

DS Series Manual



DATA SWITCH

DS72 ETHERNET Host Module

BayTech Manual Publication

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DS72 Host Module

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ABOUT THIS OWNER'S MANUAL

This document provides information required for installing and operating your Bay Tech equipment. It should allow the user to connect, power up, and access an applications menu where peripheral equipment can be controlled. We recommend reading this manual carefully, while placing special emphasis on correct cabling and configuration. If you have any problems with your installation, please contact a BayTech Applications Engineer at **228-563-7334**, or toll free from anywhere in the United States using **1-800-523-2702** or contact us at our Web Site, www.baytech.net.

BayTech manufactures many remote site management products, data switches, data collection multiplexers, and remote power controllers. If you would like information on any of these products, please contact BayTech Customer Service at the above numbers or visit our web site.

Conventions used in this manual include:

CAUTION: This term is used to denote any condition that could possibly result in physical harm to personnel or damage to equipment.

IMPORTANT: This term is used to denote conditions that could result in the loss of communications or to highlight the proper functioning of equipment.

NOTE: This term is used to denote items of interest to the user.

<cr>: Carriage Return or ENTER

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BayTech units are in accordance with the general requirements of *Standard for Information Technology Equipment* (ETL listed, conforms to ANSI/UL STD 60950-1-2003 CERTIFIED CAN/CSA C22.2 NO. 60950-1-03, UL STD 231 8TH EDITION, UL STD 1950 3RD EDITION CERTIFIED CAN/CSA 22.2 NO. 950-95, CE conforms to IEC 60950-1).

Connection Description

BayTech's DS72 host communication module provides an interface that controls user access to the DS Series data switch and other DS Series connected modules. The DS72 is a system data controller that directs operations between the base unit, system modules and externally connected devices.

EIA-232 SERIAL CONNECTION

The DS-Series host communications modules have an RJ-45 port which uses an 8-pin crossed modular cable to connect to a local EIA-232 device such as a computer terminal or external modem. Most serial computers do not have RJ-45 connections; therefore an adapter is provided with this unit to convert from a DE-9 connector to an RJ-45 connector (Bay Tech Part No. 9FRJ45PC-4). An adapter to convert

from a DB-25 connector to an RJ-45 connector is also available from Bay Tech, upon request (Bay Tech Part No. 25FRJ45PC-4). The 8-pin crossed modular cable is configured for these adapters.

NOTE: Use rollover (RJ08X007) RJ-45 cables when using modular connectors to interface the DS-Series to another BayTech product with modular connectors, such as the RPC Remote Power Control Unit.

10/100 BASE-T NETWORK PORT CONNECTION

Using a straight 10/100 Base-T cable, connect the RJ-45 port labeled ETHERNET on the HOST module to an RJ-45 port on the network hub. The LINK (link integrity) LED, located on the front panel of the HOST, illuminates when a good connection is established between the HOST and the hub.

EXTERNAL MODEM CONNECTION

Using the 25MRJ45MD-6 adapter (or other applicable adapter) and the RJ08X007 crossed cable, connect the COM (or serial) port of the modem to the RJ-45 port labeled EIA-232 on the DS62-MD4 module. Using an RJ04X007 (RJ-11) modular cable, connect the port labeled "LINE" on the modem to the Telco wall jack. Using communications software package, dial the modem. *Setup Instruction at end of manual.*

Installation

UNPACKING

Compare the unit and serial number of the equipment you received to the packing slip located on the outside of the box. Inspect equipment carefully for damage that may have occurred in shipment. If there is damage to the equipment or if materials are missing, contact BayTech technical support at **228-563-7334** or call toll free inside the United States at **800-523-2702**. At a minimum, you should receive the following:

1. The DS72 Module.
2. Manual insert describing the location of the User's Guide on BayTech's website at www.baytech.net.
3. Power Cords that may be attached to the unit (if order requested detachable cords).
4. 1 ea. DE-9 (9 pin) PC com port adapter -- 9FRJ45PC (with Cisco Interface) or 9FRJ45PC-1.
5. 1 ea. RJ-45 Roll over cable -- RJ08X007.

NOTE: Keep shipping container and packing material in the event future shipment is required.

PREPARING THE INSTALLATION

The installation area should be clean and free of extreme temperatures and humidity. Allow sufficient space behind the DS unit for cabling and receptacle connections. Access to installation site should be restricted to authorized personnel. Installation of these units should be limited to ITE and Telco server environments.

Power

CAUTION: This unit is intended for indoor use only in a clean and free of extreme temperatures and humidity. Do not install near water or expose this unit to moisture. To prevent heat buildup, do not coil the power cord when in use. Do not use extension cords. Do not attempt to make any internal changes

to the power source. Do not attempt to modify any portion or component of a DS72 module unless specifically directed by BayTech Technical Support. BayTech must perform any internal changes.

CAUTION: High-voltage surges and spikes can damage this equipment. To protect from such power surges and spikes, this unit must have a good earth ground. A grounding screw connection is located near the power switch on the back of the unit.

CAUTION: Before removing or replacing any modules, turn off main power switch located on the DS-Series Base Unit. Communication to the DS-Series Data Switch will be disrupted while power is off.

QUICK START: DS72 Module

by Bay Technical Associates

For those Administrators who have requested the bare minimum for this type of equipment, follow these steps exactly. If this is a new unit shipped directly from Baytech, follow the steps. If this is a previously own unit, perform a factory reset to clear out any users and passwords still in the unit.

Ethernet Controller Configuration:

Before continuing your System Administrator needs to tell you to use DHCP or BOOTP or give you an IP Address, Subnet Address, and Gateway Address.

1. Connect the 9FRJ45PC-4 or 9FRJ45PC-1 adapter to your PC.
2. Connect the supplied rollover flat cable RJ08X007 to the adapter and to the EIA232 serial port on the Baytech DS62 Module.
3. Use terminal emulation software to access the unit, (i.e. Microsoft Hyper-terminal). Set the PC serial port configuration to the following: **9600 bps, 8 data bits, 1 stop bit and no parity.**
4. If you get only a blinking cursor Press 'Enter'. If still only a blinking cursor, Type 5 semi-colons (;),The Attention Character will not echo on the screen. There is a one second delay before the menu is displayed. You should see a menu similar to (Figure 1).
5. Select 'C' for the configuration menu.
6. Select the DS72 module. You should see a menu similar to (Figure 2).
7. Select the number for 'Login Setup' option. You should see a menu similar to (Figure 3).
8. Select the number for 'Manage Users' option. You should see a menu similar to (Figure 4).
9. **NOTE: The 'admin' user can not be deleted.**
10. Select 'A' to add user. Type the name and password at the prompts.
11. Press 'Enter' until get to the 'Login Setup Menu' (Figure 3).
12. Select option 'Access Control' to enable or disable the Tenet and Serial Login Prompt.
13. Press 'Enter' until you get the Configuration menu (Figure 2).
14. Select 'Network Port Configuration' option. You should see a menu similar to (Figure 5).
15. If your System Administrator requires you to use DHCP, then select 'DHCP Enable/Disable' and type 'Y' to enable DHCP. If you wish to assign a static IP address to this unit, Disable the DHCP and go to step 18.
16. Press 'Enter' until you are asked to 'Accept Changes'. Type 'Y' to accept changes or 'N' to decline changes.
17. After Accepting or Declining Changes Pres 'Enter ' until you get the Network Access Menu (Figure 1).
18. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.
19. If you disabled the DHCP in step 15, you should see a menu similar to (Figure 5).
20. Select the 'IP Address' option and type the assigned IP address and press 'Enter'.
21. Select the 'Subnet Mask' option and type the assigned subnet mask address and press 'Enter'.

