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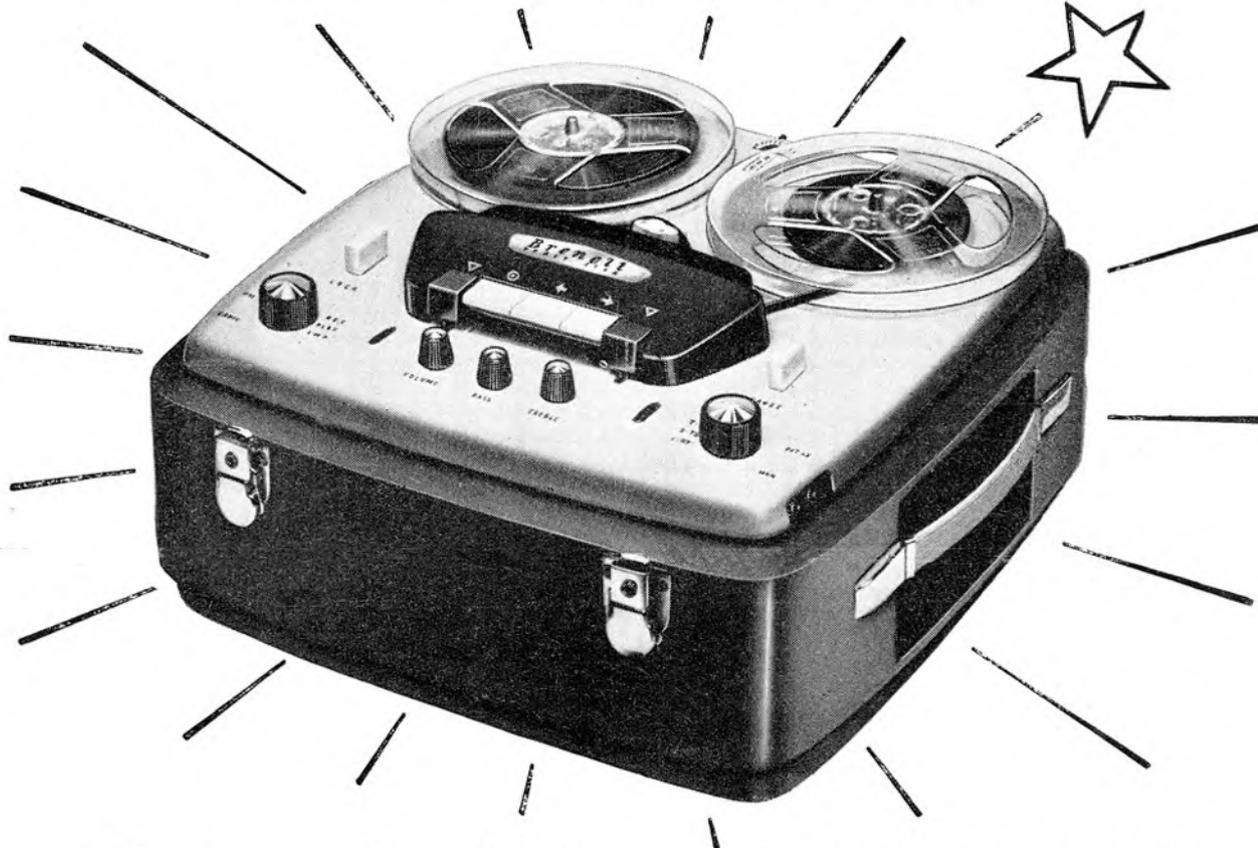
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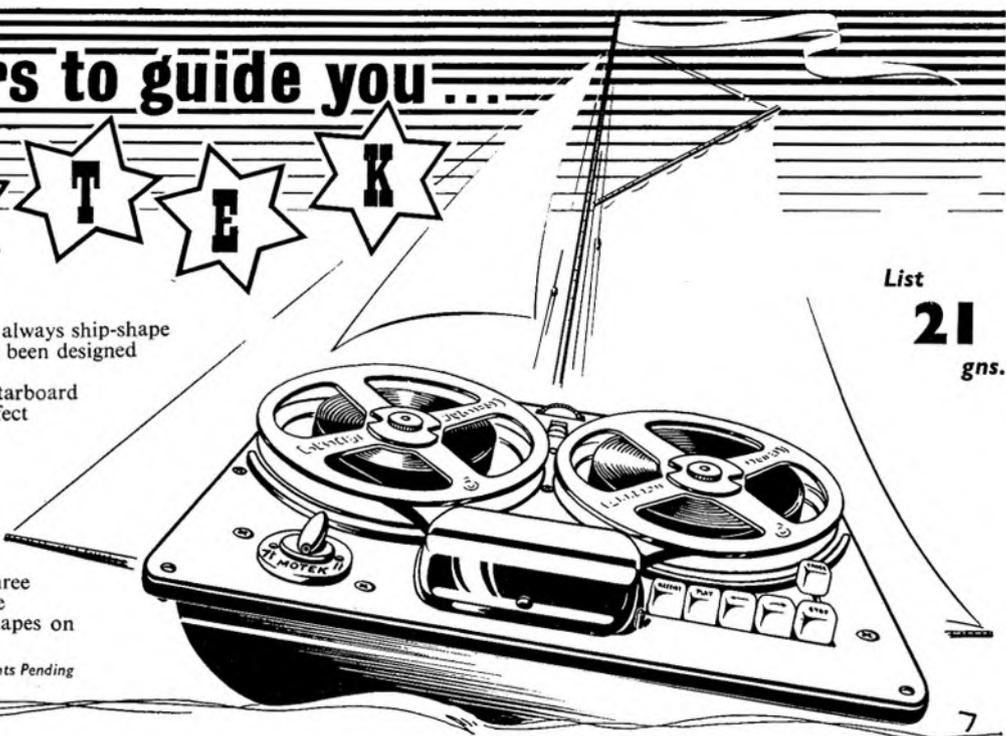
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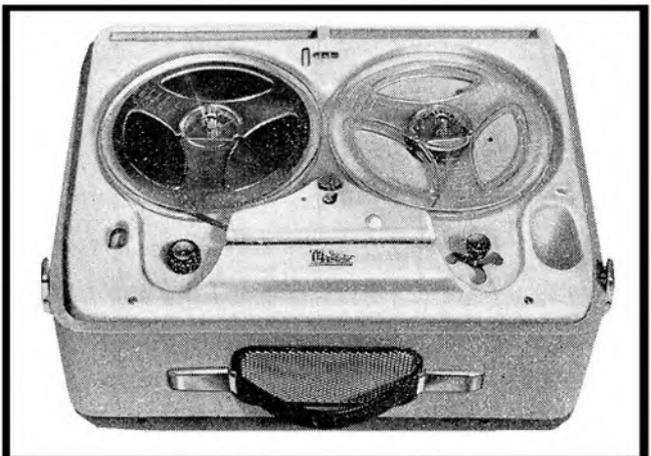
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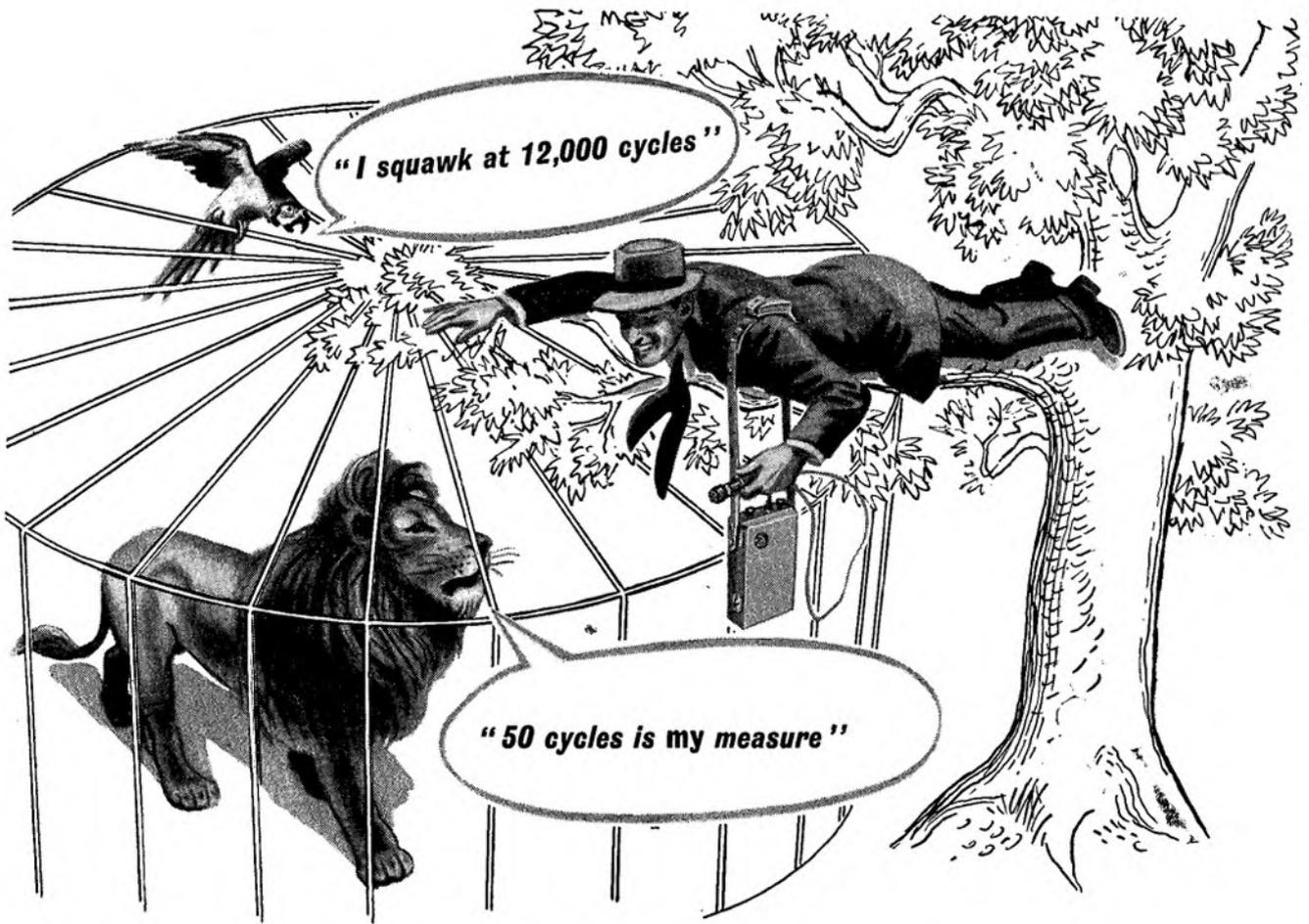
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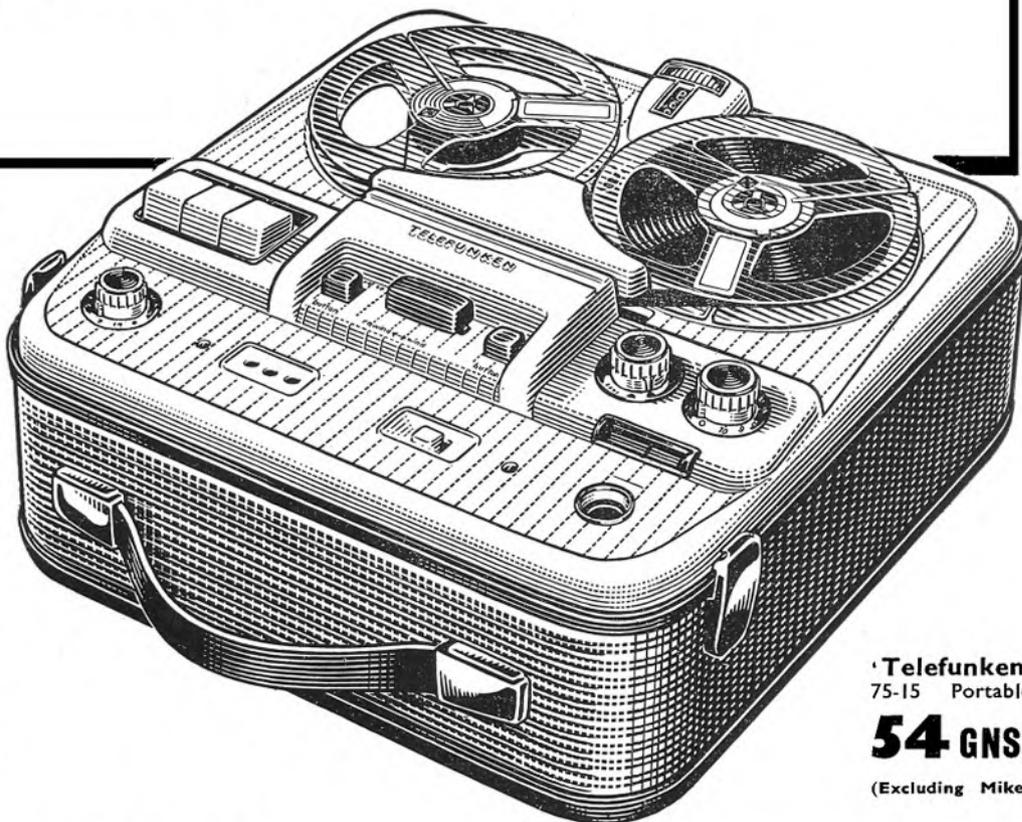
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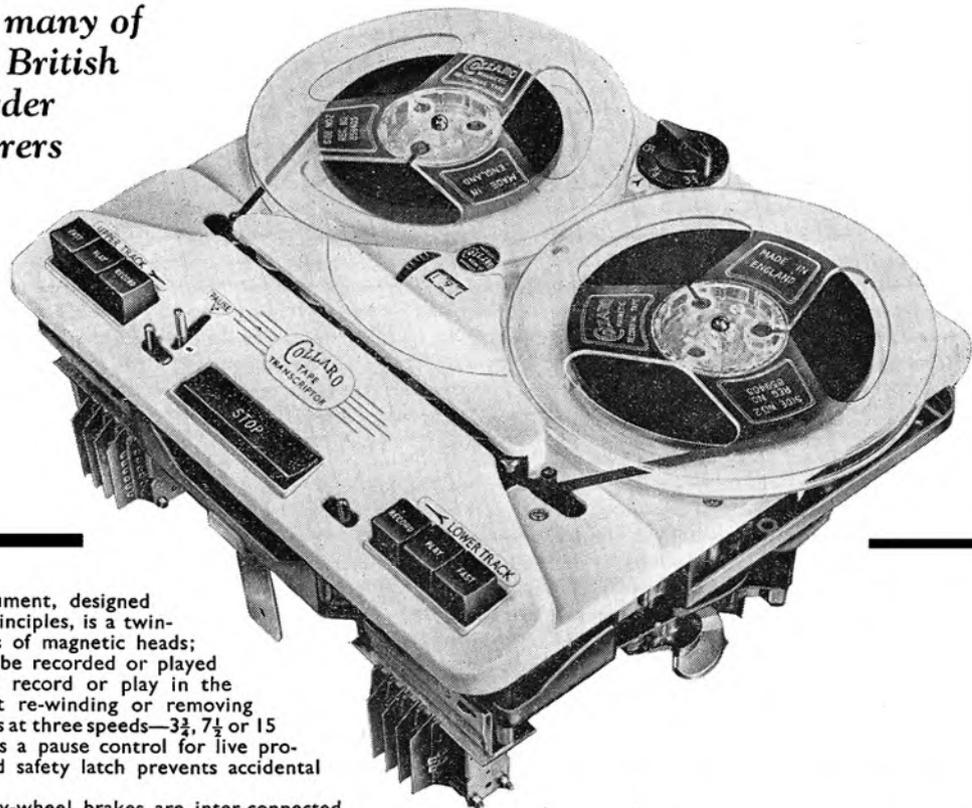
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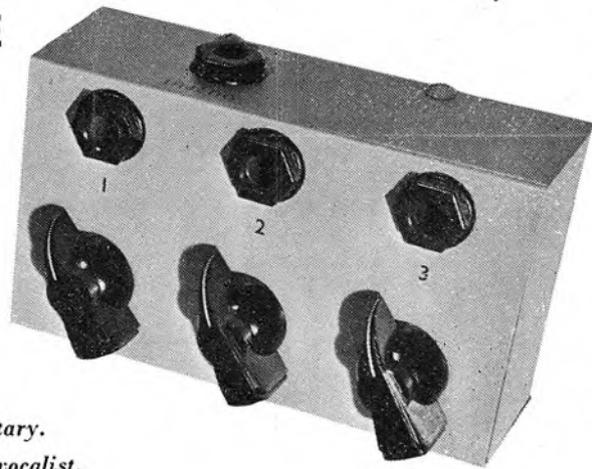
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THE CLASSICS

by **Edward Greenfield**

(recorded music critic of the *Manchester Guardian*)

I REMEMBER, a year or so back, hearing one of our more successful composers taking part in a B.B.C. Music Quiz. A fanfare was played to him and he was asked to name the composer. To his irritation, he was unable to do so. Then the horrible truth was revealed: it was one of his own fanfares, written some years before for a ceremonial occasion.

I tell the story because, as a musical form, the fanfare displays rather less than adequate musical variety. So much so that a composer can forget that one was his own child. A meal of such musical cocktail savouries is indigestible indeed, and when I saw that Delysé had issued a stereo tape (SE 12) consisting of nothing but fanfares—more than twenty of them—I was horrified at the prospect of solemnly sitting through them one by one. Actually, in retrospect, I still feel horrified that I performed the feat; but in all honesty I must admit that at the time I enjoyed the experience. I can't recommend it as a general practice but, if you are going to have a tape of fanfares, this one could hardly be bettered.

Delysé, I presume, did not intend it so much as a concert to be listened to from start to finish as a useful collection for those, in the entertainment world and elsewhere, who find that a fanfare adds the necessary piquancy to an occasion. The only trouble here might be the usual one with tape—picking out the exact extract for playing. It might have been better had someone announced the title of each one before it was played.

The recording is technically excellent. A couple of months back I praised very highly an outstanding stereo tape from Delysé of the band of the Royal Horse Guards playing marches and other military music. Once again, here, the engineer was Allen Stagg, of I.B.C., and, once again, he has shown his uncanny knack of controlling and balancing a recording so that not only is there the fullest frequency range possible but the kindest balance to the ear. The problem of recording trumpets and percussion is not all that difficult, perhaps (trumpets, at least, came out reasonably well even on acoustic discs) but the range here is astonishing for 7½ ips tape. The stereo, too, is rock-steady, so that the realism is quite shattering.

As for the fanfares themselves, most of them are what I would call "thorough-composed"—not just a simple call, but with the theme decked out with colourful harmony and often developed too. Happily, the main call of the

(Continued on page 12)

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Last Post is left alone, but the whole call is expanded. Actually, this one was the only fanfare I had any doubts at all about on performance grounds. The performers are the State Trumpeters (with, presumably, reinforcements from the Royal Horse Guards Band) and in the Last Post the recording microphones must have deterred them from giving the pregnant pauses their fullest value. This is a little too metrical.

For the rest, I was fascinated by the different ideas developed. They may remain cocktail savouries, but the flavours vary quite a lot—from the odd chromaticism of Kerkrade and the brash Oriental Fanfare punctuated by cymbals crashes worthy of the Princess Turandot herself to the very British sound of Westminster.

The only Saga tape I have had this month is a single-channel one containing four overtures I had previously heard on stereo. The overtures are Mozart's *Marriage of Figaro*, Mendelssohn's *Midsummer Night's Dream*, Glinka's *Russlan and Ludmila* and Dvorak's *Carnaval* (STA 7001). The performances are by John Frandsen and the Royal Danish Orchestra, and I cannot pretend (with the first three, at least) that they please me any more at a second hearing than at the first. Frandsen's beat is strangely lumpish, producing a stiff *plonk-plonk* through everything, so that even the athletic and lyrical second subject of *Russlan and Ludmila* (an infectious tune, if ever there was one) is all hard and unyielding. Happily, *Carnaval* is much better, and even the lyrical sections have something of the right warmth. The recording, too, is more forward and brilliant than for the other overtures.

I have been catching up on a number of E.M.I. tapes that I previously missed, and several of the stereo tapes are outstanding. *Bach's Magnificat*, performed with fine vigour and understanding by the Geraint Jones singers and players, gains enormously from the added spaciousness of stereo, though I have heard more clearly separated stereo. (SCT 1520.)

