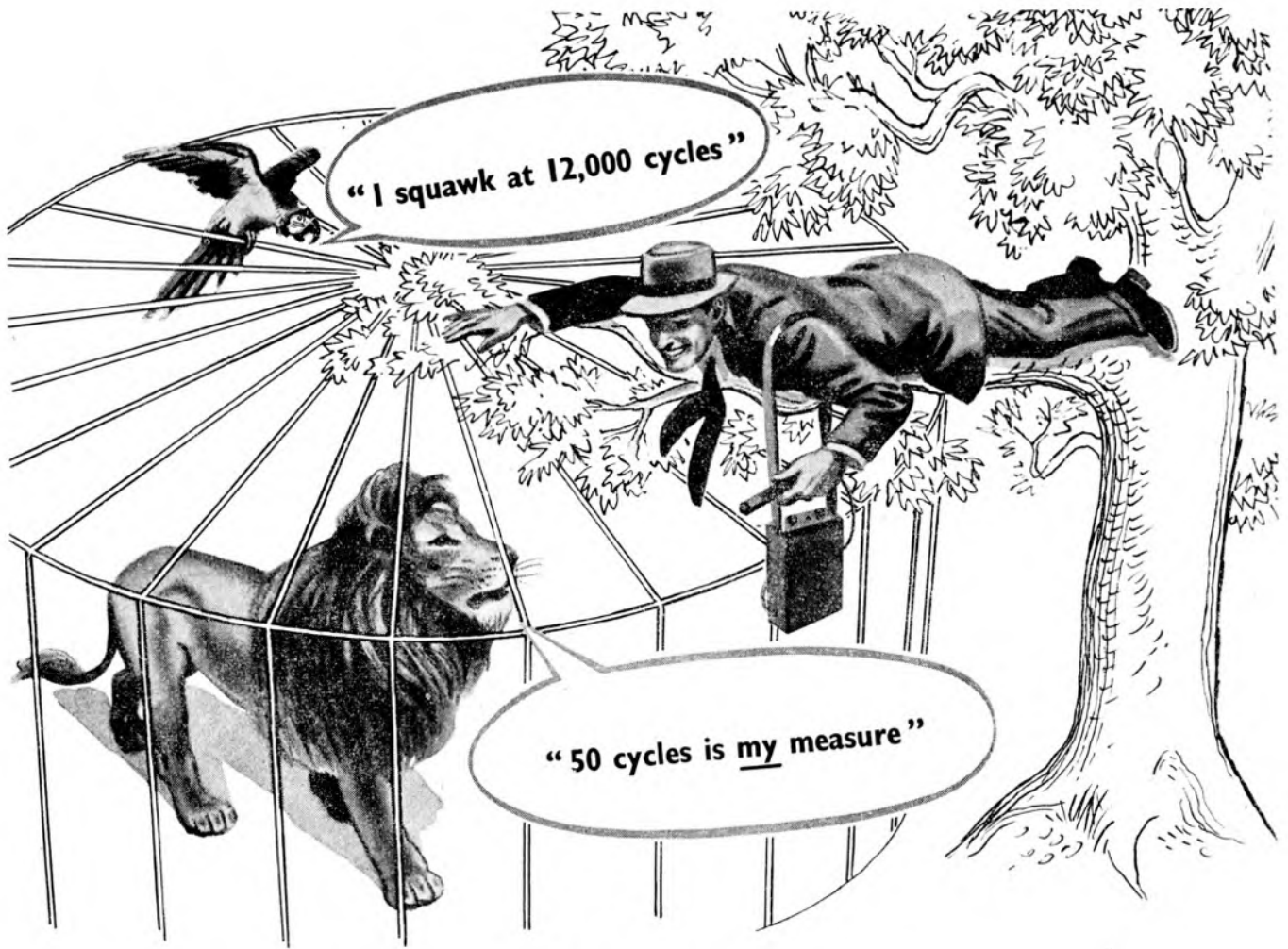


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Wyndor Viscount ... ..	49	6 19 0	3 14 2
Grundig TK20 ... ..	50	6 15 0	3 16 3
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Telefunken 75 with mike ... ..	55	7 5 0	4 3 4
Saja Export ... ..	56	7 6 0	4 5 10
Brenell 3 Star ... ..	58	7 10 0	4 9 0
Truvox R2 ... ..	59	7 19 0	4 10 0
Elizabethan Essex* ... ..	65	8 5 0	5 0 0
Veritone Venus* ... ..	66	8 9 0	5 2 6
Baird ... ..	67	8 11 0	5 3 0
Brenell MKV with mike ... ..	69	8 11 0	5 5 6
Stuzzi Magnette ... ..	69	8 11 0	5 5 6
Telefunken 85* ... ..	75	9 15 0	5 15 0
Harting HMS* ... ..	82	10 12 0	6 5 8
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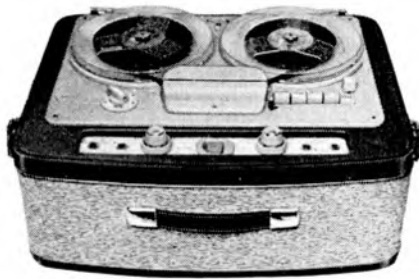
This equipment can be built up from an existing Truvox R2 (monaural) Recorder. We fit the recorder with a stereo head and supply Unit 'B' (comprising correctly matched amplifier and loudspeaker together with additional microphone and leads).

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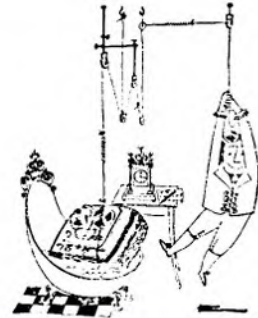
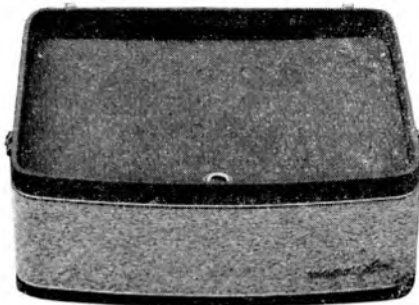
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Complete with matching  
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(including microphone, tape and spare spool)



Every MAGNAFON instrument is soak-tested for complete reliability.

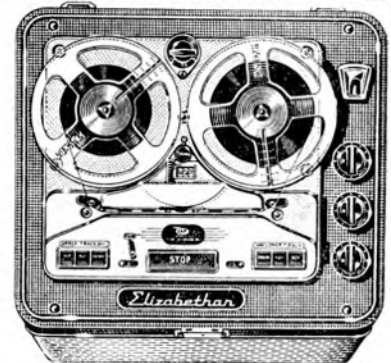
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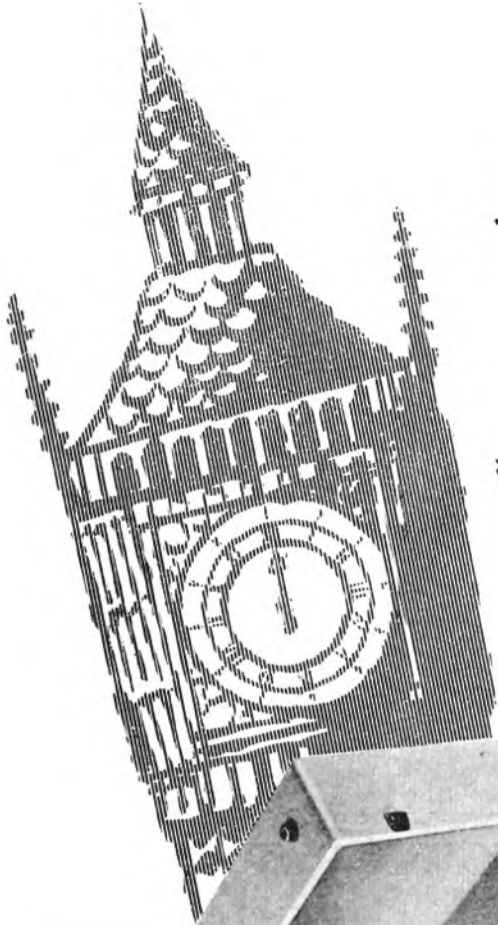
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*The Five Star Tape Deck*

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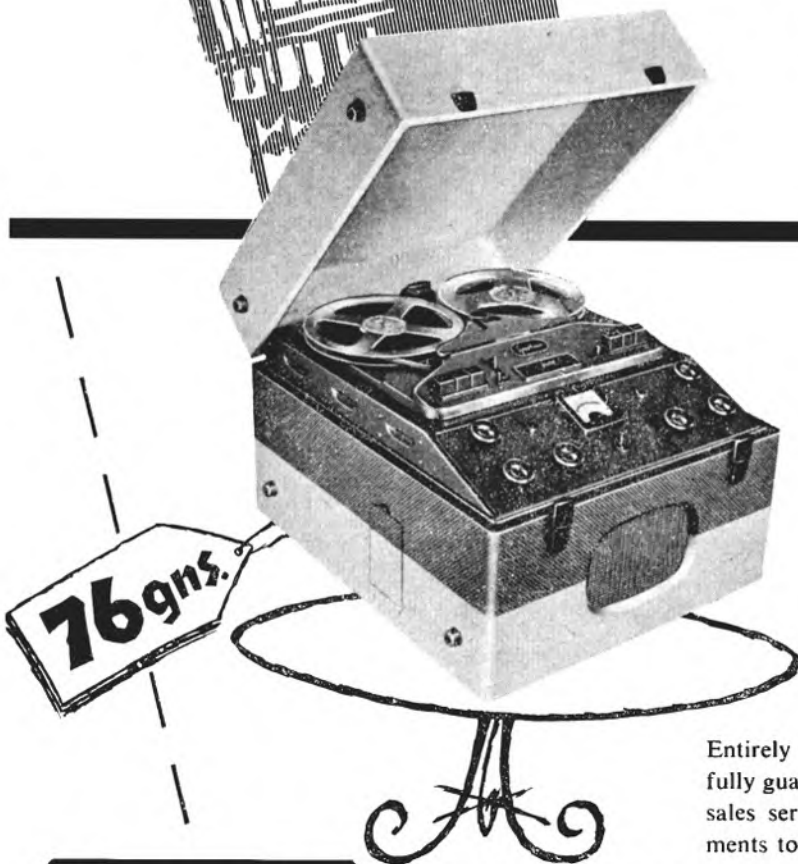
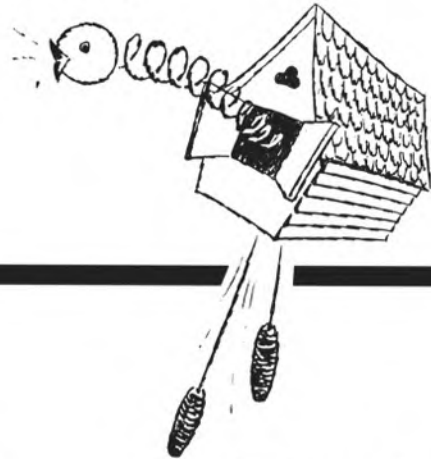




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**BOOM**

*to a chirp!*



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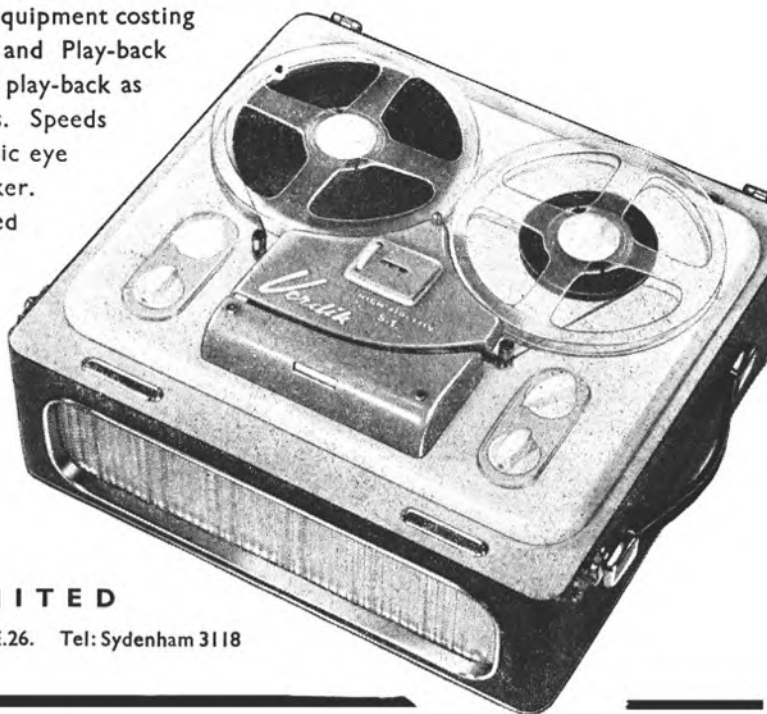
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**TeleTape** Britain's Largest Tape Recorder Specialists

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Open till 8 p.m. Friday, 6 p.m. Saturday,

If Marble Arch is too far away, write for address of your nearest branch. Or send for free details of the tape recorder that interests you. 7 days' free trial for cash customers.

