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BASF

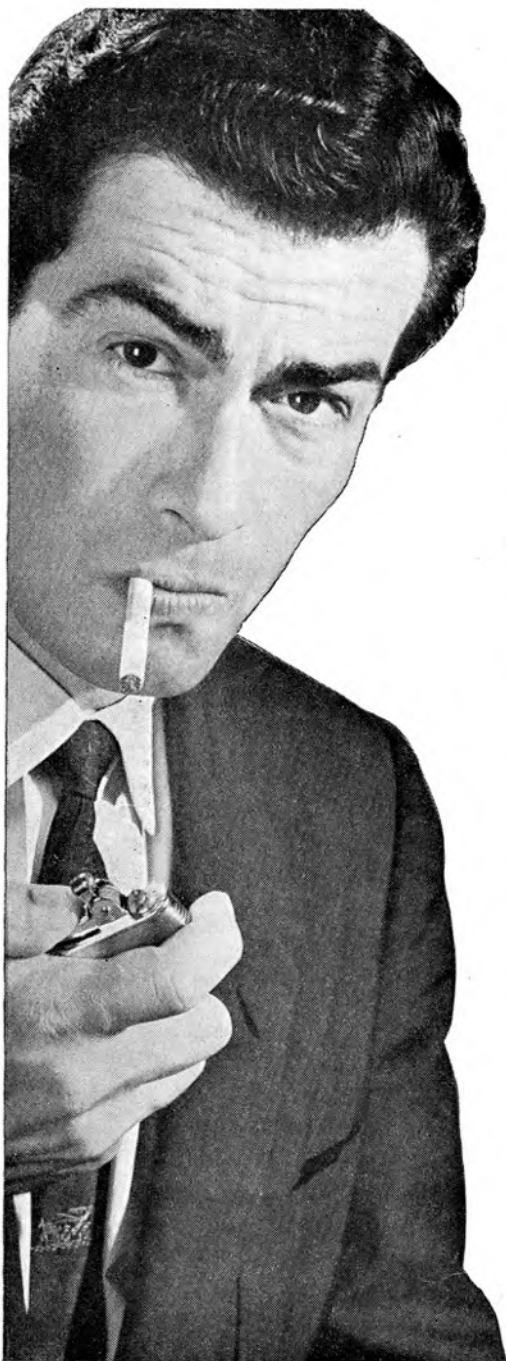
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WEDNESDAYS **1/6**
16th November, 1960



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Frequent model changes to stimulate sales have never formed part of the Ferrograph policy. Indeed, it is very significant that in its external appearance today's instrument still bears a very strong resemblance to the original Ferrograph of 1949. The fact that even after eleven years it has not been found necessary to make any substantial changes is obvious proof of the soundness of the Ferrograph basic principles of design.

Today, when keen competition among manufacturers of Tape Recorders is stimulating interest in 4-track heads, slower tape speeds, cassettes and the like, it is appropriate that we should once more re-state the Ferrograph policy.

Because *Recording* is our business, the unceasing efforts of our engineers will continue to be directed towards perfection in the *recording* function of the Ferrograph rather than attempting to foster its adoption as a competitor to the gramophone.

Those who have bought the Ferrograph in the past have deliberately chosen it for its incomparably high standards of performance and for no other reason. Among them we number many of the leading personalities in the world of music and drama, radio and television broadcasting organisations, Government departments, record manufacturers and in fact all who demand the highest attainable standards of quality and dependability.

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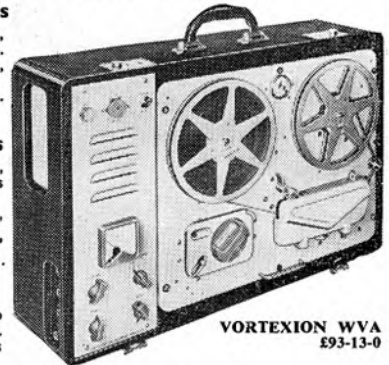
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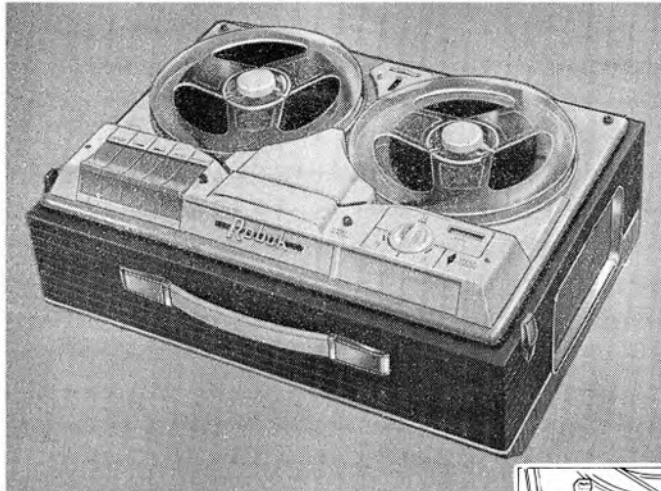
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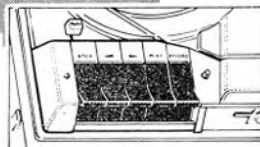
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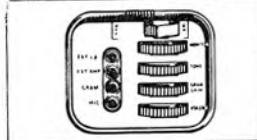
The Robuk RK 3

Its features include a featherlight 'piano-key' operation, 3 speed and separate gain controls for input mixing.

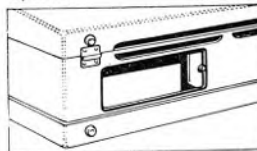
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EDITOR: **R. D. BROWN**
 NEWS EDITOR: **FRED CHANDLER**
 FEATURES EDITOR: **R. N. ROBINSON**
 TECHNICAL ADVISORY EDITOR: **CHARLES LANGTON,**
A.M.Brit.I.R.E., A.M.Inst.E.
 MUSIC: **EDWARD GREENFIELD**
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DON WEDGE
News Editor, New Musical Express
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OVERSEAS CORRESPONDENTS:
 FRANCE: **GEORGES GINIAUX**
Revue du Son, 40, rue de Seine, Paris-6e
 U.S.A.: **PETER M. BARDACH**
210-16, Grand Central Parkway, Queens Village 27, New York

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A DIGEST OF NEWS, COMMENT AND EDITORIAL OPINION

THE annual Congress in Amsterdam of the International Federation of Sound-Hunters (FICS) was a fascinating—and encouraging—occasion. The club movement is developing strongly throughout the world and it may now be claimed that FICS is fully representative of the organised tape recording enthusiasts of Western Europe.

During the last few years Scandinavia has become more fully engaged and steps are now being taken to get clubs active in Italy.

One significant trend appears to be the progress of the locally-based clubs, as distinct from the national or international organisations which, by their nature, are mainly restricted to tape-spondence. Creative tape recording can only result from personal contact, and this is the strength of the local clubs.

Another significant development at the international gathering in Holland was the greatly increased interest shown by the biggest firms in the field.

It was appropriate, of course, that Philips International should take a principal role, for their headquarters are at Eindhoven in Holland. After the FICS Congress and the CIMES judging, we went to the Philips studios there for a particularly impressive demonstration of recorded sound. I shall write more fully of this visit in the next issue, when I hope also to describe in more detail the ama-

teur tapes submitted to the International Contest.

Apart from Philips, there were representatives with us of EMI Sales and Service Ltd., Grundig (Great Britain) Ltd., the German firms of Grundig and Telefunken, and the Belgian firm of Gevaert.

I have a feeling that 1960 will prove to have been an important milestone in the history of both the British and International Contests.

Minor miracles

THERE are many minor miracles in the world of tape, but some of the most staggering achievements—to the lay mind—are in the field of computers and filing systems. A recent *Times* supplement reminded me of what is now possible.

Information is recorded on tape in the form of magnetic impulses and a single spool can hold about thirty million characters.

These characters can be transferred between the tape and the electronic “reading” system at speeds of up to 100,000 characters a second. As H. McG. Ross pointed out in the *Times*, this corresponds to reading an average novel in ten seconds.

A number of well-known manufacturers are doing some of their most fascinating work in these industrial and commercial applications of tape.

New plans

WITH this issue Mr. R. N. Robinson becomes Features Editor of *Tape Recording Fortnightly*.



Mr. Robinson (left) joined us some time ago from Temple Press and is already known to many people in tape recording circles. He has been principally

concerned to date with the production of our sister publication, *Stereo Sound*, and with the last British Amateur Tape Recording Contest.

He will continue to be responsible for the production of *Stereo Sound*, but his assistance on *Tape Recording* will help us to develop a number of important new features which we plan for the New Year.

Mr. Fred Chandler, (right) who has long been known to our readers, now becomes News Editor.



Talking books

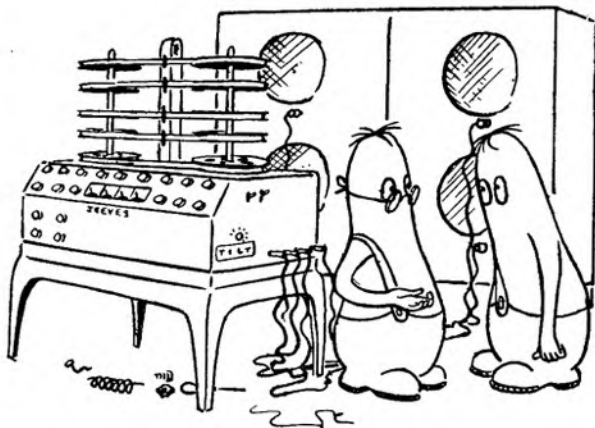
THE Talking Book Company has now released a series of four discs containing elementary language courses. They have started with French, Italian, German and Spanish and the productions are most attractively done.

In addition to the 45 rpm disc, each production contains a printed text book, which forms part of the sleeve, but which can be detached so that it becomes an orthodox booklet suitable for carrying in the pocket.

At 12s. 6d. a time, these seem to me to be very good buys. I have not yet had much chance to experiment with them, but my glance through the phrase books is encouraging.

I have only one complaint: I would like to see these productions available also on small tapes.

LAUGH WITH JEEVES



“I’m thinking of calling it ‘multeo’.”

TRIBUTES PAID TO TAPE

TRIBUTES were paid to tape recording as a contribution to the records of a trade union at the Annual Conference of the Post Office Engineering Union at Eastbourne recently. Mr. J. Hayles, of the Isle of Wight branch, moved a resolution that there should be a tape recording of all conference proceedings, that suitably edited tapes should be made available to all branches, and that a tape library be formed at the headquarters of the Union.

Mr. Hayles said that when delegates reported back to branches it was impossible to recapture the fire and eloquence of actual conference discussion. Tapes would make good that deficiency. As telecommunication workers, they should make the fullest use of suitable developments in the tape recording field.

Mr. T. C. Cook, of the National Executive Council, said the Executive would consider the proposition, which they welcomed. He had no doubt the tape recorder had a great future in recording Union business and in propaganda work.

For example, they had found difficulty in getting propaganda over on the need for international relations. That week they had made a tip-top recording of a foreign delegate's speech. He had wonderfully expressed how to spread the international gospel. It would make a deep impression if made available to branches.

THE WORLD OF TAPE • A NEWS ROUND-UP



The tape they are listening to is the Captain's voice. It is a recording of the message he sent from the bridge of his ship to the "Boys and Girls Exhibition" at Olympia on the occasion of the commencement of the ship's maiden voyage.

His ship, the Windsor Castile, is Britain's newest, most up-to-date passenger liner and sails on the Southampton to South Africa run. Our picture was taken when Commander Matthews returned from his first and last trip as Captain of the Windsor Castle. He is retiring as Captain, and taking up a shore appointment with the Union Castle Line, the ship's owners.

Marion Shattock was at Southampton to meet him, and invite him to listen to the message he had sent to Olympia. She also presented the Commander with a Stuzze Magnette as a retirement present.



TEACHING SALES TECHNIQUE ON TAPE

☆
 "Learning more in a day than in three days of lecture room teaching."
 ☆

TAPE recorders are now being used for teaching salesmen how to sell all types of products unfamiliar to them.

Our photograph was taken in the sales office of a well-known paper processing company where the Sales Manager has developed the techniques of Reinforced Learning and Subconscious Affirmation to such an extent that, with the aid of these taped courses and a text, salesmen can learn more in a day than in three days of lecture-room teaching and at a fifth of the cost.

The "student" listens, reads the text, memorises the text, tests his memory and marks his own result. When he can go through the course twice without a mistake he knows that he has absorbed the entire sales approach, which includes a typical interview. The salesman then hands over his score sheets to the sales manager who gives him a short oral test and he is ready to go out and sell.

The technique is being used with equal success on long experienced salesmen as well as those who are entirely new to the business.

B.I.R.S. lecture series commences

THE series of lectures entitled "The Record Library and its Problems" organised by the University of London Department of Extra-Mural Studies in conjunction with the British Institute of Recorded Sound, began on October 26 with a lecture by Monsieur Gilbert Rouget.

He described the Musicology Department of the Musee de l'Homme, Paris, with which he is associated, and illustrated his talk with examples of foreign music—Tibetan, primitive Brazilian, Mau:etanian and African pigmy—from the department's archives.

Emitape wins again

GRAND PRIX

(Norman Paul, "THE REST IS SILENCE")

Following his success in the recent British Amateur Tape Recording Contest, Mr. Norman Paul has now won the GRAND PRIX in the 1960 International Contest at Amsterdam, and has also been awarded the

CHALLENGE CUP

(Presented by Philips International)

& CHALLENGE SHIELD

(Presented by 'Tape Recording Fortnightly')

Emitape—the tape used for the 'masters' of most records



EMITAPE DIVISION, E.M.I. Sales & Service Ltd., Hayes, Middlesex

ET 14

BRITAIN SCORES THREE FIRSTS IN WORLD TAPE CONTEST

Grand Prix for "The Rest is Silence"

**Special Report
by the Editor**

British entries won three of the six classes in the ninth International Amateur Recording Contest in Holland and took a number of the major prizes.

Mr. Norman Paul's "The Rest is Silence," which had earlier been named "The Tape of the Year" in the 1960 British Amateur Tape Recording Contest, was voted by the international jury to be the best entry in the World Contest.

In the Music and Speech class, Mr. Ronald P. Guttridge's "Beat'n Heart" took first prize.

In the special Schools Section of the Contest, the tape submitted by Mr. P. J. Kingston and the pupils of Stanground V.C. Primary School, Peterborough, under the title of "Our School," won most points.

This is the third year in which the British and International Contests have been directly linked, and the second time a British competitor has won the grand prize in the world event. Last year Mr. John Weston's schools tape, "Journey so Long," was the winner.

GRAND PRIX

"THE REST IS SILENCE"

Submitted by Mr. Norman Paul, of 41 Woodland Rise, Muswell Hill, London, N.10.

Awarded a challenge cup and a stereo tape recorder given by Philips International, and a challenge shield given by "Tape Recording Fortnightly."

(Mr. Paul already holds the Emitape Challenge Cup awarded to "The Tape of the Year" in the British Contest by EMI Sales and Service Ltd.)

CATEGORY A—COMPOSITIONS

1. "SUPPE A LA CARTE"

Submitted by Mr. Sven Eriksson, of Hagavägen 120, Solna, Sweden.

Awarded 1,000 Swiss francs given by the Société Suisse de Radiodiffusion.

2. "THIS IS BERNE"

Submitted by the Berne Sound-Hunters' Club.

Awarded a supply of magnetic tape given by Gevaert Ltd. tape given by Gevaert Ltd.

CATEGORY B—DOCUMENTARIES AND REPORTAGE

1. "A STROLL AROUND THE FAIR"

Submitted by M. Pierre Cazenave, 16 Rue Mandron, Bordeaux, France.

Awarded 1,000 French francs given by the Fédération Nationale des Industries Electroniques et la Syndicat des Industries Electroniques de Reproduction et d'Enregistrement.

2. "STEREOPHONIE 1898"

Submitted by Mr. Erich M. Friedmann, of Austria.

Awarded a supply of magnetic tape given by Messrs Gevaert.

CATEGORY C—MUSIC OR SPEECH

1. "BEAT'N HEART"

Submitted by Mr. Ronald P. Guttridge, of "Broadlands," 20, Isis Drive, Upminster, Essex.

Awarded 250 Swiss francs given by Radio Lausanne.

(Mr. Guttridge already holds the Acos Cup awarded by Messrs. Cosmocord for the best entry in this section in the British Contest.)

CATEGORY D—ACTUALITY

1. "CIRCUS FLASH"

Submitted by the Rouen Sound-Hunters' Club, France.

Awarded 10,000 Belgian francs given by l'Institute Nationale Belge de Radiodiffusion.

CATEGORY E—TECHNICAL EXPERIMENT

1. "MELODY OF A BIG CITY"

Submitted by Mr. Siegfried Neuenhaus, of Germany.

Awarded 250 Swiss francs given by Radio Berne.

SCHOOLS CATEGORY

1. "OUR SCHOOL"

Submitted by P. J. Kingston, on behalf of the Stanground V.C. Primary School, Peterborough.

Awarded 500 French francs given by the Fédération Nationale des Industries Electroniques et la Syndicat des Industries Electroniques de Reproduction et d'Enregistrement.

(This school already holds the Grundig Challenge Cup awarded by Grundig (Great Britain) Ltd. to the best schools tape in the British Contest.)

2. "THE TURTLE-DOVES THAT WOULD NOT SING"

In other sections of the 1960 International Contest, entries from France, Germany and Sweden took the first prizes.

The prize for the "best national selection" was won by France.

Altogether, the international jury listened to 59 tapes in the VARA Studio at Radio Hilversum. They came from 18 different countries, from Chile to China and from Australia to Canada.

The jury included representatives from Belgium, Denmark, France, Germany, Great Britain, Italy, the Netherlands and Switzerland. Mr. Alan Stableford, secretary of the Federation of British Tape Recording Clubs, and Mr. R. D. Brown, the Editor of *Tape Recording Fortnightly*, represented Britain.

Mr. Paul and his collaborator, Mr. George Halse, were in Amsterdam to receive the Grand Prix at a dinner on November 1st.

Full results of the International Contest were as follows:—

Submitted by Bernard Monteclair, of the Institut Médico-Pédagogique, Le Bouysson par Assier, France.

Awarded a bronze work of art given by the Swiss Sound-Hunters' Club.

BEST NATIONAL SELECTION

1. FRANCE

Awarded the Challenge Cup given by the Nederlandse Vereniging van Gelindsjagers.

2. SWITZERLAND

3. GREAT BRITAIN

PRIZE FOR HUMOUR

"SUPPE A LA CARTE"

(details under Category A above)

Awarded the Mannikin-pis bronze Statuette given by Belgium.

SPECIAL JURY'S PRIZES

"EROTICON"

Submitted by M. Luc Perini, 9 Rue de l'Abbé Rousselot, Paris, 17.

Awarded supply of tape given by Gevaert Ltd.

PART OF "PICTURES AT AN EXHIBITION"

Submitted by M. Fernando Ceruti, Santiago, Chile.

Awarded supply of tape given by Telefunken Ltd.

STEREOPHONIC GRAND PRIX

"AS AN AID IN THE APPRECIATION OF SOUND REALITY"

Submitted by M. Daniel Gouin, of 121 Boulevard de Grenelle, Paris XV.

Awarded 1,000 French francs given by the Director Générale de la Jeunesse et des Sports (Ministère de l'Education Nationale).

INTO THE SAHARA WITH A RECORDER

I SUPPOSE everyone tries to make friends with air hostesses. And this one was pretty, petite and with a stunning "beehive" hairdo under her chic little beret. Her plane was taking me and about 30 other eager young men away from the delights of Algiers to the new "mushroom" town which had grown up in the oil fields of the desert.

Although they were all just back from leave, I knew that Frenchmen never pass up an opportunity like this and I was prepared for competition. Anyway, I thought, I was away to a fine start—I had a portable tape recorder on my lap and a good excuse to record her voice.

As she gave me a barley-sugar before take-off, I explained that I was touring the Sahara, studying the impact of the newly-discovered oil on the desert and its peoples. Aviation had played a big part in opening up the desert, so why not a few words from her?

"I am vairy sorry, M'sieur, mais je ne peux pas parler anglais," was her reply. "I do not speak English."

This was embarrassing and to my shame I had very little in the way of a reply, being none too good in her language, either. So I had to be content with a few soft words from her in French, through a thick background of the noise of each of our four engines being revved up as the pilot went through his cockpit checks.

I realised then that I was going to be in difficulties over interviews. It's not much use getting stories about a person's job to play back to friends

The second article by R. W. CUNDY describing his adventures with a portable tape recorder in the Sahara during a journey he made recently to collect material for a book on desert oil prospecting

in England if the person doesn't speak English, is it?

Arriving out in the hard glare of the desert airfield, I was met by two young PROs from the Compagnie Francaise de Petroles and SN Repal, two of the first French oil companies in the search for Saharan oil. They both spoke English and when I explained my difficulty to them, they agreed to help by giving me a short explanation of the various installations we were to visit.

First oil well

Against the roar of diesels and the clatter of machinery, they acted the parts of the engineers in charge, explaining in this way how the crude oil was collected from the wells scattered around the wide horizon, separated from gas and major impurities and then pumped along the pipe line to the Mediterranean.

In this way we recorded the hiss of the crude oil as it rushed up from the first well to strike oil, in July 1956.

"Zis is ze historic MD 1. Ze first production well in Sahara. It also bears ze name of a brave man who lost 'is life when ze well caught fire in. . ."

I think my hand must have started to shake, because some strange blobby

noises c a n be heard on the tape at this point. Anyway, he assured me afterwards that the chances of another explosion or fire w e r e remote. The well



Charts of the strata are prepared by exploding dynamite charges in shallow holes in the sand (left). The resulting echoes are collected by geophones, and recorded on a seismograph

had been "capped" with cement and was quite safe, providing the normal non-smoking rules were obeyed.

Two days later I was dining in the mess tent of a "prospectors" camp some distance south of Hassi Messaoud, just beyond the fringe of the oil field. They were a geophysical exploration crew, one of the several teams whose task it was to prepare charts of the strata making up the earth's crust. The method used by this team was to record the differing speeds and strengths of impulses "bounced back" from the various layers of rock. The impulses were caused by exploding dynamite charges in shallow holes in the sand, the echoes being collected by means of geophones and recorded on a seismograph.

The work requires a careful drill and, as the recording apparatus is often several miles from the dynamiters, an efficient wireless link. I had spent the day recording their procedure and had caught some good moments leading up to the signaller's excited shout of, "Attention . . . Feu!"

The actual sound of the explosion, muffled by several feet of soft sand, was disappointing, being recorded as a dull thud.

Security clearance

I wanted "security clearance," since the companies engaged on this work rightly insist on a high level of secrecy to protect the interests of their clients, the major oil companies, so during the evening meal, I played back my efforts to "M. le Chef du Mission," the leader of the team.

But after a while I realised that everyone in the mess tent was laughing. Poor Claude, the signaller, had muffed one of the transmissions and I had unwittingly recorded his error. I felt rather guilty, because Claude had been most helpful in explaining everything to me. He took it in good part, however, and I was able to restore our friendship with a swift glass of cognac from the bar.

The geophysicists had a fine workshop, housed entirely under canvas and fitted for the most intricate repair work on the sensitive instruments their work demanded. Rene, the bearded mechanic, carried off my little Cub for more permanent repairs to the case and was soon explaining the circuit to me in the gruffest French I have ever heard.

As he worked, I noticed a bank of microphones, all neatly cased in poly-



INTO THE SAHARA WITH A RECORDER

these bags. "Le vent du sable" (the sandstorms), he explained. "When they blow, fine sand, fine as flour, is driven everywhere." He pointed to his throat and explained that his hoarse voice was due to the last "vent du sable."

"Take care with le petit magnéto-
phone," he warned, "for now is the
season for sandstorms and they will ruin
your little machine if you are not care-
ful."

Sandstorm

I had heard of these storms, but when a few days later I found myself in a fog of driving sand, I thought that the stories I had read of this menace of the Sahara had barely done it justice. I had to grope my way to the "office"—a wooden hut a hundred yards from my air-conditioned room, where the tape recorder lay securely wrapped against the sand. Out in the height of the storm I could scarcely see a yard in front of me and only a handkerchief tied over my mouth and nose prevented me from taking in quantities of the fine sand. Such was the fierceness of the storm that a discarded oil drum lying against a fence where the wind had driven it, had its upper surface polished a shining silver from the fine grains driving over it.

I was on a "wildcat" drill. It has this name because the driller is chancing his luck. He has charts the geophysicists have prepared, but from these, the most experts can say is "There's a fifty-fifty chance we'll find oil there."

The only sure way is to drill a "wildcat."

The site was a hundred miles from base, in a desolate area of heaving sand dunes. But the drillers were far from bored. In their spare time they went on jeep rides to find the Stone Age sites where arrowheads and other relics could be picked up. They were also amateur naturalists, with a young gazelle in a

cage near the canteen. I was keen on following their off-duty pursuits, but I thought things were going a bit far when, one lunchtime, a driver brought in a tin containing a live horned viper.

He pushed off the lid and asked me to record the snake's protests at its captivity. But for some reason the snake didn't want to protest. It was only a baby and its bite would probably not be fatal, but, despite the fascination of that darting, grey head with its curious horns above the eyes, I wasn't going to hold the microphone too close!

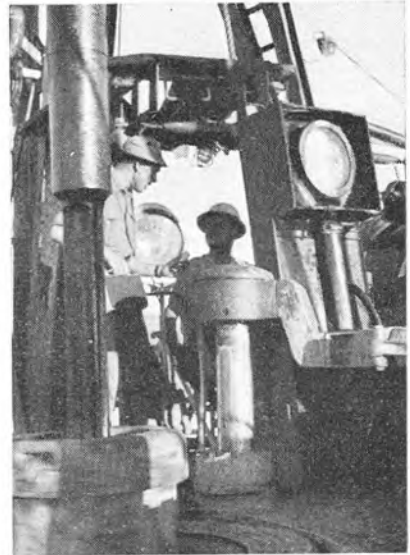
Each night there was "la Pétanque," the game of bowls as played in the south of France. This was a natural for the tape recorder.