Outstanding technically is the coupling of *Prokofiev's first and third piano concertos* played by Moura Lympany and the Philharmonia Orchestra (SCT 1517). Somehow, the E.M.I. engineers always seem to give their best when they are doing the rather cheaper plum-label recordings (maybe they are allowed more freedom than for the red-label celebrity issues?). Though Lympany is a celebrated performer on all counts, and here gives superb accounts of both these attractive works, for some reason H.M.V. only gives her what on disc is plum-label status. Our gain is two-fold—in economy and, particularly, outstanding recording.

Though the overall effect is most warm and satisfying the stereo of Michelangeli's coupling of *Ravel's Piano Concerto* and *Rachmaninov's Fourth* (SAT 1020) is not quite so clearly separated. Nevertheless, this is an outstanding recording, for Michelangeli—a temperamental pianist—has been caught at white-hot inspiration in both works.

Though Ravel's inspiration tended to dry up towards the end of his life, this piano concerto written in the late twenties is one of the most alive things he ever wrote (my personal favourite among his works, not excepting even "Daphnis and Chloe"). There is the influence of jazz here, of course, and toffee-nosed critics have not failed to suggest that that shows Ravel's lack of true inspiration, that he had to resort to so ephemeral a source. I quite admit that this is not the most profound of concertos, but for some reason modern composers have not been terribly successful with the piano concerto as a form,

and this is one of the few that is worthy to stand permanently in the classical repertory.

As for Rachmaninov's Fourth concerto it is by far the least well known of his four works in the form, and is only just being appreciated at something like its true worth. It has always laboured under the handicap of its slow movement, with a theme which is a cross between "Three Blind Mice" and "Two Lovely Black Eyes." But what a delightful cross it is on any count. As for the outer movements, they are Rachmaninov at his most exciting. At least, they are when Michelangeli plays them. I remember being terribly disappointed with them when I heard Rachmaninov's own recording. It was one of his rare failures, and even a cursory comparison with the Michelangeli will show how much finer the latter is as a performance.

Another attractive concerto from a Russian source—this time Soviet—is **Khachaturyan's violin concerto**, played irresistibly on an E.M.I. single-channel tape by David Oistrakh, with the composer conducting the Philharmonia Orchestra (CBT 555). In this work, perhaps more successfully than anywhere else, Khachaturyan uses the folk-idiom of his native Armenia to produce a work which is both modern and traditional at the same time. This is in no way a profound work, but the violin's lushness, and its brilliance too, are exploited to as great an effect as in almost any concerto written for the instrument.

Also conducted by Khachaturyan is a tape of a selection from the ballet **Gayaneh**, including the inevitable "Sabre Dance" (CBT 556). This makes rather an expensive buy, because it may alternatively be had on a ten-inch disc, while this is a CBT tape—normally a twelve-inch equivalent.

BEAT AND OFF-BEAT

by Don Wedge

(of "New Musical Express")

THE name Victor Silvester means ballroom dancing. A former world champion dancer, he created a style of music for dancing that was unique and immensely successful. It has remained that way since the early 'thirties. Indeed, has anyone in the British pop music world consistently made more money?

He deserves his success. Pop music is (or ought to be) entertaining. Yet it is rarely strict tempo dance music. Silvester's formula combines the best of both pop and dance music—"melody, simplicity and a consistent rhythm."

His music is intended for dancing, although many people enjoy listening to it. I feel his new tape, **Dancing to the Victor Silvester Orchestras—No. 6** (CDT 871), will be of more use to dancers than listeners.

The selection includes all the popular ballroom dances—quicksteps, waltzes and slow foxtrots, played by his Ballroom Orchestra, while sambas and rumbas get a more lush treatment from Silvester's Silver Strings, a larger combination.

The tunes he uses are well established—"Mountain Greenery," "Diana," "No Other Love" and "Moon-

(Continued on page 14)

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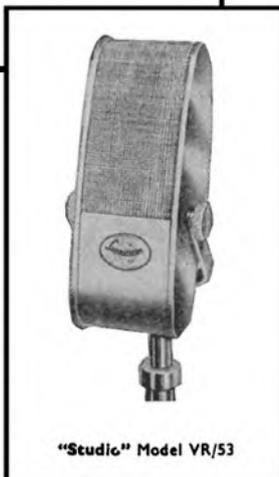
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glow" are a few. There are Irving Berlin and Noel Coward medleys, the latter including the eternal last waltz, "I'll See You Again,"

Perhaps the aura of decorum, and gracefully swirling skirts will attract this tape to your collection.

* * *

The first of the new Music on Tape range to reach me is **Gilbert Le Roy at the Theatre Organ** (24-25127). This is an impressively long record—23 numbers. At £3 9s. for the 7½ ips tape (£2 9s. for the 3¼ ips version), that is just as well.

Le Roy's choice of material ranges from Kurt Weill's "September Song" to Reginald Foort's "Sitting Pretty." Most of it would come under the category of light music rather than pop.

Organists rarely satisfy me. They seem to set out to be one-man orchestras. Technique comes before creativeness. In this selection, I was surprised to find George Shearing's "Lullaby of Birdland." Le Roy fully develops its melodic possibilities, but Shearing wrote it as something more than a melody. It was to be a theme for extemporisation. Without it, no matter how well played, it seems empty.

Throughout this tape the tremendous range of the theatre organ is fully utilised and well recorded. The standard is high and if this is maintained, Music on Tape are going to be welcome additions to the limited number of firms supplying pre-recorded tapes.

The recording seems to be quite as good as the Silvester tape from long-established Columbia. What can be faulted, in comparison, is the packaging, although this is a little better than that of many of the tapes I see.

* * *

IF the day has been wearying, or if my early morning is particularly bleak, I have lately been turning to Miss Peggy Lee. Perhaps you kept hearing her hit disc, "Fever," a few weeks ago.

I prefer the longer sessions of an L.P. to the minor pleasure of a two-minute hit disc. Two albums have been making recent suppers and breakfasts rather brighter—"Jump For Joy" (T 979) and "Things Are Swingin'" (T 1049), both from Capitol.

The latter L.P., more recently issued, is better for breaking in. Swingin', yes, but so restrained and relaxed. There are few better than Peggy Lee at taking a song and making it seem fresh without distorting it. She has a great ability, too, of projection. However inane the lyric, she gives it a real meaning.

* * *

SWING-DRIVING, orchestrated jazz—was at its height in the early 'forties. An interesting reminder of it is "Sing, Sing, Sing" (London, HA-D 2128) by the Clark Sisters.

A new group? Hardly. You have probably heard them many times. They supplied the vocal on the famous Tommy Dorsey recording of "Sunny Side of the Street." They spent several years with Dorsey and also had spells with other bands. About ten years ago, all four married and the act broke up. Late last year they got together again in a recording studio for this album.

The quartet tries to vocally recapture the sounds of the great swing bands and the numbers they made famous—Glenn Miller's "Little Brown Jug" and "String of Pearls," Charlie Barnet's "Cherokee" and a lot of Dorsey favourites.

Many of the Clarks' lyrics are new, others are brought up to date. Though they fail to reach their objective their album is good and invigorating.

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COPYRIGHT—

A TIME FOR ACTION

WE MAY BE on the eve of a battle, and a battle the outcome of which can be of decisive importance for the future of tape recording as a hobby and as an industry.

It concerns copyright, a subject which hitherto has been discussed only in whispers, behind cupped hands. It is time now that it was brought out into the open and thoroughly thrashed out.

As professional journalists whose writings have been published and reproduced during the past 20 years in newspapers and magazines all over the world, we are acutely aware of the importance of copyright protection for creative workers. They can be an easy prey for unscrupulous pirates after easy money.

We expect the very efficient professional organisations charged with the protection of copyright to be single-minded in their zeal.

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Charles Langton
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The danger now is that those who speak for tape recording are insufficiently organised to act with a similar sense of purpose. It is our wish this month to discuss the present situation and to urge upon all concerned the wisdom of a responsible and balanced attitude.

Law—and interpretation

THERE ARE two Acts of Parliament covering copyright, so far as tape recording is concerned. The first is the Dramatic and Musical Performers' Protection Act of 1925 and the other is the Copyright Act of 1956. Copies of both can be obtained from H.M. Stationery Office by those sufficiently interested.

But the interpretation of Acts is only possible by lawyers, and sometimes then only by resort to the courts, which can be an expensive business.

Because of this, there exists today a field for doubt and difference of opinion about the exact effect of some sections of these two Acts.

Even the most recent of them was passed by Parliament before tape recording had become a widespread activity. When, in February 1957, we asked an eminent Queen's Counsel, experienced in copyright matters, to comment on the 1956 Act he candidly stated:

"If I am asked to say whether the new Act pays any special attention to the problems created by the possible mass sale of tape recorders, I can only answer that in my view it does not. It will remain to be seen whether the general legislation affecting sound recording deals adequately with any such problems; and if it does not, Parliament will clearly have to enact amending legislation."

After discussing the complexities of the legislation, and offering the view that it is a clear breach of copyright to make a tape recording of a commercial gramophone disc, this authority wrote about radio broadcasts as follows:

"There are here obvious difficulties of definition, and all that can safely be said in a short article is that there should be no risk if the recording is made for the purpose of performance in a private house for the pleasure of a man's family and friends and confined in practice to such purposes."

Radio programmes

NOW LET us turn from the law for a moment to consider what has been happening in practice. It is known to be a fact that many individuals who buy expensive L.P. discs containing commercial recordings take them straight home and transfer them to tape. The discs are then stored and the tapes are played. In this way a "master copy" in first-class condition is kept available.

Now, however innocuous this practice may seem to those who have followed it, it is without doubt illegal.

It should be explained, lest there is any confusion, that there is nothing illegal in the mere procedure of transferring a recording from disc to tape—provided the original sounds on the disc do not constitute copyright material.

As to recording of radio programmes, we have been through several phases. Two or three years ago, it was almost impossible to get anyone to express a firm opinion on the legality of this procedure. Tape recorder manufacturers "played down" the possible use of their machines in this way.

We take the view .

A DIGEST OF NEWS, COMMENT AND EDITORIAL OPINION

When the Copyright Act of 1956 came into operation on June 1st, 1957, however, the B.B.C. published a statement in the *Radio Times*, the relevant parts of which read as follow :

"A record may not be made of a sound broadcast or of the sound part of a television broadcast otherwise than for private purposes. . . .

"In addition to the permission of the B.B.C. for the above purposes, permission must be obtained from the owners of any copyright material used in a broadcast for the recording, filming, or public performance of their material, and the consent of any dramatic or musical performers taking part in a broadcast must be obtained for the recording or filming of their performances, otherwise than for private and domestic use."

We particularly draw the attention of readers to the concluding qualifying phrase in each case: "*otherwise than for private and domestic use.*"

With this assurance, recorder manufacturers began to advertise boldly the opportunities to make private recordings of broadcast programmes.

A new claim

SUCH IS THE background to the present situation, and now we will report the recent developments which suggest to us that there may be difficulties ahead.

On March 5th the Secretary of the Mechanical - Copyright Protection Society Limited, Mr. B. W. Pratt, wrote to the Editor of *Tape Recording and Hi-Fi Magazine* in the following terms :

"We were interested to see the warning to readers regarding the recording of sound broadcast and television programmes which appeared as a footnote to the item 'Times to tune in' on page 46 of the March issue of your magazine.

"As the footnote in question may give rise to a misunderstanding by your readers, in that they could take

this as meaning that they are at liberty to record broadcast and television programmes if such recordings are made for private purposes, may we request your co-operation by amending any future notice to make it quite clear that, in the case of such programmes including copyright music—or other copyright material for that matter—it would be an infringement of copyright to make a recording without licence or the permission of the copyright owner, even though it may be intended for use only within the immediate domestic circle."

Once again, we ask readers particularly to note the concluding phrase, beginning "even though . . ." This represents a direct challenge to the view of the law which has hitherto prevailed, and which had been given the blessing of the B.B.C. in the statement which it published in 1957.

A licence fee?

DURING the last two months, the Mechanical-Copyright Protection Society Limited has been in correspondence with a number of tape recording clubs, pressing upon them the same point of view.

To one such club, the Society has written :

"We are in a position to regularise the recording by your members of copyright music under our control where such recordings are used only for playback to the members or their families, and provided no commercial use is made thereof, by the issue of our licence at an annual fee to be agreed."

The Society has also approached organisations representing the clubs nationally with a proposal that there might be "collective licensing" of members.

On the basis of the above facts, we have approached Mr. Pratt, the Secretary of the Mechanical-Copyright Protection Society Limited, for fuller information. We understand that the Society is now engaged in further dis-

cussion with associated organisations about future policy.

When this discussion is finished, Mr. Pratt has agreed to meet us and to go over the ground with us, to try to clarify the situation for the benefit of our readers.

Need for unity

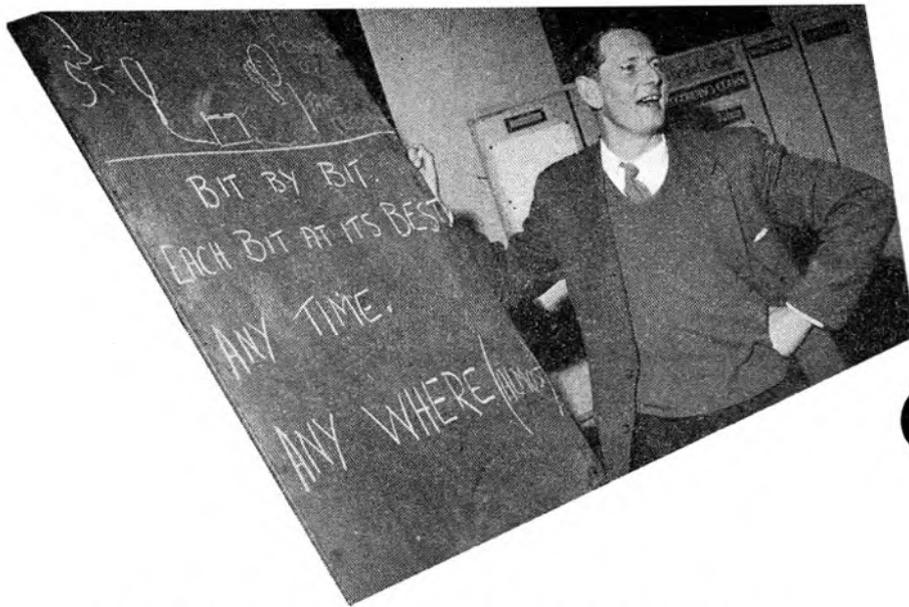
WE FEEL IT to be necessary, however, to discuss some of the implications immediately. There is no doubt that the Mechanical-Copyright Protection Society is seeking to establish an interpretation of the law which—to say the least of it—is the most generous possible interpretation from its point of view. It would be premature to assume that that is the interpretation which would be supported if the issue ever came before the courts.

Let us be clear about what is involved. If the Society's case is upheld, tape recording enthusiasts can cut the leads from radio to tape-deck. No recording from the radio will be possible without paying licence fees. Very little comes from the speaker, other than the chimes of Big Ben, that is not the copyright of someone, somewhere.

What is clear beyond doubt is that all those who are concerned with the future of tape recording, either as a hobby or as an industry and trade, need to get together urgently and to thrash out a co-ordinated policy. *Tape Recording and Hi-Fi Magazine* has already taken steps to secure such a conference.

We fully recognise that there are serious and difficult problems involved. We shall resist all pressure for a one-sided settlement.

Our readers, who may depend upon our close and continuing interest, are invited to keep us informed of any further developments about which they are aware.



THE FIRST COLLEGE COURSE ON TAPE RECORDING

A college course on tape recording is a new idea in Britain, and probably in the world, but the first such, just held in Kent, proved an immense success. Fifty enthusiasts—some of them with little or no experience but great enthusiasm to learn, others with a good deal of practical knowledge—gathered for five days at the Rose Bruford Training College to exchange ideas and to do valuable work in the studio and in the field.

Experts in the field—including Charles Langton, our Technical Advisory Editor, and Tony Gibson, one of the judges in our British Amateur Tape Recording Contest—lectured and led the studies.

Among the students were Nigel Rees and Roger Charlton, two of the winners in last year's Contest, who were awarded scholarships at the Course as a result of their Contest achievements.



Opposite page: top, Tony Gibson speaking at the opening day.

Bottom left, a studio recording in progress. The students produced "The Nose Bag," by Louise Macneice.

Bottom right, Mr. Jeffrey Langley, an Ilford clerk, interviews tennis players for an "opinion" feature programme.



This page: top, the technical manager of the course explaining things to school-teacher Mrs. Margaret Downey, of Strood, Kent.

Centre left, Desmond Briscoe goes through the rudiments of recording with a group of students.

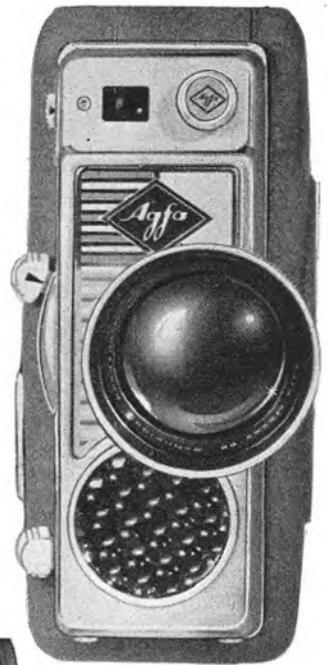
Centre right, talking tape are (l. to r.) Royston Henry, a Swindon teacher, Nigel Rees, Liverpool schoolboy, and Roger Charlton, music student from Whitley Bay.

Bottom, Miss Christine Ewing (second from right), an instructor, demonstrates technique to students.

