

Honeywell

ZL7762A1026



LONSTATION™

EXCEL 5000 OPEN™ SYSTEM

Congratulations on purchasing LONSTATION™, the one stop solution for configuring and managing sites and the following family of Honeywell controllers:

- **Excel 10 controllers**
- **Excel 15C Plant controllers**
- **Excel 15A Building Manager**
- **T7300/Q7300 controllers**
- **T7350 Communicating Subbases**

LONSTATION™ belongs to the Light Commercial Building System (LCBS) suite of products. The following section provides a brief listing of the advantages of using LCBS suite of products.

About LCBS

- Three-way savings—from initial purchase and setup to daily operations to low life-cycle costs—make the light commercial building solution the best value of any building management system today.
- Easy installation and simple configuration—no line-by-line programming required.
- Flexible mounting options and easy wiring.
- Quick startup using real-time monitoring.
- Remote dial-in to speed service calls and reduce costs.
- Advanced energy management features like Adaptive Intelligence Recovery®, Demand Limit Control (DLC), and Time-of-Day scheduling to maximize your customer's investment.
- Scalable and expandable to simplify future additions.
- LonMark® Open Systems ensures your customers of lasting investment value.

About the LonStation™ Quick Reference Guide

This quick reference guide provides a brief overview about LONSTATION™, new features for the current release, initial setup procedure and the different network interfaces that can be used for establishing connectivity.

NOTE: It is not intended for use as a comprehensive user's guide.

What's New in LONSTATION™ 05.01.00

LONSTATION™ supports T7350 and NX VFD.

Managing T7350

T7350 is a full-featured commercial programmable thermostat that communicates with other device nodes, monitoring devices, and engineering tools using a LonWorks® digital data network. You can perform the following tasks:

- Enable T7350 as a Time Master
- Configure and update T7350 schedules and holidays. In addition, you can also do the following:
 - Save and restore schedule and holiday configurations across multiple T7350s on the network.
 - Assign a maximum of six configured US holidays to the unconfigured holiday schedules.
- Assign T7350's schedules to a maximum of 120 controllers that includes both Excel 10 and Excel 15C controllers.
- Perform monitoring and diagnostic operations on T7350.

Monitoring NX VFD

VACON NX frequency converter (NXVFD) enables you to control speed and torque of three-phase alternating current (AC) motors. You can connect it to the LonWorks® network using a Fieldbus board. You can only test it for proper operation after configuring and commissioning it from LONSPEC™.

NOTE: For more information on configuring T7350 and NX VFD controllers, refer to LONSPEC™ online help and for information on managing them from LONSTATION™, refer to LONSTATION™ online help. To view the help for a particular task or feature, click the 'Help' button on the related LONSPEC™/LONSTATION™ window.

Excel LONSTATION™ Features

User Friendly Interface

1. The LONSTATION™ Interface consists of the following sections:
 - a. Left Navigation window pane: provides a hierarchical representation of different entities. It consists of the following two tabs:
 - Services tab: By default, displays the following LONSTATION™ feature/controller functionality as an icon in the Services window pane:
 - Sign Off
 - Site
 - Schedules
 - Special Displays
 - Logs
 - Alarm History
 - Alarm Browse
 - Auto Polling
 - Auto **Download**.
 - Explorer tab: On clicking, displays the Explorer window pane with the different features/controller functionality in a hierarchical tree structure.
 - Provides a quick view of the existing sites that includes the respective site specific controllers, point groups, graphics, and device groups.
 - Helps you to view and manage individual controller configuration, thus enabling overall site management.

NOTE: It is recommended that you use the Explorer window pane to view or update controller configurations like schedules and special displays, as executing the same tasks from the Services window pane consumes lot of time.