22. Select the 'Gateway Address' option and type the assigned Gateway address and press 'Enter'.
23. Press 'Enter' until you are asked to 'Accept Changes'. Type 'Y' to accept changes.
24. Press 'Enter' until you get the Network Access Menu, (Figure 1).
25. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.

At this point you have setup enough basic configurations to operate this Baytech unit.

Serial Port Setup

- Connect the *9FRJ45PC-4* adapter to the user's computer
- Connect the Host Module's EIA-232 port to the adapter via the *RJ08X007* rolled flat ribbon cable.
- Default configuration is **9600 bps, 8 data bits, 1 stop bit and no parity**.

NOTE: At any time during the session you need to go to another menu, use the **Attention Character = semi-colon (;)**. Press the attention character key 5 consecutive times to get back to the main status menu.

NOTE: Depending on the DS-Series model, the menus will vary according to the number of DS74 modules installed in the unit. If this is not an initial set-up and Password has already been enabled, you are prompted to login. After logging in successfully, invoke the main menu by sending the attention character five times (;;;;;).

NOTE: Password feature is case sensitive. (Default is user/password is **root/baytech**)

Main Menu

The following Menu appears or similar:

Figure 1

```

Module: 2
Attention Character: ;
Device A .....1
Device B .....2
Device C .....3
Device D .....4
DS-RPC .....5   Status of outlets
Configure.....C   Module Setup
Status.....S     Current Setup Configuration
Unit Reset.....RU Resets the DS-Unit, terminates internal,
                  external modem connections, allow 10
                  seconds for reset.

Logout.....T
    
```

Select option 'C' for the configuration menu. Select the DS72 module option and the following menu is displayed:

Figure 2

DS72 Data Switch Series - Telnet Host Module	
Revision F.3.21.4	Kernel K.1.01H
Core C.1.00N	Hardware H.2.01
Module 2	
Status.....1	Current status of DS72 module
Serial Port Configuration.....2	Change port config, 9600, 8, 1, none
Port Device Name.....3	Change the name of the module port
Attention Character.....4	(;;;;) get Main Menu
Disconnect Timeguard.....5	Delay to see if more data after `;`
char	
Connection Override.....6	User override another for priority
Connect Port ID Echo.....7	Enable echo module & port#, device
name	
Login Setup.....8	Manage User, Port, Header
SNMP Configuration.....9	Trap Address, Read/Write,
Enable/Disable	
Network Port Configuration.....10	Ethernet configuration menu
Unit ID.....11	Name of the module
Upgrade Firmware.....12	FTP-Firmware upgrade w/user password
Active Restore.....13	Allow units to internally reset for
	freezes, login idle timeouts,
RPC Management.....14	Set thresholds temp/v/c
Exit.....X,CR	
Enter Request :1	

Select option '8' to add users with passwords and Enable/Disable access to the Network and Serial ports. Select option '10' to configure the Ethernet port

Login Setup

Figure 3

Header.....1	Enable/Disable Header for each menu
Access Control.....2	Enable/Disable Network/Serial port
	user name and password
Manage Users.....3	Add/Delete users and change passwords
Exit.....X,CR	

Header

This allows the admin to have enable or disable Header upon connection to the host module.

Access Control

This security feature allows the admin to enable or disable usernames and passwords for both serial and modem port access.

Manage Users

This option allows the administrator to change user passwords or add/delete new users. Up to 19 users plus an administrator allowed. Usernames are case sensitive and alphanumeric.

Figure 4

```
User Management Menu

To change user password, enter number of user.
To add/delete user, select appropriate menu choice.
Enter request, CR to exit menus.

A)...Add user
1)...admin
Enter Request :a
```

Network Port Configuration

Figure 5

```
Network Configuration
IP Address: 0.0.0.0
Subnet Mask: 0.0.0.0
Gateway: 0.0.0.0
Ethernet Address: 00.C0.48.06.57.4C
Connection Inactivity Timeout (mins): Disabled
Carriage Return Translation: Disabled
Break Length (msecs): 350
DHCP is Disabled Bootp is Enabled Telnet is Enabled
IP Address.....1 Ethernet port IP Address 0.0.0.0
Subnet Mask.....2 Tells when to listen Address 0.0.0.0
Gateway Address.....3 Router/Hub/Switch IP Address 0.0.0.0
Inactivity Timeout.....4 Set timeout, in minutes
                          (<=120,0=disable)
Carriage Return Translation.....5 Enable/Disable
Break Length.....6 Set in milliseconds (<=10000,
                          0=disable)
Bootp.....7 Enable/Disable
DHCP.....8 Enable/Disable
Telnet.....9 Enable/Disable
Exit.....X,CR
```

IMPORTANT: For network access, either Enable the DHCP, BOOTP or disable the DHCP and BOOTP, then configure the IP addresses, Subnet Mask, and Gateway Address. The module must be reset for network changes to take effect.

Cabling

RJ-45 Cables and Adapters

DS72 EIA-232 RJ-45 Pin/Signal Definition

Pin	EIA 232 Signal	Signal Direction	Description
1	DTR	Out	Handshake, Line Driver Inactive State = High: +12V when power is applied. Used as a handshake line to enable/disable the receiving of characters.
2	GND		Signal Ground
3	RTS	Out	Handshake, Line Driver Inactive State = High: +12 V when power is applied. Not used to enable/disable.
4	TX	Out	Transmit Data Out
5	RX	In	Receive Data In
6	DSR	In	Handshake In. -12V when not used.
7	GND		Signal Ground
8	CTS	In	Used as a handshake line to enable/disable the receiving of characters.

Adapters Signals

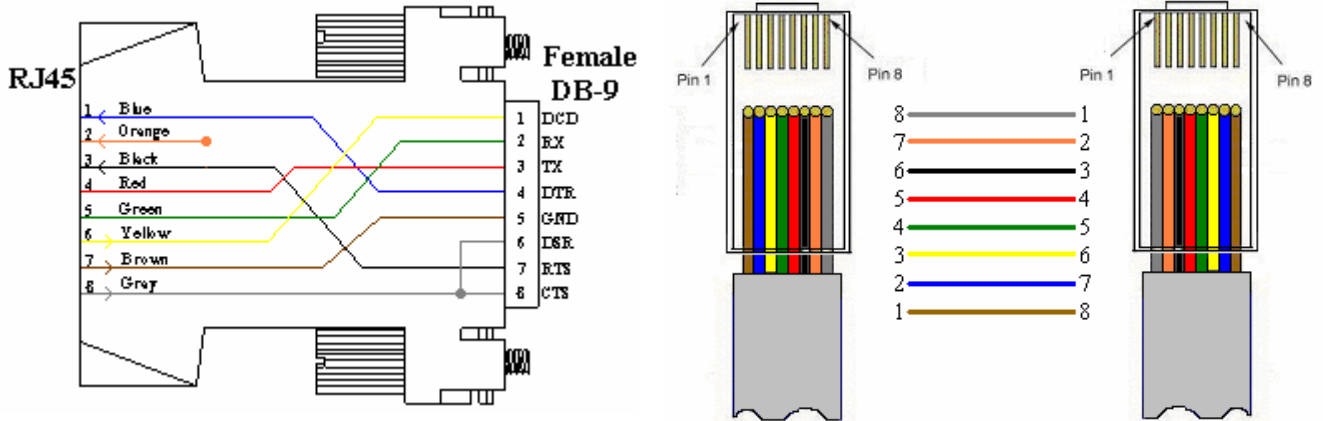
Listed are the pin specifications for the BayTech cable and adapters and the terminal COM ports:

Signal	RS-232 Port (DS)	RS-232 Port (RPC)	COM Port DE-9 Pin	COM Port DB-25 Pin	
DTR	1	1	4	20	DSR
GND	2	2		1	GND
RTS	3	3	7	5	CTS
TxD	4	4	3	2	RxD
RxD	5	5	2	3	TxD
DSR	6	N/C	6	6	DTR
GND	7	7	5	7	GND
CTS	8		8	4	RTS
DTR			4		DCD
DCD		8	1	8	DTR
RI	9			22	

Adapters

9FRJ45PC-4

RJ08X007



Figures 1 and 2 provide visual representation of an RJ-45 receptacle and plug.

