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WIRELESS WEEKLY

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FEATURES

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2 FORDS AND WIRELESS

By

W. G. WOOLNOUGH, D.Sc. F.G.S.

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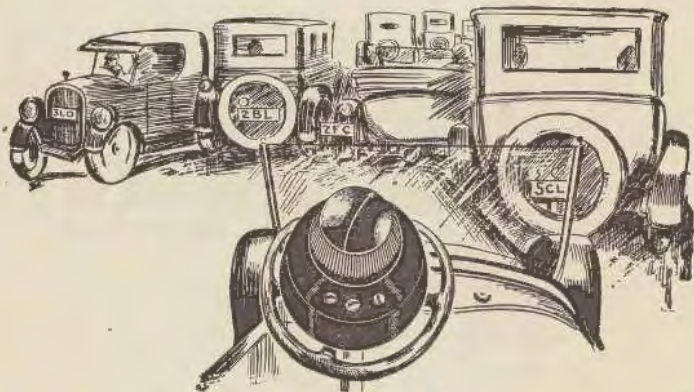
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WIRELESS WEEKLY

AUGUST 6, 1926

The Lesson of the Land Line

FULLY recognising that to stabilise broadcasting in Australia, a policy of decentralisation is required, Messrs. Farmer & Co. Ltd., at an early period decided that the studio work of 2FC was to take second place. What is termed the outside performance, was to become the dominant feature of all their broadcasting so that the atmosphere attendant upon work from public halls and theatres should be conveyed over the air to listeners. Nearly two years have elapsed since 2FC adopted this policy, and last month a record of 115 performances outside the studio was established.

It was in following up the policy of decentralised performances, that 2FC pioneered the long land line transmissions. In the early stages the station felt that it was safer to restrict the transmissions to public speaking, but as success attended its efforts, both music and the spoken word have been broadcast. The success from the Jenolan Caves, followed by the outstanding performance from Canberra, led on to last Saturday's transmission from Kosciusko, over a land line of three hundred (300) miles in length.

These long land line transmissions are not now a feature of only one station, for 2BL, in New South Wales, have also seen the value of this type of work, while SLO, in Victoria, are also scattering their performances, accepting programmes from country towns.

There is an aspect of this work which may not at first be quite apparent to the average listener, but which must ultimately play a great part in broadcasting throughout Australia. Many of the large country towns have felt that the ultimate suc-

cess of broadcasting in their areas can only come when it is possible to receive the best programmes on the least expensive receiving sets. This at once raised the question of relay, and the matter was taken up with the Postal Department, who, from the very first have been sympathetic to this movement. It is to the credit of the P.M.G.'s Department that every legitimate mechanical assistance that can be rendered by its engineers has been extended to this policy of country broadcasting, and the Department apparently have recognised that the success of these efforts would, ultimately, allow them to establish the necessary connection between the large "A" class stations and the smaller relay stations spread through the length and breadth of Australia. We believe that at no late date, what, up to the present, has been obstacle, namely, the inability of the stations to get regular use of a long land line, owing to congestion of public business, will shortly be overcome, and that in the very near future the big broadcasting stations will, through the co-operation of the P.M.G.'s Department, be able to make available these long land lines sufficiently often to make country broadcasting a feature of the daily programmes.



Broadcast Appreciation

THE first experience of broadcasting as related by an artist after facing the microphone for the first time is invariably full of interest. It is usually revealed that the artist confesses to a far greater feeling of nervousness before the radio audience than was ever exper-

enced on the stage or on the concert platform.

This is, of course, induced to a certain extent by the novelty of the surroundings and by the total absence of the customary atmosphere which has always been accepted as "part of the show." The expressive gestures, the studied actions and mannerisms which even the best artists sometimes employ are useless in broadcasting, and the artist is judged entirely by the vocal or instrumental sounds that are conveyed to the ears of the listener-in.

Broadcast listeners constitute the most critical audience that could be imagined, for the very reason that the performer, being invisible, has not the advantages of the personal touch that is otherwise so big an asset.

In one night Melba reached a far greater audience than she had in years of public singing, and the popularity which she gained in her first broadcast is perhaps the most striking example of what broadcasting can do for an artist that has ever been afforded us: An audience of forty or fifty thousand people, comprising all sections of the community and representing all shades of opinion and thought, must necessarily be regarded as a most powerful influence for good in the career of an artist who is prepared to submit to their judgment. It will be seen from this, therefore, that where there is real talent, and where an artist's efforts are appreciated, the help and encouragement which is invariably given by the thousands of listeners-in is a very great factor in their success in the musical world.

From whatever angle it may be regarded, broadcasting is fast becoming a most vital factor, not only in the success of individuals, but in raising the standard of musical and artistic ability in Australia.

Spinifex, Saltbush, Two Fords---and Wireless

This article deals with Mr. Woolnough's experiences in the little known region of Central Australia, which has been visited more than once by the author, who is Honorary Lecturer in Geology at the Sydney University. How wireless proved of invaluable assistance is set forth in the article.

MANY years ago, Jerome K. Jerome chronicled the doings of "Three Men in a Boat—to say nothing of the dog," in search of peace and quietness. It would need the pen of a Jerome, which the present writer does not possess, to do justice to the theme which forms the title of this contribution. Nevertheless, some of the experiences and some of the results may not be entirely devoid of interest to readers of "Wireless Weekly."

It all happened in the prehistoric days of "wireless," that is to say, just four years ago. The occasion was that of a scientific expedition into the dry interior of Australia, in the course of which the observation of the total eclipse of the sun was incidental. A very fine travelling equipment was got together for the purpose. Transportation was by means of "Fords." One of these was termed by the agents a "ton-truck"; but, as there is no Society for the Prevention of Cruelty to Ford Cars, the long-suffering vehicle had dunnage of various kinds piled on it till the load began to leak over the edges, and the body sat down—hard—on the back tyres every time the car passed over a bump; and, like Artemus Ward's tramcar, every time there was a doubly deep bump the body sat down twice. The other car, maligned by being called merely a "utility truck," was equally unfairly used. If ever anything on four wheels proved its utility—and more—that little grey truck did. On account of its surprising agility, this car soon earned the soubriquet of "The Flea." What we called the other car the Editor will not permit me to put in cold print.

The disgusted reader will begin to enquire, what has all this to do with "wireless"; and that is just where the joke comes in. As we anticipated being in country which had not previously been mapped in any detail, we decided to find our position by astronomical observation. As everyone knows, it is necessary to have ex-

remely accurate time to do this. To maintain accurate time by means of even a good chronometer is quite out of the question, when travelling per "Flea." Even in those dim distant days of 1922, wireless time signals



The writer, Mr. W. G. Woolnough, D.Sc., F.C.S.

were well developed. Therefore, we decided to take along a receiving set to get the time. None of us knew as much about wireless as a bull does about astronomy; the bull has seen the stars, we had never seen a wireless set. Nevertheless, the gracious permission of the Postmaster General having been obtained, we got from Amalgamated Wirelless a neat little one-valve receiver containing a one-valve circuit.

Many years ago, so many that the writer shudders to consider the sum, two schoolboys used to get detention for practising "morse" when they should have been doing quadratic equations. The writer had worked up to the lightning speed of fully six words a minute before he stuck and could get no further. The "morse" had stuck, even if the quadratics had not, so that we were thoroughly well equipped so far as knowledge went. Collecting the Gear.

We were warned that valves were delicate things, which would not stand hard usage, so we took a spare one. Those little old 201's were as hardy as footballs. It was simply impossible to smash them. Not only did

they weather all the vicissitudes of the trip; but, after returning to Sydney, they continued in use for upwards of two years, then one of them was unreasonable enough to 'throw up the sponge' when 2000 volts A.C. was inadvertently put on its plate. The other still reposes, intact, honourably pensioned, in its box at home. We were also warned that "B" batteries would be a trouble, and no truer word was ever spoken. "A" batteries we were not afraid about. Each car had two accumulators on board which were placed on charge alternately, and we never had the slightest trouble about the "juice." Aerial and masts were the next consideration. We took selected oregon poles 15 feet long and three inches by two in section, which we clamped together by means of U-bolts. The aerial was 110 metres long, theoretically the proper length for the 800 metre wave length which we were to receive. Most dismal forecasts were given in regard to our probable difficulties in getting proper earth connections.

Just at this stage, someone suggested taking a transmitting set with us and keeping in touch with Adelaide. "Fools rush in where angels fear to tread." We gaily approached the Military Authorities, who very courteously acceded to our request, and lent us the best they had available at the time, an old, war-worn Marconi spark transmitter and carbonudroni crystal detector, euphoniously referred to as a "cavalry pack-set." This we cheerfully collected, took to Moore Park, and proceeded to become familiar with. It was suggested that we should try to borrow a military signalling officer. As the date of our departure from Sydney could not be put off any longer, the sun being so inconsiderate as to refuse any postponement of the eclipse, everything had to be done by "urgent" telegrams. Again the military authorities showed great courtesy and promptness, and Captain V. D. Bowen, M.C., was seconded for the purpose. This proved

to be the best thing that ever happened to the expedition. In addition to being an extremely able wireless telegraphist, he proved himself the best of companions in every particular, and was the life of the trip.

too fully justified the next day. The motors absolutely refused to pull into Katoomba. After very serious consideration, it was decided to send some of the load by rail to Nyngan, in the hope that, by that time, cars, or driv-

more hard language; but the language used on that occasion paled into insignificance in comparison with what was flying about when it came to be unloaded.

Fitting Up the Set.

When first we saw it, we thought it was a "quadruped." As we sought to lift it on to the truck, its four legs seemed multiplied to a hundred at least, and it seemed as though each leg exhibited a most detestable capacity for standing on someone's toe, or taking off a piece of skin from any portion of one's anatomy, whence it could least readily be spared; but we had failed to realise the devilish ingenuity of that mass of copper wire and bicycle tubing. The tracks on the tops of the boxes in which were packed our stores and scientific equipment, indicated some of its wanderings. Each leg had sought out some vulnerable point in the substratum of boxes, and had then proceeded to bore its way into the vitals of our equipment. One was well and truly in the middle of a case of lubricating oil,



Outfit at Nyngan. "The Flea" with improvised trailer attached. The trailer was made from the wireless masts.

The Expedition Starts.

By the time he arrived in Sydney, it was impossible to try out the apparatus, so it had to be loaded up, "on the blind." The difficulty about "earth" had been overcome by the supply of wire-gauze earth mats, which, I may state at this point, proved entirely satisfactory.

The great day dawned; or rather, by midnight just preceding, the cars had been loaded far beyond the limit of their capacity, and there was nearly enough left over to load a railway truck in addition. By dint of a rigid policy of exclusion, the gear was whittled down until the bulk of it was tied on the two vehicles. The garage men shook their heads till they developed headaches; but there it was, and there it had to stay. The actual start was somewhat delayed while one member of the party was farewelled, and photographed from various points of view; but at long last we got away. New cars working stiffly, shockingly overloaded, and with the loads badly arranged, managed, with very great difficulty, to surmount Lapstone Hill. We had airy notions of reaching Bathurst that first day; but, after dark, tired and hungry, we crawled into Wentworth Falls, the truck negotiating the last hill backwards.

This experience filled us with considerable foreboding, which was only

ers, or both, might be in a better frame of mind.

It is unnecessary to chronicle the details of the trip to Nyngan. Before reaching there, the idea had developed of using the wireless masts, a spare front axle and a pair of spare wheels, for the construction of a "trailer," to relieve the direct strain on the car axles. It must be remembered that, up to this point, there had been no necessity to carry large supplies of petrol; but, the further we went, the less chance there was of obtaining supplies. While the mechanic was building the trailer, we thought it a good chance to try out the wireless set, so we proceeded to unpack it. This was the first time the truck had been unpacked since leaving Katoomba, and what a sight met our gaze when the tarpaulin was taken off! Probably few of my readers have ever had the privilege (?) of being intimately acquainted with a Marconi pack-set. The wireless part of the gear is contained in two large cases. These were all right. The generator, and a Douglas motor-cycle engine to drive it, are carried on a metal framework, shaped to fit on the pack-saddle of some poor long-suffering brute of a horse. Our combined man-power had succeeded in getting the contraption on top of our load, by dint of much hard labour and still



The writer listening for wireless time signals in camp in the Flinders Ranges, 400 miles from Adelaide.

another was busy mixing a pudding in the centre of a box of groceries, and so on. Again we began to wonder whether the thing had only four legs,

(Continued on Page 48.)



Studio News & Notes

SAMOAN GIRL HAPPY.

A little joke was worked on a young Samoan girl by "Uncle Jack," of Broadcasting Station 2BL, an evening or two ago.

Kofia had just arrived from the Islands—an unsophisticated young lady of 20. She had never seen a city, a motor car, an electric tram, or a train. The great world of radio was to her an unknown book. Imagine her delight that evening to hear music and singing emanating from a loud speaker at the home where she was staying.

Then Uncle Jack began to call various children. He congratulated a child at Randwick on having a birthday; to one at Dubbo he delivered the friendly advice not to pull pussy's tail; and to one at Goulburn he sent a star.

But imagine the Samoan girl's astonishment when over the air she heard Uncle Jack calling, "Kofia, Kofia." Her eyes glistened as she shouted, "That's my name, that's my name." Uncle Jack talked to Kofia for a minute or two, spoke of her island home, and then informed her that Hector, the wireless bird, was about to bring her a box of choco-

lates. Followed a mighty crash through the air and a thud, then again the voice of Uncle Jack telling Kofia that she would find the box of



Mr. Arthur Burton, the well-known English exponent of jazz, who has been engaged by 2BL to perform a series of illustrated talks on the appreciation of jazz music. As a jazz pianist, Mr. Burton is probably one of the finest who has ever visited Australia.

chocolates at the foot of the aerial—just the same old gag which has delighted thousands of Australian children. Kofia found the chocolates right enough, and she is satisfied that they came over the air. She is now saving up to buy a radio set.

if the winner does not wish to take the trip the added inducements go to the next in order in the competition. All intending September brides should forward photograph of themselves in three poses to 3LO, where they will be judged by an authority appointed by the studio. The wedding must take place during September, and the company will broadcast the wedding ceremony.

JACK O'HAGAN'S PERSONALITY.

There is an intangible possession of intrinsic value, desired by all—acquired by few. Youth is rarely with it, it is rather a cultivated attribute of age, and this magic gift which blazes its own trail through life is christened "Personality." Wireless is a difficult medium for its expression, therefore its lack is only too apparent in many of the artists who perform via the air. However, no one can miss the appealing personality which underlies all of the work of 3LO Melbourne's popular singer of colloquial songs, Jack O'Hagan.

SEPTEMBER'S BRIDE.

Considerable rush of business is expected at the Melbourne office of the Registrar of Marriages during the month of September, owing to the interest created by the "September's Most Beautiful Bride Competition," which is being conducted by 3LO Melbourne. The fortunate winner gets a dowry of £25 from 3LO, together with a honeymoon trip to Launceston, free accommodation, motor trips and entertainment. However only the bride desirous of spending her honeymoon is eligible for that prize, for



Miss Thelma Houston, a contralto of distinction, who is heard regularly on the programmes transmitted by 2BL.



Miss Ruby Michael, a soprano who has recently made her debut in wireless, singing from 2BL.

RADIO BRIDGE.

From the Studio of 2FC will be given, on Wednesday, August 11th, the fourth series of the Radio Bridge Talk by Mr. Master. Instrumental programme from the Lyric Winter Garden, baritone solos by Mr. Lawrence Halbert. Talk on photography by Mr. E. J. Van-de-Velde, the second last of the series which closes the Commonwealth Photographic Competition. From the Dreadnaught Theatre, Chatswood, the first act of "The Sunshine Girl," by arrangement with the Roseville Operatic Society, and J. C. Williamson Ltd.

STATE MILITARY BAND.

From the Mosman Town Hall, 2FC will take, on Tuesday, August 9th, the second act of "The Merry Widow," produced by the Mosman Musical Society. From the Naval House, by special permission of the N.S.W. State Military Band, and from the studio, Mr. R. A. Bartleman, baritone, and a comedy play by Mr. Montgomery Stuart and Miss Myra Leard.

COMIC OPERA NIGHT.

Station 2FC promises some interesting items on Monday, August 9th. In continuance of the series of comic opera nights, an act will be broadcast from the Conservatorium Hall of the "Knight for a Day" production by the Bankers' Operatic Society. In the Studio, Mr. Lionel Lawson in violin solos; the Rev F. H. Baward in his talk on natural history, dealing with "The Buffalo in the Northern Territory." 2FC Dance Band. An instrumental and vocal programme from the Haymarket Theatre, and in the Studio soprano solos by "My Lady Incongnito," which will hide the identity of a well-known comic opera actress. The first listener who guesses who this singer is, will receive a photo of the actress herself.

CHURCH SERVICES.

Morning service, on Sunday, August 8th, from 2FC, will be taken from St. Andrews. In the afternoon the band concert will be transmitted from the Town Hall, supplied by the Metropolitan Band. In the evening, the early

part of the programme will consist of the "Street Cries of Olde London," to be sung by Madam Emily Marks, soprano, with a story by Mr. S. H. Bowden, an authority on Old London. The evening service will be taken from



An impression of Mr. Cochrane, popular announcer at 2FC, by Kerwin Margraith.

the Congregational Church, Pitt Street. At the conclusion of which, a concert by the N.S.W. State Military Band will be transmitted from the Grand Opera House.

WEIGHT REDUCING.

Station 2BL on the air on Wednesday, August 11th, with early morning health exercises, a special feature of which are gymnastics specifically directed to weight reducing and early morning news service. A feature of the news service throughout the day is the provision of information concerning the cricket matches being played in Great Britain and other sporting fixtures. The luncheon music will be provided by Hilliers' Instrumental Quartet. During the afternoon session, music from the Studio, including a special operatic session illustrated by selected gram-

phone records and the serial story with news items and market reports will interest the listeners-in. The dinner music will be provided by the Pavilion Dinner Orchestra, and during the evening programme the City of Sydney Band will be broadcast, together with the Orpheus Society, whose male chorus provides exceedingly fine concerted numbers. A Foreign Affairs lecture will be delivered by Mr. J. M. Prentice, whose interesting comments on the events of the great world continue to instruct the great mass of the listeners-in, and portion of the programme of the Sydney Technical College Engineering Association from Turner Hall will be broadcast, commencing at 9.45. The dance programme will be provided by the Gloomchasers playing from the Bondi Casino, and together with news items will carry the programme on until midnight.

GOULBURN LEIDERTAFEL.

The concert by the Leidertafel on Thursday evening, 19th August, will be broadcast by 2FC on a direct land line of 140 miles. The last recital broadcast in June, 1925, was such a success that listeners will look forward to the 19th August, especially when they know that arrangements have been made with J. C. Williamson Ltd. for an appearance at Goulburn of the English operatic baritone, Mr. Raymond Ellis, whose artistic singing is now a feature of 2FC programmes. In addition, Miss Elsie Treweek, soprano, who is on a visit to Australia from England, will appear and sing in conjunction with Mr. Ellis. It is interesting to know that both these artists are associated with the British National Opera Company, and in one production nine Australians took principal parts at Covent Garden.

MOST FOOLISH QUESTION.

An American station wonders what pernicious influence is at work to cause twenty or thirty women to telephone in every day to ask at what dial numbers various stations can be in.

BURGESS—"Used by
American Navy"
—BATTERIES.



Radio Auction Bridge

Game No. 3—Broadcast by 2FC

"Wireless Weekly" has secured from 2FC, Farmer's Broadcasting Service, the exclusive right of publishing the Radio Auction Bridge Games which 2FC commenced broadcasting on Wednesday, 21st July.

There are 24 Bridge Games in the series, and one will be broadcast each Wednesday evening, and the following Friday's issue of "Wireless Weekly" each week will give the game in detail as it should be correctly played. These games were arranged by the United States Playing Card Company of Cincinnati, Ohio, U.S.A., and played by Bridge experts. Some very slight alterations have been made in the original games broadcast in America in order to adapt them to the calling of the Portland Club, which is the most universally followed rule, so far as Auction Bridge is concerned, in Australia.

Mr. W. F. H. Master, an acknowledged expert in the game of Auction Bridge in Sydney, is carrying out the transmissions from 2FC, and if any Bridge enthusiasts, on reading these articles, care to submit any questions or problems arising out of the games as published, arrangements have been made for Mr. Master to answer them through the columns of "Wireless Weekly."

THE complete hands held by each of the players of the Radio Auction Bridge Game, played on August 4th, were as follow:—

Dealer (South) holds:—

Spades: 8, 6, 5.
Hearts: 4, 2.
Diamonds: A, K, J, 8, 5.
Clubs: J, 7, 5.

West holds:—

Spades: A, Q, 9, 3.
Hearts: K, Q, J, 8, 6.
Diamonds: 2.
Clubs: A, Q, 9.

North holds:—

Spades: 4, 2.
Hearts: A, 10, 7, 5.
Diamonds: Q, 9, 7, 3.
Clubs: K, 6, 4.

East holds:—

Spades: K, J, 10, 7.
Hearts: 9, 3.
Diamonds: 10, 6, 4.
Clubs: 10, 8, 3, 2.

The dealer, South, opens the bidding with one diamond. All authorities now agree that Dealer, or second hand if Dealer should pass, not only may but should bid any five card suit headed by the ace king. The bid shows two quick tricks in the hand, and four probable tricks with that suit as trump; nothing more.

West doubles. As explained in Radio Game No. 2, this double is informative. While a heart bid is tempting to West, it would not give his partner a correct picture of his hand. With values in three suits, particu-

larly with four cards of the other major, and with the possibility that partner may hold four spades and about two hearts, it is usually better in this position to invite partner's co-operation in the selection of the declaration best suited to the combined hands.

North has two lines of defence to shut out, if possible, an embarrassing or even dangerous response by East. The first is an immediate no trump, and the second, a pre-emptive assist of his partner's diamond bid. The latter appearing the safer course, North bids three diamonds. While this is possibly an overbid of a trick, the risk of loss, if left in, is small, compared to that which may ensue if east be permitted a cheap opportunity to bid.

East passes, proving the efficacy of North's strategic bid.

South passes.

West again doubles. This is still an informative double. If partner holds four spades or four hearts, West proposes to force his partner to bid them. West's holding is too strong to lightly permit opponents to play the hand at diamonds.

North passes. His previous bid of three diamonds was his limit.

East bids three spades. There having been no intervening bid, he is not only expected but is obliged to respond to West's informative double by bidding a four card major; or lacking a four card major, with his

best minor suit.

South passes, not holding more than required for his original one diamond bid.

South's initial lead is the king of diamonds, his correct opening from a suit headed by the ace king. Dummy plays the two of diamonds, North the 7, and East the 4.

North's play of the 7 of diamonds was intended to show the queen (in case his jump assist of three diamonds did not sufficiently place him with this card) in case his partner desired, as possibly the best line of defence, to continue with diamonds, in order to force Dummy's trump holding.

If the Declarer (East) holds both the ace of hearts and the king of spades, there exists no hope of saving game, but North's assist shows some strength outside of diamonds. North should hold the ace of hearts, and at least one of the missing kings. If he holds the ace of hearts and the king of clubs, the game appears to be still lost, unless he also holds the 10 of clubs and a second stopper in hearts, in which case South can make the play of the hand most embarrassing to East by shortening Dummy's trump holding, and at the same time, keep Dummy in the lead. To lead spades, hearts, or clubs, under the existing conditions, would clearly be assisting Declarer to play the hand, as all of these plays Declarer must inevitably make, in order to develop

the game. South, therefore, figures his best defence is to continue with the diamonds, and lays down his ace of diamonds, Dummy trumps with the three of spades, North plays the three of diamonds, and East the six.

East has already lost one diamond trick, and must lose a trick in hearts, and in all probability, at least one in clubs. If North holds both the king and knave of clubs, East must lose two club tricks, which would prevent game. With eight trumps between the two hands, the probabilities are that the remaining five cards of the trump suit will be divided three and two between the opponents, but even with this favourable distribution, he cannot afford to exhaust trumps until his side suits are established. He, therefore, leads the king of hearts from Dummy, which North covers with the ace, fearing that East may have but one heart. East follows with the nine of hearts and South with the four.

South's play of the four of hearts was not a false card. It was his correct play, with but two cards of the suit. It should be noted that South's play of the four of hearts, together with the fact that neither the two nor three appeared on the first trick, clearly marked to North that East's play of the nine was a false card, because South, if holding the two, three, and four of hearts, would have played the two and not the four.

