

# **ECU LAN**

## **For the Building Access System or Stand-Alone Applications**

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### **USER MANUAL**



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## Revision History

February 19, 2021	Section 3.5.2 update
October 23, 2020	Display Mapping update
October 20, 2015	Speaker Settings
August 10, 2015	Update screenshots
June 30, 2015	Update to Email Notifications
May 27, 2015	Minor additions to web browser sections
April 28, 2015	BAC Global Provisioning update
February 26, 2014	Added HID Proxy/Keypad Combo to Hardware Installation Section
May 13, 2011	Initial Release

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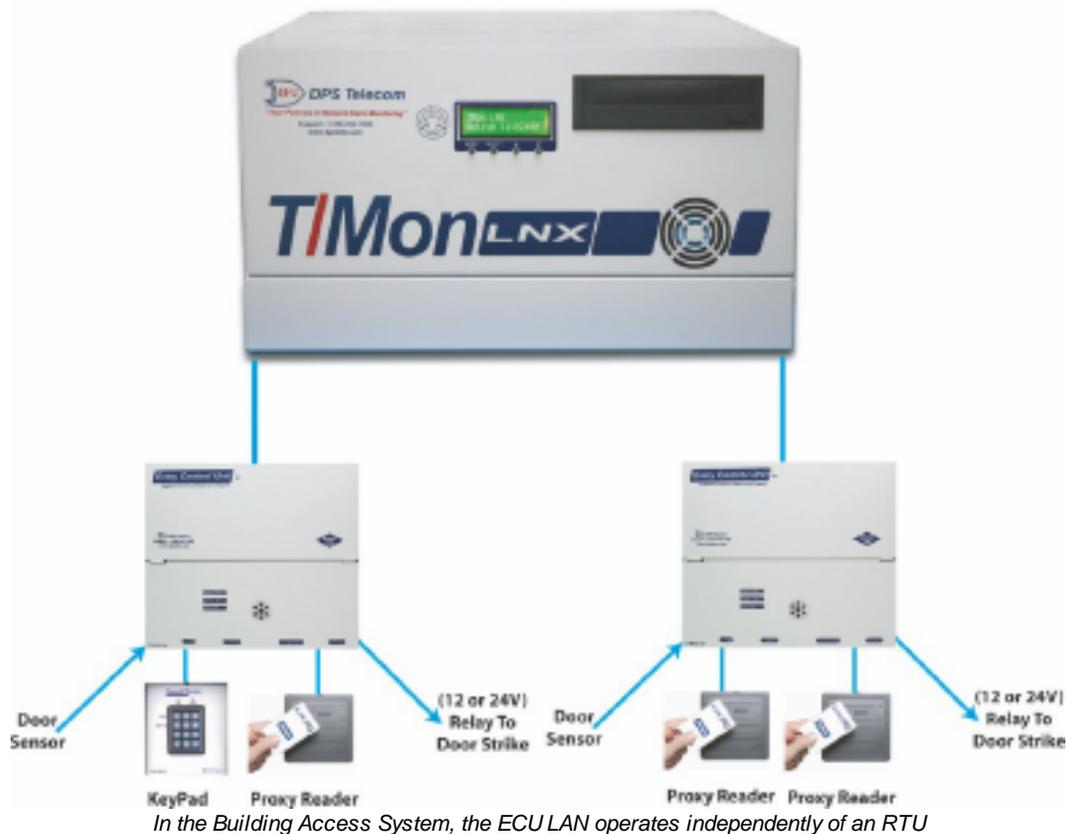
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# 1 Introduction

The Building Access System (BAS) is a comprehensive building entry management system that provides centralized door access control utilizing your existing DPS network monitoring systems. With the system in place, managers can maintain a database of all personnel access as well as the time of day and location that access was granted.

Building access functionality typically requires an RTU to report to T/Mon and locally process entry requests made through an entry control unit (ECU). The ECU LAN, however, grants or denies access on its own, performing both the RTU and ECU functions of the traditional DPS building access environment. It communicates directly with T/Mon to retrieve and report access data, stores its own access data locally, and issues control logic for a single door.

## BAS Functional Diagram with ECU LAN

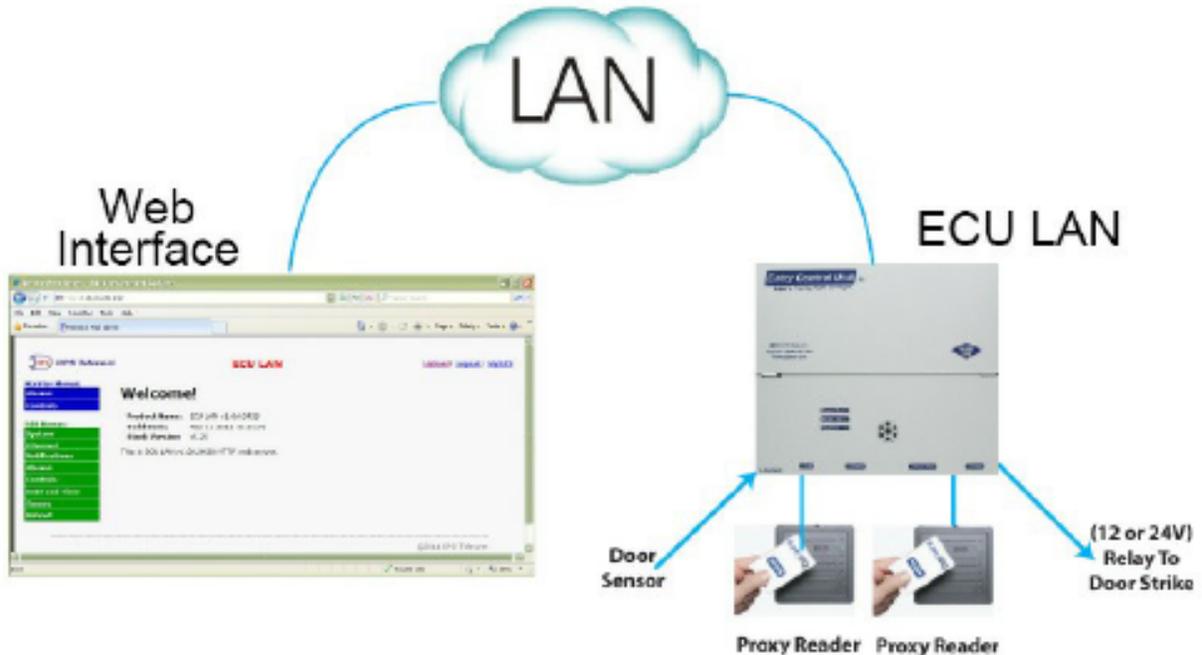


With the ECU LAN, you can cheaply and easily add individual doors to your building access system to control building access at small sites where you don't have or need an RTU. This allows you to extend building access functionality to sites that would've otherwise been unmonitored or controlled by a completely separate system.

The ECU LAN:

- Controls and regulates a single door entry point.
- Stores entry data and access permissions locally so your site functions independent of the master.
- Supports both keypad and proxy card entry methods.
- Supports a dual proxy reader build option.
- Is configurable through simple TTY and Web Browser interfaces
- Can run in stand-alone mode for applications without T/Mon

## ECU LAN Stand-Alone Diagram



*In "Standalone" mode, the ECU LAN can control door access without receiving access information from T/Mon*

### **Keypad (Accessory Sold Separately)**

The weather-shielded keypad is mounted on the exterior of the building and is designed to withstand a wide temperature range. To prevent unauthorized access, there is no amount of tampering that can be done to the keypad to cause the door to open.

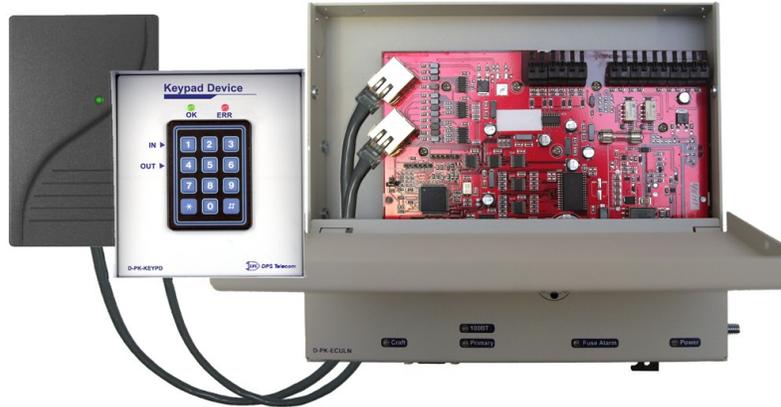
### **Proxy Reader (Accessory Sold Separately)**

The weather-proofed proximity reader is mounted on the exterior of the building and is designed to withstand a wide temperature range. As with the keypad, there is no amount of tampering that can be done to the proxy reader to cause the door to open. The ECU LAN supports +12V, 26-bit or 37-bit Wiegand card readers.

## 1.1 Proxy and Keypad Support

The ECU LAN is capable of working in multiple configurations with keypads, proxy readers, door strikes, and magnetic door locks. While it supports dual proxy readers (one inside, one out) or one proxy reader and one keypad, the ECU LAN cannot be used with two keypads.

### ECU LAN Supports Proxy Reader and Keypad (1 each)



Or

### Dual Proxy Readers (1 inside, 1 outside)



## Specialized Door Control Modes

**"Dual Proxy Mode"** - When purchased for this hardware configuration, you will mount one Proxy Card Reader inside your building and one outside. This is used for logging personnel in and out of facilities.

**"Magnetic Door Mode"** - This configurable mode may be used with doors equipped with magnetic door locks. In this mode, the door will remain magnetically locked until unlocked via proxy card scan, Request-to-Exit button, or motion sensor.

**NOTE:** Door violations occur when the door is opened without being unlocked. Pushing a Request-to-Exit button or triggering the motion sensor after the intrusion will not cancel the violation.

**"Lock When Closed Mode"** - This mode causes the door to lock a few seconds after it has been detected closed, and can be usefully combined with "Magnetic Door Mode" to ensure the door closes before being locked. In this mode, if the door does not open after it has been unlocked, It will lock again after 2-3 seconds.

## 1.2 Shipping List

While unpacking the ECU, please make sure that all of the following items are included. If some parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at **(800) 622-3314**.

### ECU LAN Box

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Entry Control Unit  
(D-PK-ECULN)



Building Access user manual  
(D-UM-ECULN-12001)



Two Mounting Ears



Four Ear Screws



One 2-pin fuse relay screw lug  
(2-820-00812-02)



One 2-pin power screw-lug jack  
(2-820-00862-02)



Two 3/4 amp fuses  
(2-741-00750-00)

## Keypad Box (Sold Separately)

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One environmentally sealed Keypad.  
(D-PK-KEYPD-12001.0001)



One 14 foot cable.  
(D-PK-KEYPD-12001.0001)



Keypad mounting template  
(D-OC-ECUMOUNTING)



Four mounting screws

## Proximity Reader Box (Sold Separately) (D-PK-PROXI-12001)

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One HID ThinLine Proximity Card Reader  
w/12" RJ-45 Cable  
(D-PR-530-10A-00)



One demo card from HID  
(D-PR-534-10A-00)



One Unshielded RJ45 to RJ45 CAT 5 Coupler  
(D-PR-534-10A-01)



One HID Mounting Instructions



Two HID Mounting Screws

## 2 Specifications

Specification	ECU LAN	Keypad (Sm)	Keypad (Lg)	Proxy Reader
Dimensions	8.56" x 7.5" x 1.72"	3"x 5" x 2 ½ "	4 ½" x 5" x 2 ½"	4.7" x 3" x 0.68"
Mounting	wall mount	wall mount	wall mount	wall mount
Power Input	-48 VDC	N/A	N/A	5-16 VDC
Current Draw	35 mA	N/A	N/A	30 mA
Interfaces	1 RJ45 LAN 1 DB9 Craft Port	RJ45	RJ45	RJ45
Protocols	N/A	N/A	N/A	Wiegand (26/37 bit)
Temp. Range	0° to 60°C (32° to 140°F)	-40° to +80°C (-40° to +176°F)	-40° to +80°C (-40° to +176°F)	-30° to 65°C (-22° to +150°F)
Humidity Range	0% to 95% non-condensing	environmentally sealed	environmentally sealed	0%-95% non-condensing
Fuse	Int. GMA 1 amp Ext. GMT ¾ amp	N/A	N/A	N/A
Audible	Speaker	N/A	N/A	Speaker
Visual	LEDs	LEDs	LEDs	LED

**Note:** Proxy reader specifications are based on the ThinLine II card reader from the HID Corporation. 12VDC power is supplied to the reader by the ECU LAN.

