

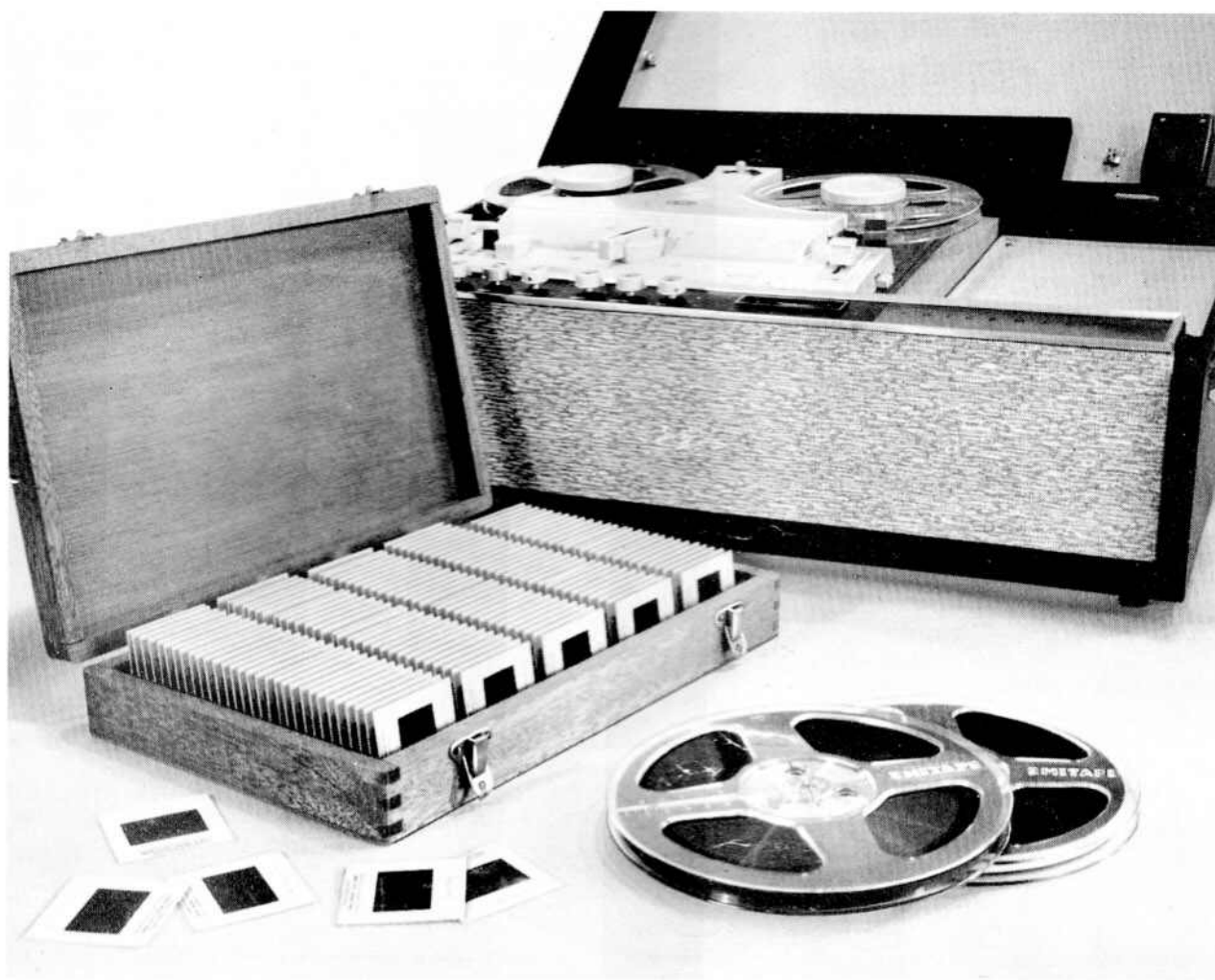
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VOL. 5 No. 1 AUGUST 1963 PRICE 2/-

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Editorial Office:

Room 532, Ulster Chambers,
168 Regent Street, London, W.1.
REGent 4833/5

Advertisement Office:

145 Fleet Street, London, E.C.4.
FLEet Street 7732/2110

Editor: Walter Gillings

Technical Editor: F. C. Judd, A.Inst.E.

Advertisement Manager: H. V. Gould

ON THE COVER

This month's cover portrays the essence of an article by John Aldred on Tape and Cine, entitled 'SHOOTING WITH PLEASURE.' See page 18. Tape and cine play an important part in summertime — this article will inspire YOU to combine the two.

Vol. 5, No. 1

August, 1963

A Worthwhile Prize for Anyone

By THE EDITOR

THE month of holidays is upon us, and if you're not in a traffic jam taking in the joys of petrol fumes or sheltering from the torrential rain with which this happy month sometimes blesses us, you'll no doubt be enjoying yourselves in the manner traditional to this doughty race.

If so, and between doses of soporific sun, you may take a gentle stroll through some parts of your holiday resort where dealers are offering their latest wares, and, if you happen to be in the right holiday camp, a free tape recorder.

From each of eight tape recorder manufacturers comes one machine to be offered as a prize in our simple August Holiday Competition. If you are in any of the camps mentioned in the details of the Competition (see pp. 12), seek out the Camp newstand displaying the machine and have a bash.

You might surprise yourself and be a winner!

One thing is certain. Each machine comes from a first-class manufacturer and will be a worthwhile prize for anyone.

Still on the subject of holidays reminds us that London Town is full of visitors; just about every other one recording the pleasure of their visit on cine film. The new game is to avoid looking directly at the visitor in case he says to his friends in Pakistani, Hindi, Japanese or just plain American English: 'There's the idiot who ruined everything by staring at the camera.' In this office we are pressing manufacturers to produce handier equipment to enable the cine enthusiast to say in Pakistani, Hindi, or what have you: 'Listen to the fool who spoilt the sound-track by swearing at the camera-man.'

Or, as we are more concerned with sound, we dream of the portable tape recorder that will synchronise to film by the mere pressing of a switch, pushing in a plug, or dreaming again into the centuries hence, a portable tape recorder which embodies a cine camera.

How we sound enthusiasts would be after you cine boys if that dream came true!

In the meantime, read what John Aldred says about tape and cine today. It will add another dimension to the pleasure you can get from your pastimes.

THOSE DEALERS—THAT CUSTOMER

Like the eye of the hurricane, we know comparative calm whilst the gale of bitter argument rages back and forth between dealer, customer, and the third element in the triangle — service. For interesting reading on this very point, read Mr. A. J. Errington's letter (Things You Say).

Always eager to supply the bromide of reason, ATR has introduced two certificates — small reproductions of which can be seen on page 17 — which we hope dealers will be proud to display, and which will bear the signature of F. C. Judd, ATR's Technical Editor, who is a tiger for maintenance and servicing, simply because he knows that good results cannot be obtained without them.

Therefore, any reader seeing the certificates displayed indicating that Fred has either inspected or recommended the facilities for service, can release their set and its fault to the dealer concerned and retire with confidence.

We believe that our certificates will help to overcome difficulties which undoubtedly have existed and are existing at the moment.

So, in the interest of tape recording we soldier on. However we hope you'll 'read all abaht it' on page 17—and don't forget our next sound effects disc. Nothing to touch 'em for quality and value.

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*An amateur learns
some lessons from*

RECORDING JAZZ IN CHURCH

By ANTHONY J. EDEN

IN Cambridge, thanks to the influence of the University, there is much that is unorthodox. Here you can find a church which occasionally holds a 'Service in Rhythm,' mainly for the younger people. The music is provided by an experienced jazz band, the hymns being sung to Beaumont's settings, and the service is conducted by the youngsters themselves.

Many amateurs are aware of the difficulties of recording in church, whether the music is provided by an organ or a jazz band. I tried the experiment of recording one of these unusual services, just to see what problems would have to be overcome and what techniques adopted. Bearing in mind that, since I am a student and finance is a prime consideration, all my equipment is home-made...

Initially, the church required a public address system for the cantor and choir; but as well as making provision for this, I wished to record the entire service. A request was made that all microphones and leads should be kept as inconspicuous as possible. Two speakers were asked for and enough amplification to give as natural a tone as might blend in with the cantor's actual voice.

The equipment

All my main equipment is based on Mullard designs. The tape amplifier is the 3-watt version, used in conjunction with a Collaro deck, and the combination has given me very satisfactory results. The amplifier is the 10-watt version, with a simple one-valve preamplifier before the tone control circuit, and as I have no disc equipment this satisfies most of the inputs to which it is applied.

The microphone preamplifier is the Mullard 4-channel mixer. The two high-level inputs I used in conjunction with two transistor preamps, as described by F. C. Judd in 'Tape Recording for Everyone.' This makes the low impedance microphones fairly sensitive and is satisfactory for close range work. I used two 15-ohm speakers in parallel — unmatched, but giving roughly the same output.

For optimum results, I recorded the service at 7½ ips. The microphones consisted of two Reslo ribbons, a Simon Cadenza, and an Aiwa medium impedance instrument. I used this Japanese microphone directly into the high impedance socket of the 4-channel mixer. What loss there was in mismatching was not very important as there was plenty of available gain.

Placing the microphones

The Aiwa mic was used for the choir, and one of the ribbons for the Lesson readers and the congregation singing. Another ribbon was used for the band; this was suspended above the banjo player, which gave excellent balance. The fourth microphone I used for the double bass alone, for two reasons: to give balance for recording, and to give more bass tone to the speakers in the public address system.

As the band microphone was a ribbon, I damped one side of it, using ordinary sponge. It was suspended about ten feet from

SEE NEXT PAGE



- **RIGHT:** The congregation sings to music provided by the jazz band. In the TOP picture the author is seen adjusting the controls while making his recording.

RECORDING IN CHURCH—from page 5

the floor and parallel to it. The double bass mic was also a ribbon — the only type I possessed which was reasonably adequate for the job — and to avoid boominess I heavily damped this, too, at the base and again on one side. It was placed about eight inches from the instrument and proved very satisfactory on the recording.

For the low impedance microphone I used twisted light flex — against all the rules but, again, with satisfactory results. Perhaps I have been fortunate, but I have never encountered hum pick-up using this method.

Unforgivable error

At the rehearsal the loudspeakers were very unbalanced to a listener in the centre aisle. Reversing the terminals on one speaker, however, put them both in phase and restored correct balance. Other minor balancing problems were also overcome. It was the following afternoon, on fitting up for the evening service, that I made my unforgivable error.

The Japanese microphone was a new acquisition and I had not inspected the soldering connection at the instrument end. The braiding had been fractured, and though it did not cause noticeable trouble at the rehearsal, just before the service the connection broke and put the main public address microphone out of action. I could hardly appear in front of the choir with a soldering iron, and the result tended to spoil what was otherwise a very reasonable recording.

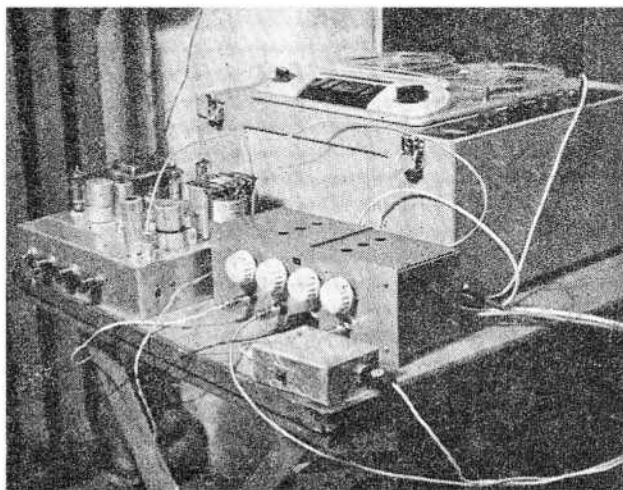
I discovered another disadvantage during the sermon, for which a separate microphone had been selected. From where I was recording in the chapel I could hear nothing of the public address system. The answer to this would have been a third speaker purely for monitoring, or to control the system from a position in front of the other speakers, at the back of the church.

Echo problem

Yet another point to be borne in mind in future was that if I advanced the gain controls too far, even if I did not get feedback, another microphone would pick up some sound from the speakers and give an echo effect. Still, it might also be worth bearing in mind if I ever have need of an echo chamber!

What, then, have I learned from this exercise? Though it is easy to be wise after the event, if I had thought a little more carefully in the beginning, I might have obtained more consistent results. Whatever your equipment, it is not much use without knowing just how to use it. It is vitally important to check all leads and connections while there is still time. And I shall have to devise another method of recording in conjunction with a public address system.

Because of the necessity to amplify the cantor and choir



● The recording and amplifying equipment used by the author, all of which he built himself.

considerably, this features to prominently on the recording. In future I shall have to divide the circuit so that I can control the volume to the P.A. system and the tape recorder independently. Ideally, the microphones should be well behind the loudspeakers, to minimise pick-up from the speakers; though in this case it was impossible, since one-third of the congregation would have heard nothing from them.

Finally, the time spent in fixing up. It took me about seven hours, followed by a rehearsal at the end of it. During this rehearsal the position of the cantor was moved, and most of this valuable time was spent in extending leads. So, when the service started, I had not ascertained the correct balance, and part of the service was spoilt in making alterations to obtain optimum results. It would have been better to have anticipated such a contingency.

Yes; recording in church has its difficulties . . . but I shall know a little better how to cope with them, next time!

[Our contributor will be glad to loan a copy of the edited form of his recording to any interested reader. It is available at 7½ ips and 3¼ ips.—Editor.]

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● Taping a melody

Perhaps one of the most remarkable things about Mitch Murray's astounding success in the hard show-business world is the fact that he can neither read nor write a single note of music. One may well ask '**HOW DO YOU DO IT?**' the well-known title of the hit song he wrote before '**I LIKE IT.**'

Well, when you are the proud owner of a Telefunken stereo tape recorder, and two Japanese Minibex tape recorders, it is more than possible.

