

# TECHNICAL INFORMATION BULLETIN

## RUNNING MX REMOTE VIA THE ETHERNET

### USING ONE OR TWO LANTRONIX UDS-10 INTERFACES

#### 1. INTRODUCTION

This TIB details the use of MXRemote using Lantronix UDS-10 Interfaces.

When using Lantronix UDS-10 devices to run MXRemote over a network, there is a restriction on the number of devices that can be addressed.

There is a table that is generated during installation that associates virtual COM ports with IP addresses of the remote Lantronix boxes.

When a COM port is selected for MXRemote, the Lantronix software redirects the COM port to an IP address using the table.

Although the Lantronix is capable of handling up to 80 ports, the communications library that is used in the MXRemote software is only capable of using ports 1 to 4.

The only way of accessing more than 4 remote devices at the moment would be to edit the redirection table at run time to change the COM port to IP address mapping.

The actual number of Lantronix boxes that can be supported without editing the table is 4 – the number of physical ports on the PC.

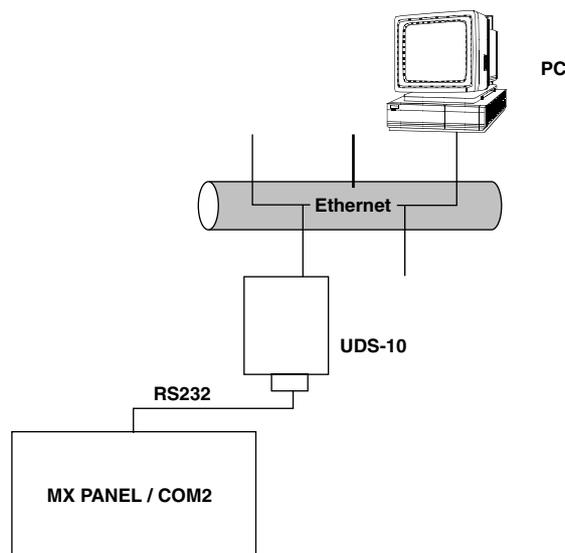
*Note:*

1)When using MXRemote, the connection to the network is not monitored by the MXRemote software and will not flag when the connection is lost.

2)If there are problems using the Device Installer, use the Hyperterminal method.

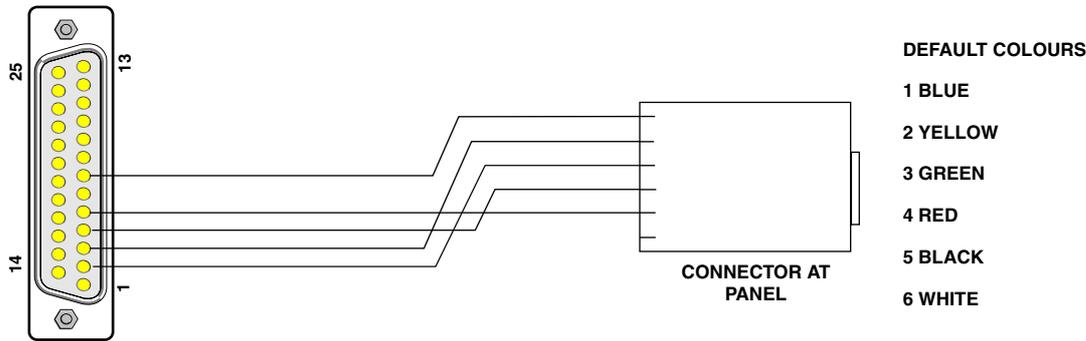
#### 2. RUNNING MXREMOTE VIA A SINGLE LANTRONIX UDS-10 INTERFACE

##### 2.1 HARDWARE CONNECTION



**Fig. 1 Hardware Connection**

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25 PIN MALE AT UDS-10

**Fig. 2 RS232 Connection**

The connection between the panel and the UDS-10 requires a null modem (not supplied) if a standard panel download lead is used. The RS-232 connector on the UDS-10 is 25-pin female. The UDS-10 may be powered from the panel's 24V supply or by its own power supply.

## 2.2 UDS-10 SETUP PROCEDURE

### 2.2.1 SOFTWARE INSTALLATION

Install DeviceInstaller and Redirector from the Lantronix CD provided with the UDS-10.

#### 2.2.1.1 Install The Device

Connect the UDS-10 to the panel and network as shown in Fig. 1.

Run DeviceInstaller.

