

Excel 15B W7760B Building Manager RELEASE 2.02.00

INSTALLATION INSTRUCTIONS

PRODUCT DESCRIPTION

The Excel 15B W7760B Building Manager is a *Light Commercial Building Solution* (LCBS) web-based operator interface (network server) and LONWORKS® Bus supervisory device. As an operator interface, it connects to the Internet, local area network (LAN), or wide area network (WAN) providing multi-user access to web pages for Building Manager configuration, LCBS monitoring and command functions. As a building manager, it uses LONWORKS® to provide network-wide alarm handling, scheduling, Demand Limit Control (DLC) and trend logging for NX VFD, application specific Excel 10 controllers and Excel 15 W7760C Plant controllers.

The Excel 15B is a network appliance equipped with a hard drive. The use of a hard drive greatly expands the alarm handling, scheduling, and logging capabilities when compared to EPROM/RAM based control devices.

The Excel 15B utilizes a Honeywell specific Everex® IntelliWAY server as the hardware platform.

BEFORE INSTALLATION

Prior to installation determine the installation network and Internet requirements.

For direct Internet operation, Excel 15B requires broadband (xDSL or cable) service. It might be necessary to work with the facility manager to establish broadband service. Refer to Appendix C.

For access from a local or wide area network (LAN/WAN), Excel 15B will be connected to the LAN/WAN. Ensure the presence of a network administrator. In case there is no network administrator, it might be necessary for the installer or the facility manager to consult with an independent network professional.

Internet access to Excel 15B is frequently provided through a LAN/WAN. Prior to installation, identify the procedures for connecting Excel 15B to the LAN/WAN and gain Internet access.

The Excel 15B can also be used as a dedicated LCBS operator interface when directly connected to a PC (personal computer) through the network interface adapter (NIC). No Internet or network access is available in this configuration.

Network Security

As with any Internet web server, Excel 15B is subject to attack by "hackers". While Excel 15B is supplied with the best available internal protection, a network "firewall" must be used if Internet access is provided.

Review the Internet, LAN, or WAN provisions for installation and determine the appropriate firewall requirements.

IMPORTANT

- When connecting Excel 15B to the Internet directly, or through a LAN or WAN, use of additional external security measures such as a "firewall" is strongly advised.
- When connecting Excel 15B directly to the Internet from a cable/DSL modem with no network, a firewall must be established by adding a router. (Simple switches and hubs are insufficient.)
- Most routers used with cable/DSL modems provide a significant level of hardware protection, network address translation (NAT), and have the ability to also implement a software firewall as well. Such routers are widely available at nominal cost.

Generally, local and wide area networks have sophisticated firewall protection and it is necessary to work with a network administrator to install Excel 15B properly.

Networks using cable/DSL modems and a router cannot be configured to support Excel 15B and cannot have a firewall. The firewall might not be properly configured to support Excel 15B. Network reconfiguration might be needed to support Excel 15B. If the installer or end user do not have the expertise required to determine the network capabilities or to set up an appropriate firewall, consult a network specialist.

IMPORTANT

- Networks configured with the Microsoft® Windows® Network Setup Wizard as a proxy server (the recommended wizard procedure) cannot support the Excel 15B.
- Installing the Excel 15B in such a network requires reconfiguring the network for peer-to-peer operation.



Excel 15B has been designed with many features to promote Internet security. The most basic is the user ID and password access to the system. Excel 15B has a default user ID and password for initial installation. After installation, each individual user should be provided with a unique ID and password. Internet best practices recommend IDs and passwords that are 8 characters or more in length with a mix of alpha and numeric characters. Best practices also require individual users to change passwords periodically. As with any system, when personnel changes occur, old IDs and passwords must be deleted and new ones assigned.

Excel 15B closes all unused internal software access ports. It is designed to allow access through HTTPS and SSH ports during normal system operation. Refer to Appendix C.

Initial setup of Excel 15B server requires a PC to be physically connected to Excel 15B serial port. When configuration is completed remove the PC serial connection.

NOTE: Future upgrades and service packs for Excel 15B will be available on the Internet.

A final precaution to promote security is to insure that Excel 15B is based on an operating system that minimizes the potential for system corruption. Excel 15B has been built on the current version of Linux that provides this functionality.

Setup Information Requirements

Specific information about the network is required to configure the network interface of Excel 15B. The section titled Setup Data Descriptions identifies the data required for each configuration option. This information should be gathered prior to attempting to setting up Excel 15B. "Appendix B" is provided to collect and record all data need to configure Excel 15B.

In local area network/wide area network (LAN/WAN) applications, the data required for the "configure network" utility will be provided by the network administrator.

In small cable/DSL networks, it can be necessary for the installer to determine the information required to complete Excel 15B setup. The section titled "Setup Data Descriptions" provides a description of the information required in the sequence, how it will be used, and where to find it. Most information is available from either the router setup or by running the DOS command "ipconfig /all". If the installer is not familiar with the processes required to configure network devices a networking specialist should be consulted.

First determine the configuration options required for the installation. The options are PPPoE or Ethernet protocol and Static or DHCP IP addressing.

PPPoE or Ethernet Protocol Option

PPPoE (Point to Point Protocol over Ethernet) has been adopted by many broadband Internet service providers (ISP), especially xDSL (telephone Digital Subscriber Line) providers. While PPPoE is also being adopted by some cable ISP, most still use traditional Ethernet. It will be necessary to ascertain the type of service from the ISP or network manager.

If a DSL/cable router is installed, Excel 15B must be configured for Ethernet. The DSL/cable router must be setup to meet the ISP requirements for PPPoE or Ethernet.

Record the PPPoE or Ethernet information in Appendix B.

NOTE: When configuring a Excel 15B as a dedicated LCBS operator interface (no Internet or LAN/WAN access) it must be configured for Ethernet.

Static or Dynamic Address Option

It is necessary to establish the IP (Internet protocol) address for Excel 15B.

Excel 15B supports both static and Dynamic Host Configuration Protocol (DHCP) IP addressing. A static IP address is one that is permanently assigned to Excel 15B and is provided by the ISP or LAN/WAN network administrator. It must be established prior to installation of Excel 15B.

A dynamic IP address is one that is assigned by another network device (DHCP host) and can change based on rules established for the network. The IP address will not be known till Excel 15B is configured. The IP address will be reported in the "Setup" utility when the setup sequence is completed. Since the IP address is not fixed, it is usually necessary to use a Domain Name Service. See "Uniform Resource Locator" below.

Record the static or DHCP information in Appendix B.

NOTE: Configuring Excel 15B as a dedicated LCBS operator interface (no Internet or LAN/WAN access) requires configuring it for a Static IP address.

Uniform Resource Locator

A Uniform Resource Locator (URL) is required to address Excel 15B with Microsoft® Internet Explorer.

In many installations, the URL will be routed through a Dynamic Name Service (DNS) to address Excel 15B. However, DNS is not required for installations using an Ethernet DHCP address. If DNS is used, the information for Excel 15B setup data must be obtained prior to setup. This can require obtaining a registered domain name from a domain name registration service. The information should be available from the facility's network administrator and/or ISP. The processes for setting up DNS service vary depending on the ISP, DNS service, and the user's LAN/WAN operating policies and is beyond the scope of this document.

Using a DNS address, the URL is in the form of *protocol://FullyQualifiedDomainName/resource* (See definitions below).

The alternative to DNS addressing is to use the IP address assigned to the Excel 15B. The URL will be in the form of *protocol/ipaddress/resource* (See definitions below).

EXCEL 15B URL COMPONENT DEFINITIONS

- *protocol* = https
 - **Important** - the protocol must be entered as https. Entering incorrect protocol results in an error message "The page cannot be displayed". Internet Explored defaults to the http protocol which will result in the error message.

- FullyQualifiedDomainName (FQDN) = hostname.domainname
- *domain.name* = the domain name assigned by the ISP or network administrator.
 - The domain name must be registered if it is to be used through the Internet.
 - Excel 15B Internet access installed in a LAN/WAN must be provided by the network administrator.
 - Excel 15B Internet access installed in a small network using a Cable/DSL router can require configuring the router DMZ or port redirection to provide access.
- *hostname* = the host name for Excel 15B (host) assigned by the installer during configuration. Refer to Setup Data for Configuration Options.
- *resource* = *hostname.htm*
 - *htm* is the resource extension and is required with the host name.
 - If a FQDN is used, it can be possible to include the resource in the Dynamic Name Service (DNS) redirection. This will simplify user access to Excel 15B. However, requiring the user to enter the resource data offers a higher level of security.
- *ipaddress* = the static IP address assigned by the ISP, network administrator, or the dynamic IP address assigned by the DHCP host.

Record the URL information in Appendix B.

Setup Data for Configuration Options

Combining PPPoE and Ethernet options result in four unique configuration options. Table 1 identifies the network data required for each configuration option. The Setup Data Descriptions section describes each configuration data prompt with an indication of where the data can be obtained. Record the information in the space provided for the selected option Appendix B.

For cable/DSL modem - router networks, most information can be gathered by accessing the network router or with the Microsoft Windows DOS command "ipconfig /all". To access the router setup command, a PC must be connected to the LAN/WAN.

If the installer is not familiar with the processes required to configure network devices, a networking specialist must be consulted.

Use the browser to access the router setup according to the router manufactures procedures.

To use the "ipconfig /all" command the PC must be connected to the same network subnet where Excel 15B is installed:

1. Open the Windows DOS prompt (Start >> Programs >> Accessories >> Command Prompt) and run ipconfig /all (c:\>**ipconfig /all**).
2. Record the data required for the applicable protocol option as indicated in Appendix B, Table 2.

NOTE: Table 1 identifies the configuration data required for each of the four possible configuration scenarios.

Table 1. Configuration Data Requirements.

Protocol Option	PPPoE		Ethernet	
IP Address Option	Static	DHCP	Static	DHCP
IP Address	X		X	
Netmask			X	
Default Gateway			X	
Primary Domain Name Server	X	X ^a	X	
Local Host Name	X	X	X	X
Domain Name	X	X	X	
PPPoE user name	X	X		
PPPoE password	X	X		
WINS IP Address			X	X ^b
WINS Workgroup			X ^b	X ^b

^a Applicable only if Domain Name Server is available.

^b Applicable only to networks using a Microsoft Windows Server employing Windows Workgroups. If WINS IP Address and Workgroup are not entered, WINS is disabled.

Setup Data Descriptions

- [IP Address] Excel 15B IP address - user assigned:
 - The LAN/WAN IP address to apply to Excel 15B in static IP configurations. Not applicable in DHCP configurations.
 - The IP address consists of four sets of numbers separated by a decimal point. The valid values for each number range from 0 to 255.

If a router is used:

- Most cable/DSL routers use 192.168 for the first two numbers (physical and IP layers) and either 1 or 0 for the third number. The fourth number is the address of a device on a subnet within the LAN/WAN.
- The router can be configured for either static or dynamic IP addresses. Most cable/DSL routers configured for DHCP will recognize a static address assignment if the address is greater than that of all IP addresses assigned by DHCP. It is suggested that the highest address in the range be assigned.
- To determine the address that has been assigned, open the router's setup and display the DHCP client table. Refer the router's user guide for procedures.
- Excel 15B IP address must be greater than any DHCP assigned address and within the range of addresses available.
- Determine the appropriate IP address and enter it.

NOTE: The static IP address assigned to the Excel 15B will typically not be displayed in the router's DHCP client list.