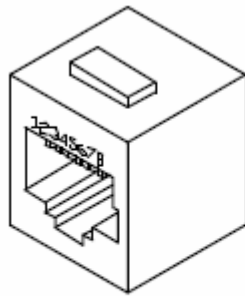


Fig. 1: RJ-45 Receptacle

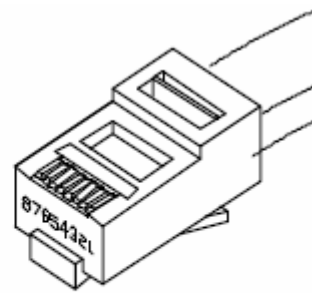


Fig. 2: RJ-45 Plug

Detailed Operation and Configuration

Main Screen

DS72 - Ethernet & RS232 Host module for DS SERIES chassis

Once connected, you will see the menu screen as shown below. This shows the operation of the unit. Depending on which Network Host module you have, the below screens may vary. The screens below are show with the DS72 module. When prompted at the unit's startup menu select "C" followed by a <cr>. This will take you to the Configuration menu.

```
Module: 2
Attention Character: ;
Device A .....1
Device B .....2
Device C .....3
Device D .....4
DS-RPC .....5      Status of outlets
Configure.....C      Module Setup
Status.....S         Current Setup Configuration
Unit Reset.....RU    Resets the DS-Unit, terminates internal,
                    external modem connections, allow 10
                    seconds for reset.
Logout.....T
```

NOTE: Only the Admin user will see the Configuration, Unit Reset, and I/O Module Reset options. All users will see only the ports assigned to them, alone with 'Exit' and 'Logout'.

NOTE: If you get the following message after selecting the 'Configure' option, the other port has the configuration option selected.

```
Configuration mode in use.
```

IMPORTANT: Once you make a change to any of the Configuration options, you have to back out of the Configuration menu and will be asked to 'Accept' changes. If you type 'y' for yes and press <cr>, the changes take effect immediately for the serial port. For the Ethernet port you must do a Unit Reset to get the changes to take effect.

```
Accept changes ? (Y/N) :y
Changes accepted.
```

Configuration Menu

The configuration menu allows the admin user to choose a module to access and edit its configuration. The following pages define each line of the configuration menu.

```

Configuration
DS72 .....1 Host Module
DS74 Module# 3 .....2 I/O Serial port
DS-RPC .....3 Assign users, outlet name, E/D
confirmation/status menu, unit id,
alarm set.
Exit.....X,CR
    
```

Enter the number that corresponds with the Host Module followed by a <cr> and the Host Module responds *without the option description*:

```

Copyright(C) Bay Technical Associates 1999
DS72 Data Switch Series - Telnet Host Module
Revision F.3.21.4 Kernel K.1.01H
Core C.1.00N Hardware H.2.01
Module 2

Status.....1 Current status of DS72 module
Serial Port Configuration.....2 Change port config, 9600, 8, 1, none
Port Device Name.....3 Change the name of the module port
Attention Character.....4 (;;;;) get Main Menu
Disconnect Timeguard.....5 Delay to see if more data after ';' char
Connection Override.....6 User override another for priority
Connect Port ID Echo.....7 Enable echo module & port#, device name
Login Setup.....8 Manage User, Port, Header
SNMP Configuration.....9 Trap Address, Read/Write, Enable/Disable
Network Port Configuration.....10 Ethernet configuration menu
Unit ID.....11 Name of the module
Upgrade Firmware.....12 FTP-Firmware upgrade w/user password
Active Restore.....13 Allow units to internally reset for
freezes, login idle timeouts,
RPC Management.....14 Set thresholds temp/v/c
Exit.....X,CR
Enter Request :1
    
```

Configuration Status

Used to view the status of the installed modules, network setup, login setup, and associated information by issuing a series of carriage returns. The following are the factory **default settings**:

DS72 Host Module

```
Installed Modules :03,05

Attention Character is .....;
Disconnect Time Guard is.....Disabled
Port ID Echo is.....Disabled
Unit ID is.....DS72

Network Setup :
Ethernet Address.....00.C0.48.06.57.4C
IP Address.....0.0.0.0
Subnet Mask.....0.0.0.0
Gateway.....0.0.0.0
Inactivity Timeout (mins).....Disabled
Break Length (msecs).....350
Telnet.....Enabled
DHCP.....Disabled
Bootp.....Enabled
Login Setup :
Header is.....Enabled
Connection Override is.....Enabled

SNMP Setup:
SNMP Agent is.....Enabled
SNMP Trap Host 1 Address.....0.0.0.0
SNMP Trap Host 2 Address.....0.0.0.0
SNMP Trap Host 3 Address.....0.0.0.0
SNMP Trap Host 4 Address.....0.0.0.0
SNMP Read-Only Community.....public
SNMP Read-Write Community.....public
```

Serial Port Configuration

DS72 Serial Port Setup:

Port	Device Type	Device Name	Baud Rate	Word Size	Stop Bits	Parity	Xon/Xmit	Xoff/Recv	LineDrive	DTR	RTS
1	RS-232	EIA-232	9600	8	1	None	Off	Off	Low	Low	

Strike ENTER to continue

The DS-Series Host modules can use different serial port configurations.

Baud Rate, Word Size, Stop Bits, Parity, Xon/Xoff, RTS Line Driver, and DTR Line Driver are configured through the serial port using the menus. The **default settings** are **9600bps, 8 data bits, no parity, one stop bit, RTS and DTR Low**.

IMPORTANT: Changing the Host module serial port configuration could create a communications lock-out if the terminal computer serial port configuration does not match the host module.

DS72 Host Module

Port	Device Type	Device Name	Baud Rate	Word Size	Stop Bits	Parity	Xon/Xmit	Xoff/Recv	LineDrive/DTR	RTS
1	RS-232	EIA-232	9600	8	1	None	Off	Off	Low	Low

Save.....1 Parity.....5
Baud Rate..2 Xon/Xoff.....6
Word Size..3 RTS Line Driver...7
Stop bits..4 DTR Line Driver...8

Enter Request :

Baud Rate

Select “Baud Rate” to change the rate the modem transfers Data bites per second, the DS displays the following: **Default is 9600**

1 For 300
2 For 600
3 For 1200
4 For 2400
5 For 4800
6 For 9600
7 For 19200
8 For 38400
9 For 57.6K
A For 76.8K
B For 115.2K
Enter Request :

Word Size

The word size is the measurement of the actual data bits in a transmission. Which setting you choose depends on what information you are transferring. For example, standard ASCII has values from 0 to 127 (7 bits). Extended ASCII uses 0 to 255 (8 bits). If the data being transferred is simple text (standard ASCII), sending 7 bits of data per packet is sufficient for communication. A packet refers to a single byte transfer, including start/stop bits, data bits, and parity.

Select “Word Size” and the DS displays the following: **Default is 8**

1 For 5
2 For 6
3 For 7
4 For 8

Stop Bits

The Stop Bits are used to signal the end of communication for a single packet. Since the data is clocked across the lines and each device has its own clock, it is possible for the two devices to become slightly out of sync. Therefore, the stop bits not only indicate the end of transmission but also give the computers some room for error in the clock speeds. The more bits that are used for stop bits, the greater the lenience in synchronizing the different clocks, but the slower the data transmission rate.

