

MediaMatrix®

A Division of Peavey Electronics Corporation



nTouch 60 Hardware Manual

Version 1.7.2.0

March 27, 2015

Copyright notice

The information contained in this manual is subject to change without notice. Peavey Electronics is not liable for improper installation or configuration. The information contained herein is intended only as an aid to qualified personnel in the design, installation and maintenance of engineered audio systems. The installing contractor or end user is ultimately responsible for the successful implementation of these systems.

All creative content in this manual, including the layout, art design, content, photography, drawings, specifications and all other intellectual property is Copyright © 2015 Peavey Electronics Corporation. All Rights Reserved. Features & specifications subject to change without notice. All other registered trademarks or trademarks are the property of their respective owners.

The ratc-server component is based in part on the work of the libwebsockets project: <http://libwebsockets.org>.

Prepared by Peavey Digital Research, 6 Elm Place, Eynsham, Oxford, OX29 4BD, UK.

Email: mmtechsupport@peavey.com (<mailto:mmtechsupport@peavey.com>).

Scope

This guide describes how to install an nTouch 60 device and associated software.

The nTouch 60 works in conjunction with an nControl unit or an nTouch 180 unit. You must install at least one of these devices on your network for an nTouch 60 to function. For installation information, refer to the relevant hardware manual.

The screens displayed on the nTouch 60 are designed and managed using NWare. Once you have physically installed the unit, refer to the *NWare User Guide* for information on designing screens and displaying them on nTouch 60 units.

Contents

Chapter 1 Important safety instructions.....	1
Safety warnings	2
Chapter 2 Before you start	5
Important network considerations	6
Power outage and surge protection	6
Warranty Registration	6
What you will need	6
What's in the box?	7
Thank You!	7
Chapter 3 Introduction to nTouch 60	9
Description	10
Features.....	10
Applications	10
Example set up	11
nTouch 60 front panel.....	12
nTouch 60 rear	13
Chapter 4 Infrastructure design considerations.....	15
Introduction	16
NEMA electrical enclosures.....	16
Local power supply solution	16
Power over Ethernet solution	17
IP addresses.....	17
Chapter 5 Installing the unit.....	19
Introduction	20
Installation steps.....	20
Switching the unit on and specifying the network settings	24
Calibrating the screen.....	26
What to do next	27
Chapter 6 Maintaining the nTouch 60	29
Displaying the maintenance menu using NDP	30
Warranty statement.....	33

Chapter 1

Important safety instructions

In This Chapter

Safety warnings.....	2
----------------------	---

Safety warnings

Warning: When using electrical products, basic cautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding plug. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
11. Only use attachments/accessories provided by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Never break off the ground pin. Write for our free booklet *Shock Hazard and Grounding*. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
16. If this product is to be mounted in an equipment rack, rear support should be provided.
17. Control panel devices, including the xControl range, D series and nTouch 60, are designed for mounting in NEMA metal enclosures. Grounding to the front plate is required.
18. **Note for UK only:** If the colors of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows:
 - a) The wire that is colored green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol,
 - b) colored green or colored green and yellow.
 - c) The wire that is colored blue must be connected to the terminal that is marked with the letter N or the color black.

- d) The wire that is colored brown must be connected to the terminal that is marked with the letter L or the color red.
19. This electrical apparatus should not be exposed to dripping or splashing and care should be taken not to place objects containing liquids, such as vases, upon the apparatus.
20. The on/off switch in this unit does not break both sides of the primary mains. Hazardous energy can be present inside the chassis when the on/off switch is in the off position. The mains plug or appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
21. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

Duration Per Day in Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

SAVE THESE INSTRUCTIONS!

Chapter 2

Before you start

In This Chapter

Important network considerations.....	6
Power outage and surge protection	6
Warranty Registration.....	6
What you will need	6
What's in the box?.....	7
Thank You!	7

Important network considerations



This product is designed to operate on a network backbone or infrastructure. The design, implementation and maintenance of this infrastructure is critical to correct operation and performance of the product. Peavey Electronics Corp does not support nor service network cabling, hubs, switches, patch bays, wall plates, connector panels or any other type of network interconnect device. Please ensure that these components and their associated installation techniques have been properly designed and installed for audio and network applications.

Power outage and surge protection

We make the following recommendations for the power source (PoE switch or DC power supply) used with the nTouch 60:

- Use an uninterruptable power supply (UPS) to protect against power outages.
- Use a power surge protection device, such as a *Surge-X* (<http://www.surgex.com>). This provides protection from destructive spikes, surges and inductive transients.

Warranty Registration

Please take a few minutes and fill out the warranty registration card. Although your warranty is valid without the registration, the information you provide with the form is crucial to our support group. It enables us to provide better service and customer support, and to keep you informed of new product updates.

Tip: Refer to the warranty statement at the rear of this manual for details of what your warranty includes and what the limitations are.

