

## Encode Capability

The C Plus is capable of encoding certain two-way signaling messages in GE Star®, MDC-1200® and FleetSync™. These “Outbound” messages include the entire GE Star® message set, all FleetSync™ status messages (Stat 10 to Stat 99), and MDC-1200® Voice Selective Call, Radio Check, Short Call Alert, Long Call Alert, Repeater Access, Repeater Setup, Repeater Knockdown, Status ACK, Unit Radio Disable, Unit Radio Enable and Open Microphone Monitor.

Commands are sent to the C Plus via the Cimarron CDT (limited command set), a compatible dispatch console or a computer running a terminal emulation program like Hyperterm.

### Communicating using “\$CT” Commands:

The C Plus may send data messages to remote radios equipped with encoder/decoder capability. The C Plus converts the host computer generated ASCII "transmit" sentence to a data message command, sending it over the selected radio channel. The Cimarron multichannel ANI Format is the serial format used. Regardless of the serial output format selected (in personality programming), the ANI input format is always the Cimarron multichannel ANI Format. The \$CT string is composed as follows:

```
$CT,iiii,mm,cc<cr><lf>
```

```
$CT,fff-iiii,ss,cc <cr><lf> (FleetSync™ Only)
```

#### Transmitted Messages

The C Plus may send data messages to remote radios equipped with encoder/decoder capability. The C Plus converts the host computer generated ASCII "transmit" sentence to a data message command, sending it over the selected radio channel. This data sentence is formatted as follows:

```
$CT,iiii,mm,cc<cr><lf>
```

```
$CT,fff-iiii,ss,cc <cr><lf> (FleetSync™ Only)
```

Transmit Data Sentence - sent by the host computer to the controller where:

<b>\$CT</b>	Transmit-data sentence header
<b>fff</b>	Fleet ID (FleetSync™ only. Valid range = 100-349)
<b>iiii</b>	Unit ID (0000 .. DEEE) (F/S Valid range = 1000-4999)
<b>mm</b>	Unit message (00 .. 7F) in ASCII-HEX, as described below:
	00 - Status One
	10 - Status Two
	20 - Status Three
	30 - Status Four
	40 - Status Five
	50 - Status Six
	60 - Status Seven
	70 - Status Eight
	01 - Unit Selective Call or MDC “Voice Sel Call” (CMD)

- 02 - Unit Interrogate or MDC "Radio Check"(CMD)
- 07 - Unit Emergency Message (ACK)
- 08 - Unit Selective Call Cancel (CMD)
- 09 - Unit Stuck Mic Message (ACK)
- 0A - Unit Radio Open-Mic-Monitor (CMD)
- 0F - Unit Man Down Message (ACK)
- 1B - MDC Short Call Alert
- 2B - MDC Long Call Alert
- 3B - MDC Repeater Access
- 4B - MDC Repeater Setup
- 5B - MDC Repeater Knockdown
- 7B - MDC Status ACK
- 4A - Unit Radio Disable (CMD)
- 5A - Unit Radio Enable (CMD)

**ss** Two digit Status for FleetSync™ Only

- 01 - Unit PTT ID Message
- 10-99 Status messages where the following are defined by Kenwood:
  - 88 - Emergency mode Off
  - 89 - Horn Alert
  - 90 - Radio TX Stun
  - 91 - Radio TX and RX Stun
  - 92 - Turn Stun Off
  - 93 - ACK TX Stun
  - 94 - ACK TX/RX Stun
  - 98 - Unit Man Down Message
  - 99 - Unit Emergency Message

**cc** Transmit channel target number (00 .. 99)

**<cr>** ASCII carriage return character

**<lf>** ASCII line feed character

The ACK messages are sent in response to receiving a critical message from the remote unit. When received by the mobile unit, the ACK terminates the remote unit message retry cycle.

**Communicating using the Cimarron CDT**

The CDT provides a simple and efficient method of sending the most common two-way commands. However, it permits transmission of only a subset of the above available commands.

**Additional Information:**

The C Plus needs to be correctly interfaced to a transceiver. The deviation of the transmitted data must be just slightly lower than voice deviation. The output level adjust is R5 located at the rear of the C Plus. Deviation should be read with a service monitor while executing the Self-Test directive "\$\$KEYT".

**Special Requirements:**

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

The Channel Busy line must be activated.

The C Plus must be interfaced to a Cimarron CDT, a compatible dispatch console or a computer running a terminal emulation program like Hyperterm.

**See Also**

Operating with a Cimarron CDT

Channel Busy

Data Output

Communicating with the C Plus using Hyperterm

Self Tests