- b. Right window pane: area where the configuration and site management tasks are performed.
 - c. Bottom Single Line Alarm window: displays all the generated alarms. Provides the following additional information:
 - Controller point on which the alarm was generated
 - Site from where the alarm was generated
 - Date and time when the alarm was generated
 - Type and priority level of the generated alarm
2. Context sensitive menus are provided for each of the entity in the Explorer window pane. These menus are dynamic and display all the available online/offline options for a particular entity.

Managing Sites

1. Create a site by discovering devices on the network. Other optional methods are:
 - Importing site information from another LONSTATION™ site
 - Importing site information from LONSPEC™ project.
2. Update a site (Modify or delete site).
3. Create or edit a logical group of points for easy monitoring of related points, from a single or multiple controllers in a site.
4. View site specific alarms (both acknowledged and unacknowledged).
5. Use the 'Search' option on the Explorer window pane to quickly search for a site in a multi-site monitoring workstation.
6. View and set the time/get the time in/from the Time Masters in a site.
7. Use the 'Connection Details' option to get the connection details of each site in a multi-site monitoring workstation. The details provided includes information on the following:
 - Connected COM port
 - Type of connecting device
 - Baud rate for the connection
 - Date and time when the connection was established
 - Elapsed time in minutes.
8. Use the 'Site Status Validation Log' option to enable LONSTATION™ detect and inform you about a possible communication failure with a remote site.
9. Provide each workstation a unique workstation ID to identify all the local communication happening with that workstation.
10. Get a report on all the registered users and all/selected site details, especially if there are many sites monitored continuously.

Managing Device List

1. View the status of different controllers on the network. LONSTATION™ segregates controllers as Honeywell and Non-Honeywell devices.
2. Update a site with the latest controller's configuration from the network, using the 'Device Update' feature.
3. Configure the following for an Excel 15A:
 - Trends
 - Run times
 - Bypass logs
 - Alarms

Managing Special Displays

1. View Excel 15A and Excel 15C configured loops.
2. Command outputs and modify run time parameters.
3. Apply Special Displays to view and control certain Excel 15A and Excel 15C parameters.

Managing Schedules

1. View and modify Time of Day (TOD) schedule configurations on the following controllers:
 - Excel 15A
 - T7300/Q7300
 - T7350
2. Configure temporary schedule for an Excel 15A TOD schedule. The configured temporary schedule takes precedence over the existing Excel 15A holiday and TOD schedules.
3. Configure exception and holiday schedules to override TOD schedules, especially for meeting special scheduling requirements such as holidays, extended hours of operation, and reoccurring events.

NOTE:

- You can configure a maximum of:
 - Eight TOD schedules and 20 exceptions for Excel 15A
 - One TOD schedule for Q7300/T7300
 - One TOD schedule and 10 holiday schedules for T7350
- Temporary schedules are only available for Excel 15A.

Managing Logs

1. Configure the following in Excel 15A:
 - Run times
 - Trends
 - Alarms
 - Bypass and energy history logs
2. View the logs in both tabular and graphical format. You can use graphical format for comparing multiple points.
LONSTATION™ logs also support reset and preset of counters and run time values.

Managing Excel 15A Generated Alarms

1. Configure and update alarms except the system generated alarms.
2. Configure LONSTATION™ as a guaranteed receptor in the local and remote mode to automatically receive all Excel 15A generated alarms. You can also directly read the unacknowledged alarms from an Excel 15A's alarm buffer.
3. View, print, or delete acknowledged alarms maintained in the alarm history.
4. Know the status of the unacknowledged alarms through e-mails, an escalation mechanism that can be used by supervisors or administrators to track the status of alarms reported to LONSTATION™.

NOTE: Whether you are configuring the Excel 15A logs or alarms, you need to ensure that there is an associated LONSPEC™ project file and the selected Excel 15A has been commissioned from that particular LONSPEC™ project file.

