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# PW-3000 Ethernet Board Installation Manual

Part Number: PW3K1EN



TD1153 rev1201



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## WARNINGS AND CAUTIONS

### WARNING



Before installation, turn off the external circuit breaker which supplies power to the system.

Before connecting the device to the power supply, verify that the output voltage is within specifications of the power supply.

Do not apply power to the system until after the installation has been completed.

Personal injury or death could occur, and the equipment could be damaged beyond repair, if these WARNINGS are not observed!

### WARNING



#### Fire Safety and Liability Notice

Never connect card readers to any critical entry, exit door, barrier, elevator or gate without providing an alternative exit in accordance with all fire and life safety codes pertinent to the installation. These fire and safety codes vary from city to city and you must get approval from local fire officials whenever using an electronic product to control a door or other barrier. Use of egress buttons, for example, may be illegal in some cities. In most applications, single action exit without prior knowledge of what to do is a life safety requirement. Always make certain that any required approvals are obtained in writing. **DO NOT ACCEPT VERBAL APPROVALS, THEY ARE NOT VALID.**

NexWatch never recommends using the PW-3000 or related products for use as a primary warning or monitoring system. Primary warning or monitoring systems should always meet local fire and safety code requirements. The installer must also test the system on a regular basis by instructing the end user in appropriate daily testing procedures. Failure to test a system regularly could make installer liable for damages to the end user if a problem occurs.

### WARNING



**EARTH** ground all enclosures, for proper installation.

**WARNING**

Use suppressors on all door strikes. Use S-4 suppressors for installation. NexWatch recommends only DC strikes.

**CAUTION**

IF ANY DAMAGE TO THE SHIPMENT IS NOTICED, A CLAIM MUST BE FILED WITH THE COMMERCIAL CARRIER RESPONSIBLE.

**CAUTION**

Electro-static discharge can damage CMOS integrated circuits and modules.

To prevent damage always follow these procedures:

Use static shield packaging and containers to transport all electronic components, including completed reader assemblies.

Handle all ESD sensitive components at an approved static controlled workstation. These workstations consist of a desk mat, floor mat and an ESD wrist strap. Workstations are available from various vendors.

**NOTICE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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## UNPACKING PROCEDURE

### CAUTION

If any damage to the shipment is noticed before unpacking, a claim must be filed with the commercial carrier.

All containers should be opened and unpacked carefully in order to prevent damage to the contents.

The following steps are used to unpack equipment in preparation for installation:

1. Open the container and remove the unit(s) and all packing material. Retain the container and all packing materials. They may be used again for reshipment of the equipment, if needed.
2. Inspect the contents for shortage. If items are missing items, contact the order entry department at 800-227-1667 Option 2.

3. Visually check contents. If damage is discovered, perform the following:

If shipping caused damage to the unit, a claim must be filed with the commercial carrier.

If any other defect is apparent, call 800-227-1667 Option 2 for a return authorization.

### Shipping Instructions

To ship equipment back to NexWatch:

1. Contact the customer service department at 800-227-1667 Option 2 before returning equipment. When calling, please have available:

- A description of the problem or reason for returning the equipment.
- Original purchase order number, invoice number and if the unit is under warranty.
- A new purchase order number if the unit is not under warranty

2. Obtain the Return Authorization Number (RMA) from the customer service department at 800-227-1667 Option 2.

3. Show the RMA number on all packages shipped. Packages, which are not marked with an RMA number will be refused at the factory and returned COD.

4. Carefully pack the equipment for shipment. Use the original packing material whenever possible.

### Limited Warranty

All Products sold or licensed by NexWatch include a warranty registration card which must be completed and returned to NexWatch by or on behalf of the end user in order for NexWatch to provide warranty service, repair, credit or exchange. All warranty work shall be handled through Customer which shall notify NexWatch and apply for a Return Merchandise Authorization (RMA) number prior to returning any Product for service, repair, credit or exchange.

