



10-006A  
6 Apr, 2010

## **MULTIDROP RETROFIT (ICOP CPU)**

### **I. PURPOSE:**

How to install the Multidrop retrofit kit into an E-Series analyzer with the new ICOP CPU.

### **II. TOOLS:**

Phillips screwdriver

### **III. PARTS:**

KIT000285 - KIT, FIELD RETROFIT, ICOP MULTIDROP



### **IV. PROCEDURE:**

1. Power down the instrument and remove the power cord.
2. Remove the instrument cover by removing the Phillips head screws on each side of the instrument.
3. Locate the rear panel of the instrument and lower it. This will give you easy access to the install the Multidrop board.
4. Use wrist strap and Remove the cable shown in Figure 1 connecting the Motherboard to the CPU.
5. Remove the two 1" screws in the top of the CPU
6. Remove the Multidrop card from the KIT and place it so that the standoffs align with the screw holes on the CPU.
7. Connect the Multidrop board to the CPU using the two screws SN-240 included in the kit.
8. Connect the cable included in your kit labeled 06305 to the CPU and the Multidrop board as shown in figure 2.

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9. Connect the cable included in your kit labeled 04671 to the main board and Multidrop board as shown in figure 3.
10. Remove the bottom right screw from your CPU and install the cable clamp onto your cable labeled 04671 and re-secure the screw to the CPU as shown in figure 4.
11. Once the Multidrop option has been installed you must now enable the Multidrop via the front panel of the instrument.



Figure 1.



Figure 2.

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Figure 3.



Figure 4.

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## V. ENABLING THE MULTIDROP BOARD:

1. From the main menu press SETUP-MORE-COM select COM1.
2. Below is a table that explains each of the channels.

Mode	ID	Description
Quiet mode	1	Quiet mode suppresses any feedback from the analyzer (iDAS reports, and warning messages) to the remote device and is typically used when the port is communicating with a computer program such as APICOM. Such feedback is still available but a command must be issued to receive them.
Computer mode	2	Computer mode inhibits echoing of typed characters and is used when the port is communicating with a computer program, such as APICOM.
Security mode	4	When enabled, the serial port requires a password before it will respond. The only command that is active is the help screen (? CR).
Enable Internet	8	Enables the use and configuration of the Ethernet interface. When enabled, a new menu item INET will appear in the respective COM port menu.
Hessen protocol	16	The Hessen communications protocol is used in some European countries. T-API part number 02252 contains more information on this protocol.
Multidrop Protocol	32	Multidrop protocol allows a multi-instrument configuration on a single communications channel. Multidrop requires the use of instrument IDs.
Enable modem	64	Enables to send a modem initialization string at power-up. Asserts certain lines in the RS-232 port to enable the modem to communicate.
Ignore Errors	128	Fixes certain types of parity errors at certain Hessen protocol installations.
Disable XON/XOFF	256	Disables XON/XOFF data flow control.
	512	Unused
RS-485 mode	1024	Configures the COM2 Port for RS-485 communication. RS-485 mode has precedence over multidrop mode if both are enabled.
E, 7, 1	2048	This setting selects even parity, 7 data bits, and 1 stop bit for this com port; the default setting is always no parity, 8 data bits, and 1 stop bit. Used in conjunction with the Hessen protocol, hence, it is listed after ID 16
Command Prompt	4096	Enables a command prompt when in terminal mode.

3. Set Multidrop to on and press enter.
4. On the Multidrop board there are two jumper pins. If you have several instruments linked together, install a jumper connecting pins 21-22 of JP2 on the Multidrop board of the last instrument in the chain and remove the jumpers on pins 21-22 of JP2 on the other instruments.
5. If you are communicating with the instruments via RS-232, you must also have a jumper between pins 23-24 of JP2 on the Multidrop board of each instrument.
6. Reboot the analyzer.

Should you have questions, please do not hesitate to contact Teledyne API Customer Service.