

Application Note

Model Number: C25 II and C25 III, APCO P25 Display Decoder

Description: Using the \$\$FORMAT Command to customize your display

Preparing the C25:

For the C25 II and C25 III, you can use the \$\$FORMAT command to customize how the decoded P25 data is displayed.

Due to the structured nature of the \$\$FORMAT command it is highly recommended to type the command(s) into a text file and save it.

There is one \$\$FORMAT command for each display so for the C25 II, there will be one command in the text file. For the C25 III, there will be two commands.

This Application Note is structured this way:

Page 2	Details how to program the C25 for a Formatted display
Pages 3~6	Samples of the \$\$FORMAT commands
Page 7	Details how to send your saved text file to the C25

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The C25 is programmed using Windows HyperTerminal. To utilize the \$\$FORMAT Command, you must first:

- ⇒ From the C25 Program Mode, change the display type to Formatted
- ⇒ Return to Normal Mode
- ⇒ Then send a text file detailing the actual formatted information you want displayed.


Using HyperTerminal, access the Main Programming screen of the C25 by typing \$\$C25

Make the following selections:

```
HELLO
MAKE YOUR SELECTION FROM THE FOLLOWING OPTIONS

1. PROGRAM THE C25 PERSONALITY
2. SET THE DATE AND TIME
3. ACCESS THE ALIAS TABLE
4. ACCESS THE MESSAGE TABLE
5. ACCESS THE NAC TABLE
6. ACCESS THE TGID TABLE
7. ENABLE AUTHORIZE MODE
8. ENABLE NAC PERMISSION MODE
9. ENABLE TGID PERMISSION MODE
A. PROGRAM NEW FLASH
B. NORMAL OPERATION


ENTER YOUR SELECTION: _
```



```
C25 PERSONALITY PROGRAMMING

1. SELECT FORMAT TYPE
2. SELECT SERIAL OUTPUT TYPE
3. SELECT DISPLAY TYPE
4. SELECT MUTE TYPE
5. DEFINE SERIAL PORT PARAMETERS
6. DEFINE RADIO INTERFACE
7. ASSIGN PORTS
8. ASSIGN CHANNEL NUMBER
9. ASSIGN BASE ID NUMBER
A. ENABLE/DISABLE SOUNDER


PRESS BACK SLASH "\ " TO GO BACK
OR PLEASE ENTER YOUR SELECTION: _
```



```
SELECT DISPLAY TYPE

1. TAXI BID
2. SCROLLING
3. MESSAGE AND ASSIGNMENT
4. FORMATTED


Your current selection of display type is: 4
Press back slash "\ " to go back
Or enter 1-3 for a new selection of display type: _
```



```
HELLO
MAKE YOUR SELECTION FROM THE FOLLOWING OPTIONS

1. PROGRAM THE C25 PERSONALITY
2. SET THE DATE AND TIME
3. ACCESS THE ALIAS TABLE
4. ACCESS THE MESSAGE TABLE
5. ACCESS THE NAC TABLE
6. ACCESS THE TGID TABLE
7. ENABLE AUTHORIZE MODE
8. ENABLE NAC PERMISSION MODE
9. ENABLE TGID PERMISSION MODE
A. PROGRAM NEW FLASH
B. NORMAL OPERATION

ENTER YOUR SELECTION: _
```



After step 3, press the backslash key twice to get back to the Main Program Screen shown to the right.

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The C25 display decoders can be programmed to show any of the following P25 data blocks:

- Source ID (SRC)
- Destination ID (DEST)
- Talk Group (TGID)
- Network Access Code (NAC)
- Emergency flag (EM)

These data blocks can be displayed in (&)Decimal or in (#)HEX.

Any of these data blocks can be displayed in any order and also with text added for clarity. For example, the P25 ANI (SRC ID) can show as "2567"; or as "ID: 2567"

Examples of FORMAT strings: **Sample 1**

`$$FORMAT, D1, #SRC, $`

- Format command
- Directed to Display 1 (Main display on C25 II or top display on C25 III)
- SRC ID in HEX. Number base MUST be specified (#=HEX, &=DEC)
- The Format Command must always end with a \$.

⇒ A Comma must separate the above values.

