



# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for NEC DSX-40. You'll find the answers to all your questions on the NEC DSX-40 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual NEC DSX-40**  
**User guide NEC DSX-40**  
**Operating instructions NEC DSX-40**  
**Instructions for use NEC DSX-40**  
**Instruction manual NEC DSX-40**

Empowered by Innovation **NEC**

Components  
Installation  
Optional  
Equipment  
Specifications  
and Parts

**DSX**

**DSX-40 Hardware Manual**

P/N 1093097

Rev 1, October 2006

Printed in U.S.A.

11/01/06

For additional resources, visit our Technical Support site on the web at <http://www.necdsx.com>.



[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)

<http://yourpdfguides.com/dref/2311101>

**Manual abstract:**

*@@This manual is subject to change without notice and NEC Unified Solutions, Inc. has no obligation to provide any updates or corrections to this manual.*

*Further, NEC Unified Solutions, Inc. also reserves the right, without prior notice, to make changes in equipment design or components as it deems appropriate. No representation is made that this manual is complete or accurate in all respects and NEC Unified Solutions, Inc. shall not be liable for any errors or omissions. In no event shall NEC Unified Solutions, Inc. be liable for any incidental or consequential damages in connection with the use of this manual. This document contains proprietary information that is protected by copyright. All rights are reserved.*

*No part of this document may be photocopied or reproduced without prior written consent of NEC Unified Solutions, Inc. ©2006 by NEC Unified Solutions, Inc. All Rights Reserved. Printed in U.S.*

*A. Table of Contents Table of Contents Components . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . 1 DSX Telephones .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*1 22-Button Display Telephone with Speakerphone. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*34-Button Backlit Display Telephone with Speakerphone . . . . .*

*. . . . .*

*. . . . .*

*. . . 34-Button Backlit Display Telephone with Full-Duplex Speakerphone . .*

*. . . . .*

*. . . . .*

*. 34-Button Backlit Super Display Telephone with Half-Duplex Speakerphone . . . . .*

*. . . . 60-Button DSS Console .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . . 1 1 2 2 2 Single Line Telephones .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*. . . . .*

*3 DTH-1-1 Single Line Telephone . . . . .*

*. . . . .*

*. . . . .*

*. . . . .*



.....  
... *Headsets for DSX Cordless Lite II Telephone*.....

.....  
.....  
.....  
.....

. 5 5 8 9 *DESI Telephone Label System*.....

.....  
.....  
.....

.....  
.....  
*10 DESI Plus Labeling Software*.....

.....  
.....  
.....  
.....

..... *10 DESI Telephone Labels*.....

.....  
.....  
.....

..... *11 DSX-40 Common Equipment*.....

.....  
.....  
.....  
.....

..... *12 DSX-40 4x8x2 Key Telephone System with 2 Door Box Ports and Caller-ID*.....

..... *12 DSX-40 PCBs*.....

.....  
.....  
.....  
.....

..... *13 DSX-40 8-Port Digital Station (8ESIU) Card*.....

.....  
.....  
.....  
.....

*Expansion Guidelines*.....

.....  
.....  
.....

..... *DSX-40 8-Port Analog Station (8SLIU) Card*.....

.....  
.....  
.....  
.....

*DSX-40 4 Port (4COIU) Line PCB with Caller ID* .....

.....  
.....  
.....

*... 13 13 13 14 IntraMail* .....

.....  
.....  
.....

.....  
.....  
.....  
.....

*.... 15 DSX IntraMail 8 x 16* .....

.....  
.....  
.....

.....  
.....  
.....  
.....

*15 DSX IntraMail 4 x 8* .....

.....  
.....  
.....

.....  
.....  
.....

*..... 15 Built-In Automated Attendant* ...

.....  
.....  
.....

.....  
.....  
.....

*. 15 Miscellaneous Cards and Optional Equipment* ....

.....  
.....  
.....

*... 16 DSX Analog Door Box* ..

.....  
.....  
.....

.....  
.....  
.....

*.. 16 DSX 2PGDAD Module* ...

.....  
.....  
.....

.....

.....  
.....  
.....

..... *16 DSX System Administrator (PC Program)* .....

.....  
.....  
.....

.....  
.....  
.....  
*17 Installation* .....

.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
*19 System Preparation* ..