Managing Auto Polling Programs

1. Manage unattended retrieval and archival of different logs from remote sites at specified time intervals. In addition to trend, energy, Run time and bypass logs, various device points and status can be polled from remote sites.
2. Get a quick picture of the behavior of a particular site by creating a site summary (collection of points from various devices).
3. Suspend selected auto polling programs for a specific time interval and then resume them when required.
4. Provide a systematic presentation of the polled data in either text or chart format to assist in the behavior analysis of the control system at a remote site. Also, create presentation templates that can be used across sites that are similar in nature.
5. View polled data from different remote sites simultaneously and compare the data to evaluate the behavior of similar buildings.
6. Manage polled data using the archive/export feature of Auto Polling.
7. Define the recurrence pattern for different activities in auto polling. The recurrence pattern constitutes the number of times the tasks must be performed and the frequency at which it should be performed.
8. Send e-mail notifications to selected LONSTATION™ users about the completion of auto polling program.
9. View the polling status in a dynamic log window where messages are printed in different colors to provide progress indication of auto polling.

Managing Graphics

1. Create a visual representation of the site being monitored by LONSTATION™. Sites can be organized into a hierarchy of graphic pages with each page designed to monitor a logical area of the site.
2. Customise alarm and warning messages that appear on the Graphics page. A maximum of 20 alarm and 20 warning messages each can be configured.

Managing Auto Download Programs

- Enable unmanned download of TOD schedules to devices in various sites based on preprogrammed schedules.

NOTE: Auto download program is very useful to effect a temporary schedule change to many devices in geographically separate sites.

Following are the five major components of an auto download program:

- Device Groups: logically group devices from various sites to perform common functions like automated TOD schedule download and auto polling on these controllers.
- Master TOD Schedules: create or update master TOD schedules and download them to devices in various sites.
- Master TOD Exceptions: create master TOD exceptions and associate them with existing TOD schedules of an Excel 15A or a T7350.
- Master Holidays: manage the list of holidays for a set of sites by creating master holiday configuration that includes all the selected holidays.
- Download Program: create or update an existing download program for co-ordinating master TOD schedule/exception download to a group of devices in a device group, as per the preprogrammed time schedule. Also, view a download program log file and generate a report.

NOTE: If TOD program schedule overlaps with any polling program occurrence, the polling program will be stopped automatically. This overlap will be detected only when the polling programs are scheduled for polling.

Managing Users

1. Administrators' can configure LONSTATION™ to capture selected tasks performed by other users, in a User Action log.
2. Users' can update profiles and change passwords when required, however, Users' are not permitted to change access level. Only the Administrator can change access levels.
3. LONSTATION™ can be configured to send notifications about a site (for example - about alarms), in the form of e-mails and SMS to five authorized users. A single user can also receive notifications about alarms of any priority.

NOTE: Ensure that all the e-mail addresses entered by each user is valid as LONSTATION™ cannot send e-mail notifications even if one of the e-mail addresses in the list is invalid.

Assigning COM Ports

LONSTATION™ supports the use of multiple communications ports. (Refer to **Accessing LONSTATION™ - Communication Port Assignment** on pg.9).

Installing LONSTATION™

System Requirements

- Microsoft® Windows® 2000 Professional Edition with Service Pack (SP) 3.0
OR
Microsoft® Windows® XP Home Edition/Microsoft® Windows® XP Professional Edition with SP1 or SP2
- Microsoft® Internet Explorer 6.0 with SP1
- 500 Megahertz microprocessor or higher for better performance
- Minimum 100 MB free disk space
- Minimum 128 MB RAM or higher for better performance
- Super VGA monitor with minimum 1024 x 768 resolution

Install LONSTATION™ 05.01.00 as per the instructions provided in the LONSTATION™ 05.01.00 Software Release Bulletin (SRB) packaged with the LONSTATION™ CD. The SRB is also included with the system literature on the ZL7762A LONSTATION™ CD.

NOTE: For technical support, contact your authorized distributor.

Accessing LONSTATION™

NOTE: This process may take several minutes as LONSTATION™ must initialize the communications ports and load operating programs.

