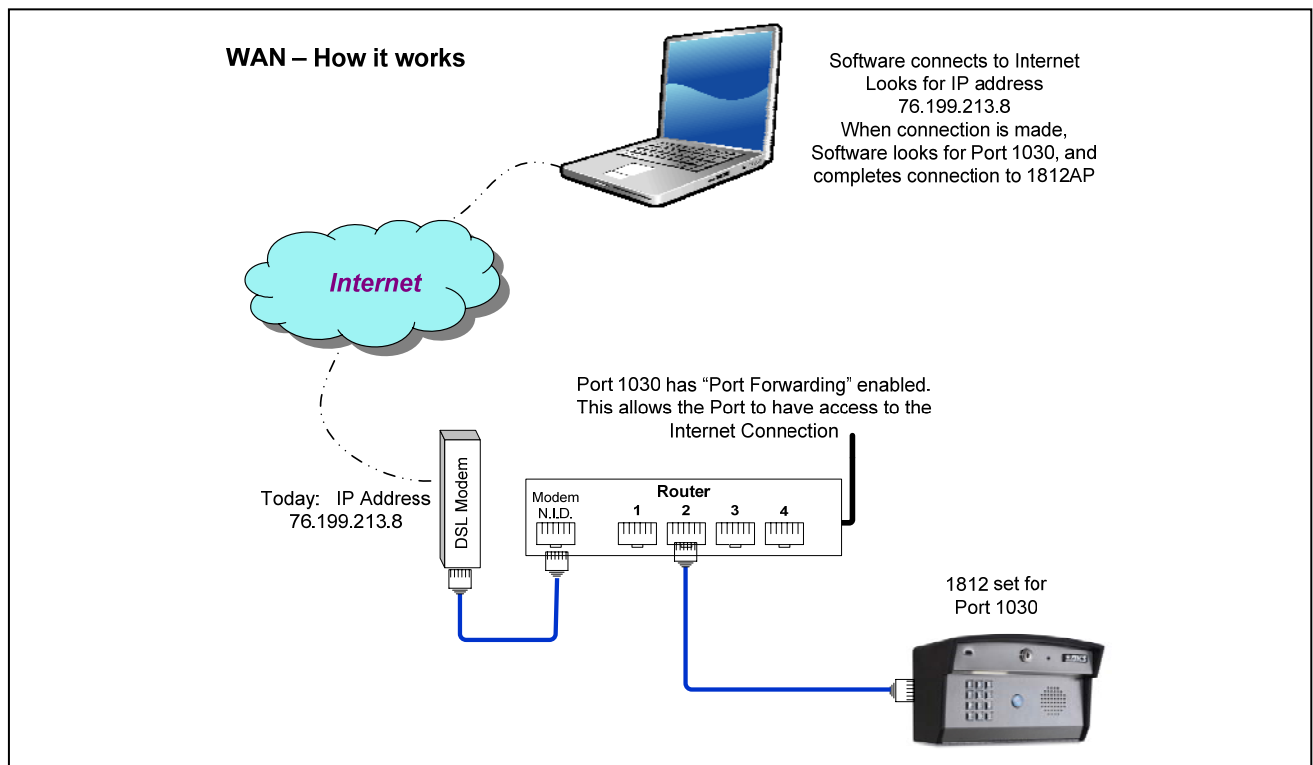# ACCESSPLUS WAN AND INTERNET CONNECTIONS

Model 1812-AccessPlus: This training guide will focus on the TCP/IP Network interface for Wide Area Network (Internet) Connections