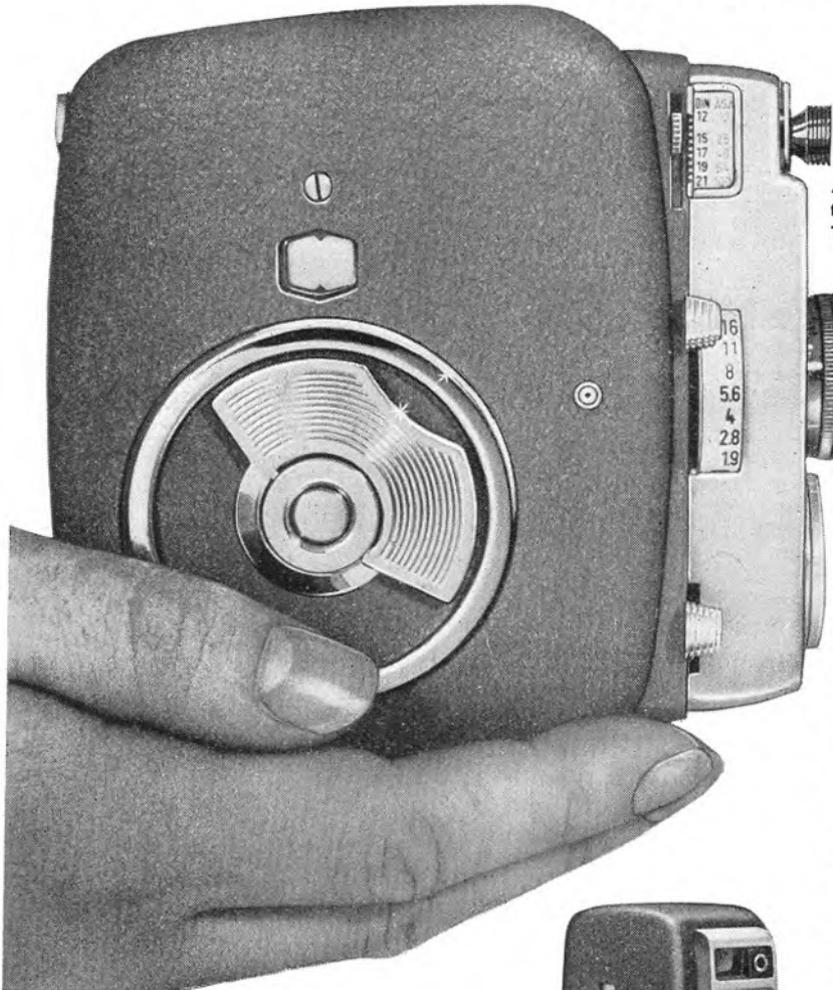


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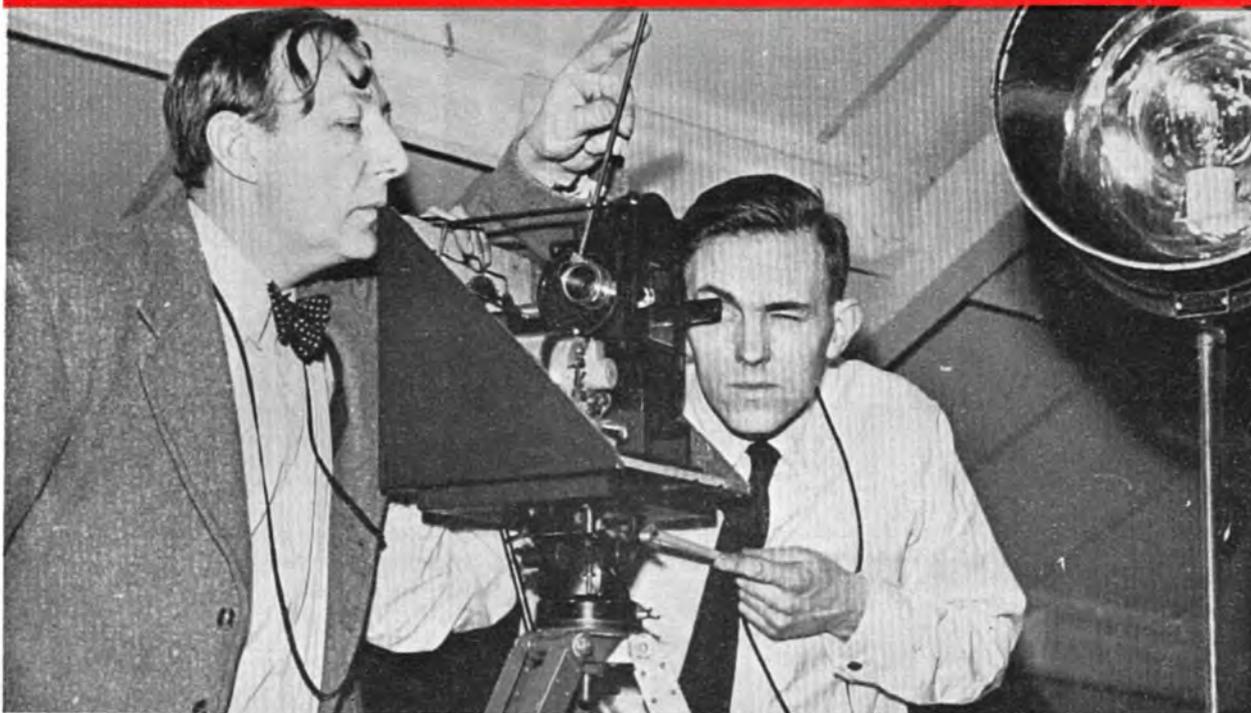
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TAPE AND CINE



Tape and cine go together
—“like a horse and carriage.”

In the past many cine enthusiasts
turned to tape as an auxiliary.

Now the same thing is occurring
in reverse—cine is being accepted
by thousands as a natural
extension of tape recording

THE PHOTO FAIR AT OLYMPIA, MAY 11—16, WILL STRIKINGLY DEMONSTRATE THIS TREND. TAPE RECORDING AND HI-FI MAGAZINE WILL BE THERE—LOOK US UP ON STAND 115.

By JOHN ALDRED

(The author is seen behind the camera in the photograph above)

TAPE recording must surely be the most rapidly developing hobby of recent years. Its popularity stems from the extreme ease of operation of the modern domestic tape recorder, which gives excellent results with the minimum of effort.

Yet there is another equally fascinating hobby with just as many followers—home movie making.

Just as hundreds of movie enthusiasts augment their main hobby by using a tape recorder to add sound to their films, there are many more owners of tape recorders who would like to increase the usefulness of their machines by making movies to illustrate their recorded tapes. This ciné supplement is intended as a guide to the choice of suitable apparatus and the various methods of approach to making home movies.

Filming one's holiday immediately springs to mind, but this is only one side of home movies. There are family records, always valuable material and well in demand, and much more interesting than an album of stills. In colour too, good colour. Then there is the documentary style of film, always interesting when it carries your personal touch. Some people actually go so far as filming plays and stories with lip synchronised sound. This is always done much better by the

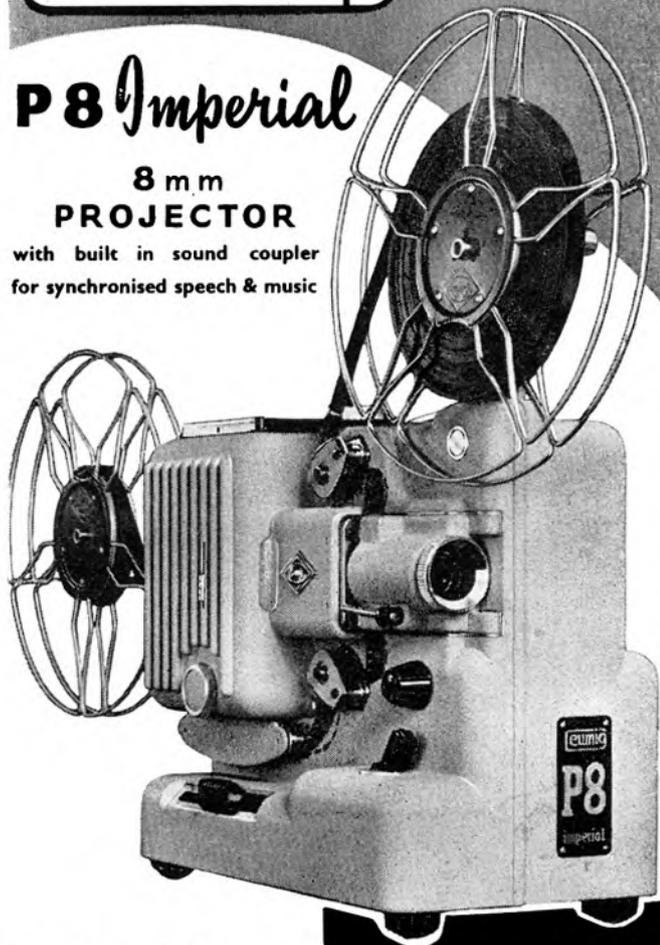
(Continued on page 24)

eumig

P8 Imperial

8 mm
PROJECTOR

with built in sound coupler
for synchronised speech & music

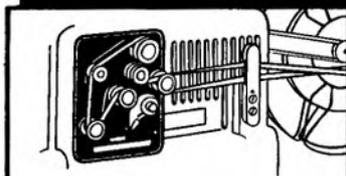


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professional film maker and television. So it is the family film that scores today everytime.

Eight millimetres is the gauge favoured by the home movie maker with a moderate income who wishes only to film for pleasure and show his own films in his own home.

Consequently, manufacturers have concentrated on this gauge when making adaptors and synchronisers for coupling ciné projectors and tape recorders, and it is the 8mm. gauge we shall concentrate on in this supplement.

Of course, most of the information given applies equally well to all three gauges and the final choice is purely a personal one, rather like choosing a recorder speed. Good results can be obtained on any gauge, the limiting factor is, as usual, the size of one's pocket when buying equipment.

The 8mm. gauge was introduced by Kodak and came about by slitting 16mm. down the middle and doubling the number of sprocket holes. This means that an 8mm. picture frame is one quarter the size of a 16mm. frame. It is too small to be viewed comfortably with the naked eye but a good projector will throw a respectable picture on a screen three to four feet in width, suitable for home viewing.

Running costs are 30s. for four minutes and the camera film is sold in 25 ft. lengths, 16mm. wide. This is mounted on a blank spool with sufficient leader to enable daylight loading of the camera. Care must be taken to avoid bent spools as the flanges are fitted tightly to prevent any leakage of light during loading, and a bent flange can cause the camera to jam and not take up properly.

The film is run through the camera once and then turned over like a reel of tape and run through again. After it has been processed the film is slit into two halves and 50 ft. of 8mm. is returned on a spool already for projection.

The finished film must be handled with care and only by the edges, as finger prints leave greasy marks on the film which show up on projection. Also, any minute particles of dust or abrasions show rather alarmingly due to the large magnification. So do not let your films trail on the carpet or other fluffy surface, such as soft furnishings or upholstery, if you wish to keep them clean and in good condition.

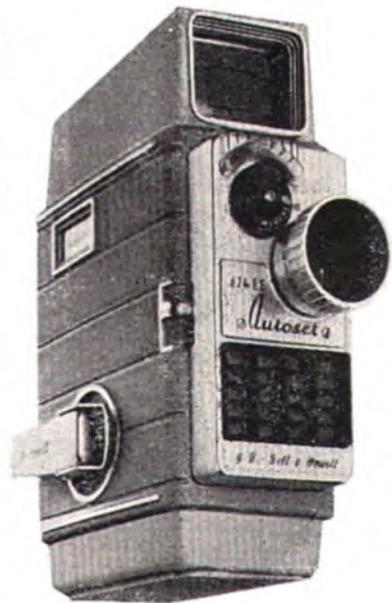
A large selection of cameras are currently available ranging from a Brownie type with simple exposure adjustment to variable speed, turret headed, multi-lens jobs costing over £100. Automation has come to home movies with a camera that adjusts the lens aperture according to available lighting condition, leaving you with just one button to press. Second-hand models are sometimes a good buy although it is best to purchase only from a reputable photographic dealer. When dealing with such a small sized film, every piece of mechanism and lens adjustment must be spot on to achieve good results. There is no point in owning apparatus which gives inferior definition, or pictures which are out of focus at the edges or down one side. Good 8mm. can be really good providing you accept the limitations of the gauge. Long scenic shots and landscapes for instance, do not reproduce as well as closer subjects, film resolution being what it is.

8mm. ciné projectors are priced from £25, such as the Kodak Brownie or Specto 8, to around £60 such as the Bolex and Bell and Howell. The higher priced apparatus generally gives improved lighting and picture definition due to a more expensive optical system. Construction is also made around a die-casting which is a better proposition when it comes to general wear and tear. A 400 ft. spool is the maximum size usually provided for, and this length of film will run for over half an hour at 16 frames per second which is the standard filming speed.



CHOOSING A CAMERA

The Kodak
"Brownie"
camera model FI.9



The GB Bell and
Howell Autoset
model 624 EE

It is not every week that you will be thinking of buying a ciné camera so it is wise first to study the current models and find out what they will do. In this way, you will not be going back to your photographic dealer after six months to exchange your camera for the one you wished you had bought in the first place. We will assume that you have set yourself a ceiling price, above which you dare not go too much.

All 8mm. cameras are very compact, measuring only a few inches all round. The normal drive is clockwork, and a check should be made on the running time for one full wind of the spring as this can vary considerably. One camera, the EUMIG, has an electric motor driven by an ordinary flash lamp battery inside the case. The speed is governed at 16 frames per second and one battery will last 10 reels of film—quite a proposition.

The next point to look for is the lens as this is the determining factor of picture quality. 12.5mm. is the standard focal length and the lower priced cameras are fitted with a non-focusing anastigmat of apertures from $f2.5$ to $f3.5$, so that there is only one adjustment to make on the iris before pressing the button. And, if you think that is too difficult, there is the Bell and Howell Autoset with an exposure meter coupled to the iris diaphragm. If the light is not good enough for filming a visual warning appears in the view-finder.

Next come the focusing lenses, with apertures as large as $f1.5$ and naturally more expensive. They are usually made in interchangeable screw-in mounts so that lenses of different focal length may be used. A wide angle lens is the usual choice for a second lens as it can be so useful when filming indoors or in other confined spaces. The focal length can be as short as 5.5mm. either in fixed or focusing mounts. A lens of more than normal focal length is called a telephoto, and by having a narrow field of view, brings subjects much closer with a binocular effect. Various focal lengths of up to 36mm. or three times the normal lens are available all with the standard interchangeable mount. Top honours are shared by the British made Taylor Hobson range and the Swiss Kern Lenses, both of which give excellent definition.

Kern also manufacture a novel Zoom lens with a continuously variable focal length which can be altered during filming from 10mm. to 30mm. (Price £90 16s. 4d.)

Now turn your attention to the viewfinder. Make sure that there is some adjustment for parallax, especially with cameras having a focusing lens. As the viewfinder is offset from the lens, usually above and to one side, there is a dis-

crepancy when filming subjects in close up at distances of less than six feet. Adjustment is made by either sliding the eyepiece over a scale or reframing the subject against lines scored on the front finder element as picture limits.

Cameras with interchangeable lenses should have a multi-focal viewfinder which gives a full-size image for every lens used.

The film compartment and gate should be easy to load on all 8mm. cameras. The full spool of 25 ft. double run, is placed in position and the film dropped into the open gate. There is a single claw to engage the perforations, and the film secured on to the take-up spool. Loading a camera is as quick an operation as lacing a reel of tape. The Bolex H.8 departs from normal practice and uses 100 ft. spools of single run 8mm. film. There are also two sprockets one before and one after the gate, but threading is semi-automatic and no difficulty should be encountered.

Normal running speed is 16 frames per second and a useful refinement is the ability to vary this speed for slow motion and other tricks. Speeds are usually provided in multiples of 16 frames such as 8, 16, 32, 64, but intermediate speeds can be achieved if desired. Even moderate priced cameras have some form of speed adjustment. A single picture device is sometimes fitted for stop motion work, cartoons and animated diagrams, and fades on titles. On some cameras the starting button can be locked in the "on" position so that you can include yourself in the picture.

In every case exposure is governed by the setting of the lens iris and the speed of the mechanism. The shutter is fixed, unlike the conventional still camera. There is one exception, the Bolex fading shutter model V.S. This carries a shutter control on the side of the camera body which is engraved, open, half and closed. Apart from the obvious advantage of being able to fade out a scene when required, by half closing the shutter and opening the lens one stop, fast moving objects will be less blurred when passing close to the camera.

A tripod bush let into the underside of the camera is essential. Although the camera is a light weight object, an unsteady hand can ruin the picture. It is also trying on your audience if the picture weaves about too much on the screen.

CHOOSING A PROJECTOR

Some people prefer to purchase a projector to start with and are quite content just to show films. Seldom do you find a ciné camera owner who does not also possess a projector. The ideal of course is to buy both camera and projector at the same time, although this is not always financially possible.

The choice of a projector is sometimes governed by the camera you own or have already set your eye on. The product offered by the same manufacturer should be examined to see if it will meet your needs. The main reason for this is quite straightforward and one of picture steadiness. Supposing your camera has the claw operating alongside the aperture, then the projector must also show the film with the same claw/aperture relationship.

Should the projector claw engage a perforation two frames away from the aperture the film will be pulled down through the gate by a different perforation than when the film was exposed in the camera. Since there is no tolerance at all when it comes to 8mm. projection, the picture on the screen is liable to be unsteady. But when projected on a machine of the same make as the camera, all will be well. If you wish to purchase equipment of different makes it is wise to check on this point first of all.

Two popular projectors at a popular price are the Kodak Brownie for £25 and the Eumig Imperial at £37 10s. Both give a brightly illuminated picture three or four foot wide, using an 8 volt 50-watt lamp, and will take spools accommodating 400 ft. of film. The advantage of the Eumig is a synchronising attachment at the rear of the projector for permitting the use of a tape recorder.

The Kodak Brownie has a constant speed induction motor which gives more silent running than a series-wound brush type motor. The motor windings are also employed as the projector lamp transformer, a unique feature.

CHOOSING A CAMERA

(Continued from page 25)

If you do not favour the idea of a tripod there is a unipod which steadies the camera considerably. A pistol grip handle is another favourite which screws conveniently into the tripod bush and sometimes incorporates a camera release mechanism.

Bauer manufacture a model of their camera with an electro-mechanical brake on the governor. This will operate in conjunction with an ordinary tape recorder and coupling unit to record lip-synchronised dialogue. At the time of writing this camera is not available in this country.

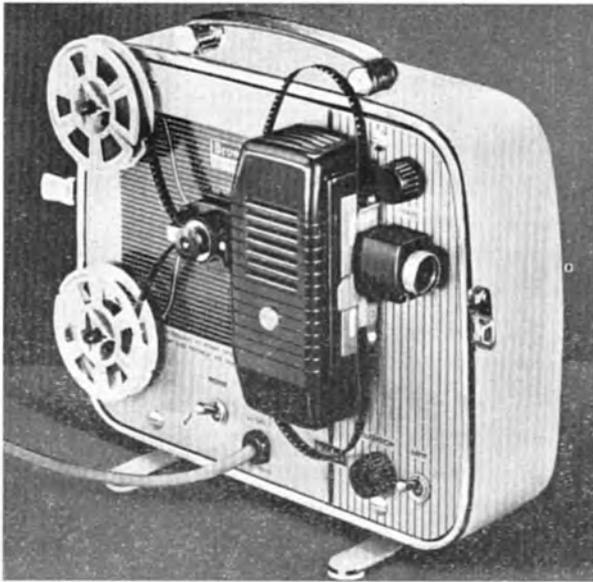
Having studied the finer points of those cameras which interest you, the final choice must always be a personal one based on style, appearance, and sometimes shape. The Zeiss Movikon for instance has been designed to handle like a Contax or Leica for the convenience of still photographers who are accustomed to using this shape of camera. Bear in mind that as a general rule, the results obtained will vary in proportion to the price paid.



The G.B. 625 at £35 and the Specto "8" at £31 10s. are also good buys. Both have variable speed motors but Specto sells a speed governor as an optional accessory for controlling the speed at 16 frames per second. The G.B. 625 is also sold with a "Filmovara" lens. This means that the size of the picture can be adjusted over a limited range to exactly fill the screen without moving the projector. Both these machines have 500 watt lamps of mains voltage which give a similar illumination to the low voltage types but consume more current.

In the higher price range there is the Bolex M.8.R. at £60 which gives excellent illumination with a large aperture lens and 500 watt lamp. A tape synchronising attachment is available. The Zeiss Movilux 8B at £53 is a well made machine, quiet running with an induction motor drive. It also employs a low voltage lamp. A special tape recorder, the Moviphon, is available and mechanically driven from the projector main shaft. Another continental product is the Bauer T.10 which sells here for £49 17s. 6d. It is constructed around a solid die casting, part of which forms the carrying handle, and has a governed speed of 16 frames per second.

All the above projectors have power rewinds incorporated so there is no need for any tedious rewinding by hand. Some kind of tilting control is usually provided to centre up the picture on the screen. To allow for the frame line being slightly variable on different cameras some form of adjustment is necessary on the projector. There are two types of framing control, a simple shift of the aperture mask which alters the position of the picture on the screen and means adjusting the tilt of the projector, and the optical type of framing which shifts either the lens or claw mechanism relative to the picture aperture. With this second method the picture does not move off the screen, and it is therefore to be preferred.



SHOWING FILMS IN THE HOME

Because it is a simple matter to rig up your projector in any room at home and put a picture on the screen, most of the finer points of projection are often disregarded. When showing films to yourself of course it doesn't matter if the picture only half fills the screen or commences slightly out of focus. But in front of the rest of the family or before an invited audience these things become unforgivable. So a little preparation beforehand in an empty room will be found worthwhile.

First of all make sure that the room is going to be sufficiently darkened. You will be surprised how much brilliance is lost from the picture by even a chink of light coming through badly drawn curtains. A flickering coal fire can be disastrous and the screen should be shielded from any disturbance of this sort. The projector should be placed on a firm support at a height sufficient for the beam to clear the heads of your audience. A projector stand is ideal and infinitely preferable to a pile of books on top of a table. Make sure you have plenty of room to operate both projector and tape recorder and that the leads connecting to the mains are neatly tucked round the ends of the room or under the carpet; you don't want anyone to trip over them especially when the room light is turned out.

Next, turn your attention to the screen. Do buy one the right size for the room you expect to use for film shows. If it is more convenient to project diagonally across the room, do so. Generally speaking, a screen of from 3 ft. to 4 ft. in width will prove suitable, and a choice must be made from the three different screen surfaces. A matt white screen is best and provides an equally illuminated picture when viewed from any seat in the room. But you may find that with your particular projector a brighter picture is indicated. So go

in for a silver screen which has greater reflective properties but over a smaller angle. A beaded screen will give you the brightest picture of the lot, but it is hardly suitable for the average square sitting room. Illumination falls off rapidly from the optimum viewing position and members of your audience sitting on the sides will see a very dim picture.