- [Netmask] LAN Subnet Mask address:
 - Applicable only to Ethernet Static IP configurations.
 - From router or "ipconfig /all".
 - In router setup look for "LAN" "Subnet Mask".
 - When using "ipconfig /all" look for "Subnet Mask".
- [Default Gateway] LAN (DSL/cable modem):
 - Applicable only to Ethernet Static IP configurations.
 - Default Gateway address
 - From "ipconfig /all"
 - Look for "Default Gateway"

- [Primary Domain Name Server] WAN (cable/DSL modem) DNS address (first in the list)
 - From router or “ipconfig /all”
 - In router setup, look for “WAN” “DNS” and use the first address in the list (primary)
 - In Windows “ipconfig /all”, look for DNS Servers and use the first address in the list (primary)
 - This is necessary for email alarm notification.
- [Local Host Name] Excel 15B name:
 - User assigned
 - Enter any unique name - recommend “xl15b”. A LAN/WAN with multiple Excel 15B installed requires each host name be unique and descriptive of the location.
 - Only alphanumeric, “-” (dash), and “_” (underbar) characters are permitted.
- [Domain Name] ISP domain name:
 - Not a user’s domain name
 - In Windows “ipconfig /all” look for “Connection specific DNS Suffix”.
 - This is necessary for alarm emails to be sent correctly.
- [PPPoE user name (if any)]:
 - Assigned by the network administrator or ISP
 - Will be supplied by the network administrator or ISP if required.
 - Used only for DSL direct connect to the Internet.
- [PPPoE password (if any)]:
 - Assigned by the network administrator or ISP
 - Will be supplied by the network administrator or ISP if required.
 - Used only for DSL direct connect to the Internet.
- [WINS IP Address (if any)]:
 - Windows Internet Naming Service
 - Applicable only to networks using Microsoft Windows Server software.
 - Will be supplied by the network administrator if required.
- [WINS Workgroup (if any)]:
 - Will be supplied by the network administrator if required.
 - Applicable only to networks using Microsoft Windows Server software.
 - Only alphanumeric, “-” (dash), and “_” (underbar) characters are permitted.
 - Used only for Microsoft networks using WINS workgroups.

HARDWARE INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check ratings given in instructions and on the product to ensure the product is suitable for your application.
3. Installer must be a trained and an experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

IMPORTANT

All wiring must comply with applicable codes, ordinances and regulations.

Excel 15B is an ENERGY STAR® compliant low-power consumption, “always-on” network server appliance. Proper placement and setup of the device is essential for achieving top performance and longevity. Device placement on or near a desktop, or on industrial shelving is recommended. However, placing the device within a wiring closet or wall mounting are also viable alternatives.

Shipping box Contents:

- 1 - Excel 15B (Everex IntelliWAY hardware).

NOTE: Software is pre-loaded.

- 1 - Power Adapter.
- 1 - Ethernet RJ-45 cable.
- 1 - Excel 15B Installation Instructions (95-7668).
- 1 - Software Registration Card.
- 1 - Software License Agreement.
- 1 - Warranty Card.

Location

Proper placement and setup of Excel 15B is essential for achieving top performance and longevity. It can be mounted in any space suitable for installing a PC:

- Install in a clean, flat, stable, open environment with adequate ventilation and isolated from any form of moisture, dust, and contaminants.
- Placement of the device on or near a desktop or industrial shelving is recommended.
- Place within a wiring closet or wall mounting (professional installation recommended).
- Provide adequate PC connection access space for initial setup and future software upgrades.
- Do not install near any heating source.
- Do not install in area exposed to moisture or high humidity.
- Do not install in area exposed to direct sunlight.
- Do not install near high voltage wiring or devices.
- Do not install near radio transmitters or other RF transmitting equipment.
- Do not block the ventilation openings.

NOTE:

- If Excel 15B is kept inside a panel box or any closed enclosure and if the installation is in an air-conditioned room, it is suggested to place sufficient silica gel sachets in the enclosure. Silica gel absorbs the moisture in the enclosure and keeps the air dry. Exposure to high humidity environments might cause Excel 15B to malfunction as a result of internal corrosion.
- Install proper ventilation fans to circulate air in the enclosure. The direction of the fan blow should be such that hot air is directed out and cool air is directed into the enclosure. To decide the appropriate location for the fan installation on the enclosure follow this general rule: Hot air always moves up as it is lighter than the cool air.
- Improper shutdowns can cause file systems to corrupt.

Table or Shelf Mounting

Set Excel 15B on a flat desk top, table top, or heavy duty (industrial grade) shelf. Provide minimum clearance of 2 in. (5.1 cm) on each side for ventilation. Provide a minimum of 6 inches (15.2 cm) behind the unit for cable connections. See Fig. 1 for physical dimensions of Excel 15B.

Wall Mounting

Excel 15B can be mounted on a sturdy wall (masonry block, wood, metal, and etc.) - Sheetrock anchors are not acceptable. To mount on a sheetrock wall, first install a backer plate (wood or metal), fastened to the wall studs, and then mount Excel 15B on the backer plate.

IMPORTANT

Mount Excel 15B with the curved face oriented to the right.

Install two screws suitable to the wall or backer plate material to meet the dimensions shown in Fig. 1.

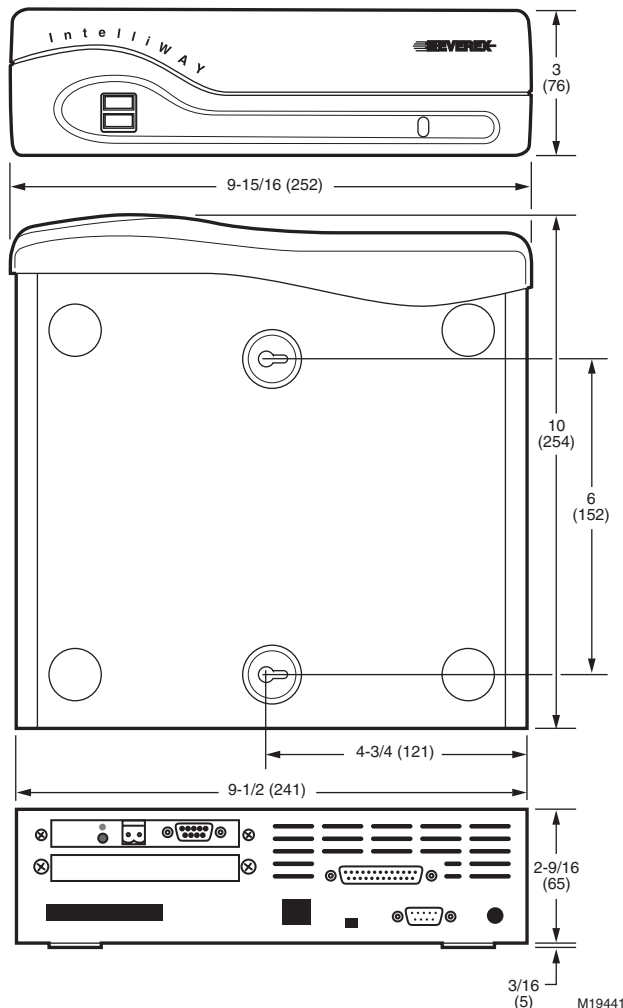


Fig. 1. Excel 15B Dimensions in inches (mm).

Wire and Cable Connections

Refer to Fig. 2 for Excel 15B connector locations.

NOTE: Excel 15B application does not support the following Everex IntelliWAY connectors:

- Printer
- Wireless LAN Card
- DB-9 connector adjacent to the LONWORKS® adapter on the LONWORKS® interface card.
- USB connectors on front of cover.

Connecting Excel 15B to a LAN/WAN

Refer to Fig. 2 for Excel 15B connector locations.

1. Slide Excel 15B "Hub/PC" switch to the "Hub" position.
2. Connect the supplied Ethernet cable to the "To LAN" RJ-45 connection on the back of Excel 15B.
3. Connect the other end of the cable to the network connection provided by the network administrator.

NOTE: If the supplied Ethernet cable is too short to reach the network connection location, use a Category 5 patch cable of the required length.

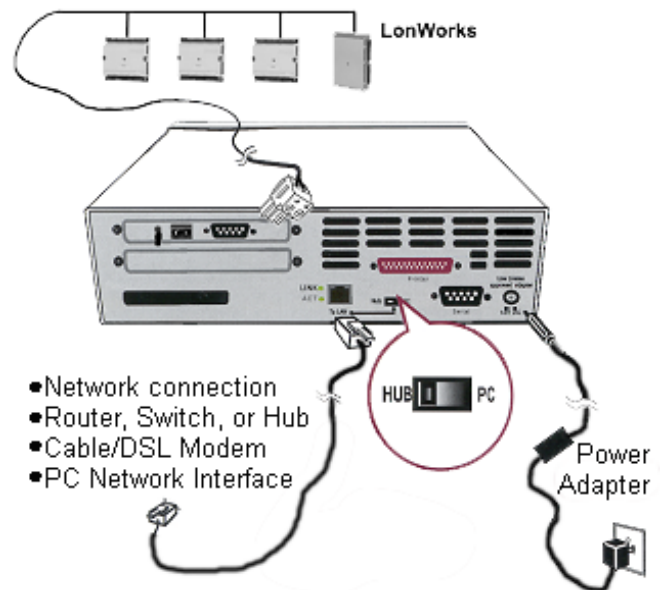


Fig. 2. Excel 15B Connections.

Connecting Excel 15B to a DSL/Cable Modem and Router Network

Refer to Fig. 2 for Excel 15B connector locations.

1. Slide Excel 15B "Hub/PC" switch to the "Hub" position.
2. Connect the supplied Ethernet cable to the "To LAN" RJ-45 connection on the back of Excel 15B.
3. Connect the other end of the cable to a Ethernet router, switch, or hub.

NOTE: If the supplied Ethernet cable is too short to reach the network connection location, use a Category 5 patch cable of the required length.

4. If necessary Power ON the Ethernet hub, switch, or router.

Connecting Excel 15B Directly to DSL/Cable Modem

Some DSL and Cable ISPs now offer firewall protection for subscribers. Firewall protection at the ISP level must be considered as a minimum level of protection.

NOTE: Consider adding a router with firewall between the DSL/Cable modem and Excel 15B to create a DSL/Cable modem and router network. Routers with integrated firewall are available at nominal cost.

Refer to Fig. 2 for Excel 15B connector locations.

1. Slide Excel 15B "Hub/PC" switch to the "Hub" position.
2. Connect the supplied Ethernet cable to the "To LAN" RJ-45 connection on the back of Excel 15B.
3. Connect the other end of the cable to the DSL/Cable modem per the manufactures instructions.

NOTE: If the supplied Ethernet cable is not long enough to reach the hub, switch, or router location use a Category 5 patch cable of the length required.

4. Power ON the DSL/Cable modem if it is not yet ON.

Connecting Excel 15B as a Dedicated Operator Interface (No Internet or LAN/WAN Access)

If the application does not require Internet access or LAN/WAN access it is possible to connect Excel 15B directly to a PC. The combination is used as a dedicated operator interface.

NOTES:

- As there is no Internet access, no firewall protection is required.
- The PC must have an Ethernet network interface adapter and Microsoft Internet Explorer 5.5 or later installed.
- Refer to Fig. 2 for Excel 15B connector locations.

1. Connect Ethernet cable to "To LAN" RJ-45 connection on the back of Excel 15B. Either a straight through or cross-over patch cable can be used to connect Excel 15B to the PC. The "Hub/PC" switch must be set according to cable type.
 - Straight-through patch cable - set switch to "PC" position. (The patch cable supplied with Excel 15B is straight through)
 - Cross-over patch cable - set switch to "Hub" position.
2. Connect the other end of the cable to the PC network interface adapter.

NOTE: If the supplied Ethernet cable is too short to reach the network connection location, use a Category 5 patch cable of the required length.

Connecting Power to Excel 15B

Refer to Fig. 2 for Excel 15B connector locations.

