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Documentation Update

Allen-Bradley BASIC Module User's Manual (Cat. No. 1771-DB)

Use This Update With:

Publication 1771-6.5.34, BASIC Module (Cat. No. 1771-DB) User's Manual, dated July, 1987.

Connecting a T1, T2, T3 or T4 Industrial Terminal to the Program Port

Use the following table to determine which keyboards you can use with your 1770-TA Monitor.

1770-TA Monitor

Terminal	Series A	Series B
1770-T3 Terminal 1770-FD Keyboard[1] Series A, Revision H	not applicable	Use Port C cable configuration. Refer to (figure 4.3) in your user's manual.
1770-T3 terminal 1770-FD Keyboard[1] Series C, Revision H	not applicable	Use Port C cable configuration. Refer to (figure 4.3) in your user's manual.
1770-T3 Terminal 1770-FD Keyboard[1] Series C, Revision H	not applicable	Use Port C cable configuration. Refer to (figure 4.3) in your user's manual.
1770-T1 Terminal 1770-FC Keyboard	Use Port B cable configuration. Refer to (figure 4.3B) below	2
1770-T1 Terminal 1770-FA Keyboard	Use Port B cable configuration. Refer to (figure 4.3B) below	2
1770-T4 Terminal 1770-FE Keyboard Series A, Revision F	not applicable	Use Port C cable configuration. Refer to (figure 4.3) in your user's manual.

1 If your firmware revision is earlier than the following you should update your keyboard to the latest revision

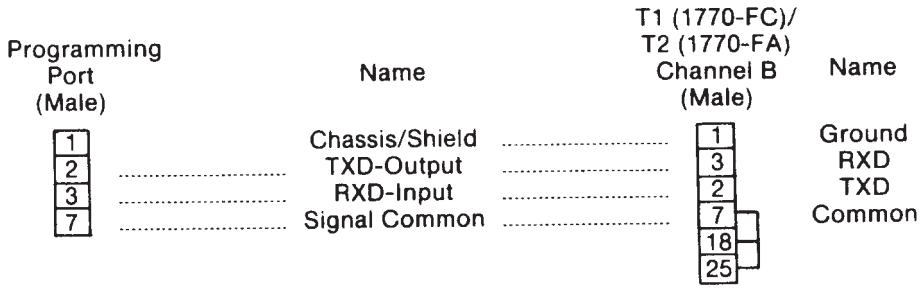
1770-FD Series A, Revision H
1770-FD Series B, Revision H
1770-FD Series C, Revision A
1770-FE Series A, Revision F

2 **Important:** Do not use a 1770-FC or 1770-FA keyboard with a 1770-TA, Series B monitor for this application. You cannot select Channel C as the main active port.

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Important: Use the firmware revision level shown on the screen when the T3/T4 first powers up. Do not use the revision levels listed on the bottom of the keyboard or back of the T3/T4.

Figure 4.3B
Cable pinouts for connecting a 1771-db BASIC Module (Program Port) to a 1770-TA, Series A Monitor (1770-FC or 1770-FA keyboard).

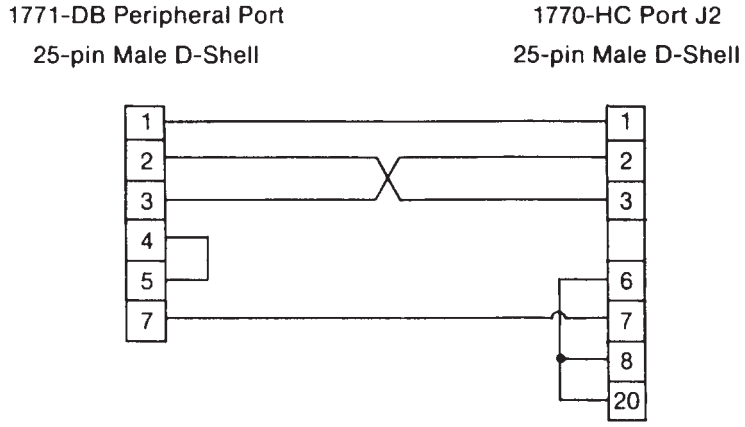


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Replace Figure 4.6, "Cable Connection to 1770-HC Printer" with the following figure:

4.4. Peripheral Port

Figure 4.6
Cable pinouts for connecting a 1771-DB BASIC Module to a 1770-HC Printer



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Important: This cable does not support hardware handshaking.

4.4.3 Connecting a 1770-SA/SB Recorder to the Peripheral Port

Change the figure references in section 4.4.3 from Figure 4.6 to 4.7.

4.4.4 Connecting a 1770-HC Printer to the Peripheral Port

Change the figure reference in section 4.4.4 from Figure 4.7 to 4.6.

4.4.5 Connecting RS-422 Devices

Insert the following paragraph between paragraphs 2 and 3 on page 4-12.

The following cables have 100 Ohm characteristic impedance. Use them for RS-422 applications. This is not a complete list of available 100 Ohm cables.

- Belden – 9729, 9804, 9829, 8162
- Consolidated – 5755, 5980, 5343
- Carol – C0829, C0804, C0841, C0500

5.4.31 Statement: STRING

Replace the statement LET $(1) "HELLO" with:

LET $(1) = "HELLO"

5.11 Memory Support Calls

Add the following Important note to section 5.11:

Important: If you use the ONTIME statement in your programs, refer to Section 5.4.20 for information about using ONTIME with PROGRAM EXECUTION TRANSFER CALLS.

