

Modem/PXL-250 Connection/Power-up Process Application Note

This Application Note provides assistance with the modem/Master Controller connection process. System power up and cabling and connection information is provided.

1.0 Powering Up a Modem-Configured System

Before powering the system for active use:

1. verify all power and grounding requirements are met
2. verify the master controller is set to address 1
3. verify all slave controllers all have unique addresses

The instructions for performing these steps are found in the following documents.

- PXL-250 Quick Start Guide (p/n 01835-002)
- PXL-250/SB-293 Technical Reference (p/n 01836-004)

There is a specific order to how an access control system should be powered up to ensure proper communication between the master controller, slave controllers, and all modems. Follow this order when powering up a system.

1. modems
2. slave controllers
3. the master controller

Once everything has been checked out, the system is ready to power up for active use. When starting *Doors* for the first time, you must run the Auto-Configuration routine to collect information for the *Doors* program.

- The Auto-Configuration button is found under the Setup > System > Controllers tab in the *Doors* program.

2.0 Cabling and Connections

Communication via modem link requires two cabling connections.

- PC to Modem AND Modem to Master Controller

When the Master Controller is powered up it will automatically detect the modem connection and configure itself for that type of communication. The cables can come from one of three sources.

- cables are available from Keri Systems
- cables may be purchased from a computer equipment supplier
- cables may be made using information provided in this document

When working with modems, the following notes apply.

- Use modems from the same manufacturer at both the Host Computer and the Master Controller. This eliminates modem manufacturer incompatibilities from affecting the communication between Master Controller and Host Computer. Keri Systems cannot be held responsible for problems caused by incompatibilities between modems from two different manufacturers.
- When using 56K modems for communication, both modems must use the same communication format – either X2 or Flex. Incompatibilities between the two formats make them unreliable when installed together. However, modems using the V.90 specification are compatible regardless of whether they are from an X2 or Flex manufacturer.

2.1 PC to Modem Connections

Keri Systems does not provide this cable, however a three-headed adapter cable is provided with the modem and is also available as an off-the-shelf item from any computer supplier or electronics store.

The adapter cable can accommodate a modem with a DB-9F connector and a PC with either a DB-9M or DB-25M connector. If your PC/modem configuration matches that of the adapter cable, you can make the connection between PC and modem using the adapter cable as shown in Figure 1.

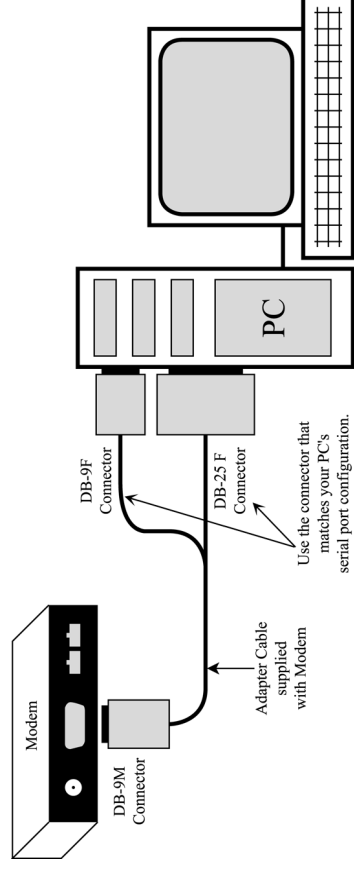


Figure 1: Modem DB-9M to PC DB-25F or PC DB-9F Adapter Cable

If required you can make a cable for the PC/modem connection, replacing the three-headed adapter cable. The connector and wiring configuration depends upon the configuration of the serial ports on the host computer and the modem. Based on these ports, there are four possible cables. Table 1 identifies these cables.

Table 1: PC to Modem Cabling Configuration

Modem Connector	PC Connector	Table	Keri Cable Part Number
DB-25M	DB-9F	Table 2	
DB-25M	DB-25F	Table 3	
DB-9M	DB-9F	Table 4	
DB-9M	DB-25F	Table 5	

2.1.1 Modem DB-25M to PC DB-9F

The following information describes a cable that must be either purchased or made by the installer.

Table 2: Modem DB-25M to PC DB-9F

Modem DB-25M	Standard Wire Color	PC DB-9F
Pin 2	Red	Pin 3
Pin 3	Green	Pin 2
Pin 4	Brown	Pin 7
Pin 7	Black	Pin 5
Pin 8	Blue	Pin 1
Pin 20	White	Pin 4
Shield	Silver	Shield

2.1.2 Modem DB-25M to PC DB-25F

The following information describes a cable that must be either purchased or made by the installer.