The screen must be at the right height for comfortable viewing and this is best determined by trying out the seats yourself. While doing this, make sure that anyone sitting in the front row is not going to suffer from eye strain. Seats should not be placed closer to the screen than two and a half to three times its width. Loudspeakers should be raised from floor level so that those sitting at the rear do get a chance to hear the sound as well as the front row. Never place the speaker behind the screen, over the top is preferable with a side position as second best.

Quite a number of projectors of continental manufacture have an outlet for connecting to a room light. The outlet is wired to the projector lamp switch and the room light is automatically extinguished when the projector lamp is turned on. This is much more convenient than fumbling for a wall switch near the door. The outlet will be of the 2 pin 5 amp. continental type, and a standard or table lamp wired up and placed in one corner of the room will be most effective. For a professional touch a small dimmer can be bought which is more pleasing than plunging everyone into darkness by a switch.

But even now you are not quite ready for your audience. Thoroughly clean the projector gate of all foreign matter before threading any film. A small hair or piece of fluff around the aperture looks enormous on the screen. Load your tape recorder and make sure that both film and tape are on their start marks.



Give yourself a trial run through the first film or part of it. Adjustment should be made on the picture size, focus and framing, and the sound checked for quality, level and sync. Make sure when rewinding and threading up the film once more that you do not alter the focus. Some lens mounts have a lock on them but not all. If your machine has a reversing switch use it. Your projector must be at room temperature before you commence your show.

If the machine has been left in a cold room or outside in the car for some time the lens may tend to condense over the rear element when the lamp is switched on. This will gently obscure your picture and you will have to stop the show. One final Golden rule—never show a white light on the screen. Always catch the end of the film after the final fade-out. If you do not have a separate lamp switch cup your hand over the lens. And don't project meaningless numbers to your audience which you will find on the leaders of certain packaged films.

You are now in a position to throw open the door and allow your audience to settle down. If you have followed all the points mentioned you will undoubtedly be rewarded by enthusiastic clapping after the final fade-out on your programme. Don't make the programme too long. It is far better to leave off while your audience is asking for more than to stifle them with a three-hour programme. Always remember you are showing home movies and not competing with the local cinema.



everyone's

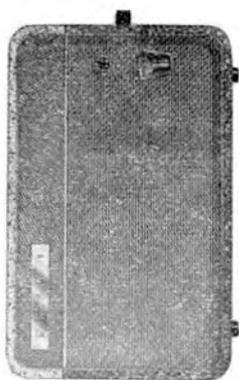
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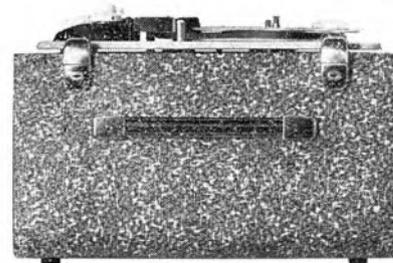
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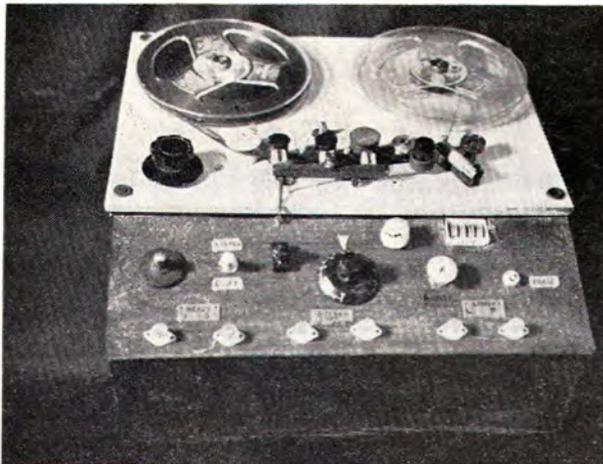
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AN EDITING AND EXPERIMENTAL DECK



CECIL ANDREW, A.M.Brit.I.R.E., A.M.Inst.E.
describes how you can build yourself a versatile
tape deck which, used in conjunction with your
ordinary commercial recorder, will give facilities
for a wide range of interesting experiment

IT is very advisable, if you want to experiment, not to tamper with your commercial deck, but to build yourself a special editing and experimental deck, and this article is intended to suggest a suitable design. A deck of the type described here has been found by the author to be more convenient than an ordinary recorder for editing, splicing and checking recordings, as well as for playing tapes recorded at non-standard speeds and for copying tapes recorded at the old Continental standard.

The accompanying circuit diagram and photograph will make many of the main features clear at a glance. In the

early days of recording, "do-it-yourself" kits were marketed with which one could build one's own deck, and it is possible that some may still be found in surplus goods shops.

The deck follows the familiar layout, with three motors providing *fast rewind*, *fast forward*, and *play-back*. The control knob can be seen at the left of the deck. The pinch roller is operated by a lever and the brakes are applied when this is pulled away from the capstan.

The three heads can also be seen on the photographs, the stereo head on the right. It was first intended to use ordinary springs and pressure pads, but three small "blocks" of synthetic sponge rubber were tried as an alternative—with success.

Three small felt pads were firmly stuck to the rubber to avoid "drag," supported by small metal angle brackets to counteract the tape pull. These felt pads were lubricated with a spot of moistened graphite and this served to avoid the formation of a "crust" on the pads, with consequent "squeaking."

A fixed capstan, with overhead bearings, which featured in the original deck design, was removed and replaced by a fly-wheel and capstan assembly, so that the capstan head could be easily interchanged, allowing any speed—standard or not—to be secured. The author has had several capstan heads turned up on a lathe, to accommodate any speed variation. It is a simple mathematical calculation to ascertain the exact diameter for any particular speed.

Turning now to the control panel, it will be seen that there are six co-axial sockets. These allow one to copy from a monaural recording from any one of three sockets, or to listen to a stereo recording on the two sockets at the right.

Headphones specially adapted with two co-axial plugs are

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AN EDITING AND EXPERIMENTAL DECK

connected to the right and left-hand stereo sockets, and a pair of two- or three-stage transistor amplifiers are used. These can easily be constructed; or printed circuit amplifiers, which are very small and compact, can be purchased reasonably.

For monaural single-track listening a stethophone is most convenient, and it is a good idea to make a small socket adaptor to save repeated removal of the stethophone plug.

For copying purposes, each of the three "top track" sockets can be connected by co-ax. to three separate high impedance inputs on three other recorders, and in this way three copies of a recording can be made simultaneously, without the losses of parallel inputs.

By using the lower stereo socket, it is possible to secure a standard copy of a recording made at the old Continental standard. Another facility is that both tracks of the stereo head can be used to secure two copies of a single-track recording, but in this case one copy will be in reverse. But then, by connecting to the appropriate sockets, it is possible to get two double-track copies that are "clear."

The flexibility of the machine will be apparent. Other combinations will occur to the constructor. The deck can be simplified by omitting some features, or made more comprehensive by including further switching.

On the left of the control panel will be seen a telephone "key" type switch, with multiple "leaves." In the upper position, this switches the stereo head through to the two stereo sockets. In the lower position, the stereo heads are through to the two transistor amplifiers and, at the same time, the batteries are brought into circuit.

The large switch in the centre of the panel, with dial, is a Yaxley type fitted to deal with any future additions.

On the right of the control panel is a small A.C. eraser, made from laminations from an old impedance matching transformer. This must be exactly half the tape width, and it is critical in adjustment. The magnet is energised by a small mains transformer giving six to eight volts output.

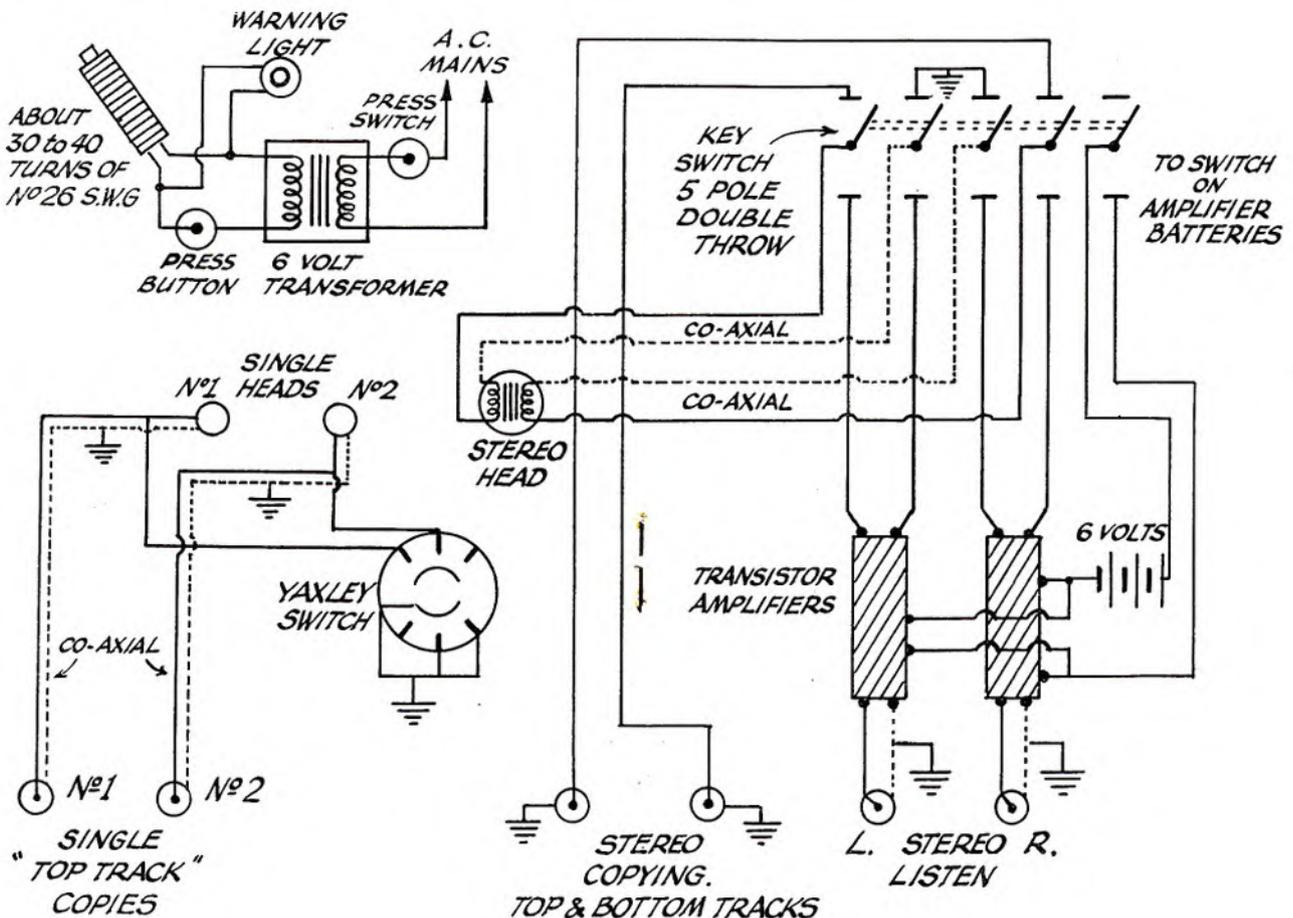
This form of erasure was adopted to avoid the extra cost of a valve oscillator, etc. Direct current or magnetic erasure tends to leave a noisy background, but this A.C. erasure has proved to be quite silent.

It was felt advisable to have two switches, so that erasure required a deliberate action. One switch is in the primary of the transformer and the other in the secondary circuit. A small red warning light is also connected to the secondary.

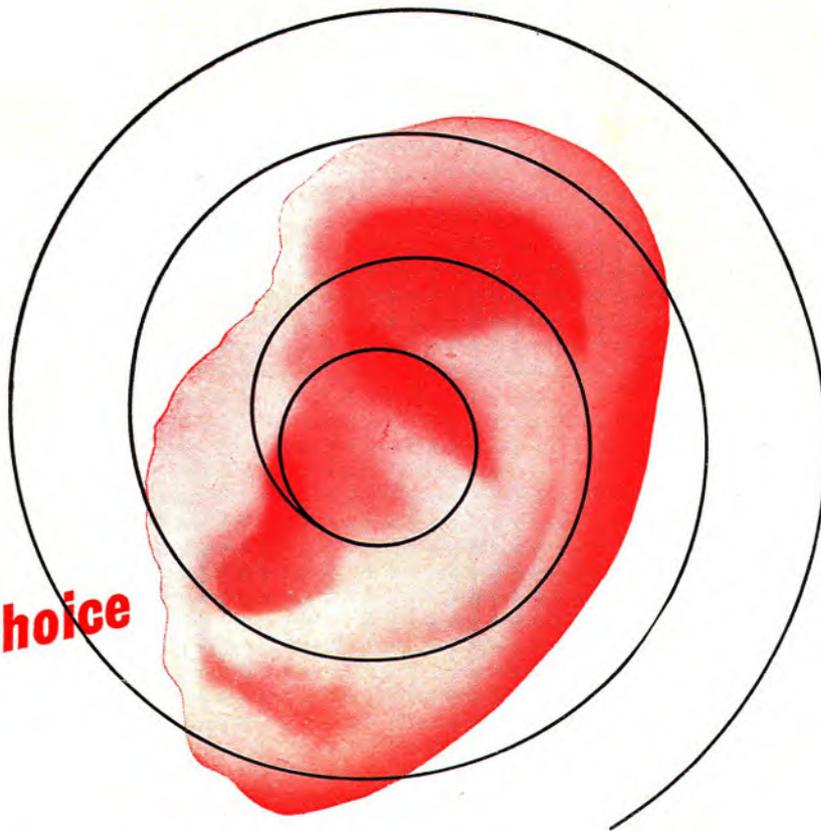
Finally, the tape position indicator is located at the top right of the panel. This was, in fact, made from parts of a discarded electricity meter and it is operated by a thin plastic belt on a pulley on the reel axle—plastic is preferable to rubber, as it contracts when warm and belt slip is thus avoided.

If one wishes to listen to a standard tape on this equipment, it can be done on the upper socket of the stereo. Binaural or stereo listening on headphones produces very realistic results and provides an interesting change to the customary loudspeakers.

The deck makes possible much instructive experimental work which is not possible on the ordinary commercial recorder.



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How can I fit my recorder to a car battery, when out in the country to record birds, etc?

For your car battery, 6 or 12 volts, you will need a converter giving an output of 200-230 volts A.C., 50 cycles, 100 watts. These are easily obtained from Vortexion Ltd., The Broadway, Wimbledon, or Valradio, Browells Lane, Feltham, Middlesex. Ex-Government stores sell a unit.



I get mains hum, and motor noise is audible especially when the volume control approaches maximum. What can be done?

Reversing your mains plug may cut down the mains hum. When recording, the magic eye should just meet on the loud passages of music. Recording at too low a level compels you on playback to turn the volume control up very high, but by recording at a good level you will only need to turn your control half way, which will cut down unwanted noise.



I wish to fit a new record-replay head to my Grundig TK 8, as the old one is rather worn. I have only a limited experience of recorders.

Fitting a record-replay head to the TK 8 is fairly simple. Carefully remove the mu-metal screen, pull out record-replay head, replace the new head and carefully replace mu-metal screen. Make sure that this screen does not get damaged.



My Reslo ribbon microphone was working perfectly on a floor stand and in a sling i.e. the microphone is the socket and the sling is the plug. I was using single strand co-axial wire, plastic covered and then screened. Recently in the slung position the microphone went "dead," but worked perfectly on the floor stand. Both contacts on the slung fitting were loose and out of their terminals but refitting them did not bring a cure.

Try the cable for continuity to see if there is a break somewhere. Also, look to see if the live wire of the cable is touching either the frame of the sling or the earth screen of the cable. Single strand co-axial wire is not suited for microphone work. Remedy is to change to multiple-stranded co-axial or use screened cable specially made for microphone work.



I have been using a reel of professional, plastic base recording tape and have had considerable trouble with crackling caused by static electricity.

ADVICE BUREAU

Our Advice Bureau is now dealing with dozens of problems every week. Inevitably, some questions frequently recur. From time to time, therefore, we shall print a selection of questions and answers covering what seems to be typical problems among readers.

Enquiries, provided they do not involve technical research, will be promptly dealt with if sent to "The Advice Bureau". A stamped, addressed envelope and a coupon from the current issue of the magazine (see below) MUST be enclosed.

Sparks can be seen when the deck is operating in darkness. How can I overcome the difficulty?

Static is a problem with certain tapes and tape decks. The rubbing of the tape against the plastic spool disturbs some of the free electrons and any substance that becomes unbalanced tries instantly to recover the loss from anything within reach. Since particles of dust are light and easily pulled while floating in the air, an electron-starved article takes violent possession of any stray electrons in one comprehensive gesture. To help keep static to a minimum: keep all equipment clean; keep tapes in cartons when not in use; wash spools periodically, letting them drain and not drying with a cloth; it may be better to use metal spools (8mm. Ciné); and try different types and makes of tape.



When playing one track of my recorder I can also hear the other track backwards. Also I find difficulty in erasing completely the other track. What is the cause, and the remedy?

The record-replay and erase heads on your machine are badly out of alignment. The positioning of the Head Assembler of a tape recorder is very critical and is particularly important for perfect reproduction of recordings. The adjustment has to be made using a test tape and special equipment. We advise you to return the recorder to the makers for the necessary task.



My recorder instructions specify Stethostet headphones, but I purchased a different pair. It seems they are not powerful enough as I need the volume full up to hear clearly.

The Stethostet headphones are of low

resistance, 50 ohms. Those purchased by you are of high impedance, either 2,000 or 4,000 ohms, causing a loss of signal strength.



Is it safe to record from my A.C./D.C. television? As there are no extension speaker sockets, how would this be done?

It is possible to record from an A.C./D.C. television, but this is not a job for the layman. The danger of modifying this type of receiver is very great, especially when the chassis is "live." We suggest you consult your retailer, or write to the manufacturer, before attempting such a job.



I used a Lustraphone VR 64 Pencil Ribbon Velocity microphone of low impedance with 20 feet of cable to record on my Elizabethan Escort, using a suitable transformer as the Escort is of high impedance. The recording volume was low, even with the control knob turned full up, resulting in pick-up sensitivity being limited to 2 or 3 feet. I know the VR 64 can reach a greater distance.

To use the VR 64 with long leads into your Escort you need a small pre-amplifier, which need not be expensive. The pre-amplifier is placed between the microphone and the recorder. Mullard Ltd. issue a circuit, free of charge, using transistors.



I want to record B.B.C.—V.H.F. broadcasts. Do I need an F.M. radio tuner?

Yes, if you want to get good recordings from the B.B.C. broadcasts you must use a V.H.F./F.M. radio tuner. You can buy a self-powered unit, several types of which have been featured in *Tape Recording*. Many more are advertised in our columns.

TAPE RECORDING AND HI-FI
MAGAZINE ADVICE BUREAU

MAY, 1959

Practice makes perfect—but a little theory smooths the way.

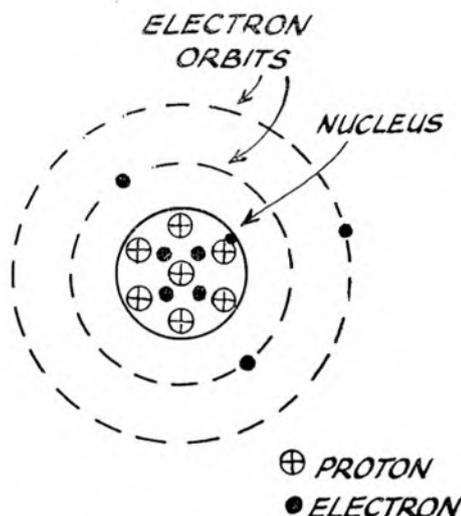
Our technical editor, CHARLES LANGTON, begins a new series with this simple explanation of

ELECTRICITY AND MAGNETISM

ELECTRICITY and magnetism are linked together in this article because they are so closely linked in nature. In fact, modern science has shown that it is impossible for magnetism to exist without electricity, and, whilst it is possible for electrical charges to exist without magnetism, as soon as an electrical charge starts to move, a magnetic field is created.

Now, an electrically charged body is capable of attracting small objects as long as the objects themselves are not charged, or if they are oppositely charged. If the object carries the same kind of charge, however, it will be repelled from the charged body. Hence, like charges repel, and unlike charges attract one another.

