

# With Dealer and Customer Getting Together To Solve Radio Selling Problems

## SOME DISAPPOINTMENTS.

Radio traders, in many instances, report that business did not come quite up to expectation during the Christmas period. Many ascribe the absence of a real rush of business to the depressing effect of the "Summer-time" Bill, which has deducted an hour from the evening darkness.

## WINTER BETTER THAN SUMMER.

If dealers are disappointed with the volume of business they did during Christmas, they will gain some satisfaction from the knowledge that, after all, the counter-attractions of the great out-doors militate somewhat against radio during summer-time in other countries. The coming winter, however, is bound to be a record radio season in New Zealand.

## RADIO "DOCTOR'S" CHANCE.

With the growing popularity of radio and the large number of listeners in the cities, it is now up to some enterprising young radio dealers to organize a radio "doctor's" service in each of the four New Zealand centres. Many well-to-do broadcast listeners would welcome a chance to be able to call a radio "doctor" by telephone at night time to fix up their sets when they unexpectedly develop some trouble which incapacitates them.

## DON'T CLOSE AT MIDDAY.

Some of the smaller radio traders close their shops during the lunch hour, just when folk are able to get out from their shops and offices to make their purchases. This is not only evidence of lack of enterprise upon the part of the trader, but it means a loss of business, and the man who does keep open scores.

## USE GOOD WINDOW CARDS.

Window cards should be neat, but not too ornate. Their function is to convey information plainly and directly to the prospective buyer. The cards should not be too small, and the lettering should not require field-glasses to decipher. There is a city radio shop with most elegantly printed cards and almost microscopic lettering upon them. To make matters worse, the cards are placed right away from the front of the window.

## NEAT WINDOW DISPLAYS.

No wise radio trader will clutter his window with a confusion of articles carelessly thrown about. A lot of anything looks cheap. Don't confuse the buyer with competing lines. Don't disgust the onlooker by having a dirty window. A layer of dust on displayed goods is the worst thing possible for business. A trader can always display his enterprise and attract business by having his windows frequently rearranged. If, on the other hand, there is a 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.

## WINDOW DISPLAYS FEATURED.

Good, sound advice is given by the president of a big American radio com-

pany on the subject of window displays. He says:—"At present, aside from the publicity given us by people who have purchased sets from us and recommend them to their friends, our most valuable advertising medium is our show window. At the opening of the fall season we have a window featuring the joys of radio; prior to the holidays another; and in the spring we suggest it as a much appreciated present for graduates and brides by means of an interesting display. Four times a year, toward the close of each season, we announce a sale, at which time we fill the window with radio equipment specially priced. In this way we keep both quality and price constantly before the public."

## COLOURS ATTRACT BUSINESS.

An American dealer advises fellow radio traders as follows:—"Taking a tip from the colour advertisements which stand out from those in black and white we make it a point to use colour in all our window displays. To achieve all possible colour effects we take advantage of various lithographed window cards supplied by the manufacturers and use crepe paper liberally. Colour thus obtained is inexpensive, and has a sales punch that moves merchandise from our shelves. We find that it also pays to have all our printing done on coloured paper, the slightly increased cost for the latter being offset by the business it attracts."

## DON'T URGE DISTANCE NOW.

Although tone quality is important in the minds of radio fans, the ability of receiving sets to get distance is always a very great sales factor. With the public still interested largely in distant stations, many dealers exhibit a tendency to overplay this particular feature. Clear reception can be obtained within a range of, say, from 500 to 1500 miles, but if this range is exceeded, although the set may be capable of much greater distance, natural noises are bound to result. This in turn will make a dissatisfied customer. Therefore, retain distance in the sales talk, but don't over sell it. The Australian stations are not heard to advantage before 11 p.m. during midsummer. When the autumn sets in, and "daylight saving" goes out, the position will be much improved.