The heart situation is now clear to North. If he held an immediate stopper in spades, such as the king, he would immediately return a heart; but with no stopper in spades, to return a heart would accomplish nothing except to assist East in establishing the heart suit. Inasmuch as a club lead is equally impossible, his best line of defence seems to be the continuance of that adopted by South. North, therefore, leads his queen of diamonds, East plays the 10, South the five, and Dummy trumps with the ace of spades, in order not to block the re-entry into East's hand.

In order to be in a position to attempt the club finesse, East must get into his own hand at once. He, therefore, leads the queen of spades from Dummy, North following with the two, East with the king, and South with the five.

East leads the 10 of clubs, intending to underplay the nine of clubs from Dummy (unless the 10 is covered

by South) in order that, if the 10 holds the trick, he may lead a second round of clubs from his own hand.

This play of the 10 is made on the possibility, however remote, that South may hold both the king and jack of clubs.

South follows with the five of clubs, West with the nine, and North with the four.

South does not cover the 10 with the knave because with ace, queen, nine in Dummy, there is no possibility of establishing a trick in his own or his partner's hand by so covering.

Game is now assured without taking the second club finesse. With the possibility, however, that both the king and jack of clubs are held by South, and there being little, if any, danger of losing the game by a second lead of clubs, East strives for an extra trick by leading the two of clubs; South follows with the seven, Dummy with the queen, and North with the king.

North thinks that his best defence is to continue with the diamond, hoping East will trump in his own hand, in order to avoid discarding a heart or club. So North leads the nine of diamonds.

This lead is unexpected by East. Should he trump in his own hand and lead two rounds of trumps to exhaust opponents' trumps, and the heart suit should not break, he would be short one trick of the game, because he would then be unable to get back into his own hand to make his fourth club. There are two ways in which the remainder of the tricks may be made, that is, provided the trumps are split three and two between the opponents. The first way is to trump the diamond in his own hand, lead a small club to the ace of clubs in Dummy, in order to unblock the club suit, lead the remaining small trump from Dummy, and then a second round from his own hand, in order to exhaust opponents' trumps. The second way is to discard a heart from his own hand and trump the diamond in Dummy, lead a small heart from Dummy and trump with the seven of spades, lead two rounds of spades to exhaust opponents' trumps and return to Dummy with the ace of clubs, so as to make the remaining good heart. Either line of play is sound, and it is merely the option as to which to adopt. By

adopting the second, he avoids the remote risk of having the third round of clubs trumped. Therefore, East discards the three of hearts, South plays the knave of diamonds, and Dummy trumps with the nine of spades.

Dummy now leads the six of hearts, North covers with the seven. East trumps with the seven of spades, and South plays the two of hearts.

East leads the knave of spades, South plays the six, Dummy the eight of hearts, and North the four of spades.

East leads the 10 of spades, South plays the eight, Dummy the knave of hearts, and North the six of clubs.

Declarer leads the three of clubs, South follows with the knave, West with the ace, and North with the five of hearts.

Dummy's queen now wins, so East makes four odd and game.

The important features are as follows:—

West's informatory double of South's one diamond bid, which directed his partner to do one of four things: To bid no trump if he has the diamond suit well stopped and no sound major bid; to bid a major suit if holding one of at least four cards, in preference to a stronger or longer minor; or falling a four card major, to bid the other minor suit; or if long in diamonds and fair side strength sufficient to justify the assumption that the double of one diamond, if left in, could be set several hundred points, to pass.

Most Bridge players would have bid a heart originally with West's holding, thus overlooking the fact that the bid might not suit partner's hand, and partner might be too weak to deny. He would have been in difficulty from the time he was forced to trump the second diamond lead, if left in a heart bid.

In respect to West's second double of North's interpolated bid of three diamonds, there is still some confusion in the minds of players in regard to the meaning of a three bid where partner has not as yet bid. According to the general rule, the double of an adverse suit bid of one, two or three, is informatory, when made at the first opportunity, if partner has not bid; and, when subsequently made,

(Continued on Page 46.)



Gems from Listeners' Letters

"We think your voice is just lovely, and we often laugh at things you say. But you nearly always sound so sad." A letter to the "Hello Man" from Joan and Wallace.

"When you became thrilled and excited in describing the match, we also became worked up and joined in the cheering which came over the air,"—says a correspondent from New Zealand to 2FC.

The broadcasting of Gipsy Smith has brought some wonderful letters and messages to Farmer's, 2FC, studios. They definitely remove the charge that has been laid against broadcasting that it destroys the personal appeal of the singer or speaker. One of the messages received stated that in a church on the North Shore line, on Sunday, 25th July, a loud speaker had been erected and after the congregation had listened with the utmost interest to the address by Gipsy Smith from the Hippodrome, no less than twenty-six (26) of the worshippers answered to the appeal of the great evangelist. The letters came from all parts of Australia and New Zealand, from persons who, under no circumstances, could ever hear Gipsy Smith in the flesh. That the listeners had not been unmindful of this privilege, is demonstrated by the fact that quite a large sum in donations has been received from those who had listened to Gipsy Smith on the air.

An interesting letter comes from Mr. H. Russ, of Noumea, who writes—"I wonder if you realise what it means to us living some seventeen hundred (1700) miles away from you down in this French settlement, to be able to hear a service from St. Andrew's Cathedral in Sydney. Sunday is our best reception because the commercial stations in the Pacific are quiet on that day, and we are not disturbed by Morse."

"Imagine yourself, Sir, sitting hundreds of miles away, tuned in to the night session, and then hearing your

own name and address broadcast over the whole of the Commonwealth, that you had been selected to receive one of the enlargements of Signorina Toti Dal Monte, on account of being the farthest away listener in the state. I nearly went through the roof. Fortunately, my wife, wondering what was the matter, quickly brought me back to earth."—Extract from a letter written by Mr. Henry Wilkinson, of Wentworth, who received an enlargement of Signorina Toti Dal Monte's photograph.

Mr. Nolan, of Wairamarama, New Zealand, is also a cricket lover, for he writes: "We are delighted that we are able to pick up your station every morning at 7 a.m. to get our cricket news. Folk around here are awfully excited as they did not know before that it was possible to pick up an Australian station by daylight. You can imagine we kept tuned into your station during the Test matches, as we look upon the Australian cricket team as belonging to us just as much as to you."

"I think that Saturday's transmission from Canberra surpassed all previous ones picked up by us here in New Zealand. The volume and clarity were such that the artists might easily have been in the next room. The only 'fly in the ointment' in our listening to your wonderful transmission is our local Government spark station, which, when in operation harmonises well with the broadcasting reception on all wavelengths for many miles around Auckland. Hence—many blanks," writes Mr. J. C. Nichol, of Epsom, Auckland, New Zealand.

Mr. P. C. Ingham, of Mundah, Queensland, brings a homely touch

when he writes—"We are listening to your concert from Canberra tonight. The reception is very good, and quite a number of us are now sitting round a roaring fire thirty feet away from the loud speaker, where we can hear every word equally as good as the announcements from the studio. Our neighbours come for the Test match scores which we receive from you every morning. I also give them the final scores in the office long before they could receive them through any newspaper."

Here's a little gem from Cecil—"Dear Uncle, have you a nephew Cecil besides me? Uncle, you told somebody that you know what we do, so please tell me what I did yesterday. I rather like school, because I do not think that it is hard to learn lessons." Cecil then quotes the name of his teacher and adds—"I haven't had the cane off him yet, but I have had the cane off Mr. ———." Cecil is a bit of an artist, as he underlined the portion of his letter in which he asks the "Hello-Man," to "tell me what I did yesterday."

Another small boy, Jimmy, writes: "Dear 2FC, By jove, your cricket news early in the morning is great. Dad never needs an alarm clock, as we see that he is up in time to tune in. Somehow, I don't think dad quite enjoys getting up so early in the cold because my brother Billy said that he heard father say something the other morning when we called him up, that would not have sounded too good over the air, but I hope you won't stop the cricket on dad's account"

**BURGESS—"They're on
the Leviathan"—
BATTERIES.**



The three smiling faces shown above scarcely need any introduction to readers of "Wireless Weekly." Miss Dorothy Bertram is responsible for those delightful programmes from 2BL. Uncle George has a following of youthful admirers whose names is legion, and Uncle Jack—well, he's Uncle Jack.

AGRICULTURAL BROADCASTS.

Station 2FC arranged with the Department of Agriculture for the broadcasting rights in connection with a number of very interesting papers that were delivered at the State Conference of the Agricultural Bureau, which commenced on July 28th. It was felt by the Bureau that such well-prepared and technically reliable matter was of too great a value to be used only before the delegates and the Hawkesbury College, and the Bureau at once agreed to Station 2FC broadcasting these papers during the progress of the Conference.

This represents an entirely new idea in broadcasting, and the value of such information on the air cannot be too highly appreciated. Amongst the lectures delivered was "The Supply of Water for Domestic and Stock

Purposes," which was broadcasted on July 29th, "The Control of Noxious Weeds" on July 28th, "Railway Freighting" on July 28th, "Pasture Improvement" on the 28th, and "The Extension of the Wheat Belt" on the 29th. It is hoped that more of these particularly instructive lectures will be made available from 2FC later.

DANCE NIGHT AT 2FC.

The Fourth Annual Artists' Ball will be held at the Sydney Town Hall on Monday evening, 16th August. This night has been set aside by 2FC as a special dance night. The band of fourteen musicians will be conducted by Mr. Eric Pearce—leader of the dance band at 2FC—and continuous dance music will be available to listeners from 9.30 p.m. to midnight.

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THE TASMANIAN STATION.

Things are moving rapidly in connection with the new station, 7ZL. With the exception of the valves, which are expected to arrive in Melbourne within the next two or three weeks, all the apparatus is completed, and it is thought that 7ZL will rank amongst the most up-to-date broadcasting stations South of the Line. The transmitting valves which are to be used are quite new to Australia, each one being of 1000 watts and air-cooled. There are to be one oscillator, two modulators, and a bank of six rectifier tubes.

The studio for the new station is to be erected at 95 Elizabeth Street, Hobart, and consists of the first and second floors of the building. There is, of course, a separate entrance. The main studio is 27ft. x 22ft. 6ins., and another room situated directly above the main studio will probably be the auxiliary studio. A sound-proof control room is being built in a section of the waiting-room, adjoining the main studio. The location for the transmitting apparatus has not yet been decided, but there are one or two sites in view, and as soon as this matter has been finalised, the erection of the transmitting house will be proceeded with.

Mr. Sidney F. H. Laws, the general manager of Tasmanian Broadcasters Pty., Ltd., has just paid a visit to Launceston, to look into the question of a relay station there. There has been a little hitch in this direction, but Mr. Laws states that all the apparatus for the Launceston station is completed and awaiting shipment from Melbourne.

METROPOLITAN QUARTETTE.

The Metropolitan Quartette, consisting of Miss Jean Grant, soprano, Miss Mary Bourke, contralto, Mr. A. L. Champion, tenor, Mr. A. G. Ellis, baritone, will sing the song cycle composed by Easthorpe Martin, "The Philosopher and the Lady," from 2FC, on Friday, August 6th. This is a cycle of nine songs, which has only been done in Sydney by this combination. Miss Goodie Reeve, after recovering from her illness, will continue her Friday evening chats behind the scenes, with the personalities of J. M. Barrie's plays at the Theatre Royal. Baritone solos by Mr. Law-

rence Halbert. Talk by Mr. G. Cooper, Superintendent of Parks, on "Street Beautification." Solos will be given by members of the Metropolitan Quartette, and an act from "Quality Street," by permission of Messrs. J. C. Williamson Ltd., will be transmitted from the Theatre Royal.



The sketch reproduced above was sent in by W. H. Cotton, 26 Prince Albert Street, Mosman, in connection with the Poster Competition arranged by Arthur Tossau, from 2FC, on Friday night, July 16. As was announced last issue, Mr. Cotton was the winner.

"THE MERRY WIDOW."

Features from 2FC on Saturday, August 7th, will include the usual Sporting Intelligence transmitted during the day, and the night programme will be of great interest, as the Mosman Musical Society has given permission, by arrangement with Messrs. J. C. Williamson Ltd., for 2FC to transmit the first act of "The Merry Widow," from the Mosman Town Hall. The artists include, Miss Ida Bloomfield, Miss Dorrie Ward, Mr. Bryson Taylor, and others. At the conclusion of this act, the Newcastle baritone, Mr. Norman Hestelow, will sing for the first time in the Studio, and at 9.40, in response to many requests, the third act of "Our Liz" will be transmitted from the Grand Opera House. At the conclusion of this, 2FC Dance Band will play until midnight.

THE AMATEUR WORLD.

Over the last couple of years, the status of amateurs, the world over, has been enormously increased, mainly due to the pioneering work carried out by them in short-wave transmission and reception. More and more attention is being paid to amateur affairs, and the public generally has realised that the amateur has a very definite place in the scheme of things. In "Radio" there is a very large Amateur Section, which deals extensively with the doings of Australian amateurs, and reports of other activities, which are sent regularly by amateur correspondents in each State.

In the current issue of "Radio" (dated August 4th), is contained a particularly interesting Amateur Section, and in addition there are many special features which make it invaluable to the broadcast listener. Amongst other features contained in this issue are "Broadcasting in Germany," an article dealing with "Neutralisation," "The Origin of Wireless Communication," and a vast amount of other general radio information, which makes the journal particularly attractive.

"Radio" may be obtained at all bookstalls, or direct from the publishers, Wireless Newspapers Ltd., 51 Castlereagh Street, Sydney.

EVERY RACE.

As far as 2BL is concerned, Saturday is usually a sporting day "Par Excellence," and August 14th will find them broadcasting sporting events direct from the scene of the event. The latest sporting information is placed on the air with the utmost rapidity, and every race is available within, at the most, 2 minutes of the hoisting of the numbers. During the evening session, Mr. Bobby Watson, comedian, will be featured, and Miss Maisie Mooney, contralto, will sing from the studio. A Nigger Minstrel performance broadcast from the Victoria Hall, Manly, and provided by our Boy's Nigger Minstrel Troupe will also be a special feature of the evening transmission. During the evening, Mr. Fred Brown will deliver a talk on "Battery Troubles" in connection with motor cars.

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Pilot, S.L.F., 17 Plate Condensers	0 13 6	Philips Valves, A109	0 13 6
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R.V.G., S.L.F., 23 Plate Condensers	0 13 6	Philips Valves, A306	0 13 6
Montrose 23 Plate Low Loss Condensers	1 2 6	Mullard Valves, P.M.3	0 13 6
Igranite Square Law .0005 Condensers	1 15 0	Mullard Valves, P.M.4	0 13 6
Igranite Square Law .0003 Condensers	1 12 6	Osram Valves, H.F. and L.F.	0 13 6
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Ever-Ready W.P.40 Batteries	0 12 6	Radiotron Valves, UX201A	0 13 6
American 45 volt Batteries	1 5 0	GECo Valves, RV5	0 13 6
Rayovac 45 volt Batteries	1 16 0	Cunningham Valves, CX301A	0 13 6
Rayovac 22½ volt Batteries	0 15 9	Radiotechnique, Super Ampli	0 13 6
Quam Audio Transformers	1 12 6	Amplion Loud Speakers.	
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Igranite Audio Transformers, 3-1	1 9 3	GECOPHONE Loud Speakers.	

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OFF THE BEATEN TRACK.

This is the interesting title chosen by Major Sandford Morgan and Mrs. D. Morgan for 2FC listeners on Thursday evening, 26th August, when this much-travelled couple will give some experiences of India, surrounded by an atmosphere of music suitable to the occasion. It is interesting to note that Major Sandford Morgan, D.C.M., is one of the "Old Contemptibles," and on Sunday evening, 22nd August, the anniversary of the Retreat from Mons, he will describe some of his thrilling experiences on that occasion.

"CONVENT" MASS BY GOUNOD.

To those listeners understanding and conversant with church music, the performances of the several church choirs broadcasting from the Studio of 4QG will prove of gratifying interest. Included in the programme to be given by St. Joseph's, Corinda, on August 3rd, are excerpts from the "Convent" Mass by Gounod. The Mass, together with Oratorio forms the most important branch of sacred music; and when we consider its great scope for musical expression, we readily understand why so many of the great composers have written in this form.

OLD SYDNEY.

Mr. J. G. Lockley ("Redgum") is giving a series of talks on "Old Sydney" from Station 2FC. Last week he spoke on "Old Sydney Markets," and his future talks will include such subjects as "Old Ferries on Sydney Harbour," "Recollections of a Punt Boy," "Old Pyrmont," and "Old Sydney Identities."

NEWTOWN CONGREGATIONAL.

The Sunday service to be broadcast by station 2BL on Sunday, August 15th, will include the Newtown Congregational Church both morning and evening, and include an organ recital at 6.30. During the afternoon a studio concert will be transmitted following on the Bible class conducted by Mr. W. Cairo Bradley, and during the evening session, a studio concert will be featured also.

BRASS INSTRUMENTS POPULAR.

Among the many well appreciated programme items broadcast by Sta-

tion 4QG, the cornet solos played by Messrs. Davis, Dauth, Henry and others seem to hold high favour in the esteem of radio fans. Brass instruments have proved themselves well adapted to broadcasting needs, and Brisbane players have shown themselves able to "produce the goods."

**MY LADYE INCOGNITO.**

Hiding the identity of a well-known musical comedy artist, who is known to everybody. She will sing from the 2FC Studio on Monday evening next, August 9th, and the listener whose correct answer is received first will be presented with an autographed photo of herself, duly framed. Listeners' replies should be addressed to Station 2FC.

A TALK ON JAZZ.

The programme from 2BL on Thursday, August 12th, will include the luncheon music provided by Hilliers' Instrumental Quartette playing from Hilliers' Cafe, and the Old Sydneysians Amateur Jazz Band from the studio. During the afternoon, David Jones' Tea Room Trio will provide a musical programme. Music from the studio, news items, and the serial story complete the session. During the evening programme the Ambassadors Salon Quartette, under the direction of Mr. Claude McGlynn will be broadcast in a programme of popular and classical numbers. Miss Freda Gilda, contralto, will be heard in items from her repertoire, and there will be a special session for Broadcasters sporting expert to discuss racing form and sporting events. A short eye talk by the president of the Institute of Optometrists will be also placed on the air, and Mr. A. Burton will deliver an illustrated talk on "Jazz." Mr. Burton is an expert as an exponent of jazz music and will play his illustrations as the talk proceeds. The dance programme will be provided by the Ambassadors Dance Band under the direction of Mr. Al. Hammett, playing until midnight.



The modern, up-to-date show rooms which form portion of the premises occupied by the Australian Wireless Co., a concern which has made remarkable strides in the wireless industry in Sydney during the last year or so.

COMIC OPERA MEMORIES.

Listeners never seem to get enough of the old comic opera music which delighted them a generation ago, and 2FC to satisfy this demand, has prepared an elaborate programme spreading over a period of several weeks, in which their appetites for comic opera will be thoroughly satisfied. The programme commenced on Tuesday night, 3rd August, when the whole studio programme was devoted to comic opera memories, and the numbers included the principal items from such musical plays as "Floradora"; "San Toy"; "The Runaway Girl"; "The Country Girl"; "The Geisha"; "Dorothy"; "Our Miss Gibbs," etc., and old favourites such as Miss Olive Goodwin, Miss Vinia de Loitte and Mr. Leslie Holland, who were present in the studio to sing the songs that were associated with them when they created the various parts. Following on this, arrangements have been made with the various musical societies and J. C. Williamson Ltd., to carry out the following transmissions: Saturday evening, 7th August, the first act of "The Merry Widow" by the Mosman Musical Society. Monday evening, 9th August, the second act of "A Knight for a Day," by the Bankers' Operatic Society. Tuesday, 10th August, the second act of "The Merry Widow." Wednesday, 11th August, the first act of "The Sunshine Girl," by the Roseville Operatic Society. Thursday, 12th August, the second act of "The Sunshine Girl." Saturday, 21st August, "The Pink Lady," by the Petersham Choral Society. Wednesday, 1st September, the first act of "The Runaway Girl," by the Kuring-gai-Gordon Operatic Society. Thursday, the 2nd September, the second act of "The Runaway Girl."

CHARITY BAND CONCERT.

The New South Wales Military Band has completed arrangements to give a complimentary concert in the Sydney Town Hall on Sunday afternoon, 15th August. The proceeds will be given to the Royal Alexandra Hospital for Children, and 2FC has obtained the exclusive rights to the transmission.

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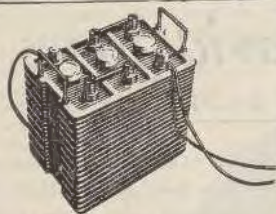
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CONDENSERS			INDUCTANCE and COUPLING COILS		
Type.	Description.	Price. s. d.	Type.	Description.	Price. s. d.
247-B	.0006, geared	87 6	277-A	50-150 metres	0 8
247-P	.00035, geared	35 6	277-B	100-300 metres	2 8
247-M	.00025, geared	34 0	277-C	200-600 metres	9 6
247-F	.0006, plain	30 0	277-E	300-900 metres	11 6
247-N	.00080, plain	28 6	277-D	1/2 Coupling, 200-600	11 6
247-K	.00025, plain	26 6	277-D $\frac{1}{2}$	Coupling, 200-600	11 6
354-B	.0005, geared metal	89 8	277-U	Coil form	5 0
354-P	.00025, geared metal	47 6	274-A	Base, with 3 jacks	7 0
354-M	.00025, geared metal	36 8	274-B	Base, with 4 jacks	7 6
384-F	.0005, plain, metal	38 0	274-C	Base, with 2 jacks	5 8
284-N	.00035, plain, metal	86 0	274-P	Contact plug	1 3
284-K	.00025, plain, metal	38 0	274-J	Jack	1 0
374-B	.000125, S.L.F.	38 0	MISCELLANEOUS		
374-K	.00025, S.L.F.	32 0	285	Transformer, 1-6	45 0
374-N	.00085, S.L.F.	49 0	285-L	Transformer, 1-8	45 0
374-F	.0005, S.L.F.	52 6	271	Medium Frequency transformer	37 6
248-F	.0006, Tandem	49 0	351	Filter transformer	37 6
248-N	.00085, Tandem	48 0	355	Coupling impedance	37 6
248-K	.00025, Tandem	43 0	301	200 ohm potentiometer	9 6
296-H	.001, Laboratory, plain	75 0	214-A	100 ohm potentiometer	22 6
296-G	.001, Laboratory with gear	101 0	156	Standard socket	7 6
295-M	.002, Laboratory, plain	97 6	290	190 socket	3 9
293-L	.002, Laboratory with gear	124 0	840	UX base socket	3 9
368	.000012, Micro-Cond. dial	9 6	309	Socket cushion	3 0
302	2 1/2 in., metal vernier	18 0	274	Multi-connector plug	7 6
303	4 in., metal vernier	18 8	335	0.5 MF by-pass condenser	7 6
304	4 in., geared, bakelite	16 0	260	Stand off insulator	2 0
310	2 3/4 in., metal plain	4 6	231-M	Modulation transformer	37 6
317	4 in., metal, plain	11 4	174	High frequency buzzer	16 0
			133-2	N.P. binding post	0 9

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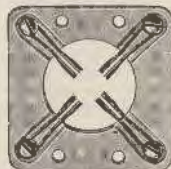


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W197 (Bakelite)

Porcelain & Bakelite Sockets



It is well known that valves are "delicate." They cannot operate to the best advantage when subject to jars and vibrations. Increase the efficiency of your valves by putting them in H & H sockets, and cut down valve noises. All sockets have "Pussyfoot" cushions: even the mounting screws have rubber cushions.

In appearance—handsome; in efficiency—highly rated by both amateurs and professionals all over the world.

Note the special contacts: There is a positive bond between valve prongs and the socket contacts. These make a firm positive wiping contact. It is dust proof and noise proof. The valve guide pin readily fits the socket slot. Just press down the valve gently and easily. The socket prongs go home snugly in the phosphor bronze spring contacts.

COST NO MORE THAN ORDINARY SOCKETS.

For "Low Loss" work use the H & H Porcelain Sockets.

H & H Radio goods are obtainable at all leading stores, and include:—

Sockets (see No-Loss Porcelain Socket)	Jacks and Plugs
Rheostats	Potentiometers
Variable Condensers (Low Loss Type)	Dials and Knobs
Transformers (Audio)	Battery Switches
Push-Pull Transformers	Lever Switches
	Etc., Etc.

Send for the complete catalogue to the Australian Representatives:—

BOSWELL & CO.,

51 York Street, Sydney,
402 Bourke Street, Melbourne.



"Wireless Weekly" Receiver No. 3

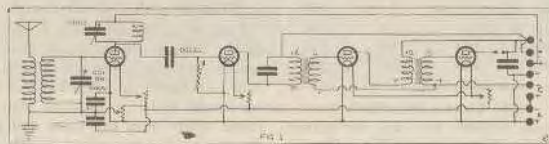
MANY of our readers have asked us what is the ideal receiver. In fact, so many, that we have decided to answer it here, reminding them, of course, that we represent but one opinion. The set to which we refer is one that is for the majority—the average family receiver.