**EVERY MAKE OF TAPE RECORDER IN STOCK**

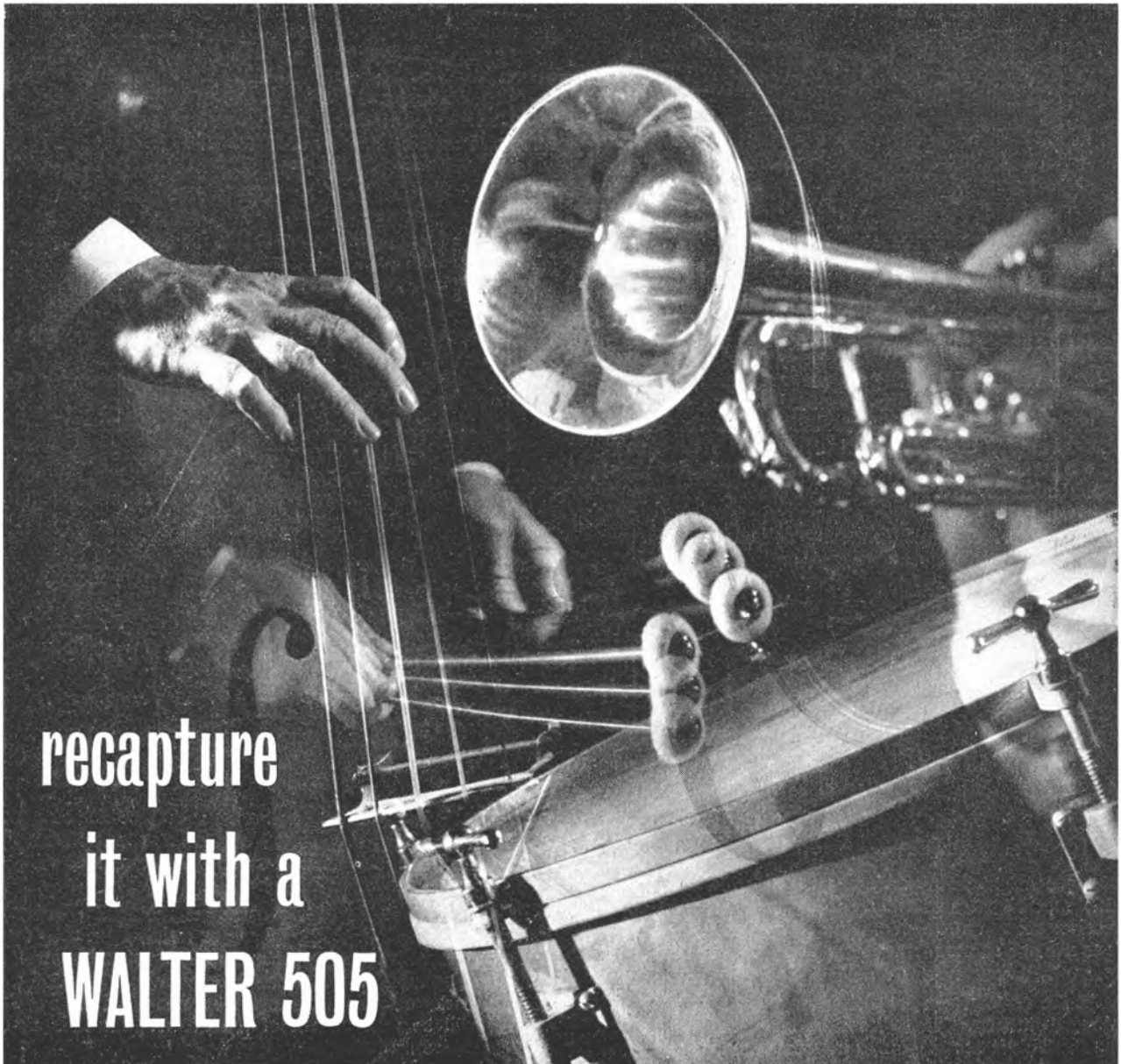
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it with a  
**WALTER 505**

## High Fidelity tape recorder

The Walter 505 gives you an orchestra in your hand—all the extra features you've been hoping for, and it's light enough to be *really* portable into the bargain. You'll be as thrilled with its superb quality as with its handsome modern styling. It has the new Walter Mark II Deck;

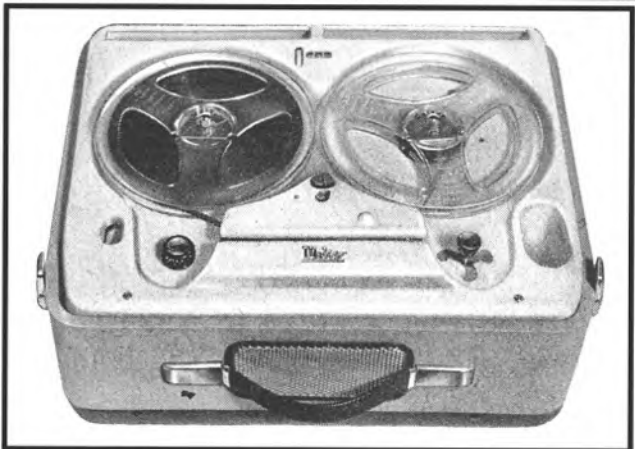
2 speeds, 2 speakers, 2 inputs, 2 outputs. **57 gns.**

Write now for free folders describing the 505 and the other Walter models.

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# Pardon our blushes -

but we do feel very honoured, if not a little embarrassed at times, when we receive such glowing praises from the many satisfied users of Brenell tape recording equipment. To quote but a few—

*From a HI-FI FAN*

... in comparison with all other popular makes of recorders on the market, including the very expensive ones, I find that it is by far the best. The quality of reproduction is excellent and, as you claim, it has every worth-while feature at a price anyone can afford. . . .  
M.N.

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J.M.

*From a HEADMASTER*

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A.S.

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R.T.

*From a FIRST EVER testimonial*

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H.L.



## THE BRENELL ★★★ 3 STAR

- ★ Three recording speeds, 1 $\frac{1}{2}$ , 3 $\frac{1}{2}$ , 7 $\frac{1}{2}$  i.p.s.
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# TAPE RECORDS

S U P P L E M E N T

## THE CLASSICS

by **Edward Greenfield**

(recorded music critic of the *Manchester Guardian*)



**T**HE idea of a new and comparatively small company launching out into the uncharted world of stereophonic tapes may not be too encouraging. But having heard the first pre-recorded stereo tapes from the Saga Company I am glad to be able to give the highest praise on a fine technical achievement.

For anyone used to the high frequency range of discs pre-recorded tape at 7½ ips often has a disconcertingly low ceiling, but here for practically the first time on pre-recorded tape I have felt no damping-down of frequencies at the upper end.

Outstanding even among the tapes I heard was **Brahms's Fourth Symphony** played by the Royal Danish Orchestra under John Frandsen (STF 4002)—an intelligent performance made into a vivid one by the quality of the stereo. The sound here is beautifully smooth. Occasionally the violins in a high passage have too sharp a cutting edge for my ears, but that is very much a matter of taste. As the engineer responsible for the dubbing pointed out, it is always possible for the listener to cut down the frequency range to his own taste but he can't provide something which isn't there.

It was interesting to compare the sound on this with that on the recent E.M.I. stereo tape of Klemperer's incomparable performance of **Brahms's First Symphony**. The E.M.I. gave a sense of greater sense of spaciousness, it is true—something which I like on E.M.I. discs—but the inner clarity of the Saga tape is much greater with the parts more clearly defined.

On the E.M.I. there was just a hint of grittiness in the middle which the Saga consistently avoids. Above all the Saga tape has a more extended range. Although I find that with stereo the added atmosphere can make one imagine an extended range quite happily, here one had the double advantage of plenty of top but without the scratchy, shrill noise too many engineers tell us is high fidelity and which can be torture to a musician's ears.

Though not all the other four tapes I heard were quite so good as this, they still had surprisingly wide range. Particularly impressive was **Dvorak's "Carnival" Overture** played, like the symphony, by Frandsen and the Royal Danish Orchestra. This is coupled—oddly but attractively—with **Gershwin's Rhapsody in Blue** played by Joyce Hatto with the Hamburg Pro Musica Orchestra under George Byrd (STD 2003). Both recordings are vivid, but it was in the work for piano and orchestra that I noticed an odd characteristic that marks the stereo on these tapes. The piano, instead of being in the centre of the stage as it really should be in a stereo recording (as though one is in a centre seat in the concert hall), is firmly on the right.

Much the same applies to the other two piano concerto records I heard. These were the **Schumann Concerto** played in

(Continued on page 14)

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(Continued from page 13)

dramatic, no-nonsense style by Sergio Fiorentino and the Hamburg Pro Musica under Erich Riede (STE 3003) and Eileen Joyce in the **Grieg Concerto** with the Royal Danish Orchestra once again under Frandsen (STE 3001). In the Schumann the piano, which at first seemed to be placed right centre, started to shift ground slightly as the work progressed and in the last movement I was hearing it firmly from the right-hand speaker. This sort of shift is the menace of stereo recording, and I can only insist in mitigation that in practice one accepts it without any trouble unless the shift is sudden.

Another minor consideration, too, in the Schumann was that the piano-sound seemed to be a shade damped-down compared with that of the orchestra. As for the Grieg, it opens with a patch of distortion, certainly not typical of the whole recording. I only mention it to underline the generally very high quality of sound. The piano again is placed too far right for my liking, but after all the engineers of all the different companies must be given the chance of experimenting on studio placing for stereo records.

As for the performance, it was high time Eileen Joyce recorded her individual and much-loved account of this concerto. As ever, she shows here an astonishing bravura for a woman and there are unexpected flashes which make well-worn passages seem new and fresh.

On all these records the orchestral playing is very vigorous and highly enjoyable, if not always quite so well-drilled as it could be. The same remark goes for the playing of Beethoven's overtures "**Egmont**," and "**Coriolan**" by the Hamburg Pro Musica under Erich Riede (STC 1003), but this is the most astonishing stereo I have yet heard, and I don't mean that to be complimentary. On some of the other tapes I had noticed a tendency for the strings to be on the left and the wind on the right. In the Beethoven, though, the separation is complete—violins, violas and cellos from the left-hand speaker, woodwinds and brass from the right. I almost began to wonder whether, in fact, the two recordings had been made separately and fitted together only later. As it happened, I heard this on a different hi-fi set-up from the other four tapes, so that it is just possible that the reproduction and not the tape was to blame.

I must emphasise that both this month for the stereo and last month for the Saga monaural tapes I have been at pains to use the best instruments possible. This has sometimes brought out blemishes in reproduction which I am sure would scarcely be noticed on a less sensitive machine (such as those used in most homes). It is certainly a point worth remembering by anyone with a less than hi-fi machine. This month, with the stereo tapes, I can say confidently that none of the blemishes (apart from that on the Beethoven tape) came anywhere near spoiling my enjoyment of the music, even on the highest-fi machine. If the dubbing can be kept up to this standard Saga is to be congratulated. It is an excellent start.

Prices.—STC 600 ft., 40s.; STD 900 ft., 55s.; STE 1,200 ft., 70s.; STF 1,800 ft., 84s.

## LIGHT MUSIC

by Stanley R. White

**R**ECENT Saga-Elizabethan releases have included several tapes that will have obvious appeal to light music lovers.

Johann Strauss will live for ever with the lovers of the lighter type of music with which his name is associated and STA7009 (35s.) gives us five of his best-known works. The first track contains **Artists Life** and **Roses from the South**, and track two **Blue Danube**, **Pizzicato Polka**, and **Tritsch Tratsch Polka**.

The music is well played by the Leipzig Gewandhaus Orchestra, and I particularly liked the Pizzicato piece for its solo instrumental performance.

Two other Saga tapes provide some of the best-known music from recent musicals. On the first (STA 7019, 35s.), the London Variety Theatre Orchestra plays well the hits

from **South Pacific** and **Oklahoma**. I do not myself rate this sort of material as outstanding, but I recognise that it will find a place in the collections of very many people who enjoy these American musicals.

It is a tape that might prove popular when entertaining friends to a social evening.

The other tape (STA 7018, 35s.) has the same orchestra playing on one track a collection of songs from the film **Around the World in 80 Days** and on the other track the ever-popular music from **My Fair Lady**.

Very catchy numbers, these.

In general, I should like to add that these tapes provide very good recording quality—far above that of the average recording you are likely to be able to make in your home.

## BEAT AND OFF-BEAT

by *Don Wedge*  
(of "New Musical Express")

**S**TANDING head and shoulders over everyone else in the world of pop music are Ella Fitzgerald and Frank Sinatra. True, Elvis Presley still rocks his way for a quick stay in the hit parade with each release, Connie Francis, more gently, rolls her revivals to top position.

They suit the fancies of the teenager. They provide a temporary excitement. But for the pleasure of the more discerning—those prepared for excitement seated deep in a favourite armchair—Miss Fitzgerald and Mr. Sinatra seem amply to fill the bill.

Sinatra did, in fact, win the teenagers' support a year ago with his 78 rpm disc of "All the Way" and "Chicago." He always wins their support anyway, if only for his rather brutal charm on the screen.

Ella found favour, too, in this market with a vocal version of "Singing Shepherd Blues," some time after this number had been an instrumental hit.

But it is in the more expensive world of L.P.s that these great singers really score. Sales of Sinatra's "Songs for Swingin' Lovers" (LCT 6106) album are approaching a million—something few singles do. At a cost of nearly £2 a time it demonstrates considerable appeal.

"Songs for Swingin' Lovers" is usually considered the best record he has ever made. I doubt it. "A Swingin' Affair" (LCT 6135) is just as good and "Come Fly With Me" (LCT 6154), released by Capitol this autumn, is better.

Billy May's arrangements and backing give it a freshness sometimes missing after the long collaboration between Sinatra and Nelson Riddle. The L.P. has a stronger theme than most—the round-the-world air trip, with mainly familiar songs from locations en route.

Unfortunately, the best of them is missing from the British version. "Road to Mandalay" had to be deleted after the executors of Rudyard Kipling objected to Sinatra's cavalier treatment. The issue in America and other parts of the world is not affected.

(Continued on page 16)

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by **DOUGLAS GARDNER**  
and **IAN ARNISON**

both of *Tape Recording Magazine*

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*Illustrated with photos and diagrams*

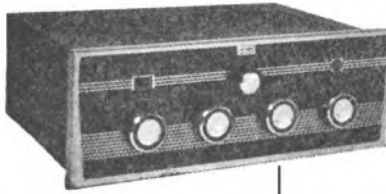
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ELLA FITZGERALD

Every month, Don Wedge will contribute a personal digest of developments in the world of pop music recording. Next month he will discuss some of the latest Stereo tapes.

(Continued from page 15)

The title song, specially written for the album by Sammy Cahn and Jimmy Van Heusan is going to become a classic itself. It sets a perfect mood for Sinatra's firm, yet relaxed, singing.

These three L.P.s show Sinatra in a beat-y mood. Though he has few peers as a ballad singer, he excels when concentrating on the virile approach. His new Capitol L.P. "For Only The Lonely" (LCT 6168) is ballad-style.

Ella Fitzgerald's principal output in the past two years has been the "Songbook" series on H.M.V.—a collection of the works of the greatest writers in the idiom: Rodgers and Hart, Cole Porter and Irving Berlin. They should be included in any basic collection of lasting pop music.

She goes nearer to her own taste with the latest in this impressive series. "Ella Fitzgerald Sings the Duke Ellington Songbook" is a magnificently recorded four-volume set (CLP 1213-4, 1227-8).

Ellington remains the greatest writer jazz has produced. For three decades he has held this position. From time to time the general public has taken to his songwriting: "Solitude," "It Don't Mean A Thing If It Ain't Got That Swing," "Sophisticated Lady," and "I Let A Song Go Out Of My Heart" are a few of his hits.

These, and many others less well known, are included in this ambitious set. For the first time in the "Songbook" series, the Ellington collection has the advantage of the composer actually being concerned with the recording. Duke's orchestra, or parts of it, backs Ella.

The final side breaks with the previous pattern. Ellington turns the tables on the singer with a suite written and dedicated to her.

Two great talents meet. The outcome is superb, if expensive—the set costs £7 3s. 8d., but it is available in two parts.

\* \* \*

**MORE THAN ANYONE.** Harry Belafonte has made the calypso into an international craze. But calypsos are not the only music the West Indies has to offer.

Jamaican Noel Anthony introduces some of the others on his Nixa L.P. "Romance of the Caribbean" (NPT 19030). You don't have to be a connoisseur to enjoy this one.

\* \* \*

**FOR TWO YEARS,** Eddie Calvert has been wanting to record an L.P., but something different from the usual collection of oldies. Shakespeare's "Seven Ages Of Man" gave him an idea for a suite.

Twelve numbers is usual on an L.P., so the trumpeter came up with "Gabriel" and the "Twelve Ages Of Man" (33SX 1088), an unusual suite tracing a lifetime from "The Awakening" to "Sunset."