Select “Stop Bits” the DS displays the following: **Default is 1.**


```

1 For 1
2 For 1-1/2
3 For 2

```

Parity

Parity is a simple form of error checking used in serial communication. For even and odd parity, the serial port will set the parity bit (the last bit after the data bits) to a value to ensure that the transmission has an even or odd number of logic high bits. For example, if the data was 011, then for even parity, the parity bit would be 0 to keep the number of logic high bits even. If the parity was odd, then the parity bit would be 1, resulting in 3 logic high bits. This allows the receiving device to know the state of a bit so as to enable the device to determine if noise is corrupting the data or if the transmitting and receiving devices' clocks are out of sync.

With no parity selected (or defaulted), it's assumed that there are other forms of checking that will detect any errors in transmission. No parity also usually means that the parity bit can be used for data, speeding up transmission. In modem-to-modem communication, the type of parity is coordinated by the sending and receiving modems before the transmission takes place.

Select "Parity" the DS displays the following: **Default is None.**

```

1 For None
2 For Even
3 For Odd

```

Xon/Xoff

For a simple communication between modems three connected lines are needed: TX, Rx, and Ground. For the data to be transmitted, both sides have to be clocking the data at the same baud rate. While this method is sufficient for most applications, it is limited in being able to respond to problems such as the receiver getting overloaded. This is where serial handshaking can help. **Xon/Xoff** is software data flow communications protocol for controlling the flow of data between Baytech and other devices. Baytech units will send an XOFF character when it can't take any more data and when it can once again take more data, will send an XON character to the transmitter.

Select "Xon/Xoff" the DS displays the following, **Default is Off:**

```

Output Flow Control (Xmit) - Xon/Xoff is ( Off )
Stop/Restart Output Upon Receiving of Xoff/Xon ? (Y/N) :

Output Flow Control (Recv) - Xon/Xoff is ( Off )
Xoff/Xon sent based on Buffer - Full/Empty Condition ? (Y/N) :

```

RTS/DTR Line Driver Inactivity State

RTS (Request to Send)/ DTR (Data Terminal Ready) is normally used in conjunction with an external modem. With no modem the RTS and DTS **default state is Low.**

Select "RTS Driver State" the DS displays the following:

```

RTS Line Driver Inactive State is: Low
High ? (Y/N, CR for no change):

```

Select "DTR Driver State" the DS displays the following:

```
DTR Line Driver Inactive State is: Low
High ? (Y/N, CR for no change):
```

Serial Port Device Name

Select a port and type the new name:

```
Enter Port Device Name (Max. 16 characters):
or press ENTER for no change .....
```

Attention Character

Pressing the Attention Character 5 consecutive times will access the network main menu. **The Default is a semi-colon (;)**. Select this option to change the attention character. The DS displays the following:

```
Attention Character is..... ;
Enter Attention Character :
```

NOTE: If you change the attention character and forget which letter or symbol you selected, the attention character will not echo if you are typing the correct character. You can type each character/symbol on the keyboard to find it, or reset the module to factory default to get the semi-colon back.

Disconnect Timeguard

This feature provides reliable binary data transmission by providing a one-second “Timeguard” after the DS-Series receives the attention character. If more data is received within the delay period, the DS series treats the character as data, not an attention character; thereby preventing unwanted port disconnection. **The Default setting is Disabled.**

```
Disconnect Time Guard is.....Disabled
Enable ? (Y/N, CR for no change) :
```

Connection Override

This feature allows the admin user to override another user’s connection and force priority over the other users. **Default setting is enabled.**

```
Connection override is.....Enabled
Enable ? (Y/N, CR for no change) :
```

Connect Port ID Echo

When a user logs into the DS unit the port is identified in the following example:

DS72 Host Module

```
BAYTECH

For further information check:
http://www.baytech.net/

DS71MD4          <= Device name Port echo.
  or
02,1             <= Module and Port Number echo.
```

Select option 1, to disable the echo. **The Default setting is Disabled.**

Select option 2 to echo the module and port number. (i.e. 3,2)

Select option 3 to echo the device name. (Device A)

```
Port ID Echo is.....Disabled
Disable Port ID Echo.....1
Use Module, Port Number.....2
Use Device Name.....3
Exit.....X,CR
```

Login Setup

This menu allows the user to enable or disable the Header, Access Control, Menu, Manage Users, Auto Connect, Dial Back Number, and Assign User Ports.

```
Login Setup:
Header.....1 Enable/Disable Header for each menu
Access Control.....2 Enable/Disable Network/Serial port
                    user name and password
Manage Users.....3 Add/Delete users and change passwords
Exit.....X,CR
```

Header

If enabled, the following header appears with the main menu upon initialization of power or after a modem connection to the host module has been established. If disabled, the header does not appear with the main menu. **Default Header is enabled.**

```
Header is.....Enabled
Enable ? (Y/N, CR for no change) :
```

Access Control

This feature configures the Serial and Network port access by enabling the module to prompt for user name and password. **Default for both is disabled.**

DS72 Host Module

```
Login setup
Toggle option by entering number, CR to exit.

Network access:
  1)...Prompt for user name: disabled
  2)...Prompt for password : disabled
Serial Port Access:
  3)...Prompt for user name: disabled
  4)...Prompt for password : disabled
```

CAUTION: Before you enable the password for either Serial Port or Network access, verify the admin password is known, or you could create a lockout condition. If the password lockout condition occurs, you will need to reset the DS72 host module to the factory defaults.

The host module confirms the option you selected to change.

```
Enable prompt for network user name? (Y/N)>y
```

Manage Users

This option allows the administrator to change user passwords or add/delete new users. Up to 19 users plus an administrator allowed. Usernames are case sensitive and alphanumeric.

NOTE: The “admin” can not be deleted.

```
User Management Menu

To change user password, enter number of user.
To add/delete user, select appropriate menu choice.
Enter request, CR to exit menus.

  A)...Add user
    1)...admin
Enter Request :a
```

Add User

Select A), from the User Management Menu and the Host Module responds with a request for the user name.

```
Enter username (<= 9 characters)>test
```

Enter the name of the user to be added, followed by <cr>. The Host Module will display the User Menu with the added user.

NOTE: User name is case sensitive.

Change User’s Password

NOTE: The factory default password for “admin” is <cr> (**Enter**).

The admin can change a current user’s port access and password. Select the number of the user from the User Management Menu and the Host Module displays the following:

```

Enter choice, CR to exit.
User name: test
Enter old password (CR if none)>
Enter new password (<= 9 characters)>****
Confirm by re-entering new password>****
    
```

If the password and confirm password do not match, the module will ask you to confirm the password again. The module displays the following for a matched password:

```

Password change successful.
    
```

Delete User

Select D), from the User Management Menu. The Host Module will display the following:

```

From menu above, enter number for user to delete>1
    
```

If you select the “admin” user the Module responds with an input error message:

```

Input error: deletion of admin user not allowed.
From menu above, enter number for user to delete>
    
```

Type the number of the user to be deleted and press <cr>. A successful deletion the Module responds with User Menu minus the deleted user.

