

Encore™ Partyline System TWC-703 Adapter

Quick Start Guide

The TWC-703 combines two standard Clear-Com intercom channels, on two separate cables, onto a single standard 3-pin microphone cable. This includes bi-directional AC/DC call signal translation. It does this by combining one channel of intercom audio with the 30 volts DC operating power. You can also use the TWC-703 Adapter as a stand-alone device that can power up to 12 RS-703 beltacks.

Note: For more detailed information about the TWC-703 Adapter, see the **TWC-703 Adapter User Guide**, and the **Encore System Installation Guide**.

Before Installing

- Review the cable specifications for the venue or application before installing.
- Unpack the unit and inspect for any damage that may have occurred in shipping.
- Locate the device away from other equipment that generates excessive amounts of heat.

Powering the Interface

Interfaces require adequate power from the partyline system's power source, normally a Main Station or Power Supply, to guarantee optimal system performance. Power reserves are shared between the system's user stations and channels and are drawn dynamically. Power consumption depends on system levels.

TWC-703 Power Consumption	
Idle/Continuous	<=65mA
Max/Peak	<=550mA

Note: System power requirements can easily be estimated using the Clear-Com Power Calculator, <https://clearcom.me/encore-calc>. Consult system manuals for different strategies to expand system power capability beyond a single power source.

Installing and Operating the Adapter in Normal Mode

1. Connect two channels of standard Clear-Com intercom lines to the female Channel A and Channel B connectors.
2. Connect RS-703 beltacks or TW remote intercom station to the male TW two-channel output connector.
3. Enable/disable the call signal translation settings as required. Default is **ON**.

Note: RS-703 beltacks should have DIP Switch #8 set to RTS for TW compatible call signal. Other TW devices may refer to this mode as TW, RTS-TW, or AC call signals.

Note: To operate multiple TWC-703s in parallel on the same channel, only one TWC-703 should have call translation enabled. All other TWCs should have call translation disabled.

Note: You can optionally connect an external PSU (453G023 or EXT-003) to inject power to the TW output. This PSU must be ordered separately.

Note: The TWC-703 adapter contains an automatic current limiter and reset circuit.

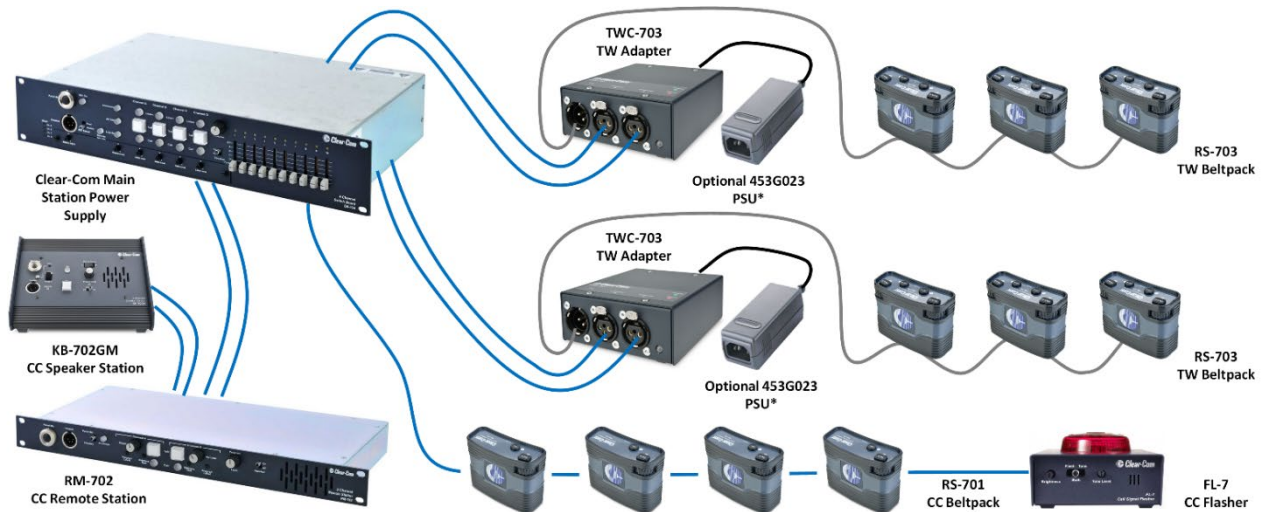
Installing and Operating the Adapter in Stand-Alone Mode

1. Disconnect any Clear-Com partylines from the front panel of the adapter.
2. Connect the external power supply to the rear panel of the adapter.