## 3 Hardware Installation

### 3.1 Site Preparation

Tools needed:



Phillips screwdriver



Wire strippers/cutter



Small standard No.2  
screwdriver (1/16" for screw-lug  
connectors)

Materials needed:

- 1/2" conduit

**Precautions**

- *Pull GMT fuse before connecting ECU power feed.*
- *Always observe electrostatic discharge (ESD) precautions.*

### 3.2 Installation Overview

1. Mount the ECU and the Keypad and/or Proxy Reader.
2. Connect power to the ECU.
3. Connect communication lines between the ECU, LAN, and Keypad and/or Proxy Reader.
4. Set the ECU IP address via TTY interface.
5. Customize ECU LAN settings via the Web Browser Interface
6. Provision T/Mon with the appropriate information. (See the BAS software module in the T/MonXM user manual for more information)

## 3.3 Mounting Instructions

### 3.3.1 Entry Control Unit

The Entry Control Unit can be wall mounted by using the provided rack ears. These will need to be screwed onto both sides of the unit.



Fig. 3.1

### 3.3.2 ECU with conduit

- The 3/4" circular openings support standard 1/2" conduit fittings (not included).
- Secure power and communication wires by installing 1/2" inch conduit in any of the 3/4" circular openings on the ECU.
- To attach the conduit, remove the 3/4" pre-cut metal circles from the case and insert the 1/2" conduit or the nylon plug.



Fig. 3.2

### 3.3.3 Keypad

1. Mount the keypad bracket on the desired surface using the four screw holes by using the mounting bracket.
2. Before securing the keypad onto the bracket, weave the RJ45 cable through the securing barriers and out the circular bracket opening.
3. Secure the keypad onto the bracket by inserting the four side panel screws into the unit.

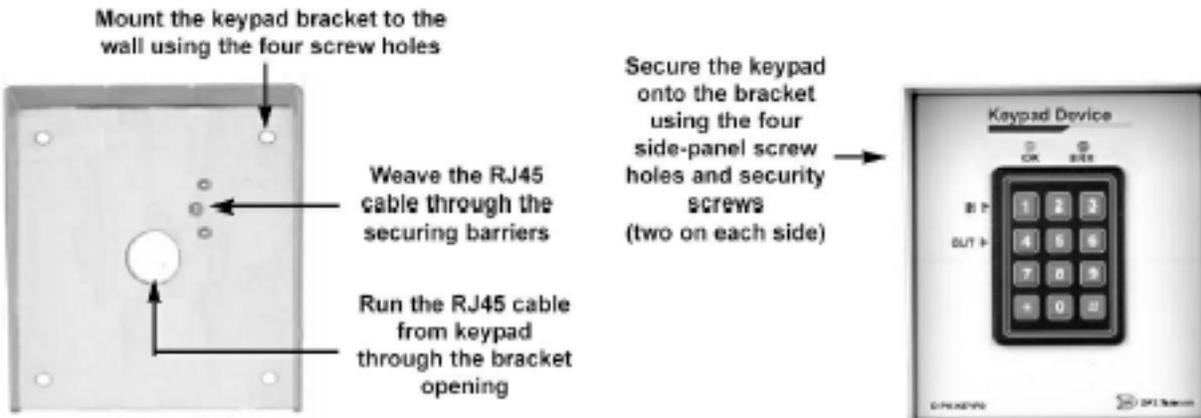


Fig. 3.3

### 3.3.4 Card Reader

1. Add RJ cable lead to the reader according to ECU pinout. Make sure cable length is adequate to reach the ECU or use an RJ coupler w/CAT5 extension cable. Maximum cable length is 300 feet.

RJ45 Pin #	HID Wire Color	Function
1	Red	+12 VDC Power
2	N/C	Do Not Connect
3	White	Data1
4	Green	Data0
5	N/C	Do Not Connect
6	N/C	Do Not Connect
7	N/C	Do Not Connect
8	Black	Ground

**RJ-45 pinout information**

2. Mount the reader on the desired surface according to mounting instructions provided by card reader manufacturer.

### 3.4 Opening the Case

The entire ECU cover does not need to be taken off to access the internal wire termination connectors, fuse or RJ45 connectors for the keypad and proxy reader. The front panel is broken up into two parts and hinges towards the middle of the ECU. The upper half can be unscrewed and pulled open to access all of the ECU internal connections.



Fig. 3.4

To open the upper half of the ECU case:

1. Locate and remove the screws on both sides of the upper half of the unit.

**Note:** Do not remove the screws that are holding the bottom portion of the front panel.

2. Gently pull the top of the panel away from the unit to access the inside of the case.

## 3.5 Power Connection

### 3.5.1 Entry Control Unit



WARNING!

The Grounding Lug on the side of the unit provides a permanent connection to earth ground when connected. The Grounding Lug must be used in order to comply with CE standards.



ECU LAN GMT fuse slot, power connection, and grounding lug

**Before you connect a power supply to the ECU, test the voltage of your power supply:**

- Connect the black common lead of a voltmeter to the ground terminal of the battery, and connect the red lead of the voltmeter to the battery's  $-48$  VDC terminal. The voltmeter should read **between  $-43$  and  $-53$  VDC**. If the reading is outside this range, test the power supply.

**To connect the ECU to a power supply, follow these steps:**

1. Always use safe power practices when making power connections. Be sure to remove fuses from the fuse distribution panel, as well as the ECU, before making your power connections.
2. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the symbol . Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included).
3. Insert a battery ground into the power connector plug's right terminal and tighten the screw; then insert a battery line to the plug's left terminal and tighten its screw.
4. Insert a fuse into the fuse distribution panel and measure voltage. The voltmeter should read between  $-40$  and  $-$

70VDC.

5. The power plug can be inserted into the power connector only one way to ensure the correct polarity. Note that the negative voltage terminal is on the left and the GND terminal is on the right.
6. Insert fuse into the Power fuse slot. The power LED should be lit green. If the LED is off, the power connection may be reversed. To confirm that power is correctly connected, the front panel LEDs will flash RED and GREEN, indicating that the ECU application has started.

**Note:** Observe polarity when connecting battery leads. If using the **-48VDC** red/black cables supplied with the unit, connect black to **GND** and red to **-BATT**. Standard gauge is 20AWG, but may vary between 18-24AWG.



Fig. 3.6

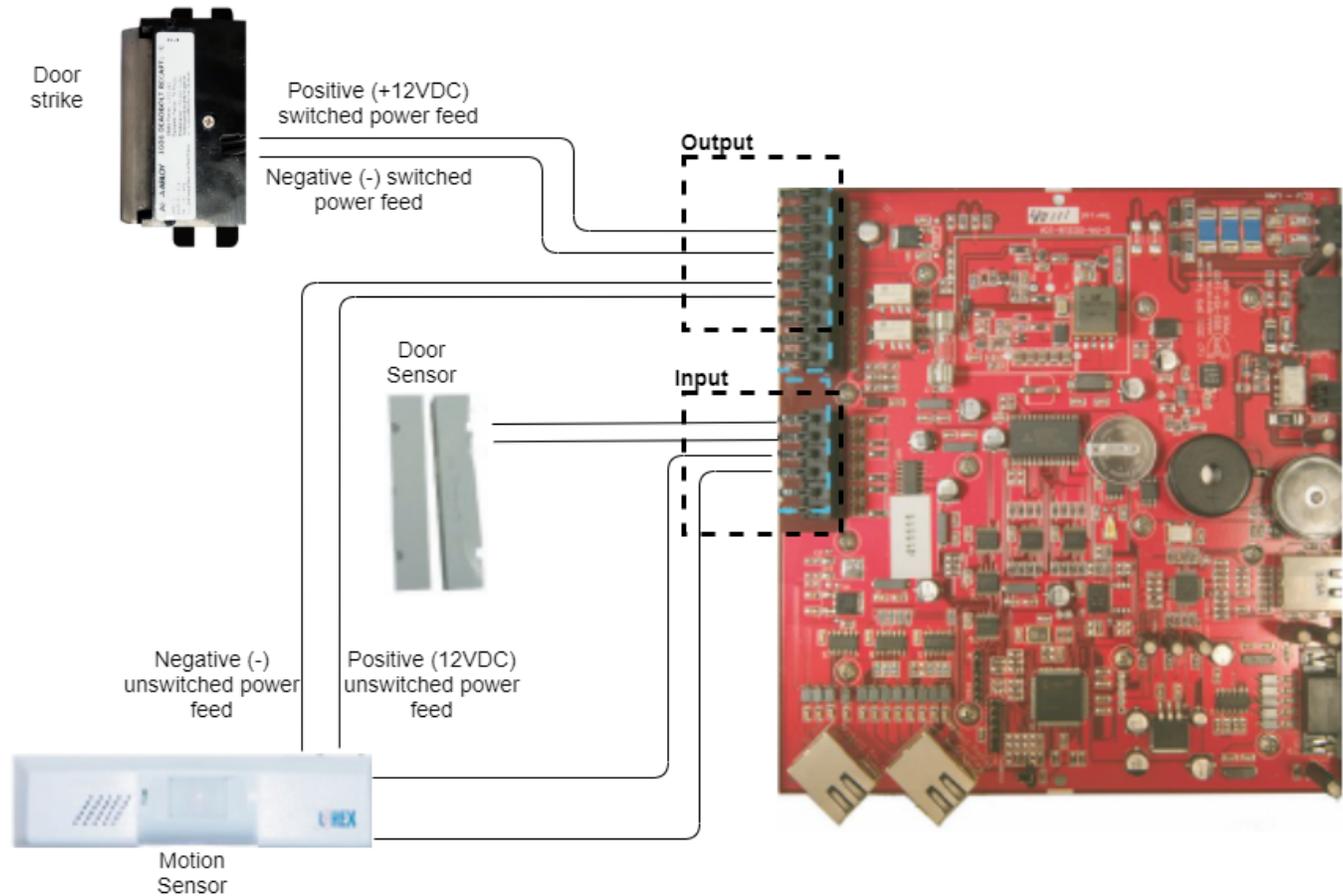
FA Relay on the bottom of the unit contains the contact closures for the fuse relay. This will close when the 3/4 amp GMT fuse has blown and will normally be open. Use the included 2-pin screw lug.

### 3.5.2 Door Strike

When a valid password is entered on the keypad, the ECU will operate the relay to energize the door strike. The ECU will de-energize the relay if configured for magnetically controlled doors.

Follow the directions below to connect the door strike and door sensor to the ECU.

- 1) Use the screw-lug connectors. If using a 24VDC door strike, connect the door strike power wires to SPB (+) and SNeg (-). If using a 12VDC door strike, connect the power wires to SPA(+) and SNeg(-).
- 2) Connect the door sensor to RTN (return) and ALM1 (opto isolated alarm for the door sensor).



