

OCTOBER 1965

TAPE

RECORDING MAGAZINE



IN THIS ISSUE
BRITISH TAPE
RECORDING CONTEST
Full report

ALSO

- News of the latest recorders
- TRAVEL with a tape recorder
- EQUIPMENT on the test bench

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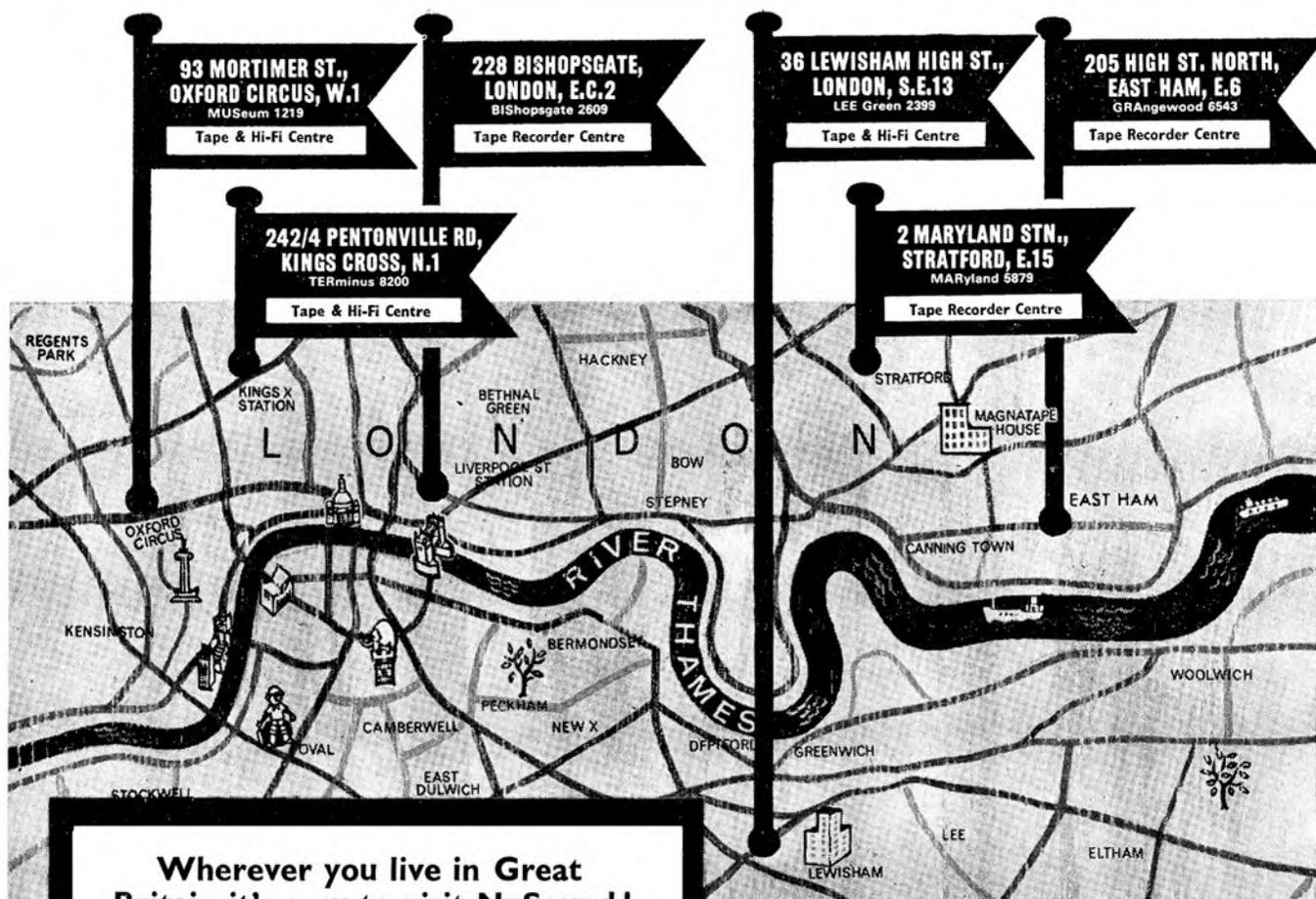
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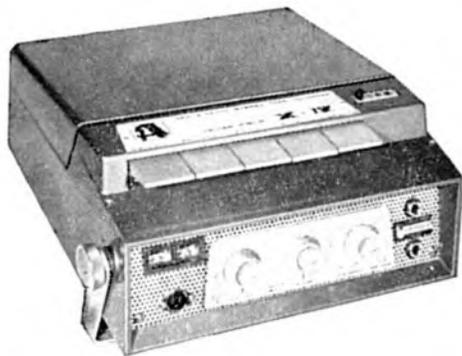
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THIS MONTH'S



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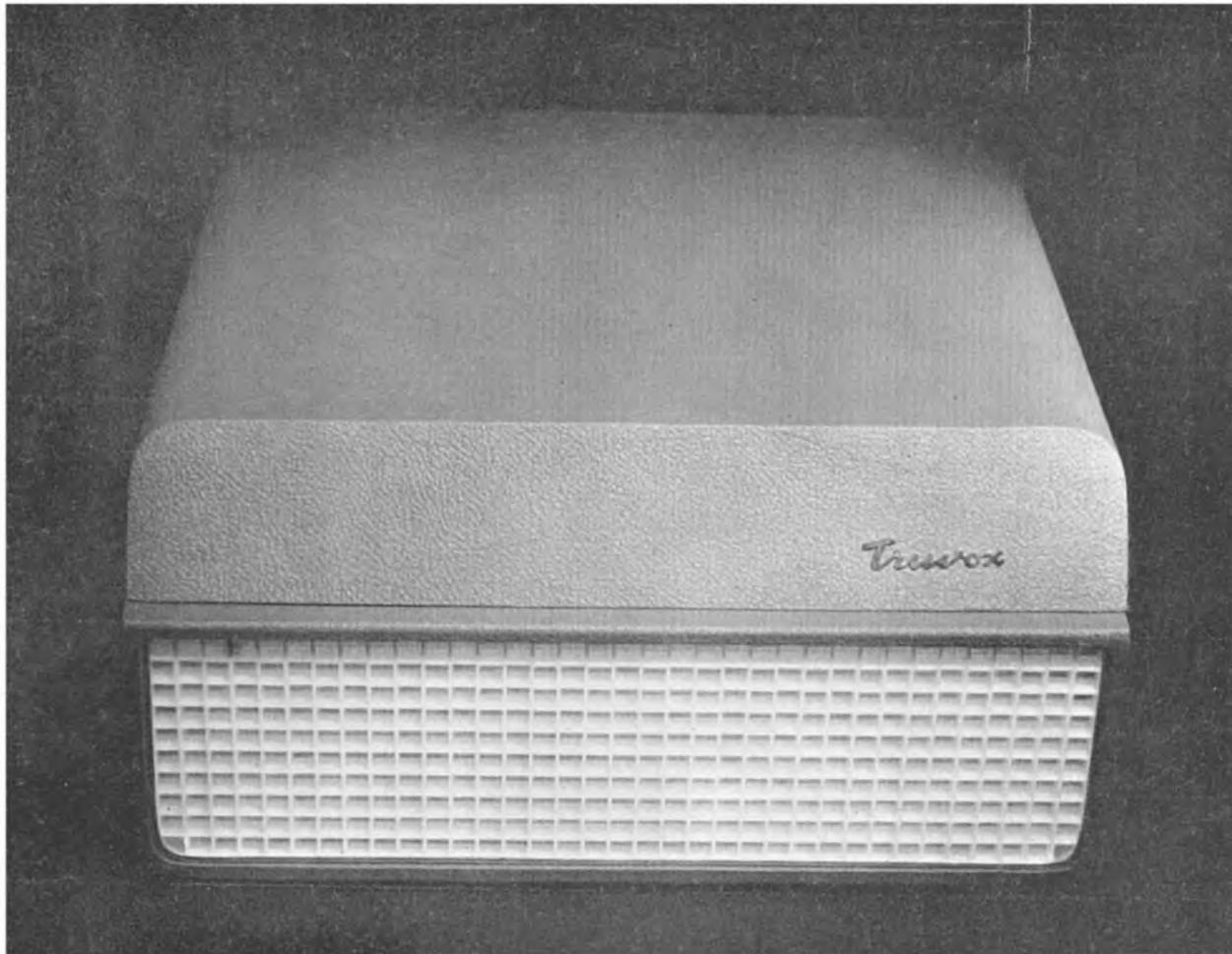
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2

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Tape Speeds: $7\frac{1}{2}$ " $3\frac{3}{4}$ " & $1\frac{7}{8}$ " p.s. constant within $\pm 1\%$
Drive: 3 motors, separate capstan motor, heavy flywheel, drive disengaged in OFF position.
Brakes: Mechanical compensated.
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Amplifier distortion: (Recorder only) .35 of 1% at 5 watts.
Hum: better than 45db

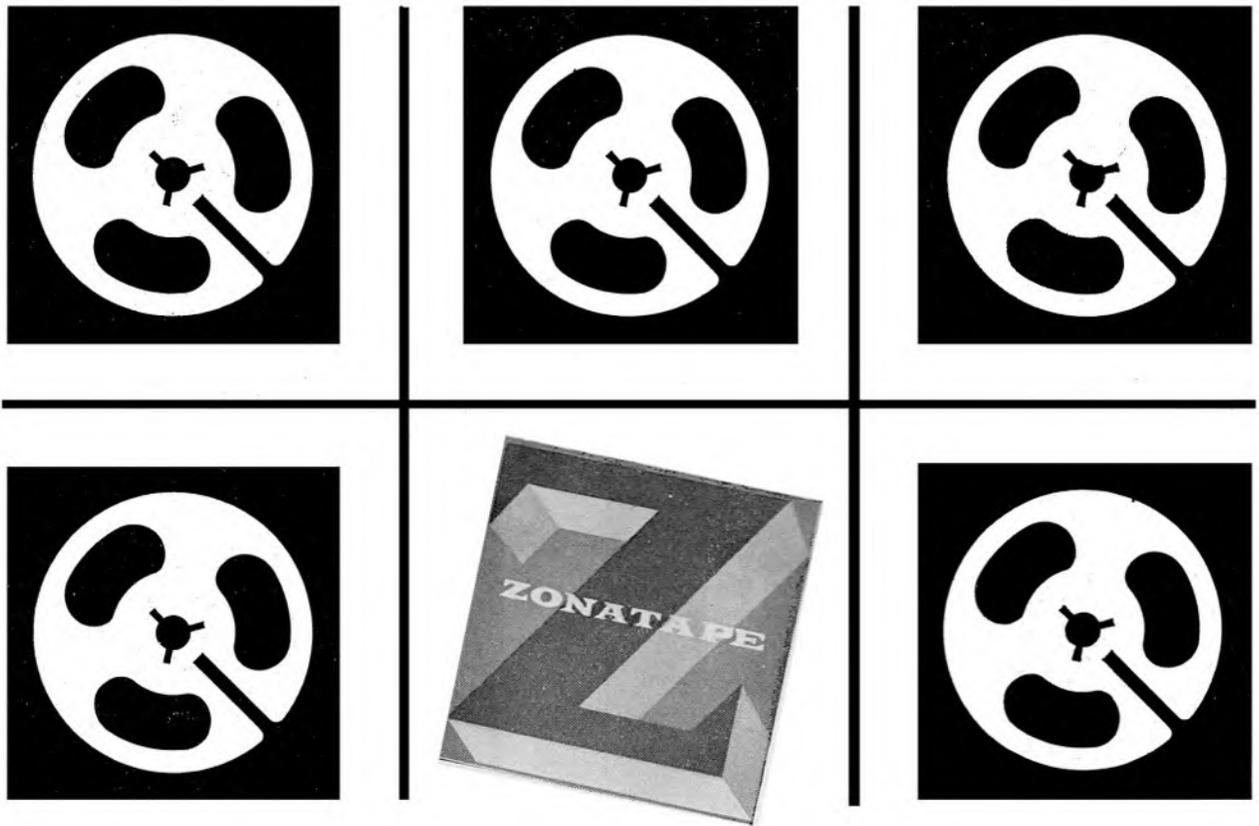
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(2) Radio/P.U. 50mV at 100K ohms.
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SPECIFICATION

Power Source: 6 unit cells (U.2.), 9 V.
Output: 500mW (700mW max.)
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Tape Speed: 3½ i.p.s., 1½ i.p.s.
Frequency Response: 100-7,000 c/s at 3½ i.p.s., 100-4,000 c/s at 1½ i.p.s.
Recording Level Indicator: VU meter.
Speaker: 3½" Permanent Dynamic Speaker.
Dimensions: 3½" x 9" x 12½".
Weight: 5 lb. 14½ oz.
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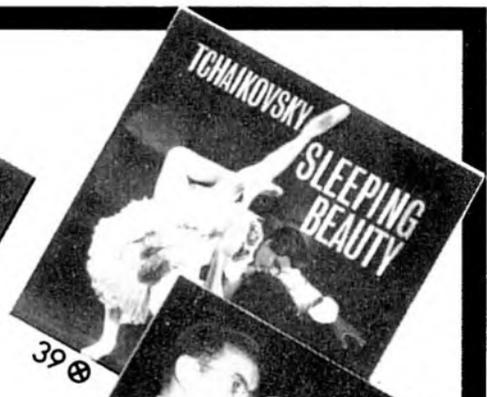
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THE FOUR I HAVE CHOSEN ARE
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Tick for Stereo LPs.