It employs four valves, has a minimum number of controls, is easy to tune, and is made in such a manner that all parts are easily accessible. It is reasonably broad in tuning Interstate stations, yet with the aid

noises, which one so often hears in thickly-populated areas, are considerably reduced by taking advantage of the directional properties of the loop.

The following instructions give all constructional details necessary. The popular back of panel view which shows the point to point wiring should drive away all fear or doubt, from the minds of those readers who are not over confident of their capabilities of building a multi-valve receiver. Each of the components

arm of potentiometer. 7, is the negative "A" bus bar and links the left hand terminal of potentiometer to filament switch. 8, right hand terminal first rheostat to negative "A" bus bar. 9, right hand terminal second rheostat to negative "A" bus bar. 10, right hand terminal of third rheostat to negative "A" bus bar. 11, fixed plate connection of second condenser to right hand connection of tuned plate coil holder. 12, moving plate connection of second condenser to left hand connection of tuned plate coil holder. This completes the panel component wiring for the time being.



The Circuit Diagram.

of the loop it is knife-like selective on the locals.

Many home constructors will probably say: "Oh, I don't like the plug-in coils, they are unsightly."—but with the present conditions of broadcasting in Australia, where the wavelength range of our stations is so large, the plug-in type of coils are very hard to beat.

The tuned plate method of H.F. amplification is employed, which, without a doubt, affords the very highest possible percentage of efficiency for all Australian broadcast wavelengths. Country readers who are out to improve their daytime reception of long distance stations are particularly recommended to use this receiver. City readers who wish to use a loop will also find that this four-valve set will suit their requirements excellently.

Those who have not yet used a loop are in for an agreeable surprise. Many of the annoying interfering

used are laid out to the very best advantage, and if home-constructors will follow our drawings explicitly, they may rest assured that their completed receiver will be just as efficient, as if it were built by an expert.

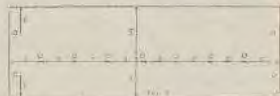
Method and Order of Construction.

Drill and mount the panel components as shown in Fig. 2 and 3. Next mount the baseboard components, see Fig. 4. These completed, wire up connections in the following order.

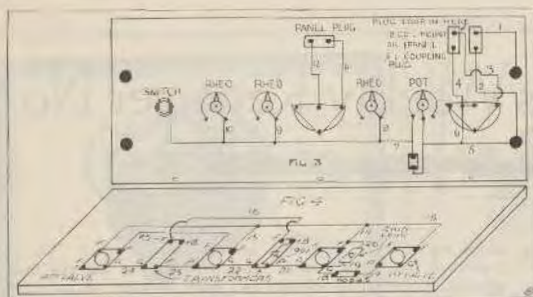
Panel Components. 1, Aerial terminal to top connection of primary coil holder. 2, lower connection primary to earth terminal. 3, top connection secondary coil holder to fixed plate connection of first variable condenser. 4, lower connection of secondary coil holder to moving plate connection of first variable condenser. 5, earth connection to moving plate connection of first variable condenser. 6, link soldered from No. 5 to moving

Baseboard Connections.

The long connection, 13, is the positive "A" bus bar and links the two outside F terminals of first and fourth valve holders together. 14, a link taken from the right hand F terminal of second valve holder to positive "A" bus bar. 15, right hand F terminal of third valve to positive "A" bus bar. 16, links the two negative F terminals of the audio transformers. 17, P terminal of first valve holder to one of the grid condenser terminals. 18, the other grid condenser terminal to grid terminal of second valve holder. 19, grid terminal of second valve holder to variable grid leak. 20, grid leak connection to 14. 21, P of second valve holder to P terminal of first transformer. 22, grid terminal of first transformer to grid of third valve holder. 23, P of third valve holder to P terminal of second transformer. 24, grid of second trans-



Panel Drilling Diagram.



Showing Wiring of Panel and Baseboard.

former to grid of fourth valve. 25, left hand F terminal of third valve holder to right F terminal of fourth valve.

When the whole of these twenty-five connections have been made, the panel and baseboard should be secured together, and the following connections made in their numerical order. It will be noticed that these final connections are shown in heavy type. See Fig. 5.

Panel to Baseboard Connections. 26, G of first valve holder to fixed plate connection of first variable condenser. 27, left hand F terminal of first valve holder to left terminal of first rheostat. 28, right hand terminal of potentiometer to positive "A" bus bar. 29, P of first valve holder to fixed plate connection of second condenser. 30, left hand F terminal of second valve holder to left hand terminal of second rheostat. 31, the positive B terminal of second transformer to upper phone or loud speaker terminal. 32, a link taken from No. 25 connections (see baseboard wiring, Fig. 4) to the left hand F terminal of third rheostat. 33, P of fourth valve holder to lower phone or loud speaker terminal. A terminal board is not necessary, and furthermore, is not recommended if the cabinet is made to take the batteries underneath the receiver as shown in "Wireless Weekly's" photograph.

Readers must, however, carefully note where each of the battery connections go, then by drilling a small hole in the baseboard near each respective connection, the flexible wires may be passed through to the lower battery compartments. The following coil table shows the coils neces-

sary for tuning the various broadcasting stations.

COIL TABLE.

Station	Primary	Secondary	Tuned Plate
2KY	15	35	35
2BL	25	50	50
3LO	25	50	50
4QG	25	50	50
5GL	35	50	50
2FC	100	150	150
6WF	150	200	200

The Circuit Described.

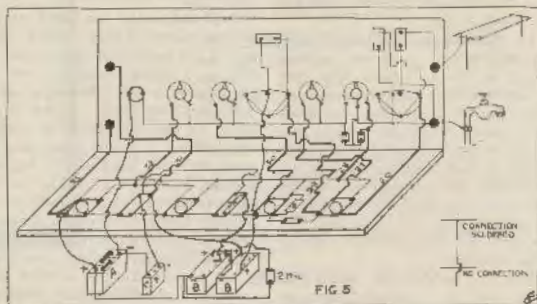
Those readers who are conversant with circuit diagrams will readily recognise that the hook-up used is quite well-known, except that it has one or two refinements which improve the all-round efficiency to a very marked degree. In the first place, we have a .002 condenser, shown shunted across each side of the moving arm of the potentiometer, to the negative and positive A bus bars. This sim-

plifies the tuning operations and instead of the high frequency valve going into heavy oscillation with a "plop," it enables a smooth even control of regeneration, by a very slight alteration of the grid bias of the H.F. valve.

The tickler coil method of feeding back regeneration is not employed, it will be found that the tuned plate and tuned grid circuits of the H.F. valve will cause ample regeneration. The advantage of this will be readily recognised by the non-technical reader, as it obviates the necessity of mounting all coils the same way, and so eliminates the possibility of reversed reaction. Many country readers have built home constructed receivers which have been a complete failure due to this one simple mistake, viz, their tickler coil connections were placed the wrong way round, and instead of the tickler coil increasing the range or volume, it has entirely prevented distant reception of any kind.

Tuning with Outside Aerial.

Plug-in coils as advised in coil table. Close the filament battery switch and turn on the rheostats. Now, by carefully rotating the two condenser dials, a position will be found where both the plate and grid circuits are in resonance. This is denoted by a plucking sound in the loud speaker. By carefully advancing each dial together in step the high shrill note, caused by the carrier waves of the various broadcasting stations will be heard. A slight variation of the potentiometer dial and rheostat will, however, entirely eliminate these carrier waves



Full Wiring Instructions.



The Completed Receiver with Loop.

and bring in the speech and music of the station you desire.

Careful adjustments of rheostats, grid leak and plate voltages of first and second valves will not only improve the ease of operation, but will greatly increase the volume and tone.

To use the loop in lieu of the outside aerial, flexible connections should be secured to the two contacts of a coil plug which must be inserted in the grid coil holder. By attaching two small battery clips on the other ends of these flexible leads the whole or half of the loop can be used at will. For all the lower broadcasting stations a hundred feet of wire is used and for 2FC, two hundred feet is required tuned with a .001 variable condenser when using the loop. The aerial and earth connections should be removed right away from the loop, or the directional properties will be spoiled.

Our loop is made up in two sections with one hundred feet of wire in each, so that no dead-end effect is experienced when tuning in the lower wave stations. Full construc-

tional details for building this efficient loop was described in "Wireless Weekly" of April 23rd, so that it will not be dealt with again here.

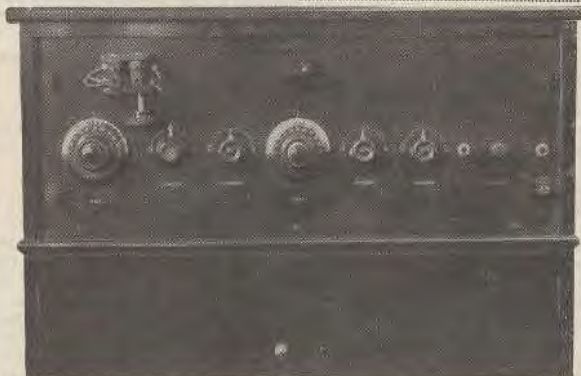
Tuning with loop. Carefully rotate the dials in exactly the same manner as previously described until the

resonance point is found. It will, of course, be necessary to alter the direction until you find the correct one for the broadcasting station you desire to tune.

In conclusion, we would like to point out to our readers that this receiver is particularly suitable for present Australian conditions, and no matter what alterations are made in the future the plug-in type of coil affords maximum efficiency on all wavelengths.

List of Materials Required

- 1 Panel, 24 x 9 x 3/16 inches.
- 1 Baseboard, 24 x 8 x 1/2 inches.
- 2 Panel plugs.
- 1 Coupling plug,
or 2 coil holder internal or external type.
- 1 .001 variable condenser.
- 1 .0005 variable condenser.
- 2 Dials (preferably slow motion).
- 1 Potentiometer.
- 4 Valves.
- 4 Holders to suit valves.
- 3 Rheostats, to suit valves.
- 1 .00025 grid condenser.
- 1 .001 fixed condenser.
- 1 Variable grid leak.
- 2 Audio transformers.
- 4 Terminals.
- 1 Push-pull battery switch.
- Screws, bus bar wire, etc., coils and loop as required.



Close Up View of Front Panel.

First Photo - Radio - Advergram

A GOOD deal has been published lately of the development of wireless in the direction of transmitting pictures by radio, and the latest development that has occurred is the adaptation of this remarkable discovery to advertisements.

Reproduced with this article is a picture of an advertisement which appeared in the Paris edition of the "Daily Mail" of May 3 last. This is, we understand, the first occasion on which the transmission of an advertisement for reproduction has been carried out by wireless.

That section of the advertisement including the type, which is shown in the accompanying illustration was transmitted by wireless from John Wanamaker's big store in New York to John Wanamaker's in London, via the Radio Corporation of America, and the Marconi Company of London, with the result that the advertisement was published simultaneously in London, Paris, New York and Philadelphia. This announcement of Wanamaker's, which was set up in type with a drawing of the building at the top, was photographed and then radioed through the air a distance of 3,000 miles to London. It is a remarkable performance, proving the limitlessness of radio.

In commenting on this remarkable achievement generally, Wanamaker declares that the merchant will find radio of great service, not only in building name and reputation and goodwill, but in linking country with country, people with people, to the end that all may live and work together peacefully and happily.

The Official Radio Photograph Service between the United States and Europe was inaugurated by the Radio Corporation of America on the 1st of

May, 1926, and the occasion was marked by the transmission of a cheque for a very large amount, which, when transmitted by radio across the Atlantic and presented to

method of so much per word, the charges are based upon the number of square inches in the photograph.

With a little imagination it is possible to conjure up a vision of what may be done in the future when this system of transmitting photographs will be made world wide, and pictures which are taken, for instance, in Europe this morning may be transmitted to Australia and reproduced in the daily papers within a few hours.



FIRST PHOTO-RADIO-ADVERGRAM

FROM JOHN WANAMAKER NEW YORK
TO JOHN WANAMAKER LONDON

via The Radio Corporation of America to
the Marconi Company of London

PUBLISHED SIMULTANEOUSLY
IN LONDON, PARIS, NEW YORK AND PHILADELPHIA

The Atlantic ocean in our thoughts is not half as wide as it used to be," wrote John Wanamaker in 1919. "the balloons traveling over it, and the airplanes, and the visions of inventors and engineers and the Columbus who are exploring the air altogether have created the belief that the whole world has come to be neighbors". It was the age of Kipling's "Night Mail."

Came then a greater magic—the radio

a large bank in London, was immediately honoured, thus illustrating the remarkable accuracy with which signatures and photographs are transmitted.

The scheme was later enlarged, and it is now possible for a person requiring reproductions of photographs or any other printed matter transmitted by radio to Europe to leave the article to be transmitted at any telegraph office in the United States. It is forwarded from the telegraph office to the nearest commercial radio station, and is then transmitted by radio. Instead of the orthodox

BEHIND THE MICROPHONE.

The insistent clamour about radio being a boon to shut-ins created a reaction so that many people now consider that phase of broadcasting to be greatly over-estimated. A new angle on shut-in and invalid reception develops, however, from the mail received on the KFI Midnight Frolic. The late hour programme, often running to three o'clock Sunday morning is heard by many people whose illness or pain does not allow them to sleep. One hospital patient, lying helpless with a broken back, wrote that the only time he really enjoys himself is during the Frolic when the hearty laughter of the Frolicers creeps into the microphone and serves for a time to make him forget his pain.

CRYSTAL PALACE, BRISBANE.

The linking of the new Crystal Palace Dance Hall, South Brisbane, with Station 4QC, has resulted in jazz lovers being given a further treat. It is only a few days since the first transmission from the Crystal Palace was effected, and yet scores of letters of appreciation have reached the Station. Regular periods of music from the Crystal Palace are to be provided.

OLD TIME DANCES.

On Tuesday, August 10th, the regular daily features from 2BL will be presented, including luncheon music provided by Hillier's Orchestra, playing from Hillier's Cafe, and the Palm-grove Orchestra playing from the studio. During the afternoon session, there will be a talk on "Modern Psychology," and a musical programme provided by the Civil Service Restaurant Trio. This is a new combination, which is being broadcast for the first time, and it is anticipated that the listening public will be charmed with the programmes which will be presented. Music from the studio and the serial story complete the afternoon transmission. Broadcasters' Dinner Orchestra following the bedtime stories will entertain during the dinner hour, and the Special Country Session will include a talk on land subjects of particular interest. For the evening programme, Broadcasters' Instrumental Trio are providing selections; and Mr. Norman Jansen, the distinguished baritone, will be heard in selections from his repertoire. An interesting feature will be the Elite Old-time Dances broadcast from the Marrickville Town Hall. It is anticipated that these old-time dances will revive many memories, and also provide entertainment for a class in the community who have hitherto not been catered for. Mr. Montague Orr will speak on "Property Income and Deductions" in connection with the completing of income tax returns, and will also reply to any telephone enquiries which may be submitted in connection with this subject (this invitation is not to be brought under the notice of Mr. Whidden). Mr. Walter Finch will speak on the Single Tax, "What is Aimed at and Hoped for." In connection with Single Tax lectures it is interesting to note that a certain amount of opposition has been expressed and arrangements have been made for a speaker of distinction to reply to the Single Tax arguments at the conclusion of the series of talks. The dance programme until midnight will be provided by Mr. Cec. Morrison's Gloomchasers, playing from the Bondi Casino.



"Dad—I want these batteries"

THAT'S the almost unanimous recommendation from Boyland. A spontaneous, good-natured, yet positive expression of preference.

Based upon—perhaps the building and rebuilding of set after set. The constant tinkering and improving of receiver equipment.

And who is more observant than these youngsters? Who in your family first recognizes improved reception through the addition to your set of newly developed and superior parts.

It is not surprising then that every day, everywhere, when Dad buys batteries, he respects the experienced recommendation of his young adviser. And when he says, "Dad, I want these batteries with the black and white stripes"—well, what would you do?

Only obtainable from High-Class Dealers

Wholesale:

NEW SYSTEM TELEPHONES PTY. LTD.
280 CASTLEREAGH STREET, SYDNEY
Also Melbourne and Adelaide



BURGESS RADIO BATTERIES

BUILD IT YOURSELF

THE "WIRELESS WEEKLY" 2 VALVE REFLEX SET.

	£	s.	d.
1 Ebonite panel, 17 x 7 x 3/16	0	4	9
2 Variable condensers, .0005, at 8/6	0	17	0
2 4 inch dials, at 2/4	0	4	8
2 Coupling plugs, at 1/9	0	3	6
1 Panel plug, at 1/-	0	1	0
2 Audio transformers, Crescent or Sterling, at 13/6	1	7	0
1 Genuine carborundum fixed detector	0	11	0
3 Wetless Condensers, .001, .002, .0003, at 1/6	0	4	6
4 Nickel plated terminals, at 2d.	0	0	8
6 Lengths square buswire	0	0	6
1 C battery, 4½ volts	0	2	9
2 30 ohm rheostats, at 2/6	0	5	0
2 Standard valve sockets, at 1/11	0	3	10
Total	£4	6	2

THE "WIRELESS WEEKLY" RECEIVER No. 2.

	£	s.	d.
1 Ebonite panel, 17 x 6 x 3/16	0	4	3
2 Variable condensers, Low Loss, .0005, at 12/6	1	5	0
2 Emmco metal vernier dials, at 6/9	0	13	6
2 30 ohm rheostats, at 2/6	0	5	0
1 Transformer, Crescent, 6 to 1	0	13	6
2 Valve sockets, at 1/11	0	3	10
1 Single circuit jack	0	1	9
1 Grid condenser, .00025	0	1	9
1 2 megohm grid leak	0	1	0
2 Ebonite strips, 2½ x ¾, at 3d.	0	0	6
Screws, Buswire, etc.	0	1	11
Total	£3	12	0

Special Purchase of EBONITE PANELS, extremely high grade and specially matt surfaced (sand blasted) to prevent surface leakage.

	s.	d.
Size: 17 x 13 x 3/16, cut neat and square, each	8	3
Size: 20 x 13 x 3/16, cut neat and square, each	9	6
Size: 24½ x 24 x 3/16, cut neat and square, each	21	0
Smaller sizes at proportionate prices.		
Solder: Resin core, per yard, 6d. Kester, per tin	2	0
Buswire: Best tinned copper, square section, in 2 ft. lengths, per dozen	0	10

CRESCENT AUDIO TRANSFORMERS ARE HERE

6 to 1

13/6

3½ to 1

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Phone M 3049

STIMULUS TO SPORT.

Sport is receiving a substantial stimulus in New South Wales from the broadcasting of leading matches of various kinds. Both the Sydney A class broadcasters are now regularly represented at the big football games, boxing encounters, and other events in the metropolitan area. A journalist or other expert describes the match, speaking into a microphone, and his words, together with the cheering of the spectators and the shouts and cries of the players, and all the other accompanying sounds, are broadcast for the benefit of lovers of the sport who are prevented from attending.

The broadcast stations announce their intentions in advance, and the advertisement thus received helps to draw big attendances. Also the listeners—many of whom may not be particularly interested to the sport—often suddenly realise what they are missing and make a point of attending similar events whether in the city or country.

The benefit of broadcasting will also apply to the summer sports, and it is certain that the tremendous interest now being taken in the test matches in England is all the greater from the fact that stumps drawn scores are now broadcast at 7 a.m., 8 a.m., and 9 a.m. daily. One interesting result of broadcasting also is that it stimulates the sales of newspapers. It is found that listeners both in the city and country, having heard the result of an event, like to read the fuller details in print.

INTERFERENCE AT WANGANUI.

Some consternation is being caused in Wanganui, N.Z., by electrical interference with broadcasting. Engineers from the Power Board have made several endeavours to ascertain the cause, but they have so far been unsuccessful in their search. The loud noise interferes with New Zealand broadcasting as well as Australian, and while it continues listeners are prohibited from enjoying anything in return for their license fee. A petition is being prepared, and when ready will be forwarded to the Postmaster-General. This seems a first cousin to the position at Launceston.

The Superlative
"NEUTRODYNE"

The Most Efficient
 of all 5-Valve Sets

Unassembled Improved Kit - £13

These Kits, complete for the building of the wonderful Neurodyne Sets; stand out as the most astounding value yet offered to the public.

Each Kit comprises Panel Drilled, Neuroformers, Neutralising Condensers, Large 4-inch Dials, special Variable Condensers, Bakelite Sockets, 2 Battery Switches, and necessary parts for increasing wavelength to 2,000 metres, ensuring loud speaker results from 2FC up to 200-300 miles, together with circuit diagram.

Our radio Expert offers the fullest assistance and advice in the building of the "Neurodyne."

We also offer Igranite Outfits, complete for constructing the Supersonic Heterodyne Receiver. Prices on application.

A SUPER 2-VALVE SET

Wireless Weekly 2-Valve "Reflex"

(As featured in "Wireless Weekly," 23/7/26)

ALL COMPONENT PARTS FOR THIS WONDER LITTLE RECEIVER AT THE LOWEST POSSIBLE PRICES.

Carborundum (Genuine) Detectors, each 11/-

THE IDEAL LOUD SPEAKER.

"The Manhattan Junior Adjustable."

An efficient loud speaker that ensures you perfect radio reproduction. Speech, song or music—there is the same purity of tone without distortion. The "Manhattan Junior" is the most reasonably-priced high-grade speaker on the market to-day. Height, 22 inches, 10 inch bell **37/6**

Postage anywhere in Australia, 2/6.

Winchester, Large Capacity "B" Batteries.

22½ volts 13/-

45 volts 26/-

Neutron Crystal.

"The Crystal with Valve Power." Universally acknowledged as the world's finest crystal 2/3



"The World's Greatest Sports Store."

Headquarters:
 HAYMARKET, SYDNEY

And also at Brisbane.

Why the *new* Weco valves will improve your set!

GREATER sensitivity is assured from Weco valves, for when operated at a dull red heat, the new patented tape filament used in the improved Weco valve gives fourteen times the electron emission of thoriated tungsten filaments operating at a bright red heat.

Owing to the unique rigidity of their construction and the special method of supporting the valve elements, Weco valves are positively free from the parasitic noises common to other valves of the dull emitter type.

The extremely low temperature at which Weco valves operate, due to the special oxide coated filament used, ensures longer life than that usually obtainable from ordinary dull emitter valves.

Weco valves are specially graded as detectors and as radio or audio frequency amplifiers.



The new Weco valves are now available from regular radio dealers at

17/6

Standard Telephones and Cables (Australasia) Limited

FORMERLY

Western Electric Company (Australia) Ltd.

192-4 CASTLEREAGH STREET, SYDNEY

LAND LINE TRANSMISSIONS.
2FC's record-breaking land line transmissions are completing a very wide circuit and tapping the State's resources in every direction. To the ever-increasing list is now to be added a whole night's programme from Dubbo on the western line on Wednesday, 25th August, when the Royal Scots Kilnies have been specially engaged

by the Dubbo Scottish Association, to give a complete performance, which will be transmitted over a 300-mile land line. Every line has now been covered with the exception of the far northern part of the State, and it is hoped to carry out a transmission from Lismore on the 22nd September, on the occasion of the final night of the Lismore Musical Festival.

STREET CRIES OF OLD LONDON.

So many requests have reached the studio for a repetition of these quaint street cries of the 15th, 16th and 17th centuries that arrangements have been made whereby the collection of songs depicting these cries will be given in the 2FC studios on Sunday evening, 8th August. The vocalist will be Madame Emily Marks, and the story surrounding these cries will be given by Mr. S. H. Bowden, who is an authority in this connection.

LYRIC GLEE PARTY.

The Lyric Glee Party is proving itself a welcome feature on 4QG programmes. The Glee is a form of composition almost peculiar to the English School of Music, and its purest style is unaccompanied. Being essentially a branch of chamber music, it lends itself more to tenderness and expression than to the production of broad effects, and the Lyric Glee Party with its musicianly performances of concerted vocal music, has secured quite an enviable place in the regards of listeners.

Manufacturing Products Sales Co.

(M.P.)

(H. J. HAPGOOD)

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WIRELESS REVUE A SUCCESS.

Broadcast productions seems to be particularly popular with listeners to 3LO Melbourne. The "Belle of New York" has had to be repeated in response to thousands of requests, and still come demands for more. Now the "What Nots" revue recently produced for 3LO by Miss Dorothy Duncley has met with the same general approval, and Major Conder's mail has been well enlarged by letters of appreciation and requests for a repetition. Given in the form of a rehearsal for a theatrical production, the revue went with a decided swing right from the start.

