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WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against such interference when operating in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with this guide, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause interference in which case the user, at his or her own expense, will be required to take whatever measures may be required to correct the interference.

Warning: Changes or modifications to this device not explicitly approved by Lantronix will void the user's authority to operate this device.

Cet appareil doit se soumettre avec la section 15 des statuts et règlements de FCC. Le fonctionnement est subjecté aux conditions suivantes:

- (1) Cet appareil ne doit pas causer une interférence malfaisante.
- (2) Cet appareil doit accepter n'importe quelle interférence reçue qui peut causer une opération indésirable.

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Introduction

This manual lists all commands that can be used in conjunction with the LB. These commands can be used to configure the bridge to specific needs, such as limiting access to the bridge or setting a particular data transfer rate. All parameters to be used with a command are listed, as well as the correct syntax for the command. For instructions on the various methods used to execute commands, see Chapter 3 of the LB Installation Guide, *Set-Up and Operations*.

This manual contains the following topics:

- Command Syntax rules and conventions
- System Commands: SET/DEFINE SYSTEM, SET PRIVILEGED, SAVE SYSTEM
- Protocol commands: SET/DEFINE PROTOCOL, SHOW/LIST PROTOCOL
- Port commands: SET/DEFINE PORT, SHOW/LIST/MONITOR PORT
- Filter Commands: SET/DEFINE FILTER, SHOW/LIST FILTER, CLEAR/PURGE FILTER, SAVE FILTER
- Bridge Commands: SET/DEFINE BRIDGE, SHOW/MONITOR/LIST BRIDGE, SAVE BRIDGE
- Miscellaneous Commands: CLS, FINGER, HELP, INITIALIZE, LOCK, LOGOUT, NETSTAT, PING, SHOW USERS, UNLOCK, ZERO COUNTERS

Command Syntax Rules and Conventions

In order to have the desired effect, commands used with the LB must consist of a specific set of components (**keywords** and **parameters**), in the appropriate syntax. The command components are presented below; to determine the syntax of a particular command, consult the section covering that command.

Keywords

- Required and optional keywords are displayed in all capital letters in this manual.
- If a required keyword is misspelled or missing when a command is entered, an error message will be displayed.
- Keywords may be abbreviated when entering a command, however, an abbreviation must be unique to the desired command. For example, if MONITOR was abbreviated as MO, that MO could denote MODEM as well as MONITOR. Be sure that any abbreviations are unambiguous.

Required Keywords

- Required keywords are keywords that must be used with a particular command.
- Required keywords are displayed within braces ({ }) in this manual.
- In this manual, when there is a choice of two or more required keywords to be used with a command, all available options will be displayed within braces. For example, if either ENABLED or DISABLED must be used with a command, the keywords will be displayed as follows:

$$\left\{ \begin{array}{l} \text{ENABLED} \\ \text{DISABLED} \end{array} \right\}$$

Optional Keywords

- Optional keywords are keywords that may be omitted or included in a command.
- Optional keywords are displayed within brackets ([]) in this manual.
- In this manual, when there is a choice of two or more optional keywords that may be used with a command, all available options will be displayed within brackets. For example, if either CHARACTERISTICS or COUNTERS may be used with a command, the keywords will be displayed as follows:

[CHARACTERISTICS
COUNTERS]

User Defined Parameters

- These parameters are displayed in *italics* in this manual. The parameter that appears in this manual represents the type of information to enter; for example, if *filename* is displayed, *filename* represents the actual filename to enter with the command.

Privileges

- In this manual, if a command requires privileged status in order to be used, a **Privilege** section will appear in the explanation of the command. If the **Privilege** section is not included in the explanation of a command, the command may be used with any status level.

SET/DEFINE and SHOW/MONITOR/LIST Commands

SET/DEFINE and SHOW/MONITOR/LIST commands appear frequently in this manual. It is important to note the difference between these commands. SET makes an immediate change, but is not permanent. Conversely, DEFINE makes a permanent change, but it doesn't take effect until the LB is rebooted.

Note: Two of the DEFINE commands take effect before the LB is rebooted. DEFINE PORT and DEFINE PRINTER commands will take effect as soon as the port is logged out or finishes a print job. For this reason, many examples in this manual contain DEFINE PORT commands followed by a LOGOUT PORT command to make the DEFINE PORT take effect.

Changes made with the SET command can be made permanent using the SAVE command.

The SHOW and LIST commands function in a similar manner to the SET/DEFINE commands. SHOW displays the current settings (including those SET but not saved as permanent changes). MONITOR displays the same current information as SHOW but is updated every three seconds, unless the SET/DEFINE SYSTEM REFRESH value is changed (see page 8). The LIST command displays permanent settings (excluding those SET but not saved as permanent changes.)

System Commands

System commands are used to specify, configure, display, and save the different features and settings in the LB.

SET/DEFINE SYSTEM

These commands enable a user to specify the following LB parameters:

- **INCOMING:** specifies different login restrictions
- **NAME:** assigns a name to the LB
- **LOGIN PASSWORD:** establishes or changes the password required to login to the LB.
- **PRIVILEGE PASSWORD** enters or changes the password required for particular commands
- **PROMPT** permits you to tailor the appearance of the prompt string
- **SOFTWARE** specifies the name of a file to be downloaded to the LB

SHOW/MONITOR/LIST SYSTEM

SHOW SYSTEM, **MONITOR SYSTEM**, and **LIST SYSTEM** commands display LB configuration, current status, and settings.

SET PRIVILEGED

This command enables privileged status, permitting a user to enter an additional set of commands.

SAVE SYSTEM

SAVE SYSTEM saves current LB settings in permanent memory.

Set / Define System

Command Syntax

{ SET DEFINE }	}	SYSTEM	{	INCOMING	{	TELNET	}	
						NONE		
						PASSWORD		
						NOPASSWORD	}	
						}		
						LOGIN [PASSWORD] [<i>CurrentPswd</i>]		
						NAME <i>systemname</i>		
						PRIVILEGED [PASSWORD] [<i>CurrPrivPswd</i>]		
						PROMPT <i>promptstring</i>		
						REFRESH <i>seconds</i>		
						SOFTWARE <i>filename</i>		
						}		

Keywords and Parameters

SET/DEFINE

For an explanation of the SET and DEFINE commands, see page 4.

INCOMING

This parameter permits you to restrict the ability of the LB to recognize incoming telnet network connections. Use the NONE parameter to disable the LB from recognizing incoming telnet network communications. To restore the recognition of telnet communications, use the TELNET parameter.

The PASSWORD and NOPASSWORD parameters establish and remove the requirement for a password when logging into the LB. When you receive the LB, the NOPASSWORD parameter is in effect, *i.e.*, you will not be prompted for a password when you first log into the LB.

Note: This parameter has no effect on the LB's console serial port.

LOGIN

This parameter establishes or changes the password required to login to the LB.