Tick for 3 1/2 i.p.s. mono tapes.

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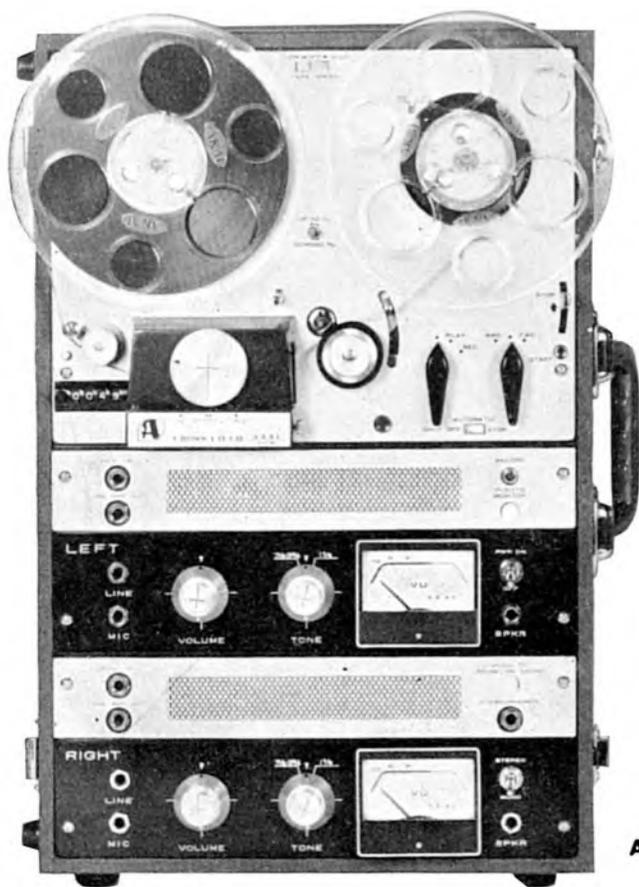
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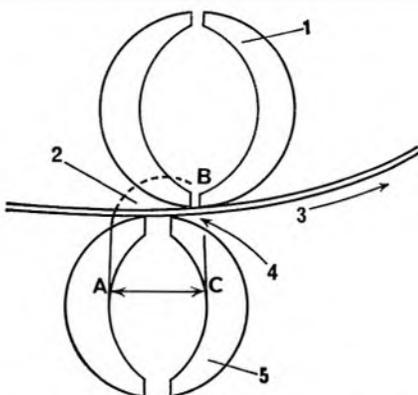


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... the best head for sound in the business

No other tape recorders can throw about claims like full frequency range at $3\frac{3}{4}$ i.p.s. and expect to be believed! Whatever other recorders do have, there's one thing they haven't—that's the ex-

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This is the Crossfield Head—only Akai has it.
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On conventional heads the high frequency components of the signal recorded tend to be attenuated or erased by the effect of bias fields. On the exclusive Akai Crossfield Head the signal head and the bias head are mounted in opposition with their centres slightly off. The tape is pre-magnetized between points A and C and recorded with the signal at point B. The recorded signal is completely free from the effect of prevailing bias fields and can be retained on the tape without loss.

It will be seen from the construction of the Akai Crossfield Head assembly that, as the signal head is arranged obliquely apart from the bias

head, across the tape, the amount of bias may be selected without regard to the functioning of the signal head. This means that the tape can be modulated over the entire frequency spectrum with maximum fidelity since the recorded signal is entirely unaffected by the bias field.

The maximum audio frequency that can be recorded on tape is usually around 790 c/s. at a tape speed of 1 centimetre per second, rising to about 2,000 c/s. at 1 inch per second. For Standard tape speeds: 9.5 cm/s. ($3\frac{3}{4}$ i.p.s.) —7,500 c/s. and for 19 cm/s. ($7\frac{1}{2}$ i.p.s.) —15,000 c/s.

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That's for the real buffs! And explains just one feature of the amazing M8 and X4 Akai tape recorders. But we know you tape recorder experts—gluttons for information—especially if it's about the biggest recording advance of the decade! So we've written down everything you want to know about the Akai range, just clip the coupon and we'll send it to you.

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TRM I





(A Company within The Rank Organisation)

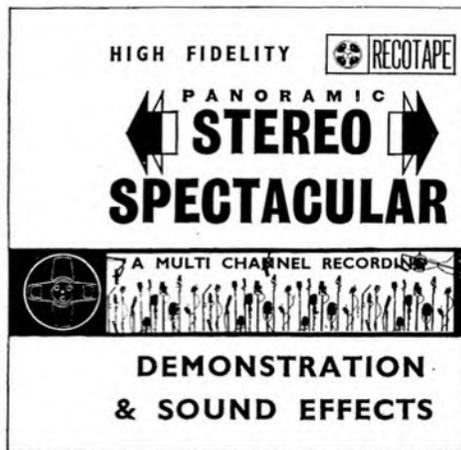
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WITH  **RECOTAPE**

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This tape for 15/- to all who buy STEREO SPECTACULAR



and STEREO TEST TAPE

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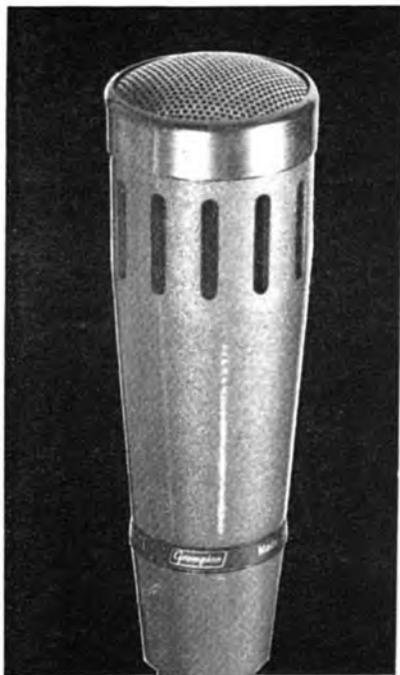
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TAPE

RECORDING
MAGAZINE

Vol. 9

No. 10 October 1965

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COVER PHOTOGRAPH: John Cordeaux, Head of Sound Broadcasting for Thomson Television (International) Ltd., who recently completed a series of articles describing his travels with a tape recorder in “TAPE,” met 1965 Radio Personality of the Year Jack de Manio during his tour of the August audio shows. Our illustration shows the two experts discussing the latest Uher 4000 Report L battery/mains tape recorder at the Bosch showrooms. Other recorders seen at the various trade shows are detailed on page 385 of this issue.

“TAPE Recording Magazine” is published on the third Wednesday in the month, by Print and Press Services Ltd., from 7, Tudor Street, London, E.C.4.
“TAPE Recording Magazine” is available by a postal subscription of 25s. per annum (U.S.A. \$3.75) including postage, or it can be obtained at newsagents, bookstalls and radio and music dealers. In the event of difficulty, write to the Publishers at 7, Tudor Street, E.C.4.

Back numbers, if still in print, are available at 2s. 6d. per copy.

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EDITORIAL

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**Editor,
R. DOUGLAS BROWN**

**Assistant Editor,
FRED CHANDLER**

Tape trends and tape talk

By the Editor

FROM GERMANY news of a development which seems to me likely to have an important effect on the whole future of tape recording. Grundig have just shown at an exhibition in Stuttgart prototypes of new tape cassettes, and associated equipment, which look like being marketed in the most widespread and aggressive way next year.

Not only are Grundig themselves promising the new cassettes, and a machine to operate them costing (in Germany) something like £25; they announce, too, that other well-known manufacturers of tape recorders will be using the new cassette; and that the Continental disc firm of Teldec (Telefunken, Decca and RAC-Victor) are completing a repertoire of tape records in the new cassette form.

This, I think, may be a moment of break-through for domestic tape recording.

The cassette comes in two types: in one there is about 450 feet of triple-play tape, one-eighth of an inch wide, providing for half-track recording and so giving a total playing time of 90 minutes at $1\frac{1}{2}$ ips; the other type uses about 600 feet of quadruple-play tape and so gives a total of 120 minutes playing time.

The cassette measures approximately $4\frac{1}{2} \times 3 \times \frac{1}{2}$ inches, is made of Novodur and is made in such a way that a number of them can be placed together in a shelf like books, with titles inscribed on the "spines."

The Grundig recorder manufactured to handle the new cassette is designated (in Germany) C 100 and is a fully

transistorised portable which can be operated on batteries or mains supply.

There is no news yet when the new equipment will be generally available here or elsewhere on the Continent, but clearly we are about to witness the rapid development of the market which Philips opened up over a year ago with their cassette portable machine.

I have a feeling that the simultaneous appearance of tape records in cassettes may have a more important effect than the availability of another cassette design. Although there are many in the world of tape recording whose views I respect who will strongly disagree, I feel there is an important future for tape-record players: the simplest type of equipment, without recording facilities: In fact, I would classify the probable future of tape under three general headings: creative recording by the keen amateur (which will soon embrace video as well as sound); "snapshot" recording with battery portables; and tape record playing.

The big question which the tape enthusiast now wants to have answered quickly is this: will the various cassettes on the market be compatible one with the other? It will be unfortunate if standards vary so that cassettes and recorder-reproducers are not interchangeable.

FOR THE first time since the establishment of the British Tape Recording Contest, I had to miss the final judging of entries this year because of absence abroad. (As a consolation, I am leaving, immediately after writing these words, to attend the final judging of the French national contest, in Dijon.)

The reports I have received show that the British Contest was the biggest success to date, with a record entry, and the judges appear to have no difficulty in finding worthy winners of the various classes.

A number of experiments were made in the organisation of the Contest this year—the introduction of a professional section, the change in classes in order to try to simplify matters for entrants, and so on.

The Organising Committee will now consider how these experiments turned out and the rules of the Contest will be re-examined and, if thought desirable, reframed for the 1966 event. All those who have submitted their thoughts on these matters can be assured that their letters will be considered carefully by the organisers.

One correspondent recently implied that the judging may not be as fair and objective as it should be. This anxiety I can remove at once and with certainty. The preliminary sifting of entries was carried through by groups appointed from among the members of the Organising Committee; their short list of tapes went to the panel of judges who made the final decisions.

One unforeseen circumstance this year was that two persons who had been invited to sit as judges submitted themselves in the Contest. When this was discovered, the judges concerned withdrew from all adjudication of those sections of the Contest in which their tapes figured.

In the light of this experience, the Organising Committee has already decided that in future judges may not submit entries in the Contest. Entrants may be assured that every possible step will be taken to ensure scrupulous fairness in the judging.

Planning of the 1966 Contest is already under way and full information will be published immediately if becomes available.

LAUGH WITH JEEVES



"Yes, I know it would make a good tape, but the recorder happens to be underneath."

BRITISH TAPE RECORDING CONTEST 1965

Top award for Oxford students' anti-nuclear tape

Special report
by Fred Chandler

A NINE-MINUTE programme providing a stark reminder of the horror of some future nuclear holocaust has won for two Oxford students the coveted award of "Tape of the Year" in the 1965 British Tape Recording Contest.

Their tape "Mushrooms" was heard in complete silence by the radio and TV personalities and audio experts forming this year's panel for the final judging session.

"Mushrooms" concerned the Law Court confession of a future American President on trial for destroying China and Russia in an atomic attack. It had been produced by R. K. Partridge and Jeremy Gibson, 19-year-old physics students of Hertford College. They had considered their subject for almost six weeks, and recorded the tape in two days. In one of the best examples of the use of a microphone ever met in this nine-year-old competition, they had remembered and exploited the effect of intimate narration.

Enlisting the aid of five fellow students who provided the voices of "men in the street" expressing their opinions, the Oxford pair presented a sensitive and solemn programme exploring the possibilities and likelihood of nuclear war.

The economically chosen remarks were well balanced and followed in quick succession, yet the listener was rarely confused. Subtle changes in manner, opinion and voices gave a staccato effect that held the attention throughout. Even during



Peter Cox, producer of the best Amateur tape and best Music recording, with "Henry"

repetitive excerpts from Louis MacNiece's poem "Prayer before Birth" interest was maintained by the skilful use of varying acoustics.

The relaxed and confidential tone of the narrator was heightened by his use of the *ad-lib* effect. With the script providing only the main outline of his speech, his concern regarding the future accentuated by his improvisations contrasted



Jeremy Gibson (left) and R. K. Partridge, co-producers of the "Tape of the Year," and their award the Emitape Challenge Cup



well with the optimism of those interviewed.

Unanimous approval of the judges won for "Mushrooms" the Amphlett Shield presented by the Federation of British Tape Recording Clubs for the best recording submitted by a tape group. In the closing stages of the judging session, after every tape had been heard, further deliberation led to its selection as "Tape of the Year" and so it received the Emitape Challenge Cup plus a £50 cash prize as the outstanding tape in the Contest.

"Mushrooms" had earlier won the Oxford University Cuppers' Contest. Reporting on this internal competition in the July issue of *TAPE*, Geoffrey Hodson forecast the judges' opinion that the Oxford tape was a distinguished entry which really exploited the medium of sound.

