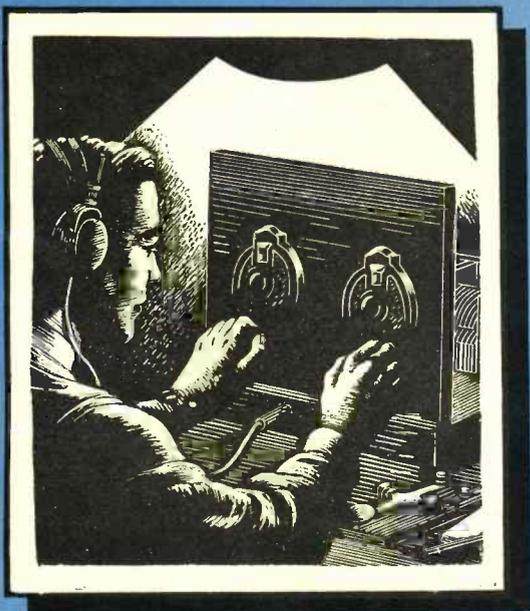


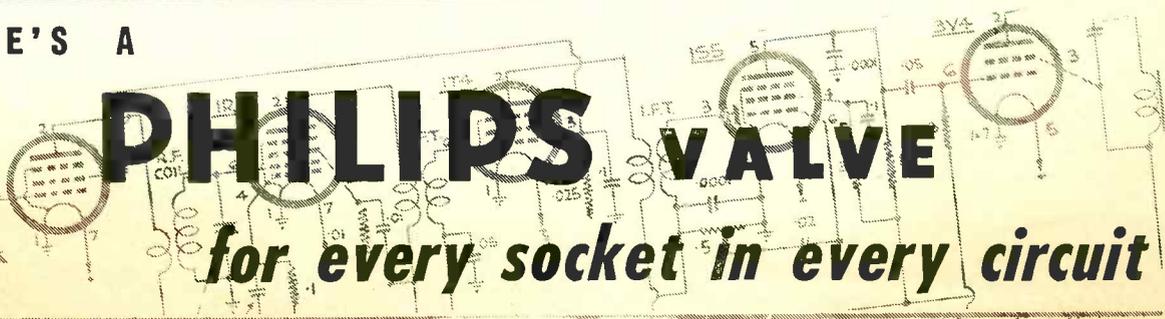
# *Australian* RADIO AND TELEVISION NEWS



THERE'S A

## PHILIPS VALVE

*for every socket in every circuit*



## *Built like a Scientific Instrument . . .*

Because music and speech from each broadcast station must be tuned-in precisely by the listener himself—Mullard has introduced scientific Eycline Tuning—thus making this delicate task smooth and easy for everybody—thanks to Mullard scientists and the new Mullard Matched Valves. Each receiver is fully guaranteed



*. . . and Triple Tested!*

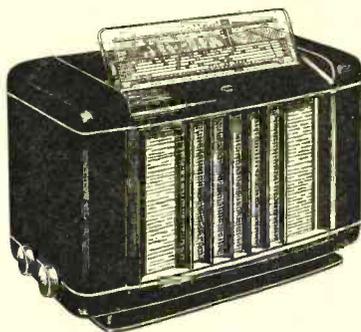
### *The "Thousand"*

A compacted medium-range Broadcast Interceptor activated through in-built rotary mains supply switch from any A.C. 220-260v. light or power point. One-piece cabinet mould with Sonic "free-back" gives pure and ample re-creation. Standard cabinet toning: Walnut, mahogany, ebony. Ivory, jade and blue slightly extra.  
**MODEL 1000 RECEIVER, £18/18/-.**

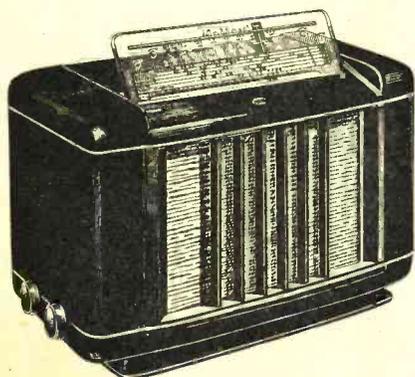
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Larger Broadcast Interceptor with expanded R.F. and Sonic range. Gramophone input channel with extra generous Sound Re-creator giving surprising volume and extreme clarity. For 220-260v. A.C. supply through rotary mains switch. One-piece walnut cabinet mould.

**MODEL 1107 RECEIVER,  
£27/15/-.**



*Mullard English-made valves were the first to be used in Australian Radio. They are first in the Empire to-day.*



### *The "Eleven-O-Three"*

Comprising all the 1107 features plus hemispheric H.F. Range-probe covering all standard broadcasts and local or overseas—16.3 to 50.8 metre transmissions. The 1103 makes two hemisphere listening an easy pleasure at any time of the day or night.

**MODEL 1103 RECEIVER, £32.**

**UNCONDITIONAL  
GUARANTEE**  
on every Eycline  
Tuning dial plate.

# Mullard



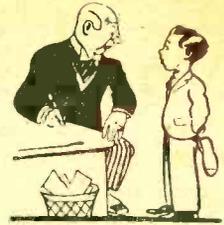
**MAKERS OF WORLD FAMOUS RADIOS**

Advertisement of Mullard Australia Pty. Ltd., 35-43 Clarence Street, Sydney.  
Distributors in all States

Sold Everywhere

M110B-49

# **YOU HAVE BEEN MISINFORMED**



*if you have been advised to wait for television instead of buying that new broadcast receiver now. Take no notice of people without technical knowledge who say that television will take the place of radio*  
**BROADCASTING.**

## **THEY ARE WRONG**

*There is no connection between television and the established services of radio broadcasting.*

*Broadcasting, as you enjoy it today, will be with you well into the future.*

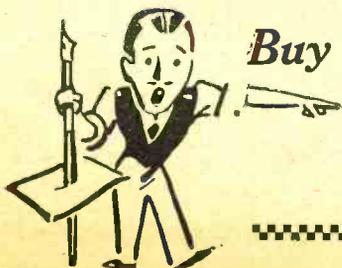
## **TELEVISION WILL BE AN EXTRA**

*You will still have your*  
**SERIALS, JACKPOTS and RADIO SHOWS.**

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**Don't be PENNY WISE and POUND FOOLISH**

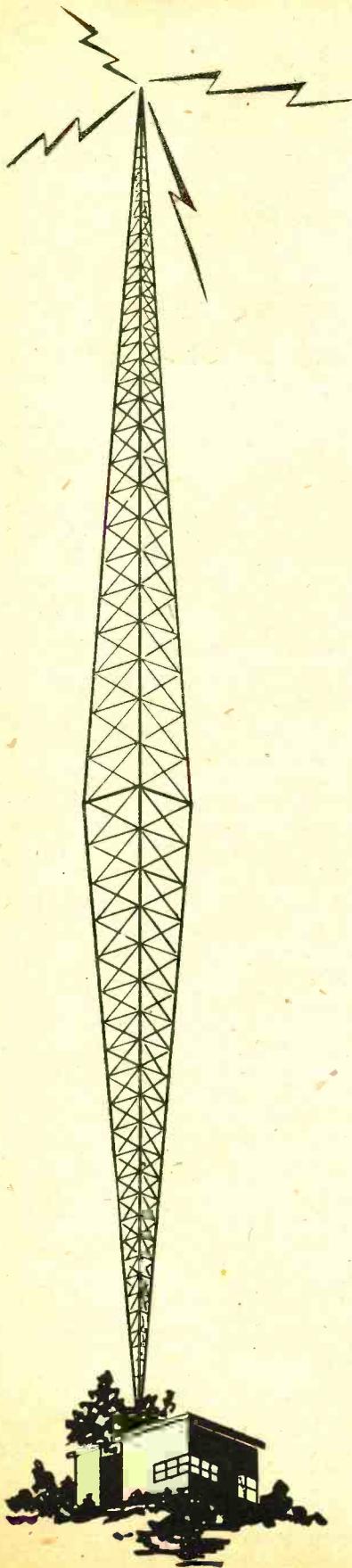
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*Buy that new Broadcast Receiver*

# **NOW**

*Don. B. Knock*



# AUSTRALIAN RADIO AND TELEVISION NEWS

THE PROGRESSIVE NATIONAL  
JOURNAL FOR EVERYBODY

EDITED BY DON B. KNOCK

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JULY-AUG.-SEPT. 1949

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### THIS MONTH'S COVER ILLUSTRATION:—

*Youth at the Controls. An impression of one of our younger constructor readers tuning his self-made headphone radio receiver.*

READ AND  
ENJOY

# AUSTRALIAN RADIO AND TELEVISION NEWS

A MAGAZINE  
FOR EVERYBODY

Vol. 1, No. 3. (Power Restriction Period) SYDNEY, AUSTRALIA.

July-Aug.-Sept., 1949

## FANCY OR FACT? *THE BEST LAID PLANS OF MICE AND MEN—*

IT IS TRUE that in the last two or three years there have been misleading statements about television and frequency modulation, attributed to politicians and others. The daily Press, doing its best with items from a news angle, may have given the wrong idea to the public in some instances, perhaps because news editors, hoping to "scoop" contemporaries, have suffered a little from over-imagination and have elaborated erroneously on otherwise simple statements. So much "ballyhoo" was printed about Frequency Modulation three years ago—it was to be THE answer as the medium of future entertainment—that the public stalled, naturally enough, on intended purchase of standard broadcast receivers. The result was felt in quick time by those who make radios and those who distribute them. There was a minor slump. Despite that, certain courageous manufacturers offset it admirably by the introduction of attractive features backed by clever advertising. This journal knows that the claims of one leading set maker whose name and product will be found in our advertising pages, tells the truth when he informs us that he has never done better at any time in his business history; that he cannot keep up adequately with the demand. So also with another of our advertisers, who, with a first-rate development in sound reproduction to offer, relegates the previous limitations of the midget set to the past. One has only to hear the new product to agree that here indeed IS something outstanding. There is nothing fanciful about these Australian developments; they are facts. Readers of this journal may rest assured that what they read in its pages about television and frequency modulation will be the facts. When we tell you that neither television or F.M. have any connection with radio broadcasting as now in vogue, you can accept that as being a truthful statement. Don't be influenced by fanciful Press reports about television—you can look to "Australian RADIO and TELEVISION News" to give you the facts.

AMONGST the troubles and misfortunes resulting directly from the coal strike and the consequent prohibition of the use of power in industry, the complete cessation of printing and publishing of most periodicals and magazines constitutes a lesser part. Even so (having no emergency electrical plant available for printing) it was a bitter pill which the publishers of "RADIO and TELEVISION" had to swallow.

It was small consolation to know that this young and lusty publication was but one of a large number conspicuous by absence from stalls and bookshops during the past two months. Very early during the strike, your Editor intended submitting a paid announcement to a contemporary fortunate enough to possess emergency power—and therefore able to go to Press with the July issue—which was intended to advise those of their readers who also take "R. & TV. News" of the hold-up. We were informed that "it was not the policy of that journal to accept advertisements from a competitive publication." . . . Well, dear readers, we tried to let you know . . . it is not our fault we failed. Our July issue was actually on the Press in process of production when the order came to suspend operations, and now, two months later, we are beating the record by getting away to a quick start. We have had to cut out quite ruthlessly a lot of good reading matter because it is no longer "news" in the strict sense of the word—and we have also a current problem of paper supply caused by the strike—a shortage regarding both quantity as well as suitable quality.

All things considered, we must not complain, and it is with pleasure we present the current issue, which readers will notice is marked July-August-September. Subscribers' orders will be suitably extended to ensure the provision to them of two further monthly issues beyond the present expiry dates. And now, Gentlemen, to work. . . .

