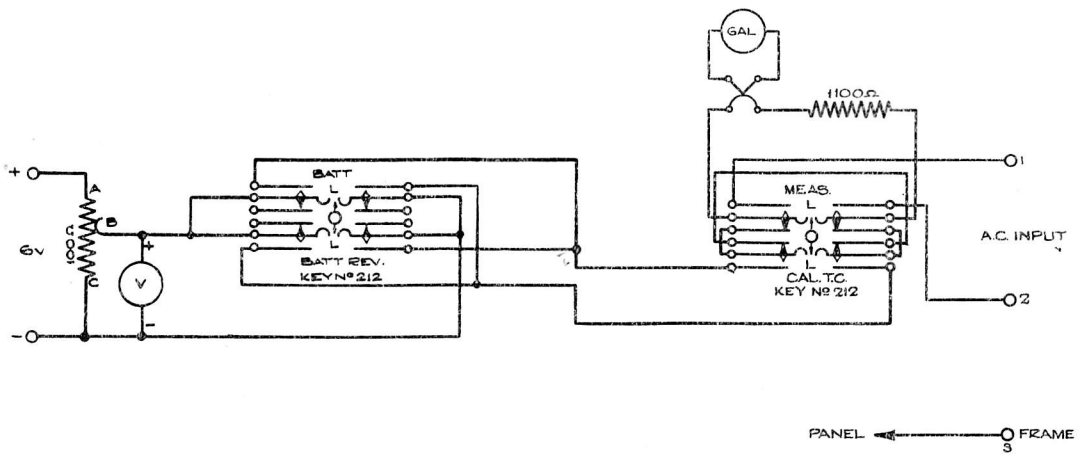
THERMOCOUPLE PANEL TC/2

Function—This thermocouple panel is used at **Maida Vale** in conjunction with the 1,000 c/s oscillator **OS/3** and variable attenuator **AT/2** for calibrating programme meter amplifiers.

Circuit—The panel includes a circuit for the calibration of the thermocouple itself on D.C. in addition to that for measuring levels.



Drawing A.3013, Issue 2.

For calibrating the thermocouple the **Meas—Cal TC** key should be thrown to the **Cal TC** position. This connects the thermocouple heater and its series resistance via the make contacts of the **Batt-Batt Rev.** Key, between the slider *B* and the negative end of the **Calibrate** potentiometer, which is connected across the D.C. supply circuit. A D.C. voltmeter is also connected across this circuit. The battery key should be thrown to the **Batt** position, and the **Calibrate** potentiometer should be adjusted until a reading of 2.45 volts (i.e. up to the red mark on the scale) is obtained on the voltmeter. The reading of the D.C. microammeter in the thermocouple output circuit that corresponds to this voltage, should then be noted. It will be approximately 50. The battery reverse key should now be thrown to its other position and the reading of the thermocouple meter again noted. If there is any difference between the two readings the average value should be noted as the standard deflection.

When the **Meas—Cal TC** key is thrown to the **Meas** position the thermocouple input is connected across the output of the oscillator **OS/3** which is permanently wired via break jacks to the A.C. input terminals and to the input terminals the attenuator **AT/2.**

For calibrating a programme meter the AT/2 output should be connected to the pro-

gramme meter input and also to a 600 ohm resistance. This resistance provides the proper termination for the **AT/2**. The oscillator volume control is set so that the thermocouple meter reads the same as it did on 2.45 volts D.C. The level at the output of the oscillator will then be + 10 db.

The programme meter amplifiers at Maida Vale are adjusted to give programme meter readings of 7 on tone at zero level and 2 on a level of –20 db. The necessary adjustment of level at the programme meter amplifier input is made with the attenuator by inserting losses of 10 db. and 30 db. for the two readings, respectively.