What you will need

Phillips head screwdriver to fit NEMA enclosure screws.

What's in the box?

nTouch 60 is packaged in a single container. This container includes the following items:

- nTouch 60
- Mounting plate
- Screws for mounting plate (2)
- Knob control
- Control knob removal tools (2)
- Three pin euro connector for EIA-485
- Two pin euro connector for power (when PoE is not used)
- User manual.

If any of these items are missing, please contact your Authorized Peavey MediaMatrix contractor/dealer.

Thank You!

Thank you for purchasing this MediaMatrix product. It is designed to provide years of trouble-free operation and high quality performance. We are confident that you will find this product and other MediaMatrix products to be of the highest quality.

Chapter 3

Introduction to nTouch 60

In This Chapter

Description.....	10
Features.....	10
Applications.....	10
Example set up.....	11
nTouch 60 front panel.....	12
nTouch 60 rear.....	13

Description

nTouch 60 is a wall-mounted control panel for controlling MediaMatrix audio systems.

The unit has a touch-sensitive screen for selecting options from an audio control project, which has been designed in NWare. It also has a knob for adjusting individual settings, like volume, and selecting options.

The nTouch 60 works in conjunction with an nControl unit or an nTouch 180 unit, which hosts the Kiosk pages from the NWare project.

Features

- Touch screen user interface
- Touch-sensitive, rotary control knob for fine adjustment of settings
- 1-gang NEMA mount (fits US, UK, European and Australian NEMA wall boxes)
- Easy wiring and installation
- Software upgradable from within NWare
- Power over Ethernet (PoE) or local power supply options
- Low power requirements
- Cost effective.

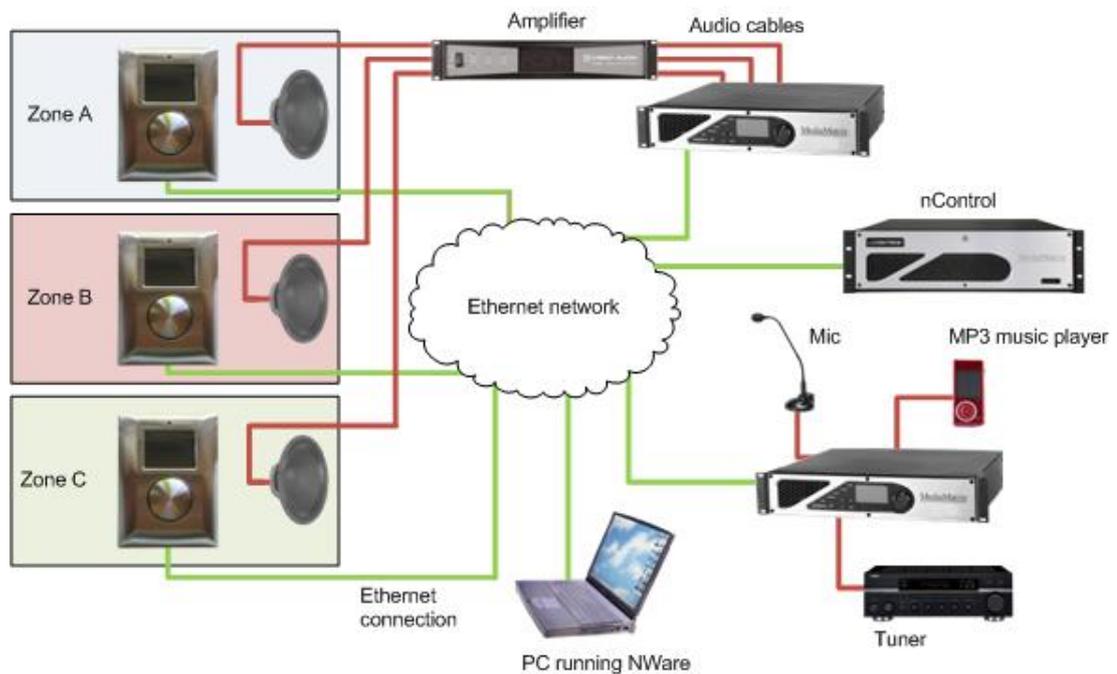
Applications

- Conference rooms
- Meeting rooms
- Ballrooms
- Hospitality and hotel meeting rooms
- Paging systems
- Entertainment systems
- Theater BOH (Back of House)
- Bars and restaurants
- Schools
- Medical facilities
- Institutional facilities
- Municipal facilities
- Courtrooms
- Lecture halls
- Presentation rooms.