⇒ There can be NO SPACES. Spaces are allowed only within quotes (more about that on page 2)

⇒ D1, the main display, can show only one item at a time. For example, if the SRC ID and NAC are chosen for D1, they will alternate, one then the other.

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Examples of FORMAT strings: **Sample 2**

```
$$FORMAT,D1,&SRC$  
$$FORMAT,D2,DATE," TalkGroup=",&TGID,$
```

So, these two strings are sent to a C25 III. First line is described on page 3. The second line is broken down here:

```
$$FORMAT,D2,DATE," TalkGroup=",&TGID,$
```

- Format command
- Directed to Display 2 (This is the smaller sub-display on the C25 III)
- DATE will insert the current date in the format mm/dd/yy.
- The text **within** the quotes will be displayed exactly as typed, including spaces. You can use the quoted text and spaces to format the display as needed.
- &TGID will display the TalkGroup ID in Decimal format. (#TGID would display the TalkGroup ID in HEX format.)

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Preparing your \$\$FORMAT Command:






Examples of FORMAT strings: **Sample 3**

```
$$FORMAT,D1,&SRC$  
$$FORMAT,D2,TIME," TGID: "&TGID," NAC: "#NAC,$
```

So, these two strings are sent to a C25 III. First line is described on page 3.
The second line is broken down here:

TIME inserts current time  TalkGroup ID in Decimal format 

```
$$FORMAT,D2,TIME," TGID: "&TGID," NAC: "#NAC,$
```

- Format command 
- Directed to Display 2 (This is the smaller sub-display on the C25 III) 
- Quoted text to indicate TalkGroup ID. 
- The text **within** the quotes will be displayed exactly as typed, including spaces. You can use the quoted text and spaces to format the display as needed. 
- #NAC will display the NAC in HEX format. (&NAC would display the NAC in Decimal format.) 

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Examples of FORMAT strings: **Sample 4: ALIAS**

The C25 III can display an Alias in place of the decoded ID. The Alias Option must be installed for this and an Alias table must be loaded into the C25 for this feature to work. Please see the C25 manual for loading your Alias table.

```
$$FORMAT, D 1, SRC -a, $  
$$FORMAT, D 2, SRC -A, $
```

- a after the SRC directs the C25 to show the Alias of the decoded ID rather than a HEX or Decimal number.
- A after the SRC directs the C25 to show the Assignment (extended alias field).

Since the C25 III has two lines of display, this allows for an 8-character Alias for the top line with and extended 28-character extended Alias on the bottom line.

If the decoded ID is not in the Alias table, the field will be blank (no ID shows)

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Sending your \$\$FORMAT Command to the C25

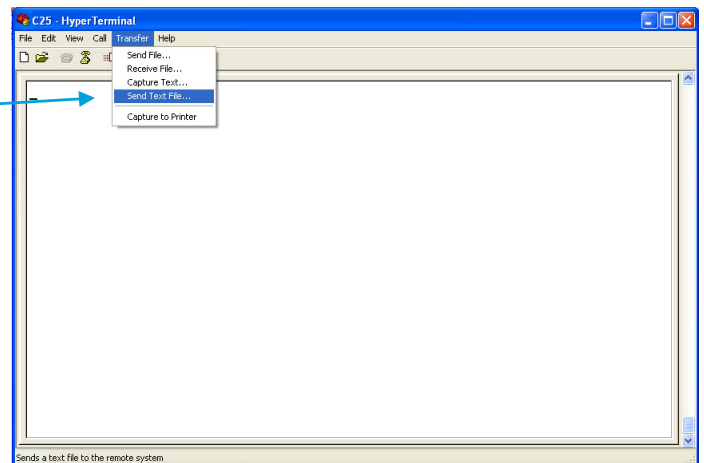
It is highly recommended to type your \$\$FORMAT command into a text file. Then send this text file to the C25.

The reason for this is due to the critical format structure of the command plus the fact that commands sent to the C25 are not echoed (do not show up) on the computer screen.

Go to the Transfer pull-down menu, then to Send Text File.

Be careful NOT to select Send File.

After you find and select your text file and click OK, the file will immediately be sent.



If your \$\$FORMAT command is accepted, you will see Format Saved.

In the example here, the file I sent had two \$\$FORMAT commands; one for the Main Display (D1) and a second line for the sub-display (D2).