## WILFRID THOMAS SINGS

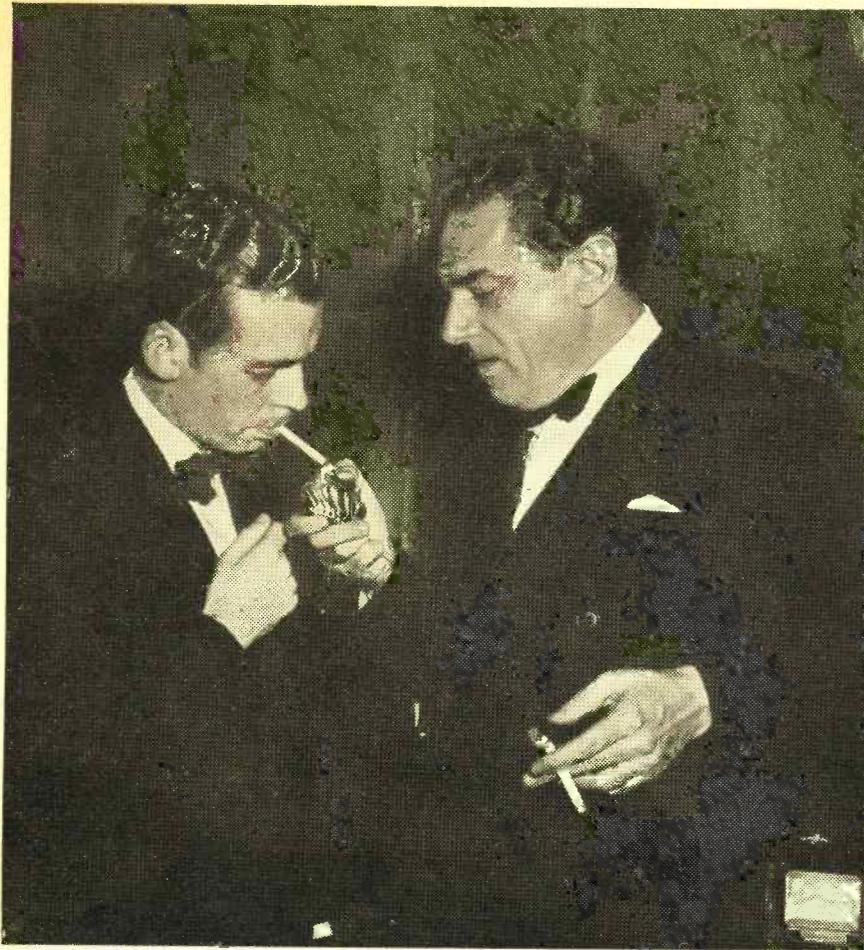
Broadcaster In New Role

Wilfrid Thomas, one of Australia's most popular broadcasters, appears in a unique role in radio in his new 2CH programme, "Wilfrid Thomas Sings."

A musical walkabout, this entertainment brings him to the microphone to sing the songs of the people of the countries he has visited. Although it is an entirely new role for him in radio, it was as a singer that he began his career, he having been a Melba protegee. In subsequent years he sang his way around the world at concerts and in opera, appearing in distinguished company at the Albert Hall, the Palladium and most other important halls and theatres.

Wilfrid learned the songs from Spanish gypsies in their cave dwellings, from American cowboys at their chuck wagon picnics and fire-side sing-songs, from Africans and Filipinos, and from Calypso singers and negro convicts.

Wilfrid Thomas has been in such demand as a speaker and writer that listeners have, until now, been deprived of his singing, but their appreciation was indicted following his first broadcast on 2CH, when for half-an-hour he was busy answering phone-calls from listeners, congratulating him on the entertainment he had provided. He is accompanied in "Wilfrid Thomas Sings" by Don Andrews, guitarist. Tune-in every Friday at 8 p.m. on 2CH.



Above: — Wilfrid Thomas lights a cigarette for Don Andrews, his guitarist, after a broadcast of "Wilfrid Thomas Sings," 2CH Sydney, Friday nights at 8 p.m. In this programme 'Wilf' sings for the first time in Australian radio, and to Don Andrews' accompaniment, presents the folk songs of the countries he has visited all over the world.



Right: — Studio audience watches proceedings during a broadcast of "Stump the Experts," 2CH, Fridays, 7.30 p.m. In this programme listeners' questions are put by Bob Pollard to a Board of experts present in the studio. Prize money is doubled if the experts cannot answer, and there's a special award of £4/4/- for the best question of the week.



# BRITISH TELEVISION

The following comments about British television are made by Mr. Ray Allsop. He is the Australian representative for E.M.I. Ltd. and a prominent radio and radar engineer of long experience, being prominent also as a Fellow I.R.E. Aust.; Fellow Society Motion Picture Engineers, U.S.A.; Senior Member I.R.E., U.S.A.; and Member British I.R.E. In keeping with the editorial policy of "Australian RADIO and TELEVISION News" to keep the public fully informed on all phases and developments, Mr. Allsop's observations are given here. The views outlined are not necessarily those of the editor or of the proprietors of this magazine.

WITH television on the Australian scene, and being the newest wonder of the electronic age, it is naturally news. However, the publicity, in my opinion, has been to some extent misleading, and the claims somewhat ambiguous. I, therefore, consider it necessary to point out indisputable facts and thus give credit to the physicists, and the research laboratory responsible for the fine British world pioneering achievement in this sphere.

*It was the Electronic and Musical Industries Ltd. at Hayes, Middlesex, England, that gave Britain and the BBC the world's first high definition electronic television service in 1936. That system and the identical cameras and transmission equipment is still in operation at Alexandra Palace, the London BBC television headquarters, producing the now world famous service.*

The genesis of to-day's television systems may be found in 1908 when A. A. Campbell Swinton, F.R.S., the eminent British Scientist, enunciated the principles of distant electronic vision in a letter to *Nature*, and in his presidential address delivered to the Rontgen Society on 7th November, 1911. By 1932 research specialists in the E.M.I. Research Laboratories at Hayes had developed the tools for proving these principles, twelve months ahead of similar work carried out in the U.S.A., which was published by Zworykin.

The Television camera tube design, known as the EMITRON, developed from this initial work, was used for the beginning of the first regular public service instituted by the B.B.C. in London in 1936. The Emitron is still the only camera tube used for studio broadcasts by the BBC.

It is appropriate, and of particular interest to Australians, to mention at this juncture, of the physicists responsible for this world pioneering effort, two, J. D. McGee, M.Sc., Ph.D., and J. I. Cairns, M.Sc., Ph.D., are Australians.

In the search for means to improve camera tube sensitivity, to cope with the difficulty of televising outside events under poor light conditions, especially during the English winter, and in theatres or places where only

artificial light or normal intensity is available, the SUPER-EMITRON was developed and first used by the BBC for televising an outside event in November, 1937, under weather conditions when the light was hardly sufficient for the taking of good "still" photographs. The Super-Emitron mobile camera channel equipments are still used by the BBC for that work and were recently supplemented with a post-war mobile equipment featuring the C.P.S. Emitron, which is claimed the world's most efficient camera tube.

As early as 1934, the E.M.I. Research Laboratories realised that if design details could be solved to control certain spurious electron effects in camera tubes, the sensitivity could be greatly increased. In that year the research specialists proposed a method to eliminate these effects. Considerable work was done along the lines of these proposals, i.e. Cathode Potential Stabilisation, before the war. But, the commencement of hostilities diverted the entire research staff to the development of radar and other specialised secret electronic armament. However, the C.P.S. Emitron was born.

It is interesting at this point to mention that technical development of television did not cease during the war, in the United States.

At the war's end, E.M.I. Research Laboratories, the specialists concerned, returned to development of the C.P.S. EMITRON, without respite after the strenuous years of wartime work, and have since reared a lusty brainchild with extraordinary eyesight through which millions of people will see afar in the years to come.

An experimental camera fitted with this tube was first used by the BBC to televise the Royal Wedding Procession in November, 1947. Following that practical test the BBC ordered a mobile three C.P.S. EMITRON camera unit which was used, together with the SUPER-EMITRON Mobile Units for the first time in August, 1948, to televise events of the Olympic Games. That the Telecast of the event was an outstanding success, I quote in part, a statement by Lord Trefgarne, Chairman of the British Government's Television Advisory Committee:—



*"In its television transmission from the Olympic Games, the BBC has just given the world a striking visual demonstration of the technical excellence of the British system, using the latest British cameras and British transmitting equipment" and "The results have been the admiration of our overseas guests, including the Americans" end of quotation. It was a spectacular achievement for the British Emitron Television System.*

The most important features of the C.P.S. EMITRON, the high sensitivity, fixed and uniform black level are attained without other attendant disabilities existent in competitive tubes. The photo-electric emission is used with almost 100 per cent efficiency. This compared with something like 5 per cent efficiency of the EMITRON.

The nett result of this post-war camera development is that only one-fiftieth part of the light is required to give a comparable picture brightness to that of the earlier tubes, and then with uniform black level and contrast. In fact, the pictures are satisfactory at the level of illumination at which the average person can work, read and write with reasonable comfort, that is, between 5 and 10 foot candles of incident light. It will give a recognisable picture even at  $\frac{1}{2}$  foot candle, and that is very low illumination; so low it would be impossible to effectively expose even the fastest known motion picture negative film. Now it is possible to transmit pictures of sporting events etc. long into the late afternoon with excellent quality.

The C.P.S. EMITRON does not produce excessively "noisy" black when operating at high sensitivity as do other tubes. The term "noise"

(Continued on page 11)

(Continued from page 9)

is used to describe white grain in the black parts of the picture. An equivalent may be seen in motion pictures taken in weak illumination, especially in some newsreel shots the grain is evident. A definition of 1250 lines will be possible from the C.P.S. EMITRON when the other links in the chain of transmission and reception are developed.

Sir Noel Ashbridge, M.I.C.E., M.I.E.E., Deputy-Director General of the BBC recently honoured the Electric and Musical Industries Ltd. by using the C.P.S. EMITRON camera equipment in giving the Faraday lecture of the Institution of Electrical Engineers, and spoke very highly of it.

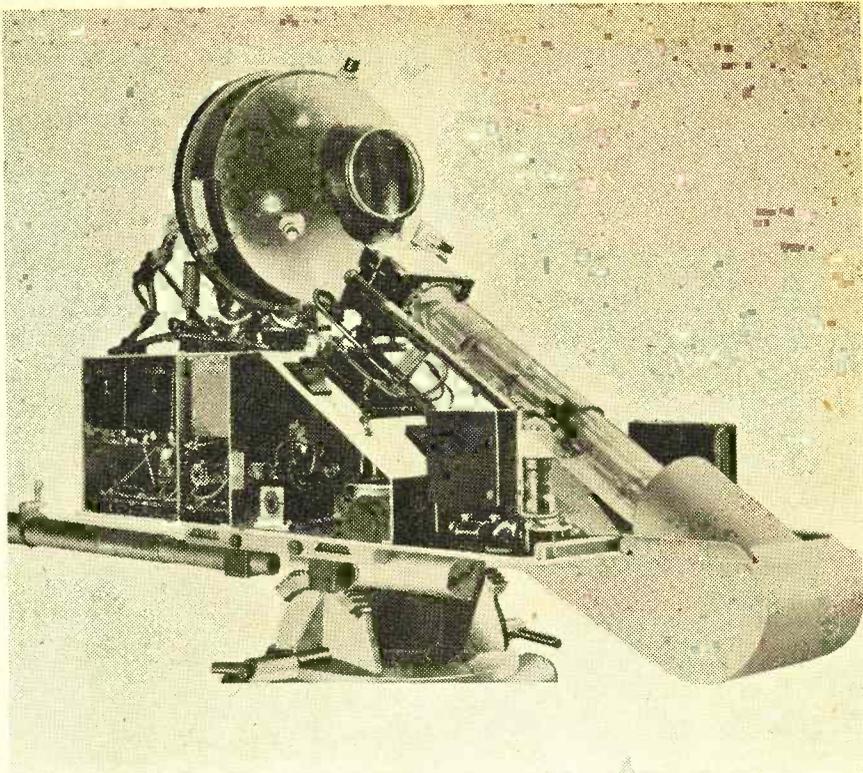
In addition, to the three C.P.S. EMITRON cameras and channel equipment used at the Olympic Games, additional units are in course of supply to the BBC.

At the Oxford and Cambridge Boat Race on 26th March last the BBC used seven cameras. Several of these were of competitive design and manufacture, including American. However, indications are such that history will prove the C.P.S. EMITRON Camera was the one selected to be used in the expansion of the BBC television services.

