

PRACTICAL ELECTRONICS

COMPONENTS LIST AND STUDY INSTRUCTIONS FOR STEP NO. 9

INSTRUCTIONAL MATERIAL

Practical Work Instructions for this Step

Circuit Diagram for Step No. 9.

Diagrams Figs. 24 and 27.

COMPONENTS

- 1 - U-clip for C.R.T. Mounting to be used at Step No. 12.
- 1 - $\frac{3}{4}$ " x $\frac{1}{2}$ " x 6" long strip self adhesive plastic foam.

STUDY INSTRUCTIONS

- 1. Carry out all practical work described (Instructions 1 - 34)

- 2. Complete green copy of the circuit diagram, and compare with

Yellow sheet No. 9. Transfer information to the white sheet.

NEXT STEP

Completion of Wiring of Oscilloscope

PRACTICAL WORK INSTRUCTIONS FOR STEP NO. 9

The first part of this Step deals with completing the interconnections

to the components on the Front Panel. You will recall that in Step No. 8 we provided the necessary leads for these interconnections by soldering wires in their appropriate positions on the back of the Circuit Board. You will also remember that we grouped many of these wires and labelled each group. Each group is associated with a particular component on the panel.

Eventually of course, the Circuit Board has to be fitted in a horizontal position on its three spacers already mounted underneath the chassis. However since it may be necessary to gain access to the back of the Circuit Board for servicing at a later date, all the wires already connected to the back of the board have been made of sufficient length to enable interconnections to be completed with the board in a vertical position.

You should therefore start by arranging the board vertically inside the chassis, in roughly the correct position, with the complete unit upside down on the work surface. Make absolutely sure at this point that the Circuit Board itself is the right way round in relation to its chassis mountings. (Refer to Fig. 27).

The first batch of instructions to follow are concerned with laying out the wires in their correct positions underneath the chassis, and through their appropriate holes in the chassis. Remember that wires will need to be folded eventually, in order to fit the Circuit Board in its final horizontal position. In routing the wires to their destinations, make sure that wires will not become entangled with each other. If necessary, having passed a group of wires through a hole, remove it again, if it is clear that it may be more neatly arranged in relation to other wires, by altering its route.

Instruction 1.

1. Pass wire groups, 5, 10, 11 and 18 through hole 'E' (see Fig 17 in Step 7) ().

Make sure at this stage that the Circuit Board can be easily folded down into its final horizontal position and mounted on its three fixing points. If necessary re-arrange wires or wire groups. Be certain that no wires are in such a position that they could be trapped under fixings.

Having satisfied yourself that the wiring layout is adequate lift the board again to the vertical position and proceed to the next paragraph.

We now continue by making the remaining connections to the Front Panel Components (See Fig. 24).

The following instructions deal with the Timebase Range Switch S1. If necessary, refer back to Step No. 3 Practical Work instructions for the description of the switch coding

(paragraph following instruction no. 20). In any case, it will be wise to check your switch connections using the 'bulb and battery test' to avoid errors.

9. Connect the grey wire of Group No. 10 to S1 terminal B1 ()
10. Connect the yellow wire of Group No. 10 to S1 terminal B2 ()
11. Connect the white wire of Group No. 10 to S1 terminal B3 ()
12. Connect the green wire of Group No. 10 to S1 terminal B4 ()
13. Connect the white wire of Group No. 18 connected to T.108 and passed through hole 'E' at instruction 1, to S1 terminal B.O. Ensure that you have not confused this wire with the white wire of Group 10. ()
14. Connect the grey wire of Group 11 to S1 terminal A4 ()
15. Connect the yellow wire of Group 11 to S1 terminal A0 ()

Check the above seven connections carefully before proceeding to the next paragraph.

We now deal with connections to the other controls mounted on the upper part of the Front Panel.

16. Connect the grey wire of Group 1 to Tag No. 3 of the Brilliance Control (RV5).

34. Connect the remaining violet lead to T.58 ().

Check the above wiring, and when you are satisfied all is correct, carefully fold the board down on to its mountings, and fix in position with 3 - 4 B.A. nuts and washers. Make absolutely sure that the connections to the twin capacitor C5/C6 are well clear of any terminals or bare wires on the Circuit Board. Also make sure that the connecting wires to C5 and C6 are arranged to pass between the edge of the board and the side of the chassis.

If necessary, release the fixing nuts on the three projecting sockets at the bottom of the front panel and slide the sockets outwards a little, so that the Circuit Board may be folded down on to its mountings without fouling the sockets.

Some Earlier

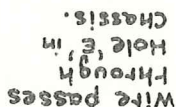


FIG. 27. POSITION OF BOARD FOR WIRING.