WIDE AREA NETWORK (WAN): This allows the 1812 to be access from outside the LAN. Proper set up of the WAN connection is required for Remote Programming, Remote Control and Monitoring of the system relays.
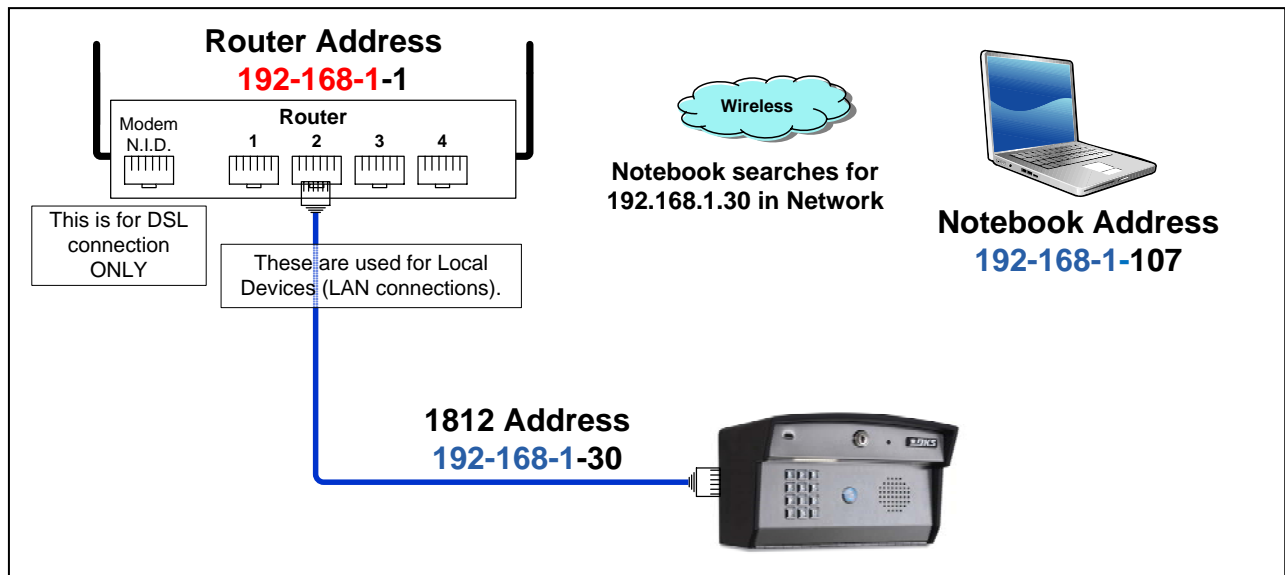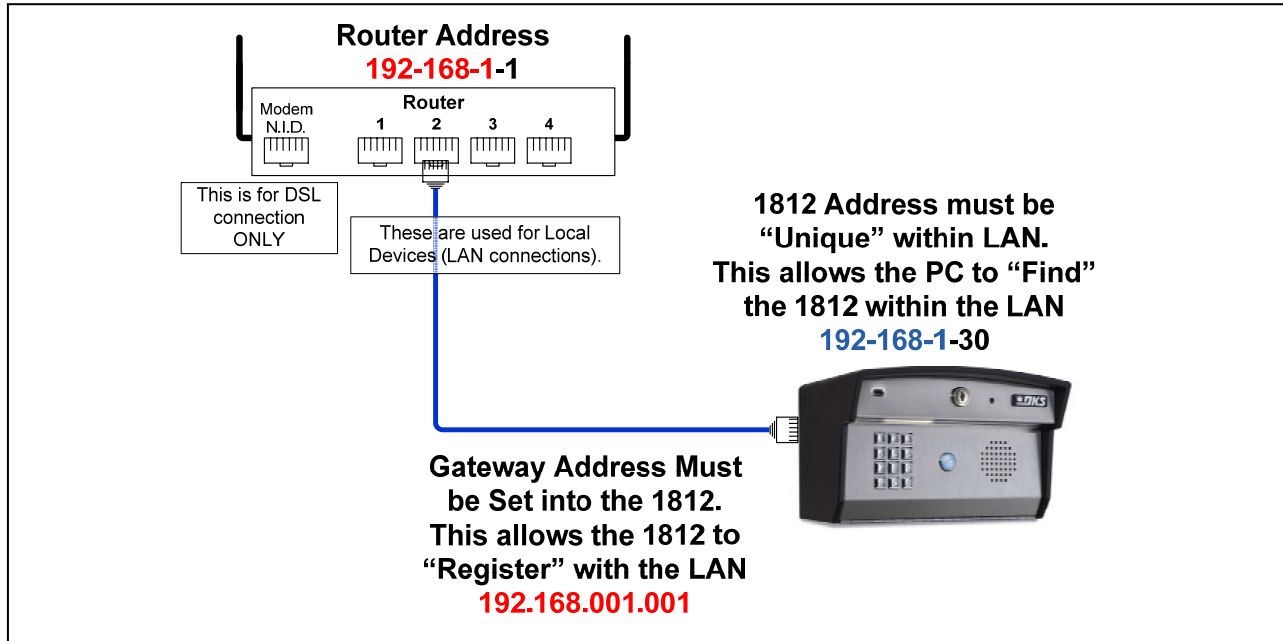
REQUIREMENTS FOR A WAN APPLICATION:

☑ **Local Area Network, (LAN)** – The AccessPLUS System 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 –** 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 AccessPLUS System.

☑ **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 need to register for a DDNS Host Service.

WAN – How it works

Software connects to Internet
Looks for IP address
76.199.213.8
When connection is made,
Software looks for Port 1030, and
completes connection to 1812AP

Internet

Port 1030 has "Port Forwarding" enabled.
This allows the Port to have access to the
Internet Connection

Today: IP Address
76.199.213.8

DSL Modem

Modem
N.I.D.

Router
1 2 3 4

1812 set for
Port 1030

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 1812 (from the system keypad). This allows the 1812 to locate and register with the LAN.

☑ **1812 IP Address** – The 1812 must also have a unique IP address within the LAN. The default of 192.168.001.030 is typically available. However, if the Gateway Address utilizes a different number in the first 2 segments, for example: 192.168.2.1, this must be changed in the 1812.