NexWatch warrants that its Products shall be free from defects in materials and workmanship for a period of two years from date of shipment of the Product to Customer. The warranty on Terminals, Printers, Communications Products and Upgrade kits is 90 days from date of shipment. Satisfaction of this warranty shall be limited to repair or replacement of Products which are defective or defec-



tive under normal use. NexWatch' warranty shall not extend to any Product which, upon examination, is determined to be defective as a result of misuse, improper storage, incorrect installation, operation or maintenance, alteration, modification, accident or unusual deterioration of the Product due to physical environments in excess of the limits set forth in Product manuals.

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## PROGRAMMING ETHERNET DEVICES

This covers all of the steps needed to get the PW3K1EN Ethernet Daughter board on-line and working. Programming of these units will be outlined within this Installation Guide.

### PW3K1EN Programming

The PW3K1EN will be programmed from a Command Prompt using the ARP command. ARP (Address Resolution Protocol), a TCP/IP protocol used to convert an IP address into a physical address (called a DLC address), such as an Ethernet Address. A host wishing to obtain a physical address broadcasts an ARP request onto the TCP/IP network. The host on the network that has the IP address in the request then replies with its physical hardware address (MAC address).

#### EQUIPMENT NEEDED

1. PW3K1IC (Intelligent Controller)
2. PW3K1EN (Ethernet Card and Mounting Kit)
3. A Networked Computer.
4. A Network Crossover cable to connect directly to the PW-3000 or a Network Connection that is on the same network segment as the PW-3000.

**Special Note:** *When programming the Ethernet card verify that you're not initially going through a gateway or a router. When programming is complete the unit can be installed on a different network segment.*

### HARDWARE SETUP

1. Prior to mounting the PW3K1EN onto the P23K1IC verify the MAC address on the back of the PW3K1EN (Ethernet Card). This address will be needed during programming of the card with the correct IP Address, Subnet Mask, and Gateway.

Example: MAC Address 00-20-4A-54-49-B7

MAC Address \_\_\_\_\_

Static IP Address \_\_\_\_\_

(Check with MIS\IT Department)

Subnet Mask \_\_\_\_\_

(Check with MIS\IT Department)

Default Gateway \_\_\_\_\_

(Check with MIS\IT Department)

2. Set the dipswitches on the PW3K1IC (S1) to:

Baud Rate is 38,400 bps

Flow Control is ON

Panel Address is 1

**S1**

8 OFF (PASSWORD OFF)

7 ON (BAUD RATE)

6 ON (BAUD RATE)

5 ON (FLOW CONTROL)

4 OFF (PANEL ADDRESS)

3 OFF (PANEL ADDRESS)

2 OFF (PANEL ADDRESS)

1 ON (PANEL ADDRESS)

3. Set the jumpers on the PW3K1IC

**Jumper**

J14 OFF (NETWORK ENABLED)

J12 ON (PORT 2 EOL ACTIVE)

J13 ON (PORT 3 EOL ACTIVE)

J4 2 AND 3 ON

J5 2 AND 3 ON

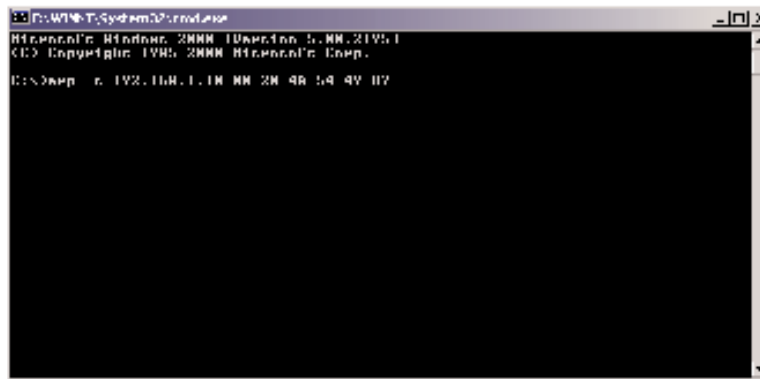
J6 2 AND 3 ON

J9 ON

4. Mount the PW3K1EN to the PW3K1IC (Mounting instructions on Page 15)
5. Finish Installation of PW-3000. Refer to Installation manuals
6. Connect the Networked Computer to the Ethernet Card using CAT5 cable.