Example set up

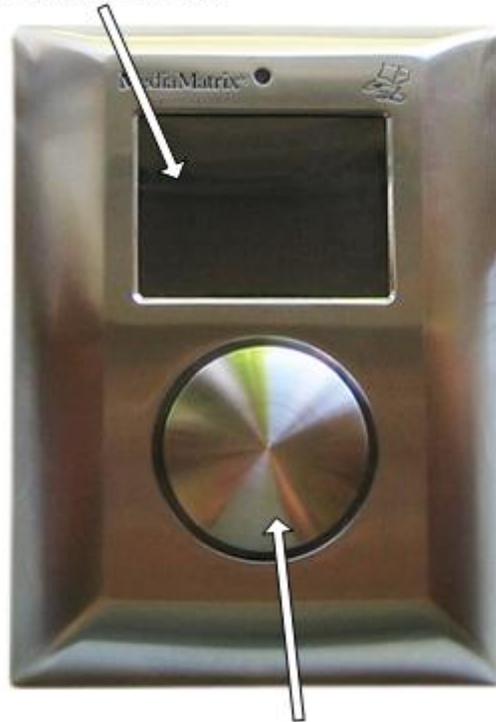
The diagram below shows nTouch 60 devices in three different zones in a building. In each zone there is also a speaker. Users who have access to the nTouch 60 devices can control the volume in the local zone and select the input source for the audio – either music from the MP3 player or from the tuner. Announcements made via the microphone can override the other two sources.

Tip: The design of the NWare project determines which zones each nTouch 60 can control.



nTouch 60 front panel

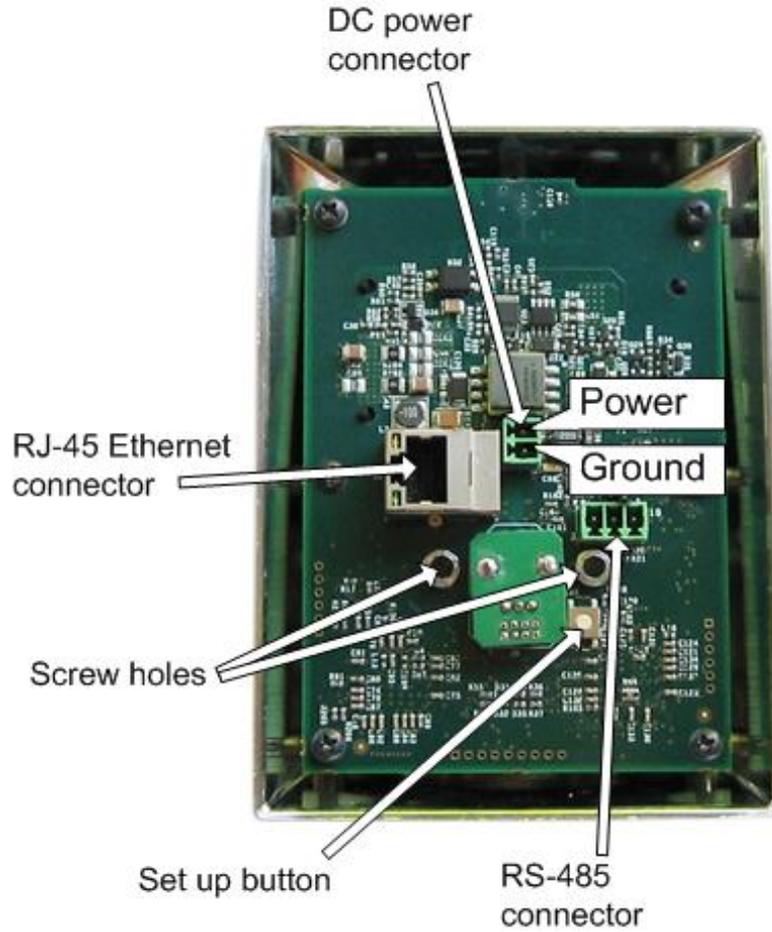
Touch-sensitive screen



Rotating, touch-sensitive knob

<p>Touch-sensitive screen</p>	<p>Color, touch-sensitive screen. Diagonal measurement is approximately 2.4" (60mm) and features a display resolution of 320 x 240 pixels.</p> <p>The screen is primarily designed to display buttons that the user can press to make selections and progress bars that display the values of settings, like volume or treble.</p>
<p>Rotating, touch-sensitive knob</p>	<p>The knob can be turned to select menu options and make adjustments to settings on screen. Touching the knob wakes the unit from sleep mode.</p>

nTouch 60 rear



DC power connector	12-48V DC power connector. This is required when power is unavailable via the Ethernet interface.
RJ-45 Ethernet connector	Standard RJ-45 connector that accepts a shielded CAT6 data cable for data transport to/from the internal network interface. A connection is required to all units for system configuration. This connector can also supply power to the nTouch 60 via a Power over Ethernet (PoE) switch.
RS-485 connector	Reserved.
Set up button	When the unit is receiving power, pressing this button displays the set up menu on the touch screen, allowing you to specify the network settings and calibrate the touch screen.
Screw holes	Two screw holes for fixing the front panel of the nTouch 60 to the wall panel box mounting plate.

