MASTER STATION MS741
MASTER STATION EXTENDER ME742

Developed from the UK's most successful wired intercom system, the all new Series 2 Master Station and Master Station Extender unit inherit the sturdiness and excellent build quality of the original Tecpro designs, incorporated into a space saving 1U format. Despite the reduced size, several new features have been added that address common installation and operational issues.

Original Tecpro master stations offered a creditable 650mA per circuit – enough to drive sixteen of our BP111 beltpacks. The new MS741 master station supplies 1.25A per circuit – almost doubling the drive current.

Like its predecessors, the new MS741 offers two independent circuits A and B. Circuit B may be linked to A to form a single 'super' circuit capable of powering up to sixty BP111 beltpacks!

When combined with the master station, the ME742 extender unit adds an extra two channels, C and D. These are technically identical to A and B and may be used independently or linked as required. In total, between 1 and 4 intercom circuits may be configured.

Each intercom circuit has its own power supply with short-circuit protection. All protection is electronic and automatic so no resetting is necessary following the removal of a fault condition. As the supplies are independent, in the event of a cable fault temporarily disabling one circuit, the other circuit will continue to operate uninterrupted. Over-temperature circuitry monitors the entire power supply.

New features include 'Remote Mic Kill' to help keep intercom channels free of unnecessary noise and an 'Announce' mode which allows the intercom talk-back mic to be used to page directly to an external audio system. Latching and non-latching modes have been added to some selector switches to increase their functionality.

The master station and extender unit are fitted with Universal Power Supplies and can be operated world-wide without the need to change AC power settings.

Tecpro series 2 products are backwards compatible with the original Tecpro range (except 'Remote Mic Kill' facility which applies to series 2 products only).

For further details visit www.tecpro.co.uk
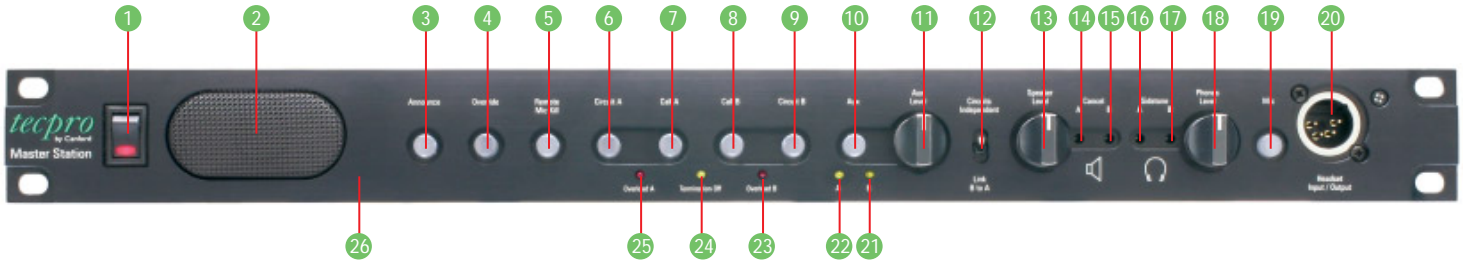
Features

Master Station MS741

- Two independent intercom circuits, A and B (increases to four when combined with ME742 Extender unit)

- Separate short circuit and overload protection on each circuit. Thermal monitoring / protection for main PSU

- Circuit B may be linked to A to form a single circuit with doubled drive capacity

- Supports up to 30 Tecpro BP111 beltpacks per circuit

- Buit-in electret talk back microphone. XLR4 Input for optional gooseneck microphone or headset

- Built-in high efficiency 2" elliptical loudspeaker. External speaker jack on rear panel

- Additional 6.35mm jack input on rear offers additional external dynamic microphone input

- 'Remote Mic Kill' facility will shut down all open microphones on a selected circuit (series 2 products only)

- 'Override' function triggers Tecpro LS200 and LS300 series paging loudspeakers to operate at pre-set audio levels

- XLR3 AUX input on rear with selectable microphone or line level. Switched 48V phantom power on mic circuit

- Microphone limiting prevents signal overload

- 'Announce' output on rear allows paging to an external PA system. This function may be triggered externally by contact closure

Master Station Extender ME742

- Designed to integrate with MS741 Master Station. Not for stand-alone operation

- Provides two additional independent intercom circuits, C and D, when operated with MS741 Master Station

- Separate short circuit and overload protection on each circuit. Thermal monitoring / protection for main PSU

- Circuit D may be linked to Circuit C to form a single circuit with doubled drive capacity. Circuit C may be linked to circuit A