- a) Click Search.
- b) The UDS-10 should appear in the list of devices. If more than 1 device appears, the Hardware Address will identify the unit. The Hardware Address is printed on the label on the UDS-10.
- c) If the unit cannot be found, click Assign IP. Enter the Hardware Address and click OK. Select either Obtain IP address automatically or Assign a specific IP address depending on the network in use. For details, see the network administrator for the network you are using.

*Note: If a 'Fatal Error 01' condition exists, refer to the attached TIB037SWH06.*

- d) Highlight the UDS-10 in the list and click Telnet.
- e) Ensure that Port is set to 9999 and click OK.
- f) When the new window opens, an output similar to the following will be displayed:

```
*** Lantronix Universal Device Server ***
Serial Number 0439724 MAC address 00204A049B2C
Software version V5.8.0.1 (041112) LTX
```

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Press Enter for Setup Mode.

Press Enter within 5 seconds or telnet will exit.

- g) Enter 0.
- h) IP address = address assigned previously.
- i) Set Gateway IP Address = Refer to the Network administrator.  
For simple networks, Set Gateway IP Address = N.
- j) Netmask = to the Network administrator.  
For simple networks, Netmask = 0.
- k) Change telnet config password = N.
- l) When the main menu is displayed again, select 1.
- m) Baudrate = 115200.
- n) I/F Mode = 4C.
- o) Flow = 0.
- p) Port No = 10001.
- q) ConnectMode = C0.
- r) Auto increment source port = N.
- s) Remote IP address = 0.0.0.0.
- t) Remote Port = 0.
- u) DisConnMode = 0.
- v) FlushMode = 0.
- w) DisConnTime = 00:00.
- x) SendChar 1 = 00.
- y) SendChar 2 = 00.

When the main menu is displayed again, select 9 Save and exit.

Run the device Redirector.

- a) Click AddIP.
- b) Put the IP address from the installer into the Host field in the form 10.123.21.4.
- c) Enter 10001 in the TCPPort field and click OK.
- d) Click COM setup and check the box next to the field that you will tell MXRemote to use (currently only COM1 to COM4) and click OK.
- e) Select this port in the Redirect field.
- f) Click Port settings, check Raw mode and set Connection Timeout = 7. Click OK.

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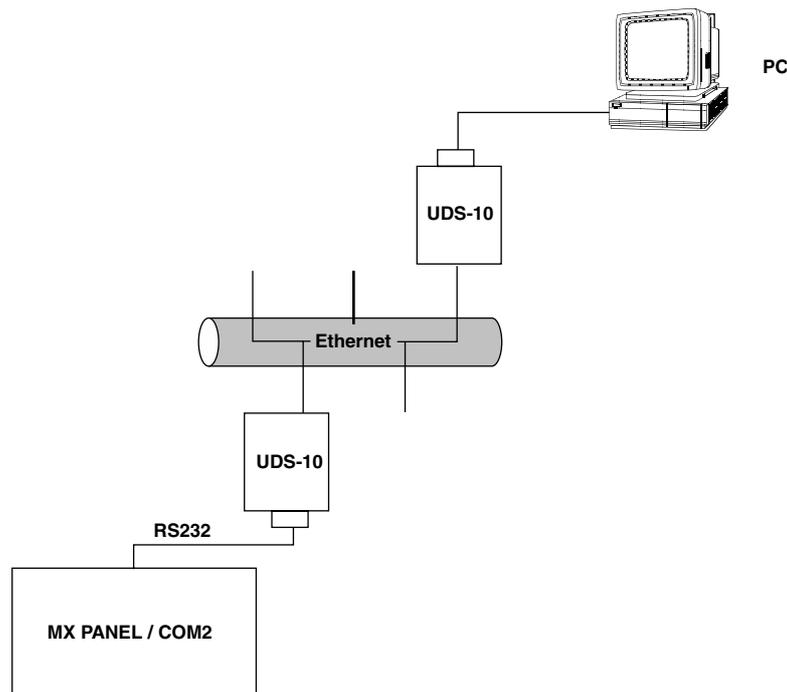
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g) Close and save the settings.

Run MXRemote and connect through the port selected in step e).

## 3. RUNNING MXREMOTE VIA TWO LANTRONIX UDS-10 INTERFACES

### 3.1 HARDWARE CONNECTION



**Fig. 3 Hardware Connection**

The connection between the panel and the UDS-10 requires a null modem (not supplied) if a standard panel download lead is used.

The RS232 connection between the PC and the UDS-10 also requires a null modem cable (not supplied). The RS-232 connector on the UDS-10 is 25-pin female.