After successfully installing LONSTATION™, follow these steps to access LONSTATION™:

1. Start LONSTATION™

- Double-click the LONSTATION™ icon on the Desktop
OR
 - Click 'Start' on the task bar and point to 'Programs' > 'LONSTATION™' and click 'LONSTATION™'.
- Observe LONSTATION™ startup.

2. Log On

On the LONSTATION™ main page, log on with the default 'User ID' (admin) and 'Password' (password). To prevent unauthorized access to LONSTATION™ and to the sites that it monitors, the password for the User ID (admin) must be changed.

NOTE: In case you forget the new password given for the user (admin), you have to uninstall and reinstall LONSTATION™ again.

3. Create New Users

- a. In the 'Services' window pane, click the 'User' icon.
- b. In the 'Profile for Admin' window, click the 'Administrator' tab.
- c. Enter the 'User ID', 'Password', and assign the 'Access Level'. (The 'Acknowledge Alarms' option though optional can only be set by an administrator).

4. Communication Port Assignment

LONSTATION™ supports the use of multiple communications ports.

- a. To configure each port for specific operations, on the LONSTATION™ menu bar, select 'Configure' > 'COM Ports Assignment'.
- b. In the 'Communication Port Assignment' window, assign each COM port to any of the following functions by selecting the checkbox under the respective function:
 - Reserved: when selected, blocks LONSTATION™ from using the COM port.
 - Monitor: when selected, implies that the COM port will be used by LONSTATION™ to connect to sites and read point data and logs. Select it when initializing a site connection. More than one port can be assigned to 'Monitor' function.
 - Receive Alarms: when selected, implies that the COM port will be used by LONSTATION™ to receive alarms from a site. The site must be configured to connect to this port to transmit alarm data. More than one port can be assigned to 'Receive Alarms'.

- TOD Schedule Download: when selected, implies that the COM port will be used by the autoTOD schedule download program to connect to sites and download schedules. Auto TOD schedule downloads can be executed simultaneously on multiple sites if you assign more than one port to this function.
- Auto polling: when selected, implies that the COM port will be used by the auto polling program to connect to sites and poll configured logs and points at scheduled intervals. Auto polling can be executed from multiple sites if you assign more than one port to this function.

NOTE: A port can be connected to only one site at a time and can be assigned to both 'Monitor' and 'Receive Alarms'. Multiple modem ports require multiple telephone lines.

5. Create Sites and Device Lists

NOTE: LONSTATION™ does not support offline controller configuration and site management. You need to create a site and discover devices on the network before proceeding with any other related task.

A device list is required for each site monitored by LONSTATION™. It is automatically created when you configure a site by importing a LonStation™ or LONSPEC™ project. However, the list must be updated before proceeding with other setup and operation functions (refer to **Other Methods of Creating a Site and Device List** on pg.12)

If the LONSPEC™/LONSTATION™ project files are not available, manually create a site by connecting LONSTATION™ to the network. It in turn queries the connected network to create a device list for the site.

- a. In the 'Services' window pane, click the 'Site' icon.
- b. In the 'LonStation-Site Management' window, click the 'Create' icon that is displayed on the 'LonStation-Site Management' menu bar.
- c. Enter a unique 'Site Name' and 'Site ID' number. The site ID number that you enter must match with the site ID number that is used to configure the site within the LONSPEC™ project.

- d. Select one of the following connections for LONSTATION™ to communicate with the site:
- Direct: The LonTalk® adapter is connected directly to the PC serial port or is installed in the PC.
 - Modem: The LonTalk® adapter is connected by modems to the LONSTATION™ computer and requires a telephone number to dial out the connection. The password function is currently not compatible with the LonTalk® adapter and must be left blank.

Select the Engineering Units to be displayed in LONSTATION™ as either 'English' or 'Metric'.

