

With Dealer and Customer

Getting Together To Solve Radio Problems

PARTICULARLY with regard to parts for valve sets, radio retailers should beware of cheapness when purchasing stocks. Overseas "bagmen" pass through New Zealand from time to time showing samples of low-priced radio goods. These should be very critically inspected, and, when possible, tested before purchasing. Selling cheap and nasty radio goods rebounds very quickly on the retailer, and he will soon find trade diverted to the "other man," who refuses to stock "dud" stuff, and tells his customers so.

KEEP A VALVE TESTER.

New Zealand radio dealers who regard themselves as up-to-date should have a valve-testing device, so that every buyer of a valve can see it tested before he pays for it. Many of the larger shops use valve testers, and it saves much dissatisfaction on the part of their customers. These valve testers may now be purchased for about \$3 and upwards. One big New Zealand importing company tests every valve in a shipment as soon as the cases are delivered to their warehouse. "Dud" valves are then weeded out, so that there is little risk of their being forwarded to any of the distributing agents. Naturally, in transit to the distributors there is a chance that valves will become damaged, so it is incumbent on the retailers to test them again before handing them over the counter to a customer. Besides, casualties are not infrequent in retailers' shops, where salesmen are just as liable as any other mortals to drop a valve.

THIS IS ENTERPRISE.

The trans-Tasman air flight afforded the radio dealers a fine opportunity for exercising whatever enterprise they possessed. They were splendidly served by 2YA, Wellington, which station broadcast all the latest information on the flight on the Tuesday the brave fellows sped across the Tasman. The Wellington dealers in many cases placed loudspeakers where they could be heard by the public outside. One Wellington company kept a loudspeaker in operation right through the night until 2.30 o'clock on the Wednesday morning, when 2YA, Wellington, signed off. The doorway of their shop was surrounded by an eager throng until the early hours of the morning. The proprietors also painted on their shop window in large, bold letters all the latest official news regarding the Tasman flight each day, and so that radio shop secured a wonderful advertisement. This is enterprise.

A YANKEE METHOD.

Instead of trying to sell a customer everything which he possesses in his shop, a certain Yankee radio trader says

his way is to ascertain just what the conditions and the needs are and then sell the customer as little as possible to render him absolute satisfaction, telling him at the time how best to take care of it so that it will last him a maximum length of time. When he sells two battery clips, for instance, he throws in an envelope of steel wool and instructions on how to keep them free from corrosion. It means a longer time before that customer buys his second set of battery clips, to be sure, but he has found that the results pay in the end.

TRY REVERSING THE PLUG.

A point which radio dealers should bear in mind is that when a receiving set is operated with a socket power unit, broad tuning may be caused by the fact that the power line will act as an aerial and ground system bringing the signal in through the power unit which will add to or subtract from the signal received in the normal way through the regular aerial. The effect of this is apparently to broaden the tuning that sometimes causes interference from local stations. Under these circumstances the broad tuning is not in the set but is due to the power line pick-up. This difficulty may be eliminated by reversing the plug in the socket.

NEW A.C. VALVES.

The new A.C. valves, which enable the house-lighting current to be used instead of an A battery, have arrived in New Zealand, and good stocks are on the shelves. The circuits of existing radio sets must be slightly altered before the new valves can be used in them.

Adapting battery-operated sets to use the new A.C. valves presents a new sales opportunity to the industry. Several manufacturers in America have devised and are marketing apparatus to accomplish this with a minimum of re-wiring. In most instances, it is a practical undertaking. In some cases it may be expected to result unsatisfactorily. With the constants of the circuit, the valves, and the power supply individual in almost every installation, each re-wiring job may be subjected to experimentation. But, generally speaking, the plan opens up new fields of profit for the dealer through the sale of the necessary parts and accessories, as well as the service charge for doing the job.

LACK OF VARIETY.

Observers of window display effectiveness state that a series of well planned displays can lead the habitual window shopper to look at a display every time he or she passes. If, on the other hand, there is lack of variety in the character of the window display, the impression is soon created that that

particular window is always the same and warrants no attention.

NEW AUDIO TRANSFORMER.

An American radio manufacturing company is now making a revolutionary new audio-transformer built on a radically new principle, being entirely without laminations. It is said that the new transformer produces an amazing improvement in both volume and quality on distant stations—and better quality on locals. This new transformer has a solid core, cast from a new high-resistance copper-nickel-iron alloy called "A" metal. This core, cast in two pieces and fitted together, forms both core and shield. It completely encloses the winding, doing away with all need for further electrical or magnetic shielding. It is claimed that the "Acast" has the same efficiency in either first or second stages due to the fact that the D.C. flux set up by the plate current produces but a negligible effect upon the properties of the magnetic circuit used in this transformer.

CANNOT RENDER SERVICE.

