

- 6.46: Negro spirituals—Paul Robeson (a) "Scandalise My Name" (Burleigh), (b) "Sinner, Please Doan' Let Dis Harves' Pass" (Burleigh), (H.M.V. B2771).
- 6.54: Instrumental—Victor Olof Sextet, (a) "To a Water Lily"; (b) "To a Wild Rose"; (c) "In Autumn" (Macdowell) (H.M.V. B2690).
- 7.0: Relay of service from Oxford Terrace Baptist Church—Preacher: Rev. J. Robertson, M.A. Organist: Mr. Melville Lawrie, Choirmaster: Mr. K. G. Archer.
- 8.30 (approx.): Studio Concert:
Prelude—New Light Symphony Orchestra, "Prelude in G Minor" (Rachmaninoff) (Zonophone EF24).
- 8.33: Mezzo-contralto—Mrs. Graham Jamieson, (a) "The Moon Drops Low" (Cadman); (b) "The White Dawn is Stealing" (Cadman).
- 8.38: Baritone—Mr. R. Lake, "The Two Grenadiers" (Schumann).
- 8.41: Pianoforte—Miss Dorothy Davies, "Rhapsody in C" (Doblinger).
- 8.50: Mezzo-soprano—Mrs. Wilfred Owen, (a) "Come and Find the Quiet Places" (Coningsby Clarke), (b) "Rest at Midday" (Hamilton).
- 8.56: Tenor—Mr. L. C. Quane, "All Hail Thou Dwelling" (Faust) (Gounod).
- 9.0: Violin solo—Fritz Kreisler, "Shepherd's Madrigal" (Kreisler).
- 9.3: Mezzo-contralto—Mrs. Graham Jamieson, "An Old Garden" (Hope Temple).
- 9.7: Baritone—Mr. R. Lake, (a) "Sacrament" (MacDermid); (b) "How Fair Art Thou My Lovely Queen" (Brahms).
- 9.13: Instrumental—Christchurch Broadcasting Trio, "Trio in G Minor—(a) Andante; (b) Poco Adagio; (c) Rondo all Ongarese" (Haydn).
- 9.27: Mezzo-soprano—Mrs. Wilfred Owen, "Spring Has Come" (Coleridge-Taylor).
- 9.30: Tenor—Mr. L. C. Quane, (a) "Oft in the Silly Night" (Irish Air); (b) "Where'er You Walk" (Handel).
- 9.37: New Light Symphony Orchestra, "Prelude in C Sharp Minor" (Rachmaninoff) (Zonophone EF24).
- 9.40: Close down.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, JANUARY 12.

- 8.0: Town Hall chimes.
3.1: Selected gramophone items.

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- 5.30: Children's song service, conducted by Big Brother Bill.
6.30: Relay of service from Trinity Methodist Church—Preacher: Rev. J. E. Bellhouse. Choirmaster: Mr. J. Simpson. Organist: Miss G. Hartley.
7.55: Weather report.
Selected items from the Studio.
8.30 (approx.): Relay of Studio programme from 3YA, Christchurch.
9.30: Close down.

Choosing Valve Holders

THE valve holders used in a receiver are generally chosen by their construction and, of course, price.

Modern valves are, on the whole, so well constructed that solid valve holders are suitable, although an exception may be made of the detector. This valve usually has a fairly large magnification factor and any noise that may be set up in the detector circuit is magnified by the complete low-frequency amplifier.

There are occasions, however, when it is most important to consider the electrical properties of valve holders. I am not referring to such matters as the size or fit of the contact sockets or the connections between the socket and the terminals, although these must obviously be correct.

I am referring to the high-frequency losses of the valve holder.

The grid, anode, and filament contact sockets, and the connecting terminals, are held in a shell of insulating material. This is seldom of ebonite. It is usually of bakelite, for the reason that this material is easily and cheaply moulded. Good bakelite is not always employed. Nevertheless, the resistance between one terminal and another is usually many megohms, which is so high that the leakage is of no importance.

What does matter is the high-frequency loss resistance. There is capacity between the terminals. The condenser has as its electrodes the metal connections, and as its dielectric the insulating material. Now the condenser formed by the grid and filament connections, and for that matter the other connections as well, is across the tuned circuit connected to the valve. If, therefore, the losses of the valve holder are high, the signal strength

will be reduced and the selectivity impaired.

One might imagine the losses could not be so high as to produce noticeable effects, but when the tuned circuit has a very good tuning coil, such as one of the Touchstone type, the amplification may be reduced by as much as 30 per cent. One should remember this when about to purchase the valve holders for a new set, and when the coils are particularly good ones every endeavour should be made to obtain the valve holders particularly specified by the designer of the set.

—STAN MOORE.

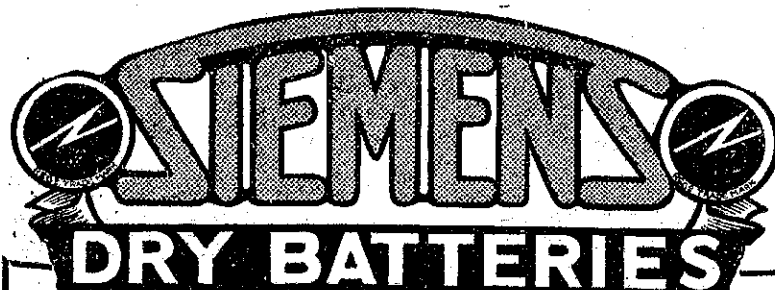
Tinning a Soldering Iron

A WELL-TINNED soldering iron can be used frequently, and will remain properly tinned if put away for a time, so that it is worth going to a little trouble to tin the iron properly. The actual tinning consists simply in providing the business end of the iron with a thin layer of solder. To do this you must first of all clean the tip of the iron, for about three-quarters of an inch back from the end, by filing it carefully. (A particularly good job is made by finally polishing the surface with emery cloth.) Heat the iron as if for soldering, and whilst it is still hot spread a thin layer of flux on the tip of the iron, immediately after rubbing the tip on a few pieces of soft solder placed on a tin lid.

If the iron is properly heated, the solder will adhere to the tip of the iron and form a bright coating all over it. This will last for a long time, but will need renewal if iron is overheated, when it must be re-tinned in the same way again. Always have a clean cloth handy when soldering, so that any impurities or dirt may be removed as soon as noted.

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