NOTE:

- A LonTalk® adapter is required on each site to connect the PC (with LONSTATION™) to the communications bus. (Refer to **Communicating with LonWorks® Network** on pg.14 to know about the type of network interfaces used.)
 - More than one LONSTATION™ can be used to monitor a given site and each may be independently configured for 'English' or 'Metric' display of engineering units.
- e. Set the refresh rate. It is recommended that it be less than 30 seconds as it might result in loss of information in larger point group displays.
- f. Click 'OK' to return to the 'LonStation-Site Management' window.
- g. Then, click the 'Connect to a Site' icon on the 'LonStation_Site Management' menu bar to view the connection details. Ensure that the default settings are not changed.
- h. Click 'OK'. LONSTATION™ connects to the site and queries the network to discover the LonMark® devices on the network and build a device list. The process takes time as LONSTATION™ uploads each device configuration file to its own file. The time required is based on the number and type of network devices and the data transfer rate of the connection (maximum baud rate - 38,400).

Other Methods of Creating a Site and Device List

Site and device list can be created from an existing LONSPEC™ or LONSTATION™ project.

Importing from LONSPEC™ Project

If a LONSPEC™ project file (database_name.mdb) is available, you can use it to generate the LONSTATION™ site and device list. This process is much faster than creating the device list online. Ensure that the LONSPEC™ project file is the most recent one and the devices in the LONSPEC™ project file have the node addresses (Neuron® ID) assigned. After the LONSTATION™ site and device list are generated, connect LONSTATION™ to the site to update the site with the latest changes made by LONSPEC™ or other tools.

Point Groups created in LONSPEC™ will not be copied to LONSTATION™. The LONSPEC™ project with the required sites must be loaded in a directory that is easily accessible to LONSTATION™. If the LONSPEC™ project is not available, it must be copied from LONSPEC™ or restored from a LONSPEC™ backup file.

1. On the LONSTATION™ menu bar, select 'Utilities' > 'Import LonSpec Projects' and in the 'Select Directory' box, select the directory where the LONSPEC™ project (project_name.mdb) files are located. All LONSPEC™ project files in the selected directory will be listed in the 'Available LonSpec projects' list box.
2. Select the project of your choice and move it to the 'Selected LonSpec Projects' list box by clicking the '>' button. To remove a LONSPEC™ project from the 'Selected LONSPEC™ Projects' window, click the '<' button.
3. Click 'OK' when you have selected the required project. When the single/batch creation of projects is completed, follow these steps to connect to the site and do an update operation:
4. In the 'Services' window pane, click the 'Site' icon.
5. In the 'LonStation-Site Management' window, click the 'Site Details' tab.
6. Select the site of your choice from the list of sites displayed in the tree structure.
7. Click 'Connect' on the 'LonStation-Site Management' menu bar. LONSTATION™ connects to the selected site.
8. Then, click the 'Device List' tab. LONSTATION™ displays the device list and updates the respective controller's configuration from the installed controller on the site.

NOTE: LONSTATION™ 05.01.00 allows importing of LONSPEC™ projects that have been upgraded to LONSPEC™ 4.3.0 version or project files that have been created using LONSPEC™ 4.3.0 version or higher.

Importing from another LONSTATION™ Site

If a LONSTATION™ file “Osmsitemgmt.mdb” is already available, you can import it for one or more sites. This method is typically used in the following scenarios:

- When LONSTATION™ is being upgraded from a previous version
- When the site details from one LONSTATION™ is being copied to another site within the same or another LONSTATION™. The site information, device list, and point groups from the original LONSTATION™ file are imported to the new LONSTATION™.

NOTE: Only files created with LONSTATION™ 2.1.0 or higher are compatible with the Import feature.