NAME *systemname*

NAME permits you to specify a different name for the LB. This name is used to connect the LB to the different networks.

systemname is any combination of up to sixteen characters. If the name you specify contains lower case letters, it **must** be enclosed in quotation marks and may not include any spaces.

When you receive the LB, the system name will be in the form **LB_XXXXXX**. The six x's represent the last six hex digits of the ethernet address.

PROMPT *promptstring*

Use this parameter to alter the LB's command prompt. The default prompt is *Local>*. You may enter any combination of up to sixteen characters. You may include any printable ASCII characters. However, if you include lower case letters, the *promptstring* must be enclosed in quotation marks.

You may also include any of the following special character combinations in the *promptstring*.

**Substitute
these
characters**

to:

%p	include the name of the port you are currently logged into.
%n	include the number of the port you are currently logged into.
%s	include the current LB name.
%D	include the LB description characters LB .
%C	include the letters "Lantronix" (without the quotation marks).
%P	include a <i>greater than</i> (>) symbol whenever a SET PRIVILEGED command has been entered.
%%	include a percent (%) symbol.

REFRESH *seconds*

This parameter permits you to specify the update interval on the information displayed by a MONITOR command. *seconds* is a value from 2 to 60. The default value is 3.

SOFTWARE filename

SOFTWARE permits you to specify the name and path to the file that will be downloaded into the LB.

filename is any combination of up to forty-six characters. The file name may contain up to fifteen characters and the path may be up to thirty-one characters. If the file name and path specified contain lower case letters, they must be enclosed in quotation marks.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Command Examples

```
Local> SET SYSTEM INCOMING TELNET
Local> SET SYSTEM NAME "Lab_Bridge"
Local> SET SYSTEM SOFTWARE "/tftpboot/lbm.sys"

Local> SET SYSTEM PASSWORD
Password> hobbes (the password will not be displayed )
Verification> hobbes (the password will not be displayed )
Local>

Local> SET SYSTEM PROMPT "Loc_%D%P"
Loc_LB>>
```

Show / Monitor / List System

Command Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{MONITOR} \end{array} \right\} \text{SYSTEM} \left\{ \begin{array}{l} \text{BOOTPARAMS} \\ \text{CHARACTERISTICS} \\ \text{COUNTERS} \\ \text{STATUS} \end{array} \right\}$$
$$\text{LIST SYSTEM} \left\{ \begin{array}{l} \text{BOOTPARAMS} \\ \text{CHARACTERISTICS} \end{array} \right\}$$

Keywords and Parameters

SHOW/MONITOR/LIST

For an explanation of the SHOW, MONITOR, and LIST commands, see page 4.

Note: When **BOOTPARAMS**, **CHARACTERISTICS**, **COUNTERS**, OR **STATUS** (discussed below) are included with SHOW or MONITOR, the LB settings currently in effect due to SET commands will be displayed. If LIST is specified, only those settings entered with DEFINE commands will be displayed.

BOOTPARAMS

This parameter will display reloading information including the file name and path as specified by the SET/DEFINE SYSTEM SOFTWARE command and the load host name specified by the SET/DEFINE PROTOCOL command.

CHARACTERISTICS

This parameter will display network settings, system flags, and any login restrictions.

COUNTERS

This parameter will display a current count of traffic being directed to the LB. The counters are reset every time the LB is turned on, rebooted, or re-initialized, or when a ZERO COUNTERS SYSTEM command is entered.

STATUS

This parameter displays available memory and login events.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Set Privileged

Command Syntax

$$\text{SET } \left\{ \begin{array}{l} \text{PRIVILEGED [OVERRIDE]} \\ \text{NOPRIVILEGE} \end{array} \right\}$$

Keywords and Parameters

PRIVILEGED

When you enter this command, you will be prompted to enter the current privileged password as specified by a SET or DEFINE SYSTEM PRIVILEGED command.

Once the privileged password is accepted, you will have *supervisor* status on the LB. This status will remain in effect until you log out of the LB, someone enters an SET PRIVILEGED OVERRIDE command, or a SET NOPRIVILEGED command is entered.

NOPRIVILEGE

This parameter will cause *supervisor* status to be immediately disabled.

OVERRIDE

This parameter permits you to obtain *supervisor* status when someone else is currently logged into the same LB port with *supervisor* status. When you enter this command, you will be given *supervisor* status and the other person's *supervisor* status will be immediately disabled.

Save System

Command Syntax

SAVE SYSTEM

When you enter this command, all settings, configurations, and conditions, currently in effect in the LB will be stored in the LB's permanent memory.

Note: Conditions currently set with SET/DEFINE PORT and SET/DEFINE BRIDGE commands will **not** be affected by the SAVE SYSTEM command.

The newly-saved configurations will take effect the next time that the LB is turned on, rebooted, or initialized.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Protocol Commands

Protocol commands are used to specify, configure and display the different protocol features and settings in the LB.

SET/DEFINE PROTOCOL

SET PROTOCOL and DEFINE PROTOCOL commands specify several LB parameters:

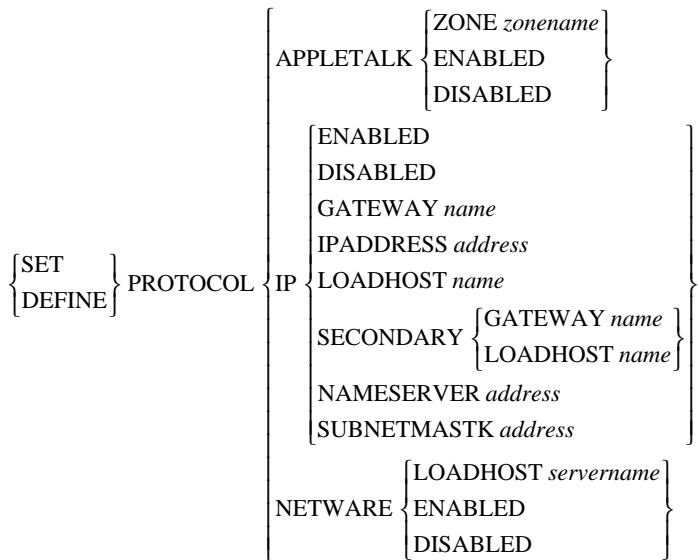
- **APPLETALK:** identifies an AppleTalk zone for the LB
- **GATEWAY:** when using IP protocol, specifies a gateway hostname
- **IPADDRESS:** specifies an IP address for the LB
- **LOADHOST:** when using IP protocol, specifies a host from which to download software to the LB
- **NAMESERVER:** when using IP protocol, assigns a name to the nameserver
- **SUBNET MASK:** when using IP protocol, assigns a name to the subnet mask
- **NETWARE:** specifies the name of the Netware file server

SHOW/LIST PROTOCOL

SHOW PROTOCOL and LIST PROTOCOL display and provide status information relating to the different protocols.