The BBC entrusted E.M.I. Ltd. with the design and production of their second television transmitter which will go into service later this year at Birmingham. This transmitter will be the most powerful in the world; its peak power being in the order of 50 K.W., and will serve 6,000,000 people.

And now, more recent E.M.I. achievements in the field of television transmission equipment:—The Research Laboratories not being satisfied with the pre-war method of scanning motion picture film, a method which is still in use in the U.S.A., designed equipment with radical differences. One of these equipments went into service at the London Station on 28th March, and the BBC have expressed their satisfaction. Two more units have now been ordered for installation in the Autumn of this year.

The new FILM SCANNER, conceived, developed and produced by the E.M.I. Research Laboratories is the first of its kind in the world, corrects the difficulties of converting the film frame pictures into electronic pulses without loss of clarity as in other scanners. The resultant picture is equal to the best cinema projection, and in some circumstances, superior as the operator has control of the contrast, i.e. if the film exposure is not good, it can be corrected, electronically, within reasonable limits.



The interior of the Emitron camera discussed by Mr. Allsop. This piece of equipment is literally the eye of Television, has no moving parts and is noiseless, instantaneous, and continuous in action. —Photo by E.M.I. Ltd.

The importance of this development is one of first magnitude as film to a television service, will be equivalent to disc records to a sound broadcasting service.

Parallel with the development of the FILM SCANNER, the Research Laboratories also solved the problem of 'transcribing' vision to motion picture film with greater clearness than by other methods. The design of this equipment is also radically different, from that used in other countries, in which each frame of the film is exposed by presenting it to a complete picture on a cathode ray tube. The new E.M.I. VISION RECORDER, however, builds up the picture line by line on the negative film and thus eliminates optical and other losses. In fact, the clarity is so good only very experienced persons can detect a film recorded by television when projected by a good cinema machine.

Coming now to the question of definition viz:—number of lines per frame. It is unfortunate that reference to British Television conjures up, in the minds of persons not completely informed, the impression it is available only at the BBC Standard of 405 lines, and, therefore, cannot be as good as the 525 line television in America. That is not true.

The definition of 405 lines was recommended by E.M.I. television research specialists and adopted by the BBC as standard in 1936, in spite of the fact that, at that time, the opinion in the technical world was that nothing higher than 240 lines would be practical. To-day the BBC 405 line definition is giving a highly satisfactory service, and because it is so good, producing clearer pictures than the American system owing to certain technical advantages, and as a large number of homes had receiving sets installed before the war, the authorities, after due consideration, decided to maintain that standard for the television network in Great Britain, and in the future to parallel the service with a higher definition system, consistent with the state of the art, when that time comes.

But, much progress has been made since 1936, and a line definition greater than 600 is a technical fact and at a very small increase in cost above 405 line definition. Therefore, it would be a foolish step to commit a country, where television services have not been instituted, to a definition not consistent with the present advanced state of television, and for which equipment is available.

Soon after the end of the war, E.M.I. Research Laboratories an-



## A Fine Hotel FACING A PARK

The one thing you will immediately notice when you stay at the Wentworth is the peaceful atmosphere . . . the absence of noise and bustle. . . . The Wentworth faces a park . . . yet it is merely "round the corner" from the centre of the city. The rooms are all you would wish . . . the service and cuisine excellent.

## THE WENTWORTH in Sydney

Phone BW 1561 (10 lines)  
C. D. Maclurcan, Managing Director

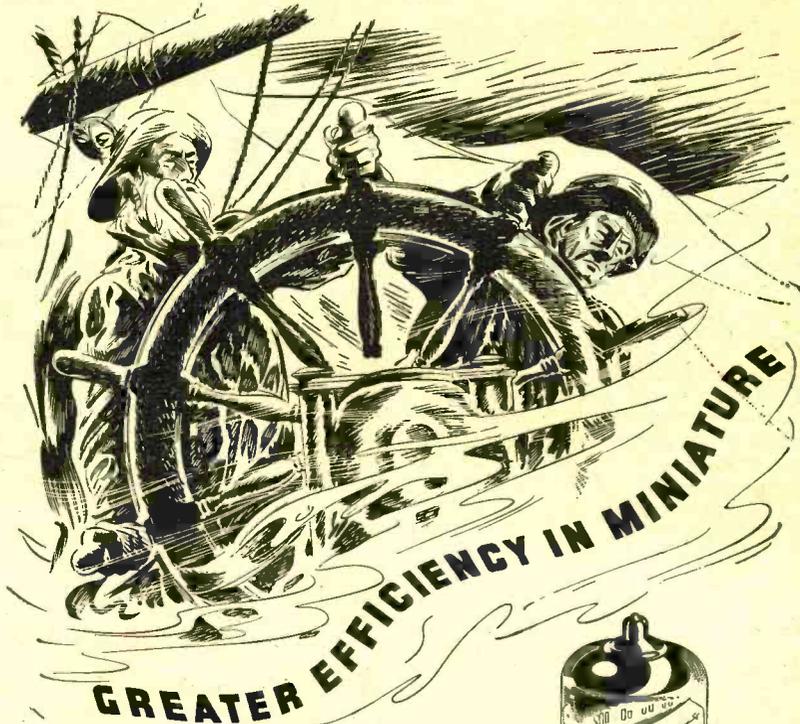
### WAR HISTORY FOR BROADCAST SERIES

Described as "a story that had to be told to the widest possible audience" the history of Australia's fighting forces in World War II has been re-cast for radio presentation, and is broadcast over 2UW at 7.15 p.m. each Sunday.

"These Were Their Yesterdays" is the title of the programme, which is regarded as one of the most important radio presentations on the air in Australia to-day—a factual and chronological drama, graphically told in documentary style, of the exploits of all units of our fighting services in battle, from Bardia to Buna, and all the old familiar landmarks of victory and defeat that lay between.

Actual units, ships, squadrons and aircraft are introduced in authentic battle order, their exploits taken out of the black and white of the records and re-enacted as a living drama. On-the-spot recordings of battle effects have been used as a background to each engagement, and a cast of ex-servicemen who actually fought have been used to tell their own stories.

"These Were Their Yesterdays" is part of Australia's history, not merely for its epic theme, but because it marks the first occasion when radio has been used to present a complete war history.



The miniature radio valve, like the modern ship's helm, to-day combines improved performance with compact design.

The standard valve for 1948/9 battery receivers, and now released for electric mains operation.



# Radiotron



Valves

MADE IN AUSTRALIA

nounced the development of a 605 line definition television system and since then various higher definitions have been investigated. A Belgian and Dutch Government technical delegation visited E.M.I. recently and were given an impressive demonstration of 637 line definition transmission from the C.P.S. EMITRON camera and the new FILM SCANNER.

In preparation for what research may reveal in the future, up to 1000 line definition is undergoing investigation at E.M.I. But very high line definition is expensive and brings in serious problems with the bandwidth required to resolve the lines, viz! that is the space required in the television wave band, and other factors of transmission and reception, that it will be many years before the solution is found.

However, as the eye will barely resolve 600 lines at the correct viewing distance, any further increase greater than 605 to 637 lines under these conditions is probably unnecessary.

In the sphere of receiving equipment, Electric & Musical Industries Ltd. produce the greatest proportion of the British Radio Industry's total output of television receivers, radio receivers and radiograms. They are marketed under the famous "H.M.V." and "Marconiphone" Trade Marks, and it is of particular interest that the organisation has now released the world's cheapest television receiver with a 10 inch tube.

Presentation of this new "H.M.V." Television Receiver, designed to work off AC or DC mains, and selling at 36 guineas, plus tax, has captured the popular market and will assist the BBC to achieve their ultimate aim—a Television Receiver in every home in Great Britain.

Thorough investigation has proved that a 10-inch tube is the smallest acceptable screen size, and so E.M.I. has concentrated on 10 inch for the popular Table Model, 15 inch for Consoles, and 24 inch for the De Luxe Projection Model.

To bring television from the earliest experiments to the state of to-day's high perfection cost vast sums of money. For the concentrated programme of investigation of the problem Electric & Musical Industries Limited expended, approximately, £3,000,000, which has resulted in British leadership in this art, as in so many other phases of scientific development. Emitron television is a British conception and development. It is a British patent, and, therefore, royalties are not paid to any other country.

To-day, as in the past, vigorous and extensive work proceeds in the E.M.I. Research Laboratories, which is one of the greatest vacuum and



Above:—Television receivers on the production line at the E.M.I. factory at Hayes, England.

electron physics organisations in the world. All phases of electronics, including important armament development, is under investigation. The original leader at E.M.I., and his original team of television specialists, are applying their profound knowledge, gained from their pioneering effort, to the future television.

Every large undertaking must have foresight and dynamic force to be successful. That E.M.I. has that foresight and force is proved by the brilliant achievements since the end of the war—especially in television. Sir Ernest Fisk, Deputy Chairman and Managing Director of Electric & Musical Industries Limited, one of the world's radio pioneers, is determined that British Emitron Television will always lead, and has well earned the sobriquet recently bestowed upon him by a leading London newspaper—"Mr. Television of England."

(Sgd.) RAY ALLSOP,  
2nd May, 1949

"G-Man": An important aspect of children's-hour broadcasting is the influence such performances may have on the infant mind. In the U.S.A. a script was submitted for a serial play in which a band of little ones solve crimes that have tricked their elders. Everything was "O.K.'d" except for a phrase, "He has a heart of stone." "How can a child be expected to know what that means?" demanded the programme director. "Change it to 'He's a yellow rat!'" At another studio a room had just been vacated by the players in the children's programme. A visitor, entering, saw on a sound-effects table a badly-crushed ripe melon. Upon asking the guide what that was for, he was told, "For a sound effect—a man's head being bashed in with a hammer."

# IN LIGHTER VEIN

## SHATTERING THE SHADES

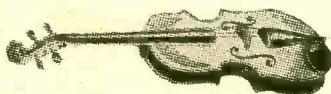
THE Styx had been crossed, and here, on the Elysian side of the river, I snapped open the lid of the little Personal Portable, to the devastating accompaniment of Spike Jones and Co. at a crescendo of cacaphony. From somewhere in the mists a troubled voice muttered, "Strange . . . strange sound indeed," following which there advanced from the filmy surroundings a little group of equally filmy looking beings.

"Permit me to offer you welcome," said the foremost courteously. "I am Johann Bach, President of the Hereafter Musical Association, and these are my colleagues . . . Herren Handel, Beethoven, Haydn and M'sieur Chopin. What, may we ask, is this peculiar instrument you play?"

"Gentlemen," I replied, "I present to you a scientific wonder of this century. From out of space this gadget brings speech and music from the land of the living. Since you gentlemen left, mankind has produced many inventions, and you are now listening to a performance of a few years ago in a city of America. No doubt some of those who took part are by now Shades even as you are; which perhaps would be a good thing for those left behind, but thus has man progressed that his works now live materially after him." Just then the



"A blast of hot sax."



5-inch speaker nearly shed its voice coil as a blast of hot sax, accompanied by a big drum, drowned my speech. When the tumult had somewhat subsided, Handel said thoughtfully, "If they have passed over indeed, they should be sought in darker surroundings, not here in Elysia."

"Our works," then put in the President . . . "are they forgotten?"

"Indeed, sir, no," I replied, meanwhile dialling frantically from station to station, skipping over "Buttons and Bows" and "Much Binding" until rewarded by the strains of "Liebestraum."

This was succeeded by Bernard Heinze and the Melbourne Symphony Orchestra with Handel's "Water Music."

"Pfery goot," beamed the President . . . they know how to play . . .

Meanwhile, a stage of an "interval for clapping" was reached and requests came from the transparent audience for further queuing along the ether lanes. No luck . . . nothing suitable, and when the dial was re-tuned to the desired symphonic station, a "technical hitch" appeared to have taken it off the air. Perforce thus we embarked on a spate of Hotcha, Hepcats and Harem stuff, and in desperation finally settled on the Voice of America with Sousa in full stride.

Expostulations and excited chatter broke out among the Shades, but when that eased off a bit Chopin reckoned he had snagged two leetle ideas from Kay Kyser. The President thought that the music, if it could be so-called . . . was beyond him, and argument arose as to whether or not Sousa should be asked to join the Association.

