

stance, when a Dunedin programme is relayed to Christchurch. On such occasions the strength of the current requires considerable "boosting" up in order that it may override minor noises picked up en route, and reach Christchurch with sufficient power to be handled by 3YA. There is also equaliser equipment for correcting any undesirable characteristics which may be present in the case of programmes sent over land line. There are, of course, the usual motor generators.

The microphones for general use will be of the condenser type. They are different from the carbon type hitherto used at 4YA. There is no background hiss and practically perfect frequency characteristics. In cases, however, when there is liability for rough handling, as for instance when sporting events are being described, the carbon microphones will still be used.

The 4YA towers, which are erected on the roof of the "Evening Star" building, are of steel, and similar to those at the other stations. The aerial, which is a single wire, is about 150 feet from the ground. The Broadcasting Company's chief engineer, Mr. J. M. Bingham, has been responsible for the installation of the whole of the transmitting equipment.

## Power Valve Distortion

MANY listeners have now installed power valves in their receivers with the idea of improving their tone quality, but through neglecting to increase the plate voltage on the power valve in the last stage, have been disappointed with their results. It should be noted that an extra terminal should be included as by merely connecting another battery in series will result in distortion caused by working the other valves at the wrong points of their characteristic curves.

With modern improvements in receiver and valve design, and with the increased power of transmitting stations, the grid swing applied to the last valve in any set using more than two valves, is so great that ordinary "general purpose" valves cannot deal with it adequately, and poor tonal qualities result. With sufficient anode voltage, the power valve, when proper grid bias is applied, is designed to handle a large grid swing, and when used, greatly improved reception follows.

Usually it is best to work with as high a grid bias value as possible without weakening reception, but manufacturers always provide working data with their valves, and this should always be followed.

## Antarctic Exploration

### The "Discovery's" Equipment

THE barque Discovery, now on a new voyage of exploration, is equipped with an up-to-date Marconi wireless installation to enable her to keep in touch with the outside world. The expedition, under the leadership of Sir Douglas Mawson, has been specially equipped for scientific and survey work, and the comprehensive wireless equipment will play an important part in maintaining communication with the scientific world.

For ordinary inter-ship and ship-to-shore communication a  $1\frac{1}{2}$  kilowatt quenched spark transmitter, and a ship's receiver of the latest pattern have been installed. For special communications from the heart of the Antarctic, many hundreds of miles from civilisation, a short-wave telegraph transmitter is employed. In conjunction with this transmitter a short-wave receiver is fitted.

A wireless direction-finder also forms an important part of the navigational equipment of the Discovery. The direction-finder has already proved of great value in Arctic and Antarctic navigation, and is widely used by whalers and other vessels engaged there.

The Moth aeroplane carried by the expedition is also equipped with a Marconi installation. The aeroplane is to be used for scouting purposes within a range of 100 miles of the Discovery, and is fitted with the new Marconi transmitting and receiving set specially designed for light aeroplanes.

During scouting expeditions the pilot will thus be able to keep in touch with the base ship, which, by use of its direction-finder, will be able to locate the aeroplane's position. In case of a forced landing, an emergency aerial can be rigged on the aeroplane and the generator normally driven by airscrew can be hand-operated. With the power thus supplied, a special automatic code sender will enable those on the ship to locate the missing plane.

ONE of the best checks upon the condition of an "A" battery is the specific gravity of the electrolyte.

USE distilled water to make good any loss by evaporation in your accumulator, and never allow the level of the liquid to fall below the top of the plates.

# THE D.X. CLUB

## Views and News.

### Identification Wanted

STATION heard Friday, September 27, at 11.30 p.m., on about 240 metres (1475 k.c.). Call letters sounded like 3EX. I am certain of the 3, and also heard the announcer say Melbourne.—"Query" (Te Awamutu).

[Probably 3GX, Melbourne—a new station.—Ed.]

CAN anyone identify these two stations: (a) Between 215 and 220 metres (approx. 1380 k.c.); this station is in New Zealand, and often relays programmes from 2YA. Too weak to hear call sign. (b) About 495 metres (605 k.c.); probably in Australia.—"New Ohum" (Morrinsville).