## INSTRUCT YOUR CUSTOMERS.

A frequent cause of trouble is the supplying of a special detector valve (like the 200A type) without properly instructing the customer as to its operating characteristics. After hearing a fine demonstration in the store, the purchaser has the receiver installed in his home. He wonders why he did not notice the hissing noise when the set was sold him, and is likely to conclude that the demonstration set is superior to his own. Were customers properly instructed by the dealer as to the warming-up process and correct adjustment of the filament rheostat, after warming up is over, the customer would be thankful for the thoughtfulness of the dealer in supplying him with this superior detector valve. Instead, his first evening of radio entertainment is one of exasperation which ends in a service call, costing the dealer at least 10 shillings in time.

## AVOID DISSATISFACTION.

It pays to sell only good-quality radio goods. The receiving set, completely installed, should be considered as a unit. The dealer sells the complete package; a failure of any part of it, however, insignificant, means the failure of the entire equipment. The sale of low-grade valves, accessories or power supply, in order to make a larger profit on the set, is inviting a later series of service calls which will eat up that profit. A little less expensive set, with high-grade valves, adequate current supply, and a speaker of good quality, means a permanently satisfied customer and a profit which will not be constantly in jeopardy because of the customer's kicks.

## TO DEMONSTRATE EFFECTIVELY.

A poor quality loudspeaker connected with a poor quality receiving set cannot be expected to give good tone. Using a good loudspeaker with a poor set will fail to give pleasing tone. And a poor loudspeaker operated by a good set will have the same effect. A radio dealer should not attempt to demonstrate without having the best quality in both loudspeakers and set if he sells high-priced equipment.

## GOOD SERVICE IMPERATIVE.

New York "Radio Retailing" says:—"The day is over when any 'ham' can build as good a set as a factory-made product, and with this comes the realization that no longer can any young high school boy with a smattering of amateur radio be hired as an efficient service man." It is a plain truth that there are some radio dealers in the Dominion who are quite unable to provide any service for their customers, and as a result there is much dissatisfaction among buyers. Small troubles which should be easily rectified are neglected.

## FREE ADVICE AIDS TRADE.

A San Francisco radio trader has built up a big business by inducing listeners to come in and obtain free advice about their equipment. Printed on all signs used, on all advertising, and on every package which goes out of his shop is the slogan, "We specialize in furnishing expert advice in your own language, free from puzzling technical terms, and without having to buy anything." From 8.30 a.m., when his shop opens, until 6 p.m., when it closes, there is almost a continuous procession of questioners, and his salesmen are busy all the while.

## A COMMENDABLE PRECAUTION.

An enterprising Indiana (U.S.A.) radio salesman always makes a private preliminary test near the house of a prospective buyer with his portable set to ascertain whether there are any discouraging local noises that may mar reception. Then when the salesman is absent to give a demonstration for the prospective buyer he frankly informs the customer if there are any electrical leakages in the vicinity and endeavours to have the cause corrected before giving the demonstration.

## A CONE HINT.

A Connecticut (U.S.A.) radio company suspends large cone loudspeakers horizontally from its shop ceiling fixed up like an electric light fixture. As a result the sound is more evenly distributed throughout the room, and the reproduction is more faithful as there is no gravity side pull of the vibrator pin against the armature.

## SALES INTELLIGENCE.

It has been found that 15 per cent. of radio service calls are due to the customer misunderstanding or poor instruction of the customer by the dealer. A service complaint may be to the effect that the set squeals constantly, while the only attention needed is to have the rheostat turned down. Or, after a month or two, the storage battery gives out and the customer is surprised to learn that it requires charging. Just why the radio dealer should not have displayed the ordinary sales intelligence which each such case represents is not clear, but this kind of abuse is so widespread that it is the cause of hundreds of otherwise avoidable service calls.