Pressed for further dial twisting, the Elysian fields resounded to "Spurs That Jingle Jangle" and "Rum and Coca Cola," but try as I would, no Philadelphian offering could I locate. Swing and Jive aplenty were there. . . I clicked shut the lid of the Personal Portable in time to awake to the roar of the surf and the caustic remark from the Missus that I would need a new set of batteries, seeing as how I would fall asleep when I coulda been listening to Bing.

—"WAKO."

## A THOUGHT FOR AN IDLE MOMENT



"Improving Speaker Tone."

— 0 — 0 —

"REFFO?" This actually happened. At the time R & TV News was on the stocks before launching, the publishers were approached by a type with ideas about running a programme sheet. He had been told—he said—that Messrs. Hay and Knock would be useful people to supply him with editorial matter about TV. "What," asked DBK, "is to be the title of your proposed publication?" "Radio News" quoth the character.

"Sorry" said DBK, "but you cannot use that title for reasons of copyright—better change it."

There was a sequel. A week or two later the Managing Director of one of our largest National radio manufacturers had a caller with a view to selling advertising space in a proposed tabloid. "Did Mr. So and So know a foreign bloke with a name like Noche, who reckoned he had something to do with a pre-war programme magazine called Australian Radio News? I'll show HIM, etc. etc. . . ." rambled on the individual. Leaning forward in his chair, the M.D. said "Did I hear correctly . . . you said the name was Knock?" "Yes Donne Noche . . . some name like that . . . anyway . . . a foreigner." "Indeed," said the M.D. "Seems to me that YOU are the foreigner if you haven't heard or read about my friend of 26 years standing and veteran of two wars. The door is there, and don't bother to call again."

Which all goes to prove—a little, or incomplete knowledge, can be quite troublesome.

### In Passing

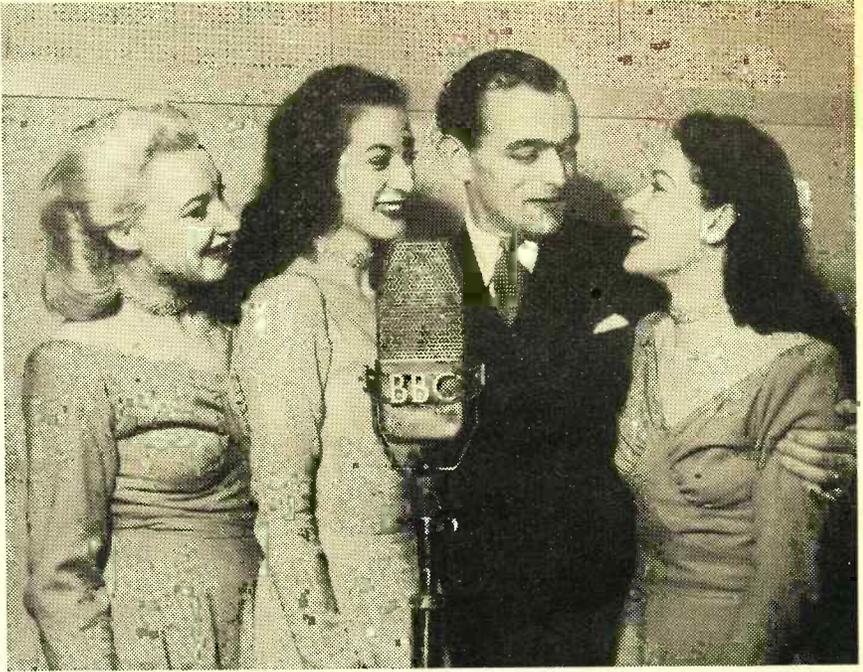
LUNA PARK SPIELER: "Could I interest you in the Sky Ride?"

RADIO FAN: "No fear, I just bought one from Reliance."



## ON THE LAUGH BEAM

"LORUM." Wonder what was the best effort in unintentional broadcasts? An announcer was lifting a stack of records from a shelf when they slipped and crashed to the floor. His impromptu comment was sufficiently forceful to bring in a shoal of indignant letters. The best I personally know of, however, was that of the cockatoo which an amateur induced to speak from his station every Sunday. Cocky performed like a gentleman for some time; then let loose a choice string of expletives. Frantic efforts were made to shut either the bird or the microphone off, but the damage was done. The newspapers made a feature of the incident next day.



The three attractive girls seen here with John Stevens in the BBC variety show "To Town with Terry" are known as April, May and June. April, in the middle, is really Margaret Webb, who forsook drama for singing. Red-headed May, on the right, is a brilliant accordionist called Johnnie Johnson, the third, and blonde member of the trio is June, otherwise Eileen Hall, a wartime factory-lass discovered by the other two. Escort John Stevens is an actor of some experience who started off earning his living as an electrical engineer.

We deny emphatically that radio is wrong in reducing the loud high notes of tenors and sopranos. A screech sounds terrible in a concert hall, and it sounds terrible by radio—but radio knows how to stop it.

"A.R.W.": "Can you come and look at the set?" asked old Haysseed the other day as I was passing. "A buzz comes through every now and then, and I want to know if it will do the batteries any harm." The set was an old-timer, and was surmounted by a mighty horn speaker. As soon as it was switched on a peculiar buzz came through; not steady, but intermittent. Strangely enough, it persisted after switching off. Stranger still, it continued after the batteries were disconnected. When I took the speaker to pieces the blowfly flew away.

\* \* \*

Some scientists support the notion that radio signals go on for ever, never dying away completely. There have even been attempts in a European laboratory to distinguish between present signals and those of the past.

\* \* \*

"Communist Band Shattered by Bomb"—headline. Bandspread—eh?

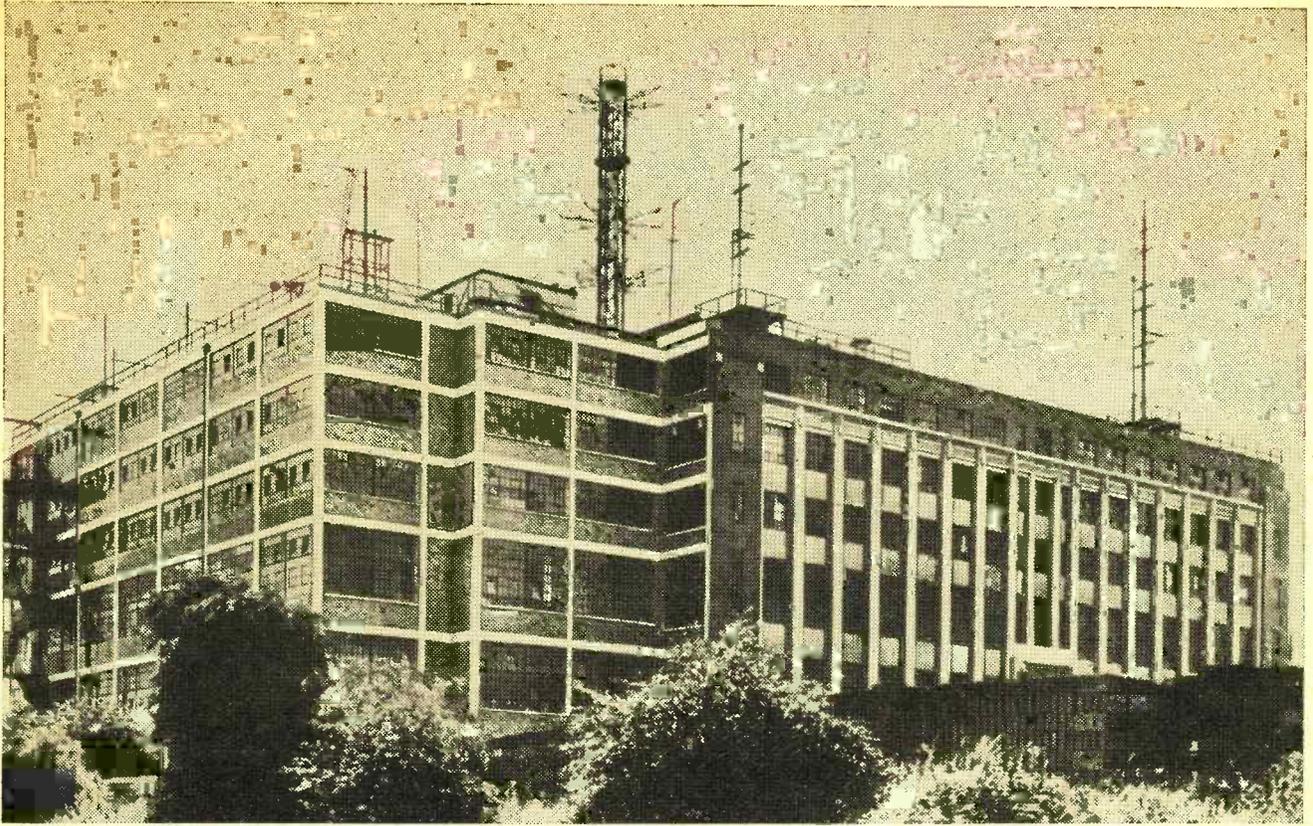
\* \* \*

### Read It Out Loud

An electron is about 1/10,000,000,000,000 of an inch across, and a current of one ampere, lasting for only a second represents about 6,000,000,000,000,000,000 electrons, each of which weighs about 9/10,000,000,000,000,000,000,000,000,000 of a gram.

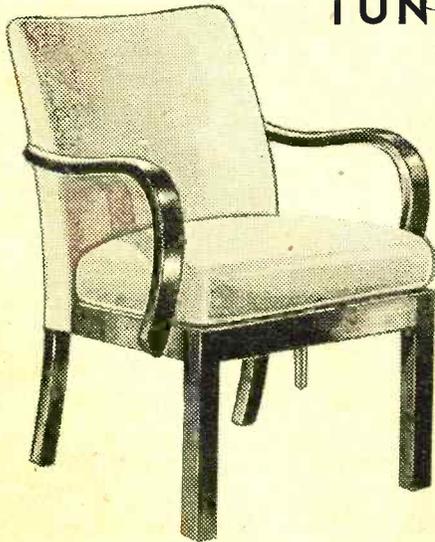


"Take it from Here" is a weekly variety feature heard in the BBC Light Programme and Overseas Services. It seems that Australian Comedian Dick Bentley's secret is for Joy Nichol's ear alone, and not to be shared by fellow funny-man Jimmy Edwards.



This is the Research Laboratory building of Electric and Musical Industries Ltd., located at Hayes, Middlesex, England. It was here that the British system of Television as used by the B.B.C. was designed and built. The Australian Company of this organisation has commenced Television Training courses for young men with sufficient technical ability to avail themselves of the opportunity.

## TUNE IN WITH COMFORT IN A PARKER-KNOLL CHAIR



— WITH ENGLAND'S BEST FABRIC-COVERED SPRINGS —

Parker-Knoll Chairs are a revelation in comfort, and sprung on an entirely new principle. These famous chairs have fabric-covered, horizontal coil springs that give to every movement of the body.

You will enjoy complete relaxation while listening to your favourite Radio programme seated on a Parker-Knoll Chair.

Call and let us demonstrate this new idea.

Parker-Knoll chairs are made in a number of pleasing designs and will be your choice for comfort.

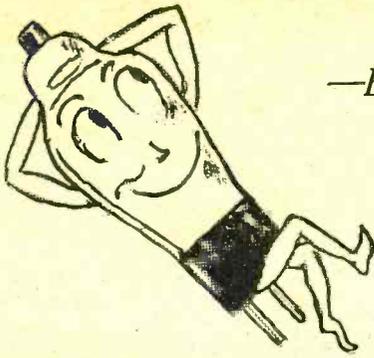


*Made by and obtainable only at*  
**BEARD WATSON & CO. LTD.**

GEORGE AND YORK STREETS (NEAR KING ST.), SYDNEY. PHONE: BX 3281.

# TELEVISION TRAINING

—EXCELLENT OPPORTUNITY FOR YOUNG MEN



Below:—

● An outside Television broadcast unit as used by the BBC, England. It comprises the power truck (front), transmitter truck (back), and mobile antenna array. A camera control vehicle is not visible in this photo.