While the diesels roared away in the background, turning the drill table, twisting the bit deeper and deeper into the earth, the shift that had just come off duty would play the other that would be going on at ten p.m., or the team made up of Algerian truck drivers.

These tough characters would make up for their lack of experience in the game with a swift patter which quickly reduced their opponents. When they realised I was taping, trying to capture the characteristic click of the metal balls and the shouts of the onlookers, the drivers began to step up their swearing. Algerians are famous for their oaths and that section of tape must be one of the bluest in history, but all in French!

After a week I left the hospitable "wildcatters." I wanted to travel farther south and see the traditional Sahara of the nomads and the palm-groves. So I loaded my gear, complete with a fresh pot of marmalade, the gift of the kindly cook, on to a truck bound for Algiers and one night we set off, the loudest-swearing Algerian and I.

We drove over the dunes, crashing and lurching over the rough track to the accompaniment of the best of his oaths and next morning I stood in the market



The author interviews a Master Driller on an oil rig

place of the first oasis on the old road south to the Sudan.

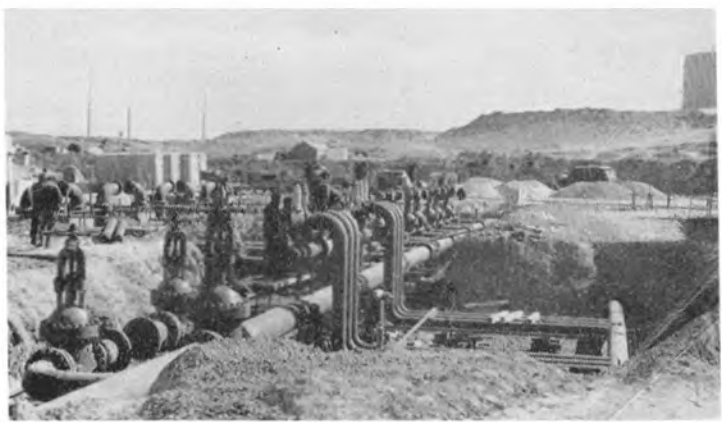
It was hardly light, but already the sounds of an oasis waking up began to flood in. Dogs barked and howled, an ass brayed, several cocks were crowing and all the birds sang.

"Background to a Sahara dawn," I whispered to myself and unpacked the Cub.

But this time it was no go. The batteries were flat. There were none in the few shops round the market place either.

"You can get them in El Golea, the next oasis south," they said.

"Sure," I thought, looking at my map, "the next oasis south. Only two hundred miles. Oh well, let's get going."



Left: An oil derrick at Hassi Messoud. After the oil is separated from gas and major impurities, it is pumped along the pipeline (right) to the Mediterranean

A TREMENDOUS roar burst from the crowd as Fulham's star forward Cook shot the ball past Preston's slithering goalie Fred Else to score the first of two goals in the Fulham v. Preston match at Craven Cottage.

I had been asked by Mr. S. R. Wilkinson of Putney, London, to go along and record one of the first division matches, and so there I was up in the stands ready for action, Fi-cord on my lap and microphone poised to catch the ear-shattering explosion of approval that was bound to signify the first goal of the day.

I had thought about that moment quite a lot during the morning. Obviously I should have to be very careful indeed not to over-record. The snag about exceptionally low recording levels is that at one instant you're registering nothing at all, and then with no more than a fractional movement of the control you suddenly find yourself way up over the top.

As it happened I needn't have worried, for the moment of truth when the leather ball slammed into the undefended goal found me slap in the middle of changing tapes! Can you imagine my feelings? I was so busy fiddling with those wretched spools I didn't even see it happen, but I knew I'd missed the boat. Miserably I looked up to see the players strolling back to their places in the field.

Determined not to be caught out again, I made up my mind on the spur of the moment to change the batteries in the machine and the first cell was out when the referee's whistle restarted the game. Quick as lightning I whipped out those batteries, but Langley of Fulham was quicker. I don't remember whether two or three new cells were in position, I only know that it certainly wasn't the full set of four and the second goal of the day found me with a brand new tape laced up on the deck and no power to turn it.

Those two goals, coming as they did within seconds of each other, were the only ones scored that afternoon and I had muffed them both! I thought, sadly, of that time-honoured naval custom of concluding the report on a gunnery exercise with the words: "No hits were recorded but many valuable lessons were learned", and I suspected that my readers were going to be very much more critical than the senior officer the gunnery lieutenant had to deal with.

Nevertheless, it's quite true to say that one can learn a lot from "near misses", so let's go back and see what went wrong during this tragic afternoon of mine.

The day had started quite well. I left home in plenty of time and was soon recording the voices of the programme sellers at the approach to the ground. Recording street traders, whether they

ANOTHER SPECIAL ASSIGNMENT



OUT WITH THE FOOTBALL FANS

are selling newspapers, football programmes or peanuts is a problem in itself; nine times out of ten they will become very self-conscious and will lose all the beautifully natural inflections to their voices if they are aware of the fact that you are recording.

It's very frustrating to find a deep, fruity voice full of spontaneous humour and local colour change to a pitifully stilted shadow of itself. That is almost certain to happen if you stand right in front of the man, microphone thrust out as you gaze hopefully into his face. One dodge that I often adopt in such circumstances is to stand with my back to the street vendor and to stare intently at some point in the far distance at the end of the road.

The fact that the microphone is being held out at arm's length behind me within inches of the subject himself doesn't seem to worry him as soon as he sees a complete preoccupation with some action going on some way off and unconnected with him personally. He perhaps thinks that the microphone is pointing in his direction unintentionally and in a very short space of time a perfectly natural recording is being taken down.

Consideration

I must digress here for a moment to mention the moral or ethical considerations involved in recording people's voices without their knowledge. Never, under any circumstances, should a recording be taken of a private conversation unless all the persons speaking are aware of what you are doing. Now this imposes a very rigid limitation, but I believe myself—and this is my own opinion only—that one can take quite a liberal interpretation of the words "private conversation". There is all the difference in the world between the spontaneous exclamations of pleasure, enjoyment or annoyance so essential to give a natural atmosphere to a feature programme, and

the malicious recording of confidences taken for the sake of making someone look ridiculous. This kind of eavesdropping is being done and it is putting the miracle of tape recording to its worst possible use, apart from casting an unwarranted slur on the genuine enthusiast. So if in any doubt about whether your subject would object to having his voice and comments put down on tape leave your microphone in your pocket and your machine switched off. There will be plenty of other opportunities.

The recording of the clanks of the turnstile and the steward directing people to their seats produced no particular difficulties, but I should have realised what was to follow when the loudspeakers suddenly barked out a list of changes. I wasn't ready for it and only came on to record half way through the announcement. When the game started I was really in trouble.

It took less than thirty seconds to bring home to me the awful fact that I could either watch the game or I could watch the levels on the machine, but I couldn't do both at the same time. In the slower periods, and there were quite a few, the surrounding noise level was very low but I couldn't take advantage of the lull to speak about the progress of the game because I hadn't seen it. As soon as any excitement took place the crowd roared and I had to watch the level indicator like a cat after a mouse. Within ten minutes I was so confused I wasn't in the least sure who was supposed to be doing what, where!

I had not gone to the match with the intention of giving a BBC type of commentary on the game. There would be no point in doing that; the professionals

OUT WITH THE FOOTBALL FANS

BY DENYS G. KILLICK

can invariably do it so much better than the amateur. I had reasoned to myself that I should have opportunities denied to the broadcasting commentator. My feature was to be based on the reaction of the crowd rather than a slickly detailed account of the game itself.

I certainly did get a very good impression of the crowd noises as a whole, but the personal comments needed to give some colour to the final production were lacking, and for that I must in part blame the equipment I was using. I missed recording the scoring of the goals because I was changing tapes and batteries at those moments, and I missed the brilliantly sardonic or critical comments that I had hoped to get because I had taken a seat in the stands instead of going down in the cheaper, standing-only enclosures:

Anticipation

I had quite rightly thought that the difficulty of changing tapes whilst standing up in a tightly packed bunch of fans would be just too much, and that was the only reason why I chose a seat instead. I didn't anticipate finding all the spectators around me to be too staid and self-conscious to utter a single word. Yet that is how it was. At one point, when the game was very slow indeed, I caught a glimpse of a dear old lady a couple of rows down nodding her head and fast asleep!

Half an hour of chasing the high spots of the game by switching the machine on and off, one eye on the ball and the other on the level indicator, wrestling with spools and batteries as I made a hopeless mess of changing them in my over-eager haste, convinced me of how the job should have been tackled.

The Author combines the roles of explorer, experimenter, artist, teacher and roving reporter in this exciting series.

**"Recording street traders
... is a problem in itself"**

Firstly, take a companion who is capable of operating the machine and who won't mind seeing absolutely nothing of the game, or alternatively surrender the microphone and stick to the controls yourself.

Never try to "chase the game" as I did. Put a tape on, let it run and record all that takes place until it has wound itself off. If that happens to be a slow period in the play it's just hard luck. Come back on the other track and hope for better things. If the game slows down and you switch off you'll find that a flash of excitement has come and gone before you know it and you'll be switching on just in time to catch the next lull.

If I had had the choice of equipment, I should have used a 3½ ips Stuzzi Magnette, with four-inch spools of double-play tape. It would have been possible, of course, to record with the Fi-cord at 1½ ips, but I have not adopted this practice, as the quality is naturally not so good at this slow speed.

There is no doubt that 7½ ips, such as is provided on the Fi-cord, is the speed to use whenever possible, but this occasion was a classic example of the need under unusual circumstances to sacrifice quality for length of recording time. Failing the use of a machine that will give forty-five minutes recording time without a break one must be prepared to miss something, but I hope you won't be as unlucky as I was and miss the most important moments of the match.

Leaving the ground I felt suitably



chastened, but the great thing in recording is never to give up, so I spoke to some of the departing fans and recorded their remarks about the game. I kept my own thoughts very much to myself.

One last recording pleased me greatly. It was a news vendor, and he was crying "Late special . . . Half-time results . . . Man in space . . . Half-time results . . . Man in space!" I discovered later that the banner headline "Man in Space" was a newspaper stunt, and in fact there had been no official announcement that day of any man in space, but could one have asked for a better closure for a feature on a football match in nineteen hundred and sixty? "Half-time results! . . . Man in space! . . ."

Thank you, Mr. Wilkinson, for this assignment, which I thoroughly enjoyed, in spite of the frustrations.

I'm waiting now for the postman to bring me news of where to go on my next trip. If you haven't written yet, there's still a chance for your request. Don't forget, we want requests for unusual or original live recordings to be taken without either special equipment or special recording facilities. And, by the way, if you name the machine on which you would like your particular request to be recorded I'll do my best to get hold of one for the occasion.

B.B.C. "Sound" Programme
6:40 p.m. Monday,
November 21

(A repeat of the programme
 broadcast on November 13)

INTERNATIONAL 1960

Douglas Brown, Editor of
 "Tape Recording Fortnightly,"
 recently returned from
 Amsterdam where he was one
 of the judges in the 1960
 International Amateur Tape
 Recording Contest.

In this programme he
 reports on the entries and
 presents some extracts from
 the winning tapes.

"Sound" is broadcast on alt-
 ernate Sundays at 2.40 p.m.
 on Network Three.

The next new programme is
 on Sunday, November 27

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**H. Burrell-Hadden continues his
 learn-as-you-make-it series on:**

**BUILDING A
 STEREO MIXER**

**Part Two: How a single monophonic microphone can
 be used to reinforce a soloist with an orchestra**

IN the first article in this series we discussed the requirements for the stereo microphone pre-amplifier section of the mixer. Two of these channels will eventually be incorporated, one of them having an alternative high level input. In this instalment we will consider what other requirements are necessary in a stereo microphone mixer and how they can be met in a simple manner.

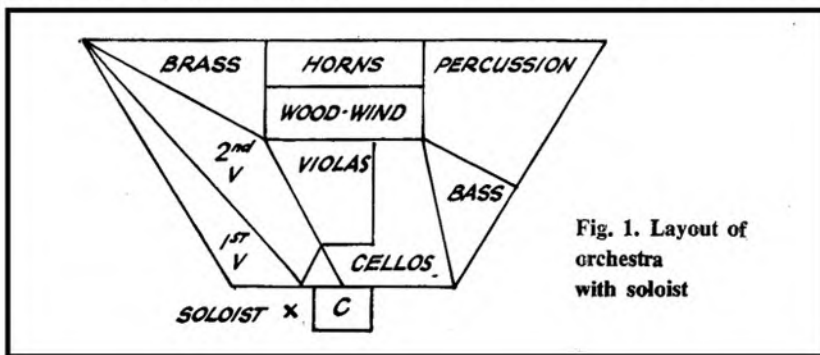
Let us again consider our hypothetical recording of an orchestra on which we based much of the last article. Suppose that our orchestra has a soloist, say a violinist, playing a concerto (Fig. 1). Listening on a stereo microphone, suitably placed we shall obviously hear an image of the soloist in his normal place in the stereo picture, say just on the left of the conductor (Fig. 2). This may be perfectly satisfactory and the balance between the soloist and orchestra may be as the composer intended, but more often than not the soloist will sound too weak in relation to the orchestra.

This situation also exists of course in balancing similar music for monophonic listening, and in this case it is simple to remedy, we just put another microphone close to the soloist and fade up just sufficient of its output to reinforce the sound from the main microphone, taking care that the presence of the second microphone does not become obvious. In the stereo case what can we do?

Suppose we put another stereo microphone in front of the soloist and fade up in a similar way to the mono one. When we listen to this we will get a rather interesting effect. It will be remembered from the last article, that due to the angle of acceptance governing the width of the reproduced picture, a sound source close to the microphone will appear to cover the whole of the stereo picture. In this case our "solo" microphone has produced a wide soloist stretching right across the orchestra, with the original image of the soloist still weak as before (Fig 3.). Clearly this is not what we wanted. It is necessary to reinforce the image of the soloist without altering his position or his size, and without doing anything to the orchestral picture. A stereo solo microphone is clearly not the answer. Fortunately, as before when we seem to have got into difficulty, there is a fairly simple way out. We use a monophonic microphone.

Panoramic Potentiometer

How do we connect this microphone into the circuit? Again from the reasoning of the last article, if we connect it to the left channel, it will obviously come out on the left-hand side, and similarly, connection to the right channel will produce an output on the right-hand side. Connection equally to both channels will produce an output from the centre. If some means can be found to enable varying amounts of the monophonic microphone output to be connected to both sides, it should be possible to move our image to any point in the picture. All that is needed is some form of ganged dividing control, and this in professional



**Fig. 1. Layout of
 orchestra
 with soloist**

BUILDING A STEREO MIXER

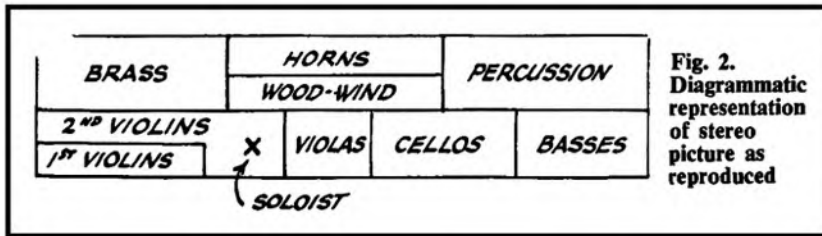


Fig. 2. Diagrammatic representation of stereo picture as reproduced

circles has come to be called a "Panoramic Potentiometer," affectionately referred to as a "pan pot" (Fig. 4).

A number of such channels are desirable in a stereo mixing set-up, and the reason for this will be evident when we consider the recording of a dance band. For the moment we will look at the professional case. In such a combination, the sound expected by the listener is not exactly the sound heard in the studio. We have all been accustomed to hearing an artificially contrived sound which owes as much to the arranger and recording engineer as it does to the composer and the band leader concerned. In the domestic sense the recording of, say, an amateur jazz group, may need several reinforcing microphones within the stereo picture. This is because, again due to the angle of acceptance difficulty, the stereo microphone may well have to be too far away to produce the "tight" close-up sound expected from such a group (Fig. 5). In fact, many commercial records of "pop" music seem to rely entirely on a number of such pan pot microphones and often leave out altogether an overall stereo one. It must be stressed that this is not good practice since no overall stereo atmosphere is produced. Furthermore, a mono microphone used in this way produces a point source in the stereo picture from all the sounds it accepts.

This means that if it is used to reinforce a group of instruments in a band, say the saxophone section, all these instruments will come from one point only instead of appearing as a group as they would from a stereo microphone. Hence, a number of pan pot microphones can only produce a series of point sources of sound, each point containing all the



Fig. 3. Effect of using stereo microphone for soloist

instruments in the group it represents. An overall stereo microphone is necessary to reproduce the groups as groups as well as to produce an overall atmosphere (Fig. 6).

What then is the requirement for a pan pot channel? We must have a single microphone amplifier which can for convenience be identical to one half of our stereo channel discussed last time, complete with single gain setting control and channel fader, with the addition of a two-gang control arranged to split the output from the channel fader as required to our two stereo channels.

This gives us three controls for each of the pan pot channels and three such channels will be incorporated in our mixer. It is convenient, as with one of our stereo channels, to have a high level

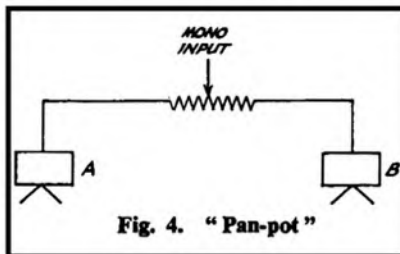


Fig. 4. "Pan-pot"

input as an alternative on one of the mono channels. This enables us, say in a dramatic production, to utilise monophonic recordings for effects where these are point sources of sound, such as a door creak, or pistol shot, and use the pan pot to put the sound in the right place in the reproduced picture. Likewise, a monophonic recording of a motor car can be made to produce a moving effect in the stereo picture by using the pan pot to move it across.

We have now discussed the requirements for the individual microphone pre-amplifiers required for our mixer unit and all that remains is to see how these may be mixed together to provide one stereo output. After mixing, a final main gain control is necessary in order

to control the level to our tape recorder. The same considerations will apply to this main gain control as apply to the microphone channel fader, namely that the accuracy of the ganging of the two halves must be very good indeed, in order for the positions of images to remain stationary when the gain control is moved. We can, however, utilise the same principle as before to ensure that the effect of any mis-ganging of this control can be kept to a minimum. If

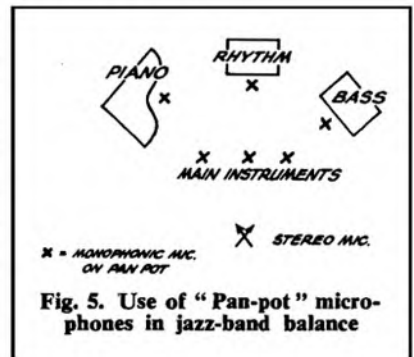


Fig. 5. Use of "Pan-pot" microphones in jazz-band balance

you will remember we put our gain control in the (A+B) and (A-B) part of the circuit, where any error would only cause a change in the width of the picture. If instead of converting back to A and B, after the microphone pre-amplifier stage, we continue with (A+B) and (A-B), up past the mixer stage and the main gain control, then this condition is fulfilled.

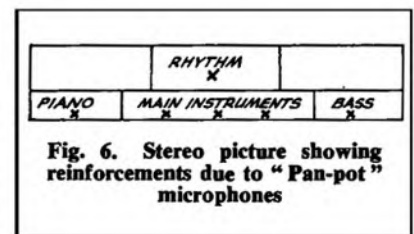


Fig. 6. Stereo picture showing reinforcements due to "Pan-pot" microphones

All that then remains is to provide further sum and difference networks to produce our A and B channels to feed to the recorder, preferably arranging in the process that the output impedance of the mixer should be low enough to enable a reasonable length of lead to be used.

The next article in the series will discuss the circuit design and layout of our mixer.

“Out and about with a recorder”

WE HUNTED FOR SOUND IN THE ZOO

THE cat sat on the mat gave us the idea. We were wondering what we could record next when we thought of our pet cat's big brothers kept in cages at the local zoo. What better sound hunting ground than a zoo?

We collected our bits and pieces together, filled our pockets with spare reels of tape, and set off for Belle Vue Zoo, Manchester.

The zoo is only a bus ride from our house and is very handy as a recording haunt for us.

The first building seen once inside the main gates, is the Lion and Tiger House, but to get to the cages you have first to pass through a number of rooms which contain parrots, cockatoos and various other big birds.

On the day we were there the birds were in a co-operative mood and we made a number of recordings, including the “Hello's” of the parrots. One lively cockatoo was holding his dinner dish in his beak and banging it on the floor of his cage—we recorded this as well.

The piercing shrieks of some of these birds echoing around the room and ricocheting off the walls presented us with quite a problem, as we soon found out. Playing back our first recordings we found that we had fallen into the trap of over recording whilst trying to ensure we had sufficient level. As the birds seem to keep up an almost continuous performance of their cries we had no difficulty in getting a better recording later on when we called back to see them.

We passed into the Lion House proper and made ready to record these great beasts. We were a little disappointed as none of them seemed to be roaring, but after a while managed to record the growl of a lion and two very wild-looking cheetahs who were spitting and snarling at the people standing in front of the cage. We had to be content with these few recordings and hope that we would have more success when we revisited the cages on our way out.

By
F. J. G. Hodge

One of the problems of recording in a zoo is to decide which animals make sounds suitable for a tape. Many of the animals, whilst being photogenic and attractive, are completely useless from a recordist's point of view. It was at this stage that we enlisted the aid of one of the keepers, who provided a number of ideas on this point. He suggested we make a start by going along to the elephant house.

We arrived at this enormous building to find we were in luck. One of the elephants, returning from its morning constitutional, was being greeted by loud trumpeting from its fellow creatures. It was just like being in the middle of a jungle stampede—the noise was deafening. A number of birds in an adjoining aviary, probably dissatisfied at the sudden distraction afforded by the elephants, decided they too would join in. Their screeching and whistling added to the realism of a jungle episode, and provided some exciting material for my tape.

From the elephant house we went to visit the new bear pits. Either bears don't make a noise or we were out of luck because we came away from the pits without having added to our collection of sounds.

To cover this disappointment and cheer ourselves up we decided to go along to the monkeys and chimps and have a laugh at their antics; we also hoped to record any worthwhile sound that caught our ear. As it happened there were two cages that provided us with new material. The first contained a family of monkeys, the youngest of which just sat there making the most pathetic noises. The second cage housed three monkeys, and one of these was a fighter who kept going for one of the others. The attacked monkey was shrieking in a most frightful way, and it was this sound which was recorded.

When we went into the chimp's house it was feeding time, and the chimps knew it! They were making all sorts of noises as they waited impatiently for their meal. Some were even “barking” almost like dogs.

After getting a number of these sounds



on tape we made our way to a small place called “The Hall of Jewels.” This turned out to be a room full of rare birds and we knew we would get plenty of material here as birds always seem to be chirping, singing or whistling.

One of the cages contained a laughing jackass, and whether it was the sight of us or not that set him off we don't know, but he started up almost as soon as we got in front of his cage. I've often heard “background” noise in films when, in the dead of night, a weird bird sound splits the still air. I now know that it is the sound of the laughing jackass—and what a noise he makes. We were in danger of over-crowding but we managed to adjust the volume control as the laugh rose and fell. As he built up to his crescendo we thought he would never make it, but he did.

This particular recording is one of our best and most impressive. We play it to visitors and watch their reactions!

All too soon we ran out of tape and had to think about going home. We just had enough left to make a last attempt in the lion house and we managed to get some better recordings of the big cats.

As soon as we reached the comparative quiet of our home we played the tapes through on our mains machine. The next step was to decide which ones were worth keeping and “dubbing” on to our final feature tape describing our day at the zoo. This done, we wrote a linking script and extracted from the various tapes the parts we thought would help our story along and which were sufficiently well recorded to stand being re-recorded.

Belle Vue is not only a zoo. It also has a large amusement park, complete with side-shows, swings and roundabouts and all the fun of the fair. Unfortunately, we had not taken enough tape along with us to make any recordings of this side of Belle Vue, and so we now have a pencilled date in our diary to go along another day and complete our “Day at the Zoo” feature. By adding these other sounds, we hope we will then have a true picture in sound of “the playground of the North.”

Sound Effects

ALAN EDWARD BEEBY, who has had long experience in devising and recording sound effects, continues his series "Sound Effects from Scratch."

Sound ingredients and their treatment

IN the last issue, we discussed the problem of analysing sound: in other words, taking a sound to pieces to find out what it was made of. Having done this, we now face the task of putting the pieces together again in correct sequence, using various items of sound-effect equipment.

There are two main types of sound effects: "solo" and "composition." In simple terms, a "solo" effect is a single noise, like a pistol shot, and a "composition" effect is one in which a number of different sounds occur together to form a recognisable whole, such as a car-crash.

We are concerned only with "compositions," as these are the ones which employ "sound-ingredients" . . . the "pieces" referred to in the opening paragraph. They rarely, if ever, follow each other in strict succession, but overlap or interplay according to the sound in question. A superimposing or mixing facility on your recorder is, therefore, essential if the "sound-ingredients" are to be placed properly.

"Composition" effects are produced in stages, and it is most important that each stage be thoroughly checked and *double* checked before proceeding with the next. It's no use getting as far as Stage 4 and then discovering that Stage 2 doesn't register properly! It's also a good idea to rehearse each stage in advance by itself; this can give you a great deal more confidence when it comes to making the actual recording, especially if you know *exactly* what's going to happen.

An even better plan is to pre-record each individual "sound-ingredient" on to a spare piece of tape; then, when you're satisfied with the result, to dub it on to the effects tape from a second recorder. This leaves only the recording level and timing factors to worry about, which makes the whole thing a lot simpler.

Now to the "sound-ingredients" themselves. These can be bumps, bangs, water noises, scraping, scratching or tearing effects, thuds, crashes . . . there are hundreds of them. In addition to this, any one of these sounds may, by virtue of its inclusion in a certain sound effect, call for special "treatment," such as being played back at half or double speed, or having an echo added by re-recording, etc. The many possible permutations of these applications involved in even the smallest collection of sound effects are so varied that any attempt on my part to compile a list would probably bring a crisp note from Tudor Street, asking me which chapter I'd like published first!