Note: The PSU (453G023 or EXT-003) must be ordered separately.

3. Connect RS703 beltacks or TW remote intercom stations. You can connect up to 12 beltacks.

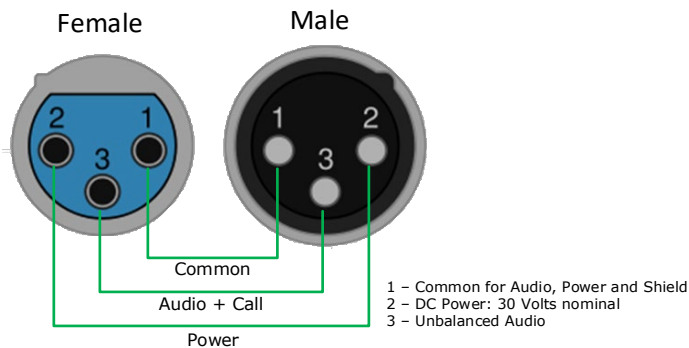
Example Configuration



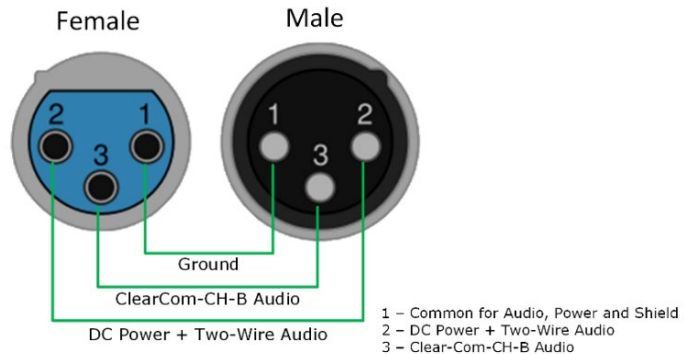
Cabling and power recommendations

Analog Partyline systems use standard shielded 3-pin XLR cables to interconnect intercom stations. For Clear-Com systems, the cable carries +30V DC system power, unbalanced audio and a +15V DC call signal. For TW systems, the cable carries +30V DC system power with unbalanced audio, second unbalanced audio, each with AC tone control for call signals. The performance of Analog Partyline systems is highly dependent on the quality of the systems cabling infrastructure. Clear-Com recommends using high-quality cabling, selected with the following in mind:

XLR Connectors (Clear-Com)



XLR Connectors (TW Two-Wire)



- Cable Resistance: Low cable resistance for optimal power distribution. Look for 22-18 AWG (lower is better) wire gauge depending on system size.
- Cable Capacitance: Low cable capacitance for best audio, TW crosstalk and call signal performance.
- Cable Shielding: Use cables with quality shielding to minimize crosstalk and external interference.
- System Power: Ensure appropriate system power reserves using the Clear-Com power calculator.

Useful links

TWC-703 links	General Encore links	Support links
TWC-703 Datasheet https://clearcom.me/twc703-datasheet	Encore Installation Guide https://clearcom.me/pl-install-manual	Solution Finder https://clearcom.me/solfinder
TWC-703 User Guide https://clearcom.me/twc703-manual	Comprehensive Guide to Partyline Systems https://clearcom.me/pl-ebook	Email Preferences https://clearcom.me/emailpref
TWC-703 Quick Start Guide https://clearcom.me/twc703-qsg	Power Calculator https://clearcom.me/encore-calc	Support Requests https://clearcom.me/support-repair