With Dealer and Customer

Getting Together To Solve Radio Problems

NO doubt during the ensuing year a great number of electric pickups for combining gramophone reproduction with audio valve amplification in conjunction with radio sets will be sold in New Zealand. Both traders and the public will be faced with the difficulty of making a judicious selection of these electric pickups when purchasing. One of the besetting faults of some makes of these pickups is their weight on the gramophone records. Some pickups bear down so heavily on the records that the springs of some gramophones cannot maintain their normal function, and have to be more frequently wound up to keep the records revolving. In fact there are some higher-priced gramophones which cannot run a complete record without having to be re-wound, when some of these electric pickups are resting on the records. Plainly these pickups are too heavy. Then some of these electric pickups are inclined to "chatter" when the records are loud. This can be cured only by opening up the needle unit of the pickup and making certain alterations, but this is the work of an expert. On the other hand electric pickups are being sold which have neither of these faults; this is published only as a guide to purchasers of an article which is new on the market, and of which there is relatively little experience in New Zealand.

GRAMOPHONE AMPLIFIERS.

A separate audio amplifier for the gramophone electric pickup is preferred by many instead of using the amplifier in the radio set. Besides, in New Zealand there are many gramophone enthusiasts who cannot be induced to take up radio at present. The alert radio dealer cannot overlook the potentialities of catering for this section of the public, and he will have audio amplifiers built up solely for gramophone electrical amplification.

If the special amplifier is transformer coupled it does not need more than two valves, and if the best audio quality obtainable will be comparable to the most expensive and up-to-date gramophone.

If only a moderate loudspeaker volume is required from the circuit, the last valve may be a 112A as well as the first. The plate voltage on the last valve then should be cut to 157 volts and the grid voltage (C batt-) to 10½ to 12 volts. When this valve is used as the output valve it is not necessary to employ any filter, but the speaker may be connected directly to the plate circuit.

The amplifier may be mounted on an ebonite or similar sub-panel 7 x 10 inches, or on a sub-panel made of ply wood, asbestos board, or metal of the same dimensions. Thus assembled the amplifier can be tucked away in a compartment of the gramophone cabinet in connection with which it will be operated. There will be room in the majority of larger cabinets to install the batteries and the A battery charger as well.

AN ECONOMIC CLEAN-UP IN NEW ZEALAND.

SOME of the weaker elements in New Zealand radio trading circles are now experiencing an economic clean-up, inasmuch as some of those enterprises which entered the field with insufficient capital, and in many cases insufficient experience (and knowledge as well) are being forced out through the inexorable law of bankruptcy or voluntary liquidation to avoid greater losses. In this respect we are following most countries, which have taken to radio. The temptation to make comparatively big money in quick time by meeting a popular demand for ready-made sets necessarily attracted to the business some not fully equipped for staying with it and giving satisfaction to the public. In addition to this influence and the incapacity of this class to build a permanent business by rendering that follow-up service which radio demands in even greater measure than most retail businesses, there is being experienced a back-wash from American amalgamations, which mean reductions in the number of competitive sets likely to remain permanently on the market. In the cleaning-up process it is unfortunate, but inevitable, that two important groups shall suffer—namely, the wholesaler who has supplied the weakening retailer with goods, and is left with a bad debt, and the buying public, who may find they have relied upon men of straw for information and service in a field where the buyers' own ignorance made them the more dependent on good advice. The outcome of both effects is a higher cost of radio to the public, for the wholesaler must provide a margin to recoup his losses, and the public must frequently face further expenditure to secure satisfaction.

BETTER WITH FEWER DEALERS.

IT is true that dealers have been required to be licensed, but that license has carried with it no obligation on the license to really know anything of radio or be in a position to reliably serve the public. It has been merely a revenue-earning license, not a guarantee of capacity or ability. In this respect the present position and its difficulties and losses might have been mitigated by the Government benefiting from overseas knowledge, and imposing a heavier trading license fee, and requiring a standard of knowledge on the part of dealers, as a protection to the public. But no such requirements have been imposed, and as an outcome it is left to the slower but sure process of economic adjustment to right the position. The position is being sighted, and the first visible result will be a distinct reduction in dealers' licenses after March 31. Far too many have engaged in the business. Competition here has not meant lowered costs, but has meant the maintenance of an unnecessarily high overhead. It will be far better for the public, and more conducive to better service at lesser rates, for fewer dealers to be in the business, particularly fewer of the type who have mainly secured a dealers' license to profit on discounts. The interests of the buying public require first consideration, and they are more likely to be properly conserved by trading being in the hands of capable and legitimate traders, who are in the business to stay. The public can hasten the betterment of conditions generally, and ensure their own satisfaction, by concentrating upon those houses and dealers of standing who are handling quality lines, and are definitely in the business to stay.

