A

Troubleshooting Guide

In This Appendix. . . .
— Troubleshooting Guide

Troubleshooting Guide

One or more example programs in this manual do not operate properly. What's wrong?

Check for the following possible causes:

- Most of the example programs include first scan rungs using SP0 contacts. The CPU needs to make a program-to-run mode transition in order for these rungs to execute. Use *Direct*SOFT to do this.

- The program may require an external input such as X0 or X1. Check the system configuration requirements listed for the example to work.

- The DL430 CPU does not support some instructions such as MOVMC and ACON boxes which occur in the examples. The DL130 and DL230 do not support pointer variables (type P).

When pressing some of the keys on the DV-1000, a display message appears that says "Setup Error, Check Value in V(xxxx)". How can I eliminate these error messages?

For most of the DV-1000 modes, two or three PLC V-memory locations must be loaded with setup parameters. The range of V-memory set aside for this purpose is described in Chapter 3. If you have manually entered these parameters at one time, they now may have become corrupted for one of several possible reasons. We recommend imbedding parameter setup data in ladder logic (first scan rung only). See Chapter 3 for more on this topic.

Using Change Preset Mode I attempt to change timer or counter presets. However, the timer or counter preset does not actually change when the PLC program is running. What's wrong?

The most likely problem is that the counter or timer box in the ladder program has a constant Kxxxx selected as a preset. You will need to edit the timer or counter box to instead reference a V-memory location for the preset. The Change Preset function cannot change an instruction box's constant. Please see the examples in Chapter 6.

I can't get the numeric data in Message Display mode to put numbers on the screen.

Potential sources of this problem are:

- The numeric setup parameter at V7623 may not be pointing to the area of V-memory where the value resides.

- The text data may be masking the number(s) if its ASCII codes are 20 hex or greater in text positions corresponding to numeric positions where you want the numbers to appear.

- The display is not in Message Display Mode.

Why does Change Preset keypad entries take so long to respond and update the display?

The delay you are seeing is due to communication time between the DV-1000 and the CPU. If screen updates lag behind, it can cause you to overshoot the desired value. For best results, pause a second between key strokes.

In ladder logic I change the text or numeric pointer to point to a second block of data. However, the DV-1000 only reads the original data block. Why is that?

The DV-1000 only reads the setup parameter table just after powerup. If you want to change the display data, you'll need to move new data into the original text and/or numeric data blocks. An example in Chapter 4 shows the ladder logic required to do this.

I am not able to change preset values, even though I have entered the correct password (or the password is disabled). What's wrong?

See if the number(s) you are trying to edit are hex numbers. Remember, Change Preset Mode only works for BCD numbers (0000 to 9999). Also, make sure the switch on the front of your CPU is not in the "Run" position (use "Term").

The ACON (ASCII Constant) instruction box will only accept two characters, while the examples in the manual show many more characters. What's the problem?

You are probably using a Hand-held Programmer to enter ladder logic. This is ok, but the extended ACON box functionality you are expecting is provided by the PC-based *Direct*SOFT programming software. The Hand-held Programmer accesses the CPU's standard ACON box function, which accepts two characters. This is described in Chapter 4.

The keypad seems to be locked up. When I press keys the display does not change. Why is that?

There can be two different causes of this problem:

- It may be that the DV-1000 is in Bit Control Mode. This temporarily changes the keypad functionality. Press the **Clear** Key followed by the **Enter** Key to exit Bit Control Mode.

- The DV-1000 setup parameters may be invalid, thereby confusing DV-1000 firmware. This is most likely if your CPU is new and its setup parameter locations for the DV-1000 have never been programmed. Follow the instructions in Chapter 2 to initialize the CPU scratchpad memory, which places zeros in all these setup parameter locations.

When I use a LDD instruction to load text data (ASCII codes), the display output swaps the position of the two pairs of characters. Why?

This is normal. The reason behind this effect, along with an example, is shown in the section in Chapter 4, titled "Loading Text Using the LDD and OUTD Instructions".

The display backlight is on, but no characters ever appear on the display for any of the modes.

This condition occurs when the DV-1000 is connected to the second communications port on a DL240 that is configured incorrectly. Using *Direct*SOFT, select the **PLC** menu, then **Setup**, then **Secondary Port**. Set the port for 9600 baud, 8 data bits, 1 stop bit, odd parity.

When I view the contents of the setup parameter locations, the setup pointer values are wrong. It seems something is overwriting the setup data which the ladder program writes on the first scan.

Remember that the LDA instruction which loads octal addresses in the setup program converts the octal numbers to hex numbers. It's likely that the values you see are the correct hex representations of the octal addresses.

When the DV-1000 powers up, the only thing it does is display the error message "E320 TIME OUT". The keypad also does not work. What is the problem?

The message you see is generated by the DV-1000. It is unable to establish communications with the CPU. Check the following to find the source of the problem:

- The communications cable may be faulty. Inspect the contacts for dust, etc., or change cables.

- If you have made a custom cable, it may be that the cable pinouts are reversed (the RJ12 connector on one end is installed upside down). Pin 1 of one end should connect to pin 6 of the opposite end! Refer to the custom cable drawing in Chapter 2.