SHORT-WAVE station KIO, an American transmitting on approximately 24 metres (14,750 k.c.). I wish to know its location. This station was conversing with KES, approx. 28 metres (10,710 k.c.), between 5 and 6 p.m., September 26. The announcer stated that it was station KIO, of (Co-u-cu). At least that is what I took it to be.—E. Bullough (Rotowaro).

### Stations Identified

SINCE writing you for identification of a station I had received, I have on two occasions heard their call-sign, which is 6WF, Perth. It comes in at 63½ degrees on the dial.—Mrs. Ethel Stenson (Wanganui).

IN the DX Club notes for October 4, "Amateur" (Southland) inquires for particulars of 3GX, Melbourne. This station is evidently 3DX, Melbourne, an amateur station, of 100 watts, on about 244 metres (1230 k.c.), and the address is Australian Exhibition Buildings, Melbourne. I once heard the announcer say that the station was on the air on Thursday and Sundays, but I also heard it one Friday evening. I have written for a Q.S.L. card, and will forward you any further particulars if you are interested.—Another Amateur (Petone).

IN reference to the inquiry of Mr. Morrison (Brooklyn) concerning an unknown station operating on about 50 metres (6000 k.c.) Mr. Leslie Jones reports that on Thursday, September 26, station J1XR was testing on 49 metres (6125 k.c.). The first time he received the call it sounded like CYXR, but eventually came through clearly as J1XR.

### DX Topics

SINCE reading of the doubt concerning the identity of the station whose call-sign is WLW, I would like

to say that I have received this station every Saturday night since August 17, and to-night I had them as early as 4.50 p.m. They were playing dance numbers, and again at 7.15 p.m. they were coming in very strongly. The items and times were: 7.15, Whistling solo, with organ accompaniment; 7.18, medley of college tunes; 7.22, duet, with organ accompaniment; 7.27, quartet; 7.31, foxtrot; 7.35, whistling solo, accompanied by Studio Wurlitzer; 7.40, soprano; 7.43, Michael Howard's Dance Band. They announced that they would be on the air again next Friday (next Saturday, New Zealand time), with their all-night party. The call book gives WOW Omaha's wave-length as 508.2 metres (590 kilocycles).—W. G. Sturgess (Christchurch).

### Concerning 3GX.

RE Station 3GX Melbourne, mentioned by "Amateur," Southland, I have heard this station several times, but have received the call sign as 3CX. On each occasion they were broadcasting from the All Australian Exhibition, Melbourne. The announcer stated that the entire station had been manufactured by A.W.A., Australasia, Ltd. I have been using a four-valve receiver, one screen grid RF stage, from the time those excellent valves were first introduced in the New Zealand markets, and have done some extensive experimenting with them. I have found the parallel feed system to be the most satisfactory. A small coupling, and grid condenser (.0001); I find to be the most suitable, for all-wave design. During the past twelve months I have logged 180 stations on the receiver, 52 being American stations on the normal broadcast band, and to date, 24 of them have been verified. I was fortunate enough to win the long distance prize given by station KFI. I have never troubled to have my loggings verified, but since some of our DX-ers are in quest of the Valve Bart, I have been endeavouring to relog all of these stations and have them verified. I expect quite a lot of verifications to arrive from America shortly, as a number were written to some time ago. One interesting station heard, that I believe has gone off the air, was KFOW, Avalon, Catalina Island, California. The American stations heard reach from coast to coast of the United States. WRVA Virginia has been heard and verified. This station was then using 1000 watts. Among the low powered stations heard and verified are KFUP, Denver, Colorado, and KGBK, Long Beach, California, both of which were using only 100 watts.—Q.R.A.

I NOTICED is last week's DX Notes that "Amateur" (Southland) reports hearing the Melbourne station 3GX. Last evening I logged 3GX, at fair speaker strength, on five valves, several dance numbers being heard, but could not ascertain any information about the station except that the call is 3GX and wavelength 244 metres. My log to date on all waves for eleven months is now 121 stations, 78 short-wave, and 43 long-wave. I have only 23 verifications so far. I wonder if any listener in the city can beat this for eleven months.—A. D. Rogers (Newtown).

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