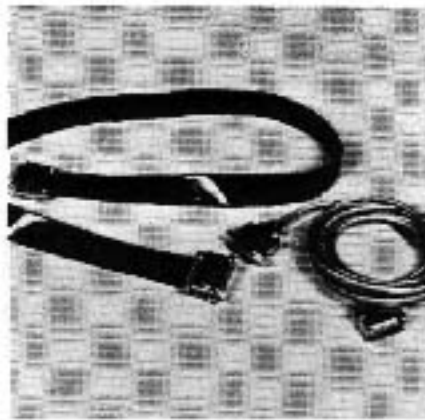




## **Allen-Bradley Hardware Interface Cable Information for Personal/Industrial Computer Systems**

(Cat. Nos. 1784-CAK, -CAS, -CXK, -CYK, -CYS)

### Product Data



### **Introduction**

This document shows you how to install the cables needed to upload/download control programs developed with the 6200 Series Software using personal/industrial computer systems. You transfer these programs from the RS-232-C serial port (COM1 or COM2) to a PLC-2 family programmable controller through a:

- 1771-KE/KF module to a 1771-KA or 1771-KA2 in a Data Highway network
- 1771-KG module
- 1770-SB Data Cartridge Recorder
- Hayes external modem to a Data Highway network

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## Cable Description and Usage

Tables A, B, and C present information for connecting the above listed components to a computer. Each table:

- lists the applicable cables
- describes the connection points
- identifies the compatible programming devices (personal/industrial computers)
- refers to the applicable pinout schematic

**Table A**  
**Connection to a Data Highway Network Using a 1771-KE/KF or 1771-KG Module**

| Cat. No. | Cable Description                                                        | Connection Points                                                                                 | Programming Device Used With                                           | Refer to in Figure: |
|----------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------|
| 1784-CAK | RS-232-C Null Modem Cable (10ft/3m) — for 9-pin serial port connections  | RS-232-C socket on 1771-KE/KF or -KG module to serial port COM1 or COM2 on the programming device | IBM PC/AT, Allen-Bradley 6121 Series or compatible programming devices | 1                   |
| 1784-CXK | RS-232-C Null Modem Cable (10ft/3m) — for 25-pin serial port connections | RS-232-C socket on 1771-KE/KF or -KG module to serial port COM1 or COM2 on the programming device | IBM PC/XT or compatible programming devices <sup>1</sup>               | 2                   |
| 1784-CYK | RS-232-C Null Modem Cable (10ft/3m) — for 9-pin serial port connections  | RS-232-C socket on 1771-KE/KF or -KG module to serial port COM1 or COM2 on the programming device | IBM 5531, Allen-Bradley 6120 Series or compatible programming devices  | 3                   |

<sup>1</sup> These programming devices may contain a 9-pin serial port. Verify your port connection requirements before ordering cables.

**Table B**  
**Connection to the 1770-SB Data Cartridge Recorder**

| Cat. No. | Cable Description                                                       | Connection Points                                                        | Programming Device Used With                                                       | Refer to Pinout in Figure: |
|----------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------|
| 1784-CAS | RS-232-C Interface Cable (10ft/3m) — for 9-pin serial port connections  | socket on recorder to serial port COM1 or COM2 on the programming device | IBM PC/AT, Allen-Bradley 6121 Series or compatible programming devices             | 4                          |
| 1784-CXS | RS-232-C Interface Cable (10ft/3m) — for 25-pin serial port connections | socket on recorder to serial port COM1 or COM2 on the programming device | IBM PC/XT or compatible programming devices <sup>1</sup>                           | 5                          |
| 1784-CYS | RS-232-C Interface Cable (10ft/3m) — for 9-pin serial port connections  | socket on recorder to serial port COM1 or COM2 on the programming device | IBM 5531, Allen-Bradley 6120 Series or compatible programming devices <sup>1</sup> | 6                          |

<sup>1</sup> These programming devices may contain a 9-pin serial port. Verify your port connection requirements before ordering cables.