SNMP Configuration

Selecting the SNMP Configuration and the Host Module respond:

```

SNMP Trap Host 1 Address.....1 Where to send Trap messages, 0.0.0.0
SNMP Trap Host 2 Address.....2 Where to send Trap messages, 0.0.0.0
SNMP Trap Host 3 Address.....3 Where to send Trap messages, 0.0.0.0
SNMP Trap Host 4 Address.....4 Where to send Trap messages, 0.0.0.0
SNMP Read-Only Community.....5 Enter READ Community name
SNMP Read-Write Community.....6 Enter Write Community name
SNMP Enable.....7 Enable/Disable
Exit.....X,CR
    
```

Depending on the firmware, SNMP Configuration allows the admin to control whether or not a user has Read/Write access or Read access only. It also allows the admin to control which IP addresses are allowed to receive a host trap, and simply whether to enable or disable the entire SNMP function.

IMPORTANT: You will need some knowledge of SNMP protocols in order to get the Baytech device to work with your SNMP program. Information provided is for the SNMP Agent only. Baytech Support will assist with the Agent part only. For SNMP Manger assistance refer to the vender manual or contact the vender of the SNMP software you are using.

NOTE: There are a number of shareware MIB Browsers that can be downloaded from the internet to make changes and receive traps for a quick verification test.

IMPORTANT: To use the SNMP functions you need to download the MIB from Baytech’s web site, www.baytech.net. Look under Tech Support, Docs and Downloads.

IMPORTANT: Any changes do not take effect until they are saved by pressing <cr> until you leave the configuration menu. The Host Module responds:

Accept changes ? (Y/N) :

SNMP Trap Host (X) IP Address

A SNMP Trap Host is a trap management station that receives and processes traps. Traps are system alerts that the Baytech device generates when certain events occur. By default, no trap manager is defined, and no traps are issued. Up to four SNMP Trap Hosts maybe assigned to receive traps. Select a SNMP Trap Host, the Host module will respond, **Default address is (0.0.0.0) for all Hosts.**

SNMP Trap Host 1 IP Address: 220.225.36.212
Enter new Trap Host IP Address:

SNMP Trap Host 2 IP Address: 70.154.96.10
Enter new Trap Host IP Address:

SNMP Trap Host 3 IP Address: 192.168.1.102
Enter new Trap Host IP Address:

SNMP Trap Host 4 IP Address: 192.168.2.136
Enter new Trap Host IP Address:

Read/Write Community String:

SNMP community strings authenticate access to MIB objects and function as embedded passwords. In order for your SNMP script/software to access the Baytech SNMP, the community string definitions on your SNMP script/software must match the Baytech SNMP string definitions.

‘Read’—Gives read access to authorized management stations to all objects in the MIB except the community strings, but does not allow write access.

‘Write’—Gives read and write access to authorized management stations to all objects in the MIB, but does not allow access to the community strings

To enter a Read Community string Select ‘SNMP Read Community name’ option, the Host module responds with the current setting, **Default is public.**

SNMP Read Community name: public
Enter Read Community Name:

To enter a Write Community string Select ‘SNMP Write Community name’ option, the Host module responds with the current setting, **Default is public.**

SNMP Write Community name: public
Enter Write Community Name:

SNMP Enable

To make changes to the Baytech device or receive traps, the SNMP function must be enabled. Selecting the ‘SNMP Enable’ option, the Host module responds, **Default is Enabled.**

SNMP is ENABLED. Enable? (Y/N):

Network Port Configuration

This allows access to the menu to change such options as the IP Address, Subnet Mask, Gateway, DHCP, and Telnet; all of which are necessary during initial startup. The Connection Inactivity Timeout allows you to enable/disable whether the firmware ends your session or “times out.” Disabling the Carriage Return Translation allows you to bypass all unnecessary carriage returns, and it will send you straight to the next “end of line.”

```

Network Configuration
IP Address:  0.0.0.0
Subnet Mask: 0.0.0.0
Gateway:     0.0.0.0
Ethernet Address: 00.C0.48.06.57.4C
Connection Inactivity Timeout (mins): Disabled
Carriage Return Translation: Disabled
Break Length (msecs): 350
DHCP is Disabled      Bootp is Enabled      Telnet is Enabled
IP Address.....1 Ethernet port IP Address 0.0.0.0
Subnet Mask.....2 Tells when to listen
Gateway Address.....3 Router/Hub/Switch IP Address 0.0.0.0
Inactivity Timeout.....4 Set timeout, in minutes (<=120,0=disable)
Carriage Return Translation.....5 Enable/Disable
Break Length.....6 Set in milliseconds (<=10000, 0=disable)
Bootp.....7 Enable/Disable
DHCP.....8 Enable/Disable
Telnet.....9 Enable/Disable
Exit.....X,CR
    
```

IMPORTANT: For network access, you must configure the IP addresses, Subnet Mask, and Gateway Address. The module must be reset for network changes to take effect.

IP Address

The IP address is the network address assigned by your network manager for your network. The IP Address consists of four bytes, each byte ranging from 0 to 255. This parameter must be programmed before the Host Module may be accessed via the network.

Enter IP address in dotted decimal form :

Enter the Module IP Address (Example: 200.4.3.50), followed by <cr>. The Host Module resumes the configuration menu. **Default Module IP Address is 0.0.0.0.** If you fail to enter the Module IP Address in dotted decimal form, the Host Module responds again:

Enter IP address in dotted decimal form :

The Host Module responds indefinitely with the same request until the Module IP Address is entered in the correct form.

NOTE: There should be no active connections while configuring the Host Module. The unit should be reset upon completion of configuration.

Subnet Mask

The Subnet Mask is a bit mask that identifies the network portion of the IP address, allowing the Host Module to determine whether to send a packet directly to the client or to a gateway. The Subnet Mask consists of four bytes, each byte ranging from 0 to 255. **This parameter must be programmed before the DS-Series can be accessed through the network.**

Enter the Subnet Mask (Example: 255.255.255.0), followed by <cr>. The Host Module resumes the configuration menu. **Default Subnet Mask is 0.0.0.0.** If you fail to enter the Subnet Mask in dotted decimal form, the Host Module responds again:

Enter Subnet Mask in dotted decimal form :

The Host Module responds indefinitely with the same request until the Subnet Mask is entered in the correct form.

Gateway

The Gateway is the address of a router for connection to their networks. The Gateway address consists of four bytes, each byte ranging from 0 to 255. If your network uses gateways, this parameter must be programmed before the Host Module can be accessed through a network. Enter the Gateway address (Example: 200.4.5.50), followed by <cr>. **Default Gateway address is 0.0.0.0.** If you fail to enter the Gateway address in dotted decimal form, the Host Module responds again:

Enter Gateway address in dotted decimal form :

The Host Module responds indefinitely with the same request until the Gateway address is entered in the correct form.

Inactivity Timeout

When this option is enabled, the Host Module will automatically disconnect, if there is no activity, after the programmed amount of time. **Default is 0 (disabled).** The enabling input can be from 1 to 120 minutes.

Connection Inactivity Timeout is 0 minutes
Enter timeout, in minutes (<=120, 0 to disable) :
Enter 0 to disable or a number between 1 and 120 (inclusive) to set the timeout.

