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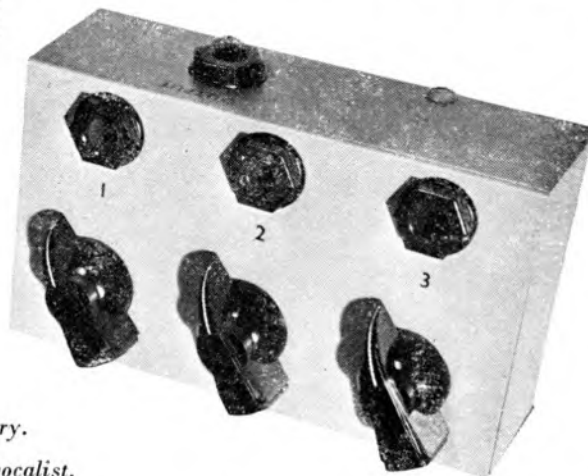
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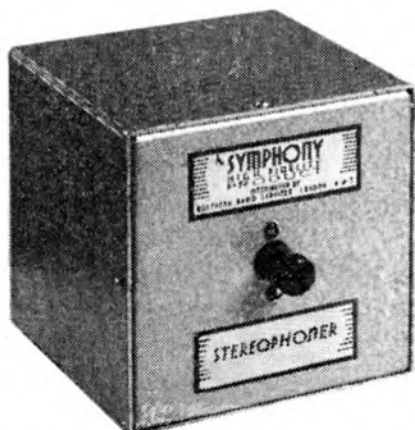
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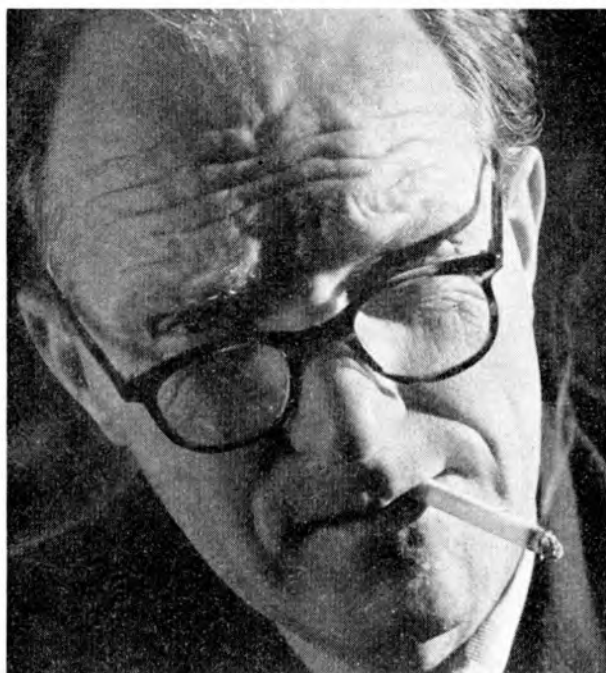
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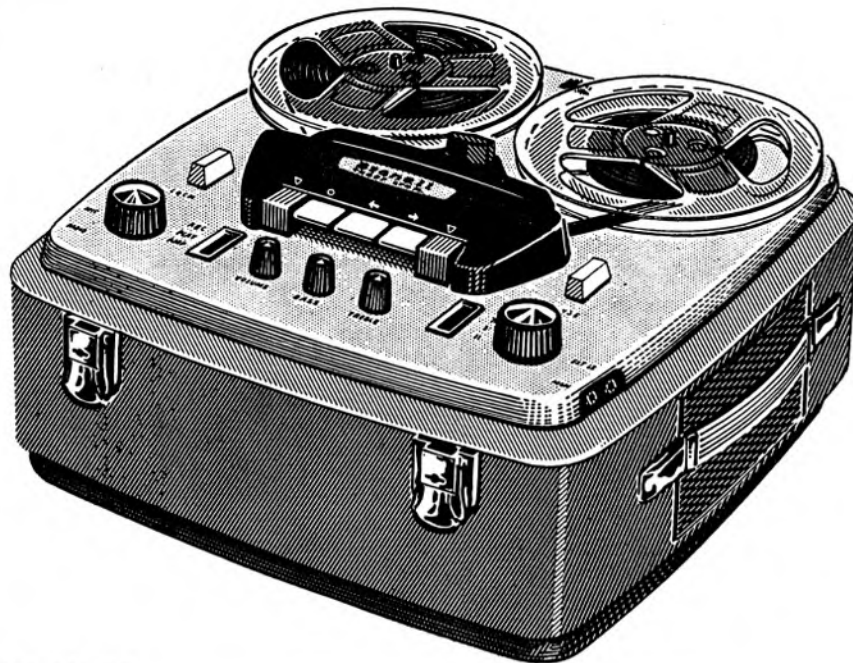
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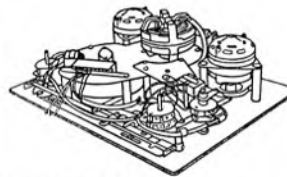
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# THE NORTHERN AUDIO FAIR

## *The emerging pattern*

**T**HE Northern Audio Fair has more than kept pace with the general upward trend of public interest in Tape Recording. In addition to the increasing numbers of tape recorder exhibitors, the general impression gathered is that many of them are actively planning extensions to their manufacturing facilities in order to meet the heavy demand for their products.

Although there is certainly no clearly defined border between classes or types of machine, a pattern does seem to be emerging which divides machines into the following groups: Professional and semi-professional, good performance general purpose at about £50 (including such features as push-pull output, superimposing facilities, and pause control), popular priced simple machines, and battery portables.

There is a noticeable increase in the number of machines fitted with superimposition facilities this year. The Trix "Everest" is a good example of this, a simple control allowing the new recording to be made above the background of the original. At 49 gns. the quality of reproduction from its built-in 7 in. x 4 in. elliptical speaker was above the average.

Three motors and three speeds are employed, 1½, 3¼, and 7½ ips. Provision is made for adding a stereo or monitoring head. Other recorders, by Trix, range in price from 29 gns.

The Philips AG8108 is a well engineered recorder of neat appearance. Nine push buttons control operations, which include an effective pause control. A foot operated extension to this control is available as an optional extra. A three speed model, the AG8108 costs 62 gns. Also exhibited by Philips was their model EL3527 at 39 gns. A single speed of 3¼ ips is used, allowing a total of 90 minutes playing time using long-playing tape. A modulation level indicator is included, and although a tape position indicator is not normally fitted, an extension indicator may be obtained coupled to one of the spool pulleys via a short length of Bowden cable.

Stereophony was well to the fore throughout the exhibition, and an example of first-class stereo on tape reproduction was given by Grundig. The model TK55 reproduces stereo or monophonic tapes, but will record monophonic only.

This is a three-speed high fidelity machine at 92 gns.

For those who wish to record their own stereo, the more ambitious TK60 will shortly be available. This has two speeds (3¼ and 7½ ips) and will cost 128 gns. High performance figures are given for this machine.

Although the whole range of Grundig models was on show, special mention must be made of their TM20 recorder. This is basically the same as the well-known TK20, but is in chassis form minus cabinet, output stage and loud-speaker, ready for incorporating into an existing high fidelity equipment. The price of the TM20 is 44 gns.

The enthusiast was able to compare the performance not only of tape recorders, but also the products of the leading amplifier manufacturers. Leak amplifiers were demonstrated with excellent realism, the Stereo 20 and Point One Stereo pre-amplifier creating the most interest. Priced at 29 gns. and 20 gns. respectively, together they provide the basis for the high quality stereophonic amplification of almost any source, including tape heads, pick-ups, and radio inputs.

One of the busiest demonstration rooms was that of Fi-Cord Ltd., the specialists in battery operated portable recorders. Their 59 guinea miniature recorder weighs only 4½ lb., and measures 9½ in. x 5 in. x 2¼ in., using two speeds of 7½ and 1½ ips.

A fully transistorized printed circuit is employed, power being obtained from a tiny unspillable accumulator which may be easily removed and charged by the charger supplied. A built-in loud-speaker provides adequate output on playback, although for the high quality reproduction of music a good external loudspeaker is recommended.

A most impressive demonstration of one application was a colour film taken on a cine-camera, and using a Fi-Cord to provide the synchronised sound.

A newcomer to the British Market, the Steelman Phonograph and Radio Co. Inc., New York. This is an old established American organisation, and they entered the Northern Audio Fair with the 55 guinea Steelman Transi-tape mentioned in our last issue. Attachments to run this battery portable from a 12 volt car battery or the A.C. mains, are available.

Good reproduction was provided by the built-in 4 in. speaker, although an external speaker is obviously required for satisfactory bass response.

Also prominent amongst the battery portables was the Stuzzi Magnette,

**BY CHARLES LANGTON**  
Technical Advisory Editor

operating from four torch batteries which will give 30-100 hours playing time per set. The two speeds of 3¼ and 1½ ips provide 60 minutes per reel with standard tape.

Two motors are used, the capstan motor being electronically governed to 2 per cent. A digital counter is included, and the motor battery condition is checked by an indicator. The size is 11 in. x 8 in. x 4½ in., weight 8 lbs. including batteries. The smart case is covered in washable plastic, and is fitted with a transparent lid. Price £72 9s.

Stuzzi also demonstrated their Tri-corder high fidelity machine. The three speeds are 3¼, 1½ and 15/16 ips, the latter giving up to twelve hours playing time per reel.

Superimposition, space for a third magnetic head, and facilities to control a slide projector and work in conjunction with 8 mm. cine equipment are incorporated in this machine.

The well-known range of Walter recorders was exhibited, their joystick control attracting as much attention as ever. The model 101 at 29 gns. and giving one hour playing time per reel proves the opinion that a large market exists for recorders having very simple controls.

The 505 at 57 gns. is, of course, much more flexible, and contains facilities for superimposition, separate input level controls for the simultaneous recording of two channels, 4 watts output is provided whilst recording may be carried out at 3¼ or 7½ ips. The model 303 at 42 gns. was also on show.

Telefunken gave a convincing demonstration of their products, and it is interesting to note that anyone already possessing a good quality loudspeaker can purchase a table model equivalent to any of the portables on show at a reduced price. The 75-15 K (portable) or 75-15 T (table) has two speeds, 3¼ and 1½ ips.

Reduction in wear is effected by the elimination of pressure pads. A digital counter and automatic stop are incorporated. Portable model 52 gns., table 45 gns.

The model 76 (K or T) was one of the few four-track machines at the fair, allowing over 12 hours per reel to be played at the lowest speed of 1½ ips. DC heating of all valves is employed, although transistors are used in the pre-amplifier. This machine costs 64 gns. as a portable, or 57 gns. table version.

Many accessories are becoming available to extend the interest and utility of tape recorders, and in general the mixer units, pre-amps, and tuner units are becoming much neater and more streamlined in appearance as well as more efficient in operation.

The Philips four-channel mixer is a good example of this. Cosmocord were showing a new medium priced stereo microphone in addition to their established range of microphones and pick-ups.



# We take the view

A DIGEST OF NEWS, COMMENT AND EDITORIAL OPINION

## The B.B.C. and stereo

MR. VICTOR WEAKE, chairman of Audio Fairs, must have known what a lively controversy he would cause in knowledgeable quarters when he criticised, at the Northern Audio Fair, the B.B.C. policy on stereo. He was nothing if not bold in his strictures.

The industry, he declared, was appalled at the lack of B.B.C. co-operation. He went on:—

“It almost looks as though the Corporation is not really serious about the future development of stereophonic sound as a public service.

“We have repeatedly asked the B.B.C. to join us in promoting stereo in the public mind by expanding their live broadcasts and co-operating in exhibitions supported by the industry as a whole.

“But the answer has always been evasive.”

Mr. Weake, who is Managing Director of Pamphonic Reproducers Ltd., pointed to the support given by the French radio service to the audio industry in the popularisation of stereo.

Later, a B.B.C. official spokesman replied: “We have been doing all we possibly can to co-operate with the man who matters—the listener.”

## A problem of timing

NOW what is the truth of this matter? There is no possible doubt that the back-room boys at Broadcasting House are pressing ahead with their researches as hard and as swiftly as is possible. We know, from our contacts with them, that they are making important progress; but they are not yet satisfied that the technical achievement they regard as essential to regular stereo broadcasting has been secured.

So far as the technicians are concerned, there is no dragging of feet at the B.B.C.

What is true is that the B.B.C., on the policy-making side, might have given greater help in stimulating public interest in stereo. Here we encounter all the peculiar delicacies which are involved when a public institution finds itself

deeply involved in projects which rest upon private enterprise.

At the present time, the policy appears to be to co-operate openly and publicly if the outside organisation is sufficiently large and powerful, e.g. the Radio Show.

In other cases, great caution is often shown.

It must be admitted, though, that a real problem of timing is involved. It would not be sensible to raise expectations that cannot be immediately satisfied.

## The way to co-operate

THE B.B.C. has its heart in the right place, and we have recently had the practical proof of it. For some years radio stations on the Continent have encouraged hi-fi, stereo and sound recording amateurs with special programmes. Several stations have associated themselves with the International Federation of Sound Recording Enthusiasts (F.I.C.S.) and its associated international recording contest for amateurs (C.I.M.E.S.).

In an editorial comment a year ago we suggested that the B.B.C. should do more on these lines in this country. Its response has been magnificent.

First there is the “Sound” programme, recently promoted to a much better listening period. This is now doing much the same task as the special programmes on the Continent.

Last weekend we saw the fulfilment of the efforts of the past year, in which we are proud to have been deeply involved, to bring about a balance of interest in unified activity by amateurs, broadcasting and the industry in Britain.

When, at our invitation, F.I.C.S. and C.I.M.E.S. met for the first time in London, the B.B.C. played a generous and valuable role. The judging of the entries in the International Contest, for example, took place in the Council Chamber at Broadcasting House.

At the party which we gave at the Berners Hotel, representatives of the industry, the B.B.C., the clubs and of amateurs here and abroad met on common ground.

And then, at the end of the weekend programme, the British recording and hi-fi industry itself provided the financial backing to enable this magazine to organise, on its behalf, a special dinner.

We believe that it is by such means that the closer liaison between all interested parties is best secured. We hope to do a great deal more to help in the future.

## Note this broadcast

THERE was a quite fascinating gathering of tape enthusiasts from France, Belgium, Holland, Switzerland, Germany, and Italy in London last weekend for the annual congress of the International Federation of Sound Enthusiasts.

Entries in the International Recording Contest came from all these countries, as well as from Sweden, Austria, America and Australia. The judging was completed at Broadcasting House on Monday, after this issue had gone to Press. We shall publish full information in our next issue.

Readers will be able, however, to hear a good deal about the weekend's events, with extracts from some of the best tapes submitted in the Contest, in the B.B.C. “Sound” programme next Sunday afternoon at 3 p.m. Most of this programme will be devoted to the occasion, which was, of course, quite unique in tape recording history in Britain.

The Continental entries were of a very high standard and British enthusiasts must look to their laurels if they are to hold their own against such skilled competition.

## On the continent

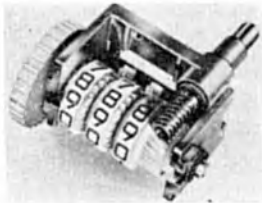
THE Contest has been running in Europe, of course, for eight years, so that competitors who have taken part from the beginning have acquired a good deal of valuable experience.

Yet it remains the case that there is a much wider and more genuine public interest in tape recording in Britain than in some of our neighbour countries.

I have just travelled 3,000 miles through several parts of Western Europe, and I have not seen—even in the capitals—the same public displays of tape equipment as are commonplace in every town and city here.

In Paris, however, I discovered that another national tape recording magazine has appeared. Earlier in the year we greeted a German bi-monthly. Now we hail *Le Magnetophone*, which is also a bi-monthly, selling at 250 francs per copy (about four shillings).

It is a brightly-produced, well-illustrated review of the latest developments in France, with detailed assessments of some of the recorders on sale there.



# POSITION INDICATORS

**A**LL manufacturers of tape recorders are following the trend towards including an accurate tape position indicator on their machines. This is a logical development, for such a device is no longer considered to be a refinement, but a necessity. Even the simplest applications of recording or replay can be carried out more quickly and conveniently if the tape position indicator is reasonably accurate, while for editing and more serious uses the ability to turn to the exact portion of the tape in the shortest possible time is essential.

An obvious application would be for locating the beginning of each piece of music or other entertainment recorded on a tape. Having once made a note (perhaps on the tape carton) of the number indicated at this point, a good indicator will be accurate enough to return the recording to this place whenever required.

With the increasing use of tape recorders for supplying commentaries and music to accompany amateur cinematography, tape positioning once more assumes importance. Not only will accurate timing be called for during the production of each recording but, as the tape may carry an hour or more of sound on each track, one tape may be used for several short films. The correct portion of tape must, therefore, be selected for each film.

In hospitals, tape recorders are used to aid in diagnosing certain complaints, speed and accuracy of tape positioning being essential to reduce the time factor. Research, industrial, and commercial uses of such machines present their own specialised timing problems, which can only be solved by incorporating an accurate tape position indicator.

Indicators fall into one of two groups, aural or visual. The aural indicators have a suitable signal, possibly in the form of a low frequency note, recorded at intervals (between items, for example). When played

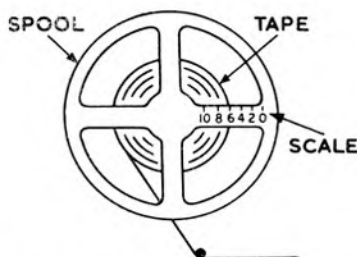


Fig. 1.—Calibrated tape spool

back during fast forward or rewind the notes will have a higher pitch which may be used to identify a particular portion of the tape. Being only approximate in character and only suitable for special uses, aural methods will not be discussed further in this article.

Marking the uncoated side of the tape with a suitable colour, number, or wording was probably the earliest form of place identification. This is an absolute method, and tape is now available having a specially prepared surface which will accept ink or pencil markings. This method is useful, but very slow in operation, it being necessary to stop the machine in order to read numbers or words.

Graduations marked radially on the tape spool as shown in fig. 1 provide a simple method of tape positioning. The reading obtained is proportional to the number of turns and is, therefore, a form of revolution counter. This means that when the spool is fairly full, a given change in indication

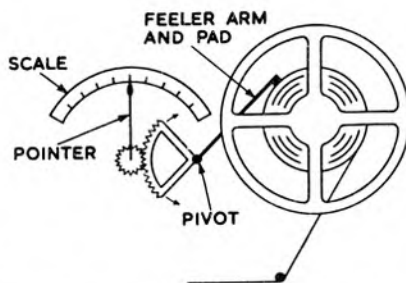


Fig. 2.—The feeler arm is lightly sprung against the tape

means that a greater footage of tape has passed across the magnetic heads than would be the case for the same change in indication when the spool was almost empty. The accuracy of repeating, therefore, is greater when the spool is almost empty than when it is full.

As the reading may only be accurate to one thirty-second of an inch with this method, and as a standard tape is 0.0023 inches thick, the system can only be accurate to  $1/32$  divided by 0.0023, or 13 turns approximately. This simple method is obviously unsuitable for precision work.

An improved version of this method makes use of a feeler arm terminating in a pad which presses lightly against the tape (fig. 2). The arm rocks backwards and forwards as the amount of tape on the spool varies, and a system of levers or pulleys amplify this movement to be indicated on a conveniently placed scale. As in the previous method, the reading is proportional to the number of revolutions and *not* the tape footage. This can be compensated for by making the lever system to the pointer non-linear, so that the calibration may now be a measure of the length of tape and, therefore, proportional to the playing time. An advantage of the feeler-arm method is that the pointer automatically reads zero when the spool is empty, thus obviating the need for a zero setter.

The clock type of indicator is superior to the above. For ease of reading, two fingers rotate over a scale calibrated in the familiar manner of a clock, having twelve divisions, each divided into five. For one complete revolution of the "hour" hand, there will be twelve revolutions of the "minute" hand, giving a total effective rotation of  $12 \times 60 = 720$  "minutes." The gearing would be arranged so that this would accommodate a complete spool of tape normally supplied with the machine. Decimal scales are also available.

The drive to the clock mechanism may be by means of a pulley coupled

# POSITION INDICATORS

(continued from previous page)

**Our Technical Advisory Editor  
CHARLES F. LANGTON  
explains the importance and  
methods of "finding the place"  
on a recorded tape.**

to one of the tape spool spindles, in which case the reading is proportional to the number of spool revolutions. A better method is to couple to the capstan mechanism, for the indication will now be proportional to the tape length. The load imposed by a clock-type instrument is very light and constant. This is in contrast to the feeler-arm type, the load of which depends upon the amount of tape on the spool.

Zero setting must be carried out whenever a spool is changed. This is done by winding all the tape on to the appropriate reel (except for the leader, of course, which remains secured round the other reel), and then setting the clock fingers to twelve o'clock. A more precise way of doing this is to mark the back of each tape a few inches from one end, and with this mark lined up against a convenient datum line on the tape deck, set the indicator to twelve o'clock.

The type of indicator used in the greatest variety of tape recorders today, and the one to which more and more manufacturers are turning, is the *counter* type. This is also known as a digital tape position indicator, a photograph of a typical instrument being shown in fig. 3. It is gear driven, the spindle being coupled to either the capstan or tape spool as in the case of the clock indicator. The counters used in tape recorders read up to 999 or 9999, and are available in various worm gear-ratios. The mechanical loading is extremely light, and the space taken up by the counter is small. The counter may be re-set to zero almost instantly, and the same remarks about zeroing apply when changing a spool as have already been made about the clock type.

The precision of repetition may be judged assuming the counter to be used as a footage indicator, and geared so that the maximum indication is reached after playing a full 1,200 foot of tape. Thus a change of one digit will represent 1.2 feet or about 14 inches. If the recorder is running at 7.5 inches per second, this will represent a maximum error of about two seconds playing time, which is good considering the fact that one track of a tape carries half-an-hour's programme at this speed.

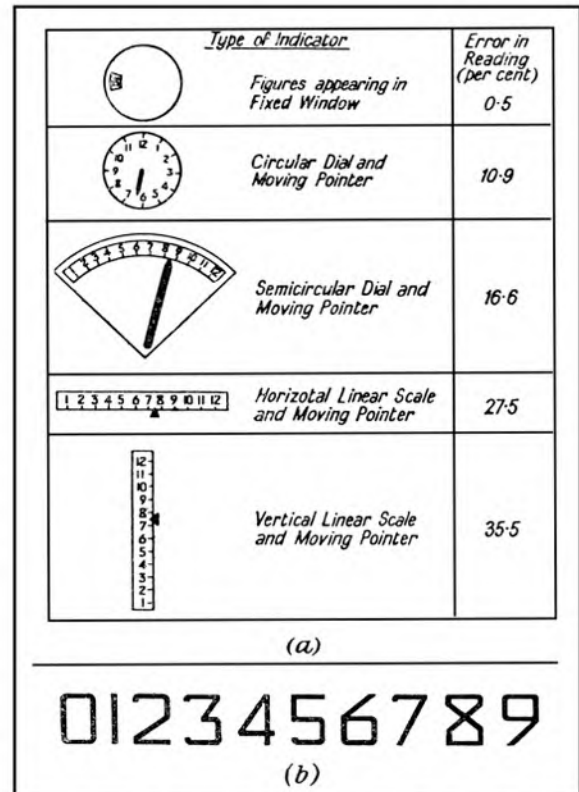
The popularity gained by the counter with its fixed-window display is based on scientific experiments conducted in the fields of instrumentation and control engineering.\* Although the human operator is capable of making errors in reading any instrument, especially under conditions of rapid reading, the diagrams at fig. 4 show the superiority of fixed-window displays in a striking manner. After hundreds of tests had been carried out by operators using each of the scales shown in the diagram, on the average an operator made one error in two hundred readings when using the fixed-window display. The next best was the circular dial and moving pointer, resulting in 10.9 errors per one hundred readings.