1. Copy the LONSTATION™ file “Osmsitemgmt.mdb” from the ‘...\\LonStation\\Database’ directory of another LONSTATION™ to a folder in the current LONSTATION™ application.
2. In the ‘Services’ window pane of the current LONSTATION™, click the ‘Site’ icon.
3. In the ‘LonStation - Site Management’ window, click the ‘Import’ icon displayed on the ‘LonStation-Site Management’ menu bar.
4. Locate the directory where you copied the file “Osmsitemgmt.mdb”, select the file, and click ‘Open’.
5. In the ‘Import Site’ window, select the site whose details you want to import. If required, enter a new site name and site ID number.
6. Click ‘Import’ to add the site details to LONSTATION™. Repeat the procedure to add additional sites.

Associating a LONSTATION™ Site with a LONSPEC™ Project

If LONSTATION™ is installed on the same computer as LONSPEC™, the associated LONSTATION™ device list is dynamically updated when changes are made to the LONSPEC™ project file.

1. In the ‘Services’ window pane, click the ‘Site’ icon.
2. In the ‘LonStation-Site Management’ window, click the ‘Create a New Site’ icon displayed on the ‘LonStation-Site Management’ menu bar.
3. On the ‘New’ window, enter the ‘Site Name’, ‘Site ID’, ‘Connection’ details, and ‘Engineering Units’.
4. Select the ‘Associate’ checkbox to enable the ‘Select LonSpec Site’ button for associating a LONSPEC™ project file.
5. Click the ‘Select LonSpec Site’ button and select the LONSPEC™ project file.
6. Click ‘OK’ to complete the association.

Follow these steps to complete device listing:

7. In the 'LonStation-Site Management' window, select the site of your choice from the tree structure.
8. Click the 'Connect' icon displayed on the 'LonStation-Site Management' menu bar. LONSTATION™ connects to the selected site.
9. Select the 'Device List' tab. LONSTATION™ displays the device list and updates the respective controller's configuration from the installed controller on the site.

Communicating with LonWorks® Network

LONSTATION™ enables you to connect to the network using:

- Direct connection
- Remote connection

Direct/Local Connection: Communicate with LonWorks® network using the following network interfaces:

- External Serial LonTalk® Adapter, SLTA-10, FT-10 (O.S. Number Q7760A2001) with standard RS 232 9 pin male to 9 pin female cable (refer to form, 95-7511-2).
- Q7770A1001 RapidLink™ Dialup Network Adapter with standard RS 232 9 pin male to 9 pin female cable - recommended for best results.
- Internal LonTalk® Adapter, PCLTA-10, PCLTA-20 and FT-10 (Use manufacturers instructions to install and commission it).
- Internal LonTalk® Adapter for laptops, PCMCIA PCC-10, FT-10 (O.S. Number Q7752B2009). (Refer to form, 95-7613)

NOTES:

- Ensure that the PC is within 49 ft. (15m) of the controller. At greater distances (maximum 3281 ft. [1000m]), add a line driver.
- RapidLink Flasher version 02.00.01, shipped with LonStation™ 05.01.00 provides Internationalization Support enabling you to download country specific PC modem settings to RapidLink.

Setting up the Site using Serial LonTalk (SLTA-10) or RapidLink

1. Use a RapidLink or SLTA-10. In case of SLTA-10, change the DIP switch settings as follows:
 - Switch 5 Up (1)
 - Switches 1, 2, 3, 4, 6, 7, and 8 Down (0)
2. Power RapidLink or SLTA-10 (Q7760A 2001) with the appropriate power supply:
 - 9V AC/DC to 24V AC/DC, 250mA, 50/60 Hz, NEC Class 2 wiring in case of RapidLink
 - 9v DC in case of SLTA-10.
3. Connect the Serial RS232 port of the PC to the RapidLink or SLTA-10 RS232 port using a serial 9 pin male-to-female cable.
4. Connect RapidLink or SLTA-10 to the LonWorks® network using the 205979 cable.

NOTES:

- For SLTA-10 Installation and Specification details, refer to 74-2954 and 95-7511 documents.
- For RapidLink Installation and Specification details, refer to 74-3981 and 95-7700 documents. Refer to the LonWorks® Bus Wiring Guidelines section in 74-2865.