**Table C**  
**Connection to the Hayes External Modem**

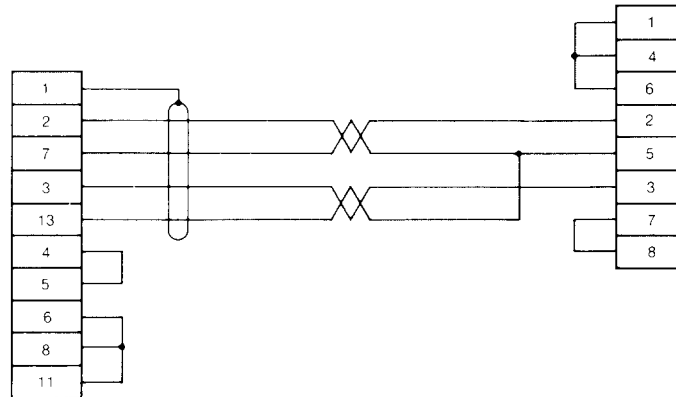
| Cat. No. | Cable Description                                                       | Connection Points                                                     | Programming Device Used With                                           | Refer to Pinout in Figure: |
|----------|-------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------|
| 1784-CAS | RS-252-C Interface Cable (10ft/3m) — for 9-pin serial port connections  | socket on modem to serial port COM1 or COM2 on the programming device | IBM PC/AT, Allen-Bradley 6121 Series or compatible programming devices | 4                          |
| 1784-CXS | RS-232-C Interface Cable (10ft/3m) — for 25-pin serial port connections | socket on modem to serial port COM1 or COM2 on the programming device | IBM PC/XT or compatible programming devices <sup>1</sup>               | 5                          |
| 1784-CYS | RS-232-C Interface Cable (10ft/3m) — for 9-pin serial port connections  | socket on modem to serial port COM1 or COM2 on the programming device | IBM 5531, Allen-Bradley 6120 Series or compatible programming devices  | 6                          |

<sup>1</sup> These programming devices may contain a 9-pin serial port. Verify your port connection requirements before ordering cables.

**Figure 1**  
**Pinout for Cat. No. 1784-CAK RS-232-C Null Modem Cable — for 9-pin Serial Port Connections to IBM PC/AT, Allen-Bradley 6121 Series or Compatible Programming Devices**

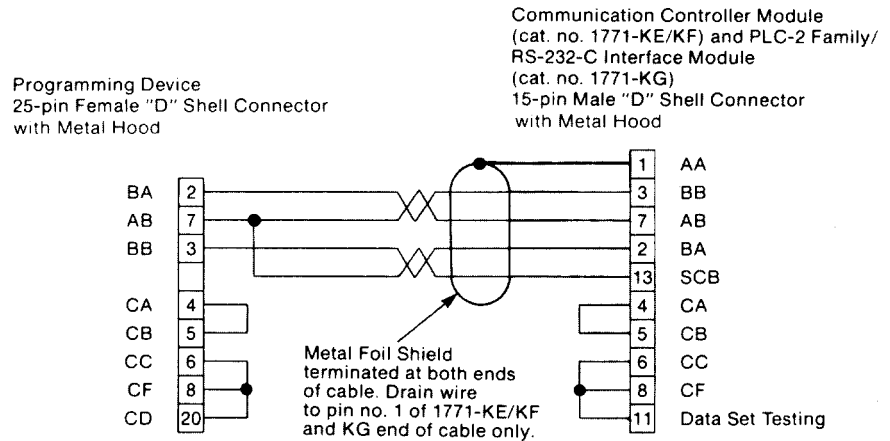
Communication Controller Module (Cat. No. 1771-KE-KF) and PLC-2 Family RS-232-C Interface Module (Cat. No. 1771-KG) 15-pin Male 'D' Shell connector with metal hood