Chapter 4

Infrastructure design considerations

In This Chapter

Introduction.....	16
NEMA electrical enclosures	16
Local power supply solution	16
Power over Ethernet solution.....	17
IP addresses.....	17

Introduction

Before you start the installation, it is important to consider the implications for your network and power supply system. The infrastructure must be designed and installed correctly, in order to provide reliable and error-free performance.

Each nTouch 60 unit requires power (12-48V DC) and a network connection to an nControl unit or nTouch 180 unit. However, there are several configurations you can use, allowing for a degree of flexibility in your installation.

If it has been decided that a DC power supply will be used in place of a PoE switch or PoE injectors, make sure it is capable of providing enough current for all the nTouch 60 units.

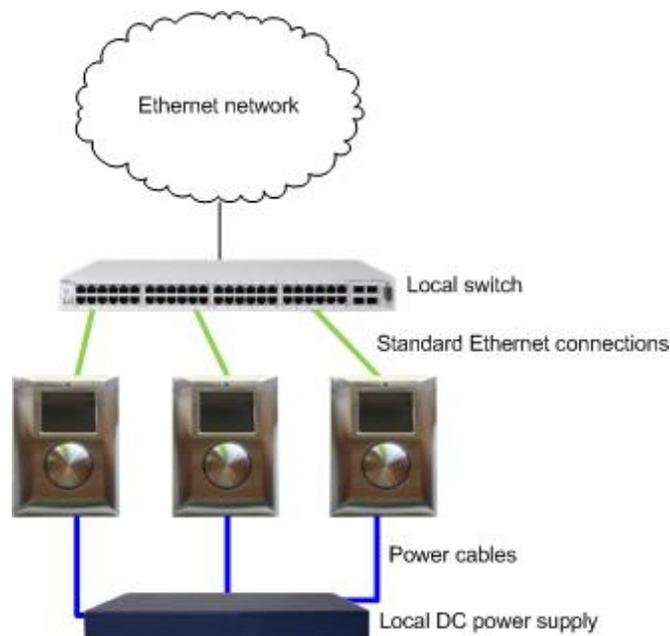
NEMA electrical enclosures

nTouch 60 units are designed to mount in standard NEMA electrical enclosures. This includes boxes designed for fixed installation into sheet rock, wood or masonry construction. We do not recommend that nTouch 60 units are installed into plastic boxes or in open wall space. All cabling and terminations should be installed into EMT conduit, securely coupled to the mounting box and system ground plane.

Local power supply solution

In this configuration, power is supplied locally, either by individual power supplies for the nTouch 60 devices, or a shared power supply, as shown in the example below.

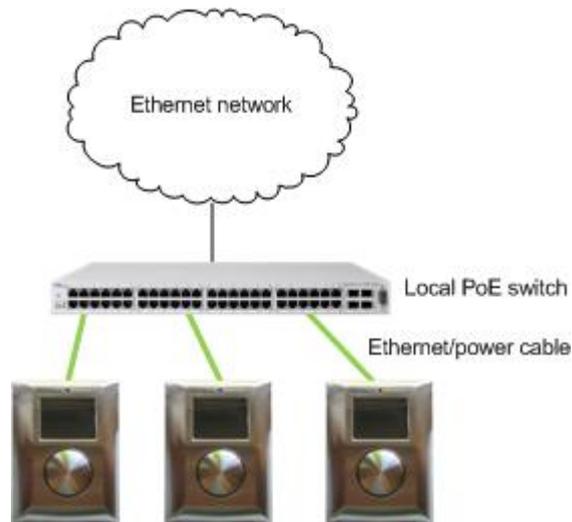
The nTouch 60 units are linked to the Ethernet network, which in turn is connected to the other MediaMatrix devices.



Power over Ethernet solution

In this configuration, power is supplied to the nTouch 60 devices via a Power over Ethernet (PoE) switch. The nTouch 60 devices do not require separate power connections.

The nTouch 60 units are linked to the Ethernet network, which in turn is connected to the other MediaMatrix devices.



IP addresses

Each nTouch 60 unit requires a unique IP address, which is used to identify the unit on the network and also within NWare. Before you install the units, it is important that you consider the IP address range that will be used in your installation.

Fixed IP addresses must be assigned to each unit. DHCP is not currently supported.