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## THE EDITORS' VIEW

### A Wonderful New Year

WE EXTEND TO ALL our readers the Compliments of the Season and our wish that they may enjoy happiness and prosperity in the year ahead. It is going to be a great and wonderful year in the world of tape recording and hi-fi.

Consider the exciting prospect ahead.

Stereo is the popular gimmick of the day, but it will outgrow this phase. It is the reproduction system of the future, whether with tape or disc. That is why, in keeping with our usual policy of moving with the times, we launch with pride this month the first *Stereo Sound Magazine*. This is the publication which, henceforth, will set the pace in this expanding field.

So far as tape recording goes, the familiar refrain whenever we discuss the future with our friends in the trade is: "We have an interesting surprise in store for the New Year." So look out for a spate of important announcements in the months ahead.

As announced elsewhere in this issue, the British Amateur Tape Recording Contest is to take another big stride forward this year.

And we are planning a British contribution to the International Contest which we think will be of spectacular proportions. We hope to give more information in our next issue.

It should give a fillip to the development of tape recording clubs in Britain—and we have other plans designed to the same end.

Finally, we have many new editorial ideas which will keep this magazine lively and informative. This month, besides *Stereo Sound Magazine*, we introduce two enlarged and redesigned sections in this parent publication.

At the front of the magazine each month we shall have a special section for music-lovers, reviewing the latest tape records and discussing items and personalities of interest. Pops and light music will receive full attention, as well as the classics.

In a special section at the back of the magazine each month we shall describe fully all new products announced by manufacturers. This will be the most detailed, yet most convenient, trade guide of its kind published anywhere.

Our basic policy remains unchanged—to cater for *all* tape and hi-fi enthusiasts, whatever the extent of their technical knowledge. There are other publications—*The Recordist*, published by the British Tape Recording Society, for example—which cater for narrower, highly specialised audiences. Others will probably appear from time to time. As the pioneers and pace-setters in this field of journalism we welcome all our junior relatives.

This month we have had to increase our selling price to two shillings. Despite that, firm orders for this issue were the highest in our history. We thank our readers for their support and confidence. We shall not disappoint them.



# A

is the first letter in our

## ABC OF SOUND EFFECTS SERIES

By  
**Terry Jennings\***

*This series will cover the letters A-Z and will be published monthly. We hope it will encourage enthusiasts to experiment with their own sound effects and we shall be pleased to publish details of the most interesting suggestions received.*

**A**FOR aeroplanes. The dominant noises of aeroplanes are the propellers and engines.

An ordinary electric fan with a length of foolscap paper is one simple means of making a light aircraft noise. Fold the paper lengthwise by half an inch in width; start the fan and hold the spill so that it touches the tips of the blades of the revolving fan; the nearer the tips the higher pitch the noise will be; various speeds may be simulated by holding the spill near or far from the centre of the fan.

The manoeuvre of circling can be carried out by holding the spill of paper at the tips and describing a circle with it

in the plane of the revolving blades, keeping in contact with them all the time.

Another method is by drilling the tips of the blades and tying in a short length of leather bootlace. Keeping the fan revolving with a piece of plain or padded board held lightly against the revolving lace, you will produce a distinctive noise. By varying the speed of the fan, the length of leather, or the type of material held against the revolving laces, as well as the pressure and angle, you will simulate aircraft manoeuvres.

A more elaborate set-up is made by using an electric motor with a variable resistance speed control. To the shaft of the motor a circular disc is attached; near to the periphery of the metal disc, holes are drilled with an angular spacing, of forty-five degrees. In each hole a length of leather (say from the driving belt of a sewing machine) is put with a knot at one end to prevent it coming out when

*\* (Terry Jennings is a sound effects producer with a wealth of broadcasting experience.)*

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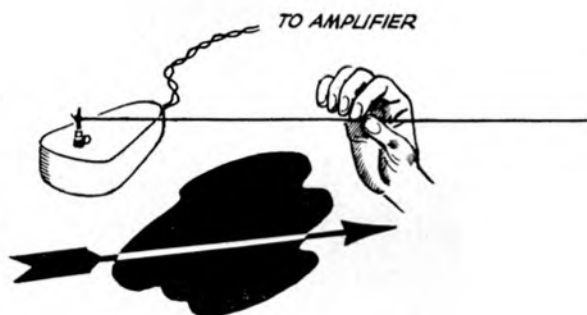
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revolving. A piece of board, or similar material to give the timbre of the sound you require, is held against the revolving leather tips.

Here again, the rules of pressure and speed mentioned above as well as the angles at which the board is held at, will apply.

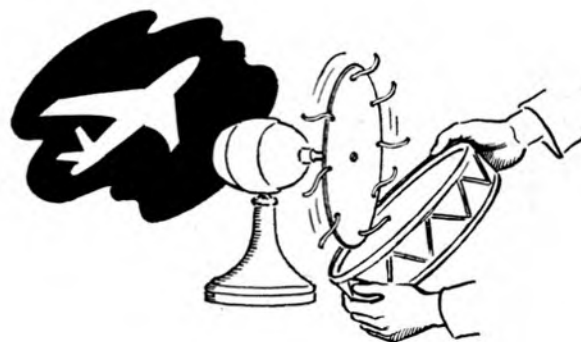
The use of a side drum membrane stretched across a wooden box will be very effective when held against the whirling leather strips on the disc. This is the best way of creating the noise when using a powerful electric motor; the range of variation is greater and much more clearly defined aircraft noises will be produced. Measurements for the disc and leather will depend on the motor used; a motor of half horsepower will take a disc eighteen inches in diameter with quarter inch circular leather thongs six inches long.

**A**RROWS are our next subject. It is helpful to divide their sound. For instance an arrow is fired from a bow which produces a twang when released; the arrow swishes through the air and strikes the target with a thud. The twang is easily produced by a stretched rubber band; the actual tone will depend on the thickness of the rubber, the amount of pull exerted and whether stretched upon a frame or other resonant object.



Different bows will obviously produce different twangs. Such considerations must govern the swish of the arrow, which is made by a long cane or metal foil moved very fast directly above and as near to the microphone as possible. The thud of the arrow hitting the target is made by throwing a dart into a piece of wood very close to the microphone.

A more advanced method of producing an arrow swish is by tying a piece of twine to the needle of an old-fashioned moving iron pick-up. I strongly advise you not to tie it to a modern lightweight pick-up, as subsequently it will be damaged. The length of twine may be up to nine feet depending upon the length of swish noise required. Fix the pick-up head firmly on its back, tie the twine to the needle, and stretch it out horizontally. Place a finger near to the pick-up head and move it smartly down the whole length of twine. A noise of high frequency will start quickly lowering in pitch until the end of the twine is reached. This is the way those wonderful arrow noises were made in the film, *Henry V*, and they are the most satisfactory flight noises I have ever heard.



**A**NIMALS. Animal noises are best recorded from the subjects themselves. Always write to the curator of a zoo before taking your equipment along. Bona fide amateurs with portable recorders are usually granted permission.

Creating the sound effects of animals is a different problem. Snake hisses, for example, can be made simply by blowing down a steam whistle.

Horses will feature in many scripts, neighing, whinnying and snorting. They will walk, trot, canter or gallop on a variety of surfaces.

Here coconut shells come into their own. Use them on a piece of felt for grass. A country lane will come to life when a handful of gravel is scattered on the felt, and as the lane gives way to a modern road a useful frame of three rubber tiles may be brought into use. The chink of harness may be well represented by a bunch of keys attached to the middle finger lying across the back of the hand to move with it as the coconut shells are moved up and down. Don't forget that a horse has four legs and each one can be the front or back edge of the coconut shell. When the horse walks touch the half shell in the right hand on its forward edge, then on to its back edge. Follow this with the left hand doing the same. From this basic action the rhythms of the canter, trot and gallop will be built up by practice and your own ear.



# AN EXPANDING VENTURE

**T**HE British Amateur Tape Recording Contest is being dramatically extended in 1959. A special section is being created to cater for Britain's increasing number of clubs. All clubs are free to enter this section and submit a fifteen minute feature tape on the theme "Our Town."

The Contest will reach a climax at the time of the Earls Court Radio Show when winning entries in the individual sections will be played at a public function and the prizes presented before a distinguished audience.

The annual Emitape Luncheon will take place at the same time.

Special arrangements are being made to make the winning tapes available to as wide an audience as possible and they will automatically go forward for the International Recording Contest which, it is confidently expected, will take place in London later in the year. A special announcement on this question is awaited. Closing date for entries will be Friday, July 31st, 1959.

The overall winning entry in the individual section will be awarded the Emitape Challenge Cup for the "Tape of the Year." The winner will retain a replica of the cup permanently. In addition many other handsome prizes

are expected in the individual categories. Individual sections are the same as last year for compositions (radio-type plays, dramas, sketches), documentaries and "reportage," music or speech, and actuality.

**T**HE Schools section of the Contest is being held separately earlier in the year. Closing date for entries is Friday, 29th May. This will enable the winning entry to be decided and the prizes presented at a function to be arranged by Messrs. Grundig (Great Britain) Limited, before the summer holidays begin. The theme here is "How we see other countries"; this is open to interpretation any way a school taking part sees fit.

The winning entry in this section will be awarded the Grundig Challenge Cup as well as a replica to be retained permanently.

Judges of the two contests will be headed, as in previous years, by Josephine Douglas and Tony Gibson. Douglas Gardner will again represent *Tape Recording and Hi-Fi Magazine*.

Entry forms are in preparation now. Write immediately, enclosing a stamped addressed envelope for your forms in order to take part in the greatest recording contest which has ever been held anywhere.

## BERNE 1958

### *A personal report by Basil Harley*

"Winner gets Swiss trip," said a headline in the August issue. As readers will know, I was fortunate to be the winner of this exciting prize and, before giving some of my impressions of the International Tape Recording Contest, I must record my thanks to E.M.I. for the wonderful way in which the trip was organised—a truly luxury trip to Switzerland.

As an observer of the contest I was happily free from any duties and settled down for three days to enjoy a wide variety of entertaining tapes. Most interesting, though not to everyone's taste, was the number of extremely competent electronic music and musique concrete entries, particularly from Holland. In the documentary field the range of subjects was staggering from a most sensitive and imaginative impression of a railway journey entitled "The Rails" from Belgium, to a delicious Danish story, in

schoolboy English, about the Battle of Hastings.

There was some rather pretentious science fiction (complete with "space music") which didn't come across very well in translation and some exciting experiments in ultra-close-up sounds—flies, water drops, even the balance wheel of a watch could be heard clearly ringing. Again there was a story of what might have happened at Waterloo if General Blucher had had toothache.

\* \* \*

I was much impressed by the quality of the music recordings which ranged in subject from a fair organ to a Chilean symphony orchestra. To my ears Mr. Charlton's Harpsichord entry (felicitously described in the programme as Happy Schord music) was equal to the best.

Altogether, the range of subjects, the imaginative treatments and the technical skill of the recordists was most impressive—a very high standard was achieved which is a real challenge to us all in Britain.

## STEREO

STEREO SOUND MAGAZINE appears for the first time this month as a free supplement to *Tape Recording and Hi-Fi Magazine*. It will be published in similar form in February and March.

From the April issue we have decided to establish it as a separate magazine.

The new STEREO SOUND MAGAZINE will appear as a high-class Journal for the stereo connoisseur, printed on art paper, lavishly illustrated, written by the foremost experts in the field.

Popular coverage of stereo developments will continue to be provided by *Tape Recording and Hi-Fi Magazine*.



## HOMO TAPIENS

by

*Donald Gardner*

**T**HE recent formation of a Tape Organ Club seems to me to be an important piece of news because it underlines the fact that all kinds of special sounds can be looked after in the same way. Collectors of bird songs, for instance, and the many people who are fascinated by train noises, could well do with suitable loosely-knit organisations constituted with the main object of ensuring that the greatest possible use is made of the recordings in the categories they are concerned with produced by individuals all over the world.

For example, members could provide dubbings (one or two a year, perhaps) of their best recordings for a communal collection, which would not only be a source of enjoyment for other members but would ensure that the best work in a given field is preserved for the future.

With proper safeguards, too, the collection could be made available for educational and other uses. Broadcasting companies would no doubt be glad to know of the existence of these rich reservoirs of specific sounds.

Organisations of this type would not cut across the work of local clubs, or taping groups of a general nature; they would simply provide a valuable extra service, and act as a stimulant to individuals interested in particular fields of recording. No doubt the Federation of British Tape Recording Clubs would play a part in helping such clubs to develop if called on to do so.

Have you any ideas about subjects which would lend themselves to speciality clubs of this kind? I shall be glad to hear from readers who can think of useful examples. You can send a whole list if you like, with a cross against those you yourself are especially interested in. Write to me c/o *Tape Recording and Hi-Fi Magazine*, 426, Camden Road, London, N.7.

### GRUB SCREW MENACE

**M**ANY tape recording engineers are, I am convinced, quite unaware of the torments sometimes suffered by the technically untutored. Modest and generous people that they are, they cannot find it in their hearts to believe sincerely that there are owners of tape recorders who can give up trying to produce a recording or a playback because of some little thing like a loose on/off switch.

On more than one occasion I have spoken to a technician—who may have designed a machine that is a miracle of electronic efficiency below deck—about a little thing that tends to go a bit wrong at the point where the customer applies his hopeful fingers, and received by way of response a light-hearted comment such as “Oh, that! Simplest thing in the world to put right. Just a couple of turns here and a rub of oil there. . . .”

Simplest thing in the world to the

## TAPE TITTER



(from *Ton-Band*, Munich)

“Say that again—just say that again”

# Why not a library of specialised sounds?

technician, but the end of the world to Mr. Jones!

At the top of my list in the category of simple things that spoil the fun is the menace of the grub screw. Some grub screws will hold tight for years. Others manage to work themselves loose in less than an hour—and the little knob that is supposed to bring triumphantly into action all the miracles of magnetic tape, slips feebly in thin air and conjures up not even a whimper. I have even met a diabolical grub screw that slips just far enough to make the control knob indicate “replay” when it is really recording—or, to be horribly precise, erasing.

Pointed screws with appropriate indentations in the spindle may have a clean record, but when I see flat-ended ones on a machine I am trying out I begin to have horrible nightmares and walk about with two screwdrivers in every pocket.

### JET, COUNTER JET

**C**ONSTANT effort in the realm of civil aviation has at last produced the ultimate triumph. Modern jet planes are so quiet in flight that the airline companies are providing gentle tape recorded music for the entertainment of passengers. If I had known about this a bit earlier I might have booked a trip to New York and back after the Radio Show and the Northern Audio Fair as an antidote to those stereo demonstrations of jet planes in flight.