ADVISE CALIBRATION.

IT would seem hardly necessary to advise radio traders to tell their novice customers, when they buy a radio set, that much time will be saved in finding distant stations, after they have once been tuned in, by keeping a record of the tuning dial settings. Yet one often sees novices helplessly searching night after night for some of the Australian stations, although they have tuned them in on previous occasions. Traders are apt to overlook some details when handling novices, but it is to the dealer's own interest to leave no stone unturned to assist his customer in obtaining the greatest amount of pleasure possible from his new radio set. This is essentially good business policy. One well-known company which manufactures an extensive line of valves, exceedingly popular in New Zealand, distributes, gratis, a neatly printed card with a table of the New Zealand broadcast stations and the chief Australian stations with ruled spaces for writing in the dail numbers of the radio set. The card bears an advertisement about the valves, and the idea is calculated to prove capital for publicity purposes.

POINTS ON TIME-PAYMENT SALES.

IF New Zealand radio traders go into the time-payment sales system they will find some interesting points in the following advice published by the New York "Radio Dealer":—

"Always sell for cash when possible.

"The salesman who springs 'easy terms' on the customers at the outset is doing you no service. Instalment terms should always be reserved for those who find immediate cash payments inconvenient. Sell on time only when it will benefit the customer. Does he want Radio badly enough to go into debt for it? And will he keep on wanting it?

"Get as large a down payment as possible.

"Where some dealers fall down," said a Radio merchant, "is in selling terms instead of merchandise. I sell Radio, with terms incidental. The first thing the average customer asks is: 'How much cash is required?' Our salesmen are instructed to come back with, 'How much can you pay?' The customer's pride asserts itself. You'd be surprised to know how often he names a figure above our required minimum."

"Doesn't that sound like good sense? And it's right in line with the advice recently given by Curtis C. Cooper, President of the General Motors Acceptance Corporation, to his organisation.

"Without in any way restricting the salesman's ability to close a sale," said Mr. Cooper, "an effort could be made to secure the most conservative terms adapted to the purchaser's circumstances.... It would increase the general average of all down payments.... reduce the average term of all outstanding notes, and therefore require less money to carry them. The loss experience would be lower. There would be fewer repossessions. Less collection effort would be required. There would be more satisfied customers, and sales would stick.... The dealer's credit line would be greater in proportion to his capital, increasing his turnover and increasing his ratio of profit."

LATER on, in New Zealand, it will be found necessary to institute some system of examination for radio service men, who will then have to possess a certificate of competency before being allowed to follow their calling. While many New Zealand radiotricians are turning out work equal to any of that in imported sets, the fact remains that there are some jobs seen from time to time which are a positive disgrace. Good sets are also sometimes badly messed up after being through the hands of some folk.

In future the license fee to be paid by Australian listeners will be 24s. a year, instead of 27s. 6d. as in the past years. The rado trade is anticipating the reduction will give an impetus to the purchase of receiving sets. The listening license now costs less than a penny a day. For that amount radio gives pleasure to the whole household almost continuously from 7 a.m. to midnight. It is said the value of radio in rural parts is becoming more appreciated as time passes.

THE FUNCTION OF BATTERIES

To explain why we have "A" and "B" batteries in a receiving set, the functions of each, and why one high-voltage and one low-voltage battery is used, it is necessary to go into an explanation of the principle of the vacuum tube (or valve) as used for radio purposes. We will attempt to make this explanation as clear and non-technical as possible.

Through the researches of scientists, such as Thomson, Richardson and Millikan, we know now that when certain metals are heated to incandescence, particles of matter are thrown off. These particles are called electrons and the theory explaining this phenomenon is called the "Electron Theory." Incidentally, these electrons are negative particles, and at present the smallest particles of matter known.

In 1904 Fleming (another scientist) was granted a patent on the device called a "Fleming valve," which consists of a filament-and-plate element enclosed in an evacuated glass vessel. In school, in the physics or science class, we learned that positive attracts negative, or vice versa, depending upon which has greater strength. Fleming inserted in his device a battery of high potential. The positive side of this battery was connected to the plate within the vessel, thus making the plate highly positive, thereby enabling it to attract the electrons which were thrown off by the heated filament. This device was of little practical use as far as radio (in those days called "wireless") was concerned, until 1906 when DeForest inserted the third element called the "grid," thereby making the most sensitive detector known.