Set / Define Protocol

Command Syntax



Keywords and Parameters

SET / DEFINE

For an explanation of the SET and DEFINE commands, see page 4.

Note: When the LB is booted up, the APPLETTALK, IP, and NETWARE protocols (discussed below) are defined as ENABLED by default. To improve performance, disable any protocols that are not being used. Note that a protocol cannot be "set" to enabled or disabled; it must be defined using the DEFINE command.

APPLETTALK ZONE *zonename*

Use this parameter to enter the name of the AppleTalk zone you want the LB to join.

zonename is any combination of up to sixteen characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks.

If the name you specify cannot be confirmed by an AppleTalk router on the network, an error will occur.

IP GATEWAY *name*

This parameter specifies the name of a gateway host the LB will use when it needs to send IP data packets to a different local area network.

name can consist of any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks. **Note:** If you specify a text *name*, you must first enter a SET/DEFINE PROTOCOL IP NAMESERVER command.

You may, instead use an IP address in the following form:

nnn.nnn.nnn.nnn

where *nnn* can be a decimal number from 0 to 255. The periods must be included.

IPADDRESS *address*

This parameter is used to specify the IP address of the LB.

address is an IP address in the following form:

nnn.nnn.nnn.nnn

where *nnn* can be a decimal number from 0 to 255. The periods must be included.

IP LOADHOST *name*

Use this parameter to specify the name of a TFTP host that can be used to download software, if necessary, into the LB.

name is any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks. If you specify a text *name*, you must first enter a SET/DEFINE PROTOCOL IP NAMESERVER command.

You may instead use an IP address in the following form:

nnn.nnn.nnn.nnn

where *nnn* can be a decimal number from 0 to 255. The periods must be included.

IP NAMESERVER *address*

This parameter is used to specify the address of the DNS nameserver host to the LB.

address is an IP address in the following form:

nnn.nnn.nnn.nnn

where *nnn* can be a decimal number from 0 to 255. The periods must be included.

IP SUBNET MASK *address*

This parameter is used to specify an IP subnet mask to the LB. When an IP address is determined by a SET/DEFINE PROTOCOL IP IPADDRESS command, the LB will assign a subnet mask. Use this parameter if you wish to substitute the subnet mask assigned by the LB.

address is an IP address in the following form

nnn.nnn.nnn.nnn

where *nnn* can be a decimal number from 0 to 255. The periods **must** be included.

NETWARE LOADHOST *servername*

Use this parameter to specify the name of a NetWare file server that can be used to download software to the LB.

servername is any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Command Examples

```
Local> SET PROTOCOL IP LOADH "elmer.cid.ins.com"  
Local> SET PROTOCOL APPLETTALK ZONE "Lab_Zone"  
Local> SET PROTO NETW LOADH "Acct_Fserv"
```

Show / List Protocol

Command Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{LIST} \end{array} \right\} \text{PROTOCOL} \left. \begin{array}{l} \text{APPLETALK} \\ \text{IP} \\ \text{NETWARE} \end{array} \right\}$$

Keywords and Parameters

SHOW / LIST

SHOW displays the current settings and configuration as specified by SET PROTOCOL commands.

LIST displays settings and configuration that has been stored in the LB's permanent memory by entering DEFINE PROTOCOL commands.

The information displayed by LIST may not be the same as that displayed by the SHOW command. LIST displays what will be in effect when the LB is turned on, rebooted, or initialized.

APPLETALK / IP / NETWARE

Select one of these protocols to display the current LB configuration.

Port Commands

Port commands are used to specify, configure and display the different port settings for the console serial port on the LB.

SET/DEFINE PORT

This command specifies the following serial port parameters:

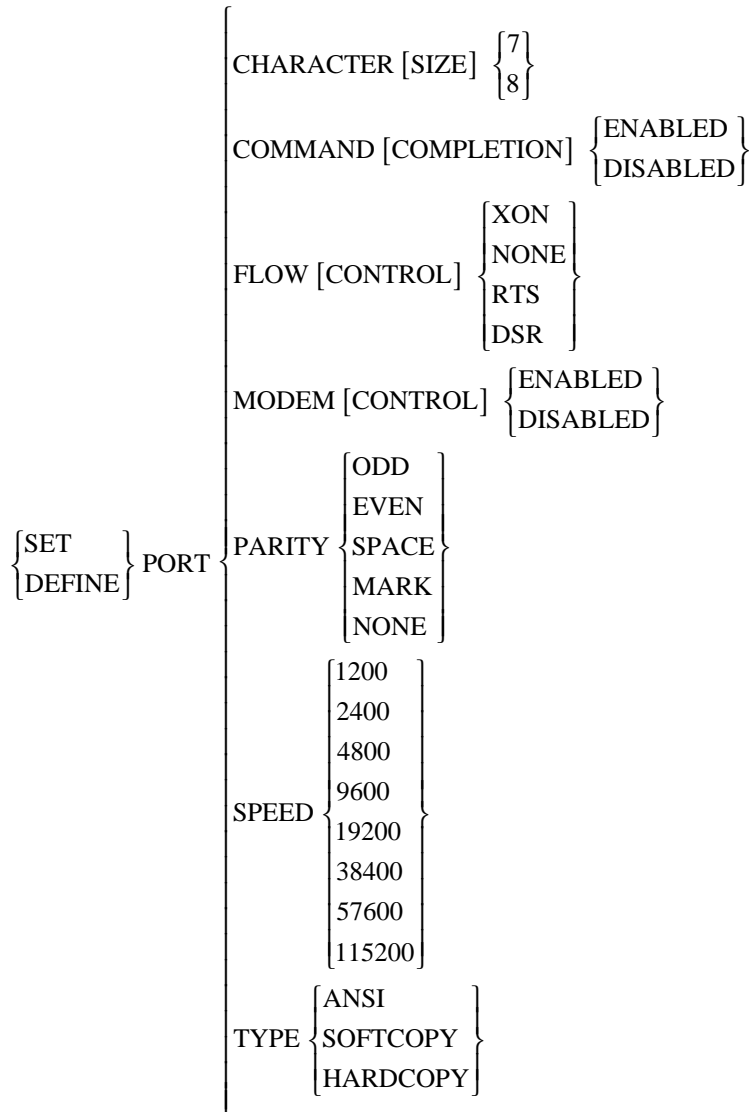
- CHARACTER, FLOW, MODEM, LB PARITY, SPEED, and TYPE: configure the settings that ensure the functions properly when connected to a modem, printer, or terminal
- COMMAND COMPLETION: instructs the LB to complete a keyword when keywords are being entered and the space bar is pressed

SHOW/LIST PORT

SHOW PORT and LIST PORT display the current and permanent settings of the LB's console port.