**W**ITH the swift establishment of television as an entertainment medium and valuable aid to industry overseas, there is no doubt that the time is very close for its advent in Australia. There is ample proof that Australian television will assume great importance in our lives in the fact that E.M.I. (Australia) Pty. Limited has now taken steps to make a valuable system of training immediately available. What this means to the young man fired with enthusiasm for the possibilities of television is realised when one considers the wealth of experience and achievement behind E.M.I. British television as enjoyed daily and nightly by thousands of people in England is the result initially of planning and development in the laboratories of Electric and Musical Indus-

tries Ltd. Here in Australia, the parent company is represented by E.M.I. (Australia) Pty. Limited, located at 2 Parramatta Road, Homebush, N.S.W., and from this progressive factory comes the announcement of the new postal training scheme. "Australian RADIO and TELEVISION News" has gone thoroughly into the pros and cons of the scheme, and is pleased to recommend to younger readers with ideas of making a career for themselves in the future world of television; that here indeed is a unique opportunity.

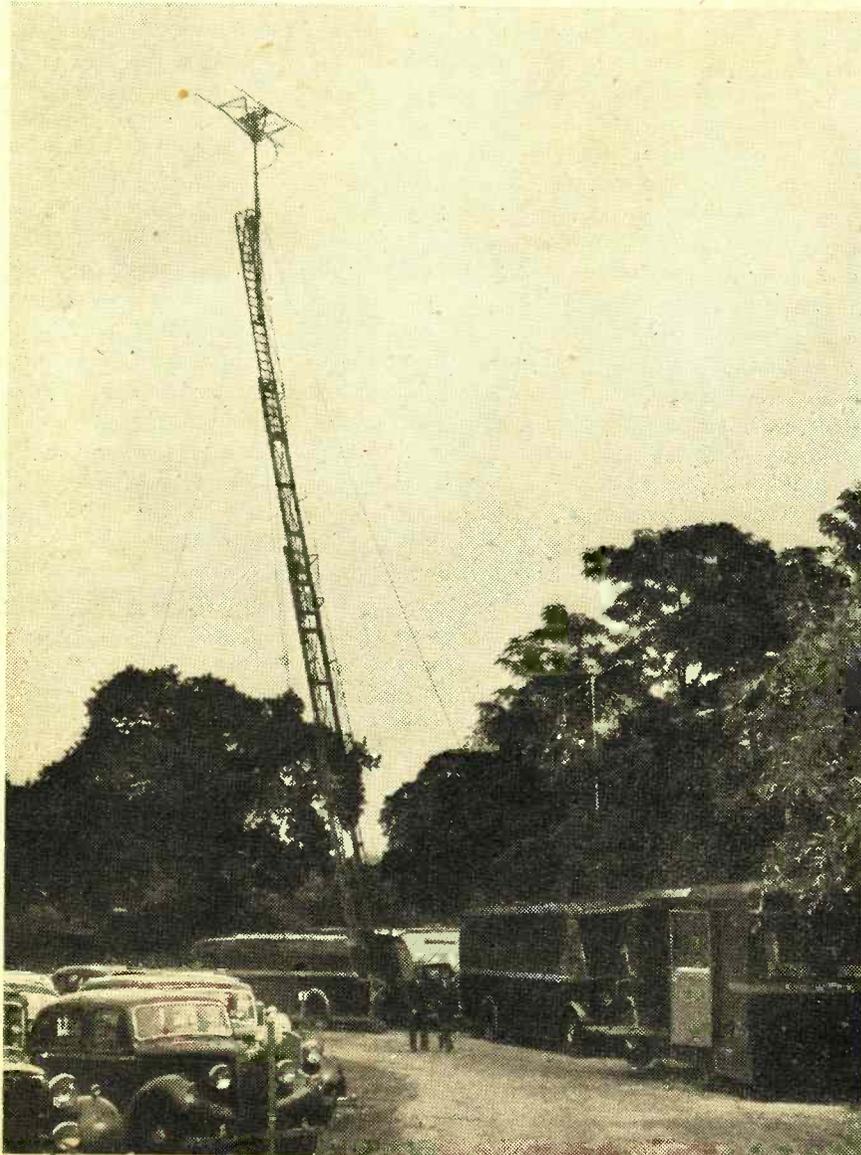
Correspondence courses have been running for some time in England, and it is these carefully planned E.M.I. courses that are now offered in Australia. They include all necessary technical assistance and tutoring and are in three categories, with a wider field than television alone. They embrace "Preparatory Maths and Physics," "Basic Radio," and "Basic Television." The latter course has been written with a view to giving students a solid background of television techniques, and this is done admirably in non-mathematical fashion. It should be a valuable course for radio servicemen in particular. Attention is concentrated on circuits designed to operate in modern high-definition television systems. Each course is equivalent to a chapter in a text-book and there are 15 lessons. This point is of great importance . . . at the end of the course, the student will thus possess a text-book on basic television far superior to anything at present on the market. The printed material in the lessons will be supplemented as the course progresses by the answers to the set questions, together with comments and explanatory notes provided by the tutors. The subject matter is necessarily drawn from the vast experience available from the laboratories, factories, and service organisation of Electric and Musical Industries Ltd., but the course is not restricted to the techniques employed in the products of that organisation; many interesting circuits and developments used in equipment manufactured by other firms are included.

If you wish to become competent to design, produce, test, instal, or service television equipment in the future lying immediately ahead, the importance of acquiring a sound knowledge of basic television techniques cannot be over-estimated. The course on "Basic Television" assumes a sound knowledge of maths, physics, and radio fundamentals. The prices of the courses are as follows; and if required, arrangements can be made with the Company for payment in progressive stages instead of the lump sum.

Basic Television—£19/19/- cash. Progressive Payments: £6/13/- deposit and 6 monthly payments of £2/6/-.

Basic Radio—£26/5/- cash. Progressive Payments: £8/15/- deposit and 6 monthly payments of £3.

(Continued on next page)



(Continued from page 17)

# BOOK NEWS FROM TECHNICAL BOOK & MAGAZINE CO.

Keep abreast of the latest developments in RADIO by subscribing to any of the following Magazines.

## AMERICAN

	Per year
"C.Q." (The Radio Amateur's Journal) . . . . .	£1 6 0
Audio Engineering . . . . .	1 6 0
"Q.S.T." . . . . .	1 13 6
Radio News . . . . .	1 12 0
Radio Electronics (formerly Radio Craft) . . . . .	1 9 6

## AUSTRALIAN AND ENGLISH

	Per year
Wireless World . . . . .	1 12 6
Electronic Engineering . . . . .	1 12 6
Wireless Engineer . . . . .	2 0 0
Radio and Hobbies . . . . .	12 0
Australian Radio World . . . . .	16 0
Australian Radio & Television News . . . . .	12 0
Amateur Radio . . . . .	6 0
Radio & Science . . . . .	12 0

SEND YOUR ORDERS TO:—

# TECHNICAL BOOK & MAGAZINE CO.

295, 297, 299 Swanston Street,

Opp. Old Melbourne Hospital

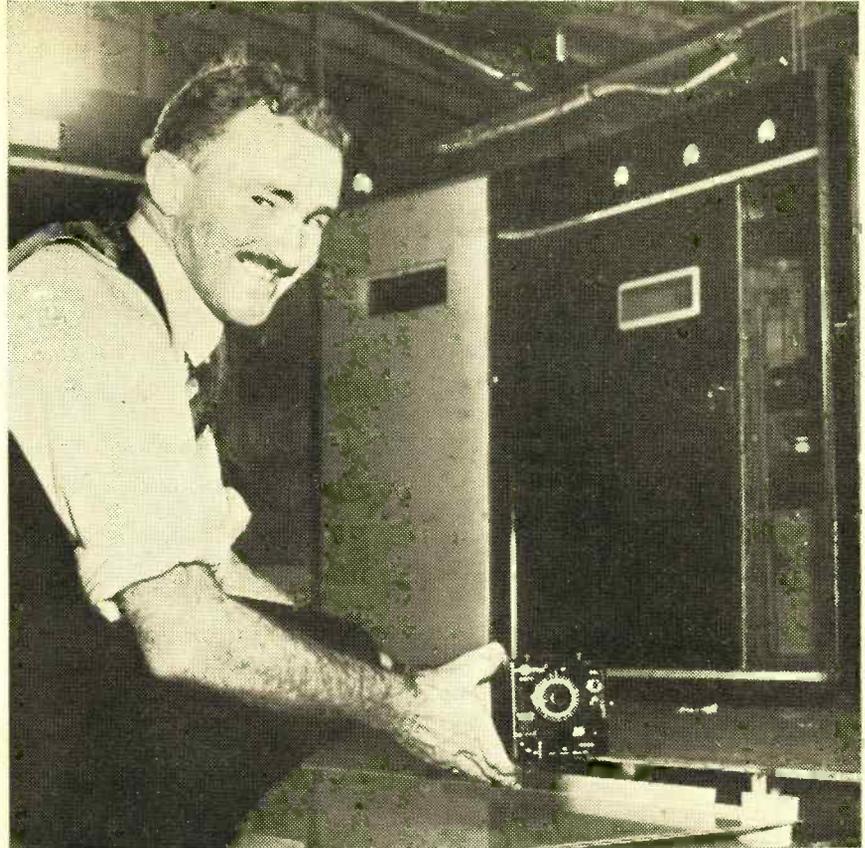
MELBOURNE, C.1.

Cent. 2041

Preparatory Maths and Physics—£10/10/- cash. Progressive Payments: £3/10/- deposit and 6 monthly payments of £1/4/-.

Technical direction of the courses is under the supervision of Mr. J. N. Briton, B.Sc., B.E., M.I.E. (Aust.), F.I.B.E. (Aust.), and the tutors are drawn from the staff of E.M.I. (Australia) Pty. Limited.

More complete details of all three courses may be obtained by writing to the General Manager of Works, E.M.I. (Australia) Pty. Limited, 2 Parramatta Road, Homebush, Sydney.



A.W.A. "AIR-MITE"

### A CONTRIBUTION TO SAFER FLYING

One of the most interesting developments in two-way radio is the newly announced A.W.A. "Air-Mite."

With the increase of air traffic in Australia, private flying has created quite a problem for busy city airports, and it becomes increasingly apparent that some means of ground to air communications would be necessary if private flyers are to continue the using of the big commercial aerodromes. The requirements of space, cost and weight in smaller private moth type aircraft have not made the problem an easy one.

The amazing performance under tests of a transmitter and receiver housed in a 4 in. cube small enough to be fitted on the instrument panel of the smallest plane has been hailed as a major contribution to private flying. A.W.A. research on this midget lasted two years, and has achieved a transceiver that will provide efficient air to ground and ground to air communication; intercommunication within the aircraft, and with aerial modifications will fly the VHF beam.

This VHF transceiver is designed for small aircraft, where considerations of cost and space prohibit the use of standard airline equipment. Principal purpose is to provide communication facilities between plane and control tower during take-off and landing. In two-place aircraft it also allows intercommunication between pilot and passenger.

**Frequency Coverage:** The receiver is manually tuned and covers the range 112-122 Mc. The transmitter provides output on two crystal-controlled frequencies; these two frequencies must be close together because the transmitter circuits have fixed tuning.

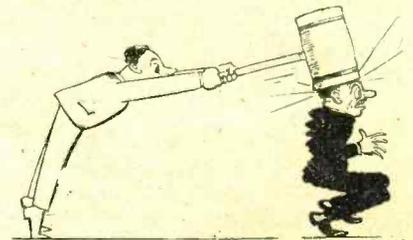
**Controls:** The equipment is arranged for press-to-talk operation, transmission being selected by pressing the microphone push button. Panel controls are provided for receiver tuning and audio volume.

**Valves:** Six 6J6 double-triode-miniature valves are used in the transceiver, two for the transmitter two for the receiver and two for the combined modulator and audio output.

**Power Supply:** The transceiver operates from a 12 volt accumulator, a synchronous vibrator providing the high-tension supply.

**Sizes and Weights:** The transceiver unit has the dimensions, height, including shock mount, 5 3/8 in., width 4 1/8 in., and depth including knobs, 4 7/8 in. The weight is 3 1/2 pounds.

