Wide Area Network (LAN) Connection

☑ Ethernet Connection: An Ethernet Cable, or wireless connection must be provided between the 1830 Adaptor and the Router

☑ Local Area Network, (LAN) – The 1830 and Adaptor must be connected and active on the LAN. This requires the following information (See LAN Guide for details)
  - Router (Default Gateway) IP Address
  - IP Address for 1830 adaptor

☑ Port Forwarding – Within the Network Router (Gateway), the Port Number assigned to the Network Adaptor must be programmed to enable Port Forwarding (sometimes called “Virtual Server” in some routers). This must not conflict with other devices active within the LAN.

☑ Gateway and Port Number Programming – These must be programmed into the Adaptor

☑ The ISP (Internet Service Provider) IP Address – This will either be a Static IP Address or a Dynamic IP address (which can change periodically). If the ISP uses a Dynamic IP Address, you may want to register for a DDNS Host Service.
TCP/IP NETWORK CONNECTION OPTIONS

Network and Ethernet connectivity for our 1833, 1834, 1835, 1837 and 1838 systems:

1830-175 TCP/IP Adaptor for Ethernet connections:
The 6.3 Software expands the connectivity options for all 1830 series systems. Connectivity options now include:

- **Local Area Network (LAN):** Communicate between PC and Entry System utilizing Ethernet Connection

- **Wide Area Network (WAN):** Communicate between PC and Entry System utilizing Internet Connection at PC and at Entry System.

- **Improved Communication Speeds:** Data Transfer entire database in around 1 ½ minutes.

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![TCP/IP Adaptor for Ethernet connections](image-url)
**1830 SERIES WAN AND INTERNET CONNECTIONS**

**Model 1830-175 Network Adaptor:** This training guide will focus on the TCP/IP Network interface for Wide Area Network (Internet) Connections.

**Wide Area Network (WAN):** This allows the 1830 series systems to be accessed from outside the LAN. Proper setup of the WAN connection is required for Remote Programming, Remote Control and Monitoring of the system relays.

**Requirements for a WAN application:**

- **Local Area Network, (LAN)** – The 1830 and Adaptor must be connected and active on the LAN. This requires the following information (See LAN Guide for details):
  - Router (Default Gateway) IP Address

- **Port Forwarding** – Within the Network Router (Gateway), the Port Number assigned to the Network Adaptor must be programmed to enable Port Forwarding (sometimes called “Virtual Server” in some routers). This must not conflict with other devices active within the LAN.

- **Gateway and Port Number Programming** – These must be programmed into the Adaptor

- **The ISP (Internet Service Provider) IP Address** – This will either be a Static IP Address or a Dynamic IP address (which can change periodically). If the ISP uses a Dynamic IP Address, you may want to register for a DDNS Host Service.

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![WAN – How it works](image-url)
REGISTERING WITH THE LAN

LAN CONNECTIONS: (See the “LAN Guidelines”, or “Network Training Guide” for more details on setting up the Local Network Connections)

☑ Registering with the LAN – The Gateway Address must be programmed into the Network Adaptor. This allows the Adaptor to locate and register with the LAN. This is performed from a PC using Internet Explorer.

☑ 1830 IP Address – The Adaptor must also have a unique IP address within the LAN. The default of 192.168.001.040 is typically available. However, if the Gateway Address utilizes a different number in the first 3 segments, for example: 192.168.2.1, this must be changed in the Adaptor.
Once the system is active within the LAN, you will need to set up the Router to allow access between the “Port” and the Internet Service Provider connection.

☒ **Router Port Forwarding:** This will require entering into the Router Manager Software to set up the Port and IP address for the 1830 Adaptor.

**BE CAUTIOUS WHEN WORKING IN ROUTER PROGRAMMING. WE RECOMMEND HAVING THE NETWORK ADMINISTRATOR PERFORM THESE PROGRAMMING FUNCTIONS**

1. Open Internet Explorer. In the address line, type in the IP Address of the Router (Default Gateway Address).

2. This will open an Authentication Window asking for the User Name and Password for the Router.

   The default User Name and Password is typically listed on the identification label of the Router (bottom of Router).

   A common default is as follows:

   User Name: admin
   Password: password

   If this is an existing LAN, the User Name and Password have probably been changed. Contact the Network Administrator for Router Set Up.
3. This will open the Router Manager software. Each Router brand may use different screens, or different terminology. The following are examples:
Setting up Router Port Forwarding: (Continued) Depending upon the Router brand, this may be called Virtual Server.

4. Using the Netgear Router as an example… From the Router Manager, select “Port Forwarding”. Then click on Add Custom Service.
5. This may open an Authentication Window asking for the User Name and Password for the Router. Once you are into the Port screen, enter a Service Name (1835 for example, or 1835 Main Gate), Service Type (TCP), Port and IP address of 1830 Adaptor. Click “Apply”

NOTE: We recommend changing the Port from the default value of ‘1040’ to increase security. This Port Number must be programmed to match at the Router, in the DKS Software, and set in the 1830 Adaptor

6. This will bring you back to the Port Forwarding screen and should show the new “Service” with the 1835 set up.
INTERNET CONNECTION: There are 3 methods of connecting through an Internet Service Provider:

STATIC IP ADDRESS: If the network is provided with a Static IP Address, this can be used for connection from outside the network, via the Internet.