* * *

The Contest had been slightly altered this year, with provision made for three classes of entry. The Novices, Amateur and Professional classes were judged separately and awards made in each section in addition to the overall award of "Tape of the Year."

The final judging session followed extensive pre-selection of qualifying tapes from the record number of entries received. The Amateur entries had been separated from the Novice and Professional tapes and received further categorisation in accordance with usual practice into Actuality, Documentary, Humour, Music and Stereo classes. Club and School entries were pre-judged separately from the "individual" sections.

This division of entries resulted in five class awards, three awards for the best tape in each of the main headings for Novice, Amateur and Professional, and the overall prize for the "Tape of the Year."

At the judging session held in the comfort of the Mullard Theatre in London, the eleven judges were joined by members of the BTRC Committee and representatives of the tape recording press.

The individual sections were heard first, and the winners selected before the judges reconsidered the tapes heard for the top four awards. Two tapes were con-

sidered for the award and £25 prize for the best recording by an amateur. The Agfa Cup eventually went to Peter Cox, a 41-year-old Plymouth schoolmaster, for his two-minute recording of a traditional folk song. "Henry" caused some debate among the judges, who had to discount the performance of two brilliant singers. However, Mr. Cox's choice of programme and artists and his undoubted recording ability won over and the prize was his. Earlier in the session he had been awarded the Acos Cup for the best entry in the Music section. Contenders for this title had been a two-minute song "Old Kildare" recorded by John Penty, and an eight-minute organ recital entered by Derek Dewey.

"The Nose," entered by last year's "Tape of the Year" producer Ray S. King, was also considered for the Amateur award. Mr. King had retained his earlier formula, substituting a collection of nose noises for last year's sinks. His recording skill and deft script-



Ray S. King, last year's "Tape of the Year" producer, winner of the Humour award for his tape "The Nose"

writing provided another humorous five minutes for the judges, who expressed regret that he had not been more adventurous this year.

Although unsuccessful here, "The Nose" was an obvious winner in the Humour section, where many of the finalists attempted to emulate Mr. King's former success. None were successful at beating the master, who was awarded the Mastertape Trophy for his combination of well recorded sounds and tongue-in-cheek narration.

The finalists in the Novice section provided some embarrassment for the judging panel, not least disc-jockey Alan Freeman.

(Continued on page 382)

Schoolchildren produce their own contest entry

(Continued from page 381)

His introduction to tape recording followed his first association with the previous Contest in 1964. So he was qualified to enter in the section for recordists with less than one year's recording experience. Entering, as he said earlier, in order to obtain greater knowledge of the problems involved, Mr. Freeman was astounded to find his tape had been short-listed by the pre-selection committee, who were unaware of his seat on the final panel. He left the judging "arena" to allow greater freedom of expression to the other judges.

His entry "Fan Club" competed for the award with two well-recorded guitar pieces entered by B. D. Howell, of Cambridge, and C. E. Vaughan, of Thornton Heath. Whilst both had shown expertise in their handling of newly purchased equipment, top marks went to Mr. Freeman for additional ingenuity. "Fan Club" illustrated the invasion of the privacy of a TV personality by a persistent member of the public who eventually failed to identify his "hero." The spontaneity of the four-minute tape delighted the judges, who had little difficulty in allocating Mr. Freeman the Philips Shield, and the £25 cash prize, before inviting him to rejoin them to judge the remaining sections.

My own personal highlight of the evening was a tape entered by the children of a Worcestershire school. Their documentary, "A day at Grange school," centred on a tour provided for a new pupil. The 12- and



Disc-jockey Alan Freeman's tape "Fan Club," winner in the Novice Section

13-year-old children, who produced the tape entirely on their own, had been schooled in the use of a tape recorder during their English periods, by their master, Dr. Low.

Their interest in the hobby and natural charm shone through as, for seven minutes, we were transported back through time, reliving the fatalism, innocence and sophistication of the early teenager.

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category. Straight documentary tapes were judged together with Actuality entries for the first time this year, although only one actuality recording was selected for the final session.

Judging here, once technical perfection is attained, is a matter of comparing choice and opportunity of recording the subject matter, presentation, information imparted, and overall effect.

"Portrait of Calella," entered by 31-year-old medical practitioner Dr. Albert C. Watt, of Sunderland, Co. Durham, was a nine-minute feature describing a Spanish holiday resort. Dr. Watt had recorded on location last summer, and assembled his tapes, adding the narrative, during the winter months. His informative script, coupled with well-recorded actuality items, including local dancing, eventually decided the judges to award him the Kodak Shield.

The most frequent fault with competition tapes is the reluctance of entrants to edit. In this section particularly, entrants failed to consider the effect on the judges who have to listen to a long programme of tapes. Unrest is created as the tapes, otherwise well recorded, introduce prolonged sound effects or musical items. Each tape would



P. Lawson-Smith, producer of "Thos. Mortier Organ"—best stereo tape in the contest

benefit with extensive pruning, the effects being faded in behind the narrator, played for the minimum of time, and faded down as the narrator picks up the story again.

The train sounds, factory machinery, piano tunes, and horses hooves heard suggest the producers had been so proud of their recordings they insisted the judges should hear them in their entirety. A wiser course would have been to leave the judges asking for more. Such editing, particularly where the subject is uninteresting (it can happen) makes a lasting impression. Only one of the tapes heard was restricted in duration to less than five minutes. All the others occupied over nine minutes: two, in-

cluding the winner, played for 9 minutes 50 seconds.

The winner in the Professional section had been selected at a separate judging session by the BTRC Committee. Winner in this class was Fred C. Judd, a 50-year-old electronic engineer of South Woodford, London.



Dr. Albert C. Watt winner in the Documentary section with his tape "Portrait of Calella"

His tape, "Tempotone," was a five-minute electronic music composition compiled using a variety of specialised equipment. The tune, composed by Mr. Judd, was produced entirely electronically and had taken over 100 hours to record. The special judging panel found no problem in awarding it top marks, the Scotch Cup, and a £25 cash prize.

Every tape in the Contest qualified for consideration for the "Tape of the Year" award, and after selecting the individual group, and status awards, the judges deliberated for the top honour. "A day at Grange School," which will live in the minds of many of the judges, was among those included at this stage. A final vote, however, was not necessary this year, and "Mushrooms" was elected the outstanding tape of the contest, and the British Tape Recording Contest for 1965 was over.

The judges and others present then retired for a most welcome hour of refreshments provided by Mullard Ltd., who co-operated to the utmost in arranging the evening's playback facilities.

One name, in particular, must be mentioned, that of Mr. Norman Taylor. Volunteering his time in the interests of the Contest, he operated the four recorders (Grundig TK46, Philips EL3534, Leavers-Rich E242P, and Vortexion WVA Series 5) necessary to cover the recording characteristics of the entries. His studio also included the use of a Rogers Master Control Unit, twin twenty-watt Audiomaster amplifiers and Tannoy loudspeakers. He recorded the evening's proceedings on a Ferrograph recorder with a Tannoy microphone.

The Contest this year had attracted the highest number of entries since its inception. This is also the highest national entry to date—since the International Amateur Recording Contest began in 1952.

The stride forward thus achieved is a result of the increased publicity given to the BTRC following the support by leading magnetic tape manufacturers. Since we began the Contest in 1957, *TAPE Recording Magazine* has strived for maximum recognition by the UK manufacturers. The formation of a special committee of these makers, at last, looks like showing dividends.

The BTRC Committee, representing Agfa, B.A.S.F., E.M.I., Ilford, Kodak, Master-tape, 3M and Philips, and headed by chairman C. Rex Hassan and vice-chairman Douglas Brown, Editor of *TAPE*, has been rewarded by the support shown by this year's record entry.

British enthusiasts can now hope for further awards in the International Contest being held in London during October.



Fred C. Judd, winner of the Professional section with "Tempotone"

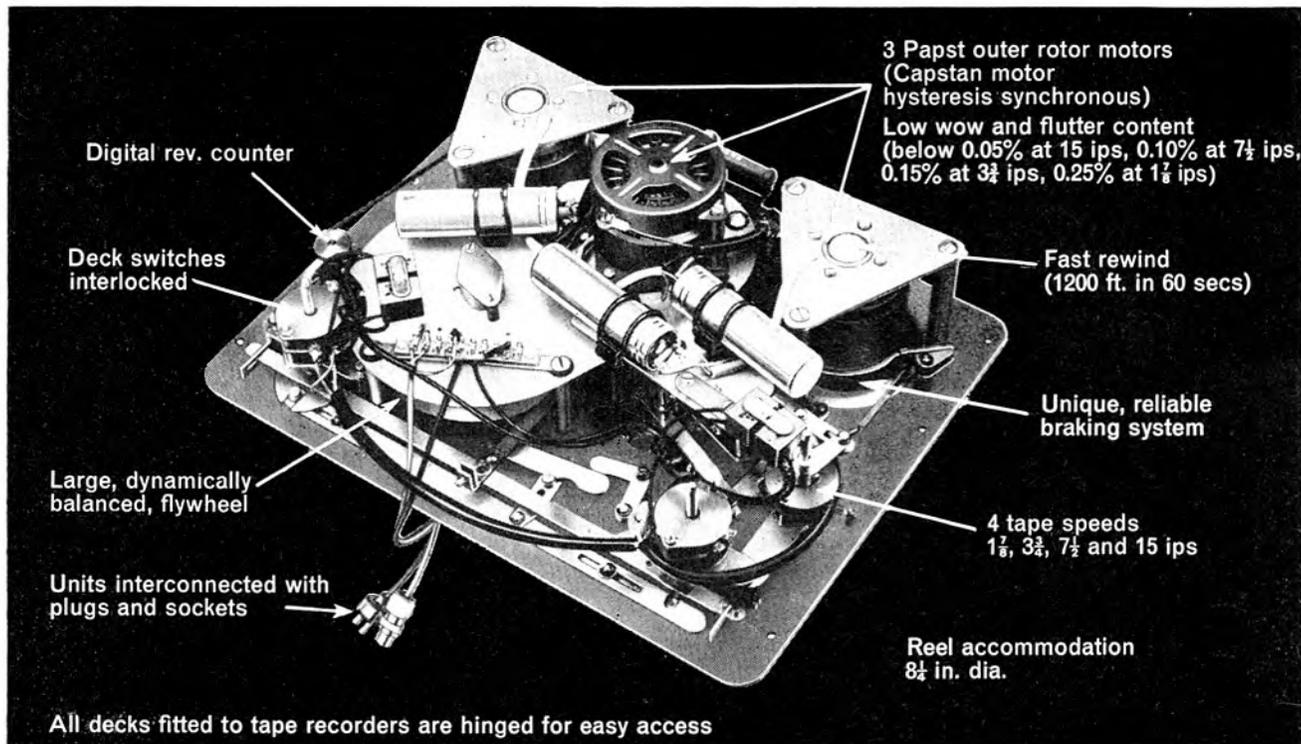
British successes in past years total 21 awards, including three Grand Prix prizes.

The Federation of British Tape Recording Clubs is currently active preparing to welcome the overseas delegates and tapes, and selecting from the BTRC entry those tapes to represent Great Britain. A full report on the International Contest will be given in the December issue of *TAPE Recording Magazine*, out on November 17.

The BTRC Committee are meanwhile preparing details for the next British Contest. Important new steps are being taken. These will be reported in these pages immediately arrangements are finalised. But now is the time to unearth those treasured recordings, or to prepare for your entry next year. 1966 could be your turn to produce the "Tape of the Year."



Members of the judging panel seen in the Mullard Theatre during the final stages of the British Tape Recording Contest 1965. Left to right are: Eric Robinson (TV personality and conductor), disc-jockey Alan Freeman, Donald Aldous (Technical Editor of "Audio Record Review"), Timothy Eckersley (Assistant Head of Central Programmes Operations (Recording) BBC), and John Borwick (author-journalist on audio topics). In the back row are members of the Federation of British Tape Recording Clubs. Left to right: A. Highcazony (Secretary), F. J. Weed, Ken Blake, and Alan Stableford (Chairman)



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In the absence of a Radio Show this year, many manufacturers arranged special trade shows to introduce their new models. FRED CHANDLER toured London seeking the latest news and reports below.

HUNT the tape recorders was the order of the day during most of the waking hours of the fortnight spanning August and September. With the demise of the Radio Show, many manufacturers hurriedly re-arranged their schedules and booked space at hotels throughout the Metropolis. My diary for that period looked like a Midshipman's locker with everything on top and nothing handy as press previews clashed.

Fortunately, a number of manufacturers chose the same venues, while others grouped together arranging not-so-miniature radio shows of their own.

Rex Hassan, who organises the International Audio Fair in the spring, repeated his venture of last year by arranging the International Radio Electrical Trade Exhibition at the Prince of Wales Hotel: and on the other side of Hyde Park, the first trade fair organised by the Japanese Electrical and Radio Importers' Association was held.

But in the main it was a question of touring the various hotels and private show-rooms seeking out the new models. Full details of all the models seen were not available for this report. The exceptions are those noted below, others will be described next month, including new machines by Ferguson, Fidelity Radio, Perdio (entering the market for the first time), Telefunken, and UNAMEC.