Excel 15B is designed to operate continuously and, therefore, no power switch has been provided on the unit. Power is applied by connecting the power adapter to a 120 Vac power outlet and to the back of the Excel 15B:

1. Connect the supplied power adapter to Excel 15B DC connector (on the back) and insert the power plug into a 120 Vac wall socket with surge protection.
2. The Excel 15B automatically performs a two to three minute self-test upon power-up.
3. The LED located on the front of the Excel 15B indicates the self-test process status:
 - Blinking green light: Test in progress.
 - Solid green light: Successful test (operational Excel 15B).
 - Solid red light: Unsuccessful test. Service required.
4. Connect the LCBS LONWORKS® network to the Excel 15B using the supplied Weidmueller connector (part number BLZ508/BSN). Refer to Fig. 2 for connection location.

NOTE: Use a UPS that provides at least 30 minutes of power backup.

Minimizing Bus Interference Using the Ferrite Bead

The supplied ferrite bead is a small plastic cover rectangle with two 'C' shaped inner cores made of ferrous material. The ferrite bead is given as part of the Excel 15B installation kit.

The ferrite bead can be used to help reduce radio frequency interference and power line disturbances. These noise sources can interrupt Excel 15B communication with other devices on the Lon®/E network. Thus, the ferrite bead should be clamped to the Lon® bus cable to avoid such disturbances.

The following steps are to be performed by the installer. Fasten the Ferrite Bead to the Lon®/E bus cable:

1. Insert the Lon® bus cable into one of the circular openings.
2. Then, pull out the cable from the other circular end of the box.

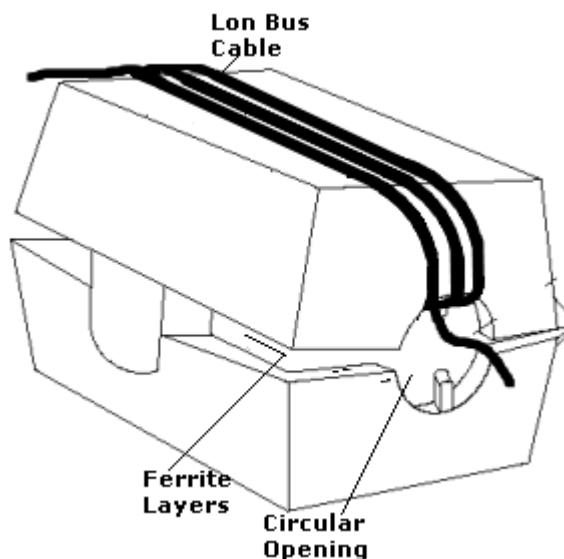


Fig. 3. Ferrite Bead Box

3. Repeat the above-mentioned steps three times so that the cable is wrapped around the box, as shown below, tightly.

4. The plastic shell of the Ferrite Bead needs to be fully closed after the Lon® bus cable has been looped through for the Ferrite Bead to be effective in reducing noise.
5. Then, pull out the cable from the other circular end of the box.

Ensure the following:

- The Ferrite Bead box is not more than 1.5 inches away from Excel 15B box.
- The Lon® bus cable is at least 3 feet away from any source that can cause disturbance in Excel 15B's communication with other controllers on the network.

Software Setup

After Excel 15B has been installed (connecting it to a LAN, LONWORKS® network, and power), the software setup must be completed. This process requires a PC with HyperTerminal. Most versions of Microsoft® Windows® have HyperTerminal installed.

This process sets the Internet protocol (IP) address and must be completed with a PC connected to Excel 15B serial port. Your PC serial port name (e.g., COM1, COM2) can vary.

HyperTerminal Setup

1. Connect the PC serial port to Excel 15B serial port.
 - This requires a 9-pin null-modem cable (not supplied). See Fig. 4 for connector location.
 - If the PC does not have a serial port but has a Universal Service Bus (USB) connection available, it is possible to use a USB-serial adapter to connect to Excel 15B.

- Ensure proper Com port identification for the USB adapter when configuring HyperTerminal. HyperTerminal is a program that has been part of Windows since Windows 95. It is loaded into the Accessories folder under communications.

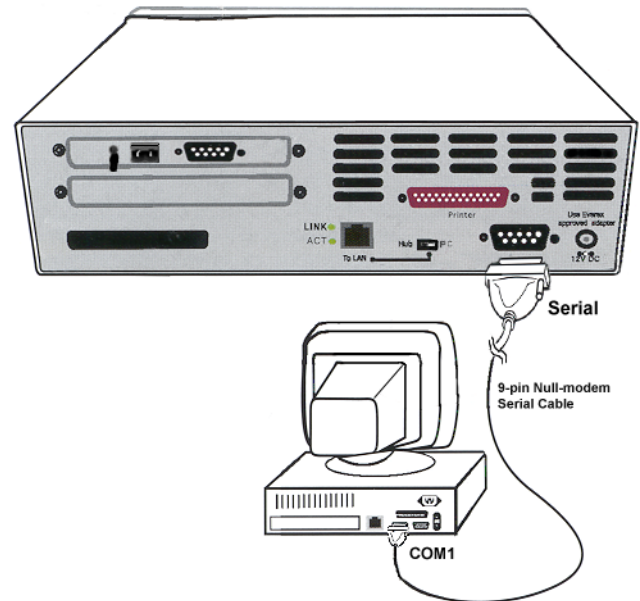


Fig. 4. Excel 15B Connections for Null-modem Cable.

2. Launch HyperTerminal:
 - a. **Start >> Programs >> Accessories >> Communications >> HyperTerminal** (See Fig. 5).
 - b. If HyperTerminal is not installed use the Microsoft Windows installation disk to install it. (**Start >> Settings >> Control Panel >> Add or Remove Programs >> Add/Remove Windows Components**).

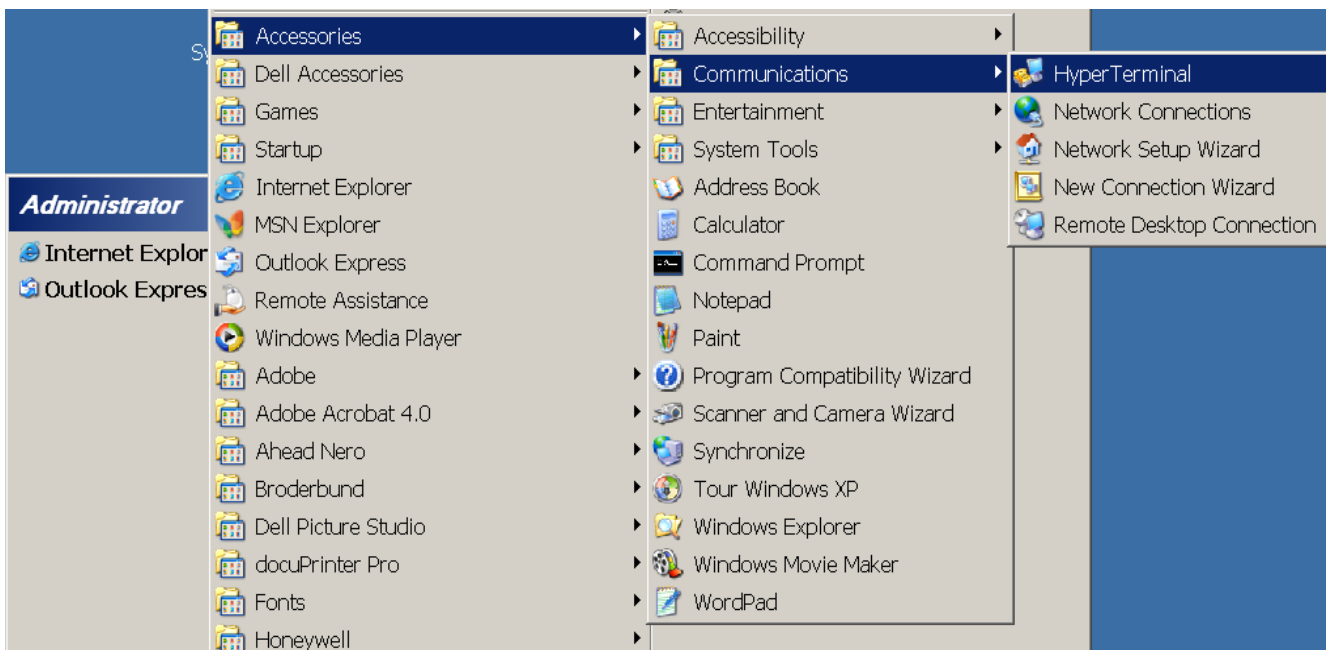


Fig. 5. Launching HyperTerminal.

3. In the "Connection Description" dialog box (Fig. 6.):
 - c. "Connection Description" dialog box opens. (Fig. 6.)
 - a. Enter any name in the "Name:" box, (e.g., "XL15B Setup").
 - b. Click "OK".

- c. The "Connect To" dialog box opens (Fig. 7).
4. In the "Connect To" dialog box:
 - a. From the "Connect using" drop-down list, select the PC serial COM port (generally COM1). See Fig. 7.
 - b. Click "OK".
 - c. The COM# Properties dialog box opens. (# is the number of the COM port selected.) See Fig. 8.
5. In the "COM# Properties" dialog box "Port Settings" tab click "Restore Defaults" (See Fig. 8).
6. Verify (and correct) the following Port Settings:
 - "Bits per second:" **9600**.
 - "Data bits:" **8**.
 - "Parity:" **None**.
 - "Stop bits:" **1**.
 - "Flow control:" **None**.
7. Click "OK". The "Connection Name - HyperTerminal" window opens without data. (Connection Name = the name entered in "Connection Description" dialog box.)
8. Configure the HyperTerminal connection for VT100 operation.
 - a. From the "Connection Name Hyper Terminal" dialog box menu bar select **File >> Properties**
 - b. The "Connection Name Properties" dialog box opens.
9. In the "Connection Name Properties" dialog box:
 - a. Select the settings tab (see Fig. 12).
 - b. Set "Function, arrow, and ctrl keys act as" to **"Terminal keys"**.
 - c. Set "Backspace key sends" to **"Del"**.
 - d. Set "Emulation:" selection to **"VT100"**.
 - e. Set "Telnet terminal ID" to **"ANSI"**.
 - f. Set "Backscrol buffer lines:" to **"500"**.
 - g. Do not change the default settings for Terminal Setup..., "Input Translation...", or "ASCII Setup..."
 - h. Click the "OK" button.
 - i. Returns to the "Connection Name - HyperTerminal" window. The status bar at the bottom left of the HyperTerminal will indicated "Connected".
10. Saving the HyperTerminal configuration eliminates the need to configure the connection each time the Excel 15B is accessed.
 - a. To save the Hyper terminal configuration select from the HyperTerminal menu bar **File >> Save**.
 - b. Subsequent connections can be initiated with **Start >> Programs >> Accessories >> Communications >> HyperTerminal >> Connection Name**



Fig. 6. HyperTerminal "Connection Description" Dialog Box.



Fig. 7. Hyper Terminal "Connect To" Dialog Box.

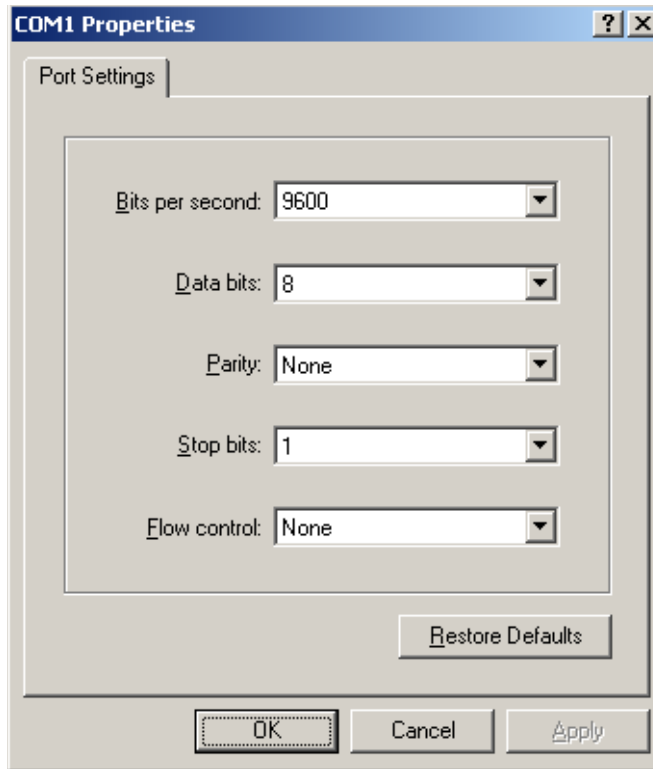


Fig. 8. HyperTerminal COM properties dialog box.