### A THOUGHT FOR AN IDLE MOMENT



"Shock Excitation."



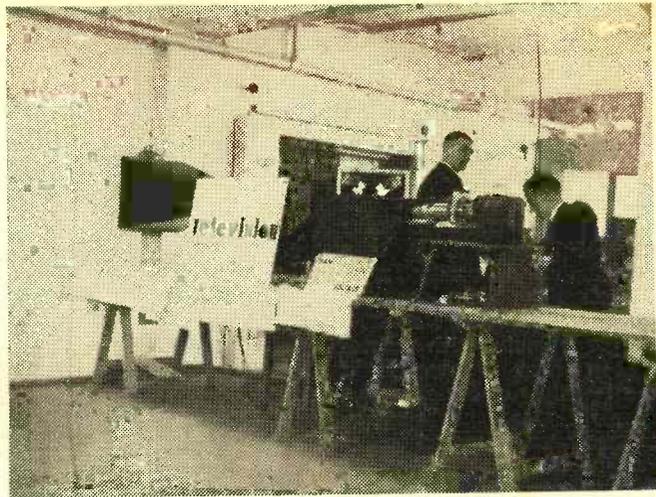
# QUALITY TRANSFORMERS

and

# METAL-WORK

Manufactured by

**TRIMAX Transformers**  
 DIVISION OF CLIFF & BUNTING PTY. LTD.  
 29-35 FLEMINGTON ROAD,  
 NORTH MELBOURNE . . VIC.



## First Public Showing of TV in Australia

### WHEN WAS IT?

There is no idea of trying to "steal the thunder" of the modern television-minded world in bringing to mind the following occasion; it is done simply to record a little amateurish history. Despite the fact that the electronically-derived and technically faultless modern form of television is worlds apart from the crude mechanically created efforts of the pioneers, there is the point that

the latter, nevertheless, was television . . . of a kind. Recently a commercial organisation has given public showings of 405 line television in the cities of Melbourne and Sydney; good stuff, but not necessarily the ultimate in possibilities. The mind goes back to an occasion a few years ago, when a crude but workable demonstration of mechanically derived TV was made in Sydney. Old hands in the amateur radio world will recall when this was . . . during the Amateur Radio Exhibition organised by the N.S.W.

(Continued on next page)

# HAMS!! SAVE MONEY ON THESE GUARANTEED VALVES

The following valves are ex-disposals and unboxed, but are all tested and guaranteed as new:—

## 6SH7

A metal valve with standard octal base. Excellent I.F. or R.F. amplifier up to 20-25 mc/s. Sharp cut-off penthode.

Heater . . . . . 6.3V 0.3A  
 Capacity .. In 8.5 pF. Out 7 pF.  
 Plate . . . . . 250V 10.8 mA  
 Screen . . . . . 150V 3.1 mA  
 Grid . . . . . -1.0V  
 gm . . . . . 4.9 mA/V

5/-

## CV6

A transmitting triode for frequencies up to 300 mc/s. Standard octal base, with plate and grid through top of envelope.

Heater . . . . . 6.3V 0.3A  
 Plate Diss: . . . . . 3.5W max.  
 . . . . . 500V max.  
 Amp. Factor . . . . . 20  
 Capacity In 2.2 pF Out 0.7 pF  
 G to P 3.6 pF

7/6

## EF50

One of the best valves for I.F. or R.F. amplifiers at the higher frequencies to about 40 mc/s. Ideal for television receivers. Fitted with British 9 pin local type base.

Sharp cut-off penthode.  
 Heater . . . . . 6.3V 0.3A  
 Capacity . . . . . In 8 pF Out 5 pF  
 Plate . . . . . 250V 10 mA  
 Screen . . . . . 250V 3.1 mA  
 Grid . . . . . -2V  
 gm . . . . . 6.3 mA/V

10/-

## 6H6

A metal duo diode with octal base. Useful for many receiver applications such as detectors, limiters, etc.

Heater . . . . . 6.3V 0.3A  
 Plate, Max. 100V RMS per plate  
 Output . . . . . 4mA

5/-

## EA50

A miniature diode with special base. Designed for UHF applications.

Heater . . . . . 6.3V 0.15A  
 Plate . . . . . Ma 200V RMS  
 Output . . . . . 5mA

3/6

Please allow 6d. per valve for packing and postage.

## ATTENTION

You may now purchase all EDDYSTONE components from Sydney's leading radio store. Comprehensive range of condensers, dials, chokes, etc., available. Please write for the Eddystone catalogue.

# PRICE'S RADIO

5 and 6 Angel Place

SYDNEY

(Continued from page 19)

Division of the Wireless Institute, in the lower hall of the Presbyterian Assembly Building, Margaret St., Sydney, for a week from Monday, June 15, 1936. The accompanying photograph shows the set-up used, built and put into action by two or three Sydney radio amateurs under the guidance of Gordon Wells, then prominent in the old Waverley Radio Club. The scanning discs used 30 holes in spiral form, running at 1000 revolutions per minute with photo-cell and neon tube turning light into electrical energy and vice versa. The "subjects" were photo-slides, and the unsteady, red-coloured image was seen at the reception end of the apparatus, over a distance of a few feet. It was, even so . . . television . . . prehistoric in relation to today's achievements in every sense . . . but there it was . . . the first occasion in Australia, so far as is known.

**QUIZ PICTURE ANSWER**

"Who was it?" Identity of the telephoning gentleman on page 60, June, 1949 issue 'R & TVN' is Naughton MacNaughton. (VK2ZH), of the staff of Price's Radio, Sydney.

**THOUGHT FOR AN IDLE MOMENT**



"A GOOD CONDUCTOR"

**AUSTRALIAN TV STANDARD TO BE 625 LINES**

Just prior to the July hold-up, the Prime Minister (Mr. Chifley) made the official announcement that the six Australian capital cities are to have National Television stations, and that they will use the standard of 625 lines. Thus the important step has been taken, and the population resident in and around the cities may now look forward definitely to the establishment of Television by 1951. Frequency will be 178 to 200 mc, with AM for vision and FM for sound. No announcement had been made regarding the successful tenderer or tenderers.

**DON'T MISS OUT!**

**PLACE A FIRM ORDER**

**FOR**

**"R. and TV. News"**

**WITH YOUR**

**NEWSAGENT**

**HAVE  
YOU  
HEARD**

**OVALTONE ?**

**BY**

**STROMBERG-CARLSON**

# FILM AND TELEVISION ARE NATURAL ALLIES

Says **GEOFFREY THOMPSON**

(Victorian Representative, Cinesound Productions)

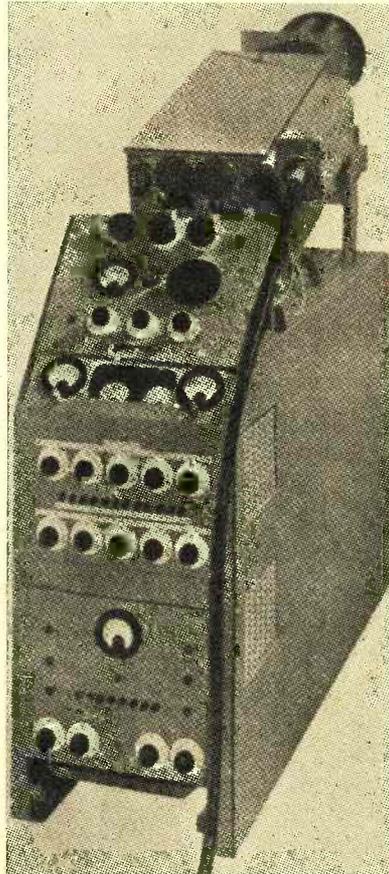
**F**ROM the earliest days of radio broadcasting, the sound transcription in its most convenient form, the gramophone disc has been a natural ally of radio as a ready provider of programme material. It follows as a corollary that film will perform the same service for television.

The latest American Television studio arrangements include banks of projectors, comprising usually a pair of 35 mm. sound machines, one 16 mm. at silent speed and one at sound speed. A pair of iconoscope cameras on trolleys fitted to rails can be readily rolled into position to pick up the projected image from any one of the bank of machines. Although the 35 mm. projectors run at their normal speed of 24 frames per second, 90 feet per minute, the 16 mm. sound at 24 frames per second, 36 feet per minute, and the 16 mm. silent at 16 frames per second, 24 feet per minute, by some mechanical wizardry, each projector presents to the iconoscope 30 pictures per second as required by the American standards. Each television studio therefore requires the services of a highly qualified projectionist to handle this equipment.

The skilful blending of film with directly televised material enables the medium to step beyond the environs of the studios themselves, and whenever, in a directly televised programme, the players cannot make costume changes quickly enough to suit the story, or complicated settings cannot be placed in position with sufficient speed, these particular sequences are often committed to film with no apparent loss of quality or feeling of continuity. It appears, therefore, that producers of the visual programmes of the future will need competent film men to help them out of some of their tight spots. Undoubtedly, many producers of visual programmes for television will prefer to commit their entire productions to film since by so doing, many of the highly complicated processes of a direct televising can be by-passed, and the opportunity to edit and re-edit and to repeat where results are not of the best will be hard to resist.

## TV BOOMS IN U.S.A.

The past six months has seen a sudden mushrooming of American Television. More and more sponsors are withdrawing their advertising



● One type of television projector used for large size screen theatre operation.

allocations from the radio field and trying out the new medium. Most sponsors prefer to see what they are going to get for their money before it reaches the video screen, and once again film has come to the rescue. Too many things have gone wrong at the last moment in many directly televised advertising broadcasts. One, which I was told was perfectly true, featured a popular brand of self-raising flour. The demonstrator went through the process of making dough for scones. When the oven door was opened before the expectant eyes of thousands of video viewers, the sorriest bunch of flat, soggy comestibles that ever Mother made emerged. And TV lost one of its biggest sponsors until film saved the day. This sort of thing has happened so many times that sponsors have become wary, and many refuse to pay for anything but a

visually transcribed programme plug for their products. As yet, we do not know what our Government has in mind for Australian television. It is likely, however, that the high cost of programme material for the visual medium may force a liaison between Government and private enterprise if the new medium is to make any headway in this country.

There is a great deal to be said for the present policy which intends to restrict television for about two years. As yet, standards are not finalised. As a maker of films, always interested in achieving the best possible resolution from photographic materials, to me the American television, with its 525 lines, seemed to me to be better than that of the British standard of 405 lines. It would be unfortunate if we were to fix a standard which within a year or two became obsolete. When we do build we should have the benefit of considerable research overseas, and we should be building best and to standards which may persist for many years.

As yet, the problem of television networks is one which may take some solving. The laying of an underground cable across the entire continent of the U.S. was economically possible only because the same cable provided a dozen or more channels for trans-continental telephone circuits, in addition to its TV channel, which could never have financed such a costly venture. We have also seen the spectacle of a large size aircraft flying continuously over a city, and relaying TV programmes to points within visual distance. Australia may be placed in a difficult position for the relaying of its TV programmes, and once again it would appear that film made either off the tube, or in the form of films made on the TV set, will play its part to make Australian TV a workable proposition.

The CBS and NBC television networks have established their own television newsreel organisations which are active each day filming news items which are projected during visual news sessions each night.

## FASCINATION OF TV

There is something hypnotic about the effect of the video screen. So long as there is something appearing on the screen, it is difficult to tear one's eyes away, even from inferior  
(Continued on next page)

programme material. There is something about the immediacy of a directly televised programme which forgives technical defects which would be unforgivable in a film.

On no account should TV be considered as an extension of radio. This would be wrong thinking. The sound channel becomes merely an adjunct to the visual channel, and "mike," for the first time in his career, must move literally out of the picture, into a position usually above the heads of the artists and just out of the frame. In fact, TV technique in the studios follows closely on the lines of standard practice in the motion picture studios.

There will be disappointments, to, for those who imagine that they can step straight out of radio and into TV. Take a race broadcast, for instance. The skill of many of our sport commentators lies in their ability to observe a sequence of events and to relate these in an exciting way to their audiences after they have happened. With the TV audience watching the event with the commentator, his line of approach will have to be entirely different. Commentary will be more on the lines of observations made as the spectacle unfolds itself, and the fact that the audience can see everything the commentator sees will spoil any attempt to whip up the artificial excitement often possible in radio broadcasts.