* * *

At the Royal Garden Hotel Philips introduced three new recorders. Setting a precedent by announcing three of their models simultaneously, they also changed the styling of two of their models, introducing teak cases blending with dark grey plastic for the cabinet.

First of the new models is the completely transistorised EL3553 (illustrated below), a four-track, two-speed model in a two-tone grey polystyrene cabinet. This incorporates tape speeds of $3\frac{1}{2}$ and $1\frac{1}{2}$ ips, and has accommodation for seven-inch spools, providing a playing time of 64 minutes per track using standard-play tape (1,200 ft.) at the higher speed. Rewind for 1,200 ft. of tape is achieved within three minutes.



The quoted frequency response is 60-15,000 cps at $3\frac{1}{2}$ ips, and 60-8,000 at $1\frac{1}{2}$ ips. Wow and flutter is given as less than 0.6 per cent peak to peak at $3\frac{1}{2}$ ips, and signal-to-noise ratio as better than 45 dB.

Among the features of the EL3553 are facilities for mixing, monitoring, stereo listening, using an additional EL3787A pre-amplifier, parallel track playback, tone control, pause control, three-digit rev. counter, safety erase lock, and the usual Philips Duo-play and Multi-play facilities. The 8 x 3 inch built-in elliptical loudspeaker handles the power output of 1.8 watts, and the recorder also features a spring-loaded retractable carrying handle.

Other features include inputs for microphone, diode, and pick-up, and outputs for headphones, extension loudspeaker, stereo amplifier, and diode.

The price of 36 guineas includes an omnidirectional moving coil microphone, spool of tape, spare spool, and recording lead. The EL3553 is tropicalised, measures 16 x 11 $\frac{1}{4}$ x 5 $\frac{1}{2}$ inches, and weighs 15 $\frac{1}{2}$ lb.

The second of their new models is the EL3558. This incorporates all the features of the EL3553, is housed in the new teak cabinet, and features automatic recording level control. This latter feature ensures automatic undistorted recordings from both microphone and radio/pick-up inputs, and is operated by a simple three-position level for manual, microphone, and radio/pick-up control.

The EL3558 is slightly larger, measuring 16 $\frac{1}{2}$ x 11 $\frac{1}{2}$ x 6 inches, and weighs 16 lb. The price is 42 guineas.

The third new model is the EL3556 (illustrated above) successor to the highly successful EL3549. Complete restyling, including its being housed in a teak cabinet and the addition of some new features, has resulted in no change in the price of 62 guineas.

This four-speed, four-track recorder has a claimed frequency response (within 6 dB) of 60-18,000 cps at $7\frac{1}{2}$ ips, reducing at the top to 15,000, 10,000, and 4,500 cps at the other speeds of $3\frac{1}{2}$, $1\frac{1}{2}$ and 15/16 ips. Wow and flutter is given as within 0.3 per cent (peak to peak) at $3\frac{1}{2}$ ips, and signal-to-noise ratio as better than 47 dB. Accommodation is available for seven-inch spools, providing a playing time of 48 minutes per track using long-play tape (1,800 ft.) at $7\frac{1}{2}$ ips. Rewind for 1,800 ft. of tape is achieved within three minutes.

On this machine, Philips introduce separate bass and treble controls for the first time. It also features a hybrid circuit using transistors and valves on a printed wiring panel for greater reliability, increased output power (four watts) through the 7 x 5 elliptical loudspeaker, a completely new tape transport and tape deck mechanism, and a neon recording level indicator. Inputs are provided as for the EL3553.

The EL3556 measures 17 $\frac{1}{2}$ x 13 $\frac{1}{4}$ x 6 $\frac{1}{2}$ inches, and weighs 22 lb.

Also new from the Philips stable is the modified version of their cassette loaded miniature recorder introduced last year. The



new Stella model, designated ST472, sells at 26 guineas, uses one-eighth-inch wide tape running at $1\frac{1}{2}$ ips, and will play for thirty minutes on each of the two tracks.

New features of their cassette model includes a hinged lid providing easy access for loading, and weather-proofing of the moulded black polystyrene casing with a simulated leather finish.

Battery life is given as twenty hours using "long-life" batteries, and the power supply required is five 1 $\frac{1}{2}$ volt U11 cells or their equivalent. Provision is made for connection of external mains supply unit.

Concurrent with the launching of the first Stella cassette recorder is the new Philips re-styled cassettes, designated C60. These feature a window to reveal position of the tape, with calibrations to locate specific recordings, and a "knock-out" lug available for each of the two tracks. After removing one or both of these "lugs" a previously recorded cassette may be replayed without any risk of accidental erasure.

* * *

LAATEST recorder to join the Grundig range of nine models is the TK27L, a single-speed, $3\frac{1}{2}$ ips, four-track recorder selling at 69 guineas. (Illustrated below.)



Introduced at their Orchard Street show-rooms, the new model features automatic recording level control and will allow playback of stereo recordings using an additional amplifier for the second channel.

Based on the current TK23L, it has a quoted frequency response of 40-12,000 cps, and a signal-to-noise ratio of better than

(Continued on page 393)

I SUSPECTED that first set of rapids. We could see no spray or white water which would have betrayed the existence of hidden rocks, but the river was flowing fast and I did not feel safe in a heavy, unmanœverable dugout canoe. Twenty feet long, and with its gunwale a few inches above the surface it only needed the least slip and we should capsize. But the powerful outboard on our stern reassured me. As long as it gave us steering way we should be able to avoid sudden dangers. In addition, they had told me that the usual terrors of Amazonian jungle rivers, the giant anaconda water snakes and the carnivorous pirana fish were only to be found miles downstream. But how could they be sure?

Over the roar of the outboard, I questioned George Golas, who was taking me to film his diamond mining operations 15 miles downstream. "In British Guiana," he shouted, "the rivers are only dangerous below the Escarpment, that's about fifty miles downstream. Down there you get the lot, including electric eels."

I gripped the rough-hewn sides of the canoe, and hoped that none of the river beasts had decided on a change of scenery. The Mazaruni was in spate, rising steadily with the onset of the rainy season. At Kamarang Mouth there had been nothing more than a few showers, but over towards Roraima, the mountains were hidden in thick cloud and rain was swelling the rivers. It was possible that the diamond seekers who were the object of my journey would already have been forced to stop operations. As the water soaked through the heavy mass of decaying vegetation it turned a rich brown colour. Now it swirled, black and ominous, as our dugout canoe approached the first of the rapids.

The descent was slight, only a foot or so, but the mass of water was sliding like twisted glass around a large rock in the centre of the river. The current was taking us towards the rock and if the outboard cut . . . and cut it did, when we were just a few feet away. The boatman rose to grab a paddle, but as he did so the bows dipped at the force of the rapid, and we began to spin sideways. To my horror, he lost his footing and fell into the bottom of the boat. There was only one thing to do, try and fend off from the rock which was racing towards us. I looked for a paddle, anything to prevent us from crashing.

But George had beaten me to it. Skilled in the ways of the river, he had already seized a plank and, with great strokes of his powerful arms, was backing water frantically. As the rapid seized our bows, the clumsy boat lurched, until, for an instant, water poured over the gunwale. Then George's strength won through. Suddenly we were past the rock, with inches to spare, and shooting out into the whirlpools below the rapids. The dugout spun as if hit by a giant hand. Once again George's arms failed the water. The canoe straightened and glided into the safe, smooth water beyond.

"Phew, just like the old days," breathed

TRAVEL

with a tape recorder: In our series of articles on location recording, journalist BOB CUNDY recalls his adventures and describes the difficulties he experienced as he searched for diamond hunters, and found himself:

Taping thrills in mysterious S. America

George, wiping his brow. "When planes had not been thought of out here, everyone travelled by river from Georgetown, getting out and hauling the boats up the rapids. Then they travelled with a pack overland, making their own woodskin canoe out of bark when they came to a river."

This was the time to get my Fi-Cord out of its waterproof wrapping and tape George's tales of "the days before." But as he saw me bend to unlash the package, he motioned for me to stop. "Look at that cloud," he said, pointing to a vicious-looking black pall drifting down river. "It's going to rain, hard, any minute."

We had no raincoats and preferred to leave the canvas cover to protect the stores we were carrying. In seconds we were drenched, not unpleasantly because the rain came cool in the midday heat. The river bank was hidden in a hissing grey mist of driving rain. We began to bail, to keep the canoe from being flooded.

After five minutes, the rain stopped, the sky cleared, and soon our clothes had dried on our backs. I unpacked the tape recorder, but this time there was interference from the

boatman's two boys, who insisted on speaking into the microphone. In the strange ways of the Amerindian, who is sometimes almost over-eager to adapt to Western ways, they had been christened Jack Dempsey and Rocky Marciano. I set up the microphone to do a "send-up" interview as if they were boxing champs. But they spoke only a few words of English. As usual, though the playback sent them into fits of laughter, I did finally get them to admit that they had been named after boxers, but the only way they could tell me was by sign language, raising two pairs of chubby fists, and fighting with each other.

River travel through jungle can be monotonous. To pass the time, I tried to find signs of life in the imminent tangle of branches and leaves that were sliding by. But there was nothing. No sign of movement other than the occasional flash of a small bird skimming low over the water. We heard parrots and monkeys caterwauling. But they were invisible, lost in dense foliage.

After two hours Golas pointed out a tin sheet board, the words—"Name: George Golas, M.C. Correia; Lic. No. 47338. November 27, 1959. Name: Golas No. 1." This was a claim board, marking the beginning of George's area. "I've got seventeen miles of claims from here," he shouted. Then he pointed at the river level, cutting high into the dangling branches. "But the river's too high for work now. That's why we can't hear the sound of the engine at Kowaima."

We swept round a sharp bend and saw the camp, a lean-to of branches covered with a tarpaulin. We landed and were introduced to "the boys." Presiding over the group was Uncle Dan—a diminutive Guianese of Dutch extraction, who was cook and general adviser. The leader was Norman de la Rochelle—a 25-year-old Bostonian who had studied anthropology at Colombia University and with his brother David and a friend, Mark Perez, had travelled to Brazil "to see the Amazon."

Their expedition had stalled in Manaos, Brazil, where they had learnt of the possibility of diving for diamonds in British Guiana. With their last dollars they flew to Georgetown and persuaded George Golas to take them on to help the two Amerindians and a Negro who were prospecting his claims.

After moving the pontoon for several miles along the river bank they had found good indications. Now they were ready to start diving in earnest, but the rains had begun, and the current too strong to dive.

George took a diamond diver's lunch with us—rice, and black beans with hunks of pork fat, washed down with some of Uncle Dan's excellent home-brewed coffee (he used a diamond sieve over a low fire).



The modern diamond hunters use the latest equipment. Here, Alvin Newton helps Mark Perez in diving gear returning from a dive

Taping thrills in mysterious S. America

After seeing that my hammock was slung properly under the tarpaulin, George left in the dugout canoe to visit his other crews.

I was chatting over my coffee with the boys, when a tall, fair-haired young man stepped out of the jungle. To my astonishment, I saw he was bare-foot and wearing only a pair of swimming trunks. When he realised I was English, he grinned, and introduced himself in a broad Yorkshire accent, "Alvin Newton—from Hull."

Alvin had served in the British Army in Malaya, and his fascination with the jungle prevented him from settling down into civilian life. He was a born prospector, living the open-air life in the freedom of the forest. I had the impression that he would not be too worried if he failed to make a fortune seeking diamonds.

He suggested that since I could not see the modern way of diamond diving, using the suction dredge, we could call on an old prospector, also English, who was panning for gold and diamonds about three miles away. I let Alvin walk first. Secretly I was glad of my thick leather boots when snakes were said to be everywhere. "You develop a sixth sense," Alvin said as we walked along the jungle path. "For instance, you suspect branches and fallen trees—these are often hiding places for snakes and you learn to keep your eyes on the ground."

"As well as keeping a watch on the branches for boa-constrictors and the like," I laughed. But I knew that greenhorns in the jungle tended to see snakes under every leaf.

We followed the line of the river, across a small stream, and into a clearing. A patched canvas sheet had been strung over four posts to make a rude shelter. From inside came dance music. As we approached a tall man, fair-haired and with long, emaciated arms, emerged. This was the "Grand Old Man of BG diamonds"—Bill Fleming. Since his first diamond hunt in 1936 he has almost constantly been in the jungle, apart from war service.

Bill was making bread—cooking the dough in a saucepan. He invited us to join him in his shelter for a cup of tea. I set up the tape-recorder—this was an interview I wanted to be sure of—and joined the other two around the fire.

It seemed that Bill used to visit England about once every three years, when he had made enough from diamonds to pay for the trip. Each time he thought that he could

John Valentine's concluding article on "Tape Recording Television" has been held over until next month.



Songs around a camp fire make ideal recording material. "Reggie, one of the Guianese, was a great singer," writes the author who was treated to a recital of rather bawdy divers' songs, together with the "Top Twenty" hits of two years back

stay at home for good, but always the jungle drew him back. "Once a month the Indians bring me supplies and occasionally Alvin comes along for a chat, but otherwise I see nobody. Oh, I get all kinds of things coming into my shelter, snakes and rats and once even an anteater. But I don't tell them to go unless they are mean. But there's a wild pig who comes after my tomatoes—I'll get him one morning!" Outside the lean-to was Bill's small patch of garden. There was nothing unusual about it apart from the fact that his tomatoes grew seven feet high!