Now to show how "A" and "B" batteries are concerned. The battery required to heat the filament to incandescence is called the "A" battery (probably because it is the first battery to be taken into consideration, of primary battery). The battery required to give the plate its positive potential is called the "B" battery. However, since the filament consumes an enormous amount of current compared to that used by the plate element of the tube, the battery necessary to heat the filament must have a high amperage capacity, ranging from 28 to 120 amperes, depending upon the number of valves used in the receiving set, and the type of valves. In the early days valves were manufactured with filaments which required six volts and consumed about an ampere. At present, due to research and developments made by electrical engineers, we have radio valves which operate from a dry cell or two, and consume only from .06 to .25 of an ampere.

The "plate" of the valves consumes very little current, as aforementioned, but requires an extremely high potential, varying from 22½ volts for a "soft" or detector valve, to 90 volts for the ordinary amplifier valve, and about 180 volts for a power-amplifier valve. Ordinary "B" batteries are constructed (consisting of a number of very small cells) so that, although their amperage capacity is very low, ranging from two to seven amperes (of total output) the voltage delivered is high because of the small cells, each delivering 1½ volts, being connected in series.

FAMOUS JAZZ BAND

JOE ARONSON AND HIS GANG.

Some hundreds of New Zealanders have obtained many hours of delight from Joe Asonson and his jazz band, which plays at 3LO, Melbourne. Some particulars of this clever musical combination will interest many New Zealanders. Joe Aronson himself is from the United States, but the other players are Australians. Of his team Aronson writes:—"First there is Roger Smith, who as a trombonist and violinist has no equal when it comes to versatility—an essential in modern orchestration. He is deputy-conductor, and an expert arranger. Percy Code, solo cornetist, needs no introduction. He stands alone as a musician and composer, and my combination is enriched with his silver-toned trumpet to such a degree that I now regard him as indispensable. Ned Tyrell, who plays the banjo and ukulele, and is the comedian of the party, was for years a vaudeville artist of popularity. Neville Stoneham plays violin and saxophone; Colin Turner, saxophone and organ; H. Hallam, trumpet; Les Whitty, saxophone; Andy Robertson, sousaphone; Les Richmond, popularly known as "The Wizard at the Piano," is well-known for his pianoforte syncopations; whilst last, but not lease, is Clarence Aronson, drummer, xylophonist, and tympanist, who provides the wonderful effects for which the orchestra is noted. Most of them can play any instrument put before them, and that accounts, to a large extent, for the versatility of the orchestra in producing variety turns and novelty numbers."

Perhaps some of our New Zealand jazz band directors will take a hint from the above combination of instruments.

ARONSON'S CAREER.

Joe Aronson's career has been a remarkable one. He drifted into the land of crochets and quavers when ten years old. At the age of twelve he formed a small band among the boys in the little American town in which he was born. A visiting circus fired his imagination, and his services with the circus band were eagerly availed of. Before the show he played outside the big tent, and then took his turn in the ring as clown, acrobat, and a rider. Later he secured an engagement as a saxophonist in the famous Rector's Cafe in New York. From there he went to Earl Fuller's Orchestra, and was one of the first players to make jazz records for the Victor Gramophone Company. Their immediate success was the forerunner of the present-day catalogue of dancing jazz numbers.

Aronson's Band has played in New York, San Francisco, Shanghai, Japan, and all through the East. Their remarkable success at 3LO, Melbourne, has made them famous throughout the world.

RADIO AND RECORDS

ELECTRICAL PICKUP.

The combination of radio amplifiers, an electrical pickup and a gramophone is becoming increasingly popular. Most electrical pickups for phonograph use impose less load on the record than the mechanical type, and for this reason a needle may be used for several records. For this reason numerous people have been surprised to find that the motor in the usual portable type phonograph has insufficient torque to run some records with some types of pickups, although there was sufficient to run the mechanical reproducer.

The reason for this is that some electrical pickups are considerably heavier than the mechanical reproducers. This weight is largely due to the use of a permanent magnet in the pickup. Since the sensitivity of such a pickup is proportional to the magnetic field strength, there is a relation between the size and weight of the magnet and the sensitivity. To make the output of the pickup sufficient to give loud volume on two stages, several manufacturers have made units, which are quite heavy. This results in a drag on the record, and in cases where the spring motor is "weak," the speed is reduced, and frequently the record will stop.