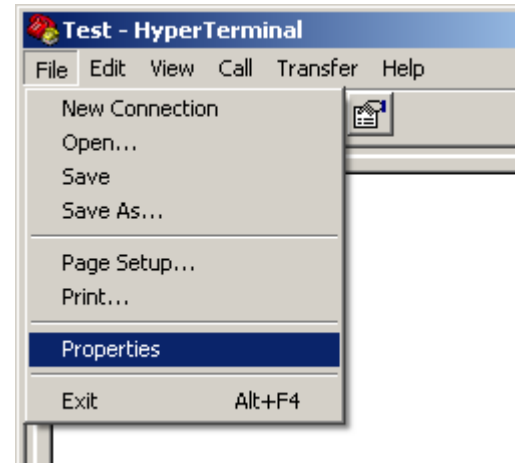


Fig. 10. HyperTerminal properties selection.

11. In the "Connection Name Properties" dialog box:
 - a. Select the settings tab (see Fig. 12).
 - b. Set "Function, arrow, and ctrl keys act as" to **"Terminal keys"**.
 - c. Set "Backspace key sends" to **"Del"**.
 - d. Set "Emulation:" selection to **"VT100"**.
 - e. Set "Telnet terminal ID" to **"ANSI"**.
 - f. Set "Backscrol buffer lines:" to **"500"**.
 - g. Do not change the default settings for Terminal Setup...", "Input Translation...", or "ASCII Setup..."
 - h. Click **"OK"**.
 - i. Returns to the "Connection Name - HyperTerminal" window. The status bar at the bottom left of the HyperTerminal will indicated "Connected".

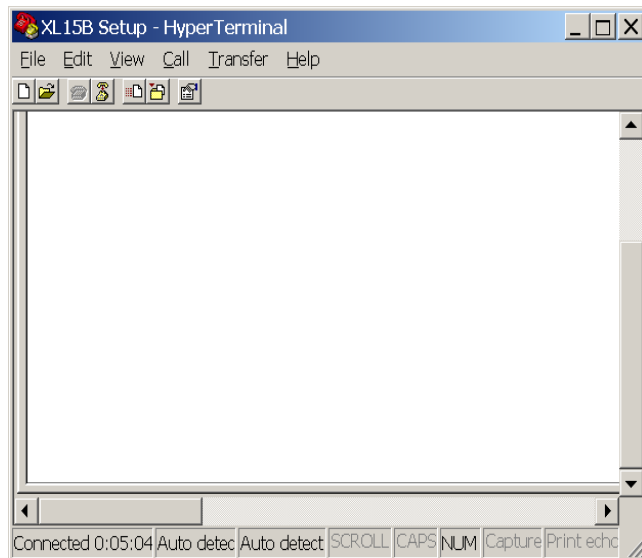


Fig. 9. HyperTerminal screen.

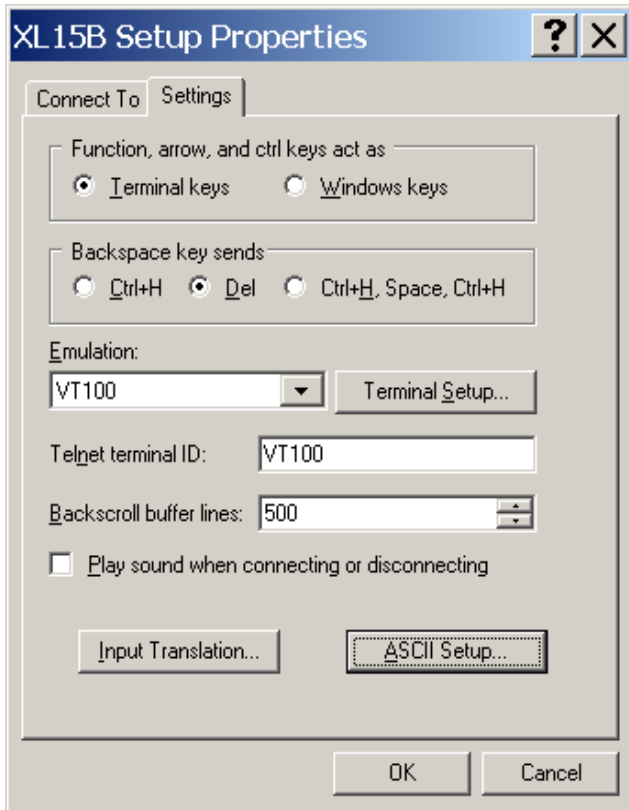


Fig. 11. "Connection Name Properties" dialog box settings tab.

12. Saving the HyperTerminal configuration will eliminate the need to configure the connection each time Excel 15B is accessed.
 - a. To save the Hyper terminal configuration select from the HyperTerminal menu bar **File >> Save**.
 - b. Subsequent connections can be initiated with **Start >> Programs >> Accessories >> Communications >> HyperTerminal >> Connection Name**

HyperTerminal Login to Excel 15B

When connecting HyperTerminal to Excel 15B, it is necessary to enter a user ID and password. Excel 15B setup program uses Command Line Mnemonics. A flashing underbar indicates the location of the cursor. Both the log in ID and password are case sensitive. Type the appropriate response as shown below. When each response is complete it is necessary to press the Enter key. If either the user ID or password is not correct, a message "Login Incorrect" will appear followed by the "login:" prompt. Re-enter the login ID and password.

Typing errors can be corrected by backspacing to eliminate entered text. The Windows highlight function does not work in this application.

Excel 15B Login Procedure (Fig. 12)

This section shows prompts in plain text and entries in bold text. The **↵** symbol indicates the enter key. The user ID and password are case sensitive.

1. After connecting HyperTerminal to Excel 15B, the work area of the HyperTerminal window will be blank. Press the "Enter" key one or more times to get to the login prompt as shown in Fig. 12.
2. **<Fully Qualified Domain Name> login: setup↵**

NOTE: During the initial login the Fully Qualified Domain Name (FQDN) is "localhost.localdomain". After the initial setup is completed the domain name will be that entered by the user.

3. When login ID is entered a password prompt appears: Password: !setup!↵

NOTE: When typing the password, the cursor does not move and no characters appear on the screen.

4. The welcome screen appears with the command prompt "excel15b>" as the last line. See Fig. 13.
5. If either the login ID or password are incorrect a "Login incorrect" message appears followed by a prompt to login. See Fig. 14. To login to Excel 15B, repeat steps 2 and 3 of the login procedure.

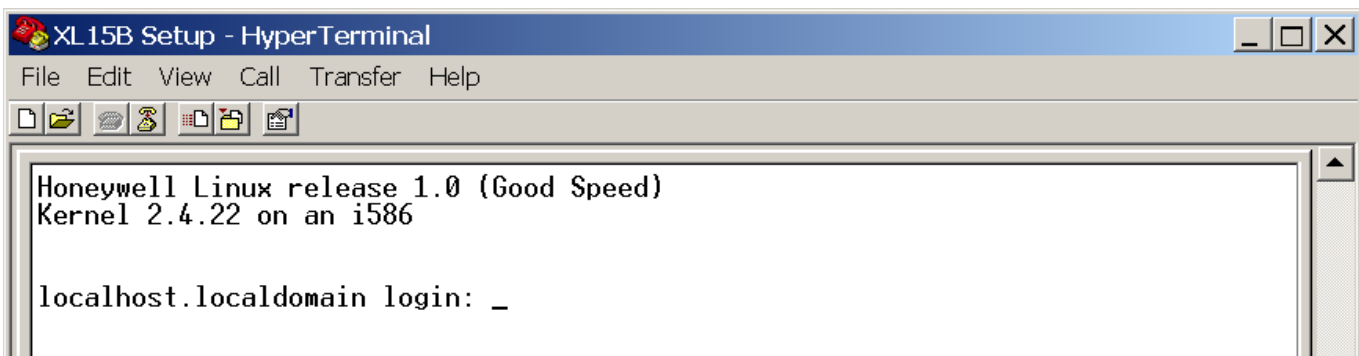


Fig. 12. Excel 15B Setup HyperTerminal "login".

Excel 15B Setup “Tips”

Excel 15B setup “Tips” (excel15b> tips↵) is a list of ten commands that can be used in “XL15B Setup”. These commands are listed with detailed explanations in Appendix A of this manual.

“Configure Network” Data Entry Conventions

The “**configure network**” utility requires data be entered sequentially. It is not possible to return to a previous line and change the data.

- At the completion of the utility all data entered is displayed and the user is asked to verify the entered data.
- If any entry is incorrect the routine can be restarted. All data must be re-entered.
- Prior to pressing the enter key, corrections can be made by deleting the text backwards.

In this discussion, Excel 15B command “configure network” prompts are shown in brackets, the entry format is shown in bold, and the enter button is shown as ↵.

Example: [prompt] **data**↵

Refer to Setup Data Descriptions for definition, source, and entry constraints of data required.

“nnn.nnn.nnn.nnn” represents an IP address consisting of four segments, each with up to 3 numerical characters ranging in value from 0 to 255.

“xxxxx” represents an alphanumeric entry that is user defined.

```
Honeywell Linux release 1.0 (Good Speed)
Kernel 2.4.22 on an i586

localhost.localdomain login: setup
Password:
Last login: Tue Jan 6 20:30:55 on ttyS0
bash: SHELL: readonly variable
bash: PATH: readonly variable

WELCOME TO THE EXCEL15B SETUP

1. To correct keystroke errors, use the Backspace key.
   To enable the Backspace key to send a delete command,
   see HyperTerminal Settings in your PC's HyperTerminal
   application.

2. To see more on the supported commands from the
   serial console, type "tips" at the prompt below
   and press the Enter key.

excel15b>_
```

Fig. 13. XL15B Setup Welcome Screen

```
Honeywell Linux release 1.0 (Good Speed)
Kernel 2.4.22 on an i586
```

```
localhost.localdomain login: setup
Password:
Login incorrect

login: _
```

Fig. 14. Setup Login Incorrect

Configure Network for PPPoE Static IP Address

PPPoE must be selected only when connecting Excel 15B directly to a DSL/cable modem, which in turn is connected to an ISP using PPPoE. Most xDSL ISP use PPPoE while most cable ISP do not.

If a DSL/cable router is installed, then Excel 15B will be configured for Ethernet. The DSL/cable router must be setup to meet the ISP requirements for PPPoE also.

Refer to Setup Data Descriptions for definition of the prompts.

To configure a Excel 15B for PPPoE protocol and Static IP, login to Excel 15B as described in v. 4-04 and enter the following previously recorded data from Appendix B Table 2.

See Fig. 15 for PPPoE screen capture with Static IP configuration.