For instance, Mitch can be driving along one of our highways when suddenly, from out of the blue, comes the idea for a great song—what does he do?—he switches on the tape recorder and softly hums into it. And a hit song is on its way into the charts.

In Mitch's own words:

'Most of my best ideas come to me when I'm driving along and, as I'm completely lost when it comes to writing music, I just spout my ideas into the little machine on the seat next to me. If I didn't, by the time I had reached my destination and collared somebody who could take down my ideas, they would have vanished forever!' Sound reasoning indeed, Mr. Murray.

That's how he does it; this is why he likes it and how it all started . . .

● Family boy

Mitch, like a million other young men of his generation, lives at home—in North-West London, with his parents and two younger sisters. He was what you could call his father's 'blue-eyed boy', and, naturally enough, being the only son, was expected to carry on the family leathersgoods business. But Mitch was not happy at his work. He went to his father and explained that it was obvious this line was not for him. Music was the big attraction. His father agreed to let him go his own way.

● Dummy disc to Decca

'I'm sure people often wonder just how pop songwriters get started,' he says. 'It's not easy to write a pop song, especially one that will reach the top of the Hit Parade.'

Helped by his tape recorders, Mitch started by sending a demonstration disc to the famous Decca Recording Company—and got it accepted. It was a song called 'Save a Dream for Me,' and Gary Mills recorded it. This was just over a year ago—a year on which Mitch has never looked back—in anger, or anything else.

His first Hit Parade success was '**HOW DO YOU DO IT?**' recorded by Jerry and the Pacemakers. After a remarkably short period this song rocketed to the top of the charts, and Mitch was thrilled at the sound of his name being broadcast on Radio Luxembourg and various other radio and TV music programmes.

He wrote '**I LIKE IT**' as a quick follow-up to his previous success, and again made the charts with Jerry and the Pacemakers on the label.

● How he does it

Mitch's method of getting his ideas onto tape is really very simple. After having recorded the basic ideas on one of his small Japanese machines, he then makes a more complex recording on his Telefunken, accompanying himself with a ukulele. He dubs the arrangements, and, satisfied with the results, takes them along to the Regent Recording Studio which is fully equipped with all the professional equipment necessary to wax a disc.

● No genius

Mr. Murray does not regard himself as a dedicated musician—or even a particularly talented one. He has aspirations to producing records independently himself one day, and is interested in the film world, having just written some of the songs for Frankie Vaughan's new film '**IT'S ALL OVER TOWN.**' He also has rather revolutionary ideas with regard to writing a musical show—but of course, revolutionary as they are, they are remaining put—in Mitch Murray's head, along with all his other brainwaves. And of course, his knack of putting those brainwaves on to tape creatively will doubtless carry this energetic, enterprising young man exactly where he wants to go—**TO THE TOP.**



● Pop song-writer Mitch Murray in pensive mood, surrounded by music stands—awaiting inspiration?

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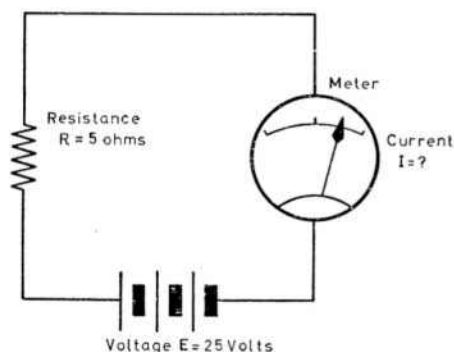
A BROAD outline of radio or electronic components was given in Part 1 of these articles and we return now to the **electrical** function of resistance, capacitance, and inductance, the three major components aside from valves and transistors.

RESISTANCE

The ability of a conductor to restrict the movement of electric current is called its **resistance**. Closely bound with this function is the electric current itself and its pressure, or potential, otherwise known as the '**electromotive force**' or e.m.f. Electric current is measured in terms of **amperes** (amps) and pressure or e.m.f. in terms of **volts**. Resistance itself is measured in **ohms**. The symbols for these three terms are E =voltage, I =current, and R =resistance and for any given values of two, the third must remain constant.

OHMS LAW

'Ohms Law' originated by Simon Ohm, states quite simply that if the voltage is E and the current is I , the resistance will be $R = \frac{E}{I}$. This simple algebraic formula can be turned around to show that if the voltage is E and the resistance is R , the current will be $I = \frac{E}{R}$ or if the current is I and the resistance is R , the voltage will be $E = I \times R$ or simply $E = IR$. The remaining formula is therefore $R = \frac{E}{I}$.



● FIG. 1: An Ohms law problem. Work out, from appropriate formula given in text, the current measured by the meter and which is also flowing through the resistance R .

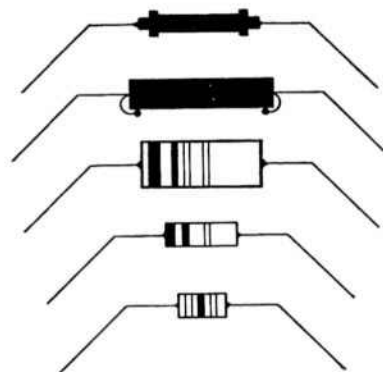
Answer: Current $I = \frac{E}{R} = \frac{25}{5}$ or $\frac{5}{1}$ which is 5 amps.

To give one simple example, suppose we have a resistance of 10 ohms passing a current of 0.5 amps. What then will be the pressure or voltage required to pass the current through

the resistance? Taking the Ohms law formula of $E = I \times R$ or $E = IR$, the answer will be Voltage = 0.5×10 , or 5 volts (see also Fig. 1).

Resistors used in radio and electronics take several forms but the most commonly used in amplifiers and tape recorders are carbon and small wirewound types (see Fig. 2). There are also variable resistors, or potentiometers, commonly employed as volume controls and one occasionally finds a special type of resistor called a 'thermistor'. These are frequently used in valve heater circuits especially in AC/DC radio and television sets.

● FIG. 2: Typical resistors used in amplifiers and tape recorders. From top to bottom they are: 1 and 2, high stability cracked carbon types; 3, a two-watt carbon type; 4, a one-watt carbon type; and 5, a ½-watt carbon type. The rings around 3, 4 and 5 are the colour code, denoting the value in Ohms.



CAPACITORS

The basic function of the capacitor was explained in part 1, but a capacitor can be used in AC as well as DC circuits and is an essential component for coupling the individual stages of amplifiers. This is because capacitors do not directly conduct electric current, i.e., they have no **conductance** of their own, therefore DC current cannot flow. If it did, coupling between two amplifiers would be a very difficult problem, unless transformers were used.

An alternating e.m.f. applied to a capacitor will however, cause an alternating current to flow not **through**, but **in and out**. The **amount** of current due to a given voltage will depend on two things—the value of the capacitance itself and the frequency of the alternating current. The greater they are, the greater will be the current which leads us to a new term in electronics, called '**reactance**'. Very briefly, when a capacitor of low value has applied to it an alternating current of low frequency, the capacitor can be said to have a 'low reactance' and vice versa.

The fixed capacitor is commonly used for coupling circuits where DC must be isolated but where AC currents or potentials must be transferred from one part of the circuit to another as in Fig 3, on page 10. Variable capacitors, usually of fairly low value, are used for tuning in radio receivers. All capacitors however, have specific values measured in terms of **Farads**.

The values of capacitors in common use are mostly in microfarads or mfd. (1 microfarad = $\frac{1}{1,000,000}$ th of a Farad).

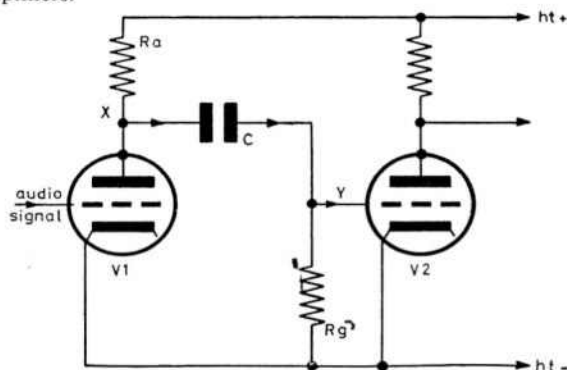
The values of small capacitors, such as those less than 0.01 mfd.

SEE NEXT PAGE

ELECTRONICS WITHOUT TEARS—from page 9

are usually given in terms of **picofarads** or pfd. (1 picofarad = one millionth of a millionth of a farad). A capacitor with a value of 0.001mfd. for example, might therefore be marked 1000pfd.

Next month I will describe the different types of capacitors and their uses and go on to outline the function and use of the inductance, another component used in tape recorders and amplifiers.



● FIG. 3: When two valves are coupled together, as in an audio amplifier, the D.C. $ht+$ at point x must be prevented from reaching point y . The capacitor c provides the necessary isolation and at the same time allows the A.C. audio signal to flow from x to y .

We are pleased to note the number of comments received about this series, the general tone being that understanding the function of components brings a greater interest to the hobby.

● A LIST OF WANTED NAMES!

The following readers have omitted their Names and Addresses from Postal Orders for ATR Hi-Fi Discs.

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● BRIGHTON & HOVE	181190
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● HORSHAM	142249
● ILFORD & BARKING	616461
● LEYTONSTONE	460188
● LONDON, N.1.	608772
● MANCHESTER	235951
● MELTON MOWBRAY	101932
● MITCHAM	912676
● NEWPORT	Cheque No. 002775
● PADDINGTON	241878
● ROMFORD & DAGENHAM	824015
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● UXBRIDGE	870669
● WATFORD	575550

PLEASE REMEMBER TO SEND YOUR NAME AND ADDRESS

IF YOU ARE MENTIONED ABOVE—PLEASE SEND COUNTERFOILS OR STUBS AS PROOF OF IDENTIFICATION.

SWOP COUNTER

G. Ferrar, 7 Chesnut Close, Carshalton, Surrey, has: Hornby Dublo 3-rail model railway equipment, including points, crossovers, plenty of track, two stations, a locomotive, coaches, a breakdown crane set, etc., all in good condition. He wants a high impedance, moving coil, or ribbon mic., or 10-watt amplifier.

W. Evans, 7 Castle Street, Clackmannan, Scotland, has: a Specto Projector S/S 9.5 m.m. and 16 m.m.; 15-watt Amplifier; 15-watt 15-ohm 12in. Goodmans Speaker, all in good condition. He wants a Fi-cord 202 Tape Recorder.

W. L. Felton, 4 Cumberland Terrace, Douglas, Isle of Man, has: a Collaro turnover Stereo 78 Cartridge; a T.S.L. Mixer; a Wharfedale low impedance loudspeaker separator unit with crossover frequency of 3000 c/s and an input of 7-15 ohms. He wants tape, splicer, stereo headphones suitable for Philips Stereo recorder. Also has Telefunken 76 and a Korting 4-track Stereo for deal purposes. Offers?

R. Hamilton, 94 Salisbury Avenue, Barking, Essex has an Elpico-Geloso crystal mic, with telescopic floor stand, and an unused German collapsible photographic tripod, which he wants to exchange for a good guitar or a low impedance, 30-ohm ribbon or cardioid mic with floor stand.

P. L. Bastin, 2 Canynge Street, Barbourne, Worcester, has: Geloso stick microphone, high impedance, Acos 33-1 ivory-ball type high impedance microphone, high resistance light-weight headphone — all barely used. He wants a good heavy-base microphone floor-stand, or Grampian DP 4H microphone. Individual offers considered.

T. Robinson, 17a St. Anne's Road, Whitstable, Kent has: Lustraphone Stereolus twin-ribbon microphone, AKG D19B moving coil cardioid microphone, Bang & Olufsen multi-impedance ribbon microphone. He wants one AKG D 24 8 —60 ohms impedance microphone. Other arrangements considered.

● Swop Counter offers should be addressed to **SWOP COUNTER, Room 532, Ulster Chambers, 168 Regent Street, London, W.1.**

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● Super Stereo Sampler by Saga at 63/- Twin $\frac{1}{2}$ track $7\frac{1}{2}$ ips, high fidelity tape record.

THESE days, sixty three shillings is a parcel of money from anybody's pocket. Suppose you find yourself with that amount and in a spending mood. Then the tape for you is this one, especially if your musical taste ranges along that middle appeal of good popular music to the light classical.

The playing time seems endless, so there is plenty of length for the money; there's good musical value too, for each of the sixteen recordings comes at the ear with fine tonal clarity and range from Caesar Giovannini and the Radiant Velvet Orchestra playing Jealousy, to the Percussive Art Ensemble percussing away at 'That's a Plenty', to the 'Masai Rumble' and 'Tumbata Tintinambula' being beaten out by Harry Coons and Richard Cambell.

Between those random selections are other pieces which took my ear. One being 'Dizzy Fingers' by Caesar Giovannini. Caesar has twinkling fingers right enough, and they sparkle over the keyboard during this number. The playing is fast, but not so fast as to spoil the number, and the rhythm is meticulously kept going.

Rimsky-Korsakov is a favourite of mine. His musical invention is wild and fiery and yet so beautifully controlled. He evokes passionate thoughts and minds' eye pictures of vast steppes inhabited by vital people. The 'Dance of the Tumblers' played by the Musical



Arts Symphony Orchestra soon had me travelling eastwards. Musically, that is.

Perhaps the mood of the composer when writing this piece was quieter and less vigorous than in other scores, but the colour and character are there in sufficient strength to send the blood racing.

To prove the wide range of recording, the listener is subjected to train and jet noises immediately after The John Halloran Choir has lifted its collective

tape parade

voice to give an excellent rendering of Stephen Foster's 'Li'l Liza Jane'.

For me it jarred. I for one don't want trains and jets after Mr Foster's black mammy music.

And I'm still wondering why such a good tape should be marred by these excellently recorded interruptions. And even suppose I do require the noise of a jet plane, I certainly don't want an American type voice telling me 'to stand by for a real jet flight taking off now.' Juvenile!