Set / Define Port

Command Syntax



Keywords and Parameters

SET / DEFINE

When you select SET, the conditions specified by the command will be immediately acted upon. SET commands do not change LB conditions previously established by a DEFINE command, *i.e.*, every time you log out of the port, or the LB is turned on, rebooted, or initialized, all conditions previously SET will be lost.

When you enter DEFINE PORT, the condition specified by the command will be placed into the LB's permanent memory and will take effect when you log out from the port you are currently logged into. This is different than all of the other DEFINE commands. You do not have to reboot or initialize the LB to place these settings into the permanent memory.

CHARACTER SIZE

Select either seven or eight data bits. The default setting is eight.

COMMAND COMPLETION

This feature, when enabled, will permit you to type the first few letters of a keyword and then press the space bar to have the LB finish typing the command.

FLOW CONTROL

This parameter permits you to choose either the XON/XOFF software handshaking protocol, one of the hardware handshaking protocols RTS/CTS or DSR/DTR, or no (NONE) protocol. The default setting is XON.

MODEM CONTROL

When this parameter is enabled, the LB will operate as if there is a modem connected to the serial console port. Specifically, the DTR signal will drop when the modem connected to the serial console port logs out, The LB will assume a log out when the DSR signal, provided to the serial console port, drops.

When disabled, the LB will ignore the status both DTR and DSR signals.

PARITY

Select either ODD, EVEN, SPACE, MARK, or NONE. The default setting is NONE.

There will be one stop bit except in one instance; CHARACTER SIZE is seven and PARITY is NONE. In this case there will be two stop bits.

SPEED

Select one of the following baud rates: 300, 600, 1200, 2400, 4800, 7200, 9600, 19.2K, 38.4K, 56.0K, 115.2K. The default baud rate is 9600.

TYPE

Use this parameter to specify the desired output from the serial console port.

If you select ANSI, the output will contain cursor movement key characters and editing command characters. ANSI is the default condition.

The SOFTCOPY parameter limits the transmission of special characters to the backspace/delete key only. This parameter is used on devices that do not support the ANSI characters.

When you select HARDCOPY, all special characters will be removed except carriage returns and line feeds. This parameter can be used when the serial console port is connected to a printer.

Command Examples

```
Local> SET PORT SPEED 38400
Local> SET PORT FLOW XON
Local> SET PORT COMMAND ENABLED
```

Show / Monitor / List Port

Command Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{MONITOR} \end{array} \right\} \text{PORT} \left[\begin{array}{l} \textit{port} \\ \text{ALL} \end{array} \right] \left[\begin{array}{l} \text{CHARACTERISTICS} \\ \text{COUNTERS} \\ \text{SUMMARY} \end{array} \right]$$

LIST PORT

Keywords and Parameters

SHOW / MONITOR / LIST

For a full explanation of the SHOW, MONITOR, and LIST commands, see page 4.

The information displayed will depend on the *port* or **ALL** parameters. If neither parameter is present, information will be displayed for the port through which the LB received the SHOW/MONITOR PORT command.

port / ALL

port specifies either the serial console port or one of the devices currently logged into the LB. Port numbers are assigned sequentially as each device logs into the LB. To determine a particular port number, enter the SHOW USERS command or the SHOW PORT ALL command.

The content of the information displayed will be in accordance with the additional parameter selected.

If a *port* number is specified without another parameter, the CHARACTERISTICS for the specified port will be displayed.

ALL will display the serial console port and any other current network connections. The information displayed will be in accordance with the additional parameter selected.

If ALL is included without another parameter, the SUMMARY information is displayed.

CHARACTERISTICS / COUNTERS / SUMMARY

These parameters determine the type of information displayed.

If one of these parameters is included without a *port* number or the **ALL** parameter, the information displayed will be for the current port, *i.e.*, the port through which the LB received the SHOW PORT command.

If none of these parameters is included, the information displayed will be in accordance with the instructions provided in the immediately preceding **SHOW/MONITOR/LIST** and *port/ALL* sections.

Example of Command

```
Local> SHOW PORT 3 COUNTER
```

SNMP Commands

Simple Network Management Protocol (SNMP) is a network protocol used to interrogate the status of, and specify parameters to different nodes on the local area network.

Because many devices on networks can generate SNMP traffic, the ability to limit access to the LB has become necessary.

SNMP commands are used to specify and configure limits to the usage of SNMP.

- **SET/DEFINE SNMP:** specifies which users can configure and obtain information from the LB using SNMP
- **SHOW/LIST SNMP:** displays the current status and settings of SNMP limits
- **SAVE SNMP:** saves the current SNMP settings to the LB's permanent memory

Set / Define SNMP

Command Syntax

$$\left. \begin{array}{l} \text{SET} \\ \text{DEFINE} \end{array} \right\} \text{SNMP COMMUNITY } name \text{ ACCESS } \left. \begin{array}{l} \text{NONE} \\ \text{READONLY} \\ \text{READWRITE} \end{array} \right\}$$

Keywords and Parameters

SET / DEFINE

When you select SET, the conditions specified by the command will be entered into the LB and will be immediately acted upon. SET commands do not change LB conditions previously established by a DEFINE command, *i.e.*, every time the LB is turned on, rebooted, or initialized, all conditions previously SET will be lost.

When you enter DEFINE, the condition specified by the command will only take effect the next time the LB is rebooted or initialized. All DEFINE command conditions will be placed into the LB's permanent memory so that each time the LB is turned on, rebooted, or initialized, the defined conditions will take effect.

COMMUNITY *name*

A COMMUNITY *name* is an identification provided in SNMP packets. The LB will respond to SNMP packets that contain the community name specified by this parameter.

name may be any string of characters.

Note: A SET/DEFINE SNMP COMMUNITY *name* command will affect only the SNMP packet traffic containing the specified community name. By default, SNMP traffic containing the community name *public* will be permitted READONLY access. See the following ACCESS parameter for further information about the type of access permitted.

ACCESS

COMMUNITY name will be permitted.

By default, the LB will permit READONLY access to all SNMP traffic containing the COMMUNITY name *public*. When you specify a different COMMUNITY name, the type of access will be determined by the value specified with this parameter.

NONE will deny access to SNMP packets containing the specified COMMUNITY name.

READONLY will permit SNMP packets containing the specified COMMUNITY name to only query the LB for information.

READWRITE permits full access, *i.e.*, SNMP packets containing the specified COMMUNITY name may both query for information and specify commands that can alter the configuration of the LB.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Command Examples

```
Local> SET SNMP COMMUNITY lab ACCESS READWRITE
```

Show / List SNMP

Command Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{LIST} \end{array} \right\} \text{SNMP}$$

Keywords and Parameters

SHOW

SHOW displays the current settings and configuration as specified by SET SNMP commands.

LIST

LIST displays settings and configuration that have been stored in the LB's permanent memory by entering DEFINE SNMP commands.

Save SNMP

Command Syntax

SAVE SNMP

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

When you enter this command, all settings and conditions currently in effect and specified by SET SNMP commands will be stored in the LB's permanent memory. A SET command currently in effect will become defined and will overwrite any configurations made with the DEFINE command.