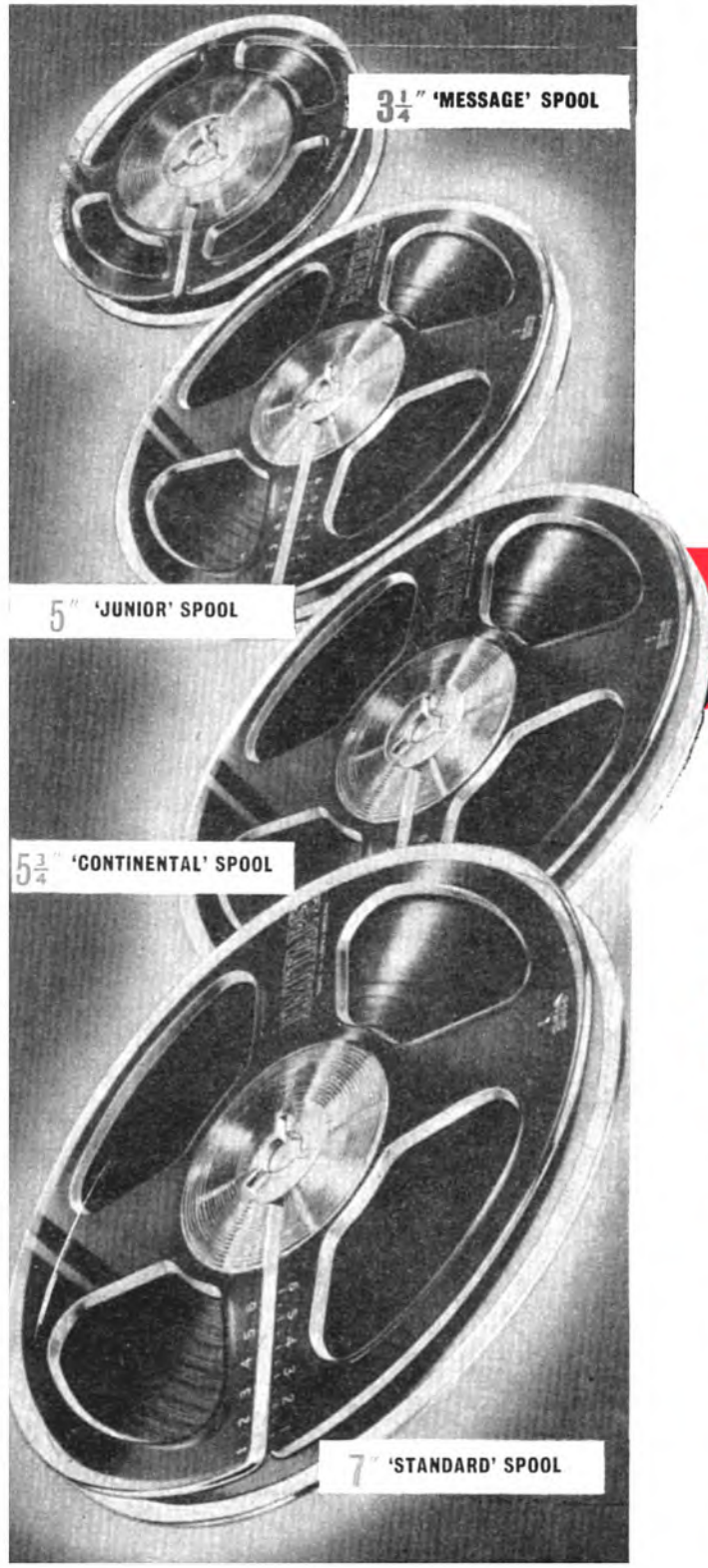
### HELPING THE AMATEURS

**I** ENJOYED the informal gathering at Olympic Sound Studios on December 6, when a talk, demonstration and discussion on stereo launched a series of meetings that will take place regularly there on the first Saturday of every month. The object is to help amateurs to get the best out of their tape recording activities, and many of the facilities of the studio will be at their disposal as well as the advice of Mr. Angus McKenzie and members of the technical staff.

One of the demonstrations that impressed me a lot was a comparison between very moderate quality stereo and a top monaural recording of the same musical sequence made with equipment costing £700 and using 12 microphones. All but a few of the listeners preferred the comparatively cheap stereo.

Microphones were given special attention, and an expensive battery of them was on show. The difficult problem of recording piano music was nicely illuminated by an exchange of ideas on microphone placing by Mr. McKenzie and Mr. George Ponzen, of Lustraphone. They agreed that the microphones must be close to the strings, possibly suspended from the raised lid.

The next meeting will take place on 3rd January at 3 p.m. The address is Carton Hall, Carton Street (off George Street), London, W.1.



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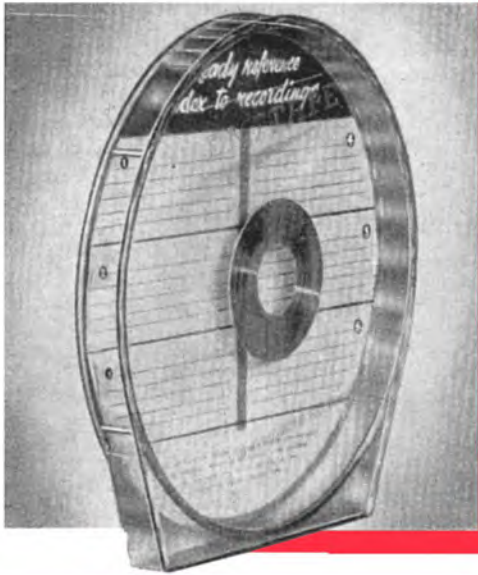
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88/9	"Continental"	5 1/4" dia.	850'	£1 10 6	£1 8 0
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99/18	"Standard"	7" dia.	1800'	£2 12 6	£2 10 0
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# RECORDING CHOIRS AND ORCHESTRAS

By Michael Woodhouse



**L**ARGER choirs, particularly if accompanied, are best recorded as arranged for a concert. If the arrangement is left to you, place them in successive rows, with about eight people in a row, and preferably in a broad semicircle round the microphone. The highest-pitched voices will be in the front, and the lowest voices in the back rows. It is usually a good idea to elevate the back rows on a platform so that they sing over the heads of the front rows; otherwise the tone may be muffled and the choir more difficult to balance. The placing of the microphone will depend on the acoustics of the building and the effect desired.

Clarity is enhanced by a close microphone position, but correct balance may necessitate a more distant placing. However, if the microphone is too far away this arrangement may give rise to loss of clarity, particularly if the echo in the building is pronounced. The final position employed is a matter of compromise; it may be influenced by the style of the music performed.

The tape recording enthusiast is at an advantage here if he has a fairly detailed knowledge of music. The ability to read music and to follow a score are great assets, whilst a familiarity with the different styles of writing can help immensely in arranging the equipment to best effect. Thus the set-up for recording a Bach Chorale in which clarity in all the parts is required, demands a close microphone position consistent with good balance. In a piece in which the effect of the chording is important (so often the case with modern music) the microphone should be placed further away.

Recording music in churches may be mentioned here. Such projects can be very rewarding; the buildings are often very resonant and with care a most attractive result can be obtained. At the same time, difficulties may arise to challenge the skill of the recording enthusiast. The problems are first, that of clarity, which applies to any recording made in a resonant building; and second, balance, which is often very difficult in places of worship.

If you can arrange a special session for the recording and have freedom to set up equipment where you wish, the chief difficulties are over. The best position for the microphone will probably be in the nave, either on a high stand or slung, about fifteen to thirty feet from the choir. If you are to record an actual service, however, there may

well be difficulties. For instance, it may be thought by the authorities that a microphone slung across the main body of the church will be too obtrusive, and will distract the congregation. (This despite the fact that it is well out of the way above the heads of the people.) Certainly permission must be sought before the set-up is arranged. If the optimum microphone position is thus banned, there is little that can be done. An alternative position must be found for it to give as good a balance as possible. Since churches differ so much in their design details, it is impossible to be more specific on this point.

Incidentally, if the whole service, lessons, prayers and sermon is to be recorded, the disparity between the volumes of speech and music will be very noticeable. A two-microphone set-up is the only satisfactory solution; to merely turn up the gain for passages of speech is not satisfactory, since the background noise will increase without any real improvement in the aural perspective—the minister will still sound very far “off mike.” The difficulty is that a microphone position satisfactory for the choir will be quite unsuitable for the minister—and a reverberation time which enhances music may well be sufficiently long to destroy completely the clarity of speech.

Problems of resonant buildings and of large choirs bring me on to the question of orchestral recordings. Such events are not the rarity you might at first think. Many towns have their own amateur orchestra or young people’s orchestra; and grammar schools with a music specialist on the staff often have their own orchestra. Such groups are often grateful to have recordings made, either as the memento of a special concert, because the piece performed is unusual or rarely played, or even simply for teaching purposes. For the recording enthusiast, recording an orchestra offers interesting possibilities for applying general principles and technique.

The best pick-up of an orchestra is usually made on one microphone. This is not altogether surprising, since if the orchestra is balanced for an audience (real or potential) the use of more than one microphone will introduce falsification. If you have the chance to attend a concert which is being broadcast, make a note of the microphone position employed. In general, the technique is straightforward; a single ribbon microphone is slung across the hall, some thirty to sixty feet from the conductor, and perhaps twenty to thirty feet above the ground. It is

beamed down towards the conductor, and is mounted a little off centre. The problem of balance then consists in altering the positions of the musicians until a satisfactory result is obtained.

With a ribbon microphone this can be done in two ways: If an instrument or group of instruments is too loud, it can either be moved farther back or moved further towards the edge of the beam. This may be necessary with the brass section, the percussion and possibly the double basses. If, for example, the woodwind section is weak, it can be brought nearer the conductor, or moved to a more central position. Observation of professional orchestras is a useful guide, but don't be surprised to find considerable variety in the arrangements, all to achieve the same result!

The addition of a soloist does not affect the general set-up. Usually, however, the B.B.C. do use a second microphone for the solo instrument, placed on a level with the conductor and about fifteen feet away. (This is an example of the modification of the general principle of single-microphone pick-up to achieve greater clarity in the recording.)

I have talked about the arrangements required for a number of different music groups at some length; before I discuss the last of these, the recording of solo voice and piano (and incidentally of solo piano) there are a number of points to mention about the actual recording session. If this has been arranged for the sole purpose of making the recording, your task is much easier. If not, some of these points must be settled beforehand, preferably at a rehearsal or run-through. Have the programme of works played in front of you, with a note of their duration in minutes and seconds. Determine and note down the settings of the volume control to give satisfactory modulation on *mf* passages.

Remember that, particularly in the case of a full orchestra, the total volume range possible is about three times that available on tape; a certain amount of volume compression will therefore be necessary. If you have the scores of the works in front of you, these can be very helpful in anticipating "peaks." If this isn't possible, it may be possible to borrow the conductor's full score beforehand, and note down any difficult points, changes of tempo, and so on.

In any case, arrange the position of the recorder so that you can observe the volume control, modulation meter, score (if available), stopwatch, programme notes and conductor. This last is very important—he can assist you greatly, particularly if you haven't a score during the performance.

If you have practised the moves, the changeover can be points are worth noting. Always have an extra reel of tape and end ready attached to an empty spool, to transfer quickly on to the machine should the need arise. If you are recording the complete concert there is almost always enough time between items to make a change of this kind—and it's far better to do this than see the tape come to an end a few seconds before the end of the piece!

If you have practised the moves, the changeover can be made in less than thirty seconds. Always record a little of the background chatter from the audience before the programme begins—and the applause which greets the appearance of the conductor. Then you can add a commentary afterwards, so that the recording stands complete without any need for programme notes or your own verbal explanation at the playback. I will return to this point in my final article in next month's issue when I discuss editing.

## HOW LONG DO THEY RUN?

FROM time to time correspondents have discussed the playing times of particular pieces of music and readers generally will find valuable a list which has been compiled by Mr. Ian Gibson, of Liversidge, Yorks. "I have found that none of the works listed runs more than five minutes over the stated time," he comments.

This is the list, to which we shall be pleased to add any further items on which readers may have factual information.

**Beethoven** Symphonies: No. 1, 23 mins.; No. 2, 33 mins.; No. 3, 50 mins.; No. 4, 33 mins.; No. 5, 30 mins.; No. 6, 40 mins.; No. 7, 36 mins.; No. 8, 25 mins.; No. 9, 65 mins.

**Berlioz:** Symphonie Fantastique, 50 mins.

**Borodin:** Symphony No. 2, 29 mins.

**Brahms** Symphonies: No. 1, 43 mins.; No. 2, 38 mins.; No. 3, 34 mins.; No. 4, 37 mins.

**Dvorak:** Symphony No. 5, 36 mins.

**Franck:** Symphony, 37 mins.

**Haydn:** "Surprise" Symphony, 21 mins.; "Farewell" Symphony, 28 mins.

**Mahler** Symphonies: No. 2, 76 mins.; No. 3, 90 mins.; No. 4, 54 mins.; No. 5, 65 mins.

**Mendelssohn** Symphonies: No. 3, 33 mins.; No. 4, 29 mins.

**Mozart** Symphonies: No. 35, 17 mins.; No. 39, 25 mins.; No. 40, 25 mins.; No. 41, 27 mins.

**Prokofiev:** Symphony No. 1, 13 mins.

**Schubert** Symphonies: No. 5, 25 mins.; No. 7, 48 mins.; No. 8, 24 mins.

**Shostakovich:** Symphony No. 1, 32 mins.; Violin Concerto, 36 mins.

**Tchaikowsky** Symphonies: No. 4, 40 mins.; No. 5, 43 mins.; No. 6, 42 mins.

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## Letters to the Editor

### 'TAPE RECORDERS OF THE FUTURE'

**I**N his article "Tape Recorders of the Future," James Moir asserts: "Tape recordings have failed to displace gramophone records as home entertainment, etc., etc. This rather suggests the public will always prefer the convenient to the technically perfect, and moreover, they are generally prepared to pay a high price and sacrifice a good deal of possible performance for the sake of their personal convenience." . . .

Pre-recorded tapes are recorded at  $7\frac{1}{2}$  ips. How many tape recorders, excluding professional equipment are capable of reproducing the full frequency range of a tape at a speed of  $7\frac{1}{2}$  ips?

The price of a pre-recorded tape is in the region of £3 to £4 compared to an L.P. record of about £2.

A good quality pickup and amplifier is better capable of giving the frequency response required than a medium-priced recorder. The tape recorder scores in respect of lack of surface noise, but to suggest that it is cheaper or more convenient is, in my own opinion, rather sweeping.

J. PARISH.

*Darlington.*

**I** AGREE entirely with Mr. Moir about the inconvenient fiddling necessary with a rear socket panel but suggest that, whereas input and output sockets should be fitted in a business-like front/top position, duplication of certain sockets is a great convenience with the better quality (and heavier) recorders.

I too have found that the quality and output from my Ferrograph has enabled me to dispense with additional equipment. I feed my tuner unit directly into (and draw power from) the Ferrograph via the octal plug on the front panel; my record reproducer unit feeds when required into the recorder via a neat little one valve preamp/tone control unit; the external speaker system is fed from the recorder direct. However, with wires from the output socket for the speaker system and a six core cable from the octal plug the lid cannot be closed and the whole looks untidy. So I took leads to the rear of the instrument to provide duplicate sockets for normal home use.

In addition to the automatic stop at the end of the reel, I suggest that the mechanism concerned could be linked with another switching mechanism (for use at will) to cut off the mains supply also.