Setting up the Site using PCMCIA/PCLTA

1. For PCMCIA, install the PCLTA card in the PC. (In case of PCLTA, Install the PCC -10 card in the PCMCIA card that is available on the PC).
2. Run the 'Echelon® Setup for Drivers' that is provided along with the PCLTA card.
3. On the Windows® taskbar, click 'Start' > 'Settings' > 'Control Panel'.
4. If the PCLTA card is installed properly, then the LONSTATION™ 'Plug and Play' icon is displayed in the 'Control Panel' window.
5. Click the 'Plug and Play' icon to know the Lon® controller name that is used and also to verify if the card is functioning properly.
6. Select the 'System' icon in the 'Control Panel' window. The 'System Properties' window is displayed.
7. Among the tabs displayed, select the 'Device Settings' tab.
8. Under the item 'LonWorks® Interface', check for the entry: 'PCLTA LonWorks® Network Interface'. (In case of PCLTA, check for the entry: 'PCC - 10 Lonworks® Network Interface'). If the card is not installed properly, a red cross is displayed for this entry.

NOTE: Refer to Echelon® PCLTA manual (In case of PCLTA, refer to PCC-10 manual) and re-install the PCLTA card, if required. Once card is installed properly, you can view the Lon® controllers' names that are displayed in the Lonspec™ 'Communication Settings' window, like the 'PCCLON1' and 'PCCLON2'.

Verifying the Local Connection

1. Start LONSTATION™
2. In the 'Services' window pane, select the 'Site' icon.
3. In the 'LonStation-Site Management' window, create a new site and connect the site to the network.

NOTE: When LONSTATION™ is connected to the site, the tool bar will display the following message: "(user) Connected To (site name)".

If LONSTATION™ cannot locate SLTA-10 or RapidLink or if it fails to connect to the site, it displays the following error message: "Open COM Failed".

4. Check all connections.
5. Remove power from the network interface and wait for 30 seconds.
6. Apply power back to the network interface and click 'OK' to clear the message. The title bar displays the following message: "(user) Not Connected".
7. Retry connecting to the site. LONSTATION™ will search for the network interface again.
8. If it fails again, the network interface you are using might be faulty. If another network interface of the same type is available and in good condition, try using it to connect to the network. This will help you determine if you have a faulty network interface.

Establishing Remote Communications

Communicate with the LonWorks® network using the following network interfaces:

- External RapidLink with telephone line connection. Since RapidLink has a built-in modem, there is no need of an external modem on the remote site.
- Special NULL modem cable(s) (O.S. Number: 32002517).
- External Modem(s): 3Com U.S. Robotics 5686D, V.90 or V.92 56K standard compatible.

LonStation™ 05.01.00 supports the use of a maximum of six modems simultaneously. When using more than two modems, a four-port replicator with four additional external modems can be used (Multi-Tech ISI4604-PCI - Four-Port Replicator PCI Board, www.multitech.com).

For best results, assign one or more modems for alarms, one or more for unattended downloads and polling, and one or more for monitoring.

NOTE: Use Honeywell XM500-US TCP/IP modem for LAN/WAN connection instead of a telephone line connection. (Refer to the LonStation™ online help displayed for "WAN Modem Setup" for complete setup and checkout instructions.)