The newly-saved conditions will be in effect the next time the LB is turned on, rebooted, or initialized.

Filter Commands

Filters are used to permit or deny passage of data packets through the LB. The SET FILTER and DEFINE FILTER commands are used to specify filters.

Also included in this section are the associated commands SHOW/LIST FILTERS and CLEAR/PURGE FILTERS.

Filter commands define filters for different types of data packets, different protocols, and different patterns of data within packets. The filter is then configured to either permit or deny passage through the LB.

When a filter is identified with a filter command, it is placed on a list stored in the LB.

The LB then compares each data packet against each filter starting with the first filter on the list. It continues comparing until the data packet matches a filter on the list. The data packet will then be either permitted or denied passage through the bridge. If no match is found, the data packet is forwarded through the LB.

Note that the order that filter commands are entered into the list is very significant. In order to configure the LB to operate most efficiently, you will want to determine the order in which you want the LB to compare data packets with the list of filters. You may specify any number of filters however if the list contains more than six or seven filters, you may start to notice slower performance.

You will want to identify the most common data packets in your local area network. Enter filters for the most common data packets near the top of the filter list. Conversely, put filters for the least common data packets at the end of the list.

In order to activate the filters, you must associate a filter list with a particular LB port. Filter lists are associated with the different LB ports using the SET/DEFINE BRIDGE command. Note that one filter list may be associated with either or both ports.

Set / Define Filter

Command Syntax

$$\left. \begin{array}{l} \text{SET} \\ \text{DEFINE} \end{array} \right\} \text{FILTER } \textit{filtr} \left. \begin{array}{l} \text{APPEND} \\ \text{INSERT } \textit{position} \end{array} \right\} \left. \begin{array}{l} \text{ALL} \\ \text{BROADCAST} \\ \text{MULTICAST} \\ \text{SOURCE } \textit{address} \\ \text{DESTINATION } \textit{address} \\ \text{PATTERN } \textit{pattern offset} \\ \text{PROTOCOL } \textit{identifier} \end{array} \right\} \left. \begin{array}{l} \text{ALLOW} \\ \text{DENY} \end{array} \right\}$$

Keywords and Parameters

SET / DEFINE

When you select SET, the filter defined by the command will be immediately entered into the filter list and will be immediately acted upon by the LB. SET commands do not change LB conditions previously established by a DEFINE command. Every time the LB is turned on, rebooted, or initialized, all SET command filters will be lost.

When you select DEFINE, the filter defined by the command will only take effect the next time the LB is turned on, rebooted, or re-initialized. All DEFINE commands will be placed into the LB's permanent memory so that each time the LB is turned on, rebooted, or initialized, the defined filters will take effect.

FILTER *filtr*

This parameter identifies the particular filter list within the LB.

filtr may be a value of either 1 or 2. The LB may include up to two filter lists.

Note: Filter list numbers are associated with a particular port number using the SET/DEFINE BRIDGE command.

APPEND / INSERT position

This parameter tells the LB where in the filter list to place this filter definition. **Note:** To view a currently active filter list, enter a SHOW or LIST FILTER command (see these commands later in this section.)

APPEND will place the new filter definition at the end of the list.

INSERT position defines a location of the new filter definition other than the last position. The filter will be placed in the list just prior to the value you specify for *slot*, *i.e.*, if you enter a value of 3, the new filter will be inserted into the list just before the filter currently occupying position 3. If you enter a value larger than the current number of filters on the list, the new filter will be added at the end.

ALL

This keyword specifies that every data packet will be allowed or denied passage through the LB based on the ALLOW/DENY setting.

Usually, the ALL keyword is placed last in the filter list to prevent passage of all other data packets that have not been specifically identified by the previous filters in the list. A word of caution, placing ALL first on the filter list and specifying ALLOW or DENY will allow or deny passage to all data packets regardless of any following filter specifications on the list.

BROADCAST

When included, the LB will either permit or deny passage of broadcast messages through the bridge.

Note: Bridge Protocol Data Units (BPDUs) are never denied passage through the bridge; refer to Appendix A, *Spanning Tree Algorithm*, in the LB Installation Guide for more information.

MULTICAST

When included, the MULTICAST keyword will cause the LB to either permit or deny passage of data packets containing multicast messages.

SOURCE address

This parameter permits or denies passage of data packets that have originated from a specific node in the local area network.

address defines the Ethernet address of a specific node. The *address* may be specified in one of two ways; with the specific Ethernet address, or with patterns.

If a pattern is entered instead of a complete address, packets with source addresses matching the pattern will be filtered. For example, the following pattern:

0-80-a3-*.*.*

will filter all packets that have 0-80-a3 as the first three bytes of their source address. The final three bytes, represented by asterisks, may vary.

DESTINATION address

This parameter permits or denies passage of data packets destined for a specific node within the local area network.

As with SOURCE, the *address* may be specified in one of two ways; with the specific Ethernet address, or with patterns.

If a pattern is entered instead of a complete address, packets with source addresses matching the pattern will be filtered. For example, the following pattern:

0-80-a3-*.*.*

will filter all packets that have 0-80-a3 as the first three bytes of their source address. The final three bytes, represented by asterisks, may vary.

PATTERN pattern offset

This parameter provides you with the ability to permit or deny passage of data packets that contain a particular pattern of data within the packet. This is accomplished by identifying two bytes of data that you want to look for within the packet, and a number that specifies the position from the beginning of the data packet.

pattern is two bytes (four hexadecimal characters, or 16 bits) long and defines the characters contained in each data packet. The four hexadecimal characters must be preceded by *0x*.

offset can be up to three hexadecimal characters long and defines where, in the data packet, the LB is to look for the specified *pattern*. The hexadecimal characters must be preceded by *0x*.

offset may be a hexadecimal value from 000 to 5ff. 000 indicates the first data position in the data packet. For example, if you specify the hexadecimal value 10, the LB will look for the first character of the pattern at the SEVENTEENTH data position in the data packet. Remember that the first data position is zero.

PROTOCOL identifier

This parameter is used to identify or select one of the protocols present in the local area network. A protocol can be identified by entering hexadecimal characters, or by selecting a protocol mnemonic.

Protocols may have mnemonics for subgroups and these subgroups may have further subgroups. For purposes of clarity, we will identify the protocols as level one, two, or three. In the syntax below, the leftmost column of protocol mnemonics are level one.

If a level one protocol is specified, and has level two and three protocols, the filter will act upon the level one protocol and all of the level two and three protocols as shown in the syntax below. If a level 2 protocol is included, the filter will act upon the combination of the specified level one protocol, the specified level two protocol and any of the level two protocol's level three protocols. When a level three protocol is included, the filter will act upon only that combination of level one, two, and three protocols.