Thirdly, in addition to Mr. Moir's plea for more simple tape-slot threading, I would like to see standardisation of tape threading in respect of the take-up reels. Invisible slots in clear plastic reels are maddening when time counts—patent hub-locks are not much better: the simplest system to date is provided by the Grundig/BASF reel with split side. For domestic use the whole tape threading process should be simple enough for a blind person to use a machine unaided.

Lt. Col. W. B. HUBBARD.

*Aldershot.*

**W**E would refer to the opening paragraph of the article "Tape and Disc Recording" on page 34 in your February, 1959, issue which warns against the illegal copying of a commercial gramophone record.

It should be made clear to your readers that in addition to the copyright which may subsist in a recording as such, there may also be a copyright in the material it reproduces. The Copyright Act, 1956, makes it quite clear that one of the acts restricted is the reproducing of a copyright musical work in any material form, which includes that of recording on any form of contrivance and for any purpose whatsoever, and it is therefore illegal for any person possessing tape recording equipment to make a recording of the copyright musical work even for his own private use, without the licence or permission of the copyright owner.

We suggest that this is a fact which cannot be emphasised too strongly and we would welcome your co-operation in making it known to your readers in their own interests.

B. W. PRATT.

*Secretary of the Mechanical Copyright Protection Society Limited.*



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If you have a problem, write to "The Ideas Pool" about it. And if you think you have an answer to any of the queries, let other readers share your knowledge and your personal experiences.

## THE IDEAS POOL . . . .

### SUGGESTIONS

#### TAPE AND REELS

I READ with great interest the ingenious ideas in the *Ideas Pool*, and I would be the last to criticise any budding recordists for experimenting and then telling others of their success.

But to Mr. Rose I would say "beware of small-diameter hubs on your reels." All but the smallest reels have a certain standardised minimum diameter for the hub and this is done for a purpose. On the take-up side a small hub frequently will not turn fast enough to keep a steady tape tension for quite a few turns, that is until the tape itself has filled out the hub. On the feed side, the last few turns often exert a braking force so strong that the capstan motor starts to develop wow.

Mr. Holmes' "outrigger" or extension arms often work well on three-motor decks such as the Brenell or Wearite, but the heavy load imposed on a large take-up reel on a single motor is frequently sufficient to slow it, and the capstan, down seriously. For the sake of price, manufacturers usually have to use motors which have very little extra power to spare. More credit to them that some machines will stand this modification.

Too much tape on a reel usually means that the outside turns tend to drop off when the reel is handled. The best answer to the demand for more playing time is to use the new thin-based "double-play" tapes, and slower speeds. Also as an interesting thought, what about the new recently introduced four-track heads, already coming on the market.

JOHN W. BERRIDGE.

S.W.10.

#### SMALL SPOOLS

PERHAPS readers will be interested in my answer to the problem: More tape on small spools.

In point of fact my recorder takes seven-inch diameter reels, which hold 1,800 ft. LP tape, but I have often wished it possible to get an hour's recording time at  $7\frac{1}{2}$  ips.

The solution is this: I bought two five-inch spools of Telefunken double play tape from an advertiser in this magazine. Each spool holds 1,200 ft., and thus by rewinding the tape on to a seven-inch spool—I achieved my object.

Users of small machines may find this an improvement on the method of reducing the spool hub diameter.

R. STRUDWICK.

Hillingdon, Middlesex.

#### ADVICE BUREAU

Special arrangements are being made to extend our Technical Advisory Service to readers.

Our Advice Bureau can now cope with readers' enquiries provided they are clearly described and do not involve technical research. Address letters to "Advice Bureau" and enclose a stamped addressed envelope. A coupon as printed below, taken from the current issue of the magazine, must be enclosed with each enquiry.

Tape Recording Hi-Fi  
Magazine Advice Bureau  
January 1959

### AND QUERIES

#### NOISE LEVEL

A FRIEND of mine is plagued by excessive aircraft noises from a nearby airfield and, being unable to convince the authorities concerned that the problem is an acute one, he has asked me to visit him and take some recordings to prove his point.

The obvious problem is to catch the noises in such a way that the recording cannot be dismissed easily as an exaggeration, or as being open to exaggeration through manipulation of the volume controls.

Should some standard intermittent noise be included as a basis of comparison; and, if so, what noise could I use?

I have heard of tape recorders being used to measure noise levels in factories. Perhaps someone can tell me how that is done and whether the same methods could be applied to my effort to rescue my suffering friend.

J. MCCARTHY.

Maidenhead, Berks.

#### HELP THE TYPIST

ALTHOUGH I am chiefly interested in music I occasionally use my recorder (with a Collaro deck), for dictating letters. The machine is not fitted with a back-spacer and my typist has to resort to stopping and starting for each break and moving the tape back an inch or two by hand to avoid missing words through the over-run.

Perhaps one of your bright technically-minded readers can design some apparatus for linking the pause with an automatic back-spacer, or suggest some similar device for simplifying the operation.

V. WALLER.

Scunthorpe.

# CUSTOMS PRESCRIBE CORRECT DECLARATION FOR TAPES

THE Customs and Excise authorities have laid down a form of declaration to be made in respect of tape letters, in order to facilitate free transmission between overseas contacts and tape enthusiasts in this country.

Mr. Stanley White, of Kettering, recently took the matter up with the Customs and Excise after he had had trouble with a recording sent him by a friend in the U.S.A. The form of the declaration on the package was at fault.

The recommended wording is as follows:—

*"Private recordings of speech, sent free of charge. Not intended to be sold or otherwise disposed of by way of trade, or to be copied or reproduced for sale or hire or other commercial purpose."*

Overseas contacts should be advised to use this formula. Tapes will then be allowed in without payment of duty, as being of no assessable value.

## TAPES FOR APES

**A** Johannesburg scientist, Dr. N. Bolwig, is off to hunt gorillas in equatorial Africa—with a tape recorder and a ciné camera.

He plans to hunt them at close range—close enough to record their "conversations."

Dr. Bolwig, senior lecturer in zoology at the Witwatersrand University, said that he would travel on foot for most of his eight-month trek. He plans to study the habits, social behaviour and means of communication of the great apes and try to find out how these factors have developed in human beings.

## Attempt to tapespond with Soviet Union

STANLEY WHITE is now making a resolute effort to establish tape exchanges with Russia and believes that, if he succeeds, it will be the first contact of its sort.

He has also exchanged two parcels of L.P. discs with a friend living near Moscow, but his efforts at tape contact have, so far, failed.

The Russian, however, seems keen and has mentioned that several of his friends have their own tape recorders.

Mr. White hopes that, in due course, it will be possible to establish regular contacts between British and Russian enthusiasts; but it remains to be seen what the attitude of the Soviet authorities will be.

## Tape and champagne

**A** HEREFORD hospital patient who missed a long-anticipated wedding had the wedding taken to her bedside—by means of tape. The patient was a church organist, anxious to play at the wedding of a life-long friend. On the appointed day she found herself an accident victim. The married couple took her a complete tape of the service, a bottle of champagne and a piece of the wedding cake.

## RECORDED THE BURGLAR

New technique in detection

**A** TAPE recording has just played its part in bringing a burglar to justice. Mr. Ronald Davies, London representative of the Voicespondence Club of America, had his flat ransacked and lost clothing, electrical equipment, cheque book and other items.

But the intruder was seen and recognised as a man who had previously been to the flat with a friend of Mr. Davies. The friend, however, had met him casually at a club and knew nothing about him—not even his name.

Mr. Davies recalled that, during their visit, the mystery man had called from an adjoining room for the postal district number of a London post office at which, he said, his girl-friend lived.

When that shout was made, Mr. Davies was recording a tape message.

He got the tape back from his Voice-spondence contact and it did, indeed, record the shout, giving the name of the post office. And there was, indeed, a girl friend there when Mr. Davies rang through.

When she kept a date that night, the mystery man turned up wearing one of Mr. Davies' blazers! The police were in attendance.

**A** NEW midget recorder perfected in America for scientific use weighs 7 lbs., measures eight inches long, but can record 3,000,000 pieces of scientific information on a single tape.

**S**EVERAL leading air companies have installed tape recorders in their airliners to provide music during flights. The American Boeing 707 now provides its passengers with continuous dance music, interspersed with songs from musical shows.

**S**AGA-ELIZABETHAN gave an impressive demonstration of monaural and stereophonic recorded music in the Royal Festival Hall Recital Room last month. The audience formed a very favourable impression of the tape records from this enterprising new company.

## Tape to Disc Services

### TAPE TO DISC SERVICE

78's or L.P.

QUEENSWAY RECORDING STUDIOS  
123, Queensway, London, W.2.  
Tel.: BAYswater 4992

### TAPE RECORDERS FOR HIRE

### TAPE RECORDER SERVICE ENGINEERS

THE BRUCE-MILLER COMPANY

65 Fortress Road, London, N.W.5 GUL 2468

from minor repairs to complete overhauls

## TAPE TO DISC RECORDING Microgroove L.P. (30 mins.) 27/6, 78 rpm. 13/6

S.a.e. for leaflet: Dero Sound Service (A.D. Marsh), Little Place, Moss Delph Lane, Aughton, Ormskirk, Lancs.

### TAPE RECORDER HIRE

TAPE TO DISC 78-LP  
RECORDING STUDIO  
SALES—EXCHANGES

## MAGNEGRAPH

1 Hanway Place, London, W.1.

s.a.e. for leaflet or  
telephone LAN 2156

### RAPID RECORDING SERVICE

21, Bishops Close, Walthamstow, E.17. LAR 3889

Recording Studio equipped with new Steinway Grand, Mobile Recording Van. 78s. and L.P.s from your own tapes. Commentaries and music on Synchronised L.P.s for cine enthusiasts.

### RENDEZVOUS RECORDS

(T. H. ADKINS) 19, Blackfriars St. Manchester 3, offer a Comprehensive TAPE TO DISC SERVICE — 33 — 45 — 78 r.p.m.

S.A.E. for latest leaflet.





**BASF Magnetic Recording Tape**



- ★ **LGS STANDARD and**
- ★ **LONG PLAY**
- ★ **EDITING SOUND and**
- ★ **DOUBLE PLAY TAPES**

*The original... and still the Best*

F. A. HUGHES & CO LTD 4 STANHOPE GATE LONDON W1 HYDE PARK 6080

# PRODUCTS REVIEW

**A** BIG decision now facing tape recorder manufacturers on this side of the Atlantic is how far they should commit themselves to designs incorporating a tape cassette or cartridge. Urgency is given to the matter by the offer by Radio Corporation of America of manufacturing rights for their cartridge, which is just coming on the U.S. market.

Prototypes of this cartridge have been made available to British manufacturers. Readers may recall that one was seen at the Audio Fair at Harrogate recently.

R.C.A. claim that their system is likely to be adopted as a standard in America. Releases of tape records in cartridges are now due there.

Drive and control mechanisms for use with tape cartridges are, of course, entirely new and different from conventional tape transport mechanisms.

The R.C.A. cartridge holds 600 feet of tape, which plays at 3½ ips. There are four tracks on each tape, tracks one and three operating in one direction and tracks two and four in the other. The result is two hours of monaural recording, or one hour of stereo.

The specially designed heads are of dual construction, with 0.136-inch spacing centre to centre, and they are claimed to give full frequency response through 15,000 cps.

A brake is provided in the cartridge to prevent unwinding, and automatic stopping or reversing is possible.

Windows are provided to give visible indication of the tape on the hub.

The cost of 600 feet of tape in cartridge is stated to be approximately equal to the cost of a 1,200 foot standard magnetic tape on spool.

R.C.A.'s own ideas or machines to use the cartridge vary from a fully automatic stereo version to a simple monaural unit.

## New C.Q. tuner



A NEW F.M. TUNER and a new amplifier are announced by C.Q. Audio Ltd.

The tuner is self-powered to work from 200/240 volts supplies. Sensitivity is stated to be high and reception satisfactory in any part of the country. Tuning is continuously variable from 88 to 108 megacycles per second.

Variable automatic frequency control is designed to enable weak signals to be tuned in and "locked." It is a six-valve unit, measures 11×4×8 inches, and is suitable for shelf or panel mounting.

The price is £26 19s.

The new C.Q.-10 amplifier is fully self-contained, with an integral pre-amplifier. It is designed to work with any type of pick-up, either crystal or magnetic; radio tuner; tape

(Continued on page 34)



## MICROPHONES FOR TAPE RECORDERS

### SINGLE CHANNEL AND STEREOGRAPHIC

**LUSTRAPHONE LTD.** design and manufacture a wide range of microphones including a new model, the "Stereomic" for stereophonic sound. Of the many types available, the microphones indicated below are of special interest to all who use tape recording equipment.

- "STEREOMIC" Double Ribbon Microphone.
- "LUSTRETTE" Popular priced general purpose, dynamic.
- "RIBBONETTE" Pencil Ribbon velocity.
- "STUDIO RIBBON" Broadcast type Ribbon Velocity.
- "FULL VISION" High quality dynamic.

Full descriptive literature free on request

**LUSTRAPHONE LTD.** ST. GEORGE'S WORKS,  
REGENT'S PARK ROAD, LONDON, N.W.1  
Phone: PRI 8844

## SECURE THIS BARGAIN!

FAMOUS MAKE  
DE LUXE  
RECORDER

LISTED AT 64 GNS.

LASKY'S  
PRICE **42** GNS.

Complete with Lustraphone  
"Lustrette" mike and  
1,200ft. tape  
Carr. and Ins. 2/-



Brand New  
and Unused

Limited  
number  
only

Embodies the famous Collaro Tape Transcriber Mk. IV, Tape Deck, 6-valve Hi-Fi Amplifier, and 10" x 6" Elliptical Speaker, in handsome Case superbly finished two-tone simulated lizard. Overall size: 18½" x 15½" x 7½".

TWO HIGH GAIN INPUTS for radio/gram and mike, each separately controlled and can be mixed, so that speech and singing can be superimposed on an orchestral background. Two outputs, monitor headphones and extension speaker.

4 WATTS UNDISTORTED OUTPUT. Freq. range at 7½" per sec., 50, 12,000 cps. Separate bass and treble controls, automatic equalisation on all 3 speeds. Magic Eye level indicator. Upper and lower track recordings can be made quickly without spool reversal and a safety device prevents accidental erasure. Three speeds, 3½", 7½", 15" per sec., digital counter, pause control.

For A.C. Mains 200/250v. GUARANTEED FOR 12 MONTHS DEMONSTRATIONS AT BOTH ADDRESSES.

Available on H.P. terms; deposit and monthly payments to suit you.

The Carrying Case only can be supplied for 79/6 plus carriage.

**LASKY'S RADIO** (DEPT. TR)

LASKY'S (HARROW RD.) LTD.

42, TOTTENHAM COURT ROAD, W.1 MUSeum 2605  
370, HARROW ROAD PADDINGTON, W.9 LAD 4075 & CUN 1979

Open all day SATURDAY. Half-day Thursday

PLEASE ADDRESS MAIL ORDERS TO HARROW ROAD

# What ? ? Where

What type of Tape Recorder, among all the machines now on the market should I buy? What are the various characteristics, for instance, of a Grundig TK20, a Simon SP/4 or a Philips AG8108 and other recommended machines?