Programming Device 9-pin Female 'D' Shell Connector with metal hood



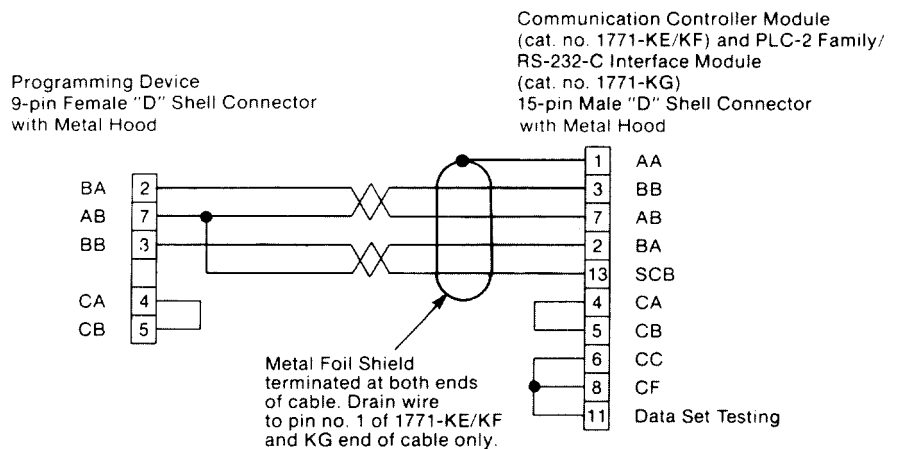
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**Figure 2**  
**Pinout for Cat. No. 1784-CXK RS-232-C Null Modem Cable — for 25-pin Serial Port Connections to IBM PC/XT or Compatible Programming Devices**



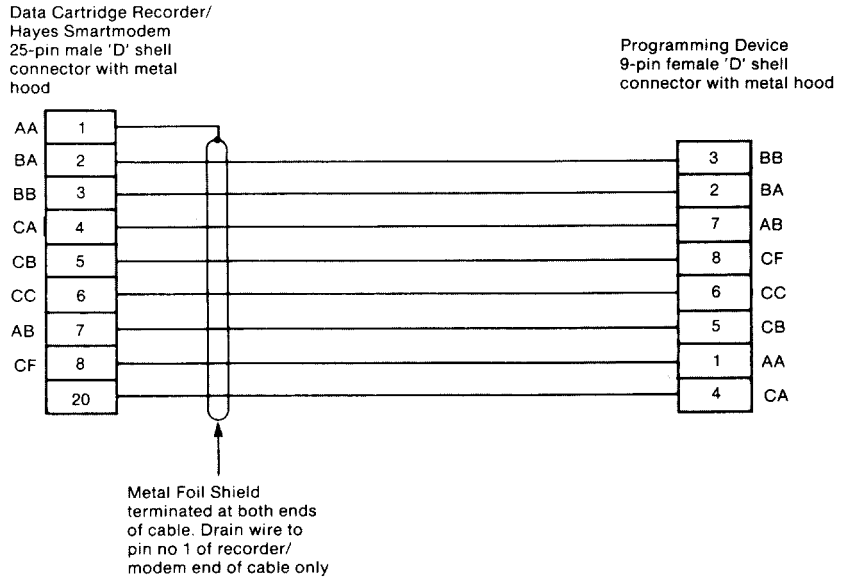
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**Figure 3**  
**Pinout for Cat. No. 1784-CYK RS-232-C Null Modem Cable — for 9-pin Serial Port Connections to IBM 5531, Allen-Bradley 6120 Series or Compatible Programming Devices**



12845

**Figure 4**  
**Pinout for Cat. No. 1784-CAS RS-232-C Interface Cable — for 9-pin Serial**  
**Port Connections to IBM PC/AT, Allen-Bradley 6121 Series or Compatible**  
**Programming Devices**

