Test Equipment uses of the C Plus

The C Plus can be used as test equipment for the testing of radio systems, individual radios and even other decoders. This application uses a computer to generate encode commands which are executed by the C Plus. This allows any valid ID to be targeted for the test.

Testing other decoders:
Although C Plus Rev B and C units have the $$LOOP loop-back test to self-test encode and decode, you may have other ANI decoders (or systems) that do not have this capability. By connecting the Data output of the C Plus into the input of the target decoder, you can send known good data bursts to the target decoder. Data bursts that are the same as a radio PTT ANI or emergency can be generated as well as unique GE Star® messages and all FleetSync™ statuses. MDC-1200® Short Call Alert and radio check are also supported.

Testing Radios with decode capability:
Say you have a radio system that uses GE Star® signaling and incorporates the "radio kill" feature of GE Star®. You need to test the kill feature of the radio, or you received a radio from the field that ho longer works and has been subjected to "radio kill" just before it had a casualty. Connect the C Plus Data Out to the external modulation in of a service monitor and connect the radio to the RF connection. Now, using a terminal program, send an encode string to the C Plus formatted with the target radio ID and the radio enable (or disable) command. If you switch the monitor from TX to RX, the C Plus will also decode the acknowledgment that is generated by the radio.

If the radio is inoperative and you need to enable a previously disabled Cimarron CDEU-1 (GE Star® Encoder/Decoder), or Cimarron CIM-2000 (Dual Format Encoder/Decoder) you can inject the C Plus data output directly into the target devices data input. You can also connect the target devices output to the C Plus data input to complete the return data path and see the CDEU-1 acknowledgments.

Formulating the RS-232 data strings:
The following is a string that would send a data burst that is the same as a radio emergency:

`$CT,1234,07,01^M^J`

Where: $CT   =   Command to Transmit

1234   =   Target radio ID

07   =   Message type (07 = Emergency)

01   =   Channel Number

^M   =   Carriage Return

^J   =   Line Feed

The C Plus will react only if its assigned channel number is the same as the channel number in the $CT string. To find out what channel number is assigned to the C Plus use the command $$chan. Refer to the manual for a complete list of supported message types.

Additional Information:
The Cimarron CDT can be used in place of computer running Hyperterm. They can be purchased from Cimarron Technologies. The CDT supports all ID's but the types of messages available are limited. The $$LOOP command can be used to generate alternating emergency and PTT ANI messages. The ID is not changeable with this command.

Special Requirements:
The optional feature "Encode" must be purchased and activated. Contact Cimarron Technologies for information.

The C plus must be interfaced to a computer running a terminal emulation program like Hyperterm or to a Cimarron CDT.

See Also:
Encode Capability

Connecting the C Plus to a Printer or Computer

Communicating with the C Plus using Hyperterm