.....  
.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
*19 Unpacking* .....

.....  
.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
*Before Installing* .....

.....  
.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
*Site Requirements* .....

.....  
.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
*Single Line Telephone REN Limitations* .

.....  
.....  
.....  
.....  
.....

19 19 19 19 Installing the Main Equipment Cabinet . . . . .

. . . . .  
. . . . .  
. . . . .

. . . . . 20 Planning the Installation . .

. . . . .  
. . . . .  
. . . . .  
. . . . .

. . . . .  
. . . . .  
. . . . .

. . 20 Removing the Cover . . . . .

. . . . .  
. . . . .  
. . . . .  
. . . . .

. . . . .  
. . . . .

. . . . 21 Hanging the Cabinet.

. . . . .  
. . . . .  
. . . . .  
. . . . .  
. . . . .

. . . . .  
. . . . .

. 22 Grounding the Cabinet . . . .

. . . . .  
. . . . .  
. . . . .  
. . . . .

. . . . . 23 Table of Contents i DSX-40 Hardware Manual Table of Contents Attaching the Ground Wire . . .

. . . . .  
. . . . .  
. . . . .

. . . . .  
. . . . .  
. . . . .

. . . . . 23 Removing the Top Panel . .

. . . . .  
. . . . .  
. . . . .  
. . . . .

. . . . .  
. . . . .

. . 24 Top Panel Removal . . .

. . . . .  
. . . . .  
. . . . .  
. . . . .

.....  
..... 24 *Installing Expansion Cards, the Battery, and Replacement Fuses.*

.....  
.....

.. 25 *Installing Expansion Cards.* .....

.....  
.....  
.....

..... *Station Cards.* .....

.....  
.....  
.....

..... *Line Card* .....

.....  
.....  
.....

.....  
.....  
.....

..... *Installing and Replacing the Battery* .....

.....  
.....  
.....

*Power Supply AC Input Fuses* .....

.....  
.....

.....  
.....  
.....

..... *Extension and Line Connections* .....

.....  
.....  
.....

*Punch Down for Extensions* .....

.....  
.....

.....  
.....  
.....

..... *Punch Down for Lines* .....

.....



.....  
.....

.....  
.....  
.....  
.....  
.....  
*..... Securing the Cables .....*

.....  
.....  
.....  
.....  
.....  
.....  
.....  
*... Securing the Ground Wires and Station Cables .....*

.....  
.....  
.....  
*..... Securing the AC Power Cord .....*

.....  
.....  
.....  
.....

.....  
*... Making Your Own Cables ..*  
.....  
.....

.....  
.....  
.....  
.....

*..... Making Your Own Installation Cables .....*  
.....  
.....  
.....

.....  
.....  
*Connecting Extensions .....*  
.....

.....  
.....  
.....  
.....

.....  
*Connecting Lines .....*  
.....  
.....

.....  
.....  
.....  
.....

*..... Installing the DSX Keypad Handset and Line Cord.*  
.....  
.....  
.....



.....  
.....  
.....  
.....

..... 43 Reinstalling the Cover .....

.....  
.....  
.....  
.....

..... 43 Resetting and Initializing the System .

.....  
.....  
.....  
.....

..... 44 Resetting the System . .

.....  
.....  
.....  
.....

..... 44 Initializing the System .....

.....  
.....  
.....  
.....

..... 45 Upgrading the System Software .

.....  
.....  
.....  
.....

.. 46 Upgrade System Software .....

.....  
.....  
.....  
.....

..... 46 Installing Optional Equipment .....

.....  
.....  
.....  
.....

..... 47 Installing IntraMail .....

.....





[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)

<http://yourpdfguides.com/dref/2311101>



8 Components DSX-40 Hardware Manual Headsets Headsets for DSX Cordless Lite II Telephone P/N 750637 (M175) P/N 750642 (MX150) Components At a Glance P/N 730602 (EXP9530) The following headsets are available for the DSX Cordless Lite II Telephone: · M175 Headband Style (P/N 750637) · MX150 Earloop Style (P/N 750642) · EXP 9350 Convertible Headset (P/N 730602) DSX-40 Hardware Manual Components 9 DESI Telephone Label System DESI Telephone Label System DESI Plus Labeling Software DESI Plus Labeling Software At a Glance DESI Plus Labeling Software is a Windows-compatible application for printing customized key data on specially designed DESI telephone labels.