## MELBOURNE TRADERS' GOOD WORK.

A Melbourne writer says:—"This Christmas very attractive window displays were observable in Melbourne at all the dealers, but the most noticeable improvement over previous years was the excellent behaviour and adjustment of the loudspeakers. Most dealers arrange to have a loudspeaker over the doorway of the establishment, and too frequently in past years these have been the most deplorable exponents of wireless incompetency that it was possible to meet. It was only to be expected that when such awful combinations of misplaced sound were hurled at passers by that they should wag their heads disparagingly and remark, 'Oh! it's only the wireless!' and pass by on the other side."

"To-day, however, all this is changed, and the noisiness of a loudspeaker is merely proof of decadence in the dealer. The most reputable firms have learnt to restrain the youthful enthusiasm of inexperienced salesmen, who in days of yore could not forbear from tinkering with apparatus that they knew nothing about. The consequence

is that wireless has come more thoroughly into its own, even as a street musician. In one much frequented Melbourne street there is a bevy of wireless dealers well within coo-ee of each other, and you cannot get out of hearing of one before the others, too, take up the tale and can be heard quite distinctly. In past years the horrid result used to be an excoriation of the aural diaphragm. This Christmas, however, there was actual pleasure to be derived from taking up a strategic position, where all three loudspeakers were to be heard at once, and with equal volume, and it was quite a revelation in good musical reproduction to notice how accurately in unison and uniform in tone the trio were. It was, in fact, somewhat weird when any speaker or singer was under transmission, and the three identical voices came from different quarters simultaneously."

## RADIO AND GRAMOPHONES.

New Zealand radio traders should note that there is a lot of business to be done with the electrical pick-up used in connection with a gramophone, a radio set, and a loudspeaker. The advantages of the electrical gramophone are many. Apart from the question of tone, the volume obtainable is only limited by the power of the amplifier and the ability of the loudspeaker to handle it, yet volume control is quite easily arranged. For dancing and similar purposes this is a great advantage. There is also the advantage that the gramophone and amplifier can be in one room and the loudspeaker in any other. Those already in possession of a radio set with good audio frequency stages can adapt it so that by a simple switching device either gramophone records or broadcasting can be reproduced at will. Finally, any old gramophone will do to operate the electrical portion, providing it has a fairly good motor. Alternatively, if no gramophone is available, it is only necessary to purchase a motor and tone-arm.

The radio dealer will appreciate that the introduction of the electrical gramophone opens up to him the possibility of selling, not only the "pick-up," but amplifiers (or components to build them), valves, batteries, and loudspeakers.

## KILOCYCLES AND METRES

### A SIMPLE EXPLANATION.

In rearranging the licenses of stations lately, the United States Federal Radio Commission, like all technical men, has laid special emphasis on kilocycles, rather than on wave-lengths (or metres). Yet the public has previously failed to respond to efforts to impose upon it this more scientific method of reckoning. There seems to be a popular feeling that a wave-length is something tangible, while a kilocycle is an abstract idea.

Yet the matter should be simple enough. A cycle is a reversal from positive to negative, and back again from negative to positive, in the electricity in an alternating-current circuit, or in the impulses creating the field of a radio wave. "Cycles," used as a measure of the rapidity of these changes, implies always per second; and "kilocycle" is simply a short expression for thousands of cycles (per second). A thousand kilocycles, therefore, means a million double changes per second in the polarity of the wave, as measured at any point in its progress and, as the wave advances 300,000,000 metres (more accurately, 299,820,000, more or less) per second, the "peaks" will be highest at points 300 metres apart, along the path of a 1000-kc. wave. We have here the idea of a simple wave, corresponding to a wave in water, with approximately equal spaces between its highest crests. However, the water does not move steadily forward—it rises and falls—and the radio wave is not a flow of current; it is a rise and fall of voltage.

### ACCURATE MEASUREMENT.

The frequency of currents, alternating from thousands to millions of times a second, has been very accurately measured, the wavelength, with a lesser degree of accuracy, by other complicated devices. From the standpoint of classifying stations in a broadcast list, we might use either kilocycles or metres readily enough. We may also describe a distance as 66 feet, or as

1-60 of a mile, with equal accuracy; it is merely a question of convenience in reckoning.

