

Sidelights on Trouble Tracking

Co-operation to Suppress Interference

UNLIKE the Post and Telegraph Department has in commission in Wellington a motor van staffed with radio inspectors, to locate and eliminate as far as possible interference in the receivers of licensees is generally known. Less well known, however, are the activities and accomplishments of this enterprise.

Commissioned in May of this year, the van has done excellent work, and many causes of disturbances have been eliminated. Many of these, however, could have been cleared up without the aid of the van, had the owners known just where to look for the trouble.

Causes of Trouble.

HOWLING valves have caused the van many a fruitless search. Through their nature they are difficult to locate, and one readily can see the difficulties of the inspectors when, being hot on the scene of a "howler," they suddenly lose it owing to its originator, tiring of distorted reception, switching on to a station within easier reach.

In this respect listeners are urged not to listen to distorted reception from a distant station. Straining the set in this matter causes howling in the receivers over a wide radius. Nevertheless, many radiating sets have been located by the van.

Severe disturbance has been caused through tramway bonds, links between

the rails to allow of the free flow of electricity. If, through faulty workmanship, vibration or deterioration, these become slightly defective, an arc bridges the gap, and disturbance is caused up to a distance of a quarter of a mile. Many of these seats of trouble have been found and rectified by the Tramways Department, much to the satisfaction of the listener.

Unusual Causes.

IT is surprising what will cause trouble in receivers. Recently, the van was called to a locality constantly disturbed. The direction was soon picked up and the place in question reached. On investigating, the inspector found that a faulty A.C. rectifier, when left connected to the set, was causing a disturbance so intense that all stations except the local one were obliterated.

Faults on the high tension electric power lines have been the seat of much trouble. One in particular along the waterfront at Eastbourne annoyed listeners, especially during dry weather. Strangely, during and for some time after a fall of rain, the trouble was absent. The van, on tackling this problem, located a slight leakage at an insulator.

On examination it was found that

a crust of salt was causing a bridge between the wires. When rain fell this was removed; to be replaced from the spray during fine weather.

Power lines will always give a certain amount of trouble when aerials are placed too near to them, particularly if they are parallel to them. One distressed listener complained of persistent interference.

On arriving in the locality the van was unable to pick up any serious trouble, but at the house of the licensee the cause of the trouble became apparent. The section was on a corner around which ran the city electric light mains. Parallel and close to these were the aerial and the lead-in. Both were in the magnetic field of the wires, both were picking up "noises."

The cure was obvious—a shorter aerial at right angles to one of the lines and as far removed from the other as possible.

False Alarms.

ON very many occasions the van has been called to a locality, to find no trouble whatever. Investigation has usually shown that the set of the complaining licensee was at fault. The B battery being low, faulty connections, valves or transformers, all combine to distort receivers. The

snapping of an electric switch will sometimes cause a click in the set, and if a receiver is situated near a large switching arrangement, the noise may be objectionable.

Department and Dealers Co-operate.

THERE is no doubt that the air can be practically cleared of leakage and radiation, and the Department and dealers are doing their best for the listener.

For this reason, an organisation, planned to educate the listener to the better understanding of his set, and at the same time utilise the van to a maximum, has been planned. Details are not yet available, but the plan, in essence, is that the dealers in each locality will act as intermediaries between licensee and the Department. When a complaint is made in the future, the resident dealer will be notified, who will report on the trouble, through listening through his own receiver. If necessary he will be prepared to visit the complaining owner to ascertain if the case justifies the summoning of the van.

The actual result of the co-operation of the radio trade and the Department will be that complaints of interference from electrical causes will first be confirmed, and a call will dispatch the van to the affected area to locate the trouble.

Dynamic Speakers

Identical with Moving Coil Type

MOVING coil loud-speakers are known in the country of their origin, U.S.A., as dynamic speakers. Dynamic is the name applied by the patentees, the Magnavox Company of Oakland, California, who own and control the master patents.

Little has been heard here of the dynamic speaker, but it has been manufactured and sold in huge quantities in the United States for the past two years by the Magnavox Company, and it is only now that the Magnavox Company are catching up on their orders and are able to supply for export. Owing to the fact that the Magnavox Company are producing to the maximum of their capacity, i.e., 1,000 units per day, they have just licensed

several manufacturers to use their patents for sale on the U.S.A. market only, and have decided to handle the Australasian market themselves.

The construction of a dynamic speaker in quantity on a commercial basis requires a considerable amount of knowledge and experience. This is the reason why the present Magnavox speakers are the highest quality moving coil speakers produced anywhere.

The Magnavox Company are supplying the largest manufacturers who produce the highest quality of radio sets in U.S.A. For instance: Stromberg-Carlson, Zenith, Splitdorf, Bosch, Freshman, Amrad, Gilfillan, Mohawk, De Forest Crosley, Federal. One of the above manufacturers placed a contract with the Magnavox Company at the radio exhibition held in Chicago in June for 30,000 units.

Those who have not had the pleasure of listening to a dynamic speaker cannot very well realise what a revolution in sound production has taken place by this discovery. The great feature is that there are no parts in the dynamic speaker which can rattle, and providing the in-put is undistorted the Magnavox speaker will give perfect reproduction with unlimited volume.

Magnavox dynamic speakers are produced in types to suit all classes of electrical current. There is one type operating with 230 volts A.C. which operates direct from the lighting mains. Another type which will take 110 to 220 volts of D.C. current. This type can be operated from any D.C. current available, but is primarily constructed for the purpose of operating from an amplifier of the Sampson type, from which it can be tapped off the required D.C. current. Those who have the ordinary electric light installed in their homes with the 230 volt A.C. current merely plug into the lighting socket and take the other two connections to the radio set in the ordinary way. Those who wish to operate their dynamic speaker from the accumulator may do so by using the 6 volt type.

A very effective demonstration of the perfection to which sound reproduction can be brought was given at the American Radio Exhibition in Chicago. A dynamic unit operating from 230 volts A.C. current was installed in the centre of a 8ft. square panel. This large baffle increased the range of the musical scale tremendously, and the result was that it would be practically impossible to distinguish a band selection reproduced by a gramophone from the actual performance. Manufacturers claim that the most perfect results from dynamic speakers would be secured if the speaker were mounted in the wall of a room so that the sound emitted from the front of the speaker was prevented from reaching the back of it.

Radio's Influence

ANYTHING which influences a person, consciously or unconsciously, educates. If the influence is a bad one, such as that of a person's slovenly speech, or an over-gaudy wallpaper, or even poor music, the education it gives is a bad one. If the influence is good, as in the truly beautiful, the "Ode to Nightingale," or a navvy offering his seat to a woman in a crowded tramcar, so also is the education received from it good.

For this reason it is of paramount importance that those broadcasting give us the very best they can. Their task is a greater one than satisfying the public for a definite number of hours. They are educators, and so long as we are listening-in we are being educated. Is the education beneficial or harmful? That depends on ourselves. What is our attitude to those broadcasting? Do we continually harass them for second grade, accuse them of being unable to give us what we ask, and if they refuse to badly educate us throw out our sets?

Like a general education, a musical education is acquired. Does one wishing to become educated seek the company of the uncouth or the cultured? Does one being musically educated unceasingly complain because he is put into touch with the best?

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