



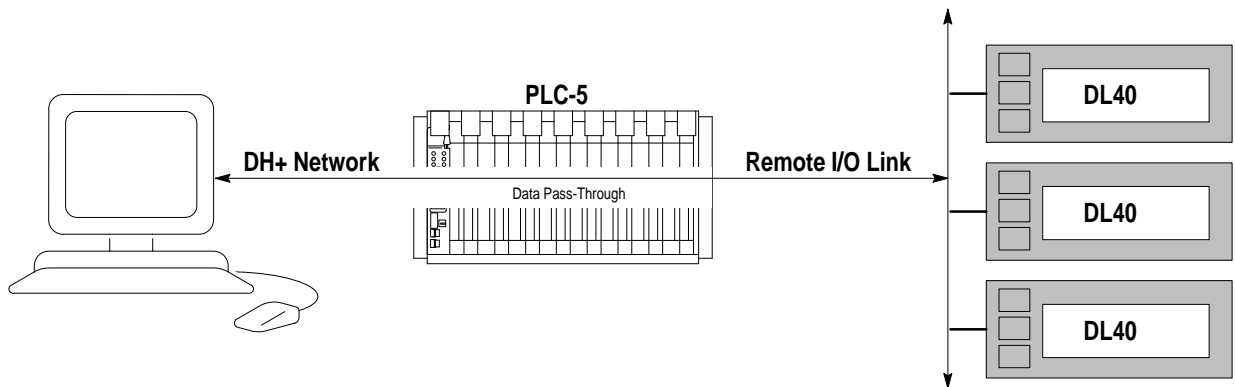
Bulletin 2706 Dataliner Message Display DL40 Series

PLC-5 Pass-Through Option

Application Note

Overview

This document describes how to use the DL40 PLC-5 Pass-Through option to transfer message files on a Data Highway (DH+) network. The PLC-5 transfers the data, there is no need to connect separate wiring between the DL40 and host computer. The figure below illustrates the Pass-Through function.



Message files can either be:

- Transferred from the DL40 to the host computer (Uploaded).
- Transferred from the host computer to the DL40 (Downloaded)

Note: If you need additional information concerning the operation of the DL40, refer to the User Manual (Catalog No. 2706-ND002).

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System Requirements

In order to use the Pass-Through option, you will need:

- Series D or greater DL40
- Revision frn 02.00 or greater Offline Programming Software.

The Pass-Through function operates with the following PLC-5s:

Table A.
Applicable PLC Types

PLC Type	Series	Minimum Revision Level
PLC-5/15	B	N
PLC-5/11	A	A
PLC-5/20	A	A
PLC-5/25	A	J
PLC-5/30	A	B
PLC-5/40	A	E
PLC-5/60	B	B
PLC-5/250	All	All

The host computer will need an interface card for the DH+ link. The following interface cards are available:

Table B.
Interface Boards and Modules for Host Computer

Catalog Number	Description
1784-KTK 1	2 Slot Interface Board
1784-KT	1/2 Slot Interface Board
1784-KL	Interface Board for Allen-Bradley 1784-T45 or 1784-T47
1784-KF2	Interface Module for PC-AT or compatible

Communications File Setup

Communication files are set up using the following Offline Programming Software screens:

- Download to DL40 (DH+ and Remote I/O) Set Up Screens
- Upload from DL40 (DH+ and Remote I/O) Set Up Screens