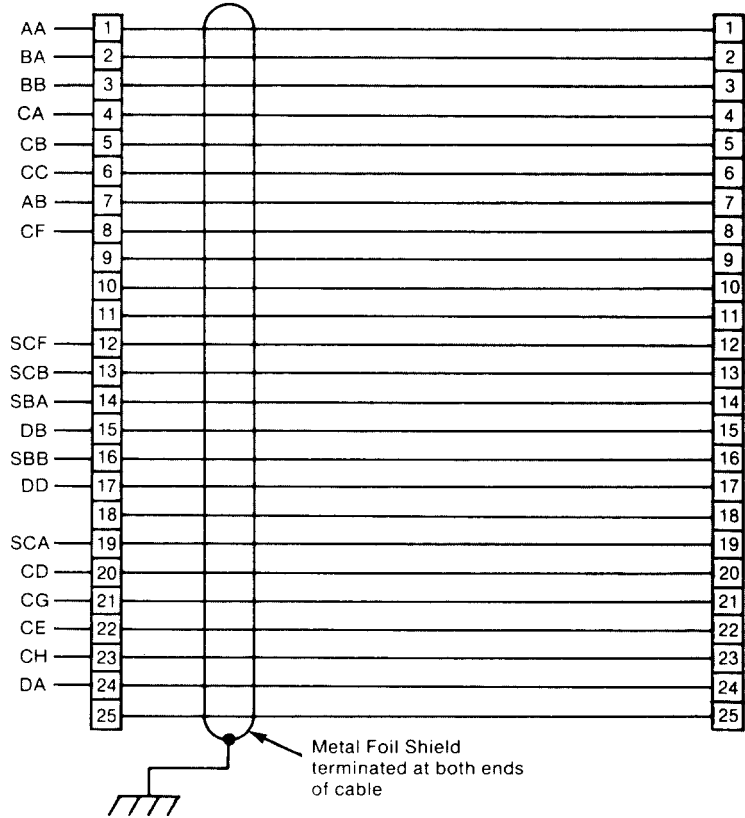


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**Figure 5**  
**Pinout for Cat. No. 1784-CXS RS-232-C Interface Cable — for 25-pin**  
**Serial Port Connections to IBM PC/XT or Compatible Programming**  
**Devices**

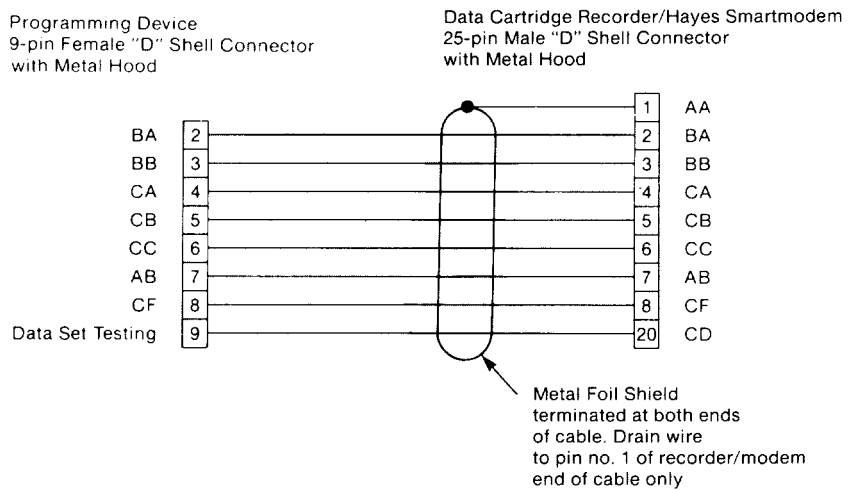
Data Cartridge Recorder/Hayes Smartmodem  
 25-pin Male "D" Shell Connector  
 with Metal Hood

Programming Device  
 25-pin Female "D" Shell Connector  
 with Metal Hood



12846

**Figure 6**  
**Pinout for Cat. No. 1784-CYS RS-232-C Interface Cable — for 9-pin Serial Port Connections to IBM 5531, Allen-Bradley 6120 Series or Compatible Programming Devices**