Carriage Return Translation

Press “Y” to enable the Host Module Telnet processor to strip line feeds or nulls **Translation** which follow carriage returns. Press “N” to allow the characters to pass through and press <cr> to leave this option unchanged. **Default is “disabled”.**

Carriage Return Translation is.... Enabled
Enable ? (Y/N), CR for no change) :

Break Length

Users may configure the Host Module for a break length of 1 - 1000 milliseconds. When a user, running a Telnet session with the Host and connected to a serial port on a DS74, sends a Telnet break command (0xF3) to the Host Module, the serial port will send a break signal of the programmed duration. **Default is 350 milliseconds.**

Break Length is (msec)..... 350
Enter break length, in milliseconds (<=10000, 0 to disable) :

DHCP/Telnet/BootP

Dynamic Host Configuration Protocol (DHCP) is a communications protocol that lets network administrators manage centrally and automate the assignment of Internet Protocol (IP) addresses in an organization's network. **Default setting is disabled.**

DHCP is.....Disabled
Enable ? (Y/N), CR for no change) :

Telnet is a user command and an underlying TCP/IP protocol for accessing remote devices. On the Web, HTTP and FTP protocols allow you to request specific files from remote computers, but not to actually be logged on as a user of that computer. **Default setting is enabled.**

NOTE: Changing this setting will logout all SSH and Telnet sessions

Telnet is.....Enabled
Enable ? (Y/N), CR for no change) :

Bootstrap Protocol (BOOTP) is a protocol that enables the unit to obtain an IP Address from a BOOTP server. **Default setting is enabled.**

BOOTP is.....Enabled
Enable ? (Y/N), CR for no change) :

Unit ID

This option allows the admin users to change the Host Module's name.

Unit ID is: DS72
Enter Unit ID (64 chars max).
: DS72 Desk Test

Upgrade Firmware

Currently, While this option is available, the DS72 upgrades it's firmware through removable EPROMS.

```
Upgrade Firmware.....1    allow the firmware to be updated via ftp
Set FTP User Name.....2    Name used by FTP program to login
Set FTP User Password.....3 Password used by FTP program to login
Exit.....X,CR
```

Select 1), to Enable Firmware Upgrade, the Host Module responds:

```
Upgrade will terminate all other processes until
code upload is complete and unit is reset.
Have new firmware file ready at workstation before proceeding.

Do you wish to continue? (Y/N):y
```

IMPORTANT: Do not type 'Y' unless you have received the instructions and firmware from Baytech's Technical Support. If you typed 'Y' and see the following below, turn power off than back on to the unit to close the firmware upgrade.

```
Ready to upload code file.
User logged off.
```

If you selected this option by mistake, to get out of this option power the unit off and on. Pressing <cr> and the module respond with "**DS72 Ready**"

Select 2), to enter the FTP name, the module responds:

```
Enter username (<= 9 characters)>
```

NOTE: The name and password is part of the user/password used by the FTP program to access the module.

Select 3) to enter the FTP password, the module responds:

```
Enter old password (CR if none)>
Enter new password (<= 9 characters)>
```

If you enter an incorrect "old" password the module will continues to request for the "old" password.

```
Confirm by re-entering new password>
Password change successful.
```

Active Restore

When the no activity timer is set, after a predetermined time, an internal program restores the communications links to all ports. Selecting this option and the Host Module responds:

Active restore is.....Enabled
 Enable ? (Y/N, CR for no change) :

RPC Management

These options are independent of the power strip's Alarm Thresholds. It is through these settings that the DS72 SNMP agent will send a (trap) to the designated SNMP Manager.

This allows you to set the temperature, voltage and current threshold alarms for the unit remotely without ever entering the firmware of the RPC itself as shown.

```

Host-controlled RPC Feature Configuration
Temperature Alarm Threshold....1   Enter value in tenths of unit measurement
Multiple Strip Current Monitor..2   Sets alarm values for RPC strips
Under Voltage Alarm Threshold...3   Enter value in tenths of a voltage
Over Voltage Alarm Threshold....4   Enter value in tenths of a voltage
Low Current Alarm Threshold.....5   Enter value in tenths of an amperage
Environmental Sensors.....6        sets threshold and enable/disable probes
    
```

If you receive the following message, the SNMP query is not being received from the RPC units.

None of the installed devices support this option.
 Strike ENTER to continue

Temperature Alarm Threshold

Select 1), Temperature Alarm Threshold and the Host Module responds:

```

Sel M/P  Identifier  Tmp Lvl  Sel M/P  Identifier  Tmp Lvl
1  2/1  rpc14      500    2  5/1  DS-RPC      500
Enter Request :1
    
```

NOTE: M/P = Module number and Port number; Identifier should be this unit model number; Tmp Lvl = temperature level. The unit's firmware determines whether the degrees are Celsius or Fahrenheit. Currently there is no option to change the degrees.

Type #1 for the selection, press <cr> and the Host Module responds:

Enter threshold value in tenths of unit measurement (degrees,%,etc.):

Multiple Strip Current Monitor

Sets Current Levels

Under Voltage Alarm Threshold

Select 3), Under Voltage Alarm Threshold and the Host Module responds:

DS72 Host Module

Sel	M/P	Identifier	Lo V Lvl	Sel	M/P	Identifier	Lo V Lvl
1	2/1	rpc14	900	2	5/1	DS-RPC	900

Enter Request :1

Type #1 for the selection, press <cr> and the Host Module responds:

Enter voltage threshold value in tenths of a volt:

Over Voltage Alarm Threshold

Select 4), Over Voltage Alarm Threshold and the Host Module responds:

Sel	M/P	Identifier	Hi V Lvl	Sel	M/P	Identifier	Hi V Lvl
1	2/1	rpc14	1300	2	5/1	DS-RPC	1300

Enter Request :1

Type #1 for the selection, press <cr> and the Host Module responds:

Enter voltage threshold value in tenths of a volt:

Low Current Alarm Threshold

Select 5), Low Current Alarm Threshold and the Host Module responds:

Sel	M/P	Identifier	Low Curr	Sel	M/P	Identifier	Low Curr
1	2/1	rpc14	0	2	5/1	DS-RPC	0

Enter Request :1

Type #1 for the selection, press <cr> and the Host Module responds:

Enter low current threshold value in tenths of an amp:

Environmental Sensors

Select 6), Environmental Sensors with no environmental probes are attached the Host Module responds:

None of the installed devices support this option (no temperature probes installed).
Strike ENTER to continue

If you have environmental probes attached the Host Module responds:

Environmental Sensor Configuration Menu
Sel M/P Identifier
1 2/1 RPC3ADE
2 All Sensors
Enter Request :1

DS72 Host Module

Selection 1), the Host Module responds:

Sel	Type	Name	Hi/En	Lo/En	St/En
1	Contact	External Sensor1	N/A	N/A	Ds
2	Contact	External Sensor2	N/A	N/A	Ds

Enter Request :1

Select the probe port to enable or disable the SNMP change trap, the Host Module responds with the change.

Selected State Change Trap is..... Disabled					
Enable ? (Y/N), CR for no change) :y					
Sel	Type	Name	Hi/En	Lo/En	St/En
1	Contact	External Sensor1	N/A	N/A	En
2	Contact	External Sensor2	N/A	N/A	Ds

Enter Request :

Select 2), from the Environmental Sensor Configuration Menu allows the administrator to identify the probe type, the Host Module responds

For configuration of all sensors of selected type in system with a single user-supplied value.	
1...Contact	
2...Temperature	
3...Humidity	
4...Air Flow	
Enter Request :1	
Selected State Change Trap is..... NP	
Enable ? (Y/N), CR for no change) :	
Enter Request :2	

Select 2), from the probe type menu allows the administrator to set the High and Low Temperature range. Option 2 and 4 will enable/disable their corresponding SNMP traps.

RPC/RPS External Environmental Sensor Configuration Menu	
Sensor Number: All Name: all RPCs/RPSs Type: Temperature	
1...High Threshold (tenths of meas. unit): NP	
2...High Threshold Trap Enable: NP	
3...Low Threshold (tenths of meas. unit): NP	
4...Low Threshold Trap Enable: NP	
Enter Request :	

Select 3), from the probe type menu allows the administrator to set the High and Low Humidity range. Option 2 and 4 will enable/disable their corresponding SNMP traps.