Router Address
192-168-1-1

Modem
N.I.D.   Router
          1   2   3   4

This is for DSL
connection
ONLY

These are used for Local
Devices (LAN connections).

1812 Address must be "Unique" within LAN. This allows the PC to "Find" the 1812 within the LAN
192-168-1-30

Gateway Address Must be Set into the 1812. This allows the 1812 to "Register" with the LAN
192.168.001.001

Router Address
192-168-1-1

Modem
N.I.D.   Router
          1   2   3   4

This is for DSL
connection
ONLY

These are used for Local
Devices (LAN connections).

Wireless

Notebook searches for
192.168.1.30 in Network

Notebook Address
192-168-1-107

1812 Address
192-168-1-30

Testing the Connection through the 1812 Software: Once the 'System Information' programming has been completed, and the 1812 has been manually set up, you can try connecting to the unit through the DoorKing 1812 AccessPLUS software.

☑ **Select 'Relay Control & Status:**
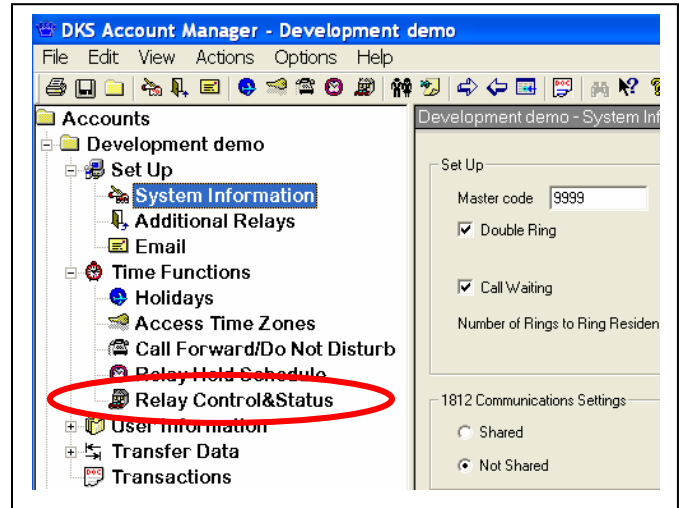
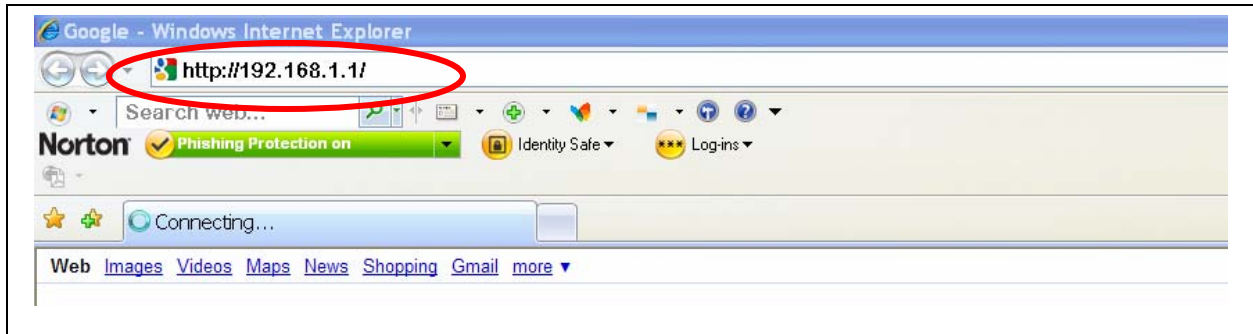☑ **Select 'YES" to initiate connection with 1812 system.**

☑ **Once verified, the screen will show the current status of System Relays:**

☑ **Router Port Forwarding:** This will require entering into the Router Manager Software to set up the Port and IP address for the 1812AP. **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.

   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:
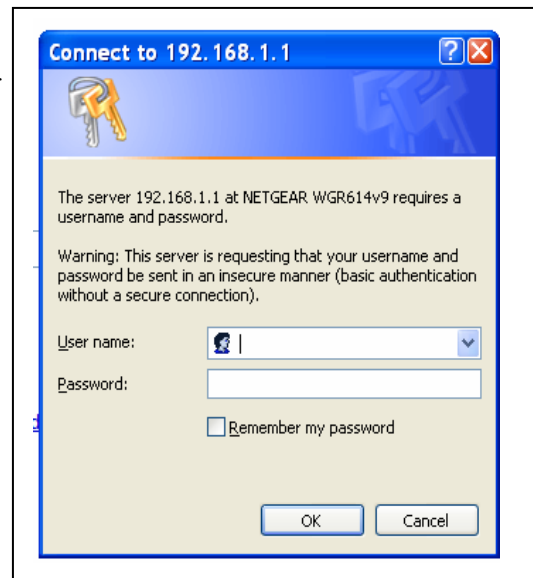
1812- ACCESSPLUS – WAN CONNECTIONS (CONTINUED)

☑ **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.