The advantage gained by the

counter-type display is undoubtedly due to the fact that the eyes may be concentrated on a small area the whole time, and do not have to scan a comparatively large scale. There are no distractions to catch the eye, the essential information appearing exactly as the brain requires it. Mental assessment, such as when the pointer of an instrument is between two divisions, is not called for.

One of the difficulties besetting the designer of a tape deck is that of fitting a tape-position indicator in an easily visible position which is not likely to be impeded by the user's hands when operating the controls. The small size of a counter-type indicator considerably eases this problem.

\* C. B. Gibbs "Psychological Aspects of Machine Design." *Machinery*, May 6, 1955.



**Fig. 4 (a). Relationships Between Indicator Design and Reading Errors under Conditions of Rapid Reading. (b) Recommended Designs of Numerals for Good Legibility**



# Sound Effects

First in the regular series of hints on how to get satisfactory sound effects at home are the following suggestions for getting the effect of footsteps and the sounds of wind and water.

Alan Edward Beeby, the author, has had long experience in this field. If you have a particular problem, send it to us and he will try to give the best advice.

## HORSES HOOVES

You can't beat the old tried-and-true method of two halves of a coconut shell being pounded on to either a piece of brick-tile or a shallow wooden tray of

gravel. The accompanying jingle of harness, if needed, can be imitated by having someone shake a baby's pram-harness (the type with bells on) in time with the hoof-beats.

## FOOTSTEPS

Sounds simple enough, but can be a bit dodgy. Having somebody clump their way round the room gives an unnatural "booming" effect. My favourite trick is plastic thimbles placed on the first two fingers and tapped on to either a piece of brick or hardboard. Two taps close together for each foot.

## SOLDIERS MARCHING

Simple. Take an empty 7 in. cardboard tape-box, fill one-third full with dried peas and seal up. Shake from side to side.



## WIND

Blowing on the microphone is useless. Moisten the lips, part them slightly and lay the index finger across the opening

horizontally so as to allow the breath to escape from either side. Now, instead of blowing, gently suck the air in. Got it?

## WINDOW SMASHES

One-way street here, I'm afraid. All substitutes sound corny. Simply beg, borrow or steal a piece of glass . . . and break it. In the case of a large shop-window being smashed, buy a ready-made professional recording. It's much cheaper! Also, you may find that the local police do not share your passion for realism!

## WATER

A rippling or lapping effect, of course, is easy. Just wriggle the fingers about in a bowl of water. By the way, use a polythene bowl, if possible. Enamel bowls are apt to give an unwanted ringing sound. If you are stuck with an enamel bowl, line the inside with a thick towel before pouring the water into it.

Splashes, especially big ones, can be a problem if you don't want to flood the kitchen. My advice would be to take your recorder along to your local outdoor swimming pool during an off-peak period and tape one or two for future use. You're sure to find a power point handy somewhere; but be sure to check on the possibility of the place running a DC mains supply. Quite a few of them are. Having recorded your splashes, these can be "dubbed" when required with the aid of a second recorder.

## Advice Bureau

In each issue we shall reprint one specimen question and answer dealt with by our Advice Bureau. Others will be dealt with by post. When sending queries use the coupon below.

**Q** The instructions enclosed with your *Tape Recording and Hi-Fi Magazine* Test Tape state that the replay heads should be de-magnetised. I have a Truvox deck and type C amplifier and the amplifier specification states that the record/replay switch has a central position which ensures that the heads do not acquire permanent magnetisation.

I have studied the specifications of more expensive recorders, but I have never seen any reference to a facility for de-magnetising the heads.

Is it to be taken for granted that "top class" machines have this facility?—**R.L.A.L., Liverpool.**

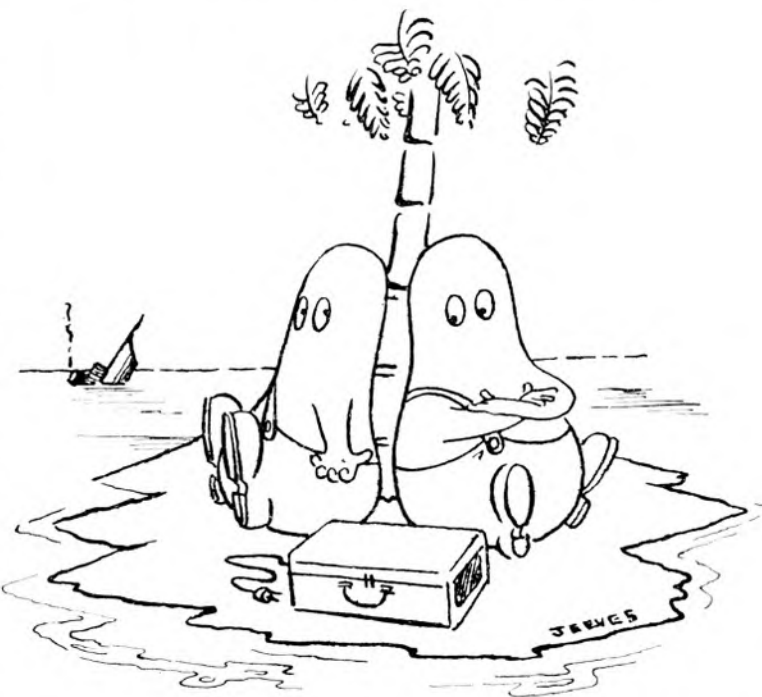
**A.** Most record/replay heads are made of Permalloy or a similar ferrous material and are liable to become magnetised after a time.

In some makes of machines, the Truvox for example, the selection knob is moved slowly from record to rewind position, the currents in both the record head and the erase head die away slowly, this subjects the heads to decreasing magnetisation. All better-class tape recorders have this arrangement.

Even so, the heads can still become magnetised. To overcome this, it is usual to use a device called a "defluxer." This unit will de-magnetise a head very effectively.

TAPE RECORDING AND HI-FI  
MAGAZINE ADVICE BUREAU  
NOVEMBER 4th, 1959

## LAUGH WITH JEEVES



"I told you to get a battery-driven model"

# TAPING in the CARIBBEAN SUNSHINE

As winter settles over Britain, we give you this glimpse of tape recording in sunnier parts by a team led by B.B.C. staff training instructor John Cordeaux.



Above—On a beach in Grenada. A pretty interviewer puts Trinidadian Max Cuffie quite at ease.



Left—The Fi-cord puts to sea, on the back of a West Indian broadcaster bound for the tiny island of Carriacou, to collect actuality material.

Below—John Cordeaux talks to singers and dancers on Carriacou. A few minutes later these middle-aged ladies gave a frenzied performance of the famous "Big Drum" dance, a unique relic of West Africa.



**J**OHAN CORDEAUX, an overseas instructor in the B.B.C. Staff Training Department, has travelled in many parts of the Commonwealth running training courses "on the spot." One such assignment recently took him to the West Indies, and he took a miniature Fi-Cord recorder along with him.

In Grenada Mr. Cordeaux and an assistant ran a course for twelve broadcasters from all parts of the West Indies Federation. One of the pieces of field work was a rough sea passage in the schooner *Island Pride* to answer the "Call of Carriacou"—an unsophisticated little island where there proved to be wonderful recording material.

Mr. Cordeaux himself brought back some of these recordings to Britain, and his programme "A candid recorder in the Caribbean" was recently broadcast by the B.B.C.

He is a great enthusiast. His first experience of radio was at the age of 10, when he operated a one-valve transmitter called the "Cordeaux Broadcasting Corporation." He put out an hour's programme each day of the school holidays—until, on discovery, the transmitter was confiscated.

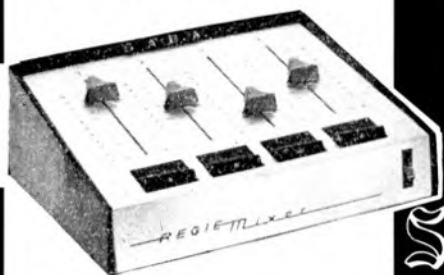
In 1946 he joined the B.B.C.

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- ★ Relay operated switches give feather-light control.
- ★ Re-winds at 30 times normal playing speed.
- ★ Speeds 3¾" per sec. for general use; 7½" per sec. for Studio-quality recording.

And many other features

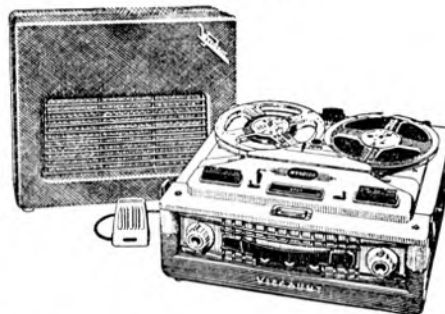


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*In his concluding article on international correspondence by tape,*

**W. PATRICK COPINGER**

*gives some valuable suggestions on*



**T**HERE are various methods of keeping records of tapes and where they are. I use a double sheet of ruled foolscap paper and rule vertical lines with the name of each Voicesspondent along the top of each column, and I write "IN" and "OUT" on each line down the left hand side of the page. I then insert the appropriate dates under the names thus:

B'day	21 NOV:			
	BILL BROWN	JOHN JONES	JACK SMITH	etc.
OUT	21/3/58		9/6/58	
IN	25/5/58	6/12/57	21/7/58	
OUT	27/5/58	12/12/57	28/7/58	
IN	16/7/58	7/2/58		

This system shows at a glance whose tape it is, where it is, how long it has been out or how long you have had it, and when it was sent or received from each member.

I also insert my friend's birthday above his name when it is known, and try to send a special tape to arrive on time.

It is a good plan to keep adequate notes of what your friend has told you and what you tell him so that you don't repeat things you've already said. It can also be very flattering to him if you "remember" something he told you several tapes back. These notes I make on ruled foolscap paper and keep in box files alphabetically under the name of the person concerned.

I also keep a printed duplicate book with every other page perforated, on which I enter the following information, which is torn out of the book and enclosed with the tape, leaving a copy in the book for my reference:—

To:  
Tape received:  
Recorded:  
Posted:  
Speed: Track 1      Track 2.  
Subject:  
File No.:              Remarks:  
From:

Under "remarks", I usually note any particular musical selections which may have been included, in order to avoid repetition and for quick reference. The

copy which goes with the tape tells my correspondent, among other things, what speed to set his tape recorder before playing back.

#### MAILING THE TAPE

The tape should be sent in the makers' box, with a piece of corrugated cardboard wrapped round it or, failing this, between two pieces of stout cardboard with edges sealed with adhesive tape to prevent the reel slipping about.

There are two ways of mailing the tape, and there are certain complicated Post Office regulations. (See *Tape Recording Magazine*, December 1957 and February, 1958).

The wrapping of the box and the contents of the tape have to be considered. Strictly speaking, if the tape is in the form of a spoken letter it must go by letter post, but if a programme of speech and music is on the tape and if it be appropriately wrapped, unsealed, it can go by Small Packet Rate. The difference in postal rate is considerable if it is being sent to the States.

I find that most Post Offices accept tape at Small Packet Rate if enclosed in a stout manilla envelope with a split pin type of paper clip fastening which may be opened easily for postal inspection. Presumably this is to enable the Post Office officials to play back your tape to ensure that it only contains music!

A small reel of tape to U.S.A. by letter post costs about 2s. 6d., but by Small Packet Rate 10d. for 10 oz. if by surface mail

#### CUSTOMS

For tapes going abroad, a Customs Declaration has to be made and forms are obtainable from the Post Office for this purpose. They are Forms CI headed DUANE, and you should insert under "Nature of the Goods"—"Magnetic Tape Recorded Message" or "Magnetic Tape Recording" and under "Value"—"No commercial", also putting the

weight in the appropriate space. This small label is then stuck to your parcel alongside the stamp or, if there is not room, on the back.

There are no Customs Duties levied on used tapes by the U.K. and, as far as I can find out, only Brazil and Spain are liable to charge duty. This, of course, can be checked with any correspondent you may wish to contact in those countries.

#### SECOND RECORDER

The advantages of tape corresponding are too numerous to list here, but you will find that before long a second tape recorder is a "must."

You are not permitted to keep someone else's tape nor must you cut pieces out without his permission and an offer to replace it with a new reel of equal length and quality. If it is your tape you can, of course, cut out any part you wish to retain and splice it on a permanent tape, if necessary, adding another bit to replace the piece cut out.

With a second tape recorder you can collect sounds or musical items of interest to your friends at any time and copy them on to his tape next time it comes in. You can copy off his tape interesting sounds he may collect for you—sounds of strange birds from his garden, of his pet canary singing, or his dog barking. You will get to know his mood from his tone of voice. All these things go to make up the pleasure of Tape Correspondence.

Happy Voicessponding.

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**PLAYBACK OF WINNING ENTRIES IN THE BRITISH AMATEUR TAPE RECORDING CONTEST**

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# Using a recorder for

## AMATEUR DRAMATICS

By Dr. Falkland L. Cary

**F**IRST, a warning. The amateur dramatic producer suddenly acquiring a recorder often appears to be mildly intoxicated by its possession. Judgment becomes unbalanced, and a belief is established that once his society possesses a machine its troubles are over, its problems solved.

It is quite true that a recorder, properly and moderately used, is a very considerable help; it is also, unfortunately, a fact that, used unwisely or immoderately, it can be almost as great a hindrance.

I was once a member of an amateur dramatic society—whose producer bought a tape machine, brought it along to a meeting where a three-act play was to be read, and announced her intention of recording the proceedings and then replaying them in order to demonstrate the faults or virtues of the reading.

Now to read a three-act play thus takes perhaps an hour

and a-half—if it is read sharply and without intervals. But if one allows for the inevitable late start, the inevitable pauses between acts, and the probable pauses for refreshments of one sort or another that are so frequently (and rightly) a part of a play-reading evening, the procedure can easily take another hour.

So a reading which starts at, say, half past seven is often not over until ten; and, as buses have to be caught, there is insufficient time for the discussion of the play that should—so imperatively—follow.

In the delirium of recorder-possession, my producer friend completely forgot that to read *and* play back must take exactly twice the time it takes to read! When the play was finished, there was time only to play a few moments of the tape before the bus exodus began.

Nothing daunted, the producer called another meeting of the readers for the following night. Apart from the fact that this hastily-arranged date did not suit many, who were thus unable to hear their voices at all, the recording revealed pitilessly the innumerable mistakes of an unrehearsed performance.

Naturally it had to include prolonged recording of the main part which, after the first interest of hearing the voice, was of no interest to anyone save the reader himself. Positioning in the room without due regard to the microphone and without the necessary change of readers' positions from time to time resulted in shockingly inconsistent qualities. The whole procedure was immensely boring and, once again, there was no time for discussion.



The recording that has not been carefully scheduled with regard to time, carefully considered as regards technical demands, and carefully contrived where speakers with "bad voices" are concerned, should, in my opinion, be avoided like the plague.

But where a reasonable degree of care and forethought has been applied, the rewards that a tape recorder brings are golden indeed.

Easily first of these is the sense of the play—of the occasion—of the atmosphere that is conveyed by hearing the piece as a whole. The intellectual luxury of leaning back and being able to consider, not merely how one's own lines are being spoken, and how other lines are being spoken, but of how *all* these lines mount to make the measure of a play. Or fail to mount.

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The author (centre) seen putting a rehearsal on to tape. Dr. Cary was the joint author with Philip King of "Sailor Beware" the comedy that ran for over three years in the West End

Photograph by Peter Phillips.

When a recording of this sort is played back, there is a template of the scene ready for the use of the minor characters. The leading player speaks from the recorder and they speak back to him. There is now the ability to rehearse the scene with a full cast, although the leading player is missing. And the important question of the speed

I use the word "luxury" advisedly, because this is the only word adequate to describe the comfort of being able to listen to colleagues in the cast without the strain of being on tip-toes to pick up one's own cues. The benefit of this relaxation has to be experienced to be believed.

The correction of faults in speech and speaking and voice-training are, of course, greatly facilitated by the use of tape. But this is a well-ploughed field indeed, and I do not think I have anything new or useful to add to what is already common practice here.

A highly valuable use of tape is in the recording of dialect. I have found this to be of great value, to be an interesting job, and to give pleasure to the individuals who are kind enough to record. I should explain that these individuals are not—emphatically not—actors or amateur actors. One wants plain speaking, untinged by any trace of histrionics. The voice-donors are ordinary individuals met in one's ordinary daily work.

The recordings can be readings or conversations—whatever the subjects most prefer.

There is no difficulty in collecting such sample dialects. One of the surprises of my life has been the extent to which a small community is made up of folk from different parts of this country, and indeed from other countries.

The amateur actor who is playing a dialect part can now be left by himself for half-an-hour or so with the machine. He is encouraged not to copy the inflections, but to attempt to get his vocal apparatus into that state of relaxation or of tightness which has been used by the original speaker of the dialect. Then he is encouraged to try to speak the dialect himself. But not, and this is important, not the words that the speaker has used. Instead, he tries his own part in the play in question, using as far as he can the sounds that he has heard from the dialect speaker.

I have used the recorder as an absent player. It often happens that one character has an outstandingly important part in a play and that the time of the player taking that part is limited. That means that those other, probably less experienced players, needing more attention are handicapped by their inability to rehearse as often as they would like with the central character. That is where the recorder comes in. A recording is made of the necessary scenes, with all the players taking part—but only this leading speaker/player speaks aloud. The others merely mouth their words.

of cue-taking comes into all this. For if the other characters are slow on their cues the leading character (generally, as we have agreed, the more experienced one) will be cutting in on them from the instrument before they have finished speaking.

Needless to say, this plan needs careful preparation to ensure that the minor characters' mouthed speeches are plainly intelligible both to the leading player and to each other. And it is also necessary to make sure that the leading player is himself picking up the cues with the certainty and reliability which alone will make the procedure useful so far as quick cueing is concerned.

This is a useful, but also, of course, a rather exceptional use of the tape machine.

On the value of tape for effects and for offstage voices and sounds I need to be cagey, for the society whose productions I direct has its own efficient double turntables and sound equipment. So, in the ordinary way, they buy their sound effect records from one of the firms which specialise in these things.

May I end with a practical example of the use of the tape recorder in a bigger theatrical field than that of the amateur?

When Philip King and I first heard our "Sailor Beware" admirably performed and (though I say it) received with wild enthusiasm at the Connaught Theatre in Worthing, some unexplained instinct prompted us to put a mike in the fireplace of the set and record the whole play. Including the audience's reaction.

"Sailor Beware" was immediately bought by a London management. But even that management found an enormous difficulty in getting a London theatre, such is the demand on these houses. To achieve the London production, it was not enough to satisfy the management who had bought the play. The theatre which was about to take it on had to be satisfied—as nearly as is possible satisfied—that they were on to a winner.

In this case, we played the entire performance of the play to the theatre board of management. At first it was a terrifying experience to see a group of glum-looking experts sitting around a tape machine. But soon terror and gloom changed to relief and pleasure; finally we had the delightful experience of hearing their own hearty laughter as the enthusiasm of the audience at Worthing communicated itself to them. Not for the first time I had reason to be thankful to the genius who invented tape recording.



# E.M.I. BACK— with four fine stereo tapes

IT was beginning to look as though E.M.I. had given up the idea of issuing more recorded tapes, but now, after well over a year's gap, come four stereo tapes which are as good as any yet issued. All four recordings have already appeared in disc form and the first two—Klemperer's recording of Beethoven's "Pastoral" Symphony with the Philharmonia Orchestra (**Columbia BTA 131**) and Beecham's recording of Rimsky-Korsakov's "Scheherazade" with the Royal Philharmonic Orchestra (**H.M.V. SAT 1021**) have already appeared in stereo as well as mono disc.

It depends enormously on just what equipment one is using how these different media compare. For myself I am using a standard Capitol stereo player—the model at £83—and for want of a really convenient stereo tape-deck I am playing my tapes through this with one of the E.M.I. decks that was used in the original—and fabulously expensive—stereo player.

Considering the limitations of the pick-up arm in the Capitol it is perhaps not surprising that the tape has much greater clarity and firmness of stereo than the disc. One fault in the tape—and I suspect that it is largely the characteristic of the deck that is to blame—is that the tape-hiss is far too high. At its worst it is almost as bad as 78 needle hiss. That is something I always noticed with the original E.M.I. player.

But allowing for that I am pretty certain that E.M.I. have stressed the top more in their stereo tapes than in their stereo discs. This has no doubt been done to counteract any limitation of range inherent in tape at 7½ ips.

Despite this contrast—brilliance on tape, warmth on tape—the balance in both is very easy on the ear in E.M.I.'s usual manner. I know that technically more brilliant recordings of "Scheherazade" will appear and in the view of some already have appeared, but I doubt whether

**EDWARD GREENFIELD**  
recorded music critic of *The Guardian*  
**reviews the new tape  
record releases**



Beecham's performance will ever be superseded. This is a work which can easily get out of hand in the soupiness of its emotions.

The bulk of conductors can be divided into two classes, those who play up the brilliance of the work and leave the emotion to take care of itself, and those who feel that in so frankly emotional a work any excess can be justified. It is typical of Beecham that he gets the best of both worlds. There is as warm an emotional depth as I have ever heard, yet Beecham finds a discipline which suggests a far better formal balance in the work than ever Rimsky-Korsakov actually devised.

Klemperer's recording of the "Pastoral" can be described in almost equally glowing terms. The opening movement has a freshness about it which reflects Beethoven's intentions perfectly and which conceals Klemperer's wonderful art—in his phrasing, his balancing and his feeling for overall structure. The slow movement also hits the right mean between warmth and sympathy on the one hand and excessive pulling-about.

The Peasant's merry-making is more controversial as a performance. Klemperer takes it much slower than usual to turn it into a sort of Laendler rather than the scherzo we usually hear. At first most listeners will find it plodding and dull, but listen to the spring with which the Philharmonia strings play and gradually the point of Klemperer's approach will dawn on you and you may well end by preferring it.

The other two tapes have so far not appeared on stereo disc, but I am already using them as demonstration recordings for showing off stereo at its best. Karajan and the Philharmonia Orchestra play selected movements from the ballet "Gaité Parisienne" (**Columbia BTB 307**) which was fashioned out of selected movements from Offenbach's operas and here perhaps the brilliance is too overpowering. The recording is on the fierce side and the effect is enhanced by the fact that Karajan is a little too military for such genuinely witty and light music. But excitement is here in plenty and from the very first bars the effect is breathtaking.

Best of all is Rudolf Kempe's truly delightful selection called "Nights in Vienna" in which he conducts the Vienna Philharmonic Orchestra (**H.M.V. SAT 1022**). The acoustic here is warmer and more reverberant—the Vienna Philharmonia's usual recording hall I imagine—but the stereo ensures that the result is still clear and well balanced. For brilliance combined with warmth this recording has few equals.

Kempe in his performances at Covent Garden has sometimes seemed rather frigid but here, he and the Orchestra have the time of their lives in such Viennese favourites as the "Fledermaus" overture, the Radetsky March, Reznicek's scintillating overture to "Donna Diana," Suppé's "Morning Noon and Night in Vienna" as well as a number of lesser-known pieces. My favourite is Lehár's "Gold and Silver" Waltz sounding so different with full orchestration worthy of a Tchaikovsky.

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## V.I.Ps PEOPLE IN THE NEWS



"You cannot sell rubbish to America. They have enough of their own. But quality will always sell." That is the thinking of Mr. H. M. Rahmer, Managing Director of Beam-Echo Ltd., of Eccleston Street, London, S.W.1., who have just announced the formation of a New York firm, Beam-Echo International Ltd.