**P**ERHAPS the most intriguing application of film to the TV medium lies in its use for full size theatre television. The television broadcast is relayed to the projectile booth of any motion picture theatre where a 35 mm. camera picks up the image off a high intensity tube, recording it on a film having a very fine grained emulsion. This film passes directly out of the camera through a quick developing and fixing solution and straight into the theatre projector, the picture reaching the screen less than half a minute after the image has been received. This system of delayed television has been used in New York with audiences refusing to believe they were seeing other than a newsreel film, so excellent was picture quality. I should mention that the television tube used in this instance produced a negative image so that a positive image would arrive at the projector gate. Actually, news films made each day are not printed, but are developed as negatives and are projected with the inoscopes so switched that a positive image is transmitted.

The opinions often expressed that TV will not affect the motion picture exhibiting industry would appear to be wishful thinking, belied by the fact that most American film pro-

(Continued on page 32)

**S. LENZER. SOLE REPRESENTATIVE FOR AUSTRALIA.**

**154 Castlereagh Street, and 283a Elizabeth Street, Sydney.**

'PHONE: M 3848.

**GREEN, HEARN & CO., LTD.**

OF

**LONDON**

presents

**"LYNDALE" Coats and Suits.**



Featuring the new action free swing back coats in all sizes, and in the new pastel shades of Ice Blue, Dove, Stone Grey and Honey.

Ask at your favourite store for the coats with the world-famous label.

**"LYNDALE . . ."**

Created for you personally.

For Character in a coat and for a coat with character, choose

**"LYNDALE . . ."**

Don't ask for a coat or suit,  
ask for

**"LYNDALE . . ."**

Lovely

Youthful

Neat

Design

Attractive

Lines

Exclusive

all spell

**"LYNDALE . . ."**

**S. LENZER. SOLE REPRESENTATIVE FOR AUSTRALIA.**

**154 Castlereagh Street, and 283a Elizabeth Street, Sydney.**

# Two components with ONE great name

Here are two, of hundreds of precision-built components whose brand name identifies them with the utmost achievements of exactitude. The name, of course—is R.C.S.!

7/6

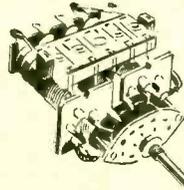


each

## NEW PERMEABILITY BROADCAST COILS

E356 Aerial .....	7/6
E357 R.F. ....	7/6
E358 OSC. ....	7/6

*If you cannot obtain from your local supplier, write direct to—*



34/-

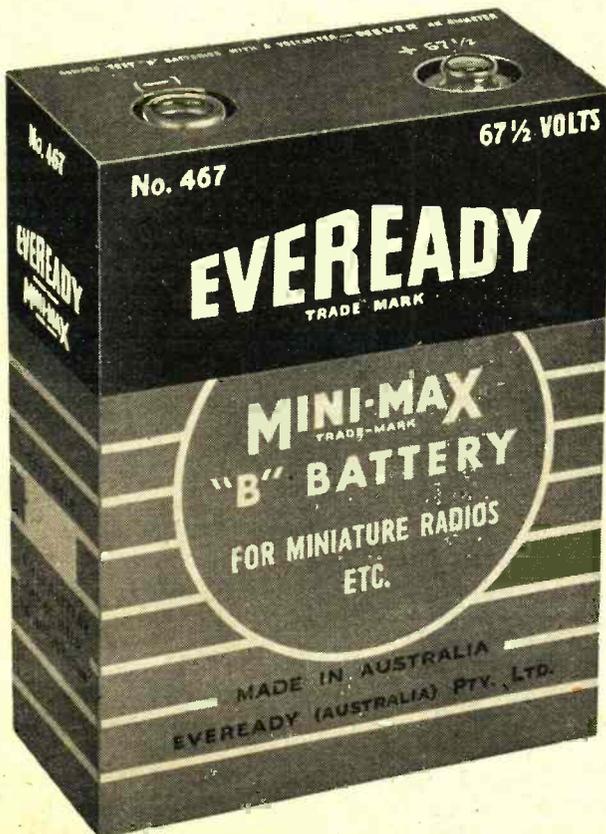
each

## DUAL WAVE UNIT. D.W. 37 (Illustrated)

Dual Wave Unit with R.F. Stage	£6/10/-
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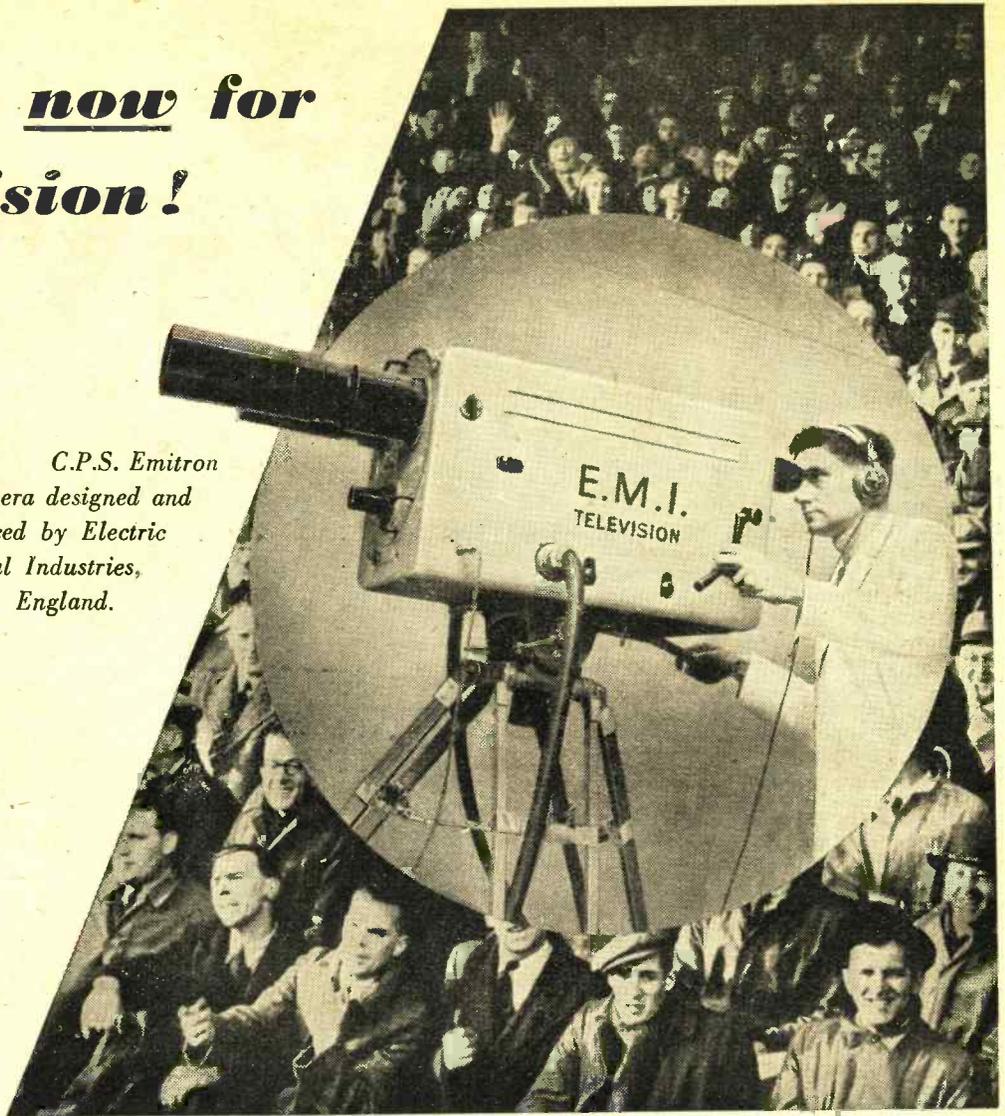
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R24/49



# READER'S FLOODLIGHT

Ken McTaggart (VK3NW) says a few words about the G8PO antenna . . . "One often hears and reads about beam arrays that have made a certain amateur's signals 'outstanding,' e.g., the G8PO, and the boys usually make a rush for it to try and do likewise. Somehow not many of them succeed in getting an outstanding signal for their pains. In your article you mention G8PO'S 'consistently outstanding signal from England'—I suppose he must have been 1, 2, or even 3 S points over most other fellows—but in the same article you say that the beam has not got a very great forward gain. Doesn't the question arise 'What then gave G8PO his outstanding signal?' No matter how one works things one can't get more than about 5db gain out of a two wire (2 element) outfit of  $\frac{1}{2}$  wavelength. That is not quite one S point. On the receiving side, of course, back-to-front radio gives one a great advantage. To get back to the question of what makes some signals very much stronger than others—I think these points are important. (A) what power does the fellow really run? One—easily the best G so far as I am concerned—runs 800 watts. He is S7 or so when other G's are just audible. A lot of other G's use high power but never let on about it. Some VK3's do the same one got shut down because of a pair of 100TH'S running at rated power input. (B) The beam itself. If we limit ourselves to 2 elements on 20 metres we can get a maximum of approximately 1 S point forward gain. Well, dozens of fellows use such beams but only a few are outstanding. The other factor with a beam is the angle of radiation, for what use is 10 dB if it stands out at the wrong angle? The old trusty W8JK has the lowest angle for low height above ground (recently beautifully demonstrated by UHF models). (C) The fact that when a beam is erected some care is usually taken in construction, dimensions, etc.; hence extra good results compared with the old affair. In the 800 watt's case I am positive that he is blessed in some way with a particularly good location and/or combination of angle of radiation and height above theoretical ground. Literally dozens of G's use some sort of 2 element beam so we can rule that out so far as forward gain is concerned. The 800 watts, say 5 times the power of the average G on 20 metres, equals 7 dB or a fraction over 1 S point, yet he is 3 S points over the others at any time and under any conditions. . .

Mr. McTaggart raises some very pertinent points and in order that the originator of the system described in our May issue may put forward his viewpoints; Lieut.-Commander Ironmonger's reply to VK3NW is given here. From our own angle, the reference to G8PO having the 'outstanding' G signal on 14 Mc/s phone was certainly substantiated at that period, now 3 years ago. During those early mornings (in Eastern Australia), G8PO and G6XR were about the only two G's CONCENTRATING on working Australians. There was little to choose between the two signals. Consistency of operation leads observers to regard such a station as 'outstanding' and in that respect we would refer at this stage to the present activity of G3BUU of Wolverhampton, England. If there is to-day any more CONSISTENTLY STRONG G signal landing into Australian receivers, we have yet to hear it. G8PO WAS in that category before he became VK3WU. As for a G station running 800 watts; we suppose that IS possible under British licensing arrangements but we leave VK3WU to comment at this stage.—Editor).

## Says Commander Ironmonger:—

"Firstly, with regard to VK3NW's remarks re high power, there may be stations in the United Kingdom piling up the watts and so putting in terrific signals to VK, however, on the other hand there are stations, e.g., G6RH, G3BUU, G8IG, G8MN who are known to operate at 150 watts and less, who do put in outstanding signals.

This may be due to, (a) transmitters and beams being most efficient, or (b) good locations. Perhaps the answer is a combination of (a) and (b).

It is felt the above was the reason for a consistent signal arriving from G8PO in Australia during 1947. Power was 150 watts, the antenna was a 2 element driven reversible beam, height 40 ft. and the location looking North East excellent.

Location was the top of Putney Hill, S.W. 19.

It was found possible to hear and work most effectively, the short way round, whilst others were struggling for a contact. However, fring South West, i.e., the long way round was a different story; whilst good results were obtained, contacts were not so easily obtained, signals being down on both transmission and reception compared to the short path. In other words, G8PO was no longer outstanding on the long route, just an average signal. G8MN's location is known to give reverse results. Location plays a big part but there are other factors to be considered. Referring again to the short route; it can be stated that one of the biggest snags to making successful contacts is interference from South Americans and stations generally to the South West. This is the reason why G's can often be heard strongly in Australia via the short route and when called do not reply, the VK is under South American or South Westerly interference. Thus the high front to back ratio of the beam used at G8PO did help considerably. We heard the boys from "down under" when others did not; this encouraged VK's to look for G8PO and vice versa, thereby resulting in consistent contacts on the short route.