This implies that there are two kinds of electric charges, and they are given the names positive and negative respectively. The tiniest negative charge exists on an electron, whilst an equal positive charge is carried by a proton. Both of these infinitesimally small particles form the basis of all atoms, a mental picture of an atom being a central core or nucleus surrounded in three dimensions



by electrons revolving in their orbits, rather like layers of cloud completely surrounding the nucleus and at various distances from its centre. The nucleus itself is made up out of protons and electrons, as well as a third type of particle which carries no charge, being known as a neutron. Although electrons and protons each carry an equal, but opposite charge, a proton is about two thousand times as heavy as an electron, a neutron having the same mass as a proton.

The nucleus is held together by the mutual attraction between protons and electrons, and very great forces are required to break this nuclear bond. As there are always more protons than electrons in the nucleus, the nucleus carries a resultant positive charge. This is neutralised, as far as the complete atom is concerned, by the negatively charged electrons in their cloud-like orbits, because every normal atom contains the same total of electrons as it does protons. To an outsider, therefore, each normal atom contains no measurable electric charge, being completely neutralised.

It is the movement and behaviour of electrons with which electronics engineers are mostly concerned, and it is the passage of electrons through electrical circuits which creates the effects of electricity, and which made the evolution of such instruments as the tape recorder possible.

Electricity is carried from one place to another by means of wires, the wires being made of a conducting material. A conductor is any material which will allow the easy flow of electric current, and most metals and some liquids fall into this category. If a substance will not conduct electricity, it is called an insulator, and this includes many substances, glass, rubber, plastics, mica, being just a few.

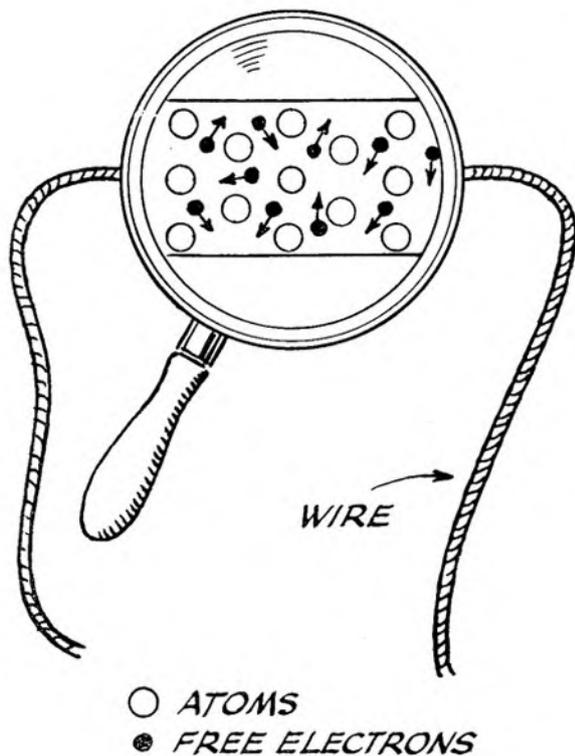
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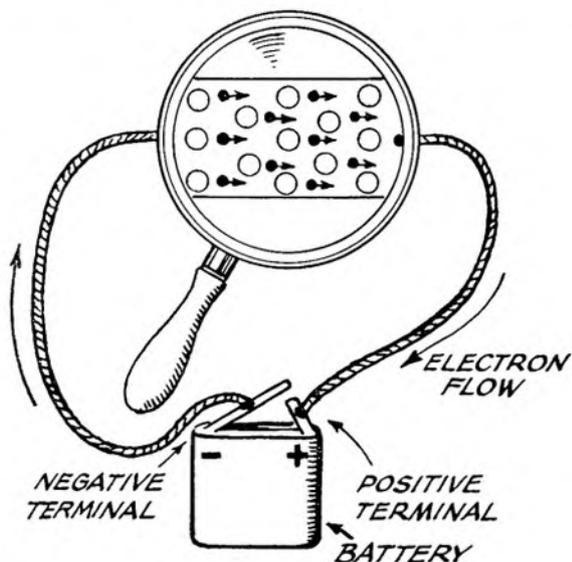
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If we could see the atoms and electrons of a conductor (say, a piece of copper wire) we would notice that whilst the atoms maintained fixed positions in a definite pattern, many electrons would be wandering about in the spaces between atoms, occasionally "landing" on an atom, or being thrown out of one. These are known as "free" electrons, and their movements are completely random, Fig. 2, in a similar manner to the movement of the crowd at a market place.

Consider now the effect of connecting the ends of the wire to the positive (+) and negative (-) terminals of a battery, accumulator, etc., Fig. 3. The free electrons would now experience a force repelling them away from



the negative terminal, and attracting them towards the positive end, so that they would rush along the wire in the direction shown, and into the battery via its positive terminal. The battery is a chemical device for creating a permanent shortage of electrons at its positive terminal, and so becomes an ever open door for receiving electrons. On the other hand, the same chemical action produces a consistent surplus of electrons at the negative terminal which are most eager to take the place of the electrons which have passed out of the positive end of the copper wire.

Thus a continuous electron flow is set up round the circuit, in the direction from negative terminal, through the wire, to positive terminal, through the battery, then out of the negative terminal, and so on. This is known as an electric current, and may be stopped by breaking the circuit at any point (such as by cutting the wire, or disconnecting one end from the battery terminal).

On the other hand, insulating materials will not conduct electricity because all of their electrons are firmly bonded to their parent atoms, and there are no free electrons available to flow round the circuit.

When a current flows through a conductor, the movement of electrons cannot, of course, be seen, but certain effects are noticeable which are not present when the current is stopped. One effect is that the temperature of the wire rises when current flows. This is because the electron movement is not perfectly smooth, and frequent collisions occur between the electrons and stationary atoms. This resistance to the flow of current gives rise to heat, and, in fact, it is this resistance (measured in ohms) which limits the size of the current in the circuit, and prevents the current from becoming infinitely great.

Well known examples of the heating effect being put to good use are electric fires, blankets, and the filaments of valves in tape recorders, etc.

Again, chemical changes are observed when the current is passed through a liquid conductor such as salt water, acid, copper sulphate, etc. A liquid conductor is known as an electrolyte, and the technique of electroplating is an example of the chemical effect of the current. Current is passed into the electrolyte via one metal plate and taken out by another metal plate. As time goes on, metal is decomposed from one plate, carried through the electrolyte, and deposited on the other in the form of a thin layer. Batteries and accumulators are other examples of the chemical effect.

The third, and probably most important effect of an electric current is its magnetic effect, for, apart from the obvious application in magnetic tape recording, devices such as electric motors, dynamos, transformers, loud-speakers, and certain microphones use this principle.

As soon as an electron starts to move, a magnetic field is set up in its vicinity. Thus the electrons revolving round all atoms each create their own magnetic field, but as there are many millions of electrons in the smallest practical conductor, and as the electrons will be moving in every possible direction at any instant, the fields cancel out and no magnetism can be detected. When a current is flowing, however, the free electrons all move in the same direction, with the result that all the tiny magnetic fields add up to produce a strong magnetic field which may easily be detected externally.

It should be noted that this magnetic field is present only when current is flowing, and surrounds every conductor which is carrying a current, whatever material the conductor is made of.

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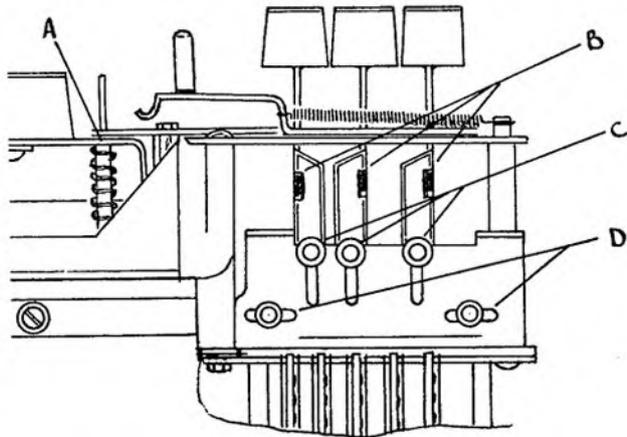
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Greasing the mechanism

This series of short articles gives a dvice to those who have bought a Collaro Mk. 3/4 tape deck for use with an existing hi-fi system.

Last month the author dealt with lubrication and with the best way to mount the deck on rubber grommets.

The article below elaborates these points.

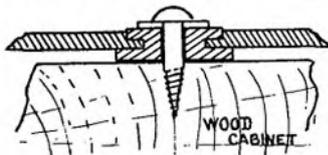


GREASE should be applied at all the points indicated in the sketch on the right. As mentioned already, Shell Retinax "A" is most suitable, because of its high melting temperature. It is best applied with the tip of a screwdriver.

This operation does assist in reducing the amount of pressure required to operate the switch mechanism.

The other sketch (below) shows a method of mounting a rubber grommet. A 4BA washer is placed under the head of the screw and, to prevent vibration loosening the screw—the length of which is determined by the thickness of the rubber mounting, a 1/2 in. length of rubber sleeving may be pushed on to the wood screw, holding the 4BA washer against the head of this screw.

The rubber sleeving, which is approxi-



mately one-sixteenth of an inch in diameter, may be obtained from a cycle shop.

In general, the lower half of the grommet type G32 is cut down to 1/2 in.; the screw then required is 3/8 in. long (size 6). With this thickness, the clearance between plastic deck cover and top of mounting board works out at just under 1/8 in. It is advisable to allow sufficient clearance for two reasons: 1, to facilitate ventilation, especially when mounted in a portable case, and 2, to prevent vibration, on loud passages of sound, between cover and cabinet.

Very often, mechanical noise from the tape transcriber is reduced when the plastic top cover is removed. This noise is due to mechanical transmission between the three-speed digit counter and the top cover, the latter acting as a sound radiator. This may be prevented by filing the back right-hand corner of the three-speed digit counter frame.

Dip the file in grease when attempting this operation, to prevent loose filings falling on to the digit worm-drive.

T. H. R.

THE SCHOOLS CONTEST

THE closing date for the Schools Section of the British Amateur Tape Recording Contest is Friday, 29th May—only just over one month away. We hope that schools who are proposing to submit entries are well advanced with their work and that they have applied for entry forms.

Tapes received after the closing date can in no circumstances be considered. But entries received in advance will be passed to the judges without delay.

The panel of judges will include Miss Jo Douglas, Tony Gibson and Douglas Gardner—all of whom have taken part in previous contests.

The winning tape in the Schools Section—not exceeding 20 minutes on the subject "How we see other countries"—will be awarded the handsome Grundig Challenge Cup. There will also be a cash prize of ten guineas from *Tape Recording and Hi-Fi Magazine*, and the chance of further valuable prizes in the International Contest.

Tapes should be carefully packed and adequately stamped and should be addressed to: *British Amateur Tape Recording Contest, Schools Section, 7, Tudor Street, London, E.C.4.*

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VERITONE VENUS

—an impressive instrument



★
**TESTED
IN THE
LAB**
★

THE Veritone Venus tape recorder arrived shrouded in mutton cloth which unwrapped to reveal a well made instrument as well as a handsome piece of furniture. The mahogany cabinet is a contemporary design with a large gilt speaker fret, and a high gloss finish both inside and out. It houses the standard Verdik tape unit containing the induction motors, and accommodating 7 in. spools.

On either side of the tape unit are pockets for storing reels of tape. One of these pockets can be removed to take the specially designed FM tuner unit which is supplied as an accessory. This tuner has its own power supply and is easy to install in the cabinet. Connections have only to be made to the mains and the amplifier.

VERDIK TAPE UNIT

The Venus recorder has a number of facilities which are usually found on machines costing considerably more. For instance, there are three heads, erase, record, and monitor. This arrangement provides a monitoring position a fraction of a second after the tape has been recorded, so that an immediate check can be made on the signal for quality and volume. The monitor head is most useful when superimposing, since the final result can be heard as you add the second recording.

Alternatively, an interesting echo effect can be achieved on either a new or existing recording, and the result monitored over the internal loudspeakers. There are two speakers, a 10 in. x 6 in. elliptical and a 4 in. tweeter, the latter being capacitor fed across the main speaker.

The only visible controls are those on the tape unit itself. On the left-hand side is the **RECORD** volume control and the fast wind on or rewind switch. On the right is the **PLAYBACK** volume which is combined with a mains on/off switch, and a **RECORD/PLAYBACK** switch for motor control which has a central OFF position. This switch also controls the erase head. The fast rewind will fill a 1,200 ft. spool in 50 seconds and the switch is interlocked so that it cannot be operated accidentally whilst the recorder is running.

The spool brakes are solenoid operated and give an instant lock to the spool hubs without any spilling of tape. The capstan is driven by a rubber belt around the circumference of the flywheel, and there is a speed change control for selecting 7½ in. or 3¼ in. which slips the belt over a stepped boss on the motor shaft. A numerical footage counter is provided and the magic eye volume indicator is housed conveniently in the front of the unit.

AMPLIFIERS

The Venus has two separate amplifiers for recording and

playing back, each containing one 12AX7 double triode and one ECL82 triode-pentode. The output stage of the playback amplifier is an EL84 which gives a good four watts. The magic eye is an EM84 which gives two converging parallel beams, and a 6X4 rectifier is used for H.T. supply. The power pack itself is on a separate chassis which has been sited at the bottom of the cabinet to minimise hum pick-up; otherwise the amplifier chassis and tape unit are constructed as one assembly. The bias oscillator is tuned to 60 k/cs, and one half of the ECL82 in the recording amplifier acts as the oscillator valve.

On a small panel at the rear of the machine are the remaining amplifier controls and sockets. The input is designed for any high impedance source such as a crystal microphone, pick-up, radio, etc., and accepts a standard jack plug. There is a 15 ohm outlet for extension speakers if required, and the insertion of a plug automatically mutes the internal speaker system. A high impedance socket is provided already corrected to the CCIR curve for connection to other amplifiers or for transcription work. This outlet is not affected by the amplifier tone controls.

STONE CONTROLS

There are separate bass and treble controls which operate only on playback through the internal speakers or the extension speaker socket. The bass control affects the response below 800 cycles. When set at maximum the curve rises 6 or 8 dB at 100 cycles, while the minimum setting produces similar loss which falls away completely at 40 cycles. By selecting a middle position the response may be held flat down to 40 cycles, plus or minus 2 dB. With the treble control at minimum the response is substantially flat up to 12,000 cycles at a tape speed of 7½ in., and up to 8,000 cycles at 3¼ in. Treble rise can be given to frequencies above 1,000 cycles by increasing this control.

There are two further switches on the rear panel, an erase cut-out and a record/amplifier switch for using the Venus as a straight through amplifier. A careful check must be kept of the position of these two switches as there is no visual indication on the front of the recorder. The idea of hiding the controls on a rear panel may seem out of place, but since the Venus is a console model meant to become part of some permanent installation, the controls should not require continual adjustment. In any case, one soon becomes familiar with their placing.

SUPERIMPOSITION

For superimposing a second recording over an existing one, it is only necessary to operate the erase switch on the rear panel. This prevents the original recording being erased and it can then be monitored on a pair of headphones connected to the high impedance outlet. The second recording is then made without any loss to the original signal, and the combined result is heard on the headphones. It is necessary to disconnect these before playing back over the speakers.

ECHO EFFECT

An echo effect can be obtained when using a microphone. The playback volume is turned up and the sound which has just been recorded is picked up by the monitor head and played through the speaker. This is fed back into the microphone and recorded again. Care must be exercised to avoid a feedback howl by keeping down the playback volume. The final

(Continued on page 39)

FRENCH STEREO FESTIVAL

STEREO made an impressive public and official debut in France at the first International Festival of High Fidelity and Stereophony in Paris recently. Twenty French and 25 foreign firms—many of the British—exhibited, and about 20,000 people visited the exhibition.

"In France we resolved to wait until the initial problems had been smoothed away before we launched stereo in a big way," one of the organisers explained to *Tape Recording and Hi-Fi Magazine*. "Now we have had a big success."

The Festival lasted for a week and, apart from exhibition stands and demonstration rooms, there was a Festival Club, a programme of daily lectures (including one by a British expert, Mr. Gilbert Briggs), and transmissions by Radiodiffusion-Télévision Française of many programmes each day either in stereo or dealing with the Festival.

Moir on hi-fi

JAMES MOIR is arranging a course of lectures in high fidelity and stereo sound reproduction at the Norwood Technical College, Knight's Hill, West Norwood, London, S.E.27. on six successive Tuesday evenings, commencing 19th May, at 7 p.m. The fee is 10s., and further details are available on request (GIP. 2268).

Drive to popularise tapes in Eire

AN energetic drive to popularise tape recording in the Irish Republic is now under way and will reach its climax at the Irish TV, Radio and Electronic Show in Dublin, opening on 28th September.

It is estimated that, at present, only one in every 5,000 of the population in

Eire possesses a recorder, compared with nearly one in 100 in Britain, so there is evident scope.

The *Irish Radio and Electrical Journal* has just published a full review of models available there, with an exhortation to traders to take a more intelligent interest in their opportunities.

Progress to pre-eminence

When we started this magazine two and a half years ago, we gave away every copy of the first issue and for several months we continued some free distribution. Furthermore, we sent very generous supplies to newsagents so that they could get the advantage of casual sales.

Today *Tape Recording and Hi-Fi Magazine* is well established as the leading publication in its field and our print order is directly related to firm orders at the newsagents. If you wish to be sure of your copy, place a regular order now.

The sales of *Tape Recording and Hi-Fi Magazine* have increased during the last four months at a faster rate than ever before.

TODAY THE PAID CIRCULATION EXCEEDS THAT OF ANY OTHER TAPE RECORDING PUBLICATION IN THE WORLD.

The A-B-C of Sound effects

FOR a French clock, and G for—well—gruesome. It is much easier to buy or borrow a musical box than a French clock; so, if one is wanted for a scene, use the tick of a travelling clock, the music box will provide the chime, and the strike can be made on a small agnus bell, or silver house bell.

VERITONE VENUS TESTED

(Continued from page 37)

result can, of course, be heard over the speakers, but a little practice is required to achieve good results as there can be no rehearsal. The echo once recorded cannot be removed.

MICROPHONES

Care should be taken when choosing a microphone as one is not supplied with the recorder. There are three types recommended by Veritone, the Lustraphone ribbon type VR64, the Lustraphone dynamic type LFV59, and the Acos crystal type MIC39. The ribbon and dynamic types must have a transformer to give a suitable impedance for matching the amplifier input.

The Veritone Venus is an impressive instrument which does full justice to any pre-recorded tape, even with the bass control in a flat position. A good external speaker in a reflex cabinet will place this instrument in hi-fi class. The recorder is set up for use with EMITAPE and is supplied with a 1,200 ft. reel containing a sample recording which demonstrates the echo and superimposition facilities. In spite of this the manufacturers have succeeded in marketing it at 60 guineas. The FM tuner unit is available at an extra 16 guineas.

VENUS PORTABLE

Veritone has released a portable version of the Venus which contains all the facilities of the console model. In addition, there are red and green indicator lamps which show at a glance if the machine is set for record or playback. There is only one speaker fitted, a 10 in. x 6 in. elliptical. A reel of tape and an Acos microphone type MIC39 are included. Price 58 guineas.

WANT TO RECORD AN EXECUTION?

The noises of a guillotine are often called for in scripts that deal with the French Revolution, or dramas of like character. We will be content here to consider the execution of a single character!

The first sound is that of a horse and cart over cobbles. The sound of horse walking has already been dealt with in this series. The cart noise may be a wheelbarrow wheeled along the garden path, with some clinking of chain.

The doomed character then walks across stone to wooden steps; a pair of household steps will do. As the person reaches the top, the acoustic must change to hollow wooden floor, as he steps to the guillotine.

The whole must be backed with crowd noises, from disc or effects tape previously recorded and mixed in. These dramatically cease as the footsteps of the victim stop on the platform. A pause, and a snare drum roll played with sticks must start. The noise of the blade's descent tops the drum roll and is made by two old-fashioned casters fixed to a piece of wood 12 x 1 x 2 ins. run for a distance of ten feet along a plank of wood. At the end of its travel, the great crash of the blade against its stops is made by bringing a heavy baulk against the plank on the wooden floor—if you have been allowed to shift carpets and linos, albeit temporarily.

The final macabre touch may be added by cleaving a large savoy cabbage with the wood chopper and letting the halves fall into a wicker basket. Immediately bring up cheers and crowd noises.