The UDS-10 at the panel may be powered from the panel's 24V supply or by its own power supply.

### 3.2 UDS-10 SETUP PROCEDURE

#### 3.2.1 UDS-10 AT THE PC END

- Connect the UDS-10 at the PC end to the PC using the serial cable.
- Power off the UDS-10.
- Run a terminal emulator on the PC. (e.g.: Hyperterminal).
- Hold down the x key on the keyboard and power on the UDS-10.

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- e) When the UDS-10 responds, press Enter within 5 seconds.
- f) Enter 0.
- g) IP address = IP Address to be used for this UDS-10. Refer to the network administrator for details.
- h) Set Gateway IP Address = Refer to the Network administrator.  
For simple networks, Set Gateway IP Address = N .
- i) Netmask = refer to the Network administrator. For simple networks, Netmask = 0.
- j) Change telnet config password = N.
- k) When the main menu is displayed again, select 1.
- l) Baudrate = 115200.
- m) I/F Mode = 4C.
- n) Flow = 0.
- o) Port No = 10001.
- p) ConnectMode = C0.
- q) Auto increment source port = N.
- r) Remote IP address = 0.0.0.0.
- s) Remote Port = 0.
- t) DisConnMode = 0.
- u) FlushMode = 0.
- v) DisConnTime = 00:00.
- w) SendChar 1 = 00.
- x) SendChar 2 = 00.

When the main menu is displayed again, select 9, Save and exit.

### 3.2.2 UDS-10 AT THE PANEL END

- a) Connect the UDS-10 to be used at the panel end to the PC using the serial cable.
- b) Power off the UDS-10.
- c) Run a terminal emulator on the PC. (e.g.: Hyperterminal).
- d) Hold down the x key on the keyboard and power on the UDS-10.
- e) When the UDS-10 responds, press Enter within 5 seconds.
- f) Enter 0.
- g) IP address = IP Address to be used for this UDS-10. Refer to the network administrator for details.
- h) Set Gateway IP Address = Refer to the Network administrator.

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For simple networks, Set Gateway IP Address = N .

- i) Netmask = refer to the Network administrator.  
For simple networks, Netmask = 0.
- j) Change telnet config password = N.
- k) When the main menu is displayed again, select 1.
- l) Baudrate = 115200.
- m) I/F Mode = 4C.
- n) Flow = 0.
- o) Port No = 10001.
- p) ConnectMode = 05.
- q) Auto increment source port = N.
- r) Remote IP address = the IP address of the other UDS-10.
- s) Remote Port = 10001.
- t) DisConnMode = 0.
- u) FlushMode = 0.
- v) DisConnTime = 00:00.
- w) SendChar 1 = 00.
- x) SendChar 2 = 00.

When the main menu is displayed again, select 9 Save and exit.

### 3.3 RUNNING MXRemote

Connect the UDS-10 boxes as shown in Figs. 2 or 3. Run MXRemote in an identical way to using a simple RS232 connection between the PC and panel.

### 3.4 RUNNING MXGraph

It is possible to run MXGraph using this configuration. The baudrate in the configuration sections above must be set to 9600 and the RS232 connection from the UDS-10 should be to the normal port that is used for MXGraph.

*Note: If a network has a fault or suffers very low bandwidth, it may cause unwanted faults to be reported on the fire alarm network.*

JM/bp

11<sup>th</sup> October 2006

## TFS EMEA Technical Support Services Software House TIB037SWH06

### Procedure to Recover Lantronix UDS-10/100 from “Fatal Error 01” Condition

Date of issue: January 2006  
Text Reference: TAB2006-01

**Purpose:** To resolve issues where hackers gain access to your Lantronix UDS-10/100 terminal server resulting in the MAC Address of the device getting changed.

**Solution:**

1. Unplug the units from power, Ethernet, and serial cable
2. remove the cover by removing the two side screws and the two lock nuts on the DB25 connector
3. connect the serial cable from your PC's COM port to the DB25 using a metal paper clip, short CON4 (by the DB25 connector) pin1 (the square one) to the chassis ground (i.e. DB25 metal shield) Mini Rev2 = CON5, FL = CON9, Micro = CON5
4. reconnect the power
5. will get the following prompt on your HyperTerminal (9600, 8, n, 1):  
\*\*\* Lantronix universal test program 4.41 \*\*\*
6. holding 'm' key down, will get the following prompt:  
Press Enter !!!
7. hit Enter
8. will get the following prompt:  
\*\*\* Lantronix universal test program 4.41 manual version\*\*\*

Functions of manual Test procedure :

- 1 manual test
- 2 serial firmware download
- 3 network firmware download
- 9 exit

Your choice ?

