TECPRO COMMUNICATION SYSTEM

This is the ring intercom system, formerly known as the 'Technical Projects' talkback, but manufactured and distributed worldwide by Canford Audio since 1986.

The ring intercom is a system of intercommunication between personnel involved in some activity where they need to communicate with each other on an 'omnibus' system. The major applications of these systems are in theatre stage, conference venue and television studios, although many other applications have been found. The Tecpro communication system is a well established, cost effective system with a large variety of possible equipment configurations to suit user requirements.

The basis of the ring system is that any number of places required to communicate, either in one direction or two, are connected, one to the next, to the next and so on, with a single cable. This cable is a simple two core screened microphone cable, and carries power, audio signals and various control and indicator signals all in one. At each place on this ring of cable an "outstation" is connected. An outstation may connect to a headphone/microphone set or contain a loudspeaker with or without a microphone. It will probably have a volume control and maybe a signal lamp and other controls. At some point on the ring a power supply is connected, capable of supporting the number of outstations in use. This may be combined with a communication unit and will often support more than one ring and talk to them individually or collectively. This is generally known as a master or main station.

Apart from the power supply, which must always be present somewhere, any type of outstation required at any particular point can be connected there. Each type of outstation carries all the electronics required for its operation. Thus the circuitry for intercom is distributed throughout the system. There is no 'exchange' or central control amplifier as such. It follows, therefore, that at any point of the ring an outstation may be substituted with one of a different type as required without any modification to the system as a whole. Indeed, an outstation may become a branch of several more outstations if necessary. It is this complete flexibility of the outstations in use that makes the system particularly versatile.

CABLE REQUIREMENTS

Two factors affect the choice of cable for a particular system or installation. They are:
– Length of run – longer runs require larger cable
– Number of outstations on each cable run increasing the number of outstations requires larger cable

In general, we recommend 0.5mm^2 (20AWG) twin screened cable should be used (Canford heavy duty cables FST-HD, HST-HD and HST-HD-R are suitable), as this allows most flexibility of application. However, for short runs (up to approx 150 metres), provided that no more than about 12 outstations are served, a smaller cable 0.22mm^2 /0.25mm^2 (24AWG) will usually be acceptable (Canford types FST, HST and HST-R are suitable). For short cables of a few metres length serving only one station (eg. between wall connector and beltpack), the core size is not critical.

Canford cable types HST-R and HST-HD-R have a polyurethane jacket, which has very similar properties to rubber - ie. very abrasion resistant and resilient. FST-HD is a foil screened cable specifically for installation purposes.

WIRING CONVENTIONS

System cable connectors:

XLR 3 pin - Pin 1 Earth/screen Microphoneearth/screen
        Pin 2 + 24v DC
        Pin 3 Audio

XLR 6 pin - Pin 1 Earth/screen
        Pin 2 +24v DC
        Pin 3 Audio, circuit 1
        Pin 4 Audio, circuit 2
        Pin 5 Audio, circuit 3
        Pin 6 Audio, circuit 4

Headset connectors:

XLR 4 pin -   Pin 1
        Pin 2 Microphone signal
        Pin 3 Earphones earth/screen
        Pin 4 Earphones signal

XLR 5 pin - (BP116 and BP117 only)
        Pin 1 Microphone earth/screen
        Pin 2 Microphone signal
        Pin 3 Earphones earth/screen
        Pin 4 Left earphone signal