The "Songs While You Wait" item of Mr. Jack Lumsdaine from station 2FC has become almost embarrassingly popular. Not only is it impossible for Mr. Lumsdaine to answer all the calls by 'phone on the nights of his appearance at the Studio, but he is now receiving a steady flow of requests by letter from inland listeners. Some of these correspondents protest that they should not be shut out from this interesting feature, owing to their being unable to telephone to the Studio. Up to date, the songs written by Mr. Lumsdaine are—"Hello! Helen," which has been such a success that hand parts have now been prepared, and the 2FC Dance Band has been playing it by request. "Twenty Years from Now," a sentimental ballad, "Who put the Arch in Pagliacci?" and another song, "Sitting by the Radiator listening to the Radio."

MISS GOODIE REEVE AGAIN ON THE AIR.

After a serious illness, extending over three months, Miss Goodie Reeve is now back in harness and will continue her delightful chats each Friday night, dealing with interviews and intimacies of the leading personalities in the theatrical world. On Friday evening, 6th August, she will talk with the principals of the J. M. Barrie Company at the Theatre Royal; on the 13th August, Miss "The Climax," will give a chat. The Dorothy Brunton, who appears in last night will be on that date. Friday evening, 20th August—a talk by Miss Harriet Bennet, the leading lady of "Rose Marie"; and on the 27th August—a talk with the members of the J. M. Barrie's play "What every woman knows."



Igranic Leads Again!

Once again the IGRANIC trademark becomes the symbol of all that is best in Radio and justifies its acknowledged position of Leadership



THE advent of the IGRANIC Supersonic Heterodyne Receiver Outfits heralds a new era for the Radio loving public, offering as it does, the most efficient, the most thoroughly thought-out and most up to date method of reception at a singularly moderate price.

Highly selective, extremely powerful, inherently stable and producing a large volume of well modulated sound, it has been hailed as the set of the year. And remember always IGRANIC quality.

IN STOCK AT:

Australian Wireless.
Burgin Electric
Colville Moore.
E. R. Cullen.
Farmer's.
Mick Simmons.
Nock & Kirby.
Swains.
W. Harry Wilson.
Etc., etc., etc.

Stocked by all better class stores.

Write for leaflet No. 3, Post Free.

We have just published the largest Radio Catalogue ever wholly set up and printed in Australia. There's a copy for you for the asking.

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11 West St.
Brisbane:
Ferry House,
Elizabeth St.
Agent for W.A.:
J. R. W. Gardam,
198 Murray St.,
Perth





Broadcasting Programmes for the Coming Week



2FC

FARMER'S SERVICE, SYDNEY

Call Sign: 2FC. Wave Length 1100 Metres.
Power: 5 Kilowatts.

FRIDAY, AUGUST 6.

Early Morning Session.

Time Signals.

- 7.—The Chimes of 2FC and Announcements.
7.5—Cricket scores, End day's play, Australia versus Warwickshires, played at Birmingham. Weather Information. Commercial News, Shipping Intelligence and Markets.
7.40—"Sydney Morning Herald" News Service.
8.—Time Signals—Music from the Studio.
8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Announcements. Cricket scores.
9.20—Music from the Studio.
9.45—A Morning Reading.
10.—Time signals. Music from the Studio.
10.—Cricket Scores.
10.5—Late "Sydney Morning Herald" News Service.
10.15—Music from the Studio.
11.—Progress Cricket Talk. Cables.
11.15—Cooking talk and Recipes by Miss Ruth Fursi.
11.50—Close down.

Midday Session.

- 12.—The Chimes of 2FC and Announcements.
12.5—Stock Exchange, First Call.
12.10—Music from the Studio.
12.40—Rugby Wireless News.
1.—Time Signals, Weather Intelligence.
1.15—"Evening News" midday service. Producer's Distributing Society's Report.
1.20—Music from the Studio.
1.30—Stock Exchange—Second Call. Musical Items.
2.—Close Down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Recital by the Pupils of Miss Nellie Chudzyk.
3.30—From Farmer's Tea Rooms, The Oak Hall Trio will play (leader, Mr. Horace Keats).
3.40—Miss Cris Hawkesford, soprano.
3.45—The Oak Hall Trio.
3.55—Music from the Studio.
4.—Miss Sybil Athelwood, mezzo.
4.5—The Oak Hall Trio.
4.15—Music from the Studio.
4.25—Miss Cris Hawkesford, soprano.
4.35—Oak Hall Trio.
4.45—Music from the Studio.

- 4.40—Miss Sybil Athelwood, mezzo.
4.45—Afternoon Call, Stock Exchange, Third Call.
5.—Close down.

Early Evening Session.

- Time Signals.
5.—The Chimes of 2FC and Announcements.
6.5—"The Hello Man" talks to the children.
6.45—Broadcast from Farmer's Dining Hall, Instrumental and Vocal Items.
7.15—From the Studio, "Evening News" service. Weather Information.
7.30—Dalgely's market reports (wool, wheat, stock), fruit and vegetable markets.
7.40—Close down.

Night Session.

- 7.50—Broadcast from The Theatre Royal—a talk by Dion Boucicault, producer of the Barrie plays.
8.5—Broadcast from The Theatre Royal (by courtesy of J. C. Williamson Ltd., and the artists), the first act of Barrie's delightful play, "Quality Street." Scenes: "The Blue and White Room in the House of Miss Susan and Miss Phoebe, in Quality Street."
8.50—From the Studio: The Metropolitan Quartette. Mr. Arthur Champion, tenor.
8.55—Mr. Laurence Hulbert, baritone.
9.5—Miss Jean Grant, soprano.
9.14—Miss Isolda, selections on the Spanish guitar accompanying songs by Heather Hardy.
9.22—Mr. A. G. Ellis, baritone.
9.30—A talk by Mr. G. Cooper, Superintendent of Parks on "Street Beautifying."
9.42—Metropolitan Quartette.
9.50—Miss Mary Bourke, contralto.
9.55—Miss Heather Hardy, songs to the Spanish guitar, played by Miss Isolda.
10.8—Mr. A. L. Champion, tenor.
10.10—Mr. Laurence Hulbert, in light numbers.
10.35—Broadcast from the Wentworth Hotel, Sydney—Wentworth Cafe Dance Orchestras.
12.—National Anthem. Close down.

SUNDAY, AUGUST 8.

Early Morning Session.

- 7.—Time Signals. The Chimes of 2FC and Announcements. Cricket Scores, Australia versus Gloucestershire. These scores will be repeated at 8.15, 9, and 10 a.m.

Morning Session.

- 10.55—The Chimes of 2FC and Announcements.
11.—Time Signals. Broadcast from St. Andrew's Cathedral: Morning Service.
12.15—From the Studio. News Session.
12.30—Close down.

Afternoon Session.

- 2.—Broadcast from the Town Hall, a recital by the Metropolitan Band. Conductor: Mr. J. Palmer.
5.—Close down.

Evening Session.

- 6.10—The Chimes of 2FC and Announcements.
6.15—From the Studio: Street Crises of Old London, collected from the 15th to the 17th Century, vocally illustrated by Madame Emily Marks, with descriptive story by Mr. J. H. Bowden.
6.45—Broadcast from the Pitt Street Congregational Church: Organ solos by Miss Lillian Frost.

- 7.—Evening Services. Preacher: Rev. T. E. Huth.

Part Two.

- 8.50—Broadcast from the Grand Opera House—a concert by the State Military Band.
10.—National Anthem. Close down.

MONDAY, AUGUST 9.

Early Morning Session.

- Time signals.
7.—The Chimes of 2FC and Announcements.
7.5—Music from the Studio.
7.10—Weather Information, Commercial News, Shipping Intelligence and Markets.
7.40—"Sydney Morning Herald" news service.
8.—Time Signals. Music from the Studio.
8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
9.20—Music from the Studio.
9.45—A Morning Reading.
10.—Time Signals. Music from the Studio.
10.5—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
11.—Progress Cricket Talk: Cables.
11.15—Music from the Studio.
11.30—Close down.

Midday Session.

- 12.—Time Signals. The Chimes of 2FC and Announcements.
12.5—Stock Exchange, first call.
12.10—Music from the Studio.
12.40—Rugby Wireless News.
1.—Time Signals, Weather Intelligence.
1.3—"Evening News" Midday News Service, Producer's Distributing Society's Report.
1.20—Music from the Studio.
1.30—Stock Exchange, Second Call: Musical Items.
2.—Time Signals. Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Recital on the Behning Player Piano.
3.30—From Farmer's Tea Rooms: The Oak Hall Trio will play (leader, Mr. Horace Keats).
3.40—Miss Eleanor Stanton, contralto: "Poor Man's Garden" (Russell).
3.45—From Farmer's Tea Rooms: Oak Hall Trio.
3.55—Music from the Studio.
4.—Miss Alice Pomeroy: "I Heard You Singing" (Coates).
4.5—From Farmer's Tea Rooms: The Oak Hall Trio.
4.15—Music from the Studio.
4.20—Miss Eleanor Stanton, contralto: "A Slumber Song of the Madonna."
4.25—From Farmer's Tea Rooms: The Oak Hall Trio.
4.35—Music from the Studio.
4.40—From the Tea Rooms—Miss Alice Pomeroy, soprano: "Happy Valley" (Pepper).
4.45—Stock Exchange, Third Call.
4.45—Music from the Studio.
4.—Time Signals. Close down.

Early Evening Session.

- 6.—The Chimes of 2FC and Announcements. Time Signals.
6.5—"The Hello Man" talks to the children.
6.45—Broadcast from the Hotel Australia, Sydney: Orchestral Items.
7.15—From the Studio: "Evening News" late news service, weather information.
7.30—Dalgely's Market Reports (wool, wheat,

stock), fruit and vegetable markets. Close down.

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
8—Broadcast from the Haymarket Theatre, Sydney; Operatic Orchestra, under the baton of Mr. Stanley Porter.
8.25—From the Studio: A Final Natural History Talk by Rev. F. H. Raward, on "Intruders in the Northern Territory."
8.40—Mr. Lionel Lawson, violin solos.
8.60—My Lady Indecent. This title hides the identity of a well-known musical comedy actress, who is broadcast for the first time.
9.5—Broadcast from the Haymarket Theatre, Sydney, vocal act.
9.25—Broadcast from the N.S.W. Conservatorium of Music, by arrangement with Messrs. J. C. Williamson Ltd., the second act of the Musical Comedy, "A Knight for a Day," produced by the Bankers Operatic Company.
10—Broadcast from Westworth Hotel; Westworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
12—National Anthem; Close down.

TUESDAY, AUGUST 10

Early Morning Session.

- 7—The Chimes of 2FC and Announcements.
7.3—Cricket Scores of the second day's play, Australia versus Gloucester.
7.10—Weather Information; Commercial News; Shipping Intelligence and Markets.
7.40—"Sydney Morning Herald" News Service; Time Signals; Music from the studio.
8—Time Signals; Cricket scores.
8.15—Close down.
Morning Session.
9.15—The Chimes of 2FC and Announcements.
9.20—Cricket Scores. Music from the Studio.
9.45—A Morning Reading.
10—Time Signals; Music from the Studio.
10.5—Cricket Scores.
10.15—Late "Sydney Morning Herald" News Service.
10.15—Music from the Studio.
11—Progress Cricket Talk; Cables.
11.15—Cooking Talk and Recipes by Miss Ruth Furst.
11.30—Close down.

Midday Session.

- 12—Time Signals; The Chimes of 2FC and Announcements.
12.5—Stock Exchange—First Call.
12.10—Music from the Studio.
12.25—Rugby Wireless News.
1—Time Signals; Weather Intelligence.
1.8—"Evening News" Midday News Service, Producer's Distributing Society's Report.
1.30—Music from the Studio.
1.30—Stock Exchange—Second Call; Musical Items.
2—Time Signals; Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Violin Recital by the Pupils of Mouni McMahon.
2.40—From Farmer's Tea Rooms; The Oak Hall Trio will play (leader, Mr. Horace Keats).
2.45—Miss Florence Barrow, contralto.
2.55—Music from the Studio.
3—Miss Jeanne Slapoffski, soprano.
3.15—From Farmer's Tea Rooms; The Oak Hall Trio.
3.15—Music from the Studio.
3.20—Miss Florence Barrow, contralto.
3.25—The Oak Hall Trio.
3.35—Music from the Studio.
3.40—From Farmer's Tea Rooms; Miss Jeanne Slapoffski, soprano.
3.45—Stock Exchange, Third Call.
5—Time Signals. Close down.

Early Evening Session.

- 5—The Chimes of 2FC and Announcements.
5.5—The "Hello Man" talks to the children.

- 6.45—Broadcast from the Hotel Australia, Sydney—Orchestral Items.
7.15—From the Studio: "Evening News" late news service, weather information.
7.30—Delget's Market Reports (wool, wheat, stock), fruit and vegetable markets.
7.40—Close down.

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
8—Broadcast from the Naval House, 6 Margaret Street, by special arrangements, a band performance by the N.S.W. State Military Band.
8.20—From the Studio: Montgomery Stuart and Myra Leard, in a one act Comedy.
8.32—From the Naval House, band items.
8.52—From the Studio: Mr. R. A. Bartleman, baritone.
9—Montgomery Stuart, humorous recitation.
9.10—From the Naval House: Band items.
9.30—From the Studio: Montgomery Stuart and Miss Myra Leard, in a short comedy sketch.
9.30—Mr. R. A. Bartleman, baritone.
9.45—Broadcast from the Murrumbidgee Town Hall, by arrangements with J. C. Williamson Ltd., the second act of "The Mercy Widow."
11—Broadcast from the Westworth Hotel, Sydney; Westworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
12—Close down.

WEDNESDAY, AUGUST 11

Early Morning Session.

- Time Signals.
7—The Chimes of 2FC and Announcements.
7.5—Cricket Scores of the third day's play, Australia versus Gloucester.
7.15—Weather Information, Commercial News, Shipping Intelligence, and Markets.
7.40—"Sydney Morning Herald" news service.
8—Time Signals—Cricket scores.
Music from the Studio.
8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
9.20—Cricket scores. Music from the Studio.
9.45—A Morning Reading.
10—Time Signals. Music from the Studio.
Cricket scores.
10.5—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
11—Progress Cricket Talk. Cables.
11.15—Cooking Talk and Recipes, by Miss Ruth Furst.
11.30—Close down.

Midday Session.

- 12—Time Signals. The Chimes of 2FC and Announcements.
12.5—Stock Exchange, first call.
12.10—Music from the Studio.
12.50—Rugby Wireless News.
1—Time Signals. Weather Intelligence.
1.3—"Evening News" Midday News Service, Producer's Distributing Society's Report.
1.30—Stock Exchange, Second Call; Musical Items.
2—Time Signals. Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Piano Recital, by the Pupils of Walfred Atton.
2.40—Miss A. Hester's reading.
2.50—From Farmer's Tea Rooms; The Oak Hall Trio (leader, Mr. Horace Keats).
2.55—Miss Myra Jackson, soprano: "Hush on the Sleepy Hills" (Loughborough).
3.45—From Farmer's Tea Rooms; The Oak Hall Trio.
3.55—Music from the Studio.
4—Miss Phyllis Raynor, contralto: "Big Lady Moon" (Taylor).
4.5—The Oak Hall Trio.

- 4.15—Music from the Studio.
4.20—Miss Myra Jackson, soprano: "You don't believe in Pines" (Hope).
4.25—The Oak Hall Trio.
4.35—Music from the Studio.
4.40—From the Tea Rooms: "Soulbair" (Woodford-Fladen).
4.45—Stock Exchange, Third Call.
4.45—Music from the Studio.
5—Close down.

Early Evening Session.

- 5—Time Signals. The Chimes of 2FC. Announcements.
5.5—The "Hello Man" talks to the children.
6.25—Broadcast from the Hotel Australia, Sydney; Orchestral Items.
7.15—From the Studio: "Evening News" late news service, weather information.
7.30—Delget's Market Reports (wool, wheat, stock), fruit and vegetable markets.
7.35—Mr. E. J. Van-de-Velde will continue his talk, and give final conclusions concerning the Commonwealth Radio Photographic Competition, which closes on August 15th.
Night Session.

- 7.55—The Chimes of 2FC and Announcements.
8—Broadcast from the Dreadnought Theatre, Chatawood, by special arrangements with J. C. Williamson Ltd., the first act of the musical comedy, "The Sunshine Girl," played by the Roseville Musical Society.
9—Solo and Chorus: "A Tiny Touch" (Della).
9.30—From the Studio: The fourth of the Radio Bridge Session, in which four players led by Mr. W. F. H. Master will play through a selected hand of bridge. The complete play will be broadcast. Mr. Master, who alone has the key to the perfect playing of this hand, will answer on the telephone and broadcast simultaneously inquiries by listeners concerning his game played. The perfect hand, as played by expert players in U.S.A., will be available to Bridge enthusiasts each week after the games are played every Wednesday.
10—Broadcast from the Leric Wintergarden. Items by the Orchestra, under the baton of Mr. Alfred Meulton.
11.30—2FC Dance Band. Conductor, Mr. Eric Pearce.
12—National Anthem. Close down.

THURSDAY, AUGUST 12

Early Morning Session.

- Time Signals.
7—The Chimes of 2FC and Announcements.
7.5—Cricket Scores of the first day's play, Australia versus the Great Public Schools.
7.10—Weather Information, Commercial News, Shipping Intelligence, and Markets.
7.40—"Sydney Morning Herald" news service.
8—Time Signals, Cricket Scores.
Music from the Studio.
8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
9.20—Cricket Scores. Music from the Studio.
9.45—A Morning Reading.
10—Time Signals. Music from the Studio.
Cricket Scores.
10.5—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
11—Progress Cricket Talk—Cables.
11.15—Musical Items from the Studio.
11.30—Close down.

Midday Session.

- 12—Time Signals. The Chimes of 2FC and Announcements.
12.5—Stock Exchange, first call.
12.15—Music from the Studio.
12.50—Rugby Wireless News.
1—Time Signals. Weather Intelligence.
1.3—"Evening News" Midday News Service, Producer's Distributing Society's Report.
1.20—Music from the Studio.
1.30—Stock Exchange, Second Call.
Musical Items from the Studio.
2—Time Signals. Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
 2.35—A recital of some H.M.V. Records.
 3.30—From Farmer's Tea Rooms: The Oak Hall Trio will play (leader, Mr. Horace Keate).
 3.40—Miss Jeannette Rooney, contralto.
 3.45—From Farmer's Tea Rooms: The Oak Hall Trio.
 3.55—Music from the Studio.
 4—Miss Eileen Crowley, soprano: "The Princess (Hansruhe)."
 4.5—The Oak Hall Trio.
 4.15—Music from the Studio.
 4.20—Miss Jeannette Rooney, contralto.
 4.25—The Oak Hall Trio.
 4.35—Music from the Studio.
 4.40—Miss Eileen Crowley, soprano: "Pale Moon" (Logan).
 4.45—Stock Exchange, Third Call.
 4.48—Music from the Studio.
 6—Close down.

Early Evening Session.

- 6—Time Signals, The Chimes of 2FC and Announcements.
 6.5—"The Hello Man" talks to the children.
 6.45—Broadcast from the Hotel Australia: Orchestral (leader, Mr. Lionel Hart).
 7.12—From the Studio: "Evening News" late news service, weather information.
 7.35—Daily's Market Reports (wheat, wheat, stock, fruit and vegetable markets).
 7.45—"The Art of Speech": The second of the series by Mr. Walter Hunt, entitled, "The sounds of the English language."

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
 8—Leichhardt District Band, in favourite numbers.
 8.15—Mr. Ernest Archer, tenor.
 8.23—Mr. Alex. Whitton, baritone.
 8.30—Leichhardt District Band.
 8.50—Talk on Old Time Plays and Theatres, by Mr. S. H. Bowden.
 9.5—Mr. Ernest Archer, tenor.
 9.11—Leichhardt District Band.
 9.30—Mr. Alex. Whitton, baritone.
 9.33—Leichhardt District Band.
 9.45—Heraldcast from the Dreadnaught Theatre, Chateau, the second act of "The Sunshine Girl," by arrangement with J. G. Williams son, produced by the Roseville Musical Society.
 11—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
 12—National Anthem. Close down.



BROADCASTERS (SYDNEY) LTD.

Wavelength, 353 metres.

FRIDAY, AUGUST 6.

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
 7.30—Talk on Health and Hygiene.
 7.45—Broadcasters' Special News Service, including news from Rugby.
 7.55—Musical Programme from the Studio.
 8—G.P.O. Clock and Chimes. Close down.
 Morning Session.
 8.10—G.P.O. Clock and Chimes, Special News Service from the "Daily Telegraph."
 10.10—Music from the Studio.
 10.30—Special news from the "Daily Telegraph."
 10.45—Music from the Studio.
 11—G.P.O. Clock and Chimes. Special Cricket Session.

11.5—Musical Programme from the Studio.

- 11.15—Markets.
 11.20—London Metal Quotations.
 11.25—Broadcasters' Information Service, including Mails, Shipping, Weather, Rainfall, Social Fixtures for the following day.
 11.35—Musical Programme from the Studio.
 11.50—News from "Sun" Cable Edition.
 12—G.P.O. Clock and Chimes. Talks to women by Mrs. Jordan.
 12.10—Broadcasters' Turf Expert will discuss the training operations and horses' form from Randwick.
 12.15—Musical Instrumental Quartette, under the direction of Caryl Castling.
 1.15—Music from the Studio.
 1.45—Sydney Stock Exchange Call.
 2—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

- 3—G.P.O. Clock and Chimes. Weather Report and Social Notes from "The Sun."
 3.15—Civil Service Restaurant Trio.
 3.30—A Talk on "Modern English Poetry," by Mr. J. M. Prentice.
 3.45—Music from the Studio.
 4—G.P.O. Clock and Chimes. Music from the Studio.
 4.30—Short Story, entitled "The Mad Song."
 4.45—Music from the Studio.
 5—Broadcasters' Turf Expert will discuss the Distributing Society's late market report.
 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes. Uncle George and the Kiddies. The pupils of Miss Monica Sealy will entertain the kiddies.
 6.45—Broadcasters' Dinner Orchestra. Special Country Session.
 7.15—Talk on Land Subjects.
 7.25—Australian Mercantile Land & Finance Co's. Stock and Wool Report.
 7.40—Stock Exchange Report.
 7.57—Producers' Distributing Society's fruit and vegetable report.
 7.45—Drama and fadler reports.
 8—Country news from "The Sun."
 7.55—Close down.

Evening Session.

- 8—Hoyt's Imperial Orchestra, under the direction of Mr. Lionel Hart, broadcast from Hoyt's Picture Theatre.
 8.20—Miss Phyllis Atkinson, mezzo soprano.
 8.37—Concerning your Valve Set.
 8.47—Mr. Austin Punch, baritone.
 8.45—Hoyt's Imperial Orchestra, under the direction of Mr. Lionel Hart.
 8.55—Resume of following day's programme.
 8.58—Weather Reports and Forecast, by courtesy of Mr. G. J. Mares, Government Meteorologist.
 9—G.P.O. Clock and Chimes. Sporting talk.
 9.10—Interval.
 9.35—Miss Phyllis Atkinson.
 9.45—Hoyt's Imperial Orchestra, under the direction of Mr. Lionel Hart.
 9.57—Round the World Travelogue, by Mr. J. M. Prentice.
 10.15—Mr. Austin Punch, baritone.
 10.32—Doc. Morrison and his Glomchancers, broadcast from the ballroom of the Bondi Casino. During the intervals between dance news reports, by courtesy of "Sun" newspapers, will be broadcast.
 11—From the Studio: Palmgrove Orchestra, under the direction of Mr. Stan. Fotheringham.
 12—G.P.O. Clock and Chimes. National Anthem.

SATURDAY, AUGUST 7.

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
 7.30—Musical Programme from the Studio.
 7.45—Broadcasters' Special News Service, including news from Rugby.
 7.55—Musical Programme from the Studio.
 8—G.P.O. Clock and Chimes. Close down.
 Morning Session.
 8.10—G.P.O. Clock and Chimes, Special News Service from the "Daily Telegraph."
 10.10—Broadcasters' Turf Expert will discuss the training operations and horses' form from Randwick.

10.25—Special news from the "Daily Telegraph."