Henry Michael Rahmer founded the company in 1953, with premises at Witham, Essex. He concentrated on attention to detail right from the initial design, through production and inspection to final packing.

This insistence on detail was derived from his early training when, as right-hand man to Professor Leon Thereomin, the head of the RCA research division, Rahmer was responsible for building experimental equipment.

Beam-Echo sold much of their output of high fidelity sound reproduction equipment to America in their first year. By 1956, the U.S. was their biggest customer, with well over 200 units a month being exported.

Now the firm is preparing to export every month at least 300 of each of their ten units. Part of the success of this huge expansion is due to the emphasis on its British manufacture. The word "Limited," not a normal business term in the U.S., has been deliberately written into the name of the American company to preserve the English touch.

Mr. Rahmer's firm devotes a lot of attention to exports. In addition to taking stands in four American trade fairs this year, they are also taking part in exhibitions in Toronto, Brussels, Paris and Amsterdam.

Their progress is displayed at Beam-Echo's new Eccleston Street showroom, which was recently opened by Sidney Harrison, the distinguished pianist and television personality.

## THE WORLD OF TAPE • A NEWS ROUND-UP

# TRADE PAPER ON TAPE

## German doctors get first-ever service

THE world's first magazine issued on magnetic tape has just been marketed in West Berlin. It is described as a monthly medical journal, the articles being spoken by leading German doctors.

Behind the new project is the vast Telefunken concern, which plans regular publication in exactly the same way as a trade paper. Although tape has often been used in the past to record specific lectures, this is the first time a deliberate policy of periodic issues has ever been attempted.

Chief advantage over printed matter is that examples of audible symptoms can be included with the descriptions and discussion ailments and their treatment.

In the first issue, articles on cardiac disease and the treatment of consumption were accompanied by appropriate recordings of varying heart-beats, as well as the sounds of patients' breathing.

This innovation in the use of tape may result in development of the technique for other professions and trades. It is considered particularly valuable for the speedy and accurate distribution of the results of research.

British doctors have for some time been experimenting with recording to assist in the diagnosis and treatment of many diseases. So far in Britain, the compilation of material into magazine form has been the work of enthusiastic amateurs.

## U.S.A's national tape repository

UNIVERSITIES and schools throughout the United States are co-operating in a vast system organised to issue educational programmes on tape. The schools determine the educational value of recorded material compiled by Dr. Anna Hyer, of the Division of Audio Visual Instruction, who is working jointly with the Association for Education by Radio and Television.

After evaluation, the master copies of accepted recordings are placed in the National Tape Repository, at Kent State (Ohio) University.

The Repository was established in 1954 and, since that date, has sent more than

five thousand programmes to schools and organisations throughout the world.

On receipt of an order, the required masters are removed from the hundreds of racks and placed on the duplicating machine. The dubbing is made, using the Magnecord single copy equipment, at either 3½ or 7½ ips. full track. Each copy is then labelled, invoiced and despatched for only a nominal charge.

The Centre also supplies tape when requested.

The University has developed a fifteen-minute film with tape commentary, entitled *Tips on Tape* to publicise the use of tape recorders in the classroom.

### NEWS IN BRIEF

A SERIES of twelve *Testimonies of the Stars* is the latest project of the Rev. G. E. Newsom, of St. Faith's Church, Maidstone. They are recordings on tapes of Christian messages by well-known show business and sporting personalities designed to help him in his work with youths who have gone wrong.

Mr. Newsom first bought a tape recorder two years ago and used it for recording choral works and church services for the sick as well as for commentaries to slide lectures.

He takes a keen interest in the activities of the Maidstone International Club and has a valuable collection of recordings from all over the world.

### NOW IT'S SOMNO-TAPES

A TAPE that teaches how to relax and sleep soundly—that is the claim of Talon Somno-Tapes, of Farnham, Surrey, who have just marketed them.

They are based on the techniques of Dr. Volney G. Mathison of Los Angeles,

but have been specially recorded in England.

The standard Somno-Tape is recorded on a 3 in. reel at 3¼ ips. The firm is also offering personalised tapes said to help the listener give up smoking or, overeating, as well as to gain self-confidence.

### A TAPE TONGUE

A GRUNDIG TK-820 provides the voice in a 6½ ft. high robot designed by a 16-year-old Russian boy and now on show at the Annual Exhibition of Economic Achievements in Moscow.

Mr. Krushchev expressed his pleasure at the robot when he visited the exhibition. Its creator, Eugene Tfanov, was assisted in its construction by 20 other pupils at his school.

Named Robert, the robot is radio controlled and was made from scraps of tin. It took a year to build and as well as "talking," it moves its arms and walks forwards and backwards.

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# The New Models



## SAGATONE 3S75

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### Manufacturer's Specifications

Price: 75 guineas. Deck: Collaro Studio.  
 Speeds:  $7\frac{1}{2}$ ,  $3\frac{3}{4}$ ,  $1\frac{7}{8}$  ips. Rewind speed: One minute.  
 Recording sense: half-track left to right. Lower track muted whilst recording monaurally.  
 Frequency response: 40-14,000 cps at  $7\frac{1}{2}$  ips.  
 Wow and flutter: Better than .4 per cent.  
 Output: 4 watts. Weight: 25 lb. (speakers 10 lb. each).  
 Size:  $16 \times 15\frac{1}{4} \times 9$  in. Max. spool size: 7 in.  
 Speaker: No internal speaker.  
 Microphone: Acos 39/1.  
 Other facilities: Superimposition, pause control, auto stop, magic eye, rev. counter, tone control, inputs for gram. and microphone.

SAGA RECORDS, 538-540, HOLLOWAY ROAD, LONDON, N.7.

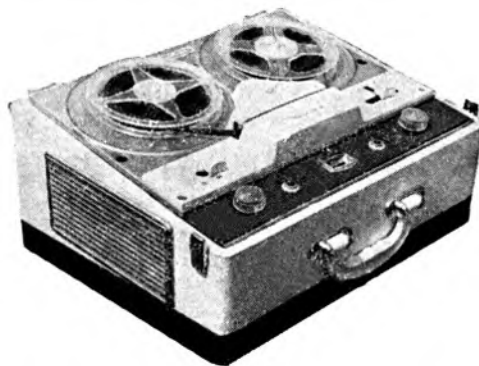
## AMPLION A224

An attractive two-tone cabinet houses the Monardeck with a performance matched by simplicity of operation.

### Manufacturer's Specifications

Price: 25½ guineas. Deck: B.S.R. Monardeck.  
 Speed:  $3\frac{3}{4}$  ips. Rewind speed: 3 minutes.  
 Recording sense: Half-track left to right.  
 Frequency response: 50-8,000 cps.  
 Signal-to-noise ratio: Better than 50 dB.  
 Wow and flutter: Better than 5 per cent.  
 Output: 3 watts. Weight: 16¼ lb.  
 Size:  $14\frac{1}{2} \times 12\frac{1}{2} \times 8$  in. Max. spool size:  $5\frac{1}{4}$  in.  
 Speaker: 7 x 4 in. elliptical.  
 Microphone: Cosmocord Mic 40.  
 Other facilities: Superimposition, tone control, erase safety lock, mixing (2 inputs for microphone and gram.), extension speaker socket.

AMPLION LTD., 175-179, CRICKLEWOOD LANE, LONDON, N.W.2.



## SOUND STUDIO

Another new machine in the popular price range using the Collaro Studio deck.

### Manufacturer's Specifications

Price: 39 guineas. Deck: Collaro Studio.  
 Speeds:  $7\frac{1}{2}$ ,  $3\frac{3}{4}$ ,  $1\frac{7}{8}$  ips. Rewind speed: One minute.  
 Recording sense: half-track left to right. Provision for stereo recording.  
 Frequency response: 60-12,000 cps  $\pm$  3dB at  $7\frac{1}{2}$  ips.  
 Wow and flutter: Not greater than .15 per cent at  $3\frac{3}{4}$  ips.  
 Signal-to-noise ratio: 40 dB down.  
 Output:  $4\frac{1}{2}$  watts. Weight: 22 lb.  
 Size:  $15\frac{1}{2} \times 14\frac{1}{2} \times 7\frac{1}{2}$  in. Max. spool size: 7 in.  
 Speaker: 8 x 5 in. elliptical.  
 Microphone: Crystal.  
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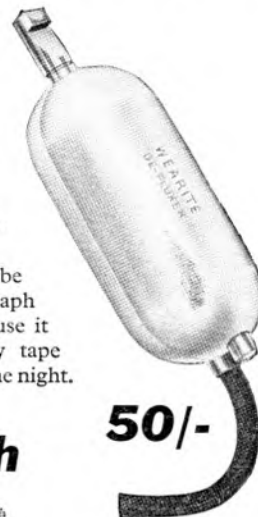
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## Equipment Under Test



# THE MINIVOX BATTERY PORTABLE

**T**HE Minivox tape recorder, made by the Challen Instrument Co., is another in the increasing range of miniature, transistorised, battery-operated machines.

It weighs only 9 lb. and this, combined with a playing time of 20 minutes at  $1\frac{1}{8}$  ips and a battery life of 100 hours, makes it a very useful instrument for the recordist who likes to go outdoors to get his material.

The machine can be operated while being carried, which means it is ideal for interviews. Obviously such carrying must be reasonably steady; some noticeable wow occurs if the machine is swung about!

The microphone supplied with the recorder is very sensitive, and there is plenty of gain in hand in the record amplifier, so that recordings of distant sounds should be possible. The high gain could be something of a disadvantage when recording speech, as careful adjustment of level is necessary to avoid overload, but this is not a serious fault.

The miniature magic eye indicator is rather too quick-acting for comfort, but can be managed easily enough after some practice.

At this point, I would like to make a comment about midget recorders in general. Many of these use permanent magnets for the erase system. This, I feel, is a pity, if not a danger; although, in fairness, it is hard to see how else it can be done in small transistorised equipment.

The danger comes from the fact that, however careful the design, there must be

some permanent magnetisation of the tape. This, as is well known, will cause a background hiss. Worse than this, the permanent magnetism in the tape can magnetise the tape heads and, in turn, these can magnetise any other tape which may be passed over them.

With the advent of multi-speed mains-operated recorders running at  $1\frac{1}{8}$  ips it would be possible to ruin a valuable  $7\frac{1}{2}$  ips tape at a later playing. It is to be

**In our next issue  
STUZZI TRICORDER  
reviewed by F. C. JUDD**

hoped that the manufacturers of midgets will find a speedy answer to this problem.

Returning to the Minivox, the double opposing erase magnets reduce tape magnetisation to a minimum, and increase in hiss level is only audible after several erasings over the same piece of tape.

In addition to the microphone input, there is a second input at high level for recording from radio or other source.

There is also a socket for an extension loudspeaker.

The tape deck itself is very well engineered, with a good-sized capstan/fly-wheel assembly. Power is from three low voltage motors, one driving the capstan, the others being used for take-up and fast wind, the latter being available both forward and reverse.

I would have liked to see a rather larger diameter rubber pinch wheel, with a better bearing. This one was small, and the simple bearing did not run easily.

Furthermore, there were signs that the machine had been left for some time with the pinch wheel engaged; rubber was found adhering to the capstan, with consequent audible wow. (This, of course, would have been flutter on a higher speed machine, but it could hardly be termed such with this very slow running capstan.) Once this rubber deposit was removed, wow and flutter almost vanished, and it was possible to make some good recordings of that most difficult of all subjects, the piano.

The frequency response of the instrument as heard from its own speaker was good, 8,000 cps being perfectly audible—quite a feat at this speed. Measuring on a 3 ohm load at the extension speaker socket, however, the picture was rather less good, there being a considerable drop above 4,000 cps. On reference to the makers, it appears that deliberate equalisation has been introduced for the tiny built-in speaker to preserve a good audible response.

This equalisation most certainly works, but it is a pity the makers could not have found a way to preserve a flat response at the extension socket.

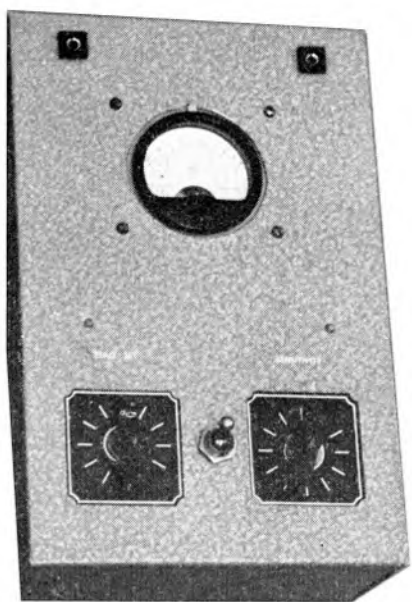
Signal/noise ratio is satisfactory for a simple transistor amplifier and the replay output level was quite remarkable.

The finish of the recorder is extremely good, and provision is made for carrying the microphone in the lid; I wish a better way could be found for dealing with the microphone lead; at the moment it tends to get a little tangled.

I consider this machine to be a good buy at £37 10s., and can only add that it has given me a great deal of pleasure during the short time that I have had it for review.

**H. BURRELL-HADDEN.**





# HOW TO MAKE AND USE A PRACTICAL OUTPUT METER

**A**LMOST any AC volt meter having a suitable range can be used as an output meter but may not have a linear response over the audio frequency range, in which case, of course, the readings would not be true for all frequencies. Linearity in response of the meter is essential and it is quite useless using one that is not linear.

A low voltage or current reading DC meter used in conjunction with a crystal or valve diode could also be used, but owing to the non-linear operating characteristics of the diode, would require special additional circuits, which makes construction and use too complicated for the amateur.

B.S. grade meters, such as the AVO Models 7 and 8, are suitable for low impedance outputs, but are restricted to frequencies up to about 10 Kc. Multi-range valve-volt meters are most suitable, but obviously too expensive for the sole purpose of checking frequency response. A simple yet effective output meter is shown as the circuit of Fig. 1.

It incorporates a transistor operated as a current amplifier and can be adjusted

for a wide range of input voltages. It has a high input impedance and is sufficiently accurate for all practical frequency response checking purposes.

Only two 1.5 volt flashlight cells are required to operate both the transistor and the meter and, as the maximum current drain is less than a milli-amp, the cells will last for very long periods.

The meter movement may be 0-100, 0-200 or 0-500 micro-amps, although the lower current meters will provide somewhat greater sensitivity. A meter with a scale calibration of 0-10 in 10 equal divisions each divided again into 10 should be chosen for convenience of interpreting the readings directly to dB's. If the half-scale reading of the meter is taken as 0dB, the ranges above and below this are: 5 up to 10=0dB to +6dB, 5 down to 0.5=0dB to -20dB.

Fig. 2 is a calibration chart for converting meter readings to dB's. Meters directly calibrated in dB as well as all the rest of the components and a suitable case may be obtained from specialist suppliers, such as ROTECH of 152, Maybank Road, London, E.18.

In constructing your own meter the layout and wiring guide should be carefully followed, as it is possible to damage both the meter and the transistor through wrong wiring. *Double*

*check the wiring to make sure it is correct.* (Fig. 3.) The meter may show a reading when it is first switched on and the reading may be forward or backward depending on the setting of the ZERO CONTROL, which should be adjusted until the needle is at the beginning of the scale, e.g. '0' on a meter calibrated 0-10. Do not confuse this zero setting with 0dB. The SENSITIVITY CONTROL should now be turned fully clockwise for maximum sensitivity and the ZERO CONTROL re-adjusted as above.

## PRELIMINARY TESTS

First locate the section of test tape containing the frequency test bands at the required speed. Then find the band 1000 cps at 20 dB below peak level (or 160 cps at 3 1/2 ips). Connect the meter to the speaker extension terminals and start the tape on the 1000 cps run, with the recorder gain control about one third way up.

The meter SENSITIVITY CONTROL and/or the recorder gain control should now be adjusted so that the meter reads -0dB on a calibrated meter, or 5 (half-scale) on a meter calibrated 0-10. It may be necessary to run the tape through this section several times in order to adjust the meter correctly.

The zero setting of the meter should

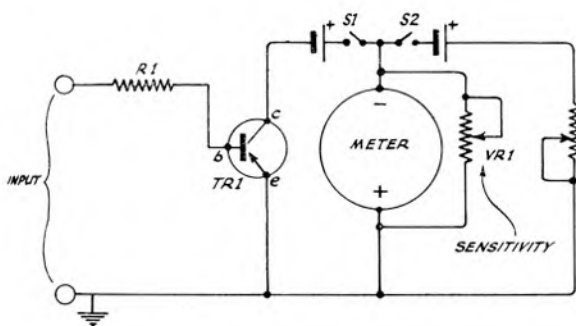


Fig. 1.—Output meter circuit

Components:  
TR1, OC71 transistor (Mullard)  
VR1, K Ohms potentiometer  
VR2, K Ohms potentiometer  
R1, K Ohms Resistor, 1/2w.  
S1 and S2, dual toggle switch

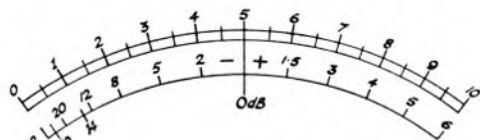


Fig. 2.—Conversion chart, meter readings to decibels. (For linear meter movements and scale only)



# F. C. JUDD, A.Inst.E., continues his series of articles explaining how to use the new "Tape Recording Magazine" monophonic and stereophonic Test Tape...

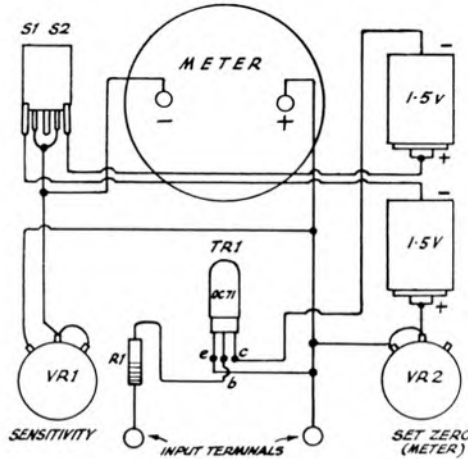


Fig. 3.—Pictorial wiring diagram of output meter

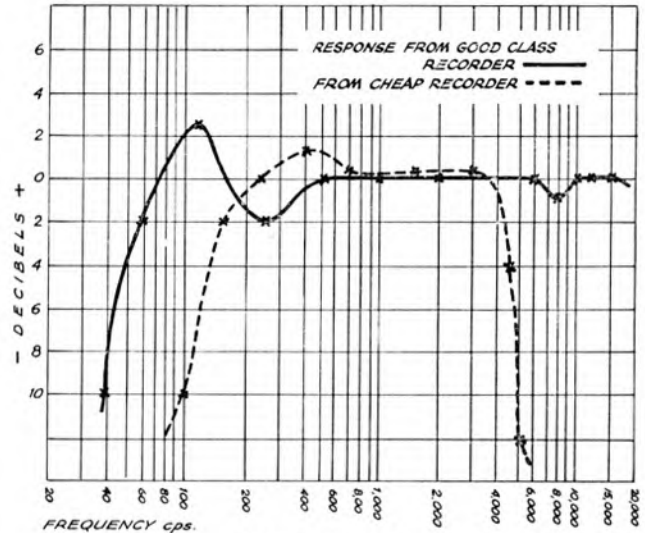


Fig. 4.—See text

be checked each time, as well as adjustment for 0dB, before commencing the frequency test run as the transistor operating characteristics may drift slightly.

If extension loudspeaker terminals or a socket are not available, it may be necessary to lift the machine from its case and locate the secondary winding of the output transformer to which the speaker is connected.

Failing this, it may be found that the machine has a "high impedance" output socket intended for connection to an external amplifier. If the output voltage here is sufficient, the meter should display a suitable reading when set for maximum sensitivity. It may be necessary to operate the machine with a somewhat higher setting of its gain control.

**BEFORE ATTEMPTING ACTUALLY TO PLOT A FREQUENCY RESPONSE CURVE IT IS IMPORTANT THAT AZIMUTH ALIGNMENT IS CHECKED.** See the paragraphs dealing with this, and the notes concerning tone controls.

Having made sure that the azimuth alignment is correct and that the meter is properly adjusted, the tape may run through and the meter reading noted for each frequency band. If the recorder has a perfect response the meter will read 0dB (or half scale) for each frequency band. The following set of readings were taken from a well known tape machine tested with the Magazine test tape at a speed of 7½ ips.

	Calibrated Meter	Scaled 0-10
1 Kc Reference (20dB below peak level) ...	0dB	5
15 Kc/s .....	0dB	5
12 Kc/s .....	0dB	5
10 Kc/s .....	0dB	5

8 Kc/s .....	-1dB	4.5
6 Kc/s .....	0dB	5
2 Kc/s .....	0dB	5
500 cps. ....	0dB	5
250 cps. ....	-2dB	4
120 cps. ....	+3	7
60 cps. ....	-2	4
40 cps. ....	-10	1.75

These have been used to plot the curve of Fig. 4 which shows the overall playback response of the machine as substantially level between 60 cps. and 15 Kc. Being one of the higher priced domestic class recorders, the response is very good. Don't be disappointed, however, if your machine does not compete with this. A response curve from a poorer class domestic machine operated at 3½ ips. is shown for comparison (dotted line). When testing machines at 3½ ips. the reference frequency can be 160 cps. or 4 Kc, for it may normally be assumed that the response of most machines at the middle frequencies will be level anyway. The same remarks apply to 120 cps. or 6 Kc/s.

### SPECIAL NOTE CONCERNING TAPE RECORDERS WITH TONE CONTROLS

Some machines are fitted with tone controls, which may be a simple single control for cutting the high frequency response, or separate controls for lift and cut on both bass and treble. *Before attempting to plot the true frequency response, any tone controls must be set to the level positions.*

If these positions are not indicated, it will be necessary to determine them by running the test tape through several times, adjusting the controls on each run, until the meter readings indicate that no further levelling can be obtained. This is a rather tedious process and, once

found, the level position of the controls should be noted or marked for future reference. A little time and trouble may be saved if the extreme ends of the frequency range are checked first; for example, if the response at 8 or 10 Kc/s shows +10 dB, it is reasonable to assume that there is too much treble lift and that the tone control must be altered accordingly.

### AZIMUTH ALIGNMENT

Before checking frequency response, the R/P head should be correctly aligned to the azimuth of the signals on the tape\*. This will necessitate removing the inspection plate or cover over the R/P head and locating the screw adjustment for rocking the head. The instruction book for the machine should include information about this or, if you are in doubt, get in touch with the manufacturers. Older recorders may not be provided with azimuth adjustment and new machines should already be accurately aligned.

The output meter should be connected up and the tape run through on one of the higher frequencies, say 10 or 12 Kc/s at 7½ ips. and 15 ips. or 8 Kc/s at 3½ ips. For machines with two or more speeds, the test should be carried out at the highest speed.

Set the gain control to about half and adjust the meter to read approximately half scale (or 0dB). Re-run the tape over the same band, this time slowly and carefully adjusting the head alignment screw for maximum reading on the meter. The test should be repeated, two or three times if necessary, to make sure that no further increase can be obtained.

Azimuth alignment should be checked periodically on every machine, as vibra-

(Continued on page 34)

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# Stereo Notes

By D. W. GARDNER

**H**ARROGATE showed more conclusively than ever before that stereo and tape are advancing together. Stereo is ultimately irresistible: shorn of its sensation value it now has nothing to offer but the fact that it sounds better, and conceding every possible point to those who try to argue away its advantages, the listener cannot escape the feeling that without two channels the heart of the sound is missing.

