

Glossary of Wireless Terms

From week to week we give here a section of the glossary of wireless terms from the "Listener's Guide."

HIGH FREQUENCY RESISTANCE.

—The resistance which a conducting path offers to high-frequency currents. Skin effect renders this higher than the resistance that would be offered by the same path to a continuous or low-frequency current.

Skin effect refers to the property of H.F. currents of flowing on the outer edges of a conductor and not penetrating to the core. The higher the frequency the less the penetration.

HIGH-TENSION (H.T.) OR "B" BATTERY.—The battery which supplies the current flowing from the plate to the filament in a radio valve. See B battery.

HONEYCOMB COIL.—A type of multilayer coil in which the lattice formation of the successive layers suggests the honeycomb. See "Duo-lateral Coil."

HOOK-UP. An Americanism for "circuit."

HOT-WIRE AMMETER.—An instrument used in radio transmission work which measures current in amperes by means of a wire expanding in proportion to the heat generated by the passing current. As the wire alters in length it pulls a pointer round a graduated scale against a spring. This type of meter will read either direct, alternating, or oscillating currents, with average accuracy. If specially calibrated for one type of current or frequency, it is quite accurate.

General abbreviation, "H.W.A."

HYGROSCOPIC.—Susceptible to the accumulation of moisture, such as condensation from the breath.

IMPEDANCE.—The total opposition offered by a circuit, or piece of apparatus, to a varying or alternating current, being made up of the combined effects of resistance and reactance. See "Inductance."

IMPULSIVE CURRENT.—A current which flows in a given direction, but varies in quantity at either a radio or an audio-frequency. Such a current flows from the B battery of a radio set.

INDEPENDENT HETERODYNE.—A separate apparatus solely to generate local oscillations for the reception of continuous wave telegraphy. See "Heterodyne."

INDOOR AERIAL.—Considerable efficiency can be obtained with a well-designed, well-insulated, indoor aerial and a standard earth, and it is much to be preferred to a frame for normal reception if a full-sized outdoor aerial is not possible.

INDUCTANCE.—When an oscillating or alternating current is passed through a coil of wire, opposition is offered to its flow by virtue of the magnetic effect of the current. This opposition is measured in terms of impedance, and the two factors determining impedance are inductance and resistance. Resistance has been explained elsewhere. The inductance (or self-inductance as it is generally called) becomes the greater, the larger the number of turns or the greater the diameter of the turns. If an iron core is introduced into the winding, the inductance increases hundreds of times in value, because of the increased magnetic effect. In actual terms of measurement, self-inductance is known as "re-actance."

INDUCTION.—The production of an electromotive force in an electric circuit through the agency of another circuit, without any direct electrical connection between the two. Induction may be brought about by lines of electric force (electro-static magnetic induction). Upon the latter depends the working of the transformer, certain tuning coils, and the loose coupler.

INDUCTION COIL.—A piece of apparatus for producing high-voltage or practically-speaking unidirectional currents from a low voltage direct current supply. It is largely used for producing the spark discharge on ships' "emergency" transmitting sets and small land spark stations.

INTERACTION.—May be deliberate or accidental. Ordinary reaction is interference, and if carefully used is beneficial. In a badly-designed set, or with badly-designed parts, there may be interaction between two low-frequency transformers, between two coils which should be isolated or even between actual leads in the wiring, which are not sufficiently widely separated.

RADIO DIRECTORY

What to Buy and Where

AUCKLAND

- ATWATER-KENT RADIO** .. Frank Wiseman, Ltd.
170-172 Queen Street, Auckland.
- ALTONA & HAMMARLUND-ROBERTS SETS.** Johns, Ltd.
Chancery Street, Auckland.
- AMPLION LOUDSPEAKERS** . All Radio Dealers.
- BREMER-TULLY RADIO** Superadio, Ltd.,
147 Queen Street, Auckland.
- BURGESS RADIO BATTERIES,** All Radio Dealers.
- CE-CO VALVES** All Radio Dealers.
- FADA RADIO** National Electric and Engineering Co., Ltd., and Radio Supplies.
251 Symonds Street, Auckland.
- FEDERAL, MOHAWK, GLOBE** Federal Radio House,
8 Darby Street, Auckland.
- FERRANTI RADIO COMPONENTS** A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers.
- GILFILLAN AND KELLOGG** . Harrington's, Ltd.,
138-140 Queen Street, Auckland.
- GREBE RADIO** Howie's,
Dilworth Building, Custom st., Auckland.
- MARCONI ECONOMY VALVES** All Radio Dealers.
- MULLARD VALVES** All Radio Dealers.
- RADIOLA RECEIVERS** Farmers' Trading Co., Ltd.,
Hobson Street, Auckland.
- RADIOTRON VALVES** All Radio Dealers.
- RELIANCE BATTERIES** Reliance Battery Mfg. Co., Ltd.,
96 Albert Street, Auckland.
N.Z. Made
- T.C.C. CONDENSERS** A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers.

COUNTRY TOWNS

- CROSLEY ELECTRICAL AND BATTERY MODELS** The Forrest-Crosley Radio Co., Ltd. Cuba Street, Palmerston North.
- CROSLEY RADIO SALES AND SERVICE** D. A. Morrison and Co
The Avenue, Wanganui.
- FEDERAL AND AIR PATROL RADIO** J. B. McEwan and Co., Ltd.,
New Plymouth.
- GAROD, CROSLEY, RADIO AND ACCESSORIES** The Hector Jones Electrical Co.
King and Queen Streets, Hastings.
- GILFILLAN, FEDERAL, STANDARBYNE AND GARRARD ELECTRIC RADIO — ALL ACCESSORIES** W. M. Pitcher and Co.
Hamilton.
- GREBE, CROSLEY AND RADIOLA SERVICE** E. Dixon and Co., Ltd.,
Hawera.
- RADIOLA DEALER AND SERVICE** G. C. Carrad.
140 The Avenue, Wanganui.
- PHILIPS VALVES AND APPARATUS** All Good Radio Dealers,

LINEN DIAPHRAGM SPEAKERS

PROOF OF THEIR SUPERIORITY

See the diagrams on pages 27 and 30 in last week's "Radio Record" and you will then know why a linen-diaphragm speaker is ideal for your set. The linen-diaphragm or "Air-Chrome" speaker gives the most brilliant and life-like reproduction obtainable from the shrill piccolo down to the rumbling tympani, without the slightest trace of muffling or blasting at the greatest volume.

Complete sets of unassembled parts will be arriving in seven or eight weeks' time, so we recommend you to book your order immediately and avoid disappointment.

YOU WILL BE OUT OF DATE WITHOUT ONE, SO BOOK NOW.

Demonstrations given at any time during day.

PRICE £4/10/-.

DISTRIBUTORS:

J. A. SMYTH & CO.

71 Victoria Street, Wellington.

'Phone 42-342.

AIR-CHROME SPEAKERS WILL BE STOCKED BY ALL GOOD DEALERS.