

Modem to Keri Controller Connection/Power-up Process Application Note

This Application Note provides assistance with the modem to PXL-500/PXL-510 or Entraguard Master Controller connection process. System cabling, connection, and power up information is provided.

1.0 Cabling and Connections

Communication via modem link requires two modems, each with a cabling connection.

- *PC to Modem*
- *Modem to Master Controller*

The modem includes its own PC to Modem connection cable.

There are three sources for the Modem to Master Controller connection:

- *KDP-336 cable is available from Keri Systems - typically shipped with the Modem*
- *A cable may be purchased from a computer equipment supplier*
- *A cable 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.*
- *Because of variations in how serial modems operate, proper modem operation cannot be guaranteed when using non Keri approved modems.*

1.1 PC to Modem Connections

The Keri modem comes with a modem to PC cable. This is a DB-25M to DB-9F cable and it assumes the serial port on the PC has a DB-9M connector.

If this does not match your PC serial port configuration you can either purchase a cable from a computer equipment supplier or create a cable per the following instructions. 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
DB-25M	DB-9F	Table 2
DB-25M	DB-25F	Table 3
DB-9M	DB-9F	Table 4
DB-9M	DB-25F	Table 5

1.1.1 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

1.1.2 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

1.1.3 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

1.1.4 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

1.2 Modem to Master Controller Connections

Keri provides a KDP-336 cable with its modem. Otherwise, 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 modem and the master controller.

Table 6: PC to PXL-500/PXL-510 Master Controller Cabling Configuration

Modem Connector	Master Controller Connector	Table	Keri Systems Cable Part Number
DB-25M	RS-232	Table 7	KDP-336
DB-9M	RS-232	Table 8	KDP-929

1.2.1 Modem DB-25M to Master Controller

The following information describes the KDP-336 cable that is provided with the modem. It can be purchased separately or be made by the installer.

Table 7: Modem DB-25M to Master Controller

Modem DB-25M	Standard Wire Color	TB-12 Master Controller Serial Connection
Pin 2	Red	Pin 1
Pin 3	Blue	Pin 2
Pin 4	Brown	Pin 4
Pin 7	Black	Pin 6
Pin 8	Green	–
Pin 20	White	Pin 5
Shield	Silver	–

1.2.2 Modem DB-9M to Master Controller

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

Table 8: Modem DB-9M to Master Controller

Modem DB-9M	Standard Wire Color	TB-12 Master Controller Serial Connection
Pin 1	Brown	–
Pin 2 (TxD)	Red	Pin 2
Pin 3 (RxD)	Black	Pin 1
Pin 4 (DTR)	Blue	Pin 5
Pin 5 (Gnd)	Green	Pin 6
Pin 7 (RTS)	White	Pin 4
Shield	Silver	–

2.0 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 each slave controller's address is unique

The instructions for performing these steps are found in the individual product Quick Start Guides.

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.

- *First the modems*
- *Then the Slave controllers*
- *Finally the master controller*

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

When the Master Controller is powered up it will automatically detect the modem connection and configure itself for that type of communication.



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