But, in the technical problem of arranging stations so that they will not interfere with each other, it is necessary to calculate in cycles; because what is impressed on a radio carrier-wave is not a wavelength. It is a frequency.

### VIBRATIONS AND CYCLES.

A musical note is a vibration at the rate, for instance, of 800 cycles a second, causing air waves about four feet long. In an electric speech amplifier this would correspond to electric waves about six hundred miles long, because of the great speed of electricity. But we do not add a six-hundred-mile wave to a thousand-foot wave; we impress a frequency of 800 cycles (per second) upon one of a million (per second). The result is a "modulated wave." The function of a radio detector is to iron out, so to speak, the million-per-second wave and leave the 800-per-second wave, which enters the loudspeaker and reproduces a 800-cycle note, of sound in air.

Now, at the upper end of the broadcast band, a 300-cycle change affects the wavelength (measured in metres) about ten times as much as it does at the lower end of the band. At 5200 metres, the wavelength used for trans-Atlantic radiophone work, one kilocycle added to the frequency makes a difference of about 100 metres in the wavelength. At 5.2 metres, down near the very short wavelengths at which amateurs are now working, a kilocycle makes a difference of only about one ten-thousandth part of a metre in the wavelength. As a mathematician might put it, the difference in the length of a wave represented by a kilocycle varies inversely as the square of the frequency (approximately).

### CONVERSION TABLE.

The following table, to the nearest tenths of metres, is therefore published for the information of our readers, who may desire to convert kilocycles into metres, or vice versa.

Metres	K.C.	Metres	K.C.	Metres	K.C.
545.1	550	344.6	870	252.0	1190
535.4	560	340.7	880	249.9	1200
526.0	570	336.9	890	247.8	1210
516.9	580	333.1	900	245.8	1220
508.2	590	329.5	910	243.8	1230
499.7	600	325.9	920	241.8	1240
491.5	610	322.4	930	239.9	1250
483.6	620	319.0	940	238.0	1260
475.9	630	315.6	950	236.1	1270
468.5	640	312.3	960	234.2	1280
461.3	650	309.1	970	232.4	1290
454.3	660	305.9	980	230.6	1300
447.5	670	302.8	990	228.9	1310
440.9	680	299.8	1000	227.1	1320
434.5	690	296.9	1010	225.4	1330
428.3	700	293.9	1020	223.7	1340
422.3	710	291.1	1030	222.1	1350
416.4	720	288.3	1040	220.4	1360
410.7	730	285.5	1050	218.8	1370
405.2	740	282.8	1060	217.3	1380
399.8	750	280.2	1070	215.7	1390
394.5	760	277.6	1080	214.2	1400
389.4	770	275.1	1090	212.6	1410
384.4	780	272.6	1100	211.1	1420
379.5	790	270.1	1110	209.7	1430
374.8	800	267.7	1120	208.2	1440
370.2	810	265.3	1130	206.8	1450
365.6	820	263.0	1140	205.4	1460
361.2	830	260.7	1150	204.0	1470
356.9	840	258.5	1160	202.6	1480
352.7	850	256.3	1170	201.2	1490
348.6	860	254.1	1180	199.9	1500

If an outside aerial is used with a superheterodyne receiver it should be designed to work with the receiver. Usually, fifty feet is long enough. The longer the aerial the more it broadens the tuning and decreases selectivity. For the super, the aerial does not need to be as high as for less powerful sets.

It is generally conceded that transformer-coupled amplification provides the simplest and most stable means of obtaining ample loud speaker volume. While the better makes of present-day transformers provide good tone quality in combination with a suitable loud speaker, to those with a critical musical ear, however, somewhat better tone quality, with less volume, may be obtained with impedance and resistance-coupled methods. However, the last two methods, because of their inherent characteristics, have often been abandoned in favour of the more stable transformer-coupling system, with its greater volume for given "B" or plate voltages, though at a slight sacrifice in realistic rendition.

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