**Wiring diagram for connecting sensors and strikes to the ECU LAN**

**Output Connections**

<b>Screw-Lugs</b>	<b>Description</b>
SPB+	Positive switched power source (24VDC). Can be used for door strike.
SNeg	Negative switched power source. Can be used for door strike. This is used by either SPB+ or SPA+.
SPA+	Positive switched power source (12VDC). Can be used for door strike.
UPB+	Positive un-switched power source. (24VDC)
UNeg	Negative un-switched power source. This has 2 connections and both are the same. For use with UPA+ or UPB+. Can be used to power the motion sensor or other external accessory.
UPA+	Positive un-switched power source (12VDC). Can be used to power the motion sensor or other external accessory.
RNO	Relay normally open.
RCO	Relay common.
RNC	Relay normally closed

**Input Connections**

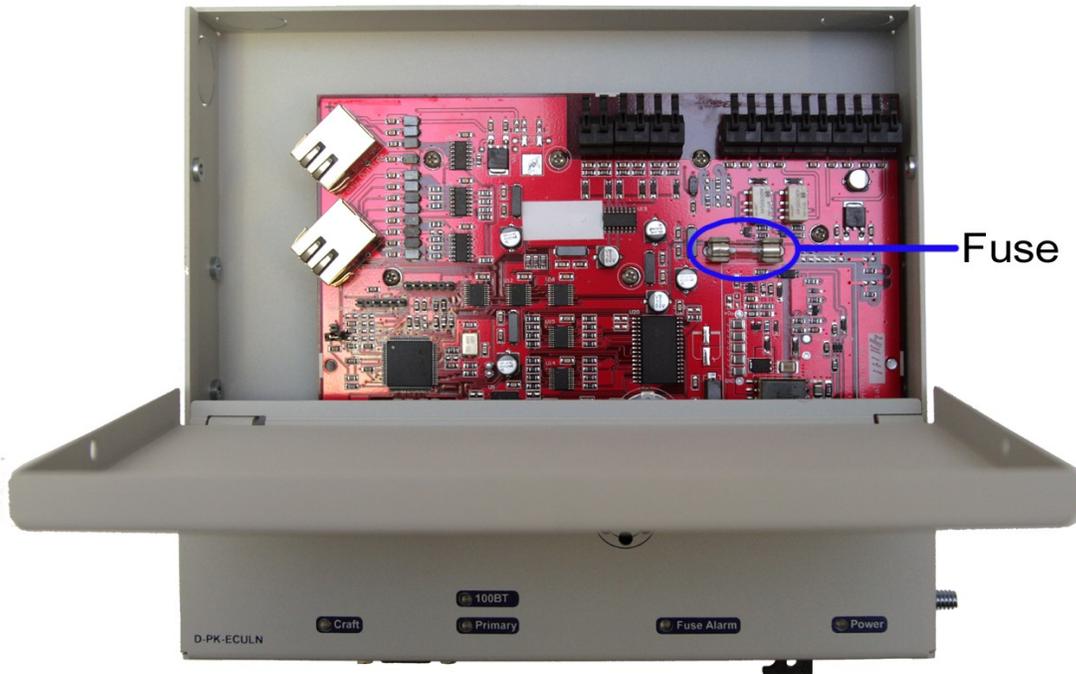
<b>Screw-Lugs</b>	<b>Description</b>
ALM1	Isolated alarm for door sensor.
RTN	Door sensor return.
ALM2	Request to exit (motion sensor)
RTN	Motion sensor return.
ALM3	Available as a general purpose alarm input
RTN	Alarm return

**Tbl. 2.2.5.2b - ECU screw-lug jack descriptions**

### 3.5.3 ECU LAN Internal Fuse

If the unit fails to power the door strike, motion sensor, or proxy reader, then make sure the fuse inside the unit has not blown.

Replace with a 1 amp GMA fuse (part number: 1-740-01000-00) if necessary.



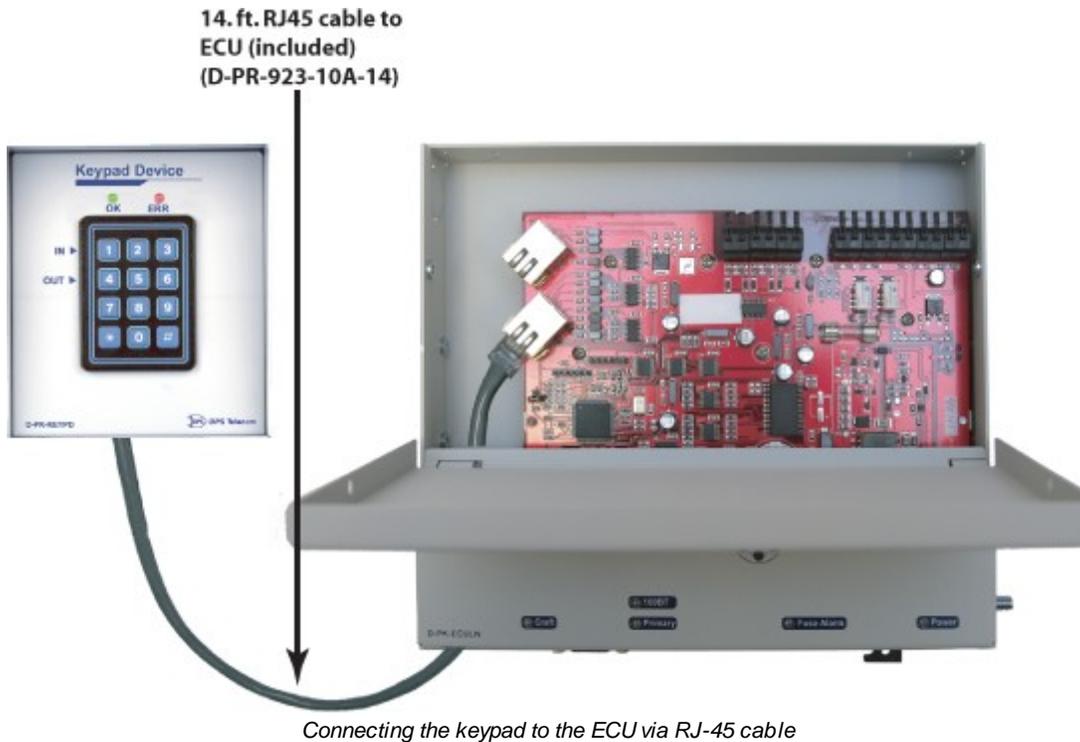
The ECU LAN's internal fuse

## 3.6 Communication Lines

### 3.6.1 Keypad

The keypad interfaces with the ECU via an RJ45 cable (attached to the keypad). The ECU has five circular openings (two on top, two on the side and one on bottom) where the RJ45 cable can be inserted. The RJ45 jack is located on the inside of the ECU casing. Insert the RJ45 cable through one of the openings and connect it to the RJ45 jack labeled "Keypad/Proxy Inside".

**Note:** Your ECU LAN must be purchased with the keypad option in order to use the keypad accessory. Check your product appendix to confirm the hardware build of your ECU LAN unit.



**Note:** There is a maximum distance of 14 feet between the keypad and the ECU.

### 3.6.2 Proxy Reader

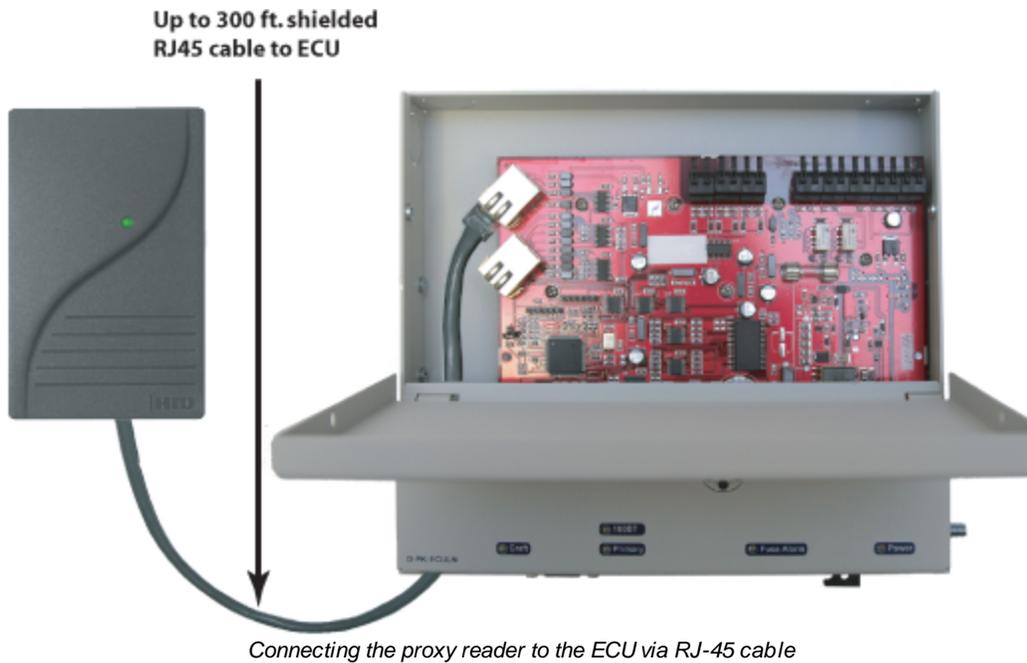
The proxy reader interfaces with the ECU via an RJ45 cable (attached to the proxy reader). The ECU has five circular openings (two on top, two on the side and one on bottom) where the RJ45 cable can be inserted. The RJ45 jack is located on the inside of the ECU casing. Insert the RJ45 cable through one of the openings and connect it to the RJ45 port labeled "Proxy Outside".

**Note:** *There is a recommended maximum distance of 300 feet between the proxy reader and the ECU.*

#### Dual Proxy Mode

To use 2 proxy readers for entry and exit logging, connect the proxy reader located inside the building to the internal port labeled Proxy Inside, and the proxy reader located outside the building to the port labeled Proxy Outside.

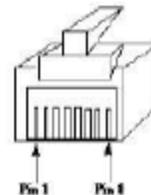
**Note:** Your ECU LAN must be purchased with the Dual Proxy hardware option in order to use Dual Proxy Mode (Proxy Inside). Check your product appendix to confirm the hardware build of your ECU LAN unit.



RJ45 Pin #	HID Wire Color	Function
1	Red	+12 VDC Power
2	N/C	Do Not Connect
3	White	Data1
4	Green	Data0
5	N/C	Do Not Connect
6	N/C	Do Not Connect
7	N/C	Do Not Connect
8	Black	Ground

*RJ45 pinout information (Proxy reader)*

#### RJ45 Connector



### 3.6.3 HID ProxPro Keypad/Proxy Reader

The proxy reader/keypad interfaces with the ECU via an RJ45 cable. The ECU has five circular openings (two on top, two on the side and one on bottom) where the RJ45 cable can be inserted. The RJ45 jack is located on the inside of the ECU casing. Insert the RJ45 cable through one of the openings and connect it to the RJ45 jack labeled "Proxy A" or "Proxy B".



First, remove the front plate of the ProxPro unit.



From the inside of the unit, locate the screw connectors. This is where you'll attach the wires to the RJ45 connector.



After the front plate has been removed, 4 holes containing screws will be revealed. Remove all 4 screws.



Match the corresponding wire to the screw connector. See pinout table below for additional information.

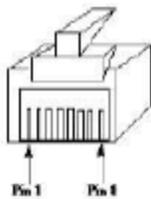


Match the corresponding wire to the appropriate pin on the RJ45 connector. See pinout table below for additional information.



Put the two pieces back together. First, on the inside cover, locate the 10-pin male connector. This connector will need to correspond to the 10-pin female connector on the board on the base unit (image below).