I wanted to know why Bill still worked the old way, and had not attempted the modern methods of diving. "I find the water too cold for diving. I am 57 years old now," he explained, "besides, I can work the land here when the rainy season brings the rivers too high to dive. I have got sixteen hundred feet of claim land along that stream. So far I haven't found anything, but I'm just about on the pay gravel now. Come along and I'll show you how I work."

We followed Bill to a wide hole about ten feet deep near the stream. He put two or three spadefuls of gravel into the sieve, shook it hard underwater, then withdrew it. He gently pushed a finger at the small pile of black carbon in the centre. Suddenly, he withdrew his hand. Glistening between his thumb and forefinger was a tiny diamond. "Only an industrial, but it's the first I've found here and it means there should be more."

Alvin and I congratulated him. He'd been working for more than a month without a single find. "You've brought me luck," Bill said to me, "take it." And he handed me the tiny gem. I protested, but accepted when he explained that it had practically no value.

We left him steadfastly digging deeper into the gravel, his tired eyes gleaming now, the eyes of a man with diamond fever. The next day the river level had fallen and

the boys started to dive again. Round mid-morning, my turn came. I put on a pair of ragged jeans and a tattered wool sweater, lent by Norman, who stood on the edge of the pontoon while the suffocatingly heavy lead weights were hung over my chest and back. Then the compressor was started up and a battered copper helmet lowered over my head. With the face plate screwed in position I could hear nothing save for the hiss of the air coming in at the top of the helmet and the roar of the compression engine.

Since the suit was not complete the water could only be kept out by the air in the helmet. I prayed that George's compressor might not stop and began to climb down the ladder into the water. I felt the cold water tug at my clothing, then suddenly it was as if I had stepped out of the day into a night of swirling roaring blackness. But I noted with satisfaction that the helmet did not leak. I forced myself to breathe regularly and to remember to keep my arms and legs from being splayed out by the current. But even so, I was swept downstream underneath the pontoon, swinging on the end of the airline like a puppet on a string.

Suddenly, reassuringly, I felt my feet touch bottom. I bent forward and could only see a white blur which were my legs. I tried a few paces but almost immediately lost my balance and found myself crawling on all fours, struggling frantically against the tremendous force of the river. Suddenly my feet felt metal. This was the end of the suction pipe. By jerking on the lifeline I signalled for them to start the suction pump. The job of the diver on the river bed was to keep the pipe where there was gravel, distinguishing gravel from rock and sand by the feel of his feet. Perhaps I would be lucky and hit a pocket of diamonds. I signalled for them again to start the pump but this time I felt myself jerked violently upwards. What was happening to me?

(Continued on page 391)

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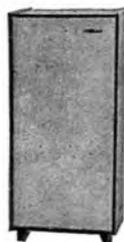
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TEST BENCH

OPTACORD 408

By H. B. Hadden

THE Optacord 408 is a small portable tape recorder in the medium price range. It is attractively styled in a grey gunmetal die-cast case, with a lighter grey cover to the tape transport section. The front panel is chromium-plated, and carries all the controls, as well as the internal loudspeaker. The machine is very simple in operation, having a minimum number of controls, and will accept tape reels up to 4¼ inches in diameter. The tape speed is 3½ ips, and fast forward and rewind facilities are provided. The maximum playing time, using triple play tape, is thirty minutes on each of the two tracks, giving one hour in all. The rewind time for the 4¼-inch reel of long-play tape supplied with the machine was 85 seconds.

This machine is unusual in an instrument of this small size, 9½ x 7¼ x 3½, in that it can be operated either from dry batteries, four U2 cells, or by its own internal mains supply. No external mains unit is necessary, and space is provided inside the case to store the mains lead. It would be asking too much, perhaps, in such a small size to find a compartment to carry a microphone, and so this has to be carried separately, a small pouch being provided for this purpose. In spite of the addition of the mains supply, the machine is still in the lightweight class, only just over 7 lb. With suitable accessory cables, the machine can also be operated from a 6- or 12-volt car battery, and a slide-in car mounting is also available.

Simplicity is the keynote for the operating controls of the 408. The tape transport is handled by four piano-type keys. These are, from left to right,

rewind, stop, play and fast forward. The on/off switch is incorporated with the play and stop keys, so that there is no danger of leaving the amplifier switched on if the tape is not running. It might be supposed that this might risk missing the first few seconds of a recording, but the transistor amplifier works instantaneously, and no trouble was experienced from the tape run-up time. The machine is switched to the record



mode by the operation of a red "record" lever, which has to be held down until the "play" key has been pressed. This lever is automatically released on stopping the machine, so risk of accidental erasure is avoided. Only one other control is incorporated, the volume control on playback, which serves, as usual, as the recording gain control on record.

Record level indication is by means of a VU-type meter, which is also used to give an indication of the battery voltage when the machine is switched to play. No tape position indicator is provided, but there is an arbitrary scale on the base-plate under the tape spools, which can be used to give a rough indication.

External connections to this machine are also very simple, only three sockets

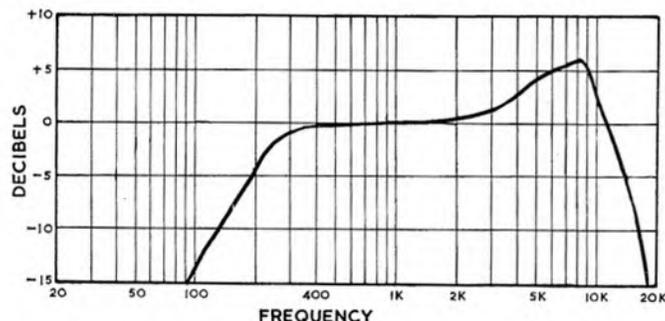
are provided, two on the left-hand side of the instrument and one at the rear. All are of the now almost universal DIN-type. The first of the two side connections is a five-pin socket. This is used both for the microphone and radio inputs, and also for the low-level output to feed an external amplifier. The second connection, a two-pin "loudspeaker" type, is used for the connection of an external five-ohms impedance loudspeaker, with or without muting of the internal loudspeaker, depending on the way the plug is inserted. This socket is also used for the connection of a pair of headphones, available as an accessory, for monitoring during a recording. The third socket is used for power from a car battery, and is automatically connected when the machine is placed in the slide-in car fitment.

The amplifier is fully transistorised, having ten transistors and three germanium diodes. It feeds 0.8 watt into the internal loudspeaker which is a 6 x 3-inch elliptical. The erase and bias frequency is 55 kc/s approximately. The internal construction is a masterpiece of almost watchmaking workmanship.

The recorder is supplied complete with a moving coil microphone of the pressure type, a very good instruction manual, and a fully comprehensive service sheet. The service sheet supplied with the machine sent for review was in the original German, but I understand that English versions are now available from the distributors.

The Optacord 408 was subjected to the usual practical and technical tests and performed well. Recordings from the microphone were clean and of good quality, and the built-in loudspeaker gave good reproduction. On music, recorded via the radio input, a slight flutter was apparent, but this was not serious. The record/replay frequency response is shown in the diagram, and it can be seen that, except in the bass, it is well up to the manufacturers' specification. As the makers do not give any tolerance for their quoted frequency response, I cannot comment on the rise at the high frequency end, suffice to say that it did not mar the reproduction from the internal loudspeaker, and could easily be equalised by any high fidelity pre-amplifier to which the machine might be connected for better reproduction. The loss of extreme bass I find more serious, but, again, since no tolerances are quoted, I can only record the fact. The measured signal-to-noise ratio was only 36 db, and this was well outside the specification, and not really good enough.

I must say that I found this little machine very interesting, particularly because of its compactness and the great

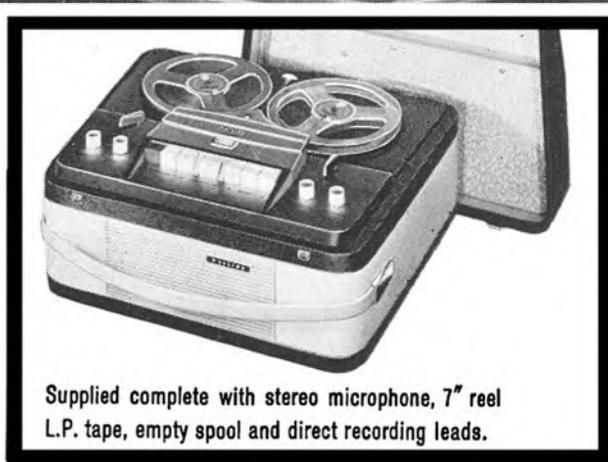


Record/replay response of the Optacord 408 battery and mains-operated tape recorder

(Continued on page 391)



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Taping thrills in mysterious S. America

(Continued from page 387)

On the pontoon Norman explained that the suction pump motor had broken down. "Mark will try and mend it. Meanwhile I am going to sift what we have so far."

The suction pipe disgorged itself into a long steel trough, inset with shallow dividing bars. Underneath the bars was a length of coconut matting forming the bottom of the trough. "The sand and gravel are washed over the bars," Norman explained, "but the diamonds being heavier fall on to the matting." He raised the dividing bars, shook out the mat carefully, and took a spadeful of the sand and gravel that remained. He sieved in a square wooden trough on the side of the pontoon.

As he reached the third sieve, discarding the contents of each after carefully setting aside the small heap of carbon and gravel which formed the centre of each, the others gathered round. With the final sieve they drew closer. I watched Norman's fingers moving quickly, taking out, in all, five diamonds. "Not bad," he said as he dropped them into the marmite jar which served as treasury.

I looked up to see the others smiling. They had not had much luck so far this season and had not covered their expenses yet. Norman explained that everything was supplied by George Golas but that before they could make any profit for themselves they had to pay him back. Apart from food, they were using a drum of petrol a day, which cost them £40 by the time it had been flown in to their camp site.

While Norman still sieved, Mark succeeded in repairing the compressor and work continued. The men took turns, div-

ing for one hour, spending another watching the air and signal pipe line, another hour on the compressor and so on.

We returned to the camp at four in the afternoon. Uncle Dan stood waving on the little beach by his cook house. He had made a batch of small white loaves in the oil drum, which served as oven, and there was a fresh pot of coffee on the fire. As it grew dark we gathered around the fire and a guitar was produced. Reggie, one of the Guianese, was a great singer, and I was treated to a recital of rather bawdy divers' songs, together with the "Top Twenty" hits of two years back.

Later, as we sat and watched the embers die, the stories began—of the snakes they had encountered on jungle trails, and the battles with Venezuelan claim-jumpers. The border was only thirty miles away and law, in either Caracas or Georgetown was powerless to prevent armed robbery.

Uncle Dan told us that he estimated the day's findings at a good \$300. Even he became talkative, telling us tales of the "river people" or the ghosts which were said to inhabit the lower Mazaruni. Then everyone started on their favourite theme. "What I shall do when I strike it rich." Norman and Mark were going to set themselves up in business in New York. For Alvin—a house in the jungle and an aircraft to carry on the search. For the Guianese, a "blind" in Georgetown, a house for their families, and back to the jungle.

"Man, you can't stop this, when de diamond fever gets in de bones," said Reggie. "You just keep on going back, diving and sieving, all your days."

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* * *

John Borwick and James Moir are among the speakers for a series of nine two-hour lectures on "High Fidelity Sound Reproduction" to be given during October at the Hendon College of Technology. The series will begin on October 13 and will continue each Wednesday (7-9 p.m.). Titles will include tape recorders, recording techniques, room acoustics, stereo, and frequency modulation. The fee is £2.

A second series of lectures, "Transistors and Transistor circuit design" will commence the same evening at the College. Sixteen talks will be given by speakers from the G.E.C. Hirst centre. The fee is £3 15s.

Further details are available from the College at The Burroughs, Hendon, London, N.W.4.

TEST BENCH

(Continued from page 389)

versatility which it possesses by virtue of its many power-supply arrangements. It should prove very useful to the growing army of recordists who go outdoors to get their sounds, and to those who use a recorder to make sound tracks for their own films. Personally, I would like to see a similar machine made to operate at 7½ ips so as to be able to take advantage of the undoubtedly better response available at this speed. Still, I am probably in the minority, and the economy in tape costs of the slower speed must be taken into consideration.

If the above faults could be remedied, I think this machine would be very good value for money.

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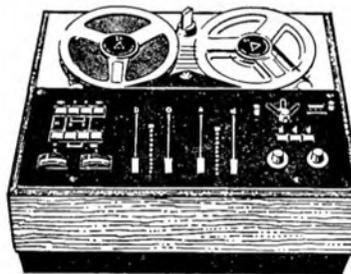
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'TAPE' tours the trade shows

(Continued from page 385)

45 dB. Among the features are facilities for monitoring, multiplay, superimposition, pause control, digital rev. counter, automatic end of tape stop, tape cleaner, and a built-in editing block. Provision is made for the accommodation of 5½-inch spool, providing a playing time of 45 minutes per track using standard-play tape (850 ft.).

It measures 13¼ x 10¼ x 6¼ inches, and weighs 22 lb.

* * *

THREE new Uher tape recorders were introduced by Bosch at their London showrooms. Included in the trio were two versions of a tape unit for installation with an existing hi-fi set-up, a two-speed, four-track stereo recorder, and their latest battery mains operated portable recorder the Uher 4000 Report L (illustrated on our front cover this month).



