Radio Everywhere

Position in America

DURING a tour of the United States of America, the outstanding fact that faced one all the time was the ubiquitous radio, says a writer in a Home journal. It could not be avoided anywhere—not even in one's bedroom at the hotels, for there were earphones.

In crossing the Atlantic one was constantly reminded of the linking-up power of wireless. Each passenger was given a card which contained the terms for sending wireless messages anywhere. The third day out a wireless message came to me from England direct. On the noticeboard on deck was the daily reminder that our ship was in constant touch with eight other ships, the names of which were given.

It was no stretch of the imagination to think of each of these eight ships in constant touch with eight other ships until the whole oceans and continents were linked up in a cob-web of radio designs.

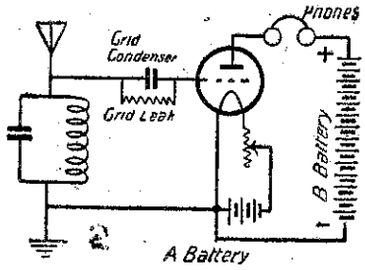
Every morning there was awaiting us at the breakfast table the "Radio Bulletin," which contained news gathered by the ship's radio from the four corners of the earth. On the fast American express trains was the unavoidable radio. Telegrams came and went all day long. The wireless operator on one train informed me that during one day the previous week fifty-six telegrams had passed through his hands, most of which were received for passengers. This wireless on trains is a great boon to busy business people, as it helps to facilitate appointments in particular. It has another purpose.

There are many hoboes—knights of the road—who still travel via "side-door" Pullmans and who are frequently put off trains on which they are stealing rides. In the past these riders have been able to conceal themselves from the eyes of the train crew.

Adding an Audio Stage

To Increase Volume and Quality

SEVERAL correspondents have asked how an additional audio stage may be connected with their receiver, and the following remarks, probably somewhat unnecessary for the experimenter, should, nevertheless, clear up the problem for these people.

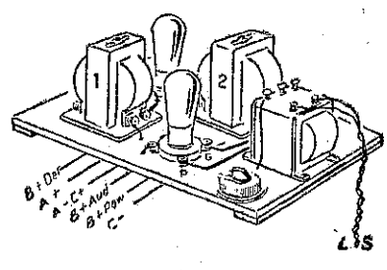


A single stage detecting valve to which an audio stage may be added.

An extra audio stage can be added only to small receivers where the previous audio valves do not exceed one. Three audio stages introduce very many troubles, and the extra amplification secured thereby is spoiled. Small sets comprising detector alone, detector and audio, and radio, may have an audio stage added in the method described.

Diagram 1 depicts a crystal set with a one-valve amplifier, and this will be taken as a typical example from which to add another stage. It will be seen that the plate of the valve is connected with one of the speaker terminals, the other terminal being connected to the B battery.

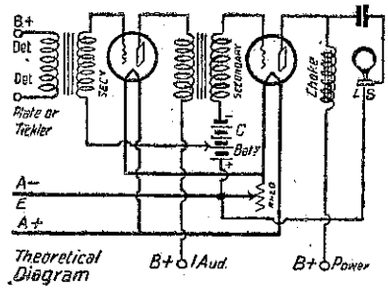
The first step is to remove these terminals and replace them by an audio frequency transformer. Obtain a good make, which will cost from 17s. 6d. upwards. Connect the plate lead to "P" of the transformer, and "B+" (of the transformer) to about 67½ volts, unless this is the detector, in which case the applied voltage will be considerably



Layout after second stage has been added.

lower. Connect "G" of the transformer by the shortest lead possible to "G" of a valve socket, and take the plate of this to the speaker terminal. By connecting the highest "B" voltage available (about 90 volts) to another terminal, the speaker may be connected.

"GB" or "C" of the transformer just added is connected to a negative tapping of a grid bias battery, and the positive of this is connected to "A—." The "A" supply for this last valve may be derived from taking a lead from each side of the preceding valve or from the two wires from this valve at a point nearest the new socket. If the



Two stages of audio which may follow a single valve or crystal.

voltage is higher than that stipulated on the valve cartoon, put a resistance in one of the leads. This resistance may be a variable rheostat or a fixed resistance of the amperite type.

So much for the actual connections. A very important part of this is the layout. The transformer should, if possible, be at right angles to one another, and the grid and the plate wires short, and free from one another. Keep these above the baseboard, which should be either of a non-conducting substance such as fibre or well shellaced timber. For best results, the whole audio stage should be remodelled, and to facilitate the layout several diagrams with explanatory notes have been appended, and these should make quite clear any difficulties. Grid bias on the first audio valve is essential only where very high voltages are to be used.

Shore to Ship Wireless Telephony

A UNIQUE feature in Australian journalism, and also in Australian wireless was carried out in Sydney recently, when a wireless telephone conversation was carried out by representatives of one of the evening papers and of a motion picture trade journal, with a passenger on board the s.s. Sierra, when the latter was 370 miles from Sydney.

The interview was made possible by the courtesy of Mr. E. T. Fisk, managing director of Amalgamated Wireless. From a room at the Sydney office representatives of the two journals, and officials of the Fox Movietone Co. spoke to the Sierra by radio telephone. The conversation was carried out through A.W.A., Radio Centre, Pennant Hills, Sydney, but, unfortunately, owing to the Sierra not being equipped for modern wireless telephony, the replies of Mr. S. Crick, managing director of the Fox Movietone Co., who was the person interviewed on the Sierra, had to be transmitted from the ship by Morse code. These messages were then received at the station at La Perouse, and transmitted by land line to the city office of the company.

The newspaper representatives spoke through the office telephone in exactly the same manner and with the same facility as they would in the conduct of an ordinary land-line telephone. The interview by wireless telephone was entirely successful, the Press representatives asking Mr. Crick many questions regarding his impressions of the state of the moving picture industry in the United States, especially with regard to the talkies and their future development.

Mr. Fisk has carried out several telephonic conversations with the United States, Berlin, Java, and several other overseas countries, but this is the first time that a Press interview has taken place between Australia and an ocean-going liner.

400ft. Aerial

G. F. RICKETT, Hawke's Bay, writes saying that in connection with a recent correspondent's trouble with a 150 feet aerial, he has an aerial 400 feet long. "With the long aerial, I think I get less static. The tuning is slightly broad, but I can get distant stations much better, as I often receive American stations with a volume equal to the local ones.

"Last Monday, the description of the landing of the Graf Zeppelin at Los Angeles came through from two stations, KHJ and KFI at full loudspeaker strength. This last few days I have been getting WENR, Chicago, as good as a local station (from 4.30 to 6 p.m.).