Use DESI Plus Labeling Software to create quick, professional custom labels that can be printed on virtually any office ink jet or laser printer. DESI Labeling Software features: · Automatic extension numbering · Label templates that can be saved for later use · Copy and paste functions · Perforated and die cut labels for a perfect fit · Choice of fonts and font colors · Space for incorporating company logo · User-printable background graphics (using DESI Preprint) DESI Plus Labeling Software is provided on the DSX System Document CD included with each DSX telephone system. 10 Components DSX-40 Hardware Manual DESI Telephone Label System DESI Telephone Labels Labels for DSX Telephones Labels for NEC Single Line Telephones Components At a Glance The following DESI labels are available for DSX telephone "replacement" applications. · 22-Button Display (pkg 20 with 10 backers) - White (P/N 1093086) - Black (P/N 1093085) · 34-Button Display (pkg 20 with 10 backers) - White (P/N 1093084) - Black (P/N 1093083) · 34-Button Super Display (pkg 20 with 10 backers) - White (P/N 1093082) - Black (P/N 1093081) · 60-Button DSS Console (pkg 20 with 10 backers) - White (P/N 1093080) - Black (P/N 1093079) The following DESI labels are available for DSX telephone "preprint" applications. · 22-Button Display Preprint (pkg 25) - P/N 1093072 · 34-Button Display Preprint (pkg 25) - P/N 1093071 · 34-Button Super Display Preprint (pkg 25) - P/N 1093070 · 60-Button DSS Console Preprint (pkg 25) - P/N 1093069 The following DESI labels are available for the NEC analog single line telephones. · For DTR-1-1 - Black (P/N 780400) - Metallic green (P/N 780401) - Metallic silver (P/N 780402) - Lime green (P/N 780403) - Preprint (blank) (P/N 780459) · For DTR-1HM-1 - Black (P/N 780404) - Metallic green (P/N 780405) - Metallic silver (P/N 780406) - Lime green (P/N 780407) - Preprint (blank) (P/N 780460) · For DTH-1-1 - Metallic silver (P/N 780450) DSX-40 Hardware Manual Components 11 DSX-40 Common Equipment DSX-40 Common Equipment DSX-40 4x8x2 Key Telephone System with 2 Door Box Ports and Caller-ID P/N 1090001 At a Glance Digital extension ports: Built-in: 8 Fully expanded: 24 Analog extension ports: Built-in: 2 Fully expanded: 18 Built-in door box ports: 2 Built-in door box control relays: 2 Total Ports: 40 Ethernet port: Yes (auto sensing) Analog line ports: Built-in: 4 Total: 8 Expansion slots: Station expansion slots: 2 Line expansion slots: 1 Audio outputs: 1 Audio inputs: 2 CompactFlash interface: Yes USB connector: Yes DSX-40 is a compact, wall-mountable, more economical member of the DSX family that offers many of the features and options of the larger DSX-80/160 in a smaller, self-contained cabinet. In its off-the-shelf basic configuration, DSX-40 supports 4 CO (outside) lines with Caller ID, 8 DSX digital keyset extensions, and 2 analog (single line) extensions with power failure. Additionally, the basic DSX-40 provides: · CompactFlash card interface (for IntraMail, software loading, and database backup) · Conference circuits, DTMF receivers and DTMF generators · NAND Flash for storing the system database · Battery for short term (14 day) backup of the internal Real Time Clock and station parameters · Two audio inputs for Background Music and Music on Hold (1/8" mono minijacks) · One audio output for External Paging (1/8" mono minijack) · Ethernet and USB ports for local and remote PC Programming · RS-232 serial port for Station Message Detail Recording · 2 DSX Analog Door Box ports with associated relays · Built-in V.32BIS 14.4K BPS modem for remote maintenance Tips to remember: 1.