- Links to MS741 via cable terminated with 15-way, D-Sub connectors

The Master Station and Extender unit are fitted with Universal Power Supplies 90-260V AC, 50-60 Hz

MASTER STATION MS741

Front Panel Features

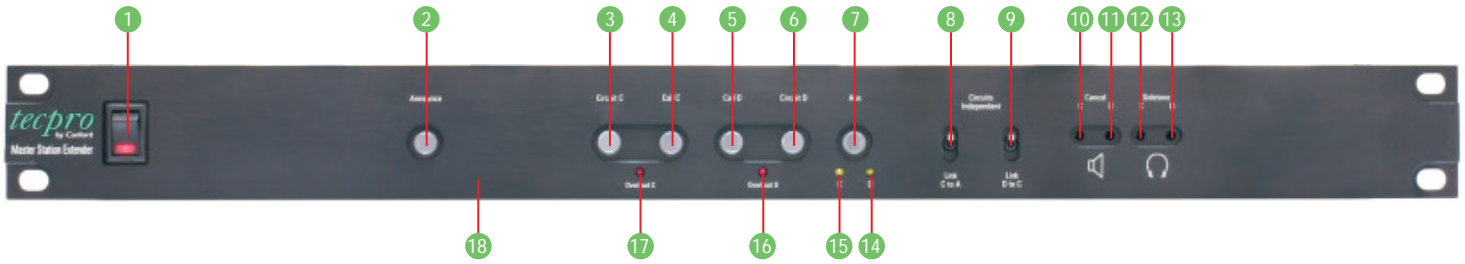| #	Feature	#	Feature
1	**Power ON / OFF Switch**	14	**Cancel A -** Front panel accessible preset to help elliminate feedback when talkback microphone and speaker are operating simultaneously.
2	**Elliptical Speaker -** High efficiency elliptical speaker provides intelligible monitoring of the intercom circuits.	15	**Cancel B -** Front panel accessible preset to help elliminate feedback when talkback microphone and speaker are operating simultaneously.
3	**Announce -** Routes the output from the talkback microphone directly to a dedicated socket on the rear panel to feed an external audio system. Announce signal appears only on Master Station rear output. Announce may also be triggered remotely.	16	**Sidetone A -** When a headset is plugged in, the level of the user's voice can be adjusted in relation to other user's voices on intercom circuit level.
4	**Override -** Triggers Tecpro LS200 and LS300 series paging loudspeaker to operate at a preset level - independent of where the loudspeaker volume has been set. This ensures important announcements are heard.	17	**Sidetone B -** When a headset is plugged in, the level of the user's voice can be adjusted in relation to other user's voices on intercom circuit signal level.
5	**Remote Mic Kill -** Shuts down all open microphones on a selected circuit. *This feature is not compatible with original Tecpro designs which use mechanical switches. All Series 2 products use electronic switching and will respond to 'RMK'*	18	**Phones Level**
6	**Circuit A Select Button**	19	**Mic -** Switches talkback microphone on and off. Latching and non-latching modes.
7	**Call A -** When Circuit A is selected, pressing the Call button makes all Call lights on that circuit illuminate.	20	**Headset Input / Output -** Inserting a gooseneck microphone automatically mutes the Master Station's internal microphone. Plugging in a headset mutes both the internal microphone and the loudspeaker.
8	**Call B -** When Circuit B is selected, pressing the Call button makes all Call lights on that circuit illuminate.	21	**B -** Indicates auxiliary selected for circuit B.
9	**Circuit B Select Button**	22	**A -** Indicates auxiliary selected for circuit A.
10	**Aux Selector Switch -** Directs auxiliary audio to circuit A, B, A and B or none,	23	**Overload B -** Indicates excessive current draw on circuit B intercom line.
11	**Aux Level Control -** Controls the level of the auxiliary signal.	24	**Termination Off -** Indicates audio termination is disabled.
12	**Circuits Independent / Link B to A -** Using the toggle switch, circuit B may be linked to circuit A to form a single 'super' circuit with double the drive capacity .	25	**Overload A -** Indicates excessive current draw on circuit A intercom line.
13	**Speaker Level**	26	**Front Panel -** Brushed, anodised aluminium curved extrusion.