● Symphony no. 45 in F. Sharp Minor 'Farewell.' Symphony No 73 in D. Major 'La Chasse'. South West German Chamber Orchestra conducted by Friedrich Tilegant (no. 45) West German Mozart Orchestra conducted by Walter Schulden (No. 73.) World Record Club TT206 Mono $3\frac{3}{4}$ ips. 31/6d.

Any musically minded person who has visited Germany will tell you the country abounds with orchestras of skill and

ability. The Germans are a musical race; their classical instrumentalists are musicians of sensitivity and feeling.

When two well known orchestras bring Haydn to our ears we can feel that the composer's works will be treated with understanding.

Friedrich Tilegant coaxes lightness and surety from the South West German Chamber Orchestra when ranging over disciplined sadness of the Farewell Symphony. Within the deliberate measure of the musical structure the wistful melancholy of a goodbye continuously emerges.

And yet the dexterity of handling by Friedrich Tilegant produces no feeling of sombreness.

One is left with a firm memory of restraint; rather like the touching farewells given to an old professor on his last rounds. Lightly offered yet deeply moving.

Walter Schulden has a bolder work with which to deal when conducting the 73. The musical picture in the first movement calls upon greater richness from the cellos. The disciplined form of the Haydn manner is still evident, yet somehow Herr Schulden seems to take some of the severity out of it.

I found it interesting to contrast the two styles of conducting a composer whose musical nature and characteristics are so definite and recognisable in his works.

Lovers of Haydn no doubt contrast the styles of the orchestras as well as enjoying the complete tape.

● Strict Tempo Dance Time with Ernest Wilson. Dual Saga $\frac{1}{2}$ track Mono $3\frac{3}{4}$ ips. 31/6d.

For those who dance the ballroom way — and I used to be one of them —



TAPE GUIDES

● If you have a practical tip which could be useful to other readers, send it to 'Tape Guides,' ATR, Room 532, Ulster Chambers, 168 Regent Street, London, W.1. A guinea is paid for each one published.

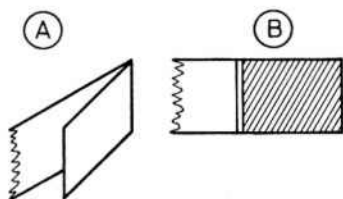
Saving on tape

FIRST useful tip this month comes from reader *E. Kibblewhite, Edlington, near Doncaster*, who does a good deal of outdoor recording collecting sounds for his cinefilms.

He saves a little on cost by re-spooling tape from a 7in. spool on to 3in. cinefilm or tape spools. Most portables use 3in. spools, and it is more economical to buy in quantity. This also applies to purchasing 1000 metre (3280 ft.) lengths of tape on N.A.R.T.B. hubs, which can then be spooled off on to standard hub 7in. spools.

Protecting leaders

A simple idea comes from *C. Lamplough, Uxbridge, Middlesex*. To prevent the beginning and end of leader tapes from becoming 'tatty,' wrap $\frac{1}{2}$ in. or so of splicing tape around the end as in **Fig. 1**. Fold the end of the leader over first; the extra stiffness also helps tape threading.

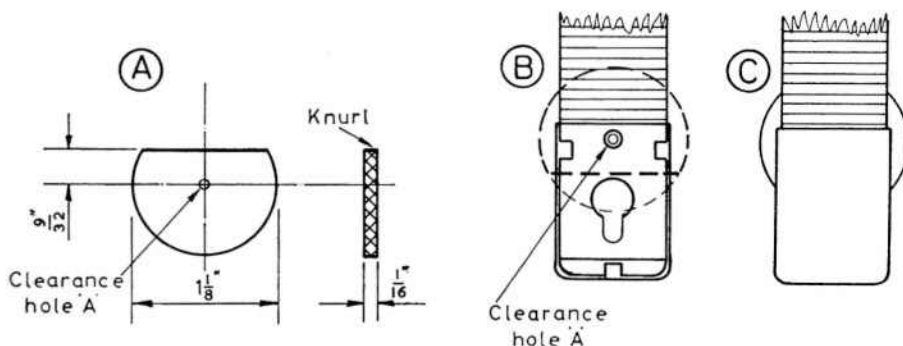


● **Fig. 1:** To protect the ends of leader tapes, (A) fold end of leader, (B) bind with complete turn of splicing tape.

Extra security

Owners of the Philips battery-operated tape recorder will be interested in a useful modification for extra security of the shoulder strap, an idea set in by reader *D. O. Davies, Rhondda, Glam.* All you need is two discs shaped as in **Fig. 2A**, and two small screws.

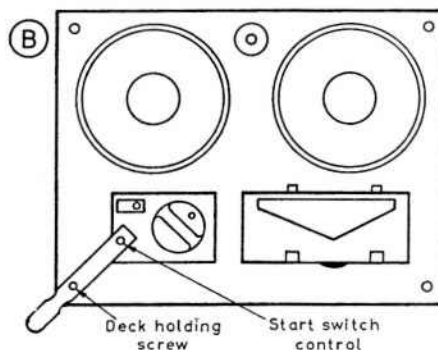
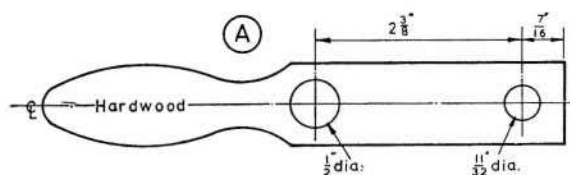
Remove the cover plates by bending back the three flaps. Drill a small hole in the rivet (A) to clear a 6BA or $\frac{1}{16}$ in. diameter screw. Place a disc on the outward face and push the



● **Fig. 2:** Extra security for the shoulder strap on the Philips battery-operated tape recorder.

screw through, allowing just enough length for burring over. Replace covers.

To operate, turn the disc to allow the larger portion of the



● **Fig. 3:** Device for holding off the brakes on the Wearite deck.

'keyhole' to be seen, then hook on to the machine as normally. Lastly, turn the discs so that the flat part is on top and the larger portion of the 'keyhole' is covered (see **Fig 2 A and B**).

For Wearite decks

Reader *J. V. Herbert Cookson, New Langton, near Preston, Lancs.*, earns a guinea for a useful gadget for offsetting the brakes on a Ferrograph 4 A/N tape recorder — or any other machine with a Wearite deck.

The device consists merely of a piece of hard wood shaped and drilled as shown in **Fig. 3A**. This is placed so that the small hole engages the 'start' switch control and the large hole engages the milled head of the nearest deck-fixing screw. A slight pull on the start switch is necessary to free the brakes and allow the device to hold it in the required position, as shown in **Fig. 3B**.

SEE NEXT PAGE

TAPE GUIDES—from page 13

[I have used a sample of this device sent to me by Mr. Herbert Cookson, which does free the spool brakes, allowing the tape to be pulled freely through the head assembly.—**Technical Editor.**]

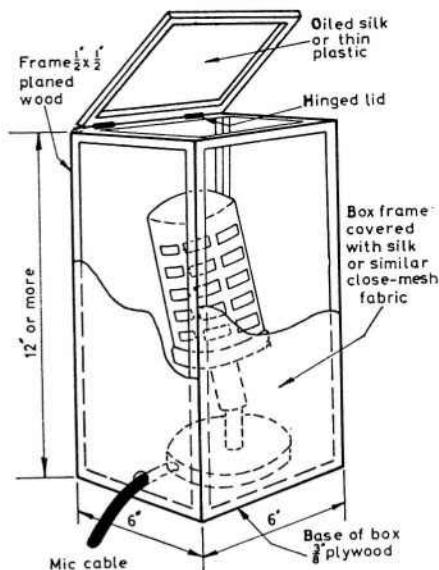
Keep heads clean

Reader **G. Knott, Canvey Island, Essex**, has found an easy way to clean the heads of his tape recorder. He uses a length of linen tape (the sort you can buy at 5 yds. for 6d.), with one end soaked in methylated spirit, the other half-length being kept dry. With the aid of a couple of 3in. message spools, he runs it through a couple of times backwards and forwards, and finds that it cleans heads very efficiently.

Windshield for a microphone

An oblong box of about the size given in **Fig. 4** (or to suit your microphone) makes an effective rain and wind shield for ribbon and other microphones on table stands, which are exceptionally sensitive to wind noise. All that is required is a light framework of, say, $\frac{1}{2}$ in. \times $\frac{1}{2}$ in. planed wood which is covered with silk or similar thin close-mesh fabric.

● **Fig. 4: Rain and wind shield for ribbon and ribbon cardioid microphones.**



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● ATR, by arrangement with Contrast Sound Productions, brings you yet another in its series of Hi-Fi Sound Effects Disc offers, the third in the present series of six.

● This high-quality record contains eleven tracks, all dealing with British Railway trains sounds, such as a complete selection of steam engines, diesel engines, express trains and goods trains. The recordings are excellent, and will be invaluable to people using tape and cine on their summer holidays, and may be used **FREE OF COPYRIGHT**.

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● **Why not tape those handy household tips?**

SHARE TAPE TIPS WITH YOUR NEIGHBOURS

says **RACHEL LINDSAY**

WHEN I first got a tape recorder I regarded it as a toy — something wonderful for recording my friends' voices and equally wonderful for use at a party.

I would put it on and hide it in some corner out of sight, then half an hour afterwards I would bring the machine out and press down the play back button. It was not until then that we realised how dull party conversation is. Ever since then I have always longed to take a recorder to a cocktail party, for it is at these sort of gatherings that the conversation is at its least interesting.

Strictly Feminine

Realization

But then, as the months passed and the novelty of my machine wore off, I found that I was not using it very much, and it was only a little while ago, when I started writing this monthly page for you, that I began to realise how many wonderful things one can do with a tape recorder.

One of the nicest way in which to use a machine is to make it bring you into contact with other people. Being a housewife can be a lonely business, though husbands won't admit it, and after living in the same house for years and having the same neighbours, I found I had exhausted all my conversation with them. But how could I get to know the people on the other side of the road or that nice woman at the bottom of the street who never spoke to anyone at all? My dear old tape recorder supplied the answer.

Food for thought

I decided that I was going to open a tape bureau — on an amateur scale of

course, and just for the fun of it. There were many things I felt I knew that my neighbours didn't know, just as there were many things my neighbours knew that I didn't know. For example, I have a vast collection of wonderful recipes; but to start writing them out and giving them to my neighbours would have taken too long. My neighbour on the left was a wonderful dressmaker and had all sorts of little 'wrinkles' that enabled her to make sure that her home-made dress looked as if it came from Dior.

It was this really that gave me the idea to start my Handy Hints on Tape.

In the beginning

I began with Handy Hints on Cooking. In the course of time, I had learned many ways to short-cut a recipe, and because I travelled a great deal I could do wonders with canned foods. My neighbours were always asking me for hints and advice on preparing meals, and so for my first tape I sat down and recorded a dozen suggestions that I thought would help a housewife when doing her cooking. After that I loaned my tape to the lady opposite who also owned a machine. She played it back and found that she also had a few ideas of her own, which she recorded on to my tape. And that's how it all began. The tape was loaned to all the women in the road, and those who did not possess a recorder would borrow their neighbour's. By the end of a fortnight my half-hour spool was completely filled and we all got together and made up

our minds to start a sort of tape library of household hints. Any woman in the neighbourhood could then borrow the tape and either copy it out at her leisure or re-record it on her own spool.

Although we began with cookery hints, this was only a start, and from cookery we went on to hints for dressmakers, a hundred and one tips for household cleaning, beauty hints and a host of others, and now we're known as the H-O-T Club (Hints On Tape, of course). The thing snowballed once it got going, and the thing that amazed me most was that I learned so much about the women around me.

I hope this inspires you to do the same; even if you can think of only one hint, don't worry. Record it and pass the tape on to your neighbour to let her add a bit. By the time it's been up and down the road I guarantee you will be pleasantly surprised.

● **Taped party conversation can be dull —but not necessarily so.**



● *Russ Allen has a nag . .*

ON THE IMPORTANCE OF SLEEVE NOTES

they're invaluable, he says.

IT does upset me when I have a record sleeve that tells me nothing relevant to the disc it contains, especially when such a sleeve contains the latest Gerry Mulligan Quartet's "Spring is Sprung": Philips BL 7564.

I presume that the trombone is played by Brookmeyer and the bassist sounds as if he might be Crow. And the drummer. . . . But why should I have to guess? Willis Conover has written a most amusing set of cover notes that mean absolutely nothing at all.

Most collectors of jazz like to know who plays what—and when. Please Philips, Fontana, Riverside, Columbia, HMV, CBS, Verve, and all you others, do tell us the recording dates and the line-up in future. Esquire records, whose head Carlo Kramer is an ardent collector himself, always manages to tell all, for which—'ta.' Oh—I almost forgot, this disc is well up to the very high standard set by Jeru's Quartet and contains some intriguing piano from both Gerry and Bob.

Spring is sprung—swing is swung!

● **Riverside** don't give the date of recording, but on **RLP 420 'The Kerry Dancers,'** we do know that it's the Johnny Griffin Quartet consisting of Johnny on tenor, Barry Harris piano; Ron Carter bass; Ben Riley drums.

Little Mr. Griffin is truly wonderful. When quite recently he played a season at the Ronnie Scott Club, hardened session men who came to hear him went home uttering cries of 'fantastic,' and practiced harder than ever.

Side one is devoted to 'folky' tunes and they are delightfully treated by all concerned.

Swinging folk for swinging folk.

● On **RLP 400,** Riverside tell all. **Triple Threat: Jimmy Heath.** Jimmy, tenor; Freddie Hubbard trumpet; Julius Watkins french horn; Cedar Walton piano; Percy Heath bass; Albert Heath drums. (Recorded between 14/4/61 and 17/1/62. Featuring, it says, the compositions, arrangements and tenor sax of J.H.)