The CPU also has a reset switch that provides the following three functions: · System reset (when momentarily pressed). · System initialization (when held down as power is turned on). · Software update (when held down for a few seconds while a software update CompactFlash card is installed). 2. DSX-40 provides FSK Message Waiting. It does not provide high voltage Message Waiting. Even with all the value built into the basic off-the-shelf DSX-40, the system is easily expandable by adding station and line PCBs. See DSX-40 PCBs (page 13) for more. 12 Components DSX-40 Hardware Manual DSX-40 PCBs DSX-40 PCBs DSX-40 8-Port Digital Station (8ESIU) Card Components P/N 1091002 At a Glance Digital station ports: 8 Max. cards installed: 2 (16 additional digital station ports) Max.

digital ports: 24 (8 in each digital card installed plus 8 built-in) Installs in either the top or middle DSX-40 expansion slot. Can be mixed with 8-Port Analog Station Cards in any combination in the top and middle expansion slots. The 8-Port Digital Station Card is an expansion card that provides eight additional digital station ports. You can install up to two 8-Port Digital Station Cards, using the upper and middle expansion slots, for a system maximum of 24 digital stations. Expansion Guidelines The top 2 DSX-40 expansion positions are for the 8-port station cards, and you can install them in either position in any combination.

DSX-40 Station Card Capacities Top Position (9-16) Middle Position (17-14) Total 8-Port Digital Card 8-Port Digital Card 8-Port Analog Card 8-Port Digital Card 8-Port Analog Card 8-Port Analog Card 24 Digital and 2 Analog 16 Digital and 10 Analog 8 Digital and 18 Analog Tips to remember: · The 8-Port Digital and 8-Port Analog Station Cards use the same expansion slots (upper and middle). DSX-40 8-Port Analog Station (8SLIU) Card P/N 1091003

At a Glance Analog station ports: 8 Max. analog cards installed: 2 (16 additional analog station ports) Max. analog ports: 18 (8 in each analog card installed plus 2 built-in) Installs in either the top or middle DSX-40 expansion slot Can be mixed with 8-Port Digital Station Cards in any combination in the top and middle expansion slots The 8-Port Analog Station Card is an expansion card that provides eight additional analog station ports. You can install up to two 8-Port Analog Station Cards, using the upper and middle expansion slots, for a system maximum of 18 analog stations.



[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)

<http://yourpdfguides.com/dref/2311101>



*Tips to remember:* · The 8-Port Digital and 8-Port Analog Station Cards use the same expansion slots (upper and middle). DSX-40 Hardware Manual Components 13 DSX-40 PCBs DSX-40 4 Port (4COIU) Line PCB with Caller ID At a Glance P/N 1091001 Line ports: 4 Max. line cards installed: 1 (4 additional CO line ports) Max. line ports: 8 (4 in the CO line card plus 4 built-in) Installs only in the bottom expansion slot. Caller ID: Built in Message Waiting: FSK only The 4-Port CO Line Card with Caller ID is an expansion card that provides four additional CO line ports with built-in Caller ID. You can install this card only in the bottom expansion slot for a system maximum of 8 outside line ports. *Tips to remember:* · You can install the 4-Port CO Line Card with Caller ID only in the bottom expansion slot. 14 Components DSX-40 Hardware Manual IntraMail IntraMail DSX IntraMail 8 x 16 Components P/N 1091013 At a Glance Ports: 8 Routing Mailboxes: 16 8 Announcement 8 Call Routing Ring Group Mailboxes: 8 Total Mailboxes: DSX-40: 66 Storage Hours: 16 Subscriber Mailboxes: DSX-40: 34 UCD Group Mailboxes: 8 DSX IntraMail 4 x 8 P/N 1091011 At a Glance Ports: 4 Routing Mailboxes: 16 8 Announcement 8 Call Routing Ring Group Mailboxes: 8 Total Mailboxes: DSX-40: 66 Storage Hours: 8 Subscriber Mailboxes: DSX-40: 34 UCD Group Mailboxes: 8 IntraMail is a plug-in "in-skin" full-featured, DSP-based integrated Voice Mail with Automated Attendant for DSX. It is available in two models: · P/N 1091013 with 8 Voice Mail ports, 16 hours of message storage, and up to 160 mailboxes. · P/N 1091011 with 4 Voice Mail ports, 8 hours of message storage, and up to 160 mailboxes.