MASTER STATION MS741 (rear)
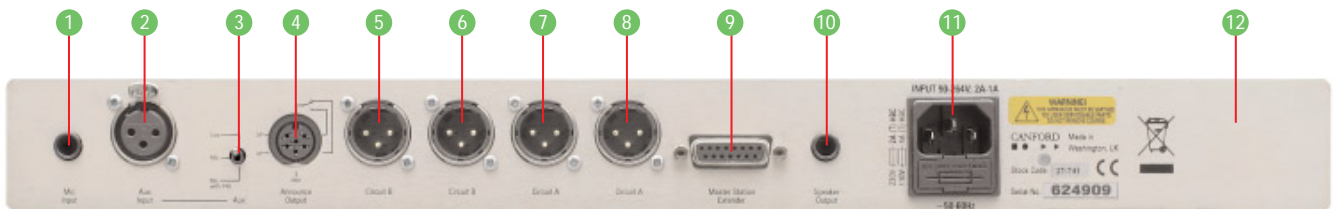
Rear Panel Features

#	Feature	#	Feature
1	**Mic Input -** Additional 3-pole A gauge 6.35mm jack for unbalanced low impedance microphone. Phantom power not available on this input.	7 / 8	**Circuit A -** XLR3 intercom circuit connectors.
2	**Aux Input** Balanced XLR3 auxiliary audio input.	9	**Master Station Extender -** 15-way D-SUB connector for linking to ME742.
3	**Auxiliary mic / line selector switch -** Three position switch: LINE, MIC and MIC with +48V phantom power.	10	**Speaker Output -** 2-pole A gauge 6.35mm socket for 8 ohm 2W speaker.
4	**Announce Output -** 6-pin DIN socket. Carries balanced line level announce signal. Also supplies relay contact for GPI and input for remote announce trigger.	11	**Power Connector -** IEC fused inlet for world-wide operation. 90-260 VAC, 50-60Hz.
5 / 6	**Circuit B -** XLR3 intercom circuit connectors.	12	**Rear Panel -** Alocrom finish.

MASTER STATION EXTENDER ME742

Front Panel Features

1	**Power ON / OFF Switch**	**10**	**Cancel C -** Front panel accessible preset to help elliminate feedback when talkback microphone and speaker are operating simultaneously.
2	**Announce -** Routes the output from the talkback microphone directly to a dedicated socket on the rear panel to feed an external audio system. Announce signal appears only on Extender rear output. Announce may also be triggered remotely.	**11**	**Cancel D -** Front panel accessible preset to help elliminate feedback when talkback microphone and speaker (on master station) are operating simultaneously.
3	**Circuit C Select Button**	**12**	**Sidetone C -** When a headset is plugged in, the level of the user's voice can be adjusted in relation to other user's voices on intercom circuit level.
4	**Call C -** When Circuit C is selected, pressing the Call button makes all Call lights on that circuit illuminate.	**13**	**Sidetone D -** When a headset is plugged in, the level of the user's voice can be adjusted in relation to other user's voices on intercom circuit level.
5	**Call D -** When Circuit D is selected, pressing the Call button makes all Call lights on that circuit illuminate.	**14**	**Aux D -** Indicates auxiliary selected for circuit D.
6	**Circuit D Select Button**	**15**	**Aux C -** Indicates auxiliary selected for circuit C.
7	**Aux Selector Switch -** Directs auxiliary audio to circuit C, D, C and D or none.	**16**	**Overload D -** Indicates excessive current draw on circuit D intercom line.
8	**Circuits Independent / Link C to A**	**17**	**Overload C -** Indicates excessive current draw on circuit C intercom line.
9	**Circuits Independent / Link D to C**	**18**	**Front Panel -** Brushed, anodised aluminium curved extrusion.

MASTER STATION EXTENDER ME742 (rear)
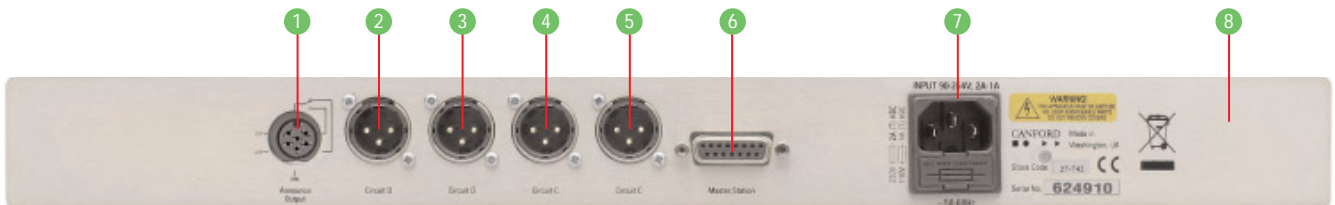
Rear Panel Features

1	**Announce Output -** 6-pin DIN socket. Carries balanced line level announce signal. Also supplies relay contact for GPI and input for remote announce trigger.	**6**	**Master Station -** 15-way D-SUB connector for linking to ME741.
2 **3**	**Circuit D -** XLR3 intercom circuit connectors.	**7**	**Power Connector -** IEC fused inlet for world-wide operation. 90-260 VAC, 50-60Hz.
4 **5**	**Circuit C -** XLR3 inercom circuit connectors.	**8**	**Rear Panel -** Alocrom finish.