- 10.40—Music from the Studio.
 11—G.P.O. Clock and Chimes. Special Cricket Session.
 11.5—Musical Programme from the Studio.
 11.15—Markets.
 11.20—London Metal Quotations.
 11.25—Broadcasters' Information Service, including Mails, Shipping, Weather, Rainfall, Social Fixtures for the following day.
 11.40—Musical Programme from the Studio.
 11.50—News from "Sun" Cable Edition.
 12—G.P.O. Clock and Chimes. Talks to Women by Mrs. Jordan. News reports, by courtesy of "Sun" Newspapers, Sporting Information. News reports ("Sun").
 1—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

- 2—G.P.O. Clock and Chimes. Special Sporting Information.
 3.15—G.P.O. Clock and Chimes. Close down.
 Early Evening Session.
 6—G.P.O. Clock and Chimes. Uncle Jack and the Kiddies.
 6.45—Dinner for Orchestra.
 7.15—Results of football, lacrosse, and sporting information.
 7.35—Country news from "The Sun."
 7.45—G.P.O. Clock and Chimes. Close down.

Evening Session.

- 8—G.P.O. Clock and Chimes. Empire Theatre, under the direction of Mr. F. Watkins.
 8.20—Mr. W. B. Lewis, baritone.
 8.27—Mr. Russell Phillips, cornet solo.
 8.36—Mr. J. Holmes will talk on "Humance of the Colonial Clippers."
 8.55—Resume of the following day's programme.
 9—G.P.O. Clock and Chimes.
 9.5—Miss Ruby Michael, soprano.
 9.12—Mr. Howard Lawton, novelty pianist.
 9.25—Interval.
 9.30—Mr. Fred Brown will talk on "Electricity and the Motor Car."
 9.45—Empire Theatre Symphony Orchestra.
 10—Mr. Russell Phillips, cornet solo.
 10.8—Mr. W. E. Lewis.
 10.15—Al. Hammett and the Ambassadors Dance Band, broadcasting from the Ambassador Theatre. During the intervals between dances, news by courtesy of "The Sun" will be broadcast.
 12—G.P.O. Clock and Chimes. National Anthem.

SUNDAY, AUGUST 8.

- 11—Service broadcast from First Church of Christ, Scientist, Sydney.
 3.30—Bible Class, conducted by Mr. W. (Cairo) Bradley.
 7.15—Service broadcast from Chalmers Presbyterian Church, Sydney.
 8.30—Mandy Band, broadcast from Hialto Theatre, Manly.
 8.30—Interval.
 9.35—Resume of following day's programme.
 9.45—Weather Report by courtesy of Mr. C. J. Mares, Govt. Meteorologist.
 9.40—Broadcasters' Instrumental Trio.
 10—G.P.O. Clock and Chimes. Close down.

MONDAY, AUGUST 9.

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
 7.30—Talk on Health and Hygiene.
 7.45—Broadcasters' Special News Service, including news from Rugby.
 8—G.P.O. Clock and Chimes. Close down.
 Morning Session.
 8.10—G.P.O. Clock and Chimes. Special News Service from the "Daily Telegraph."
 10.10—Music from the Studio.
 10.25—Special news from the "Daily Telegraph."
 10.45—Music from the Studio.
 11—G.P.O. Clock and Chimes. Special Cricket Session.
 11.5—Musical Programme from the Studio.
 11.15—Markets.
 11.20—Musical Programme from the Studio.

- 11.25—Broadcasters' Information Service, including Mails, Shipping, Weather, Rainfall, Social Features for the following day.
- 11.40—Musical Programme from the Studio.
- 11.50—News from "Sun" Cable Edition.
- 12—G.P.O. Clock and Chimes. Talks to Women, by Mrs. Jordan.
- 12.30—Sydney Stock Exchange Calls. Results broadcast immediately received.
- 12.45—Hillier's Instrumental Quartets, under the direction of Caryl Castling.
- 1.30—Sydney Stock Exchange Calls.
- 1.45—Latest sporting information from the "Sun."
- 2—G.P.O. Clock and Chimes. Close down. Afternoon Session.
- 2—G.P.O. Clock and Chimes. Weather report and Social Notes from the "Sun."
- 2.15—Music from the Studio.
- 2.30—A talk on "A Course in Philosophical Thought," by Mr. J. M. Prentice.
- 2.45—Music from the Studio.
- 4—G.P.O. Clock and Chimes; Music from the Studio.
- 4.15—Music from the Studio.
- 4.30—Serial Story, entitled "The Mad Song."
- 4.45—Music from the Studio.
- 5—Early country news; The Producers' Distributing Society's late market report.
- 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes. Uncle George and the Kiddies.
- 6.45—Pavilion Dinner Orchestra, under the direction of Cec. Morrison, Special Country Session.
- 7.15—Talk on Land Subjects.
- 7.25—Australian Mercantile Land & Finance Co.'s Stock and Wool Report.
- 7.30—Stock Exchange Reports.
- 7.37—Producers' Distributing Society's fruit and vegetable report.
- 7.41—Grain and Fodder reports.
- 7.45—News (country) from "The Sun."
- 7.55—Close down.

Evening Session.

- 8—Convert, broadcast from St. George's Hall, Newtown.
- 8.57—Resume of following day's programme.
- 9—G.P.O. Clock and Chimes.
- 9.1—Weather Report and Forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.
- 9.2—Al. Hammett and The Ambassadors Dance Band, broadcasting from the ballroom of The Ambassadors. During the intervals between dances, descriptions of frills and social notes; by Mrs. Potts.
- 9.39—Interval.
- 9.55—Newtown Band, from Industrial Hall.
- 10—Al. Hammett and The Ambassadors Dance Band, broadcasting from the ballroom of The Ambassadors. During the intervals between dances, news by courtesy of "The Sun" will be broadcast.
- 12—G.P.O. Clock and Chimes. National Anthem.

TUESDAY, AUGUST 10

- 7.15—Usual Early Morning Session.
- 10—Usual Morning Session.
- Afternoon Session.
- 8—G.P.O. Clock and Chime; Weather Report and Social Notes from "The Sun."
- 8.15—Civil Service Restaurant Trio.
- 8.30—Lecture from the Studio.
- 8.45—Music from the Studio.
- 4—G.P.O. Clock and Chimes.
- 4.30—Serial story, entitled "The Mad Song."
- 5—Early Country News; The Producers' Distributing Society's late market report.
- 5.15—G.P.O. Clock and Chimes; Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes; Uncle Jack and the Kiddies.
- 6.45—Broadcasters' Dinner Orchestra.
- 7.15—Talk on land subjects.
- 7.25—Australian Mercantile Land & Finance Co.'s Stock and Wool Report.
- 7.37—Producers' Distributing Society's Fruit and Vegetable Report.
- 7.41—Grain and Fodder Reports.
- 7.45—Country news from "The Sun."
- 7.55—Close down.

Evening Session.

- 8—Broadcasters' Trio.
- 8.15—Miss Mully Raynor, comedienne.
- 8.25—Miss Duelle Blair, violin solos.
- 8.30—Mr. Walter Elach, The Single.
- 8.40—Mr. Norman Janson, haritone.
- 8.57—Resume of following day's programme.
- 9—G.P.O. Clock and Chimes.
- 9.1—Weather report, by courtesy of Mr. C. J. Mares, Government Meteorologist.
- 9.2—Announcements.
- 9.7—Eld and Molly Owen, in musical novelties.
- 9.37—Interval.
- 9.30—Lecture from the Studio.
- 9.50—Broadcasters' Trio.
- 10.5—Miss Mully Raynor.
- 10.12—Mr. Norman Janson.
- 10.18—Three old-time dances.
- 10.30—"Sun" news.
- 10.40—Eld's old-time dances, broadcast from Marrieville Town Hall until midnight. During intervals between dances, news by courtesy of "The Sun" will be broadcast.
- 12—G.P.O. Clock and Chimes. National Anthem.

WEDNESDAY, AUGUST 11

Early Morning Session.

- 7.15—Physical training and health exercises.
- 7.30—Musical programme from the Studio.
- 7.50—Broadcasters' special news service, including news from Rugby.
- 7.55—Musical programme from the Studio.
- 8—G.P.O. Clock and Chimes.

Morning Session.

- 10—Usual programme.
- During the afternoon Race Results will be broadcast immediately after the race.

Afternoon Session.

- 3—G.P.O. Clock and Chimes; Weather Report and Social Notes from "The Sun."
- 3.15—Music from the Studio.
- 3.30—Special special session with explanatory talk by Mr. J. M. Prentice.
- 3.40—Music from the Studio.
- 4—G.P.O. Clock and Chimes; Music from the Studio.
- 4.30—Serial story, entitled "The Mad Song."
- 4.45—Music from the Studio.
- 5—Early Country News; The Producers' Distributing Society's Late Market Report.
- 5.15—G.P.O. Clock and Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes; Uncle George and the Kiddies.
- 6.45—Pavilion Dinner Orchestra, under the direction of Cec. Morrison.
- 7.15—Special Country session; Talk on land subjects.
- 7.25—Australian Mercantile Land & Finance Co.'s Stock and Wool Report.
- 7.30—Stock Exchange Reports.
- 7.37—Producers' Distributing Society's Fruit and Vegetable Report.
- 7.41—Grain and Fodder Reports.
- 7.45—Country news from "The Sun."

Evening Session.

- 8—Sydney Orpheus Society, under the direction of Mr. Penmann.
- 8.15—City of Sydney Band, from Barlow Chambers.
- 8.30—Lecture from the Studio.
- 8.55—Resume of following day's programme.
- 8.55—Weather report and forecast, by courtesy of Mr. C. J. Mares.
- 9—G.P.O. Clock and Chimes. Announcements.
- 9.5—City of Sydney Band.
- 9.25—Interval.
- 9.30—Lecture from the Studio.
- 9.50—Sydney Orpheus Society.
- 10.5—City of Sydney Band.

THURSDAY, AUGUST 12.

- 7.15—Usual Early Morning session.
- 10.15—Usual Morning session.
- Afternoon Session.
- 3—G.P.O. Clock and Chimes; Weather Report and Social Notes from "The Sun."
- 3.15—David Jones' Tea Room Trio.

- 3.30—Music from the Studio.
- 4—G.P.O. Clock and Chimes; David Jones' Tea Room Trio.
- 4.15—Music from the Studio.
- 4.40—Serial story, entitled "The Mad Song."
- 4.45—Music from the Studio.
- 5—Early Country News; The Producers' Distributing Society's Late Market Report.
- 5.15—G.P.O. Clock and Chimes; Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes; Uncle Jack and the Kiddies.
- 6.45—Broadcasters' Dinner Orchestra.
- 7.15—Talk on land subjects.
- 7.25—Australian Mercantile Land & Finance Co.'s Stock and Wool Report.
- 7.30—Stock Exchange Reports.
- 7.37—Producers' Distributing Society's Fruit and Vegetable Report.
- 7.41—Grain and Fodder Reports.
- 7.45—Sporting Talk by Broadcasters' Special Staff representative.
- 7.55—Close down.

Evening Session.

- 8—Bondi Casino Orchestra. Miss Freda Gilde, contralto; Miss Daisy Richards, violinist; Mr. Lance Jeffrey, tenor; and Broadcasting Sporting Representative.



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7.30 to 9—Lectures, orchestral and vocal items.

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MONDAY TO FRIDAY.

Luncheon Hour Session.

12.15—Tune in to the ticking of the clock; Luncheon Hour session consists of vocal and musical items, news service and Union matters, closing down at 1.45 p.m.

TUESDAYS AND THURSDAYS.

Afternoon Session.

3.15—Tune in to the ticking of the clock; The afternoon session consists of popular science talks by Mr. A. T. Keeble, B.Sc.; Book reviews; Home talks and special details of new Lincoln records, closing down at 4.45 p.m.

MONDAY, TUESDAY, FRIDAY.

Children's Hour.

6.30—Tune in to the ticking of the clock; The Children's Hour is conducted by Mr. Thompson, the well-known hospital story teller.

Evening Session.

7.30—Tune in to the ticking of the clock; The evening session consists of news service; shipping log; industrial lectures; Editorials; vocal and musical items from the studio and music by the Palais Royal Gallicians, from J. C. Hendrod's Palais Royal, Walter Beesen (leader).



QUEENSLAND RADIO SERVICE

Wavelength, 885 metres. Power, 7 kilowatts.

FRIDAY, AUGUST 6.

Midday Session.

- 12.15—Tune-in.
12.18—Time Signal.
1—Market Reports. Weather Information. "The Daily Mail" news, the "Daily Standard" news.
1.20—Close down.

Afternoon Session.

- 2.30—A Musical Programme from the Studio.
4.15—"The Telegraph" news.
4.30—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session. Stories by "The Sandman."
7—The Farmers' Session. Market Reports. Lecture, "Grain Marketing of Meat, No. 2," by Mr. C. Sheehy (Assistant Secretary of the Council of Agriculture).
7.30—"The Telegraph" news. Stock Exchange.
7.30—Close down.

Night Session.

- 7.45—Lecture Session.
8—in response to numerous requests, tonight's programme will comprise a Scottish entertainment.
9—Week-end news information for motorists, officially supplied by the Royal Automobile Club of Queensland. Continuation of Classical night.
9.20—Weather Information, officially supplied by the Commonwealth Bureau. Announcements.
9.30—Various Musical Items.
10—"The Daily Mail" news service. Close down.

SATURDAY, AUGUST 7.

No Midday Transmission.

Afternoon Session.

- 3.25—Tune-in.
3.30—A Matinee for Little Listeners.
4.30—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session. Bedtime Stories by "Uncle Ben" and "Uncle Jim," assisted by "Mabel Sunshine."
7.15—Sporting News.
7.30—Close down.

Night Session.

- 7.45—A Sporting Talk, by Rugby League Officials. Gaiety Theatre—Lennon's Ballroom.
8—From the Gaiety Theatre, Toowoong. By courtesy of the proprietors, the overture played by the Orchestra will be relayed from the Gaiety Theatre, Toowoong. From the Studio: Miss Margaret Lloyd, mezzo contralto solo; Mr. Eric Hayne, baritone solo; Mr. Norman Brown, baritone solo; The Kalua Trio, Hawaiian instrumentalists, in selected numbers; Mr. J. Trezise, tenor solo; Mr. Eric Hayne, violin solo; Miss Mabel Malouf, soprano solo; The Kalua Trio, Hawaiian instrumentalists; Miss Dorothy Brown, contralto solo.
8.30—From the Gaiety Theatre, Toowoong: Ten minutes music by the Orchestra.
9—Weather Information, officially supplied by the Commonwealth Weather Bureau. Announcements.
9.15—From Lennon's ballroom, by courtesy of the proprietors of Lennon's Hotel, dance music will be relayed from Lennon's ballroom. Items will be broadcast from the Studio of 4QG between dances.
10—From the Studio: "The Daily Mail" News Service. Close down.

SUNDAY, AUGUST 8.

Morning Session.

- The complete Morning Service will be relayed from St. Stephen's Roman Catholic Cathedral.
10.15—Tune-in.
11—St. Stephen's Cathedral.
12.30—Close down.

Afternoon Session.

- The Concert provided by the Federal Band in the Brisbane Botanical Gardens will be relayed.
3.10—Tune-in.
3.15—Band Concert.
4.30—Close down.

Night Session.

- The complete Evening Service will be relayed from St. Stephen's Roman Catholic Cathedral.
7.25—Tune-in.
7.30—St. Stephen's Cathedral.
8.30—Conclusion.

Band Concert.

- At the conclusion of the Church Service, the Band Concert provided by the Greater Brisbane Municipal Concert Band, under the leadership of Mr. E. Jackson, will be relayed from Wickham Park.
9.30—Close down.

MONDAY, AUGUST 9.

Morning—Special Sessions. New Settlers' League Conference.

- The Fifth Annual Conference of the Queensland Division of the New Settlers' League will commence this morning at the Albert Hall. The official opening ceremony, which will be performed by His Excellency the Governor-General (Lord Stonehaven) will be relayed from the hall.
There will also be speeches by the Premier of Queensland (Mr. W. McCormack, M.L.A.), and Canon Garland.

From the Albert Hall:

- 10.45—Tune-in.
11—Opening Ceremony.
Radio and Electrical Exhibitions.
The first Radio and Electrical Exhibition to be held in Brisbane under the auspices of the Electrical Federation will commence today at the Exhibition Concert Hall, Brisbane. The official opening ceremony, which will be performed by His Worship the Mayor of Greater Brisbane (Alderman W. A. Jolly) will be relayed from the hall.
12.15—Tune-in.
12.25—Time Signal.
1—Market Reports supplied by the Council of Agriculture. Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange; Weather Information supplied by the Commonwealth Weather Bureau; News Service supplied by "The Daily Mail" News service supplied by "The Daily Standard."
1.20—Close down.

Afternoon Session.

- 3.30—A programme of Music from the Studio.
4.15—News Service supplied by "The Telegraph."
4.30—Close down.
4.35—Early Evening Session.
6.25—Tune-in.
6.30—The Children's Session—Stories by "The Sandman."
7—The Farmers' Session. Market Reports supplied by the Council of Agriculture. Lectures: "Agricultural Shows of Great Britain and America," by Mr. J. R. Murray (Principal, Agricultural High School and College).
7.20—News Service supplied by "The Standard."
7.30—Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange.
7.30—Close down.

Night Session.

- Demonstration Entertainment each night during progress of Radio and Electrical Exhibition.
7.45—Lecture Session: From the Demonstration Studio, Exhibition Hall. Lectures: "Automatic Telephone Exchange," by Mr. J. H. Brown (Stevens Coy. Ltd.).
8—Popular Concert from the Demonstration Studio, Exhibition Hall.
9—From the Studio: Weather Information, officially supplied by the Commonwealth Weather Bureau. Announcements.
9.10—From the Band Practice Room. A programme of music by the South Brisbane City Orchestra, under the leadership of Mr. J. W. Ferguson.
10—From the Studio: "The Daily Mail" News Service. Close down.

TUESDAY, AUGUST 10

Midday Session.

- 12.15—Tune-in Signal.
12.18—Time Signal.
1—Market Reports; Weather Information; "The Daily Mail" News; the "Daily Standard" News.
1.20—Close down.

Afternoon Session.

- 3.30—A programme of music from the Studio.
4.15—"The Telegraph" News.
4.30—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session. Stories by "Uncle Ben" and "Uncle Jim."
7—The Farmers' Session; Market Reports; Lectures: "Features of the Royal National Show—Dairy and Beef Cattle Exhibits."
7.20—"The Standard" News. Stock Exchange.
7.30—Close down.

Night Session.

- Demonstration Entertainment from the Studio.
7.45—Lecture: "The Development of Electrical Science," by Professor Parnell (University of Queensland).
8—From the Demonstration Studio, Exhibition Hall. Popular Concert.
9.20—Weather Information, officially supplied by the Commonwealth Weather Bureau. Announcements. From the Centennial Hall, by courtesy of the lessee, three-quarters of an hour's dance music by the Centennial Hall Orchestra.
10—From the Studio: "The Daily Mail" News Service. Close down.

WEDNESDAY, AUGUST 11.

- 12—Official opening of the Show by His Excellency the Governor-General (Lord Stonehaven), from the Showgrounds.

Midday Session.

- 12.15—Tune-in Signal.
12.18—Time Signal.
1—Market Reports; Weather Information; "The Daily Mail" News; the "Daily Standard" News.
1.20—Speeches. Official Show Luncheon, from Luncheon Hall, Showground.
2—Close down.

Afternoon Session.

- 3.30—Description of the Show, special transmission from the Showground.
4.15—"The Telegraph" News.
4.30—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session; Stories by Little Miss Brisbane. Market Reports.
7—The Farmers' Session. Market Reports. Lecture: "Features of the Royal National Show—Eggs and Poultry Exhibits."
7.20—"The Standard" News. Stock Exchange.
7.30—Close down.

Night Session.

Demonstration Entertainment, from the Demonstration Studio, Exhibition Hall.

- 7.45—Lecture, "Broadcasting," by Mr. J. W. Robinson (Director, Queensland Radio Service).
10.—From the Studio. "The Daily Mail" News Service. Close down.

THURSDAY, AUGUST 12.

Midday Session.

- 12.55—Tune-in Signal.
1.25—Time Signal.
1.—Market Reports; Weather Information; "The Daily Mail" News; "The Daily Standard" News.
1.20—Close down.

Afternoon Session.

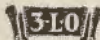
- 3.30—A programme of music from the Studio.
4.15—"The Telegraph" News.
4.30—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session; Stories by "The Sandman."
7.—The Farmers' Session; Market Reports; Lecturette: "Features of the Royal National Show—Horse and Sheep Exhibits."
7.20—"The Standard" News, Stock Exchange.
7.30—Close down.

Night Session.

- 7.45—Lecturette: "Engines and Engineering," by Professor Hawkins (University of Queensland). The Lyric Entertainers.
9.20—Weather Information, officially supplied by the Commonwealth Weather Bureau. Announcements.
9.30.—From the Band Practice Room: An important programme of music by the Greater Brisbane Municipal Concert Band.
10.—From the Studio. "The Daily Mail" News Service. Close down.

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FRIDAY, AUGUST 13.

Midday Session.

- 12.—Time Signal. Latest cricket scores, Australia v. Warwickshire, at Birmingham, by courtesy of Reuters Ltd., British Official Wireless News from Rugby, Reuters and the Australian Press Association cables. "Argus" and "Herald" news services. Shipping Intelligence.
12.45—Stock Exchange information.
12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast.
1.—Time Signal.
1.1—Studio Orchestra.
1.10—Scott Sanders, comedian, will entertain.
1.17—Mortimer J. Pettigrove, tenor.
1.24—Studio Orchestra.
1.34—Scott Sanders will again entertain you.
1.41—Studio Orchestra.
1.52—Mortimer J. Pettigrove, tenor.
2.—Close down.
2.40—Public Schools Football—Melbourne Grammar School v. Xavier. "The Captain" will speak from the ground on the crowd, weather conditions, topical remarks.
2.45—The bounce.
Afternoon Session.
3.—Latest Cricket News, Australia v. War-

wickshire, at Birmingham, by courtesy of Reuters Ltd.

- 3.1—Studio Orchestra.
3.10—Public Schools Football. "The Captain," quarter time interval. Story of first quarter's play. The scores.
3.15—Miss Frances Fraser, "Easter in Florence."
3.30—Studio Orchestra.
3.37—Arthur Douglas, Scotch comedian.
3.44—Public Schools Football. "The Captain," half-time interval. Story of second quarter's play. The scores.
3.47—Milton Sands, baritone.
3.55—Public Schools Football. "The Captain," third quarter starts. News of any special incidents in the interval. The bounce.
4.—"An Fall" of Messrs. Buckley & Nunn, Ltd. "Fashion Talk."
4.15—Scott Sanders, baritone.
4.20—Public Schools Football. "The Captain," three-quarter time. Interval. Story of third quarter's play.
4.25—Milton Sands, baritone.
4.32—Studio Orchestra.
4.40—Latest Cricket News, Australia v. Warwickshire, at Birmingham, by courtesy of Reuters Ltd. "Herald" news service. Stock Exchange information.
4.45—Public Schools Football. "The Captain," final bell. Story of last quarter's play. Best players. Final scores.
5.—Close down.

Evening Session.

- 5.45—Children's Hour. Answers to letters and birthday greetings.
6.—"Billy Bunny" and "Lillibets" fairy story; "The Red Princess," "Black Beauty."
6.40—Latest cricket scores, Australia v. Warwickshire, at Birmingham, by courtesy of Reuters Ltd. "Argus" and "Herald" news services. Reuters and the Australian Press Association Cables.
6.53—Weather synopsis. Shipping movements.
6.57—Stock Exchange information.
7.2—Fish Market Reports by J. R. Borrett Ltd.
7.4—River Reports.
7.4—Market Reports by the Victorian Producers' Co-operative Co. Ltd. Haymarket sales. Poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions. Market prices of oranges and lemons, supplied by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

- 7.30—Under the auspices of the Department of Agriculture: Mr. S. A. Cuck, Citriculturist, "Tomato Growing."
7.40—Mr. Gus Bluett, now appearing in "Tell Me More," at His Majesty's Theatre, will speak to you from his dressing-room, by permission of G. G. Williamson Ltd.
9.40—Brunswick City Band.
9.10—"The Captain" School Life and School Sport.
9.30—Brunswick City Band.
9.40—Jack Kays, trombone solo.
9.40—A short lecture by Mr. Frita Hart, on Wolf.
9.40—Brunswick City Band.
9.50—British Official Wireless News from Rugby. "Argus" news service. Announcements.
10.3—Alan Brudenell, tenor.
10.10—Lal Bartlett, xylophone selections.
10.20—Brunswick City Band.
10.25—Meteorological information. Road reports, supplied by the Royal Automobile Club of Victoria.
10.33—Alan Brudenell, tenor.
10.45—Lal Bartlett, xylophone selections.
10.45—Brunswick City Band.
11.—God Save the King.

SATURDAY, AUGUST 14.