9. select 1 manual test
10. prompted with:  
Type Byte is xx  
Serial number is: xxxx-xxx  
[or no serial number assigned]  
Reload Serial Number <N> ?

11. Enter Y

Note: see the procedure for calculating the serial number on page 3 of this document.

12. at Enter Type Byte in Hex : enter the type byte

13. at Enter Serial number : enter the serial number

14. will be prompted with:

Serial number set

Ethernet Hardware Autodetect AUI

\*\*\* Hardware Address: 00 00 00 xx xx xx

15. make sure this address matches the MAC Address on the box

16. answer N to the rest of the questions

Network interface (TPI) test (N/I for interface/Y) ?

Send Firmware Request (N/Y/Autonom/Monit) ?

Expect firmware download on 192.168.15.202

17. will get the following:

.....

18. remove power, remove the paper clip and reboot the unit

19. hold the x key down.

20. unit will boot up into the setup mode

21. make sure the settings are correct,

if not sure select 7 for factory defaults and reset all settings as required.

22. select 9 to save and exit

23. note: set the following to Disabled in the security settings

if you are not using them to lock down the units:

SNMP, TFTP, 77FE, Web server and Telnet

Calculating the test program Serial Number from MAC Address

*Continued on the next page:*



see examples below

MAC address on the UDS-10 units have the following format:

00-20-4A-xx-xx-xx

00-20-4A is preset to company ID number and can not be changed

Type Byte & test program Serial number is calculated from the lower 3 bytes of MAC address.

Test code serial number is represented as a 4 digit and 3 digit decimal numbers derived from the MAC address.

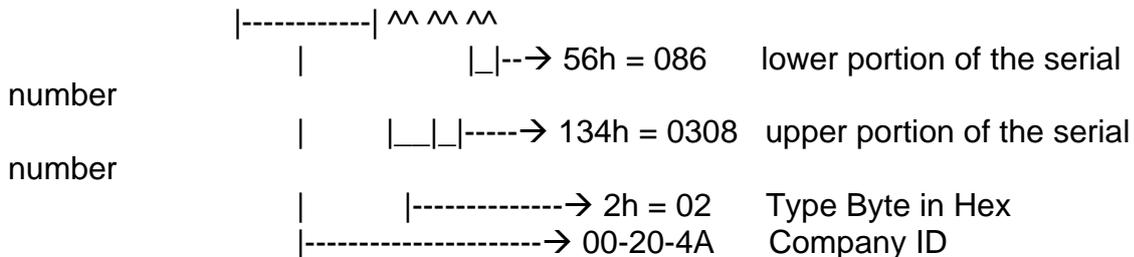
Byte one, lower nibble identifies the Type Byte in Hex

Byte one upper nibble and Byte two are upper part of the serial number in Hex

Byte three is the lower part of the serial number in Hex.

Serial number is entered in the test mode as a decimal number.

MAC Address: 00-20-4A-12-34-56



00-20-4A : company ID

2h: Type Byte code in Hex entered as 02

134h-56h converted to decimal is the serial number needed by the test program in the following 134h = 308 decimal,

56h = 86 decimal

format: xxxx-xxx

=> serial number 0308-086 (requires the dash between the two numbers)

i.e.

MAC Address: 00-20-4A-64-FA-B4 => Type Byte of 4, Serial Number = 1786-180 [6FAh-B4h]

MAC Address: 00-20-4A-68-2B-24 => Type Byte of 8, Serial Number = 1579-036 [62Bh-24h]

MAC Address: 00-20-4A-68-2A-0D => Type Byte of 8, Serial Number = 1578-013 [62Ah-0Dh]



**Contact Details:**

If you have any questions about this technical information bulletin, please contact our Tyco Fire and Security EMEA Technical Support Centre:

Toll Free: +800 CALLTYCO or (+800-2255 8926)  
UK only: 08701-238 787  
Direct: +31 475 352 722  
Fax: +31 475 352 725  
Hours: 9:00 to 18:00 CET  
EET - 1, GMT + 1

[TSPEUROPESUPPORT@tycoint.com](mailto:TSPEUROPESUPPORT@tycoint.com)  
[www.tycosafetyproducts-europe.com/](http://www.tycosafetyproducts-europe.com/)

**Author:** GC-14-February-06