It has taken many people until this year to relax sufficiently to assess stereo as a musical experience — people, that is, who only hear stereo at Audio Fairs and similar places.

At Harrogate there were few remaining barriers, the record numbers attending apparently weighing-up the mainly-gimmick-free demonstrations of stereo as they would any other, and very seriously discussing the ways and means of achieving the right results in their own homes.

Tape is showing signs of becoming more popular than disc in the not-far-distant future. There is an inevitability about this process, too, since tape is technically the better medium and can be made to yield much more in terms of playing-time and economy. Cartridges are bringing in the waverers who dislike fiddling with tape ends.

This double trend clearly points to stereo on tape as the principal audio medium of the future, and gives added interest to the machines that provide it. There are now enough of them to give enthusiasts a reasonable choice, both in technical detail and in the possible methods of approach.

It should be remembered, in this connection that the "Studio" deck has provision for fitting a stereo lead. Garrard will probably make similar provisions in due course.

The stereo version of the Stuzzi Tri-corder adheres to the very sound principle that a tape recorder for serious recording use should be as portable as possible consistent with quality of recording. I have always stressed the danger of falling between two stools by yearnings for completeness as well as portability. Loudspeakers that go along with the recorder can, if they aim at even a fair standard of reproduction, add much to the weight and still fail to do reasonable justice to a good recording.

There seemed to be more emphasis on cabinets at Harrogate, I thought; and quite a number of designs were based on the assumption that both tape deck and record player would be incorporated eventually. This is a rational attitude, especially as large cabinets are healthier for the amplifiers and other electronic apparatus.

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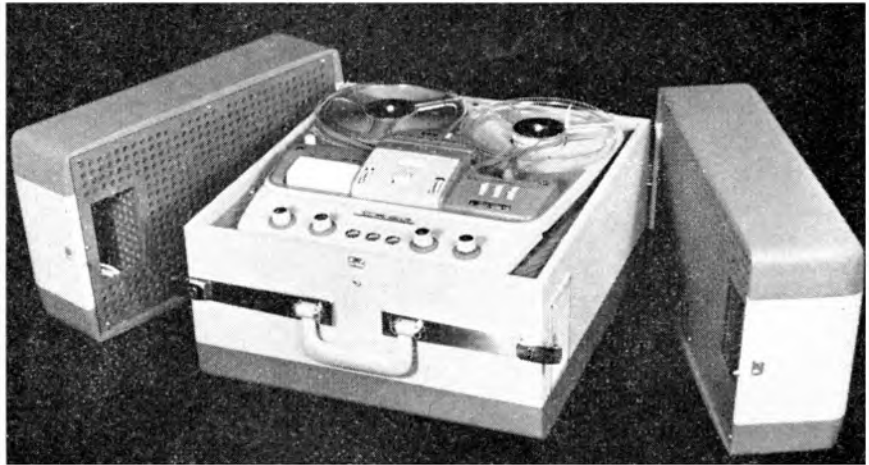
## A Grundig hat-trick

### THREE NEW PRODUCTS COME TOGETHER

GRUNDIG have just announced three important new products. Firstly, they have now added to their range a complete self-contained portable Stereophonic Tape Recorder and Reproducer. This machine was briefly mentioned in the report on the Harrogate Audio Fair published in our last issue. The recording sense, monophonically and stereophonically, conforms to International Standards—i.e., top track left to right for mono and twin track "in-line" heads for stereo.

It is a two-speed machine operating at  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips, and the maximum spool size is 7 in., carrying 1,800 ft. of Grundig L.P. tape.

It contains two high quality  $4\frac{1}{2}$  watt Power Amplifiers which feed two high flux permanent magnet extended range elliptical loudspeakers of  $10 \times 6\frac{1}{2}$  in. The loudspeakers are housed in separate en-



The Grundig TK 60 stereo recorder

losures and can be detached from the main body of the recorder for stereophonic reproduction.

Remote control facilities are provided for Stop/Start.

There are input sockets for two microphones, extension loudspeaker or gramophone pick-up diode input from Grundig radio receiver, or other external input source.

Output connections are available for two stereophonic channels or monophonic signals and for extension loudspeakers.

There are facilities for superimposition, and a temporary stop control is fitted. Control is by push button.

The TK 60 is remarkably compact, and is contained in the now famous Grundig blue-grey case.

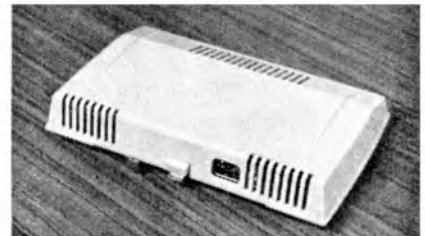
The price is 128 guineas.

The TM 60, the tape deck of the TK 60 stereophonic and monophonic tape recorder is also available. The deck itself is identical with that of the

TK 60 and contains the whole electronic equipment of the TK 60 other than power amplifiers and speakers.

A separate box attached to the main unit by a connecting lead contains three sockets for microphone inputs.

Although designed primarily for use with the Grundig Gainsborough Radiogram, the TM 60 can be used with any



The mains unit for use with the Grundig Cub

good amplifier or stereo amplifier, radio or radiogram.

The price, including 1,800 ft. of long-play tape, is 90 guineas.

Grundig have also introduced a Mains Unit for use with their portable Cub recorder, as an alternative to the batteries. This unit allows mains operation of the Cub wherever normal AC supply is available.

The Unit, which clips neatly on to the bottom of the machine after the batteries have been removed, is finished in the light grey Cub case.

Adding only  $2\frac{1}{2}$  lb. to the weight, it in no way impedes the portability of the machine.

The price is £7 7s.



The Grundig TM 60 deck

When writing to manufacturers for information about new products, please mention that you "saw it in Tape Recording and Hi-Fi Magazine"

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# News from the Clubs

## Club Personalities No. 5



**MAURICE NICHOLS**  
Luton Tape Recording Society

**W**OULD you like to wear a badge that identifies you as an active member of a T.R. Club? The idea is put forward by Mike Brown, of the Rugby Club. His idea is for a lapel badge with a basic design suitable for every club in the country, but leaving a space for the name of individual clubs to be added.

Mr. Brown puts forward two ideas of his own—one shows two loaded tape spools drawn apart to form a scroll, the other a spool of tape with a short leader stretching horizontally. In both cases, the spool or spools would carry the words "Tape Club" and the loose tape would be left for engraving the place-name.

We should be interested to receive reactions to this idea.

Rugby were most likely prompted to this idea of a club badge by the surprise presentation to them recently of a club banner made by Mr. and Mrs. Tilcock.

Two unusual competitions have been arranged by the members of the clubs in **Grantham** and **Huddersfield**. In Grantham, the idea is to record the tune "The Bells of St. Mary's." This sounds easy, until it is pointed out that the recording must be made using anything but an accepted musical instrument. The Huddersfield members are to submit tapes of extracts from radio or television adverts suitably edited and spliced to produce humorous results.

Demonstration of tape recorders was the main occupation of the September meeting of the **Kettering** club. Models on view included the Grundig TK 20, the Clarion and Fi-Cord portables, a Telefunken, and—of interest to many members—the new Grundig Cub. At the same meeting, Mr. Webb played a tape, made with the help of Mr. Potter, entitled "Story of a Newspaper." The sound effects had been recorded at the offices of the Northamptonshire *Evening Telegraph*. The October meeting was devoted to a demonstration of stereo equipment given by Mr. C. Smith, of Truvox Ltd.

The Truvox stereo recorder also featured at the September meeting of the Grantham club. The demonstration, supplied by a local wholesaler, commenced with a number of musical items on monaural and stereophonic pre-recorded tapes. Following this short introduction to the equipment, members recorded music in stereo and an excerpt from a play. The performances were given by the Grantham Dramatic and Operatic Societies.

A committee has been formed to produce a tape about Grantham. Messrs. Gilbey, Burdon and Brown are currently compiling a list of the equipment available among members for this project. Owing to business commitments, Charles Hesketh has had to relinquish his position as Secretary. His successor is Mr. L. G. Gilbey of 67, Denton Avenue, Grantham.

**A** MOTOR-CYCLE accident in 1954 resulting in serious leg injuries, meant that Maurice Nichols could no longer continue his greatest pleasure—ballroom dancing. After two spells in hospital he assumed a passive role of increasing his collection of gramophone records, which, started at the age of nine, totalled some three hundred discs. These became almost obsolete when, three years ago, frustrated at his inactivity and intent on resuming an active hobby, he purchased his first tape recorder.

He joined the Friendly Folk Association tape circle and was introduced to World Tape Pals. Then followed a hectic period of tape correspondence resulting in his helping to form the British Tape Recording Society and starting the Luton club. Although at first the local response was disheartening, perseverance and publicity even-

tually multiplied the initial half-dozen enthusiasts to a present total of nearly forty members.

His first year as Secretary of the club came to an end at the A.G.M. held in May, when he was elected publicity officer. Still badly disabled he devotes a great deal of time and energy to the club's activities. He represented his club at the National Federation's A.G.M. and is currently organising the dispatch of technical and general news round-robin tapes.

A bachelor, aged 33, he claims his tape recorder is his key to the outside world and says, "I don't know what I would do without it."

Members of the club in **Leeds** are working along the same lines as the Grantham members. They are preparing a thirty-minute tape of people and events in their town. The Editor of the *Yorkshire Evening Post* has promised assistance for their programme, which is intended for broadcast on an Australian network. Recordings of the police band and choir, interviews with the town's First Division Football team during the half-time of a home match, and a message from their Rugby League team who played the Australian touring team this year, are a few of the items to be included in the tape. A short history of the city is being supplied by the Curator of the City Museum and, to round off, members hope to obtain a message from the Lord Mayor.

The **Coventry** club has been

approached to act as an agent for a London firm which is organising a personal message service. They have agreed to co-operate and their share of the fees charged will help to swell the club's funds.

A mixture of recordings collected and compiled over a number of years by Dan Woodcock provided the one-man show of the October meeting. Included in the tapes were two stories with sound effects added.

Peter Ritchie entertained members of the **Rugby** club with a tape-slide show. Over 150 colour slides collected during his travels in the Merchant Navy were seen. The ninety-minute programme covered the many shipping routes from Singapore to New York, Amsterdam to Aden. A tour of the *Rugby Advertiser* has been arranged. Members intend to record the visit and include the material in their tape on Rugby.

**Warwick and Leamington** members recently paid a visit to the Birmingham I.T.A. Studios to see Bob Monkhouse make a recording of "For Love or Money." At their most recent meeting, Cyril Carter played his recordings of a choral work as his contribution to the society's scheme whereby members offer their tapes for criticism. Members were also given a splicing display by Ken Wilkins.

"It's all in the mind" was the title of a play presented on tape by Mr. A. E. Share, the **Birmingham** club's technical adviser, at their September meeting. Members afterwards set to produce a tape for the B.T.R.S. Inter-club sound magazine. Earlier in the month the club was host to the delegates attending the

(Continued on page 33)

## FORTHCOMING MEETINGS

**BIRMINGHAM: November 9**, at the White Horse Cellars. (Meetings weekly).

**COVENTRY: November 12**, at Rotherham's Social Club. (Alternate Thursdays).

**EDINBURGH: November 15**, at the Cine Society Rooms. (3rd Sunday).

**GRIMSBY: November 10**, at the R.A.F.A. Club, Abbey Drive West, Abbey Road. (Alternate Tuesdays).

**IPSWICH: November 7**, at the Art Gallery Committee Rooms, High Street. (1st Saturday).

**LONDON: November 5**, at the Abbey Community Centre, Marsham Street, S.W.1. (1st Thursday).

**LUTON: November 10**, at 17, Dunstable Road. (2nd and 4th Tuesdays).

**RUGBY: November 19**, at the Red Lion, Sheep Street. (Monthly).

**WEST MIDDLESEX: November 12**, at the Co-operative Hall, Station Road, Hampton. (2nd Thursday).



## 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.

Elizabethan Bandbox Recorder won in raffle. Cost £30 9s., still in makers box. Will dispatch if necessary. Only £25. G. Collis, 12, Greenhill, Wembley, Mdx. ARN 4797.

Stuzzi Recorder almost unused, complete with carrying case, telephone adapter and microphone, price £45. Telephone CHAncery 2651, Ext. 21.

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## Copyright

**I**N view of the official statement of policy of the Committee of the Federation of British Tape Recording Clubs published in your October issue under the heading "Copyright—The Federation View", we shall be grateful if you will bring to the notice of your readers the following statement of the law:

The Copyright Act 1956 defines copyright as including the exclusive right of reproducing the work in any material form. The work means every original literary dramatic or musical work as in the Act mentioned. Reproducing the work means reproducing it in the form of a record or cinematograph film and Record means any disc, tape, perforated roll or other device in which sounds are embodied so as to be capable of being automatically reproduced therefrom.

Copyright also includes the exclusive right of performing the work in public. Reproduction must not be confused with performance. The former means the production of copies whether in print, on record, tape or film or by other photographic, mechanical or electronic device. The latter means the acoustic representation of the work in any form.

Copyright is infringed by any person who without licence of the owner of the copyright does any of the acts the exclusive right to do which are conferred upon the owner. Copyright in a musical work is accordingly infringed if it is performed in public but not if it is performed in private. Copyright in a musical work is also infringed, however, if a record of the work is made whether in public or in private.

If, therefore, a musical work is reproduced on to a record or tape by a person on club premises or in his private house without the consent of the owner of the copyright in the work an infringement of copyright will be committed.

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We are pleased to announce that special binders for *Tape Recording and Hi-Fi Magazine* will be available shortly. We can now take orders for binders to hold 1959 copies of the Magazine. Orders received now will be delivered at the beginning of January.

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(Continued from page 31)

# Club directory

A.G.M. of the British Tape Recording Society. The ladies came nobly to the fore and provided refreshments.

**Leicester** club members are producing a play with an outer space theme. Written by two members, the sound effects needed should provide plenty of scope for experimenting in the musique concrete field.

At the October 3 meeting of the **Sheffield** club, Messrs. Grantham, Brazil and Redfean operated their own recorders, while the remainder of the meeting performed from a prepared script. Sound effects for the play-reading were provided on a Stuzzi Magnette. The object of the exercise was to compare the respective recorder qualities, operative skill, and general microphone technique.

Microphone technique was demonstrated by Mr. G. H. Leighton, Secretary of the **Grimby** club, at the September meeting. Twenty-two members were present to elect a new committee. Mr. Fitzpatrick vacated the chair to become President, and Mr. F. Gardiner was elected in his place.

Local publicity given to the **Dundee** club on winning first prize in the National Contest has boosted club membership and attendance. Nearly thirty members were present at the September meeting to hear demonstrations of the Clarion and Stuzzi battery portables.

A Korting mains recorder was used to play the recording of the B.B.C.

**NORWICH:** W. Dawson Robertson, 5, Essex Street, Norwich, Norfolk.

**NOTTINGHAM:** Norman D. Littlewood, 129, Standhill Road, Nottingham.

**OLDHAM:** Beverley Stuart Craig, 126, Main Road, Oldham, Lancs.

**PORTSLADE:** Roy Mitchell, 78, Southdown Road, Portslade, Sussex.

**PLYMOUTH:** J. M. Ashby, 3, Hill Cottages, Station Road, Plympton, Plymouth, Devon.

**RUGBY:** Michael Brown, 219, Clifton Road, Rugby.

**R.A.F.:** R. L. Restace, Tape Recording Society, R.A.F. Waterbeach, Cambridgeshire.

**READING:** D. M. Noyes, 4, Froxhill Avenue, Reading, Berks.

**SHEFFIELD:** B. T. Jeeves, 58, Sharrard Grove, Sheffield, 12.

**SHOREHAM:** G. C. Davey, 6, Beach Road, Shoreham-by-Sea, Sussex.

**SIDCUP:** J. B. A. Braidwood, 104, Belmont Lane, Chislehurst, Kent.

**SYDENHAM:** A. R. Dyer, 59, Tannfield Road, Sydenham, London, S.E.26.

**WALTHAMSTOW:** J. A. Wells, 178, Selwyn Avenue, Highams Park, London, E.4.

**WAKEFIELD:** Michael Storey, 331, Horbury Road, Wakefield, Yorkshire.

**WARWICK AND LEAMINGTON:** Brian Race, 30, Ashford Road, Whitnash, Royal Leamington Spa, Warks.

**WEST ESSEX:** F. Stebbings, 24, Tweedmouth Road, London, E.13.

**WEST MIDDLESEX:** H. E. Saunders, 20, Nightingale Road, Hampton, Middlesex.

**WEST WALES:** Gareth Jenkins, 5, Glyndwr Road, Aberystwyth, Cardiganshire.

**WEYMOUTH:** Gordon Butler, 53, Chapelhay Heights, Weymouth, Dorset.

**WINCHESTER:** Terence Offord, 77, North Walls, Winchester, Hants.

**WIRRAL:** Meryl O'Donnell, 385, New Chester Road, New Ferry, Cheshire.

**WORTHING:** Ken Wiber, Clarendon Yard, Montague Street, Worthing, Sussex.

"Sound" broadcast, while Leonard Douglas and Charles Aitken went out to experiment with the Stuzzi and Clarion. During the second half of the meeting, their efforts, which included the cries of a newsvendor, the sounds of passing traffic, and a goods train, were played back. Club funds are in a very healthy state and they intend purchasing a mixer unit or a battery portable.

A change of officials for the **Sightless Members Section** of the **Voicependence Club of America** is announced. Fred Gazeley, one-time editor of the West Middlesex newsletter, has taken over from John Ll. Hughes. His address is 2, Bromley Road, Beckenham, Kent.

In our last issue we introduced the first list of future club meetings. This now will be a regular item. Many clubs have written giving the times of future meetings, but have omitted to say where they are to take place. In an endeavour to keep our list of meeting particulars up to date, would secretaries please give us these details—and also any special items on the agenda.

The second list of organised clubs is given in this issue, and we advise that these lists be kept handy. In future, addresses will only be given when a change of secretary has occurred or when the formation of new clubs is announced.

CUT ALONG DOTTED LINE

## ADVERTISEMENT ENQUIRIES SERVICE

*This is a special service for readers of TAPE RECORDING AND HI-FI MAGAZINE. It enables you—without cost—to get fuller information about those products in which you are particularly interested. Fill in one coupon below for each inquiry, writing in your name and address in each case. Then cut out the whole of this half-page, following the dotted line, fold as indicated, and post to us.*

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# TESTING WITH AN OUTPUT METER

by F. C. JUDD

(Continued from page 27)

tions etc., can cause the head to move out of alignment of its own accord. Some modern machines have no alignment screw and the head is securely fixed. It must be assumed that alignment is correct and was set before the machine left the factory.

## WOW TESTS

It is not possible to measure the percentage of wow with the output meter;

## IN NEXT ISSUE

### THE NEW DECKS

Special illustrated review of the COLLARO "STUDIO" DECK



### THE INTERNATIONAL RECORDING CONTEST

(CIMES)

Full illustrated report of the results and events of the weekend.



And all the usual features

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in fact this can only be done with very special equipment. One can only run the tape through on the 3 Kc/s wow test band and judge by listening.

On a good machine an amount just perceptible with intent listening is acceptable and indicative of a low percentage. Anything worse than this may point to mechanical defects, in which case it would be advisable to consult a Service Engineer or the makers.

Much the same comments apply to "flutter" effects (fast rate of change in output) due to poor tape guides and pressure pads.\* If fluctuations due to wow or flutter are very violent they will be indicated by the output meter. Do not, however, confuse these with the small fluctuations of about a dB or so which are generally due to phenomena associated with the tape itself and may be more noticeable at the higher frequencies.

Although the stereo tests can be carried out by instructions given on the tape, some notes will be given in a later issue of the Magazine.

\*See articles, "Specifications for a Tape Recorder," by F. C. Judd, in the September and October Issues of "Tape Recording and Hi-Fi Magazine."

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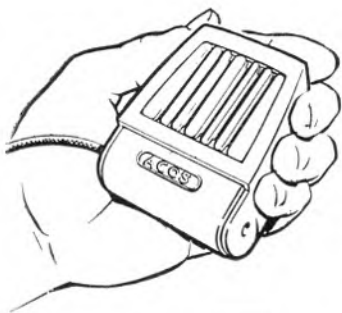
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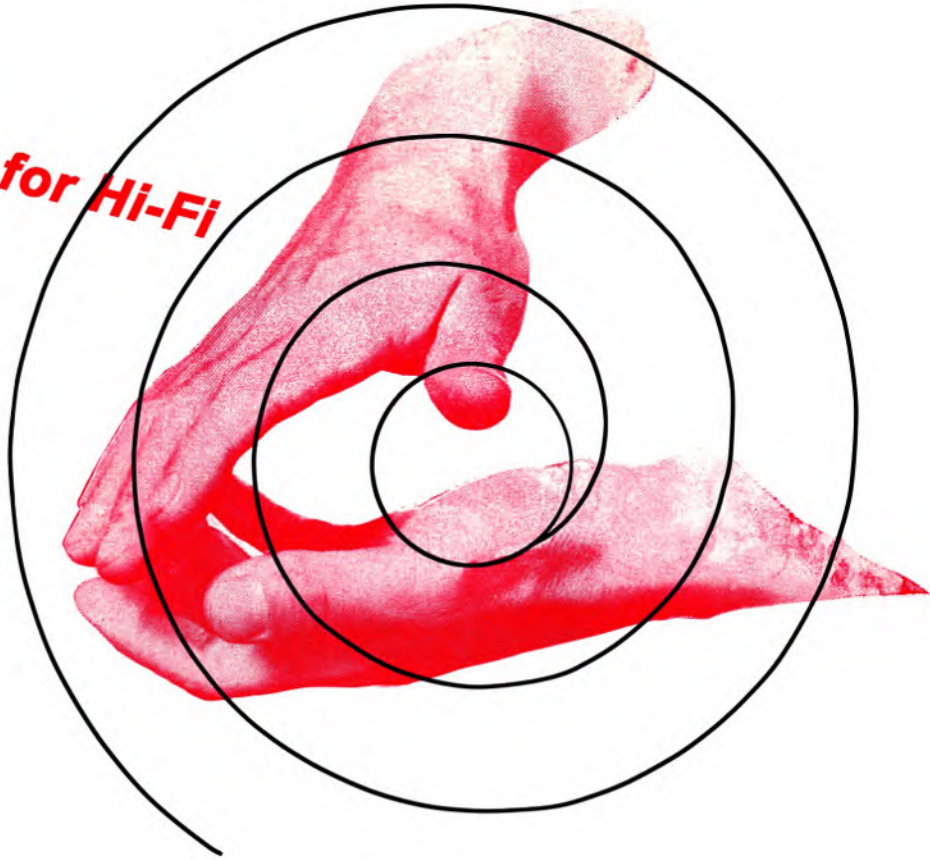
# FOR MIKES

## **MIC 40**

The Acos MIC 40, for instance, is a neat, fold-away microphone, that either fits snugly into the hand, or stands on its own. One of the smallest microphones in the country, in attractive dual colours, the MIC 40 is standard equipment with many well-known tape recorders. It is also available separately from most good dealers. The price is moderate, and the sensitivity and sound reproduction are remarkably good. Acos also make several other, equally successful microphones in different price ranges.

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FORTNIGHTLY **1/6**

18th November, 1959



# Something to Shout About

*But please whisper it*

**I**F your announcement is eagerly awaited, there is no need to shout the odds in letters ten feet tall, nor to roll the drums and fanfare the trumpets. Good news travels far fast and the launching of the new WyndSOR portable, the "Victor," really is something to shout about. But a whisper seems to have been enough to set the tape-recording world by the ears and when even the elder brethren in the electronic trade join in the excitement there must be a mighty good reason. And there is: the shapely WyndSOR "Victor," is a quality-all-the-way portable, so beautifully designed and executed as to bring professional-sounding recordings within the reach of the most non-technically-minded amongst us.