As a saxophonist, Heath cannot compare with Griffin and Mulligan, though he's good and his musical ideas make excellent vehicles for Hubbard, Watkins and Walton. Not a fantastic set, but swinging and well worth innumerable spins.

A triple threat to be welcomed—not feared.

● **Lalo-brilliance:** the piano of **Lalo Schifrin.** **Columbia 33SX 1514.** With Leo Wright alto and flute; Jimmy Raney guitar; Art Davis bass; Rudy Collins drums, and Willie Rodriguez latin percussion.

This is a very interesting set. Schifrin



was born in Buenos Aires and has a lot of Latin and Eastern influences in his playing and composing. His approach is different and he seems to influence his fellow musicians to his way of playing.

Brilliant? Well certainly out of the rut. Get it and say 'halo' to Lalo yourself.

● **Big Band Jazz from the Summit:** recorded live. **Louis Bellson and His Band,** **Columbia 33SX 1513.**

Bellson's first claim to fame was his long stint with the Duke Ellington Band. Later, after his marriage to singer Pearl Bailey, he came with her to Britain and I had the pleasure of watching him at the Astor Club when he was persuaded to come onto the floor and give an impromptu percussion show. Using only a snare-drum and a hi-hat he gave one of the most exciting demonstrations of subtle swinging drumming I've

● **Bellson is the man who knocks out both band and customers with his drumming.**



ever heard. Not only were all the band knocked out—but the customers as well.

Anyway, he hasn't lost any of his talent, and with a twenty-piece orchestra and an exciting book of mostly Benny Carter and Marty Paich scores, the whole band really rocks. Conte Condoli and Bill Perkins are among the soloists and there's some wonderful drumming.

Peak big band jazz.

● **Blue Genes: The Three Sounds,** **Verve VLP 9032.** Gene Harris piano; Andrew Simpkins bass; Billy Dowdy drums. Recorded N.Y., Oct. 13th, '62.

This is delightful commercial jazz. Easy on the ears, uncomplicated. Not frantic, but fun.

Three good guys as one. Three sounds two delight.

● **The Incredible McJazz.** Al Fairweather and Sandy Brown's All Stars, **Columbia 33SX 1509.** (Recorded Nov. 20th, '62).

Unmistakeably British. I don't understand why these men find so little to say on records. They state the theme, and sometimes daringly play a whole chorus, play the theme again and then out. **WHY?** Brown and Coe are both capable of playing chorus after chorus of exciting and original jazz and yet here—nothing. Perhaps the recording people are to blame? Somehow there is a failure with a lot of British recordings of jazz to capture the atmosphere.

The sad thing is that it's not by any means a bad record; but it could have been so much better.

The Incredible McJazz in snatches from his repertoire.



● **The fabulous Jimmy Heath, pictured on the sleeve of his latest disc 'Triple Threat'—but Russ Allen doesn't regard it as a threat to be feared.**

ATR AND YOUR DEALER

IN the interests of both customer and trader, *ATR* has always sought to encourage good relations between its readers and those tape recorder dealers who are qualified and anxious to give the best possible service.

Pursuing this policy, after careful inquiry it has compiled a list of dealers in various parts of the country whose services it feels it can safely recommend. Certificates to this effect are now being issued to these dealers, which they are at liberty to display on their premises.

Seal of Approval

ATR will continue to visit representative dealers in different areas to make further inquiries into the services they offer and the technical qualifications of their servicing personnel. Wherever the Technical Editor is satisfied that further endorsement is merited, another certificate bearing *ATR*'s Seal of Approval will be issued.

ATR is always glad to supply readers with the names of dealers in a particular area whom it can recommend. At the same time, it welcomes information of exceptional service experienced by readers, with a view to

issuing its Certificate of Recommendation wherever warranted.

We shall also welcome inquiries from dealers interested in acquiring the *ATR* Seal of Approval. Dealers already approved by *ATR* are listed on page 37.



● Reproductions of the two certificates to be issued to dealers by *ATR*. LEFT: The Certificate of Recommendation.

ABOVE: The *ATR* Seal of Approval. The originals are printed in colour.



Can't

see clearly?

ARE YOU SO BLINDED BY VARIETY AND TECHNICAL SPECIFICATIONS THAT YOU CAN'T DECIDE WHAT TO BUY?

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SHOOTING WITH PLEASURE



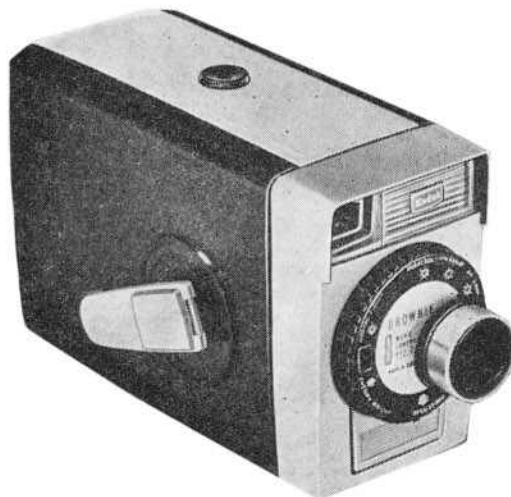
By John Aldred

HAVE you ever imagined yourself as a movie director or film cameraman, with your family and friends as film stars? If you can handle an ordinary camera there is no reason why you cannot start making your own movies right away—in good colour, too. £30 is all you need to buy your first camera, projector, and a reel of film.

Favourite film gauge today is 8 m.m., due to the large variety of equipment available and economical film stock. Running costs with 8 m.m. compare favourably with 35 m.m. colour transparencies (25s. 6d. for a four-minute film), and a movie gives far greater pleasure and entertainment. One single frame of 8 m.m. is just too small to be viewed comfortably with the naked eye, yet a good projector will give a respectable picture on a screen 3 or 4 ft. in width—quite suitable for home viewing. Providing you accept the limitations of the gauge, 8 m.m. can be really good. But film resolution being what it is, scenic shots do not reproduce quite so well as close subjects.

CAMERAS

8 m.m. cameras are available in bewildering variety, ranging from a simple **Kodak Brownie** for under £11 to expensive Swiss-made models costing well over £200. Naturally the higher priced ones are a joy to use, but the Kodak Brownie will give you perfectly acceptable results. All cameras are extremely compact, easy to load with film, and are normally fitted with a clockwork drive which gives a filming speed of 16 or 18 frames per second. The normal focal length of lens fitted is 12.5 m.m., contained in a fixed focus mount. The aperture varies from f/1.9 to f/2.8 in the cheaper range of cameras, which can be adjusted down to f/11 or f/16 according to the kind of weather. This is the only adjustment you have to make before pressing the starting button, and if you think that is too difficult, there are cameras which take care of the problem for you. It all depends on what you personally want to do.



KODAK BROWNIE 8. f/2.7

FULLY AUTOMATIC CAMERAS

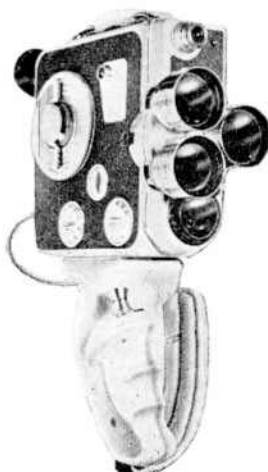
Fully automatic cameras, such as the **Eumig S.2**, have the lens aperture controlled by a built-in exposure meter. So there is absolutely nothing to worry about once you have loaded a reel of film. In addition, the Eumig has an electric motor drive, powered by four 1.5 volt dry cells, all for only £27 18s. Of course, if you want a camera with a three-lens turret or a modern Zoom lens, you will have to pay quite a bit more. The Japanese **Chinon Zoom 8** at £56 10s., the Swiss **Bolex P.2** at £97 13s. are typical examples in the zoom range.

FULLY AUTOMATIC EUMIG S.2



The mechanism of an 'Electric Eye' camera showing the variable lens aperture mounted on the movement of a built-in exposure meter.

SWISS BOLEX P.2



EUMIG G. 3. M

8 mm. camera, 3 lens turret.

Standard lens : Eumigon f1.8/12.5 mm.

Eumacro 2.5 × (31.25 mm.) tele attachment.

Eumicron 0.5 × (6.25mm)

FILM STOCK

The film for your camera is sold in 25 ft. lengths on daylight loading spools, and is 16 m.m. wide. The film is run through your camera once, turned over like a reel of tape, and then run through once again. After it has been processed by the manufacturer, it is split carefully down the middle and returned to you on a 50 ft. spool ready for projection. A new idea is to load the camera film in a special cassette, which is turned over in the camera in the usual way without having to re-thread the film.

You can choose from six different manufacturers making colour film, namely Agfa, Ferrania, Gevaert, Gratispool, Ilford and Kodak. Four firms are currently making black and white film — Adox, Ferrania, Gevaert, and Perutz. Black and white is slightly cheaper than colour, and is to be preferred for some subjects.

Colour films are manufactured for either daylight or artificial light, and can only be interchanged by using special conversion filters. This is because daylight contains a lot of blue, and is a different 'colour temperature' from artificial light (photofloods), which contain more red.

WHAT TO SHOOT

Filming one's holiday springs readily to mind, although this is only one small facet of home movies. There are family events to be captured, always valuable material and well in demand — far more interesting than an album of stills or a box of transparencies.

Then there is the documentary style of film, always interesting when it carries your own personal touch. Many amateurs actually go so far as filming plays and stories with lip-synchronised dialogue, although this is best left to the professional. It is the family film which scores every time with a home audience.

One of the commonest faults with beginners is 'hosepiping' — meaning waving the camera violently from side to side. Although you are taking moving pictures, the subject should provide the movement — not the camera. 'Pan' your camera when you feel you have to, but only with the movement of the subject (if any), **never** against it. Film from different angles, and do not take just one shot of a subject. This will give variety to your film and make it more pleasing to view. Close-ups are always more interesting than long shots, and you cannot have too many of them.

When filming children make sure that they have something to do which will take their mind off the camera. The result will be a more natural picture. On holiday, don't forget to shoot off a few signposts and place names to cut into your film later on. They are much better than titles, and serve much the same purpose. If you intend to film a local carnival or ceremonial occasion, turn your camera round occasionally to obtain the reactions of the crowd — clapping, cheering, laughing, etc.

Fireworks and neon signs make interesting colour movies, although they will not register on your exposure meter quite often. Shoot with the lens aperture wide open, and hope for the best.

One way of avoiding film wastage is to shoot only the material you think you will finally require. You can do this by writing down the incidents and events you intend to cover, divide them into sequences, and then into sub-divisions of long shot, medium shot, and close-up. This will form your shooting script, and should be adhered to as closely as possible.

When your film is returned after processing it must be handled with care, and only by the edges. Fingerprints leave greasy marks on the film which show up on projection. Any minute particles of dust or abrasions also show alarmingly, due to the high magnification. So never let your films trail on the carpet or any fluffy surface if you hope to keep them clean and in good condition.

PROJECTORS

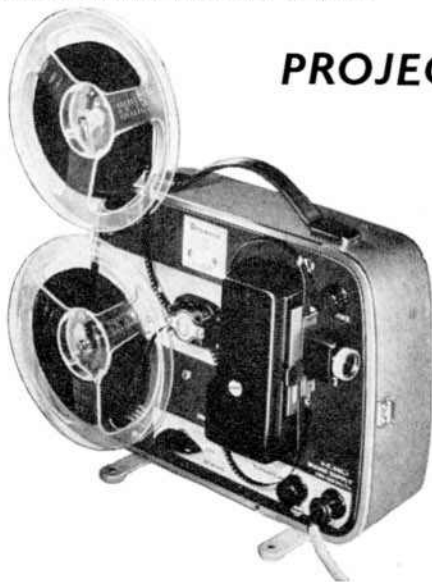
Seldom do you find a cine camera owner who does not own a projector, although the reverse is sometimes true. The ideal arrangement is to buy both at the same time, for they are really complimentary items of equipment, and the product offered by the same manufacturer as your camera should be examined to see if it meets your needs.

For a beginner, the **Kodak Brownie** projector is ideal at £19 10s. It automatically threads the film on to the take-up spool once you have pushed the end into the gate. It takes 200 ft. spools, sufficient for a 15-minute show, and has an induction-type motor giving a constant projection speed. There is also a motorised rewind.

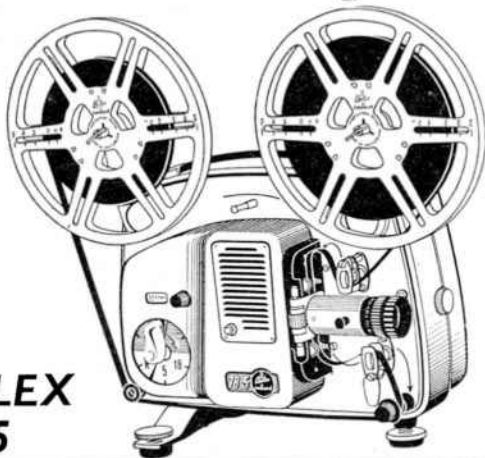
For a greater outlay you can obtain first class projectors by Agfa, Bauer, Bell and Howell, Bolex, Leitz, and Zeiss Ikon, to name a few. These all project a picture of exceptional steadiness and crispness — also brilliantly illuminated. You can also obtain a zoom lens to adjust your picture size to fill your screen.

The favourite projection lamp these days is a low voltage, thick filament type with a built-in reflector. This ensures that the maximum amount of light is passed through your film and on to the screen. There are two types: 8V.-50W and 21.5V-150W., both extremely efficient. You will not go wrong if you choose a machine with either of these.