☑ **Router Port Forwarding:** (Continued)

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 (1812 for example, or 1812 Main Gate), Service Type (TCP), Port and IP address of 1812AP. Click "Apply"

   NOTE: We recommend changing the Port from the default value of '1030' to increase security. This Port Number must be programmed to match at the Router, in the AccessPLUS Software, and physically set in the 1812AP system.

6. This will bring you back to the Port Forwarding screen and should show the new "Service" with the 1812 set up.

☑ **Programming at the 1812:** This is the same programming steps as detailed in the LAN Section of this training guide. Defaults are set in the 1812. You will either utilize the defaults, or reprogram as required, then enable the TCP/IP.

1. **Program Master Code of 1812**

2. **Program IP address:** (default 192.168.001.030. First 3 segments must match Router address).

3. **Subnet Mask:** This should always be the default of 255.255.255.000. If different, contact network administrator.

4. **Set Gateway (Router) address:** (default 192.168.001.001)

5. **Set Port Number:** (default 01030)

6. **Enable TCP/IP:** Reboots system.

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1 – Master Code

Blinking LED - power is applied to the 1812 and the processor is working.

Steady LED - system is in Master Code programming mode.
(Reverts to blinking if master code is not entered within 10-seconds)

1. Press the Master Code push button (the LED will stay on steady).
2. Enter a four digit Master Code number then press *.
   _ _ _ _ ✱(beep)

2 – IP Address (reboot required)

1. Press ✱ 51 and enter the Master Code.
   ✱ 5 1 _ _ _ _ (beep)
2. Enter the IP address. Use the * key to enter the "dot".
   _ _ _ ✱ (beep) _ _ _✱ (beep) _ _ _ ✱ (beep) _ _ _✱(beep)
   (valid value for any 3-digit number is 000 to 255)
   Default value is: 192.168.001.030
3. Press 0 # Together to end.
   0 # (beeeeeep)

3 – Sub-net Mask (reboot required)

The Default value should be appropriate for most applications. If this requires programming, see Network Administrator

4 – Gateway (router) Address (reboot required) ④

1. Press ✱ 53 and enter the Master Code.
   ✱ 5 3 _ _ _ _ (beep)
2. Enter gateway (router) address (Use the * key to enter the "dot").
   _ _ _ ✱ (beep) _ _ _✱ (beep) _ _ _ ✱ (beep) _ _ _✱(beep)
   (valid value for any 3-digit number is 000 to 255)
   Default value is: 192.168.001.001
3. Press 0 # Together to end.
   0 # (beeeeeep)

③ If the 1812 is connected directly to the PC with a crossover cable, this address MUST be set to 000.000.000.000.

5 – Set the Port Number (reboot required)

1. Press ✱ 56 and enter the Master Code.
   ✱5 6 _ _ _ _ (beep)
2. Enter the port number.
   _ _ _ _ _ ✱ (beep)
   (valid values are 01024 to 65535)
   Default value is: 01030
3. Press 0 # Together to end.
   0 # (beeeeeep)

6 – Enable/Disable TCP/IP Support and System Reboot

1. Press ✱ 50 and enter the Master Code.
   ✱5 0 _ _ _ _ (beep)
2. Press **0 ✱** (beep) to disable **or** press **1 ✱** (beep) to enable.
   Default is disabled.
3. The system will reboot automatically.

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 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 AccessPLUS software then searches for this site, and provides connection between the PC and the 1812.

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 1812.

☑ **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**
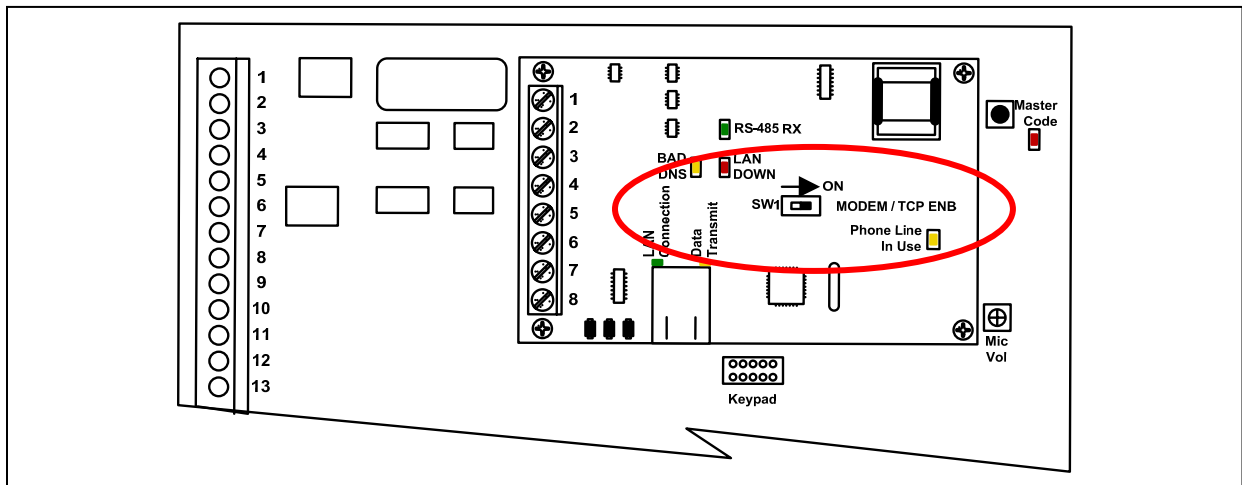
- **Checkmyip.com**