## PROGRAMMING THE ETHERNET CARD

1. Go to a MS-DOS prompt.
2. Type `arp -s XXX.XXX.XXX.XXX ??-??-??-??-??-?? <Enter>`  
XXX.XXX.XXX.XXX = TCP/IP Address for the Ethernet Card  
??-??-??-??-??-?? = MAC Address of the Ethernet Card.  
After pressing Enter the result will show nothing.

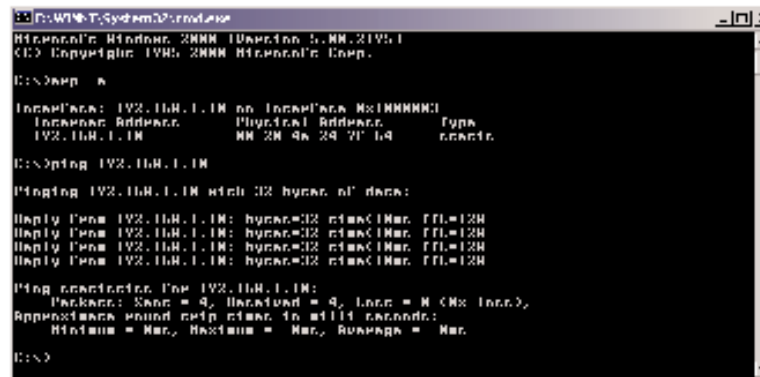


```
C:\WINNT\System32\cmd.exe
Microsoft Windows [Version 5.00.2195.1]
(c) Copyright 1996-2000 Microsoft Corp.

C:\>arp -s 192.168.1.10 88 20 4a 24 71 b4

C:\>
```

3. Type `arp -a <Enter>`. Verify the IP Address has been assigned to the Ethernet Card.



```
C:\WINNT\System32\cmd.exe
Microsoft Windows [Version 5.00.2195.1]
(c) Copyright 1996-2000 Microsoft Corp.

C:\>arp -a

Interface: 192.168.1.10 on Interface 881000000
Interface Address      Physical Address      Type
192.168.1.10          88 20 4a 24 71 b4     static

C:\>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time=10ms TTL=128
Reply from 192.168.1.10: bytes=32 time=10ms TTL=128
Reply from 192.168.1.10: bytes=32 time=10ms TTL=128
Reply from 192.168.1.10: bytes=32 time=10ms TTL=128

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Loss = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 10ms, Maximum = 10ms, Average = 10ms

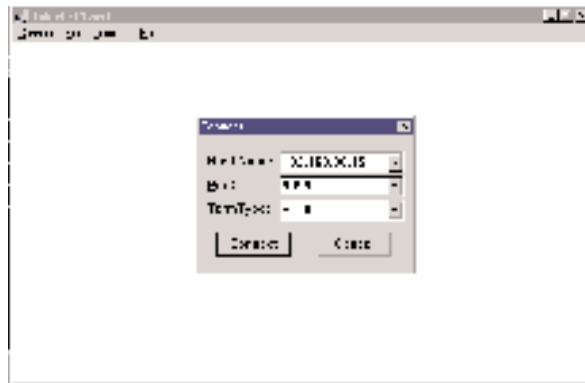
C:\>
```

4. Type Telnet XXX.XXX.XXX.XXX 1 <Enter>  
(IP Address and the number 1)

**Note:** The 1 is port "1".



5. The Telnet window may or may not connect to Host Name:  
XXX.XXX.XXX.XXX.  
Click "OK"
6. Select "Connect and Remote System"
7. Verify the Host Name is the correct IP Address and type:  
9999 in Port. Click "Connect"