TECHNICAL SPECIFICATION

Microphone	200 ohm dynamic type
Headset earphone	400 ohm typical – 32 ohm to 4k ohm acceptable
Front panel built-in mic	Electret type
Internal speaker	2W elliptical type
Rear speaker output	2-pole A-gauge 6.35mm socket for an 8 ohm 2W speaker
System output voltage	+24V DC
System line termination impedance	200 ohm in the audio frequency band, 5k ohm at DC
Auxiliary Input	XLR3 electronically balanced, line or mic sensitivity with +48V phantom power
Rear microphone Input	2-pole A-gauge 6.35mm unbalanced socket
Announce output	6-pole DIN socket with electronically balanced audio output. Single pole relay contact rated at 30V 1A maximum for GPI use
Call signal	DC and 20kHz
Remote mic kill signal (RMK)	24kHz
Override signal	28kHz
Maximum number of outstations per circuit	30 beltpacks or 7 loudspeaker stations (depending on model selected)
System cabling	Fixed installations:31-050 FST-HD
	Mobile facilities:30-130 HST-HD
Power	90 – 260V AC50 – 60Hz
Fuse rating	2A (T) HBC for 240V AC operation
	4A (T) HBC for 110V AC operation
Dimensions	1U rack mount 195mm deep
Weight	1.6 kilos

WIRING CONVENTION

Cable requirements

Three factors affect the choice of cable for a particular system or installation:

(a) The length of cable run – longer runs require a larger gauge cable.
(b) The number of outstations on each cable – increasing the number of outstations requires a larger gauge cable.
(c) Permanent installation or mobile use.

In general, we suggest a screened 0.5 sq mm (20AWG) twisted pair cable should be used. Canford heavy duty cables FST-HD, HST-HD and HST-HD-R are suitable. HST-HD-R has a polyurethane jacket, which has very similar properties to rubber – i.e. very abrasion resistant and resilient. FST-HD is a foil screened cable specifically for permanent installation purposes. HST-HD can be used for mobile systems.
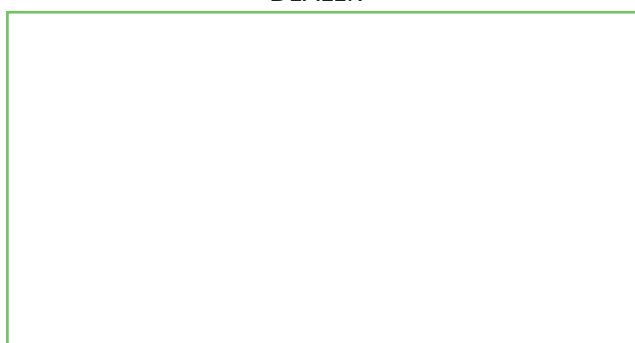
SYSTEM CABLE CONNECTORS

BP111, BP112, BP114, BP116	XLR3	Pin 1	Earth / Screen
		Pin 2	+24V DC
		Pin 3	Audio

BP113, BP115, BP117	XLR6	Pin 1	Earth / Screen
		Pin 2	+24V DC
		Pin 3	Audio Circuit 1
		Pin 4	Audio Circuit 2
		Pin 5	Audio Circuit 3 - Unused for beltpacks
		Pin 6	Audio Circuit 4 - Unused for beltpacks

N.B. XLR6 pin connectors must be Neutrik type. Switchcraft XLR6 pin types are non-standard - and are NOT suitable.

HEADSET CONNECTORS

BP111, BP112, BP113, BP114, BP115	XLR4	Pin 1	Microphone screen
		Pin 2	Microphone signal
		Pin 3	Earphones common
		Pin 4	Earphones signal

BP116, BP117	XLR5	Pin 1	Microphone screen
		Pin 2	Microphone signal
		Pin 3	Earphones common
		Pin 4	Left earphone
		Pin 5	Right earphone

DEALER