**RJ45 Connector**



**RJ45 Connector Pinout**

RJ45 Pin #	Function
1	DC+ (Red)
2	No Connect
3	Data 1
4	Data 0
5	No Connect
6	No Connect
7	No Connect
8	Ground

**ProxPro Connector Pinout**

Connector*	Function
1	DC+ (RED)
2	Ground (BLACK)
3	Data 1/Clock (WHITE)
4	Data 0/Data (GREEN)
5	No Connect
6	No Connect
7	No Connect
8	No Connect

\*Starts from DC+ (RED) and goes down vertically

**4 Speaker and LEDs**

## 4.1 Front Panel LEDs

The ECU's LEDs give at-a-glance status indication.



Fig. 5.1

LED	Status	Description
Power	Off	There is no power, or -48V and Ground on power connector are reversed.
	Solid Green	Power is on and correctly configured
Fuse Alarm	Solid Red	Blown Fuse
Door Stat	Solid Green	Door Relay Active (i.e door unlocked) Or "Propped Door Mode" is active Or "Stay Open Door Mode" is active
	Solid Red	Lockout (prevents user access for 5 minutes)
	Blink Red	Open door lockout
Entry Stat	Blink Green	Card Read is being processed
Shelf Stat	Slow Blink Green	Receiving polls normally
	Slow Blink Red	ECU LAN is operating in Stand-Alone Mode
100BT	Off	LAN connection is 10BaseT or not connected
	Solid Green	LAN connection is 100BaseT
Primary	Blink Green	Transmit serial communication to T/ Mon
	Blink Red	Receive serial communication from T/ Mon
Craft	Blink Green	Transmit Serial Communication to PC
	Blink Red	Receive Serial Communication from PC

*ECU LAN LED Descriptions*

### 4.1.1 LED Verification and Local Testing

Upon powering up the ECU, all of the unit's panel LEDs (except for Power and 100BT) will flash between green and red. If the unit is functioning properly, the Shelf Stat LED will flash green every 2 seconds (this functions as a unit status indicator - if the Shelf Stat LED is flashing red it means the unit is not communicating with T/Mon and is operating in Stand-Alone Mode).

During normal communication with the T/Mon, the Primary LED will rapidly alternate between green and red.

## 4.2 Speaker Operation

The ECU offers the following audible notification of specific events:

\*Configurable in the Provisioning > Timers page under Door Warning Beep.

\*\*Configurable in the Provisioning > Timers page under Time Before Door Violation.

### ***Normal Entry Operation***

After entering a valid "Entry" password or card scan and the door strike has been energized, users have approximately 55 seconds\*\* to enter through the door and close the door behind them before an alarm condition occurs. Once a valid "Entry" password is accepted by the ECU, a 25-second\* silent time-lapse will occur followed by a 30-second slow (warning) beep, during which time the user must enter through the door and close it behind them. An alarm condition will occur after 55 seconds and will be indicated by a faster beep.

### ***Normal Exit Operation***

Upon exiting through the door, users must enter a valid "Exit" password or card scan within 30 seconds of opening the door. A 30-second slow (warning) beep will sound during which time the user must close the door and enter valid "Exit" password before an alarm condition occurs.

### ***Normal Exit Operation (With Request-to-Exit)***

An optional motion sensor can be tied to ALM2 to signal a request-to-exit scenario. You would do this if you don't want to enter a password or card scan during exit. During a request-to-exit, the person exiting has approximately 55 seconds\*\* to close the door behind them before an alarm condition occurs. A 25-second\* silent time-lapse will occur followed by a 30-second slow (warning) beep, during which time the user must exit through the door and close it behind them. An alarm condition will occur after 55 seconds\*\* and will be indicated by a faster beep.

### ***Door Alarm***

A fast beep indicates a door alarm has occurred. The user must re-enter or re-exit (with a valid password or card scan) in order for the alarm to clear. While the door alarm remains standing (uncleared), the speaker will cycle between 12 minutes on (fast beep) and 3 minutes off. Because a fast beep indicates a door alarm, open door lockout will be canceled, and the keypad or reader will be enabled, even if the door is open. A T/Mon administrator can also cancel the door alarm by issuing a MOM door unlock command.

### ***Propped Door Mode***

T/MonXM can issue a "Propped Door Mode" by issuing a MOM control command to point 21, which will allow the door to be held open without an alarm for up to 15 minutes. The speaker will not sound while the "Propped Door Mode" is active. Door violation alarms will not post while the "Propped Door Mode" is active. However, users should continue to submit passwords as they enter and exit the building.

A beep indication will be given during the last 2 minutes if the door is open to show the command is about to expire. See the Building Access System software module in the T/Mon user manual for information regarding issuing a "Propped Door Mode" command.

### **Extended Propped Door Mode**

The "Extended Propped-Door Mode" feature can be engaged by remotely issuing an OPR control command from the T/Mon to point 22. The door may be opened and closed freely with no door violations for an indefinite period of time. The door will be locked when closed. With the door closed, exit this mode by remotely issuing an RLS control command to point 22.

**Caution:** Extended propped-door mode will not auto-expire.

### **Stay-Open Door Mode**

You can enter "Stay-Open Door Mode" in one of two ways:

- i. Scan any card defined in T/Mon for that door with Stay-Open parameter set to 'Yes'
- ii. Remotely issue an OPR control command for both points 17 and 22

Points 17 and 22 will be active during Stay-Open Mode. The door will be unlocked and no door violations will occur.

With the door closed, you can exit Stay-Open mode in one of two ways:

- i. Scan any card defined in T/Mon for that door with Stay-Open parameter set to 'Yes'
- ii. Remotely issue RLS control command to point 22. Point 17 will automatically clear, which will lock the door.

**Caution:** Stay-Open mode will not auto-expire.

## **4.2.1 ECU Internal Speaker**



**Fig. 5.2**

### **Internal Speaker Volume Control**

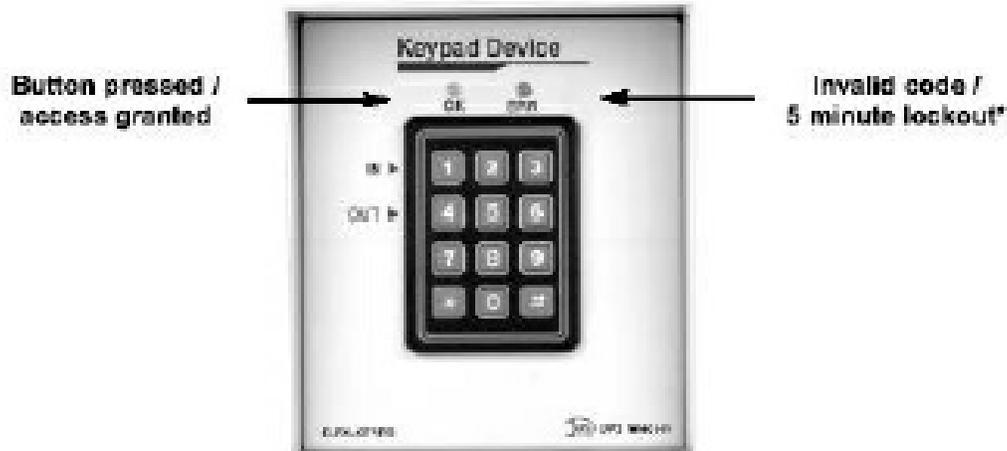
The volume control for the internal speaker can be found on the bottom of the unit next to the Fuse Alarm relay and the primary connections.

### **Disabling the Speaker**

To disable the speaker, remove the **J10** jumper from the ECU circuit board. This shunt is not accessible from the hinged door and requires full removal of the lid. It may be more convenient to disable the speaker by intentionally lowering the volume so that it cannot be heard.

## 4.3 Keypad LED Operation

The Keypad LED indicators show keypad activity and access status. See table 4.2 for specific LED descriptions.



LED	Status	Description
OK (Green)	Flashing Green	Button on keypad is being pressed
	Solid Green	Access granted (Door will remain unlocked for 5 sec.)*
ERR (Red)	Flashing Red	Access code denied
	Solid Red	Lockout (prevents user access for 5 minutes)

Keypad LED indications

\*Door unlock time is configurable via the Web Edit Interface. (See the subchapter of **Advanced Unit Configuration (Web Interface)** titled **Controls** for more information.)

### 4.3.1 Basic Operation

#### **Accessing a door (Outside - In)**

Enter a valid access code on the keypad followed by “1” and then the pound “#” key (In)\*. If access is granted, the “OK” LED will be solid green and you will hear a “click” sound (this is the solenoid activating). The door will remain accessible (solenoid active) for 5 seconds. The door must be closed within 25 seconds before the ECU speaker sounds a warning and within 55 seconds before an alarm condition occurs.\*\*

#### **Exiting (Inside - Out)**

Open the door from the inside and exit through the door. The door must be closed before the “exit” password can be entered. Once the door is closed, enter a valid access code followed by “4” and then the pound “#” key (Out). The “OK” LED will flash green if the user has successfully entered a valid password upon exiting. The “exit” code will not enable the solenoid and therefore you will not hear a “click” sound as is heard when a valid “In” code is entered. However, magnetic door mode will unlock the door on both entry and exit.\*\*

#### **Lockouts**

A 5 minute lockout occurs if 6 invalid codes are entered consecutively in a period of 10 minutes. However, pressing the “\*” (star) button causes the unit to clear all prior key presses (a 10 second delay also clears prior key presses). Alternatively, a manual activate door strike command will override the lockout.

---

An “Open Door” lockout disables the keypad and/or proxy reader when any of the following conditions occur:

1. Door is open
2. There is no door alarm
3. The door is not propped enabled\*.

*\* If the door is propped open, users should still enter Entry/Exit passwords for T/MonXM event log recording.*

*\*\* If sites are set to “Directional” and a user doesn’t log out (i.e. doesn’t press “4 #” after the access code), the T/Mon administrator can “force” log out that user. Additionally, if sites are set to “Non-directional”, and a user gets out of synch with entering “in” and “out” codes (i.e. forgetting to enter an exit code), the user may have to either log themselves back in or log themselves back out before their code will work again.*

## 5 Basic Unit Configuration

To configure your ECU LAN, you must first provision the unit with an IP Address. You will configure the unit's IP address, subnet mask, and gateway, via the ECU LAN's TTY interface, accessed via HyperTerminal (or a similar terminal emulator) over a serial connection.



The ECU LAN Craft Port

To begin configuring the unit, connect the DB9 male to female cable that came with your ECU to the unit's craft port and your PC's serial port.

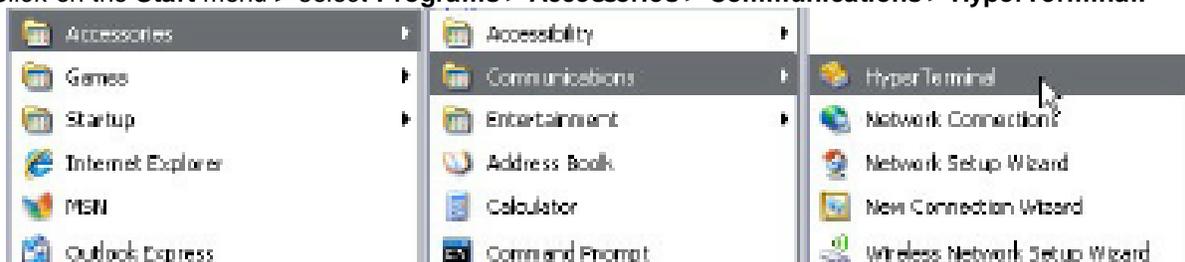
### 5.1 Provisioning an IP Address

You must be connected via craft port or Telnet to use the TTY interface. We'll be using HyperTerminal to connect to the unit in the following example - however, most terminal-emulating programs should work.

#### To Configure your ECU LAN's IP Address:

To access HyperTerminal using Windows:

1. Click on the **Start** menu > select **Programs > Accessories > Communications > HyperTerminal**.



2. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.



3. At the Connect To screen, select Com port you'll be using from the drop down and click OK. (COM1 is the most commonly used.)