19. Port Number=3001 <Enter> (Winpak Pro uses port 3001)
20. Select Enter through the rest of the menus
21. When the Main Menu Appears Verify that Channel 1 is  
Baudrate =38400, I/F Mode 4C, Flow 02 Port 03001  
Remote IP Adr: --- none ---, Port 00000  
Connect Mode: C0 Disconn Mode: 00  
Flush Mode: 00

```

D:\WINNT\System32\cmd.exe
0: Exit 1: Channel 1 2: Channel 2
3: Basic Parameters
4: IP Address 5: Baudrate 6: I/F Mode 7: Flow Control
8: Remote IP Address 9: Connect Mode 0: Disconn Mode 1: Flush Mode

***** Channel 1 *****
Baudrate: 38400, I/F Mode: 4C, Flow: 02
Port: 03001
Remote IP Adr: --- none ---, Port: 00000
Connect Mode: C0 Disconn Mode: 00
Flush Mode: 00

Change Setup : 0 Save configuration
               1 Channel 1 configuration
               Y Parameter default
               0 Exit without save
               Y Save and exit

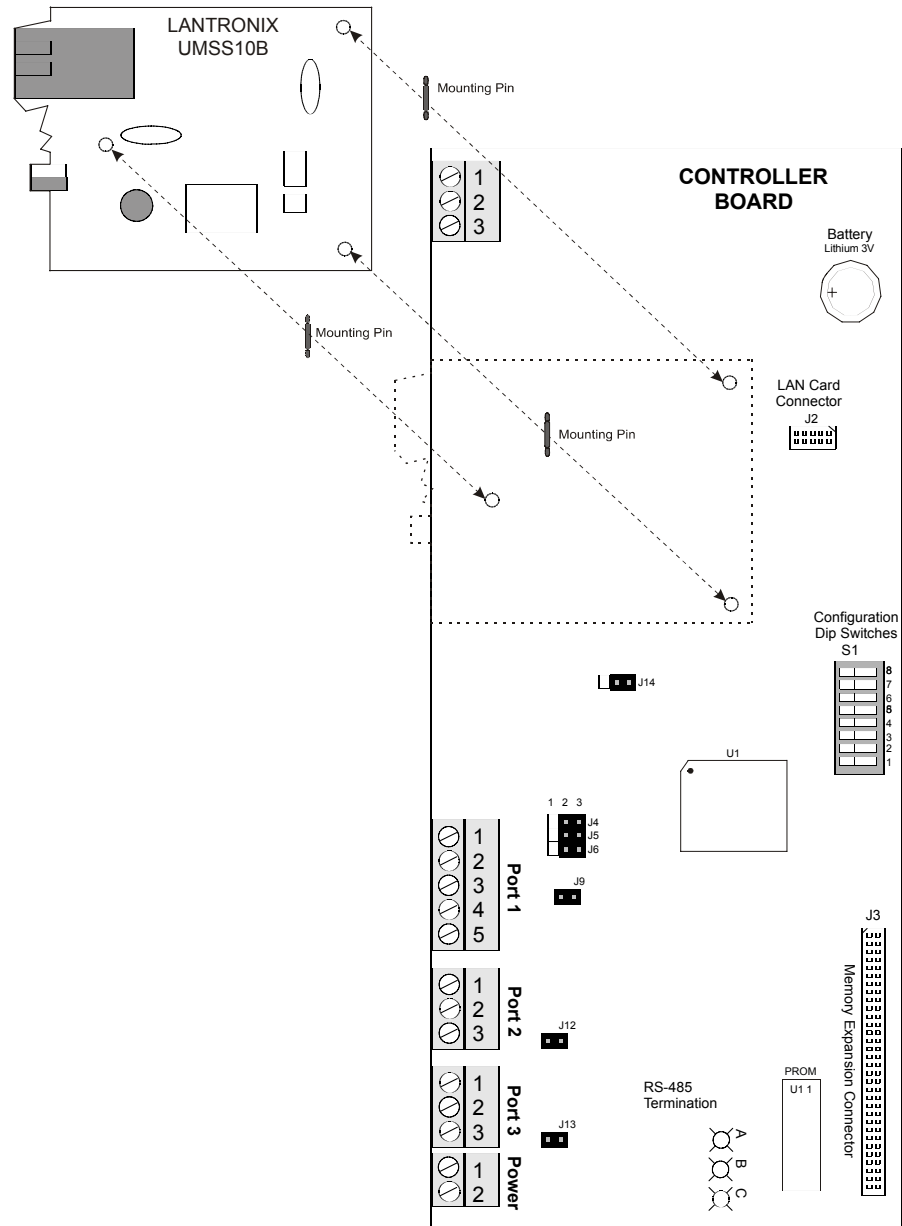
Your choice Y Y

Connection on line 100.
END

```

22. Type "9" <Enter> to Save and Exit.

## PW3K1EN Mounting Diagram









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