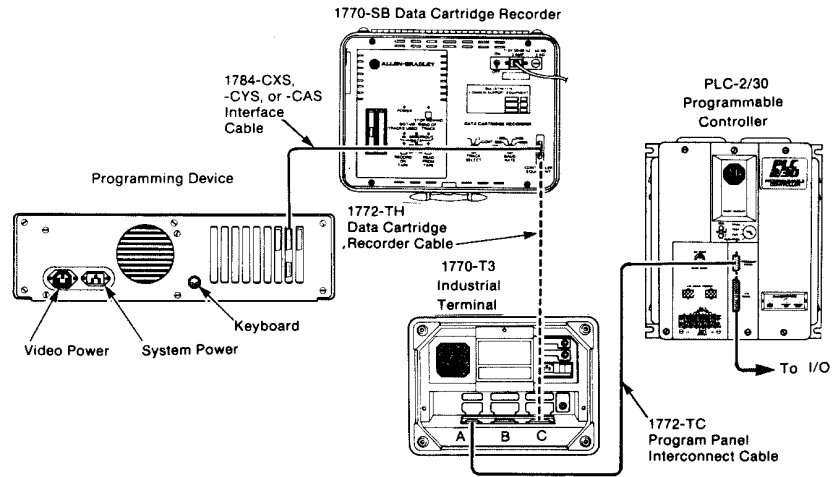
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## Typical Cable Applications

The figures that follow show you how the cables are connected to various hardware products for uploading/downloading programs. If you use a:

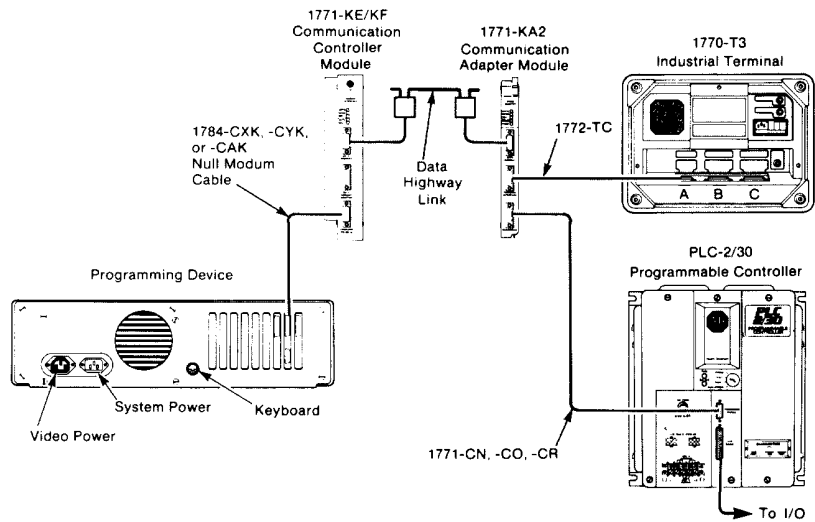
- Data Cartridge Recorder Configuration, see [Figure 7](#)
- 1771-KE/KF and 1771-KA/KA2 Data Highway Network Configuration with One Serial Port Connection, see [Figure 8](#)
- 1771-KE/KF and 1771-KA/KA2 Data Highway Network Configuration with Two Serial Port Connections, see [Figure 9](#)
- 1771-KG Configuration with One Serial Port Connection see [Figure 10](#)
- 1771-KG Configuration with Two Serial Port Connections, see [Figure 11](#)
- Hayes External Modem Used in a Data Highway Network Configuration, see [Figure 12](#)