For example, if you enter the following command,

```
Local> SET FILTER 1 APPEND PROTOCOL IP TCP ALLOW
```

TCP/IP protocol data packets, including the TCP's level three protocol data packets, would be permitted passage through the LB.

If you then enter the following command after the above example,

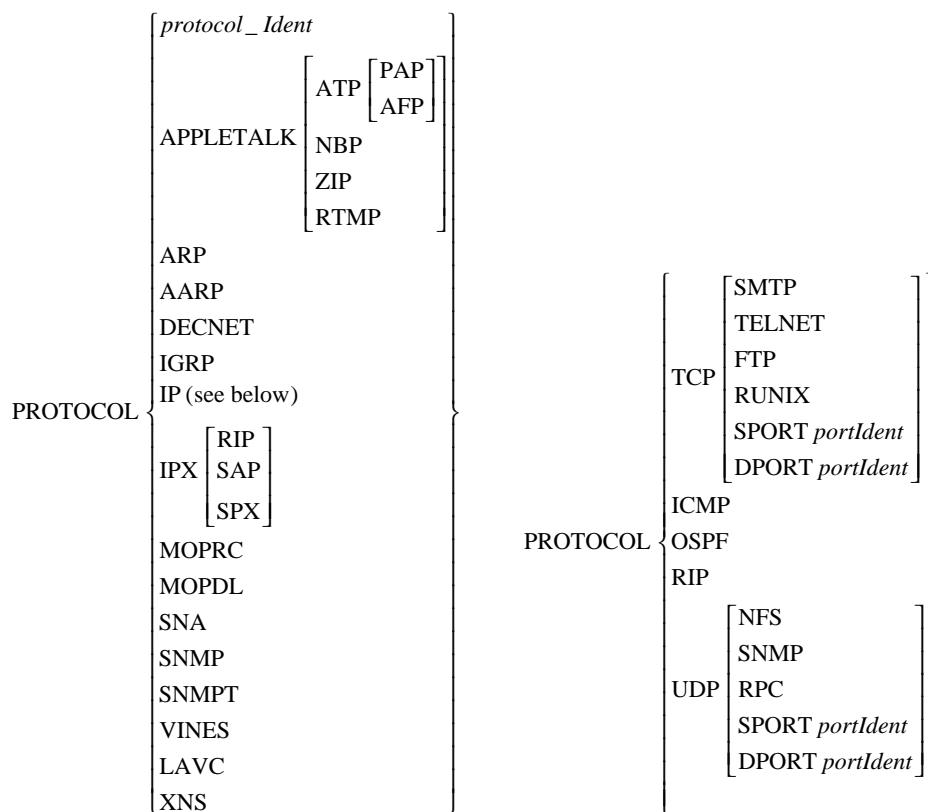
```
Local> SET FILTER 1 APPEND PROTOCOL IP DENY
```

all IP data packets containing all of its level two and three protocols will be denied passage through the LB, with the exception of the TCP/IP data packets allowed by the preceding command.

It is important to note that, if you reverse the order of the two command examples above, the results would be different. No IP data packets would be passed by the bridge regardless of the subsequent filter command.

Note that SPORT and DPORT are exceptions and are not protocol mnemonics. Rather, they can be used as shown in the protocol syntax below to specify a protocol port.

If the above is not completely clear, please review the syntax representation on the next page. The syntax shows the many combinations of protocols, sub-protocols, and sub-sub-protocols.



protocol_ident

Use this parameter in lieu of one of the protocol mnemonics. *protocol_ident* is two bytes (four hexadecimal characters) long; the four hexadecimal characters must be preceded by *0x*. This protocol identification can be substituted for one the following protocol mnemonics.

APPLETALK	MOPRC
ARP	MOPDL
AARP	NETWARE
DECNET	SNA
IP	VINES
IPX	LAVC
XNS	

An asterisk (*) may be substituted for up to three of the four hexadecimal characters as a wild card character. When an asterisk is present, the LB will accept any value in that position.

SPORT portIdent / DPORT portIdent

These parameters provide the ability to filter data packets based on both a protocol and the source or destination protocol port of the data packet.

SPORT is used to define the source protocol port of a data packet; **DPORT** defines the destination protocol port.

portident is one byte (four hexadecimal characters) long. The two hexadecimal characters must be preceded by *0x*.

ALLOW / DENY

These keywords directs the bridge to either allow or deny passage of data packets that meet the specified filter criteria.

Command Examples

```
Local> SET FILTER 0 APPEND PROTOCOL MOPRC DENY
Local> SET FILTER 1 INSERT 3 PROTOCOL IP TCP FTP ALLOW
Local> SET FILTER 1 APPEND PROTOCOL 0x08** DENY
Local> SET FILTER 1 APPEND PROTOCOL IP TCP RUNIX DENY
```

```
Local> SET FILTER 0 INSE 2 PRO IP TCP DPORT 0x23 DENY
Local> SET FILTER 0 APPEND SOOURCE 02-56-3e-2a-10-b7 DENY
Local> SET FILTER 1 INSERT 1 DESTINATION hammer ALLOW
Local> SET FILTER 0 INSERT 1 MULTICAST ALLOW
Local> SET FILTER 0 APEND PATTERN 0x45e1 0x34 DENY
Local> SET FILTER 1 INSERT 5 PATTERN 0x4**4 0x17 DENY
Local> SET FILTER 1 APPEND ALL DENY
```

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Show / List Filter Lists

Command Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{LIST} \end{array} \right\} \text{FILTER} \left[\begin{array}{l} \textit{filtr} \\ \text{ALL} \end{array} \right]$$

Keywords and Parameters

SHOW / LIST

When you select **SHOW**, the filter list currently in effect in the LB is displayed. **SHOW** provides the filter list information as specified by **SET FILTER** commands.

When you select **LIST**, the filter list currently stored in the LB's permanent memory is displayed. **LIST** provides the filter list information as entered by **DEFINE FILTER** commands.

FILTER *filtr*

This parameter identifies the particular filter list within the LB.

filtr may be a value of either 1 or 2. The LB may include up to two filter lists.

Note: Filter list numbers are associated with a particular port number using the SET/DEFINE BRIDGE command.

ALL

This parameter directs the LB to display both filter lists.

Note that if you omit both parameters, all filters will be shown or listed.

Clear / Purge Filter Lists

Command Syntax

$$\left. \begin{array}{l} \text{CLEAR} \\ \text{PURGE} \end{array} \right\} \text{FILTER } \mathit{filtr} \left. \begin{array}{l} \text{ITEM } \mathit{itemnumber} \\ \text{ALL} \end{array} \right\}$$

Keywords and Parameters

CLEAR / PURGE

CLEAR removes any filters from the filter list entered using the SET FILTER command.

PURGE removes any filters from the filter list in the LB's permanent memory entered using the DEFINE FILTER command.