Here, however, is a selection of pointers to bear in mind when dealing with "sound-ingredients" and "treatments." The first one concerns the vowel-sound backing that we were discussing in the previous issue. Every "composition" effect has a background of an "open" or vowel sound which imparts the necessary basic character to the effect. It may be compared with a canvas upon which the details of an artistic impression are painted. The picture might be a sea-scape, and the predominant colour, blue. The sea and sky, being of that colour, are, therefore, washed-in first in order to establish the basic *colour* character of the picture. In the same way, a "composi-

tion" sound effect employs a vowel noise to establish the basic *sound* character of the effect, the individual "sound-ingredients" being recorded over it. The vowel sound to be used can be determined by thinking of the term used to describe the required sound in popular thought. For example: in the case of a car crash, the term "Ker-rash!" suggests itself; the clipped syllable "Ker" representing the sound of the initial impact, and the second syllable, "-rash!" standing for the smashing, tearing and tumbling crescendo of noise which follows. Two more examples are, large iron gates: "Clang!" and sea wash: "Swoosh!"

Recording the basic "character" noise is quite a simple matter and can be achieved by *breathing the vowel sound only* into the microphone, using a fairly high gain-level. It should last for exactly the same amount of time as the effect itself, being faded down a few seconds before the end either by the recording control or by moving the microphone away from the mouth. The vowel sound can be made to appear heavier or more powerful by recording the item at double speed.

Care must be taken that the correct "treatments" are given to the various materials used to produce the "sound ingredients." There are two methods of "stretching" a sound: one, by recording at double speed, and the other by adding an echo. Some materials lend themselves to this practise better than others. Echoes added to dull-sounding materials (wood, cardboard, leather, etc.) will not only "stretch" the sound, but also, in most cases, force the sound out of its natural acoustic context, especially when mixed in with the sharper, metallic type of sound. This group usually responds well to echo-treatment in that it retains its normal acoustic "personality" with an added metallic emphasis particularly suitable for dramatic effects.

Where a handful of small pebbles is dropped in order to imitate, say, a fall of heavy masonry, it is quite often necessary to fill out the resulting sound with something heavier to give the effect more "body." One or two timber creaks, an isolated crash, a grating sound or a powerful thud. These items should be laid *behind* the noise of the falling masonry (the pebbles) which helps to screen or "feather" the individual sounds so that they appear to be part-and-parcel of the overall impression.

You can, if you wish, record your "composition" effects in three main parts: The "open" or vowel sound first; then the "sound-ingredients" (each one being taped separately), and lastly, the "feathering." This last operation is not always a materially-produced sound as in the case of the handful of pebbles. It can consist of blurring the assembled "sound-ingredients" either by adding an echo, by varying the playback speed or by deliberately *over*-recording the original item, and then dropping the gain to normal at the dubbing stage.

If, by this time, you're wondering how on earth to make any sense of my instructions on devising "Sound Effects from Scratch," let me put it this way: On paper, it makes no sense at all; on tape, it makes plenty. So get the tape recorder out . . . and start practising!

Letters to the Editor

Have you an idea, a complaint, or a bouquet to hand out? Write to us about it. Letters not for publication should be clearly marked

REDUCING THE PRICE OF TAPE

MR. PETER TURNER (October 19) urges reduction in the price of magnetic recording tape. I cannot imagine that manufacturers of good tape are in a position to reduce the price, if only because of ever-increasing costs of production. Despite rising wages, since tape first came on the domestic market the price has remained constant.

With the help of *Tape Recording Fortnightly*, I and a few other privileged people were shown the complete process of tape manufacture, testing, packing, etc., at the E.M.I. factory at Hayes in 1957. I realise the amount of work, large staff and intricate machinery involved in tape manufacture, and I doubt whether the price could possibly be reduced, however much of it may be sold.

Surely Mr. Turner is proposing a retrograde step in asking for one speed of $7\frac{1}{2}$ ips, to simplify the mechanics. Present-day techniques have virtually eliminated wow and flutter at $3\frac{1}{2}$ ips and tape heads are now available, which give a perfectly good frequency response and signal/noise ratio at this speed.

The answer Mr. Turner seeks is to be found in modern tape recording equipment. I recently made music recordings on a foreign tape recorder with four track heads, and I was amazed with the results. I have now installed on a Brenell Mk V deck two Bogen 4-track heads, erase and record/playback. The results I get from this installation are surprising indeed. I have some recordings made in 1954 at $7\frac{1}{2}$ ips on a £70 tape recorder which are not nearly as good as those made at $3\frac{1}{2}$ ips with the Bogen $\frac{1}{2}$ -track head on the Brenell.

The installation of this head enables me to use all my 70-odd 7 in. tapes again, retaining the existing recordings merely by adding two more tracks to the existing twin track recordings, without any loss of quality.

Regarding the letter from D. Wilson on a serviceman's view of 4-track, I am not a serviceman but have "a little learning" (which may be a dangerous thing). I question his *much* shorter life of record head and would like evidence. As for higher noise level, surely this depends on the head manufacturer. Some are good, some are bad.

I don't know if Mr. Wilson has lined up a pair of 4-track heads or on what he bases his remarks about critical alignment. I lined up my 4-track heads, first visually, then borrowed a 4-track recording from a friend and played it back lining up aurally. The erase head was similarly adjusted by trial and error. I then made a 4-track recording and sent it to two different owners of 4-track equipment and asked them to report. All was well.

W. PATRICK COPINGER.
Kilmarnock, Ayrshire.

I STRONGLY agree with Mr. Turner. Ten years ago I used to buy a seven-inch reel (1,200 ft.) of tape for 25 shillings. Without warning the price was increased by ten shillings, at which figure it has remained ever since. I admit that quality is vastly improved, but the makers have more efficient production methods and they boast about turning tape out by the mile. Why doesn't the customer benefit from all this?

It is generally recognised that increased production results in lower prices, but evidently not in the tape world. It looks suspiciously like a price ring as all makers charge the same. Perhaps the Monopolies Commission should investigate the position.

An obvious reason for the high cost is the ridiculously high profit allowed to the trade on all tape recording requisites.

For merely taking delivery of a recorder and handing it over the counter the retailer collects 30 per cent. No doubt the wholesaler is treated as generously. Allowing for the manufacturer's profit and freight charges, it makes one wonder sometimes just how much one's equipment is really worth.

As Mr. Turner remarks, if tape was cheaper there would be no need for all this four-track nonsense and reduced quality. Increased tape sales would probably bring the makers an even bigger profit than they obtain at present.

As they seem incapable of seeing this for themselves, could all tape users not take a leaf from the Housewives League and refuse to buy any more until the price came down?

L. REID.

Belfast, N. Ireland.

TAPE SPEEDS—more comment

WHY all this fuss about speeds? If a recording made at a particular speed really satisfies us, apart from the economical aspect, why worry about which speed others use!

Recording from a tuner, I should not

think it very important to use a high speed, such as 15 ips, since most of the difficulties of sound reproduction have already been ironed out for us before and during transmission. All that remains is to ensure that there is no over-modulation.

I prefer to use 15 ips for "live" recordings because experience has proved that it is impossible to do with $7\frac{1}{2}$ ips what can be done with a higher speed. Where "masters" for discs or dubbings are required, undoubtedly 15 ips is preferred.

It may interest Mr. Richman (October 19 issue) to learn that at 15 ips and 30 ips the gain versus the frequency compensation is not so steep as it is at lower speeds. This means that over-modulation can be more easily avoided with high frequency or rising frequency notes. For example, the "unique" voice range of Yma Sumac would be easier to record from the microphone.

Under favourable conditions, startling realism has been demonstrated many times at $7\frac{1}{2}$ ips monaural. But there are many reasons for the use of a higher speed, major ones being the improved signal to noise ratio, allowing greater freedom of microphone control; a reduced awareness of tape drop-outs; and the much-mentioned editing facility. Each contributes its portion to achieve as near an unmarred reproduction as possible.

NAOMI ARCHER (Mrs.)

Crawley, Sussex.

FURTHER MODIFICATIONS TO THE CLARION

REGARDING the article on modifying the Clarion Recorder for quick operation (*August 10 issue*), and the subsequent letter by E. Shearsmith, I would like to suggest two further slight modifications.

I have used a small rubber "sucker pad" to fix the switch to the body of the machine, instead of the metal clip suggested in the article. The switch, of either the type mentioned in the original article or the push-button type mentioned in the letter, can be fixed to the rubber without difficulty by using one of the impact adhesives, such as Evostik or Bostik Clear Adhesive.

Secondly, I have encountered difficulty with the metal clips suggested for holding the spools firmly on the spindles. With some makes of spools these clips tend to cause the spool to rotate slightly in an eccentric manner, and this in turn causes the spool to touch the side of the depression in which they rotate, once in every revolution. I have overcome this difficulty by using a piece of splicing tape wrapped completely round the three lugs on the spindle. With some spools it is necessary to use a double thickness.

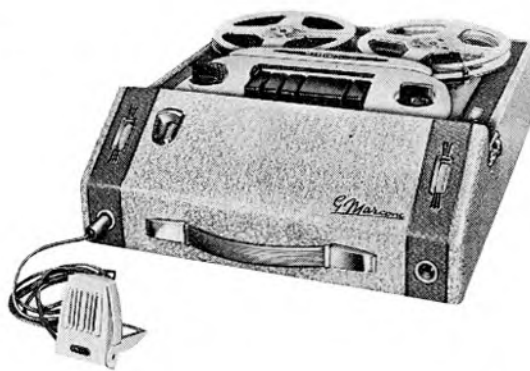
PETER TEAL.

Elland, Yorkshire.

Equipment Under Test

THE MARCONIPHONE MTR 2

By E. A. Rule



THE Marconiphone MTR2 is supplied complete with a crystal microphone for hand or table use and a 7-in. reel of recording tape. It is fitted with the Collaro Studio tape deck, which has three four-pole induction motors and push-button control. Five push-button controls are incorporated, play, fast wind, fast rewind, brake and pause. It is also fitted with a digital counter.

The recorder is a three-speed, $7\frac{1}{2}$, $3\frac{3}{4}$, $1\frac{7}{8}$ ips, half-track instrument mainly intended for domestic use. An internal $7 \times 3\frac{3}{8}$ in. elliptical loudspeaker is mounted in the front of the cabinet and an external loudspeaker jack socket on the back. When this is in use the internal speaker is muted.

Facilities are provided to permit the record/replay amplifier to be isolated from the record/replay heads so that it may be used as an independent signal amplifier. With a radio tuner connected to the radio input and the recorder switched as an independent amplifier it can be used as a good quality radio, or using a gramophone pick-up, as a radio/gram/tape recorder.

Five other controls are fitted; volume/record level, tone, on/off, speed selector, function. The function control has three positions, record, amplifier, replay.

Two inputs are provided, one for microphone with a 6 millivolt sensitivity; the other for radio/gram pick-

up at 250 millivolts. Both are high impedance and plugging the microphone jack into its socket disconnects the radio/gram, allowing permanent connection of a tuner or pick-up.

To guard against accidentally erasing there is a lever above the "play" button which must be moved forward and depressed with the play button before the heads are connected to the amplifiers, this lever only operates with the function switch in the record position. By setting the function switch to record but not depressing the play button on the tape deck, it is possible to set up the required recording level without setting the tape in motion.

The MTR2 was tested for frequency response and the resulting curves are shown in the accompanying graph. The frequency response on the recorder tested was better than that claimed by the manufacturers, in fact, the response at $7\frac{1}{2}$ ips was only 10 dB down at 18,000 cps relative to the response at 1,000 cps.

All other tests showed that the recorder was well within the claims made for it. The measured hum and noise level was -46 dB relative to a fully modulated tape/unmodulated tape, and was completely inaudible on the internal loudspeaker.

The record/replay amplifier has ample gain and it is therefore very easy to fully modulate the tape even with the microphone some distance from the sound source. On replay the 2 watts output was reached with the volume control about halfway.

A test of the bias wave - form showed a good sine - wave and

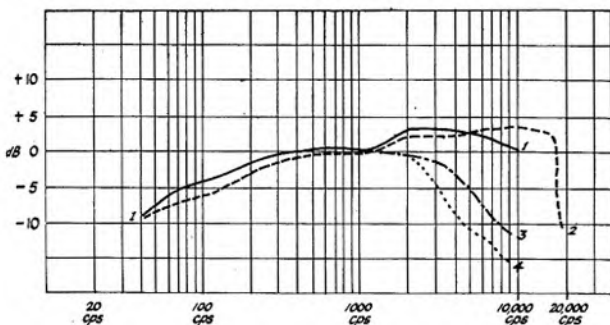
was stable in frequency which on the recorder tested was 59,000 cps. Erase is complete and recording was free from amplifier noise. Due no doubt, to the use of low noise resistors in the early stages of the replay amplifier.

The amplifier uses two valves plus a level indicator and bridge rectifier. The first stage, half of an ECC83, is used as a voltage amplifier on both record and replay. Low noise resistors are used in the anode circuit. The other half of the ECC83 is used as voltage amplifier on record with treble boost to its grid, and on replay with bass boost by means of negative feedback from its anode circuit. Low noise resistors are also fitted to this stage.

Following this is the gain control which is in the grid of one half of an ECL82 (triode/pentode). The triode section is used to provide a constant current feed to the recording head via a speed/frequency equalising circuit. The pentode section is used as a bias/erase oscillator on record and as output valve on play-back. The EM84 level indicator uses two diodes in its grid circuit to provide a "fast rise, slow decay" indication, it therefore shows the peak recording level.

The output and mains transformers are of generous size and after a long recording/play back session there was no excessive heating anywhere in the recorder. Tape spooling was even except during fast winding when it became slightly ragged. The recorder is very soundly constructed and elegant looking. My only criticism is that a spare jack plug should be provided for a radio or pick-up. Apart from this, the recorder can be recommended and will give reliable and good quality recordings.

At 39 guineas it is sound value.



(Left) FREQUENCY RESPONSE CHART

1. Replay at $7\frac{1}{2}$ ips, treble control at maximum.
2. Record/replay at $7\frac{1}{2}$ ips, treble control at maximum.
3. Record/replay at $3\frac{3}{4}$ ips, treble control at maximum.
4. Replay at $3\frac{3}{4}$ ips, treble control at minimum.

HIRE v. H.P.

ONE of the first reactions to my question a fortnight ago concerning the possibility of hiring loudspeakers for stereo was from a retailer, who says: "Why hire when you can hire-purchase?" His main point is that the cost of hiring would be not very much less than the cost of hire-purchase.

A more important point is the fact that some firms, City Sale and Exchange of Fleet Street, for example, recognise the importance of customers trying out speakers in their own homes against full cash deposit, and allow a period of about a fortnight after delivery during which time they can, if they are not pleased with the results, return the speakers and exchange them for others without extra charge beyond the difference in price.



These are very good points, I think, and they cover the needs of a very large section of the stereo-seeking public. It is not always easy, of course, to find firms which make no bones whatever about trying out speakers thoroughly in the home. However, if enough customers insist at the outset on an assurance that this policy is being followed then it would soon become general practice.

Much depends, I feel, on the conception of how many times it would be reasonable to try "yet another" pair of speakers. A real dispute on this point might never occur, but many a potential buyer would carry in the back of his mind the idea that he might be stuck with something less than the ideal solution through lack of courage to ask for yet another pair to try out.

I am concerned in this con-

Stereo Notes

By D. W. GARDNER

nection with the vast numbers of people who may be resisting a desire to buy stereo equipment because of the vague knowledge that it is necessary to hit the right nail on the head in order to get the best results in a given room. The thought of partial, if not total failure, cools their ardour at an early stage before they have had a chance to weigh up the opportunities available for trying things out.

Such people are vital to the progress of stereo and it would be invaluable if they could start out with the knowledge that for the price of hiring speakers for a few months they could satisfy themselves completely that stereo was worth while spending money on. Hire-purchase involves a feeling of commitment to adopt stereo of one kind or another. Hiring means that one has not burnt one's boats and can forget the whole thing if it should turn out after all (when the novelty has worn off) that, at least in their particular case, nothing much has been gained by having two channels instead of one.



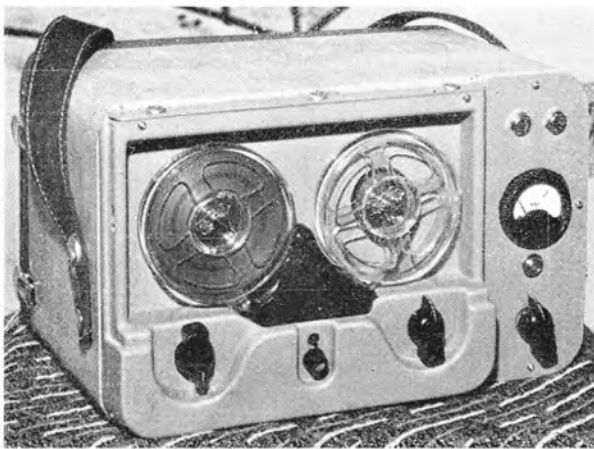
One of the doubts that might be settled in this way is whether first-class reproduction is possible with fairly small speakers in pairs. Most people would prefer, for furnishing reasons, to have the smaller speakers if they will do a good job, but there is a calculated risk involved. Trial and error seems to be the ideal way of striking the right balance between size and performance.

Again, while it might be obviously reasonable to all concerned if the exchange is made each time in favour of more expensive speakers, there would be a natural resistance on the part of a retailer to reverting (in the case of a purchase or hire-purchase), to a much cheaper model. But it may well be that the only way of being sure that the cheaper one is right is to hear the more expensive one first and assure yourself that the deficiencies of the cheaper model are not so great that you will be haunted for ever by the spectre of the might-have-been.



Summing-up, I'd be inclined to say, at this stage, that people who have no further doubts about stereo in general should be well served in the normal way by a retailer who has fully committed himself to the principle of home trial and a change or two if you want it; but that there is still a strong case for hiring pure and simple for people who just cannot be sure whether they care enough about stereo or who cannot imagine themselves to be capable of making the right decision in the face of conflicting stories about what is necessary in the way of equipment and arrangement.

Perhaps some organisation can find a formula whereby a carefully selected series of speakers could be hired out on a rota basis for about three months for a special inclusive charge to people who are prepared to go at least as far as buying stereo recorders, amplifiers and pick-ups (which can still be used for mono reproduction if the speaker trial should end in a stale-mate).



New Products

CASIAN INTRODUCE SECOND PORTABLE

CASIAN Limited have announced their second battery portable recorder. The new machine, which can also be used from mains supply, is the Trav-ler Professional (left). The price is 85 guineas.

A single-speed machine, $7\frac{1}{2}$ ips, the Professional weighs 8 lbs., and measures $10\frac{1}{2}$ x 7 x 6 inches.

The claimed frequency response is 30-12,000 cps ± 1 dB. Signal-to-noise ratio is given as better than 55dB un-weighted, and wow and flutter as better than .2 per cent r.m.s., measured using a G.B. Kalee Meter.

Six Vidor type T6007 batteries or their equivalent provide the driving power, and the battery life is estimated as over 50 hours. A single 9 volt motor is employed, running at a constant speed over a wide voltage range. The facility of pause control is included.

Recording time available is 22 minutes, using a three-inch spool of double play tape. Rewind time for such a spool is 90 seconds.

The main function switch gives control as follows: rewind, replay only, on/off, record and monitor replay, fast forward record level control, meter/monitor switch, and pre-set replay level control.

Sockets are provided for ribbon or moving coil microphones (25 ohms input); 600 ohms line input at line level; 600 ohms line output at line level or monitoring headphones.

A 100 micro-amp two-inch moving coil V.U. meter is switchable to give record level/line replay level/battery state.

Two units are employed: the recorder itself, incorporating the replay amplifier, and a second unit housing an amplifier providing one watt output through a 7 x 4 in. elliptical loudspeaker.

Casian Ltd., 37, Grafton House, Golden Square, London, W.1.

FOUR-TRACK MODEL BY KURLAND

A FOUR-TRACK version of their Konsollette tape recorder is announced by Kurland Recording Systems Ltd. The new model, the Konsollette Four, incorporates the Collaro Studio deck, and is equipped with Bogen heads.

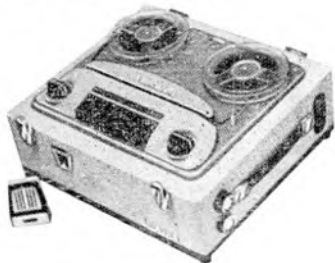
A maximum spool size of 7 ins., coupled with the lowest of the three speeds, $1\frac{1}{2}$, $3\frac{1}{2}$ and $7\frac{1}{2}$ ips, provides a playing time of $8\frac{1}{2}$ hours using standard tape. Rewind time for 1,200 ft. of tape is 65 seconds.

The machine has space for a third head for stereo adaptation.

The features include monitoring, superimposition, pause control, magic eye recording level indicator, straight-through amplification, extension speaker socket, heavy balanced flywheel, push-button operation, digital revolution counter.

The printed circuitry incorporates EF86, ECC83, two EL84s, EM81 and EZ80 valves. Power output is $3\frac{1}{2}$ watts. Mains voltage 200-250 v. A.C., 50 cycles. Operation consumption is approx. 100 watts.

Three four-pole fully screened induction motors are employed, and the wow



The Konsollette Four

and flutter level is given as 0.15 per cent at $3\frac{1}{2}$ ips.

The Konsollette Four weighs 25 lb., and its red Vynair-covered cabinet measures $14\frac{1}{2}$ x $12\frac{1}{2}$ x 7 ins. Included in the price of 45 guineas are a crystal microphone, 5-in. reel of tape, spare spool, and 7 ft. extension lead plus plugs. Storage space for two spools of tape is available in the lid.

Kurland Recording Systems Ltd., 9-11, Tilly's Lane, High St., Staines, Middx.

BIB TAPE ACCESSORIES KIT



MULTICORE SOLDERS LTD. have now incorporated in a printed two-colour fitted carton a comprehensive tape accessories kit for 28s. 6d.

The Bib Tape Accessories Kit contains the already well-known tape splicer, a reel of Scotch splicing tape on a dispenser, an additional supply of cutters and the Bib Tape Data Card Calculator. The Data Card provides up-to-date information on tape spools, playing times for all types of tape at four different speeds and in addition contains the recording times of nearly 50 orchestral works. In a packet affixed to the lid of the kit, there are 24 Bib Tape Reel Labels (as described in our October 19 issue).

Multicore Solders Ltd., Multicore Works, Hemel Hempstead, Herts.

WYNSOR GO FOUR-TRACK

WYNSOR announce a four-track version of their "Victor" tape recorder.

All the existing facilities of the two-track "Victor," mixing of inputs, controlled monitoring, three speeds, the 10 x 6 in. speaker, etc., remain. The appearance is identical apart from the track-change switch.

The new version will retail at 49 guineas complete with crystal microphone, 1,200 ft. tape and radio jack-plug.

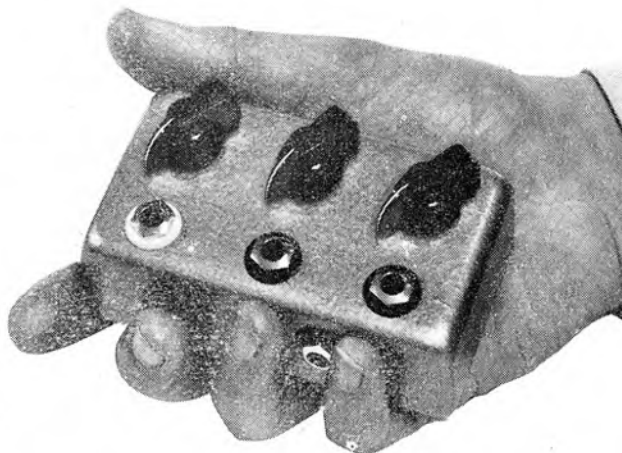
Wyndson Recording Co. Ltd., 2, Bellevue Road, Friern Barnet, London, N.11.

DEKTRON present their

NEW IMPROVED MIXER - FADER

WHICH WILL ADD SO MUCH TO
YOUR RECORDING TECHNIQUE

The unit is available for either three microphone inputs or two microphones and one high level signal e.g., radio feeder. Restyled and attractively finished in hammer green it represents outstanding value at 45/-.



Also available as a matching unit to the Mixer-Fader is the DEKTRON MONITOR. This transistorised instrument which adds monitoring facilities to all tape recorders will also serve as an efficient pre-amplifier.

PRICE 5 gns.

DEKTRON 2, WESTBOURNE ROAD, WEYMOUTH

TAPE RECORDING HANDBOOKS

Written by four enthusiasts, experts in their own particular field, these handy-sized guides to four aspects of tape recording should find their way into the pocket of anyone interested in hi-fi and tape recording. A MUST for the newcomer.



INTRODUCTION TO THE TAPE RECORDER

Charles Langton
3/6 (4/- inc. postage)

HI-FI FOR THE MUSIC LOVER

Edward Greenfield
3/- (3/6 inc. postage)

TAPE AND CINE

John Aldred
3/- (3/6 inc. postage)

HOW TO RECORD WEDDINGS

Paul Addinsell
3/- (3/6 inc. postage)

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

THE GREATEST FREE SHOW ON EARTH

ALTHOUGH we were at the seaside, we didn't get sand in our shoes. We got wind in our microphone and it played havoc with our first attempts at recording beside the sea. As we walked along the promenade, the so-called gentle sea breezes were blowing at gale force strength, whipping up skirts and whipping off hats, except for the cowboy hats that tie under the chin which seemed to be very much in favour.

We had come to Blackpool to record the switch-on ceremony of "the greatest free show on earth"—the famous Blackpool Illuminations.

Before we took our places in Talbot Square we strolled along the front, listening for likely sounds to add to our collection, trying out the batteries in our portable tape recorder, and making sure that everything was in working order. It was still early in the evening and the barkers along the Golden Mile had not yet found their "voices."