Where can I see all the leading makes demonstrated? Where can I go for unbiased help and advice, where technical points are patiently explained, where the service is willing and friendly, and, above all, where purchase terms are the most reasonable?

*Ask a fellow enthusiast—more than likely he will tell you*

**THE RECORDER Co. (dept. T)**  
188 West End Lane, West Hampstead  
London N.W.6. Telephone SW1 4977

- ★ We are mail-order specialists—free catalogue and full information on request
- ★ Open all day Saturday

## NEW! MICROPHONE M II

- A small, lightweight microphone with excellent frequency response and high output.
- Eminently suited for use with tape recorders, intercommunication systems, amateur radio, etc.
- It is supplied complete with desk stand and neck-band but may be lifted from the stand for hand use.

**Type. Diaphragm operated crystal**

**Equivalent capacity . . . . . 1,500 pF.**  
**Sensitivity at 1,000 c.p.s. . . . . 1.7 mV./Mu Bar**  
**Frequency range . . . . . 30—10,000 ± 3db**

**Recommended load resistance . . . . . 5 MΩ approx.**

**Weight, including lead . . . . . Under 2oz.**  
**Diameter . . . . . 1¼"**

Handsomely finished in black nickel frame and stand with gold colour hammer finish case. Supplied with 6ft. p.v.c. covered cable.

**List Price £2 5 0**

*Illustrated leaflet on application*

(DEPT. S.)

**FILM INDUSTRIES LTD.**

**90, Belsize Lane, London, N.W.3**

HAM 9632-3

Telegrams: Troosound Haver

recorders equipped with their own head amplifiers; dynamic, moving coil or ribbon microphones directly; or crystal microphones with external matching unit.

Price is £22 1s.

*C.Q. Audio Ltd., 2, Sarnesfield Road, Enfield, Middlesex.*

## Nagra available

THE FAMOUS NAGRA recorder is now being imported for sale in Britain. The basic model, the Nagra III, is priced at £186.

This is a high quality battery-powered and transistorised recorder intended for professional use and, though it weighs only 16½ lbs., it is claimed to provide quality up to broadcasting and cinema standards.

The Swiss makers claim to have concentrated on a tough and foolproof machine, which will be unaffected by dropping, tropical or polar climates, altitude, sea air, and the other rigours of open-air use.

An electric motor is provided for tape movement, powered by twelve 1.5 volt torch batteries, which provide about 20 hours running.

Standard five-inch reels are used with the cover closed, but seven-inch reels can be accommodated with the cover open.

There are two mixing inputs. There is an "automatic record" position, in which the recorder itself controls microphone sensitivity and attenuates low frequencies so as to improve the intelligibility of speech.

Speech can be recorded satisfactorily, it is claimed, whether the speaker is four inches or two yards from the microphone and whether the speech is loud or soft.

The basic Nagra III model is normally supplied with a speed of 7½ ips, but can be supplied at 3¼ or 15 ips.

Overall dimensions are 8¼ × 12½ × 4¼ inches.

There are two other models, the Nagra IIIB, with three speeds and three heads, and the Nagra IIIE, with 7½ ips speed and two heads. They are priced at £270 and £234 respectively, without batteries, tape or microphone.

Both models have an erase, record and reproduce head and it is possible to monitor with headphones what is going on to the tape.

*Livingstone Laboratories, Ltd., Retcar Street, London, N.19.*

## Sonocolor tape

ANOTHER BRAND of recording tape is now to be available in this country. Tape Recorders (Electronics) Ltd., who make the Sound recorders, are to import Sonocolor tapes, which are well known on the Continent.

As well as standard and long-play, the range will include "double long-play" and a synchro-cine type which has not hitherto been available here. The latter uses a strobe device, with mirror.

Prices of standard tape vary from 7s. 6d. for 130 ft. on a three-inch reel to 35s. for 1,200 ft. on a seven-inch reel. Long-play costs from 9s. 6d. for 200 ft. (three-inch reel) to 50s. for 1,800 ft. (seven-inch reel). Prices of double long-play tape are not yet available.

The synchro-cine tape costs 45s. for 825 ft. on a five-inch reel, with mirror.

A full range of jointing and editing accessories is also available.

*T.R. (Electronics) Ltd., 784-788, High Road, Tottenham, London, N.17.*



# New Telefunken

A NEW TELEFUNKEN recorder which is about to become available in this country is described as a "small studio and professional" model. A prototype was shown at the Audio Fair at Harrogate recently.

Known as model M.23, it is based on larger studio models from the same manufacturer, but the price aims at the enthusiastic amateur. The chassis costs £140; in a wooden cabinet it is £150; in a fully-portable version, with power stage and four built-in speakers, it is £180.

One outstanding feature is that the entire head assembly can be withdrawn and replaced by various combinations of heads—full track, half track, stereo, and so on. The standard model is fitted with half track heads to international standard, and the alternative assemblies are supplied as extras. A change can be made in a matter of seconds.

The recorder operates at  $3\frac{1}{2}$  and  $7\frac{1}{2}$  ips as it takes nine-inch spools, three hours of uninterrupted playing time is possible.

There are three separate motors and separate recording and playback amplifiers.

Recording level is indicated on a calibrated meter. Monitoring is possible before and off the tape, and the switch can be made during recording.

There are four inputs, with built-in mixing facilities, each input with separate controls and separated by valves so that no interference between channels is possible.

**Technical information:** Wow and flutter, less than plus or minus 0.15 per cent  $7\frac{1}{2}$  ips and 0.3 per cent at  $3\frac{1}{2}$  ips.

Frequency range, 30 to 12,000 cps at  $3\frac{1}{2}$  ips and 30 to 16,000 cps at  $7\frac{1}{2}$  ips.

Distortion factor at full modulation, less than 3 per cent.

Weight, 44 lbs. (chassis) or 57 lbs. (wooden cabinet).

Welmec Corporation Ltd., 147, Strand, London, W.C.2.

## Rogers three-way speaker

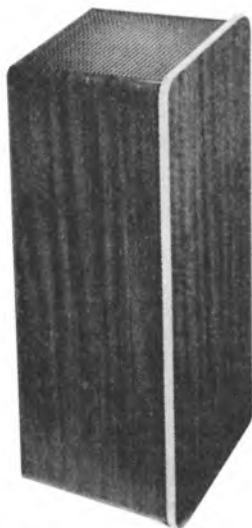
SEVERAL NEW ITEMS of equipment have recently been introduced by Rogers—a switched FM tuner, a stereo control unit, a three-way speaker system, and a redesigned equipment cabinet.

The tuner is designed for use in conjunction with RD equipment and to draw its power supply from the main amplifier. It is switched to the three B.B.C. FM transmissions.

The stereo control unit is described as incorporating every essential requirement for hi-fi stereo reproduction from tape, disc and radio.

Two special features are the high pick-up sensitivity, claimed to be sufficient to operate from any pick-up in the world, and the tape relay sockets for stereo replay direct from tape replay head.

(Continued on page 36)



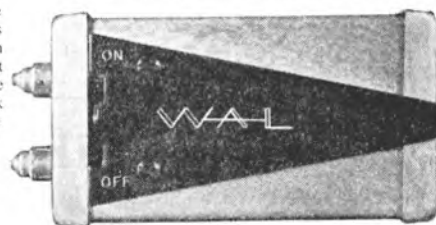
## WAL GAIN TRANSISTOR PRE-AMP

"After trying this little device with my moving coil pick-ups I would never again dream of using a pick-up input transformer . . . the WAL Gain improved the crispness to a notable degree . . . So far I have only tried it out with Ortofon, Expert, and Garrard moving coil pick-ups. . . ."

Moreover there is no hum pick-up, magnetic or otherwise and the background noise is negligible . . . I can imagine, too, that it will prove useful for the input to the playback amplifier of some tape recorders."

Percy Wilson, M.A.  
The Gramophone,  
June 1958 issue.

Price £5. Size  $3\frac{1}{2}$ " plus Phono Plugs by  $2\frac{1}{2}$ " sq.



"A WAL professional tape eraser which wipes both tracks perfectly clean in a space of half a minute . . . it is a real god-send."

PERCY WILSON, M.A.  
The Gramophone,  
August 1958 issue.

Price £7 18s. 6d.  
Size  $6\frac{1}{2}$ " x  $4\frac{1}{4}$ " x  $3\frac{1}{4}$ "



Ask your dealer for a WAL

Wellington Acoustic Laboratories Ltd., Farnham, Surrey,  
England. Phones 6461 and 4961

## Introduction to Electronic Circuits

R. FEINBERG, Dr-Ing., M.Sc.

Here is presented in logical and concise development of thought, the fundamental principles of design and operation of the whole basic range of technically important electronic devices of the vacuum and the gas-filled type, and their application in practical electronic circuits. It has been written primarily for the student who wants an introduction to the subject, and will be of value to the research worker who requires to refresh his memory. It has been designed to meet an urgent need, for the field of electronic circuits and their practical application in research, tele-communication, navigation and industry has been growing rapidly in recent years, and existing textbooks are of too advanced a nature to be suitable for this purpose.

With diagrams 21s. net

LONGMANS

(Continued from page 35)

The "1284" three-way speaker system is suitable for monaural or stereo, and is basically a small column enclosure with a twelve-inch and an eight-inch unit mounted at either end. Mounted concentrically with the eight-inch unit is a four-inch tweeter unit, which is adjustable.

The new equipment cabinet is the RD Junior table model, with a fully sprung motor board. It will take many possible combinations of RD equipment.

Rogers Developments Ltd., 4-14, Barmeston Road, London, S.E.6.

## IN BRIEF

"The Grundig Book," published by Focal Press, is now in its third edition.

R.C.A. have reduced the price of their New Orthophonic VHF/FM tuner from £33 11s. 4d. to £24.

The Tape Recorder Centre (Sypha Sound Sales Ltd.) recently organised a special demonstration of stereo in north London, attended by 150 people.

The re-wind time for the Brenell 3-star tape recorder announced in our December issue is 55 seconds and not 25 seconds.

Wyndor Recording Co., Ltd., announce the appointment of Mr. Roy Russell as General Manager, and Mr. Dennis F. Smyth as Chief Engineer.

Mr. Brian Bromwich has relinquished his post as Chief Press Officer to G.E.C. Until a successor is appointed, Mr. Vivian G. Burchill will carry out the duties of Chief Press Officer.

An all-purpose home movie screen which takes about five seconds to open is announced by Rank Precision Industries Ltd. It is the Miralyte Minor. Designed for home screening of 8 and 16 mm. films, the Miralyte can, it is claimed, be stood anywhere on a flat surface as small as 5 inches square, or can

be hung from wall or ceiling. Several sizes are available from 30 in x 22 in. upwards. Prices range from £4 19s. 6d. to £5 10s.

G. B. Film Library, Perivale, Greenford, Middlesex, have recording studio facilities available for cine enthusiasts at £5 per hour including the services of recording staff. Editing facilities are also available and there is a charge of £2 2s. per hour for these.

The three-speed tape recorder announced by Stella Radio and Television Co., Ltd., under the name of "Stellaphone" in our November issue has a frequency range of 50-18,000 ips and not 15,000 as stated.

## MANUFACTURERS NEWS FROM ABROAD

GERMAN tape recorder manufacturers are making a big drive to popularise stereo. Grundig, Telefunken, Siemens and Philips have sent demonstration units around the country, using the usual ping-pong and "passing train" effects.

So far, few stereo discs have been put out, and no tapes; but this is unlikely to be so for long, and meanwhile they will be imported.

The most remarkable new equipment is the Perpetuum-Ebner for playing stereo discs. When the cabinet is opened, the lid lifts off in two sections, each of which is a speaker assembly.

Photokina this year emphasised the increasing use of sound equipment by cine and slide photographers. There are now several units for linking recorders with slide projectors. The Tobimat, for example, uses one tape track for sound, the other for low-impulse signals to effect change of slides. But for cine work, progress with magnetic stripe seems to be out-pacing synchronous mechanisms.

Grundig still leads the German manufacturers in recorder output, though Saja, Saba, Philips, Telefunken and Uher have high production. A new Uher model incorporates a magic eye which can be observed—with start/stop facilities which can be operated—at a distance of 15 feet.

# The New Improved COLLARO TAPE TRANSCRIPTOR

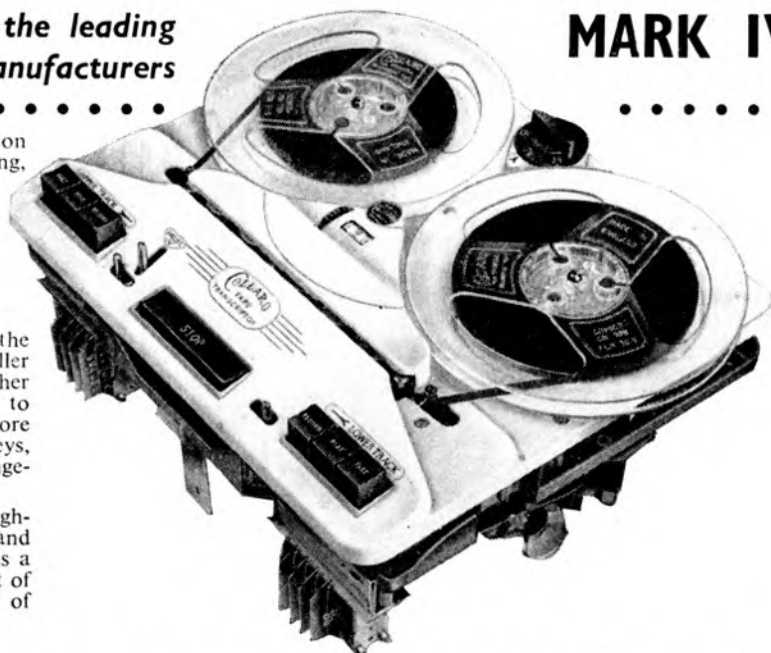
... as used by many of the leading  
British Tape Recorder Manufacturers

## MARK IV

This High-Fidelity Tape Transcriber, designed on Transcription quality principles for live recording, recording from F.M. Broadcasts, etc., and for reproducing pre-recorded tapes, is a twin-track model fitted with two sets of heads, and runs at speeds of 3 $\frac{3}{4}$ , 7 $\frac{1}{2}$  and 15 inches per second.

Several new modifications are incorporated in the MARK IV. The new interconnected Micro Switch and Fly-Wheel Brake switch off both motors and stop the flywheel immediately the "stop" button is operated. Any one of the six smaller knobs will then re-start the machine in either direction, without overloading the motors. Due to reduced wattage input, these are cooler and run more quietly. The enlarged diameter of the motor pulleys, new type re-wind pulleys and new springing arrangements make for more active re-wind.

The COLLARO STUDIO MICROPHONE is a high-fidelity, super-sensitive crystal type miniature hand microphone. Finished in maroon or cream, it has a frequency range of 30—10,000 c.p.s. with an output of 1.8 mv/ub at 1,000 c.p.s. It has an equivalent of 1,500 pf.