☑ **Things to set up in the AccessPLUS Software for connecting via IP Address:**

    o **Master Code:**   This needs to match what has been set at the 1812AP system.

    o **Network:**   Select Network as preferred connection method

    o **IP Address:**   Enter Address for IP Connection. Example: 77.213.140.3

    o **Port Number:**   1030
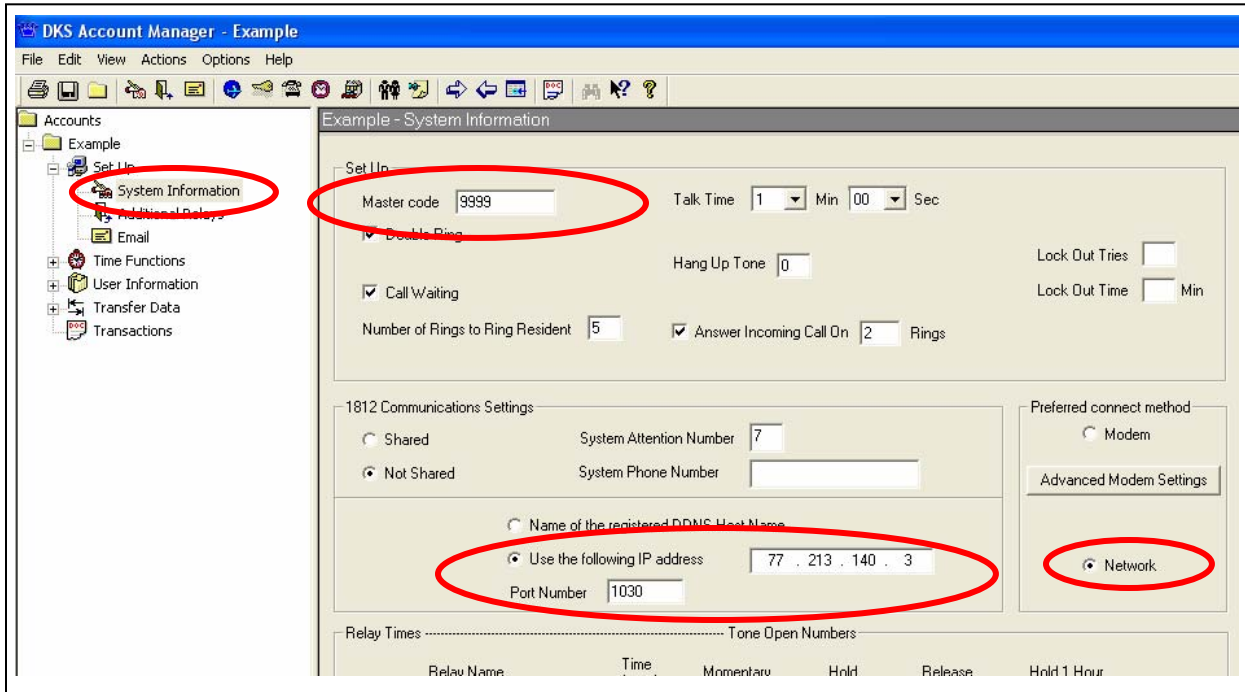
☑ **Control Board Settings:**