Some New Zealand wholesale radio importers have made the egregious blunder of granting agencies to shopkeepers who have not the remotest idea of radio, and thus are quite unable to render service. An American observer says: "I have in mind just now a case where a harness and carriage merchant plunged into the radio business. He secured the agency for a very popular make of machine and at first sold a great number of them, but when the service calls came in he was lost. He could not check a circuit. He could not repair a machine. Some sixteen or eighteen of his patrons had to go elsewhere with the machines that he had sold, but on which he could not give service. Now this kind of treatment is a money loser for the manufacturer of that set because this same dealer is having hard work to-day selling his sets. The machine is not at fault—it is one of the best makes but the people of his district have turned against it. The radio dealers who know how to service machines are slow to take up an agency on machines that have been butchered by grocerymen, hardwaremen, candy, and cigar merchants."

CORRECT C BATTERY.

Go into the shops of many New Zealand radio dealers and ask what amount of C battery is required by one of the popular makes of valves, and the dealer will look at you nonplussed. The time has arrived when every set employing audio frequency requires a grid-biasing battery.

LSC—Loudspeaker coupling of either choke coil and by-pass condenser or output transformer of 1 to 1, or step-down ratio, recommended wherever plate current (D.C.) exceeds 10 milliamperes. The device known as a "sift-ron" serves the purpose adequately.

TO HOLD THE ATTENTION.

Winning attention is largely a matter of utilising the influence of motion, colour, and variety. Having once caught the passer's eye, attention must be held by what is in the window. That formula seems childishly simple, yet many an attention-attracting display which has aroused curiosity fails immediately after accomplishing that important step because there is nothing in it to warrant further inspection. The successful window concentrates the attention, once won by use of motion or colour, on a single central object in the window. Do not expect a passerby to conduct a treasure hunt for the particular thing which he or she wants. This is a fundamental of successful windows—concentration of attention on a single leading article, a piece of merchandise having wide selling appeal.

CORRECT VOLTMETER USAGE.

Service men employed by radio dealers should remember, in testing any battery with a voltmeter, the battery should be connected to the receiver on which it is to be used and tested, with the receiver turned on to give an accurate test of the actual voltage being delivered to the set. Occasionally batteries will test O.K. when not connected, because the high-grade voltmeters have a very low current drain. When the battery is actually connected to the set, with the set turned on, it may prove defective or of insufficient power. This also applies to power units. They should be tested when connected to the set with the set turned on, and such a reading with an accurate high-resistance voltmeter will show the power being delivered.

DEMONSTRATION ROOMS.

The larger radio concerns in New Zealand should follow the example of some of the big gramophone companies, and have proper sound-proof demonstration rooms. In constructing a "demonstration room" proportion and the correct use of sound-absorbing materials are the two main factors to consider. The room should not be unusually high or long with respect to its width. Most small rooms are entirely satisfactory. It is only with rooms longer than 25 feet that proportion must be considered. The ideal demonstration room should be sound-insulated, and, to a certain extent, but not wholly, reverberation-proof. Too much deadening kills the overtones and ringing qualities of good music. Air spaces and sound absorbing material between the outer and inner partitions will serve to isolate the room from foreign noise. In America most demon-

stration rooms have the upper part of at least three of the walls made of glass. Fortunately there still remains ample surface which can be treated for reverberation, and which will go a long way toward improving tonal reception conditions. The ceiling, for example, may be completely covered with a sound-absorbing material. There are a number of different styles of such felt-like compositions now on the market. In many cases these are finished like plaster and may be tinted. This same material should also be used against the panels below the glass on the side walls, if sound-absorbing fabric is placed on the surface of the inside wall of the room it will do double duty by reducing the intensity of sound-wave reflections, and preventing the reception of sounds from the outside. Do not forget the floor. By all means cover it with a soft rug or a lined carpet.

OPERATE YOUR OWN "MIKE."

A new device is out in America which is of special interest to radio dealers. The manufacturers announce the following purposes of the device:—

1. Allows you to cut in at will on your loudspeaker and make announcements personally through it.
2. Allows you to hook up phonograph with loudspeaker.
3. Allows regular use of radio loudspeaker. (Any of these three steps with the simple throw of a switch.)

The purpose of this set is to enable the radio and phonograph dealers to readily make announcements through the amplifier and speaker of radio or phonograph. It consists of a high-power differential type microphone and a control box having a cord, with an adapter for slipping over the prongs of the detector tube, for attaching to the radio set. Three pin jacks are provided in the side of the control box to receive the microphone cord. Two additional pin jacks are also provided to receive the terminals of a magnetic pick-up for playing phonograph records, where desired. The control box is also provided with a volume control, and a three-position key type switch for turning off the radio programme while using either the microphone or phonograph pick-up with the radio set. As this set can be quickly attached to the radio, and the radio or either type of transmitter can be instantly switched on or off at will, it makes an ideal arrangement for the dealer who wishes to take advantage of the direct advertising possibilities of such a combination.

The device should be useful to dealers on occasions such as the trans-Tasman flight, when they could make near announcements to the public.

POOR JUDGMENT.