It was on this preliminary preamble that we discovered how the wind howled in our microphone and experimented until we found a satisfactory remedy by placing the microphone inside my raincoat and increasing the recording level a little.

We took our places in the Town Hall square, where we found the television crews already setting up their "stall." Microphone cables were lying all over the place, big arc lights were being swung into place, and the amount and quality of the equipment was enough to make the hard-up amateur green with envy.

The crowd was being "warmed up,"



Blackpool Tower by night

By F. J. G. Hodge

ready for the appearance of the guest celebrity. The community singing was being relayed over the P.A. system and we recorded a little of it to make sure we had the correct recording level for the actual switch-on ceremony.

The V.I.P.s took their places and then, to a fanfare of trumpets, on to the platform stepped film star Janet Munro—this year's celebrity. She is a Blackpool girl; it was the first time a local girl had switched on the lights. The crowd went wild with excitement and cheers, shouts, whistles and cries drowned out the first few words of her speech.

Janet spoke of her tour of the town the night before and, describing her police escort, gave a lively imitation of the sirens of the police car sirens! Her "whooooo" came out perfectly on our tape.

As she pulled the switch that brought to life the £400,000-worth of glittering spectacle and fantasy, fire crackers exploded as a special display above the town hall doorway burst into light.

After the ceremony most people went along to the sea front to see what it looked like "all lit up." We went with them, and started the recorder going so that we would get the comments. All the multi-coloured lights were shining, and the variations in design thought up by the illuminations staff was staggering. Tram cars, picked out in fairy lights to look like gondolas and yachts, seemed to glide along the front. People "oohed" and "aahed" and pointed out the different displays to one another, and we unobtrusively recorded it all.

Landaus, filled with holiday-makers, made their way along the front—we recorded the clip-clop of the horses' hooves as they went along.

The trams tooted and hooted—and we recorded that.

The cars and coaches snarled their way, inch by inch, along the six miles of splendour of the illuminated front—we didn't record that!

Before we left for home we walked along the Golden Mile to seek some recordings of the barkers at the side-shows. Hot dog and hamburger stalls were doing big business and, over all, was the smell of fried onions and sizzling sausages. Passing one of these hot dog stalls, we heard the men and women attendants shouting their wares in a unique way—at least we thought it was unique—and we spent the next few minutes walking backwards and forwards in front of the stall recording the patter and marvelling at the tonal quality of the woman's voice.

Then it was time for our train, and we rode home with a successful recording of "the greatest free show on earth."

Hi-Fi HARRY by Rich



"Harry! You're taking this 'special November the Fifth recording' far too far."

Mammoth recording session by Specto

ONE of the biggest ever recording jobs was tackled recently by Specto Ltd.—the recording of speeches in three languages at the ninth International Congress of Photogrammetry in London. Nearly 1,000 delegates attended and they discussed the technicalities of photogrammetry—making maps from aerial photographs—in English French and German.

Four Spectone recorders were used to record the entire proceedings at 3¼ ips and, immediately afterwards, to record, assembling all speeches in each particular language on a special set of tapes. In ninety hours' work, thirty 1,800-ft. tapes were used.

MAGAZINE DIGEST

In this column we draw attention to items published elsewhere which may be of particular interest to readers.

Amateur Tape Recording: How to make modern music with a tape recorder.

The Tape Recorder: Construction of a stereo recorder. Part Three—testing and lining-up.

Tape Recording (American): Special issue on learning with a tape recorder.

Hi-Fi Stereo Review (American): Three complete stereo systems. Introducing the first of a new series.

Audio (American) (September): *Checking frequency response, equalisation, and azimuth.* Describing a series of tests to be applied to a recorder, and how to evaluate the results.

High Fidelity (American): *Stereo integration step ups.* Describing recent combined amplifier-speaker systems.

All issues mentioned are for October unless otherwise stated.



THOSE IN THE KNOW SAY-

"This is it, my friend. Even the technical reviewers rave about the VICTOR. Lovely job all through: no wonder, look at the specification. Even if you don't understand these things, take it from me it means Value all the way. I don't know how WyndSOR do it at the price."

FREQUENCY RESPONSES

7½ i.p.s.—50 to 15,000 c.p.s. ±3 dB.

3¾ i.p.s.—50 to 9,000 c.p.s. ±3 dB.

1¾ i.p.s.—50 to 5,000 c.p.s.

- ★ Full frequency equalisation *at all speeds*.
- ★ 10in. X 6in. speaker in detachable lid.
- ★ Controlled monitoring through its own speaker.
- ★ Mixing for mic and gram/radio inputs.

45 guineas complete with
microphone, 1,200 feet of tape and spare jackplug
also 4-Track version 49 guineas

WyndSOR VICTOR

COUPON

To WyndSOR Recording Co. Ltd.,
WyndSOR Works, 2, Bellvue Road, Friern
Barnet, London, N.11. (Tel.: ENT 2226/7)

Please send me full details of the WyndSOR VICTOR and
names of nearest stockists.

Name

Address

..... TRF

News from the Clubs

WE are, of course, all aware of the lack of knowledge amongst the general public as to the existence of tape recording clubs. Quite honestly, I should admit that there is nothing unusual about this state of affairs, but it never fails to surprise me when, should the topic arise, I hear the remark "Do they actually form clubs for tape recorder owners?" I find it distinctly irritating to hear such utterances, and feel it my duty always to enlighten the ill-informed. I must admit that on some occasions I am looked at askance. Nevertheless I feel encouraged to think that such exchanges may perhaps be the first signs of a future tape enthusiast.

And it particularly pleases me to note that not only the general public, but also the world of industry, entertainment and government, especially the latter, are beginning to sit up and take notice. Why, only a few weeks ago, we have heard how Mr. Krushchev had recorded Mr. Macmillan's views surreptitiously. Although many readers of that morning's papers might have missed the original news item, there is a possibility that they had their attention drawn to the *Daily Herald* piece the following morning when Jack Lucas dwelt at length on the various ways the Russian Premier might have attempted the task at hand. Such publicity for tape recording must serve to expand awareness.

And so it is with the clubs. In almost every issue I mention the publicity gathering activities of members. In this issue is mentioned the *Ware* club and the results they have obtained from exploiting their presence. Publicity is the thing, it is no use sitting back waiting.

The *London* club, that veteran of the club world seems to be getting itself around. Latest news from them supplies the information that on a recent Sunday morning some eighteen members transported themselves to the centre of the government's advice bureau, the Central Office of Information. The object of the visit was for a special programme exercise devised by Roger Aslin. The plan was to condense a day's broadcasting into an hour long programme.

To be included in the exercise were news and weather reports, a disc jockey programme, an interview, an outside broadcast, a play, and various other continuity items. Although experience in using unfamiliar recording equipment proved a barrier at first, the members soon attended their various tasks with great enthusiasm. The photograph on

this page shows some of the members during the play recording session.

A tape/slide show and a cine film were features of the most recent meetings of the *Warwick & Leamington* club. The first show, "Italian Journey", was produced by Secretary Brian Race. Although absent from the meeting himself, Brian had arranged the programme so that it was easily presented by his proxy—Chairman Mr. Ken Wilkins.

Vice-Chairman Trevor Gilbert prepared the second show, a cine film of the Lake District and Scotland to which had been added a synchronised tape sound track commentary.

Members' plans for the future include a demonstration of stereo equipment by a member; a second visit to the local BBC Studios; a tape slide show of Leamington and district; and a "surprise evening". A tape recording course along the lines of those organised by other clubs, is visualised for the new year.

The value of portable tape equipment was well illustrated at the October 7 meeting of the *Leicester* club. Assistant secretary David Darbyshire gave a talk on a local newspaper and to illustrate it presented recordings made in the offices and printing shops of the *Leicester Mercury*. The tapes, made on the Clarion, were played back on the same instrument to which had been added the remainder of the "Twinsit".

Members were impressed with the reproduction of the model, and applauded David for realistically capturing the fervour of the news room, and the humming of the presses.

With an eye on the newcomer, club members often devote meetings to the basic technique of recording. Such a meeting was that held on October 21. Chairman D. Angrave gave a talk on editing and splicing, and secretary Peter Starrie lectured on wow and flutter. He illustrated his talk with some recorded examples, as did President John Buckler in his talk on recording weddings.

Their November 4 meeting was devoted to a demonstration of hi-fi equipment. Visiting them on this occasion to demonstrate speaker enclosures, disc, tapes and amplifiers, were representatives of Gramatape of Leicester.

The October 6 meeting of the *Rugby* club was also largely concerned with demonstrations of equipment. Mr. Terry Davis, representing AEI Sound Equipment Ltd., presented the latest BTH hi-fi monaural and stereo equipment. A Grundig mains recorder, and the Stuzzi Magnette were fed into the equipment available, to provide an example of the quality obtainable from transistorised recorders. Also demonstrated was Mr. Davis's own self-constructed recorder. This was used in conjunction with a Decca pick-up and a Garrard transcription motor.

Two humorous tapes were heard. The first, entitled "Female having driving instruction" was a resumé on an age-old problem. The second tape heard was called "The Atomic Submarine"—some humour!

A party of some 15 members travelled to Birmingham on October 5, visiting the BBC sound studios. An enjoyable time was had, especially during the hour spent in the tape recording room, discussing recorders, their use, splicing and dubbing. They also had a demonstration of the process of recording directly on to disc.

The evening came to a satisfactory conclusion with a short visit to the TV Section where the Midland news is compiled.

The second meeting of the month (October 20) was again devoted to demonstrations of equipment. This time, however, the club members themselves provided the recorders. On show were a Simon SP4, Grundig TK5, Elizabethan, Gramdeck (connected to a Pye record player), Brenell Mk.5, Stellaphone and Spectone.

These machines had been brought along by their respective owners for the recording and dubbing session required in the process of making the reply to the Bournemouth tape.

Members divided into two sections, one group replying to the tape, the other dubbing the carefully compiled quiz tape.

The evening concluded with a quiz tape provided by Mr. A. Lovett. This was won by Mr. R. Goodman.

(Continued on page 33)



Members of the *London* club record a play in the C.O.I. (see text). Left to right are: Godfrey Mousset, David McDowell, Margaret Moss, Roy Groves, and Terence and Esther Devereux. Right: Alan Pierce monitors the recording

Classified advertisements

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

SERVICES

FERROGRAPH 4 A/N's-808's, VORTEXION WVA, WVB, SIMON SP4, REFLECTOGRAPH A-B, etc., always in stock and ready for immediate delivery, as well as over 200 latest 1960 recorders at London's Largest Tape Recorder Specialists. The best, lowest H.P. terms, and finest selection of new and s/h recorders, from £18. Generous P/E allowances. Essex Tape Recorder Centres, 2, Maryland Point Station, Stratford, E.15, and 205, High Street North, East Ham, E.6.

Tape recorder need repairing? Then let London's Largest Tape Recorder Specialists do it for you, expertly and economically. Essex Tape Recorder Centre, 2, Maryland Point Station, Stratford, E.15.

GRUNDIG sales/service in your area: High Wycombe phone 457, Newbury phone Thatcham 3327, Wallingford phone 3083, Orpington Kent, phone Orpington 23816, New Malden phone Malden 6448, Watford phone Garston 3367.

TAKE A TIP FROM PROFESSIONALS. Service your recorder using the CINESMITH DEPOLARIZER. 35s. from your dealer or Cinesmith Products, manufacturers, Barnsley. Informative leaflet available.

EXCHANGES

Bell Howell 16mm 70 DR complete with Ampro Projector offered in exchange for stereo hi-fi set-up. Box E504, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

FOR SALE

Shop-soiled Clarion Transistape battery operated transistorised Tape Recorder. Bargain, for quick sale £18. Box F513, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

FERROGRAPH 4 A/N mic. and stand. £75. Warner, 65, Clarendon Road, London, W.11. Park 6742.

MINIVOX. Superb two-speed portable, 9 lb., transistorised, practically unused. Shop price with batteries £44—bargain £30. BCM/Chosen, London, W.C.1. Phone Grimsdyke 1566.

EMITAPE NEW GOVERNMENT SURPLUS. 1,200 feet on 7 in. super reel. 22s. 6d. each or five for 5 guineas. C.W.O. Lewis, 99-107, York Road, London, S.W.11.

WANTED

Telefunken "Hymnas" Stereo Radiogram complete with tape recorder. Cash waiting. Box W501, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Ferrograph endless cassette required urgently. Box W502, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Eddystone or good communications receiver wanted. Write stating age and model. Box W503, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Wanted, good GRUNDIG recorder. F. Riddle, 113 Church Road, Northolt, Middlesex. VIKing 4734.

WANTED. High quality LOUD-SPEAKER, Goodman Axiom 300 or Wharfedale. Pre-recorded tapes, classical. Gram turntable. Box F521, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

SITUATIONS VACANT

Young man required to assist manager/proprietor of important hi-fi shop. Central London. Quick promotion for right person. Box SV506, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Experienced manager required for branch of leading London tape recording and hi-fi dealers. Excellent opportunity with expanding organisation. Our present staff know of this advertisement. Write stating age, experience, etc., to Box SV507, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Development engineer required by one of Britain's top tape recorder manufacturers. Radio and some mechanical experience essential. Box SV517, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

SITUATIONS WANTED

Sales representative with wide experience of radio field. National connection with retailers (temporarily out of industry) seeks post with tape recorder or hi-fi manufacturer. Refs. available. Box SW511, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Young man, hi-fi enthusiast, would like to obtain post as trainee-manager with firm of retailers. Box SW514, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

TAPE-TO-DISC

Tape to disc facilities. All speeds, modern equipment. Very competitive charges. West End of London. Write Box TD508, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

JOHN HASSELL RECORDINGS. Tape/Discs. All Speeds. CCIR Studio, 21, Nassau Road, London, S.W.13. Riverside 7150.

Something to sell?—equipment for exchange?—looking for a job in the hi-fi tape field?—seeking a tape contact abroad?—tape-to-disc services to offer?—expert staff needed? A classified advertisement in *Tape Recording Fortnightly* will bring you quick results—cheaply.

Tape to Disc—All Speeds. Rendezvous Records. 19, Blackfriars Street, Manchester 3. Leaflet on request.

MISCELLANEOUS

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

EASYSPLICE TAPE SPLICER makes tape splicing simple, easy and accurate. Guaranteed 5s. Easysplice Co., 30, Lawrence Road, Ealing.

PRE-RECORDED TAPES all makes, 7½ and 3½ ips., send for free lists or visit TELETAPE (Dept. TR6), 33 Edgware Road, W.2. PAD: 1942.

WAL GAIN transistorised pre-amplifiers. Many applications, extra gain for Mics, Tape Heads, P-U's, etc. Mono version, £5. Stereo, £7 10s. WAL BULK TAPE ERASER, both tracks 8-in. reel erased 30 sec., £7 18s. 6d. WALTRAK transistorised oscillator, 1,000cps, indispensable for Service, £6 10s. Full technical literature sent, supplied through all leading dealers. Wellington Acoustic Laboratories Ltd., TRC Dept., Farnham, Surrey.

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News from the Clubs

(Continued from page 31)

Another commendable turn-out of members is recorded for the October 13 meeting of the **Coventry** club. Despite the "rival attraction" of the Manchester United v. Real Madrid football match on television, some 28 members attended.

Howard Freer contributed much to the evening's entertainment and set the ball rolling with a recording, similar to that heard at Rugby, of a driving instructor's misadventures with a woman driver. Howard's tape made a clear cut division of the fair sex at the wheel—good or bad, and his information seemed to derive mostly from experiences with the latter category.

Henry Hopfinger, in a little more serious vein than usual, presented a pre-recorded talk on his work producing printed circuits.

Another of Howard Freer's quiz tapes was heard, this one being concerned with questions on the city of Coventry. Carl Briggs gained most points, and everyone learned that there is more than one building in the city with a European city's name.

To follow was a demonstration of the club's dubbing machine. This was arranged by Howard with the aid of his home-built recorder. Tom Bagley's recording of the Cathedral bells, made on a Fi-Cord, was used for the demonstration.

The recent visit of an American tape enthusiast and his wife to this country was described by Roy Reynolds. Ex-

plaining how he had toured the Midlands with his tape contact, Roy mentioned their delight at the rain (they live in California), and spoke of how impressed the American was with his Boosey and Hawkes portable recorder.

The meeting closed with a description by the handful of members who had visited the Birmingham BBC sound studios. The outing, organised for the previous evening was the third such trip paid by members to these studios.

The **Ware** club has had a hectic time during the past few weeks. Reactions from local publicity has resulted in members being called upon by a number of local organisations who wished to make use of their services.

First such call came from a dramatic society who wanted sound effects for a play reading. This was followed by the provision of effects and interval music for the subsequent production of the play.

Two members, Mr. and Mrs. Campbell, meanwhile were operating their machines for the benefit of a local family of cornet players who wanted a recording of their skill to be entered in a talent competition.

Another call for assistance was answered when background music was provided for an Old People's Handicrafts Exhibition.

Encouraged by this reaction, the members again dealt themselves a large slice of publicity by taking space in a carnival exhibition organised by the Ware Youth Council. Although arranged in a hurry, their stand—a large tent complete with

posters and leaflets—met with a great deal of success. A radio firm loaned three tape recorders for display purposes, and a composite tape of extracts from tapes received from various parts of the world was played. Mrs. Campbell's Telefunken recorder was available to provide a "hear yourselves for sixpence" section, and also offered to record messages for relatives and friends abroad. This offer was taken advantage of twice, once by a gentleman with a sister in America, and again by a lady with a daughter in California.

Normal meetings have been carried out as usual, and have included demonstrations of recorders. At their first meeting in their new club rooms at The Old Brewery Tap, the local Grundig agent, Mr. Wilding, described the Grundig Cub, and the new four-track machine. Attendance for the evening was the largest to date, with fifteen persons being present. A representative from the **Enfield** club attended, and ties were cemented for future exchange visits between these two new clubs.

Their following meeting, October 10, was devoted to discussing the possibility of enlarging the club's present range of recorders.

Mr. Saul put forward his proposals for building a play-back only machine for club use, following an agreement that the only battery portable machine suitable for club use was a bit too expensive. A self-constructed machine would enormously enhance the club's intention of providing a tape message service.

The A.G.M. of the **Edinburgh** club was held on October 4. During the election of officials, the following appointments were made. President, James R. Sime; Vice President, James Evatt; Treasurer, Sir Mark Dalrymple. The new secretary is Leonard Douglas, 56, Corstophine Hill Avenue, Edinburgh 12.

The reports of the retiring secretary and treasurer were read, and it appears that the past year had not been as successful as the previous one. However, the lively discussion following the election of officials gave some indication of a rejuvenated spirit. Wrote the secretary: "Tape recording is as popular as ever in Auld Reekie."

The members of the **Nottingham** club are also well ahead in their plans for organising a hospital service. A number of members are showing a particular aptitude for documentary and feature tapes, and should be well versed in this type of activity. The scheme, under the guidance of John Palmer, is to start soon.

Mr. G. Curtis, the Service Manager of a leading Nottingham hi-fi dealer, visited the club for their October 13 meeting. He presented a talk entitled "Tape recorders in the raw", and demonstrated several varying models. Leading a discussion on the faults which can develop, he described in detail some suitable repair techniques.

Mr. Parrington of Walter Instruments Ltd. has also visited the club. Among the range of his company's products the mains/battery model created quite a deal of interest.

Organised visits to local places of interest are included in their recent activities. The most recent of such trips were to the headquarters and main station of Rediffusion, and to the telephone exchange.

CLUB MEETING DIARY

Is your club included in this list? If not, send details, on a postcard please, including date of the next meeting.

ACTON: Alternate Fridays at the King's Head, Acton High Street. (Nov. 18.)

BIRMINGHAM: Every Monday at the White Horse Cellars, Constitution Hill.

BLACKPOOL: Every Wednesday at 173, Church Street.

BOURNEMOUTH: Alternate Tuesdays at the Civil Defence Centre, Holdenhurst Road. (Next: Nov. 29.)

BRIDGWATER: Alternate Tuesdays at Erio's Radio, West Street. (Nov. 29.)

BRIGHTON: Every Wednesday at Fairlight School, Pevensey Road.

CATFORD: Every Friday at St. Mary's C.E. School, Lewisham, S.E.13.

CHESTERFIELD: Every 3rd Monday at the Yellow Lion Inn, Saltergate. (Dec. 5.)

COVENTRY: Alternate Thursdays at Rotherham's Social Club. (Nov. 24.)

CRAWLEY: 1st and 3rd Mondays in month at Southgate Community Centre.

DOVER: Alternate Mondays at The Priory Hotel. (Nov. 28.)

DUNDEE: Alternate Mondays at The Salvation Army Hostel, 31, Ward Road. (Nov. 21.)

EDINBURGH: 1st Tuesday and 3rd Sunday at 23, Fettes Row, Edinburgh 3.

GRIMSBY: Alternate Tuesdays at the RAFA Club, Abbey Drive West, Abbey Road. (Nov. 22.)

GRANTHAM: Weekly. 1st week in month, Wednesday; 2nd, Monday; 3rd, Thursday; 4th, Friday, at Grantham Technical College, Avenue Road.

HARROW: Alternate Thursdays at St. George's Hall, Pinner View, North Harrow. (Nov. 17.)

HUDDERSFIELD: Fortnightly, alternate Thursdays and Fridays at the Congregational Church Schoolroom, Great Northern Street. (Nov. 25.)

ILFORD: Every Tuesday at the RAFA Rooms, Cranbrook Road.

IPSWICH: Fortnightly, alternating Fridays and Saturdays at the Art Gallery Committee Rooms (Dec. 3) and the King's Arms Hotel Cornhill (Nov. 18.)

KEIGHLEY: Alternate Wednesdays at the South Street Sunday School Rooms. (Nov. 30.)

KETERING: Alternate Wednesdays at the Rising Sun, Silver Street. (Nov. 23.)

LEEDS: Every Thursday at the British Legion Club, Albion Street, Leeds 1.

LEICESTER: 2nd and 4th Friday at Bishop Street Reference Library.

LONDON: 2nd and 4th Thursdays at the Abbey Community Centre, Marsham Street, S.W.1.

LUTON: 2nd and 4th Tuesdays at 17, Dunstable Road.

MANCHESTER: Every Saturday, 6 p.m., at 20, Naylor Street, Hulme, Manchester 15.

MIDDLESBROUGH: Every Tuesday at 130, Newport Road.

NOTTINGHAM: Alternate Thursdays at the Co-operative Educational Centre, Broad Street. (Nov. 24.)

RUGBY: Alternate Thursdays at the Red Lion, Sheep Street. (Nov. 17.)

SOUTHAMPTON: 2nd and 4th Thursday at The Bay Tree Inn, New Road.

STAFFORD: Alternate Tuesdays at The Grapes, Bridge Street. (Nov. 17.)

STOKE NEWINGTON: Every Wednesday at 53, Londesborough Road, N.16.

WALSALL: Every Wednesday at 113, Lichfield Street.

WALTHAMSTOW: Alternate Fridays at 26, Church Hill, E.17. (Nov. 18.)

WARE: 2nd Tuesday at The Old Brewery Tap, High Street.

WARWICK: Alternate Wednesdays in Room 18 of the Royal Leamington Spa Town Hall. (Nov. 30.)

WEST HERTS: Fortnightly, alternating at the Cookery Nook, Watford (Dec. 14) and Heath Park Hotel, Hemel Hempstead. (Nov. 30.)

WEST MIDDLESEX: 2nd Thursday at the Railway Hotel, Station Road, Hampton, and 4th Thursday at St. George's Hall, Lancaster Road, Southall Broadway.

WEST WALES: 1st and 3rd Thursdays at The Meeting House, New Street, Aberystwyth.

WEYMOUTH: Alternate Wednesdays at the Waverley Hotel, Abbotshury Road. (Nov. 16.)

WINDSOR: Every Thursday at the Royal Adelaide Hotel.

WINCHESTER: Every Friday at The Ship Inn.

YORK: Every Thursday at the Rechabite Hall, Clifford Street.

Unless otherwise stated meetings start between 7 and 8 p.m.