The IntraMail Automated Attendant answers incoming calls and routes them quickly and efficiently. Integrated Voice Mail features include Conversation Record, Answering Machine Emulation, and Caller ID with Return Call. Interactive Soft Keys guide the display telephone user through the extensive IntraMail feature set. *Tips to remember:* · After plugging in the IntraMail CompactFlash card, IntraMail automatically installs on power-up. Built-In Automated Attendant The Built-In Automated Attendant gives the system call answering and routing capabilities when IntraMail is not installed. The Built-In Automated Attendant can use any of the first eight Call Routing Mailboxes (001-008) for call handling, and each of these eight Routing Mailboxes can have a 30 second Instruction Menu message (Attendant Greeting). The Routing Mailboxes must be Call Routing Mailboxes, and all other Routing Mailbox types are ignored. Additionally, the Built-In Automated Attendant provides two voice mail ports, allowing it to process two calls simultaneously. The Built-In Automated Attendant does not provide voice mail. Just like the full featured IntraMail Automated Attendant, the Built-In Automated Attendant can answer outside calls on each line according to the time of the day and day of the week that the call is ringing.

After answering, the Built-In Automated Attendant plays an Instruction Menu message (greeting) to the caller and provides them with dialing options. DSX-40 Hardware Manual Components 15 Miscellaneous Cards and Optional Equipment Miscellaneous Cards and Optional Equipment DSX Analog Door Box P/N 922450 At a Glance DSX-40: · 2 built-in door box ports · Additional door box ports requires 2PGDAD Modules connected to Digital Station ports · The Analog Door Box is a self-contained Intercom unit typically used to monitor an entrance door. A visitor at the door can press the Door Box call button (like a door bell). The Door Box then sends chime tones to all extensions programmed to receive chimes. To answer the chime, the called extension user just lifts the handset.

This lets the extension user talk to the visitor at the Door Box. The Door Box is convenient to have at a delivery entrance, for example. It is not necessary to have company personnel monitor the delivery entrance; they just answer the Door Box chimes instead. *Tips to remember:* · The Analog Door Box is a weather-tight unit and can be mounted outside. · The maximum number of DSX Analog Door Boxes you can install is determined by the number of 2PGDAD Modules, which in turn is limited only by the availability of digital station ports.

· The DSX-40 has 2 built-in door box ports. DSX 2PGDAD Module At a Glance P/N 0891027 Provides connection and relays for two DSX Analog Door Boxes Connects to digital station port The DSX 2PGDAD Module provides connection and relays for two DSX Analog Door Boxes. This module connects to an available port on a DSX Digital Station (16ESIU) PCB. *Tips to remember:* · The maximum number of DSX Analog Door Boxes you can install is determined by the number of 2PGDAD Modules, which in turn is limited only by the availability of digital station ports. 16 Components DSX-40 Hardware Manual Miscellaneous Cards and Optional Equipment DSX System Administrator (PC Program) Free Download At a Glance Download the DSX System Administrator from <http://www.necdsx.com> Components The DSX System Administrator is a Windows<sup>TM</sup>-based application you can use for programming the telephone system and maintaining site databases, instead of using the conventional telephone programming. The System Administrator provides: On-Line Programming (Direct Connection) With the PC connected to the telephone system's USB or Ethernet port, you can make immediate changes to the telephone system programming. While connected, the System Administrator also allows you to save your new data to a file on the PC hard disk, or upload a "template" database from your PC to the system. Remote Programming Using an IP or built-in modem connection between your PC and the remote system, you can customize a customer's system without leaving your office.

Off-Line Programming With Off-Line Programming, the PC Program allows you to set up a database on your PC off line, connect to the telephone system, and upload the entire custom configuration. Database Save and Restore Use the PC Program to save a site's data to your PC hard disk. You can easily restore the saved data later on, if required. DSX-40 Hardware Manual Components 17 Miscellaneous Cards and Optional Equipment 18 Components DSX-40 Hardware Manual Installation Installation System Preparation System Preparation Unpacking Unpack the equipment and check it against your equipment lists. Inspect for physical damage. If you are not sure about a component's function, review Components (page 1). Contact your Sales Representative if you have additional questions. Have the appropriate tools for the job on hand, including: a test set, a punch down tool and a digital voltmeter. Before Installing Make sure you have a building plan showing the location of the common equipment, extensions, the telco demarcation and earth ground.



**[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)**  
<http://yourpdfguides.com/dref/2311101>



In addition, the installation site must meet the requirements outlined in the Standard Practices Manual.