DS72 Host Module

RPC/RPS External Environmental Sensor Configuration Menu
Sensor Number: All Name: all RPCs/RPSs Type: Humidity

- 1...High Threshold (tenths of meas. unit): NP
- 2...High Threshold Trap Enable: NP
- 3...Low Threshold (tenths of meas. unit): NP
- 4...Low Threshold Trap Enable: NP

Enter Request :

Select 4), from the probe type menu allows the administrator to set the High and Low Air Flow range. Option 2 and 4 will enable/disable their corresponding SNMP traps.

RPC/RPS External Environmental Sensor Configuration Menu
Sensor Number: All Name: all RPCs/RPSs Type: Air Flow

- 1...High Threshold (tenths of meas. unit): NP
- 2...High Threshold Trap Enable: NP
- 3...Low Threshold (tenths of meas. unit): NP
- 4...Low Threshold Trap Enable: NP

Enter Request :

Host Module responds with the new values.

NOTE: the values are given in tenth of a degree, so the below values are 9.9 degrees for the high value and 6.0 degrees for the low value.

RPC/RPS External Environmental Sensor Configuration Menu
Sensor Number: All Name: all RPCs/RPSs Type: Temperature

- 1...High Threshold (tenths of meas. unit): 99
- 2...High Threshold Trap Enable: Enabled
- 3...Low Threshold (tenths of meas. unit): 60
- 4...Low Threshold Trap Enable: Enabled

Enter threshold value in tenths of unit measurement (degrees,%%,etc.):

NOTE: Selecting the values for the Humidity and Air Flow is the same the Temperature options.

Status

The option gives the current network status. The Host Module displays the following:

```
DS-72 Status Menu.  
Enter selection, CR to exit.  
 1)...System  
 2)...Network Interface  
 3)...Logged Users  
Enter Request :1
```

System

DS72 Host Module

```
System Status:
  Available local memory (512 byte buffers): 16
  TCP sockets in use:0
  System up time (dd:hh:mm:ss):1:04:43:19
  Available malloc memory: 32740
  Strike CR to continue.
```

Network Interface

```
Network Status:
  Medium status: fault
  Medium faults: 0
  Xmit bufr errs: 0
  Available net buffers: 37
  Receive queue status: open
  Rev bufr errs: 1623
  Strike ENTER to continue
```

Logged Users

```
Active Users:
  User Address      Internal Conn  Status User Name
  1 * RS-232 Port          +      admin
  Strike "T", CR to terminate a session, CR to continue :
```

Unit Reset

IMPORTANT: Unit reset terminates both internal and external modem connections.

NOTE: You must be connected to the DS71-MD4 module to reset the unit. Resetting the unit does not return user selections to their default settings.

Select "Reset Unit" followed by <cr>. The module resets the unit and displays:

```
Reset the unit (Y/N)?:y
```

Allow approximately 10 seconds for the unit to reset. It should state something similar to:

```
Initializing System Please Wait .....
```

Troubleshooting:

Functional Solutions:

1. **No menu serial port:**
 - a. DS power is on and cable connected to EIA232 serial port.
 - b. Verify the cable and adapter has the correct pin out, RJ08X007 and 9FRJ45PC-1.
 - c. Cisco Rollover cables have the same pin out as RJ08X007.

- d. Type 5(;), the Attention Character will not echo to the screen, if it does than it may have been changed to a character other than the semi-colon.

2. No Menu Ethernet Port:

- a. Note what the CX LED is doing, refer to Appendix C.
- b. Verify the Ethernet port is connected to your network via an Ethernet cable. The LINK LED is lit for a valid connection.
- c. Type 5(;), semi-colon, the Attention Character will not echo to the screen, if it does print or **Unknown character** than type each character on the keyboard 5-times until you discover the Attention character, else reset unit configuration.

3. Password not Work:

- a. Password is case sensitive, check for Caps Lock.
- b. Have the admin user delete the user and add back
 - i. Refer to DS Configuration/User Management 'Delete a User' and 'Add a User' section.
 - ii. Refer to Network Access Configuration/Login Setup/Manage Users

4. Network session locks up:

- a. More than 4 sessions are open, close one session.

5. No Access to Configuration Menu:

- a. Only one user at a time can have access. Have the other user back out of the configuration

6. No Outlets displayed for User:

- a. Outlets have to be assigned to the user, refer to 'DS Configuration User Management Assigned Outlets' section.

7. Not able to PING unit:

- a. Verify unit connected correctly to network.
- b. Verify unit network configuration is correct.
- c. In the Network Configuration Status Menu, verify the unit has a valid MAC address. The last six digits of the MAC address are the hexadecimal equivalent of the first eight digits of the unit serial number. (i.e. MAC address = 00:C0:48:0A:B6:59 equals to decimal 702041)

8. Verify DS chassis, Host module, and DS74 is functioning:

A rollover cables (pin out 1-8, 2-7, 3-6, 4-5, 5-4, 6-3, 7-2, 8-1) and a 9-pin adapter (9FRJ45PC-1) and Ethernet or Modem cable.

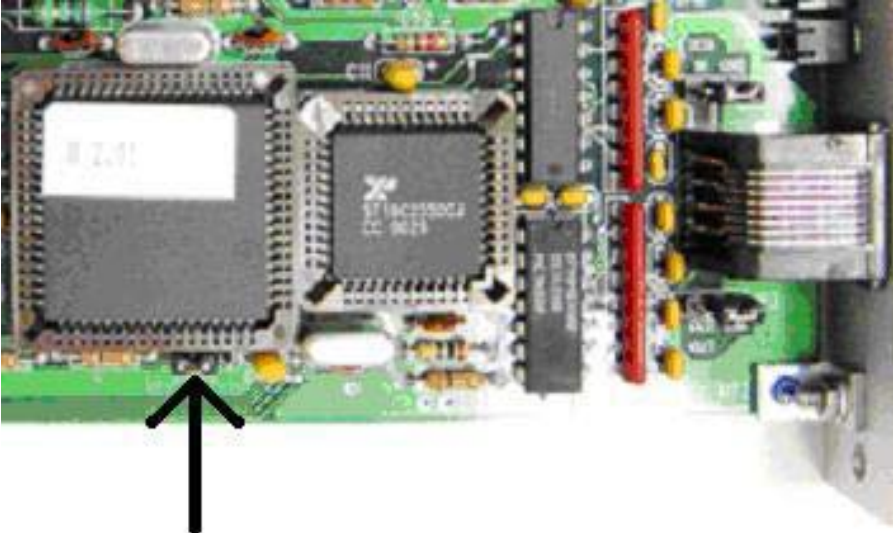
- a. Set up the Host module with modem or Ethernet cables for normal operations.
- b. Connect the rollover cable and adapter from the PC to a DS74 port.
- c. Create a Modem/Ethernet session, (Hyper-terminal). Type semi-colon 5-times (; ; ; ; ;).
- d. The main menu should display the DS74 ports. Select the port connected to the PC from step 2. The cursor will move to next line and wait.
- e. From your PC create a terminal session to the serial port. Default setting is 9600, 8, 1, no parity, no flow.
- f. Type several random characters to see them echoed in the telnet/modem session.
- g. Select the telnet/modem session and type several random characters to see them echoed in the PC serial session.
- h. This verifies the Chassis, Host module, and the I/O port is working.
- i. Move pc cable to next DS74 port and repeat steps (c-h).

DS72 Factory reset Procedure

1. Remove the module from the chassis (with the unit powered down).
2. Hold the module with the chip side up and the faceplate towards you.
3. Locate jumper JP1.
4. Move the jumper from pins 1 and 2 to pins 2 and 3.
5. Put the module back in the chassis and power up for 15 seconds.
6. Take the module back out and replace the jumper to the original position.

The module will now be reset to factory default.

