

THE Australian stations are now coming in with greatly improved volume as the winter nights are setting in. "Switch" receives 2BL, Sydney, at 6.30 p.m. with fair loudspeaker volume, the actual time in Sydney being only 5 p.m. Last winter it was possible to hear the tail-end of the Rugby football matches being described from the Sydney station. If conditions continue to improve with the advance of winter even better results will be obtainable this year.

A MEMBER of the Wellington Radio Society, speaking at the last meeting of that body, complained of very serious interference during broadcasting hours from some amateur transmitters in his vicinity. It is rather regrettable that any complaints of this nature should arise at this juncture after such excellent relations having subsisted for so long between broadcast listeners and amateur transmitters.

STARTLING claims are made in a Washington message regarding the properties of a new type of gramophone record composed of a substance called durium. The inventor is Dr. Hal T. Beans, professor of chemistry at Columbia University. The records consist of thin sheets of cardboard on which a coating of durium is laid by a dipping process. On these the impressions can be stamped at the rate of 200 records per minute. The inventor affirms that the records are practically everlasting.

IF you have tried to drill and tap "blind" holes in a panel which was only 3-16in. thick, you will know that it is a ticklish job. The bolt, too, cannot get much grip when it is put in. For neatness sake it is always preferable to put bolts in from the back of the panel in this way, rather than to drill clearance holes and insert the bolts from the front. You can make a tidy job by drilling the hole right through the panel and using a bolt not quite long enough to reach to the front surface. Then fill in the hole from the front with a little black wax, rub it to a good polish with a soft rag, and you will hardly notice the mark. You will have the satisfaction of knowing that the threads of the bolt have as firm a grip as possible.

"H. C." (Wellington) asks how he might connect a gramophone pick-up to it.

A: Many manufacturers of pick-ups supply an attachment that is slipped on to the detector base of the valve. If you

have not one of these, take wires from the grid and filament negative terminals of the detector valve and carry them to an ordinary jack. When you insert the

### Reception Table

FOR the guidance of those who wish to check their reception of the Australian stations, "Switch" has prepared the following table showing the average relative strengths with which he has obtained reception at 11.30 p.m. during the past week:—

2BL, Sydney .....	10
4QG, Brisbane .....	8
2FC, Sydney .....	7½
3LO, Melbourne .....	7½
2UE, Sydney .....	7
3DB, Melbourne .....	7
2GB, Sydney .....	6½
3UZ, Melbourne .....	6
3AR, Melbourne .....	4
5CL, Adelaide .....	3
2HD, Newcastle .....	2
2KY, Sydney .....	2

The above figures are the points assessed, with 10 as the maximum.

plug, broadcast signals will automatically be prevented from reaching the audio. By pulling out the plug the set is in the normal state.

2. I have a crystal and one-valve A.C. amplifier which does not provide grid bias. I am desirous of using a Mullard PM24, but notice that this must not be used without bias. Would the valve be ruined if I put it into the circuit, and is there any way I can obtain the bias.

A: The valve would certainly be used if placed in the circuit without grid bias. To obtain this get a 20 ohm. potentiometer and a 0/2000 ohm resistance. Put the potentiometer across the filament supply and take the lead from the moving arm to one side of the variable resistance. The other side of the resistance is connected to B— and earth. Adjust the resistance until the signals are clear and strong. The potentiometer will have to be moved until the point is reached where there is very little hum.

WHEN the Sydney stations relay concerts from Melbourne they employ a land-line about 500 miles in length, but it delivers a continuous stream of automatic telegraphy which is clearly audible in Wellington. This loud parasitic noise must detract from the pleasure derived from these relays.

THE small warships which have been in port at Wellington for some weeks manage to get in on some

of the broadcast wave-lengths with annoying results when they indulge in Morse transmission. Merchant vessels are prohibited from transmitting while in port, and it is a pity that the same restriction does not apply to warships.

MR. FRANK D. CLEWLOW, the English actor who toured New Zealand some time ago with the Allan Wilkie Shakespearean Company, and is now attached to the Melbourne Repertory Theatre, will direct a Shakespearean entertainment from 3LO, Melbourne, on Thursday evening, April 23. There will be Shakespearean music and verse, and a short selection of sonnets will be spoken by Mr. Clewlow.

TOO much voltage in the household mains is generally the cause of a.c. valves not giving 1000 hours' efficient service. The New York "Radio News" publishes a hint to users of a.c. sets where excess voltage is suspected. It says: "One method, although somewhat crude, of determining whether the receiver is operated at excessive voltages is to note the brilliancy of the valve filaments. The oxide-coated filaments, such as used in a number of present-day power valves, should be only dull red, and in a majority of cases will be visible only in a darkened room. If the filament shows either a cherry-red or straw colour, then it may be taken for granted that a line voltage-regulating device is necessary." Local radiotricians will make up a variable voltage controller which would be worth while as an economiser of a.c. valves.

"N. T." (Northland) has forwarded a query as to whether his neutrodyne set can interfere with other listeners. He writes, "I understand that a neutrodyne cannot create a howling valve nuisance." As a matter of fact, if the neutralising condensers are not correctly adjusted a neutrodyne can be a flagrant offender. Changing a valve in the radio frequency stages necessitates, as a rule, a readjustment of the neutralising condensers.

MR. WRIGHT, when lecturing at the last meeting of the Amateur Radio Society of Wellington on short-wave reception, advised short-wave listeners not to use variable grid-leaks. He said it would be far better to have a set of grid-leaks of various values, and clips into which they could be slipped for use.

A FRIEND who used a rope halyard for his aerial is lamenting having done so, as it rotted and carried away, necessitating the lowering of one of his masts to pass another halyard through the block. An examination of the rope, by the writer, proved that it had not been "prepared" against rotting. If a listener prefers rope to a stranded galvanised iron wire as a halyard he should purchase rope which is specially "prepared." The latter is on the market.

A WELLINGTON listener who, through lack of space, intends to use a twin-wire aerial, has asked "Switch" to state how wide apart should the twin-wires be spread? Not under any circumstances should they be closer than 5 feet, and for good results they should be 8 or 9 feet.

## IS IT SAFE?

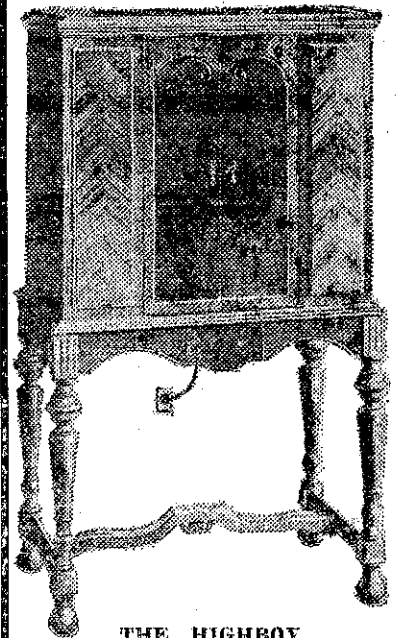
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