**Site Requirements** The common equipment is contained in the wall-mounted Main Equipment Cabinet. Choose a central location for the cabinet that allows enough space for the equipment -- and provides enough room for you to comfortably work. Figure 1: Installation Layout, DSX-40 (page 20) and shows you about how much space your system requires. Single Line Telephone REN Limitations Please note the following when installing single line telephones: The total Ringer Equivalence Number (REN) per system cannot exceed 10. The total REN per analog port cannot exceed 5.

Ringer Equivalence is cumulative. A REN of 1 is the normal for an industry standard 2500 set with electromechanical ringer. Many phones with electronic ringers have significantly lower RENs. DSX-40 Hardware Manual Installation 19 Installing the Main Equipment Cabinet Installing the Main Equipment Cabinet Planning the Installation Before installing the common equipment, you should mount a Main Distribution Frame (MDF) plywood backboard in a centrally located spot. A 1/2 sheet of plywood (4' x 4') should be adequate.

Be sure to mount the backboard using suitable fasteners, taking care to adhere to standard installation practices and local codes. See Figure 1: Installation Layout, DSX-40 below. The Main Equipment Cabinet requires a three-prong, dedicated 110 VAC 60 Hz circuit (NEMA 5-15 receptacle). The AC receptacle must be within 7 feet of the cabinet's lower left corner. Normally, you install the extension and line blocks to the right of the cabinet. Telco should also install the RJ21X to the right of the cabinet Important Local codes may prohibit you from installing extensions, trunks and optional equipment in the same blocks. . 4 1093097 - 1 Plywood backboard Line Block 4' Station Block Station Block To electrical service ground Note: The system will respond to telco ring signal in the range of 40-130 VAC @ 20 Hz. Surge Protector Dedicated AC Outlet Figure 1: Installation Layout, DSX-40 20 Installation DSX-40 Hardware Manual Installing the Main Equipment Cabinet Removing the Cover You must remove the Main Equipment Cabinet cover to access the extension, line and auxiliary connections. To remove the cover: 1.

Slide the cover button to OPEN. 2. Press down and slide the cover away from the Main Equipment Cabinet. Installation 109309 7-2 Push button to "OPEN" position Figure 2: Removing the Cover DSX-40 Hardware Manual Installation 21 Installing the Main Equipment Cabinet Hanging the Cabinet To hang the cabinet: 1. Screw suitable fasteners 11 3/16" apart in a convenient location on the MDF. Be sure to leave the fasteners "backed out" about 3/16" from the MDF backboard. 2. Hang the cabinet as shown. 1093097 - 3 11 - 7/32" 7 - 3/32" Figure 3: Hanging the Cabinet 22 Installation DSX-40 Hardware Manual Grounding the Cabinet Grounding the Cabinet Attaching the Ground Wire Important You must connect your system to Electrical Service Ground. To attach the ground wire: 1.

Loosen the lug on the cabinet's ground connection. 2. Run a 12 AWG stranded copper wire from the ground lug to Electrical Service Ground. 3. Firmly retighten the lug loosened in step 1 above.

Installation Important In case of fire, disconnect the power cord from the AC outlet. 1093097 - 4 To Electrical Service Ground Figure 4: Attaching the Ground Wire DSX-40 Hardware Manual Installation 23 Removing the Top Panel Top Panel Removal You must remove the top panel in order to install the system battery and Expansion Cards (if required), or to replace the power supply AC input fuses. To remove the top panel: 1. Be sure your system's power cord is unplugged, then unscrew the 2 captive screws that secure the cabinet top panel to the base. 2.

Lift up the top panel as shown below. 3. Remove the top panel. 10 93 09 7- 5 2 3 1 Figure 5: Removing the Top Panel 24 Installation DSX-40 Hardware