FILTER *filtr*

This parameter identifies a specific LB filter list.

filtr may be a value of either 1 or 2. The LB can have up to two filter lists.

Note: Filter list numbers are associated with a particular port number using the SET/DEFINE BRIDGE command.

ITEM *itemnumber*

This parameter permits you to specify a particular filter on the filter list.

ALL

ALL will cause the entire specified filter list to be removed. Note: if you **omit** both **ALL** and **ITEM *itemnumber***, filters will not be cleared or purged.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Save Filter

Command Syntax

SAVE FILTER [*filtr*]

When you enter this command, all filters on the filter list currently in effect and specified by SET FILTER commands will be permanently stored.

Keywords and Parameters

filtr

This parameter is used to specify a particular filter list number. If omitted, all filter lists will be permanently saved.

The new saved conditions will be in effect the next time the LB is turned on, rebooted, or initialized.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Bridge Commands

Bridge commands are used to specify, configure, display, and save the different features and settings in the LB.

SET/DEFINE BRIDGE

SET BRIDGE and DEFINE BRIDGE enable a user to configure the following parameters:

- FORWARD DELAY: specifies a delay time
- HELLO TIME: specifies a time interval
- MAXIMUM AGE: sets a time-out interval
- SPANNING TREE: enables or disables use of the Spanning Tree Algorithm
- WEED: controls the interval the LB will wait before it removes a node's hardware address when it has not heard from that node
- PATH COST: assigns a path cost value
- PRIORITY: specifies a priority value for one or both ports of the LB
- STATE: enables or disables an LB port
- FILTER: associates a filter list with an LB port

Note: the Spanning Tree Algorithm requires certain timing values to operate correctly. If an attempt is made to change a value such that the timing is no longer legal, an error message will be displayed. The individual options below discuss specific timing issues; the ranges of acceptable values are subject to the values of other options.

SHOW/MONITOR/LIST BRIDGE

These parameters display LB configuration, current status, and settings.

SAVE SYSTEM

Saves current system settings into permanent memory.

Set / Define Bridge

Command Syntax

{ SET DEFINE }	BRIDGE	FORWARD DELAY <i>delay</i>
		HELLO TIME <i>time</i>
		MAXIMUM AGE <i>age</i>
		PRIORITY <i>bpriority</i>
		SPANNING TREE { ENABLED DISABLED }
		WEED <i>weedtime</i>
		ETHERNET <i>port</i> { PATH COST <i>path</i> PRIORITY <i>value</i> STATE { ENABLED DISABLED } FILTER <i>filtnum</i> }

Keywords and Parameters

SET / DEFINE

When you select SET, the settings specified by the command will be entered into the LB and will be immediately acted upon. SET commands do not change LB conditions previously established by a DEFINE command, *i.e.*, every time the LB is turned on, rebooted, or initialized, all conditions previously SET will be lost.

When you enter DEFINE, the condition specified by the command will only take effect the next time the LB is turned on, rebooted, or initialized. All DEFINE command settings will be placed into the LB's permanent memory so that each time the LB is turned on, rebooted, or initialized, permanently defined settings will take effect.

FORWARD DELAY seconds

This parameter sets the transition delay between the LB's *listening* and *learning* states. Note that Forward Delay must be large enough so that $(2 \times (\text{ForwardDelay} - 1))$ is larger than the Max Age setting.

seconds may be a value from 4 to 30. The default value is 15.

HELLO TIME seconds

This parameter sets the interval between Spanning Tree BPDU's (Bridge Protocol Data Unit). Note that Hello Time must be low enough such that $(2 \times (\text{HelloTime} + 1))$ is less than Max Age.

seconds may be a value from 1 to 10. The default value is 2.

MAXIMUM AGE seconds

This parameter assigns the maximum time interval before the LB will look for a new root or master bridge. When the LB has not heard from the root bridge for this interval, it will assume that the root bridge is down and will attempt to find a new root bridge. Note that Max Age must be less than $(2 \times (\text{ForwardDelay} - 1))$. In addition, it must be larger than $(2 \times (\text{HelloTime} + 1))$

seconds may be a value from 6 to 40. The default value is 20.

PRIORITY value

This parameter permits you to specify a value that is used to direct a particular bridge to become the root bridge. The higher the value you enter, the less likely is that the bridge will become the root bridge.

value may be a number from 0 to 32768. The default value is 32768.

SPANNING TREE

This parameter will enable or disable the Spanning Tree process within the LB. The default setting is ENABLED.

WEED *seconds*

The LB is constantly updating address information in its address database. This parameter permits you to specify a time interval that the LB will use to remove old information from the address database.

seconds may be a value from 10 to 10000. The default value is 300.

ETHERNET *port*

This parameter specifies which LB port is to be affected by SET/DEFINE BRIDGE commands.

port may be a value of 1 or 2 and designates which port is to be affected.

Important: If this parameter is omitted, both LB ports will be affected.

PATH COST *value*

The Spanning Tree process will determine the particular links in the network it will disable based on a current path cost value. Then, if need be, the port with the higher path cost value will be disabled first.

value may be a value from 0 to 65535. The default value is 2000.

PRIORITY *value*

This parameter permits you to specify a value that is used to direct a particular port to become the root port. The higher the value you enter, the less likely the LAN ports will become the root port.

value may be a number from 0 to 255. The default value is 0.

STATE

This parameter provides the ability to ENABLE or DISABLE either or both of the Ethernet ports. When a port STATE is DISABLED, The LB will not permit the passage of data packets. However, the LB will respond to commands directed to it. The default value is ENABLED.

Note: The console serial port is not affected by this parameter.

FILTER *filtr*

This parameter associates a filter list with one or both of the LB's Ethernet ports. *filtr* is either 1 or 2 and corresponds to a filter list specified by SET/DEFINE FILTER commands. By omitting the ETHERNET *port* parameter, you can associate a single filter list with both ports.

Note: The ETHERNET NONE parameter is used to disassociate a filter list from both ports.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Show / Monitor / List Bridge

These commands are used to display configuration information currently contained in the LB.

Command Syntax

{ SHOW MONITOR }	}	BRIDGE [ETHERNET <i>port</i>]	[STATUS]
				ADDRESSES [ALL,	
				<i>num</i>	
				COUNTERS	
				TRAFFIC	

LIST BRIDGE [STATUS]

Keywords and Parameters

SHOW / MONITOR

SHOW displays the current settings and configuration information as specified by SET BRIDGE commands.

MONITOR displays the same current information as SHOW but is updated every three seconds, unless the SET/DEFINE SYSTEM REFRESH value is changed (see page 8).

LIST

LIST displays settings and configuration information that have been stored in the LB's permanent memory by entering DEFINE SYSTEM commands.

The information displayed by LIST may not be the same as that displayed by the SHOW and MONITOR commands. LIST displays what will be in effect when the LB is turned on, rebooted, or initialized.