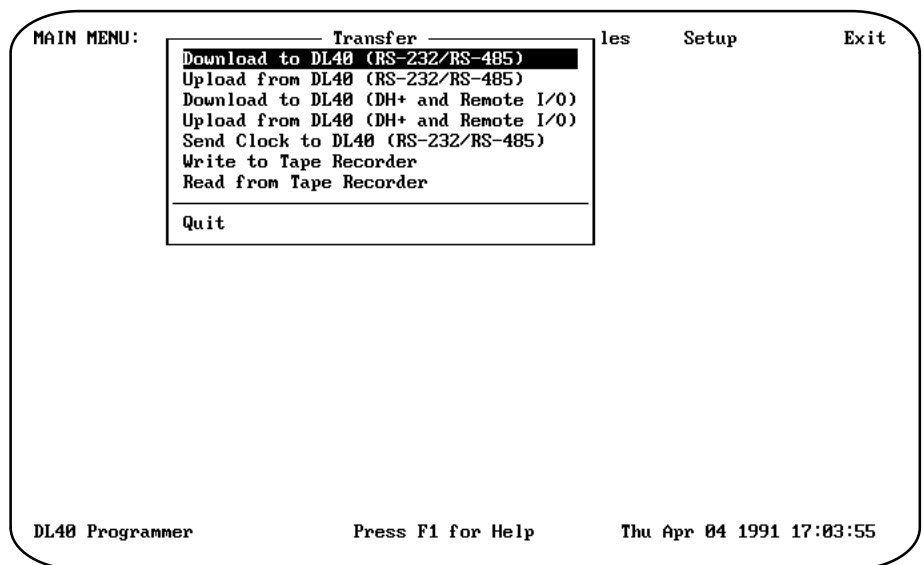
Note: The DL40 must be operating in Block Transfer mode when using the Pass-Through feature.



ATTENTION:

Incorrect Address selection could corrupt data in a non-DL40 device. Verify that the correct Communication File is selected.

To access the setup parameters for file transfers, select the **Transfer** menu on the initial Main Menu screen as shown below.



Moves cursor to desired function.



Moves cursor directly to 1st function - **Download, etc.**



Moves cursor directly to last function - **Quit.**



Selects function highlighted by cursor.



Help

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Downloading Files

You can send only one file at a time to a DL40. Select the Transfer menu and highlight *Download to DL40 (DH + and Remote I/O)* function; press [CR]. The *Download (Over DH+ and Remote I/O)* window will open. Select Message File to download and Communication File to use.

Highlight *Download <filename>* press [CR]. Answer *Yes* when asked if you want to *Start Downloading now*.

Note: When downloading through Remote I/O, *Download Type* is automatically set to *All*. You can't just transfer *Parameters*.

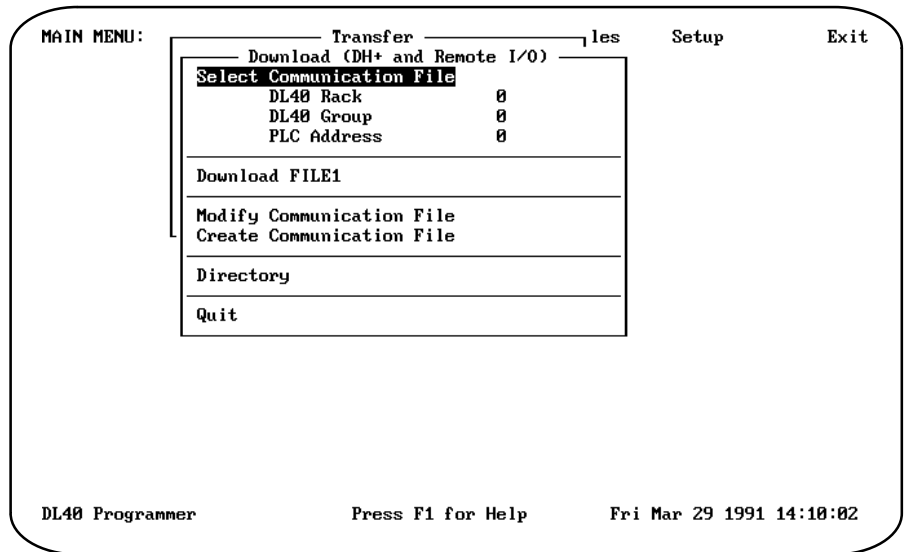
Uploading Files

You can send only one file at a time from a DL40. Highlight *Upload* from DL40 (*DH + and Remote I/O*) function; press [CR]. The *Upload (Over DH+ and Remote I/O)* window will open. Select Message File to upload and Communication File to use.