Gunshots can be done safely at home without the use of firearms or blanks; a whippy lath of wood brought down smartly on a rexine-seated chair is effective and never misfires.

The expensive flourish of heroes who always seem to smash their glasses after drinking toasts may be imitated cheaply. Unserviceable electric light bulbs are easily come by. Take the cap off very carefully and unseal by breaking the sealing tube which is just under the cap. This will break the vacuum; it is essential to do so, as the bulb will then break without an explosive pop. When breaking the seal or otherwise handling the bulb, wear gloves and glasses.

Accessories for stereo and
tape enthusiasts

TEST TAPE

A test tape, particularly suitable for the keen amateur wishing to test the efficiency of tape recorders and to check the balancing of stereo. **£2. 2. 0**

TAPE TIME CALCULATOR

A simple, read-at-a-glance device which gives you the playing times for any size reel or length of tape from any speed, $\frac{1}{8}$ ths to 15 ips. **3/6d.**

All enquiries to :

Tape Recording and Hi-Fi Magazine
7, Tudor Street - London - E.C.4

DOUBLE PLAY TAPE

Double Play Tape uses a new plastic base which is half the thickness of standard tape. Any reel will thus hold twice the length of Double Play Tape compared to Standard Tape.

Owners of Recorders which take 5" or smaller reels will find this tape of particular interest as the playing time can be considerably increased.

BASF. 300ft. (3") 14/-, 600ft. (4") 25/-, 1,200ft. (5") 42/-, 1,600ft. (5½") 52/6d., 2,400ft. (7") 77/6d.

TELEFUNKEN. 1,200ft. (5") 35/-, 2,400ft. (7") 72/6d.

All post free

ALL ORDERS SENT BY RETURN OF POST

New list of Standard and LP Tapes and Accessories free upon request

WATTS RADIO 54, Church Street, Weybridge, Surrey.
(Mail Order) Ltd. Telephone: Weybridge 4556

NOTE.—Post orders only to this address please

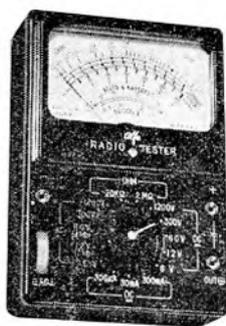
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—but if you make a point of dealing with the WHOLESALERS WHO REALLY HELP, it won't matter so much! Every month we issue a friendly little booklet which introduces, and offers help and advice on all the new and more profitable lines, as well as the current best sellers. It's absolutely free to all bona-fide dealers, and all you need do is telephone, call or write to: **V.E.S. WHOLESALERS SERVICES LTD.** 11, Gunnersbury Lane, ACTON, W.3. Telephone: Acorn 5027. We specialise in TAPE RECORDERS, and are approved Wholesalers for all the best makes, including REPS, ELIZABETHAN, SOUND, TRUVOX, HARTING, G.B.C., GELOSO, PERTH-SAJA, STUZZI, TANBERG, BRENNELL, COLLARO and the GRAMDECK attachment. We are also stockist of the SAGA-ELIZABETHAN and TSL-PHONOBAND pre-recorded tapes, also SCOTCH BOY, GEVASONER, MASTERTAPE and BASF tapes. We keep stocks of different cabinets suitable for Tape-Decks, Hi-Fi and STEREO amplifiers, Transcriptors and LOUDSPEAKERS, etc., also products by Leak, Dulci, CQ Britamer, Goodman, G.E.C., W. B. Lorenz, etc. Apart from this we keep an enormous selection of RADIO, TELEVISION and ELECTRICAL lines, ranging from Scratch Removers to Spin Dryers, Control Knobs to Convector, Fire-bars to Fluorescent Fittings, and Toasters to Test Gear! We have, in fact, more lines than Clapham Junction, but you will be on the right track if you **Open An Account With Us Now!** THE SIGNAL'S SET FOR SALES!

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Hi-Fi Stockists



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Gives 17 ranges to cover practically all requirements. Large, clearly marked scale in strong plastic case, 5½" x 3½" x 1½". Indispensable to the serious hi-fi man, and an amazing bargain at the price (P/P—2/-)

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Westrex Speaker	£169 10 0
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★Ferrograph 88...	£110 5 0
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This list is not conclusive, but is intended to show the variety and quality of lines stocked at 189.

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Rogers Pre-Amp	£8 0 0	Jason "Perfect" Switched F.M.	£15 2 9
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★Garrard 4HF with Stereo Pickup	£19 17 7	Ronette Cartridge, DC284ST	£4 3 5
Fane "Quartet"	£35 0 0	★Tannoy Cartridge	£13 10 0
Goodmans 300 12-in. Twin Cone	£11 5 9	★B.J. Head	£8 8 0
Wharfedale Golden 10 FSB	£8 14 11	★Pamphonic Amplifier 3000	£31 10 0
Tannoy Canterbury 12-in. D.C.	£57 15 0	★Brenell Deck	£33 16 0
G.E.C. Metal Cone	£9 5 0	★Brenell Recorder	£97 0 0
G.E.C. Presence Unit	£3 19 6	★Ferrograph Stereo Ad.	£31 10 0
WB 1016	£8 0 0		

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IN LIGHT-HEARTED VEIN

It is sometimes dangerous to make fun of serious things, but we hope all our readers have sufficient sense of humour to enjoy this "mickey-taking" article by BILL RAWLE.

Mr. Rawle has been one of the pioneers among blind recordists.

The Upper Bumpstead Audio Show

ONE of the sensations of the Show was a new tape recorder incorporating a pencil sharpener. The sharpener worked perfectly.

The brochure issued by the manufacturers, the Ribby Recorder Company, proudly proclaims: *The ONLY tape recorder in the world with ALL these features—Two Speeds, Separate Bass and Treble Controls, Mixing Facilities, 3 watts undistorted output, "On" switch for switching On (optional extra), "Off" switch for switching Off, PENCIL SHARPENER.*

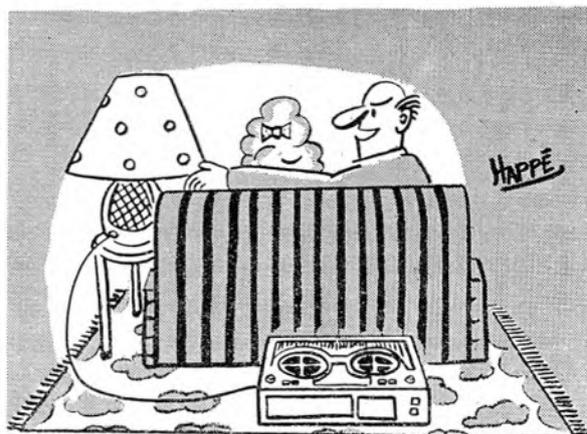
One customer bought three machines. He explained: "Well, the answer's simple—I've got a lot of pencils."

At the Fancy Recorder Company stand, the emphasis was on style and finish. The push-buttons were artificial simulated de-luxe mother-of-pearl and, to make the layout of the deck symmetrical and nice to look at, some of the buttons were "dummies." When you pressed them nothing happened. The same effect was produced with some of the "working" buttons, too, but we understand from the manufacturers that this is being put right.

The centre of attraction was the most expensive model, the Daffodil, with a 1,200 ft. reel of pink, perfumed tape. When the machine is switched on, four coloured lights on the front of the cabinet, are illuminated: green, red, blue and white. They provide a positive indication that the machine is indeed switched on.

By contrast, Stark Recorders are manufactured in the North and all valves, etc., are lagged against the climate. There is a built-in heater which sucks in warm air, derived from the friction of the moving parts.

Mr. Clutterbuck, of Stark Recorders, told us: "No messing about in this firm, lads. We build good, solid tape recorders."



"Forget about that stupid husband of yours—he doesn't suspect a thing"

The Stark deck is made from $\frac{1}{4}$ in. battleship armour-plate. Switching on is effected by giving the recorder a good running kick. This actuates a solenoid, or something, and within half an hour the machine is ready for use. All functions are controlled by push buttons, and these appeared to be rather stiff to operate. For this reason, Starks provide a mallet and a peg of wood for striking the buttons.

Fast Forward and Wind Back were effected at great speed, approximately $1\frac{1}{2}$ seconds for 1,800 ft. In view of these high speeds disc brakes have been fitted, similar to those on the Mark VIII Jaguar.

In our opinion the winding speed is too fast, and the brakes too violent.

During a test wind, the brake was applied when the tape was half wound. This caused the recorder to tip over on its side.

We understand the Stark people have considered this point and will arrange for subsequent models to have four holes bored in the bottom of the cabinet, so that the machine may be bolted to the table.

The table should be screwed to the floor, assuming the floor-boards are fairly sound and fixed firmly in position with 2 in. nails.

A leading Continental manufacturer laid emphasis on the phenomenal frequency response achieved by his products. The line on a graph illustrating the frequency range of one machine went straight through the ceiling and was continued on the second floor.

A completely portable, transistorised, battery-operated tape recorder on the stand was so small that it took 20 minutes to find it.

The stand of Sly Recordings Ltd., was hidden away at the back. They were furtively showing a miniature microphone which can be concealed anywhere and enables secret recordings to be made. It was no bigger than a split pea.

The makers claim, however, that its sensitivity is such that Big Ben was recorded with perfect clarity from the middle of Brixton High Street. They strongly denied the suggestion of a portable radio being on hand at the time.

Avantic

AUDIO AMPLIFIER STANDARD

Suitable for use as:

- * Laboratory Standard
- * Test amplifier for microphones, pick-ups, loudspeakers, pre-amplifiers, tape decks etc.
- * Recording amplifier.
- * Broadcast Transmitter Modulator.

The Avantic DL7-35, originally designed as a high fidelity amplifier, has proved to be of such advanced design that it has remained unsurpassed. During the three years it has been manufactured the high performance laid down in the design has been consistently maintained. It can now be regarded as a Laboratory Standard of the utmost reliability.

AVANTIC DL7-35 POWER AMPLIFIER

Harmonic Distortion:

< 0.05% at 20 watts sine wave output.

Intermodulation Distortion:

0.7% at 20 watts

1.0% at 29 watts

$f_m = 40$ c/s. $f_c = 10$ kc/s. $f_m/f_c = 4$

Hum and Noise:

-85dB relative to 20 watts output with $10k\Omega$ source resistance.

Distributed Load Push-Pull Output Stage.

Load Impedance:

4Ω , 8Ω , 16Ω switch selected with automatic feedback compensation.

Damping Factor:

50

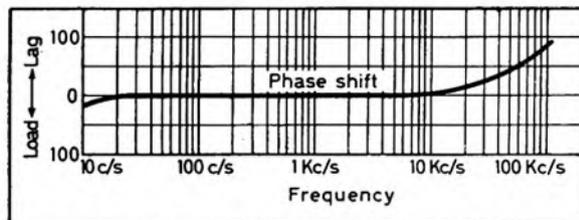
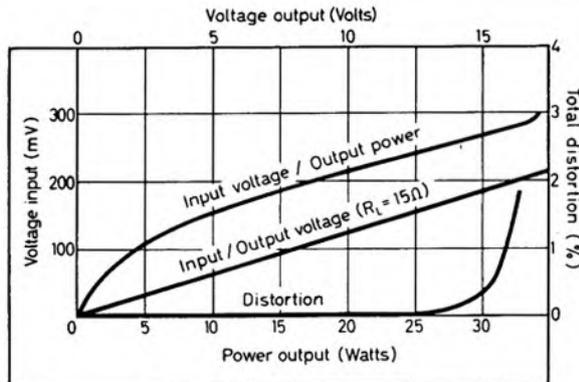
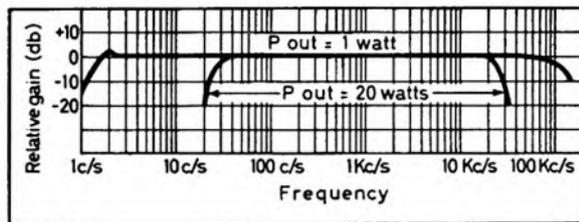
Rise Time:

5μ secs.

Power Inputs:

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40-60 c/s.



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STEREO



PAGE

Edited by
D. W. GARDNER

Proof at the Audio Fair

SOME first-class stereo demonstrations by newcomers at the London Audio Fair will have helped to dispel the doubts about the medium still entertained by those whose experience had not previously been fortunate. There have always been excellent demonstrations, but the crowds and the chances of missing the best test pieces have inevitably resulted in many visitors going away without ever having heard what stereo can do at its best.

And it cannot be stressed too strongly that it is what stereo *can* do that matters. If you find only one outfit that gives you the results you want at a price you can afford then you can happily ignore all the failures.

This year, I think, the chances of hearing good demonstrations were much higher because there were more of them, and the material used seemed to be less "gimmicky."

It would be difficult not to be impressed, for example, by the Ampex and Telefunken professional equipment, the Truvox Twin-set and the new Quad amplifier working through two Acoustical electrostatic speakers—as well as by the more familiar equipment such as the Brenell and Reflectograph stereo machines. I hope those who heard some of the demonstrations at nearly concert-hall level realised how acceptable the full volume could be, because of the two channel source, even in the confined space of the dem rooms.

STEREO is coming along in unexpected ways. A dealer who runs a large establishment in a London suburb told me that he has practically given up explaining the differences between stereo and mono to most of his potential customers. If they come in for "a good radiogram" he lets them hear single-channel and double-channel sets, and as

London Stereo Convention discussed tape prospects

THERE was a packed attendance for the Convention on Stereophonic Sound Recording, Reproduction and Broadcasting held in London recently by the Institution of Electrical Engineers. The purpose was an exchange of information, and this was effected both formally and informally.

Examining the reasons which tended to discourage the development of commercial stereophonic tapes, in spite of the merits of the medium, Dr. G. F. Dutton, Ph.D., B.Sc. (Eng.), referred to the operation of threading the tape as being "irksome to some people who are not mechanically minded."

He also suggested that extra attention should be paid to simplifying the design of replay-tape deck layout and the method of anchorage of the tape leader to the take-up spool.

often as not they prefer a stereogram. Once the machine has sold itself on the score of quality he mentions that it will also play stereo discs, and at this stage of the proceedings no difficulty arises through the customer's unfamiliarity with the principles of the system.

THERE were some extremely impressive moments in the productions of the Ludmilla Tcherina Ballet which has been visiting London after a somewhat sensational Paris season. Stereophonic sound was used in several ways, and I predict that the effect of their example will be to step up the use of tape in the theatre. Amateurs will find it a fruitful field for experiment and should set to work collaborating with the more enterprising of local dramatic groups.

Stereo, in fact, puts taped sound on-stage instead of off-stage of back-stage, and that is an important advance when it is used judiciously. The large-voiced, reminiscent narration that we have come to accept as part of the flash-back technique of the cinema falls into place naturally on the stage, when used in the right circumstances, the stereo effect giving the words a mid-air quality wholly different from that of a single channel sound—which would remind the audience too much of a radio announcement.

The most sensational use of the medium in the ballets, however, was the introduction of the noise of passing trains in "The Lovers of Teruel." Stereo makes them pass below a parapet in a suburb with a footbridge passing over the lines. From the bridge Tcherina (of "Red Shoes" and "Tales of Hoffman" fame) performs a dramatic suicide leap as one of the "stereo" trains is passing.

Owners of stereo recording equipment find it stimulating to watch some plays while bearing the possibilities of stereo in mind. Passing planes, whirling seagulls, birds in a wood (worth trying in "A Midsummer Night's Dream") and similar effects would be a useful contribution in many cases.

He pointed out that although the general quality of reproduction is considered to be superior and more enjoyable with these qualities maintained throughout the playing time, the basic cost of the 7½ ips tape record is high, owing to the cost of tape, and the signal/noise ratio is not as good as that obtainable on the stereophonic record.

On the credit side were the low crosstalk between channels and the standardisation effected by the IEC with regard to spool dimensions, the stereophonic track standards and the replay emphasis characteristics.

He reported it was proposed to examine what measures could be taken to render the tape more acceptable to the average listener to recorded music.

"The only way of making a significant reduction in the cost of the tape required for a given length of programme," he said, "is to reduce the speed required for replay and to reduce the width of the tracks—in other words, to increase the information packing density. The operation at lower tape speeds requires a tape which is capable of giving a greater short-wavelength resolution. This, in turn, calls for a tape surface of greater smoothness and freedom from drop-outs. The tape-noise component varies as the square root of the track width, and thus, the signal/noise ratio will decrease. Furthermore, a reduction in tape speed may occasion a serious increase in frequency-modulation noise, both at the recording and the reproducing stages, unless special precautions are taken. We thus see that, while a reduction in the quantity of tape for a given programme length can be made by increasing the packing density, the performance demanded of the tape is increased."



12

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for choosing the

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microphone, 1800 ft. tape,
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- 6 Simple push-button controls. Place indicator
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For full details of the Elizabethan range, post this coupon to-day E.A.P. (Tape Recorders) Ltd., Bridge Close, Oldchurch Road, Romford, Essex.



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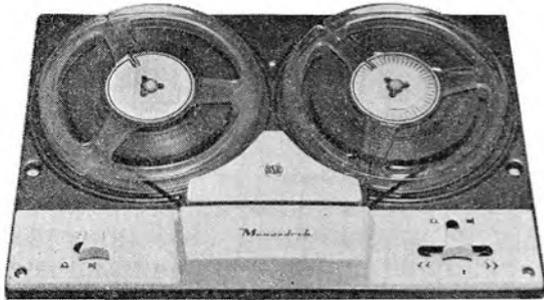
A SELECTION OF THE NEW SPRING MODELS

Models at the recent London Audio Fair demonstrate the wide range of recording equipment which is now generally available



Two interesting new British products—left, the new Spectone 161, and below, the new B.S.R. "Monardeck" which is now beginning to appear on several models.

BRITISH



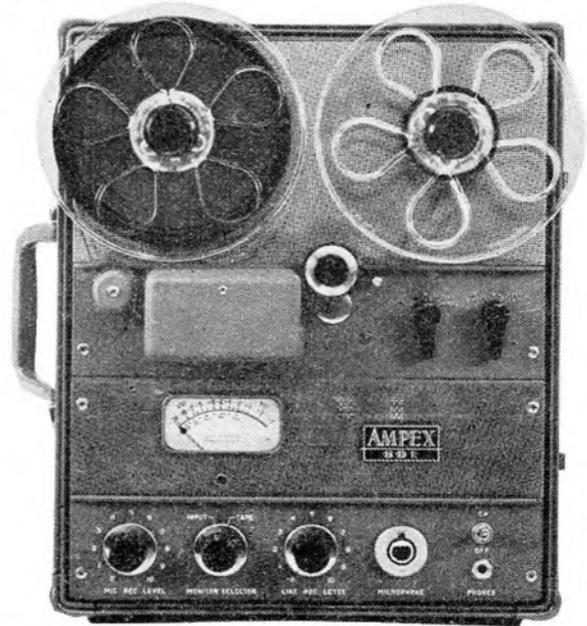
AUSTRIAN

Below: The new Stuzzi "Tricorder" which introduces the fifteen-sixteenths of an inch per second to this country



Below: One of the Ampex recorders which have just become available in this country. This is the model 601, a portable costing £271 single-channel and £426 stereo

AMERICAN



GERMAN

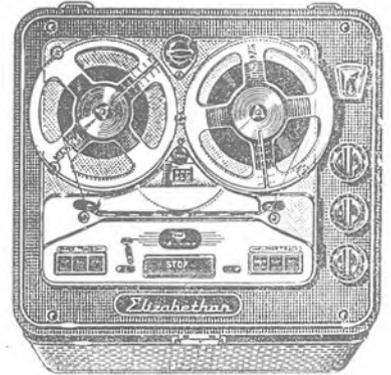
The latest Telefunken recorder—the 75-15, which is described elsewhere in this issue



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TANDBERG STEREOPHONIC ...	114gns.	KURLAND HI-FI	56gns.
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ELIZABETHAN MAYFAIR	72gns.	WALTER 303 DE-LUXE	42gns.
SOUND 444	45gns.	WALTER 505	57gns.
SOUND A20	55gns.	PERTH-SAJA Standard	45gns.
SOUND 555	65gns.	PERTH-SAJA De-luxe	56gns.
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VERDIK	45gns.	REGENTONE	55gns.
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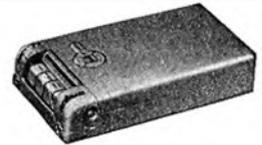
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69gns. complete with microphone and radio connecting leads.