1. [excel15b>]**configure network**↵
2. [Type 'p' for PPPoE or 'e' for Ethernet:] **p**↵
3. [Type 's' for Static or 'd' for DHCP:] **s**↵
4. [IP Address:] **nnn.nnn.nnn.nnn**↵
5. [Primary Domain Name Server (DNS if any):]
nnn.nnn.nnn.nnn↵
6. [Local Host Name:] **xxxxx**↵
7. [Domain Name:] **domain.name**↵
8. [PPPoE user name:] **xxxxx**↵
9. [PPPoE password:] **xxxxx**↵
10. [Re-enter PPPoE password:] **xxxxx**
— Re-enter the password from step 9 above.
11. [Do you want to connect to your ISP now (y/n)?:] **y**
— Entering “**y**” results in connection to the ISP.
— Entering “**n**” completes the configuration without connecting. It will be necessary to use the “pppoe start” command to initiate the ISP connection.

NOTE: When the PPPoE connection is not active, the “network setting” command shows the configuration as “UNKNOWN”.

Configure Network for PPPoE DHCP Address

PPPoE is only selected when connecting Excel 15B directly to a DSL/cable modem which is connected to an ISP using PPPoE. Most xDSL ISP use PPPoE. Most cable ISP do not.

If a DSL/cable router is installed Excel 15B will be configured for Ethernet. The DSL/cable router must be setup to meet the ISP requirements for PPPoE also.

Refer to Setup Data Descriptions for definition of the prompts.

To configure a Excel 15B for PPPoE protocol and DHCP log into Excel 15B as described in Excel 15B Login Procedure and enter the following previously recorded data from Appendix B Table 2.

See Fig. 16 for PPPoE screen capture with DHCP configuration.

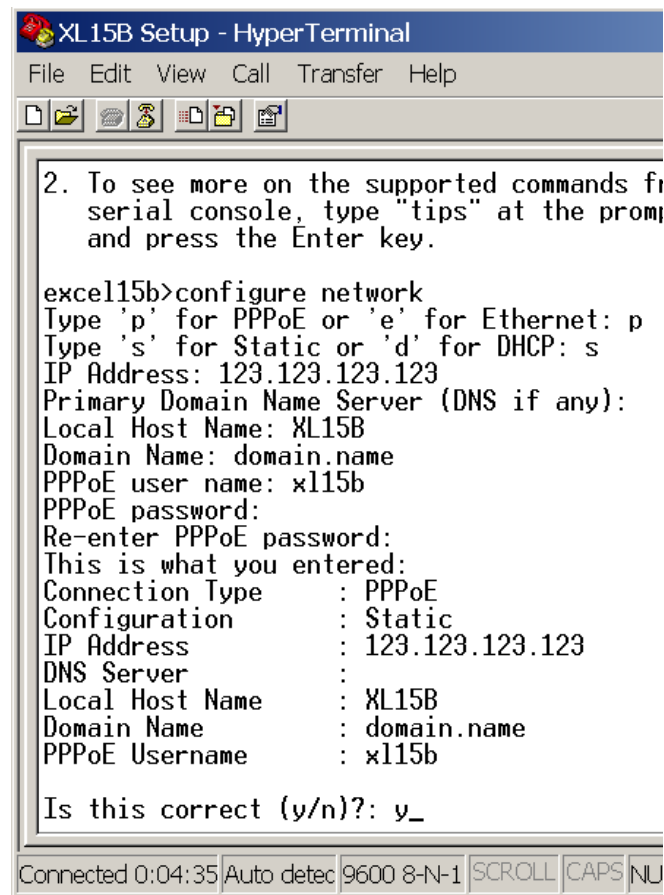


Fig. 15. Excel 15B “configure network” for PPPoE IP address.

1. [excel15b>]configure network.␣
2. [Type 'p' for PPPoE or 'e' for Ethernet:] p.␣
3. [Type 's' for Static or 'd' for DHCP:] d.␣
4. [Primary Domain Name Server (DNS if any):] nnn.nnn.nnn.nnn.␣
5. [Local Host Name:] xxxxx.␣
6. [Domain Name:] domain.name.␣
7. [PPPoE user name:] xxxxxx.␣
8. [PPPoE password:] xxxxxx.␣
9. [Re-enter PPPoE password:] xxxxxx.␣
— Re-enter the password from step 9 above.
10. [Do you want to connect to your ISP now (y/n)?:] y
— Entering “y” will establish a connection with the ISP.
— Entering “n” will complete the configuration without establishing the connection. It will be necessary to use the “pppoe start” command to initiate the ISP connection.

NOTE: When the PPPoE connection is not active, the “network setting” command shows the configuration as “UNKNOWN”.

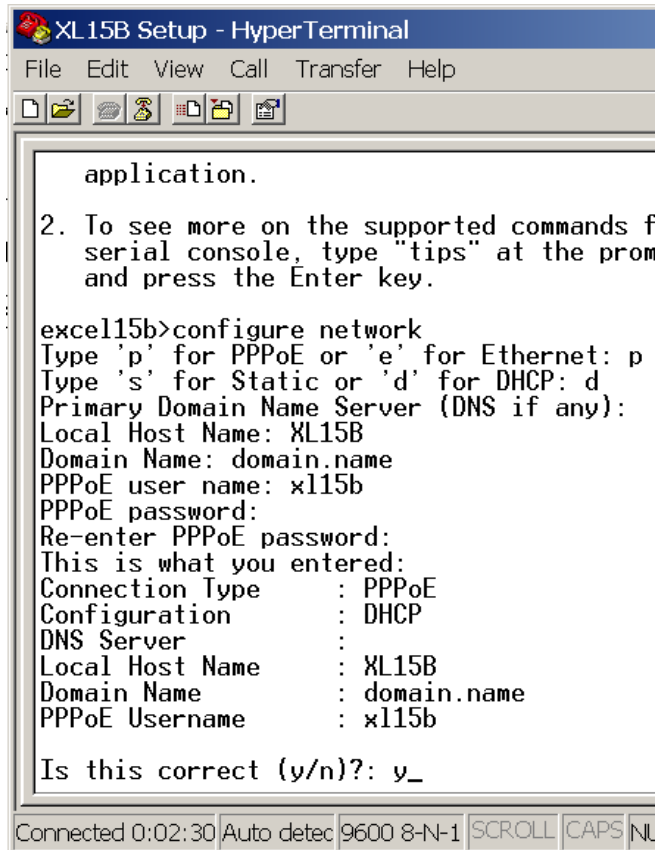


Fig. 16. “configure network” for PPPoE DHCP.

Configure Network for Ethernet Static IP Address

Refer to Setup Data Descriptions for definition of the prompts.

To configure a Excel 15B for Ethernet protocol and Static IP, log into Excel 15B as described in Excel 15B Login Procedure (Fig. 12) and enter the following previously recorded data from Appendix B Table 2, "Excel 15B Setup Data."

See Fig. 11 for a screen capture of Ethernet with Static IP configuration.

1. [excel15b>]configure network.↓
2. [Type 'p' for PPPoE or 'e' for Ethernet:] e.↓
3. [Type 's' for Static or 'd' for DHCP:] s.↓
4. [IP Address:] nnn.nnn.nnn.nnn.↓
5. [Netmask:] nnn.nnn.nnn.nnn.↓
6. [Default Gateway] nnn.nnn.nnn.nnn.↓

7. [DNS Server:] nnn.nnn.nnn.nnn.↓
8. [Local Host Name:] xxxxx.↓
9. [Domain Name:] domain.name.↓
10. [WINS Server:] xxxxx.↓
11. [WINS Workgroup Name:] xxxxx.↓Configure Network for Ethernet Static IP Address.

NOTES: For Fig. 17b:

- Used behind a router which is connected to the Internet where Excel 15B is accessible from the Internet.
- The IP address of the router from which the Excel 15B is accessed from the Internet will be different than the internal IP address of the device. The mapping of these addresses is taken care off in the router.

```

a - HyperTerminal
File Edit View Call Transfer Help

WELCOME TO THE EXCEL15B SETUP

1. To correct keystroke errors, use the Backspace key.
   To enable the Backspace key to send a delete command,
   see HyperTerminal Settings in your PC's HyperTerminal
   application.

2. To see more on the supported commands from the
   serial console, type "tips" at the prompt below
   and press the Enter key.

excel15b>configure network

Type 'p' for PPPoE or 'e' for Ethernet: e
Type 's' for Static or 'd' for DHCP: s
IP Address: 135.240.201.125
Netmask: 255.255.255.0
Default Gateway: 135.240.222.102
Primary Domain Name Server (DNS): 135.240.140.12
Local Host Name: xl15b1
Domain Name: domainname.com
WINS IP Address (if any):
WINS Workgroup Name (if any):

This is what you entered:
Connection Type      : Ethernet
Configuration        : Static
IP Address           : 135.240.201.125
Netmask              : 255.255.255.0
Default Gateway      : 135.240.222.102
DNS Server           : 135.240.140.12
Local Host Name      : xl15b1
Domain Name          : domainname.com
WINS Server          :
Workgroup Name       :

Is this correct (y/n)?: y_

Connected 0:04:02  ANSIW  9600 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
  
```

17a. Configure using Public IP Address Ranges.

```

setup - HyperTerminal
File Edit View Call Transfer Help

WELCOME TO THE EXCEL15B SETUP

1. To correct keystroke errors, use the Backspace key.
   To enable the Backspace key to send a delete command,
   see HyperTerminal Settings in your PC's HyperTerminal
   application.

2. To see more on the supported commands from the
   serial console, type "tips" at the prompt below
   and press the Enter key.

excel15b>configure network

Type 'p' for PPPoE or 'e' for Ethernet: e
Type 's' for Static or 'd' for DHCP: s
IP Address: 192.168.1.100
Netmask: 255.255.255.0
Default Gateway: 192.168.1.1
Primary Domain Name Server (DNS): 192.168.1.1
Local Host Name: xl15b1
Domain Name: domainname.com
WINS IP Address (if any):
WINS Workgroup Name (if any):

This is what you entered:
Connection Type      : Ethernet
Configuration        : Static
IP Address           : 192.168.1.100
Netmask              : 255.255.255.0
Default Gateway      : 192.168.1.1
DNS Server           : 192.168.1.1
Local Host Name      : xl15b1
Domain Name          : domainname.com
WINS Server          :
Workgroup Name       :

Is this correct (y/n)?: y_

Connected 0:06:51  VT100  9600 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
  
```

17b. Configure using non-Public IP Address Ranges

Fig. 17. Configure Network for Ethernet Static IP Address.

Configure Network for Ethernet DHCP

Refer to Setup Data Descriptions for definition of the prompts.

To configure a Excel 15B for Ethernet protocol and DHCP log into Excel 15B as described in Excel 15B Login Procedure (Fig. 12) and enter the following previously recorded data from Appendix B Table 2.

See Fig. 18 for a screen capture of Ethernet with DHCP configuration.

1. [excel15b>]configure network.]
2. [Type 'p' for PPPoE or 'e' for Ethernet:] e.]
3. [Type 's' for Static or 'd' for DHCP:] d.]
4. [Local Host Name:] xxxxx.]
5. [WINS IP Address:] xxxxx.]
6. [WINS Workgroup Name (if any):] xxxxxx.]

```
excel15b>configure network
Type 'p' for PPPoE or 'e' for Ethernet: e
Type 's' for Static or 'd' for DHCP: d
Local Host Name: XL15B
WINS IP Address (if any):
WINS Workgroup Name (if any):

This is what you entered:
Connection Type      : Ethernet
Configuration       : DHCP
Local Host Name     : XL15B
WINS Server         :
Workgroup Name      :

Is this correct (y/n)? : _
```

Fig. 18. Configure network for Ethernet DHCP.

Configure as Dedicated LCBS Operator Interface

The following is the required configuration if the PC network interface adapter and Excel 15B is being configured as a dedicated LCBS operator interface with no Internet or LAN/WAN access.

Configure PC Network Interface Adapter

Requires an Ethernet network adapter dedicated to use with Excel 15B. No other devices can be connected.