Manual Installing Expansion Cards, the Battery, and Replacement Fuses Installing Expansion Cards, the Battery, and Replacement Fuses Installing Expansion Cards The DSX-40 accepts up to 3 Expansion Cards: two for stations and one for lines. The following expansion Cards are available: 8-Port Digital Station Card ((P/N 1091002) 8-Port Analog Station Card (P/N 1091003) 4 Port CO Line Card with Caller ID (P/N 1091001) Installation Station Cards The top 2 expansion positions are for the 8-port station cards, and you can install them in either position in any combination. DSX-40 Station Card Capacities Top Position (9-16) Middle Position (17-14) Total 8-Port Digital Card 8-Port Digital Card 8-Port Analog Card 8-Port Digital Card 8-Port Analog Card 8-Port Analog Card 24 Digital and 2 Analog 16 Digital and 10 Analog 8 Digital and 18 Analog Line Card The bottom expansion position is reserved for the 4-port line card. This allows you do expand the DSX-40 from 4 lines to 8 lines, all with built-in Caller ID. 1093097 - 7 Top (Stations 9-16) Station Cards only Middle (Stations 17-24) CO Line Card only Bottom (Lines 5-8) Captive nut under motherboard Figure 6: Installing Expansion Cards Installation DSX-40 Hardware Manual 25 Installing Expansion Cards, the Battery, and Replacement Fuses Installing and Replacing the Battery In the event of commercial AC power failure, the battery provides short-term (14 day) backup of the Real Time Clock and station parameters. To install the battery: 1. Insert the battery into the battery clips as shown below.

2. Replace and re-secure the top panel. OR Go to Installing Expansion Cards (page 25) and install Expansion Cards as required. 1093097 - 6 Battery Figure 7: Installing the Battery 26 Installation DSX-40 Hardware Manual Installing Expansion Cards, the Battery, and Replacement Fuses To replace an existing battery: You should only need to replace your battery if it fails to hold a charge (i.e., no longer backs up station parameters and the Real Time Clock). 1. Do not power down the system. · If you power down the system and remove the battery, station parameters and the Real Time Clock will reset to the factory-installed default settings. 2.

Following Figure 7, gently push down on the battery and remove it. 3. Replace the battery with a Sony CR2032 3-volt Lithium cell battery or equivalent. (This battery is available from NEC as P/N EX0254-0040.) 4.

Verify that the Real Time Clock and station parameters data is intact. 5. Discard the old battery. Caution Installation · · · Take proper precautions when discarding the battery. It may be considered hazardous material in some areas.

There is a danger of explosion if the battery is incorrectly replaced.



**[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)**

<http://yourpdfguides.com/dref/2311101>

Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Power Supply AC Input Fuses The power supply AC input fuses protect the system power supply from problems with the site's AC line. These problems can include improperly wired outlets and power surges. In normal operation, you should never need to replace the power supply AC input fuses. See the detail in Figure 7: Installing the Battery (page 26). To replace a fuse: 1. Be sure your system's power cord is unplugged. 2.

Using a commercially-available fuse puller, carefully remove the blown fuse(s). 3. Replace the blown fuse only with the following type: Cooper/Bussman Type BK/S501 Rated 6.3A/250V Ceramic DSX-40 Hardware Manual Installation 27 Connecting Extensions and Lines Connecting Extensions and Lines Extension and Line Connections Important Install station equipment connected to Digital Station and Analog Station Cards as on-premises extensions only. The Main Equipment Cabinet provides 8-pin mod jacks for connecting extensions and lines. Using the Installation Cable (P/N 808920) makes it easy to connect the mod jacks to standard 66M1-50 connecting blocks. These cables have six 8-pin modular jacks on one end and are unterminated on the other. Each jack connects four extensions or lines. To connect all 26 extensions and 8 lines, you'll need 3 installation cables and 3 associated 66M1-50 connecting blocks. Extension and Line Cabling Cable Jack STA 1-4 STA 5-8 STA 9-12 STA 13-16 STA 17-20 STA 21-24 Description 1 First 4 built-in digital station ports. Second 4 built-in digital station ports. First 4 station ports in the top position. Second 4 station ports in the top position. First 4 station ports in the middle position. @@@@Four built-in lines.

@@@@@@@@Check with your local supplier for other comparable products. @@@@@@@@@@See Installing Expansion Cards (page 25) for more. To connect extensions: 1. @@2. @@3.

@@@@@4. @@@5. @@The basic Main Equipment Cabinet provides 4 lines. By adding a 4-Port Line Card you can connect the system to 8 lines. See Installing Expansion Cards (page 25) for more. To connect lines: 1. @@2. @@3. @@@@@@@@@@You can install four maximum per system. The DSS Console line cord does not use a channel and drapes down from the telephone line cord jack or connects to the telephone legs.

