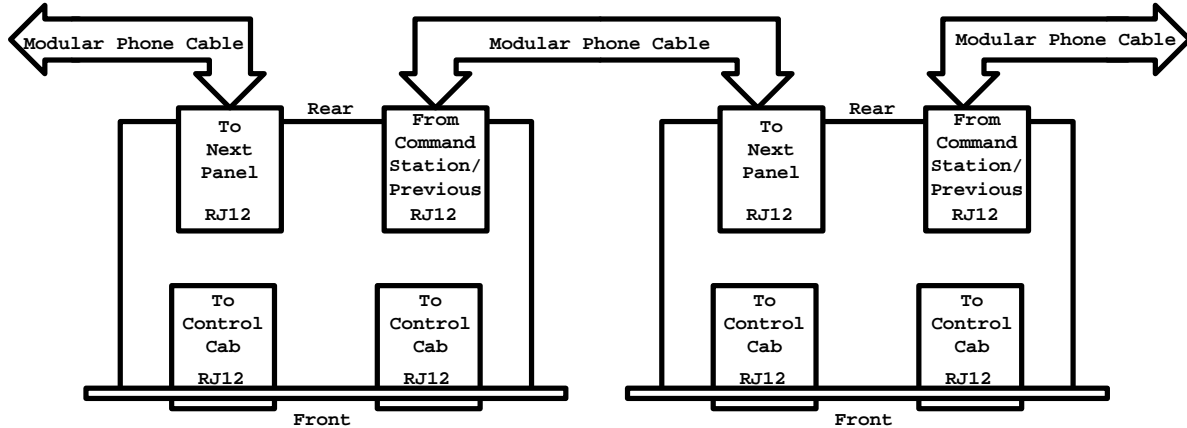# cmosEngineering

Cab Control Bus Panel

Version CCB -0
Extending the bus using Flat Modular Phone Cable

NOTE: Other versions are available from
cmOS Engineering to accommodate the use of CAT 5, 6 (8 wire RJ45) etc
See our web site: www.cmoseng.com.au for details.

The cmOS Engineering control bus panel allows one or more control cabs to be connected to the command station plugging them in at different locations around your layout.

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  ◁══ Modular Phone Cable                    ══ Modular Phone Cable ══                    Modular Phone Cable ══▷

                              Rear                                                Rear
        ┌──────────┐     ┌──────────┐          ┌──────────┐     ┌──────────┐
        │    To    │     │   From   │          │    To    │     │   From   │
        │   Next   │     │ Command  │          │   Next   │     │ Command  │
        │  Panel   │     │ Station/ │          │  Panel   │     │ Station/ │
        │          │     │ Previous │          │          │     │ Previous │
        │   RJ12   │     │   RJ12   │          │   RJ12   │     │   RJ12   │
        └──────────┘     └──────────┘          └──────────┘     └──────────┘

        ┌──────────┐     ┌──────────┐          ┌──────────┐     ┌──────────┐
        │    To    │     │    To    │          │    To    │     │    To    │
        │ Control  │     │ Control  │          │ Control  │     │ Control  │
        │   Cab    │     │   Cab    │          │   Cab    │     │   Cab    │
        │   RJ12   │     │   RJ12   │          │   RJ12   │     │   RJ12   │
        └──────────┘     └──────────┘          └──────────┘     └──────────┘
                    Front                                  Front
```

The panel utilises two RJ12 connectors on the face to plug into either side to control trains and two on the rear to connect back to the Command Station and the ability to forward on to the next panel.

Cab Bus Cabling

The cables used between the Command Station and Cab Control Panel must be wired correctly. It is not the same as other cables.

lf you are making your own cable, use 0.14mm^2 (26AWG), with the orientation of the RJ12 connections physically reversed at each end. Having crimped the first connector, study the cable and choose the opposite side of the cable to crimp the remaining connector. The cable will have a flat surface on one side and possibly a rib along the surface of the reverse. Use this as a guide to switch the orientation of the RJ12.

lf your layout requires a cab bus longer than 10 metres, extra power via a DC power supply (nominally 12 volts DC with a capacity of 0.5 to 1.0 amp) can be plugged into the rear of the control Panel using a 3.5mm tip & sleeve plug with the tip positive.

Other Options

There are five versions of the cmOS Engineering Cab Control Bus Panel which facilitate the use of Cat 5 or 6 cables which may provide additional length to the bus, reduce potential electrical noise, and allow the command station to be located anywhere in the bus structure. Please see our web site or talk to your favourite hobby shop for details.

Other Products

cmOS Engineering manufactures:

    Block Detectors; LCC compliant nodes and accessories; and custom electronics.

All products are designed and manufactured in Australia.