- 11.—Harold Rogers, pianoforte.
11.10—Scott Sanders, entertainer.
11.20—Sonora Recital.
11.30—Harold Rogers, organ.

- 11.40—Scott Sanders, entertainer.
11.50—Sonora Recital.
12.—Time Signal. Latest cricket scores, Australia v. Warwickshire, played at Birmingham, by courtesy of Reuters Ltd., British Official Wireless News from Rugby. Reuters and the Australian Press Association cables. "Argus" and "Herald" news services. Shipping Intelligence.
12.45—Stock Exchange information.
12.50—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast, and river reports.
1.—Time signal.
1.1—Studio Orchestra.
1.10—Miles Hastings, elocutionist.
1.17—Rose Reaco, altoflute.
1.27—Studio Orchestra.
1.37—Result of Crinze Trial—Caulfield Races.
1.38—Miles Hastings, elocutionist.
1.44—Walker Smith, cornet solo.
1.50—Studio Orchestra.
2.—Close down.
2.30—Results of Wilegh Steeplechase—Pint Race, Caulfield Races.
2.40—Football—Melbourne v. Carlton, at M.C. Ground. Mr. Tod Collins will speak from the ground on the team, the crowd, weather conditions, topical remarks. Close down.

Afternoon Session.

- 3.—Latest Australian Cricket Eleven results, by courtesy of Reuters Ltd., Australia v. Warwickshire, played at Birmingham.
3.5—Result of Australian Hurdle—Caulfield Races.
3.10—Football—Tod Collins. Melbourne v. Carlton, at the M.C. Ground. Quarter time interval. Story of first quarter's play. The scores.
3.15—Studio Orchestra.
3.40—Result of Molokoff Stakes—Caulfield Races.
3.41—Football—Melbourne v. Carlton, at the M.C. ground. Mr. Tod Collins, half-time interval. Story of second quarter's play. The scores.
3.45—Studio Orchestra.
3.55—Football—Third Quarter starts.
4.—Studio Orchestra.
4.15—Result of Moonah Steeple—Caulfield Races.
4.15—Studio Orchestra.
4.20—Football—Melbourne v. Carlton, at the M.C. Ground. Mr. Tod Collins, three-quarter time. Interval. Story of the third-quarter's play. The scores.
4.25—Studio Orchestra.
4.45—Sporting Results. "Herald" news service.
4.50—Result of Mornington Welter—Caulfield Races.
4.51—Football—Melbourne v. Carlton, at the M.C. ground. Mr. Tod Collins. Final Bell. Story of last quarter's play. Best players. Final scores.
5.—Close down.

Evening Session.

- 5.45—Sporting Results.
5.—Children's Hour. "Mary Gumbat." Answers to letters and birthday greetings. Poems: "Pussy Language," "Which Loved Best." Two short stories for the littlest ones. "For Sleepy Eyes," "Gollywog," and the "Fairies." Songs by the "Wattle Girl," and "Mary Gumbat." For the boys and girls. "The Selfish Giant."
6.40—Latest Australian Cricket Eleven scores, by courtesy of Reuters Ltd., Australia v. Warwickshire, played at Birmingham. "Argus" and "Herald" news services. Sporting results. Reuters and Australian Press Association cables.
6.53—Weather synopsis. Shipping movements.
6.57—Stock Exchange information.
7.2—Fish Market Reports by J. R. Borrett Ltd.
7.4—River Reports.
7.4—Market Reports by Victorian Producers' Co-operative Co. Ltd.; Grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Night Session.

- 7.20—Mr. R. Rawson, "Reperanto—Every Objectation Discussed."
 7.40—Dr. J. A. Leach, "Nestlings and Plainers Phases."
 7.55—Musical Society of Victoria's Concert, transmitted from the Australian Church, 351st Chamber Concert.
 7.58—Syd. Eaton, tenor.
 8.07—Latest Cricket News, Australia v. Warwickshire, played at Birmingham, by courtesy of Reuters Ltd. British Official Wireless news from Rugby.
 10.15—Studio Orchestra.
 10.22—Wetherburn and Leslie, a little humorous sketch.
 10.28—Studio Orchestra.
 10.42—News Service, morning results: Races, Football, Metropolitan Soccer League, Metropolitan Amateur Association Lacrosse, Meteorological information.
 10.47—Syd. Eaton, tenor.
 10.54—Wetherburn and Leslie, sketch.
 11—God Save the King.

SUNDAY, AUGUST 8.

Morning Session.

- 10.58—Express Train Information.
 10.55—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, at Cheltenham.
 11—Service for the Australian Church, Russell Street, Melbourne. Rev. Dr. Charles Strong.
 12.16—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.

Afternoon Session.

- 9—Fleasant Sunday Afternoon Service, Central Mission Wesley Church, Chairman, Rev. J. H. Cain.
 4.30—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.

Evening Session.

- 5.45—Children's Hour. Answers to letters and birthday greetings. Songs by "Billy Bunny" and his "Bee Rabbits." Stories—"Mimma's Loveliest Lilo," "Four Brothers."
 6.20—Close down.

Night Session.

- 6.15—Service from Toorak Presbyterian Church, Malvern Tramways Band, conductor, Mr. Harry Shugg, Ely Treweek, soprano, Harry Wotton, baritone (by permission of J. C. Williamson Ltd.), Speaker, Mr. J. Howarth Ross, Accompanist, Agnes Fortune, Announcer, Maurice Dudley.
 8.55—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.
 9 Service from Toorak Presbyterian Church.
 8.30—Malvern Tramways Band, Mr. Harry Shugg, conductor.
 8.35—Harry Wotton, baritone.
 8.42—Mr. J. Howarth Ross, recitations.
 8.52—Ely Treweek, soprano.
 9.14—Malvern Tramways Band.
 9.23—Ely Treweek, soprano.
 9.33—Malvern Tramways Band.
 9.37—Harry Wotton, baritone.
 9.44—Malvern Tramways Band.
 9.47—Ely Treweek, soprano.
 9.55—"Argus" news service. Announcements. Latest cricket scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.
 10—God Save the King.

MONDAY, AUGUST 9.

Midday Session.

- 10—Time Signal. Latest cricket news, by courtesy of Reuters Ltd., British Official Wireless news from Rugby, Reuters and the Australian Press Association cables. "Argus" and "Herald" news services.
 12.45—Shipping Intelligence. Stock Exchange information.
 12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia and New South Wales, Ocean Forecast, River reports.

1—Time signal.

- 1.11—Studio Orchestra.
 1.10—C. Richard Chugg, flute solo.
 1.13—Arthur Douglas, Scotch comedian.
 1.24—Studio Orchestra.
 1.34—Arthur Douglas, Scotch comedian.
 1.39—Studio Orchestra.
 2—Close down.

Afternoon Session.

- 3—Latest cricket news, by courtesy of Reuters Ltd.
 3.11—Studio Orchestra.
 3.20—Mr. J. R. Locke, "Frontiers of India."
 3.26—Kathleen Rochford, soprano.
 3.32—James Toeman, tenor solo.
 3.37—Miss Hastings, electrician.
 3.44—Studio Orchestra.
 3.52—Miss Flora Pell, Supervisor of Domestic Arts, Education Department, "Domestic Economy."
 4.7—Kathleen Rochford, soprano.
 4.14—Dessie Causton, violin.
 4.21—Miss Hastings, electrician.
 4.27—Studio Orchestra.
 4.37—Agnes Fortune, pianoforte solo.
 4.45—"Herald" news service. Latest cricket news, by courtesy of Reuters Ltd. Stock Exchange information.
 5—Close down.

Evening Session.

- 5.45—Children's Hour. Answers to letters and birthday greetings.
 6—"Little Miss Cookaburra" will sell a story for the tiny tots, all about a piggy named "Pigling Band," and girls and boys for you there will be the first instalment of a new serial story, "The Girl Who Played the Game."
 6.40—Latest cricket news, by courtesy of Reuters Ltd. "Argus" and "Herald" news services and the Australian Press Association cables.
 6.53—Weather synopsis, Shipping movements.
 6.57—Fish Market Reports by J. R. Borrett Ltd.
 7.2—Stock Exchange information.
 7.4—River Reports.
 7.5—Market Reports by the Victorian Producers Co-operative Co. Ltd.: Haymarket sheep sales, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes, and various Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

- 7.20—Under the auspices of the New Settlers' League, Lady Mitchell, C.B.E., "How Women Can Help Women in the Country."
 7.40—Under the auspices of the Department of Agriculture, Mr. P. de Castol, Viticulturist, "The Viticultural Industry."
 8—Overture, Auditorium Orchestra. Incidental music to the prologue to the picture, "Siella Keston," by permission of Electric Theatres Ltd.
 8.20—Debate by members of the University Debating Society.
 8.40—Phyllis Abley, soprano.
 8.47—Mr. A. Fletcher, Vera Fletcher, Mr. Collier, and Mr. Hirst, novelty musical quartet.
 8.51—Claude Hall, baritone.
 9.1—Frank Maxwell, entertainer.
 9.6—Melbourne Crankjack Mouth Organ Band, 1.14—Claude Hall, baritone.
 9.20—Latest Cricket news, by courtesy of Reuters Ltd., British Official Wireless news from Rugby. Announcements.
 9.30—H. Collier, mouth organ selection.
 9.35—Phyllis Abley, soprano.
 9.42—Lieut. Col. T. W. White, D.F.C., V.D.
 9.52—Arthur Douglas, Scotch comedian.
 9.50—Melbourne Crankjack Mouth Organ Band.
 10.10—"Argus" news service. Weather forecasts, etc.
 10.20—Frank Maxwell, entertainer.
 10.30—Aif. Fletcher, accompanied by Vera Fletcher.
 10.37—Arthur Douglas, Scotch comedian.
 10.47—Melbourne Crankjack Mouth Organ Band.
 11—God Save the King.

TUESDAY, AUGUST 10

Midday Session.

- 12—Time Signal. Latest cricket, Australia v. Gloucestershire, played at Cheltenham, British Official Wireless news from Rugby, Reuters and the Australian Press Association cables. "Argus" and "Herald" news services. Shipping Intelligence.
 12.45—Stock Exchange information.
 12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia and New South Wales, Ocean Forecast, River reports.
 1—Time Signal.
 1.17—Studio Orchestra.
 1.10—Walter Smith, cornet solo.
 1.17—Kathleen Rochford, soprano.
 1.25—Studio Orchestra.
 1.34—Mortimer J. Pedigrove, tenor.
 1.41—C. Richard Chugg, flute solo.
 1.46—Kathleen Rochford, soprano.
 1.52—Studio Orchestra.
 2—Close down.

Afternoon Session.

- 3—Latest Cricket Scores, by Courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.
 3.01—A Sing song, by the Students of Wesley College, transmitted from the School Hall, St. Kilda Road, Prahran.
 3.30—"Au Fait" will give a Fashion Talk.
 3.40—Studio Orchestra.
 3.55—Jessie Irwin, soprano.
 4.2—Dorothy Roxburgh, viola solo.
 4.4—Margaret Boreland, "Infant Welfare."
 4.10—Studio Orchestra.
 4.20—Jessie Irwin, soprano.
 4.30—Studio Orchestra.
 4.45—Latest Cricket scores—Australia v. Gloucestershire, played at Cheltenham. "Herald" news service. Stock exchange information.
 5—Close down.

Evening Session.

- 5.45—Children's Hours: "Mary Gunlett," Poems: "The Day and His Dog," "The Pearly Garden." Story for the little ones. Answers to letters and birthday greetings. "Blue Bird and Purple Bee." For the boys and girls, "The Story of the Happy Prince."
 6.40—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham. "Argus" and "Herald" news services. Reuters and Australian Press Association cables.
 6.58—Weather synopsis.
 6.58—Stock Exchange information.
 7.2—Fish Market Reports by J. R. Borrett Ltd.
 7.4—River Reports.
 7.8—Market Reports by the Victorian Producers Co-operative Co. Ltd.: Haymarket dairy, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes, and onions.

Night Session.

- 7.20—Under the auspices of the University Extension Board, Mr. O. de R. Fowles, LL.M., Lecturer in European History at the University, "European Royalty."
 7.40—Royal Automobile Club of Victoria, Mr. E. W. Cox, President of the Club, "A Talk to Motorists—where to an and how to get there."
 8—The Choirs from St. Paul's Cathedral, under the direction of Dr. Floyd.
 8.30—Miss S. V. Parker, traveltique.
 8.45—Newport Workshops Brass Band.
 8.50—Tom Masters and Herbert Sanderson, duet.
 8.57—Lal Bartlett, xylophone selections.
 9.4—James Fraser, songs.
 9.11—Newport Workshops Brass Band.
 9.18—Harmonists' Male Quartette.
 9.25—Dr. Laifus Hills, popular science.
 9.40—Newport Workshops Brass Band.
 9.45—Tom Masters, tenor.
 9.55—Announcements. "Argus" news service. British Official Wireless news from Rugby.
 10.5—Lal Bartlett, xylophone selections.

BOOK REVIEW.

WE have received a copy of the new journal recently established in Auckland, N.Z., entitled, "Radio N.Z." This is a paper of 22 pages, but although comparatively small its size is amply made up for in the interesting nature of its contents. The issue before us is dated July 24th, 1926, and the Editor discusses the question of relaying Australian broadcast programmes. There are two technical articles of exceptional merit, dealing with popular types of broadcast receivers for New Zealand wavelengths. Of particular interest is the article describing how Miss Bell, who is a sister of the well-known New Zealand amateur 4AA, maintains communication with him by amateur radio, although Mr. Bell is at present on the other side of the world.

Ample space is allotted to news of New Zealand broadcasting stations, and a lot of space is taken up with paragraphs relating to the Australian broadcasters. An Amateur Section contains some very interesting matter for amateurs.

The Managing Editor is Mr. Ralph L. Sangster, who has had considerable experience in wireless and in journalism. "Radio N.Z." is issued every second Saturday, and a sample copy may be obtained from the offices at 407 Queen Street, Auckland.

BROADCASTING IN VENEZUELA.

A concern, known as the "Empresa Venezolana de Radiotelefonía," was formed in Venezuela towards the latter part of 1925, for the purpose of broadcasting entertainments, news, lectures, etc., and to import, construct, sell, rent and maintain all classes of broadcast receivers. The broadcasting station is provided with a 1.k.w. transmitter of American manufacture, the installation and testing being concluded on May 9th this year. The wavelength at present in use is 375 metres. Public supply is relied upon for power, but in spite of an automatic regulator, trouble is being felt, due to the erratic nature of this power. It seems unlikely, however, that local broadcasting will be taken seriously, and consequently purchasers of receiving apparatus will probably still depend essentially on foreign stations for their entertainment.

Make Your Wireless Set More Efficient

You can increase the efficiency of your Radio and thereby get more satisfaction and enjoyment out of it, by installing an "Ever-Ready" Radio Battery.

There are many different kinds of "Ever-Ready" Radio Batteries, all designed to give the utmost in efficiency and service.

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No. 126, or A, B or C Battery
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The New Radio High Tension "WANDA" battery can be obtained in 31 1/2, 42, or 63 volts—fitted with Wanda Plug and 3 screw terminals. Varied tapings.

Small size type W.P. 80	volt	2/6
Small size type W.P.	40 volt	12/6
Small size type W.P. 60	volt	18/-
Large size type X.P. 30	volt	16/-
Large size type X.P. 40	volt	21/-

If unobtainable locally, write for address of nearest source of supply

THE EVER-READY CO. (Gt. Britain) Ltd.
163 PITT STREET, SYDNEY

- 10.12—A. Schram, cornet solo.
 10.15—Robert Gilford, bass.
 10.25—Newport Workshops Brass Band.
 10.32—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham. Weather forecast.
 10.43—Harmonist Male Quartette.
 10.50—Newport Workshops Brass Band.
 11—God Save the King.

WEDNESDAY, AUGUST 11.

Midday Session.

- 12—Time Signal. Latest cricket news, by courtesy of Reuters Ltd. British Official Wireless News from Rugby. Reuters and the Australian Press Association cables. "Arcus" and "Herald" news services. Shipping intelligence.
 12.45—Stock Exchange information.
 12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports.
 1—Time Signal.
 1.1—Le Gassick's Quartette.
 1.15—Arthur Douglas, Scotch comedian.
 1.22—Le Gassick's Quartette.
 1.40—Arthur Douglas, Scotch comedian.
 1.47—Le Gassick's Quartette.
 2—Result of Mernda Harrie. Findon Harriers' Hunt Club, Moonee Valley. Close down.
 2.5—Result of Woolert Maiden Hunters' Steeplechase.

Afternoon Session.

- 3—Result of Bournefield Park Handicap. Findon Harriers' Hunt Club, Moonee Valley. Latest cricket scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham.
 3.5—Studio Orchestra.
 3.11—Miss S. V. Parker, soprano.
 3.20—Studio Orchestra.
 3.35—"Tell Me How." Second Act. Transmitted from His Majesty's Theatre, by permission of J. C. Williamson Ltd.
 5—Results of Findon Harriers' Hunt Club Races, Moonee Valley. "Herald" news service. Latest cricket scores, by courtesy of Reuters Ltd. Stock Exchange information. Close down.

Evening Session.

- 5.45—Children's hour. "Bobby Buzekum" will answer letters and give birthday greetings.
 6—Musical hour for children, arranged by Mr. Felix Hart. Gertrude Gay, mezzo soprano, will sing.
 6.40—Latest cricket scores, by courtesy of Reuters Ltd. "Arcus" and "Herald" news services. Reuters and the Australian Press Association cables.
 6.55—Weather Synopsis; Shipping Movements.
 7.05—Stock Exchange information.
 7.2—Fish Market Reports by J. R. Borrett Ltd.
 7.4—River Reports.
 7.5—Market Review by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep sales; poultry, grain, chaff, hay, straw, Jute, dairy produce, potatoes and onions. Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.
 Night Session.
 7.20—Under the auspices of the Department of Agriculture, Mr. R. Crowe, Exporta Superintendent, "Market Comments."
 7.40—Mr. P. W. Pearce, "Physical Culture."
 8—Opening of the Resendium Campaign.
 8.15—Studio Orchestra.
 8.25—J. D. Patterson, tenor.
 8.32—Capt. Peters, "Books, Wine and Outber-ber."
 9.47—Studio Orchestra.
 10.4—Agnes Fortune, piano solo.
 10.9—Latest Cricket Scores, by courtesy of Reuters Ltd., Australia v. Gloucestershire, played at Cheltenham. British Official Wireless news from Rugby. Announcements.
 10.19—J. D. Patterson, tenor.
 10.30—Studio Orchestra.
 10.35—"Arcus" news service. Weather forecast, etc.

- 10.43—Arthur Douglas, Scotch comedian.
 10.50—Studio Orchestra.
 11—God Save the King.

THURSDAY, AUGUST 12.

Midday Session.

- By courtesy of Reuters Ltd. Public Schools XV., at Lords. British Official Wireless news from Rugby. Reuters and the Australian Press Association cables. "Arcus" and "Herald" news services.
 12.10—Community Singing, under the auspices of Community Singers and Concert Goers' Association, transmitted from the Assembly Hall, Collins St., Melbourne.
 12.45—Stock Exchange information; Meteorological information; Weather forecast for Victoria, Tasmania, South Australia and New South Wales.
 2—Close down.
 2.40—Public Schools Football. "The Captain." Wesley v. Xavier. The Captain will speak on the lozgs, the ground, the crowd, weather conditions, typical remarks.
 2.45—The bounce. Close down.

Afternoon Session.

- 3—Latest Cricket scores, by courtesy of Reuters Ltd., Public Schools XV., at Lords.
 3.1—Studio Orchestra.
 3.10—Public Schools Football. "The Captain." (quarter-time interval. Story of first quarter's play. The scores.
 3.15—Reginald Bradley, violin.
 3.22—Lilian Crisp, soprano.
 3.30—Studio Orchestra.
 3.35—Public Schools Football. "The Captain." (half-time interval. Story of second quarter's play. The scores.
 3.40—"Mary Queen." The Influence of Colour, illustrated by "Poems of Colour."
 4.5—Studio Orchestra.
 4.14—Reginald Bradley, violin.
 4.21—Public Schools football. "The Captain." (three-quarter time. Story of third quarter's play. The scores.
 4.25—Lilian Crisp, soprano.
 4.30—Latest cricket news, by courtesy of Reuters Ltd. "Arcus" news service. Stock Exchange information.
 4.45—Evenings, transmitted from St. Paul's Cathedral.
 5.30—Close down.

Evening Session.

- 5.45—Children's Hour. Answers to letters and birthday greetings.
 6—"Mary Queen." Poems: "The Fairy Mill"; "The Children." Story for the little ones; "Greens and Browns." For the boys and girls, "Our little friends from Mornington have a day at SLO."
 6.40—Latest Cricket Scores, by courtesy of Reuters Ltd. "Arcus" and "Herald" news services. Reuters and the Australian Press Association cables.
 6.55—Weather synopsis. Shipping movements.
 7.05—Stock Exchange information.
 7.2—Fish Market reports, by J. R. Borrett Ltd.
 7.4—River reports.
 7.5—Market reports by the Victorian Producers' Co-operative Co. Ltd. Haymarket Sales, Poultry, Grain, Chaff, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.
 Night Session.
 7.20—Mr. J. A. Frankhauser, Assistant Claims Agent, "How to Prevent the Necessity of Railway Claims Arbitration."
 7.40—Mr. McGregor Knox, "The Romance of Rubber."
 8—SLO Dance Orchestra.
 8.15—Mr. Tod Collins, Football Talk.
 8.30—SLO Dance Orchestra.
 8.40—Jack O'Hagan, baritone.
 8.47—SLO Dance Orchestra.
 8.57—Johnny Marks, comedian.
 9.1—G. Patterson, tenor.
 9.14—Put Your Lights Out and Listen!
 9.31—SLO Dance Orchestra.
 9.41—British Official Wireless news from Rugby. Latest cricket news, by courtesy of Reuters Ltd.
 9.51—SLO Dance Orchestra.
 10.1—Jack O'Hagan, baritone.

- 10.5—SLO Dance Orchestra.
 10.15—Johnny Marks, comedian.
 10.25—SLO Dance Orchestra.
 10.35—"Arcus" news service. Meteorological information. Announcements.
 10.45—SLO Dance Orchestra.
 11—God Save the King.



HOBART

Wavelength, 535 metres. Temporary Power.

FRIDAY, AUGUST 6.

Morning Session.

- 11—"The Mercury" news, stock market, shipping, commercial intelligence, weather information. Records from the Studio.
 12—Time Signal.

Afternoon Session.

- 3—Musical items from the Studio, weather information.
 3.30—Hobart Stock Exchange quotations.
 4—Time Signal.

Early Evening Session.

- 7—Children's Corner. "Big Brother" chats to his pals.
 7.15—Hobby Talk.

Evening Session.

- 8—"The Mercury" special Tasmania news service. Railway auction produce sales. Weather forecast.
 8.15—Hobart Stock Exchange quotations.
 8.10—Weekly gardening chat, by Mr. George Nation.
 8.20—"Sports Budget," supplied by Mr. T. W. Newton, of Hobart Sports Depot.
 8.30—Miss Helen Wallace, soprano; Miss Katie Crowder, contralto; Miss Phyllis Lettshin, violinist; Miss Joan Dudge, educationalist; Mr. Jack Broadbent, baritone; Mr. S. J. Hall, baritone.
 9.50—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.

SATURDAY, AUGUST 7.

Morning Session.

- 11—"The Mercury" news, stock market, shipping, commercial intelligence, weather information, and sporting anticipations. Records from the Studio.
 11.45—Hobart Stock Exchange quotations.
 12—Time signal.

Early Evening Session.

- 7—Children's Corner. "Big Brother" chats to his pals.
 Evening Session.
 8—"The Mercury" Special Tasmania News Service. Railway auction produce sales. Weather information, and sporting results.
 8.5—Hobart Stock Exchange quotations.
 8.10—"Come to Tasmania Movement," by Mr. Sidney Laws, "Impressions."
 8.25—Paisley de Dances Band, City Hall, Hobart.
 9.50—"The Mercury" Special Interstate News Service. Weather synopsis. Station announcements. Close down.

SUNDAY, AUGUST 8.

Evening Session.

- 7—Service from Memorial Street Church. Hymns. Preacher: Reverend Arthur C. Nelson. Scripture: Romans 12. Sermon: "Sins of Society." Hymns: 89, 375, 276, 114. Solo: "O Divine Redeemer," Miss B. Hickman.
 8.45—Concert from the Studio: Miss Amy Butterworth, pianist; Mr. Huif Lyons, baritone; Mr. Joseph Blight, sax soloist; Master Victor Thorough, harp.
 9.45—"The Mercury" Special Interstate News Service. Weather Synopsis. Station announcements. National Anthem.