Chapter 5

Installing the unit

In This Chapter

Introduction.....	20
Installation steps.....	20
Switching the unit on and specifying the network settings.....	24
Calibrating the screen	26
What to do next.....	27

Introduction

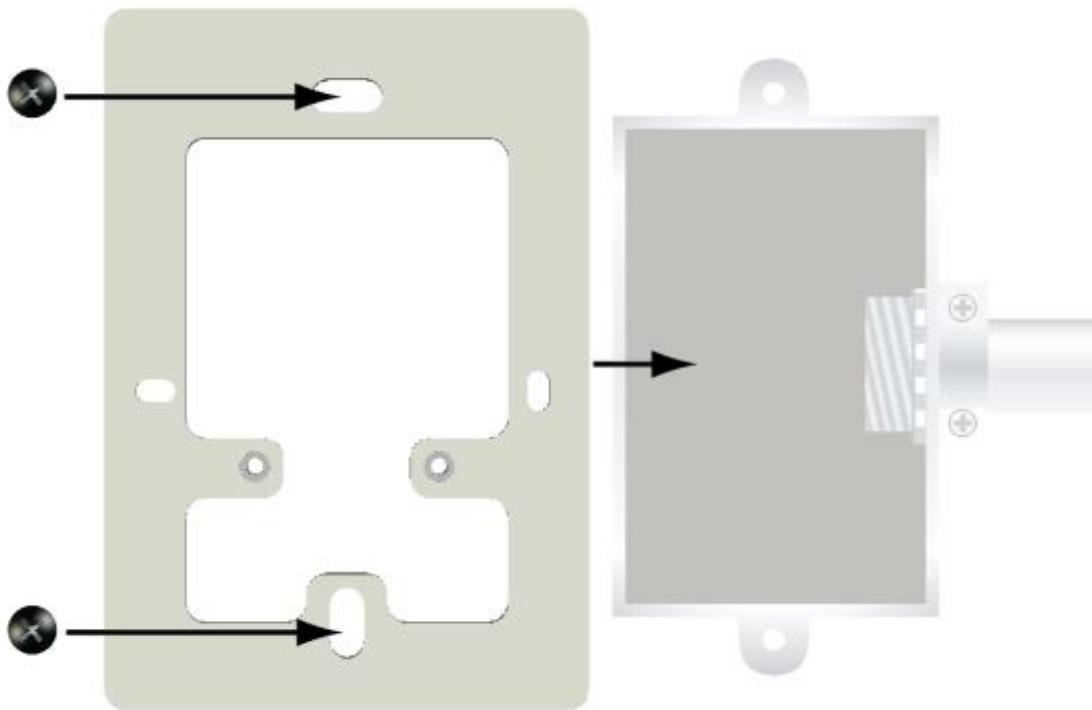
This section explains how to physically install the nTouch 60 and connect it to the power supply and data network.

The procedure below assumes that you have already fitted a NEMA electrical enclosure to the wall and the cables are situated inside the enclosure, ready to be attached to the nTouch 60.

Tip: There are several configurations you can use for connecting up the nTouch 60. Refer to *Infrastructure design considerations* (on page 15) for an explanation of the different options.

Installation steps

1. Ensure power to the unit is switched off or the PoE network cable is removed.
2. Attach the metal mounting plate to the NEMA wall box using the appropriate screws (not supplied).



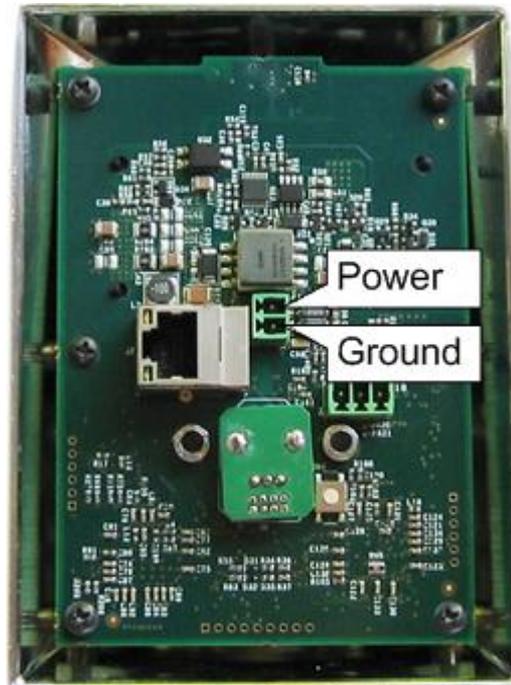
3. If the control knob is fitted to the front of the nTouch 60 unit, remove it using the supplied tools.