# COLLARO

COLLARO LTD., Ripple Works, By-Pass Road, Barking, Essex

Telephone: Rippleway 5533 — Telex 28748 — Telegrams: Korllaro-Telex-Barking

MAKERS OF RECORD CHANGERS, GRAMOPHONE UNITS, PICK-UPS, ELECTRIC MOTORS, ETC.

# THE SIMON "CADENZA" MICROPHONE

Instrument under review: "Cadenza" ribbon microphone.  
Manufacturers: Simon Sound Service Ltd.  
Price: 10 gns. with stand, or 8½ gns. without stand.

IT is always a pleasure to handle a well-made commodity, and the *Cadenza* microphone is certainly well constructed. It is attractively finished in a two-tone, aluminium alloy enclosure, and for table use plugs into a well-designed tripod base using a standard M3B type of plug. About three yards of co-axial cable is supplied. A swivel at the lower end of the microphone allows the head to be tilted back from the vertical to any convenient angle up to about 45°.

The ribbon and magnet assembly is precision-made, and is supported by four points inserted into soft rubber. This is an effective way of reducing vibration pickup from the table. A self-contained transformer steps up the output impedance to 80,000 ohms, and may thus be connected straight to the high-impedance input sockets of an amplifier. If preferred, the output may be taken directly from the ribbon, having an output impedance of 30 ohms. In this case, a suitable transformer has to be installed in the amplifier; this should have a ratio of approximately 50:1, and can be obtained from the same manufacturers.

The instrument was tested in conjunction with a high-quality recorder, and throughout the tests both music and speech were recorded and reproduced with remarkable clarity and freedom from distortion. As there was no trace of hum when used at high impedance, there would be even less possibility when used as a low-impedance microphone, as long as care is taken in the location of the amplifier input transformer. As the maximum recommended length of lead when used at high impedance is 11 feet, for longer distances (up to a hundred yards), it is desirable to use the low-impedance connection.

Most ribbon microphones tend to boom when speaking too close, and this model is no exception. It was found, however, that as long as the manufacturer's instructions were adhered to, and a distance of at least eighteen inches maintained between microphone and person speaking, results were perfectly satisfactory. Bass response was smooth, showing no resonances.

The output from a ribbon microphone is proportional to the velocity of the sound wave, and therefore this type of instru-

Tested in  
the lab



ment is directional. The microphone under test showed a marked cut-off in output to sounds coming from top, bottom or sides, the field of pickup extending over an angle of approximately 90° in the front, and the same in the rear. This directional effect was only obtained when testing in a heavily-draped room or outdoors, whilst in an average living room, the directional effect was not so prominent owing to reflections from the walls and furniture.

The measured frequency response on the model tested to the -3dB points was 34 cps to 13,800 cps, being within ±1dB throughout the range.

In conclusion, the writer feels that the *Cadenza* microphone can be recommended to all who require a first-class quality microphone for amateur or professional use. **C. L.**

---

## THE COLLARO TAPE TRANSCRIPTOR

*A new series for the home constructor*

WE shall begin publication in our next issue of a specially written series of articles directed mainly at the home constructor who has obtained a Collaro Mk. 3/4 tape transcriptor for incorporation in his own hi-fi set-up. The advice contained in the five articles in this series should assist in obtaining the best possible results from this mechanism.

It should be emphasised that where the tape transcriptor is part of a complete manufactured product no attempt should be made to alter or adjust the mechanism other than as indicated in the manufacturer's instructions. This is particularly important while the instrument is under guarantee.

The following is a synopsis of the five articles:—

**FEBRUARY:** Alignment of the three speed mechanism. How to reduce to a reasonable level any excessive mechanical and motor noise. How to construct

a simple rack to house the tape transcriptor whilst making adjustments.

**MARCH:** Where to grease and adjust in order that the operational pressure may be reduced without adverse effects. What special grease to use.

**APRIL:** Possible causes of "wow" and/or "flutter" and how to minimize. How to effect a cure if the re-wind is slow in either direction.

**MAY:** Adjustment of pressure pads. How to fit a three-speed frequency compensation switch to the tape transcriptor.

**JUNE:** How successfully to balance out motor-hum pick-up in the play-back head, including the construction of a suitable pair of humbucking coils.

The author intends to make the series as comprehensive as is possible, with—where necessary—detailed drawings, but without duplicating the excellent service and instruction manual supplied by Messrs. Collaro.

It is recommended that only those with a knowledge of basic workshop practice

and with the correct tools to hand, should undertake adjustments on the tape transcriptor, as various components in the mechanism are very susceptible to damage if handled incorrectly.

A classic example of this is the silicon rubber re-wind pulleys which are attached by two grub screws. Should the screw driver blade be too wide, damage may be caused to the surrounding parts. On the other hand, a small screwdriver may allow the blade to slide out of the grub screw slot when pressure and torque is applied.

As a final warning, we strongly urge the reader critically to assess his own capabilities before attempting any adjustments to the tape mechanism, as no liability whatsoever can be accepted for injuries received, or damage caused through following instructions contained in these articles.

Address all correspondence regarding these articles to: Tape Recording and Hi-Fi Magazine, 426 Camden Road, London, N.7. Postcards if possible. **T. R.**



# Recording radio programmes

by  
Charles

Langton, A.M. Brit. I.R.E.

ONE of the most popular uses of a tape recorder is for recording music and other programmes from the radio. In this way an excellent library of classical and popular music may be compiled that can be drawn upon for use within the family circle at any time. Many enthusiasts obtain first class results; but occasionally disappointment is experienced through lack of knowledge, and this article aims to bring to light some of the difficulties, and to make clear how they may be overcome.

Recordings may be made directly from an existing radio receiver, or by using a tuner unit specially made for the job in conjunction with the tape recorder. More will be said about the tuner unit later, while the following paragraphs will deal with the methods of connecting a standard radio receiver for the purpose. The following remarks apply equally whether the receiver is tuned to the long, medium, short, or VHF waveband.

Before describing how to connect your recorder to your radio, a warning must be given. First, find out whether your receiver is an A.C. or A.C./D.C. model. Even though your house is wired with A.C. mains, the receiver could be either. If your set is for A.C. operation only, and has a double wound mains transformer (this applies to the vast majority of A.C. sets) then read on. If the receiver is an A.C./D.C. model, however, great care must be taken in carrying out any modifications because the chassis may be live at 240 volts A.C.; those with little electrical knowledge are strongly recommended to obtain expert advice, in the interest of safety.

Satisfactory recordings can never be achieved merely by placing the microphone in front of the radio loudspeaker. Not only will the combined distortion of the loudspeaker and microphone be added to the signal, but room noises will add to the background noise. In general there are two points in the receiver from which the signal may be successfully tapped off and fed into the radio input socket of the recorder. They are the extension loudspeaker sockets, and the output from the detector or discriminator. The first has the advantage of simplicity and rather less chance of hum being picked up than

$R_1 = 500k\Omega$  RESISTOR  $\frac{1}{2}$  WATT  
 $R_2 = 5k\Omega$  " " "

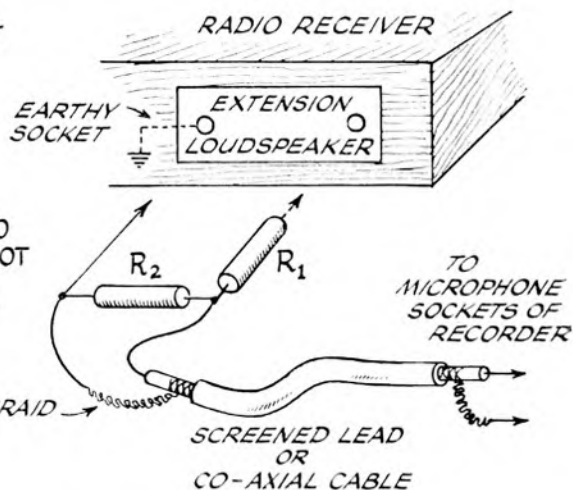


FIG.1. CONNECTING TO A RECORDER NOT FITTED WITH RADIO SOCKET

the second. If better quality is desired, however, the signal should be tapped off the detector or discriminator stage, in which case the signal does not have to pass through the output stage of the receiver (which produces most distortion).

The first method will now be dealt with. The recorder should be fairly close to the radio, although this is not critical and a distance of several feet would not be detrimental; a screened lead should be used for connecting the two items. The screening, or braiding, should be connected to the earthy loudspeaker socket at one end, and the earthy input socket at the recorder end.

To determine which is the earthy extension speaker socket, switch on the radio as normal and then short out each of the two loudspeaker sockets in turn to chassis, using a short length of wire. If shorting one socket cuts off the loudspeaker, that socket is "live" and the other one

earthy. If neither tests succeed in cutting off the speaker, then it is immaterial which is used for connecting the braiding to. As regards the recorder end, the radio input socket on most recorders is either a jack or coaxial socket, and it is simply a matter of making sure that the braiding is connected to the stem of a jack plug (not the point, which is live) or to the outer casing of a coaxial plug. If these connections are wrongly made the usual symptoms are a loud mains hum superimposed on the recording.

Several of the earlier tape recorders did not have a radio input socket or, if they had, often it was not very sensitive, and it was necessary to have the volume control turned full on before modulation was satisfactory.

In such a case, it is quite in order to apply the radio signal into the microphone socket, although, as the radio signal will be much greater than a microphone would give, the modu-

lation control will have to be turned almost to zero and may be very difficult to set for optimum results. This can be overcome by attenuating the radio signal, by means of the circuit shown in fig. 1. With this arrangement, modulation can be smoothly controlled. Of course, the radio output could be reduced by turning down the volume control, but then the sound would be hardly audible in the loudspeaker for monitoring purposes.

If better quality is desired, the radio signal should be taken from the output of the detector. This necessitates removing the chassis or base plate of the receiver, but it is well worth the trouble. As the volume control of most receivers is connected to the detector output, this is the easiest point to locate, and the signal should be tapped off from across this control. There is the added advantage with this method, that the volume control will continue to control the loudspeaker output but will not affect the signal to the tape recorder; therefore, once the modulation control is set on the recorder, recording will continue whatever the setting of the volume control, which may even be turned to zero, if desired.

Fig. 2 shows how to wire up a permanent socket for the purpose. A tubular capacitor of between .01 and .05 microfarad has one of its wires soldered to the *right hand* tag of the volume control, looking at the back of the control with its three tags pointing upwards. Care must be taken not to disturb the original wiring to the control, and do not apply the heat for too long or both components might be damaged. If you are inexperienced, a little soldering practice with old components would be helpful before tackling the main job. Always use resin cored solder, not "plumber's" solder, and never use corrosive fluxes (such as killed spirits).

\* \* \*

Next, obtain a coaxial socket (the type usually fitted as the aerial socket of a television receiver) and decide upon its most convenient position. This may be on the back of the chassis, or somewhere on the cabinet. Cut off sufficient screened lead to reach from this point to the capacitor, and solder one end to the coaxial socket, as shown in 2 (b). If the socket is mounted on to the chassis, the braiding at the other end need not be connected, the inner wire only

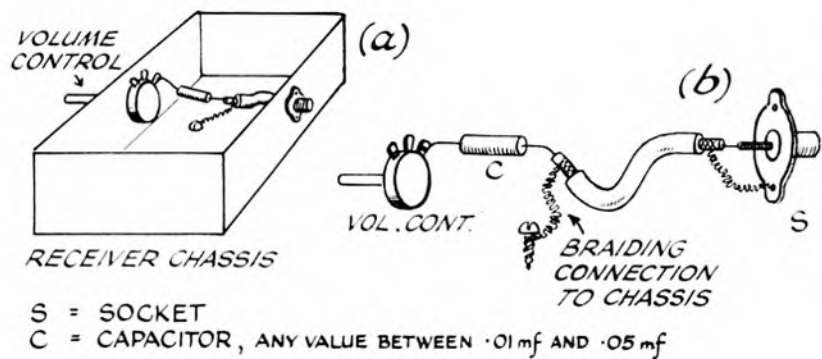


FIG.2. CONNECTING TO VOLUME CONTROL

being soldered to the second wire of the capacitor. On the other hand, if the socket is mounted on the wooden or plastic cabinet, the braiding at the volume control end must be connected to the chassis either by means of a nut and bolt through a convenient hole, or by soldering to any earthed point. Unless the lead is very short it should be held in place by a small clip so as to protect the capacitor from any pull on the lead.

\* \* \*

Although the above remarks apply equally to medium, long, and VHF (Very High Frequency) transmissions, for the highest fidelity recordings, use must be made of the B.B.C. VHF service. It is not possible to receive high fidelity signals on the medium and long waves, not to mention the disturbing effect of crackles, whistles, and interfering stations that prevail on these wavebands. In contrast, the B.B.C. VHF transmissions can be received with realistic quality and negligible background noise in most parts of Great Britain and Northern Ireland.

There will be many readers who wish to record from the radio without having to interfere with their receivers. The answer in this case is to purchase a "tuner-unit." This is a radio receiver minus an output stage and loudspeaker. A tuning control is fitted which will enable any of the VHF stations to be tuned in. It is also possible to obtain models which will tune in the long and medium wavebands as well, if desired. A volume control is usually fitted. Take care before purchasing, however, as there are two classes of tuner unit on the market: One which is self contained with its own power pack, and only needs connecting to the mains

and an aerial, whereas the other type require separate H.T. and L.T. supplies.

The output from such tuner units can be applied straight to the radio input socket of the recorder, and headphones may be used to monitor the programme. Alternatively, as most recorders have a "straight through" mode of operation (i.e., acting as a straightforward amplifier from input to loudspeaker), the combination of tuner unit and recorder may also be utilised as a high quality receiver, thus saving the cost of a separate receiver for general purposes. Of course, if a radio receiver is already in use, then a tuner unit enables one to record a favourite programme transmitted from one station, whilst listening to another programme on the main receiver, to mention just one advantage.

When installing a VHF tuner or receiver, ensure that a good aerial is fitted. The exact type and cost will depend upon the location, and there is no hard and fast rule in this respect. VHF waves behave very much like light waves, and are easily reflected by large objects, and shadows are often cast. If your aerial is in one of these shadows, good results are not likely to be obtained even when close to the transmitter. Moving the aerial a few feet either way, or up or down, may make a considerable difference to reception. Commercial receivers often have a self contained VHF aerial inside the cabinet, but these are effective only in the most favourable locations.

One final word of caution. There are several devices described as "tuner units," prominent among them being television tuner units, and it will pay, therefore, to be explicit when inquiring about a tuner unit for your tape recorder or high fidelity amplifier.



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## Letters to the Editor

### ANGLO-SCANDINAVIAN CORRESPONDENTS

YOU might be interested in this photograph. It shows (left to right) Kjell Petterson of Stockholm, Robert Ellis of Whitsome, Berwickshire and Bert Duff of Manchester. All



three of us have been tape correspondents for over two years but we had never met until this summer. When this photograph was taken, we were setting out on a tour of the Scottish Highlands accompanied by our wives.

ROBERT ELLIS.

*Schoolhouse, Whitsome-by-Duns, Berwickshire.*



#### TAPE TRAVEL RECORD?

IS this a (tape) record?