MONDAY, AUGUST 9.

Morning Session.

11—"The Mercury" news, stock market, shipping, commercial intelligence, weather information. Records from the Studio.
12—Time signal.

Afternoon Session.

3—Musical items from the Studio. Weather information.
8.30—Hobart Stock Exchange quotations.
4—Time signal.

Early Evening Session.

7—Children's Corner, "Big Brother" chats to his pals.

Evening Session.

8—"The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5—Hobart Stock Exchange quotations.
8.10—Mr. C. S. King, Lecturer in History, "The Movement Towards Federation."
8.30—Miss Dorothy Newton, contralto; Miss Doreen Glover, mezzo contralto; Miss Fide Lamplin, soprano; Miss Evelyn Scrinia, soprano; Miss Gretna Wilson, soprano; Miss Amy Butlerworth, pianist; Mr. George Muir, tenor; Mr. Rolf Lyons, baritone; Mr. De-la Herg, bass.
9.50—"The Mercury" special Interstate news service. Weather synopsis, Station announcements. National Anthem.

TUESDAY, AUGUST 10

Morning Session.

11—"The Mercury" news, stock market, shipping, commercial intelligence, weather information. Records from the Studio.
12—Time Signal.

Afternoon Session.

8.30—Hobart Stock Exchange quotations.
4—Weather forecasts. Time Signals.

Early Evening Session.

7—Children's Corner, "Big Brother" chats to his pals.
7.15—The adventures of George the Book-shelf Cat, "George goes to the Zoo," by Aunt Stella.

Evening Session.

8—"The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5—Hobart Stock Exchange quotations.
8.10—Literary Lapses and Library Lists, by Mr. W. E. Fuller.
8.30—Musical items from the Studio—special request numbers.
9—Photographic Talk, Mr. Ch. H. Sims, of Kodak Ltd., Hobart: "Dark-room Helps."
9.20—Musical items from the Studio.
9.50—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. National Anthem.

WEDNESDAY, AUGUST 11.

11—"The Mercury" news, stock market, shipping, commercial intelligence, weather information, and sporting anticipations. Records from the Studio.
12—Time Signal.

Afternoon Session.

3—Musical items from the Studio. Story from "Illustrated Tasmanian Mail."
3.30—Hobart Stock Exchange quotations.
4—Time Signal.

Early Evening Session.

7—Children's Corner, "Big Brother" chats to his pals.
7.15—Story from "Illustrated Tasmanian Mail."

Evening Session.

8—"The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information and sporting results.
8.5—Hobart Stock Exchange quotations.
8.15—Palais de Dance Band, City Hall, Hobart.
9.50—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. Close down.

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Heath Non-Dielectric Condensers

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Reduced Prices: Plain, .001, 28/6; .0025, 21/-; .00225, 18/6. For finest tuning, order with geared vernier, at 5/- extra.

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This familiar phrase suggests that you should insist on the Valve so often used as a standard of comparison.

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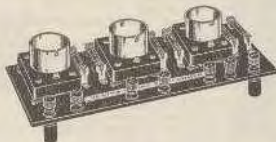


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THURSDAY, AUGUST 12.

Morning Session.

- 11.—"The Mercury" news about market, shipping, commercial intelligence, weather information. Records from the Studio.
12.—Time Signal.

Afternoon Session.

- 3.—Musical Items from the Studio. Weather forecasts.
3.30.—Hobart Stock Exchange quotations.
4.—Time signal.

Early Evening Session.

- 7.—Children's Corner. "Big Brother" chats to his pal.
7.15.—"The adventures of George, the Book-shelf Cat. "George gets an Electric Shock" by Aunt Stella.

Evening Session.

- 8.—"The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5.—Hobart Stock Exchange quotations.
8.10.—Selections from Jones' I.X.I. Band, Mr. L. M. Barnett, conductor.
8.—Physical Culture talk by Mr. George Collins.
9.15.—Jones' I.X.I. Band.
9.50.—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. National Anthem.



CENTRAL BROADCASTERS LTD.

Call Sign, 5CL. Wavelength, 835 metres. Input, 5 K.W.

FRIDAY, AUGUST 6.

Morning Session.

- 11.30—G.P.O. Chimes.
11.51—Featuring a Stock Duo Art Number.
11.50—"Advertiser" News Service.
11.55—Vocalion number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15—Featuring a Stock Duo Art Number;
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.55 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
3.45—From Studio—Social Story.
4—G.P.O. Chimes.
4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
4.55—Stock Exchange Reports, General Information, and Station Announcements.
5—G.P.O. Chimes.

Evening Session.

- 8.30—G.P.O. Chimes.
8.31—Bedtime Stories.
7.30—Market Reports.
7.40—Sporting talk by "Old Timer."
8—G.P.O. Chimes.
8.1—Studio Orchestra in a programme of classical music.
9—G.P.O. Chimes.
9.1—Weather reports.
9.3—Studio Concert.
9.15—"Advertiser" news service.
10.20—Studio Concert continued.
10.45—Station announcements and International cricket.
11—G.P.O. Chimes. National Anthem.

SATURDAY, AUGUST 7.

Morning Session.

- 10.30—G.P.O. Chimes.
11—Studio Orchestra. Stock Exchange Intelligence; Official Weather Reports.
12—G.P.O. Chimes; Station announcements.
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.

Afternoon Session.

- 3.—From the Studio: Football results, local and Interstate sporting results.
3.30—Vocalion and Stock Duo Art numbers.

Evening Session.

- 6.30—G.P.O. Chimes.
6.31—Bedtime Stories.
7.30—Market Reports.
7.40—Resume of the chief sporting results throughout the Commonwealth.
8—G.P.O. Chimes.
8.1—Studio Concert.
8—G.P.O. Chimes.
10.15—Sporting Results continued.
10.30—Studio Concert continued.
10.55—Station announcements and ships with-in wireless range.
11—G.P.O. Chimes. National Anthem.

SUNDAY, AUGUST 8.

Morning Session.

- 11—Relay from Rose Park Congregational Church.

Evening Session.

- 6.30—G.P.O. Chimes.
6.31—Sunday Stories for the children by "King Electron."
7—Relay from St. Bartholomew's Church of Frankland, Newwood.
8.15—From the Studio: Holden's Silver Band in a programme of band music.
8.50—Mr. O. H. Nicholas will talk on "Science of Tuesday."
9—G.P.O. Chimes.
8.1—Holden's Band, continued.
10.55—Station announcements.
10.30—G.P.O. Chimes: National Anthem.

MONDAY, AUGUST 9.

Morning Session.

- 11.30—G.P.O. Chimes.
11.31—Featuring a Stock Duo Art Number.
11.40—"Advertiser" News Service.
11.55—Vocalion number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15—Featuring a Stock Duo Art Number;
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.55 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
3.45—From Studio—Social Story.
4—G.P.O. Chimes.
4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
4.55—Stock Exchange Reports, General Information, and Station Announcements.
5—G.P.O. Chimes.

Evening Session.

- 8.30—G.P.O. Chimes.
8.31—Bedtime Stories.
7.30—Market Reports.
7.40—Mr. W. W. Frederickson, automotive engineer of Vacuum Oil Co., will give his weekly motor talk.
7.50—Mr. J. Alexander will talk on "The Leather Industry."
8—G.P.O. Chimes.
8.1—Studio Concert.
8.20—"Jenkins' Boys' Club.
9—G.P.O. Chimes.
9.1—Weather Reports.

- 8.1—Studio Concert continued.
10.15—"Advertiser" news service and ships within wireless range.
10.30—Studio Concert, continued.
10.55—Station announcements and International Cricket.

TUESDAY, AUGUST 10

Morning Session.

- 11.30—G.P.O. Chimes.
11.51—Featuring a Stock Duo Art Number.
11.40—"Advertiser" News Service.
11.55—Vocalion number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15—Featuring a Stock Duo Art Number;
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.55 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
3.45—From Studio—Social Story.
4—G.P.O. Chimes.
4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
4.55—Stock Exchange Reports, General Information, and Station Announcements.
5—G.P.O. Chimes.

Evening Session.

- 6.30—G.P.O. Chimes.
6.31—Bedtime Stories.
7.30—Market Reports.
7.40—Mining talk by Mr. Jackett.
8—A programme of classical music by the Cadenza Quartet.
9—G.P.O. Chimes.
9.1—Weather reports.
9.3—Studio concert continued.
10.15—"Advertiser" news service, and ships within wireless range.
10.30—Studio Concert, continued.
10.55—Station announcements and International Cricket.
11—G.P.O. Chimes. National Anthem.

WEDNESDAY, AUGUST 11.

Morning Session.

- 11.30—G.P.O. Chimes.
11.31—Featuring a Stock Duo Art Number.
11.40—"Advertiser" News Service.
11.55—Vocalion number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15—Featuring a Stock Duo Art Number;
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.55 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
3.1—Relay from "Maple Leaf" Cafe—Orchestral numbers.
3.45—From Studio—Social Story.
4—G.P.O. Chimes.
4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
4.55—Stock Exchange Reports, General Information, and Station Announcements.
5—G.P.O. Chimes.

Evening Session.

- 8.30—G.P.O. Chimes.
8.31—Bedtime Stories.
7.30—Market Reports.
7.40—"Boy's Club" corner.
8—G.P.O. Chimes.
8.1—Studio Concert.
8.30—Science Lecture, by Messrs. F. H. Foulding and Co.
8.40—Studio Concert, continued.
9—G.P.O. Chimes.
9.1—Weather Reports.
9.3—Studio Concert, continued.
10.15—"Advertiser" news service, and ships

Putting
QUALITY
into
RADIO



JEFFERSON
Super - Sensitive
Amplifying
TRANSFORMERS



Fox & MacGillycuddy Limited

Daily Telegraph Buildings, Sydney

BRISBANE AGENTS: WIRELESS HOUSE, ADELAIDE STREET, BRISBANE.

PHILCO

REG. U.S. PAT. OFF.



Fit companions-

BEAUTIFUL as well as highly efficient. A fit companion for the finest radio set, that is the NEW PHILCO 83X—the world's finest Rechargeable B battery.

Requires recharging only every 2 or 3 months—refilling with water once a season.

The built in Charge Indicators tell at a glance how far the battery is charged or discharged. Far more economical than dry batteries.

Only obtainable from High Class Radio Dealers.

FILL IN THIS COUPON.

New System Telephones Pty. Ltd.,
280 Castlereagh Street, SYDNEY.

SIRS—I am interested in learning more about the new Philco Rechargeable Storage Batteries for radio.

Name

City

State

Name of radio set

If you are a dealer in radio, please state

PHILCO

DIAMOND GRID BATTERIES

PROGRAMMES WELL AHEAD.

Wireless knows no close boundaries. A modern and powerful broadcasting station does not cater merely for people who live close to it, but numbers among its regular listeners, people many, many miles away from the station itself. This fact is carefully borne in mind at 4QG, and the arrangements for the release of programmes to the press have been made accordingly. In all parts of the Commonwealth, radio enthusiasts look forward to the programmes, and consequently, every care is taken to see that distant listeners are able to obtain copies of the programme in time for them to know just what is happening each night. To achieve this object, the programmes are prepared in full detail some three or four weeks before they are actually broadcast. These programmes are printed in quantity and are released each week to the press, and sent to various newspaper editors in time to be published. When it is remembered that 4QG is situated in Queensland, and that dozens of New South Wales, Victorian, and South Australian papers publish its programmes in advance, it will be realised that a very complete system of programme releases must be adopted to enable all newspapers to be catered for. Apart from Interstate papers, Queensland itself is supplied with programmes.

CLEANLINESS THE MOTTO.

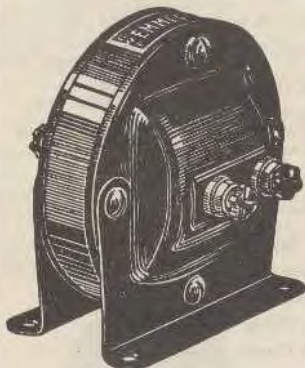
The average radio enthusiast knows that in his receiving set, dust is a relentless enemy of good reception. This fact also applies to transmitting equipment, and good quality transmission cannot be effected with dirty and dusty apparatus. At station 4QG, Brisbane, more than ordinary care is given to the transmitter. The main instrument itself, is always spotlessly clean, and the floor is covered with a green linoleum. The apparatus is carefully dusted with blowers each day, and the whole of the highly polished portions of the gear are kept in splendid order. This cleaning takes up a good deal of time, but proves worth it in the long run. When the station is in operation, the instrument room presents a splendid spectacle, with its clean polished floor and with big valves glowing brightly in heavily enamelled frames with nickel fittings.

Quality Parts

For Permanent Results

THE consistent efficiency and economy of EMMCO parts is commonly known among radio owners to-day. The unique combination of high quality with low cost, which has contributed to the wide-spread popularity of these Australian made radio products, has only been attained through the most up-to-date production and highly skilled engineering methods.

To buy EMMCO Parts for your set is to buy the utmost efficiency and permanent performance.



Emmco Transformer

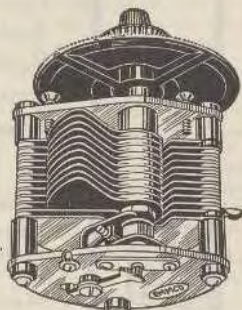
With its rugged build and handsome appearance, the New EMMCO Transformer is the King of Transformers. In comparison with other types, thousands of radio users have found that, for really good value and dependability, the EMMCO stands alone. It is obtainable in ratios $3\frac{1}{2}$ to 1 and 5 to 1; also 2 to 1 and $7\frac{1}{2}$ to 1. Price, 21/-.

Emmco Condenser

Infinite care and the most skilled workmanship are necessary in the manufacture of Condensers. That is what you get in an EMMCO. Built like a watch, with the most minute vernier adjustment, EMMCO Condensers give that hair-breadth tuning and real selectivity so necessary for good radio results.

Prices:

Vernier Type	Plain Type
.00025 .. 20/-	.00025 .. 13/6
.0005 .. 21/-	.0005 .. 15/-



Emmco Condenser

ASK YOUR DEALER FOR EMMCO

Manufactured by

Electricity Meter Manufacturing Company Limited
Sydney, N.S.W.



Listen-In To-night with B406

LISTEN-IN to-night to an entertainment plucked from the air. Enjoy nights of perfect reception by equipping your set with Philips Valves. Philips Valves, especially the B406 which is designed for Loud Speaker Reception, combine undoubted economy with the highest efficiency. The B406 has a filament consumption of only one-tenth amp. but the purity of tone and wonderful volume given add merit to its name, the New Wonder Valve.

Price 13/6

Obtainable at all Radio Dealers. Stocked with either Standard, English or American Cap, also the New UX Cap.

Makers of the Famous Philips Lamps

B406 Characteristics.

Filament Voltage	$3\frac{1}{2}$ to 4 Volts
Filament Current	. 01 amp.
Plate Voltage	20-120 Volts
Plate Current	. 12 m. A.

PHILIPS



MISS MARY MacCORMICK.

The photograph of Miss Mary MacCormick, late principal of the mezzo Rigo Grand Opera Company is shown in the oval above. Miss MacCormick was born at Auckland, New Zealand, and came to Sydney three years ago, where she has sung in many concerts, including those of the Royal Apollo Club and Conservatorium String Quartette concerts, besides her own recitals. She was one of the artists who sang on the occasion of the special New Zealand Night on July 29th from 2FC.

MR. ANDREW MacCUNN.

Mr. Andrew MacCunn, the musical director of J. C. Williamson Ltd., is also closely associated with radio performances. Mr. MacCunn takes an active interest in the arranging of the musical side of 2FC's programmes. To have any spare time to give to radio affairs seems an impossibility for a



man so occupied with the musical productions of such a big concern as The Firm, but Mr. MacCunn does find

Programme Personalities

time for even another outlet for his musical genius. He has recently established the MacCunn School of Singing and Acting, which is under the direct patronage of J. C. Williamson Ltd., and is turning out many artists who, in the near future, will loom large in the theatrical world. "In his spare time," he is an ardent broadcast listener, and has a set in his home at "Pomeroy," Potts Point, and another at his week-end cottage at Mons Vale. It is whispered to us that Mr. MacCunn is particularly partial to Sabbath services as a relaxation to his "lighter" duties during the rest of the week.



MR. RAYMOND ELLIS.

Mr. Raymond Ellis, of the British National Opera Company, who has already made hosts of friends through his broadcast singing and musical talks in association with Miss Elsie Treweek, has arranged to broadcast at the Goulburn Liedertafel Concert, on Thursday, August 19th, when his voice will be taken over a landline 140 miles, and broadcasted from 2FC. Mr. Ellis is perhaps the most versatile concert artist who has so far visited

Australia. On the evening of August 2nd, he broadcasted, from 2FC, a seven language programme, singing very interesting songs in Hebrew, Italian, French, German, English, Russian, and Yiddish. He was brought to Australia by J. C. Williamson Ltd., and his delightful baritone voice has entertained thousands of theatrical patrons and broadcast listeners.

"GINGER MEGGS."

Every generation of children has its particular fictional hero—some character sufficiently well known and attractive to grip the general imagination. It cannot be denied that a great majority of children in Australia today, both old and young, look forward each week to seeing the latest escapades of "Ginger Meggs," the irrepressible, mischievous, but entirely human figure created and popularised in Australian newspapers by Mr. J. C. Banks.

The faithful manner in which every childhood mood and expression has been reproduced in "Ginger" is responsible for his hold on the public, and people who never had a comic paper in their house before are now glad to welcome the wholesome young urchin and his colorful pals.

With such an understanding of the child mind, Mr. Banks will be a welcome addition to the ranks of the entertainers of 3LO Melbourne, for whom he will shortly commence a series of children's hour talks. Banks, who also creates Mr. Melbourne, a topical figure in the Melbourne "Sun Pictorial," is one of the foremost humorists of Australia, and his talks will be well worth while listening to by "grown-ups" as well as children. He will tell the story of "Ginger's" creation and development, and of how "Ginger's" adventures come to be arranged. Mr. Bank's first talk will be in about two weeks' time.



THE AIRZONE NEUTRODYNE KIT.

The Airzone Neurodyne kit comprises one aerial coil and two interstage couplers, the secondary of each having an equal number of turns, and with three variable condensers of the same capacities, gives a dial reading corresponding with each other. These coils have an



attractive appearance, being wound with green silk-covered wire on celluloid. The imitation mother of pearl, on which the various connections have to be soldered, provides a very neat design. One very strong point in favour of these coils is that the secondary windings are space-wound,

The coils are designed for increased power and range, and every coil is thoroughly tested before leaving the works.

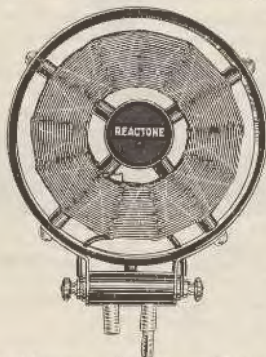
Also supplied with this kit are two Renrade neutralising condensers.

Agents: Manufacturers' Products Sales Co., Challis House, Martin Place, Sydney.

REACTONE LOW LOSS COIL.

The new Reactone Low Loss Coil is wound on excellent principles, under constant tension by special machinery. No shellac, wax, tape or fibre is used in the construction of the Reactone Low Loss Coil. Wound with double silk-covered wire and mounted in a special low loss frame, this coil

combines absolute rigidity with the highest efficiency, while losses are reduced to a minimum. Actual experi-



ment has demonstrated beyond a doubt the admirable quality of this new coil. Agents: W. Maling and Co.

"BURGESS 'A' BATTERIES."

"The Burgess Radio 'A' Battery is a No. 6 Dry Battery, especially designed for use on the Filament Circuit of Dry Cell Valves.

For use, it will give approximately double the hours of service that are furnished by an ordinary No. 6 Ignition Battery.



This battery is also useable for general purpose service after its voltage has dropped below the valve operating requirement.

This table gives the

approximate hours of service:—

A.109	WD.11	UV.201aDV.3	DV.3a	C.509
UV.199	WD.12	DV.2	A.306	
	Valve amps.	Hours	Valve amps.	Hours
1 Valve	... 0.06	700	0.25	110
2 "	... 0.12	300	0.50	110
3 "	... 0.18	180	0.75	110
4 "	... 0.24	150	1.00	110
5 "	... 0.30	240	1.25	110
6 "	... 0.36	180	1.50	110

THE DARIMONT PRIMARY BATTERY.

This is a primary cell, having the following characteristics:—

- (1) It gives a constant current at a satisfactory high E.M.F.
- (2) The current may be used with equal advantage intermittently or continuously.
- (3) The cell is easily re-charged when exhausted.

In this cell two liquids are used, separated by a porous pot, but the liquids are such as to form a semi-permeable membrane in the pores of the porous pot, and therefore diffu-



sion is negligible. The cell consists of a container made of glass, in the centre of which is the porous pot. The space between the top of the container and the top of the porous pot is filled in with a special sealing compound, which holds the carbon plates and porous pot in position.

The E.M.F. is about 1.6 volts, and the cell is easily re-charged. Further particulars may be obtained from the agents, Amalgamated Wireless (A'sia) Ltd.

Greater Volume
Increased Power



Unequaled Service—Enduring, Efficient and Unfailing—is rendered by

RADIOTECHNIQUE

SCIENTIFIC SUPER VALVES

Day by day—the round of the clock—these remarkable valves—products of the vast resources of La Radiotechnique and La Compagnie Generale de T.S.F., Paris—are yielding in all four quarters of the globe—to Government, Commercial, and Amateur station alike—results of an exceptionally high order.

In using Radiotechnique Valves you are following the judgment of the world's leading radio authorities.

RADIO MICRO.
.06 Amp.

Low Consumption, Detector and Amplifier, 3-3.5 volt., .06 amps. Price 13/6

SUPER AMPLI.
Improved 201A Semi Dull Emitter.

TYPE R46, 5 volt., .25 amp.
TYPE R41 (English Base only).
3.8 volt., .4 amp. Price . 13/6

RADIO AMPLI.

Bright Emitter, Detector and Amplifier, 3.8 volt., .7 amp.
Price 8/6

OBTAINABLE WITH ENGLISH OR AMERICAN BASE

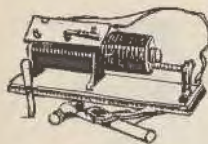
AT ALL LEADING DEALERS

For greater Volume—Increased Distance Reception—Longer Life—And AT NO EXTRA COST. Instal Radiotechnique Valves.

Should you experience any difficulty in obtaining supplies, communicate direct with Factory Representatives for Australasia:

BROWN & DUREAU LTD.

BROUGHTON HOUSE, CLARENCE ST., SYDNEY; and at Melbourne, Perth, Wellington and Auckland, N.Z.



Beginners' Problems



I have only just taken up wireless and am rather nervous about the aerial, as I understand that it is dangerous during a thunderstorm. Is this a fact? A.: When it is properly installed, a wireless aerial does not constitute any danger whatever during a thunderstorm. As a matter of fact, it is generally a safeguard, provided that provision is made whereby the aerial can be directly connected to earth by means of a switch.

I am using the five-valve loop receiver described in "Wireless Weekly," dated April 23rd, and I am more than satisfied with the results I generally obtain. But for a few days after the re-charging of my A battery I am unable to get long distance reception. I find the first rheostat far too critical. After the A battery is slightly run down, however, everything is O.K. Can you please advise me how to make a vernier rheostat suitable for my H.F. valves? A.: A vernier rheostat should not be necessary in the receiver you mention, and we feel sure that if you will change round the valves you will find two which give good results, and are not so critical to filament current. The following advice may, however, prove useful. Vernier filament adjustment cannot be obtained with a wire wound rheostat having a larger maximum resistance than 30 ohms, due to the fact that the slightest movement of the contact arm makes a very appreciable difference to the total resistance in the filament circuit. It is obvious that whereas a 30 degree movement of a 30 ohm rheostat gives say a resistance variation of about 4 ohms, the same variation is spread over two-thirds of the whole circular range of rheostats with lower total resistances.

If a vernier adjustment is absolutely necessary it is better to use a fixed resistance in series with a low resistance rheostat, viz., a 20 ohm fixed resistance in series with a 16

ohm rheostat or a 24 ohm fixed resistance in series with a 6 ohm rheostat. This will then provide as fine a vernier as any carbon disc controlled rheostat of considerable high total resistance.

A super-hot owner asks why are amperites so expensive, can they be made by an amateur enthusiast. Will you please explain their action? A.: The amperite is an automatic rheostat that is far more ingenious than the casual reader would expect. It consists of several turns of wire made of a metallic alloy, the resistance of which increases with the temperature. If the voltage of the battery is high, a large current will tend to flow through "amperite" and filament of the valve. This raises the temperature of the "amperite," thus increasing its resistance.