**Figure 7**  
**Data Cartridge Recorder Configuration**



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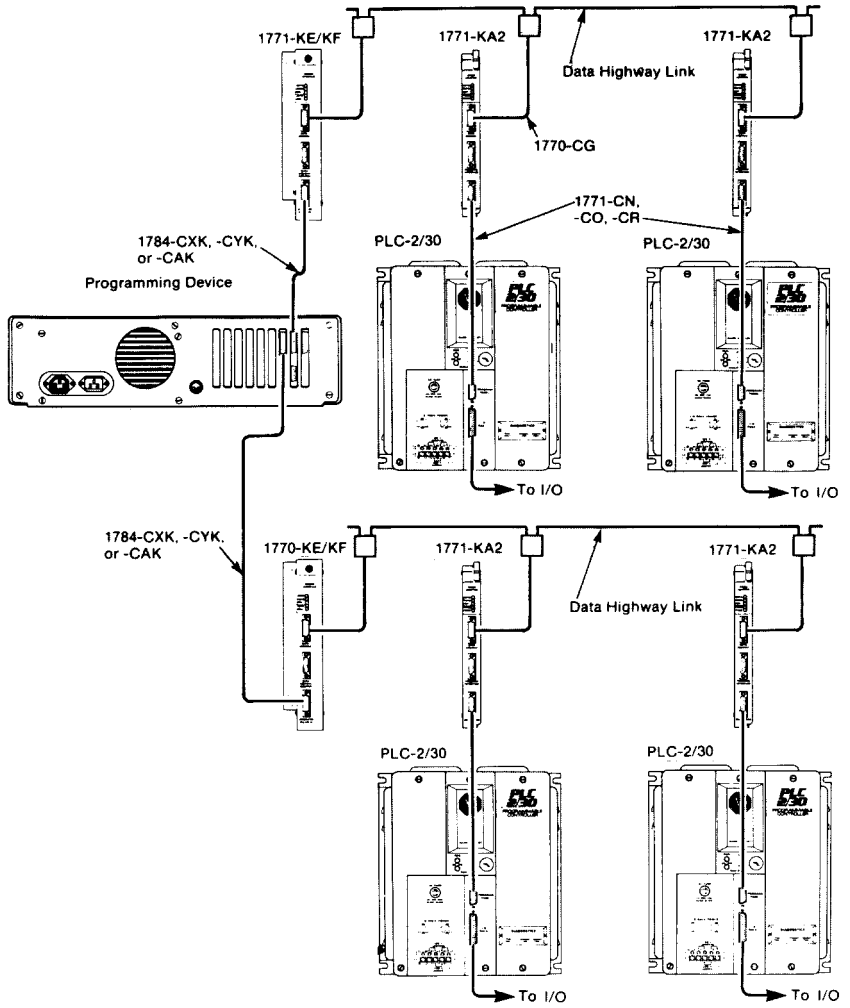
**Figure 8**  
**1771-KE/KF and 1771-KA/KA2 Data Highway Network Configuration with One Serial Port Connection**



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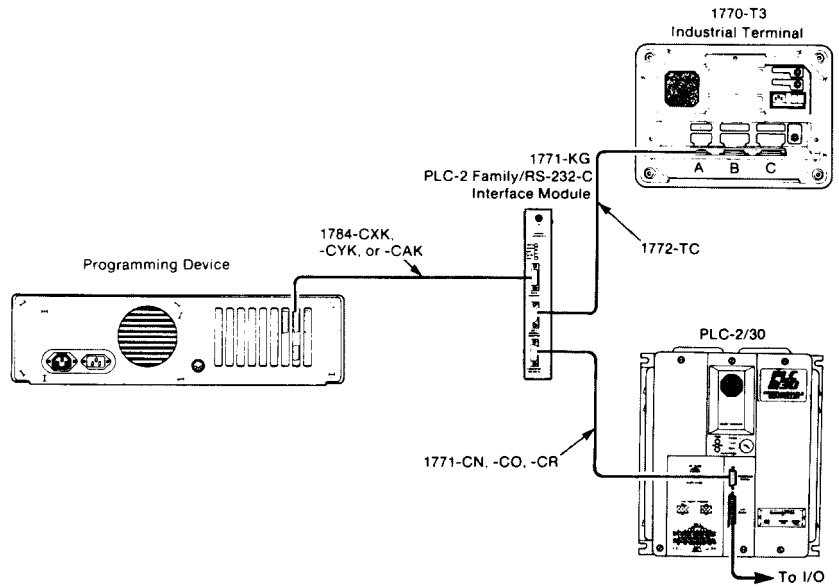