DS72 Host Module



DS72 External Modem Configuration

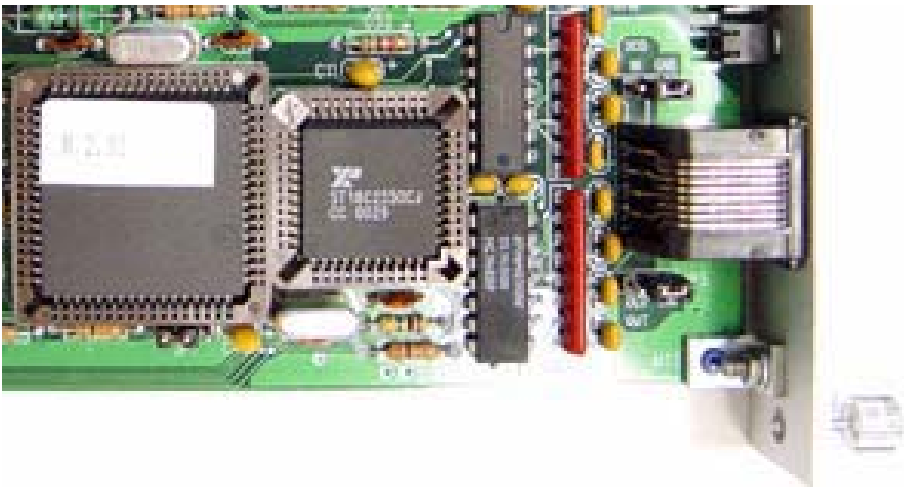
The DS72 network controller module can be controlled remotely by an external modem. To achieve this level of access please follow the instructions listed below.

DS72 Setup

The DS72 needs the DCD configured properly to work with an external modem.

To configure the DCD:

1. Power down the DS base unit.
2. Remove the DS72 network controller.
3. While holding the face plate in your right hand locate the EIA-232 port.
4. Locate where the EIA-232 port connects to the PC board of the DS72.
5. Locate the DCD In/Out jumpers on either side of the EIA-232 port.
6. Move the DCD In jumper from GND to DCD In. See Figure 1
7. Place the DS72 controller back into the base unit.
8. Power up the base unit.



External Modem Setup

The external modem has to have a certain configuration for it to function properly with the DS72.

Verify the following Configuration:

1. Data Terminal Ready (DTR) Normal
2. Verbal Result Codes
3. Suppress Result Code
4. No Echo
5. Auto Answer 1st Ring
6. Carrier Detect (CD) Normal
7. Load NVRAM Defaults
8. Smart Mode

Cabling

Make sure that the proper cabling is being used to connect the external modem to the serial port on the DS72. In most cases the combination of the 25MRJ45MD-6 adapter and the RJ08X007 cable is needed. If you have any questions about cabling please contact the BayTech Support team at **800.523.2702** or at support@baytech.net.

BayTech Product Warranty

Bay Technical Associates (BayTech) warrants that its products will be free from defects in materials and workmanship under normal use for a period of two years from date of purchase (or from date of shipment from BayTech if proof of purchase is not provided).

During this warranty period, BayTech shall, at its discretion, either repair or exchange any defective product at no charge for labor and materials, or refund the amount paid for the product, less shipping and handling charges. Any replacement and/or repaired products are warranted for the remainder of the original warranty.

The customer is responsible for properly packaging the product and for shipping costs for returns. The customer is liable for loss or damage to the product during shipping, as well as any other fees or charges associated with transporting the product back to BayTech. BayTech will pay return costs for delivery within the Continental United States.

All repair and return shipments must be approved by BayTech and must be accompanied by an RA (return authorization) number. Please refer to our Repair and Return Policy below.

For the initial 30 days from the original date of shipment, any unopened product may be returned to BayTech, accompanied by an RA number. Full purchase price will be refunded, provided that the product is in excellent condition. A product may not be returned after 30 days from the original date of shipment unless approved by BayTech management.

Replacements for defective products may be cross-shipped to the customer at no cost if requested within 30 days of date of purchase. At BayTech's discretion, this period may be extended to 90 days. For additional information or more specific warranty issues, contact BayTech's Technical Support Department at **(800) 523-2702** or **(228) 563-7334**.

Exceptions

This warranty does not cover misuse or minor imperfections that fall within design specifications or that do not materially alter functionality. BayTech does not warrant and is not responsible for damages incurred in shipping and handling or caused by disasters (such as fire, flood, wind, earthquake, lightning, power surges or water).

The warranty will be voided regarding products that have been neglected, altered, abused, misused, or used for purposes other than those for which it was designed.

Under no circumstances shall BayTech be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include (but are not limited to) loss of profits, loss of the product or associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

BayTech Extended Warranty

Extended warranties and overnight replacements are available for purchase, but only at the time of product purchase. The extended warranty cost will not exceed 7% per year of the product list price unless otherwise stated in the customer contract or approved by BayTech management. Contact BayTech for further details on this.

Technical Support

BayTech offers Tech Support for the lifetime of the product. A staff of Applications Engineers is on duty to assist with installation, set up or operation issues. Support is available from **8:00 a.m. to 5 p.m.** (CST or CDT), Monday through Friday at the phone numbers or website provided below.

Please have the following information available to help the Applications Engineers answer questions efficiently:

1. BayTech model type
2. Unit serial number
3. Firmware version (if accessible)
4. A list of devices connected to the BayTech unit
5. A general description of the application being used and the intended outcome
6. Information about cables and adapters being used (type, length, place of purchase)
7. The name of the software emulation program being used
8. Printout of the configuration status (if possible)

Bay Technical Associates, Inc.
5239 A Avenue
Long Beach Industrial Park
Long Beach, MS 39560
Telephone: 800-523-2702 or 228.563.7334
FAX: 228.563.7335
Email: support@baytech.net
Website: www.baytech.net

Repair and Return Policy

(Return policy refers to BayTech products purchased and returned for credit or repair.)
A Return Authorization (RA) number must be obtained in all cases before returning the BayTech product. Have the serial number and reason for the return or description of the problem handy. Customers in the Continental U.S. can call 1-800-523-2702 or international customers can call 228.563.7334 to obtain an RA number.

If a product is being returned for credit (based on BayTech approval), the credit will not include shipping and handling charges. Determination of credit amount will be made after BayTech receives the product.

Returns on BayTech products older than 3 months are subject to a 15% re-stocking fee of the list price of the product and will be evaluated on a case-by-case basis. BayTech does not allow returns on products out of warranty or for any type of custom product.

Before dismantling equipment or returning the unit for any reason, always contact BayTech. Attempting to repair a product without BayTech authorization may result in voiding the warranty.

Follow the instructions below for repackaging and shipping. **NOTE: Power should be disconnected from the power source before servicing or dismantling.**

Return Authorization Process:

1. Contact BayTech to get a Return Authorization (RA) Number. **IMPORTANT:** *BayTech will not accept any returns without an RA number.*
2. Package the unit carefully in its original packaging or similar packaging. The warranty does not cover damage sustained during shipment. Enclose a letter with name, address, RA number, daytime phone number and description of the problem.
3. Mark the RA number clearly on the outside of the package.

NOTE: If the RA number is not on the outside of the box, the package will be returned back to the sender or will sit in Receiving until the customer calls in regarding status of RA.

4. Ship the unit by insured, prepaid carrier to the following address:

**Bay Technical Associates
5239 A Avenue
Long Beach Industrial Park
Long Beach, MS 39560
RA #: 140-xxxxx**

5. Surround your unit with a minimum of two inches of insulation.
6. Be sure to seal the box securely with strapping or packing tape. We do not recommend masking tape or cellophane tape.