4. Plug the Ethernet cable into the RJ-45 socket at the rear of the nTouch 60 unit.



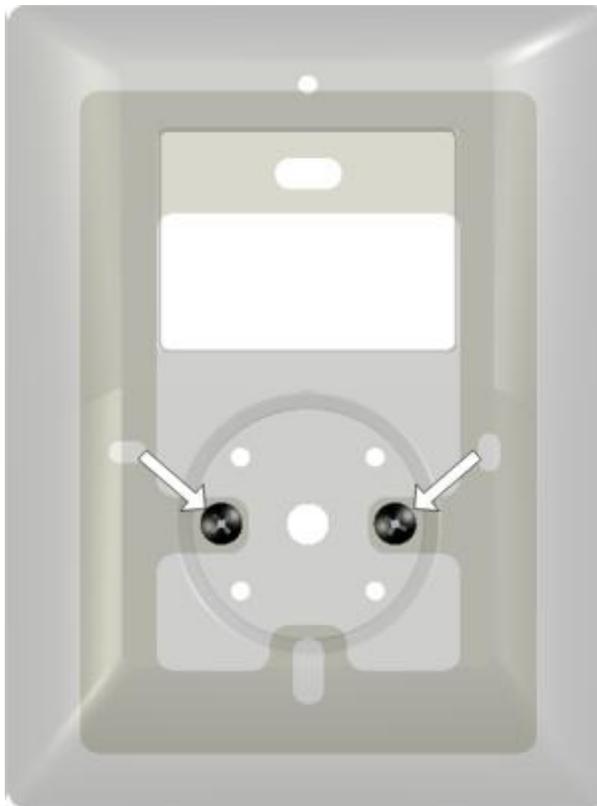
5. If you are using a separate power supply cable and not a PoE cable:
 - a) Wire a two pin terminal plug so that when the plug is inserted into the two pin header, the power and ground wires correspond to the picture below.



- b) Insert the plug into the connector socket.



6. Fix the nTouch 60 front panel to the mounting plate using the supplied screws.



7. Fit the control knob.



Switching the unit on and specifying the network settings

1. Switch on the power.
2. At the rear of the unit, press the set up button.

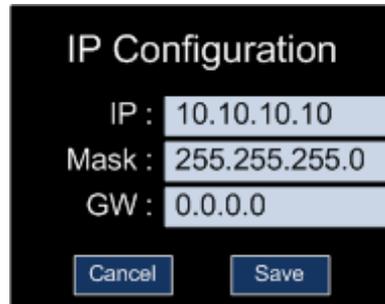
The **Maintenance menu** is displayed on the screen.



3. Press **IP Config**.

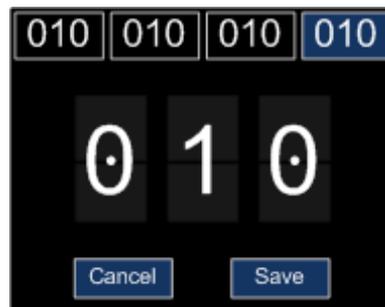
The **IP Configuration** menu is displayed on the screen.

Tip: If you find that the screen is not responding when you press it, it may need calibrating. For more information, see *Calibrating the screen* (on page 26).



4. Press the IP address next to **IP**.

The IP address is displayed at the top of the screen. This screen allows you to specify the IP address segment-by-segment. The segment being configured is highlighted in blue at the top of the screen.



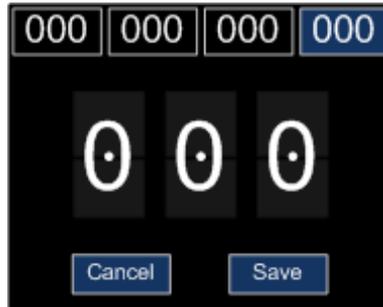
5. Press one of the four boxes at the top the screen to select the segment you want to edit.
6. Press the top half or bottom half of one of the three numbers in the middle of the screen to change the value.
Pressing the top half of a number increases the value. Pressing the bottom half decreases the value.
7. Repeat steps 5 and 6 to change the other segments as necessary.
8. Press **Save**.
9. Press the subnet mask next to **Mask**.

The subnet mask is displayed at the top of the screen. This screen allows you to specify the subnet mask segment-by-segment. The segment being configured is highlighted in blue at the top of the screen.



10. Press one of the four boxes at the top the screen to select the segment you want to edit.
11. Press the top half or bottom half of one of the three numbers in the middle of the screen to change the value.

12. Pressing the top half of a number increases the value. Pressing the bottom half decreases the value.
13. Repeat steps 10-12 to change the other segments as necessary.
14. Press **Save**.
15. Press the gateway next to **GW**.
16. The gateway is displayed at the top of the screen. This screen allows you to specify the gateway segment-by-segment. The segment being configured is highlighted in blue at the top of the screen.



17. Press one of the four boxes at the top the screen to select the segment you want to edit.
18. Press the top half or bottom half of one of the three numbers in the middle of the screen to change the value.
19. Pressing the top half of a number increases the value. Pressing the bottom half decreases the value.
20. Repeat steps 17-19 to change the other segments as necessary.
21. Press **Save**.

Calibrating the screen

The nTouch 60 touch screen is calibrated in the factory, but sometimes it may need to be recalibrated to ensure that it responds correctly to finger presses.

The unit is configured to prompt the user automatically when it detects that the screen needs calibrating (and display on screen instructions), but you may also want to start the procedure manually if you find that the unit is not responding to touch as expected.

►► **To calibrate the screen**

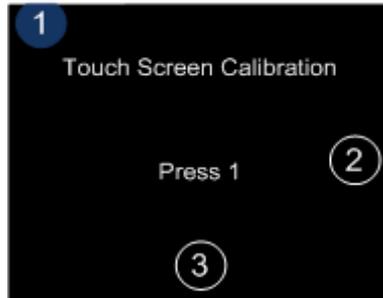
1. Switch on the power.
2. At the rear of the unit, press the set up button.