The increased resistance then cuts down the flow of current to the proper value. As the voltage of the A battery drops, due to the continued discharge, the flow of current will tend to become smaller, but this increases the temperature, and consequently, the resistance of the "amperite" and the value of the current will therefore remain constant, until the battery is fully discharged. Amperites are made to suit almost any type of valve, and care must be taken to see that the right type is used. They are reasonably efficient, but we do not advise the home constructor to try and make them.

A country reader says that he has tried to instal an extra loud speaker in a bedroom of an invalid, the new unit being connected to the receiver by means of a pair of bell wires about 75 feet long. He reports that he gets very low volume and sizzling noises with the speaker at the distant end of the line, despite the fact that it works perfectly when connected direct to the receiver. He desires to know the remedy? A.: A parallel pair of wires of any length have a considerable capacity between them, and acts as a pick-up for radio frequency currents, causing disturbing noises in the loud speaker. We would suggest

that you use a twisted pair of wires. The bell wire you have may be twisted together by stretching the two lengths out taut, and twisting them together by means of a small breast drill. In a twisted pair of wires, the capacity effect is neutralised to a great extent. A radio frequency choke connected in series with one of the long leads may also help in cleaning up some of the extraneous noises of which you speak. If these suggestions do not improve your present results use twin lead-covered electric light cable, and earth the lead sheath which surrounds the wires.

The following query although not a radio one is answered in case the writer employs his car battery in conjunction with his radio receiver, and may prove useful to some other country readers. I have a 6-volt, 90 ampere car battery which continually goes dead even after it has been fully charged. This takes place even though the car is not in use at all. Can you please tell me what is the cause? A.: Test your battery and lighting circuits for short circuit in the following manner: First, with the lights and ignition switch turned off, remove one of the leads from the battery and connect a low reading ammeter in series with heavy lead and the battery terminal. If the ammeter registers, this shows a short circuit or a ground somewhere in the wiring of the car, that must be traced out and located, by disconnecting each of the various leads in turn which go to the head-lights, horn, ignition, etc.

If there is no indication of a current flow with the above test, the trouble is probably due to a poor battery, which may be internally shorted or badly sulphated.

**BURGESS—"Standard
of Comparison"—
BATTERIES.**

A SURE THING.

Of the many amusing letters received by the announcers of SLO Melbourne, a recent correspondent from the country supplies one of the best. "We have a Mr. So and So here who has to go to bed every night at sunset owing to weakness from operation. Usually I place our loud speaker near the 'phone with the receiver in the loud speaker, which enables Mr. So and So to hear the concerts as he has an extension telephone to his bed, as he lies there listening to the finish. He is very fond of trotting horses. In fact this is about the only thing that keeps him on the move. He has a mare running in Melbourne on Monday." The correspondent gave the names of two horses owned by the invalided sportsman. "He is not too confident of winning, as she is a long way back, but she is sure to be hard and I wouldn't advise you to punt, but a little dollar each way wouldn't do much harm. If you would possible arrange it to get hold of the running and particulars of the race I will be on the look out for you at 6.15 p.m. Monday and will put Mr. So and So on. This mare as a rule takes a fair time to get going, and according to the Melbourne papers there are some fairly slick ones near scratch. Neither Mr. Andrew nor Mr. Dudley will be able to include any mention of winning bets in their income tax.

MUSICAL PLAYS BY 2FC.

Mr. James Donnelly, the versatile artist, who appears at the 2FC studios, has displayed so much originality in connection with his dialogues specially written for the "Old-time" nights, transmitted by 2FC, that he has been commissioned by this station to write a series of musical plays. The first will be given at the studios on Monday evening, 16th August, and the artists assisting will be — Miss Gwladys Finnister, soprano; Miss Kitty Elliott, comedienne; Mr. Laurence Halbert, baritone; and Mr. Donnelly himself. Something original can be looked for and the subject that evening will deal with the "Artists' Ball," which takes place that night and the dance music from which will be broadcast by the 2FC studio from 9.30 p.m. until midnight, giving listeners an opportunity of arranging well in advance, their wireless dances.

COLMOVOX SUPER FIVE MODEL

1926



Price, £52/10/-

FULFILLS YOUR UTMOST DESIRE IN BEAUTY AND PERFORMANCE

THE 1926 SUPER COLMOVOX is beautiful to look at—lends an atmosphere of dignity and worth to Library or Drawing Room. Naturally you expect unusual performance from so beautiful a Radio Set and unusual performance is exactly what you get. Tuning, for example, is controlled by three dials only—so perfectly adjusted that each station comes in always at the same dial settings. It never varies. Powerful locals may be on full blast, yet you can tune them out completely and bring in distant stations. Tone reproduction is always clear and true, the volume always adequate. Non regenerative and extremely silent in operation, this Receiver comprises two stages of tuned Radio Frequency Amplification, Detector and Two stages of Distortionless Audio Amplification. Before you choose the receiving set to occupy the place of honour in your home, be sure to see and try the COLMOVOX. Its beauty you will recognise at a glance. Its extraordinary capabilities we will be always glad to demonstrate.

COLVILLE MOORE WIRELESS
SUPPLIES LIMITED

10 ROWE ST., Near Hotel Australia, SYDNEY



Radio Auction Bridge

(Continued from Page 2.)

Radiokes

Another unsolicited testimonial from a prominent Sydney enthusiast once again proving the supremacy of the "NEW RADIOKES" Products.

Belmont Road, Mosman.

17th July, 1926.

Dear Sirs,

To-day I assembled a four valve Browning Drake Receiver using your "NEW RADIOKES" Kit, and can trustfully say that this is the best set I have yet handled.

Within five minutes of completion I had quite easily logged every A class station in Australia and most of the B class stations.

The extreme selectivity and sensitivity of this receiver I consider admirably demonstrates the high efficiency of this product, and I can quite genuinely recommend this kit to anyone seeking the ideal receiver.

You may use this letter as you choose. Wishing you every success with the "NEW RADIOKES" line.

I am,

Yours faithfully,

(Sgd.) E. MERRETT.

Manufacturers:

Keith Stokes
Pty. Ltd.
27 KING STREET
SYDNEY

after having doubled informatorily an earlier bid.

Last, but not least, is to explain what is meant by a double finesse. When opponents hold two high honors of a suit, and it becomes necessary to prevent them from making more than one, the player, if holding a suit combination such as the ace, queen, 10, or king, knave, nine, and three or more cards of suit in the other hand, must finesse the lowest card first, and, if necessary, subsequently the next lower, in hopes that the missing intermediate cards of the suit are split between opponents, or are both held by the opponent on the left of leader. This hand is a very good example of the double finesse.

QUERIES ANSWERED.

"Hexam": I was an adversary and thought that the Declarer has the last four tricks. I put my cards on the table and simultaneously my partner told me to take them up again. The Declarer claimed the rest of the tricks, saying that I had abandoned the hand. My partner demurred. Who was right?

Your partner. The hand is only abandoned when all the players throw their cards down. All your cards were exposed cards, and were liable to be called at any time.

"Chichane": Is it allowable to score double-chichane if neither you nor your partner hold the trump suit during the one hand?

Yes.

"Money": The Declarer contracted to get seven tricks, i.e., grand slam, and failed by one trick. Was he entitled to 50 points for Little Slam?

No.

"Puzzled": I holding Ace, xxxxx spades, knave, xx hearts, xx clubs, xx diamonds, dealt and bid one spade. Was I right?

In my opinion, no. You should have made no bid until the second round of the bidding, and then disclosed the spades if it was necessary.

"Fire": In No Trumps with a suit held by king, knave, 10, what is the correct lead?

The knave.

"Dido": Is it ever permissible to

lead from an ace queen suit except when it is one's partner's call?

Yes. In No Trumps it is a good lead. The Declarer will make the king, and probably that is all. I am not keen on the ace queen lead when playing against a trump suit.

"Bullswool": My partner called one diamond; player on my right one No Trump. All passed. I held clubs, ace, king xx; diamonds queen seven; hearts knave, 10 xx; spades, xxx, and led the queen of diamonds. Was this right?

Certainly; but it would have been better if you had led the king of clubs to disclose to your partner that you held the ace, and then led the higher card of his bid.

"High": Is it advisable to bid a major suit having four honours bare without the ace?

Yes, bearing in mind that the honours would be worth 64 points above the line in hearts, and 72 points in spades. Otherwise it is a weak bid and only worth one effort.

"Napou": Score nil, the declarer bid one No Trump. I had the lead, and although I held clubs king, knave, 10, 9, xx; hearts, ace, xx; spades, ace, x; diamonds xx, I did not call clubs but led them. The Declarer failed by two tricks, and I was told I should have called two clubs. Do you think so?

No. Unless your partner had very exceptional strength to assist you, there was no hope of your going game in clubs. You might have got three tricks over, viz., 18 below the line and 12 for honours, or 30 in all, as against 100 points you did score. Furthermore, had you called clubs, with your weak spade holding, the odds are that the Declarer would have gone into spades successfully.

"Peter": My partner dealt and bid two spades. Next hand two hearts, which was an undercall, and he was made to go three hearts. I passed and fourth hand bid four clubs. Could he do so?

No, he made an illegal bid. Should a player fail to bid a sufficient number of tricks to overcall the previous bid he may be called upon to, *inter alia*, bid the requisite number of tricks, in which case offender's partner is debarred from making any further bid unless the adversaries bid over or double.

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(Continued from Page 5.)

or whether it was veritably a centipede. Needless to say, when it was eventually re-stowed, each of its visible legs was well shored up and securely leg-roped to something solid. By degrees, we got to know its tricks, and to get it more or less "domesticated."

Nyngan, at first sight, looks an ideal place to test out a travelling wireless set. Absolutely level plains stretch for about a hundred miles in any direction you care to look. For hundreds of acres at a stretch the plains are treeless, so that there is nothing to cause interference or absorption. On such a surface we set up our masts, erected our aerial and spread out our earth mats. These preparations naturally attracted a good deal of attention, first from the town flock of goats, next from the children, and later from the entire population. All preparations were complete before sundown, and we waited impatiently for dark to start off our Douglas engine, call V.I.A. and get into communication immediately. Alas, for our hopes! After most of the party and some of the onlookers had reached the verge of exhaustion turning a ridiculous looking little handle the engine finally deigned to start. The rotary spark gap made a fine firework display, but "devil a kick" could we get into the aerial. Our audience was becoming increasingly inquisitive, and insisted on crowding closer and closer round. In vain we pointed out to them that we were trying a very important scientific experiment. We were the trespassers, and they had more right to the ground than we had. In vain we pointed out that the generator was working at Heaven knows how many thousand volts. Volts did not trouble them, what they wanted was to see something doing. At last, as we did not wish to assist in the electrocution of any of the prominent citizens, we had to declare the seance closed. With the little P.1 set, Captain Bowen was able to pick up a Dutch station, and get an indecipherable jumble of letters. Thus ended our first wireless experiment on the trip.

As a result of this fiasco, it was decided to wait till we got to Broken Hill before repeating the trial. Really, our troubles in the matter

of road only commenced after leaving Colbar, and, in spite of our experience on unpacking at Nyngan, we were unprepared for the spectacle of awaiting us at "The Hill." Previously, the contents of the two boxes had been all right. When, however, we opened them up on reaching Broken Hill, it looked as if every nut had come loose, and every wire had tied itself in a knot with every other wire. There, the big tubular condensers, and an



"The Flea" in trouble—broken differential. Trailer detached preparatory to repairs.

assortment of dials and "junk" were lying in the corners of the boxes, completely covered with fine red sand. It was a sight to make angels weep. Even the jovial Bowen looked solemn. It was one of the very few occasions we ever saw his face without a pleasant smile. However, with characteristic energy, he set to work, and, by toiling literally day and night, he reduced chaos to order.

Road Experiences.

In spite of unremitting endeavour, the generator and transmitter could not be made to give at all satisfactory results. Meanwhile, the sun and moon were hurrying along to keep their appointment with one another, and we had a long way to go to get to our trying place with them. Moreover, though there is a road from Broken Hill to Tibbooburra in the extreme north west of New South Wales, the track from that point to Innamincka in South Australia, though well defined, is almost uninhabited; and, at the time of our visit, was in the grip of the drought. We built another "trailer," the first having proved such a success; and, though this solved our

transport difficulties, it kept our wireless masts out of commission; as everything had to be dismantled before they could be detached. For these reasons, no further wireless experiments were indulged in until we reached Cordillo Downs, a large sheep station in the extreme north-east corner of South Australia. This we did eventually, after sundry experiences, pleasant and unpleasant, amidst the saltbush, spinifex and sandhills, and in spite of twice carrying away the differential of "The Flea."

At Cordillo Downs we found the preparations of the official South Australian astronomical party, under the Government Astronomer, Mr. Dodwell, and Professor Grant, of the University of Adelaide, well under way. Most of the astronomical instruments had been erected, and were being adjusted and calibrated in preparation for the great day. Our wireless set was not the only pebble on the beach. They had a fine aerial, on water-pipe masts, 70 feet high, and a two-valve receiving set under the charge of Mr. Thrum, a brilliant student of Adelaide University. With this apparatus, they had been receiving time signals from Adelaide, specially transmitted for the use of the astronomers. There was, nevertheless, considerable excitement in the camp when it was learned that we had a transmitter. Having now an opportunity of getting to work quietly and systematically, Messrs. Bowen and Thrum soon got the transmitter under discipline, and, about the second evening the first wireless message ever sent from Central Australia was despatched to Adelaide, and duly acknowledged.

The excellence of this feat cannot be insisted upon too highly. The Marconi pack-set was only guaranteed for 100 miles, even when it was new and in good order. The set had been used and abused and cursed in Mesopotamia for Heaven knows how long during the war, and a few of the vicissitudes through which it had passed since leaving Sydney on the present expedition have been recounted. Nevertheless, these two fine operators were able to maintain constant nightly communication with Adelaide, over an air distance of 800 miles throughout the entire duration of the eclipse preparations and obser-

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vations. When the men slept I do not know. I know that the sneezing and coughing of that infernal Douglas engine would break the deathly silence of the desert night at the most unearthly hours; and curses loud and long, to say nothing of sulphurous, would rise from "Government House," from the "Hut," from the "Bachelors' Quarters," from the "Sheepers' Hut," and from the niggers' humpies, as the rest of the entire community was rudely disturbed. If all the curses called down upon the heads of those devoted operators had taken effect, they would have been sizzling in Tophet before the first morning had dawned after their preliminary successes.

Value of Wireless.

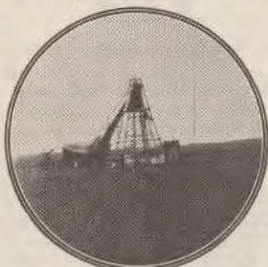
The extraordinary value of wireless to the people of the "Outback" was amply demonstrated on that occasion. Not only was the 250-word report of the successful observation of the eclipse received in Adelaide immediately after sundown, and reported in all the leading papers in Australia the next day; but the owners of the station, who had joined the party to assist in the observations, were able to keep in touch with the wool sales, and to send instructions of the utmost importance to their agents. Normally, it takes four weeks to send an order to Adelaide for any goods required and to get the goods delivered. On this occasion, a motor car part was ordered by wireless, just managed to catch the train, and was at Innamincka within a week.

While this fine result was due to the devotion of Messrs. Bowen and Thrum, the efficiency and interest shown by the staff of V.I.A., under Mr. Pope, was a very important contributing factor.

Two other incidents, quite simple nowadays, but vastly interesting in those far-off times, may be mentioned. Sitting in the wireless tent one evening, listening to the silent voices of the great world outside, our operators picked up a SOS call, from a Japanese vessel, caught in a typhoon in the Philippines. For hours they spelt out the drama which was being enacted; and we, sitting in the "desert" were able to follow the whole course of that sea epic, from start to finish.

This period was in the very early

experimental days of broadcasting. Tentative experiments were being made from Melbourne, and we were just able to distinguish a gramophone playing, "The Bonnie Bonnie Banks



Eclipse preparations, Covilla Downs. The high structure is a camera of forty feet focal length. Note the seventy foot wireless mast behind.

of Loch Lomond," and "God Save the King," at a distance of about 1000 miles.

It may be of interest to mention that, at the outset, only Melbourne and Adelaide had been informed that the call GW had been allotted to this portable station; yet, nearly all the Coast stations reported its (apparently illegitimate) activities to headquarters.

After the Eclipse.

After the eclipse, the parties which had come together for its observation parted and went their own ways. Our own party proceeded with its programme, and, thanks, to wireless, were able to keep in constant touch with Adelaide. Many were the vicissitudes experienced in so doing. At Mount Hopeless, so called because it was the furthest point reached by Burke and Wills on their ill-fated expedition, the atmosphere seemed mostly flies. The wireless operators, who were now in touch with Adelaide during daylight, had to work under a mosquito net—to attempt to sit in the open with one's hands otherwise engaged was out of the question.

Near Lake Callabonna, camp had just been pitched on a windswept sandhill, and the masts erected, before dark. Intending to complete preparations next day for a somewhat lengthy stay, no attempt was made to put

things shipshape that night. About 9 p.m. there was a commotion, and we found that some drovers had arrived with a mob of thirsty cattle, which they were removing from the dry sandhill country to a better watered region. A dark night, a mob of wild, thirsty, terrified cattle, a litter of guys, haliards and aerial wires, an unfamiliar camp; tired, irritated drovers, sulphurous of language; and you have a combination hard to beat for radio purposes. When the drovers found what the wires and masts meant they were most anxious to get word through to Adelaide with regard to the condition of the cattle. The cheerful Bowen, though as nearly worn out as a man could be, made a gallant, though unfortunately unsuccessful attempt to carry out their wishes, and peace and harmony were restored.

A couple of days later, after things had been got shipshape, the camp had settled down to a regular routine, and work was progressing smoothly, it was found possible to work both ways with Adelaide, and to exchange cable messages with England. This, however, did not go on uninterrupted. Practically every day a sandstorm blew and capsized everything. When this happened at night, the first man out of his blankets in the morning, generally Bowen, found five other heaps of dust in his vicinity, which gradually came to life and revealed the other members of the party, sanded up. Cooking utensils, provisions and wireless gear were in like case, and it was truly a Sisyphean task to keep the wireless functioning under such circumstances.

I did not mention earlier that, as an experiment, a small spark-coil transmitter was taken, with the object of keeping in communication with the main camp when a flying survey was being undertaken by a small party.

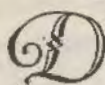
In spite of every endeavour this could never be made to work satisfactorily, and its failure nearly led to disaster on one occasion. In an attempt to penetrate the sandhill region in "The Flea," the differential carried

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DFA.4	5.0	0.25	12/6
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	Fil. Volts	Fil. Current	Price
LP	3.8	0.6	7/-
D.06	3.0	0.06	15/6
D.3	1.8	0.2	13/6
DFA.1	5.0	0.25	13/6
DFA.3	5.0	0.06	17/6
PM.1	3.7	0.1	13/6

Type	Power Valves.		
	Fil. Volts	Fil. Current	Price
DFA.1	5.0	0.25	13/6
DFA.3	5.0	0.06	17/6
PM.4	3.7	0.1	15/6
DFA.0	2.5	0.25	13/6
DFA.4	5.0	0.25	12/6

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away for the third time. We had water where we were; and could easily have stayed there, had we been able to inform the main party of our predicament, and get the mechanic to come along with spare parts. As it was, the mishap necessitated a walk of 20 miles, through blazing hot sand-hills, to reach the nearest boundary rider's hut. As one man knocked up, and had to have the water-bag left with him, the experience was anything but pleasant. I strongly advise the provision of an efficient small transmitter for this class of work should any of my readers ever undertake a similar trip.

Final Catastrophe.

Soon after the expedition had been extricated from this unpleasant predicament, there happened the final catastrophe which put an end to the transmission of wireless messages. A more than usually severe sandstorm struck the camp, wrecked the wireless tent and bowled the apparatus about the landscape. After Bowen had collected the pieces and put them together again it was found that the working of the set was considerably impaired, and that considerable repair was necessary. As Captain Bowen's original leave of absence, and an extension kindly granted by the Military Authorities, were almost spent, and as my own knowledge of the art of wireless could not be said to have progressed by leaps and bounds, I judged it better that the borrowed apparatus should be returned to its rightful owners lest worse befall. It was a sad day to the party when the "quadrupe" was hoisted on the truck for the last time, not because we were sorry to see the last of the said "quadrupe," but because Bowen's cheerful face went with it.

Hereafter, limited to the P1 receiving set, and the writer's hectic speed of six words a minute (with an average accuracy of something like 43 per cent.), wireless became one of the minor energies of the expedition. Even so, however, thanks to the extraordinary good nature of Mr. Pope and his staff at V.I.A., it did not suffer entire extinction. A programme was arranged whereby messages received for the expedition should be sent out, at six words a minute, repeated three times, immediately after midnight

time signals, and again at 3 a.m., on three nights a week. The reason for sending at these hours was because we had to get the time signals, and because, as the summer drew on, atmospheric became worse and worse; until it was frequently impossible to read an ordinary message except just before daylight. You are at liberty, then, to picture a stout and rather elderly gentleman, thoroughly tired out by miles of walking over red hot sand-hills all day, going to bed on a cement verandah (on the verandah not on a bed), with an alarm clock as a bed-mate. I can assure you that, on many occasions, only the strictest sense of duty, combined with profound gratitude to the officers of A.W.A. for their never failing courtesy, prevented the aforesaid stout one from pretending he did not hear that alarm go off. These midnight vigils were not made any more pleasant by the fact that a hornet of the biggest and bluest type took a proprietary interest in many of the seances. As soon as the valve was lit up, down he came, and seemed very much inclined to investigate the hands which had, perforce, to manipulate the tuning dials, and the eyes in which he could see the light of the valve reflected. However, we managed to maintain a status of armed neutrality, and no casualties were suffered.

Many of the hoary amateurs of that time, but now grown into aged men of twenty or so, doubtless remember how V.I.A. patiently tapped out those signals night after night; many a ship's operator doubtless cursed the unknown G.W., who held up their traffic for an unconscionable time. Yet, if they had realised the conditions, and had known the satisfaction it was for one isolated in these lonely places even to imagine himself in close touch with the outside world, their vexation must have evaporated.

And really, all things considered, it was remarkable how much of those messages was received, and what a deal of time and trouble they saved. Even cable messages in code were deciphered, largely by the process of interchanging A's for N's, D's for U's, and so one, and by eliminating the incorrect readings by a process of trial and error. Talk about cross-word puzzles! Commend me to a message in

morse received by a totally incompetent operator!

However, all's well that ends well! Everybody came home not much the worse, some with broken collarbones, others on stretchers, but all got here; and all are longing to get back there again. And one thing which was proved was that wireless is of the utmost value to the people of the "Great Lonely Land," that equipment on quite a modest scale is capable of doing a vast amount of service, and that an old, worn spark set, with or without logs, is not the very best type for the purpose.

HAWAIIAN MUSIC.

In response to numerous requests for Hawaiian music, Station 4QG has lately included quite a number of these items in its programmes, and enthusiasts will be pleased to hear that more are to follow. The Kalua Trio, the Pacific Trio, the Honolulu Serenaders, and the Moana Duo are all combinations of Hawaiian instrumentalists who have found favour among listeners to the northern station.

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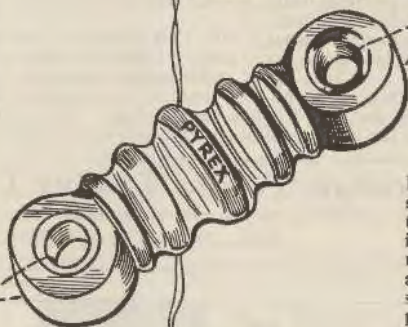
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programme comprises a concert of unusual distinction from St. George's Hall, Newtown. The speakers during the evening programme will be Madame Evelyn Greig, who will conclude her series of travel impressions by dealing with "New York—the Mecca of Music," and Mr. Ian A. Henning, B.A. (holder of the French Government Travelling Scholarship), dealing with the "Romance of the Middle Ages."

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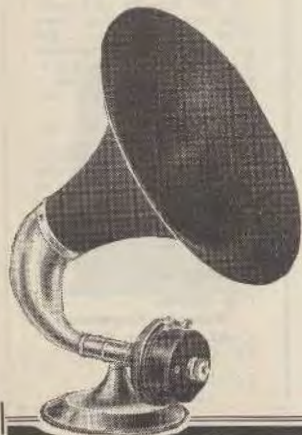
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