PROJECTOR



**BOLEX
18-5**



ADDING SOUND

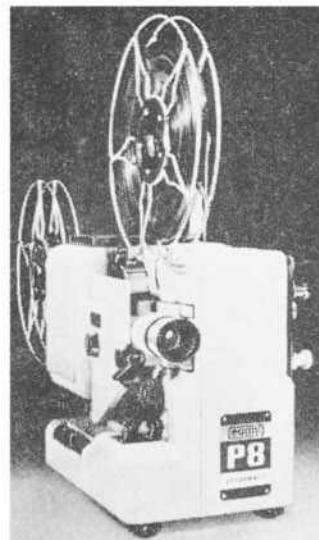
No amateur film today is complete without some form of sound track, even a plain musical accompaniment. Using your tape recorder and a constant speed projector, there is no reason why you should not obtain reasonable synchronisation between picture and sound without any additional aids — providing both machines are warmed up beforehand and switched on simultaneously. But in practice there is always a gradual creep, and your film ends with one machine way behind the other.

The remedy here is to purchase a projector which has been designed to cater for this problem, such as the **Eumig Phonomatic** at £44. Although this does not have one of the two lamps previously mentioned, it does have a series of synchronising rollers mounted on the side, which enables a loop of tape taken from your recorder to accurately control the projector speed. With this arrangement you can obtain excellent synchronisation from start to finish of your film, even over periods of half an hour.

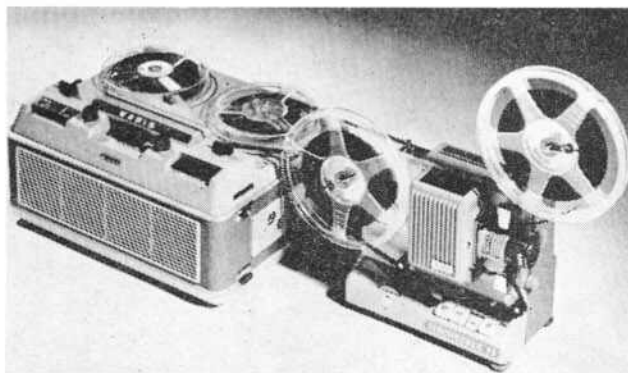
Of course there are other projectors with synchronising facilities, such as the **Noris Synchroner**, **Zeiss Moviluz** and **Bolex 18-5**. Projectors without synchronising

rollers can sometimes be adapted to take a special unit called the **Synchrodek**, which uses a loop of tape to adjust the motor speed through an external resistance.

Recording your sound track on tape provides yet another use for your recorder, and with a suitable projector there are no real synchronising problems. But it does mean setting up two items of equipment every time you want to have a show, and in some cases a separate synchroniser as well. The relative clumsiness of this method, coupled with the fact that you can really only show your own films, leaves room for a projection system offering greater convenience.



SYNCHRONER TS

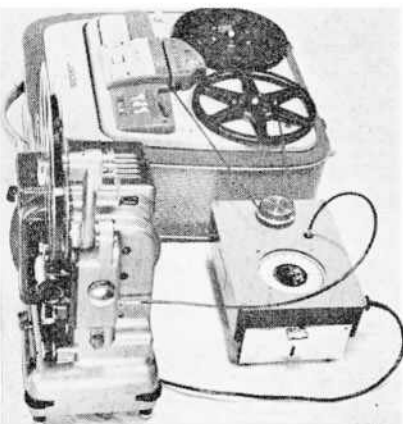


SOUND STRIPE

An alternative method, which enables you to record directly on to your picture film, is called **Sound Stripe**. This consists of a narrow strip of iron oxide coated down the edge of your edited film. Owing to the linear speed of 8 m.m. film through a projector (2.4 ins. at 16 frames per second), there is some loss of sound quality compared with results you can expect from an average tape recorder. The cost of striping your film works out at 1½d. per foot, which is rather more expensive than ¼ in. tape.

To use sound stripe you will have to purchase a magnetic recording projector, or a magnetic attachment for one of the previously mentioned projectors. These can be expensive, and of course can only be used for adding sound to films. But with sound and picture contained on only one reel of film, there is nothing to go wrong with synchronisation at any time during projection. However, if you already possess a tape recorder, it is preferable to use this in conjunction with a projector having synchronous rollers.

SYNCHRODECK



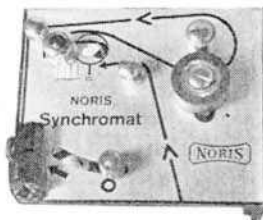
RECORDING SOUND TRACK

I have moved very quickly through this survey of possibilities for the recording enthusiast who wants to incorporate cine-filming with his present hobby, so finally, here are a few hints and tips to help you to get underway.

First of all put really clear start marks on both tape and film, so that you can always thread them in exactly the same place. Leave enough leader on the front of your film for the equipment to settle down to its normal running speed. If you intend to record a commentary, don't record projector noise as well. If you cannot place your microphone far enough away, time your commentary with a stop-watch and record without the projector running.

Use twin-grammables for adding music from records, since you will often want to fade straight from one item to another without stopping. It is advisable to arrange your musical changeovers so that they occur under a passage of commentary, then they will never be noticed by your audience.

A film sound track can be enlivened considerably by the addition of a few simple sound effects, especially background sounds and 'atmospheres'. 'Spot' effects are rather difficult to get in sync. with the picture, unless recorded over the microphone as you



are doing the commentary.

Don't forget that you cannot legally re-record music without clearing the copyright. Full details of a scheme for amateurs, enabling the use of a large selection of records, are obtainable from the I.A.C., 8 West Street, Epsom, Surrey, who welcome new members.

'ATR' TAPE COMPETITORS-CLOSING DATE AUG 31

FOR all intending competitors in ATR's unique competition, the Rules are published for the last time. Shortly, we shall be printing photos of all seven trophies.

Any organised club or group comprising at least six members is eligible to participate, provided the recording entered in any category represents the combined work of three or more members and is submitted by a responsible official on behalf of the whole.

A maximum of three entries may be submitted by any one club or group, but only one recording may be entered in any particular category.

Seven categories

The seven categories in the contest, and the trophies to be awarded in each case are as follows:

1. **Documentary or actuality:** Any form of speech recording, with or without effects. **The Fi-Cord Trophy.**

2. **Music:** A live recording of any musical group. **The Philips Trophy.**

3. **Creative Sound:** A story in sound effects; montage without speech. **The Stuzzi Trophy.**

4. **Experimental music:** A recording employing any of the known techniques of electronic music and musique concrète, including special treatment of and effects produced from conventional music and musical instruments. **The BASE Trophy.**

5. **Quality of reproduction:** Any subject of live monaural recording, which need not have a definite beginning or ending, to be judged solely on technical quality and balance. **The Simon Trophy.**

6. **Stereophonic reproduction:** A live recording of any music group or choir, or a short dramatic item or arrangement of sound effects. A representative extract from a fuller recording or work may be submitted. **The Lustraphone Trophy.**

7. **Junior section:** Any type of recording in the above categories produced by a club or group none of the members of which is over 16 years of age, without active assistance from older persons. **The ATR Junior Trophy.**

Other conditions

The maximum duration of a recording entered in any of the seven categories shall be three minutes.

Except in Category 6, all recordings will be monophonic quarter, half or full

track only. Stereophonic recordings will be quarter or half track, two channels only.

All tapes will be fitted with leaders and wound on spools not greater than 7 in. diameter. An entrance fee of 2/- to cover the return packing and postage of tapes must be forwarded with each entry.

The following information must be supplied with each entry: (a) Make and type of tape recorder(s) used in making the recording, (b) Make and type of microphone(s) used, (c) Make or makes of tape used, (d) Make(s) of mixers and other auxiliary equipment employed.

Entries may be submitted at any time until the closing date—AUGUST 31st, 1963.

Copyright

Club officials submitting entries must vouch that no copyright material has been used unless express permission from the author, writer or composer concerned has been obtained. No recording shall contain music or any other material copied from radio programmes. All sound effects commercial pre-recorded tapes, discs or incorporated must be recorded or specially created by the contestants.

The copyright in each of the winning recordings will become the joint copyright of ATR and the club concerned.

The panel of judges specially formed for this contest will include John Borwick, author of the Emiguide; Miss Daphne Oram of Oramics Ltd., producer and composer of electronic music; F. C. Judd, A.Inst.E., Technical Editor, ATR, and the Publishers of ATR, acting in a supervisory capacity.

ZERO HOUR FOR ATR'S UNIQUE CLUB CONTEST

ONE PER CENT GENIUS IS ALL YOU NEED

HEARING about the activities of the clubs month by month gives us a strong indication of the feeling of good fellowship which exists between the members themselves and the genuine desire to put their equipment and experience to the general use of the community. Of course, the obvious helpful activity is the work done for the blind, and following closely to that, the aged and infirm. At the Audio Fair ATR was particularly impressed by the number of blind people being escorted round the stands by friends and club members; and the expression of pleasure on the faces of the sightless was a joy to behold.

We see that this month in Edinburgh, the Elders of a church asked a local society to record the service so that it could be played to those members of the congregation in hospital.

We think it immensely satisfying to know that within these simple acts of compassion and thoughtfulness lies the essence of humanity. How refreshing to realise that the tape recorder plays its part, and that from a hobby that is not inexpensive comes kindness and thought for others.

On the creative side, too, we notice that clubs are getting more daring and imaginative. It's hard work being creative — and, as one famous person said — it's ninety-nine per cent sweat and one per cent genius. But the results, however humble, are worth the effort; and the appreciation received when we tickle the senses unexpectedly makes all that sweat seem gloriously well spent.

OUR TAPE RECORDING CONTEST

That's why we are pleased to publish this month a photograph of the Philips Trophy, to be given for category two in our Tape Recording Contest. It is for Music; a live recording of any group (3 mins.). This will test the creative ability of the musicians and the creative recording ability of the competitor.

Six other trophies are being offered in the ATR Tape Recording Contest in which all clubs are invited to compete, and the full details of the competition can be seen on Page 21. Please remember that the final entry date is AUGUST 31st.



● The Philips Trophy for ATR's Clubs' Competition.

Brixton on the ball

We've heard of ghosting for writers, but so far not for tape recording, unless the recent unusual **Brixton Tape Recording Club** outing qualifies for this activity.

Apart from welcoming members of the Bromley Club and entertaining them with a 'This is the B.T.R.C.' tape/slide show, members also took their recorders to a seance in the hope that they would be able to record some "noises off."

All set for a psychic phenomena session, the Brixton boys have to report 'no take.' The inhabitants from the other side were just as shy in front of the mic, as many other a would-be broadcaster.

Next month B.T.R.C. are going to try again with an experienced medium, and will no doubt produce for us the evidence if they succeed in recording a spool spook.

If originality of recording wins points in our league table, Brixton certainly collect a few this month — and they'll collect a whole 'passle' more if they get that voice from outer space on tape.

Tape tick

Up north, the **Edinburgh Tape Recording Club** got itself active when some time-conscious member thought up the stunt of recording all the chiming clocks in the City. Knowing that this beautiful city has many spires, it's no wonder that speed limits were broken all over the place to record the different chimes in one evening.

A more sober but no less satisfying occupation was to record a baptismal service. Elders from another church requested similar recordings to take to elderly and infirm people. Points to Edinburgh for this one.

ATR on holiday

If any holiday maker in Great Yarmouth feels in a spontaneous mood, then

TOP TEN CLUBS FOR AUGUST

- | | |
|----------------------------------|--------------------------------|
| 1. THORNTON HEATH | 6. SOUTH BIRMINGHAM |
| 2. RUGBY | 7. BRIXTON |
| 3. VALENCE T.R.C. | 8. GREAT YARMOUTH |
| 4. SOUTH REACH COUNTY BOYS' CLUB | 9. LEEDS |
| 5. WEST OF SCOTLAND | 10. NEW CIRCLE (BETHNAL GREEN) |

SEE NEXT PAGE

TAPE CLUB NEWS—from page 22

he would do well to wander down to the Marine Parade, where members of the **Great Yarmouth Tape Recording Society** will be collecting interviews.

Club members feel it would be pleasant to gather from visitors a store of impressions about their town. Let's hope the weather remains fine, or else there will no doubt be some earthy comments!

For those with spontaneity on their lips, make for the Information Centre!

Leeds League

The Chairman of **Leeds Tape Recording Club** tells us that many of our Yorkshire readers may not be aware of the existence of the club, and its future activities.

The club will be at Chapel Allerton, where a stand at the first Annual Garden Party on July 13th will enable people to record messages to send to relatives or friends for a small charge. Receipts will be donated to the Friends of Chapel Allerton.

Also at St. James's assistance will be given in the production of the Hospital request programme, shortly to be inaugurated.

THE LEAGUE TABLE

	Pts.
1. BRIXTON	31
2. NORTHAMPTON	30
3. BOSTON	24
4. THORNTON HEATH	22
5. RUGBY	19
6. SOUTHALL	18
7. HUDDERSFIELD	16
8. WALTHAMSTOW	14
9. LEICESTER	13
9. SOLENT	13
10. BETHNAL GREEN	11
11. READING	10
12. AYLESBURY	10
13. MEDWAY	9
14. COVENTRY	8
14. WOOLWICH	8
14. SOUTH REACH C.B.C.	8

Middleton-cum-Huddersfield

Two more clubs joining up their resources are the **Middleton** and **Huddersfield** clubs, who made preliminary arrangements for a full meeting sometime in the near future.

Plans for a demonstration in the town centre by Middleton club members, in which the theme will be to convert members of the public who do not yet belong to a club. Other local clubs have been invited to this important get-together.

A new circle

Down in **Bethnal Green** things have been stirring. An established club has

changed its identity and retained 95 per cent of its previous membership.

The emergent tape recording club is now called **The New Circle**, and the majority of the members have returned to the Shoreditch Tabernacle where the Bethnal Green club was first started.

Slightly mystifying, but no doubt necessary owing to some lack of social atmosphere at the Shoreditch Town Hall and bad acoustics.

The new club is well housed, with its own car park and canteen. The club equipment consists of a Leak pre-amp and amplifier, a W.B. 10-in. Stentorian speaker, a 30-watt amplifier, bulk eraser, plus other pieces. No charge is made for the loan of any equipment.