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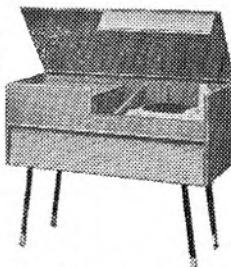
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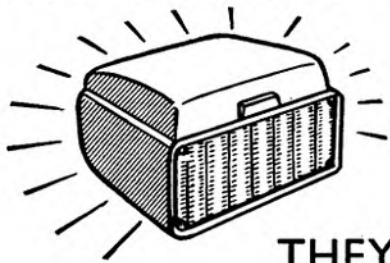
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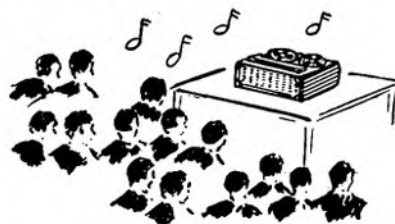
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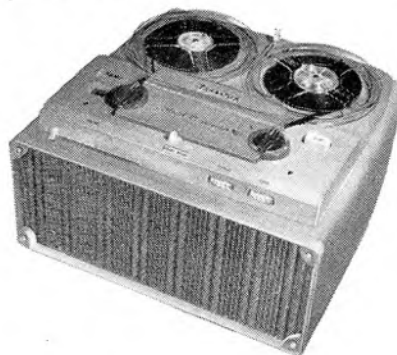
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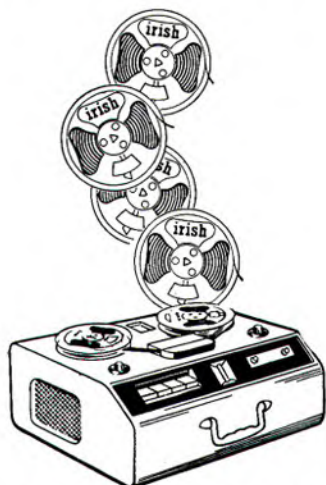
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Robuk RK3 ...	3	15	8	3	15	8	36
Minstrelle ...	4	2	0	4	1	11	39
Allegro ...	4	2	0	4	1	11	39
Spectone 171 ...	4	2	0	4	1	11	39
Victor ...	4	15	0	4	14	6	45
Spectone "161" ...	5	2	11	5	2	11	49

4-TRACK

Argyll 4-T ...	3	5	1	3	5	1	31
Philips EL3541 ...	3	11	5	3	11	5	34
Elizabethan FTI ...	4	2	0	4	1	11	39
Sound ...	4	15	0	4	14	6	45

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Clarion ...	2	15	0	2	12	3	25
Grundig "Cub" ...	2	16	0	2	14	6	26
Trav-ler ...	3	1	0	3	0	11	29
Clarion Mk. 2 ...	3	9	4	3	9	4	33
Minivox "B" ...	3	17	0	3	17	0	37
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Truvox R6 ...	11	15	0	2	11	2	55
Brenell 3 Star ...	12	4	0	2	14	0	58
Grundig TK25 ...	13	2	0	2	17	10	62
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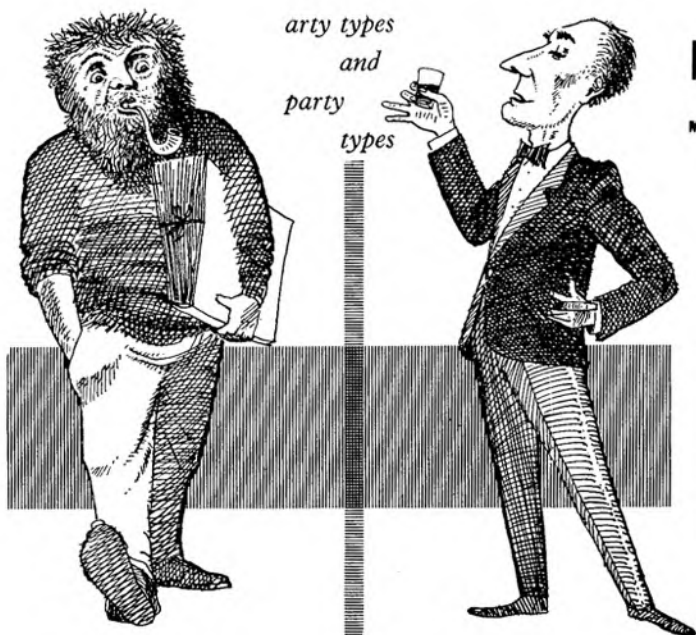


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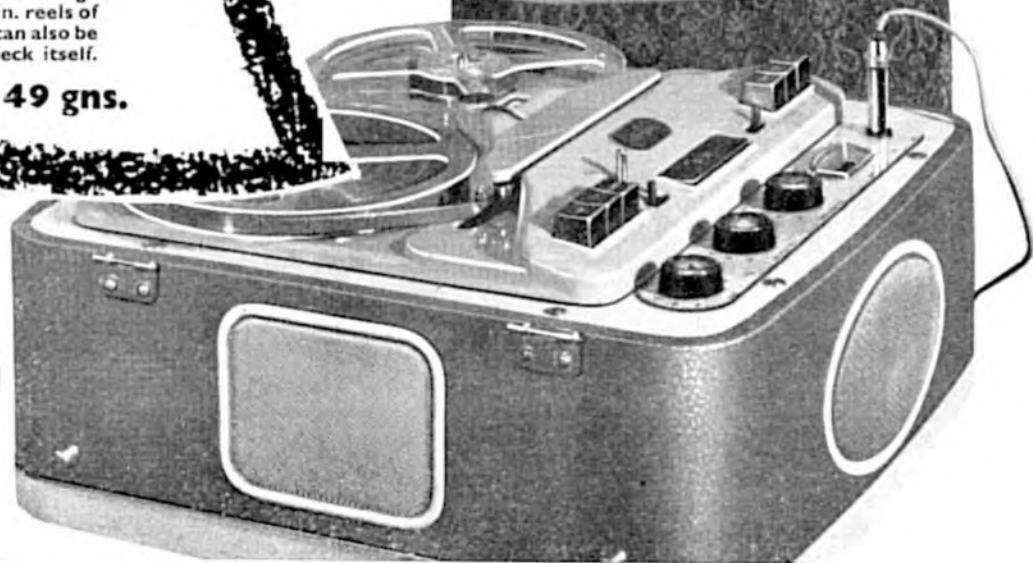
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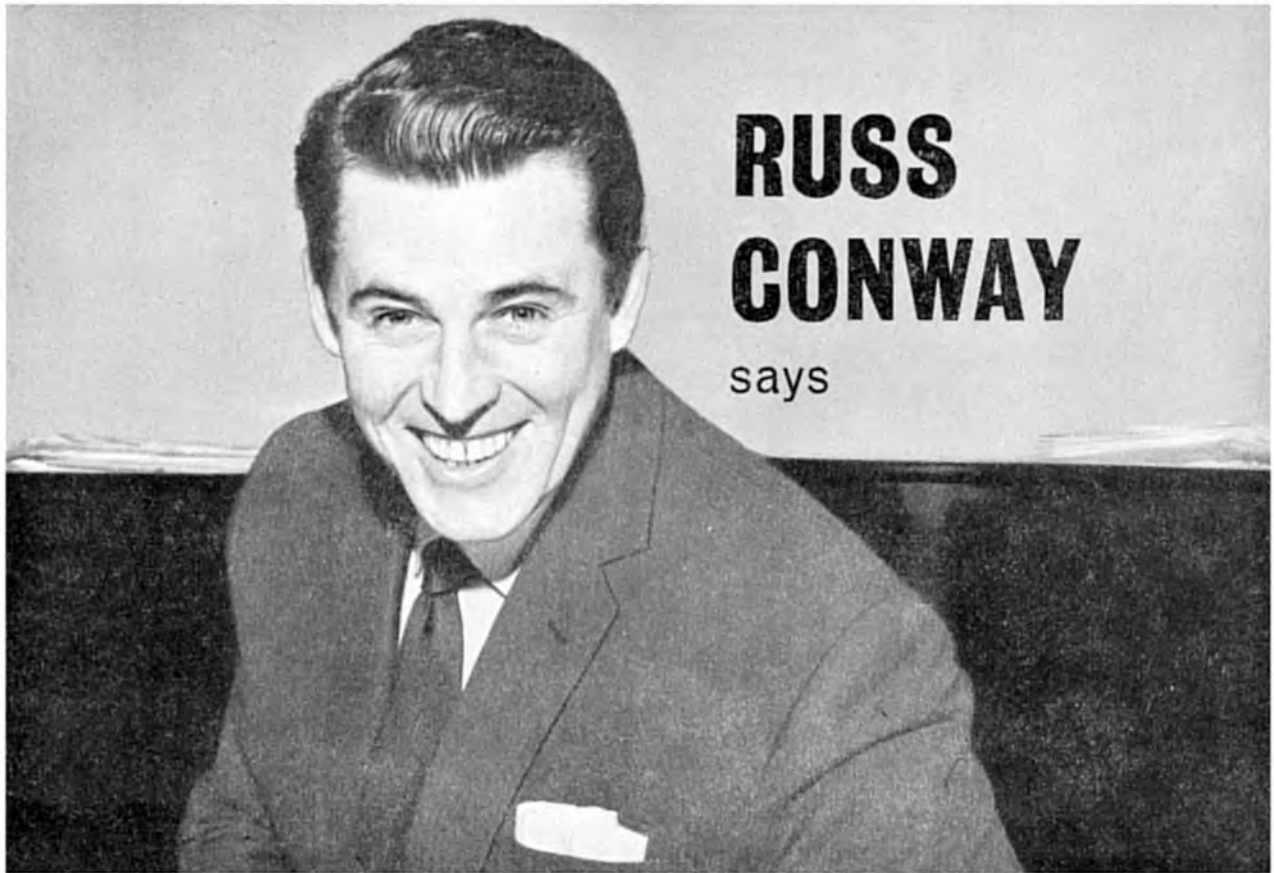
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Inside Story

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TAPE

RECORDING
FORTNIGHTLY

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EDITOR: **R. D. BROWN**
 NEWS EDITOR: **FRED CHANDLER**
 FEATURES EDITOR: **R. N. ROBINSON**
 TECHNICAL ADVISORY EDITOR: **CHARLES LANGTON**,
 A.M.Brit.I.R.E., A.M.Inst.E.
 MUSIC: **EDWARD GREENFIELD**
The Guardian recorded music critic
DON WEDGE
News Editor, New Musical Express
 MOVIE-MAKING: **JOHN ALDRED**
 OVERSEAS CORRESPONDENTS:
 FRANCE: **GEORGES GINIAUX**
Revue du Son, 40, rue de Seine, Paris-6e
 U.S.A.: **PETER M. BARDACH**
210-16, Grand Central Parkway, Queens Village 27, New York

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A DIGEST OF NEWS, COMMENT AND EDITORIAL OPINION

THE best amateur stereo recording heard by the jury at the recent International Recording Contest was not an entry at all—it was a tape played during our visit to the Philips headquarters at Eindhoven. It was, in fact, the best stereo demonstration tape I have ever heard.

It was recorded by a wealthy German enthusiast in his local theatre: a brief episode in which an actor climbed a staircase to one corner of the stage, walked across it to centre, stopped to light a cigarette, and then left at the other side. The Philips technicians played it in a darkened theatre for us. The impression that the actor was actually in the room with us was irresistible.

Less sophisticated audiences, we were informed had been known to let out feminine screams at mid-tape.

Philips also provided us with classical recordings in stereo played through 85 speakers, arranged around and above us. I imagine this technique would provide the theorists with plenty of scope for argument. All that matters, it seems to me, is that Philips have done it, and that the result is magnificently reproductive of an original performance in a concert hall.

Speaking of theory, the issue of *Stereo Sound and Music Magazine* which is on sale today contains another extremely valuable article in its series on microphone technique when recording stereo. Can we hope to get satisfactory results if we use only two spaced mono mics? This question is discussed authoritatively and some very good advice offered.

So far as stereo reproduction is concerned, we now have available in the shops several special devices for checking accurate balance of the two channels. Two quite different techniques of doing this are considered, in a review of two of the latest units, in the same issue of *Stereo Sound*.

Our charming hosts

ONE memorable feature of my recent visit to Holland—as of every trip I have made there—was the food. Our Dutch hosts proved again the gargantuan dimensions of their hospitality.

Lunches or dinners were arranged for us by the organising club, by the Dutch recording industry, by the

Dutch electronics industry, and by Messrs. Philips individually.

I was even more impressed, however, by the quality of the organisation of the FICS Congress and the Contest. Having carried much of the burden of organising last year's International gathering in London, I appreciate the tremendous amount of work that goes into this event.

Our Dutch friends proved themselves to be, simultaneously, the most charming hosts and the most super-efficient organisers—and it is not an easy combination to achieve.

Text book on tape for schools

NOTHING so certainly signals the acceptance of the tape recorder into the schools as a valuable aid to teaching as the publication of the first school textbook for lessons with tape.

"Plays for Reading and Recording", it is called. The cover carries a photograph of pupils around a recorder. There is an introductory section of hints on recording in the classroom. The main section of the book contains a number of plays that are suitable for recording with several voices and simple sound effects.

I have no doubt that my colleague, Geoffrey Hodson, will have something more to say about this later. His regular "Tape in the Schools" feature appears in this issue in a rather different form. Readers are invited to keep us fully informed of tape recording developments in schools with which they have contact, so that Mr. Hodson's feature will contain the fullest and most up-to-date summary of news possible.

Recorder reviews

IN this issue we feature a general review of recorders in the under-£50 bracket. In our next number, December 14, the recorders priced above this total will be reviewed, and in the following issue, December 28, battery portables will be featured. This issue will also include a special article of home tests carried out on the current range of tape-splitters.

LAUGH WITH JEEVES



"Can't we dub the sound of the cork after the reception?"



THE WORLD OF TAPE

A NEWS ROUND-UP

THE TABLE TURNED ON MR. FI-CORD

Natalie Core, roving correspondent for the National Broadcasting Corporation of America, and a BBC contributor, records a farewell conversation with Ralph Gough, Fi-Cord's General Manager, prior to returning to America.

Miss Core's Fi-Cord is probably one of the most travelled in the world, and has been used to record conversations with most of the world's personalities. (Mystified on-looker is Natalie Core's husband, playwright John O'Hare.)

In the next issue

THE FIRST MAN TO RECORD TV ON DOMESTIC TAPE



John A. Plowman has adapted his home-built recording equipment to record television pictures on standard quarter-inch domestic tape at standard operating speeds.

His fascinating story is told for the first time in a special article he has written for *Tape Recording Fortnightly*.



On Sale 14th December

£100,000 for "talking books"

THE Nuffield Foundation has made a gift of £100,000 to the Nuffield Talking Book Library for the Blind which will enable it to complete its change-over from long-playing records to tape recordings. The donation will also help to increase its members, the Royal National Institute for the Blind said recently.

The library, run by the institute and St. Dunstan's, lends "talking" books to nearly 7,000 members, mainly elderly and bedridden blind. In about five years the library will have replaced the present gramophone records with tape recordings.

STUZZI DEALER CONTEST

A CHARMING villa sleeping five with a maid to cook for you and attend to your every need; the beautiful Mediterranean only minutes away and the sun to keep you company—this is the prize that Recording Devices Limited are offering in a new competition.

The competition is aimed at encouraging retailers to enhance their sales and display imagination by designing special display windows incorporating the Stuzzi range of tape recorders. The entry, made

by submission of a photograph of the window, should be received by Recording Devices Ltd. by January 31, 1961.

The winner, and his wife, will be able to choose their villa from a wide selection on the Spanish coast or off-shore islands.

The judging panel will be Mr. K. Short, the Managing Director of Recording Devices, sole British Concessionaires for Stuzzi tape recorders, and a publicity consultant.

NEWS IN BRIEF

A DEMONSTRATION and exhibition of the complete range of Garrard audio equipment was held at the Queen's Hotel, Manchester, on November 2.

Present were Mr. Waite, of Simon Equipment Ltd., demonstrating the Minstrelle and Cymbal tape recorders, and Mr. Smith, Trix Electrical Company Ltd., demonstrating the Trixette Comet recorder. Both these instruments incorporate the Garrard magazine loading tape deck.

AN illustrated talk entitled "Magnetic Recording and the Home Cinema," will be given by Desmond Roe, B.Sc., to the British Sound Recording Association on December 16, at 7.15 p.m., at the Royal Society of Arts, John Adam Street, London, W.C.2. Particular attention will be paid to the problems of making and projecting 8 mm films with sound.

Inquiries should be addressed to the Hon. Secretary, The B.S.R.A., 40, Fairfield Way, Ewell, Surrey.

Emitape wins again

GRAND PRIX

(Norman Paul, "THE REST IS SILENCE")

Following his success in the recent British Amateur Tape Recording Contest, Mr. Norman Paul has now won the GRAND PRIX in the 1960 International Contest at Amsterdam, and has also been awarded the

CHALLENGE CUP

(Presented by Philips International)

& CHALLENGE SHIELD

(Presented by 'Tape Recording Fortnightly')

Emitape—the tape used for the 'masters' of most records



EMITAPE DIVISION, E.M.I. Sales & Service Ltd., Hayes, Middlesex

ET 14

THE TAPES THAT WON TOP PRIZES



Some of the British contingent at the International Contest. Left to right: Alan Stableford, Secretary of the National Federation; Mrs. R. D. Brown; the Editor, Mr. R. D. Brown; Mr. N. Paul, winner of the Grand Prix; and Mr. P. Earl, Publicity Manager of Grundig (Great Britain) Ltd.

THERE is no doubt that the best of the tapes which we heard during the judging of the Ninth International Recording Contest (CIMES) in the VARA studios at Radio Hilversum represented a big stride forward from the standard of previous years.

If, however, we exclude the dozen best tapes among the 59 which came through for the International Jury's consideration, I thought the remainder did not show the same advance. Some of them showed indifferent recording technique, but the more common fault was an unimaginative approach when choosing a subject.

If I were asked to offer advice to competitors in next year's Contests, it would be this: think long and hard about your subject and the best way of tackling it.

And, as I said when reviewing the winning tapes in the B.B.C. "Sound" programme, there is a great need for humour. A really good humorous tape starts with a tremendous advantage, providing it is adult and competent.

Let us consider this year's winning entries. About Norman Paul's "The Rest is Silence," it is unnecessary for me to say a great deal, for it has already had a great deal of well-merited attention. There was little doubt about the impact it made on the International Jury, despite the obvious language difficulties. Its effect owes a great deal to the narrative and there were many judges who knew no English. French and German texts were provided, however, and once the tape was into its stride one could have heard a pin drop in the studio, so closely was it followed.

This tape combined all the virtues: a gripping story, a well-organised script, good production and brilliant acting, and above all—yes, above all—absolutely first-class recording technique.

When the tape had been played, one of the German judges, who was himself a professional radio man, asked for details of the studio in which Mr. Paul had recorded. He was clearly astonished to hear that the tape had been wholly created in home conditions.

Readers should not miss hearing this tape for themselves. It has already been broadcast in its entirety by the B.B.C. in the "Sound" programme. It can be heard again next Monday, December 5, in the Network Three programme at 6.40 p.m.

Incidentally, I should like to interpolate here news of another winning tape in the British Contest, "Ban the Phon." This was not among the entries sent forward to the International Contest. We were limited to six British entries, so something had to be sacrificed. "Ban the Phon" owed much of its success to a peculiarly British brand of humour; it had many references to purely British circumstances, and there was the further difficulty that it depended upon considerable dialogue, introducing again the language difficulty in the International event.

I am particularly glad to hear, therefore, that the B.B.C. has recognised the merits of this tape. On Monday it was mentioned in a Schools broadcast as an example to school-leavers of what can be done with tape recording as a constructive use of leisure.

French tapes of fair and circus

Now back to Radio Hilversum. The tape that ran Norman Paul close for the Grand Prix was "A stroll around the fair," made and submitted by M. Pierre Cazenave, of Bordeaux, which was chosen as the prize-winner in the Documentary-Reportage section.

M. Cazenave went along to the fair-ground one afternoon last March with his Philips equipment and three assistants and, plugging into the power points made available by the fair folk, he recorded the extravagant language of the barkers at the various side-shows. "Roll up, roll up . . ." it begins, and we get a succession of glimpses of boisterous, colourful characters. I cannot convey (but you may have heard it in the "Sound" programme extract) the flavour of the huskily excited showman shouting: "Ladies and gentlemen . . . these young

ladies will take you for a few moments to the great boulevards of Paris, Montmartre, Pigalle, St. Germain des Prés and Montparnasse. . . ."

This was a wonderful documentary tape.

I thought it had a great deal in common with another successful French tape, "Circus Flash," made by the Rouen Sound-Hunters' Club, which was awarded first prize in the Actuality Section.

If anything, a circus is noisier than a fair-ground and I imagine that the Rouen enthusiasts had to give very careful attention to their recording levels. To compress the atmosphere, the noise—and the pace—of a circus into four minutes is an achievement. "Circus Flash" was outstandingly the best tape in its section.

The Rouen club recorded the whole of the four hours' circus performance and then selected and edited to produce the four-minute vignette which we heard.

In the Compositions section, "The Rest is Silence" gained most marks, but once it had been selected as the Grand Prix winner, it was lifted out of this class and the tape which had been second became the prize-winner. This was called "Suppé à la Carte," and was a nine-minute recording of a good-humoured session with a students' orchestra during a "peasoup and pancake" supper at the Stockholm Royal Institute of Technology. This was variety entertainment of a high order. The technical quality of the recording, done on a Revox machine, was extremely high.

What else had we in the Compositions section, the most ambitious class, since it is the only one which calls for tapes of up to 15 minutes duration?

The Berne Sound-Hunters' Club submitted a sound-portrait of their city, with

(Continued on page 16)

The Editor discusses some of the entries in the International Recording Contest and their impact on the jury in Holland

(Continued from page 15)

a very competent and racy commentary and some well-selected sound effects—bands and singers and cathedral bells. The Club put in a total of 200 hours of work to produce this quarter-hour programme.

Marjorie and Derek Worman, of Johannesburg, who were prize-winners last year, offered a tape that was attractive in many ways, called "The River." It set out to tell the story of a great African river, from its birth in rainstorms, along its path through country and town. It told of the flora and fauna of the surrounding countryside and included some good recordings of Bantu religious rites on the river banks. If it had a fault, it was that the approach was too "literary"; the commentary sometimes obscured the story in sound.

From Mr. Kenneth Miller, in New York, we had humour—not as successful as with his "Contact Microphone" the previous year, but a good attempt. He projected himself forward to the year 1999, when a tape-spool has been preserved in a museum as a primitive and rudimentary method of communication. You can see the opportunities for fun in that!

Other ideas tried out by competitors in this section were "Everyday farm sounds," recorded in Belgium; a haunted castle fairy story, using electronic effects, from Austria; a sound diary of a day in the life of a Dutch town, from Holland; a brave Danish attempt to build up a dramatic sound picture of "Footsteps"—an excellent idea, well scripted, but failing to "come off" because of poor microphone technique; and another good idea from Denmark, "Murder without words," an action story composed entirely of sound effects and without words.

Stereophony of grandpapa

The Documentaries-Reportage section attracted the greatest number of entries. Runner-up to M. Cazenave's fair-ground tape was a delightful little recording from Erich Friedmann, of Austria, which he called, with a touch of humour, "Stereophonie 1898."

Mr. Friedmann had secured two 19th-century music boxes which played the same tune. He recorded each of them separately; then he recorded them together. He called it "the stereo of grandmama and grandpapa." Here the idea was the basic thing; but the recording was of high quality, too.

Willi Baumann, of Steinach, Switzerland, entered a 7½-minute tape called "Diary of a Blackbird's nest" that was the result of great patience. The bird nested in a vine just below his bedroom window. For a fortnight he hung a



Top: Fredy Weber, President of F.I.C.S. (International Federation of Sound Hunters) inspects electronic equipment during the visit to the Philips Works at Eindhoven. Right: M. C. J. Nijsen, of Philips International, addresses the gathering during the "Brabant" lunch provided by Philips. Also in the photograph are left to right: Fredy Weber, Rene Monnat, of the Swiss delegation, and Dr. Jan Mees, Secretary of F.I.C.S.



microphone eight inches from the nest for two hours each day.

He captured the sounds of the birthdays of four youngsters, the noise of young beaks at work, the coming and going of the father, the alarm when a cat appears, the exercising of wings, the daily song, and, eventually, the departures from the nest.

Other Documentary entries included sound-pictures of the island of Aruba, in the Dutch Antilles, of a gathering of Africans in the bush, of a church choir at Hildesheim in Germany, of the many types of Dutch windmill, of Copenhagen's famous Tivoli Gardens, of Manchester's Ringway airport, and of Austrian folksongs.

The Music section, won by Britain with Ronald Guttridge's "Beat'n Heart," brought in some most attractive entries. The runner-up, Karl Duschek, of Ger-

many, produced a four-minute tape called "Echo of Haydn." He had recorded an orchestra, two-thirds of which played on a stage in front of a curtain, the other third behind it, and the result was a most satisfying light-and-shade contrast in the music.

One of the most interesting sections of the Contest is that set aside for technical experiment. Only six tapes were submitted this year and the British effort was not well placed in the final judgment. Winner—easily—was Siegfried Neuenhaus, of Germany, with an entry called "Melody of a Big City." This realised the full potentialities of the electronic form, but it was a carefully disciplined effort, with a good rhythmic pattern that gave it coherence.

The Schools section attracted entries from Canada, Australia, China, Poland, Switzerland, Germany, France and Britain, and the tape from the Stan-ground Junior School at Peterborough emerged triumphant. I understand that

this tape is likely soon to be broadcast complete in the BBC Home Service.

The runner-up was from a teacher at an Institut Medico-Pedagogique in southern France, M. Bernard Montclair. He called it "The turtle-doves that would not sing." This was a tape made by a class of mentally deficient children between eight and fifteen—M. Montclair reports that for them the tape recorder is an excellent instrument of re-adjustment.

The class set out to record turtle-doves for classes in other schools with which they exchange tapes. Instead of a straight recording, this tape was an account of the misadventures during the recording session—interruptions by a plane overhead, by a child crying, by nearby church bells. This was a serious subject treated with underlying humour.

(Continued on page 34)

TAPE IN THE SCHOOLS

GEOFFREY HODSON

edits the latest
news and comments

WORKING PARTY WILL PROBE EDUCATIONAL USES

THE National Committee for Visual Aids in Education has set up a small Working Party to investigate how tape recorders are being used in schools and other educational establishments all over the country.

The members represent a wide variety of educational experience.

They will probably be circulating all authorities in the near future, and all teachers who are interested in this work are requested to co-operate.

EURATOM INVITES TEEN-AGE TAPES

THE European Atomic Energy Community (Euratom) has entered the field of international tape recording contests for schools, with a competition open to pupils from 15 to 18 years of age. Either individuals or groups of not more than ten may compete, but University students are excluded.

Entrants are asked to "Illustrate in sound, as expressively as possible, the history of nuclear research throughout the world, and the part which Euratom is playing in this development".

Recording should last half an hour.

There is no entry fee. Each National prize winner will receive 970 dollars, and there will be an additional European prize of 1,940 dollars to the best of the national entries.

The tapes must be in Brussels by February 26, 1961. Full details may be obtained from The Press and Information Office, Delegation in the U.K. of the High Authority, 23, Chesham Street, London, S.W.1.

Courses for teachers

TAPE RECORDING COURSES for school teachers have been held in Dover and Willesden recently. Both have been well attended, and testify to the continuing interest in the application of tape in schools. John Carr, of the John Kelly School, organised the first course, and Miss Avice Allchin, the Kent Speech and Drama Adviser, the second.

International seeks British contacts

A CENTRE International Scolaire de Correspondance Sonore set up in France has become affiliated to the FICS (International Federation of Sound-Hunters), was represented at its recent Congress in Amsterdam, and submitted a majority of the tapes entered in the Schools Section of the CIMES International Contest.

M. Pierre Guerin was present as its representative in Holland and gave a demonstration of the audio-visual aids which are being made available to schools in France by his and similar organisations.

M. Guerin appealed for, and was promised, support from other countries affiliated to FICS in developing sound recording in schools.

His contacts, as shown by the entries submitted to the International Contest through the CISCS, already extend throughout the world, including America, Australia and China.