4. Select the following COM port options:

5. When prompted, enter the default username

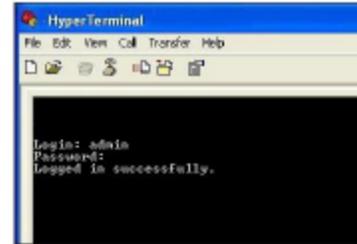
- Bits per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: **None**

Once connected, you will see a blank, white HyperTerminal screen. Press Enter to activate the configuration menu.



**admin** and password **dpstelecom**. **NOTE:** If you don't receive a prompt for the username, try pressing **Enter** to receive the prompt. If that doesn't work, check the Com port you are using on your PC and make sure you are using the cable provided.

Additional cables can be ordered from DPS Telecom: *Part number D-PR-045-10A-04*



6. The ECU LAN's main menu will appear. Type C for C)onfig, then E for E)thernet. Configure the unit's IP address, subnet mask, and default gateway.

```

Login: admin
Password:
Logged in successfully.

ECU LAN v1.00.0416
©2011 DPS Telecom, Inc.
C>onfig P>ing D>ebug e<X>it ? C
Ethernet S>tats n<U>eam re<B>oot <ESC> ? E
Linked      : Yes
DHCP        : Disabled
Host Name   :
Host IP     : 126.10.230.136 <126.10.230.136>
Subnet Mask : 255.255.192.0 <255.255.192.0>
Gateway     : 255.255.255.2
Host MAC    : 00.10.01.00.0F.0F <00.10.01.00.0F.0F>
Unit Addr   : $)subnet G)ateway D)HCP H)ost <ESC> ?

```

7. ESC to the main menu. When asked if you'd like to save your changes, type Y for Y)es. Reboot the ECU LAN to save its new configuration.

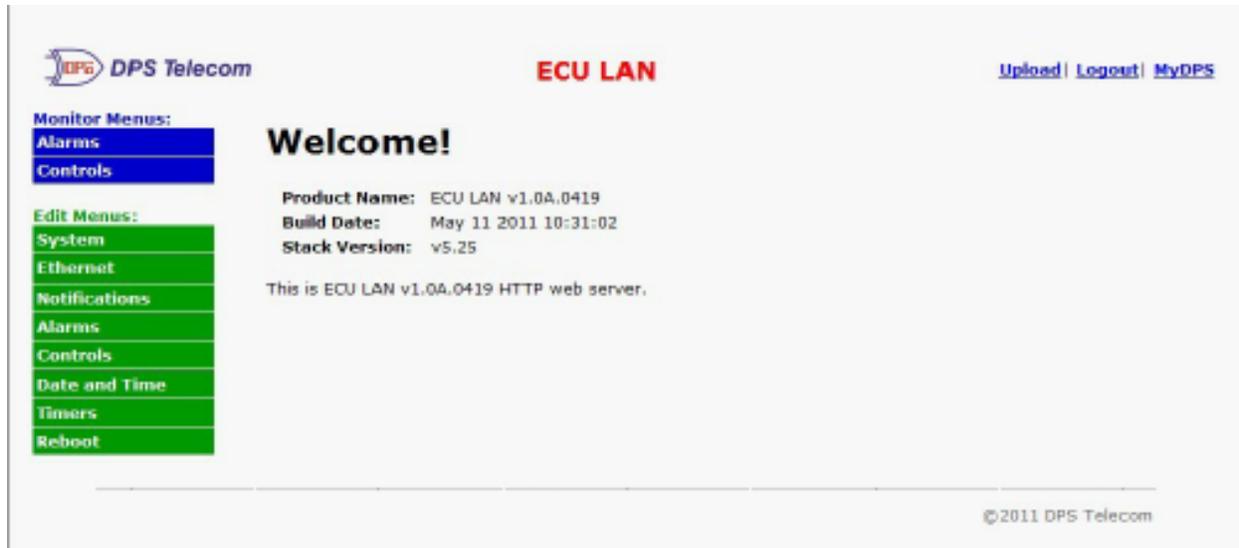
```

ECU LAN v1.00.0416
©2011 DPS Telecom, Inc.
C>onfig P>ing D>ebug e<X>it ? C
Ethernet S>tats n<U>eam re<B>oot <ESC> ? E
Linked      : Yes
DHCP        : Disabled
Host Name   :
Host IP     : 126.10.230.136 <126.10.230.136>
Subnet Mask : 255.255.192.0 <255.255.192.0>
Gateway     : 255.255.255.2
Host MAC    : 00.10.01.00.0F.0F <00.10.01.00.0F.0F>
Unit Addr   : $)subnet G)ateway D)HCP H)ost <ESC> ? <--
Ethernet S>tats n<U>eam re<B>oot <ESC> ? E
Rebooting...

```

## 6 Advanced Unit Configuration (Web Interface)

The ECU LAN features a built-in web browser interface for configuring and monitoring the unit through the Internet or your Intranet. Beyond configuring the unit's IP address, most ECU LAN configuration will be performed via the unit's Web Interface.



*The ECU LAN's Web Interface allows for easy configuration and monitoring*

### Navigating the Web Interface

The Web Interface is split into 2 sections:

- The **Monitor Menu** allows you to monitor and control access to your door.
- The **Edit Menu** is where you'll configure system information, alarms, door controls, and notifications.

To navigate to any of the web interface menu options, simply click the option in the left side of the interface.

### 6.1 Logging in to the Web Interface

To login to the unit's web interface, simply type the IP address of the ECU LAN into the address bar of your web browser. You will be prompted for your username and password.

The default username is: admin

The default password is: dpstelecom

DPS Telecom strongly recommends you change your username and password. See the System section later in this manual for instructions on changing the default username and password.

## 6.2 Edit Menus



ECU LAN configuration is performed from the Edit Menus, the menu options in green on the left-side of the web interface. The following pages describe the options available in each menu.

### Saving Your Changes

At the bottom of each page is a Save button. When you have finished editing any ECU LAN settings, click the Save button to commit your changes to the ECU LAN. Failure to save changes before you navigate to another option or close the web interface will result in the loss of your changes.

*The ECU LAN Edit Menus*

## 6.2.1 System

From the **Edit Menu** > **System** screen, you can configure and edit global system settings for the ECU LAN. For information on configuring system settings, see the table of field descriptions below.

The screenshot shows a web-based configuration interface titled "System Settings". It is divided into three main sections:

- Global System Settings:** A table of input fields for configuration:
 

Name	ECU LAN
Location	Fresno, CA
Contact	559-454-1600
"From" E-mail address	ecu@dpstele.com
SNMP Get String	dps_public
SNMP Set String	dps_public
User	admin
Password	*****
- System Controls:** A table of control buttons and links:
 

Initialize Configuration	<input type="button" value="Initialize"/>
Delete BAC Profile Database	<input type="button" value="Purge BAC"/>
Backup Configuration	<a href="#">config.bin</a>
Restore Configuration	<a href="#">Upload</a>
- Logging Controls:** A table of control buttons and links:
 

Get Event Log	<a href="#">eventlog.csv</a>
Erase Event Log	<input type="button" value="Erase"/>

At the bottom of the form are "Reset" and "Save" buttons.

The System Screen

Global System Settings	
<b>Name</b>	The name for the ECU LAN.
<b>Location</b>	The location of the ECU LAN.
<b>Contact</b>	Contact telephone number for the person responsible for this ECU LAN unit. (Optional field)
<b>"From" Email Address</b>	A valid email address used by the ECU LAN for sending email alarm notifications.
<b>SNMP GET String</b>	Community name for SNMP requests. (case-sensitive).
<b>SNMP SET String</b>	Community name for SNMP SET requests. (case-sensitive).
<b>User</b>	Used to change the username for logging into the unit.
<b>Password</b>	Used to change the password for logging into the unit (case-sensitive).
System Controls	
<b>Initialize Configuration</b>	Used to restore all factory default settings to the ECU LAN. Do not initialize the non-volatile RAM (NVRAM) unless you want to re-enter all of your configuration settings.
<b>Delete BAC Profile Database</b>	Clicking <b>Purge BAC</b> will delete the ECU's database of access profiles downloaded from T/Mon. It does not affect the unit's 32 internal profiles.
<b>Backup Configuration</b>	Allows the user to backup the unit's current configuration file to be restored later. Type in the filename for the configuration you wish to save, then click <b>Save</b>
<b>Restore Configuration</b>	Clickable link that takes you to the Firmware Load screen, where you'll browse to the configuration file saved on your PC.
Logging Controls	
<b>Get Event Log</b>	Allows the user to download the Site Access Log.
<b>Erase Event Log</b>	Allows the user to erase the Site Access Log.

## 6.2.2 Ethernet

From the **Ethernet** Menu, you can define and change your unit's Ethernet settings.

Ethernet Settings	
MAC Address :	00:10:81:00:BF:DF
Host Name :	<input type="text"/> ( )
Enable DHCP :	<input type="checkbox"/>
Unit IP :	<input type="text" value="126.10.230.136"/> (126.10.230.136)
Subnet Mask :	<input type="text" value="255.255.192.0"/> (255.255.192.0)
Gateway :	<input type="text" value="255.255.255.255"/> (255.255.255.255)
DNS Server 1 :	<input type="text" value="255.255.255.255"/> (255.255.255.255)
DNS Server 2 :	<input type="text" value="255.255.255.255"/> (255.255.255.255)

*Edit Ethernet Options*

Ethernet Settings	
<b>MAC Address</b>	Hardware address of the ECU LAN. (Not editable - For reference only.)
<b>Host Name</b>	Enter a Host Name for easy-access via the web browser. Example: If you don't want to remember this unit's IP address, you can type in a name in this field, like "ECULAN". Once you save and reboot the unit, you can now browse to it locally by simply typing in "ECULAN" in the address bar. (no "http://" needed).
<b>Enable DHCP</b>	Used to turn on Dynamic Host Connection Protocol. <b>NOT recommended</b> because the unit is assigned an IP address from your DHCP server. The IP you've already assigned to the unit becomes inactive. Using DHCP means the unit will NOT operate in a T/Mon environment.
<b>Unit IP</b>	IP address of the ECU LAN.
<b>Subnet Mask</b>	A road sign to the ECU LAN, telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide-area network.
<b>Gateway</b>	An important parameter if you are connected to a WAN. It tells the ECU LAN which machine is the gateway out of your local network. Set to 255.255.255.255 if not using. Contact your network administrator for this info.
<b>DNS Server 1</b>	Primary IP address of the domain name server. Set to 255.255.255.255 if not using.
<b>DNS Server 2</b>	Secondary IP address of the domain name server. Set to 255.255.255.255 if not using.

## 6.2.3 Notifications

From the initial **Edit > Notifications** menu, you can configure up to 8 different notifications for alarm and control events.

Notifications					
No.	Stat.	Type	Server	Time Window 1	Time Window 2
<a href="#">1</a>	ON	SNMP	10.0.4.170	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
<a href="#">2</a>	ALM	Email	smtp.dpstele.com	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
<a href="#">3</a>	ON	Relay	Latch 1	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time

*The Edit > Notifications menu*

The initial notifications screen will show you current settings for the unit's 8 notifications.

- Stat shows what events will trigger a notification.
  - **Off** indicates that the notification is not currently enabled
  - **Alarms** indicates that notification will be sent when alarms set
  - **Clears** indicates that notification will be sent when alarms clear
  - **Both** indicates that notifications will be sent when alarms set or clear
- The **Type** field shows the type of notification being sent. The ECU LAN is capable of sending Email notification, SNMP Traps, or operating a relay (derived control) when events occur.
- The **Server** field shows the server being used for SNMP notifications, if SNMP notifications are enabled.
- The **Time Windows** show days and times during which the notification is active.

Click on the hyperlinked number in the **No.** column to begin **configuring notifications**.