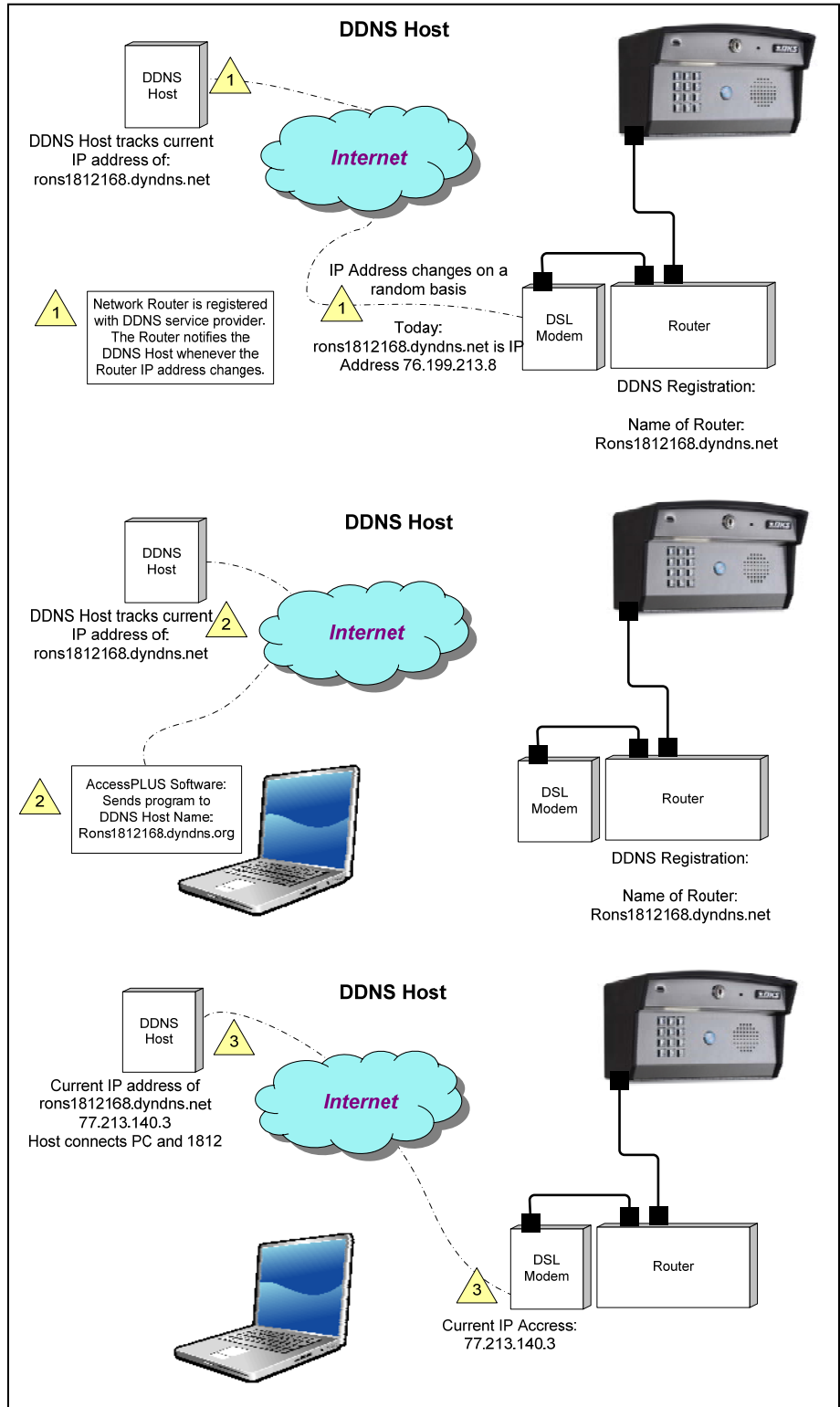   o **SW1:** Must be Turned ON for Modem or TCP Connections to be enabled.

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.

DDNS Host

DDNS Host

DDNS Host tracks current IP address of: rons1812168.dyndns.net

Internet

IP Address changes on a random basis
Today: rons1812168.dyndns.net is IP Address 76.199.213.8

Network Router is registered with DDNS service provider. The Router notifies the DDNS Host whenever the Router IP address changes.

DSL Modem   Router

DDNS Registration:

Name of Router:
Rons1812168.dyndns.net

DDNS Host

DDNS Host

DDNS Host tracks current IP address of: rons1812168.dyndns.net

Internet

AccessPLUS Software:
Sends program to DDNS Host Name:
Rons1812168.dyndns.org

DSL Modem   Router

DDNS Registration:

Name of Router:
Rons1812168.dyndns.net

DDNS Host

DDNS Host

Current IP address of rons1812168.dyndns.net
77.213.140.3
Host connects PC and 1812

Internet

DSL Modem   Router

Current IP Accress:
77.213.140.3

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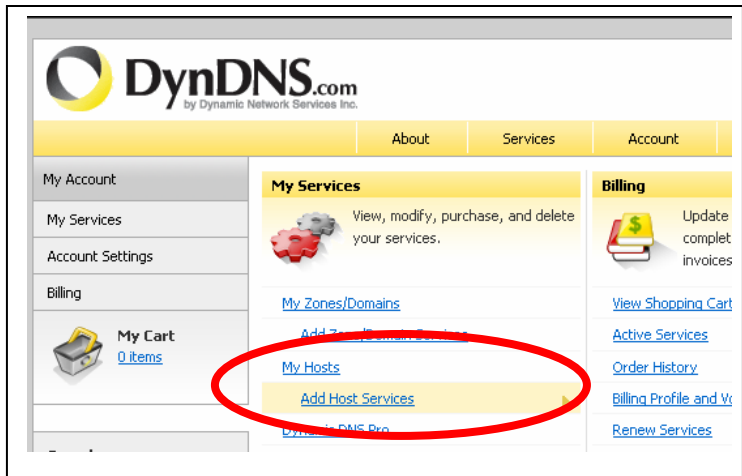
From a PC on the Network connected to the 1812 System:

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"

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.
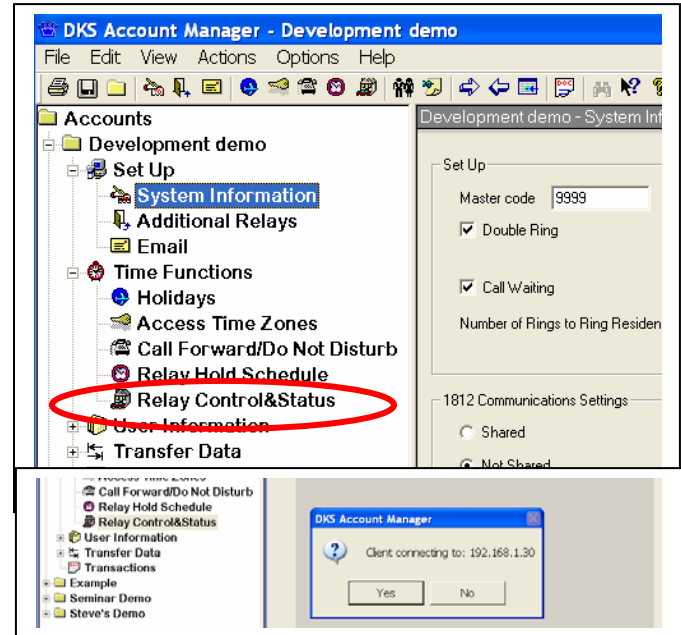6. **Click "Apply" to complete the Router programming.**
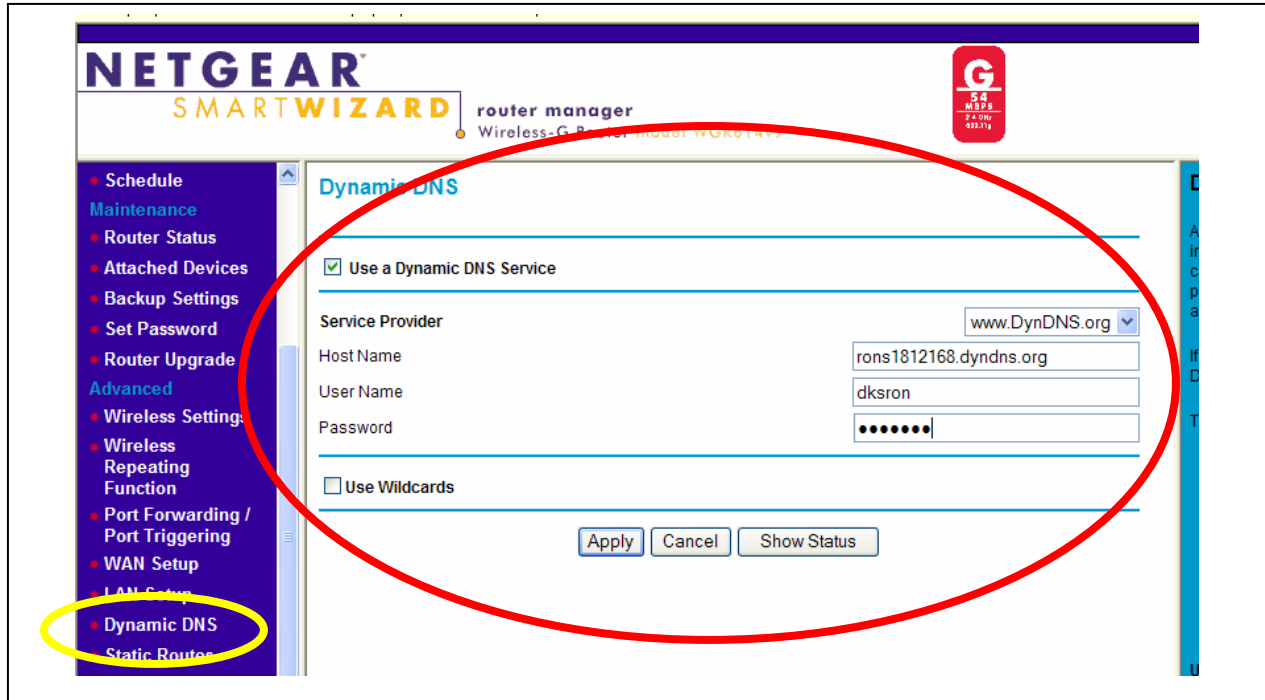
7. **AccessPLUS Software:** In the System Information screen, select the Network option for "Name of registered DDNS Host" and enter your listing.
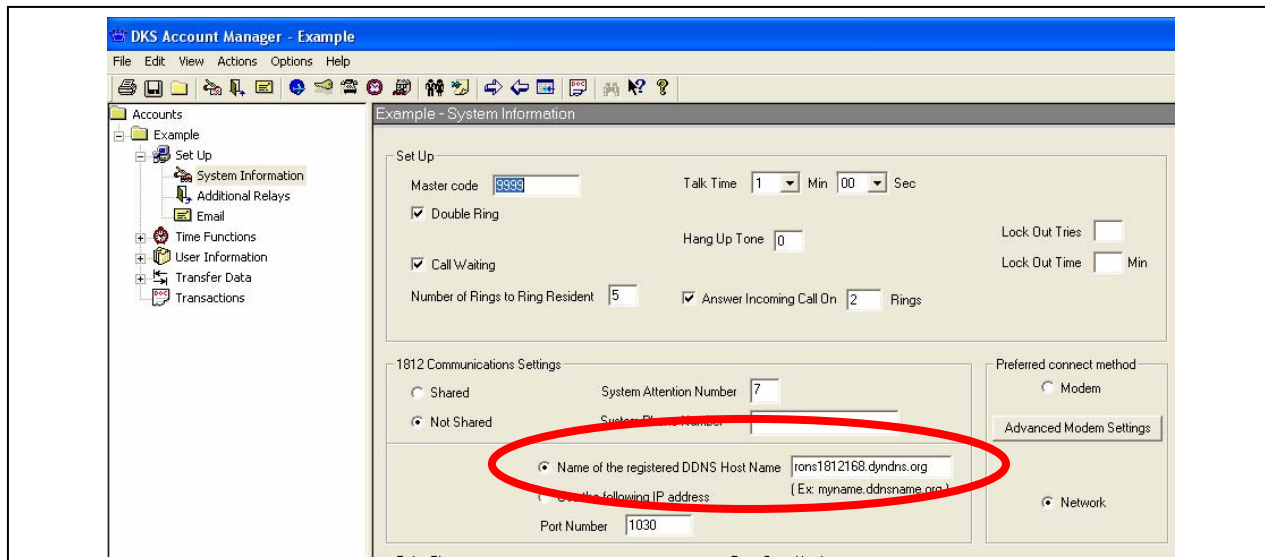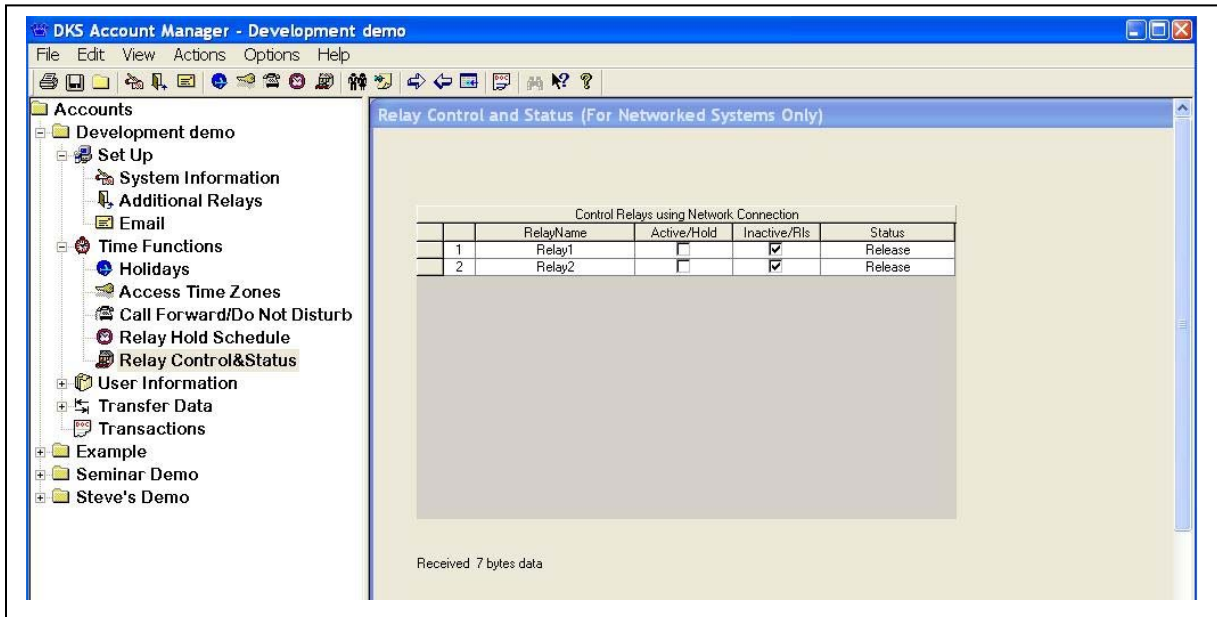
Testing the Connection through the 1812 Software:

☑ **Select 'Relay Control & Status:**

☑ **Select 'YES"** to initiate connection with 1812 system.

☑ **Software will verify connection with 1812. This should only take a second or two.**
Once verified, the screen will show the current status of System Relays

☑ **Clicking on the Relays can change the status:** For example, click on the 'Activate/Hold' for Relay 2, the display should show the change in relay status.