Highlight *Upload <filename>* press [CR]. Answer *Yes* when asked if you want to *Start Uploading now*.

**Download to DL40
 (DH+ and Remote I/O)
 Sub-Menu**

Select **Download to DL40 (DH+ and Remote I/O)** from the **Transfer** menu to set up a communications file for download data Pass-Through.



Moves cursor to desired file.



Accepts file to download.



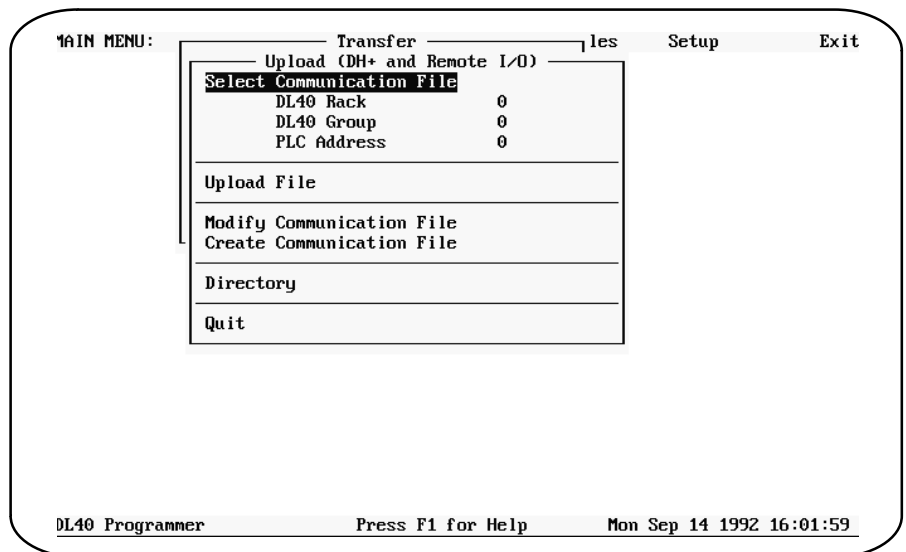
Moves cursor to first or last file.



Returns to transfer screen. No download.

**Upload from DL40
 (DH+ and Remote I/O)
 Sub-Menu**

Select **Upload (DH+ and Remote I/O)** from the **Transfer** menu to set up an upload communications file for upload data Pass-Through.



Moves cursor to desired file.



Accepts file to download.



Moves cursor to first or last file.



Returns to transfer screen. No download.

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Creating New Communications Files

Select **Create Communications File** on the DH+ and Remote I/O upload or download menus to create a new communications file.

The screenshot shows a terminal window titled 'DL40 Programmer'. At the top, it says 'MAIN MENU:'. Below this, there are several menu options: 'Transfer Files', 'Setup', and 'Exit'. A sub-menu is open under 'Transfer Files', showing 'Download (DH+ and Remote I/O)'. Within this sub-menu, 'Communication File' is selected. The 'Communication File' screen has a header 'File Comment' followed by a blacked-out area. Below this, there are several fields with their values: 'DL40 Rack' is 99, 'DL40 Group' is blank, 'PLC Address' is 99, 'PLC Type' is PLC5/15/25/40/60, 'Prog. Terminal Address' is 77, and 'DH+ Hardware Device' is 1784-KT. At the bottom of the screen, it says 'Quit'. At the very bottom of the terminal window, it displays 'DL40 Programmer', 'Press F1 for Help', and 'Fri Mar 29 1991 14:13:17'.

When creating or modifying a communications file, you will have to provide the following data:

DL40 Rack (Address) 0 to 76 (octal)

The rack address assigned to the DL40 using DIP Switch Bank #1.

DL40 Group (Number)

First I/O Group Number assigned to the DL40 using DIP Switch Bank #1 on the back of the DL40.

Select: 0, 2, 4 or 6

PLC Address 0 to 77 (octal)

The station number of the PLC-5 on the DH+ link to which the DL40 is attached. This address must match the DIP switch settings on the PLC.