M. Guerin—whose address is EPA Chanteloup, Sainte Savine, Aube—is now anxious to make English contacts. For a start, he is looking for a school in the South of England ready to exchange correspondence and recordings with a school in France. He would prefer a mixed school, but a boys' school and a girls' school in the same town would be acceptable.

He has in mind the possibility that later there might be exchange visits between the schools which form this link.

The CISCS is run on a non-profit-making basis and maintains its library of colour slides and recordings in association with two other organisations—the Bureau d'Etudes des Techniques Audio-Visuelles and l'Institut Co-operatif de l'Ecole Moderne Francaise.

WELCOME to a new International Contest for schools—announced in an adjoining column.

But tapes of 30 minutes duration! This seems to me to be too long for any amateur recording on one topic. Fifteen minutes—on the evidence of listening to British entries to competitions during the last three years—seems quite long enough to retain interest.

* * *

CONGRATULATIONS again to Stanground V.C. Primary School, Peterborough. Their tape "Our School—a school magazine in sound" has now been awarded first prize in the Schools Section of the International Amateur Recording Contest. Grundig's have arranged a tea-party at the school for Friday, December 9, and have asked Alan Stableford, Secretary of the Federation of British Tape Recording Clubs, to present the school with the Grundig Shield—their award for winning the British Contest.

I think this tape gives an excellent idea of the musical activities of the school, also it includes all the incidental noises which form the background to their daily life. The drama item—a short rehearsal from "Toad of Toad Hall"—is perhaps the weakest part from the listener's point of view. And yet, in another way, it contributes to the strength of the tape as a whole, because there has been no striving for professional gloss.

"Our School" is an honest sound picture of a small part of life in a Junior School. The only adult voice I detected was an involuntary laugh at a particularly loud thunderclap. Remembering how international our lives have become these days, I thought it was a charming touch to include an Italian greeting, early in the tape, from the young daughter of one of the many Italian workers in the Peterborough area.

* * *

ALAN BEEBY suggested on this page recently the establishment of a tape library service for teachers. For various reasons Mr. Beeby has found it impracticable to set up such an organisation, but his enthusiasm has sparked off interest in other quarters. An article in the next issue of this magazine will relate the experience gained with such a library in America and may stimulate action here.

We cannot make too close a parallel with the United States, because education in the two countries is organised on very different lines. But it does seem that we have a decided blank on this subject in this country, and it deserves further consideration.

INTO THE SAHARA WITH A RECORDER

IT seemed that if I wanted to see the nomads I should have to hitch-hike. Apparently the bus service which I thought used to operate between Algiers and French West Africa had been withdrawn because the rapidly expanding airways network in the Sahara had made it uneconomical.

But I did not want to fly over the desert again. I wanted to visit the places where there was none of the air-conditioned living and quick transport of the oilfields. I had decided that I would travel the old way, the way people travelled up till about five years ago. By truck.

My first lift was not just one lorry, but a whole convoy. Their loads were reels of cable for Reggan, the testing ground of the French atom bomb. The convoy was eventually turning off the main route south, but I was welcome as far as the next oasis, El Golea.

There is a brand new tarmac road across the windswept plateau which must be crossed before El Golea and so the journey was simple. But once in the shade of the tall palms of the oasis, my difficulties began. I was seen to take a photo of the truck which had brought me, and the police demanded the films from both my cameras.

The reels of cable were "war stores", they explained, and it was forbidden to photograph war stores. I spent an anxious two hours in the local barracks, and eventually left without my films, even though both were carrying only one or two exposures each. Some time later, after a rapid phone call to Algiers no doubt, the films were restored to me. However, I was to find that the affair was far from over.

Central desert

My next stop was a strange town in the central desert. Built entirely of mud and palm wood, it was one of the hottest places in the Sahara. Its inhabitants were negroes, descendants of the slaves hauled in long caravans from Black Africa until the turn of the last century. Now the town provides most of the manual labour for Edjelah, another rich oil field far to the east, on the Libyan border.

Once a month, a giant Breguet "double-decker" aircraft lumbers in and releases a laughing crowd of negroes, all home for a few weeks' leave. Clutching the portable radios and other valuables they have bought with their earnings, they rush to the barrier. There they meet the relatives and friends

R. W. CUNDY recently travelled to the Sahara to collect material for a book on desert oil prospecting. With him on the journey was a portable tape recorder, and in this the final of his three articles he describes how his "Cub" led to his being branded as a spy.

who have walked the eight kilometres to the airfield to meet them. Meanwhile, the new passengers, a line of grave, bowed heads, face towards Mecca and pray for a safe journey, asking Allah to guard those they had left in the little mud town.

I wanted to record this scene, but: "C'est interdit, M'sieur," said the gendarmes, "magnetophones are not permitted on the airfield."

It was no good fuming at their stupid suspicion, so I packed up the Cub and slouched away, looking disconsolate. This seemed to satisfy them and, as soon as I was in the midst of the turbulent crowd, I set the reels turning again, safely hidden by the natives' long white robes.

The next morning there was a loud knock on my door. A ferocious-looking native soldier stood there and told me, in halting French, that the Governor wanted to see me.

Each of these oasis towns are administered by officers seconded from the French

Army. I count one or two of them among my firmest friends, but this one was obviously under the spell of the atomic bomb security scare.

"Got at"

"You have been seen walking around this town with a tape recorder, Mr. Cundy," he began. "This annoys the gendarmes and so I must ask you to keep it packed in your luggage and refrain from making your recordings here."

My explanations were listened to politely, but I got nowhere. I had the distinct impression that I was being "got at". In the hotel, my only friends were the German Foreign Legionnaires who called en route for a lonely fort in the south. Strolling to the bar with the swagger of the professional soldier, they would stand round after round of beer, at five shillings a bottle and sing sad, lilting songs of their homeland.

The doctor was kind, too. He was a fine example of the dedicated men of the French Army Medical Service, who today are doing their best to eradicate the many diseases which centuries of starvation and insanitary living have brought upon the natives.

He had a large, cool hospital and when I called, with the tape recorder discreetly veiled in a shirt, he was holding his baby clinic. A huge negro nurse explained how the mothers should administer the medicine to their babies. Her voice boomed among the bottles and phials, while the doctor's needle sliding into a tiny black arm produced the most high-pitched squeals my machine has ever been called upon to record.

Grouped outside, in the hospital compound and under a sort of "house arrest" while treatment was going on, were about a dozen young children, all with a scalp disease. Their opening gambit was the same as usual.

"Donnez-moi dix francs, M'sieur." (An indication that I was getting away from the oil-beaten tracks was the fact that they were asking for ten francs as against the hundred demanded in El Golea!). This request was always pitched in a high, plaintive, key. I failed to record it because when I produced the Cub, the children all fell silent, as if in the presence of something of mysterious power. By the time they had warmed to it, we were friends and they would not beg from me.

The best amateur tape recording fan was undoubtedly Ben Yacoub, a little negro boy



Top: The author with some Touareg children who were patients in the hospital at In Salah, one of the hottest places in the Sahara. **Below:** The splendid facade of the hospital

INTO THE SAHARA WITH A RECORDER

who attached himself to me in Tamanrasset.

This town was my objective, the gathering place for the Touareg, the tall nomads who graze their flocks in the deep valleys of the Hoggar, a volcanic mountain range the size of France and lying across the centre of the Sahara. Like many another traveller, I had been drawn south by the stories I had read of these tribes. Unlike the Arabs, the men wore the veil, and the women exposed their faces.

Suspected

I had been given shelter in Tamanrasset by some monks belonging to the order of Petits Frères de Foucauld. Ben Yacoub was their laundry boy and he appointed himself guardian of my little mudwalled cell. He was an idler, albeit a charming one, and the only way I could get him to do the things he had promised, like sweep the floor and fetch the water, was to have a recording session.

During the day I wandered around the town, under the feathery tamarisk trees, photographing the Touareg and trying to make headway with a request I had made in Algiers to be allowed to visit the men who were prospecting for minerals in the Hoggar. Everywhere I met the same, cold faces and the thin, negative voices.

Then I found out.

I had a French friend who was in the Army headquarters and one day he came up to me with a broad smile on his face. He had found a telegram in the office which had come from El Golea. It warned all military personnel that I was suspected of being a British agent and that I must be most carefully watched!

We hurried off to the nearest bar (the only bar) to celebrate. I later had cause to regret that incident in El Golea, because I was denied permission to visit the miners. My journey, too, would have been far more pleasant had I not been suspected at every turn.

“Stolen” voice

But at least my hosts at the monastery

had enough sense to realise that a spy does not wander round with all the instruments of his trade in full view. And, of course, there was always Ben Yacoub to welcome me home in the evening.

One night he brought his friends to hear how, as he put it, I had “stolen” his voice. They stood around, shifting their feet in an awed silence as I set the reels turning. Then Ben Yacoub’s voice burst upon them, telling them where he lived and what was his work. There was an immediate tumult and they all pressed forward, shouting to have their voices stolen, too.

I gave Ben Yacoub the microphone and he turned to interview one of his schoolmates, his little monkey face now stiffened with mock seriousness. The questions bubbled spontaneously and this time it was my turn to laugh. He was so good, I felt like recommending him for the “Panorama” team on the spot.

My last spool

My last spool of tape was used up over tea with the Touareg. My soldier friend announced one day that we had both been invited to come to the tent of a Touareg noble, the brother of the Amenokal, who is their king. At the appointed time we kicked off our sandals and entered the red tent. Sherif, as he was called, sat, grave and veiled in one corner, while his wife, with a merry, handsome face, prepared the tea.

We drank mint tea, the traditional beverage of North Africa. You must drink at least three cups with the Touareg, or else you are thought impolite. Then, with the little teapot put back in the large wooden chest where they kept their valuables, the Touareg treated us to their songs.

As ever, the Cub broke the ice and after a few numbers I saw, to my amusement, that Sherif’s veil was slipping. Some minutes later he threw it down, and I knew that I was accepted as a friend. The music grew louder, the men singing, the women banging their enamel cooking basins and playing a sort of primitive violin. The play-



Ben Yacoub, the “charming idler” (centre) and friends

back sounds to me now a pretty horrible din, but at least it proves that the Touareg are a happy people.

It also proves that, although the tape recorder brought me trouble with the gendarmes, it was a winner at making friends with everyone else in the desert. The tapes do not appear to have suffered from the extremes of climate, either. I kept them and the machine well wrapped during sandstorms and made sure that the loaded spools were cased in silver paper against the effects of any possible electrical storm when flying.

I have plans to travel in the jungle soon and I am already making lists. Since my return from the Sahara I have made one alteration. Instead of the traditional “trinkets and beads-for-making-friends-with-the-natives” item, I have written in, “portable tape recorder”.



Left: The huge double-decker Breguet aircraft arrives on its monthly flight from the oilfields with its “laughing crowd of negroes . . . home for a few weeks’ leave”. Right: The men from the oilfields clutch portable radios and other valuables bought with their earnings, as they rush to greet their friends and relations waiting at the barrier. It was at this airfield that the author met the first barrier in his search for authentic recordings—it was here that he was “got at”



Monitoring and controlling Sports Report. Here a BBC LSU/10 is being used. This is a bass reflex system consisting basically of a twin cone unit to which a Lorentz tweeter was added to extend the h.f. response at about the time when VHF/FM broadcasts started up

SOME years ago the BBC made a series of experiments on listeners' preferences for relative levels of speech and music. These preferences, averaged over many different types of music and varying styles of announcement, were summarised as follows:

Speech following music to be 4 dB down.

Music following speech to be 2 dB up.

Now it should be emphasised that these results are for listeners concentrating on the programme *with full attention*, and what it really means is that under these conditions a listener will probably have a volume setting such that announcements using anything like the high modulation given to the heaviest music passages would be unpleasantly loud. (It also means, by the way, that announcements linking music items should be "edged in" a little.)

When a broadcast or recording is being made, the people in the studio will, of course, be listening very carefully indeed—so for their particular case the preferences given above will, in general, apply. A BBC studio manager, for example, will monitor his programmes at a fairly high listening level—and the same will be true of the amateur recordist, as he plays back to himself the results of his own efforts.

But the state of affairs at the listening end may be very different indeed. And

in making a recording or a broadcast the conditions under which it is likely to be heard should always be borne in mind.

Some further experimental results will underline this: tests were also made on the maximum sound levels preferred by BBC Studio Managers, musicians, and members of the public. It was found that SM's preferred louder music and speech than the musicians did, and very much louder levels than the general public, as shown by the accompanying table.

The figures (Somerville and Brownless, BBC Quarterly, Vol. 3, p.249) were obtained in 1948, before the advent of VHF/FM broadcasting. But I don't think the picture has changed a lot since then.

Finer points

Part of the reason for the diversity of these results is that people professionally concerned with sound are extracting a great deal more information from what they hear, and the greater volume helps them to do so. SMs want to know more about the technical quality of the sound, and hear the finer points of fades and mixes, etc., besides listening for points of musical technique and content.

Musicians, on the other hand, draw on a vast fund of experience of musical form and instrumental quality, and are listening for performance, often disregarding technical quality almost completely (this sometimes makes professional musicians poor candidates for

LISTENING AND LOUDNESS CONDITIONS

ALEC NISBETT concludes his series of articles in which he has compared amateur and professional methods of recordings.

"Desert Island Discs"—they generally want to select cherished performances and tend to forget that the average listener's enjoyment is diminished by surface noise and distortion on old records).

Now, these preferred maximum levels refer only to the case where the listeners, like those concerned in creating the programme, want to listen attentively and have reasonable conditions for doing so. But there are very many occasions when for the vast majority of listeners this will not be the case.

For example, a programme of light or dance music will generally be heard at a much lower level than an orchestral concert (and a great deal lower than the levels shown in the table). It will, in fact, be used for background music.

Background noise

A programme designed for this type of listening would have a much narrower dynamic range (partly accomplished by using a smaller orchestra and by the musical arrangements used) and linking speech would have to be louder, to maintain intelligibility.

To go one stage further than this, there will be cases where there is likely to be considerable background noise at the receiving end, on which occasions it may be preferable to have speech quite a bit louder than the music, in order for it to be clear.

Most BBC programmes are balanced for an audience listening under reasonably good conditions, but not all. Some programmes are directed to an audience, the majority of whom will be listening in relatively difficult circumstances—on car radios on the way home from work, or while preparing meals—and so on. In such a case the ratio of music to speech would have to be altered, and perhaps even revised. In some cases speech may be peaked as much as 8dBs higher than music. If an individual item of music appeals to you and you turn it up, you will find that the announcement following it appears somewhat loud.

Linking together speech items of vary-

	Preferred maximum sound level (dBs above 0.0002 dyne/cm. ²)					
	Public		Musicians	S.M.s		
	Men	Women		Men	Women	
Symphonic music.....	78	78	88	90	87	
Light music	75	74	79	89	84	
Dance music	75	73	79	89	83	
Speech	71	71	74	84	77	

LISTENING AND LOUDNESS CONDITIONS

ing intelligibility presents a special problem, to which there is sometimes no entirely satisfactory solution—particularly in the case where an item containing a great deal of noise and distortion has to be matched to good studio quality.

This problem occurs very frequently in programmes such as *Radio Newsreel*, *From Our Own Correspondent*, and, to a lesser extent in *Today*. If poor overseas circuits are matched by loudness, the intelligibility may be down; whereas if they are lifted to maximum intelligibility the sharp rise in noisiness will be unpleasant.

The least unsatisfactory answer will be found if the insert is matched for loudness at the beginning and end, and lifted for intelligibility in between; the item must be slightly faded in and out.

Acoustics

The same problem often arises in programmes mixing actuality and studio speech—and for amateurs, in mixing items of widely differing technical quality. Remember, too, that acoustics also have a part to play in intelligibility. Bright, well-reinforced speech will be much clearer than that heard in a very heavily damped acoustic, which may sound muffled or “woolly”.

To summarise: there is a wide variety of listening conditions, and for the amateur, who will generally know the circumstances in which his tapes will be heard, these will demand programmes tailored to fit in at various stages between two extremes. On the one hand we have the high intelligibility programme which is suitable for small transistor portables and for the small internal speaker built in to many tape recorders: on the other



Checking the cues of a recorded insert into the news. The loudspeaker is a BBC type LS/3, which has a 15 in. moving coil unit and two h.f. units in a totally enclosed cabinet, the amplifier being housed separately. This compact speaker is now being introduced into many studios to replace obsolete equipment

hand we have the extreme of wide range hi-fi.

The two sets of requirements are largely incompatible—and neither is compatible with the conditions under which the man controlling the sound prefers to listen. I say “the man” advisedly for women seem to prefer a more realistic level. Men balancing dance bands are notoriously fond of high level listening. To create a “splendid noise” by mixing the output of many microphones, and listen with the loudspeaker going full blast is very exhilarating, but may encourage the balancer to disregard the needs of his audience.

Solution

What, then is the solution? Unfortunately there can be no rule-of-thumb answer. It is a question of judgment; of trying to imagine what the audience will hear when listening to your programme. Remember that your own ideas must be considerably coloured by long acquaintance with the material: familiarity breeds acceptance! And there are no short cuts; an AVC, for example, would make nonsense of Ravel's “Bolero”!

One thing I hope I've achieved in talking about loudness in these terms, is to dispel the idea that once you've had a look at the Fletcher-Munson curves (or their more modern equivalents) the subject of listening levels and loudness is exhausted. Such a view of the subject is highly misleading.

And, incidentally, if you think that this business of matching levels is complicated for the amateur, with his restricted monitoring facilities, you might take en-

couragement from having a look at one of the problems which crop up in broadcasting—but not in amateur work.

THE EFFECT ON THE LISTENER

It is reasonable to expect that every tape you hear at a tape club evening will be at a different level, and will require the volume control resetting; but if this happens obviously with successive radio programmes, listeners feel that they have grounds for complaint.

But, in fact, it is both reasonable and necessary to allow different types of programme to set different average volumes. For instance it would waste transmitter power and reduce service areas if all other programmes had to be undermodulated so that an orchestral concert, when it came on, would appear loud enough. It would be unreasonable to require that a play and a talk should have the same average level, when the one requires some volume in hand for dramatic light and shade; and the other needs to be put over at the best possible signal-to-noise ratio.

It is possible to bridge some of the gaps by gradually altering the level of a continuity announcement, or edging in a programme which is going to sound louder than the preceding one—but basically the problem is insoluble. The amateur recordist should be thankful he doesn't have to cope with this one—but when he has to get up and adjust the volume of his radio set he will at least know the reason why.



BBC Studio Manager checking quality during a record programme. This loudspeaker was specially designed to fit into a corner recess. The most suitable distance for monitoring in the studio is between three and six feet from the speaker

CHRISTMAS RECORDER REVIEW



Less than £50 to spend?

IT will be perhaps best to start at the bottom of the price-range bearing in mind, of course, that it will not be possible to mention every recorder on the market. However, we will try to give a good cross-section of those currently available.

At the lower end of the scale we find the **Contronics' Carol**, the cheapest complete tape recorder obtainable in this country. A single speed machine, utilising the B.S.R. Monardeck and retailing for the uncommonly low figure of 19 gns, the Carol should suit those with even the shallowest pocket.

Not quite so inexpensive, but still well down the scale is the first Japanese recorder to appear in this country. The recorder we have in mind is the **Fujiya**, which is available in two versions. The single-speed $3\frac{1}{2}$ ips version costs 23 gns, and accommodates spools up to 5 ins. in diameter. It weighs 8 lbs. only and has a 3 in. speaker. An additional $1\frac{1}{4}$ gns is provided on its brother which costs a guinea more.

* (Continued on opposite page)

A TREND, immediately noticeable at the 1960 Radio Show, was that of increased production of four-track machines. We were quick to point this out and there was much speculation in our columns about this new phenomenon.

But this was not the only factor which emerged at Earls Court this summer. Quietly, the major firms, previously uncommitted to tape recorders, began to jump on the bandwagon by bringing out inexpensive recorders. Ekco, Ferranti, Kolster Brandes and Defiant were among those who decided that an under-£30 tape recorder was a necessary addition to their range of products, and other concerns, already established in the recorder field, joined them.

This tendency has continued to grow, and now the prospective purchaser in the under-£50 range has a very large selection to choose from. A little rough arithmetic showed us that there were something like 80 different recorders available within this price bracket.

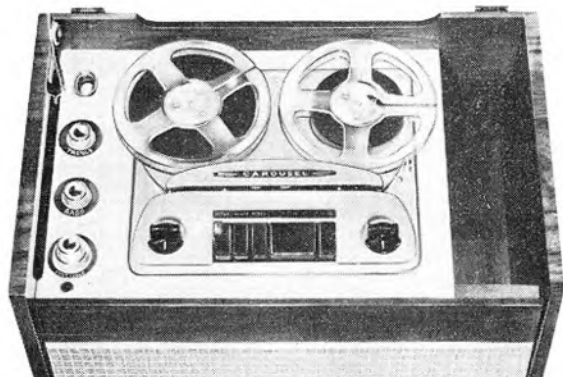
With a few exceptions, the field is divided into three, according to deck. The B.S.R. is easily the most popular and its familiar features are recognisable on nearly all the really low-priced models. Despite its modest cost, it is by no means restricted in scope, for it has been incorporated on some four-track recorders.

Somewhat more specialised is the Garrard magazine-loaded deck. Ease of handling is the prominent feature here and it is obvious that this fact has been much in the minds of the designers who have employed this unit.

Finally, moving away from single speed to three speed, we have the Collaro Studio. This deck can offer a good deal of sophistication—pause control, digital rev. counter, capacity for 7 in. spools—to the recorders which are nearer the upper maximum in this price group.

Apart from these three major categories, there are perhaps a dozen other recorders which employ either their own make of deck, or another of outside manufacture.

It is a refreshing thought that there should be this emphasis on inexpensive models, although it does tend to be rather baffling for the newcomer. For those who are "trembling on the brink" of purchase, we offer the following survey of a representative selection.



Left: Carousel Radiotape, 39 gns.; and the Ekco RT 366

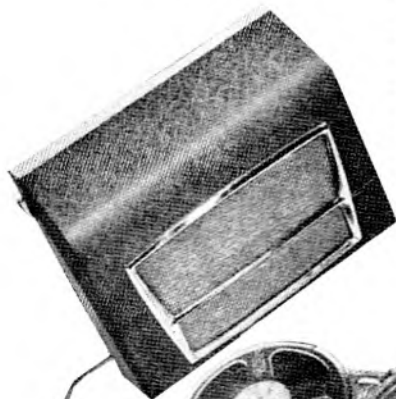
◆◆◆◆◆ THE DECKS ◆◆◆◆◆

THE most widely used decks in present day recorders are the B.S.R. Monardeck, the Collaro Studio, and the Garrard Magazine-loading decks. The main features of these units are as follows.

B.S.R. MONARDECK: Single speed, $3\frac{1}{2}$ ips. Maximum spool size $5\frac{1}{2}$ inches, giving about 45 minutes playing time per track on standard tape. Operation: A joystick control has three active positions: record/replay, fast forward and reverse winding. A fourth position stops all the mechanism except the motor, thus providing pause control. A second control allows choice between record and replay, an interlocking device providing complete safety against accidental erasure. A full 850 ft. reel can be rewound in almost exactly three minutes.

COLLARO STUDIO: Three speed, $7\frac{1}{2}$, $3\frac{1}{2}$, $1\frac{1}{2}$ ips. Maximum spool size, 7 inches, giving a total of 120 minutes playing time per track at the slowest speed using standard tape. Operation: Five piano-type keys provide: start, fast forward and reverse winding, stop, and pause control. Two rotary switch controls give record/replay and speed selection. Later models incorporate a small red button above the "start" key which must be used on "record", to prevent accidental erasure. A digital rev. counter is fitted. Rewind time: 65 seconds for 1,200 ft.

GARRARD MAGAZINE: Single speed, $3\frac{1}{2}$ ips. Maximum spool size 4 inches, giving 32 minutes playing time per track on double-play tape. Operation: The controls have been kept to the absolute minimum: record/off/playback, and a second for fast wind. As the tape magazine incorporated in this deck can be turned over easily, fast wind is provided in a forward direction only. A red button is incorporated to ensure against accidental erasure. A spring-loaded brake fitted to the magazine prevents the spools turning, and so spilling tape, when not in use on the deck. The advantage of the magazine system is that it can be removed from the deck at any time without winding the tape on to one of the spools. When replaced later, the tape will still be in the exact position at which it was originally stopped. Approximate location of recordings is possible by a scale moulded on each side of the magazine.



Top left: The Simon Cymbal, with the Garrard deck; centre, the WyndSOR Victor, with the Collaro Studio; and right, the Robuk RK 3, incorporating the Motek deck

* (Continued from opposite page)
Just a few shillings more is the only recently - announced, **Triumph Top Twenty**—the first recorder by a newcomer to this market. A single, $3\frac{1}{2}$ ips speed machine, it has as its main feature the B.S.R. Monardeck. Facilities for superimposition and monitoring are also provided for a total cost of 26 gns.

The two Italian machines must be included if only to illustrate the availability of $1\frac{1}{2}$ ips on a machine costing only £27 16s. 6d. This low speed occurs on the **Elpico G. 256**. This company have also recently introduced a second machine, the **G. 258**, which gives the ultra slow speed of $15/16$ ths, plus $1\frac{1}{2}$ and $3\frac{1}{2}$ ips for 42 gns. Over three hours recording without changing the tape!

E. K. Cole, as already mentioned, was one of the new concerns entering the tape field for the first time at this year's Radio Show. Their recorder is the **Ekco RT366** priced at 28 gns. and featuring

the B.S.R. Monardeck. A robust-looking machine, the RT366 weighs 22 lbs. and is representative of the other newcomers at Earls Court.

From the new to the well-established.

One of the best known names on the market is **Walter Instruments**. At present they have four current machines, but for the moment we are interested in only two. These are the **101** and **404**. The former is the first of their range and uses the original Mark I deck with a single speed of $3\frac{1}{2}$ ips. Cost: £30 9s. The 404 with an additional speed of $7\frac{1}{2}$ ips is £44 2s. Both employ the unique Walter's joystick with positions for neutral, record, play, fast forward and reverse.