The 4000 Report L supercedes the earlier Report S and incorporates new features. Among these are the three-digit rev. counter, a new type of AC motor providing almost silent running, and better speed stability, and a level indicator calibrated in dBs, which also serves as a battery life indicator on playback.

The fully transistorised battery model incorporates tape speed of 7½, 3½, 1½, and 15/16 ips and has a quoted frequency response of 40-20,000 cps at 7½ ips, the top being reduced to 16,000, 10,000 and 4,500 cps at the other speeds.

First of the new tape units is the 22 Special, a two-speed, half-track stereo recorder playing at 7½ and 3½ ips. It has a quoted frequency response of 20-20,000 cps at the top speed, and 20-15,000 at 3½ ips. Wow and flutter is given as within 0.08 per cent at 7½ ips, and within 0.11 per cent at 3½ ips. Signal-to-noise ratio is quoted at 60 dB and 54 dB respectively. Crosstalk is rated to be better than 55 dB (stereo), 65 dB (mono).

The Uher 22 Special will accommodate seven-inch spools, providing a playing time of 32 minutes per track using standard-play tape (1,200 ft.) at the higher speed.

Among the features are separate record and playback heads and amplifiers providing before and after monitoring, VU meter recording level indicators, tape tension control associated with a tape cleaner, equalisation switch for CCIR and NARTB specifications, four digit rev. counter with zero reset, and facilities for multiplay. Inputs are provided for two microphones and com-

bined stereo microphone lead, radio, and pick-up. Output sockets are available for earphone and amplifiers. Other features include removable head cover for easier editing and head cleaning, and a transparent Plexiglass cover. All terminals are located at the back of the walnut, or teak, veneer cabinet.

A four-track version of the 22 Special, the 24 Special, is also available. Both retail at 149 guineas.

Detailed specifications of their third new machine, the 724 two-speed, four-track stereo recorder will be given next month. Meanwhile Uher announce the reduction by 20 guineas of the price of the 784 Stereo Royal. This model now retails at 129 guineas.

* * *

FIVE new tape recorders, including a battery/mains machine, and a tape unit are announced by Sony who entertained at their London showrooms.

First of the new models is the TC900 (illustrated left) the first battery/mains model to be marketed here by this Japanese manufacturer. The TC900 is a two-speed, two-track recorder incorporating



an automatic recording level control, the Sony-O-Matic. Running at 3½ and 1½ ips, it will accommodate three-inch spools, providing a playing time of 16 minutes per track using double-play tape (300 ft.) at the faster speed.

Preliminary specifications omit a frequency response or wow and flutter figures, but among the features are a power output of one watt through the built-in 4 x 2½ inch dynamic loudspeaker, facilities for monitoring, pause control, fast rewind, tone control, and inputs for microphone and remote control.

The TC900 operates from four standard 1½ volt torch batteries, or from 110, 120,



220, or 240 volts AC, 50/60 cycles. Power consumption is rated at three watts. The recorder measures 8½ x 4½ x 8½ inches, and weighs 4½ lbs. The price, including dynamic microphone with a stop/start remote control switch, recording tape and spare spool, batteries and carrying bag, is 32 guineas.

Lowest priced of their new mains recorders is the TC135, a two-speed, 3½ and 1½ ips, recorder selling at 28 guineas. This model also features the Sony-O-Matic automatic recording level control, earphone monitoring, accommodation for five-inch spools, and a pause control. It measures 9¼ x 5½ x 11 inches, and weighs 7½ lbs. It is illustrated on the left.

Also with the automatic recording level control is the 62-guinea Model TC357-4 (illustrated below left), a three-speed, four-track mono recorder which features Sony's newly developed "retractomatic" pinch roller for easier tape loading combined with a self-threading reel.

Most expensive of the new range is the 215-guinea TC777-SJ4 (above). This four-track stereo recorder incorporates separate record and playback heads and amplifiers, a three-



motor tape transport system, with facilities for superimposition, parallel track playing and monitoring.

Finally, their stereo tape unit (above), the TC250A. Housed in a wooden base, this two-speed, four-track transistorised recorder is designed to be installed in an existing hi-fi set-up. For vertical or horizontal mounting, it will retail at 55 guineas.

Also shown at the Sony Trade show was their video tape recorder (described in our last issue). This was used in conjunction with their tiny television receiver which incorporates the unique output for recording TV sound onto tape.

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Tape records reviewed

CLASSICS



By Edward
Greenfield

An ideal tape for sound effects

"AGAINST THE GRADE." Lineside recordings at Shap and Lickey. Audiocord (MP 5), 3½ ips, mono, 10s. 9d.

This is one of Audicord's Motive Power Series, the first I have heard, and the obvious comparison is with the Transacord discs of Peter Handford. Choice of subject is very similar. As the title implies, the recordings are of locomotives climbing the two most celebrated inclines on British Rail, the one on the Midland Region main line south of Carlisle, the other between Bristol and Birmingham. Like Mr. Handford the Audicord engineer has sought to present each item as a dramatic incident, and when as in two of the Lickey items and one of the Shap ones you get banking engines adding their power, the multiple climax is all the more interesting.

Most of the locomotives are Class 5 "Black" Staniers with two of their three-cylinder "Jubilee" cousins providing variety. The logging is reasonable, I suppose, but not nearly so meticulous as Mr. Handford's (one "Jubilee" for example is identified by the number alone, the other merely by name). The recording is much less wide in range than Mr. Handford's (it would be interesting to have Transacord tapes to compare) and the dynamic range too is limited. When much of the point of such recordings is to have a long crescendo, it is disappointing if this is in any way flattened out. But in its price range, this is a good buy, and the sound effects people will no doubt be pleased.

DEBUSSY. Images Nos. 1-3 (Rondes de Printemps, Ibéria, Gigue); Prélude à L'après-midi d'un faune. French Radio Orchestra conducted by D. Ingelbrecht. WRC (TT 428), 3½ ips, mono, 29s. 6d.

This tape includes four of Debussy's finest and most atmospheric works authentically played by a top Paris orchestra under one of the most respected of French conductors. The *Prélude à l'après-midi d'un faune* was the first of Debussy's works which fully exploited his revolutionary technique of using the orchestra to the most evocative effect with tenuous and subtle textures. As the music is so subtle some interpreters feel that it should be played with chilly exact-

The tapes reviewed this month are issued by the following companies:

"Capitol," and "Columbia": E.M.I. Records Ltd., 20, Manchester Square, London, W.1.

"Tempotape": A. C. Farnell Ltd., 81, Kirkstall Road, Leeds 3.

"W.R.C.": World Record Club, Box 11, Parkbridge House, The Little Green, Richmond, Surrey.

ness, but rightly I think Ingelbrecht senses the emotional warmth behind the music and the result is more appealing.

The three orchestral Images together form Debussy's most ambitious work outside his opera *Pelléas et Mélisande*, and Ingelbrecht's handling of the two shorter Images—*Rondes de Printemps* an evocation of France, and *Gigue* with its use of the keelrow theme an evocation of Great Britain—has an urgency and strength which remove any thought of waywardness in the music. Ibéria, Debussy's evocation of Spain, is on a bigger scale, being itself in three movements, and there Ingelbrecht is perhaps not quite so successful, for although the warmth of emotion remains the playing of the orchestra has not quite the virtuoso brilliance one ideally asks for. The recording—presumably made by French EMI—is excellent. The very forward sound particularly of the woodwind is most vivid.

Two tapes with Cliff and the Shadows



By Don
Wedge

WONDERFUL LIFE. Cliff Richard with the Shadows, the Stanley Black and Norrie Paramor Orchestras and the Michael Sammes Singers. Columbia (TA 335X 1628), 3½ ips, mono, 35s.

It's a year now since "Wonderful Life" moved round the cinemas of Britain competing with "Hard Day's Night." The dynamic freshness of the first Beatle film seemed, at the time, to relegate the Richard movie, the third using the very successful youth-plus-Hollywood musical formula.

Listening to the sound track album now leads to new judgment. The film's complete escapism was brilliantly done. The music and songs, not designed for emotional involvements, were accomplishments worthy of many of the old Hollywood-musical epics.

The title song and the brilliant Peter Myers-Ronnie Cass songs, *Girl in Every Port*, *Home*, *Love a Movie*—make amusing re-listening.

They are coupled with songs by various members of the Shadows, including two hits which came from the film Cliff's *On The Beach* and the group's *Young Lovers*—a beautiful tune played with almost Palm Court-like sympathy.

The best song, *Matter of Moments*, was not a hit but will be the one that will last.

ALADDIN AND HIS WONDERFUL LAMP. Cliff Richard and the Shadows with Norrie Paramor's Orchestra and the Michael Sammes Singers. Columbia (TA-335X 1676), 3½ ips, mono, 35s.

The compositions of the Shadows were well featured in the "Wonderful Life" film. But this studio recording of music and songs they wrote for the last London Palladium pantomime demonstrates their complete ascendancy as writers of commercial music.

Not too well known is the fact that they wrote virtually every note of music used in the production—and they are doing it again for this year's Christmas presentation.

This long record of 21 compositions includes a four-part ballet and production

numbers such as the opening *Chinese Street Scene*, *Dance of the Warriors* and a *Dragon Dance*. Even a song for the dame!

These numbers were never intended for the hit parade, of course. But they're well above the average standard of such routine music for pantos. The hits came with Cliff's *I Could Easily Fall*, while the Shadows' instrumental *Genie With the Light Brown Lamp* reached the Top Twenty.

Let no one think that Cliff Richard and the Shadows are merely a teenage attraction. They are nationally known and accepted by the vast majority (except for older teenagers who they have passed by).

Their compositions alone, as these two records show, mean that they will be important figures on the musical scene—if only for their compositions—for a long time.

CY & I. Cy Grant with Bill Le Sage. WRC (TT 451), 3½ ips, mono, 29s. 6d.

This album has World Record Club stamped all over. It's one of those cosy concerts of not-too-well-known names packaged into something for the drawing room.

Cy Grant is too dramatic a singer to be classed in the pop field. But combined with the brilliant jazz vibraphonist Bill Le Sage he makes a successful bid for worthwhile listening.

Quite the best number is the first, Grant's *Bela Calypso*, a humorous parody of the best of (Harry) Belafonte. It contrasts very favourably with *Girl From Ipanema*, an exotically light song whose insidious and memorable melody is quite unsuited to Cy Grant.

Even Bill Le Sage cannot save it, but makes amends with four of his own instrumental compositions. Particularly noteworthy is *Wardour Street Waltz*.

OLD GOLD AND IVORY. George Shearing with Quintet and Orchestra. Capitol (TA-T-2048), 3½ ips, mono, 35s.

What happened to the misty jazz of George Shearing? That wonderful combination of melody and progression? Somewhere along the line it got drowned in heavenly choirs and lush strings.

Now it has disappeared. Sad day. This record is described as "The Shearing piano in rich orchestral setting." It, so the copy writers say, "brings a modern burnish to timeless favourites."

Shearing has his way with a Chopin *Prelude*, Cecil Sharp's version *Country Garden*, Ernesto Lecuona's *Malaguena*, a Rachmaninoff theme and Ravel's *Pavane*.

It's pretty. It's interesting, perhaps. But it's not the Shearing Sound. Sad day.

ROARING 20's. Billy Daniels. Tempotape (No. 7), 3½ ips, mono, 21s.

The *Old Black Magic* man, Billy Daniels, provides another kind of mystery on this record. Gone is a lot of the old attack. That wonderful grating quality in his voice as he attacked a lyric is missing. The most virile of singers sounds sweeter and mellow.

The magnificent performing ability, whatever the song, remains. Every word is made to count. He is brilliantly clever at singing within his ability. So many singers try to over-reach themselves.

Somehow "tear away" seems appropriate for the 20's. But that's not always the atmosphere created. *Can't Get Out of This Mood* is a beautiful song, slowly and thoughtfully presented.

Perfidia is sung much slower than usual. Some roughness is added by an excellent accompanying jazz group, particularly a full-blooded tenor saxophonist.

I can offer no explanation of why it does not sound like the old Billy Daniels. Nevertheless, it's my album of the month.

A solid wedge of pure jazz music

JAZZ



By Mike J. Gale

TYREE GLENN AT THE EMBERS. Personnel: Tyree Glenn, tmb, vb; Hank Jones, pno; Mary Osborne, gr, Tommy Potter, bs; Jo Jones, dms and Harold Baker tmpt. WRC (TT 430), 3½ ips, mono, 29s. 6d.

Controversy in the non-classical music world has swung in the last decade from an ignorant condemnation of jazz to an equally intolerant stand against "pop" chiefly on the grounds of behaviour and codes of life rather than on any critical appraisal. Jazz being respectable surely means creative sufficiency with visions, for example, of the *Surbiton Ladies' Guild* enthusiastically endorsing Thelonious Monk with Alan Freeman as compere. But if that is to be avoided at all costs—as it should—a little less controversy in the jazz world is a good thing providing that it does not mean the end of animated discussions. In the final analysis there will always remain a solid wedge of innocuous jazz. In this category "Tyree Glenn at the Embers" impotently falls.