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MICROPHONES AND STANDS. Grundig, Cadenza, Geloso, Cosmocord, Lustraphone, Reslo, etc.

CRYSTAL PEN STAND MICROPHONE complete with ball point pen—suit Geloso TR 175. Price £6 18s. 0d.

TAPES. Grundig, B.A.S.F., Emitape, Scotch Boy and Telefunken Double Play.

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PRODUCTS REVIEW



This recording studio scene is now featured on the new packs for 3M "Scotch" brand tapes

Double-play in plenty

THE NEW DOUBLE-PLAY tape has arrived in variety. Emitape and Scotch brand tape is now available in this very economical form. Both firms announced the introduction of the new, thin tape to coincide with the Audio Fair.

The 3M Company point out that a 7 in. spool will, for example, record such lengthy works as Beethoven's 9th, "Cavalleria Rusticana," and "I Pagliacci" without annoying and disturbing breaks.

There are also 5 in. and 3½ in. Scotch Boy spools, with 1,200 feet and 400 feet of tape respectively.

The base of the new tape is a thin, tough plastic with a very low print-through factor. A thin base has in the past been associated with poor quality sound reproduction, but 3M engineers have achieved a better signal-to-print ratio and also better high frequency response.

The new tape has also been dry-lubricated by an exclusive silicone process, so there will be no quality loss through frictional wear on sensitive recording heads.

Simplicity in splicing

IT MIGHT be said of the latest splicing device, the "Editape," that "the idea is everything." It consists of a simple piece of grooved metal, 4 in. by 1 in., which can be screwed down to the tape deck. But the groove has a special profile so that the tape, when pressed in with the forefinger, is firmly held and will not slip. With a razor-blade, guided by a machined slot, a diagonal cut is then made, and joining tape applied.

This is claimed to be the simplest possible means of making an accurate splice.

The splicer is available from the manufacturers at 7s. 6d.

Sound Developments, 9, Osbourne Road, Kingston-upon-Thames.



In this feature every month you can check

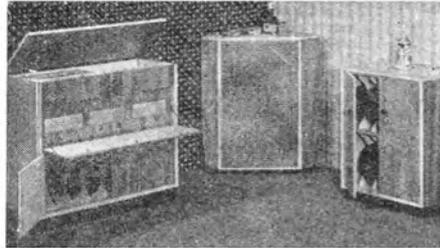
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AMPEX AT £271

FULL DETAILS are now available of the Ampex recorders which have become available for the first time in this country through Rank Cintel Ltd. There are three basic recorders and the prices range from £250 for the 601 7½ ips model, uncased, to £2,744 for a professional two-speed, four-channel console.

The model 601, illustrated on page 45, is available in half-track, full-track and stereo versions, all at 7½ ips and the prices, respectively, are £271, £271 and £426. They are also available, uncased, at a little over £20 below these prices.

The manufacturers claim that, at these figures, Ampex recorders cost less per hour of use than any other machine you can buy, performing within original specifications for many years with a minimum of adjustments or parts replacements.

The 601 monaural has separate record and playback amplifiers, level meter, separate erase, record and playback heads (the playback head with a gap width of .00025 in.). It has low impedance output and plug-in low impedance input and the tape tension is controlled to an eight-ounces maximum. Frequency response is quoted at 40 to 15,000 cps, down no more than 4 dB at 15,000 and within plus or minus 2 dB from 40 to 10,000 cps.

Signal to noise ratio is given at over 50 dB for the half-track head, and flutter and wow at below 0.17 per cent.

The 601-2, the stereo version, provides a separate mixing facility on each channel, between microphone and other inputs, during recording.

The 601 weighs only 28 lb. and the 601-2 weighs 42 lb.

Rank Cintel Ltd., Worsley Bridge Road, Lower Sydenham, London, S.E.26.

High claims for Elektron

HIGH CLAIMS are made for a German machine, the Elektron EMG9/2, which has just been introduced here by Technical Supplies Ltd., for sale at £49 17s. 6d.

This recorder is a development of a design produced for a German government order, with emphasis on mobility, robustness and simplicity of operation.

It is a single-speed machine—3½ ips; it has a claimed frequency response of 30 to 16,000 cps; wow and flutter combined, are quoted at better than 0.15 per cent; and signal to noise ratio at better than 53 dB.

Maximum reel size is 5½ in.

The frequency range is attributed in part to the high quality sound head—with a minimal gap of less than .0016 in.

Five push buttons, volume and tone controls, a monitor speaker switch, and a switch controlling the three-way input provide operating control. There is a built-in speaker, and facilities for using a larger extension speaker.

The machine weighs 17½ lb. and measures 13 x 10½ x 6 in.

Technical Supplies Ltd., 63, Goldhawk Road, London, W.12.

Another Telefunken model

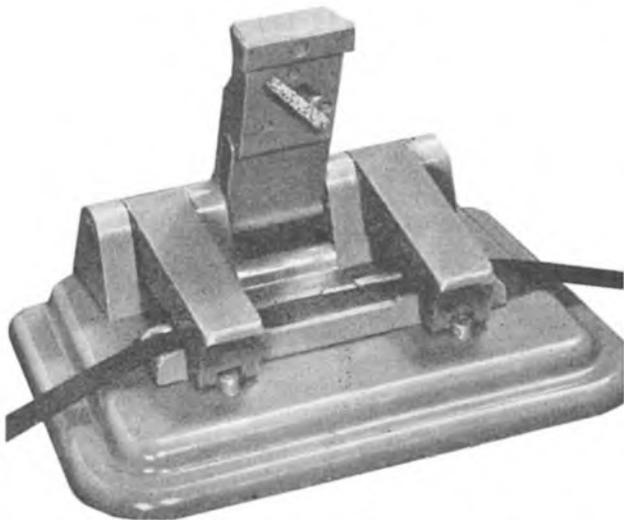
A TELEFUNKEN recorder, the 75-15, which will give six hours 20 minutes playing time at 1½ ips using double-play tape, has been announced by Welmec Corporation. The 75-15 has the super-sensitive braking system common to all Telefunken machines.

It costs 54 guineas, excluding microphone. It has tone control for reduction of treble response, electrical remote control start/stop, and 5½ in. tape spools. A remote control back-spacer is available and trick control can be added.

Frequency response is quoted at 60 to 16,000 cps at 3½ ips and 60 to 9,000 cps at 1½ ips, and signal-to-noise ratio at 45dB. The rewind time for 1,780 feet is four minutes 15 seconds.

The Telefunken 85 model is being continued. It was the first recorder to be sold with an individual certificate guaranteeing frequency response.

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



The Sonocolor splicer

TAPE RECORDERS (ELECTRONICS) LTD. are now marketing the Sonocolor Splicer, plus jointing and editing accessories. The jointing block and cutter, with the reference number CM6, costs £1 12s. 6d. There is a jointing and editing accessory kit, at £3 12s. 6d., containing Splicer CM6, three spools of leader tape, printing tape, jointing compound, ten safety clips and spare parts for the splicer, etc., in a fitted case.

Tape Recorders (Electronics) Ltd., 784-788, High Road, Tottenham, London, N.17.

THE STEREACORDER

A NEW REFLECTOGRAPH, Model 570 "Stereacorder," is claimed to be the only one at present available which records stereophonically, monophonically and two-channel. Stereo records can be reproduced by connecting a stereo pick-up.

The Stereacorder has four amplifiers. The lid divides into two sections, each containing a Goodmans monitor speaker, 10 feet of lead and a jack plug. Under the tape deck at each side of the front of the case are a record and playback amplifier, each channel having a peak level meter and separate record and playback gain controls. There are inputs for microphones and radio or pick-up. Two output sockets enable the 3-watt undistorted playback amplifiers to be connected to external speakers or the output to be taken at high level to be fed into an external amplifier.

The Reflectograph tape deck includes variable speed between 8 and 3½ ips, with a stroboscope indicating the precise speeds of 7½ and 3½ ips. The deck accommodates up to 8¼-inch reels and has a clock-type tape position indicator and Bib tape splicer. The three heads include a full track erase and stacked (in line) separate record and playback heads.

A switch on the instrument panel of each channel allows instant comparison while recording between input signal and the signal recorded on each channel. Cross-talk is given as better than 45 dB.

With two-channel recordings two entirely different programmes can be recorded monophonically and can be played back either simultaneously or separately. It is possible to record a programme on the right-hand channel and then re-record on the left-hand one. One programme can be superimposed on another on the left-hand channel.

Price in Britain of the Model 570 is 149 guineas. Accessories include two screened jack plugs, a spare reel and an E.M.I. stereosonic demonstration tape, including a metronome signal for setting up the playback amplifiers.

With the lid on, the transportable case is 11¼ ins. high, 14¼ ins. wide and 29 ins. long. Weight is 65 lb.

Available to special order is Model 470, at 139 guineas, the same as the Model 570 but without the case and loudspeakers—for installation in furniture.

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Another with Monardeck

FIDELITY RADIO have produced a low-price recorder, the "Argyll," selling at 29 guineas, including crystal microphone. It incorporates the "Monardeck" T.D.I. made by Birmingham Sound Reproducers, which is illustrated on page 45.

There is a magic eye recording level indicator, the tape speed is 3½ ips and reel size 5½ in. Frequency response is quoted at 60 to 10,000 cps, signal-to-noise ratio at 50 dB, and wow and flutter at 0.4 per cent R.M.S.

Output of the amplifier—which may be used as a straight amplifier—is 4 watts, and the loudspeaker is a 7 × 4 in. high flux.

There are input sockets for microphone or diode radio loudspeaker or gram pick-up, each with its own compensation and own variable control, and an output socket for a 3-5 ohm loudspeaker.

The "Argyll" has facilities for mixing both inputs simultaneously for superimposition, and for monitoring by using the internal speaker with a variable control. An adjustable tone control and an automatic locking device to prevent accidental erasing are also features. Fast rewind time is three minutes for 850 feet.

Dimensions of the cabinet, which is in various colours and has storage space for microphone, mains lead and two spare reels, are 17 × 13½ × 7¼ in., and the weight, without reels or microphone, 22 lb.

Fidelity Radio Ltd., 11-13, Blechynden Street, London, W.11.

Daystrom arrive with kits

HI-FI EQUIPMENT, including a stereo amplifier and radio receivers, test instruments and transmitters are now being marketed by Daystrom Ltd., a subsidiary of the United States group Daystrom Incorporated, in "build-it-yourself" kit form.

The models, known as the Heathkit range, were shown at the Audio Fair. Kits of parts include a manual with easily-followed step-by-step instructions and illustrations for assembly.

Daystrom Ltd., Glevum Hall, Gloucester.

The new Collaro deck

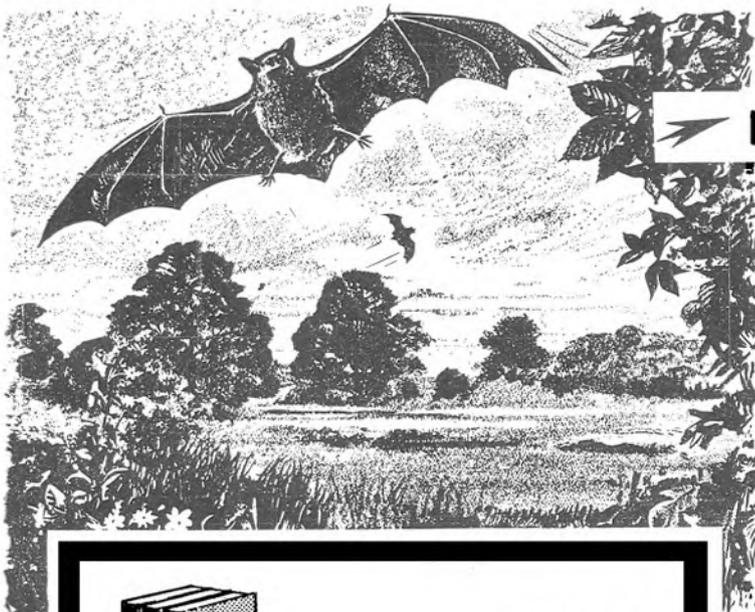
WE REGRET THAT in the Audio Fair review in our last issue we reported that the new Collaro Studio Tape Deck would be shown to the public at the Fair.

In fact, this unit will not be available to manufacturers for some weeks yet, and will not be shown to the general public until later in the year.

Truvox

TRUVOX LIMITED ask us to make clear that reports of the liquidation of Truvox Holdings Ltd. (not published in *Tape Recording and Hi-Fi Magazine*) do not affect the activities of Truvox Ltd., makers of tape recorders, of Neasden, London, N.W.10, and Harrow, Middlesex. Truvox Holdings was liquidated for administrative reasons.

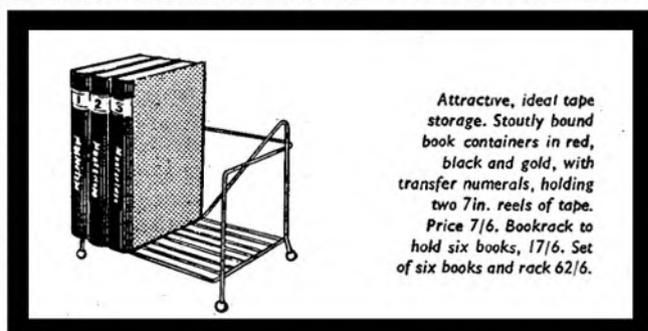
THE PRICE OF the Easysplice tape splicer is 6s. 9d., not 6s. 3d. as inadvertently given in the April issue. Makers are Easysplice, 30, Lawrence Road, Ealing, London, W.5.



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Mastertape in the News! Mastertape is now supplied for use with the British Communication Corporation Mars Recorder in service with the United States Air Force.



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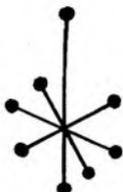
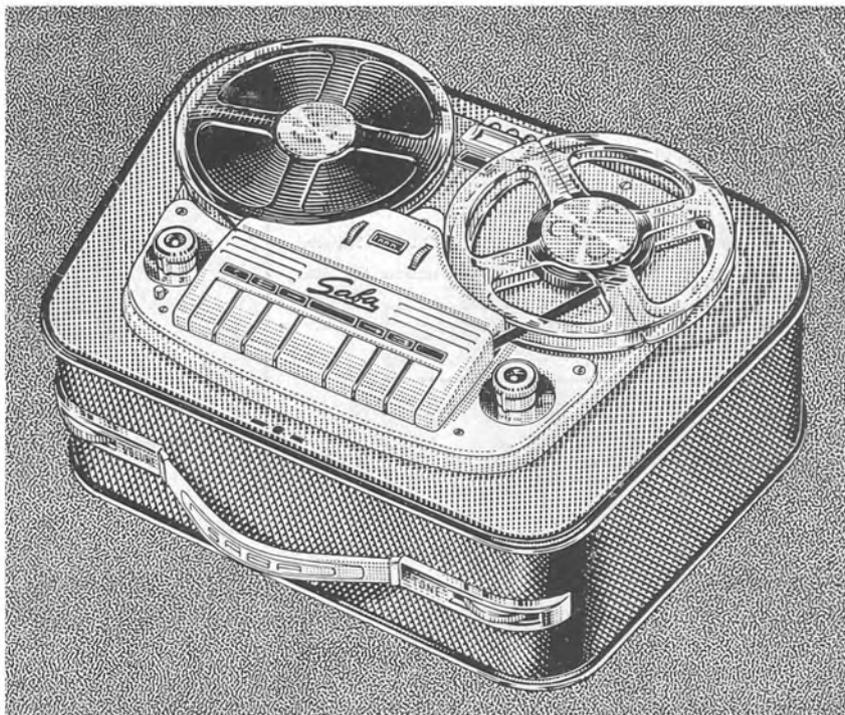
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Times to tune in . . .

AMONG symphonic works and concertos to be broadcast during this month is the **Tchaikovsky Violin Concerto**, played by Bronislav Gimpel. The programme will be relayed from the Kendal Festival on 6th May, and can be heard in the Home Service at 8 p.m.

Another of Tchaikovsky's works, his **Fourth Symphony**, can be heard in the Sunday afternoon concert in the Home Service on 26th April.

There are two special Elgar-Delius-Holst concerts. The first includes Delius's **Sea Drift** (29th April), the other Holst's **The Planets** (13th May). Both are to be broadcast in the Home Service at 8 p.m.

Klemperer's performance, on 24th May at the Royal Festival Hall, of Bach's **St Matthew Passion** is to be broadcast in the Third Programme.

In the "Background to Music" series on 9th May, Alec Robertson will speak about Elgar's life and music. A week later he will discuss Elgar's **Violin Concerto**. Both programmes will be at 4 p.m. in Network Three. Subsequent broadcasts of works by this composer

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programmes which we
think will interest
readers

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will include his **Enigma Variations** on 13th May, and his **Violin Concerto**, with Alan Lovelace, soloist, on 17th May. Sir Malcolm Sargent will conduct the B.B.C. Symphony Orchestra on each occasion.

The City of Birmingham Symphony Orchestra under Sir Adrian Boult will perform Elgar's **Sea Pictures**

on 22nd May. All three broadcasts will be in the Home Service.

A Richard Strauss programme, under the direction of Peter Hermann Adler from New York, will be broadcast in the Home Service on 27th May.

The B.B.C. have arranged two concerts for Sunday evenings. On 24th May they present the Royal Liverpool Philharmonic Orchestra with the Winner of the International Piano Competition; and on 31st May, a relay from Stirling of the Scottish National Orchestra under Muir Mathieson playing the **César Franck Symphony**.

Operas this month to be broadcast in the Third Programme include the English version of Tansman's **Le Serment** (The Solemn Oath). Stanford Robinson conducts the Royal Philharmonic Orchestra in this recorded studio performance on April 20th.

Geoffrey Dunn's English version of Nielson's **Saul and David** will be performed for the first time on May 10. Ian Whyte will conduct the B.B.C. Scottish Orchestra.

Le Jongleur de Notre Dame, by Massenet, is to be presented in a recording from Holland on April 26th. Jean Villars, Leon Combe and the Chorus and Orchestra of the Netherlands Radio will be conducted by Albert Wolff.

Dvorak's **The Devil and Kate** performed by soloists, Chorus and Orchestra of the Prague National Theatre, conducted by Zdenek Chalabala, will be presented on gramophone records on May 17.

NEWS FROM THE CLUBS

The Federation

THE first year of Federation activity is ending and plans for the first Annual General Meeting are being made—it will be in Coventry on 20th June. Further information will be released later, in particular with regard to non-participating observers from all clubs.

There has been some re-organisation within the Committee in order to spread the heavy load of correspondence. Alan Stableford is acting as Assistant Secretary, and all legal, technical and publicity matters should be addressed directly to him.

Readers who wish to start clubs in their district are reminded that the Federation is able to give practical help, and requests for such help and advice on all aspects of club management can be made to the Secretary.

(Secretary: Roy Penfold, 48, Holbrook Lane, Coventry. Assistant Secretary: Alan Stableford, 9, Normandy Terrace, London, E.16.)

Bournemouth

AFTER some publicity had been given to Bournemouth Tape Recording Club in the local press, fifteen visitors were welcomed to the meeting held last month at St Aldhems Hall. They heard two of the Philips machines, as well as a demonstration of stereo.

Members plan to visit the projection room of a local cinema, and to the ITV Studios at Southampton.

(Secretary: Hedley R. Jones, 442, Poole Road, Branksome, Poole.)

Catford

THIS club has been officially formed and its officials elected. Mr. John W. Harris is to be Treasurer, and Mr. D. C. Harker will be the Secretary. Meetings will be held fortnightly, on Fridays at 8 p.m., in the Ravensbourne, Catford. Next meeting on 1st May.

It is pointed out that non-technical members are as welcome as technicians.

(Secretary: Mr. D. C. Harker, 62, Barmeston Road, Catford, London, S.E.6.)

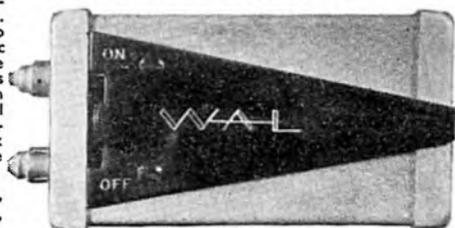
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Moreover there is no hum pick-up, magnetic or otherwise and the background noise is negligible . . . I can imagine, that it will prove useful for the input to the playback amplifier of some tape recorders."