*The Notification Setup Menu*

1. In the drop-down box, choose whether you'd like to receive notification for alarms, clears, or both. You may also disable the notification by selecting the appropriate option.
2. Next, choose the sort of notification you would like sent when an event occurs. You may choose:
  - **Send Email** to have an email sent when events occur
  - **Send SNMP** to have a trap sent when events occur
  - **Relay** to latch a relay when an event occurs. The relay option is a simple derived control, causing a relay to echo one or more of the ECU LAN's alarms.
3. Click **Next >** to continue configuring notifications. (See the appropriate section to continue configuring email, SNMP, or relay notifications.)

### 6.2.3.1 Email Notification Settings

Notification 1 (Email)

**Email Notification**

SMTP Server IP or Host Name	smtp.dpstele.com
Port No. (Usually Use 25)	25 <input type="checkbox"/> Use SSL
"From" E-mail Address	ecu@dpstele.com
"To" E-mail Address	support@dpstele.com

**How to authenticate**

No Authentication  
 SMTP Authentication

Login ID	DPS Employee x
Password	*****
Confirm Password	*****

*Editing Email Notification Settings*

4a. Enter the appropriate information for email notifications in the fields of the Email Notification screen. Click **Next >** to continue.

Email Notification	
<b>SMTP Server IP or Host Name</b>	The IP address of your email server.
<b>Port Number</b>	The port used by your email server to receive emails, usually set to 25.
<b>"From" E-mail Address</b>	Displays the email address (defined in the Edit menu > System) that the ECU LAN will send email from. Not editable from this screen.
<b>"To" E-mail Address</b>	The email address of the person responsible for this ECU LAN, who will receive email alarm notifications.
<b>Login ID</b>	User name for the Gmail account being used.
<b>Password</b>	Password for the Gmail account being used.

### 6.2.3.2 SNMP Notification Settings

Notification 1 (SNMP)

**SNMP Notification**

SNMP Trap Server IP	10.0.4.170
Trap Port No. (Usually Use 162)	162
Trap Community	dps_public

*Editing SNMP Notification Settings*

4b. Enter the appropriate information for SNMP Trap notifications in the fields of the SNMP Notification screen. Click **Next >** to continue.

SNMP Notification	
<b>SNMP Trap Server IP</b>	The SNMP trap manager's IP address.
<b>Trap Port No.</b>	The SNMP port (UDP port) set by the SNMP trap manager to receive traps, usually set to 162.
<b>Trap Community</b>	Community name for SNMP TRAP messages.

### 6.2.3.3 Relay Notification Settings

#### Notification 1 (Relay)

Select which relay you'd like to respond as a notification

4c. For Relay Notifications, use the pull-down box to select the relay (1 or 2) you'd like to activate when an alarm event (set, clear, or both, determined from the previous screen) occurs. Click **Next >** to continue.

### 6.2.3.4 Notification Schedules

#### Notification 1 (Schedule)

The Schedule creation screen

5. Set a schedule indicating what days and times this notification can be sent.

Notification Scheduling	
<b>Days of the week</b>	From either Schedule 1 or 2, check which days you want to receive notifications.
<b>Any Time</b>	Select to tell the ECU LAN you want to receive alarm notifications at any time for the day(s) you've selected.
<b>Notification Time</b>	Instead of "Any Time", use these fields to only send alarm notifications during certain hours on the day(s) you've selected.

Click **Test** to send a test notification.

Click **Finish** to save the notification.

## 6.2.4 Alarms

The **Edit Menus > Alarms** option will allow you to configure your ECU LAN's three alarms. From here you can set descriptions for each point, what notifications to send for each point, and qualification timers for each alarm.

The screenshot shows the 'Alarms' configuration screen with the 'System' tab selected. It displays a table with three rows of alarm configurations:

	Description	Rev	Notifications	QualTime	QualType
9	Door Sensor (Alarm 1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0s	On Set
10	Motion Sensor (Alarm 2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0s	On Set
11	Alarm 3 Sensor	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set

At the bottom of the screen are 'Reset' and 'Save' buttons.

*Configure your unit's discrete alarms from the Alarms Screen*

The far left field indicates the alarm point you're editing. To configure your base discrete alarms, enter information into the appropriate fields for each point:

Field	Description
<b>Description</b>	Enter a description of the alarm point
<b>Rev</b>	Check this box to reverse the polarity of the alarm. (Alarm set and clear conditions will be reversed.)
<b>Notifications</b>	Check the boxes, 1-8, left to right, to indicate which notifications you would like sent for the alarm.
<b>Qual Time</b>	Set the amount of time an alarm state must be present to qualify as an alarm. Valid entries are 1-127, for seconds (s), minutes (m), or hours (h).
<b>Qual Type</b>	Determine for which alarm states the <b>Qual Time</b> will apply (On Set, On Clear, or Both)

### 6.2.4.1 System Alarms

Clicking the **System** tab on the Alarms screen will take you to the ECU LAN's system alarms, a set of housekeeping alarms that can inform you of status issues specific to the ECU LAN.

The screenshot shows the 'Alarms' configuration screen with the 'System' tab selected. It displays a table with five rows of system alarm configurations:

	Description	Notifications
12	Door Violation Alarm	<input type="checkbox"/>
17	Door Strike Active (Relay 1)	<input type="checkbox"/>
18	Relay 2 Active	<input type="checkbox"/>
19	Hack Lockout	<input type="checkbox"/>
20	Exit Password OK	<input type="checkbox"/>

*The Alarms > System screen*

## 6.2.5 Controls

The **Edit Menu > Controls** option provides access to configure your ECU LAN's 2 control relays.

**Controls**

**System**

Number	Description	Momentary time	Notifications
17	<input type="text" value="Door Strike Active (Relay 1)"/>	<input type="text" value="5s"/>	<input type="checkbox"/>
18	<input type="text" value="Relay 2 Active"/>	<input type="text" value="5s"/>	<input type="checkbox"/>

*The Edit Menu > Controls Screen*

Editing Controls	
<b>Description</b>	User-definable description for each control relay.
<b>Momentary Time</b>	The length of time between Opr and RIs (or RIs and Opr) when a momentary (Mom) command is issued. (Typically, this is between door unlock and lock commands when a valid entry code has been entered.)
<b>Notifications</b>	Toggle the checkboxes to indicate which notifications (1-8, left to right) you want the ECU LAN to send when a control command is issued.

*Field descriptions for the Base tab of the Controls screen*

## 6.2.6 BAC Globals

From the **BAC Globals** menu, you can configure the DCP responder settings for communicating with T/Mon, how your ECU LAN will validate access, and enable special door-control behaviors.

**BAC Global Settings**

**DCP Responder Settings** [Display Mapping](#)

Disable DCP    DCP over LAN

DCP Unit ID / Protocol:  /

DCP over LAN port / protocol:  /

**BAC Settings**

Use internal profiles only when TMon profiles are not available  
 Use internal profiles only, and ignore TMon profiles  
 Do not use internal profiles, and use TMon profiles only

Using magnetic door lock (uncheck if using door strike)  
 Enable request to exit when using door strike (always enabled when using magnetic door lock)  
 Keep door unlocked until close detected  
 Enable direction logic for logging in/out activity  
 Mirror Alarm 3 on Alarm 1 (Door Sensor)  
 Continuous tone after Door Violation has been in alarm for 12 minutes

*From the BAC Globals screen, you can determine building access functionality for your door*

DCP Responder Settings (For use with T/Mon)	
<b>DCP over LAN</b>	Enables DCP transmissions over LAN (Enabled by default)
<b>DCP Unit ID/Protocol</b>	User-definable ID number for the ECU LAN (DCP Address), and the DCP protocol being used (DCPx or DCPf).
<b>DCP over LAN port/Protocol</b>	Enter the DCP port for this ECU LAN (UDP/TCP port).

The **BAC Settings** allow you to configure ECU LAN profile validation and door control behavior

The radio buttons determine the method the ECU LAN will use to authenticate door access.

- **Use internal profiles only when TMon profiles are not available** set's the ECU LAN to use profiles from T/Mon to validate door access unless the T/Mon database has been purged (see the **System** section for details on purging the BAC database), corrupted, or has not yet been downloaded from T/Mon. **This is the default setting.**
- **Use internal profiles only, and ignore TMon profiles** sets the ECU LAN to work in **Standalone** mode. In this mode, the ECU controls door access with its own internally databased access profiles. It will **not** use access information from T/Mon to make entry decisions. (**Note:** the ECU can still report door violations and access if being polled by T/Mon.)
- **Do not use internal profiles, and use TMon profiles only** configures the ECU LAN to ignore its internal profiles. If T/Mon's database has not yet been downloaded, been purged (see the **System** section for details on purging the BAC database), or corrupted, an ECU operating in this mode will essentially make a door inaccessible.

The four checkboxes in the BAC Settings section determine any special behaviors for the door.

- **Using magnetic door lock (uncheck if using door strike)** configures the ECU LAN to operate in **Magnetic Door Mode**. In Magnetic Door Mode, the door will remain magnetically locked until unlocked via proxy card scan,

Request-to-Exit button, or motion sensor. Enabling magnetic door mode reverses the relay energize state from normally open to normally closed, keeping the electromagnetic lock powered (locked) until access is granted.

- **Enable request to exit when using door strike** keeps the door strike locked until a request to exit or motion sensor alarm is seen by the ECU.
- **Keep door unlocked until close detected** sets the door to lock a few seconds after it has been detected closed, and can be usefully combined with "Magnetic Door Mode" to ensure the door has closed first before the lock is applied. In this mode, if the door does not open after it has been unlocked, It will lock again after 2-3 seconds.
- **Enable direction logic for logging in/out activity** enables the unit's in-out clocking function. In this mode, T/ Mon will log whether a user is entering or exiting the door (by keypad, following a passcode, a user will enter 1 for "in" or 4 for "out")
- **Mirror Alarm 3 on Alarm 1 (Door Sensor)** treats discrete alarm 3 as a door sensor alarm and will post to alarm 1 when triggered.

Continuous tone after Door Violation has been in alarm for 12 minutes.

- **When activated, the speaker of the ECU LAN** will go into a cycle of 12 minutes fast beep, 3 minutes off. The NetGuardian ENV Speaker, when activated, beeps for 12 minutes and then remains turned on, emitting a long continuous beep. Check the box if you would like the ECU LAN speaker to behave like the NetGuardian ENV Speaker.

Click **Save** at the bottom of the screen to commit your changes to the ECU LAN.

## 6.2.7 BAC Profiles

From the **BAC Profiles** screen, you can manage up to 32 internal profiles for valid door access.

**Note:** By default, the ECU LAN's internal profiles will be used to validate door access only when not configured with T/Mon. These profiles are **not** databased in T/Mon unless you do so manually. You can alter the ECU LAN's behavior for determining when to utilize its own internal profiles to validate door access from the **BAC Globals** screen.

