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## **TFS ClearCom/RTS 2 wire to 4 wire InterCom Interface - Mod.CCRT242** **Installation and Operating Instructions with ATEM Studio Converter 2**

### Product Description

TFS's CCRT24 interface connects a 2 wire Clear-Com or RTS base station to the Blackmagic ATEM Studio Converter or Studio Converter 2's four wire intercom system. The Clear-Com or RTS base station becomes the master intercom and communicates to both wired or wireless party line/matrix belt-paks and the ATEM camera converters linked to the Studio Converter over fiber.

### Installation

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Connect the Clear-Com or RTS base station to the CCRT24 interface using a 3PIN XLR cable from any intercom output channel. NOTE: The CCRT24 is powered by the Clear-Com or RTS base station.

Connect the ATEM Studio Converter to the CCRT24 interface using the interface cable designed for STUDIO CONVERTER 2. (Note: The original STUDIO CONVERTER comes with a different cable.) One end has a 16 pin DIN connector which attaches to the CCRT24. The other end has two break-out cables for connection to the Studio Converter's Mic and Headset sockets. Insert the BLACK .20" connector plug into the MIC input and the grey 1/4" TRS plug into the HEADSET sockets on the Studio Converter.

### DIP Switch Positions

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The dip switch settings at the rear of the CCRT241 should be set as follows:

Switch 1 - ON (up)

Switch 2 - ClearCom - OFF (down) RTS -ON(up)

### Calibrating the Interface

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Your TFS CCRT24 Clear-Com/RTS interface was factory nulled with an MS-702 Clear-Com base station attached to a Blackmagic ATEM Studio Converter. You may have to tweak the null adjustments to match your particular Studio converter using an ear set and a small screwdriver. To null the interface, plug in the ear set into the 1/8" jack to the right of the interface and adjust the RLC trim pots for minimum noise...then unplug the ear set. IMPORTANT: You must unplug the ear set after nulling the interface

before using it. If you forget, you will hear lots of noise and it will not work. Also -- the yellow data light on the interface will blink repeatedly.

## Controls and Operation

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### **Atem Studio Converter Settings:**

Turn all camera buttons 1 - 4 on. Buttons should turn blue. You must have all of them on for intercom audio to pass between the ClearCom or RTS Base station.

**ClearCom or RTS Base Station Settings:** Termination settings for all intercom outputs should be ON. On the ClearCom MS-702 or MS-704 base stations -- these switches are located on back.

### **Local Send:**

Controls the audio signal level from the Clear-Com/RTS 2 wire Com to the audio *out* of the 4-wire I/O (headset). Adjust as required.

### **Local Receive:**

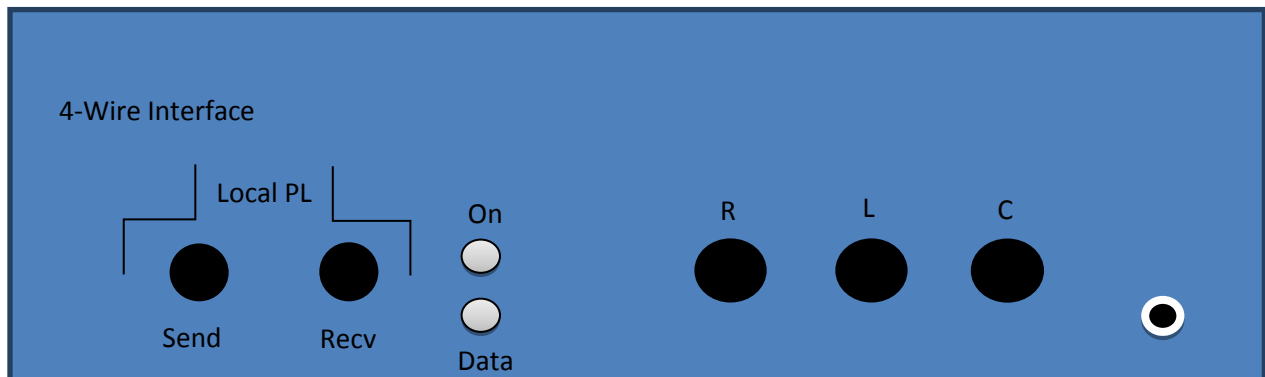
Controls the audio signal level from the audio *in* (*mic*) of the I/O to the local 2-wire intercom. Adjust as required.

### **Sidetone Null Adjustment:**

This set of three trim-pots include R= Resistance, L= Inductance, and C= Capacitance. These compensate for each component of the line impedance, providing the best null possible. To prevent damage to the level control and nulling trim-pots, do not force them past their stop points.

### **Power LED:**

This green LED will illuminate when it is receiving power from pin 2 of the party-line XLR connection.



Ear set Port  
For Nulling