5.4.20 Statement: ONTIME [expr],[ln num]

Add the following section at the end of section 5.4.20.

Using ONTIME with PROGRAM EXECUTION TRANSFER CALLS

The ONTIME feature uses the currently executing program as the basis to search for the subroutine line # associated with the ONTIME statement. If the ONTIME statement is executed and control switches to a different ROM or RAM Program File (e.g. via calls 70-72) then the ONTIME execution results in one of the 2 undesirable situations that follow:

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1. The program picks up execution at the same line # in the currently executing program. This can cause unexpected program operation and machine operation.

2. The program terminates operation with an "invalid line number" error message, if the line # doesn't exist.

You can avoid this situation by:

1. disabling the ONTIME feature (with CLOCK 0) before changing to another program, then enabling it (with CLOCK 1) after returning or;

2. duplicating the ONTIME routine in all executed programs **at the same line number.** This assures that the routine is available for execution when any program executes.

6.3.1 PLC-Processor Program

Replace Figure 6.2, "Sample BASIC Module Program" with the following figure.

```
>5     DIM A(5)
>10    REM SET BTW LENGTH TO 5 WORDS
>20    PUSH 5:CALL 4
>30    REM SET BTR LENGTH TO 5 WORDS
>40    PUSH 5:CALL 5
>50    REM READ THE BTW BUFFER
>60    CALL 6
>70    REM CONVERT DATA FROM 3-DIGIT SIGNED BCD TO DB FORMAT
>80    FOR I=1 TO 5
>90    PUSH I: CALL 10: POP A(I)
>95    PRINT A(I),
>100   NEXT I
>110   REM DO A CALCULATION
>120   T=A(1)+A(2)+A(3) +A(4)+A(5):V=T/5
>125   PRINT "AVE=",V
>130   REM CONVERT DATA FROM DB FORMAT TO 3-DIGIT SIGNED BCD
>140   PUSH T:PUSH 1:CALL 20
>150   PUSH V:PUSH 2:CALL 20
>160   REM WRITE TO THE BTR BUFFER
>170   CALL 7
>180   REM CONTINUE TO BLOCK TRANSFER
>190   GOTO 60
>200   END
```


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In Figure 6.3, "Sample PLC-2 Family Ladder Diagram", change the following parts of the ladder diagram:

In Rung 2:
BLOCK LENGTH: 05
FILE: 0205 - 0209

In rung 3:
FILE LENGTH: 005
FILE A: 0205-0209
FILE R: 0210-0214
RATE PER SCAN: 005

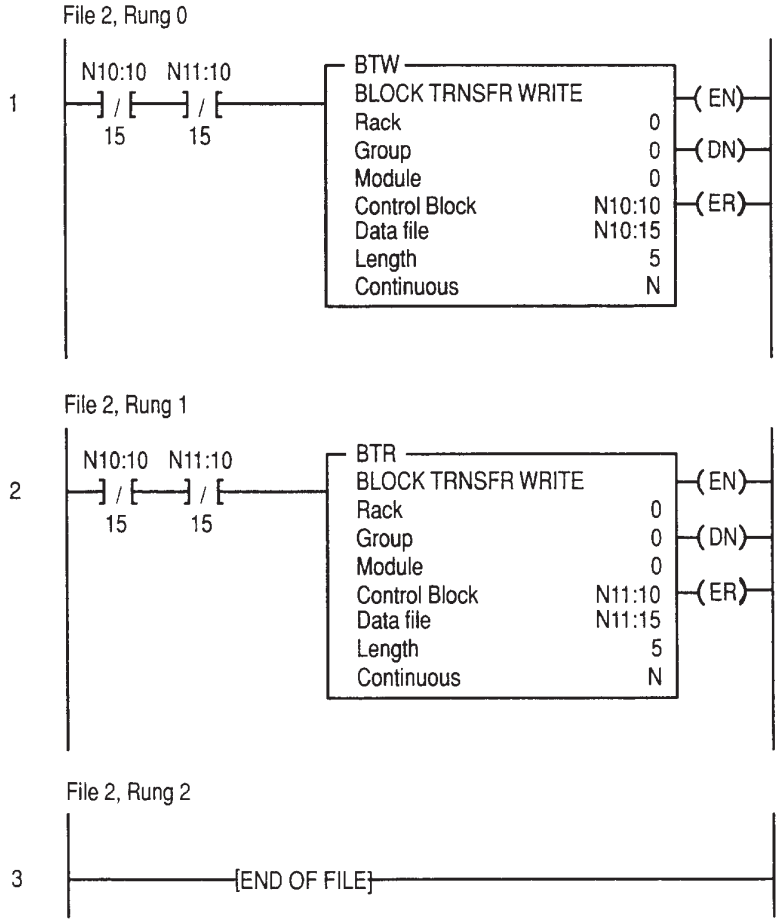
6.4 PLC-3 Family Processor

In Figure 6.5, "Sample PLC-3 Family Ladder Diagram", change Rung Number RM2 from "LENGTH = 10" to "LENGTH = 5". Change Rung Number RM3 from "LENGTH =2" to "LENGTH =5".

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6.5 PLC-5 Family Processor

Replace Figure 6.7, "Sample PLC-5 Family Ladder Logic", with the following figure:



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