BAC Local Profiles			
Id	Description	Passcode	Summary
1	Mark's Card	0001000123	Any Time or Day <a href="#">Advanced&lt;&gt;</a>
Stay Open Mode: <input type="checkbox"/> Dates (mm-dd-yyyy): From 1 - 1 - 2011 To 1 - 1 - 2050 Days of Week: Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat <input checked="" type="checkbox"/> Time of Day (hh:mm): From 00 : 00 To 23 : 59			
2	Open for Business	00010001234	Any Time or Day <a href="#">Advanced&lt;&gt;</a>
Stay Open Mode: <input checked="" type="checkbox"/> Dates (mm-dd-yyyy): From 1 - 1 - 2011 To 1 - 1 - 2050 Days of Week: Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input checked="" type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input checked="" type="checkbox"/> Sat <input type="checkbox"/> Time of Day (hh:mm): From 8 : 00 To 17 : 00			
3	Chad's Card	0123456789	Any Time or Day <a href="#">Advanced&gt;&gt;</a>
4	Andrew's Code	9876543210	Any Time or Day <a href="#">Advanced&gt;&gt;</a>

*The BAC Profiles Screen*

To configure profiles:

1. Enter a **Description** for the profile (typically, the name or the purpose of the profile)
2. Enter the **Passcode** that will be used to authenticate door access, either a code that will be entered manually on the keypad or a code associated with a proxy card. If using a proxy card, you can read the passcode associated with the card by placing the unit in debug mode. See the section of this manual titled **Determining Proximity Card Numbers** for more information.
3. Set Date and Time restrictions for the profile. The **Summary** field will show any access restrictions for a profile by Date, day of the week, or time. By default, a profile is set to be able to access a door without date or time restrictions. To configure access restrictions for any profile, click **Advanced<<**.
  - o Enable **Stay Open Mode** if you want the door to remain unlocked after the passcode is entered. In this mode, you can lock the door again by re-entering the passcode (by proxy or keypad), or by logging into the ECU LAN and issuing a RLS command to point 22. This mode is disabled by default.
  - o Enter **Dates** for valid use of the profile. By default, profiles are set with virtually no expiration date.
  - o Enter **Days of the Week** during which the profile will be valid.
  - o Enter the **Time of Day** during which the profile can access the door. All times are set in military. By default, there is no time restriction (the Time of Day fields are set to 00:00 and 23:59)
4. Repeat the above steps for any profiles you wish to configure. When you are finished, click **Save** at the bottom of the screen to commit the profiles to the ECU LAN.

## 6.2.8 Date and Time

The **Date and Time** option allows you to set the internal clock of the ECU LAN or synch it with a Network Time server. If your ECU LAN should suffer a power failure or you need to reboot, and your ECU LAN was ordered without the Real-Time Clock (RTC) option and the network time option is not enabled, you may have to reset the unit's date and time. (Most ECU LAN units come standard with a Real-Time Clock, but you may wish to check your build option to be sure.)

The Edit > Date and Time menu

Time Settings	
<b>Date</b>	Select the current month, day, and year from the drop-down menus.
<b>Time</b>	Select the current hour, minutes, and time of day from the drop-down menus.
Automatic Time Adjustment (NTP)	
<b>Enable NTP</b>	Check this box to enable Network Time Protocol.
<b>NTP Server Address or Host Name</b>	Enter the NTP server's IP address or host name, then click Sync. Example: north-america.pool.ntp.org <b>NOTE:</b> Make sure DNS servers are defined if using Hostname for NTP server.
<b>Time Zone</b>	Select your time zone from the drop-down menu.
Adjust Clock for Daylight Savings Time (DST)	
<b>Enable DST</b>	Check this box to have the ECU LAN observe Daylight Savings.
<b>Start Day</b>	Select the month, weekday, and time when Daylight Savings will begin.
<b>End Day</b>	Select the month, weekday, and time when Daylight Savings will end.

## 6.2.9 Timers

The **Timers** menu allows you to change how often certain ECU LAN specific events occur.

Timers	
Description	Timer Value
<b>Web Refresh (100ms-60s):</b> How often web browser is refreshed when in monitor mode.	<input type="text" value="1s"/>
<b>Timed Tick (0s-60m 0=off):</b> This is a 'heartbeat' function that can be used by masters who don't perform integrity checks.	<input type="text" value="0s"/>
<b>Door Warning Beep (0s-60m, 25s default):</b> Slow beep period to warn that a Door Violation might occur.	<input type="text" value="25s"/>
<b>Time Before Door Violation (0s-60m, 55s default):</b> Declare Door Violation alarm if fault not cleared in this period of time.	<input type="text" value="55s"/>

*The Edit > Timers menu*

Timers	
<b>Web refresh</b>	How often the web browser is refreshed when in monitor mode.
<b>Timed Tick</b>	The "heartbeat" function that can be used by masters who don't perform integrity checks.
<b>Door Warning Beep</b>	The amount of time after the door is unlocked before a slow beep will occur to alert the person entering or exiting that a door violation is about to occur. <b>Note:</b> Set the Door Warning Beep to some number of seconds less than the Time Before Door Violation, otherwise you will not receive warning for potential door violations.
<b>Time Before Door Violation</b>	The time after which a violation will occur if a fault has not been cleared.

## 6.2.10 Reboot

Click on the **Reboot** link from the **Edit** menu will reboot the ECU LAN (DC) after writing all changes to NVRAM.



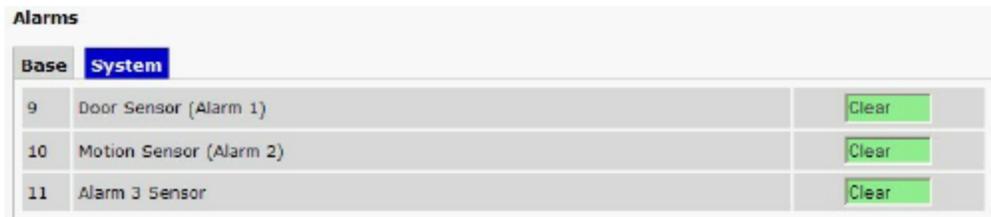
*The Edit > Reboot confirmation popup*

## 7 Monitoring Alarms and Issuing Controls

### 7.1 Monitoring Alarms

Click on **Alarms** in blue under the Monitor Menu to view the status of your unit's alarms. The **Base** tab will show you your unit's 3 programmable alarms, while the **System** tab will display the ECU's own system alarms.

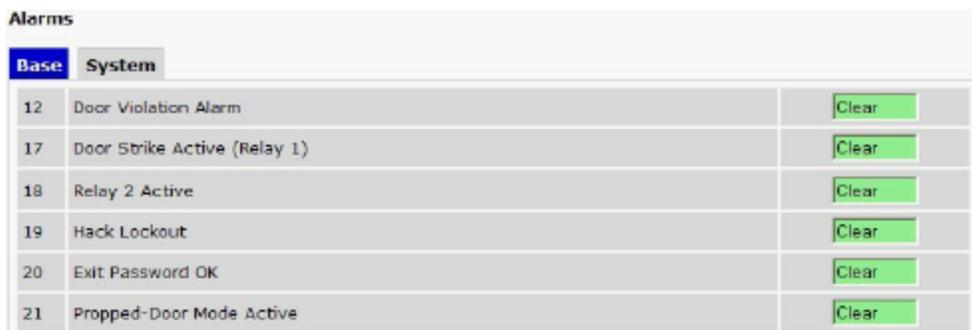
Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present.



The screenshot shows the 'Alarms' screen with the 'Base' tab selected. It displays a table with three rows of alarm information. Each row includes an ID number, a description of the alarm, and a 'Clear' button with a green background, indicating the alarm is not active.

Alarms		
Base		System
9	Door Sensor (Alarm 1)	Clear
10	Motion Sensor (Alarm 2)	Clear
11	Alarm 3 Sensor	Clear

*The Monitor Menu > Alarms screen*



The screenshot shows the 'Alarms' screen with the 'System' tab selected. It displays a table with six rows of system alarm information. Each row includes an ID number, a description of the alarm, and a 'Clear' button with a green background, indicating the alarm is not active.

Alarms		
Base	System	
12	Door Violation Alarm	Clear
17	Door Strike Active (Relay 1)	Clear
18	Relay 2 Active	Clear
19	Hack Lockout	Clear
20	Exit Password OK	Clear
21	Propped-Door Mode Active	Clear

*Click the System tab to view your unit's system alarms*

## 7.2 Issuing Control Commands

Clicking on **Controls** in blue under the Monitor Menu gives the user access to the unit's 2 control relays.



*Activate controls from the Monitor Menu > Controls screen*

Next to each relay is a bar indicating its status.

To issue a control for any of the power outputs, click on a command.

- **Opr** latches the relay.
- **Rls** releases the relay.
- **Mom** issues a momentary command, temporarily placing the relay in the opposite state before resuming its previous operation. (If a relay were in a "released" state, issuing a momentary command would latch the relay temporarily and then release it again.) By default, a Momentary command lasts 5 seconds; you can change this time from the **Edit Menu > Controls** screen.

## 7.3 Site Access Log

**Event Log**

Evt	Timestamp	Passcode	Dir	Status
1	2015-05-22 14:25:06		Exit	EVENT: Valid exit detected
2	2015-05-22 14:24:56	2362361	Enter	Chris J
3	2015-05-22 14:24:15	1234	Exit	ERROR: Invalid code
4	2015-05-22 12:21:18		Exit	EVENT: Valid exit detected
5	2015-05-22 12:15:43		Exit	EVENT: Valid exit detected
6	2015-05-22 10:05:23	2362361	Enter	Chris J
7	2015-05-22 10:03:15	2362361	Enter	Chris J
8	2015-05-21 10:06:12	2362361	Enter	Chris J
9	2015-05-21 10:03:17	2362361	Enter	Chris J
10	2015-05-21 10:02:34	2362361	Enter	Chris J
11	2015-05-21 10:02:12	2362364	Exit	Chris J
12	2015-05-21 10:01:33	2362361	Enter	Chris J
13	2015-05-21 09:52:27	2362364	Exit	Chris J
14	2015-05-21 09:52:03	2362361	Enter	Chris J
15	2015-05-21 09:51:11	2362364	Exit	Chris J
16	2015-05-21 09:50:40	2362361	Enter	Chris J
17	2015-05-21 09:41:02	12341	Enter	Technical Support
18	2015-05-21 09:27:54	56784	Exit	Mark C
19	2015-05-21 09:27:48	56782	Enter	Technical Support
20	2015-05-21 09:27:38	56781	Enter	Mark C
21	2015-05-21 09:27:32	5678	Enter	Technical Support

[eventlog.csv](#)

Monitor Menus > Site Access Log

The Site Access Log displays the event log for Building Access events. The log has the following fields:

Event Log	
<b>Evt</b>	The event number. The most recent event is displayed at the top.
<b>Timestamp</b>	The Date and Time the event occurred.
<b>Passcode</b>	The passcode that was used for the event, if applicable.
<b>Dir</b>	The direction that was used for the event, if applicable. <b>Note:</b> Ignore if direction is not enabled under Edit>BAC Profiles.
<b>Status</b>	A description of the event or the user that triggered the event under Edit>Bac Profiles.

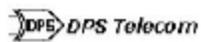
## 8 Firmware Upgrade

To upload new firmware to the ECU LAN, you can either click **Upload** in the upper-right corner of the screen at any time or, From the **Edit Menu > System** screen, in the **System Controls** section, you may click the **Upload** button next to **Restore Configuration**.

The screenshot shows the 'ECU LAN' configuration page. The 'System Controls' section contains the following elements:

System Controls	
Initialize Configuration	<input type="button" value="Initialize"/>
Backup Configuration	<input type="text" value="config.bin"/> <input type="button" value="Save"/>
Restore Configuration	<input type="button" value="Upload"/>
<input type="button" value="Reset"/> <input type="button" value="Save"/>	

At the **Firmware Load** screen, simply browse to find the firmware file you downloaded from [www.dpstele.com/mydps](http://www.dpstele.com/mydps) and click **Load**.



