

CT-2 CHANNEL TAG

Operation Manual

**Test Equipment
Depot**

1-800-517-8431

99 Washington Street
Melrose, MA 02176
Fax 781-665-0780
TestEquipmentDepot.com





**GENERAL
INFORMATION**

Congratulations! You now own the most versatile member of TRILITHIC's *channel tag* family, the **CT-2**. This device is a state-of-the-art instrument that enables you to do your job more effectively! Your CT-2:

- *Tags* carrier used for leakage measurement for easy identification.
- Provides dual frequency *tags* (3 Hz or 10 Hz).
- Is compatible with Trilithic's SEARCHER, SEARCHER PLUS, and SUPER PLUS leakage receivers.
- Is non interfering because CT-2's low frequency modulation is removed easily by the customer's TV automatic gain control.
- Is simple to install and operate.

As you know, when several CATV systems operate in the same area, it is often difficult to determine which system is the source of a detected leak. Your CT-2 is designed to deal with the problem of leakage identification in dual cable or overbuild situations.

Your CT-2 solves the problem of determining which cable is leaking by attaching a low frequency *tag* to the leakage carrier on one of the cables. This *tag* causes a distinctive audible response in Trilithic's SEARCHER, SEARCHER PLUS and SUPER PLUS leakage receivers or any other leakage receiver with level controlled tone.

Trilithic's leakage receivers generate an audible tone which varies in pitch, depending on the leakage strength. When CT-2 *tags* a leak, it causes this audible tone to rise and fall in pitch at a rate of 3 or 20 oscillations per second.

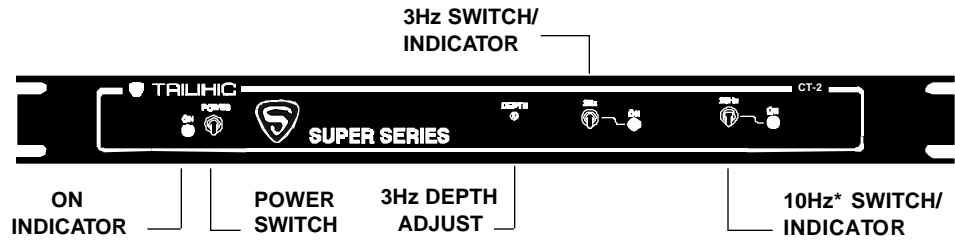
If you do not hear this fluctuating tone, you know that the leak did not originate in your system.

SPECIFICATIONS

Modulation	Sine wave
Modulation Rate	Selectable 3 Hz or 10 Hz
Depth of Modulation	Settable, 0.5 to 5dB (3 Hz only) 10 Hz fixed at 2dB
Input/Output Impedance	75 Ohms, nominal
Power	115 VAC
Mechanical Packaging	1U (1.75") rack enclosure

OPERATION

Figure 1 below shows the front and rear panels of your CT-2.



FRONT PANEL

The CT-2's line voltage is set at the factory. Each CT-2 is labelled for either 115 VAC or 230 VAC operations.

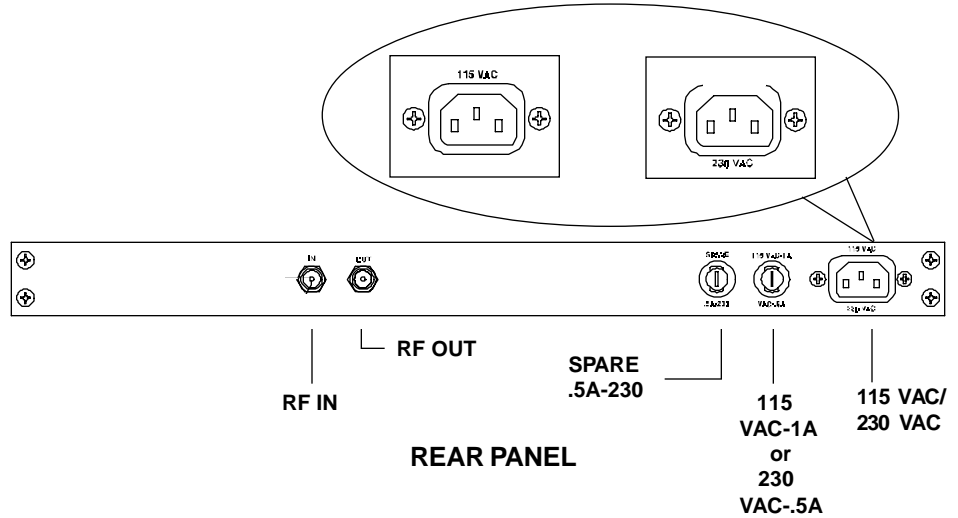


Figure 1. CT-2 Panels.