The **Maintenance menu** is displayed on the screen.



3. At the rear of the unit, press the set up button again.

The **Touch Screen Calibration** screen is displayed.



4. Press the numbered buttons in sequence, as directed by the onscreen instructions.

What to do next

The nTouch 60 is managed and configured using NWare. Refer to the section *Adding an nTouch 60 node to your design* in the *NWare User Guide* to see how to use an nTouch 60 in your audio system design.

Chapter 6

Maintaining the nTouch 60

In This Chapter

Displaying the maintenance menu using NDP..... 30

Displaying the maintenance menu using NDP

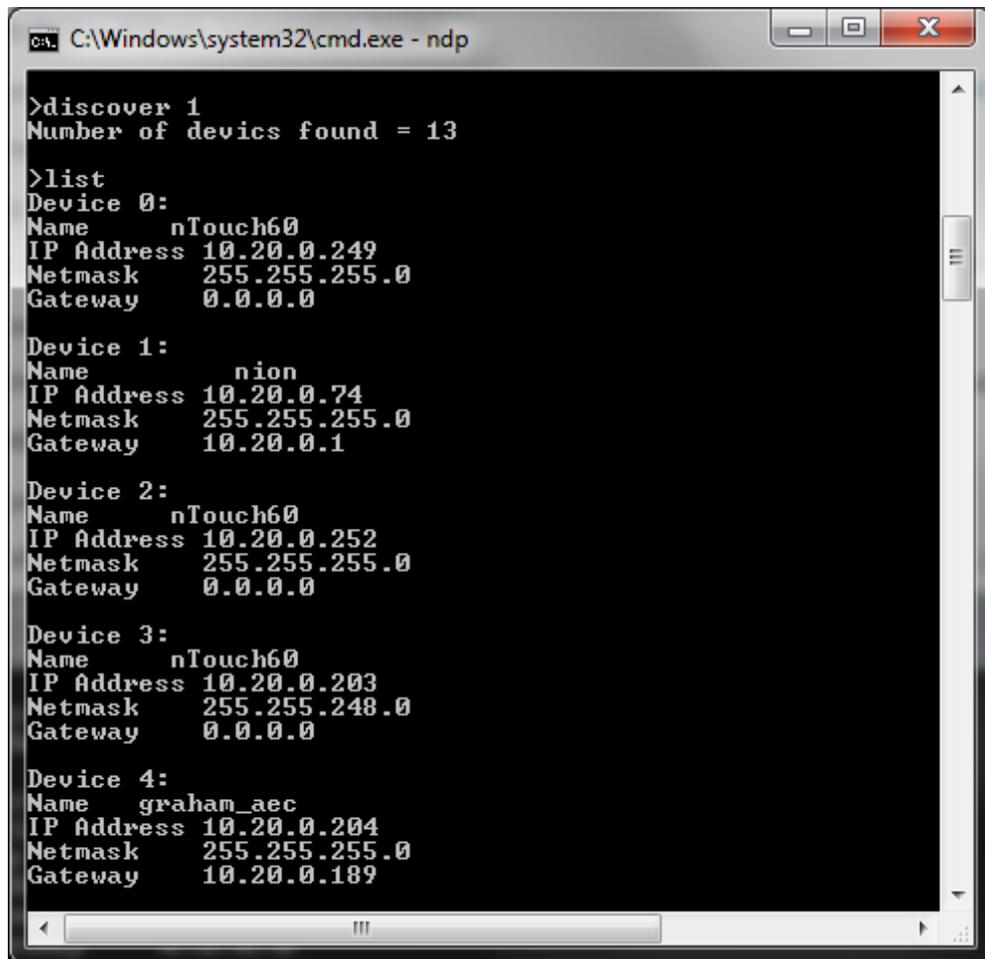
You can display the maintenance menu, which is used to calibrate the nTouch 60 and change the network settings, without needing access to the set up button on the rear of the unit. This is useful when the nTouch 60 is already installed in a NEMA enclosure and you do not want to remove it.

Note: The current version of NWare does not include all the required components to run NDP. Before you use it, you must install a program called WinPcap, which is freely available from <http://www.winpcap.org/> (<http://www.winpcap.org/>).

▶▶ *To display the maintenance menu using NDP*

1. Open Windows Explorer.
2. Navigate to the NWare installation folder.
3. Hold down SHIFT, right-click the NWare installation folder, and then click **Open command window here**.
A Command Prompt window will be displayed.
4. Type `ndp`.
The NDP program will start and a list of available network interfaces and commands will be displayed.
5. Type `discover <interface number>`
where *<interface number>* is the number of the interface used for the control network.
The number of discovered devices will be displayed.
6. Type `list`.