Mark these following features, and ask yourself how *does* WyndSOR do it at the price. New readers start here for the answers:—

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7½ ips : — 50 to 15,000 cps better than ±3db.

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**\* full frequency equalisation AT ALL SPEEDS.**

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**\* finger-tip controls closely grouped.**

**\* mixing facilities for mic and gram/radio inputs.**

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**\* three independent 4-pole motors.**

**\* unique styling in two-tone grey with gilt fittings.**

**\* twin tracks \* pause control \* tone control.**

**\* guarantee: 12 months (valves 90 days) and the name of WyndSOR.**

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*the new WyndSOR "VICTOR" complete with crystal microphone, 1,200 feet of tape, and spare jackplug, is only 45 guineas*

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# Avantic

## AUDIO AMPLIFIER STANDARD

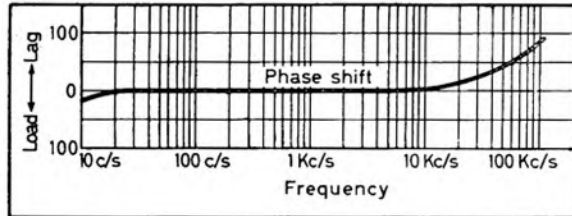
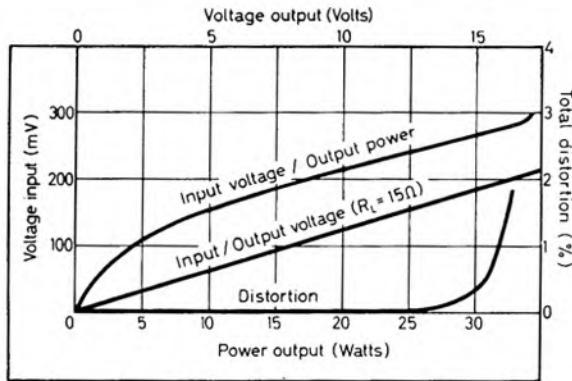
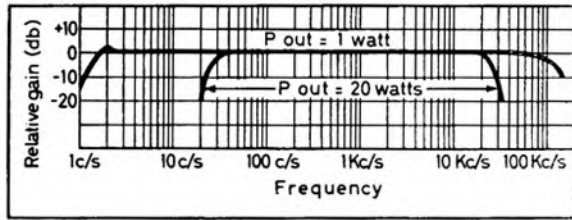
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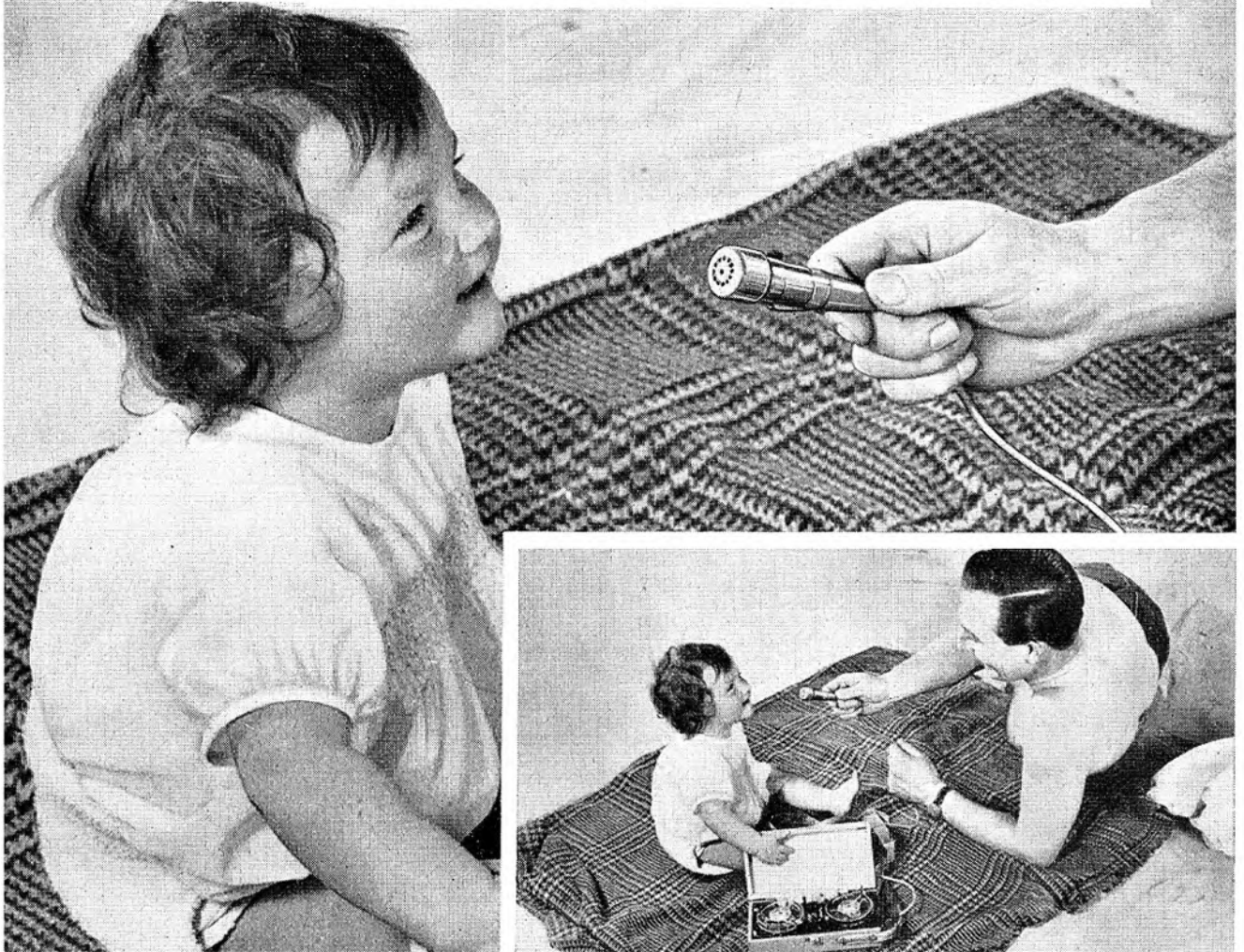
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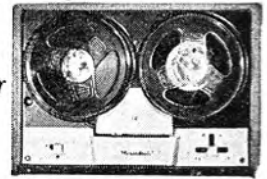
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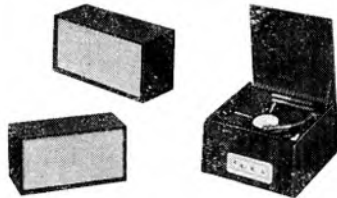
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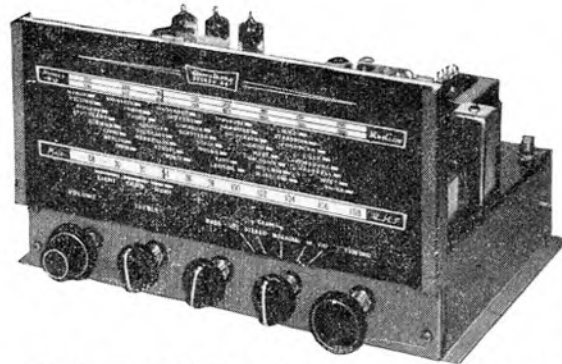
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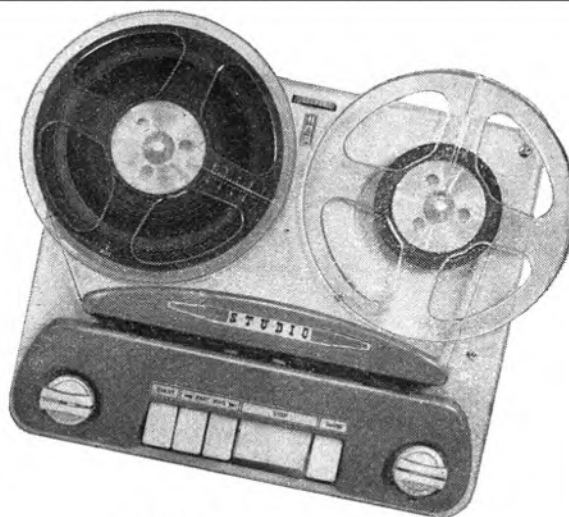
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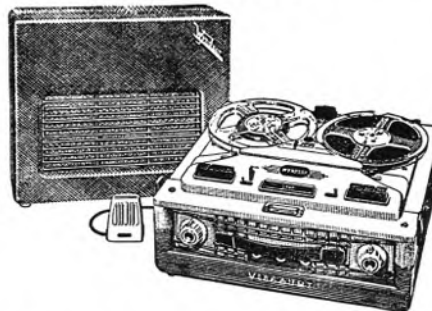
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# We take the view .

A DIGEST OF NEWS, COMMENT AND EDITORIAL OPINION

## Staggered heads

WHEN I lunched with Jean Thevenot, retiring President of the International Federation of Sound Hunters, just before the opening session of its congress, I suggested that it might be a short meeting this year. The agenda was brief; I thought we might complete it in comfortable time for dinner.

M. Thevenot gave me a curious look. He had had much experience of F.I.C.S.

In the event, the Congress was in session for eight hours on the first day and about four on the second.

At one stage we discussed the problems of copyright. Readers of this magazine will understand how delicate and complicated a matter this is when one is dealing with the law of a single country, and speaking in a single language.

At F.I.C.S. we found ourselves involved in the varying laws and practices of eight or nine countries, and speaking in three different languages.

After it had been going on for some time, one of my British colleagues put his hands to his weary brow and commented bleakly: "Now I know what's meant by staggered heads."

## The best joke

THAT brings me naturally to the subject of tape humour. The result of our invitation to readers to send in jokes about tape recording has been astonishing. At the time of writing, we have received only one entry which, in my view, is a joke at all.

It was sent by J. Fryer, of Leamington Spa, to whom the prize is being sent.

"Mummy."

"Yes, son?"

"Do the birds in the roof talk at night?"

"No, son. Why?"

"Well, every night Daddy puts his microphone outside the people-next-door's bedroom window."

## Other types of humour

WE did receive some pretty examples of humour, although they did not qualify as jokes. Mr. Robert Ellis wrote to tell us of a lecture he gave north of the border.

He explained that magnetic tape could be used over and over again.

"Oh," said an old lady in the front row, "that's why they call it Scotch tape?"

I have been sent, too, a number of funny stories based on the ignorance of some folk about tape recording.

Mr. W. Mackey, of St. Leonards-on-Sea, related his experience when he called at a house on business, saw a recorder on the table, and explained his interest.

The owner switched on. There was a recorded tape of music on the machine and it was playing at 1½ips.

Mr. Mackey commented on the speed. "There are two other speeds," the owner said. "But I don't know why they fit them because you can't understand the music—it's going so fast."

It makes you think, doesn't it!

## Play-on-words

MR. T. DEVEREUX, of Earls Court, London, was one of the readers who sent in phrases using a play-on-words. I like best of his selections:—

"Hark at Crystal, she's overloaded."

and

"Let's get spliced, we could carry on a long time together."

## Wanted— a barn owl

ONE of the most diligent attendants at the international contest judging was Mr. A. Acland, who earlier won the British contest with his "Tape of the Year" of nightingales.

Since then Mr. Acland has been out regularly with his portable recorder, capturing other sounds. He brought the machine with him, so that he could let me hear a particularly fine recording he has just made of a blackbird.

Mr. Acland has also secured the sound of a squirrel—he describes it as "almost a bark."

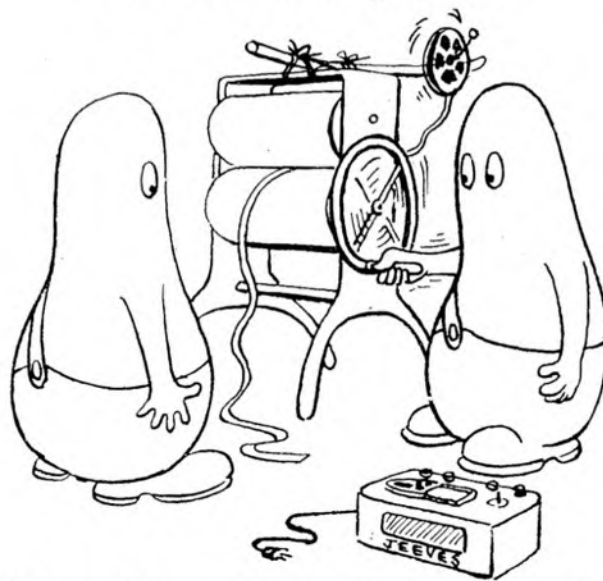
He has two ambitions now. This winter he hopes to record foxes near his home in a still-unspoiled valley near Chatham, Kent.

While at Broadcasting House, he heard that the B.B.C. library of sound effects lacks the cry of the barn owl.

"I think I can get that for you," said Mr. Acland confidently.

And off he went, tape recorder in hand.

## LAUGH WITH JEEVES



"Once through this and I get three weeks' recording on a 5-inch reel."

# THREE BRITISH SUCCESSES IN WORLD TAPE CONTEST

The fourth annual Congress of the International Federation of Recording Enthusiasts, and the eighth annual International Recording Contest judging and award of prizes, took place in London—for the first time ever—on October 30 to November 2.

Delegates and judges attended from Austria, Belgium, Denmark, France, Germany, Holland, Switzerland and Great Britain, and from two international groups—World Tape Pals and Tape Respondents International.

A representative also travelled from Italy.

The meeting of F.I.C.S. was

held at the Berners Hotel and the International Contest play-back of tapes and judging took place in the Council Chamber at Broadcasting House, which was made available by the British Broadcasting Corporation.

The distinguished B.B.C. producer, Mr. Douglas Cleverdon, acted as the Chairman of the International Jury.

At the end of the weekend programme the European visitors, representatives of the B.B.C. and leading figures of the British tape recording industry met at a special dinner organised on behalf of the industry.



Left to right: Dr. Jan Mees (Holland), Fred Chandler (*Tape Recording Magazine*), Mireille Jequier (interpreter) and Joop Goossen (Holland)

**Tape Recording  
and Hi-Fi Magazine  
EXCLUSIVE**

IT was a triumphal weekend for British tape recordists when the International Jury met at Broadcasting House. British entries were placed first in the Schools and the Actuality sections of the International Contest, and an award was also made to a British entry which was placed second in the Documentary-Reportage section.

Mr. John Weston and a score of his pupils at the Meeching Junior School, Newhaven, Sussex, submitted the tape which was not only placed first in the Schools section, but also judged to be the outstanding tape in the whole contest.

It was therefore awarded the following prizes:

**1,000 Swiss francs**, from the Societe Suisse de Radiodiffusion, for the best tape in the Contest.

**50,000 French francs**, from the French electrical and recording industry, for the best Schools entry.

**25 U.S. dollars**, from World Tape Pals, for the winner of the Schools section.

**A bronze work of art**, "L'oiseau," from the Swiss "Chasseurs de Sons," for the best Schools entry.

Mr. A. Acland, of Walderslade, near Chatham, Kent, was judged the winner of the Actuality section, with his four-minute recording of nightingales singing—"Just a song at midnight." He was awarded 22 reels of tape.

Mr. Richard Margoschis, of Atherstone, Warwick, was placed second in the Documentary-Reportage section with his "Lane setting," a recording of a traditional English custom. He won 10 reels of tape.

All three were, of course, winners in the British Amateur Tape Recording Contest, organised by *Tape Recording Magazine*.

(Continued on page 16)



Mr. Weston and his pupils won the Grundig Cup in the Schools section for the second successive year and has now won the International Contest too.

Mr. Acland holds the Emitape Cup for Britain's outstanding "Tape of the Year" in 1959.

Other prize-winners in the International Contest were as follows:

France was judged to have submitted the best national selection of entries, and was awarded a shield for the achievement, together with volumes of an "International Electronic Handbook."

Germany was second with quality of national selection, and received ten reels of tape.

The prize for the most humorous entry—a Mannekinpis donated by Belgium—was awarded to Mr. Kenneth Miller, of New York, for a brilliant satirical recording called "Contact microphone."

The best stereo entry was "Sanctus et Benedictus," a recording made by Abbe Garnier in Dijon Cathedral. It was awarded 100,000 French francs, given by the French National Ministry of Education, and also received the Challenge Shield donated by *Tape Recording Magazine*.

An "International Electronic Handbook" was awarded to J. Bruyndoncky for a recording entitled "Nocturne voor twee," which was judged the best technical recording.

In the various categories the premier awards were distributed as follows:

#### CATEGORY A:

##### COMPOSITIONS

**1. Contact Microphone.**—Mr. Kenneth Miller, New York.

(100,000 French francs from Federation Nationale des Industries Electroniques et Syndicat des Industries Electroniques de Reproduction et d'Enregistrement).

#### CATEGORY B:

##### DOCUMENTARIES & REPORTAGE

**1. Africa sings.**—Mr. Derek Worman, Johannesburg, Africa.

(10,000 Belge francs from Institut National Belge de Radiodiffusion).

**2. Lane Setting.**—Mr. Richard A. Margoschis, Mancetter, Atherstone, Warwicks, England.

(10 rolls Gevasonor M.A. tape from Gevaert, Belgium).

## PHOTO SHOTS at our PARTY



Representatives of the industry and of the Club movement in Britain attended a special reception given by *Tape Recording and Hi-fi Magazine* before the formal sessions began. In the photograph on the left, Mr. P. Glaser, managing director of the Brenell Engineering Company is seen talking with Mr. H. M. Rahmer (centre), managing director of Beam-Echo Limited, and Mr. M. Boissinot, a French member of the International Jury. In the picture above, Mr. A. Acland, who produced Britain's "Tape of the Year" is seen chatting with Mr. Len Watkins (right), the U.K. Representative of World Tape Pals

Photographs by Brian Worth

#### CATEGORY C:

##### MUSIC OR SPEECH

**1. Kiss Me Once Again.**—Mr. Wilhelm Gluckert, Mainz am Rhein, Germany.  
(250 Swiss francs from Radio Bern).

**2. The Dragons of Louvois.**—Mr. Marcel Casiez, Paris, France.  
(125 Swiss francs from Radio Lausanne).

AND

**Tropfen Intermezzo.**—Mr. Karl Grollnigg, Vienna, Austria.  
(125 Swiss francs from Radio Lausanne).

**3. Bach for Accordeon.**—Mr. Jean Piazzano, France.  
(10 Rolls of Gevasonor M.A. tape).

**4. Coney Island Washboard.**—Mr. J. Keizer, Amsterdam, Holland.  
(A work of art from Echevin de l'Instruction Publique et Beaux, Arts de Schaerbeek, Bruxelles).

#### CATEGORY D:

##### ACTUALITY

**1. Just a Song at Midnight.**—Mr. A. Acland, Walderslade, near Chatham, Kent.

**In our next issue we shall publish a special article describing and discussing the tapes heard by the International Jury.**

## THE MAN WHO WON A GRAND PRIZE



Mr. John Weston, of Peacehaven, who submitted the tape which won the schools section and secured the highest mark in the whole contest.

(22 Rolls of 600 BASF tape from Deutscher Tonjager Verband).

#### CATEGORY E:

##### TECHNICAL EXPERIMENT

**1. Die Nacht (The Night).**—Mr. Karl-Heinz Wellinghoff, Germany.

(Telefunken Recorder from Telefunken, Great Britain).

**2. The Bagpipes (Breton) and the Laboratory.**—Mr. Roger Pierre Lafosse, Bordeaux, France.

(Pick-up from Thorreus, Ste. Croix, Switzerland).

Extracts from several of the winning tapes were played in the B.B.C. "Sound" programme, when the editor of *Tape Recording and Hi-fi Magazine*, R. D. Brown, announced the results.

A further selection from outstanding tapes will be played in a later "Sound" programme.



# NEW RECRUITS JOIN THE INTERNATIONAL

**T**WO new organisations were admitted to the International Federation of Sound Hunters at its Congress — the Swedish recording organisation and the Tape Respondents' International.

T.R.I. was, in fact, represented at the Congress, by M. Roland Maury, of Belgium.

An application for membership from a recording club in Windhoek, South Africa, was accepted, subject to confirmation that it is a national

organisation representative of the whole of South Africa.

The Federation of British Tape Recording Clubs is now the official British affiliate to the Federation.

If the South African organisation is admitted, F.I.C.S. will now embrace seven national organisations in Europe—France, Switzerland, Belgium, Holland, Denmark, Germany and Britain—one in Africa and three international organisations—World Tape Pals, Tape Respondents' International, and the Centre International Scolaire de Correspondance Londre.

M. Jean Borel, of Switzerland, retired from the Secretaryship of the Federation this year. He has been succeeded by Dr. Jan Mees, of Holland.

M. Jean Thevenot, of France, retired from the Presidency. He has been succeeded by M. Fredy Weber, of Switzerland.

M. Thevenot was elected to the specially created position of "Honorary President" in recognition of his services.

It was resolved to hold the 1960 Congress of F.I.C.S. in Holland, and the following year it will probably take place in Germany.

## What is the F.I.C.S.?

*The Federation Internationale de Chasseurs de Son (International Federation of Sound Hunters) was founded on October 21, 1956, in Paris by representatives of Austria, Belgium, Denmark, Spain, France, Holland, Switzerland, and of World Tape Pals and the International Academic Centre of Tape Correspondence (Switzerland). The decision arose from the meeting of the jury of the Fifth International Tape Recording Contest.*

*The objects of F.I.C.S. were defined as being:*

*to develop close relationships between the national organisations affiliated to F.I.C.S.;*

*to assist in the formation of national organisations where they do not exist;*

*to advance the interests of tape recording with the public, radio organisations, the radio-electric industry and trade, and appropriate institutions such as societies of authors' rights;*

*to promote and aid exchanges between member organisations; and*

*to organise international events.*

*The headquarters of F.I.C.S. is established in Berne, Switzerland.*

*As a general rule, only one organisation may affiliate from each country, but international organisations to encourage tape exchanges (such as World Tape Pals) are equally eligible.*

*F.I.C.S. meets at an annual Congress, which is organised by the different national organisations in turn. Last year the Congress was in Berne. This year, at the invitation of "Tape Recording and Hi-Fi Magazine," it was held in London for the first time.*

*Present members of F.I.C.S. are: Britain, France, Switzerland, Belgium, Holland, Denmark, Austria, Germany and Sweden, World Tape Pals, Tape Respondents' International, and the International Academic Centre of Tape Correspondence.*

*An application from South Africa has been accepted in principle, subject to clarification of certain points.*

## IN BRIEF

**T**HE prizes were handed over to the various national delegations—for later distribution to individual winners—at the special dinner, organised on behalf of the industry, which concluded the London meetings.

Mr. John Weston received the awards for his successful schools tape, "Journey so long" at the special gathering at Olympic Sound Studios on November 7 at which all the winning tapes in the British Amateur Tape Recording Contest were heard publicly and in full for the first time.

**S**EVERAL delegates to F.I.C.S. were specially interviewed by the B.B.C. for the "Sound" programme.

The B.B.C. arranged a tour of their television studios at Lime Grove for the overseas visitors.

The London Tape Recording Club were official hosts for a tour of the sights of London on the last morning.