1. In the PC, select the "Network Connections"
 - Start >> Settings >> Control Panel >> Network Connections
2. Select Local Area Connections Properties
 - Right click "Local Area Connections".
 - Click "properties".
 - Local Area Communications Properties box opens.
 - Scroll to find "Internet Protocol (TCP/IP)". See Fig. 19.

NOTE: If multiple "Internet Protocol (TCP/IP)" are available, choose the one that suits the Excel 15B connection network adapter.

3. Select "Internet Protocol (TCP/IP)" properties.
 - Select "Internet Protocol (TCP/IP)".
 - Click "Properties".
 - "Internet Protocol Properties" box appears (Fig. 20).
4. Set the PC network adapter to use a fixed IP address.
 - Click the "Use the following IP address:" radio button.
 - The DNS server selection automatically changes to "Use the following DNS server address:" and the other option is grayed out.
5. Enter the following data:
 - [IP Address:] **10.0.0.3**
 - [Subnet Mask:] **255.0.0.0**
 - [Gateway:] **10.255.255.254**
 - [Preferred DNS server:] **10.255.255.4**
 - [Alternate DNS server:] *leave blank*
6. Verify correct data entry. Make corrections if necessary.
7. Click OK to close the "Internet Protocol (TCP/IP) Properties" dialog box.
8. Click OK to close the "Local Area Connection Properties:" dialog box.
9. Close the "Networks Connections" screen.

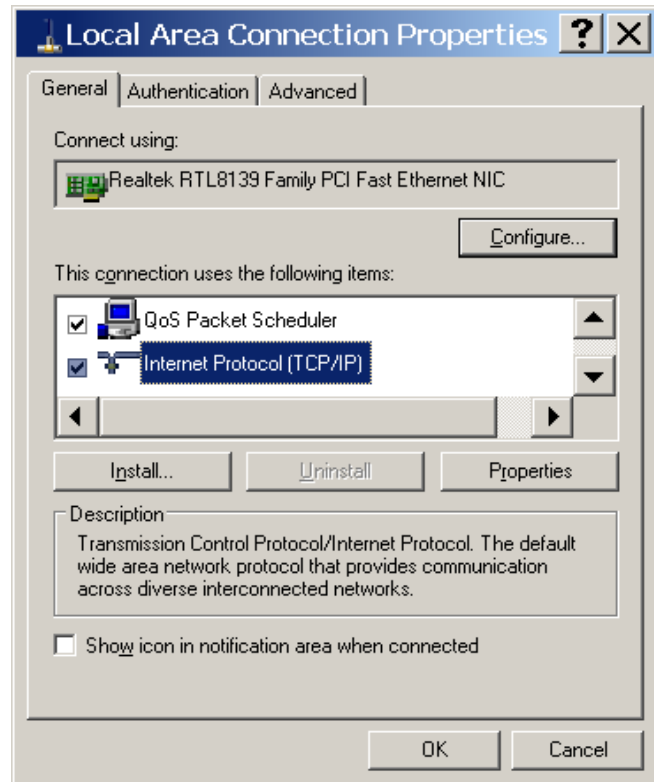


Fig. 19. Local area communication properties.

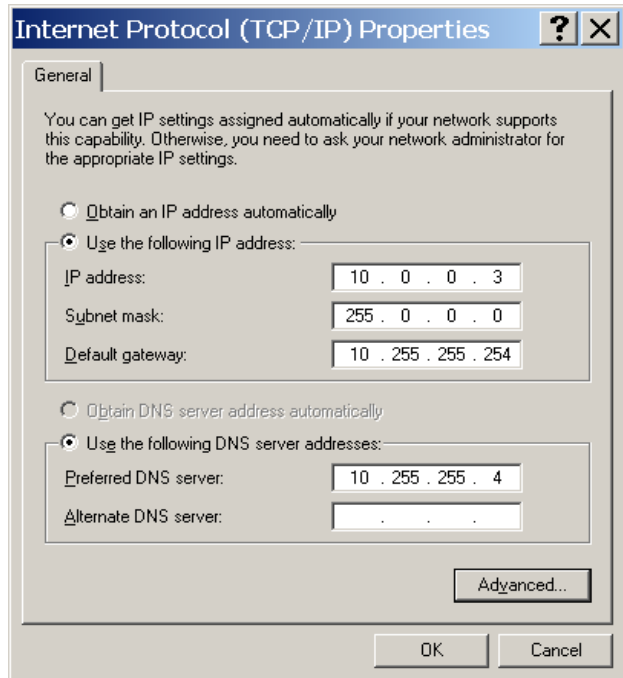


Fig. 20. Internet Protocol (TCP/IP).

Configure Excel 15B Network Interface

The same PC can be used for both configuring and operating Excel 15B. However, the configuration process requires connection to the serial port through a PC Ethernet network interface adapter. See Hardware Installation.

NOTE: Use Hyper Terminal to connect to Excel 15B serial port as described in The Lon® bus cable is at least 3 feet away from any source that can cause disturbance in Excel 15B's communication with other controllers on the network..

Login to Excel 15B and enter the following data. This conforms to the Ethernet Static IP configuration option.

1. [excel15b>]configure network.↵
2. [Type 'p' for PPPoE or 'e' for Ethernet:] e.↵
3. [Type 's' for Static or 'd' for DHCP:] s.↵
4. [IP Address:] 10.0.0.1.↵
5. [Netmask:] 255.0.0.0.↵
6. [Default Gateway:] 10.255.255.254.↵
7. [DNS Server:] 10.255.255.4.↵
8. [Local Host Name:] xl15b.↵
9. [Domain Name:] domain.com.↵

NOTE: As there is no network, there is no domain name. The "setup" utility checks for a valid entry format. So it is necessary to enter a valid domain name.

10. [WINS Server:] ↵ (No data, just enter)
11. [WINS Workgroup Name:] ↵ (No data, just enter)

NOTE: The URL will be "https://10.0.0.1/xl15b.htm".
<hostname.domainname> cannot be used.

EXCEL 15B MAC ADDRESS RESOLUTION

In some instances, ISPs require the System Administrator to provide MAC addresses for each Excel 15B that is to receive a static IP address from the ISP. This is often the case where an ISP is using DHCP addressing but requires Excel 15B to have a static address. In such cases, use the following procedure to find the MAC Address of each unit to be installed.

1. Install Excel 15B on a network with a known static IP address. This address can be a temporary IP address. This is the case with a PC directly connected to Excel 15B.

NOTE: You can also use a DHCP IP address. However, the resulting Excel 15B IP address (assigned at the end of the network setup process) must be recorded for use in the following steps. Keep in mind that DHCP addresses can change either over time, or if Excel 15B is powered down then up again.

2. Once Excel 15B is configured on a network, perform the following commands from DOS shell of a PC on the same subnet as Excel 15B:

- a. Enter the following at the DOS prompt:

```
C:\>ping <ip address>
```

NOTES:

- <ip address> is Excel 15B IP address
 - The PC drive letter can be different from C:
 - This command confirms subnet communication with Excel 15B and creates a temporary entry in the PC's address resolution protocol (ARP) table.
- b. If the device does not respond, check to make sure that the local PC and Excel 15B are on the same subnet and that all connections are correct.
 - c. Then reboot Excel 15B.
 - d. If the device still does not communicate, contact the I.T. system administrator for assistance.

NOTE: The result will look something like the example shown below. However, the IP address will be different.

```
C:\>ping 192.168.231.201
```

Pinging 192.168.231.201 with 32 bytes of data:

```
Reply from 192.168.231.201: bytes=32 time<10ms TTL=128
```

```
Reply from 192.168.231.201: bytes=32 time<10ms TTL=128
```

```
Reply from 192.168.231.201: bytes=32 time<10ms TTL=128
```

```
Reply from 192.168.231.201: bytes=32 time<10ms TTL=128
```

Ping statistics for 192.168.231.201:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milliseconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

```
C:\>
```

- e. Enter the following command from the DOS prompt:

```
C:\>arp -a
```

NOTE: This command displays the ARP table for the PC being used. The ARP table now includes an Excel15B entry. The result will look something like the example shown below. Identify the IP address of Excel 15B in the table by its IP address. The associated Physical Address (MAC Address) of Excel 15B is adjacent to its IP address. In the example below, the Excel 15B with the IP address of 192.168.231.201 has a MAC address of 00-06-3f-00-08-67. In this example, the IP address was a DHCP assigned address (dynamic). The other IP addresses shown in the example below are the devices on the local subnet that have been recorded in the PC's ARP table. The IP addresses and associated MAC addresses present in the ARP table will vary depending upon what devices are on the local subnet in the network.

```
C:\>arp -a
```

Interface: 192.168.228.225 on Interface 0x1000005

Internet Address	Physical Address	Type
192.168.224.1	00-00-0c-07-ac-e0	dynamic
192.168.224.128	00-a0-c9-6f-a7-6b	dynamic
192.168.224.131	00-a0-c9-9d-61-68	dynamic
192.168.231.201	00-06-3f-00-08-67	dynamic

```
C:\>
```

VERIFY USER LOGIN

Requires a PC connected to the Internet or LAN/WAN with Microsoft® Internet Explorer version 5.5 or higher.

Excel 15B DNS Server entry is given for mail purposes only. Excel 15B is a DNS client and is not able to update the DNS server with the dynamic IP address assigned by the DHCP server.

User Login Verification Process

Using IP Address

To use the static IP addressing for Excel 15B, you need the assigned IP address. In case, you have forgotten the password or it is unknown, use Excel 15B HyperTerminal setup mode with the “network settings” utility ([excel15b>] **network settings**↵) to get the current IP address.

1. Open Microsoft® Internet Explorer and enter the IP address of Excel 15B in the “Address” field. The address consists of the protocol (https) and the static IP address followed by “/xl15b.htm”.
RESULT: https://nnn.nnn.nnn.nnn/xl15b.htm

NOTE: Failure to enter the protocol identifier (https://) or suffix (xl15b.htm) results in error messages that the site cannot be opened or found.

2. Press Enter, or click “Go”.
3. The Honeywell Excel 15B User Login page should open (See Fig. 21).

NOTE: If Excel 15B has been assigned a DNS domain name, the procedure described in “DHCP IP Address” should also be performed.

Using Domain Name URL Address

To use a domain name address, the domain name needs to be assigned in a DNS server at the LAN/WAN or ISP level. The assigned domain name must be obtained from the network administrator or ISP.

1. Enter Excel 15B Internet address in the Explorer “Address” field. This address will be assigned by the network administrator or ISP.

NOTE: If the path was not included in the domain name it is necessary to add the suffix /hostname.htm.

Example: https://domainname/xl15b.htm

NOTE: Failure to enter the protocol identifier (https://) results in error messages that the site cannot be opened or found.

2. Press Enter, or click “Go”.
3. The Honeywell Excel 15B User Login page should open (See Fig. 21).

Using WINS Host Name

In Microsoft® LAN/WAN networks where WINS is available and Excel 15B is configured to use WINS, the user can use the *hostname* in the URL to access it.

1. Open Microsoft® Internet Explorer and enter the WINS address of Excel 15B in the “Address” field. The address consist of the protocol (https) and WINS address followed by “/xl15b.htm”.
RESULT: https://store_A/xl15b.htm
2. Press Enter, or click “Go”.
3. The Honeywell Excel 15B User Login page should open (See Fig. 21).