Details of each of the devices will be shown, including the name, IP address, subnet mask and gateway.

A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe - ndp". The window shows the output of the 'discover' and 'list' commands. The 'discover' command shows 13 devices found. The 'list' command displays details for five devices, including their names, IP addresses, netmasks, and gateways.

```
C:\Windows\system32\cmd.exe - ndp
>discover 1
Number of devices found = 13

>list
Device 0:
Name      nTouch60
IP Address 10.20.0.249
Netmask   255.255.255.0
Gateway   0.0.0.0

Device 1:
Name      nion
IP Address 10.20.0.74
Netmask   255.255.255.0
Gateway   10.20.0.1

Device 2:
Name      nTouch60
IP Address 10.20.0.252
Netmask   255.255.255.0
Gateway   0.0.0.0

Device 3:
Name      nTouch60
IP Address 10.20.0.203
Netmask   255.255.248.0
Gateway   0.0.0.0

Device 4:
Name      graham_aec
IP Address 10.20.0.204
Netmask   255.255.255.0
Gateway   10.20.0.189
```

7. Make a note of the device number for the device you want to configure.
8. Type `configure <device number>`
The Maintenance Menu will be displayed on the screen of the nTouch 60.

Warranty statement

MediaMatrix®
PEAVEY ELECTRONICS CORPORATION
DOMESTIC (USA) LIMITED WARRANTY
Effective Date: May 1, 2005

What This Warranty Covers

This Warranty covers defects in material and workmanship in Peavey MediaMatrix products purchased and serviced in the United States of America (USA).

What This Warranty Does Not Cover

The Warranty does not cover: (1) damage caused by accident, misuse, abuse, improper installation or operation, rental, product modification or neglect; (2) damage occurring during shipment; (3) damage caused by repair or service performed by persons not authorized by Peavey; (4) products on which the serial number has been altered, defaced or removed; (5) products not purchased from an Authorized MediaMatrix Integrator. This warranty does not cover associated costs incurred from servicing equipment, including, but not limited to, travel, jobsite-related costs, fabrication, freight, loaner equipment, installation, cabling or harnessing, mounting materials or other variable costs.

Who This Warranty Protects

In applications where the product is sold *over the counter*, this Warranty protects the original retail purchaser. In applications where the product is part of an integrated system, and such system is warranted by the integrator as a complete assembly, this Warranty protects only the system integrator.

What Peavey Will Do

We will repair or replace (at Peavey's discretion) products covered by warranty at no charge for labor or materials. If the product or component must be shipped to Peavey for warranty service, the consumer must pay initial shipping costs. If the repairs are covered by warranty, Peavey will pay the return shipping costs.

How Long This Warranty Lasts

The Warranty begins on the date of purchase by the original retail purchaser or on the date received by the system integrator. (See *Who This Warranty Protects*, above). The duration of the Warranty varies by product as summarized below.

5 Years	MediaMatrix® DPU cards, NION™ Processing Nodes, CABs, I/O cards, Cinema Processors, Power Amplifiers, Pre-Amplifiers, Mixers, Electronic Filter Sets and Dynamics Processors.
1 Year	MM Series Cardframes, MF Series Cardframes, ControlMatrix™ Host Processors, Servers and Controllers, nControl, nTouch 180, nTouch 60, xControl LCDs, nWall, VCAT, VCAT-HD, VGA-2, VSC, D4S, D1V, Remote Control Panels, Plates, Paging Stations, Ambient Sense Devices and other devices installed in user-accessible locations.
90 Days	Loudspeaker Components (including speakers, baskets, drivers, diaphragm replacement kits and

passive filter networks.) and all Accessory Products

How To Get Warranty Service

End Users: Take the defective product and your dated sales receipt or other proof of purchase to your Authorized MediaMatrix Systems Integrator or Authorized Peavey Service Center. System Integrators: Ship the defective product, prepaid, to Peavey Electronics Corporation, International Service Center, 412 Highway 11 & 80 East, Meridian, MS 39301, 601-483-5365. Include a detailed description of the problem, the name and location of the jobsite and a copy of your invoice as evidence of warranty coverage. Please include a complete return shipping address.

Limitation of Implied Warranties

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Exclusions of Damages

PEAVEY'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT PEAVEY'S OPTION. IF WE ELECT TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. PEAVEY SHALL NOT BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If you have any questions about this warranty or service received, or if you need assistance in locating an Authorized Service Center, please contact the Peavey International Service Center at (601) 483-5365. Features and specifications subject to change without notice.

MediaMatrix®

A Division of Peavey Electronics Corporation



MediaMatrix®

A Division of Peavey Electronics Corp.

5022 Hartley Peavey Drive, Meridian Mississippi, 39305, USA

Phone: 866.662.8750

<http://www.peaveycommercialaudio.com/products.cfm/mm/>

Features & Specifications subject to change without notice

Copyright © 2015, All Rights Reserved

80307509