Its exponents are not necessarily unimaginative although more often than not they go unrecognised in the popularity polls but as Alan Freeman will agree this is not everything. To be pedestrian is not a crime and the line up here has veteran ex-Basie man Jo Jones whose stimulating technique is very rarely shown to advantage; then there is Mary Osborne, unknown here, who transcended a dance band society apprenticeship to reach some measure of critical appreciation in America. The other Jones, Hank, seems to have spent his entire life in a recording studio consistently turning in a standard of performance taken for granted by everyone. As for Glenn, the former Ellingtonian remains symbolic of the great middle strata of jazzmen without whom the jazz world would have collapsed long ago.

If the techniques on this album are rather mundane, as they are, it should not be condemned out of hand for if the rhythm section hobbles along unimaginatively and a gimmicky trumpet sounds near to a nervous breakdown in the sparse solos it is, as the programme notes coyly admit "polite and most inoffensive." The remark was made about one item but it applies to the whole set.

One number, *Tyree's Tune*, reaches above this level with solos from Glenn, Hank Jones, Mary Osborne and Harold Baker who all justify the session, inexplicably injecting sensitive and almost unorthodox performances for brief moments. I don't know if this was the last item at the session but even Jo Jones suddenly finds his true level and contrives some excellent brush work.

The collection consists of *Sinbad the Sailor*, *What Will I Tell my Heart*, *Lonely Moments*, *After the Rain*, *Until the Real Thing Comes Along*, *Without a Song*, *I Thought about You*, *How High the Moon*, *I wanna Be Loved* and *Too Marvellous for Words*.

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(SEE PAGES 368 and 369)

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**Who says the British
Tape Recording
Contest is 'fixed'?**

**Letters to
the Editor**

DAVE WISEMAN wrote (*Letters, August issue*) that far too many people are still convinced that the British Tape Recording Contest is "fixed." He says nothing to suggest he does not also subscribe to this feeling.

My own connection with the Contest began in 1963, as a successful competitor, and continued in 1964 when I sat on the judging panel as a representative of the Federation of British Tape Recording Clubs. This year I again attended the final judging session as a Federation observer. Anyone connected with the Contest knows of course that any suggestion of "fixing" is absolutely untrue, but such talk can do great harm to the Contest.

Although "fixing" can enter into amateur contests, this normally only happens when the material awards are great. This could hardly be said of the one and only tape recording contest we have in this country.

As instigator, and in the light of the great interest and practical part you have played in the British Amateur Tape Recording Contest in the past, and as vice-chairman of the committee running the BTRC, you may care to enlarge on the methods of judge selection and judging, and "lay" this particular ghost.

JOHN BRADLEY.

Croydon, Surrey.

IT was very disturbing to learn that two of the prize-winning entries in the British Tape Recording Contest were submitted by members of the judging panel. The confidence of many unsuccessful entrants in these and other classes must have been severely shaken.

Even allowing for the fact that the judges concerned did not join in the voting in their respective classes, I still think this is a most unsatisfactory state of affairs, and that it will do the Contest absolutely no good at all, if not bring it into disrepute.

The organisers must surely re-frame the conditions of entry for the future, so that no judge may enter the Contest: if this is not done I foresee a wholesale loss of interest and confidence in the competition and many fewer entries next year.

TOM ROBINSON.

Whitstable, Kent.

LIKE a hundred or so other tape enthusiasts I have evidently not achieved any success in the latest British Tape Recording Contest. Not to worry, there's always next year.

My main concern, and reason for writing is whether there will be any chance to hear the tapes that just missed being runners-up. I should like to see these tapes, or copies of them, being made available to all the clubs (or selected clubs throughout the country) so that we could discuss them, and learn accordingly. If the judges could say why they were only near misses, this would be even better.

If non-club members could be invited to these Contest tape sessions, they would be

introduced to club meetings, and may possibly decide to enrol. Either way the tape movement in this country could be improved. At present, unsuccessful entrants in the BTRC have little information to guide them in future competitions.

One other point regarding the Contest arises from the dropping of the Technical Experiment Section. I should like to see the Contest revert to the earlier format which seemed ideally to categorise entries. I write on behalf of all those enthusiasts who wish to construct their own sound effects and try out technical experiments for compilation into a Contest entry tape.

JOHN HONE.

London, W.12.

The points in the first two letters are covered in our editorial on page 380 of this issue. Members of the Federation of British Tape Recording Clubs are currently tackling the mammoth task of copying all the entries in this year's Contest. News of the availability of these master tapes will be published when available.—EDITOR.

**Preserve your tapes
by
'copy-editing'**

PAUL BEARD'S article in the September issue is very instructive, but it does give the impression that cutting and splicing is the *only* method of editing a tape.

I have found "copy-editing" to be quite effective for most general purposes. All that is required is the use of a second machine, and plenty of practice in the precise use of the "pause" button.

The great advantage of this method is that material on other tracks is not lost, and in fact can be used in the final tape. It is also possible to control tone and volume to match preceding material, and, best of all, if a mistake is made or there is dissatisfaction with the join, another attempt can be made.

Although dwelling too long on the pause control is not to be recommended, careful preparations can be made to achieve surprisingly fast run-ons, track changes, or even spool or disc changes.

Whilst it is not possible to make microscopic corrections such as the deletion of a single syllable, I suggest the necessity for such precision is comparatively rare. I have eliminated pauses, coughs, and other brief interruptions quite easily by the "copy-editing" method.

So, although cutting and splicing are essential in some circumstances, this other procedure, which is simpler, enables the user to retain two complete tapes without any physical joints.

It may seem I have been reiterating facts which are well known to most recordists,

but the less experienced ought to know of this possible recourse to mercy before committing their tapes to Madame Guillotine.

JOHN SHEEHAN.

Waltham Abbey, Essex.

Tape exchanges and spool sizes

THE "Tape Exchange" section of *TAPE* is a very worthwhile service. Through it, I have made many new friends. All too often, however, I find misunderstanding due to the nature of the printed form for details.

Although in the heading it states that "spool size to be used" should be given, many readers must give this only a cursory glance. The spool size normally given is the largest accommodated by their recorder.

Could this be altered to read "spool size preferred" or as in the heading. New enthusiasts who find others sending 5-inch or 5½-inch spools, and who would prefer to receive three-inch spools, usually have an embarrassing task in correcting their new friends.

ALASTAIR J. SMYTH.

Co. Antrim, Northern Ireland.

Point taken Mr. Smyth, but size of spool to be used normally rests with the sender. Should you wish to despatch a longer programme to your contact, it is essential to know the maximum spool his recorder could accommodate, and such information is not always generally available. A demand for an equivalent length programme in return for one's own tape, however, could cause unnecessary embarrassment, and our own experience suggests personal agreement always the best course.—EDITOR.

One way to index your tapes

AN aspect of tape recording not often covered in tape journals is the methods employed to index musical programmes.

I have established a system which is fairly permanent, yet adaptable at will, is neat without being expensive, and overcomes that problem of searching out those odd scraps of paper.

The system comprises a set of 8 x 5 inch ruled record cards. These have two perforations at one of the widest edges and are stored in a Walker's Student 8 x 6 inch loose-leafed binder. Cards and binders are freely available from stationers and cost only a few shillings.

Each card, which is read horizontally, is divided vertically into ten columns of varying widths. One half-inch from the top of the card is drawn a horizontal rule, and in the ten rectangles produced above this space is provided for the following details. No., Side, Type, Speed, Duration/length, Diameter, Record, Playback, Speed, and Remarks.

Below the horizontal line are headings which refer to the various columns. These are: From, To, Minutes, Artist, Title, Composer, Level settings (across the two columns for "Record" and "Playback"), and Speed (provided for any variations from the Main index heading). The final column has no heading, and is set aside for "remarks."

This particular system of headings suits my purpose ideally, but of course variations can be made for the individual.

The backs of the cards are left blank, or additional remarks can be added.

The system is very flexible, strong, and easily adaptable to the user's whim. My own system includes an additional index of cards on the inside front cover. A spare could be inserted at the front if preferred.

D. J. SHAW.

Tiverton, Devon.

Second thoughts on striping machines

IN my recent series about combining tape and cine photography, I stated that on the whole do-it-yourself striping machines were best left alone.

Since then I have had favourable reports of the machine sold by Harringay Photographic at about eight guineas. I have heard sound reproduced from stripe laid down by one of these units, and would like to retract my earlier comments.

Whilst all the other units I have come across have been most inadequate, the Harringay one really does seem to work.

PETER RYDE.

Spalding, Lincolnshire.

Can anyone help this reader?

COULD you please help me in trying to trace a tape recording of a concert of "Grande Messe des Morts." During the winter of 1963-64 the BBC broadcast a commemorative concert of Berlioz's massive work conducted by Sir Malcolm Sargent, and performed by the orchestras and choruses of the Royal Academy of Music, Royal College of Music, London Guildhall School of Music and Trinity College of Music.

I had my own private recording of this concert and relived and thrilled every time it was replayed. Alas, through bad indexing, now corrected, we accidentally rushed off a recording of our own band and discovered later that in our efforts to please someone else, we had completely erased our treasured recording.

Is it possible that one of your readers was equally interested in this work and has a recording they could copy for me. My full address is Band of the Far East Air Force, Changi, Singapore.

The original work is directed on the score for four orchestras to be placed North, South, East and West of the conductor. Additional to these was a brass band and an enlarged percussion section. Although there are discs available, these mainly feature one enlarged chorus and orchestra. The Albert Hall performance must rank as one of the best interpretations of the original score.

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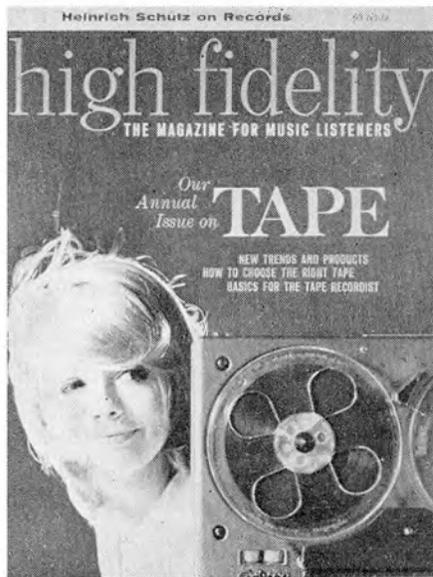
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News from the Clubs

BATH

The members of the Bath sound-recording society have now introduced a sixth hospital to their special monthly feature programme. Since its formation just over a year ago, their hospital service has received one hundred record requests. For a special anniversary programme the Bath members obtained the services of a Bristol rock group who visited Bath to record a special programme for the patients.

In June, the Bath Festival and a local cricket match provided further material for the hospital programme. Members visited both events recording on location, and providing a commentary on the cricket match.

A further extension of the service is provided by John Fishlock's "Saturday Special" feature. His formula includes pop music, religious views and comments, and a request programme for the patients together with a "Pleasure Island" item introducing the voices of patients and their choice of five records.

Secretary: C. J. Griffie, 26, Court Farm Road, Willsbridge, Bristol, Gloucestershire.

BIRMINGHAM

A change of secretary is announced for the Birmingham Club, with Alan Bird assuming the role relinquished by Mrs. Dawn Kneec.

The holiday season, as expected, produced below average attendances at meetings. Nevertheless, a trip to one of the midland's major power stations, Hams Hall, provided excellent location recording facilities for those members able to make the trip. A feature programme on the day's outing is currently in production. Handicapped somewhat by an excessive amount of coal-dust in the atmosphere, the members report little effect on the recording quality of the tapes made, and wear on the heads is only just apparent.

The first of a series of competitions was judged on July 12. A plaque and prize is to be presented to the member collecting maximum points over a twelve-month period. Michael Dagnall, who entered a tape on a sound tour to Denmark won the first stage of the contest. Second was Laurie Watson who provided a very humorous tape on the production of records from hot-water bottles (1).

A week later, technical expert Brian Skinner turned his skill to the production of a programme to cover every taste, and involving many of his relations, and on the following Monday it was the turn of Stan Finister and Terry Morris to provide the evening's entertainment.

Secretary: Alan Bird, 15, Watt Road, Erdington, Birmingham 23, Warwickshire.

BOSTON

At the latest AGM of the Boston Soundhunters, Ken Healey and Phil Towell were re-elected chairman and secretary. W. Franklin was elected treasurer to handle double the money (they hope) with subscriptions raised to 30s. per year.

During the evening's activities it was announced that Mr. Healey has won the Champion Soundhunter Cup presented by retiring treasurer H. Grainger. Competitions had ranged from interviewing and four-minute stories to radio commercials.

Other activities have included excellent tape/slide shows produced by Harold Wightman, Mike Belton and Les Brump-

ton. An extremely interesting and informative tape was received from the Thornton Heath club, and the members hope to reciprocate in the near future. "Dramatize" experiments continue under the expert eye of Douglas Stainer with the efforts of a painstaking cast. Recordings of concerts have been made, with notable successes at Nottingham, King's Lynn, and Holbeach, as well as the usual round of talks to neighbouring clubs.

Outstanding feature of their work this summer was the Soundhunter "Pop" Ball, sponsored by the Lincolnshire Standard group of papers. Beat groups from surrounding areas were invited, and the Soundhunters presented a dance featuring these groups.