DYNAMIC IP ADDRESS: Typical Residential Internet Service. In this type of service, the IP Address changes periodically. Typically the address will remain constant until the Network or DSL Modem is reset, powered down or rebooted, or if there are extended periods with no activity on the internet connection. If you utilize this type of connection, you may need to re-program the IP address in the Software periodically to maintain connection with the 1830 Series Entry System.

DYNAMIC DNS HOST (DDNS) This is a service that you register for which tracks the changing IP address of the residential internet service. A “site name” is assigned to the residential internet service, much like an internet site name. The DKS software then searches for this site, and provides connection between the PC and the 1830 Series Entry System.

☑ Static or Dynamic IP Address, Finding the IP Address: There are many methods for identifying the current IP address of the network. Open your Internet Explorer and type in one of the following IP addresses:

- IPChicken.com
- Checkmyip.com
Things to set up in the DKS Software for connecting via IP Address:

- **Master Code:** This needs to match what has been set at the 1835/37 system.
- **Network:** Select Network or DKS Server Internet as connection method.
- **IP Address & Port:** This is the ISP Internet Address, plus the Port assigned to the 1830 adaptor. For Example: `67.223.2.268:1040`
INTERNET CONNECTION UTILIZING DDNS HOST.

If the Network is not provided with a Static IP Address, it is recommended that you utilize a DDNS service provider to register the system IP Address.

What is DDNS?
Dynamic Domain Name Server. This is service that will track the IP Address of the Network when changes occur.

If the Router/Gateway is already set up with a DDNS Host for some other product or system, you can use the same DDNS service for connection to the Entry System Controller.
REGISTERING A DDNS NAME.

Most Routers will have a recommended DDNS Host Provider. This can be found in the Router documentation, or Router Manager. A common provider for many brands of Routers is: dyndns.org. This provider will host up to 5 DDNS accounts at no charge, as a complimentary service.

The following is an example of setting up a DDNS Host service.

From a PC on the Network connected to the 1812 System:

1. **DynDns.org**: Go to the Website and create an account. This should be in the Homeowners or Network Administrators name.

2. **Add a Host Service**: This will set up a DDNS Hosting Service for the network of the 1812 system.
REGISTERING A DDNS NAME (continued)

3. **Add New Hostname:** This is where you will create your DDNS Host information.
   - Select a “Host name”: We suggest using something related to the system
   - Select “dyndns.org” from host listing.
   - Service Type: “Host with IP Address”
   - IP Address: “Use the Auto Detected IP Address”. This will find the current IP Address of your network.
   - Click on “Add To Cart”

![Add New Hostname](image-url)
REGISTERING A DDNS NAME (continued)

4. **Confirm Order**: Depending upon the DDNS Host Provider, this often will be a complimentary service, provided at No Charge. This Host information must now be programmed into the Network Router.
REGISTERING A DDNS NAME (continued)

5. **DDNS Set Up in Router:** From a PC on the Network, log onto the Router Manager using Internet Explorer. Go to the Dynamic DNS page. Program the required information.

6. **Click “Apply” to complete the Router programming.**

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7. **AccessPLUS Software:** In the System Information screen, select either “Network” or “DKS Server Internet” (this option allows DoorKing to send you notice on product updates). Enter your Host name followed by the Port Number:

Example: **Rons1835.dyndns.net:1040**
Testing the Connection through the DKS Software: From a PC at a remote location, with a separate internet service connection, try connecting with the 1830 series controller.

- Select an account, then click on the “View” menu.
- Select “Live Transactions” and click on the account you wish to test. Click “OK”

This will open a Live Transaction Window. The first transaction should show: “Connection”. If you see a “Failed To Connect” message, the system is not registered and active within the LAN.
DIRECT CONNECTION OPTIONS FOR 6.0 SOFTWARE: (UPDATED INFO)

On-Site Programming, from a Local PC. In some applications, the entry system is not provided with a Telephone Line. This typically is seen in applications where the Controller is only providing Card Access functions, with no Visitor Call features. You may also have an application where the local computer does not have a dial up modem available, or where the customer prefers connecting to the Entry System without going through a Dial-Up Modem.

There are a few options available for programming through a “Direct Connection”:

- **RS-232 Hard Wired connection** - Requires a 5-Cond, shielded cable. Typically this hard wired connection should be run less than 50’-100’.

- **RS-232 to RS-422** – This converts the RS-232 signal, allowing hard wired runs up to 4,000’. Requires 2 twisted pairs plus a 5th conductor. Recommend CAT 5 Cable.


The Wireless and RS-422 conversions require installation of some drivers into the PC, and some pre-programming of the adaptors. These will be stocked and pre-programmed by DoorKing, and installation instructions will be developed for Dealers to install these items into their clients PC.