INSTALLATION

Your CT-2 is a broadband device and can *tag* any carrier in the aircraft band by placing it between the carrier source and the headend combiner.

Select a suitable rack panel location near the modulator for the desired leakage channel.

The CT-2 should come from the factory with the proper setting for the 3Hz Modulation depth.

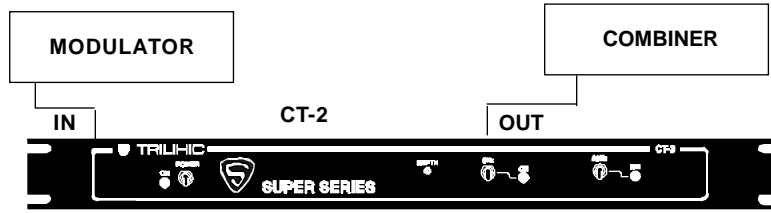
If you are using the SUPER PLUS leakage receiver, you can use the 10Hz Mode to do special detection procedures. The 10Hz internal adjustment has been set specifically for use with the SUPER PLUS. If you are using a SEARCHER, SEARCHER PLUS or other device, use the 3Hz setting. You can NOT use the 3 Hz and 10 Hz tones together when you are using a mix of leakage receivers.

Connect the Unit to AC Power (check to see whether it is set at 115 VAC or 230 VAC).



INSTALLATION (Continued)

Connect the CT-2 between to the combiner.



SET UP

Your Unit comes ready to go. All you need to do is decide whether you want to use 3 Hz or 10 Hz.

- If you are using the SEARCHER or SEARCHER PLUS, select 3 Hz. Do not use this setting with SUPER PLUS.
- If you are using the SUPER PLUS only, use 10 Hz.

NOTE: Typically, you won't use the SUPER PLUS with the 3 Hz tone. The 10 Hz tone is the mode which activates the SUPER PLUS' features.

- If you are using SUPER PLUS with other types of leakage receivers, use 10 Hz.

Select the proper modulation by *toggling* the 3 Hz or 10 Hz switches on the front panel. The green LEDs should be lighted, indicating that the modulation is ON.



In some cases, you may desire more or less 3 Hz modulation. You can use one of the following to achieve this:

- Spectrum analyzer and a leakage receiver or,
- Signal Level Meter with and analog meter movement.

Analyzer Method

If you are using the Analyzer Method, follow this procedure.

1. Connect the analyzer to a system test point after the combiner.



Analyzer Method (Continued)

2. Tune to the leakage carrier and set the analyzer to zero span.

Use an IF bandwidth setting between 200 and 300kHz.

3. As you observe carrier amplitude, slowly adjust the CT-2's **3 Hz DEPTH** Control. Start at the control's *counter-clockwise* stop and adjust to a modulation depth of approximately 2dB.

If necessary, you can enhance the audibility of the tag by increasing the modulation depth with CT-2's **3 Hz DEPTH** Control.

NOTE: When the CT-2 is used with a video carrier, we recommend that you limit the maximum setting to a depth of 3dB.

Analog Meter Method

If you are using the Meter Method, follow this procedure.

1. Connect the meter to a system test point after the combiner.
2. Tune to the leakage carrier.
3. As you observe carrier amplitude, slowly adjust the CT-2's **DEPTH** Control. Start at the control's *counter-clockwise* stop and adjust to a modulation depth of approximately 2dB (which is indicated by the meter needle slowly varying by 2dB).

If necessary, you can enhance the audibility of the tag by increasing the modulation depth with CT-2's **3 Hz DEPTH** Control.

NOTE: When the CT-2 is used with a video carrier, we recommend that you limit the maximum setting to a depth of 3dB.