

Servicing of Sets.

ONE of the most misconstrued terms in radio phraseology is "the servicing of sets." On purchasing a set most dealers instal and leave it in thorough working order. If anything goes amiss they ask that the purchaser communicate with them. In most cases no charge is made for adjustment only, but it must be borne in mind that free service costs the dealer something, even if it involves only a few minutes' work.

Some distressing episodes are told of purchasers who have for some considerable time worried their dealer in taking him, sometimes a great distance, to turn on a switch, to connect the aerial or earth, or to replace a battery.

Nearly every man in the trade can tell of long journeys to do some such simple operation. To suggest a fee, even his bare time, brings wrath and indignation upon his head.

It is the duty of every set owner to acquire at least an elementary knowledge of his set, and to learn to do these simple jobs for himself.

The Set.

THOSE who purchase a set and have it installed will do well, once it is going, to leave it alone. Don't fiddle or allow anyone else to fiddle with your set. Hundreds claim to be experts, but the number who are truly expert are very few, and the listener, in engaging such a person must expect to pay for his service. One visit from such an expert is worth all the service that "others" can ever render.

Certain factors outside the actual set require attention, and this can be done only if the owner knows something about his set.

The Aerial and Earth.

IN many installations a switch is provided connecting the aerial with the set on one side, and on to the earth on the other to safeguard against lightning risks.

Everyone likely to operate the set should make certain that they understand the working of the switch. In the event of the set failing, first look to this factor. If it is not known which is off or on no harm can be caused through moving the lever to try and decide.

In other cases there is no switch, the aerial and earth wire being connected directly to their respective terminals. It is the practice of some to disconnect the aerial before leaving the set, and quite often another wishing to use it may wonder why it will not work. Don't call the dealer; look for the aerial terminal (usually marked ANT, for antenna), and connect the free end to it.

Care must be taken to connect the aerial to the aerial terminal and the earth to its terminal. The two wires should be marked in some way, for although an error would not do any damage it would impair reception if not prevent it altogether.

A Corner for Beginners — By Observer —

Those unacquainted with their sets and who are often troubled with quite simple problems will find in these columns from week to week notes on the elements of radio.

Batteries.

PROBABLY more trouble is caused through faulty batteries than through any other single factor. Batteries in some ways are to be preferred to eliminators; they give a steadier current, and are very reliable, but they don't last for ever.

Provision is usually made for the regular recharging of the A (filament) battery, by a trickle charger or by taking the accumulator to a service station to be recharged regularly. The former is the more economical, and is to be preferred.

With the B (plate) battery, however, this is not the case. The voltages required are fairly high, requiring a very elaborate accumulator, so that the "dry" type usually are relied on. The life of these is governed by their use, but, if in regular use they require renewing about every six months.

The C battery, the smallest in the set, uses but little current, and requires renewal less often than the others. This battery gives a negative charge to the grid of the valve in order to control the flow from the other batteries.

Careful arrangement of the voltages of B and C batteries is necessary to give good results, and if the B is allowed to fall too low the correct relationship between it and the C is lost, and distortion is the result.

Voltages of the Batteries.

NORMALLY B batteries are made up in blocks of 50 volts. Some sets use as many as four or five of these blocks, but the average five or six valve set will work from three, giving a total emission of 150 volts.

These will work satisfactorily until they fall to about 38 volts in each block, when the relationship between them and the C is so disproportioned as to give badly distorted reception. In addition, volume will so decrease that many stations may be entirely lost.

If the B batteries are kept in proper order the C must not be neglected. If allowed to run until very low while the B is maintained at good strength, distortion will result.

Measuring Voltage.

A GOOD voltmeter is essential to all set owners, and should be in constant use. To measure the potential of a battery it is necessary to place one terminal of the voltmeter on each of the battery terminals (positive and negative), but this is not all.

The following precautions must be observed:—

(1) The maximum voltage of the voltmeter must be greater than that of the battery block. A voltmeter, made to register 20 volts, would be ruined if placed on a fully charged 50-volt block.

(2) The positive terminal (marked + or coloured red) of the voltmeter should be applied to the positive terminal of the battery which is connected to the set. There are several positive tappings each marked with a number and the positive sign. If fully charged, this and the reading of the voltmeter should agree.

(3) The negative (—) terminal of the voltmeter, usually on flexible wire, should be placed on the battery negative terminal, and the indicator will register the voltage.

(4) Do not attempt to measure the accumulator (A battery) in this manner. A special hydrometer, which tests the density of the liquid, should be employed.

Connections.

THE greatest care must be taken to ensure that the connections are kept clean. Badly distorted reception, sometimes completely failing, may result from unclean terminals. This applies especially to the accumulator. The acid, if not cleaned from the terminals, will corrode them, and cause a faulty connection.

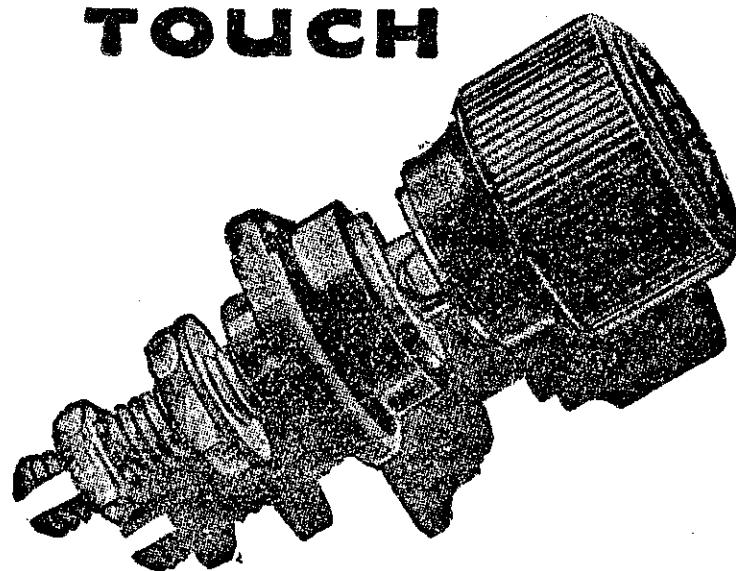
Periodically these and the clasps attaching them to the set should be scraped and made as clean as possible. Ensure that firm connections are made. A loose connection will give continual trouble.

This applies to all connections. The aerial and earth wires, entering the set, should be periodically scraped and cleaned. The B and C batteries will require constant care in this respect, but it is not advisable to try cleaning any of the wires inside the set. Leave this to someone who knows what he is doing.

Speaker plugs need an occasional scraping.

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