Table 3: Modem DB-25M to PC DB-25F

Modem DB-25M	Standard Wire Color	PC DB-25F
Pin 2	Red	Pin 2
Pin 3	Green	Pin 3
Pin 4	Brown	Pin 4
Pin 7	Black	Pin 7
Pin 8	Blue	Pin 8
Pin 20	White	Pin 20
Shield	Silver	Shield

2.1.3 Modem DB-9M to PC DB-9F

The following information describes a cable that must be either purchased or made by the installer.

Table 4: Modem DB-9M to PC DB-9F

Modem DB-9M	Standard Wire Color	PC DB-9F
Pin 1	Blue	Pin 1
Pin 2	Green	Pin 2
Pin 3	Red	Pin 3
Pin 4	White	Pin 4
Pin 5	Black	Pin 5
Pin 7	Brown	Pin 7
Shield	Silver	Shield

2.1.4 Modem DB-9M to PC DB-25F

The following information describes a cable that must be either purchased or made by the installer.

Table 5: Modem DB-9M to PC DB-25F

Modem DB-9M	Standard Wire Color	PC DB-9F
Pin 1	Blue	Pin 8
Pin 2	Green	Pin 3
Pin 3	Red	Pin 2
Pin 4	White	Pin 20
Pin 5	Black	Pin 7
Pin 7	Brown	Pin 4
Shield	Silver	Shield

2.2 Modem to Master Controller Connections

These cables are available for purchase from Keri Systems or you can make them. The connector and wiring configuration depends upon the configuration of the serial ports on the host computer and the modem. Based on these ports, there are three possible cable configurations.

Table 6: PC to Master Controller Cabling Configuration

Modem Connector	Master Controller Connector	Table	Keri Systems Cable Part Number
DB-9M	DB-9M		Modem Adapter Cable and KDP-336 ^a
DB-25M	DB-9M		KDP-336
DB-9M	DB-9M		KDP-929

- a. Modems purchased from Keri Systems come with an adapter that accommodates a DB-9F connector. If the modem has a DB-9 (instead of DB-25 connector), use this adapter with a KDP-336 to make the modem/controller connection (see Figure 2).

2.2.1 Modem DB-9M to Master Controller DB-9M via Adapter Cable and KDP-336 Cable

This configuration is presented to accommodate installers who have a KDP-336 cable in hand and a three-headed adapter cable (provided with the modem), and want to use this combination to make the Modem to Master Controller connection.

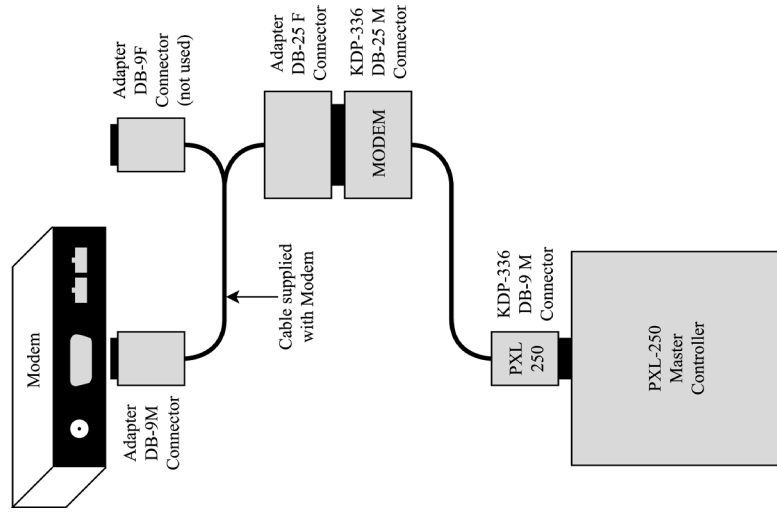


Figure 2: Modem DB-9M to Master Controller DB-9M via Adapter Cable and KDP-336 Cable

2.2.2 Modem DB-9M to Master Controller DB-9M

The following information describes the KDP-929 cable that must be purchased from Keri Systems or made by the installer.

Table 7: Modem DB-9M to Master Controller DB-9M

Modem DB-9M	Standard Wire Color	Master Controller DB-9M
Pin 1	Blue	Pin 1
Pin 2	Green	Pin 2
Pin 3	Red	Pin 3
Pin 4	White	Pin 4
Pin 5	Black	Pin 5
Pin 7	Brown	Pin 7
Shield	Silver	Shield

2.2.3 Modem DB-25M to Master Controller DB-9M

The following information describes the KDP-336 cable that must be purchased from Keri Systems or made by the installer.

Table 8: Modem DB-25M to Master Controller DB-9M

Modem DB-25M	Standard Wire Color	Master Controller DB-9M
Pin 2	Red	Pin 3
Pin 3	Green	Pin 2
Pin 4	Brown	Pin 7
Pin 7	Black	Pin 5
Pin 8	Blue	Pin 1
Pin 20	White	Pin 4
Shield	Silver	Shield