All the performances were taped, and the groups selected their two best numbers for audition by an independent jury. After the preliminary playback, two groups promptly withdrew, and the jury eventually awarded the prize to the Mergers of Louth. Their tape was sent to E.M.I.'s Norrie Paramor for contract consideration. Recording sessions have subsequently been held with the Mergers to produce an EP on the Soundhunters' own "Guildhall" label.

Latest project is a sound picture of the neighbouring village of Kirton, with microphones appearing even in the fish-and-chips queue. All contributions will first be judged in the club's competition, and will then be edited to form a feature story of the village's life.

Secretary: Philip P. Towell, 107, Spilisbury Road, Boston, Lincolnshire.

BRIGHTON

A demonstration of the latest Revox tape recorder was given by Harry Draper at one of the most recent meetings of the Brighton tape club. For the following meeting Mr. Draper was again in the chair when, with Eric Savage, he presented a film of motor-car racing. Supplied by Dunlop Ltd., the film included many great racing drivers and races, including the 1955 Le Mans.

The club suspended meetings during the summer; the first meeting after the recess is to be September 8, one week before their AGM.

During the closed period a number of members maintained recording activities. Notable among these was a visit to the local BBC transmitting station opened on July 31. Other members occupied the time preparing tapes for a club contest in Jamaica and the Friern Barnet club.

Secretary: Keith Upton, 47, Kingsley Road, Brighton 5, Sussex.

COTSWOLD

A visit to a local church to record an organ recital occupied the last meeting of the Cotswold society before the summer break. The recital was given by the club's blind member, Mr. Bill Martin, organist and choir-master of All Saints' Church, who provided a varied programme from the classical organ repertoire. He also included a Passacaglia of his composition based on a pedal theme elaborated into a stunning climax exploiting the full compass of the instrument.

Colin Woods and Jim Pryce-Jones recorded the performance in stereo, while other members made mono tapes. Of the recordings heard to date, June Turner's tape, recorded using a Telefunken M300 battery machine and a Beyer 119 microphone, is said to be outstanding.

Further church music featured at an earlier club meeting when the society devoted the evening to the playback of members' tapes. Eric Jones provided and operated the playback equipment which included a new two-speaker system he has made for the club. The programme opened with excerpts from Bach's Christmas Oratorio performed by combined college choirs in Cheltenham. Other tapes heard ranged from birdsong, with an excellent recording

by Barbara Elliott, to folk music (Peter Duddridge and Denis Oldfield) by way of a fantasy for mixed speaking voices by Frank Symes and some hilarious re-editing of an extract from a highbrow play by Colin Woods. Richard Munn satirised the club's "Cotswold Roundabout" and Bill Martin presented a multiple recording in which he sang a four-part folksong accompanied by his own duet for piano and clarinet.

Secretary: Peter D. Turner, Pike Cottage, Frampton Mansell, Stroud, Gloucestershire.

COVENTRY

Organ music also for the members of the Coventry club who visited the Kidderminster Town Hall to make recordings of its organ during one of their May meetings. Ken Preston used a Tandberg recorder while Stan Day operated his battery portable Fi-Cord 1A. The tapes recorded, which will eventually make their way to the club's library, included the organist's description of his instrument plus the positioning of the microphones during the recording session.

Other early meetings included a demonstration by Ron Atkins of his two self-constructed Lowther horn-loaded speakers, a visit to the Rugby society to join them for a programme by British Tape Recording Contest winner Richard A. Margoschis, who played many of his birdsong recordings; and an evening devoted to the comparison of loudspeakers. Four members provided units which were connected to a single switch to provide instant comparisons in mono and stereo.

Other recording activities have included a visit to the headquarters of the Standard pipe-and-drum band to record their piper and drummers; and a session at the Coventry Central Hall to record the Roxmarymka Band of Prague during a performance presented by the Coventry Committee of International Understanding. The Committee later invited the club members to provide dubbings of tapes of the Band's repertoire for distribution to other civic authorities.

Following their recent successful recording of an English text-book for a school in Bratislava, Czechoslovakia, the members have received another similar book for the same purpose. This is the first of 21 text-books, so it promises a busy time ahead for the next twelve months.

Secretary: Roy Reynolds, 1, Thurlstone Road, Coventry, Warwickshire.

IPSWICH

Latest news from the Ipswich club involves a change of secretary. Mrs. Wilding was elected to replace her husband at the A.G.M. held at the Royal George Hotel. Malcolm Wilding assumes the chair which was vacated by Mr. J. Steggall.

Latest manufacturers' demonstration for the members included a visit by Mr. G. C. Balmain of Mastertape (Magnetic) Ltd. and Mr. W. A. Jamieson of Wharfedale Wireless Works.

At the earliest meeting Mr. Balmain described and demonstrated the range of tapes made by Mastertape, and traced the development of magnetic tape. His talk included a colour film illustrating the many processes involved and the stringent tests made to ensure good reproduction.

A fortnight later, Mr. Jamieson visited the club to demonstrate some of the latest loudspeaker units manufactured by Wharfedale. He described the various units and their particular functions, and introduced some of the latest models.

Secretary: Mrs. Diane Wilding, 4 Meadowvale Close, Ipswich, Suffolk.

LLANDRINDOD WELLS

First new formation from central Wales is announced with the report of a club in Llandrindod Wells, Radnor.

Recently formed, but described by its

secretary as most enthusiastic, the new club seeks advice and information for programmes from other clubs and societies.

Secretary: C. V. Margrave-Jones, Temple Chambers, South Crescent, Llandrindod Wells, Radnor.

TAPE EXCHANGES

TAPE recorder owners who wish to contact others with similar interests, to exchange news and views by tape are invited to fill in and return the form on page 402 giving their name, age, address, special hobby or interest for this free service.

Details given here also include speeds and spool size to be used, name of recorder, and special area to be contacted.

Amesbury, T. (40). 4 Manor Gardens, Market Drayton, Shropshire. Esperanto, music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$. Seven-inch spool. Grundig TK30. USA, Australia.

Barling, John (39). Kingscroft Avenue, Dunstable, Bedfordshire. Colour photography, Evangelism, youth groups, classical music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Portogram Audiotape and Standard Unicorder 61. Canada, Australia, New Zealand, USA.

Bird, David Frederick (25). Radac House, 92, Gardiner Street, Gillingham, Kent. Cine and still photography, music. 3 $\frac{1}{2}$ ips. Seven-inch spool. Philips EL3514/15B. Male contacts preferred in UK, Germany.

Brett, B. T. (29). 26, Jutsums Lane, Romford, Essex. Photography, films, records. 3 $\frac{1}{2}$ ips. 5 $\frac{1}{2}$ -inch spool. HMV 2202, four-track.

Burrows, Walter F. (35). "Lyndhurst," 47, Kirtton Road, Trimley/Suffolk, Ipswich. Classical and opera music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Sony 500, Beomaster 2000. Commonwealth countries.

Coutts, Alan A. (29). 31, Alloua Road, Ilford, Essex. English and Swedish languages. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Regentone R104. Scandinavia, France, Italy, Germany.

Currie, Duncan (34). 170, Broadhurst Gardens, London, N.W.6. Historical and national costumes, all music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$ ips. Seven-inch spool. National, four-track stereo. Male contacts only in Europe, Asia, USA. Letters first please.

Hamer, David E. (20). 3, Whitehall Place, Wallington, Surrey. Motoring, pop and classical music. 3 $\frac{1}{2}$ ips. Seven-inch spool. Philips EL3541 and Civic four-track. Letters not required.

Harold, Ted (26). 248A, West End Lane, London, N.W.6. Foreign travel, physical culture, music. 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Elizabethan recorder. Male contacts preferred in UK and Continent.

Harris, Stanley (36). 5, Carlton Road, Boston, Lincolnshire. Television, music. 3 $\frac{1}{2}$ ips. 5 $\frac{1}{2}$ -inch spool. Westminster recorder. Australia, Canada, New Zealand, USA, Rome, Spain.

Heard, Brian M. A. (32). 34, Church Hill, Loughton, Essex. Cartooning, civil defence, light music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$ ips. Seven-inch spool. Sony stereo and BSR mono recorders. South Africa.

Hewitt, J. G. (35). 21, Haddington Gardens, Belfast, Northern Ireland. Cine photography, hi-fi, music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Truvox PD97 stereo. Anywhere overseas.

Hiseman, Robert (27). 74, High View Estate, Harvel, Kent. Science reading, 1940's swing music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$ ips. Seven-inch spool. Magnavox recorder. UK, USA, Canada.

(Continued on page 402)

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A first-class book of reference for the subject.
4. **Audio and Acoustics** by Gilbert A. Briggs (1963). 168 pages, 140 illustrations. **12s. 6d.**
Acoustical Consultant James Moir as sub-editor. A revised but basically original work from the well known "Sound Reproduction."
5. **Audio Biographies** by Gilbert A. Briggs and 64 collaborations (1961). 344 pages, 112 photographs and illustrations. **19s. 6d.**
7. **Cabinet Handbook** by Gilbert A. Briggs (1963). 112 pages, 90 illustrations. **7s. 6d.**
Intended for the do-it-yourself man, and contains vital information on design and acoustic principles particularly in relation to compact enclosures which are now so popular for stereo.
8. **Direct Current and Magnetism.** Edited by Edgar J. Black (1964). 120 pages, 92 illustrations. **10s. 6d.**
Gives a very simple account of basic electrical theory.
10. **High Fidelity Pocket Book** by W. E. Pannett. 304 pages. **40s.**
Clear explanations of each item in the chain of a high fidelity installation are accompanied by practical hints for the enthusiast.
11. **High Fidelity Sound Engineering** by Norman Crowhurst. 336 pages, 262 illustrations. **50s.**
Comprehensive coverage on the engineering of modern single-channel and stereophonic sound equipment.
27. **Stereo and Hi-Fi as a Pastime** by Douglas Gardner (1959). 148 pages. **15s.**
15. **Loudspeakers (Fifth edition)** by Gilbert A. Briggs (1963). 336 pages, 230 illustrations. **25s.**
All aspects of the design and performance of loudspeakers and enclosures are dealt with in non-technical terms.
20. **More About Loudspeakers** by Gilbert A. Briggs (1963). 136 pages, 112 illustrations. **8s. 6d.**
Deals with the latest trends in non-technical terms, and takes a new look at questions such as response and impedance, load matching, adding a speaker, listening tests, stereo.

36. **The Grundig Book** by Frederick Purves. Comprehensive 1964 edition. **15s. 6d.**
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41. **Hi-Fi and Audio** by A. T. Collins. Useful introductory paperback. **3s. 6d.**

29. **Tape Recording and Hi-Fi** by Douglas Brown (1961). 160 pages. **5s.**
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33. **You and Your Tape Recorder** by Norman Paul (1962). **4s.**
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12. **High Fidelity Sound Reproduction (Second edition).** Edited by E. Molloy. 212 pages. **20s.**
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Sound Effects on Tape by Alan Edward Beeby.

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How to achieve realistic effects simply and economically.

Tape and Cine by John Aldred.

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How to Record Weddings by Paul Addinsell.

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Hi-Fi for the Music Lover by Edward Greenfield.

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25. **Sound Recording Works Like This** by Clement Brown. Illustrated. **10s. 6d.**
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39. **Tape Recorder Manual** by Wallace Sharps. (New cheap edition). **10s. 6d.**
Sections on its uses in business, education and pleasure, how it works, etc.

2. **Alternating Current and Acoustics.** Edited by Edgar J. Black (1964). 116 pages, 86 illustrations. **10s. 6d.**
Deals in simple terms with the origin and generation of alternating current, construction of coils and capacitors. The second part deals with the nature of acoustics and construction and operation of devices used for sound recording and reproduction.

21. **Practical Hi-Fi Handbook** by Gordon J. King. 224 pages. **25s.**
A guide to choice, installation and servicing of equipment, for dealer, engineer, and amateur enthusiast.

22. **Practical Stereophony** by H. Burrell Hadden (1964). 159 pages. **37s. 6d.**
The author, an instructor at the BBC, has been actively engaged for many years in research in this field, as a result the book is mainly directed towards those who make this art their profession, but there is much for the amateur enthusiast.

35. **Tape Recording Yearbook 1965.** **7s. 6d.**
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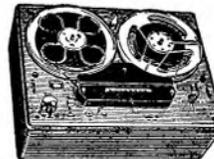


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(Continued from page 399)

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Doyle, Laurence T. (16). 92, Twilley Street, Wandsworth, London, S.W.18. Sport and music. 3 $\frac{1}{2}$ ips. Seven-inch spool. Cossor ER1602. USA, Canada, Europe.

Hance, David (15). 77, Frimley Road, Chessington, Surrey. Bowling, sport, pop music. 7 $\frac{1}{2}$, 3 $\frac{1}{2}$, 1 $\frac{1}{2}$ ips. Seven-inch spool. Civic recorder. Female contacts in UK, USA.

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Merrifield, Bernard (16). 30, Summerhouse Avenue, Heston, Middlesex. Photography, electronics, pop music. 3 $\frac{1}{2}$ ips. 5 $\frac{1}{2}$ -inch spool. Grundig TK18. USA, UK.

Rowsome, Paul (16). 87, Long

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Address

Special interests

Speeds to be used Maximum spool size

Recorder owned

Special areas to be contacted
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THIRD FOLD HERE

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