ETHERNET *port*

This parameter specifies which LB port information will be displayed by the SHOW/MONITOR/LIST BRIDGE commands.

If this parameter is omitted, information about both LB ports will be displayed.

port may be a value of 1 or 2 and designates which port is to be affected.

STATUS

This parameter will display current settings, as specified by SET or DEFINE BRIDGE commands.

If all of the parameters (STATUS, ADDRESS, COUNTERS, and TRAFFIC) are omitted, STATUS will be displayed.

When used with ADDRESS, *num* specifies a number of minutes. SHOW BRIDGE ADDRESS *num* would display all addresses heard from within a *num* number of minutes. ALL displays all known addresses.

ADDRESSES

This parameter will display the addresses of the Ethernet port. The addresses most recently heard from by the LB will be displayed.

COUNTERS

This parameter will display a current count of packets being forwarded and discarded by the LB. The counters are reset every time the LB is turned on, rebooted, or re-initialized, or when a ZERO COUNTERS BRIDGE command is entered.

TRAFFIC

This parameter is similar to COUNTERS, but displays only forwarded packets sorted by packet size and protocol type.

Privilege

MONITOR BRIDGE requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Save Bridge

Command Syntax:

SAVE BRIDGE

When you enter this command, all current configurations specified by SET BRIDGE commands will be stored in the LB's permanent memory.

The newly-saved settings will be in effect the next time the LB is turned on, rebooted, or initialized.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Miscellaneous Commands

- **CLS:** clears the terminal screen
- **HELP:** accesses the terminal's electronic help
- **INITIALIZE:** initializes the LB
- **LOCK:** prevents other users from accessing a terminal
- **LOGOUT:** logs out of the LB
- **NETSTAT** displays a list of network sessions
- **PING:** requests that another host send a packet
- **SHOW USERS:** displays all users currently logged onto the network
- **UNLOCK:** unlocks a currently locked port
- **ZERO COUNTERS:** resets counters to zero

Clear Screen

Command Syntax

CLS

This command will clear any information on the screen and display the command prompt at the top of the screen.

Finger

Command Syntax

FINGER [[*username*] [@*hostname*]]

This command is similar to the UNIX finger command. It will display information about different users of the LB or other hosts on the network.

Keywords and Parameters

username

This parameter may be entered as any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks.

hostname

This parameter may be entered as any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks.

Instead of characters, an IP address can be entered in the following format:

nnn.nnn.nnn.nnn

where ***nnn*** can be a decimal number from 0 to 255. The periods **must** be included.

Help

Command Syntax

HELP [*commandname*]

The on-line help feature permits you to get information about the different LB commands. If you enter **HELP** by itself, a list of commands will be displayed. To obtain specific information about a command, type **HELP** followed by a space and the name of the command.

Keywords and Parameters

commandname

Typing in the name of a particular command will display help on that command.

Initialize

Command Syntax

INITIALIZE {
 DELAY *minutes*
 CANCEL
 FACTORY
 RELOAD
}

The INITIALIZE command has the same effect as turning the LB off and on. Unless you have entered DEFINE commands or one of the SAVE commands, all values and conditions specified by SET commands will be lost.

Keywords and Parameters

DELAY *minutes*

This parameter schedules the delay of an initialization. *minutes* may be a value between zero (0) and one hundred twenty (120) minutes.

CANCEL

Including this parameter cancels a delayed initialization.

FACTORY

This parameter will reset all conditions within the LB to those in effect when the unit left the factory. Use caution when contemplating the use of this parameter: it will overwrite all of your SET, SAVE, and DEFINE command settings with the factory default values and conditions.

RELOAD

RELOAD is used to update the LB's Flash ROM. For instructions on reloading Flash ROM, refer to Appendix E of the LB Installation Guide, *Updating LB Software*.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Lock

Command Syntax

LOCK

The LOCK command is used to prevent access to a terminal. This command is used when you wish to remain logged onto the LB, but wish to temporarily leave the vicinity of your terminal.

The LOCK command requires a password. This password is limited to six characters or less.

Once a LOCK command has been entered, the session on the port can be unlocked one of three ways: (1) you may enter the same password you used to lock at the `<Unlock Password>` prompt, (2) the UNLOCK command can be entered through a different port, or (3) the session can be forcibly logged out with a LOGOUT command.

When issued, the LOCK command will prompt for a password and then prompt for the same password again to verify it. If the verify password does not match your first password the LOCK command will be aborted.

```
Local> LOCK
Password> ..... (password is not displayed)
Verification> ..... (password is not displayed)
Unlock Password>
```

After the verified password has been accepted, the `Unlock Password>` prompt will appear.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Logout

Command Syntax

LOGOUT [PORT *number*]

LOGOUT is used to log out from a port on the LB. Entering LOGOUT without the PORT *number* parameters will terminate the session on the port you are logged into.

If the LB has been logged into from a network using one of the network ports, the network session is terminated. If it was logged into from the console port, the console settings are reloaded from non-volatile RAM and the LB will wait for a <Return> to begin a new console session.

Keywords and Parameters

PORT *number*

This parameter specifies which port connection will be closed.

Privilege

Privileged status is required when logging out a port other than your own. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 12.

Netstat

Command Syntax

NETSTAT

This command displays a listing of all network sessions currently connected to the LB including network logins, SNMP queries, *etc.* The information will be grouped according to the four different protocols (TCP, APPLETALK, and NETWARE) supported by the LB.

Ping

Command Syntax

PING *host*

This command sends a request for an echo packet to another IP network host.

Keywords and Parameters

host

This parameter may be entered as any combination of characters. If the name you specify contains lower case letters or spaces, it must be enclosed in quotation marks. The host name must be resolvable. Refer to SET PROTOCOL IP NAMESERVER on page 17.

Instead of characters, an IP address can be entered in the following format:

nnn.nnn.nnn.nnn

where ***nnn*** can be a decimal number from 0 to 255. The periods **must** be included.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Show Users

Command Syntax

SHOW USERS

This command will display all users currently logged into the LB.

Unlock

Command Syntax

UNLOCK PORT *port*

This command will unlock a previously locked port.

Keywords and Parameters

port

port is the port number to be unlocked.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.

Zero Counters

Command Syntax

$$\text{ZERO COUNTERS} \left\{ \begin{array}{l} \text{SYSTEM} \\ \text{BRIDGE ALL} \\ \text{BRIDGE ETHERNET } \textit{port} \end{array} \right\}$$

This command is used to reset the LB's counters.

Keywords and Parameters

SYSTEM

This parameter will reset the counters related to login events on the two LAN ports and the serial console port.

BRIDGE ALL

BRIDGE ALL will reset all of the counters displayed by the SHOW BRIDGE command.

BRIDGE ETHERNET *port*

This parameter will include a *port* number to reset the counters on a particular LAN port.

Privilege

This command requires privileged status. To learn how to obtain privileged status, see the SET PRIVILEGED command on page 7.