(Editorial note: Surely a small charge would be acceptable if the return was used for purchasing additional equipment).

Much work is going to be done for the sick and the blind.

Rugby convention

The **Rugby Amateur Tape Recording Society** held its annual Convention on Friday, May 31st, at the Rokeby Room, Benn Memorial Hall, Rugby. The President, Mr. John Bannister, personally received guests, aided by his wife and club officials. Other clubs represented were: Leamington and Warwick; Coventry (both Tape and Cine and the C.T.R.C.); Nottingham; South Birmingham; Kettering, and Northampton. Apologies were received from the Cambridge and Bedford clubs, and from the three tape recording magazines. A special tape prepared for the occasion by F. C. Judd, ATR's Technical Editor, was played, after which a 'World Tour on Tape,' compiled by three members of the Rugby club was shown. This included places as far apart as London and New Zealand, as well as items from the personal libraries of the members concerned.

After the interval followed a Question Time with panellists including representatives from E.M.I., and Trevor Gilbert, secretary of the Birmingham club and the newly formed Association of Midland Tape Recording Clubs. Mr. Bannister represented local trade on the panel, and his chairmanship was temporarily taken over by Assistant Secretary, Bob Pick.

Almost 100 persons were in attendance, the club's last event in their present year.

Jungle jargon

Sound effects for a religious play for a production by the Diocesan Players were provided by the **South Birmingham Club**. Day-to-day noises, such as cars, aeroplanes and the like, were no problem — but chanting jungle tribes were! Eventually these sounds were successfully 'manufactured' in a very convincing manner.

At the club's A.G.M., reports were made on a most successful year. Mr. Rex



● Boys of the South Reach County Boys' Club manning their stand at the Erith Youth Festival.

Trueman was elected Chairman, while the rest of the original committee were all re-elected.

Youth festival

Members of the **South Reach County Boys Tape Group** had a stand at the local Youth Festival held at Erith in Kent. Public interest was high, and an estimated 200 people visited the stand—enough to keep Senior Club boy Terence Brett, ably assisted by Brian Payne and Alan Hands, busy for most of the time.

Owing to their success at the Festival, membership has boosted and they are now undertaking several projects, the first of which is a Hospitals Broadcast service at the Erith and District hospital.

TURN TO PAGE 32

PHILIP J. GOMEZ, acting Secretary of the recently revived **Darlington & District Tape Recording Club**, 24 Cleveland Terrace, Darlington, Co. Durham, would be interested to hear from anyone wanting to join the Club. Meetings are held fortnightly.

Epsom & District Tape Recording Club. Secretary: Geoffrey H. Bilton, 8 Manor House Court, West Street, Epsom, Surrey.

Robin Hood revived—

G. W. Gabbitas, President of the **Robin Hood Amateur Tape Recording Club**, Wollaton Grange Community Centre, Bilboro, Nottingham would like to hear from anyone interested in joining the club. Activities include tape-sponding, drama, music.

ON LOCATION By F. C. JUDD, A.Inst.,E.

● Giving ears to your cine camera is both fascinating and skilful

Collecting sounds for your cinefilm

IN Information Book No. 3, ATR, July, I outlined the comparatively simple rules about recording outdoors. Quite a lot may be achieved with a small portable tape recorder, certainly sufficient for the sound effects tracks for home cinefilms. In fact the combination of portable tape recorder and cine camera lends itself to the creation of very enjoyable and interesting material. The two elements, audio and visual, go hand in glove, and those of you who are already confirmed sound enthusiasts will find even greater delight in co-ordinating your efforts with the visual recording.

Recording for your cinefilm

This leads me to the location recording I have been doing recently for the ATR special offer sound effects discs.

FIRST GET PERMISSION TO RECORD. Few recording enthusiasts realise that **any** sound, except natural sounds such as the sea, rain and thunder belong to the owner of whatever makes the sound, so make sure you can record without getting yourself involved in copyright; here I hasten to add that very few owners of interesting sounds will prohibit them being recorded by amateurs providing they are assured that the sounds will **not** be used commercially.

Unless you have been on a 'recording safari' you have missed one of the most interesting aspects of the hobby; so—off we go to record the last of British Railways steam engines. Our first location is Paddington, the Western Region main line terminus where we have to work entirely with a Fi-Cord 202 because the railway authorities simply will not have cables and equipment on the platforms.

The Fi-Cord in this instance was used with a low impedance Sound Film Industries ribbon microphone, operating directly into the microphone input of the recorder. This may surprise users of the 202 but when you realise that the dynamic range of a Castle class steam loco or a 2,000 h.p. diesel engine is around a 100 dB at a range of six feet, you will see the advantage of a comparatively insensitive microphone system. This also keeps out unwanted background, reduces the risk of severe overloading, and I might add, produces a first-class recording.

Now we move to Iver in Buckinghamshire, this time with the advantage of an unused platform and waiting room at our disposal. No problem with cables so we can use a studio recorder, microphone mixer and appropriate microphones. See Fig. 1 for

the recording set up. If you do succeed in getting permission to record on a quiet main line station **do not on any account stand near the edge of the platform when express trains are hurtling through at speeds approaching 100 m.p.h. It is dangerous and will annoy the drivers.** By the way, you can generally get permission to record from the Railway Public Relations Office and providing you assure them that you will not get in the way of passengers, they will let you work on the departure and arrival platforms at main line stations. Engine drivers are usually co-operative too, if you want the engine to whistle as they pull out.

● This beautiful Devon sea-land-scapes typifies perfect shots for cine-camera enthusiasts.



In search of sounds

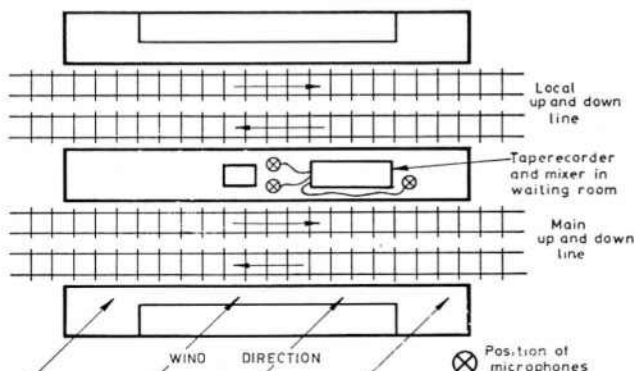
Railway trains are not the only sounds that make interesting recordings. The world of sound is almost unlimited, so from trains, we move to the countryside. In one day I collected the sounds of cows, sheep, chickens (farmers are generally co-operative), a diesel road roller, a compressor driven tree saw, some excellent countryside background of birds, small piston-engined aircraft landing and taking off, horses trotting and walking on various surfaces (by courtesy of a riding school), a few village church clock chimes and so on.

Take advantage of local events

During the summer months there are many local as well as National events planned where sounds can be collected. The local gymkhana, horse shows, traditional events like Morris dances, car-racing, fairgrounds, displays by the Armed Services, Police and other organisations, fetes and agricultural shows, domestic animals and poultry shows, not to mention the zoos and seaside resorts. If you take your recordings and cinefilm making at all seriously, you may very soon realise that **every sound is a potential effect.** Quite often the occasion arises when the sound is not readily obtainable, as for instance a recent request I had for the sound of a sail boat on the river Nile and trolleys on iron rails in the tunnels of an Egyptian tomb! You can't just push off to Egypt to make these recordings unless you are wealthy enough to take a holiday there with your recorder and cine-camera; the sounds just have to be faked or simulated from existing sound tracks.

For instance, 'sailboat on the Nile' consisted finally of creaking timber, water lapping and general ambient background. The trolleys were produced from train wheel sounds re-recorded at half speed with just a suggestion of echo.

SEE PAGE 33



● FIG. 1: The microphones were placed by the corners of the station buildings, which acted as wind breaks.

Have YOU anything to say? Letters of praise, criticism or general comment of interest to other readers find a billet here. Address them to: The Editor, ATR, Room 532, Ulster Chambers, 168 Regent Street, London, W.1.

FORCEFUL POINT OF VIEW

● **A. J. Errington, of Middlesex, writes:**

WHAT an excellent magazine **ATR** is. How well produced, but what balderdash has emitted from its pages in the last couple of issues. What do I mean? Well, this business of fair play for dealers!

This viewpoint has often been expressed, not only in **ATR**. Why on earth is it unfair to purchase a tape recorder from one source and some time later have it serviced at another. When the tape recorder is purchased, paid for and the guarantee finished, then this is the conclusion of this part, completely finished.

If, sometime later, the customer requires a service or repairs, this opens up a completely new contract between dealer and

THE THINGS YOU SAY

customer. I haven't heard of a dealer charging less because the recorder was purchased from him.

The plea from the Home Music Centre in Manchester is just not practicable — maybe desirable, but not practicable!

There are a dozen and one reasons why I don't take my car, my watch, my shoes, etc., in for repair at the place of purchase; likewise my tape recorder. (. . . A sentence has been omitted which the reader admits is facetious—Editor).

About 90 per cent. of people buying a tape recorder do so because it sounds fun to have one at a forthcoming party. So you buy one. Where? Not at a 'Hi-Fi' dealer, where people are often frightened off by the highly technical display in the window. Supposing, of course, that the specialist even has a shop in the area. No, the uninitiated may purchase one from a radio/television dealer, or even a furniture store, certainly in this area. He invariably buys an inexpensive recorder, and occasionally — if the novelty doesn't wear off in the meantime — this recorder will need repair or replacement.

So he turns to the specialised dealer in either case, and it certainly doesn't help the customer or the dealer if he's met with a nose-in-the-air attitude and is expected to give reasons why he didn't go there in the first place.

I suggest that the Home Music Centre comes down to earth. Why are they so special that they expect excuses from potential new customers? Perhaps a little more local competition would be healthy here!

If they offer helpful advice and guidance to **all** who enter their premises then they'll have no worries about custom.

So let's have no more of this poppycock; certainly in the Editorial of such a high class magazine.

(A long and forthright letter. Mr. Errington should know that while we don't consider his views poppycock, neither do we relate this outspoken comment to our own views. We also feel sure dealers have something to say in reply—Editor).

Manufacturers often take a beating from the hands of the paying customer, so it gives us pleasure to print a letter from someone who expresses complete satisfaction with the machine he purchased.

BRENNELL HAPPY

● **T. E. Cobb, 14 Dale Road, Swanley, Kent, writes:**

Having bought and used a tape recorder mainly for classical music for just over fifteen months, I feel I must write and say how satisfied I am with a Brenell Mark V. It took a few months to decide on a machine, and my experience with the Brenell has fully justified my choice.

Recordings are made from a Jason tuner, and played back through a home constructed pre-amp and push pull amplifier.

Any queries I have had with regards to the recorder have always been answered with courtesy and consideration by the Brenell Engineering Company, and I feel there is a great deal of satisfaction in getting first-hand information direct from the manufacturer who has always been more than pleased to help.

I must add that I have no connection with the Brenell Engineering Company, other than being a very satisfied customer.

CLUB LET DOWN

The Southall Tape Recording Society has something to say about firms who agree to do demonstrations and then let down the Society at the last moment. (Incidentally, the secretary of the Club says he is willing to send us the name of the firm if we so wish.) We decline to accept this offer unless the firm in question recognises the circumstances and rushes to its own defence. In that case we shall be happy to publish the reply. —Editor.

● **F. J. Weed, Chairman Southall Tape Recording Society:**

I write to discover whether other clubs have suffered similar treatment to that recently received by Southall at the hands of one of the country's

big manufacturers of stereo/mono recording machines and microphones.

The business of organising programmes for Club meetings is never an easy one and when our members showed interest in the prospect of demonstrations by manufacturers the first opportunity was taken to include such as could be arranged. When a letter was received from a well-known manufacturer with the offer of a demonstration this seemed an ideal way of making a beginning to a series of such events.

A day and time was soon arranged and when this day drew near letters were sent out to people who might be interested. The coming meeting was mentioned in the "Forthcoming Events" list for our local Community Centre and there was a note in the local paper. A special room was booked for the evening.

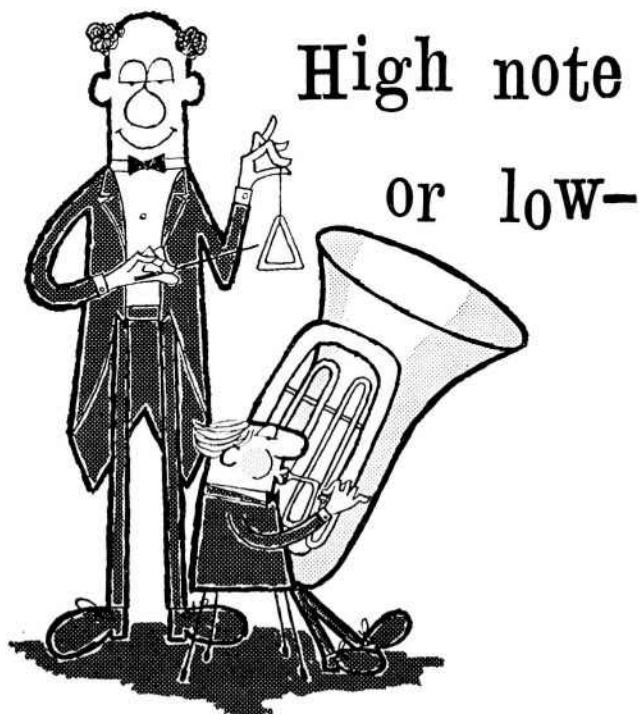
About an hour before the meeting was to commence our secretary received a telephone call from the person who was to give the talk saying that his car was broken down. An offer was made to assist him on the journey but this was declined on the grounds that as the vehicle would be required the next day that evening would be spent making repairs. Thus there was to be no demonstration. At the meeting an hour later we had to face a large gathering of members, their friends and visitors from outside, with the news that they had come for nothing. All were of course disappointed and disgruntled.