PLC Type

Select: PLC-5/15, 25, 40, 60 or PLC-5/250

Note: For PLC-5/11, 5/20 and 5/30, choose PLC Type = PLC-5/15, etc.

Programming Terminal Address 0 to 77 (octal)

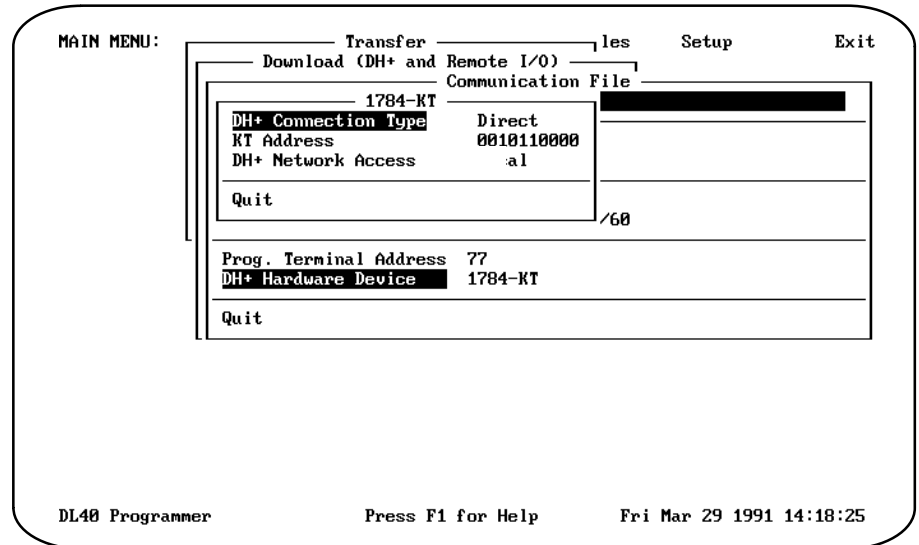
Station number for the programming terminal on the DH+ link.

DH+ Hardware Device

You will have to provide additional data depending on the type of interface module. Refer to Set Up Information in this document (pages 9 to 11).

Modifying Existing Communications Files

Select **Modify Communications File** on the DH+ and Remote I/O upload or download menus to modify an existing communications file.



If you want to modify an already specified Communication File, highlight *Select Communication File* on the file *Transfer* menu. To modify a file from another directory, highlight *Directory* and press [CR] and the *Program's Data Path* window will open. Enter directory in the form:

Drive:\Directory

Press [CR]. The *File Selections* window will open. Highlight file you want to modify; press [CR]. **Note:** All Communication Files have the suffix *.UDU*.

Highlight *Modify Configuration File* in the *Download* window and press [CR]. The *Communication File* window will open.

Highlight parameter you want to modify and press [CR]. Select parameter setting and press [CR]. When you highlight *DH + Hardware Device* and press [CR] the <Device Type> window will open. Set device parameters.

After all parameters are set, highlight *Quit* and press [CR].

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Set Up Information

Refer to the following set up parameters, when setting up communications files using the Offline Programming software.

1784-KL Interface Module Set Up Parameters

Use the following when setting up the Pass-Through function.

DH + Connection Type

Select: *Direct* if your programming computer and your PLC-5 are the only devices on the DH+ link or if there are multiple devices on the link and your programming computer **is** the first or last (physical) device on the link.

Select: *Multi-Drop* if there are multiple devices on the link and your programming computer **is not** first or last (physical) device on link.

DH + Network Access

Select: *Local* if the PLC to which the DL40 is attached is on the same DH+ link as your programming computer.

Select: *Remote (Bridge)* if the PLC to which the DL40 is attached is on a separate DH+ link (connected by Data Highway) from the DH+ link to which your programming computer is attached.

If you are using remote DH+ networks, you must also supply:

Local Bridge Address 0 to 376 (octal)

The Data Highway address that you assign to the 1785-KA Module connecting your computer's DH+ link to Data Highway. This address must match the DIP switch settings on the KA Module.