An American tapespondent living in Tokyo, Japan, has recently contacted me on a three-inch spool. Time taken for the tape to complete its return journey of 27,000 miles to Japan was only sixteen days. Postage involved from this end, two shillings!

My friend tells me that Japan offers the most up-to-date hi-fi equipment at ridiculously low prices, though it goes without saying that this Japanese equipment is nothing but a replica of what foremost United States firms produce.

FRANK MICALLEF.

*Feltham, Middlesex.*



#### CHRISTMAS GREETINGS FROM CHRISTMAS ISLAND

I HAVE just received my October copy of *Tape Recording Hi-Fi Magazine*, otherwise I should have written to you sooner.

Allow me to praise you on such an excellent magazine and to say that it is very welcome here on Christmas Island.

J. E. BURNS.

*R.A.F., Christmas Island.*



#### SINGAPORE'S OLIVER TWIST

ALTHOUGH *Tape Recording Hi-Fi Magazine* is six weeks old when it reaches me here in Singapore, I enjoy every word on every page and even after I have read it all, I go back to it again and sit looking through the advertisements in case I have missed anything.

There is only one criticism I have to make, and I am sure that all your readers make the same one, and that is that the magazine is only published monthly. Without doubt there is a good reason for this, but how I wish it was delivered to me each week.

G. H. GRANT.

*Singapore, 16.*



# NEWS FROM THE CLUBS

## NOTICE TO CLUBS

Many of the most flourishing local clubs have been established with the guidance and encouragement of this magazine. Can we help in your town?

We can supply free, a colour poster for local display inviting enthusiasts to an inaugural meeting. We also have available a draft constitution and set of rules.

Write for advice now if you think you can help start a club in your area.

## A Tape Recording and Hi-Fi Magazine SERVICE

### The Federation

CLUBS are invited to send in reports of their activities to the Federation. This will enable them to pass on the benefit of experience to those who inquire or need help.

A German schoolboy wishes to tapespond with a British boy (12-13 years old). Those interested should write to *Secretary, Roy Penfold, 48, Holbrook Lane, Coventry.*

### Bournemouth

FUTURE meetings of the renamed Bournemouth Tape Recording Club will be held on alternate Thursdays at St. Aldhems Hall, Branksome. New Secretary is Hedley Jones whose address is 442, Poole Road, Branksome, Poole.

### BTRS

THE Society is to produce another magazine, this time in sound only, which will alternate with their bi-monthly house journal. The first edition is planned for February. It will be named *I.C.N. Magazine*. Clubs wishing to receive this magazine should send a thirty-minutes supply of tape to the Secretary. The Society is no longer affiliated to Tape Respondents International. British Tape Recording Society enthusiasts have recently recorded two live Jazz Sessions for Radio Tripoli (Middle East Forces network). Jack Talling carried out the recording at the request of Gordon Vickers, manager of the Wall City Jazzmen. Already they have received a letter from the network thanking them for their work. (BTRS, 210, Stamford Road, Blacon, Chester.)

### Coventry

A NEW Constitution has been drawn up and the club is now to be known as The Coventry Tape Recording Club. Annual subscription of 12s. (8s. if under twenty-one) includes husband and wife.

Members recently heard Basil Harley's "Tape of the Year" and a tape he made in Berne during the International Competition which includes extracts from the winning tapes. A recording of a talking budgerigar with a Lancashire accent was also played.

Brian Bayliss demonstrated his Phonotrix machine with the help of a tape made during a week-end stroll. Future highspots for the club will be visits to the G.P.O. Telephone Exchange

(Continued on page 42)



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## NEWS FROM THE CLUBS

||||| (Continued from page 41)

and the new Coventry police station. An exchange of tapes with Aberdeen Tape Club is planned. The annual dinner of the club is to be held on January 9th. (Secretary, Roy Penfold, 48, Holbrook Lane, Coventry.)

### Dundee

**T**HE Club has now moved into larger premises and have the use of three rooms. At their last meeting members took part in a sound quiz made up of well-known voices from TV programmes. Club verdict afterwards: "We may watch TV but few of us really listen."

Members Leonard Douglas and Harry Ayers have taped a stereo broadcast by the B.B.C. and have also made a stereo tape themselves. Equipment used: Vortexion and Ferrograph recorders, two Reslo Ribbon mics and one tape. (Secretary, William Steele, 34, Glenmoy Avenue, Dundee.)

### Edinburgh

**W**ITH a club membership of over seventy, the drive continues for new members. As part of the drive members are preparing a leaflet—*Your tape recorder, your magic carpet in Sound*—to be distributed to local dealers. Dave Jeffries recently gave a talk on sound effects. A discussion night was held to wind up the year's activities.

(Secretary: Alex Whyte, 33, Tylers Acre Road, Edinburgh 12.)

### Kettering

**T**HE club night has been changed. Fortnightly meetings will now be held on Wednesdays at 7.45 in the Technical College, St. Mary's Road.

A competition to find the best recording depicting "bonfire night" has been won by Mr. A. M. Webb.

Maurice White recently gave a talk on microphone technique with recorded musical illustrations played on a theatre organ. A tape was made of the talk and, together with Mr. Webb's tape, will be heard by Luton Club.

Church organ music, recorded with ribbon and crystal microphones, was demonstrated by Dennis Scotney and the Chairman, Mr. Potter.

Affiliation to BTRS and World Tape Pals is announced.

(Secretary: A. M. Webb, 93, Regent Street, Kettering.)

### London

**T**HE rapid growth of the club has meant a change of rendezvous. In future meetings will be held at the Abbey Community Association, 29, Marsham Street, S.W.1.

At a recent meeting two interesting talks were given by members Hugh Smith, who spoke on "Echo," and Roger Aslin with his "Bias and Azimuth."

Members have been active of late making recordings at the London Zoo. These are being filed away for future reference.

The Club has made visits to the M.S.S. Recording Co. Ltd. and to Olympic Sound Studios during the past month. (Secretary, Roger Aslin, Fairlea, Boar's Head, Crowborough, Sussex.)

### Luton

**T**HE club plans exchange visits with the newly-formed Kettering and District Tape Club. Meetings will in future be held on alternate Tuesdays. (Secretary, Maurice Nichols, 53, Sundon Park Road, Sundon Park, Luton.)

### Rugby

**F**OLLOWING Secretary Mike Brown's recent visit to Coventry club, members of Coventry and Leicester clubs were present at a recent meeting of this club and heard a tape received from New Zealand. Howard Freer, Coventry, gave a demonstration of his home-built recorder.

Experiments were carried out with the aid of a projected film-strip, a pre-recorded commentary and a pre-recorded piece of music.

The Club hopes soon to form a technical group as well as a filming group. The club issues its own newsletter—*Tape Life*. (Secretary, Mike Brown, 219, Clifton Road, Rugby.)

## South African Recording Club

A TAPE, made into a loop, consisting of one-minute messages from tapespondents in several countries was the centrepiece of a stand exhibited by the club at the Hobbies Fair in Cape Town. Flashing lights on a world map pinpointed the origin of the messages.

At recent meetings the Cape Town branch of SARC heard demonstrations of stereo sound on tape and Herman Pedersen demonstrated Hi-Fi reproduction he obtained from radio using a home-made crystal receiver. A slide show used in conjunction with a tape commentary, was given by Alfred Oakes.

Club membership has risen to 112. (Secretary, Denoon R. Seig, P.O. Box 3392, Durban, South Africa.)

## Tape Programmes for the Blind

THIS Society, just over a year old, continues to supply recorded material to blind members. Material like that of Bill Rawle from Darlington who reads and records articles from *Tape Recording Magazine* each month. Organiser Maurice Chambers requests any reader who knows of a blind person with access to a recorder to write to him. The Society will do the rest. His address, 139, Goldthorne Avenue, Sheldon, Birmingham 26.

Mr. Rawle has four 5 in. reels of "Mels Recorded Journal" recorded at 3½ ips. They were made by Mel Cohen of Atlanta, Georgia, U.S.A. Any blind person or organisation interested in hearing the tapes should write to Bill Rawle, 20, North Lodge Terrace, Darlington, Co. Durham.

## Voicespondence Club

AN election is being held for two UK representatives of this American Club. One would cover the Scottish area, the other catering for England, Ireland and Wales.

Editor Lee Lacy reports considerable success with *Voices in the Post*, sound magazine of the club which is now almost a year old. Details of this bi-monthly 5 in. tape at 3½ ips can be obtained by sending s.a.e to Lee Lacy, 15, Fentons Avenue, Plaistow, E.13.

## Warwick and Leamington

MEMBERS were introduced to the new portable Fi-cord recorder at a recent meeting. The Grundig TK25 was also demonstrated.

Historical buildings, local colour, religion and industry are some of the subjects to be included in a tape to be made at the request of a blind tape enthusiast. A personal message by the Mayor of Warwick has been recorded for the tape which, when completed, will be sent to a social club for the blind in Luton.

The club recently provided recordings of sound effects for a local dramatic society.

Graham Harris of Warwick has again won the monthly tape competition. The winning tapes from these monthly competitions will be compared at the end of the year and the winner presented with a silver cup. (Secretary, D. V. Randle, 4, Edmonscote Road, Leamington Spa.)

## West Middlesex

M.S.S. RECORDING CO. recently entertained members at their London studios. During the evening, studio equipment was demonstrated and dubbing onto disc was also explained. Later, members were advised on the placing of microphones.

Another recent highlight of the club was the visit by Mr. Stanley Kelly of Romagna Reproducers Ltd. Among items demonstrated, the Swiss-made Revox B.36 seems to have made a great impression on members.

Issue No. 2 of the club magazine is now in circulation. (Secretary: H. E. Saunders, 20, Nightingale Road, Hampton, Middlesex.)



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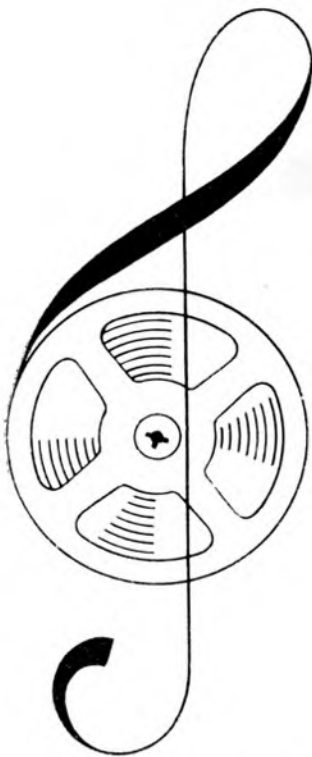
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# B.B.C. PLANS PROGRAMMES FOR TAPE

**B**IGGEST news from Broadcasting House is the decision to launch an entirely new programme called "Sound," which will regularly give star billing to tape recording and its enthusiasts. It will be heard on Network three—a new edition every fortnight, with repeats in the intervening weeks—starting on Monday, 5th January.

Producer will be Margaret Cutforth and each programme will last 30 minutes.

Among those lined up for early appearance in the programme are Mr. Basil Harley and Mr. Roger Charlton, two of the prizewinners in the 1958 British Amateur Tape Recording Contest.

"Sound" is described as a programme catering for enthusiasts for all kinds of sound, especially tape recording.

\* \* \*

**R**EADERS should have this copy of *Tape and Hi-Fi Magazine* in time for Christmas, and there are a host of programmes which are likely to appeal to those who wish to make recordings for private family playback on later occasions.

The Queen will broadcast her customary Christmas message at 3 p.m. on Christmas Day and immediately before

## ENTHUSIASTS

*Times to tune in*  
A new monthly feature giving details of radio programmes you may like to record

it there will be the traditional round-the-world Commonwealth hook-up.

For music-lovers the accent this month is on Puccini, the centenary of whose birth is on 22nd December.

On 21st December (Home Service), there will be a performance of Puccini's opera *Le Villi* by the B.B.C. Symphony Orchestra, conducted by Rudolf Schwarz. The same day the whole edition of *Music Magazine* will be devoted to Puccini.

On 23rd December (Home) there will be a broadcast from Sadler's Wells of

their production of Lehar's *The Merry Widow*.

The B.B.C. Symphony Orchestra, under Schwarz, will play *Schumann's Symphony No. 4* in an orchestral concert on the Home Service on 24th December. Mozart's *Eine kleine Nachtmusik* will be in the same programme.

In the Third Programme on 21st December Elizabeth Schwarzkopf will be heard in Mozart's *Le Nozze di Figaro*, with the Vienna State Opera Chorus and Philharmonic Orchestra, conducted by Karl Bohm.

On 24th December (Home) there will be the annual *Festival of Nine Lessons and Carols* from King's College Chapel, Cambridge.

A radio adaptation of *Chu Chin Chow*, one of the most successful musical plays of all time, will be broadcast in the Light Programme on 22nd December.

Peter Ustinov's play "Romanoff and Juliet" will be heard on the Home on 22nd December.

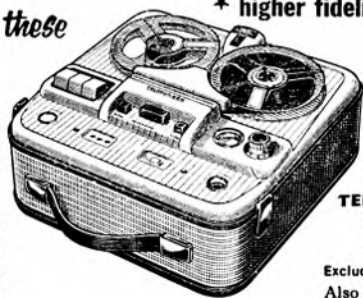
\* \* \*

**T**HERE are some outstanding programmes featuring personalities during the last few days of the month. On 21st December (Home) "The Harry Lauder Story" and on Christmas Eve (Home) an interview with **James Thurber**.

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## Classified advertisements

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## Next Month

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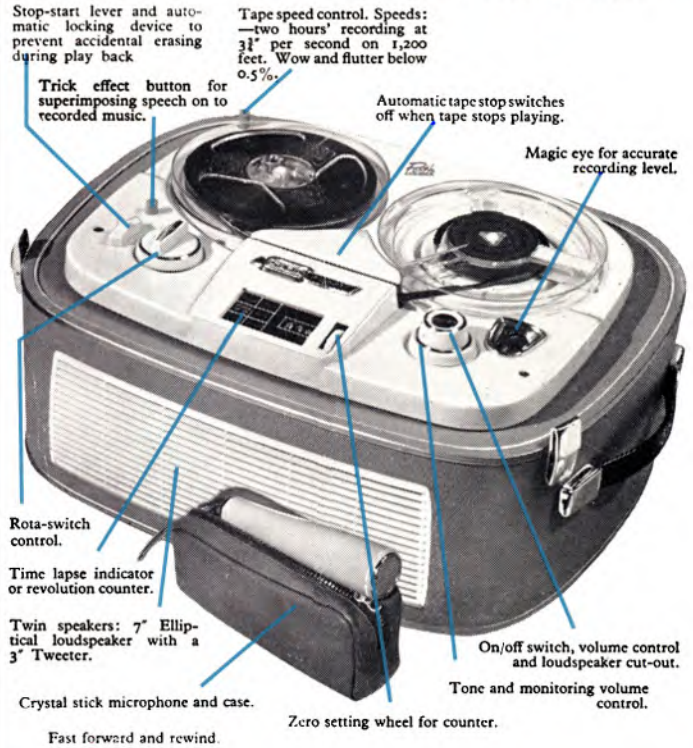
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