Our secretary wrote to the offending firm protesting at this treatment but to date, some three weeks after the event, no official apology has been received.

We wonder if the behaviour of this one firm, who after all approached us in the first instance, is common to others. We would welcome the comments of other Clubs on this matter and any suggestions on how to deal with the offender.

Members of local Tape Recording Societies are surely the people who are best able to spread the popularity of the pastime and when they are willing to open their meetings to the public and give the manufacturers an opportunity of demonstrating their equipment it is most disappointing to find that the events are treated so lightly.

In the hope that we were merely unlucky in this instance we are continuing in our efforts to arrange future demonstrations.



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GRUNDIG TK 55 with pocket	63/-
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GRUNDIG CUB with pocket	35/-
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THE SOUND SCENE AT LAST— THE HOME T.V. TAPE RECORDER

- Roving over the scene of new equipment ATR sees a tremendous horizon opening up with the announcement of canned television for all.

WE'VE been looking with great interest at recent developments to tape recorders and how manufacturers are gradually working towards desirable combinations of circuits. For instance, the Stuzzi built-in radio recorder enabling the enthusiast to record the programme to which he is listening, and the Luxor stereo recorder from Sweden are good examples.

Now we present a piece of equipment which represents the most dramatic break-through in years. It is called Telcan — and is described as "a domestic vision and sound recorder."

If you have been looking in at a recent B.B.C. TV news bulletins, you may remember the newscaster talking about the equipment, and then showing the recording of his announcement. Sound Scene saw it, and was immediately fascinated by the potentiality of this slightly incredible circuitry.

Not that recording vision on tape is new; we have all heard of video—but this application of it can possibly revolutionise the viewing habits of the nation.

● What is Telcan?

In a conversation with Mr. Rutherford one of the young technologists who helped in the development, Sound Scene learned that the equipment has one major facility which can be turned into three applications.

The facility takes the vision of a TV programme as it appears on any ordinary set and records it on tape. Thus you can watch the highlights of a Test Match or the action of a play, or any other programme of your choice and record it as you see it.

The three applications break down into

a deck sold separately for about 59 gns., and which can be attached to any normal TV set by a qualified engineer. It will take about an hour for him to match-in the deck.

The second application is something which the Telcan Company expects to sell to TV receiver manufacturers. The deck, with its ability to record vision, can be incorporated by the manufacturer and should not put much more than £25 on to the price of the normal receiver..

The third application—the one which interests this magazine—is that the same piece of equipment can be offered to tape recorder manufacturers, so that your own sound and TV vision can be recorded on the same instrument, and, no doubt, at the same time.

Think about this and you will see that indeed, the horizon of the tape enthusiast does become wide.

SPECIFICATION :

Playing Time—30 minutes. 2 x 15 minutes.

Maximum spool size—11"

Resolution—300 lines peak white

System Rise Rate—0.2 micro sec.

Signal to noise ratio—28 dbs.

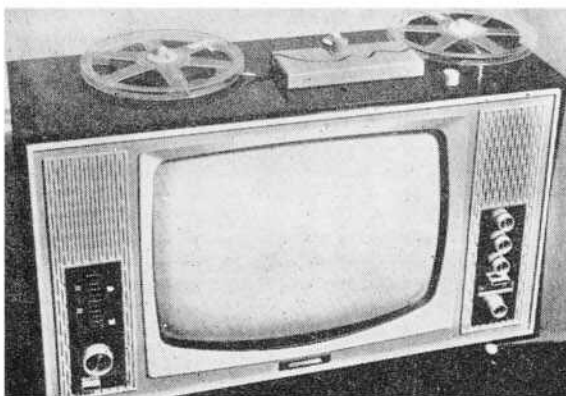
System tape tracking—Double.

Sound System—Signal to noise ratio—40 dbs.

The unit can be produced to operate on the 405 line British system, the 525 line American system and 635 line Continental system.

Size—17" long x 9" wide x 2" deep with 4" protusion for motor housing.

Weight—15 lbs.



● Operation

The equipment operates in exactly the same way as an ordinary sound tape recorder with instant playback on a $\frac{1}{4}$ " tape which can be used over and over again. Whilst recording, Telcan does not interfere with the original transmission.

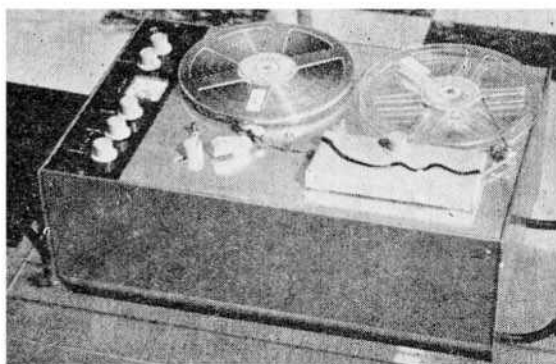
The equipment takes the TV signal from the TV set detector, amplifies and assembles it in a form that can be recorded on magnetic tape by a special transducer system, the same transducer, which has

● Commercial development

As electronics firms throughout the world have spent many years and vast fortunes in attempts to develop vision recording for home entertainment, there can be little doubt that many applications will be found in the fields of industry, medicine and education.

The commercial development of Telcan is the result of work carried out by four young Britons who should be congratulated on their break-through. They are Mr. Norman Rutherford, Mr. Michael Turner, Mr. Brian North and Mr Jack Jones. The final stages of the development occurred only during the last six months, and facilities were given to the team by the Nottingham Electronic Valve Company Ltd, of East Bridgeford.

● The 'Telcan' unit built into a TV set



● The 'Telcan' as a vision/sound recorder

no moving parts, reconverts the signal on the tape replay into electrical impulses. These impulses are assembled by the following circuitry into a normal TV signal. This signal is then applied to the grid of the video out valve in the TV set.



A TK 1—a cemetery at midnight—a bottle of whisky—and a ghost-hunting that left a large question mark.



AN OLD MAN'S FINGER

By Charles L. Towers

A CEMETERY on the side of a hill, at the time the wrong side of midnight and the inky heavens sending down icy blasts of needle sharp hailstones at all too frequent intervals, wasn't exactly my idea of how to spend an enjoyable evening, but I certainly did not intend admitting that to Basil as we ventured rather gingerly amongst the gravestones, dim, grey shapes against the night sky. Outwardly, to each other we strived hard to give the impression that there was no other place we would rather be right then. Inwardly, we cursed for being on what we firmly believed to be a wild goose chase and a fool's errand.

It started when my son told me there had been persistent rumours that a ghost-like shape had been seen on several occasions lurking around the gravestones on Cemetery Hill. He and his pal were going out that night to see if they could see this ghost for themselves. I promptly advised him against it but boys being boys off they went with such a display of zeal that I wished I had been 30 years younger and with them!

Less than an hour later they were back, white of face and shaking. I felt like saying "I told you so," but my boy doesn't frighten easy . . . my curiosity was aroused . . .

Preparation and action

And so here we were, the night before the full moon; not that it mattered because we couldn't see the moon. We had with us just about everything we could think of including Basil, a sceptical photographer friend of mine, a new T.K. 1, dozens of spare 3" tapes, camera, flashbulbs, torches and a flask of neat whisky and, yes . . . running shorts! The shorts

to be worn underneath our trousers were Basil's idea. I'm not quite sure to aid running towards the ghost or away from it. However there was no doubt about the purpose of the Scotch. I took a swig right then and a minute later somehow those gravestones didn't appear quite so eerie. The recorder was now running continuously and Basil was taking photographs indiscriminately every few minutes.

"That flash of yours will scare off every living ghost within a mile of here," I protested.

"Yes, but it is the dead ones we are interested in," cracked Basil, "Although we may see nothing with the naked eye, the camera lens are much more sensitive and when these films are developed the results may surprise you."

Half a flask later I was beginning to get to know that cemetery better than my own back garden, I suggested that we call it a day (or a night). I had got through several 3" tapes and Basil was counting the cost in film and flashbulbs, also I was decidedly damp and chilly and it was proving to be something of a nuisance protecting the recorder and camera from the intermittent showers which appeared to be the only thing likely to perform that night.

"O.K." agreed Basil, "I have had enough, and when I see that boy of yours remind me to give him a piece of my mind."

"He will get more than a piece of my mind," I said warmly. "Let's give the thing just one more chance . . . we will go

right through the cemetery again."

It happens . . .

So for the umpteenth time we retraced our weary footsteps. I was getting on quite familiar terms with the dusky gravestones, crosses and flying angels. We approached the old graveyard around the church, the ancient gravestones crumbling away in fragments and dust. And then it was just here that I quite suddenly felt a gentle, yet very firm push in the small of my back. I simply had to go forward and ended up, half sprawling across a tombstone.

"O.K. Basil," I said, "Quit the funny stuff. This is not the time nor place for your practical jokes."

"What are you gassing about now?" grunted Basil, taking another photograph as I picked myself up from the tombstone.

"Like making like a ghost and giving me a push in the back," I explained.

"I saw you trip but I certainly didn't give you any push, old man," protested Basil. He was absolutely right. It's simply in one hand I've got this flaming camera and in the other this blooming big torch. In any case I was slightly in front of you when you got this so called push."

I was beginning to feel hot beneath the collar. Of course come to think of it Basil was absolutely right. It simply couldn't have been him and there was nobody else around . . . we had the cemetery to ourselves . . . or had we? I hurriedly dusted the last remaining

See page 33

UNDER TEST

THE LUXOR M.P. 24

Reviewed by F. C. Judd, A.Inst. E.

THE LUXOR MAGNETON is a new domestic class recorder from Sweden which has provision for full stereo or mono recording employing four tracks on standard $\frac{1}{4}$ -in. tape. It has three speeds — $7\frac{1}{2}$, $3\frac{1}{2}$ and $1\frac{7}{8}$ ips — and the record/playback characteristics are to approximately C.C.I.R. standard.

The Luxor Magneton is attractively finished in two-tone grey and considering its full stereo record and playback function is remarkably compact. Although it has two built-in speakers, one on each playback channel, the stereo spatial effect is of course restricted and the makers advise the use of two external widely spaced loudspeakers.

The internal speakers can be switched off and in addition to the external speakers on each channel a third speaker can be operated and would presumably offset any 'hole in the middle' effect that sometimes occurs, especially with spaced microphones.

Accessories

No microphones are issued with the recorder, but the distributors recommend the popular AKG D88 stereo microphone. For mono work, any good high impedance microphone will operate with the Luxor Magneton. Accessories supplied with this recorder include a 5in. spool of tape (it will take up to 7in. spools) and spare spool, two long connecting leads, complete with plugs, one short gram. connecting lead with plugs, splicing tape, a head cleaning brush, instruction book and complete service manual. The case has a detachable carrying handle, and the mains lead and plugs can be stored in a compartment at the back.

Performance

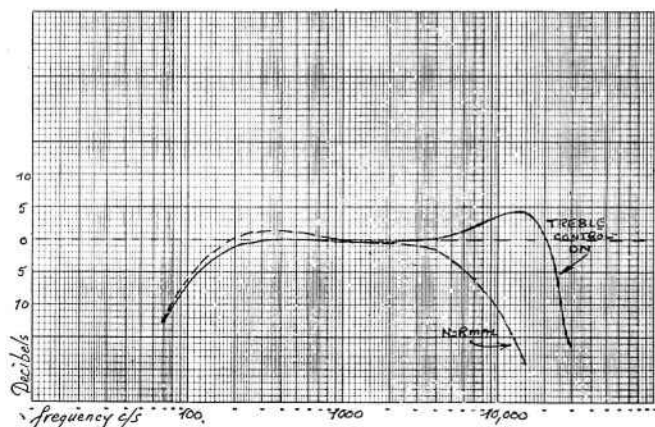
The Luxor Magneton tested for this review was found to be remarkably free of wow and flutter, even at $1\frac{7}{8}$ ips. A test recording at this speed was made from an F.M. tuner, the quality of the replay being almost comparable with similar



● The Luxor 4-track stereo tape recorder — plastic covered case.



● The same stereo recorder in a teak case.



● Frequency response of the Luxor Magneton 4-track stereo tape recorder at $7\frac{1}{2}$ ips. (See text with reference to tone control switch.)

recordings made at $3\frac{1}{2}$ ips and $7\frac{1}{2}$ ips. The overall frequency response (record to playback) was taken at $7\frac{1}{2}$ ips and is shown in Fig. 1. One curve shows the response with the tone switch set to **treble**, the other shows the response with the tone switch set to **normal**. With the tone switch set to **bass** it appeared to have no effect, other than to reduce the treble still further.

Additional tests included replaying recordings via external amplifiers and speakers, and here the Luxor gives a fine performance, with a full bass response. The quality of reproduction over its internal speakers tends to be a bit hollow with a lack of bass, possibly due to the small baffle area provided by the case. Hum and noise was found to be better than 45 dB, and crosstalk (i.e., leakage between channels) around -50 dB.

The overall performance of the machine is perfectly satisfactory, and it would make an ideal programme source for an external high fidelity amplifier and speaker system. It is strongly constructed, and the distributors have assured me that full service and spares are available.

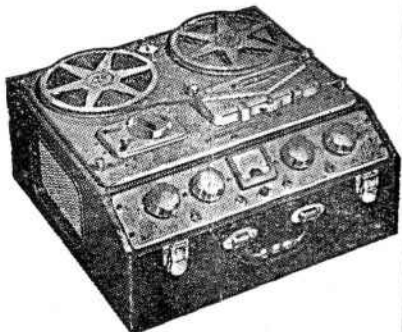
The plastic covered model retails at 77 guineas and the teak box model at 74 guineas, each complete with accessories. The Luxor Magneton four-track stereo recorders are manufactured by Luxor radio of Sweden and are distributed in the U.K. by Britimpex Limited, of 16-20 Great Russell Street, London, W.C. 1, to whom all further enquiries should be addressed.

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UNDER TEST—contd.