**Figure 9**  
**1771-KE/KF and 1771-KA/KA2 Data Highway Network Configuration with Two Serial Port Connections**



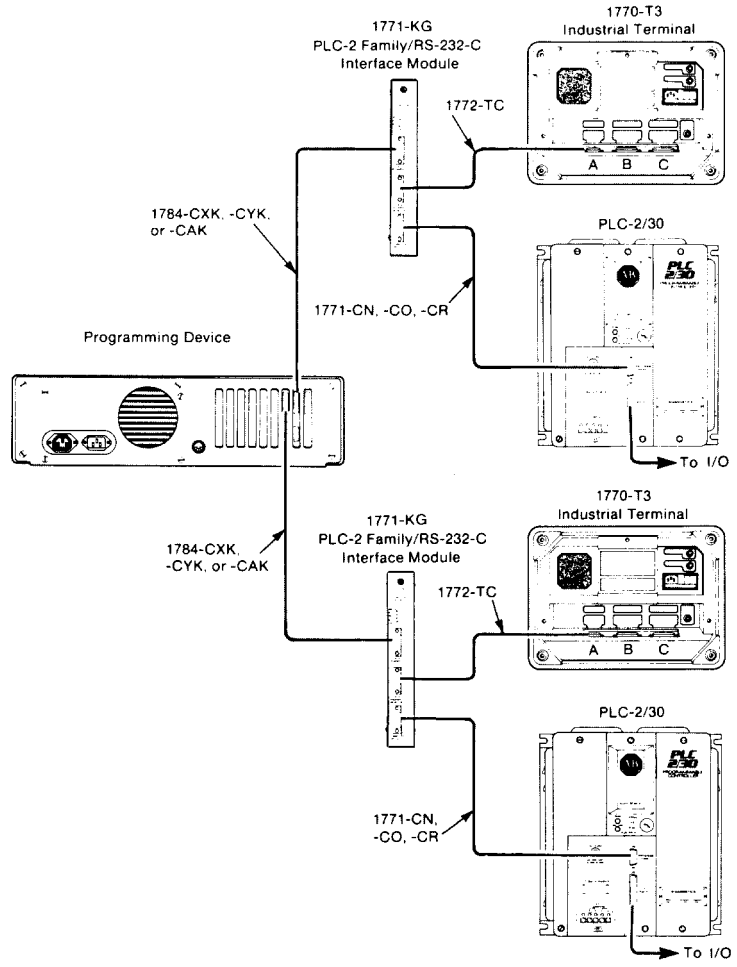
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**Figure 10**  
**1771-KG Configuration with One Serial Port Connection**



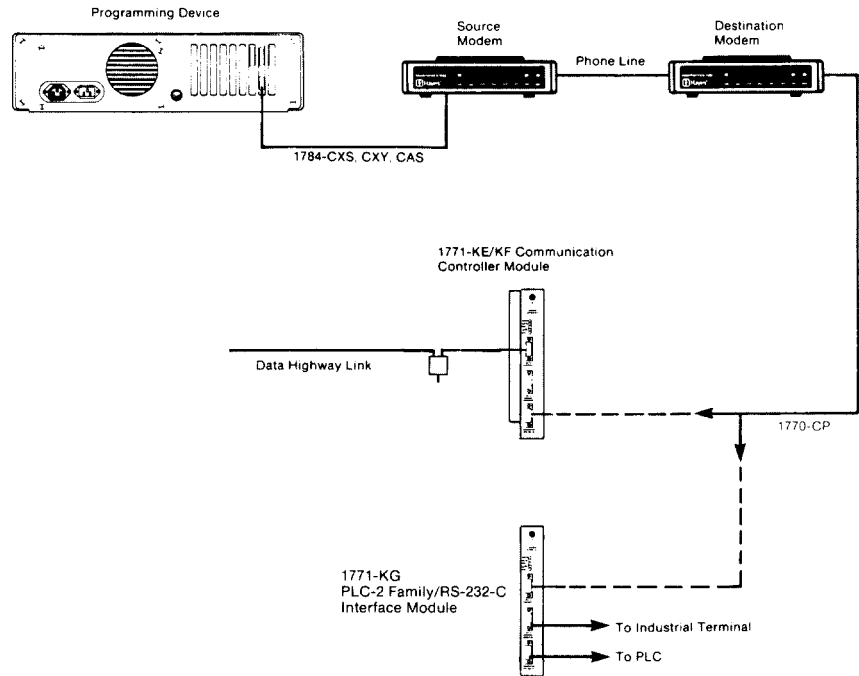
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**Figure 11**  
**1771-KG Configuration with Two Serial Port Connections**



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**Figure 12**  
**Hayes External Modem Used in a Data Highway Network Configuration**



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