Upload (config, firmware, web, or bundle)

## 9 Determining Proximity Card Number

To obtain the number of your proximity card that should be databased in your T/Mon or ECU LAN web browser in order to grant access privileges:

1. Telnet into the ECU LAN using port **2002** (or create a serial craft connection at 9600 baud)
2. Login using your username and password.
3. Select the **(D)debug** option:
4. In the **(D)debug** menu, select the **(P)roxy** option:
5. Once Proxy filter debug is set to **ON**, you can capture your card number. Swipe the undatabased card in front of the reader, and the card number will appear for you to catalog. The screen below shows examples of card numbers (access codes) for both **26 and 37-bit** proximity cards.



```

Telnet 126.10.230.136
ECU LAN v1.00.0416
(c)2011 DPS Telecom, Inc.
C>onfig P>ing D>ebug e<X>it ? D
Debug Filter Options
a> ALM :OFF      f>  -- :OFF      L>  -- :OFF      Q>  -- :OFF
A>  -- :OFF      P>  -- :OFF      n>  -- :OFF      r>  RPI :OFF
c> DBG :ON       g>  -- :OFF      M>  MPFS :OFF    s>  SNMP :OFF
C>  -- :OFF      h>  -- :OFF      o>  OTHER:OFF   S>  -- :OFF
d> DCP :OFF      H>  -- :OFF      O>  -- :OFF      t>  -- :OFF
D>  -- :OFF      i>  PING :OFF    p>  NTP :OFF     b>  -- :OFF
e> ECU :OFF      k>  KEY :OFF     P>  PRXY :OFF    W>  HTTP :OFF
E>  -- :OFF      l>  -- :OFF      q>  -- :OFF      W>  -- :OFF

"X" to Clear all filters  "?" to Display this Help
<ESC> to Quit

<P:PRXY_dbgON>
PRX1:Got 26 bit CARD-0001000099
PRX1:Got 37 bit CARD-21359201643

```

*A Telnet screen showing both 26 and 37-bit card number captures*

6. Having captured the card number, you are now ready to database it into the T/Mon. From the T/Mon Master Menu, navigate to **Files/Utilities/Building Access/Profiles** and enter the code in the area shown:



BAS Profiles

User : regularusr    Type : User    Code : (0001000099) ... ( )  
Name : Regular User    Title :  
EMail :    Stay Open: N  
Site/Group    From    To    DOW    Time of Day

001	Test ECU #1	01-26-2007	01-26-2010	SMTWIFS	00:00 23:59
002	Test ECU #2	01-26-2007	01-26-2010	SMTWIFS	00:00 23:59

Access Code (4-14 digits)

F1=Detail, F8=Save, F9=Help, F10/Esc=Exit

*Database valid user access codes captured via debug in T/Mon*

## 10 T/Mon Configuration

To incorporate the ECU LAN into your Building Access System, you must configure the device in T/Mon. Once the device is configured in T/Mon, you will be able to determine access rights by user, day, time, and during what dates, a user will have access to the door controlled by the ECU LAN.

To configure your ECU LAN in T/Mon:

### 1. Set up a Remote Port Polling Job

- o From the T/Mon main menu, select **Parameters>Remote Parameters**
- o Select a halted job greater than 49 and Create a **DCP(F) Interrogator Job**.
  - If unsure of settings when creating the DCP(F) Interrogator job, see section M1 of your T/Mon XM manual or simply use default settings.
- o Define the data connection for your job
  - Press F6 to reach the Data Connection screen
  - Press F1 to open the Ethernet TCP Port Definition screen and define the data connection (IP Port) for your Building Access Job.



*Configuring the DCP(f) Job in T/Mon*

### 2. Once you've configured the remote port job, you must **Define the ECU LAN Device**.

- o Return to the Master Menu and select **File Maintenance>LAN-Based Remotes>NetGuardian/NetDog\_g2**. From here, you will configure the ECU LAN device.

```

NetGuardian/NetDog_G2 Definition
Site Number      : 187
Description      :
Site Name       : ECU_Lan
Password        :
Device Type     : ECU LAN

Expansion Units  : 1
Expansion Modules : BAC

IP Address / Port : 126.10.220.187  2001

Dedicated Port  : 57   Base Addr: 0   Exp Addr #1: 187  Exp Addr #2:
Dialout Port    : 0    Pri Dial Prefix :   Sec Dial Prefix :
Phone           :
Polling Type    :
Polling Interval : (mins)
Scheduled Days  ---> SUN:   MON:   TUE:   WED:   THU:   FRI:   SAT:
Scheduled Hours :
Scheduled Minute :

F)ind, E)dit, D)delete, N)ext, P)revious, Q)uit : _
F1=Device, F2=Global Options, F3=Int Alarms, F4=Load Firmware, F10/Esc=Exit

```

*Defining the ECU LAN in T/Mon*

- o In the **Device Type** field, select **ECU LAN**.
  - o In the **Expansion Modules** field, select **BAC**.
  - o In the **IP Address / Port** field, enter the IP Address you configured for the unit via the TTY interface. The ECU LAN defaults to port 2001, but can be changed from the Web Browser interface.
  - o In the **Dedicated Port** field, enter the number of the Port Job you used for the DCP(F) Interrogator job you created in the previous step.
  - o For all other settings, you may use defaults. Or, if you are unsure of any settings, see section M22 of your T/MonXM manual for field descriptions in the device definition screen.
3. Once you've defined the ECU LAN device, you must define the site.
- o Return to the T/Mon Master Menu, and select **Files>Building Access>Sites/Zones**

```

T/Mon/NOI_SDE: 11/24/2014 10:00:00 - Device - Sites / Zones
Ref ID  Description  Min  Type  Port  Dvc  Adr  Dgy  Pt  Door List
-----
1 001 ECU LAN @ OPS  2    BAC   N2    187  _
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

NetGuardian Site (1-999) of BAC data source
F1=Goto, F2=INS, F3=Blank, F4=DEL, F5=Save, F6=Help, F10/Esc=Exit

```

*Defining the ECU site in T/Mon*

- o From the site definition screen, you can define the door controlled by your ECU LAN.
  - Set the site ID (001-999 - there are no restrictions as to the order of your sites)
  - For the **Type**, enter **BAC**
  - Under **Port**, enter **N2**
  - For **Adr**, enter the number you input for the **Site Number** field in the previous step
  - Under **Door List**, enter 1

Once your device is defined and properly configured in T/Mon, you may determine which users may access the door at what times. For more information on users and profiles, see section M22 of your T/Mon Manual.

## 11 Display Mapping Appendix A

Display 1	
Point	Description
1-64	Internal

Display 2	
Point	Description
1-64	Internal

Display 3		
Point	Description	Mode
1-8	Unused	N/A
9	Door Sensor (Alarm 1)	Status**
10	Motion Sensor (Alarm 2)	Status**
11	Alarm 3 sensor	Status**
12	Door violation alarm	Status
13-16	Unused	N/A
17	Door strike active (relay #1)	Status/Control * **
18	Relay #2 active	Status/Control * **
19	Hack lockout	Status
20	Exit password OK	Status **
21	Propped-Door Mode active	Status/Control *
22	Stay-Open Door Mode or Extended Propped-Door Mode active	N/A
23	Unused	N/A
24	Speaker active	Status **
25	Default Configuration	Status **
26	DCP Channel is Inactive	Status **
27	Mac Address Not Set	Status **
28	IP Address Not Set	Status **
29	LAN Hardware Error	Status **
30	SNMP Processing Error	Status **
31	SNMP Community Error	Status **
32	LAN TX Packet Drop	Status **
33	Notification 1 Failed	Status **

Display 3		
34	Notification 2 Failed	Status **
35	Notification 3 Failed	Status **
36	Notification 4 Failed	Status **
37	Notification 5 Failed	Status **
38	Notification 6 Failed	Status **
39	Notification 7 Failed	Status **
40	Notification 8 Failed	Status **
41	NTP Failed	Status **
42	Timed Tick	Status **
43	Dynamic Memory Full	Status **
44	Unused	Status **
45	Unit Reset	Status **
46-61	Unused	N/A
62	Standalone Mode Active	Status **
63	ECU enabled	Status **
64	Unused	N/A
* <b>When using controls from alarm masters, only issue the momentary (MOM) commands</b>		
** <b>DPS recommends these alarms be set to “No Log” and “No History” in T/Mon point setup</b>		

*Display Mapping for the ECU LAN*

## 12 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

**1. Check the DPS Telecom website.**

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstele.com/support/>. Look here first for a fast solution to your problem.

**2. Prepare relevant information.**

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

**3. Have access to troubled equipment.**

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

**4. Call during Customer Support hours.**

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

**Emergency Assistance:** *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

## 13 End User License Agreement

All Software and firmware used in, for, or in connection with the Product, parts, subsystems, or derivatives thereof, in whatever form, including, without limitation, source code, object code and microcode, including any computer programs and any documentation relating to or describing such Software is furnished to the End User only under a non-exclusive perpetual license solely for End User's use with the Product.

The Software may not be copied or modified, in whole or in part, for any purpose whatsoever. The Software may not be reverse engineered, compiled, or disassembled. No title to or ownership of the Software or any of its parts is transferred to the End User. Title to all patents, copyrights, trade secrets, and any other applicable rights shall remain with the DPS Telecom.

DPS Telecom's warranty and limitation on its liability for the Software is as described in the warranty information provided to End User in the Product Manual.

End User shall indemnify DPS Telecom and hold it harmless for and against any and all claims, damages, losses, costs, expenses, obligations, liabilities, fees and costs and all amounts paid in settlement of any claim, action or suit which may be asserted against DPS Telecom which arise out of or are related to the non-fulfillment of any covenant or obligation of End User in connection with this Agreement.

This Agreement shall be construed and enforced in accordance with the laws of the State of California, without regard to choice of law principles and excluding the provisions of the UN Convention on Contracts for the International Sale of Goods. Any dispute arising out of the Agreement shall be commenced and maintained only in Fresno County, California. In the event suit is brought or an attorney is retained by any party to this Agreement to seek interpretation or construction of any term or provision of this Agreement, to enforce the terms of this Agreement, to collect any money due, or to obtain any money damages or equitable relief for breach, the prevailing party shall be entitled to recover, in addition to any other available remedy, reimbursement for reasonable attorneys' fees, court costs, costs of investigation, and other related expenses.







# Warranty

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DPS Telecom warrants, to the original purchaser only, that its products a) substantially conform to DPS' published specifications and b) are substantially free from defects in material and workmanship. This warranty expires two years from the date of product delivery with respect to hardware and ninety days from the date of product delivery with respect to software. If the purchaser discovers within these periods a failure of the product to substantially conform to the specifications or that the product is not substantially free from defects in material and workmanship, the purchaser must promptly notify DPS. Within reasonable time after notification, DPS will endeavor to correct any substantial non-conformance with the specifications or substantial defects in material and workmanship, with new or used replacement parts. All warranty service will be performed at the company's office in Fresno, California, at no charge to the purchaser, other than the cost of shipping to and from DPS, which shall be the responsibility of the purchaser. If DPS is unable to repair the product to conform to the warranty, DPS will provide at its option one of the following: a replacement product or a refund of the purchase price for the non-conforming product. These remedies are the purchaser's only remedies for breach of warranty. Prior to initial use the purchaser shall have determined the suitability of the product for its intended use. DPS does not warrant a) any product, components or parts not manufactured by DPS, b) defects caused by the purchaser's failure to provide a suitable installation environment for the product, c) damage caused by use of the product for purposes other than those for which it was designed, d) damage caused by disasters such as fire, flood, wind or lightning unless and to the extent that the product specification provides for resistance to a defined disaster, e) damage caused by unauthorized attachments or modifications, f) damage during shipment from the purchaser to DPS, or g) any abuse or misuse by the purchaser.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In no event will DPS be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Damages that DPS will not be responsible for include but are not limited to, loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities or services; downtime; claims of third parties including customers; and injury to property.

For an additional fee DPS may, at its option, make available by written agreement only an extended warranty providing an additional period of time for the applicability of the standard warranty.

## **Technical Support**

If a purchaser believes that a product is not operating in substantial conformance with DPS' published specifications or there appear to be defects in material and workmanship, the purchaser should contact our technical support representatives. If the problem cannot be corrected over the telephone and the product and problem are covered by the warranty, the technical support representative will authorize the return of the product for service and provide shipping information. If the product is out of warranty, repair charges will be quoted. All non-warranty repairs receive a 90-day warranty.

*“Dependable, Powerful Solutions*  
that allow users to monitor larger,  
more complicated networks with a  
smaller, less trained staff”



*"Your Partners in Network Alarm Monitoring"*

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