Many G's are not consistent, the reason being, they are not on the air! Typical is G6RH. Bob, to my mind is the strongest G received in Australia. He runs 140 watts to a 2 element beam 50 ft. high. However, due to pressure of business and work on other bands, his powerful signal is very rarely received here on 14 mcs. If VK3NW requires proof that the 150 watt's stations mentioned are outstanding, we suggest he takes a look at our log of G's contacted over the past year, noting particularly the great number of others using full licensed power who put in only mediocre signals.

Re the gain of the G8PO antenna; this is considered from practical results to be equal if not slightly greater than that of a W8JK. The angle of radiation is also very similar. However, the bi-directional disadvantages of the W8JK (and that bi-directional pattern is a great disadvantage under to-day's congested band conditions) are overcome with the 8PO's highly uni-directional pattern. It may be of interest to readers, that if comparison of W8JK and G8PO conditions are required, all that is necessary to carry out tests is to include an additional feed socket in the centre of the delay section of a G8PO system and then bi-directional or uni-directional patterns can be checked at will. The 8PO antenna must of course be operating in the "out of phase" condition with 1/8th wave switchable delay,

to allow change over to 8JK condition by the method described above.

The present transmitter at VK3WU is 90 watts to an 829B and the licenced power is never exceeded. The antenna is still of the reversible uni-directional type, back to front ratio is 30-40dbs. and forward gain such that lots of excellent G contacts are made. There are many VK3's who put better signals into Britain than 3WU. I wonder why? Not because they are using high power, we know they are not! Efficient transmitter antennas and good locations are considered to be nearer the mark.

—J. E. Ironmonger, VK3WU."

*Radio and Television News, Sydney.*

*Dear Mr. Knock,*

I would like to congratulate yourself and your colleague on the fine publication which you have recently launched and which I feel will fill the long-needed avenue for the discussion of Amateur news, and which will undoubtedly be supported by the Amateur fraternity.

In my opinion the introduction of Television into your publication is a very wise move indeed and will give us all the information we need on this subject, in fact to sum up, I am looking forward to the future and hope that I will benefit by reading this new magazine.

Enclosed you will find a postal note to cover my subscription for the next twelve months.

You may recall my name as the former SW Correspondent of "R and H," "RS" and also at one time Publicity Officer of the Experimental Radio Society. At present I am located here in the New England area managing the Radio and Electrical Dept. of the major store in the town, and am taking the morse test to complete the A.O.P.C. which I partly passed last October, business having prevented me taking this during the past months. I hope to pass and will no doubt be on the bands in the not too distant future, 20 and 40 for a start and later I hope to do some work on VHF bands. The location here would be ideal for that type of work as we are only 208 miles air line from Sydney at an altitude of 3,250 feet and we have a clear path south and east, so it seems that a station at Walcha will be almost DX on those frequencies.

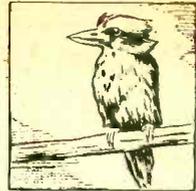
Wishing you every success,

Sincerely,  
TED WHITING.

(Thank you, Ted Whiting, for the good wishes. You can be sure that you will find an increasing amount of interesting and important television topics in the pages of "R & TV News" as the next few months pass by. At the present juncture we are in the position of a war correspondent literally bursting with vital information that the censor has clamped down on . . . certain things we would like to tell our readers about we are unable to mention. Suffice it to say that when the time comes along, you will find this magazine well in the front rank with the news. We take this opportunity of wishing you the best of luck with your pending exam for the amateur radio operator's "ticket" . . . your suggestion about VHF DX from Walcha is by no means an impossible one. VK2GU in Canberra can work with Sydney stations on 6 metres daily now.)

# AMATEUR

# Chatter

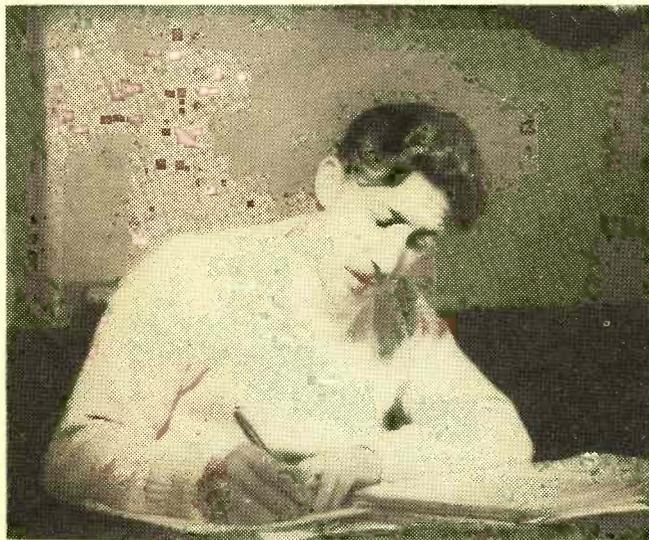


## Antarctic Radioman

THE studious gentleman shown in the photograph here is Ronald F. Oatt, normally of Clifton Hill, Melbourne, Victoria, but at the present stage of his career Senior Radio Officer with the Antarctic Naval Expedition now at Heard Island. He signs VK1VU for amateur activities down there, and consequently is much in demand by International amateur stations looking for "another country" to add to their "DX" tally. This "shot" of Ron Oatt was taken on board H.M.A.S. Labaun. He is 24 years old and has a distinguished war record, serving during the recent world upheaval as wireless air-gunner with the RAAF in England. He was commissioned Flying Officer and after discharge was busy on the courier service between Brisbane, Qld., and the Philippines. After returning to "Civvy Street," he qualified for his first-class commercial "ticket" and function on the "Radio Australia" short-wave service as technician. Apart from his duties on Heard Island, he has quite a job to do for himself there, with a year's study ahead for the British Institute of Engineering Technology. One of the amateur transmissions from the Heard Island party referred recently to the problem of keeping sea-elephants from scratching the barnacles from their hides on antenna masts and halyards, with the danger of collapsing the "sky-wires." This magazine wishes the best of luck to the radiomen facing the rigours of the frozen south, and in the meantime, plenty of contacts with the homeland by radio.

*(This information and the photograph are made available to "R and TV News" by the courtesy of Mrs. M. Oatt).*

"Isay." This business about "So and so is CAREFULLY tuning the entire band for a long long call" sounds a bit overdone at times—but no doubt the caller really is emphasising that he isn't going to skip lightheartedly across the dial. Oh well—one supposes that it does sound convincing but it *would* be a change to hear some lad claim to be CARELESSLY tuning the band.



**RON  
F  
OATT.  
VK1VU**

## LESSONS IN SPELLING

IN these times our bands are congested areas where anything which will relieve overcrowding is more than welcome. Shortening of contacts by the cutting of superfluous verbiage to a minimum is one way to help. These spelling bees for example—where IS the reason in this kind of thing. "Roger Old Man Roger Dodger, glad you are getting me Ess Nine over there, the Kiu Tee Haitch here is Woopville "W" for Washington, "O" for Oregon (ditto), "P" for Pasadena, "V" for Victory, "I" for Indianapolis—we will spare you the rest of the agony, but it is quite likely that he who exhibits this flair for emphatic spelling will go on to say that his "handle" is Archibald, spelt "A" for apple, "R" for Roger, etc, etc. Yes, yes, we KNOW that phonetics have their uses, we used them enough in the Services, but don't you agree that the spelling habit can be somewhat overdone? We can even be constrained to think that it is a form of self-expression by long-winded people who like to think that their voices are heard by lots of people. There ARE sensible things to talk about—even the weather can be a profitable subject for analysis, but please, for goodness sake, don't start teaching the other man who has to listen to your 'overs' to SPELL.

Why doesn't some cracker-jack radio inventor give us a slow-motion screw-driver for adjusting trimmer condensers?

"COMMAND-ER." A long experienced and somewhat canny VK2 radio amateur of ancient vintage recently got a cobber in the Old Country to send him out one of those handy little Command transmitters, officially designated BC453, and known in "QST-parlance" as a "Q-5-er." Selling in Britain at 25/- war surplus, they have the means to a useful end; that of extra good selectivity by virtue of low frequency IFT's. Our friend, confronted by Customs, watched a zealous minion tot up item after item, and the duty of no less than £11 had been passed. Quoth the ancient VK2: "Don't go any further, you might break your flamin' pencil; better send the darned thing back to London."

Customs said they would look into it and would let him know if there would be any concession. A day or two later the ancient was telephoned; "the case had been reviewed," and he "could have the item at the sterling value." Which would have been fine, but for the fact that another of the King's men had acted, and the item really had been packed up and shipped away in the meantime. There really isn't much justice in the world!

*(Continued on next page)*

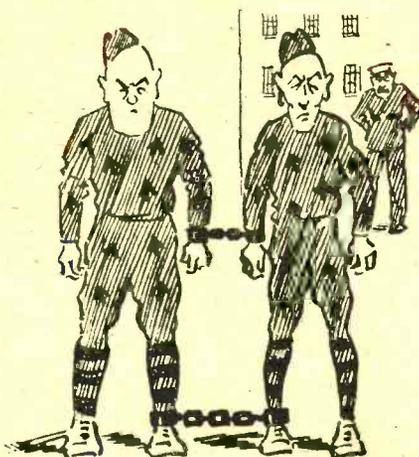
## MORE AMATEUR CHATTER

# RADIO CLUB NOTES AND DOINGS

### Gladesville District Experimental Radio Club (N.S.W.).

This club had a Field Day recently, when the winner of a VHF contest on 144 Mc/s was judged to be Vaughan Wilson, VK2VW, who attended as representative of the Kingsford Club. The callsign used in the contest was VK2ADY-6, and the location was National Park. The Kingsford Club, also the Experimental Radio Society of N.S.W., sent along several representatives to Gladesville on the evening of May 5, when "Bill" Cotterell, VK2ZN, lectured interestingly on the subject of Single Side-band Suppressed Carrier transmission. The club transmitter is in action on Tuesday evenings on "forty", and contacts with other amateurs and clubs are sought. Publicity Officer of the Gladesville Club is Kenneth Whitmore, 5 Elston Avenue, Ryde, Sydney. Prospective members are welcomed.

"VIC EDDY." Recent visitors to the H.Q. of "R. & TV." have been VK4DO, from Rockhampton, Qld., VK's, 3HW, and 3VA from Ballarat, Vic., VK2LH from Lismore, N.S.W., and ZL1CH from Auckland. Reported in and around Sydney has been VK2XO.



CONNECTED IN PARALLEL.

## That 21 Mc/s Band

Many are the amateurs who ask of the other fellow whether or not he knows anything about the opening of the 15 metre band. The answer is, not before October, 1949, and possibly—if a pessimistic view is taken—January, 1951. It is all a matter for the International Frequency Registration Board (I.F.R.B.) which was set up at the Atlantic City conference. For the last 18 months the Board has been trying to produce a properly engineered table to cover the use of frequencies below 27.5 Mc/s, to be submitted to a world conference to be held at Geneva some time this year. It was planned originally to have this conference in March, but it is now put back to October, 1949. Don't forget this, though, that when you do get the 21 Mc/s band, you lose at the same time half of the 7 Mc/s and one-eighth of the 14 Mc/s bands. One wonders whether the proposed acquisition really will compensate for the loss of big chunks of our valuable lower frequencies.

(Continued on next page)

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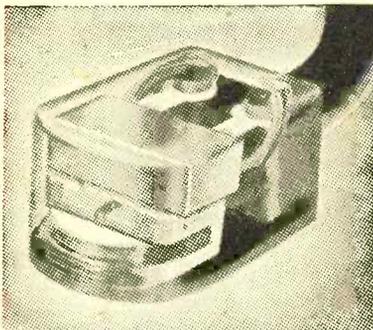
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The pick-up coil is of high impedance, being 1,300 Ohms at 1,000 CPS. The output direct from pick-up is .1 volt from a standard recording of 12 db up on the zero reference level 1 cm/sec. RMS velocity. With our special coupling transformer the voltage across the secondary will be approximately .5 volts.

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