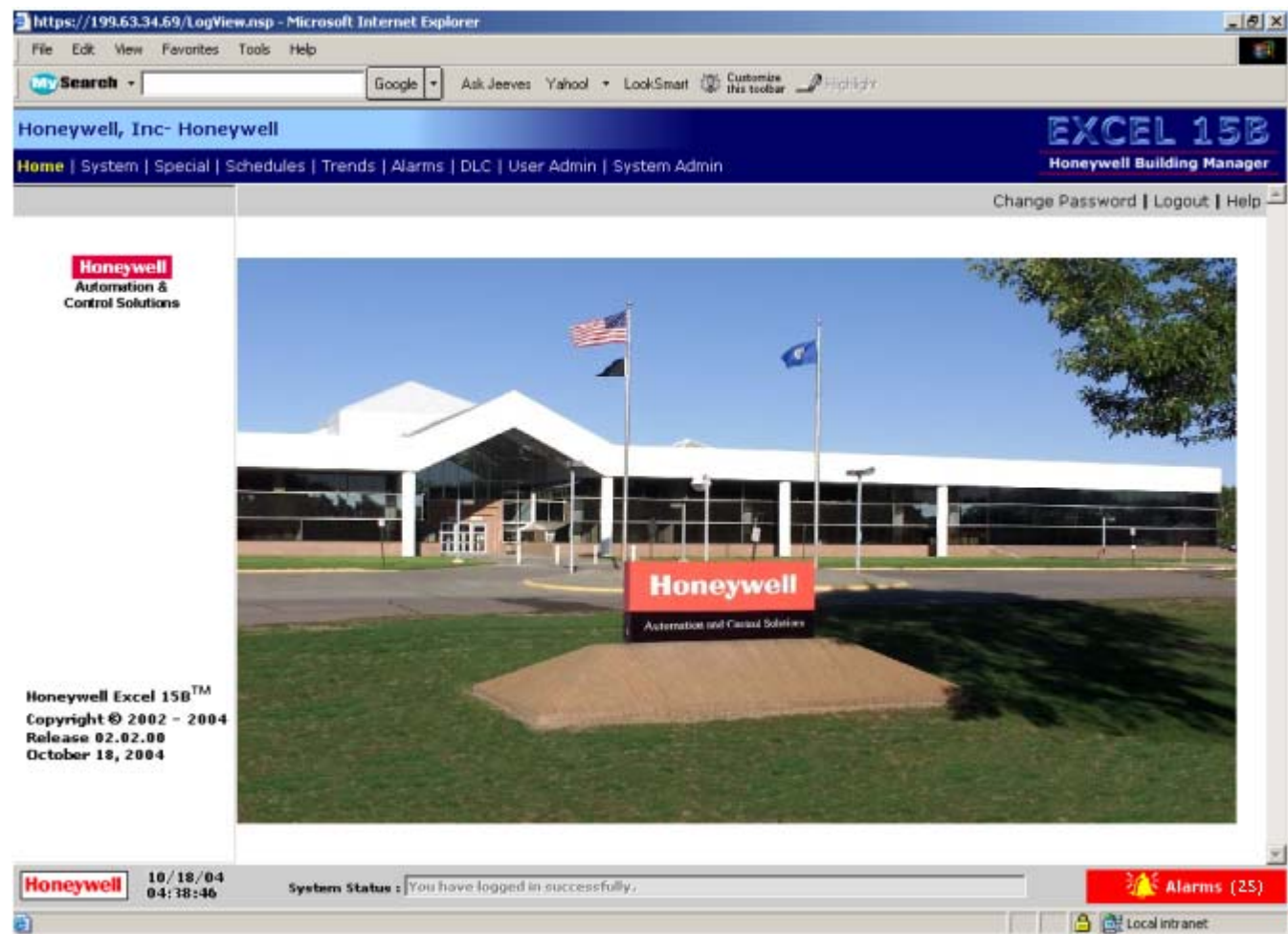


Fig. 21. Excel 15B Building Manager Home Page.

WEB INTERFACE SETUP

When Excel 15B installation is complete, perform “System Admin” configuration from the web-based interface.

NOTE: Requires Microsoft® Internet Explorer version 5.5 or higher.

Initial Login

Excel 15B web access is protected by User ID and Password.

For security purposes Excel 15B requires the default User ID “SysAdmin” password be changed as part of the initial “LOGIN” process. This task must be performed by the one who is setting up the system. Assign a new password when prompted and give it to the system administrator.

1. Open Microsoft® Internet Explorer and enter the IP or URL address of Excel 15B in the “Address” field. Refer to Verify User Login” above.
2. Excel 15B User Login page opens (See Fig. 21).
3. Enter the default User ID and password: (See Fig. 22)
 - a. Both User ID and Password are case sensitive.

User ID = **SysAdmin**

Password = **!Sys!Admin**

4. Click “Login”.
5. The Change Password dialog box appears.
6. Enter the old password, the new password, and confirm new password at the prompts. (see Fig. 23)
 - The new password must be different from the default password. The password will be for the user “SysAdmin” and must be given to the end user responsible for system administration functions of Excel 15B.
 - The minimum number of characters for a password is five and the maximum number of characters is 30. Any combination of alphanumeric and special characters are permitted.
7. Click “Change Password”

NOTE: Refer to Excel 15B Help for more information on configuring users.

Fig. 22. User login.

Fig. 23. Change password.

Configure System Data

Enter the basic site data. The help screen selected from System Admin provides detailed instructions for each entry.

Change Company and Site Name (Fig. 24)

Enter the “Company Name:” and “Site Name:” for the Excel 15B. This data is displayed in the top header of all pages and in all alarm e-mail messages.

Synchronize with Internet Time Source (Fig. 24)

Apart from setting the system internal time clock manually, you can also synchronize it with the Internet time. You can enable “Synchronize Time with Internet” option for Excel 15B to automatically synchronize its time with Internet or Intranet time servers for a given time zone.

When you select “Synchronize Time with Internet” checkbox, the Internet time is checked during Excel 15B initialization and once daily at midnight to correct the internal time clock. When this option is enabled, the “Set Time” option (manual setting of time) will be changed with the next Internet update.

The Time Zone must be selected to match the time zone of the Excel 15B geographic location (the location where Excel 15B is installed). The Excel 15B time varies according to the time zone selected.

When synchronizing time with an Internet server, ensure that Excel 15B is configured to use the correct time zone and the time server is accessible to Excel 15B. If you see the “Time sync failed” alarm on the “Alarms” page, then it indicates that Excel 15B is having communication problem with the time server. The Installation Engineer can take the assistance of the Network Administrator to enable proper time synchronization.

Follow these steps to synchronize Excel 15B time with the Internet time:

1. Enter the IP Address (numerical form) of the Internet time source in the “Source IP Address” box. For example, 10.1.19.3.
2. Select the required time zone from the “Time Zone” list. (The time zones are alphabetically sorted.)
3. Click “Save” to synchronize Excel15B time with the Internet time. Click “Undo” to cancel all the latest selections and entries.

Internet time is available from a number of public and private sources. Following are some of the public sources:

- National Institute of Standards and Technology (NIST) Internet Time Service. A list of NIST Internet Time Servers is available at <http://www.boulder.nist.gov/timefreq/service/time-servers.html>.
- U.S. Naval Observatory at <http://tycho.usno.navy.mil>.

Setup Time Keeping (Fig. 24)

Enter the date and time to be used by Excel 15B in the "Time Setup" section and click the "Set Time" option to enter initial time keeping information.

Follow these steps to select the date and time:

1. Click the "Calendar" icon adjacent to the "Day (MM/DD/YYYY)" box.
2. Select the month, date, and year that you want from the calendar. By default, the calendar displays the current system date, month, and year.
 - Use << to view the previous year and >> to view the year ahead.
 - Select the month from the "Month" list.
 - Click "X" to close the calendar.The selected date is displayed in the "Day (MM/DD/YYYY)" box.
3. Enter the time in the "Hours (0-23)" and "Minutes (0-59)" boxes.
4. Click "Set Time". The selected date and time is loaded into Excel 15B.

Set Up Excel 15B as Time Master (Fig. 24)

If additional time keeping devices such as T7300F/Q7300H and T7350 are available on the network, set Excel 15B as the Time Master to synchronize the time clocks of all the discovered T7300F/Q7300H and T7350 devices on the LON@ network with its local time.

Select the "Make Excel 15B Time Master" option. By default, this option is disabled.

Network Information (Fig. 24)

Excel 15B IP Address, IP Mask, Gateway Address, and Name Server are displayed in the System Display. They are displayed only for your reference and cannot be modified.

Email Server (Fig. 24)

Excel 15B uses e-mail to provide remote annunciation of alarms. The "SMTP Email Server" entry configures this function.

If the LAN/WAN in which Excel 15B is installed requires e-mail to be forwarded to a network SMTP mail server, enter the IP address (**nnn.nnn.nnn.nnn**) of the SMTP mail server provided by the network administrator.

If no SMTP mail server IP address is entered, Excel 15B will send the alarm messages to the SMTP mail server for the e-mail addressee. In case Excel 15B has to use an external SMTP server, enter the external SMTP server address followed by a valid e-mail address. If authentication is required at the SMTP server end, then enter your user ID and password. The user who receives the alarm notifications from Excel 15B sees the site name and the sender's e-mail address in the 'From' box.

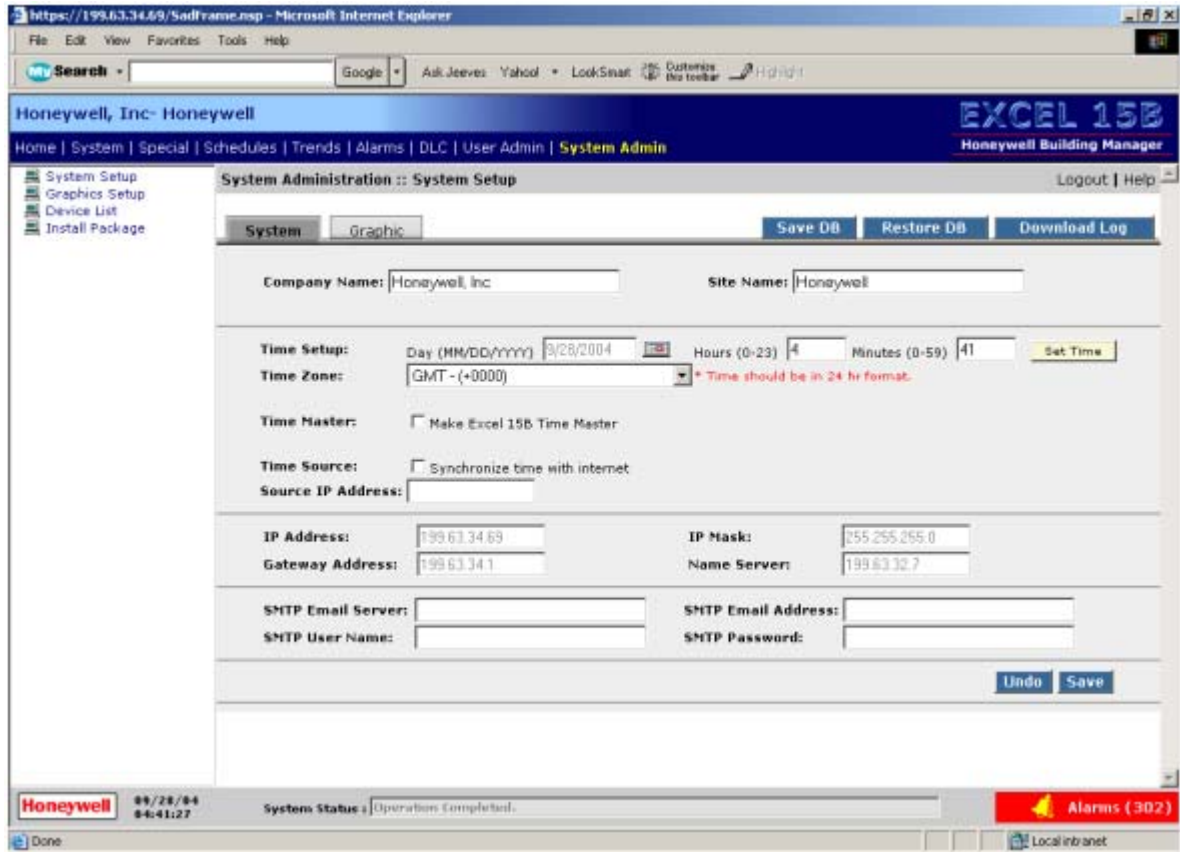


Fig. 24. Excel 15B System Administration.