Remote Bridge Address 0 to 376 (octal)

The Data Highway address that you assign to the 1785-KA Module connecting your PLC-5's DH+ link to Data Highway. This address must match the DIP switch settings on the KA Module.

1784-KT Interface Module Set Up Parameters

Use the following when setting up the Pass-Through function.

DH + Connection Type

Select: *Direct* if your programming computer and your PLC-5 are the only devices on the DH+ link or if there are multiple devices on the link and your programming computer **is** the first or last (physical) device on the link.

Select: *Multi-Drop* if there are multiple devices on the link and your programming computer **is not** first or last (physical) device on link.

KT Address

The bit address that you assign to the 1784-KT Module using the DIP switch on the module. See Allen-Bradley Publication 6200-6.4.6.

DH + Network Access

Select: *Local* if the PLC to which the DL40 is attached is on the same DH+ link as your programming computer.

Select: *Remote (Bridge)* if the PLC to which the DL40 is attached is on a separate DH+ link (connected by Data Highway) from the DH+ link to which your programming computer is attached.

If you are using remote DH+ networks, you must also supply:

Local Bridge Address *0 to 376 (octal)*

The Data Highway address that you assign to the 1785-KA Module connecting the DH+ link containing your programming computer to Data Highway. This address must match the DIP switch settings on the module.

Remote Bridge Address *0 to 376 (octal)*

The Data Highway address that you assign to the 1785-KA Module connecting the DH+ link containing your PLC-5 (to which the DL40 is attached) to Data Highway. This address must match the DIP switch settings on the module.

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1784-KTK1 Interface Module Set Up Parameters

Use the following when setting up the Pass-Through function.

DH + Connection Type

Select: *Direct* if your programming computer and your PLC-5 are the only devices on the DH+ link or if there are multiple devices on the link and your programming computer **is** the first or last (physical) device on the link.

Select: *Multi-Drop* if there are multiple devices on the link and your programming computer **is not** the first or last (physical) device on the link.

KTK1 Address

The bit address that you assign to the 1784-KTK1 Module using the DIP switch on the module. See Allen-Bradley Publication 6200-6.4.6, page 5-3.

KTK1 Interrupt

The interrupt that you assign to the 1784-KTK1 Module using the jumper on the module. The factory setting for this interrupt is IRQ5. See Allen-Bradley Publication 6200-6.4.6.

1770-KF2 Interface Module Set Up Parameters

Use the following when setting up the Pass-Through function.

Configure Port

The computer port to which the KF2 Module is attached.

Select: COM1 or COM2

Baud Rate 300, 600, 1200, 2400, 4800, 9600

Parity None, Even, Odd

Duplex Half, Full

Error Checking CRC, BCC

These parameters must match the settings for the KF2 Module.

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With offices in major cities worldwide.

WORLD HEADQUARTERS

Allen-Bradley
1201 South Second Street
Milwaukee, WI 53204 USA
Tel:(414) 382-2000
Telex:43 11 016
FAX:(414)382-4444

EUROPE/MIDDLE EAST/ AFRICA HEADQUARTERS

Allen-Bradley Europe B.V.
Amsterdamseweg 15
1422 AC Uithoorn
The Netherlands
Tel:(31) 2975/43500
Telex:(844) 18042
FAX:(31) 2975/60222

ASIA/PACIFIC HEADQUARTERS

Allen-Bradley (Hong Kong) Limited
Room 1006, Block B, Sea View Estate
2-8 Watson Road
Hong Kong
Tel:(852)887-4788
Telex:(780) 64347
FAX:(852)510-9436

CANADA HEADQUARTERS

Allen-Bradley Canada Limited
135 Dundas Street
Cambridge, Ontario N1R 5X1
Canada
Tel:(519)623-1810
FAX:(519)623-8930

LATIN AMERICA HEADQUARTERS

Allen-Bradley
1201 South Second Street
Milwaukee, WI 53204 USA
Tel:(414)382-2000
Telex:43 11 016
FAX:(414)382-2400