**W**E wish to acknowledge the generosity of the following firms which subscribed to cover the cost of the dinner given to the European delegates and judges:—

**Brenell Engineering Co. Ltd.; Birmingham Sound Reproducers Ltd.; Collaro Ltd.; E.M.I. Recording Materials Division; E.M.I. Tape Recorder Division; Fi-Cord Ltd.; Grundig (Great Britain) Ltd.; F. A. Hughes and Co. Ltd.; Lustraphone Ltd.; M.S.S. Recording Co. Ltd.; Saga Records; Specto Ltd.; Walter Instruments Ltd.; Welme Corporation Ltd.**



**Douglas Cleverdon, well-known B.B.C. producer who was chairman of the International Jury, seen discussing arrangements with Tim Eckersley, who was in charge of the technical arrangements at Broadcasting House**



**Jean Thevenot, retiring president of F.I.C.S., seen in conversation with Signora Migliardi, whose husband represented Italy during the weekend**

## What is C.I.M.E.S.?

*The Concours International du Meilleur Enregistrement Sonore (C.I.M.E.S.) is the International Recording Contest established on the Continent in 1952 by the French and Swiss associations of "Chasseurs de Son."*

*The Contest is now organised under the auspices of the F.I.C.S. and enjoys the patronage of broadcasting concerns, tape clubs, some governmental departments in European countries, and other similar institutions.*

*In a number of countries the broadcasting concerns transmit special programmes including the best entries in the International Contest.*

*Entries in the Contest are classified in five categories—compositions (radio plays, drama, sketches, etc); documentaries and reportage; music or speech; actuality recordings; and recording technique.*

*The British Amateur Tape Recording Contest organised by this magazine is the only British contest linked with C.I.M.E.S.*

## The New Decks

# THE COLLARO "STUDIO"

**T**HERE is already a very extensive demand for the neatly-designed "Studio" tape transcriber by many manufacturers who are incorporating it in complete tape recorders. The demand, in fact, is so heavy that Collaro Limited intimate that the transcriber may not be generally available until the beginning of next year.

This is an indication that the "Studio" deck is likely to be a sound investment, especially for those who think of building their own recorders, and the tests I have made were carried out with this in mind.

The deck is a simple one and,

because of this, there seems little likelihood of mechanical failure, as might easily happen with some very complicated foreign machines now on the market.

### GENERAL DESCRIPTION

The "Studio" is for three speed operation from a single track and is accordingly fitted with half track record and erase heads; but there is space provided for an additional half or double track head for direct monitoring during recording or for stereo reproduction.

Only four connections are required to amplifiers, plus a pair of leads for the mains supply to the motors, all

inter-connecting and switching being taken care of by the piano key controls.

The deck is compact and solidly constructed in pressed steel, stove-enamel finished in fine hammered silver. The head cover is quickly removable for adjustment to pressure pads or head alignment and the maker's name-plate can be removed to provide space for an additional gain or tone control, for which a hole is already drilled.

Three induction motors are used for the tape drive and spool winding and are fully screened to prevent inductive coupling with the tape head.

### SPECIFICATION

The maker's technical specification provides the following information and from that various performance tests were carried out on the deck sent for review.

Operating Speeds, 1 $\frac{1}{2}$ , 3 $\frac{3}{4}$  and 7 $\frac{1}{2}$  ips.

Recording Head Gap, .00025 in.

Head Impedance, 30 K.ohms at 10 Kc/s.

Attainable Frequency Response with CCIR Equalisation, 12 Kc/s. at 7 $\frac{1}{2}$  ips. with  $\pm 3$  dB.

Recommended Bias Frequency, 45 to 60 Kc/s.

Erase Head Impedance, 200-300 ohms at 45-60 Kc/s.

Erase Voltage, Approximately 25v at 120 Ma.

Playing time, 120, 60 or 30 minutes with standard 1,200 ft. reel.

Re-wind Times, 65 sec. per 7 in. spool (1,200 ft.) or 45 sec. per 7 in. spool (850 ft.).

Wow and Flutter, not greater than 0.15 per cent at 3 $\frac{3}{4}$  ips.

Long term speed stability, better than 0.5 per cent.

Dimensions, 12 $\frac{1}{2}$  x 10 $\frac{5}{8}$  ins. (deck plate), with 5 $\frac{1}{2}$  in. spools within the confines of the deck plate (spools of greater diameter overlapping the deck plate). Depth, 4 ins. below beaded edge of deck. Weight, 14 lb.

### PERFORMANCE

Tests were carried out using a Mullard Type C record/playback amplifier and a Mullard 510 power amplifier with bass and treble speakers. The measured frequency response at 7 $\frac{1}{2}$  ips. from the "Studio" tape head through the playback amplifier was to within a dB or so of the 1000 cps reference level over the range 40 to 10,000 cps. using the E.M.I. TBT1 Test Tape.

Additional tests were made between 10,000 and 12,000 cps. with the *Tape Recording Magazine* test tape which showed that the maker's claims of up to 12 Kc/s with suitable amplifiers is



**This is the second article in our new illustrated series describing new tape decks which have recently been introduced in this country. This month, F. C. JUDD deals with the Collaro "Studio". Next in this series will be the Truvox Mk. VI deck**

fully justified. Wow is virtually non-existent—as it should be in a well-made transcriber unit, and no flutter effects were noticeable from steady tone recordings.

Tape spooling was accurate on both playback and re-wind, but it was noticed that the spools fitted somewhat loosely on the hubs and vibrated a little on re-wind. Braking is instantaneous in both directions and the tape showed no inclination to jump or ride the guides on instant stopping or reversal of the tape.

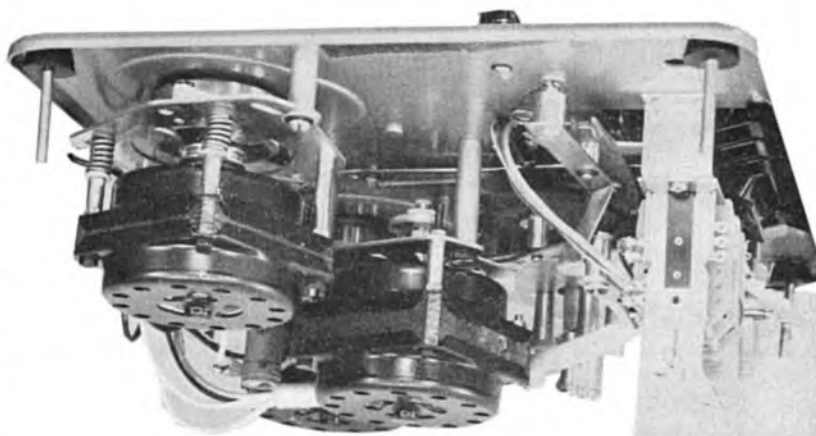
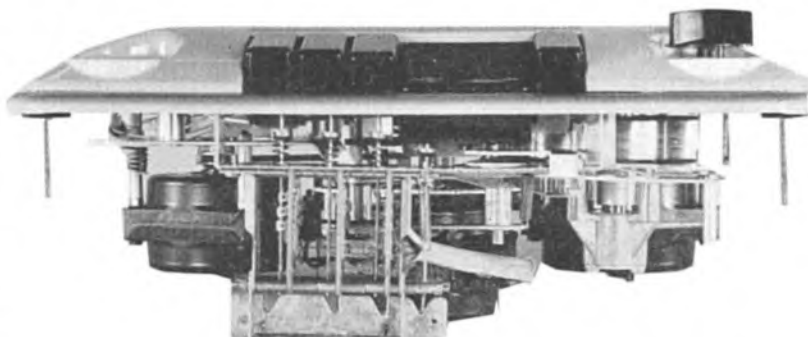
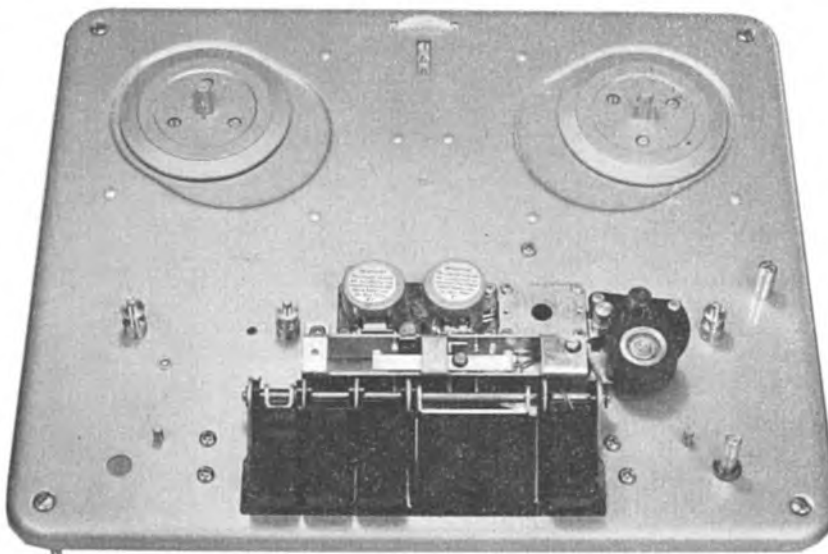
The tape position indicator is accurate, the pause button releases the tape instantly from the head, and the control buttons are certain and easy to operate. Re-wind and playing times were tested and found to be within the maker's specification.

The price of the deck is not yet fixed but I was assured by the makers that it will be both competitive and attractive to the home constructor, who could save a considerable amount by using this deck in conjunction with home constructor amplifiers.

For those whose interest lies only in pre-recorded tapes, the "Studio" transcriber becomes the equivalent of the disc transcription unit, as it can be used for playback directly with any of the pre-amplifiers now available with input sockets for a tape head.

Collaro have produced a deck which should be very popular with the home constructors. The "Studio" is to be recommended and is likely to be one of the lowest priced of its class as a first-class transcription unit with an appeal to everyone.

**Three views of the Collaro "studio" deck. Top, with spools and head covers removed—note the space for fitting a third head. Centre, side front view. Bottom, a view from beneath**







**"The player who is prepared to re-plan his practice in terms of a recorder will find he has acquired a new pair of ears."**

## By PATRICK STREVEN'S

The author—seen in the picture on the left—regularly uses a recorder for his musical work.

**W**HEN my French horn and I were launched into the hurly-burly of the orchestral profession ten years ago, the tape recorder was an expensive new toy with many detractors and an uncertain future. Now it enables me to hear myself as others hear me.

This is more important than might appear at first sight because musicians are so close to the source of the noise, and play so much from habit that only the exceptional person can listen to his playing objectively.

Perhaps this point can be made clearer by drawing a comparison with everyday speech. Most of us are reasonably happy about the way we speak, but the first reaction on hearing our own voices played back, at a party, or the day we buy our first tape recorder, is one of astonishment tinged with dismay. Yet our friends tell us that is just how we do speak. If we have little opportunity of speaking in public we probably think no more about it. But the musician cannot shrug off the faults in his playing: he is always performing to an audience, whether his listeners are in direct contact, as in the concert hall, or sitting at home listening to the radio or a record.

In fact, the player who is prepared to practise hard, and to re-plan his methods of practise in terms of a tape recorder will find that he has acquired a new pair of ears with which he can increase his potentialities.

I bought a second-hand, single-speed machine. The chief considerations at that time were a good-sized loudspeaker and a high quality microphone. The resultant fidelity of tone reproduction more than makes up for rather excessive weight and the lack of a slower speed. It so happens that I have a pleasant piece of furniture into the bargain.

Naturally no two musicians will use the recorder in the same way. My own method is to save it for a day when there is plenty of time for practising. I start with my daily limbering up exercises. These are not "physical jerks" in the athlete's sense, but musical exercises such as scales and arpeggios which have the same aim of loosening up the very much smaller muscles that a horn player uses. This takes about an hour and then I am ready for a few minutes' rest. I spend this time changing to my practise tape and checking the recorder.

One thing I never put on tape is the daily routine. I know a viola player who has his machine switched on for every note he practises. He then solemnly plays it all back again. When I tell you that the viola is such a mournful instrument that it is known in the profession as "cold mutton," you will realise that the effect on this man's critical faculties could be pretty devastating. The two kinds of music that I find it particularly useful to record are the new piece to be played in a few days' time, perhaps without very much rehearsal, and familiar passages from works I am often playing. With new music the problem is to pick out the passages in my part which are technically

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£1 deposit and 14 weekly payments of 10s. will bring you WAL Bulk Tape Eraser. Cash £7.19.6.

£1 deposit and 59 weekly payments of £1 will bring you the NEW PHILIPS EL 3538 with m/c mike. A much improved model at the lower price of 57 gns.

£1 deposit and 60 weekly payments of £1 will bring you VERITONE "Venus" with microphone. Cash 58 gns.

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# TAPE HAS PROVED ITS VALUE TO THE PROFESSIONAL MUSICIAN

difficult in themselves and those which, though they look innocent enough on paper, turn out to be difficult for more obscure reasons. For the technical passages I find a metronome invaluable. It's no use being able to play most of the notes in time and then becoming even the least bit slower for the most difficult part. A conductor is as unrelenting as the metronome most of the time and you are liable to be left behind, perhaps to find you're the only one in step! So I start to practise with the metronome set at a comfortable speed and play the difficult part a number of times, setting the metronome a little faster each time. When I think I can play it both slower and faster than the conductor will take it, I set the metronome at what I consider will be the conductor's speed and place it where I can hear it but where it is screened from the mike. Then I record it at least twice correctly. This is to make sure that it wasn't right by accident the first time.

The less obviously difficult passages need a slightly different approach. They may concern breathing for a wind-player or bowing for a string-player. But in either case they need careful listening-to for faults of control. It is surprising how these faults show up when you listen to a play-back, with the mind freed from the double effort of playing and listening. You can also play back a few notes over and over again, but to play them on your instrument exactly the same way even twice running would be difficult, to say the least. Then again there are the few bars of solo that look all too easy and not worth troubling about in the comfort of the music room at home, but which assume a new and frightening aspect in the concert hall when you suddenly realise that most of the orchestra has stopped playing and you imagine every eye in the audience trained on you. If such a solo goes wrong we usually brazen it out by telling our colleague that "it went all right in the kitchen." But to cope with such a situation I usually practise it a few times and then play it to the microphone, adding the preceding and following bars to try to create a little of the atmosphere of the concert.

With no new music in the offing, I can use a few spare minutes in recording something with which I am thoroughly familiar. This saves the trouble of setting up the music stand and finding the music in a drawer that is usually far from neat. Many's the time I have played over some easy and familiar passage, again with the metronome, only to find an unsuspected fault in the rhythm or intonation. Or I may be dissatisfied with the places where I breathe, or with the length of time taken over a particular breath.

This sort of fault shows up very clearly on playing back and is both easier and harder to correct; easier because, knowing the music well, I can practise it in the spare moments that abound at recording sessions and before rehearsals get under way; harder because playing habits are notoriously difficult to alter.

An amusing and instructive way of using a recorder, which I came across by accident, is to play duets with myself. I record, say, the top line of the famous or infamous, horn passage in the overture to Weber's opera *Der Freischütz*, making sure to precede it by counting the previous bar. Now, with the counted bar as a guide for starting, I play the lower line with the play-back. Afterwards I can repeat the process in the reverse order. I am then prepared to play any of the horn parts should I find that an engagement is offered with this difficult overture on the programme.

In common with other tape recordists, I like to get my wife to record any interesting broadcasts while I am at work.

This is particularly useful for a musician, who is usually at work in the evening when the best programmes are available. What is more, I can get home after playing for a broadcast to find one or more tapes full of my own programme. But woe betide the wife who has forgotten to set things in motion until just after that important solo I played so well!

The effect that tape has had on the atmosphere in a recording studio is quite astonishing. In the days of recording directly on to wax, the nervous tension was high; a mistake meant repeating the whole four-minute "take." This applied whether the fault was at the beginning or in the very last bar. A silly little mistake on your part could cause another member of the orchestra great anxiety over repeating a tricky solo.

Now we record on to tape a loud passage is used to cover the joins for an "insert" of anything from a few seconds to a few minutes. It is also possible to record a complete symphony movement in one attempt.

We hope it will be perfect first time, but we know that if all is not well there is no need to stop because any doubtful sections can be re-recorded separately. With the advent of stereo, the problem of joining up is becoming more acute, and the 10-15 minute "take" is becoming the rule rather than the exception, but we are still a long way from the harrowing atmosphere of pre-tape recording sessions.



A fully transistorised battery operated recorder with all the features expected from a mains operated recorder of advanced design.

### THE STUZZI 'MAGNETTE' IT'S SPECTACULAR!

- \* Size 11" x 4 1/2" x 8" Weight 8lbs.
- \* Twin Speed 1 1/2 and 3 1/2. \* Twin Track.
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Ficord available	
TRADE ENQUIRIES INVITED	LEAFLETS NOW AVAILABLE

# Announcing

the opening of our new Tape Recorder Show Room on the 28th November. Here you will be able to see row after row after row of Tape Recorders, Tapes, Microphones and all the Accessories that you may need. You will be able to see and hear, to inspect, to criticise or gloat over, as the occasion demands. Here you will be able to ask advice, compare prices, specifications, quality of workmanship and be able, without interference, to decide upon the Recorder of your choice. Each Recorder will be clearly priced with details of our very easy payments, which of course include no interest charges over an 18 month period of purchase.

We regret that our very old customer who has since emigrated to Africa is unable to attend the opening ceremony as he writes to inform us that his Parrot operated Mains Transformer had developed a short circuit in the middle of the main thrust counter dynamic gear linkage, but assures us that he will visit us once again as soon as he is discharged from his hospital compound!

Remember our new address as from 28th November is 95, Beckenham Lane, Shortlands, Bromley, Kent—one minute from Shortlands station, which is just 20 minutes from Victoria. Bring the family, bring your friends, we shall be very pleased to see you!

## TAPE RECORDER SERVICE Co.

43, NAPIER ROAD, BROMLEY, KENT

Telephone: RAVensbourne 6119



# The New Models

So many new tape recorders have been introduced this season that it has been impossible to describe them all fully when they first appeared. In this regular feature, we shall provide photographs and full specifications of models which have recently made their bow.



## TRUVOX R7

The R 7, with two-way tape transport, is an entirely new design with several interesting features.

### Manufacturer's Specifications

Price: to be announced. Deck: Own.  
 Speeds:  $7\frac{1}{2}$ ,  $3\frac{1}{2}$  ips. Rewind speed: One minute.  
 Frequency response: 30-17,000 at  $7\frac{1}{2}$  ips.  
 Wow and flutter: Better than .1 per cent at  $3\frac{1}{2}$  ips.  
 Output: 8 watts. Weight: 40 lb.  
 Size: 15 x 14 x  $8\frac{1}{2}$  in. Maximum spool size: 7 in.  
 Input sockets for mic, gram/radio.  
 Output sockets: Extension speaker and extra socket.  
 Speaker: Two, 6 in. and  $4\frac{1}{2}$  in.  
 Microphone: To be announced.  
 Other facilities: Superimposition, mixing, monitoring, safety erase lock, pause control, automatic stop, magic eye, rev. counter, separate bass/treble control, tape transport indicator.

TRUVOX LTD., NEASDEN LANE, N.W.10.

## ALBA DUCHESS

The Duchess is the result of many months research by a comparative newcomer to the tape recording field.

### Manufacturer's Specifications

Price: 26 gns. Deck: B.S.R. Monardeck.  
 Speed:  $3\frac{1}{2}$  ips. Rewind speed: 3 minutes.  
 Frequency response: 150-8,000 cps.  
 Output: 1.8 watts. Weight: 20 lb.  
 Size: 14 x 12 x  $6\frac{1}{2}$  in. Maximum spool size,  $3\frac{1}{2}$  in.  
 Input sockets for mic, gram/radio.  
 Output sockets for extension speaker.  
 Speaker: 7 x  $3\frac{1}{2}$  in. elliptical.  
 Microphone: Acos crystal.  
 Other facilities: Superimposition, mixing, monitoring, safety erase lock, twin neon recording level indicator, rev. counter, separate bass/treble controls.

ALBA (RADIO & TELEVISION) LTD., TABERNACLE STREET, LONDON, E.C.2.



## FERGUSON 441 TR

This is a compact machine using the B.S.R. Monardeck, and incorporating a new type of magic eye.

### Manufacturer's Specifications

Price: 28 gns. Deck: B.S.R. Monardeck.  
 Speed:  $3\frac{1}{2}$  ips. Rewind speed: 3 minutes.  
 Frequency response: 50-10,000 cps.  
 Output:  $2\frac{1}{2}$  watts. Weight:  $15\frac{1}{2}$  lb.  
 Size:  $14\frac{1}{2}$  x  $12\frac{1}{2}$  x  $6\frac{1}{2}$  in. Maximum spool size:  $5\frac{1}{2}$  in.  
 Input sockets for mic, gram/radio.  
 Output socket for extension speaker.  
 Speaker: 8 x 4 in. elliptical.  
 Microphone: Crystal.  
 Other facilities: Safety erase lock, tone control, cathode ray recording level indicator.

FERGUSON RADIO CORPORATION LTD., GREAT CAMBRIDGE ROAD, ENFIELD, MIDD.



# Letters to the Editor

## POSTAL RATES

**I** WONDER if your readers would be interested in the following extract from a letter received by me today from H.M. Postmaster General in response to an inquiry regarding tapes by post overseas:

"... the only recordings which are eligible for despatch at a rate lower than that for the letter post are recordings which *do not* contain a current and personal message. . . . We have recently learned that Germany does admit recordings on a very restricted basis at the sample rate and it certainly does not apply to recordings conveying a personal message, which Germany only admits at the letter rate."

As I have both sent and received recordings (personal and messages) by printed paper rate and sample post, your readers may like to know that they are infringing the regulations, as I—and many of my tape friends—have.

(Mrs.) SHEILA WAKELY

Ware, Herts.

## BACKGROUND TAPE

**T**HE following is a simple experiment that can be carried out on a tape recorder, now that double-play recording tape is available.

Select a short item of speech recorded on double play tape. Choose a few seconds of recorded music that would be suitable as background music to the speech.

Attach this second piece of tape *behind* the speech recording, using jointing tape at each end. Play the length of tape through the recorder and observe whether the speech is accompanied by a fairly quiet mellow-toned musical background. Not all recorders achieve this playback through one thickness of double-play tape, but the experiment will establish whether yours is one that does.

If so, this opens up the possibility of playing recorded speech with musical or other background at will.

A simple modification of the adaptor to carry two extra spools described in *Tape Recording and Hi-Fi Magazine*, August, 1958, will allow two tapes to be fed in and taken off together. No additional head is required, but it is essential to make sure that the two tapes come together *exactly* one behind the other *before* they go on to the first head, or even the guides. Otherwise, the first tape may ride out from behind the second.

H. G. EDE

Heston, Middx.



## TAPE AT THE MOTOR SHOW —AND ON TELEVISION

Sleek cars were not the only attraction at the recent Motor Show at Earls Court. Many visitors who stopped to admire the Bentley "S" 2 saloon were fascinated by the Grundig "Memorette" which can be supplied fitted to this car. Above, model John Fenton demonstrates the "business magnate" technique. Bronwyn Pugh, another top model, watches.

Left: Mrs. Hazel Reeve, of London, S.W.18 won a Veritone Venus console on the Michael Miles TV programme "Take your pick" recently.



**A** BOURNEMOUTH car dealer is making a daring experiment—with a tape recorder. He decided that many potential customers could only get to his premises after working hours.

So he did away with windows and doors, installed overhead, infra-red heating, and left the showroom open to the public all night.

No salesman was present—details of all models for sale were recorded on tape and this is played back continuously.

The dealer has collected a number of orders, with deposits—several left between 11 p.m. and 2 a.m. Nothing in the showroom has been damaged.

\* \* \*

**B**IRMINGHAM Library is believed to be the first to introduce a stereo record department. It will start with 50 recordings. Members will pay 30s. annual subscription and will be carefully vetted—their equipment must have cost at least £70.