The **Fidelity Argyll** incorporates the B.S.R. Monardeck and adds superimposition, mixing and monitoring to the standard facilities for only £30 9s.

A second speed of $7\frac{1}{2}$ ips is included in the specification of the Monardeck in the **Perth Clarissa Mark III**. With a

price still as low as £30 19s. 6d. this recorder also has superimposition and monitoring facilities.

In the under £40 bracket we cannot fail to mention the **Philips EL 3541**, their cheapest model at £35 14s. This machine offers a single $3\frac{1}{2}$ ips speed, and accommodation for 7 in. spools. Mixing, monitoring, pause control and safety erase are among the features included in the machine's own specially designed deck.

One of the latest recorders to be introduced is the **Robuk RK 3**. This machine incorporates the Motek deck and costs 36 gns. A wide range of facilities provide an insight into the way manufacturers are finding ways of adding more without increasing price.

Only two of the **Elizabethan** range come within the bounds of this review and the lowest priced model is the **Popular Twin-track** at £20 19s. 6d. More ex-

(Continued on page 24)

UNDER £50 REVIEW

(Continued from page 23)



Above left: the Sonic V with the Collaro three-speed deck. Price 47 guineas.
Above right: the Elizabethan FT 1. Four-tracks with a BRS deck.



Left: the EAR G 375 with the Garrard Magazine loading deck.
Above right: the AC/DS Amplion Marine; and below, the two speed, $7\frac{1}{2}$ and $3\frac{3}{4}$ ips, HMV DSR 1.



pensive, and using the Monardeck, is the new FT 1 modified for four-track at £40 19s.

The **Gramophone Company** announced two new machines at the Radio Show, the **Marconiphone MTR 1** and **MTR2**. Both are three speed machines using the Collaro Studio deck and the prices are respectively 39 gns. and 42 gns. The latter machine is slightly larger than the MTR 1.

Another recorder only recently introduced is the **Magnafon Zodiac**. Three speeds are available on the Collaro Studio deck and it is marketed in two versions. The two-track recorder sells at 39 gns. and the four-track version at 45 gns. In common with a few other machines, 18 in. legs are obtainable for a further 2 gns.

The Motek deck also provides the three basic speeds $7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{1}{2}$ ips and has been fitted to the **Balmoral TH 9**. Retailing at £47 5s. this recorder has an output of 4.2 watts and facilities for superimposition, mixing and pause control. Another recorder from the same

stable is the **TH 20**, costing £28 7s. with two speeds— $7\frac{1}{2}$ and $3\frac{3}{4}$ ips—on the Monardeck.

Still the only British machine on the market suitable for 100 to 250 volts AC or DC, is the **Amplion A227 Marine** at £47 5s. Again the B.S.R. deck keeps the price low. This company has a second machine, AC only, with the Monardeck, at £27 6s.

West German Bogen heads are beginning to appear on a number of new recorders. Kurland are among the companies to use these fine-gap heads, notably in the new four-track version of the **Konsolette Four**. With the Collaro Studio as its main feature this recorder has space for a third head for stereo adaptation—and all for 45 gns.

Latest in the **Wyndsor** line of models is the £47 5s. Victor. Again the Collaro Studio is the deck and it has the added attraction of separate speakers. Two watts output is supplied and the recorder can accommodate 7 in. spools. A four-track model costs 49 gns.

Several companies can boast a wide range of models at under £50. The Tape Recorders (Electronics) Ltd. **Sound** range, for example, includes the Belle with its own $3\frac{3}{4}$ ips deck at £27 6s.; the Prince (B.S.R. deck) at £35 14s., two-track, with a de luxe four-track version at £38 17s.; the Studio (Collaro Studio deck) at £44 2s. and its four-track de luxe version at £47 5s.

The highest priced recorder in this review is the **HMV DSR 1**, which only manages to enter the category at £50. With its own specially designed deck the DSR 1 has two speeds, $7\frac{1}{2}$ and $3\frac{3}{4}$ ips, it gives instantaneous monitoring with a three-head system.

At least six recorders use the Garrard Magazine loading deck (see panel). Among these are the **Simon Minstrelle** costing £40 19s. 6d., and **Cymbal** (£25 4s.); **Trixette Comet**, £36 15s.; **Volmar Vega**, £35 14s.; **Murphy TR 1**, £29 18s. 6d.; and the **E.A.R. G 375**, £26 5s. This last machine, we understand, may shortly be superseded by a four-track version at a provisional price of 28 gns.

Sound Effects

ALAN EDWARD BEEBY, who has had long experience in devising and recording sound effects, concludes his present series with a resume on his adventures producing sound effects.

I HAVE often been asked: "How did you become interested in sound effects, and how did you begin?" Well, perhaps the Editor will allow me to digress slightly on this occasion for the purpose of answering this and other queries which have reached me during the past twelve months, since this is the last article of the present series.

My own interest in sound effects goes back to 1942 when I was 13 years old. I'd been taken to see a war film at the local cinema, and a particular feature of this film, naturally enough, was the very authentic-looking battle-scenes. It fascinated me—I don't know why—but I distinctly remember trying to think up ways in which I could imitate the sound of explosions.

At that time, the current craze among the younger generation was a small wooden contraption about six inches long, with a metal container at one end which you loaded with percussion caps, and a set of paper flights at the other. It was, of course, a miniature bomb, and it wasn't long before Master Beeby had latched on to the potential of the thing as far as sound effect experiments were concerned!

At first, results were disappointing; the most I could coax from it was a silly sort of "Crack!" I tried putting more caps in, but the elastic broke and all the caps fell out. Then I got mad with it. I took it indoors, removed the metal container, bored the chamber down a couple of inches further and sank a large nail in the bottom to act as a base for the plunger. Finally, I loaded the bomb with about fifty caps, tied the plunger on with a length of strong sashcord, and took it out into the street.

This time, however, I didn't bother to throw it into the air. Instead, I flung it as hard as I could on to the pavement. There was a flash, a loud bang, and the pavement handed the bomb back to me with considerable force! I still have the scar in the centre of my forehead to this day: a painful souvenir of my very first sound effect!

Some years later, I was given a portable gramophone and began collecting sound-effect recordings. These were all pre-war issues on the old Columbia "Blue Label" series as we used to call them. Quite frankly, the effects themselves were nothing to write home about, and the editing left a lot to be desired.

There was, for example, the one entitled "Audience Laughter" which claimed to have been recorded in a London theatre during an actual performance. Well, they must have been a most appreciative audience because the laughter was continuous throughout the recording with a complete absence of breaks, fades or gradings of any description. It also had an uncanny jerking quality which gave the game away all too clearly. The recording engineers had simply taken something like four or five seconds of laughter and tracked it over and over again until the record-time was filled.

Possibly, you may have already heard the now-famous story of the effects recording which was used in the original London production of Noel Coward's "Cavalcade." This was supposed to represent traffic noises, and consisted almost entirely of one solitary taxi-cab going round and round Eros about 25 times. The trouble was, every time it approached the microphone the driver sounded the hooter, and the whole effect was so ludicrous that on one memorable night, a particularly boisterous audience amused itself by "honking" in time with the recording!

Nowadays, of course, things are vastly different. A good-quality tape recorder offers unlimited opportunities to the serious sound-effect enthusiast. The same tape can be used almost indefinitely, recording and playback speeds can be varied, individual sound-ingredients can be superimposed or mixed-in, the portable recorder can be used for location work under practically any conditions... the field is wide open.

This would seem to suggest that the sound-effect man's job has been made far less complicated. In other words, whatever he wants, all he has to do is to go out and get it. But it's not quite as simple as that. All that these technical advances mean is that the methods of recording and applying sound has been made easier. The problem of finding the required sounds or, if they are not immediately available, of "mocking-up" or imitating them remains the same. This brings us to the ever-present question of the nature of instruction on the subject of sound-effect composition. Should it be technical, or non-technical?

My view is that it should be severely non-technical. The subject of sound-effect composition is complicated enough as it is without wrapping it up with yards of technical snobbery and ridiculously-expensive equipment. It certainly would not make the job of instructing any easier or effective; probably half the readers wouldn't understand it... and the other half couldn't afford it! And, surely, the more technically-advanced and proficient one becomes, the less need one has for instruction...!

"Any amusing experiences?" asks

reader B. Penn of Streatham. Yes, I can think of two. The first happened a year or so ago when a group of enthusiasts invited me to devise an "outer-space" noise for them on tape. After listening carefully to a detailed description of the type of sound they required, I realised, not without some misgiving, that what they wanted could only be produced by an extremely complicated and expensive piece of electronic equipment... which I hadn't got! However, as I had a month in which to come up with something, I said I'd see what I could do.

During the next three weeks I tried everything. Whistle effects, door-squeaks, microphone-howls, the lot. Came the fourth and final week. The cat left home, the dog ignored me, my wife tottered on the brink of a complete nervous collapse, and there was some ugly talk floating around the neighbourhood concerning the possible collective issuing of a Nuisance Summons! But it was no use; I was beaten at my own game and ready to admit defeat.

Believe it or not, my reputation as an "expert" was finally saved by the ingenuity of a young acquaintance of mine (then at the tender age of seven years) who managed to create a near-perfect version of the elusive effect with the following materials: A matchbox, a length of thread, two matchsticks and a button. My sole contribution to this electronic masterpiece was to vary the speed of the tape!

Sound effects can sometimes misfire, especially when they involve the use of gunpowder! A few years ago, I was working with a colleague on the sound effects for a local performance of John Whiting's comedy, "Penny for a Song." To imitate the sound of heavy cannon-fire, we planted a dustbin at the bottom of a flight of concrete steps beneath the stage, placed a maroon inside the bin and ran the leads up to the switchboard in the wings. Now, normally, one maroon would have been quite sufficient... guaranteed, as they are, to split the ear-drums of anyone unfortunate enough to be within 100 yards of the thing!

The producer, however, thought otherwise. He was new to the company, and we hated the sight of him.

Anyway, according to His Lordship, the cannon-fire effect wasn't loud enough, and he ordered us to bring the dustbin up from the basement and to stand it just off-stage. In vain, we tried to point out to him the additional fire-risk involved in exploding the item so close to the scenery, curtains and props. He went mad! "Call yourselves sound-effects men?" he shrieked, "you couldn't load a blank-gun without doing somebody an injury!" That did it. Resisting the temptation to hit him, we decided to

(Continued on page 26)

SOUND EFFECTS

(Continued from page 25)

teach him a lesson. Next evening, instead of using one maroon we connected four in parallel so that they all exploded simultaneously.

The play went on: Act 1, Act 2, the cue came up, the switch was thrown and "B-O-W-W-O-O-M!!!" The whole building shook and shuddered, the scenery "flats" swayed dangerously and people began running about backstage in sheer panic. I remember vaguely wondering if *that* was loud enough for him!

Nerves in shreds, we trooped down to the basement, expecting to find the place completely demolished. What we saw was bad enough. The explosion had torn the sides of the dustbin clean open from top to bottom, the casing of one maroon had ploughed into a pile of prop crockery on a nearby table, and another had almost blasted the handle off the door of the "Gents"! I believe they still talk about that evening.

Our friend, the producer, left the company shortly afterwards. Rumour had it that he went into a rest home, but you know what rumours are. . . .

Now, back to tape. Many of you have asked for details on purchasing professional sound-effect recordings. My advice is to write to STAGESOUND (London) Ltd., 11-12 King Street, Covent Garden, London, W.C.2, or to E.M.I. Studios, 3 Abbey Road, London, N.W.8. These two firms offer excellent service to both amateur enthusiasts and professional production companies alike, and their reputation is above reproach. Unfortunately, this is not always the rule in other cases, as I discovered a few weeks ago when I offered myself as a "mug" on behalf of *Tape Recording Fortnightly* readers. Although I obviously cannot disclose the name of the firm whose business methods occasioned my inquiry, the Editor has invited me to describe my experiences in this direction for the benefit of other enthusiasts who may be interested in purchasing recordings of this kind. I shall be doing so in the next issue.

Meanwhile, I have to thank you for your letters, ideas, suggestions (and criticisms!) over the past twelve months. I trust that I've been able to help you in your search for sound effects, and that you, in turn, have enjoyed reading the articles as much as I've enjoyed writing them.

The Editor has been kind enough to tell me that the series has proved outstandingly popular, and I think there's a special reason for this which owes nothing to my writing ability, the magazine or anything else. It is this:

Sound is as old as Time itself, and its fascination is still fairly new to us because it is only in comparatively recent years that we have learned to "capture" time by means of sound recording. Wax cylinder, disc, wire, and now tape. All these have been milestones in the history of sound recording, and by these means, we can go back in time . . . or forward.

But whichever way we choose to travel, sound effects will always play an important part. They are the link, the vital link, between ourselves and the world of make-believe.

Equipment Under Test

THE GRUNDIG ACCESSORIES

A number of useful items can be obtained to extend the scope of the well-known Grundig tape recorders, and the brief description of them which follows will no doubt be of interest to both Grundig owners and other readers

Stethoscope Earphone (Type STET. 3. Price 3 gns.)

This consists, as the name implies, of two stethoscope-shaped, clear plastic tubes with a lightweight driver unit at the pivot point, and is supplied with a length of light, plastic covered flex and plug to fit the output socket of Grundig recorders, or the Monitor Amplifier, Type MA1.

It is comfortable to wear and enables the user to listen to recordings without disturbing other members of the household. The impedance is approximately 500 ohms.

* * *

Telephone Adaptor (Type T.A.3. Price 3 gns.)

For recording telephone conversations for future reference, nothing could be simpler. A pick-up coil is housed in a cylindrical case with a rubber suction cup attached and when the coil is held near the base of a desk-type telephone, it will pick up the magnetic field produced by the line transformer. It is stuck to the case at the point where the strongest signals are detected when a conversation is in progress.

(It won't record your telephone calls while you're in the bath—the receiver still needs lifting!)

* * *

Monitor Amplifier (Type MA1. Price 4½ gns.)

This is a two-transistor amplifier, in a grey metal box measuring about 5½ x 2 x 1½ inches, which draws its power supplies from the recorder to which it is connected. In conjunction with the earphone described above, it enables synchronised dual-track recordings to be made, the user listening to the first track through the monitor amplifier whilst recording the second track. A circuit diagram is supplied, which will simplify maintenance.

4-Channel Electronic Mixer (Type G.M.U.3. Price 16 gns.)

This type of unit is a "must" when more than one microphone is required to record multiple sound sources, such as orchestras, etc.

The level is individually controlled on each microphone channel and this enables the correct balance to be maintained between performers when recording such items as a vocalist with musical accompaniment. The unit has its own built-in power supply.

* * *

Connecting Leads

Several different leads are available, each one terminated with the appropriate plug for connection to the recorder.

Type SL3 (8s. 6d.) For all input and low impedance output connections.

Type SL33 (10s. 6d.) For all input, and low and high impedance output connections.

Type SL233 (15s.) Connects T.K.24 recorder to Grundig radio receivers with "Diode" output.

Three extension leads for type G.D.M.12 microphones (as supplied with the T.K.24), are available in lengths of five yards (MEC5—30s.), ten yards (MEC10—37s. 6d.), and 15 yards (MEC15—45s.).

* * *

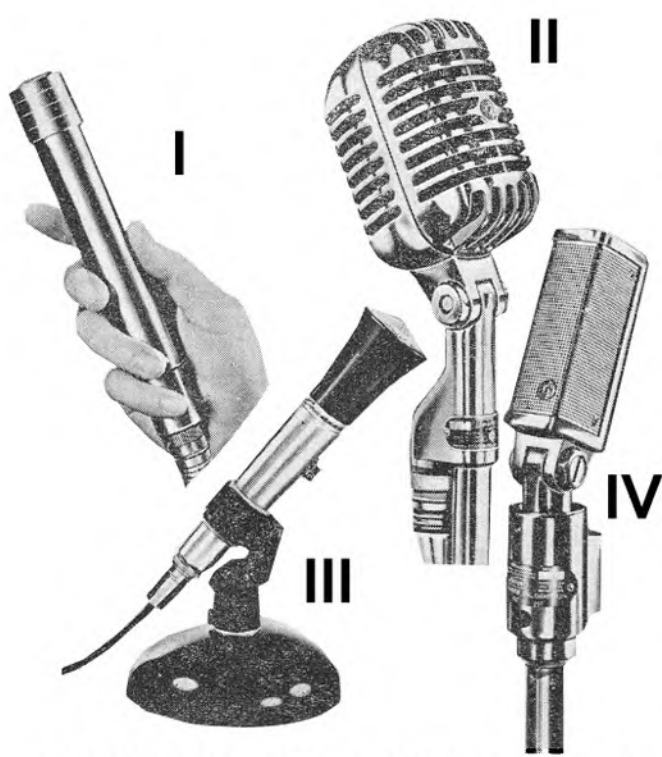
All of these accessories are fitted with continental-type plugs and sockets, so that non-Grundig owners, contemplating purchase of one of the above items, must be prepared for possible plug or socket changes.

Further information on this equipment, and on microphones, tapes, etc., can be obtained from the makers, Messrs. Grundig (Gt. Britain) Ltd., 39-41, New Oxford Street, London, W.C.1.

A.B.

New Products

SHURE INTRODUCE COMPLETE RANGE TO U.K. MARKET



The complete range of Shure microphones and accessories is now available in the U.K. This announcement has been made by the company recently made responsible for distribution of the Shure products in this country.

Included in the comprehensive list, are the four microphones illustrated: I—Model 535, the "Slendyne" dynamic mic retailing at £25 7s. 6d.; II—Model 55S, the "Unidyne" dynamic mic, at £29 1s.; III—Model 420, the "Commando" series controlled magnetic mic, at £13 9s. 6d.; and IV—Model 330, the professional "Uni-Ron," at £42.

The range includes models for all aspects of recording with cardioid, omni-directional and bi-directional characteristics. Specially matched sets for stereo are supplied at no extra cost.

Ribbon, dynamic, controlled-magnetic, crystal and carbon elements are employed, and transistorised controlled-magnetic units for direct replacement of carbon microphones are also available.

J. W. Maunder, 95, Hayes Lane, Beckenham, Kent.

PRINTED CIRCUIT CONNECTORS

BELLING & LEE have recently developed a new connector for use with "ribbon feeder." The latter is a flat, flexible, insulated ribbon containing a number of parallel copper foil strip conductors for use where space is limited, frequent flexing is necessary or in the interconnection of printed circuits, and the connectors, which can give 8 or 18 ways, have a variety of applications.

They can be installed to fit free or fixed sockets, to fit directly on to a printed circuit. They can also be "stacked" to save space.

Belling & Lee Ltd., Great Cambridge Road, Enfield, Middlesex.

PRESENTATION SET BY METRO-SOUND

METRO-SOUND have now introduced a Tape Accessory Presentation Set which should make especial appeal as a Christmas gift.

These sets each contain the complete range of Metro-Sound exclusive tape accessories: Klenzatape, for cleaning the recording and erase heads; Metro-splicer, suitable for both tape and 8mm cine film; Metro-Tabs, the instant and positive method for tape record recognition; a tape deck cleaning brush made of specially angled feathersoft nylon; plus many spares.

An added inducement to purchasers is that while the contents would individually total a retail price of £2 4s. 9d., the price of the presentation set complete is only £2 2s.

Metro-Sound Manufacturing Co. Ltd., 19a, Buckingham Road, London, N.1.

Tandberg announce new deck

APPPOINTED sole British Tandberg distributors, Elstone Electronics have introduced the Series 6 tape deck which can record and playback in stereo or mono.

The new deck incorporates a three-head four-track system, with the erase head wired for single and double track erasing. Three speeds are available, 7½, 3½ and 1½ ips.

Two separate recording amplifiers are included, with ganged concentric controls for mixing and balancing, and two separate playback amplifiers with ganged concentric volume controls.

Each channel has one microphone input using a standard jack plug, also one high-level and one low-level input using standard midget co-axial plugs.

Two magic eye recording level indicators are fitted.

Facilities are included for monitoring, superimposing and straight-through

amplification. Features include push-button controls; digital rev. counter; automatic stop when metallised leader tapes are used; and hysteresis synchronous motor.

The frequency response is quoted as 40-11,000 cps ±2dB at 3½ ips. Signal-to-noise level is rated at 55dB below maximum recording level, and wow and flutter is given as .2 per cent r.m.s. at 3½ ips.

Weighing 25 lb., the Tandberg 6, housed in a teak carrying case is priced £115 10s.

Elstone Electronics Limited, Edward Street, Templar Street, Leeds 2.

New Recorder

WHOLESALEERS H. E. Kettle Limited, of Maidstone, Kent, announce the addition of a tape recorder to their wide range of equipment.

Their new recorder is the Knightrider, a single-speed, 3½ ips recorder, incorporating the B.S.R. Monardeck.

The frequency response is quoted at 60-9,000 cps for 6dB down.

Retailing at £25, the Knightrider includes high and low level inputs, a neon recording level indicator, and volume and tone controls.

Output is rated as 2½ watts through a 7 x 4 in. elliptical loudspeaker.

Maximum spool size is 5¼ inches, providing a total playing time of three hours using double-play tape.

Designed for 200-250 v., 50 cycles AC operation, the machine is supplied with a crystal microphone and 850 ft. of tape.

H. E. Kettle Limited, Knightrider Street, Maidstone, Kent.

FI-CORD 101

ABACK-SPACING system has been introduced by Fi-Cord for their 101 portable dictating machine.

The system, which takes the form of a small motor-unit attached to the transcriber, is operated by the electronic foot-pedal which controls the transcriber's stop-start mechanism. Half-pressure on the pedal provides the normal stop-start process—full pressure gives back-space.

The new transcriber units, available at the end of November, will cost £21.

Fi-Cord International, 40a, Dover Street, London, W.1.

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FOUR TRACK: FINAL COMMENTS

MR SILLITOE apparently thinks I was making a lot of fuss about nothing and being quite illogical. Likewise, Mr. Spring, of Grundig, who, for obvious reasons, backs the Grundig system of 4-track recording. I think both missed the whole point of my argument.

I'm quite willing to agree that when you have no intention of exchanging tapes and when you record an occasional reel only, it doesn't matter much what you call the tracks or in which order you record them, so long as you know yourself which track is which, so that you don't accidentally record over a previous recording you wish to keep—which is much easier to do on a 4-track machine, if you have no positive identification of the tracking system.

Every single person I have spoken to, who uses the system advocated, of recording the two outer tracks first and then the two inner tracks, has become mixed up as to which track he is recording on and many times have I been asked to "change to Track 2" when, in fact, the continuation of the recording is on Track 3.

On the other hand, those who use the straightforward system I suggested of calling the tracks 1, 2, 3, 4 from top to bottom of the tape (which all recorders, except Grundig, do at present) and then recording these tracks in the same sequence of 1, 2, 3, 4, never appear to have any difficulty in visualising which track they are using, and never have to back track and start again because the track switch is in the wrong position.

As for exchanging tapes with dual-track owners, no confusion arises. You simply leave the track switch in the Track 1/4 (or Grundig 1/2) position and

forget it, carrying on as if your recorder was an ordinary dual-track machine. There is no actual standard requiring that dual-track recordings be numbered 1 and 2, as there is little likelihood of confusion. In fact some machines call them A and B and they are marked A and B on some makes of tape spool.

Mr. Spring's assertion that only one standard for dual-track existed until in 1954 the whole lot suddenly reversed the standard from bottom to top track rather begs the question. As anyone who has been recording for several years knows, there was quite a lengthy period when recorders of both types were on sale, and even a few which used tape spooled inside out to present-day standard. If only one standard was actually in existence, it's most surprising that it was not chosen as the International Standard. Of course, a standard had to be found, since recordings made on the two different types of machine were mutually incompatible and could not be exchanged. When the new standard came into being, a large number of machines were made obsolete and there was quite a brisk business in swapping heads over until things began to settle down.

I can assure Mr. Spring that linking two recorders together for stereo works very well indeed with the Philips EL3542. I suggested it to a dealer who specialises in stereo recorders. He seemed dubious at first, but, on trying it out waxed highly enthusiastic, saying the results were quite as good as, if not better than, most of the stereo recorders he had heard.

DONALD JEATER.

Weymouth.

... easier to visualise ...

WHEN recording on virgin tape it is, perhaps, an advantage to have the tracks numbered in the order in which they are recorded—1, 4, 3, 2 from top to bottom of the tape. But when one is playing back previously recorded material or recording on tape which already contains earlier recordings, the order in which the different tracks are recorded on virgin tape is not only irrelevant but misleading. It is much easier to visualise the position of the track required if the tracks are numbered 1, 2, 3, 4 from top to bottom of the tape.

If the tracks are numbered in this way, the position of recordings can easily be indexed by noting which side of the tape has been used and whether the track switch was in the 1/4 or 2/3 position. Thus, the first recording made on virgin tape would be indexed as "I, 1/4," the second as "II, 1/4," the third as "I, 2/3," and the fourth as "II, 2/3." Using this system and with the tracks

numbered consecutively from top to bottom, there is no difficulty in deciding exactly where a required track is on the tape.

J. F. LING.

Llandoverly, Carmar.

... N.B.: clean tape

IHAD tapes which were recorded on a twin-track machine when I got my present Philips 4-track model. As my friends had only one twin-track machine I recorded only two tracks without moving the track selector. When my friends played them back on twin-track machines part of the first recordings could be heard.

I think attention should be drawn to the fact that before recording on a 4-track machine material to be played back on a twin-track model, the tape must be completely clean.

THOMAS DEVINE.

Battersea, S.W.18.

FOUR TRACK: FINAL COMMENTS ... THERE IS NO CORRECT SEQUENCE ...

THE plain fact is that there is *no correct sequence*. One records on whatever track is available on the particular tape.

The majority of tape enthusiasts who have changed to four-track will want to keep their existing recordings and will now use the inner tracks.

I prefer the Telefunken recommendation:

Side A, tracks 1 and 2.

Side B, tracks 1 and 2.

So simple and so easy, especially if you tie up your coloured leaders on the tapes so that they all match, i.e., Side A, green; Side B, red.

Let's not hear any more of this four-track ballyhoo.

Congratulations on an excellent magazine.