Install Security Certificate

If the PC is regularly used to access Excel 15B web site, then you can install Excel 15B security certificate to eliminate the "Security Alert" message.

To install Excel 15B security certificate:

1. Access Excel 15B web site from the PC. When the "Security Alert" message is displayed click "View Certificate".
2. The "Certificates" dialog box opens.
3. In the "Certificate" dialog box "General" tab click "Install Certificate".
4. The "Certificate Import Wizard" opens.
5. In the "Certificate Import Wizard" click "Next".
6. The wizard moves to the "Certificate Store" option.
7. The user has the option of selecting the directory for storing the certificate. It is recommend to select the default (Automatically select the certificate store based on type of certificate).
8. Click "Next".
9. The wizard moves to "Completing the Certificate Import Wizard".
10. Click "Finish".
11. The "Root Certificate Store" dialog box opens. This is to confirm the addition of Excel 15B security certificate.
12. Click "Yes". A message appears confirming installation.
13. Click "OK" to close the Certificate and Properties dialog boxes.

NOTE: The security alert message will no longer activate when opening Excel 15B web site.

APPENDIX A: EXCEL 15B SETUP TIPS

The “Tips” command lists the additional 10 utilities used when configuring a Excel 15B. The Tips utility is available when in HyperTerminal setup of Excel 15B.

To open the “Tips” utility at the prompt enter “**tips**”
[excel15b>] **tips**↵

The “Tips” screen is presented in two parts with the first utility and associated tips on the first screen and the remaining utilities of the following screen. Press ↵ to move to the second screen.

Excel 15B Setup Utilities

The following describes the configuration utilities available in Excel 15B setup mode.

Configure Network

[excel15b>] **configure network**↵

The “configure network” is used to configure Excel 15B for the network in which it will operate. Processes are described in the main document.

The following list of tips are included with the description:

- Configure for PPPoE only if Excel 15B is connected directly to a DSL or cable modem (not through a router, hub or gateway) and the ISP is using PPPoE.

NOTES:

- Most DSL and some cable ISP use Point-to-Point over Ethernet (PPPoE) protocol.
- In general, Local Area Networks (LAN) do not use PPPoE.
- Prior to installation, determine network protocol used.
- If Excel 15B is connected to a router, hub, or gateway, any PPPoE requirements are managed externally. Configure Excel 15B for Ethernet.
- Only alpha-numeric characters, hyphen '-' and underline '_' characters are allowed when entering the Local Host Name, WINS Workgroup Name, and Domain Name (e.g. companyname.com).
- If the WINS IP Address or Workgroup Name is not entered during 'configure network' process, the NetBios support will be disabled.
Applicable only to networks using Microsoft Server and then only if Windows Workgroups are being used. In some cases, it may be desired to not include the W7760 in a workgroup, in which case the WINS IP Address and password would not be entered.
- Consult with your systems administrator for more information or refer to Excel 15B Installation Manual.
Any installation in a LAN/WAN environment requires working with the network administrator.
In small networks or systems with no network there may be no administrator. If the installer is not familiar with the processes required to configure network devices consult a networking specialist.

System Halt

[excel15b>] **system halt**↵

NOTE: This command shuts down Excel 15B (and halts Excel 15B application software.)

System Reboot

Reboots Excel 15B and causes Excel 15B to execute a warm boot (restart) on the application software:

[excel15b>] **system reboot**↵

NOTES:

- The boot process requires up to 2 minutes. Wait for the boot process to complete before attempting to proceed.
- With HyperTerminal connected, the user can watch the boot log to determine when the boot process has completed.

Network Settings

Displays current network configuration information:

[excel15b>] **network settings**↵

Network Ping

Pings a machine on the network. (e.g. 'network ping 192.168.1.110'):

[excel15b>] **network ping nnn.nnn.nnn.nnn**↵

NOTES:

- Tests to see if a given host is on the network.
- **nnn.nnn.nnn.nnn** represents the IP address of a network computer.
- Used to check operational response of other devices on the network and create empty configs.

Disable WINS

This command disables WINS support:

[excel15b>] **disable wins**↵

Reset Password

Deletes all users with System Administrator privileges and resets the 'SysAdmin' user's password to the default of '!SysAdmin':

[excel15b>] **reset password**↵

This command applies only to Web interface users configured as System Administrator.

- It deletes all user ID and passwords for users configured as System Administrator.
- It creates the default 'SysAdmin' user ID with default password of '!SysAdmin'
- It is then necessary to recreate new user IDs and passwords for all users requiring System Administrator privileges. Refer to the Web Interface Setup section.

PPPoE Start

Starts the PPPoE connection:

[excel15b>] **pppoe start.**

NOTE: Some ISP using PPPoE require periodic connection interruption. This command restores Excel 15B connection to the ISP if it has been stopped.

PPPoE Stop

Stops the PPPoE connection:

[excel15b>] **pppoe stop.**

NOTE: Some ISP using PPPoE require periodic connection interruption. This command disconnects the Excel 15B from the ISP preventing Internet access. LONWORKS® network management functions continue to operate.

Create Empty Configs

Clears all Alarms, Trends, Schedule, DLC, and System configurations:

[excel15b>] **create empty configs.**

IMPORTANT

This command deletes all user created Alarm, Trend, DLC, and Schedule contents and configuration files. It also deletes system configuration data set in "System Admin".

NOTES:

- Does not delete any data from default Trend and Alarms files.
- Does not alter the network setting configured in the "Setup" utility with HyperTerminal.

Installpkg <Package Name>

Installs new software package or service pack.

The following steps describe the procedure to install the package from the Serial Console:

1. Connect Excel15B to the serial port of the PC.
2. Launch HyperTerminal: "Start" >> "Programs" >> "Accessories" >> "Communications" >> "HyperTerminal" (See Fig. 5). The "Connection Description" dialog box opens. (Fig. 6).
3. At the serial console prompt, download the package to Excel 15B using the "ftp" command. Following are the steps that you need to execute:
 - a. [excel15b>] ftp <IP address>
 - b. [ftp>] bin
 - c. [ftp>] passive
 - d. [ftp>] get <packagename>
 - e. [ftp>] bye
 - f. [excel15b>] Installpkg <package name>

After the installation is completed, the Excel 15B services are automatically restarted.
4. Login to Excel 15B. The Excel 15B Home page will now display the latest release number.

NOTE: Ensure that the package to be installed is available in a good FTP server.

Exit

Causes the current serial console session to end.

[excel15b>] **exit.**

NOTE: This command does not disconnect HyperTerminal. To re-initiate Excel 15B setup routine press enter.

APPENDIX B: EXCEL 15B NETWORK SETUP WORKSHEET

The following information is required to complete the installation of a Excel 15B. The information is used to configure Excel 15B for the network.

URL

The URL is required to access Excel 15B from the Internet or LAN

Enter the URL for Excel 15B. Refer to Uniform Resource Locator for structure.

Fully Qualified Domain Name or IP address

https://

/xl15b.htm

Network

Check the network interface protocol and IP addressing used by the network or ISP to determine Excel 15B network setup data required.

Network Interface Protocol

☐ PPPoE (Point-to-Point Protocol over Ethernet)

☐ DHCP (Dynamic Host Configuration Protocol)

IP Addressing

☐ Static

☐ DHCP (Dynamic Host Configuration Protocol)

Setup Data

Based on the selections above, identify the setup data required. Circle or highlight the column selected and enter the specific information in Table 2.

Table 2. Excel 15B Setup Data.

PPPoE		Ethernet		Excel 15B Setup Requirement ^a	Excel 15B Setup Data
Static	DHCP	Static	DHCP		
X		X		IP Address	
		X		Netmask	
		X		Default Gateway	
X	X	X		Primary Domain Name Server	
X	X	X	X	Local Host Name	
X	X	X		Domain Name	
X	X			PPPoE user name	
X	X			PPPoE password	
		X	X	WINS IP Address	
		X	X	WINS Workgroup	

^a Refer to "Setup Data Descriptions" on page 3 for descriptions of Excel 15B setup prompts.

Excel 15B System Settings	Details
Internet Time Service (if used)	
SMTP Email Server (if used)	
SMTP Email Address (If required by server)	
SMTP User Name (If required by server)	
SMTP Password (If required by server)	

See Fig. 24 and refer to "Network Information (Fig. 24)" on page 20 for more details on configuring Excel 15B system settings.

APPENDIX C: INFORMATION FOR NETWORK ADMINISTRATION

The following information can be required by the network administrator and/or ISP prior to installation of Excel 15B Building Manager. Copy this page and give it to the network administrator or ISP contact.

Ports Used

Excel 15B Building Manager web server requires the following network ports to be open for Internet access:

- Port 22 - SSH (Secure SHell)
- Port 443 - SSL (Secure Socket Link)

NOTE: Network proxy servers can interfere with network access to Excel 15B.

WINS Support

Excel 15B supports Microsoft® Windows® server WINS functions.

If WINS is to be used, provide to the installer the WINS server IP address and Workgroup name for Excel 15B.

If multiple Excel 15B devices are to be included in the LAN/WAN using WINS, consider creating a dedicated workgroup for them to provide quick access from the network navigation tree.

Connection Protocol and IP Address

Excel 15B supports either PPPoE or Ethernet protocol and either Static or DHCP IP addressing.

Identify the protocol type as PPPoE or Ethernet.

Identify the IP addressing type as static or DHCP:

- For static addressing provide the static IP address.
- For DHCP the DHCP host will assign the IP address.

Uniform Resource Locator (URL)

Excel 15B URL is structured as:

scheme://domainname/path where:

- *Scheme* = https
- *Domainname* = IP address or Fully Qualified Domain Name (FQDN) assigned by network administrator or ISP
- *Path* = xl15b.htm

NOTE: When using a registered domain name, consider including the path in the DNS redirection to reduce typing and complexity for user entry.

Example: *https://FQDN/xl15b.htm*

Provides the highest security because the user must enter more data to access the site.

Example: *https://FQDN*

xl15b.htm is imbedded in the registered domain name redirection for ease of use and reducing what an operator must know to complete the Internet address.

Internet Time Source

Excel 15B can use an Internet time source to synchronize time. If this option is provided through the LAN/WAN, identify the server address. If not provided by the LAN/WAN, determine if an Internet time service can be used. The National Institute of Standards and Technology (NIST) and National Oceanic and Atmospheric Administration (NOAA) are recommended free sources.

Electronic Mail Options

Excel 15B uses electronic mail (email) to notify selected users of alarm conditions.

Excel 15B is an email server and thus can forward email to an SMTP email server on a network for delivery to a recipient.

Excel 15B can be configured to send email directly to the addressee's SMTP server (default) or to a SMTP email server within the LAN/WAN to which it is connected. If a LAN/WAN SMTP server is to be used, the SMTP server name is required. This may be necessary if the local network requires an email to be delivered only through a network email server. Consult the site I.T. System Administrator for the correct setting.

DMZ Host Setup

DMZ permits a LAN/WAN computer to be exposed to the Internet so that a user with a valid user ID and password can access the computer (host).

- In a LAN/WAN network, Internet access is controlled by the network administrator.
- In a cable/DSL modem and router network, the DMZ Host function can be part of the router.
 - In router DMZ setup procedure, enter the network IP address of Excel 15B per the router manufacturer's instructions.

Upgrades and Service Packs

Future upgrades and service packs for Excel 15B will be made available by download. Specific instructions for downloading and installing upgrades and service packs will be communicated as part of the upgrade or service pack announcement.

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