\* \* \*

**T**APE recorders figure in the elaborate sound communication and entertainment systems being installed by Tannoy Marine Ltd., in three new luxury ships for the Royal Mail Lines' South American run. The first, the *Amazon*, will leave London on her maiden voyage on January 22.

## W.T.P. EUROPE FORMED AT PARIS MEETING

**R**EPRESENTATIVES of World Tape Pals from six European countries have recently met for a three-day conference in Paris. They decided to create, within the framework of the parent organisation, a European federation which will be known as "W.T.P., Europe."

The membership in Britain was represented by Len Watkins. The French representative, Robert Krouch, presided. Other countries represented were Germany, Italy, Switzerland and Denmark.

Jean Thevenot, President of F.I.C.S., attended the discussions.

The conference decided that it would be useful to form a European federation of W.T.P., in order to relieve the organisation's headquarters in Dallas, Texas, of some of its routine work and to facilitate relations between non-English-speaking countries in Europe.

All countries within the geographical limits of Europe will be eligible to affiliate, including those east of the "iron curtain."

The conference had a full discussion of policy and resolved to meet annually. The first President is M. Krouch; the secretariat has been established in Paris, and Mr. Watkins is treasurer.

Countries which have national representatives of W.T.P.—in addition to those already mentioned—are Sweden, Holland, Ireland and Spain, and these have been invited to join the new Federation.

In other countries where W.T.P. has members, efforts will now be made to get national representatives appointed so that these countries can also be brought into affiliation.

The French section of W.T.P. arranged generous hospitality for the delegates.

## 1960 AUDIO FAIR IN BLACKPOOL?

**T**HE 1960 Northern Audio Fair may be staged in Blackpool. After two years in Harrogate, it has definitely been decided to change the venue next year.

"We would like to give Lancashire the opportunity of playing host to what has become a highly successful event," explained Mr. Victor Weake, chairman of the Council of Management of Audio Fairs, at the end of the recent event.

This year's Northern Fair established

new records, nearly 25,000 people attended it. At times admittance to the Grand Hotel at Harrogate had to be suspended to avoid congestion on the three floors of exhibits and demonstration rooms.

Very few of those who went appeared to be casual "drifters"; nearly all were well-informed inquirers. Orders taken on the trade day were reported to be good.



Members of the Council of Management of Audio Fairs examining the new Steelman Transitape battery portable. It is being explained to them by Mr. Roland J. Kalb, of Steelman Phonograph and Radio Co. Inc. Left to right—Mr. Michael Berry, Mr. Kalb, Mr. Victor Weake and Mr. Roger Threlfall

## Fortnightly publication— enthusiastic reception

**I** WOULD like to congratulate those responsible for producing a magazine as interesting as *Tape Recording and Hi-Fi*. I have taken the magazine each month since July, 1957, and have watched it grow into the wonderful value for money that it is today.

During those months I have had one complaint, but even that will now no longer exist: once each month was far too long to wait for the next issue, now I'll be able to look forward to it each fortnight.

I must add that the members and myself appreciate the space given to clubs for reports on their activities. May I take this opportunity of wishing *Tape Recording and Hi-Fi* the very best of success during the years to come.

GRAEME A. AHIER

*President, Jersey Tape Recording Club.*

### "PERFECT FORMULA"

**M**AY I tell you that I think you have now found the perfect formula for a *Tape Recording Magazine* of very wide general interest?

The decision to publish fortnightly is very welcome news.

It is not easy to please those with some expert knowledge and at the same time to capture and hold the interest of the thousands who are now discovering tape recording for the first time.

Your magazine, alone in the field, is doing just that.

RUDOLF DYNER.

*Hampstead, N.W.3.*

### COUNTRY NEEDS

**I**T is good news that you are now to publish fortnightly. Those of us who live in the country will now be in the happy position of being kept up to date on the latest from and about the tape recording world.

ROBERT ELLIS

*Whitsome by Duns, Berwickshire, Scotland.*

### KEEPING UPPERMOST

**M**ANY congratulations on your new decision to bring out your magazine fortnightly. This means more work for your staff, without doubt, but I am sure that it will earn you the admiration and full support of all readers and keep you uppermost of the competitive journals.

MIKE BROWN,

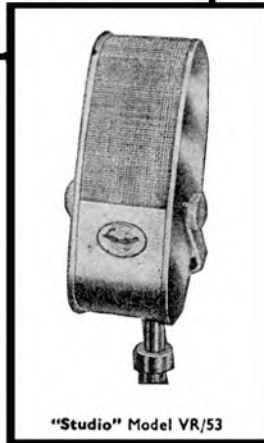
*Secretary  
Rugby Amateur Recording Society.*



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**BJ EXTEND YOUR TAPE  
SOUND TO HI-FI**

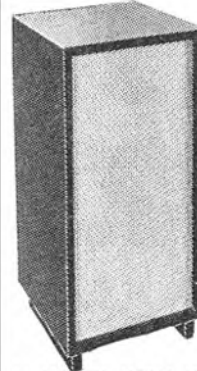
You have never really heard the sound of your tape recorder until a separate or extension loudspeaker system has been added. This is due to the limited size of the tape machine's cabinet and speaker.

At last the world famous Sonetta speaker, accepted by the Council of Industrial Design is available in matching impedance for all tape recorders.

The Sonetta Model 'T,' designed by specialists in sound for almost 40 years, is a two speaker system requiring only one square foot of floor space and is available in walnut, mahogany or oak veneers.

A demonstration of this wonderful instrument at your dealer will convince you that its addition to your tape equipment is a MUST.

Write for full details and leaflet of SONETTA Model 'T' to—



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Lustraphone LFV/59 Dynamic.....	8	18	6
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Grundig GCM 3.....	6	6	0
Reslo Ribbon.....	8	15	0
Film Industries Ribbon.....	8	15	0
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Jason JTV.....	25	8	10
Pye FM.....	23	2	0
Pye AM/FM.....	30	9	0
Garrard 4HF.....	18	17	8
Collaro 4T200.....	18	13	0
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Walter 101.....	29	gns.	
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Walter 505.....	57	gns.	
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\*Microphone extra  
**BATTERY OPERATED  
TRANSISTOR RECORDERS**  
Grundig "Cub"..... 26gns.  
Clarion..... 25gns.

**PRE-RECORDED TAPES AND TAPE SERVICE**

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# A GUIDE TO BUYING A SECOND-HAND MACHINE

The tape deck and internal amplifier have been comprehensively dealt with in previous articles. This one gives information concerning loudspeakers, the all-important bias (erase/record) oscillator, and recording tape.

## LOUDSPEAKERS

**M**OST domestic class recorders have a fitted loudspeaker intended for all normal replay purposes. A few professional machines also have an internal speaker, but this is normally intended for monitoring purposes only. One of the most popular speakers for small cabinets is the elliptical cone type and these are capable of quite favourable quality of reproduction. Naturally, the bass response will be limited according to the size of the recorder cabinet, so do not expect to get a "hi-fi" woofy bass. This can only be achieved with a suitable external speaker in a properly designed enclosure.

Some makers fit two small speakers to handle the power from a larger output amplifier but, again, the bass response can be poor when compared with a large speaker and enclosure, even though the amplifier is perfectly capable of a flat response from the very low frequencies, upwards.

It is worth while inquiring whether the recorder you intend to purchase has an external speaker connection and, if so, having a demonstration arranged with the recorder coupled to a hi-fi speaker; at least you will know what to expect if it is decided to invest in one.

## THE BIAS OSCILLATOR

This is a circuit tucked away inside with the amplifier and few, except the more enlightened experts, know of its existence. Without it the recorder will neither record or erase. A badly-designed oscillator having a poor waveform can, however, produce noise on the tape which is apparent as a fairly high pitched "hiss" when the tape is run through with the gain control turned fairly well up.

To check on this, switch the machine to "record" and turn the record volume control(s) to zero. Run a few feet of unused tape through, wind back, and switch to playback. An unused tape will produce virtually no noise when it is run through with the gain control at maximum. Any noise produced by the bias oscillator would be noticeable at once on the section used for the test.

The operating frequency of the bias oscillator can have some effect on reproduction and an oscillator having low output will cause distortion on the

By  
F. C. JUDD

recording; too much bias can cause lack of high frequency response. Normally no adjustment is provided for varying the bias, as the modern magnetic recording tapes issued for domestic use comply with certain standards and the tape recorder manufacturers design the bias oscillators to comply with these standards.

Some of the older types of tape will, however, provide less signal when used on a modern machine, and some examples of this are shown by the pen recording of Figs. 1A and B. Note that the modern tapes closely match each other with respect to signal level. The recordings were made from three well-known makes, both old and new type tapes.

## BUYING A SECOND-HAND RECORDER

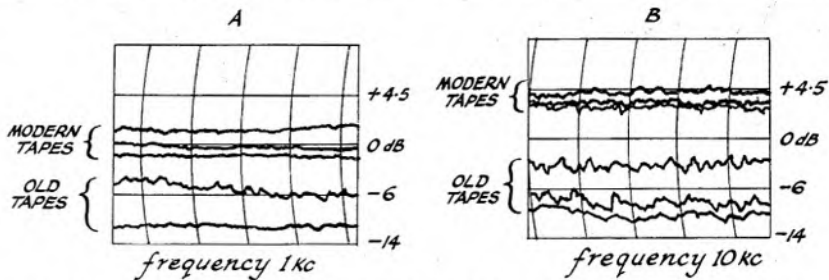
This is somewhat similar to buying a second-hand car. If you have a thorough knowledge of the subject, it is quite easy

parts. Try and satisfy yourself that faulty operation is due to lack of adjustment or lubrication and not to worn parts.

If a frequency test tape is available, all the tests mentioned in the first two articles can be carried out for wow, flutter and frequency response. If possible, some sort of frequency response test should be made to find out if the recording head is worn. If a test tape is not available the only method is a listening test, with the aid of a pre-recorded tape containing music with plenty of treble and transients.

The tape head must first be tested for azimuth alignment, and without a test tape this is difficult to do properly; but it can be carried out by running a recording through several times, each time listening and simultaneously adjusting the alignment until the high frequencies have maximum response. A badly-worn head will have severe lack of high frequency response.

A recording made on the machine should be free from hum and noise. Bad hum may be due to poor smoothing, e.g. low capacity or open circuit smoothing capacitors. Check by switching to playback, tape stationary and gain control



Pen-recordings showing different signal levels from various makes and types of magnetic recording tapes (recording bias voltage constant)

to spot defects. One cannot see what is inside the engine of a car without dismantling it and the same applies to recorders; in any case, a peep inside may tell you nothing apart from the fact that spiders, dead flies and dust can accumulate in large proportions, although this rarely affects the performance of any radio or electronic equipment.

As a preliminary test, switch the instrument on and see that all the controls work, e.g. stop, start, fast wind and rewind, pause button and tape position indicator, etc. See that the tape winds smoothly on the spools and does not jump the guides or spill on fast winding. Check the braking again, making sure that the tape does not spill from the spools.

Mechanical defects may only call for minor adjustments, or a spot of oil in the right place. Dust and oil may be clogging the guides and other moving

turned full up. Hum due to poor smoothing will be painfully obvious. Check also for noise on the tape by carrying out the tests described earlier for the bias oscillator.

Test very carefully for noisy volume and tone controls. These are replaceable, of course, but difficulty might arise with obtaining replacement controls for continental machines. When considering the purchase of older continental models, the question of spare parts should be borne in mind, particularly mechanical parts.

Finally, if you contemplate buying a new recorder, do study and compare the makers' specifications carefully. If there is any doubt as to the meaning of certain items, consult the dealer or manufacturer. Don't be taken in by high pressure sales talk and insist on proper demonstration in your own home, if possible.

# Equipment Under Test

**F**IFTEEN-SIXTEENTHS of an inch per second tape speed! Twelve hours' continuous wow-free recording! The performance of this new Stuzzi Tricorder is little short of incredible. I must admit to having been sceptical about the recording speed of 15/16ths ips and, without waiting for the signal generator to warm up, promptly recorded some slow-moving pianoforte. This is a test for wow if nothing else is. It was fascinating to watch the tape spools moving so slowly and even more so to hear the result—*no detectable wow*.

By this time the test equipment was ready and a 1,000 cps tone was recorded. Only by most careful listening could the slightest wow be detected at this and other selected frequencies over the audio range.

How did they do it? In a matter of seconds the deck panel was off to reveal the most amazing mechanics I have ever seen in a domestic class recorder. It was rather like looking at the inside of a precision made clock

—intricate and beautifully finished; with a performance to match.

The Tricorder offers much more than this; it has three speeds,  $3\frac{1}{2}$ ,  $1\frac{1}{2}$  and 15/16ths ips, hence the name "Tricorder." It has an incorporated mixing unit, a superimposing control, recording level indicator, an interlocking push button control system, output sockets for external amplifiers and extension speakers, and so on.

It is extremely compact considering the facilities it offers, and is attractively finished in two tones of leatherette. Both the lid and a strong plastic handle are detachable and the recorder is supplied with a reel of tape. The microphone deserves a review of its own, for it is a high-class (table stand or hand) ribbon instrument, with a *two-way* polar response. A ring type control on the stem permits either cardioid or co-sine law pick-up.

The ardent tape recording enthusiast will appreciate the potentialities of this.

## PERFORMANCE TESTS

The machine submitted for review was subjected to the usual tests and can definitely be rated as one of the best of the domestic class recorders. Although it comes within the higher price range at 75 guineas, it is well worth it.

Quality of production over its own speaker system is excellent, but naturally lacks the bass response of a large speaker system. For more serious listening this recorder deserves to be used with a Hi-Fi external speaker, since tests made with both an external amplifier and speaker and an external speaker prove that full frequency range response and quality of reproduction is available.

I feel there is little need to mention that wow is practically undetectable at either speed and better than 0.3 per cent. Slight flutter was noticeable, however, on the lowest speed. Fast wind and re-wind was timed at 2 minutes, 35 seconds for a 5-inch spool of L.P. tape and, while tape spooling was accurate on normal recording or playback, it did become a little ragged on fast re-wind.

Tests were made for braking, which is instantaneous, and at no time did the tape jump the guides or spools. The tape length register is accurate enough for finding a required section of tape to within a few inches.

The push-button control system is unique, as it is self interlocking so that the tape cannot be started until the correct button has been depressed for a particular function. Recording is clean and noise-free and erasing leaves the tape absolutely free of previous recording; erasure is better than 65 dB.

Such items as the automatic tape stop device, superimposing control, magic eye recording level indicator were all tested to satisfaction. A most comprehensive instruction booklet is included, which is clearly written and illustrated.

## BUILT-IN MIXING FACILITIES

I feel that, in all fairness, this should be elaborated upon, as the "Tricorder" is one of the very few domestic recorders that have provision for direct mixing of a microphone, pick-up and/or radio with a separate control for each channel.

The variable superimposition control is also an excellent feature which allows the addition of speech to music already on the tape with a varying degree of erasure to the original recording. With this control it is possible to add speech and fade the existing background right out or leave some of it there. These facilities alone add much to the value of this machine.

## SPECIFICATION

Taking the maker's specification and comparing it with the results of accurate tests was interesting. In such an exercise one is generally certain of finding some flaw in performance. Apart from the one or two points already mentioned, I could find nothing in this case that disagreed with the maker's specification, which is given below:

# Sound Effects

By Alan Edward Beeby

*A regular series of hints on how to get satisfactory sound effects at home. If you have a particular problem, send it to us.*

## CAR CRASHES

These are most effectively obtained by using a recorder which has the facility for superimposing one recording over another. Failing this, an alternative method is to use two recorders, working from each in turn as each new "sound ingredient" is built into the effect. I have found the following method to give quite satisfactory results, performed in four stages.

*Stage One* supplies the basic "noise" of the crash. To obtain a clear, sharp start for this, depress the emergency-stop button and set the machine to "Record" at maximum level. Now, blow hard into the microphone. (Over-recording, is it? That's alright, carry on!)

While still blowing, release the stop-button and, fairly slowly, fade the recording control to zero.

For *Stage Two*, rewind to the beginning of *Stage One*. This is the "tearing-of-metal" effect and is recorded at normal

level. It consists of drawing a plastic ash-tray lightly across a sheet of glass.

*Stage Three* is the "breaking-glass" effect and should occur slightly after the beginning of the crash.

Finally, for *Stage Four*, recorded at half-level, drop some small pieces of metal on to a hard surface, at the same time fading down slowly to zero.

The deciding factor for success in the recording of this type of effect is timing. The *Stage* sequence, of course, is capable of many variations and the reader is advised to experiment for himself.

## CAR SKIDS

This effect can be made vocally. First, expel the breath. Now breathe in, but at the same time almost close the back of the throat, so as to produce a screeching noise on as high a note as possible.

In this instance, also, you may find that two or even three superimposed "takes" will give a better effect than one. A small tip. Don't, at the end of a skid, follow on immediately with the crash. A one-second silence will heighten the sensation of impact considerably.



# THE STUZZI TRICORDER

Tape speeds,  $3\frac{1}{2}$ ,  $1\frac{1}{2}$  and 15/16ths ips.  
Frequency response, at  $3\frac{1}{2}$  ips,  
40-16,000 cps.  
at  $1\frac{1}{2}$  ips, 40-8,000  
cps.  
at 15/16ths ips,  
40-4,000 cps.

(Test results: Within 2 dB over frequency ranges quoted.)

Erasure, better than 65 dB.

Output power, 2.5 watts.

Signal to noise, better than 45 dB.

Wow and flutter, better than 0.3 per cent.

The remainder of the specification, in brief, is as follows:

Mains supply, 110, 130, 150, 220, or 240v. at 50 cps.

Inputs, microphone 2mV, Radio or P.U. 60mV at 0.5mA.

Outputs, extra speaker socket 2 to 6 ohms—external amplifier feed approximately 1.5v at 20K ohms.

Valves, EF86, ECC83, ECL82, ECC85, H.T. rectifier—metal.

Spool sizes,  $5\frac{1}{4}$ -inch diameter or smaller.

Drive, special purpose external rotor type motor.

Push-button controls, fast forward, fast re-wind, replay, record and pause.

Dimensions, 13 x 10 x 6 in.

Remote control, for hand or foot switch.

Projection control, connection for direct control of a slide projector.

## OTHER FACILITIES

The valves in first three amplifier stages are D.C. heated, which undoubtedly accounts for the low hum level. Provision is made for mounting a third playback head for direct monitoring of recording with the aid of an external amplifier, although the input circuits can actually be monitored directly via the internal amplifier and speakers.

Another useful feature is the provision of a socket for telephone adaptors, and for projector cables, etc.

Slide projectors with an automatic slide change mechanism can be operated from the "Tricorder" by means of special contact strips attached to the tape.

The machine may also be used purely

by  
F. C.  
JUDD



as an amplifier for a pick-up or radio tuner; in fact, the designers seem to have included everything, as provision is also made for mounting a stereo playback head, sufficient space being left for this after the existing tape head.

The Stuzzi "Tricorder" is a first-class domestic machine, fully approved and recommended. Others may well find it difficult to beat the performance, especially at the new but highly successful ultra slow tape speed of 15/16th ips.

## Advice Bureau

*In each issue we shall reprint one specimen question and answer dealt with by our Advice Bureau. Others will be dealt with by post. When sending queries use the coupon below.*

**Q.** I am contemplating the purchase of a tape recorder and, being completely non-technical, I find selection difficult. If you could advise me on one point, I should be grateful, i.e., frequency range.

For instance, one recorder costing nearly sixty guineas (a three-speed model) quotes 60-10,000 cps  $\pm 3$ dB at  $7\frac{1}{2}$  ips. Other  $3\frac{1}{2}$  ips, single-speed, models costing about 50 guineas, quote a frequency range of 30-15 or 16,000 cps. I would have presumed that the latter was preferable, but I should welcome your comments.—**J. C. G., London.**

**A.** It is generally an accepted fact that better recordings and playback of magnetic tape are obtained on a tape recorder using a tape speed of  $7\frac{1}{2}$  ips, than on a machine using a tape speed of  $3\frac{1}{2}$  ips. Some manufacturers of slower speed tape recorders do claim very high performances for their

machines, but these claims can sometimes be misleading.

Frequency response, distortion, and signal-to-noise ratio, have a conflicting relationship. The best of any one of these three may be obtained at the expense of the other two.

If tape recorder A has a tape speed of  $3\frac{1}{2}$  ips, and a claimed frequency response of 30-15 or 16,000 cps, it would generally be obtained by treble boost in the playback amplifier. This means it would have increased tape noise such as hiss, and a lower signal-to-noise ratio.

On the other hand, tape recorder B using a tape speed of  $7\frac{1}{2}$  ips with a claimed frequency response of 60-10,000 cps, would have far less tape noise, and a high signal-to-noise ratio.

Recordings made on machine A at a tape speed of  $3\frac{1}{2}$  ips may not be as good as recordings made on machine B. A tape recorder that employs adjustable bias is a worthwhile investment.

TAPE RECORDING AND HI-FI  
MAGAZINE ADVICE BUREAU  
NOVEMBER 18th, 1959

## TAPE TITTER



*"I've just done a recording of the  
Flight of the Bumble Bee"*

# CONVERT TO TAPISM

By Roy Russell

**I**F I still had my first recorder, it would be nearly old enough to sit the eleven-plus. It was a honey—and it should have been, too, for I tried eleven models before I reached for my cheque book. I was more excited than I've ever been with superior models that, from time to time, have replaced it in my affection.

It was, of course, the thrill of revolution: the big decision to sell my gramophone record (a sort of stiff black pancake, with a puncture in the centre; remember?) to the rag and bone man and became a zealous convert to tape.

We drove home from Town with the new miracle about mid-afternoon, not having had lunch. I connected up in the middle of the lounge floor, as the site of honour had not yet been cleared for the installation ceremony. My wife, meanwhile, was tackling the food problem.

Years ago though it was, I remember the first recording I made. It was Radiolympia time, so I impersonated the voices of a tape-recorder salesman and his potential buyers from Germany, U.S.A., China, Lancashire, East End, Kensington. I called my wife from the kitchen to hear the playback. She was very impressed—with the instrument more than the dialects, which she'd heard before.

No sooner had she returned to the kitchen than I called again, "Darling, do come and hear this"; she returned with an understandably piqued "What is it *NOW*? I'm getting lunch."

But it was the recorder which had called her this time—a sort of tag-line to my Radiolympia act which had also been taped. It completed my delight: the fidelity was such that the recording could be mistaken by my own wife for a real, live, tape-happy spouse!

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# TRIBUNAL RULES ON A COPYRIGHT CASE

**T**HE Performing Right Tribunal, which decided in May against the P.R.S. in a dispute with Southern Television, one of the I.T.A. contractors, has just issued an official summary of the hearing:—

Southern Television Limited is a programme contractor, and as such is concerned to obtain a licence for musical works in the repertoire of the Performing Right Society to be broadcast by the Independent Television Authority. Its case was not covered by a licence scheme.

## ANGUS McKENZIE

At the time of going to Press, a regular contributor to these pages, is again in hospital because of trouble with his eyes. This is his second stay in hospital, and he has already had three operations.

At the time of going to press, a decision was awaited as to whether a fourth operation might be necessary.

We feel sure that readers will wish to join in wishing Mr. McKenzie a quick and full recovery.

The P.R.S. was prepared to grant such a licence, but only on the condition that a clause should be inserted in effect prohibiting the reproduction on records or cinematograph films either by the programme contractor or by the I.T.A. without terms having first been agreed with the owner of the recording right.

It was the contention of Southern Television that that clause imposed terms or conditions which were unreasonable; and it applied accordingly to the Tribunal to have it so determined.