One would scarcely credit the lack of commonsense some New Zealand radio traders exhibit. One man who has a line of low-priced loudspeakers he wished to boom, persists in having one of these loudspeakers in operation when broadcasting is in progress. This loudspeaker is a tolerably good performer—at the price—and would be hard to eclipse at that price, but as a public demonstrator at a shop-door it is a decidedly poor advertisement for broadcasting. This trader has much better loudspeakers in stock, but he wants to "push" the low-priced line. The latter is all right in its way for those who cannot afford a better loudspeaker, but the general public which knows little or nothing about radio is apt to judge it by shop-door demonstrations. Traders, for the sake of the good name of radio, should never operate any but their best loudspeakers at their shop doors.

MIND YOUR WINDOW.

One prominent American radio manufacturer's service manager stated recently that only 20 per cent. of the hundreds of dealer stores he had observed use their windows in a way which helps their sales, while 80 per cent. discourage one element or another of the public by fundamental er-

rors in appearance. There is no doubt that many a radio store is overlooking the opportunity which intelligent window display offers. The habitual appearance of your window bespeaks the character of your merchandise and establishes a definite opinion of your store in the minds of the people of your community, whether they are prospects for radio or not. Effective window displays often create a sales impression on an individual which may not be capitalised for a year or more. Yet many a radio store tells its prospective customers that it is an electrical junk shop, an engineering establishment, or a music store catering only to the wealthy when, in reality, it is attempting to sell radio to the average citizen.

VOLUME CONTROL

METHODS, GOOD AND BAD.

Many of the sets in use to-day do not incorporate any special form of volume control. Excellent and easily-fitted devices are now obtainable with which the degree of sound from the loudspeaker can be regulated to a nicety, but where these are not employed rough-and-ready methods are apt to prevail. Some of these are sound, but some are inherently bad, and inevitably give rise to distortion.

Cause of Distortion.

Decreasing B battery tension, for instance, is still quite a common method of reducing signals which are too loud. And, generally, as the volume is lowered by this method, distortion is introduced, though mercifully this is partly mitigated by the decrease in power! In general reduction of B battery tension, may be classed as a very unsatisfactory form of volume control, because it throws the working point of the valve off the proper "milking slope."

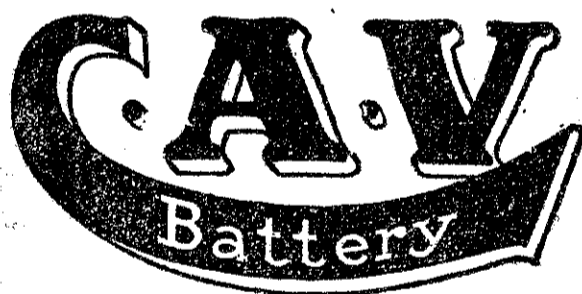
De-tuning the aerial circuit is another favourite method of controlling strength, with many listeners. But unlike the B battery method, there is nothing inherently detrimental to quality in this. When the aerial circuit is out of tune, the input to the first valve is correspondingly reduced, but no noticeable distortion is introduced on this account, so such de-tuning is preferable to B battery adjustments.

How do filament adjustments show up when regarded as volume controllers? The answer to this chiefly depends upon which filament is meant, for whilst incorrect audio frequency filament adjustments are sure to introduce distortion, a radio frequency filament can often be dulled to reduce volume without the slightest trace of distortion becoming apparent. The reason for this is partly a matter of degree of grid-saving—the grid voltages of the audio frequency valves are normally swinging near the danger point for distortion, but the smaller voltage from which the radio frequency valves bear will allow very great reduction in filament current without affecting purity of amplification.

Another Method.

Occasionally, but not often, one sees grid bias used as a volume control. The method is bad, for the same reason that B battery reduction and the dimming of audio amplifier's filament is bad—i.e., it throws the value off its correct position for amplification, which is on the straight steep part of its slope.

Another method of volume control, which is quite efficient, and has no noticeable effect on the purity of reproduction, is to employ a high-resistance potentiometer across the secondary one or other of the audio frequency transformers, if this type of audio frequency coupling is employed. The potentiometer must be capable of smooth control and should have a value of about 500,000 ohms, and the slider is taken to the grid of the valve. Grid bias is connected to one end of the transformer secondary as usual.

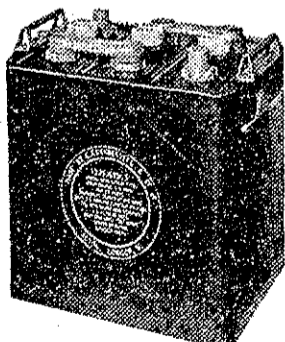


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BATTERIES

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BATTERIES AND SERVICE
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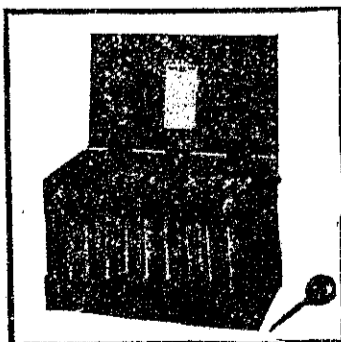
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