Setting up Remote Communications

1. Use US Robotics 56K modems complying with V.90/V.92 protocol as an interface for both the PC and SLTA-10.
 - In case of SLTA-10, the following are the modem switch settings:
 - Switches 3, 4, and 8 down
 - Switches 1, 2, 5, 6 and 7 up.
 - When Using an SLTA-10 (Q7760A 2001), change the DIP switch settings to the following:
 - Switches 2, 6, & 8 Up (1)
 - Switches 1, 3, 4, 5, and 7 Down (0).
2. Power the RapidLink or SLTA-10 (Q7760A 2001) with the appropriate power supply:
 - 9V AC/DC to 24V AC/DC, 250mA, 50/60 Hz, NEC Class 2 wiring in case of RapidLink
 - 9v DC in case of SLTA-10.
3. Connect SLTA-10 to the modem using special Null modem cable (Honeywell part number 32002517). For the SLTA-10, connect the Serial RS-232 port of the PC to the modem with a 9 to 25 pin Null modem cable

RapidLink has a built-in modem, so connect the phone line directly to RapidLink (serial baud rate of 115, 200 baud).

Verifying the Modem Connection

1. Start LONSTATION™.
2. On the LONSTATION™ main page, enter your 'User ID' and 'Password'.
3. In the 'Services' window pane, click the 'Site' icon.
4. On the 'LonStation-Site Management' window, create a new site (select the connection type as 'Remote') and click 'OK'.
5. Connect to the site (under site management) and choose the appropriate COM port (default selection is COM1).
6. For the SLTA-10, set the baud rate to 38400 (default). LONSTATION™ dials out and connects to the site. If the connection is not established, check the modem connection and connect to the site again.

Establishing Robust Communication between Remote Modem and SLTA-10

Use the following procedure to establish a robust communication link between the remote modem and SLTA-10:

Preparatory Requirements

- LONSPEC™ 05.01.00 for configuring the SLTA-10.
- A DB-9 to DB-9 RS 232 cable that connects a laptop or PC to the intended SLTA-10 on the site.

Procedure for programming SLTA-10

1. Set DIP-switch 5 to the up position and all others to the down position on the SLTA-10.
2. Connect SLTA-10 to the PC's serial port. Open the project that was created in LONSPEC™ for the site (must have an SLTA-10 in the project).
3. In LonSpec™, go to 'File' > 'Communication Settings' and select the COM port to which the SLTA-10 is connected (baud rate must be 38400 and connection type must be 'Direct').
4. Right click the site or go to 'Network' > 'Connect' to establish connection with the network.
5. Right click SLTA-10 and select the 'Commission SLTA' option.
6. Add the SLTA-10 from the 'Available SLTA' list to the 'Selected Controllers' list and click the 'Start' button. A message appears prompting you to confirm if SLTA-10 is connected directly to the PC.
7. Click the 'Yes' button and wait for the status (success or failure) to be displayed in the 'Status' window.
8. If a failure is indicated, check cables and DIP-switch settings. Make the necessary corrections and re-execute steps 1 through 5.
 - Set DIP-switches 2, 6, and 8 to the up and all others to the down position on SLTA-10. This will set the SLTA-10 for remote host (2 Up) at 38.4K baud (6 and 8 Up).
9. If SLTA-10 is already installed at the remote site, it may be necessary under some circumstances to perform steps 4 and 5 remotely. This method is not as robust and therefore not recommended. Make a remote connection through a modem and when prompted, click the 'Yes' button to confirm the SLTA-10 is directly connected to the PC.

NOTE: After programming the SLTA-10, do not change the DIP-switch 4 and cycle the power. Otherwise, steps 1 through 6 above must be executed again.

10. At the remote site, do the following:
 - a. Connect the modem to the SLTA-10 with the special modem cable (Honeywell part number 32002517).
 - b. Set DIP-switches 3, 4 and 8 to the down and all others to the up position on the US Robotics V.90, 56K baud External modem.
 - c. Verify that the DIP-switch settings on the SLTA-10 are set according to step 8 above.
 - d. Cycle power, first to the modem and then to the SLTA-10 (This sequence loads a string from the SLTA-10 into the modem for proper communication).

NOTE: For more information on LONSTATION™, refer to LONSTATION™ Software Release Bulletin 74-3960_2, LONSTATION™ online help, or LONSTATION™ user guide that is provided along with the LONSTATION™ CD.

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