The case for Southern Television was supported by the B.B.C., and that for the P.R.S. by three bodies (which combined to form one interested party) all being owners of copyright in the making of mechanical recordings.

The P.R.S. maintained that if, and so far as, a licence to broadcast carried with it any right to make a mechanical reproduction, this would constitute an infringement of the last-mentioned copyright, and frankly admitted that the clause which the application sought to impeach was deliberately designed to defeat whatever statutory provisions might have on that effect.

The Tribunal did not find it necessary

to determine the question of law as to whether or not there were statutory provisions which did have that effect. If there were no such provisions, then the insertion of the proposed clause was pointless.

If, on the other hand, the legislature had thought fit so to provide, then it was unreasonable to compel Southern Television against its will to contract-out of any statutory rights which it might have.

In either event, therefore, it was held to be unreasonable to include the proposed clause as a term or condition subject to which the P.R.S. would grant the required licence to Southern Television.

The Tribunal accordingly ordered that Southern Television was entitled to be granted a licence in the form proffered by the P.R.S., but without the inclusion in its terms of the proposed clause or any clause to the same or a like effect.

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# New Products

## SIMON USE CASSETTE DECK IN NEW MODEL

**T**HE new "Minstrel" recorder from Simon Sound (photograph below) is one of the first machines to use the Garrard "Bichette" deck, with cassette loading of the tape. It boasts also one of the smartest, contemporary cabinet designs seen so far.

It is listed at 39 guineas and this includes—another unusual feature—a microphone which is built into the recorder for use in speech recording.

The single speed is  $3\frac{1}{2}$  ips. The cassette contains 4-inch spools and the rewind time is 45 seconds.

There are separate inputs for microphone and radio, with facilities for mixing the two sources. Tone control and monitor volume control are also provided, with superimposition and magic-eye level indicator.

The triode push-pull amplifier provides  $2\frac{1}{2}$  watts output. The machine can be used as a straight-through amplifier, if desired.

The cabinet has an attractive veneered finish and measures 18 x 12 x 7 in. overall. The weight is  $27\frac{1}{2}$  lb.



## New Decca Stereo Amplifier

Five exclusive features are claimed by Decca for their new "Stereo Sound" amplifier, a preliminary specification for which has just been issued. A variable speed control is used to reduce the width of the stereo sound image when the speakers have to be placed further apart than optimum. This replaces the usual mono-stereophonic function switch.

Bass and treble variable pitch limit controls enable optimum adjustment in removing noise or distortion and turntable rumble.

There are also special adjustable pitch tone and input level controls as well as silicon rectifiers to give greater efficiency with less heating.

Controls affecting both channels are gauged and balance is maintained within plus or minus ten per cent. for most settings.

The amplifier will be suitable for tape heads with an input of 220K ohms, equalised CCIR  $7\frac{1}{2}$  ips.

Decca Radio and Television, Ingate Place, Queenstown Road, London, S.W.8.



## LUSTRAPHONE'S NEW MOVING COIL MIC.

**T**O meet the demand for a moving coil (dynamic) microphone with fidelity performance characteristics, Lustraphone have introduced model LD/66. Of completely new design, with housing on modern acoustic lines, compact and elegant in appearance, it is claimed to embody the latest techniques in microphone manufacture.

It is suitable for use as a stand or table model, and a special stirrup is available to enable it to be mounted on a stand.

The frequency response is substantially flat from 70 cps to 12,000 cps. There are four versions of the model, the basic LD/66 being a low impedance type with output rated at 25/30 ohms. LD/66M line impedance is 500/600 ohms. Also there are types LD/66Z with high impedance grid and LD/66ZC with condenser grid.

The sensitivity varies from 88dB for low impedance to 75 dB for line impedance and 52 dB for high impedance. The design incorporates the magnet system in a special concentric assembly. The microphone is housed in a cream polystyrene body,  $3\frac{1}{8}$  in. x  $2\frac{1}{4}$  in. x  $1\frac{1}{2}$  in. over-all.

The standard model has a stirrup fitted for table standing which moves into a recess for hand use. The special model for stand use has a swivel with a  $\frac{1}{2}$  in. x 26 TPI screw socket.

It is supplied with 6 feet of cable and with this weighs 8 ozs. The basic LD/66 model with low impedance costs £4 2s. 6d. The LD/66Z with high impedance is £4 12s. 6d. and the special stirrup for stand mounting costs 7 shillings extra in both cases.

Lustraphone Ltd., St. George's Works, Regent's Park Road, London, N.W.1.

# WyndSOR announce their new Victor

## V.I.Ps PEOPLE IN THE NEWS



Included in several top level personnel changes at Philips Electrical Ltd. is **Mr. W. B. Dwyer** (photo above). From January 1, he takes over responsibility for dictation machine (and car radio) sales throughout the whole of the company's south-east region.

Mr. Dwyer has a long connection with the industry and was for several years a sales representative with Brown Brothers Ltd. At present he represents Philips' radio and television interests in north London areas.

He will be succeeded in this post by **Mr. A. F. Potter**, who joins Philips from Radio and Allied Industries Ltd.

\* \* \*

**Mr. Peter Iddon** has been appointed the London area representative of Multicore Solders Ltd., the manufacturers of the well-known "Bib" splicer. He takes the place of **Mr. John Neville**, and in his new post will be directly responsible to **Mr. G. A. Jarvis**, director of the firm's sales division.

Before joining Multicore, Mr. Iddon was with Coliaro Ltd.

We regret the omission of the Fig. 1. component values in the Output Meter article in our last issue. The values are as follows:

VR1. Sensitivity control, 20 K.Ohms.  
VR2. Set Zero, 50 K.Ohms.  
R.1. 27 K.Ohms resistor, ¼w.

A NEW recorder called the "Victor" is announced by the WyndSOR Recording Company. It incorporates the Coliaro "Studio" deck and a 10 x 6 in. speaker in a detachable lid and is priced at 45 guineas.

The price includes a gilt-sleeved jack plug for direct recording and a matching crystal microphone. There are separate inputs for microphone and gram/radio, with mixing facilities, and there is gain control for monitoring recordings through the speaker.

There is an additional output socket and the machine can be used as a straight-through amplifier.

The "Studio" deck provides usual twin-track recording at three playing speeds—7½, 3½ and 1½ ips. A full description of the deck will be found elsewhere in this issue.

The "Victor" provides full frequency equalisation at all speeds. Frequency response is quoted at 50 to 15,000 cps at the highest speed and 50 to 5,000 cps at the lowest.



Signal-to-noise ratio is given as better than -40 dB.

Tone control, pause control and recording level indicator are incorporated.

The wooden cabinet is covered in two-tone grey leathercloth, with gilt fittings. Built-in spool pockets are provided.

Overall dimensions are 14½ x 12½ x 9 in. (with lid) or x 4½ in. (without lid). The weight is 29 lb.

## Stereo Notes

By D. W. Gardner

IT will be much easier to discuss stereophonic sound once everyone has heard a reasonable quantity of first-class stereo under good conditions. As it is, I often hear people saying that some form of mono reproduction is "as good as stereo" when they should really be saying that it is "as good as bad stereo."

Certainly with some stereo recordings, and some stereo equipment, the effect achieved is not all that superior to good mono recordings played through two good speakers—but you will notice that the price is not so much different in such cases, either. Two good loudspeaker systems represent a substantial outlay, and from this stage of development a full stereo system is not far away.

The main point, however, is that stereo should be judged by what it can do under proper conditions and not by its performance when something or other is letting the side down. However well monophonic material is spread, it is no substitute for first-class stereo.

The question of how much stereo there is in a stereo recording is something which has to be watched, but even if there are variations in this respect, the recorded-music collector—who normally can buy only a small proportion of the records issued—can make sure that he acquires only those with good separation.

We are now in a transitional period

between the ages of mono and stereo. A feature of this is the necessity for doing justice to large stocks of monophonic recordings—which tends to shift the focus of attention unnaturally towards the problem of mono-through-two-speakers.

It is right to deal with the matter thoroughly, but it would be wrong to modify our attitude to stereo because of this condition.

Two loudspeakers carefully arranged and reasonably well-matched can improve monophonic material considerably without the mixed blessing of frequency switching. The effect without switching seems to be that the sound image occurs mid-way between the two speakers with a variation in the apparent width of the image according to frequency content. Very high notes will seem to occupy a few inches in the middle, and lower notes will be central but with vaguer definition, so that they may be accepted as several feet wide (*unless they are held in the dead central position by the force of suggestion induced by the higher frequencies of the same singer or instrument*).

This mechanism works to advantage in opera and in the case of other orchestrally-accompanied vocalists, the effect being to place the singer sharply in the middle with a broad background of accompaniment. This is still not stereo (for one thing, the singers can only appear in the middle), but something has been gained and it has been done without the disadvantage of wandering effects.

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# TAPE RECORDING AND HI-FI YEARBOOK 1959-60

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# News from the Clubs

## Club Personalities No. 6



**BRIAN  
RACE**

Warwick and  
Leamington  
Tape  
Recording  
Society

WITH the advent of the long evenings, a number of clubs are grasping the last remnants of the long summer by playing back the tapes made by members on holiday. Outstanding among the reports received is that from the **West Middlesex Club** whose Mike Randall and Phil Mead had each taken a portable recorder on holiday. At the October 9 meeting Mike Randall played part of a festival of dancing tape which had been recorded in Spain using a Stuzzi Magnette. Together with Phil Mead's contribution, recorded in Switzerland on a Clarion Transita, the tapes provided members with first-hand comparisons of the capabilities of these two transistorised machines.

In **Rugby**, Mr. Wearing who had also visited Switzerland, presented his holiday slides at their October meeting. Included in the evening's entertainment were slides by Mr. Campden of various parts of England, and a sound only holiday programme compiled by Mr. Tilcock.

**Birmingham** members received a tape from Charles Davison who at the time was touring the Aachen area of Germany. His tape included impressions and information of the Grundig range of recorders. The three-inch tape had been recorded using seven recorders, the final stages having been recorded on the Grundig 1000.

An interesting point was that all the recorders used were fitted with a universal tone control so that once the level had been determined the tape could be continued on any other machine at the same setting. This had been done and the tone remained constant throughout the tape.

The "Bells of St. Mary's" tune competition held by **Grantham** members produced some interesting results. Mr. L. Gilbey, club secretary, gained most points. His musical instrument consisted of a narrow sheet of aluminium, a horse-shoe magnet, and an elastic band. He received the prize of a reel of tape.

Other entries include a recording made by Mr. R. V. Huddleston who partially filled wine glasses with water, and by Mr. Brown who used varying lengths of tubing. Members have made the initial recordings for the Grantham tape. They visited a local fire station to record the events following the ring of a telephone announcing a fire. The tape ended with the clang of the fire engines as they sped on their way.

Brian Race became interested in tape recording as a hobby two years ago, and has been a member of the **Warwick Club** since its inauguration. Soon after its formation he helped to organise a hospital tape service, and in 1958 was appointed Editor of the Club's newsletter.

He was elected Secretary at the A.G.M. this year. Although this has become nearly a full-time job, he feels, as Secretary to the Export Manager of an engineering firm, that his society work is almost second nature.

He is extremely interested in correspondence by tape, and is a member of **World Tape Pals** and the **Voicespondence Club of America**. He would eventually like to have a tape contact in each country of the world, and is well on the way to achieving this ambition, with contacts so far in ten different countries.

During the past twelve months he

has become engrossed in the combination of tape and 35mm photography. He is now preparing his second tape/slide show, entitled "Italian Journey." His first tape/slide show, "South of the Alps," made on holiday in Bavaria and the Italian Dolomites, recently started a tour of his friends in America and Canada.

His hobbies are collecting and listening to classical music, travel, reading, teaching, and generally learning about other countries.

He has a Grundig TK 830/3D and a Stuzzi "Magnette" battery operated portable.

To simplify the problem of insufficient mains points, a mains plug board with a number of 5 amps 3-pin sockets has been built for club use. Mr. Rose, one of the new members, is building a recorder from "bits and pieces," and making many of the parts himself. The club is in urgent need of its own premises. Anyone with knowledge of a suitable building is asked to contact the secretary.

Miss Joan Ray-Linger, an amateur theatrical producer, was welcomed by members of the Rugby club at their October 29 meeting. Miss Ray-Linger had been invited to a discussion of the play-reading group to give some practical

help and guidance. Members took home scripts of the play and the actual casting was arranged for the November 12 meeting.

Local publicity was given to the Society in the October 30 edition of the **Rugby Advertiser**. Six members saw themselves as caricatures outlining their positions and interests in the club. A tape recording course is being arranged to take place in the New Year. Further details will be given shortly.

The Birmingham hospital service group, under the direction of Barry Stephens, put on their first programme at Heath Lane Chest Clinic last month. Members also took advantage of an offer to visit the Bristol Road Cinema. They toured the projection room, and were given a demonstration of the stereo equipment.

Mr. Bennet read excerpts from William Ley's book "Dragons in Amber" at the October meeting, using **Mars** from the **Planet Suite** as background music. His timing was very accurate and it is intended to have more of these musical stories soon.

At the Uxbridge meeting on October 22 of the West Middlesex Club, Stanley Mace described his new home-built recorder, designed for use with the Brenell Mk. V deck. The machine will have optional full or half-track recording and playback, controllable fade/erase and superimposition, a built-in but removable microphone mixer, and monitoring facilities.

Mr. Mace elaborated the reasons for these and other features and provided members with a good idea of the work involved in recorder assembly. Later the

(Continued on page 37)

## FORTHCOMING MEETINGS

**BIRMINGHAM:** November 23, at the White Horse Cellars.

**BOURNEMOUTH:** December 1, at the Civil Defence Training Centre, Holdenhurst Road.

**CHESTERFIELD:** December 7, at The Yellow Lion, Saltergate (multi-recording experiments with guitars).

**COVENTRY:** December 10, at Rotherhams Social Club. (AGM).

**GRANTHAM:** November 23, at the George Theatre.

**LEEDS:** November 19, at The Hope and Anchor, The Calls, Leeds 1.

**LONDON:** December 3, at the Abbey Community Centre, Marsham Street, S.W.1.

**RUGBY:** November 26, at The Red Lion, Sheep Street.

**WEST MIDDLESEX:** November 26, at St. Andrew's Church Hall, High Street, Uxbridge. (Demonstration by F. A. Hughes & Co. Ltd.).

**WEYMOUTH:** December 2, at the Waverley Hotel.

## 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.

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**GRUNDIG TK 830/3D**. List price £117—bargain at £90. One year old, in immaculate condition. H.P. terms arranged. Write, Mr. J. Gibbin, 55, Diana Street, Scunthorpe, Lincs. Phone: Scunthorpe 5639-9-5.

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**VORTEXION** type **VVA** Tape Recorder. Cost price £92 13s. Good condition. Accept £50 for quick sale.—London. Box No. 316.

In the advertisement of The Recorder Co. of 188, West End Lane, West Hampstead, N.W.6, in a recent issue certain tape recorders were described as "transistorised mains models." This was, of course, incorrect as mains models are not yet transistorised.

The Recorder Co., who are well known for the personal service they offer their customers, ask us to publish this correction with apologies for any inconvenience caused.

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(Continued from page 35)

same evening he demonstrated the magnetic waveform on tape by applying to a length of recorded tape a mixture of methylated spirit and black oxide of iron.

The A.G.M. of the Leeds Club was held on October 1. The chairman and secretary, Messrs. Williams and Quigley, were re-elected and Mr. R. W. Scarbro was elected treasurer. Their following meeting was devoted to a demonstration of the Minivox battery portable.

The demonstration, given by Mr. Chisholm, of Challen Instruments Ltd., was of particular interest for members who at present are producing a tape of Leeds to be sent to Australia.

Mr. Chisholm offered the loan of the Minivox, and this was to be used on November 7 to record the last tram to run in Leeds. Members are to start a hospital tape service for children whose parents are too far away to visit regularly. Any club willing to help is invited to contact Mr. Brook, 11, Ashworth Place, Leeds 6.

Arrangements are being made by members of the Warwick and Leamington Society to carry out a request to play a tape to the mother of a lady living in Düsseldorf. The club was host to members of the Coventry club for a recent stereo demonstration provided by a representative of E.M.I. Four members have set up a group to experiment with tape and cine. Their Annual Dinner will be at the Clarendon Hotel on December 2.

A stereo programme for the blind has been completed by the Reading Tape and Cine Society. A commentary links local sounds ranging from church bells

# Club directory

## NATIONAL

**National Federation:** Alan Stableford, 9, Normandy Terrace, E.16.

**British Tape Recording Society (Hospital Service):** A. Lovell, 12, Longmore, Ashton, Bristol, and G. Chandler, 33, Deacon Street, S.E.17.

**The British Recording Club:** A. Alexander, 123, Sutton Common Road, Sutton, Surrey.

**Tape Recording Society of Great Britain:** John R. Walters, 29, Pitt Street, Broadwaters, Kidderminster.

**Tape Programmes for the Blind:** Maurice Chambers, 139, Goldthorne Avenue, Sheldon, Birmingham 26.

## INTERNATIONAL

**World Tape Pals:** Harry Matthews, P.O. Box 9211, Dallas 15, Texas, U.S.A. U.K. Rep.: Len Watkins, 40, Ravenslea Road, London, S.W.12.

**Around the World Tape Pals:** Roy W. Howard, 3113, South Center Avenue, Arcadia, California, U.S.A.

**Tape Respondents International:** P.O. Box 416, St. Louis 66, Missouri. U.K. Rep.: Robert Ellis, Schoolhouse, Whitson, By Duns, Berwicks. Blind Services Committee: Vic Torrey, 1103-65th Avenue,

Apartment B, Oakland, 21, California, U.S.A., and Bill Rawle, 9, Polan Road, Darlington, Co. Durham.

**Voicespondence Club of America:** Charles Owen, Noel, Virginia, U.S.A. U.K. Rep.: Ronald Davies, 15 Fentons Avenue, E.13. **Sightless Members Section:** Fred Gazeley, 2, Bromley Road, Beckenham, Kent, and Lee Lacy, 15, Fentons Avenue, E.13.

**Australia-British Cobber Club:** Robert Thorpe, 63, Harbury Road, Cannon Hill, Birmingham 12.

**Australian Tape Recordists Association:** John F. Wallen, Box 970H, Adelaide, South Australia.

**Brisbane:** C. L. Appleby, 149, Sirius Street, Coorparoo Heights, Brisbane, Queensland, Australia.

**Dansk Magnetone Klub:** K. Galle, Vesterbrogade 19, Copenhagen V, Denmark.

**New Zealand:** Murray J. Spiers, 39, Ponsoby Road, Auckland, W.I., New Zealand.

**Cape Town:** Bernie Hone, P.O. Box 3392, Cape Town, S. Africa.

**Durban:** R. A. Watt, P.O. Box 2655, Durban, Natal, S. Africa.

**Tonband Tape Recording Club:** P.O. Box 386, Windhoek, South-West Africa.

**Tape Organ Club:** Carl Williams, 19, Van Derveer, Amsterdam, New York, U.S.A.

and an organ recital to the music of a dance band. Members have had a reply from an introductory tape sent to an army sergeant serving in Cyprus.

The Abbey Community Association, at whose premises the London Club holds its monthly meetings, recently staged a *Spotlight on Local Societies* exhibition. The London Club set up a stand of their own and provided a complete public address system. Background music was provided throughout the day and members made frequent announcements drawing attention to each of the many stands. The club also recorded the opening ceremony which was performed by the Mayor of Westminster. The tape was presented to the Association.

Mr. Wilson of BASF tapes recently gave an illustrated lecture on origin and development of tape to members of the **Crawley Club**. The lecture was highlighted by the playback of a copy of a tape made in 1936 at 30 ips. It was a performance of the London Philharmonia Orchestra conducted by Sir Thomas Beecham. Members have also been visited by Mr. Robinson of Simon Sound Service who gave a stereo demonstration.

Two national tape organisations have recently amalgamated. Ted Yates, up till now Secretary of BTRS, has accepted the position of Chairman and local clubs Liaison Officer in the new organisation  
(Continued on page 38)

CUT ALONG DOTTED LINE

## ADVERTISEMENT ENQUIRIES SERVICE

**This is a special service for readers of TAPE RECORDING AND HI-FI MAGAZINE. It enables you—without cost—to get fuller information about those products in which you are particularly interested. Fill in one coupon below for each inquiry, writing in your name and address in each case. Then cut out the whole of this half-page, following the dotted line, fold as indicated, and post to us.**

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(Continued from page 37)

which is to be known as **The British Recording Club** incorporating the British Tape Recording Society.

News bulletins—in many styles and with varying degrees of humour—are a feature of many clubs. Straight detailed descriptions of club activities, together with bright tit-bits of the sometimes ludicrous errors made in tape experiments, provide refreshing reading and an insight into the type of organisations being formed by tape enthusiasts. Another journal of this type has recently appeared, edited by Terry Nurse, Secretary of the Birmingham club. *Tape Club News* is a duplicated magazine reprinting a selection of newsletters from various clubs. A personality section is included, the first edition giving details of the work of Colin Francis-Griffiths, Secretary of the Merthyr Tydfil Tape Society. *Tape Club News* is issued free to any club, and is modestly described by the editor as being published "for a bit of fun."

Issue No. 4 of the Birmingham club's own tape journal appeared recently. Edited by Albert Greenway, *Tape Express*, a twelve-page duplicated journal, contains an article by Stanley White describing the Tape Organ Club; two features in which members describe their respective recorders; a section devoted to tips on tape; and a list of tape correspondents.

The inaugural meeting of three clubs have been recently held. At the first of these, in Nottingham, more than forty persons were present to hear a talk on the relationship between the new club and the local Film Society, given by Mr.

H. Popplewell. Plans are being made for these two societies to work together on a production unit soon to be started. After a constitution had been decided upon, Keith Fricker presented a twenty-minute tape dealing with the history of the tape club movement. Greetings tapes from the Leicester and Chesterfield clubs were played and the meeting closed with a general discussion on future activities.

The **Staffordshire Tape Recording Society** was the second club to be started. Their first meeting was held at the end of September and among other items it was decided that meetings will be held monthly until permanent headquarters are found. Details can be obtained from the Secretary, Mrs. M. J. Tasker of 7, Cresswell Grove, Stafford.

Fortnightly meetings were decided upon at the inaugural meeting of the new club in **Huddersfield**. The first meeting after this decision, was held on October 28 when Chairman Mr. Blackstone introduced a sound film of an Austrian holiday. Their first activity will be to record carols and organ music with the festive spirit in preparation for Christmas. With a message from the Vicar the tape produced will be made available to the aged and infirm.

Another Yorkshire club is to be formed, this time in **Harrogate**. Dennis Bryer would like to hear from enthusiasts in his area. Write to 2, Park Side, Tollifoot, Harrogate. In **Lincoln**, Mr. E. Grantham is keen to contact enthusiasts. His address is "Four Winds," Coningsby Crescent, Brackbridge Heath, Lincoln.

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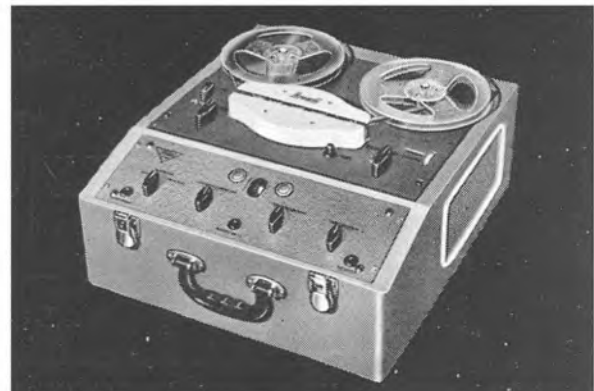
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