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



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Percy Wilson, M.A.
The Gramophone,
August, 1958 issue.
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Chesterfield

A FILM, shown by Mr. J. Waters, entitled "Around the World by B.O.A.C." was featured at a recent meeting. The film was followed by a tape "Around the world with a tape recorder," presented by Cyril Newman. This included the voices of his tape correspondents and ended with a message from Harry Matthews, President of World Tape Pals.

Contact has been made with the clubs in Edinburgh and London and an exchange of tapes is arranged. Members are also to receive a tape from Australia. World Tape Pal Norman Pugh, of Sydney, is to send a programme of 35mm. slides, with tape commentary.

The club is developing a drama group, for which George Hooley is now writing a play, specially for tape.

Bill Kemp and Geoffrey Foster, both with first-class equipment, are providing a tape-to-disc service for club members.

(Secretary: Cyril Newman, 9, Devonshire Villas, Barrow Hill, nr. Chesterfield, Derbyshire.)

Coventry

WITH an increase in membership, the club has found it necessary to find a larger club room. Future meetings are to be held at the Post Office Social Club. At one of their recent meetings, members heard tapes presented during the first year of their existence. Recorded interviews of Beryl Reid and Bobby Howes were played.

Another budgerigar has found its way into the club. Mr. Cawkill, a new member, recently introduced his pet Peter on tape.

(Secretary: Roy V. Reynolds, 1, Thurlestone Road, Radford, Coventry.)

Dublin

A CLUB has been formed to cater for the needs of Irish enthusiasts. It is to be known as the Irish Sound Recording Association. Meetings are to be held monthly at the address given below.

The Secretary of the Society is Barry J. Hardy. Further information may be obtained from him at 6, Capel Street, Dublin, Ireland.

Dundee

DUNDEE Tape Recording Club recently held its first A.G.M. Officials elected include Leonard Douglas as chairman, and Walter Coupar as treasurer. Charles Aitken continues as club secretary. Among decisions taken at the A.G.M. was that the club should become affiliated to the National Federation.

At a later meeting, members heard a tape produced by the Secretary, part of which demonstrated the Brenell Mixer Unit. The other section of the tape was made by suspending a moving coil microphone from a window, two storeys high, above the pavement.

A representative of the local press was present at this meeting to hear a discussion on outside recording. Extracts from the B.B.C. "Sound" programme, dealing with this aspect, were played. Their outside recording activities now have the advantage of a power-pack (a car and battery).

(Secretary: Charles Aitken, 59, Strathmartine Road, Dundee, Angus.)

Leicester

THE latest meeting of Leicester Tape Recording Club produced three Grundig machines for demonstration purposes. Mr. Ford operated his TK 35; Mr. Derbyshire his TK 20; and the TK 5 was shown by Mr. Frost.

Club membership has risen to twenty. Peter Starie says there is still room for many more. Meetings are held at three-week intervals; next meeting 24th April.

(Secretary: Peter J. Starie, 56, Minehead Street, Leicester.)

London

THE tape production section are continuing the instructional series on how to make a tape. Members are active recording interviews with the various clubs and groups who meet in the Abbey Community Centre, the H.Q. of the London Tape Recording Club.

(Secretary: Roger Aslin, Fairlea, Boars Head, Crowborough, Sussex.)



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Verdik SI	45	6	5 0	3	8 4
Magnafon	45	6	5 0	3	8 4
Wyndor Viscount	49	6	19 0	3	14 2
Grundig TK20	50	6	15 0	3	16 3
Dulci-Harting Deck* with pre-amp	55	7	5 0	4	3 4
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 HM5*	82	10	12 0	6	5 8
Grundig TK35*	82	10	12 0	6	5 8
Grundig TK830/30*	100	15	0 0	7	10 0
Tandberg Stereo*	114	19	14 0	8	6 8

Maidenhead

THIS newly-formed club is progressing well, with twelve members so far. Although meetings have recently been held in the home of one of the members, they hope soon to have the loan of the local football club premises.

The local press and recorder dealers have been approached, in the hope of attracting more members.

(Secretary: Mr. G. Strong, 89, Clare Road, Maidenhead, Berks.)

Midlands

THE new library of the Tape Recording Society of Great Britain is going ahead well. Librarian Peter Eames is collecting a vast assortment of sound effects and he has just purchased a battery portable recorder for this purpose. Four tape recorders are now available to produce tapes of sound effects to members at any speed required.

Michael Nyman, of West Bromwich, has temporarily taken over as editor of *Sound Magazine*, the magazine on tape, while John Walford attends the B.B.C. College at Evesham "to learn how to produce better magazines on tape."

(Secretary: John R. Walters, 29, Pitt Street, Broadwaters, Kidderminster.)

Rugby

GUEST speakers from Coventry and Leicester clubs were present at Rugby's best attended meeting since their inauguration. About thirty persons heard a talk by representatives of the local Fire, Police, Ambulance and Civil Defence Services. Members put questions to the speakers afterwards, and the whole was recorded.

Easter activities of the club included the recording of a wedding service.

The outside recording section of the club had earlier made recordings of the "Oh Boy" stage show, which visited Rugby in March. Members of the audience were also interviewed. The recording will be added to a tape on mass media being compiled by the Warden of the Percival Guildhouse, Rugby.

Slides, with a tape commentary, on the Brussels Exhibition are to be presented at the next meeting by Mike Storey.

(Secretary: Mike Brown, 219, Clifton Road, Rugby.)

Sheffield

A DEMONSTRATION of hi-fi sound reproduction was given by Mr. M. J. Thomas at the March meeting. A Swedish pick-up and a high quality transcription motor were used to provide a sound source from long-play discs. Mr. Thomas alternated the output between a three-speaker Wharfedale sand-filled enclosure and a similar sized electrostatic unit.

(Secretary: Mr. F. Shepherd, 4, Birchitt View, Dronfield, Derbyshire.)

Voicespondence

THE U.K. section of this club announces the formation of a special section to cater for sightless members. For a start, they propose forming a panel of recorder owners willing to read material on to tape. A tape lending library is also to be established. Use of these sections is extended to blind non-members of the club.

Further details may be obtained from John L. Hughes, 10, Lillie Road, Fulham, London, S.W.6.

A tape has been prepared on the Voicespondence Club and its activities. Anyone interested in this tape is invited to send a 3 in. reel and return postage to Lee Lacy.

(English Deputy: Lee Lacy, 15, Fentons Avenue, Plaistow, London, E13.)

Warwick and Leamington

ANOTHER club has reached its first birthday. Officials for their second year were elected at the A.G.M. of Warwick and Leamington Club.

Mr. D. Randall becomes Chairman, and Mr. T. Draper is the new Vice-Chairman. Brian Race was elected Secretary, and he has as his Assistant, Mr. K. Wilkins. Mr. J. Brooks continues as Treasurer.

(Secretary: Brian J. Race, 30, Ashford Road, Whitnash, Leamington Spa, Warwickshire.)

(Continued on page 57)

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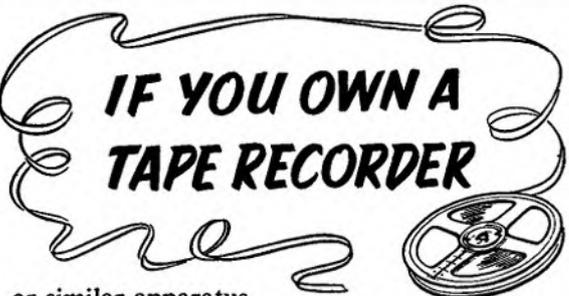
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Classified advertisements

Rate—Sixpence per word (minimum 5s.); Trade, ninepence per word (minimum 10s.); box numbers, one shilling extra. Payment with copy. Copy should be sent to Advertisement Department, "Tape Recording Magazine," 1 Crane Court, Fleet Street, London, E.C.4.

MUSIC on TAPE tape-records—3½ and 7½ ips—13s., 17s., 29s., 35s., 39s. 49s. and 69s. Dance, accordion, theatre organ, piano (popular and classical), light orchestral and operatic, Viennese and Scottish—good retail and wholesale terms—public performance—Music on Tape Limited, 6, Laurence Pountney Hill, London, E.C.4.

Grundig TK/25. Purchased 16th January, 1959 (Wallace Heaton bill shown). With GDM/111 microphone and tape. Total cost was £73 10s. Offered at £40 o.n.o. for quick sale. John Goodman. Phone MEAdway 2525 (London).

PHONOTRIX FOR HIRE. £2 per week. Box 289.

Have you anything you wish to sell or buy?

Remember classified advertising in the columns of TAPE RECORDING MAGAZINE brings results.

SIMON Latest SP4 Tape Recorder, fully guaranteed, bargain price. Holdings, 39, Mincing Lane, Blackburn.

Two S.T.C. Type 4021 Microphones complete with 4069A Jacks and Transit Cases. £10 each. Box 290.

GRUNDIG STENOGRAPHER OWNERS. Typed transcriptions. Speedy, accurate, confidential. Tabram, 34, Bradstone Avenue, Folkestone. Tel.: Folkestone 4991.

CADENZA MIKE in CASE AS NEW £8. London, 62, Queens Road, Hastings, Sussex.

John HASSELL RECORDINGS
Tape/Disc. All speeds. C.C.I.R. Studio,
21, Nassau Road, London, S.W.13.
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ONLY FROM US! Famous make stick mike listed 5 guineas only £2 14s. Save 15s. on 7 in. LP Geveart tape 35s.; 5 in. 1,200 ft. Ferrotape ex-M.O.S. listed 42s. only 25s.; 5½ in. 250 ft. for Grundig, etc., 19s. 6d. Many other tape bargains—our list will save you ££s! Outstanding secondhand Tape Recorder bargains from from Ferrograph to Walter. All new recorders supplied with Free Xtra tapes. We buy for cash or exchange Recorders, Hi-Fi equipment, Radios, Cameras, etc. Specialist Repair Service, E. C. Kingsley & Co., 132, Tottenham Court Road, London, W.1. EUSton 6500.

TAPE RECORDERS, players, radios, etc. (modern), wanted for cash or exchange. Callers or particulars. Cooks, 159 and 187, Praed Street, W.2. (opp. Paddington Station). PAD 6464.

TAPE RECORDERS.—Large selection of used models, most as new. Three months guarantee. Part exchanges with other machines, cameras, binoculars, etc. Ferrograph Tape, 7 in. spool, 1,200 ft. 25s. Cooks Miscellaneous Store, 159 and 187, Praed Street, W.2. (opp. Paddington Station). PAD 6464 or 5931.

FRIENDLY FOLK ASSOCIATION, 87, Terrace, Torquay.—Leading International Correspondence Hobby Club since 1943. Now included, facilities for Tapesponding. Details free.

GERMAN Conversational Tapes, native speakers, 3½ ips, 3 inch tape, text and translation 17s. or S.A.E. for details. Loraine, 14, Vega Road, Bushey, Herts.

WANTED. February 1957 "Tape Recording Magazine." 3s. paid. M. Hall, "Walcot," Yaxham Road, Dereham Norfolk.

E.M.I. Professional Portable Tape Battery Recorder two months old and guaranteed for one year. Speed 7½. Price wanted in region of 65-80 guineas. Box 287.

EXCHANGE.—New Philips 8108 for Battery Portable Recorder. Cash adjustment. Box 288.

TAPE LECTURES

(A series of monthly lectures organised by "Tape Recording and Hi-Fi Magazine" in association with Olympic Sound Studios.)

May 2nd at 3 p.m.

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Required urgently, Endless Loop for Ferrograph. Cash waiting. Box 295.

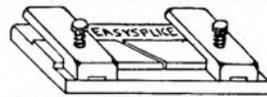
Ferrograph 2 A/N in new condition offered in exchange for good 16 mm. ciné camera. Cash adjustment. Box 294.

Export—Manufacturer's representative long experience in electrical fields, now living in Madrid, would handle products of British Manufacturer in tape recorder or radio fields. Good connections. Box 293.

MAKE EXTRA MONEY with your Tape Recorder. Mitchell, 150, Station Avenue, West Ewell, Surrey.

A MONAURAL pre-recorded tape for 30s. Also pre-recorded stereophonic tapes. Complete monthly catalogues 2s. 6d. each. Connoisseur Records Ltd., 11, Fownes Street, Dublin, Eire.

Tape splicing is accurate, simple and easy with the EASYSPLICE



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EALING, LONDON

West Middlesex

FINAL selection has been made in the signature tune contest. The "tune" to be used to introduce all official tapes was submitted by the Secretary, who received the 3-in. spool of tape.

His entry starts with the noise of a Viscount aircraft, followed by a short announcement of the Club's name and, finally, a reverberating gong note. The aircraft pinpoints the locale of the club, which is close to London Airport.

At a social held for club members, the pride of the evening was an iced cake made in the likeness of a tape recorder. It was made by Molly Thorpe and was raffled to help swell the club funds.

Club fame has spread as far afield as Portugal. The Secretary recently received an inquiry from a Senhor Prade in Portugal, who wishes to become a member.

The club has been promised a visit from Mr. Barrington-Coupe, Director of Saga Films Ltd. He will give a talk on the production of Saga Tapes, with an illustration of some of the tapes included.

The new Treasurer of the club is Cecil Pearce. Club membership now tops the thirty mark.

(Secretary: *H. E. Saunders, 20, Nightingale Road, Hampton, Middlesex.*)

Wirral

THE Wirral club is another that has recently held its inaugural meeting. The first Chairman is Gerald Sweeney, and the Secretary is Meryl O'Donnell.

Already, members have been entertaining local hospitals. They are now looking for amateur musicians who can record for the club. All inquiries should be address to *Meryl O'Donnell at 385, New Chester Road, New Ferry, Chester.*

World Tape Pals

THE get-together of World Tape Pals has been fixed for the period 20th June to 5th July at Schliersee, near Munich, Bavaria. Further information can be obtained from Dennis Cooper, 14, Guildford Street, London, W.C.1.

Len Watkins has been approached by the Irish Association for the Blind who request the services of French-speaking tape enthusiasts. Letters from interested readers should be addressed to Mr. J. P. Neary, The Irish Association for the Blind, 8, North Great George's Street, Dublin, Eire.

(U.K. Representative: *Len Watkins, 40, Ravenslea Road, London, S.W.12.*)

New Clubs

FOR the information of those who are as yet unconnected with, or have no clubs in their area, we publish below a list of areas in which there are enthusiasts keen to start a club:—

Mr. P. E. Newell, "Tilly Whim," Milborne, St. Andrews, Blandford, Dorset.

Michael P. Walker, 67, Victoria Road, Halifax Road, Dewsbury, Yorkshire.

Mr. R. W. Hayward, 79, Groveway, Dagenham, Essex.

Mr. C. Francis-Griffiths, 4, Garden City, Penydarren, Merthyr Tydfil, Glamorgan.

Mr. R. V. Huddleston, 33, London Road, Grantham, Lincolnshire.

Mr. H. J. Wheldon, Kays Business Services Ltd., Tipping Street, Stafford, Staffs.

Mr. B. H. Scott, 173, Banbury Road, Oxford, Oxfordshire.

SCHOOLS CLUB

A YORKSHIRE schoolmaster has suggested that a Schools Tape Recording Club should be formed. Its objects would be to put schools with recorders in touch with one another, and to disseminate information and ideas on the use of tape for school purposes.

Membership could also be offered to schools overseas, especially in the Commonwealth.

We would like to have from teachers their ideas and suggestions for such a club. Although we would be willing to give help and advice for the project, we would not be able to undertake the running of the club. But after reading through the correspondence, we could arrange a meeting of school representatives.

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Pause control for momentarily interrupting recording or playback.

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Provision for full size 7-in. spools. Built-in facilities for mixing all inputs.

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Three knobs for simple operation of:-

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Philips EL3527	40	19	0	3	3	0	3	3	0
Brenell Three Star.....	60	18	0	4	13	0	4	13	8
Brenell Mk. 5.....	67	4	0	5	4	0	5	3	4
Wyndor Viscount.....	51	9	0	4	1	0	3	19	0
Walter 303.....	44	2	0	3	8	0	3	7	10
Elizabethan Essex.....	68	5	0	5	5	0	5	5	0
Elizabethan Mayfair....	75	12	0	5	17	0	5	16	3
Elizabethan Escort.....	47	5	0	3	15	0	3	12	6
Philips AG 8108.....	65	2	0	5	2	0	5	0	0
*Telefunken KL75K.....	52	10	0	4	1	0	4	0	9
*Telefunken KL85K.....	78	15	0	6	3	0	6	1	0
*Grundig TK30.....	75	12	0	5	17	0	5	16	3
*Grundig TK25.....	65	2	0	5	2	0	5	0	0
Elizabethan F.M. Tuner	17	0	0	1	7	0	1	6	7

*Microphone Extra

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Wharfedale Super 12 FS/AL ...	£17 10 0	£1 15 3	£1 10 2	£1 1 0
Goodmans Stereophonic Bowl Unit ...	£8 8 0			
Goodmans Axiom 300 ...	£11 5 9	£1 4 0	19 4	13 6
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Ferroglyph 3AN ...	£82 19 0	£8 9 0	£6 19 8	£4 15 3
Veritone Venus ...	£69 6 0	£6 19 0	£5 16 5	£3 19 7
Grundig TK35 ...	£86 2 0	£6 13 6	£7 8 5	£5 3 3
*Sound 555 ...	£68 5 0	£6 17 3	£5 17 8	£4 1 0
*Brenell 3 Star ...	£60 18 0	£6 8 0	£5 1 9	£3 7 5
*Grundig TK20 ...	£54 12 0	£5 12 0	£4 11 6	£3 2 8
Telefunken KL75K ...	£52 10 0	£5 5 0	£4 8 3	£3 0 5
*Sound 444 ...	£47 5 0	£4 14 6	£4 1 6	£2 16 9
*Verdik ...	£47 5 0	£4 14 6	£4 1 6	£2 16 9
*Sound Belle ...	£27 6 0	£2 16 0	£2 5 9	£1 11 4
*Complete with Microphone				
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Decca Stereo Pickup ...	£22 0 0	£2 4 0	£1 18 0	£1 6 5

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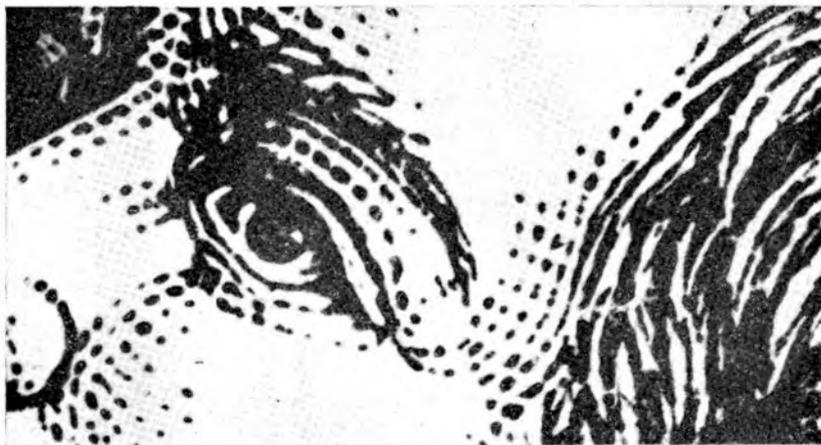
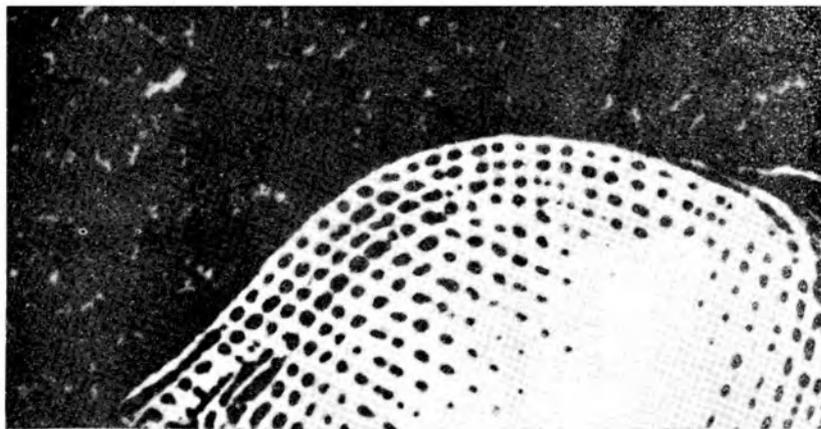
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