Input and output sockets

Access to the input and output sockets is via a recessed opening at the front. There are: a stereo microphone input, two mono microphone inputs, one on each channel, and radio and gram inputs. Output sockets are for headphone monitoring, for feeding external amplifiers, and for low impedance 4 to 6 ohm external speakers.

Deck controls

The deck controls are simple to manipulate, and two magic eye indicators show the recording level independently for each channel. Other deck facilities include tape position indicator, track and speed selectors, and fast forward and reverse rewind. The volume controls for each channel can be operated separately or together. Recordings made on one track can be synchronised with other material on an opposite track by monitoring with headphones.

ABRIDGED TECHNICAL DATA

Three speeds: 19, 9.5 and 4.75 cm/sec. ($7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{1}{2}$ ips).

Frequency ranges: 19 cm/sec.—50 to 17,000 c/s.
 9.5 cm/sec.—50 to 12,000 c/s.
 4.75 cm/sec.—80 to 6,000 c/s.

Output: min. 2×2 watts.

Connection sockets:

Stereo microphone (sensitivity about 5 mV)
 $2 \times$ mono microphone (sensitivity about 5 mV)
 Mono or stereo gram. (sensitivity about 100 mV)
 do. radio (do. 50 mV)
 do. amplifier (output about 0.5 V).

Earphone ($Z=10K$.ohms).

Three loudspeakers ($Z=8$ ohms).

Valves: $2 \times$ EF86, $2 \times$ ECC83, $2 \times$ EL95, $2 \times$ EAM86.

Motor: Shaded-pole induction motor.

Heads: 1 combination head, fine-laminated Fe-Ni-core; gap width: 3.5u.
 1 erase head.

Dynamic Range: better than 50dB.

Crosstalk in stereophonic use: better than 30dB over the whole frequency range.

Gramophone amplifier—Mono: Output 4 watts

Gramophone amplifier—Stereo: Output 2×2 watts.

Microphone amplifier: Output 2 watts with mono. mic.
 2×2 watts with stereo mic.

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GRAEME EASTWAY, 19, assistant projectionist, 192 Boundary Street, Paddington, Sydney, N.S.W. Films, photography, travel; all except opera. Philips 4-trk, 7in. 3½. Anywhere English speaking.

RODERICK JAMES BYRNE, 38, electrical engineer, 68 Oxley Drive, Holland Park, Brisbane, Queensland. Music: New Orleans, jazz, trad., dixieland, Luxor mono or stereo, 2 or 4-trk, 7in. 1½, 3½, 7½. Anyone, anywhere.

NORTHERN RHODESIA

JIM HARRIS, 15, schoolboy, P.O. Box RW 27, Ridgeway, Lusaka. Scouting, Army cadets, cycling, stamp collecting; rock, pop, jazz, light classical, Telefunken 74K, 5½in. 3½. Anywhere English speaking.

CHESHIRE

H. R. HEWITT, 54, landscape gardener, 8 Leasow Road, Wallasey. Dramatics; pop and opera. Paka Sound, 7in. 1½, 3½, 7½. Anywhere English speaking.

W. A. R. RICHARDSON, modern language teacher, 105 Manor Drive, Upton, Wirral. Spain and Latin America; classical and folk. H.M.V., 7in., 3½, 7½. Spain and Latin America.

HAMPSHIRE

CAROLE SMILES, 24, dental nurse, 1436A Wimborne Road, Kinson, Bournemouth. Cars, fishing, all outdoor life; pop, musicals. Grundig TK20, 5½in. 3½. Anywhere, male or female.

JOHN CABLE, 16, schoolboy, 6th form School House, Lord Wandsworth College, Long Sutton, Basingstoke. Humour, schoolboy interests; pop. Philips 4-trk, 7in. 1½, 3½, 7½. Any English speaking sixth-former, preferably female.

KENT

CHARLES BRIANCOURT, 41 civil servant, 146 Radnor Avenue, Welling. Musique concrete, one-voice choir, superimposition; folksong, Bach downwards. Philips CR1601, Grundig TK5, 7in. 1½, 3½, 7½. Anywhere.

MICHAEL J. STEVENS, 22, P.S.V. conductor, "Mount Pleasant," West Houghan, near Dover. Electronic music, electronics, radio, TV. Pop, guitar, light, Truvox R64 4-trk, home-built deck and amplifier, 7in. 3½, 7½. Anywhere English speaking, especially U.S.A., Australia.

JAMES T. CRAYDEN, 41, warehouseman, 60 Rock Road, Sittingbourne Theatre, radio, sport; pop, classics. G.E.C., 5in. 3½. Holland, France, English speaking only.

RICHARD STEVENSON, 36, civil servant 45 Whitehill Road, Crayford, Dartford. Photography, physical culture, all except heavy opera. Argyll Minor, Sound Riviera, 5½in. 3½. Anywhere, male only.

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ANTHONY EDWARD DAVIES, 28, G.P.O. telephone operator, 71 Castleford Road, Sparkhill, Birmingham 11. Humour, effects, trick recording, collecting records; Wagner to Sullivan, comedy. Brenell Mk. 5M, 8½in. 1½, 3½, 7½. 15. U.S.A., Canada, Germany, U.K., Italy.

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A. BEAL, 21, merchant seaman, 19 Balfour Terrace, Middlesbrough. Dancing, photography, reading; pop, jazz, no classics. Telefunken 76K, 5½in. 1½, 3½. Anywhere English speaking, preferably female.

BRIAN CHAPPELL, 32, platelayer, 53 Lambert Road, Kendray Estate, Barnsley. Stereo; classics, pop, opera. Grundig TK60, 7in. 3½, 7½. Anywhere.

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JIM BRYSON, 33, driver, 15 Langlee Avenue, Galashiels, Selkirkshire. Pipe bands, motoring, outside recording; pop, all jazz, C & W. Grundig TK20, Stuzzzi Magnette, 5½in. 1½, 3½. Anywhere.

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TAPE CLUB NEWS—from page 23

A patient-to-relative project is also planned whereby patients record messages to relatives living in distant places, and, through other groups, they hope to get messages back. The boys hope to set up their own tape-sponding directory through the boys' club movement, so putting clubs with the same interests into contact.

100 year old clanger!

Down at Thornton Heath they've been ringing the bell again. This time it was the Croydon Parish Church hand-bell team who gave an excellent evening's recording on their 100 year old hand-bells. A return date for the autumn is being arranged.

The Club's assistance to the Bingo sessions run in aid of The Croydon Association for the Blind have gone

beyond providing public address and music. The team of members who turn up each Monday evening help on the stage, at the door and also in the serving of teas and biscuits and washing up and clearing up at the end. All very much appreciated by the organisers Mr and Mrs Bundy themselves members of the Thornton Heath Tape Recording Club.

Outside recording activities have included an organ recital at Croydon Spiritualist Church and The Pilgrims—a religious group who play in the modern teen-age style.

Whit Monday will see the members providing P.A. and music for the Guide Dogs for the Blind Association at a fête at Crystal Palace grounds and also using the opportunity of having their own stand on show.

The Club's own monthly competition on May 23rd was on "The Beeching Plan" which brought in some very satirical and humorous entries. It was won by John Bradley with 27 out of a possible 30 points with a tape in which various elderly locomotives expressed their own opinions with many wheezes and clanks in doggerel verse.

Plans are going ahead for the Club's two mobile recording units (vehicles belonging to Club members) to carry proper signs when engaged upon these duties, thus furthering for the Club maximum publicity for all its activities.

Outdoor recording

Besides an 'Any Questions' evening and a demonstration by Recording Machines Ltd., the West of Scotland Club took an outside recording trip to Dunoon where electric trains, a paddle steamer, car ferry and a steam train were taped.

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AN OLD MAN'S FINGER—from page 28

traces of tombstone decay from my raincoat and when I spoke again my voice seemed strangely unreal. 'Let's get out of this place, but quick!'

All the way back Basil did his best to convince me that I must have tripped and by the time we reached my place I was almost convinced and feeling much better.

'We better play these tapes over and see how they have come out,' I suggested, once indoors and in spite of the lateness of the hour. We took off our raincoats and as I was about to hang mine on the hall stand, I give a gasp that startled Basil. On the back of the mac was a firm, sharply outlined left-hand, in the same grey tombstone dust that I had brushed off the front of my mac earlier on. I knew the raincoat was quite clean when I had first put it on to go out that evening, besides any marks there might have been would have been washed off several times over by the rain and hail.

Basil was obviously shaken. He examined the dusty outline of the long, lean fingers. 'Look at this,' he exclaimed, 'One of the fingers on this hand is missing!'

Sure enough the third finger in the impression of this left hand was just not there.

Looking for a finger

The next morning I was determined to

get to the bottom of this mystery, so Basil and I went off again to Cemetery Hill. The place looked different again in broad daylight and with several people around. We soon located the exact spot where the push occurred and I closely examined the tombstone where I had sprawled across. The chiselled lettering proclaimed that here lay the earthly remains of one Percy Harold Armstrong-Entwhistle who had passed away at the ripe old age of 88. The exact date of death was worn away. Well the name was certainly not commonplace and it rang a bell too, because at the other end of the street in which I lived was an old established family of the same name! I was determined to make some enquiries. Some time later Basil and I were outside the door of the Armstrong-Entwhistles. An old gentleman, puffing slowly on a pipe came in answer to my knock.

'Pardon the intrusion,' I begged, 'But do you mind telling me if you had a relative by the name of Percy Harold Armstrong-Entwhistle?'

The old chap was quite informative. 'Oh, yes indeed, that would be my great-grandfather . . . a well-known character in these parts and in his time, you understand.'

I hesitated before putting my next question. A question to settle something that was uppermost in my mind. 'Do you know if ever he happened to have an

accident to his left hand?'

The great-grandson of Percy Harold puffed at his pipe thoughtfully for a few moments. 'As far as I know he never had an accident in his entire life . . . a very careful man . . . and very quiet too, I remember my grandfather telling me he had a reputation for hating music of any kind, in fact all noises . . . couldn't abide noise, quite a crank about it I believe.'

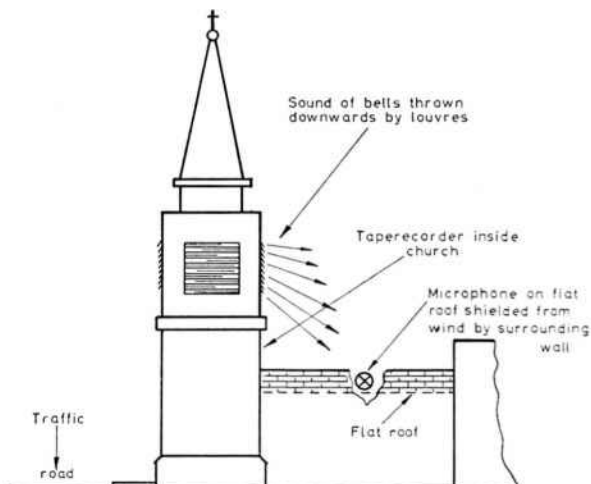
I almost breathed a sigh of relief, but my relief was short lived . . . Mr Armstrong-Entwhistle was still speaking. But funny thing you should ask about his left hand . . . you see I take after my great-grandpapa.' With that the old man held up his left hand, and I blanched as I noticed it for the first time . . . the third finger was missing!

'We were both born this way, you understand,' Mr. Armstrong-Entwhistle went on.

That same night, I reflected the Ghost on Cemetery Hill had been the real thing all right and although Basil and I had been fully equipped to establish its presence, we couldn't prove a thing . . . the tapes upon playback were quite normal, as were the many photographs when they were printed. As for that Ghost's impression of its left hand on my raincoat . . . I am afraid to say that it wore off long ago.

WILL NO ONE BELIEVE US! ●

● ON LOCATION—from page 24



● FIG. 2: Microphone position for recording Bow Bells at St. Mary-le-Bow Church, Cheapside. The bells have only been recorded once officially, by special permission of the Church Council.

Unwanted sounds

These are just as much a problem as wanted sounds and wind noise, traffic noise and chattering people are at the top of the 'unwanted' list. Wind noise, especially when working with ribbon microphones, can completely ruin a recording with low pitched rumbling noises and the only answer is to shield the microphone from the wind in the first place. Gauze wind

shields can easily be fabricated and various ideas have appeared in recent editions of ATR 'Tape Guides.'

Advantage can also be taken of low walls and buildings as shown in Fig. 2 (on page 25). In this instance I was recording the sound of London's famous Bow Bells from a vantage point which was a flat roof just below the bell tower. The surrounding wall helped to screen off the traffic noise from below and completely shielded the ribbon cardioid microphone from the winds.

Sound tracks for your cinefilm

A very extensive library of effects can soon be built up, and whether you buy them on record or tape, or record them yourself, they will require mixing and timing for your cinefilm.

The amateur is of course limited to approximate synchronization with a tape recorder and a coupling system which many tape recorder manufacturers can supply.

Nevertheless the techniques of 'track laying' used by professional film-makers can to some extent be applied.

Rarely, if ever, do they make visual and sound recording together. The two recordings are obtained separately and mixed for the simple reason of 'balance' between the sound and its background and any dialogue that may be going on simultaneously. A favourite technique for continuous sound background is to make a loop of a few feet of the sound which is set running and is ready for mixing as and when required, without having to stop and start the recorder. This technique can be applied in some instances to individual sounds such as seagulls, a dog barking, the noise of a machine running, in fact any sound of a repetitive nature.

Whilst the professional studio has the advantage of full equipment—quite realistic sound tracks for cinefilms can be accomplished with simple mixing which many modern tape recorders now feature, plus superimposing and editing. Experience can only be gained through practice and there are more than enough sounds all around for you to practice on—remember many of these sounds are gradually disappearing. Only a tape recorder can keep them indefinitely.

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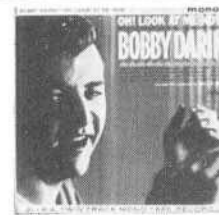
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