G. C. PHILLIPS.

Castle Bromwich, Warwickshire.

... interest first then boredom

IHAVE read the letters dealing with the 4-track controversy in your columns, with interest at first but latterly with boredom.

Clearly, there is no immediate solution to the problem. Those people who want the added advantages of four-track should be prepared to accept the increased complexity in their machines. It is all right to talk about standardization, but if a manufacturer has found a genuine reason for arranging his equipment in a certain way and has been doing so for some time, I can appreciate his hackles rising when it is suggested that he change his ways, however much a minority group his product represents.

This is not to say that I necessarily support Grundig's position. But surely if the problem does become acute, standardization will automatically take place. There are very few fields in which this has not happened in the past.

D. BRONSTEIN.

South Kensington.

This correspondence is now closed.—
EDITOR.

**Have you an idea, a complaint,
or a bouquet to hand out? Write
to us about it. Letters not for
publication should be clearly
marked**

Letters to the Editor

Would cheaper tape be used?

MR. PETER TURNER (October 19 issue) demands a reduction in the price of tape and points out how much cheaper tape is in America. No-one can deny the facts, but how many would use cheaper tape if they were offered it?

In my experience of recording over the past eight or nine years I have met and spoken to a very large number of people expressing the view of Peter Turner. During that whole period I have offered cheaper, and in some cases better, tape to such people than the tape they were then using, and I have yet to meet many who are prepared to pay less than the top prices.

No dealer is going to stock cheaper tape, and no manufacturer is going to make any untoward efforts to sell a

cheaper tape, if the majority of people refuse to try it.

Most manufacturers already make several grades of tape, each ideal for a certain type of recording, and most of us have no necessity for expensive tapes.

There is available cheaper tape than most people are now buying. Demands for cheaper tapes will make the tapes that are now already cheap even cheaper.

I can only hope Peter Turner meets with greater success than I have. People, in fact, whatever they say, just do not want it. I never use expensive tape and my present tape has been praised and appreciated all over the world.

MARK DALRYMPLE, Bart.

Treasurer, Edinburgh Tape Recording Club.

Only lower prices can help us

MAY I express my gratitude to Mr. Peter D. Turner for pointing out (October 19 issue) the only solution to the economical problem of tape recording acceptable to serious amateur recordists: reduction of the tape prices. Four-track, or for that matter (horrible future prospect!), even eight-track, offers us no solution to this problem; neither do slower speeds, because we do not want to give up the recording quality and editing ease which we enjoy with 7½ ips.

My own mains recorder, for instance, is a three-speed machine; though its reproduction at 1½ ips is better than that of many other recorders at the 7½ ips speed, I have never used this lower speed to record anything for keeping, and only about ten per cent of the recorded material in my tape library is taped at 3½ ips.

As to four-track recorders, I would never have bought one; in fact, I would gladly equip myself with a full-track machine if semi-professional ones were obtainable. And only because I, like Mr. Turner, and most others who regard their tape recorders as creative media, put quality first and not last. For us, only reduced prices for tape can help.

With the mass production methods of today, I am sure the present retail prices can be reduced by (at least) one-third and still give reasonable profits to both makers and dealers.

If there are reasons why a price reduction cannot be effected yet, who'll be kind enough to step out of their ivory towers to tell us what those reasons are, and when we can expect a reduction?

BIRGER FORMO.

Aalesund, Norway.

The cost of recorders in the Antipodes

IREFER to the letter from Mr. R. D. Fenton, of Hastings, New Zealand (November 2 issue), and would like to point out one or two matters relating to marketing prices in Australia and New Zealand.

It is incorrect that Grundig products are exported to New Zealand at British retail prices. I think the confusion arises due to the application of duty, which is based on the home market domestic value. Goods shipped to both

Australia and New Zealand are at the lowest possible price, but, of course, insurance and other charges add considerably, whilst the duty is extremely high.

I trust that this information will interest your subscriber and others who may take your valuable paper in the Commonwealth countries.

V. P. COLE.

*Sales Director, Grundig
(Great Britain) Ltd.*

NEW TWO BRILLIANT FOUR TRACK TAPE RECORDERS SOUND STUDIO de luxe



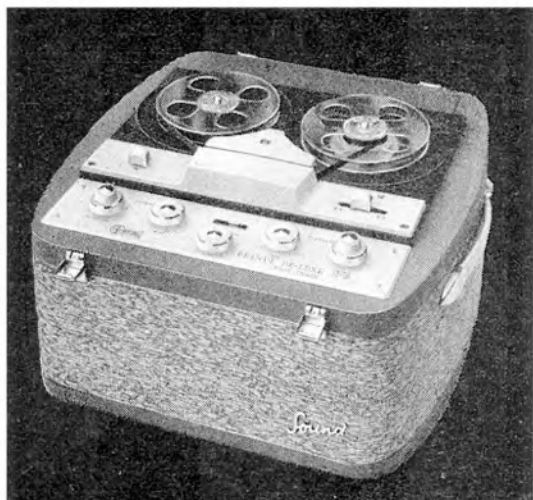
- 4 Tracks
- 3 Speeds
- Monitoring, Mixing and Superimposing Facilities
- Piano Key Operation
- Can be used as Amplifier

This sensational recorder makes the most of every inch of tape . . . giving up to nearly **18 hours record and playback time.**

Three speeds— $7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{7}{8}$ i.p.s., and the frequency response is an amazing 50 to 16,000 c.p.s. at $7\frac{1}{2}$ i.p.s. The Studio has a handsome two-tone case and is fully portable. With visual place indicator.

45 gns. complete with high gain crystal microphone, spool of tape etc.

SOUND PRINCE de luxe



- 4 Tracks
- 6 Hours Playing Time
- Adaptable for Stereo
- Mixing, Monitoring and Superimposing Facilities

The Sound Prince de Luxe gives true high fidelity performance for only 37 gns.—plus a host of features normally found only on expensive professional machines!

It has a frequency response of 60 c.p.s. to 12,000 c.p.s.; magic eye recording level indicator; safety interlock on controls; and it can be used as an amplifier for public address work.

37 ONLY gns. complete with crystal microphone, spool of tape etc.

Write now for details of the complete range of nine models from the Connoisseur de luxe (at 70 gns.) to the Belle (at 26 gns.)

TAPE RECORDERS (Electronics) LTD.

784-788 High Road, London, N.17 Telephone: TOTtenham 0811-3 Cables: Taperec London

FLEET STREET LOOKS US OVER

It is salutary to "see ourselves as others see us" and so we reprint alongside an article which has recently appeared in *The Guardian*. Naturally enough, this magazine is taken as the clearest and most reliable mirror of the world of tape.

Stereo Notes

By D. W. GARDNER

A STEREO DEVELOPMENT COUNCIL?

ONE of the facts of life in all audio matters is that developments often depend on favourable "climatic conditions" rather than on the intrinsic value of the product. Modest developments that fit in comfortably to an existing pattern can prosper from the word go, while an idea that is capable of bringing far greater benefit will struggle for existence for years simply because it is not able to start off as a large-scale selling proposition. Something of a vicious circle takes control and the thing lags and languishes.

Pre-recorded stereo tapes are an example. There are not enough of them. One of the reasons for this is that there are not enough stereo recorders to stimulate demand. And there are not enough stereo recorders about because people can see that there are not enough stereo tapes to play on them.

Again, retailers do not stock enough of the tapes that are available because they feel that they might be on the shelves too long and develop print-through.

I have always felt that we need a Stereo Development Council, manned by industrial, trade, technical, publicity and press representatives, to attack operational difficulties such as these and to run a joint campaign on behalf of stereophonic reproduction generally.

Stereo is one of the finest things that has happened for years and it deserves to be "sold" to the public in the biggest way possible.

Leaving it to win through on its own merits may well mean, in today's conditions, that it has to scramble through jungles of totally unnecessary commercial difficulties.

DO-IT-YOURSELF TAPE RECORDING

Musicians' Union alarm

BY OUR OWN REPORTER

The logical nickname for the amateur tape recording enthusiast is, surely, tapeworm. But no such frivolity is admitted inside the movement, which gets a capital "M" in the "Tape Recording and Hi Fi Magazine."

"Voicespond" and "tapespond" he may, with others at home and abroad, but he is a serious fellow, an amateur recordist and nothing less, engaged in "the art and science of tape recording."

He can join a club and his club can join a federation. The Federation of British Tape Recording Clubs is the rallying point for the defence of the recordist's "rights" against the attacks of the commercial recording interests.

A year ago the federation issued a policy statement for the guidance of amateur recordists on the problem of copyright where it affects recording. Amateur tape recording has obviously come a long way in a very short time; for 10 years ago tape recorders were purely the tools of such specialised professionals as the BBC, and were unavailable at less than £450. They can be bought today as a teenager's toy for less than £30.

"Sheer poaching"

All recorded music is regarded by the Musicians' Union as harmful to the livelihood of the professional musician. The gramophone is menace enough; but the do-it-yourself recording of records is worse. The union speaks more loudly for the gramophone record companies on this subject than the companies do for themselves. Mr Harry Francis, assistant secretary of the union, said:

"They're bound to be very worried indeed about the increasing sales of tape recorders and the increasing number of clubs. A club member can borrow a classical record from a library, tape it, and pass the tape round to all his fellow-members. Then there are the teenagers. One with a tape recorder can tape a pile of 'pop' records and use it for a dance."

This was sheer poaching. "The people who are talking about Government legislation and licences to control tape recording have missed the boat. I think it's too late. But more power to anyone's elbow if he can stop this menace to the music profession."

The union has arranged prosecutions in some cases of "poaching" where the tape recordists were clearly making money out of their activities. Mr Francis said: "We have not taken any action against any of the youngsters yet, although we've scared some of them a bit."

If you can't beat 'em . . .

Any tape recording of music or any other performance, even if it is made and used strictly in the recordist's home, is a contravention of the Copyright Act of 1956 if the permission of the copyright holder is not obtained. Permission may often be needed from the owners of the copyright in the music and the record, and the permission of the BBC; and if the tape is going to be used in public a licence from the Performing Right Society is also required.

A sales executive at Electrical and Musical Industries, who put out His Master's Voice, Capitol, Columbia, Parlophone, and Top Rank records, said that his firm had also taken legal action in a number of cases of copyright infringement by tape recordists. The recordist was obviously a danger to the record companies, because "where we ought to be selling a record to six teenagers we can be selling to only one."

His company, like all the others, was "constantly watching the situation." If he did not sound as worried as Mr Francis, it has to be remembered that EMI is the biggest manufacturer of recording tape in Europe and also sells a very large number of tape recorders.

The tape clubs' federation, feeling that the commercial interests were paying uncomfortably close attention to its members, pointed out, in its policy statement, that the activities of the clubs were largely misunderstood. Mr Fred Chandler, who writes about the clubs in "Tape" magazine, put their point succinctly when he said that they would be offended if they were bracketed with the pop-recording teenagers and "the people who think the tape recorder is a good gimmick for parties."

A juicy squelch

The clubmen are deeply interested in the technical aspects of sound recording and when this involves the use of copyright material it is quite incidental to their club discussions. There is also a creative side to club activities. The production of tapes is the clubs' primary interest as photographs are of photographic clubs. The federation states: "We have not heard it suggested that these clubs should pay a licence fee on the grounds that the equipment they use is capable of producing copyright pictures."

There are about eighty tape-recording clubs, not all of which are in the federation. One club has a baronet among its members. They, and the individual recordists, put their art and science to the test at the annual British Amateur Tape-Recording Contest. The award of the Tape of the Year prize went this year to a tape providing "a tense 15-minute drama of a condemned man's last hours before going to the gallows."

The contest had a schools' section, which was won by a tape consisting of "15 minutes of pure joy from Stanground V.C. Primary School." The winner in the club section was a tape called "Ban the Phon," which was "a good-natured satire on the nuclear disarmament campaigns."

The tape makers worry about realism—can there be too much or too little? in their tapes. "As to your suggestion," writes a reader of "Tape," "for a nice juicy squelch as the villain finally perishes under the steamroller . . . well, I think, perhaps, this is a bit too much. Oh, I don't know, though." He was, at the time of writing, collecting material for a 60-minute tape dealing with the imprisonment, trial, and execution of Mary Queen of Scots.

Classified advertisements

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

SERVICES

Tape recorder need repairing? Then let London's Largest Tape Recorder Specialists do it for you, expertly and economically. Essex Tape Recorder Centre, 2, Maryland Point Station, Stratford, E.15.

FERROGRAPH 4 A/N's-808's, VORTEXION WVA, WVB, SIMON SP4, REFLECTOGRAPH A-B, etc., always in stock and ready for immediate delivery, as well as over 200 latest 1960 recorders at London's Largest Tape Recorder Specialists. The best, lowest H.P. terms, and finest selection of new and s/h recorders, from £18. Generous P/E allowances. Essex Tape Recorder Centres, 2, Maryland Point Station, Stratford, E.15, and 205, High Street North, East Ham, E.6.

EASYSPLICE TAPE SPLICER makes tape splicing simple, easy and accurate. Guaranteed 5s. Easysplice Co., 30, Lawrence Road, Ealing.

EMITAPE NEW GOVERNMENT SURPLUS. 1,200 feet on 7 in. super reel. 22s. 6d. each or five for 5 guineas. C.W.O. Lewis, 99-107, York Road, London, S.W.11.

GRUNDIG sales/service in your area: High Wycombe phone 457, Newbury phone Thatcham 3327, Wallingford phone 3083, Orpington Kent, phone Orpington 23816, New Malden phone Malden 6448, Watford phone Garston 3367.

FOR SALE

VORTEXION WVB. One month, perfect, originally £110. Reslo microphone. Offers Connor, 27 Lancaster Gate, W.2.

GRUNDIG TK.60 Stereo. Record/Replay. Little used. As new. 95 guineas. F. Westcott, 40 Fontwell Park, Ashford, Middlesex (Ashford 4277).

FERROGRAPH 808 absolutely as new, cost 105 gns. Must sell. Accept 85 gns. Box No. 402, Tape Recording Fortnightly, 1 Crane Court, Fleet Street, London, E.C.4.

BUTOBA — Battery/Mains recorder complete with mains unit and Gramplan DP 4 microphone. Cost 88 guineas three months ago. Bargain at 70 guineas. Westcott, 40 Fontwell Park, Ashford, Middlesex. (Ashford 4277).

Something to sell?—equipment for exchange?—looking for a job in the hi-fi tape field?—seeking a tape contact abroad?—tape-to-disc services to offer?—expert staff needed? A classified advertisement in Tape Recording Fortnightly will bring you quick results—cheaply.

Ferrograph 4 AN, 6 months. Reslo microphone. Tapes. Extras. Perfect. Cost 100 gns. £55 for quick sale. Box F518, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

WANTED

Eddystone or good communications receiver wanted. Write stating age and model. Box W503, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Wanted. Latest model FICORD, complete, in mint condition. £40 offered. Box No. 401, *Tape Recording Fortnightly*, 1 Crane Court, Fleet Street, London, E.C.4.

Wanted, good GRUNDIG recorder. F. Riddle, 113 Church Road, Northolt, Middlesex. VIKing 4734.

SITUATIONS VACANT

Experienced manager required for branch of leading London tape recording and hi-fi dealers. Excellent opportunity with expanding organisation. Our present staff know of this advertisement. Write stating age, experience, etc., to Box SV507, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Development engineer required by one of Britain's top tape recorder manufacturers. Radio and some mechanical experience essential. Box SV517, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

SITUATIONS WANTED

Sales representative with wide experience of radio field. National connection with retailers (temporarily out of industry) seeks post with tape recorder or hi-fi manufacturer. Refs. available. Box SW511, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

TAPE-TO-DISC

Tape to disc facilities. All speeds, modern equipment. Very competitive charges. West End of London. Write Box TD508, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

TAPE TO DISC RECORDING. Microgroove LP from 27s. 6d., 45 rpm EP—20s., 78 rpm—11s. **48 HOUR RETURN SERVICE—FINEST QUALITY.** S.A.E. for comprehensive leaflet to: A. D. Marsh ("Deroy Sound Service"), 52 Hest Bank Lane, Hest Bank, Lancaster.

Tape to Disc—All Speeds. Rendezvous Records. 19, Blackfriars Street, Manchester 3. Leaflet on request.

MISCELLANEOUS

Fabulous offer of American "Hi Tone" high quality magnetic recording tapes. Brand new and guaranteed. A special bulk purchase enables us to offer you this amazing bargain: 5 in. 600 ft. Standard Play tapes at only 12s. 11d.! Complete on reel and boxed. Acetate base. Full frequency, 20-20,000 cps. Balanced reel. High output. Low distortion. Ideal for all tape recording purposes. P. & P. on one spool 1s.; two spools 1s. 6d.; three spools 1s. 9d.; four or more free. Trade inquiries invited. Callers welcome. Lacknu Ltd., Dept. HF1 11, Cricklewood Broadway, London, N.W.2.

Can a reliable repairer near Shrewsbury collect, estimate for, and overhaul a Truvox Tape Recorder and Radio Attachment. J. Johnson, "Funnette" Longden Common Lane, Nr. Shrewsbury.

Recordist, semi-pro., specialising in weddings would co-operate with any enthusiast that can secure this type of work. London. Box M505, *Tape Recording Fortnightly*, 1, Crane Court, London, E.C.4.

Do you use the telephone? If so you will find a Dektron Telecon the most useful of all your recording accessories. The Telecon is not just a novelty but a unit which you will use frequently for both family and business purposes. You will be surprised by its efficiency. Just stand it behind the phone (no connection is necessary) and both sides of the conversation can be recorded, or, if you wish, amplified and broadcast to listeners in the room. The price—only 27s. 6d. post free. To ensure delivery by return post write today to Dektron, 2, Westbourne Road, Weymouth.

WAL GAIN transistorised pre-amplifiers. Many applications, extra gain for Mics, Tape Heads, P-U's, etc. Mono version, £5. Stereo, £7 10s. WAL BULK TAPE ERASER, both tracks 8-in. reel erased 30 sec., £7 18s. 6d. WALTRAK transistorised oscillator, 1,000cps, indispensable for Service, £6 10s. Full technical literature sent, supplied through all leading dealers. Wellington Acoustic Laboratories Ltd., TRC Dept., Farnham, Surrey.

PRE-RECORDED TAPES all makes, 7½ and 3½ ips., send for free lists or visit TELETAPE (Dept. TR6), 33 Edgware Road, W.2. PAD: 1942.

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

News from the Clubs

IN our October 19 issue we published an article by Kenneth Blake entitled "North Sea Saga". This was an account of his adventures on a fishing trawler off the East Coast of England.

Having dealt with the article editorially I had become interested in "the Saga" and I was naturally pleased to accept Alan Stableford's invitation to attend a meeting of the **London** society on November 10 when a tape-slide show of Mr. Blake's adventures was being shown by the author.

I am not, of course, able to cover comprehensively the slides we saw that evening. However, if this is a fair indication of the activities which I have so frequently mentioned in the past, in connection with club nights, there is nothing ailing British tape recording clubs at the moment.

Apart from one or two hilarious moments when Mr. Blake's commentary laid dubious emphasis on certain aspects of some slides, the programme had been masterfully organised.

Congratulations Mr. Blake—and the London club for booking him as a speaker. Incidentally, Mr. Blake informs me that he is willing to present his programme to any interested clubs in the London area. Please write to him at 8 Gables Avenue, Boreham Wood, Herts.

On the same topic of club demonstrations I have heard from one or two manufacturers who are willing to demonstrate their equipment on receipt of written requests. Among these are: Walter Instruments Ltd., Grundig (Gt. Britain) Ltd., and Allegro Sound Equipment Ltd. For these initial offers, letters of request can be sent to me for forwarding. As the list of manufacturers grows we will include details in a special panel on this page.

I would like to encourage this liaison between clubs and manufacturers and am particularly pleased to note that a number of the latter are also encouraging the clubs to greater efforts by closely associating themselves with the activities of the members. In **Wakefield**, for instance, when the local club organised a tape recording exhibition on October 29 a number of well-known manufacturers exhibited their products too. Walter, Irish, BASF, M.S.S. and E.M.I. were among the names displayed. Wakefield dealers Messrs. Farnell and Lodge Radiovision also provided displays.

It was estimated that approximately 1,000 people visited the exhibition, including members of clubs in Leeds,

Barnsley, Rotherham, Huddersfield, Keighley and as far away as Hull.

Our own posters were used to decorate the club's stand while in the demonstration room, films prepared by BASF and Irish tape manufacturers were shown. Other items of interest included a stereo recording given by members of the Wakefield Little Theatre, a tape-slide show of a holiday in Scotland, and stereo tape demonstrations. Although the club incurred a small financial loss, the secretary wrote to say it was socially a great success, and a further exhibition is to be arranged.

A demonstration of the Sceptre four-track tape recorder by Mr. Neve of C.Q. Audio Ltd., was the main item of the latest meeting of the **Weymouth** club. Mr. Neve also presented an interesting lecture on hi-fi speakers.

At the club's previous meeting secretary Gordon Butler provided a tape recorded crossword as part of the evening's activities. It is hoped in the near future to show the film previously shown on BBC television, "This is the BBC".

The bi-monthly recorded programme of news and views, *Tapeorama*, issued by Mike Renshaw of Cambridge is progressing well, and the fifth edition is about to be released. For those who were unable to receive the third edition which went astray recently, the news is that this issue is being re-dubbed and will soon be on its way.

With number five on its way, and number six about to be recorded, Mr. Renshaw announces that an omnibus edition of programmes 1-3 will shortly be available, and programmes 4-6 will follow early in the new year. Meanwhile added to the present list of contributors is Pete Rogers, secretary of the local R.A.F. tape society in Aden. Arrangements are being made to increase the international aspect of the tapes by introducing recordings from Canada, U.S.A. and New Zealand.

Applications for *Tapeorama*, and offers of material to be included in the tape, should be addressed to Mr. Renshaw at 6, St. Vincent's Close, Girton, Cambridge.

World Tape Pals announce a vacancy for the position of U.K. Representative following the resignation in this capacity of Len Watkins. The duties for the person accepting this post are outlined in the latest bulletin received from Dallas, the Texas headquarters of WTP. These include publicising the organisation in the U.K., forwarding new membership subscriptions to U.S.A., keeping a record of current active members, working with the World Tapes for Education Director in this country, and supplying news of WTP activities for *World Topics*, the organisation's own journal.

Those interested who think they have the flair for this type of work are invited to contact President Harry Matthews.

Until a successor is named, the membership subscriptions for WTP should be sent direct to Mr. Matthews at P.O. Box

9211, Dallas 15, Texas, U.S.A. Current annual membership fee for U.K. members is thirty shillings.

Yet another change of secretary is announced. At the A.G.M. of the **Urmston** club, held on October 24, Len Bullock relinquished his role due to pressure of personal business, and his place was taken by Mr. W. Firth, 29, Kirkstall Road, Urmston.

A number of the members were guests of A.B.C. Television Ltd. on October 22, when they visited their studios at Didsbury, near Manchester.

Another jaunt planned for members was to be put into effect on November 12. On that occasion they were to travel to the neighbouring town of Barton, to the power station of the North Western Electricity Board.

A change of secretary also at the **Blackpool** club. Eric Wallis is succeeded by Mr. J. Booth, Gadsby Street, off Nelson Street, off Lytham Road, Blackpool.

George F. Brooks informs me that the former members of the WTP Police Round Robin Tape Group have now regrouped under the title of the **International Police Tape Recording Club**. This organisation is open to all serving members of police forces anywhere in the world who are prepared to produce a tape on an eight-week rota system about their jobs. Members already exist in all parts of the Commonwealth and the USA.

Mr. Brooks can be contacted at The Police Station, Bradfield, near Reading, Berkshire.

The first meeting of the **Southampton** club was held on October 13. Among decisions made were times of future meetings. These were resolved to be held on the second and fourth Thursdays in each month.

Present for the meeting was Dr. H. M. King, M.P. for Southampton who, a keen tape enthusiast himself, accepted the post of President.

During the course of the evening a telephone call was received from the **Bournemouth** club members. After wishing the new club well, the Dorset club invited the Hampshire members to pay a visit to Bournemouth.

The secretary of the Southampton club is D. J. Gannaway, 39, Cheriton Avenue, Harefield, Southampton.

The inaugural meeting of the **Walsall** tape club was held on October 19. Twelve members attended, and several more promises of membership were received. The meeting followed the usual inauguration process, with members electing officials and discussing future plans.

The Secretary is Mrs. J. Walford, 41, Mill Road, Pelsall.

Among the new clubs recently formed are those in Enfield, South Devon and Dartford. The Secretary of the **Enfield** club is Richard Collinson, 30 Ridler Road, Forty Hill, Enfield, Middlesex. Mr. S. Harris is the **South Devon** secretary and his address is 123 Sherwell Valley Road, Chelston, Torquay. The **Dartford** secretary is Mr. E. H. Foreman, 117 Westgate Road, Dartford, Kent.

The final note this month concerns Mr. Alexander Green, who is attempting to form a club in the **Beckenham** area. Interested persons should contact him at Flat 2, 44 Albemarle Road, Beckenham, Kent.



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Telephone: 27092

International Contest

(Continued from page 16)

The children not only recorded their voices, but helped with the subsequent editing.

I have only discussed so far the monophonic entries. There were, in fact, only half a dozen stereo tapes, and my own feeling was that they were not entirely successful as stereo. I make an exception. Fernando Ceruti, of Chile, sent a recording of part of Moussorgsky's "Pictures at an Exhibition." It was recorded at Santiago University on an American Century machine and it was superlative in quality.

The other good stereo tape, to which the Jury eventually decided to award the Stereophonic Grand Prix, was from France—Daniel Gouin's effort illustrating the virtues of stereo with a series of excellent musical recording, under the rather forbidding title: "Stereophonics as an aid in the appreciation of sound reality."

It took nearly two days to hear all the tapes. There is no better tribute to their quality than to say, very sincerely, that there was never a dull moment.

It is my conviction that 1960 has seen a great stride forward in the fortunes of both the British and International Contests. The recording industry is now taking a much closer interest in these events. There is every reason to suppose that next year the Contests will really come into their own as major events in the field of home entertainment.

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