Line Cord can be installed either way Installation 109309 6 - 23 Figure 18: Installing the DSS Console Line Cord DSX-40 Hardware Manual Installation 37 Setting Up the Telephone and DSS Console Keyset and DSS Console Two Position Angle Adjustment To set the low viewing angle position: 1. Fold the legs all the way back. 10 93 09 34 6- 1 Figure 19: Setting the Low Viewing Angle To set the high viewing angle position: 1. Flip up the two leg supports. 2. Fold the legs back until the leg supports contact the base. 2 10 9 9 30 6 35 1 Figure 20: Setting the High Viewing Angle 38 Installation DSX-40 Hardware Manual Setting Up the Telephone and DSS Console Removing the Faceplate You'll need to remove the telephone faceplate to write on the label or install a DESI custom label. To remove the faceplate: 1. Put your finger in the recessed area under the faceplate and lift off the faceplate. Installation 10 0 93 96 - 36 Figure 21: Removing the Telephone Faceplate DSX-40 Hardware Manual Installation 39 Setting Up the Telephone and DSS Console To reinstall the faceplate: 1. Snap back into place as shown. Figure 22: Reinstalling the Telephone Faceplate 40 Installation DSX-40 Hardware Manual Powering Up the System Powering Up the System Power Up Now that you have cabled the system, it is time to power-up. To power up the system: 1. Make sure the system is properly grounded. 2.

Plug the AC Power Cord into the Main Equipment Cabinet 3. Install a surge protector in the AC outlet. 4. Plug the Mail Equipment Cabinet's AC power cord into its surge protector. 5.

Turn on the cabinet's power switch. · The power LED will flash once blue, once green, and then "flutter" blue as the system boots. · After about 45 seconds, the LED will wink off blue continuously and the system will be operational. Installation 1093097 - 15 Power Switch AC Power Cord DSX-40 Hardware Manual Installation 41 Powering Up the System Figure 23: Power Switch and AC Power Cord 1093097 - 16 Power LED Figure 24: Power LED 42 Installation DSX-40 Hardware Manual Finishing the Installation Finishing the Installation Reinstalling the Cover Now that your cabling is complete and the system is up and running, you should reinstall the cover. To reinstall the cover: 1. Slide the cover onto the Main Equipment Cabinet as shown. 2. Slide the cover button to LOCK. Installation 10 93 09 7 - 17 Push button to "LOCK" position Figure 25: Reinstalling the Cover DSX-40 Hardware Manual Installation 43 Resetting and Initializing the System Resetting and Initializing the System Resetting the System To reset the system: Important If the system's RS-232 connection uses twisted pair cable, before resetting do one of the following: · Make sure the RS-232 cable is connected at both ends (i.e.

, PC and CPU). · If the RS-232 cable is disconnected from the PC, be sure the cable is also disconnected from the CPU. 1. Briefly press (tap) the Reset Switch on the Main Equipment Cabinet. · The power LED will flash green, and then "flutter" blue as the system boots. · After about 45 seconds, the LED will wink off blue continuously and the system will be operational. · Resetting the system does not erase system programming. 1 1093097 - 18 Figure 26: Resetting the System 44 Installation DSX-40 Hardware Manual Resetting and Initializing the System Initializing the System To initialize (cold start) the system: - This erases all your stored programming and returns the system to its default settings. 1. Turn off the system. 2. Press and hold the Reset Switch on the Main Equipment Cabinet while turning on the system power. 3. When the LED on the cabinet lights blue and then goes out, release the Reset Switch. · The power LED will flash green, and then "flutter" blue as the system boots. · After about 45 seconds, the LED will wink off blue continuously and the system will restart with the default settings. Installation 2, 3 1093097 - 19 Figure 27: Initializing the System DSX-40 Hardware Manual Installation 45 Upgrading the System Software Upgrading the System Software Upgrade System Software To upgrade system software from a CompactFlash card: 1. Remove the IntraMail CompactFlash card (if installed), then insert the CompactFlash card containing the system software into the Main Equipment Cabinet.



[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)  
<http://yourpdfguides.com/dref/2311101>

- Although advisable, backing up the site programming is not required. 2.

Press and hold the Reset Switch on the cabinet. 3. When the LED on the cabinet goes out, release the Reset Switch. - The LED initially lights green, yellow, and then blue. During the software load, the LED alternately lights blue and flashes green. - The software takes about seven minutes to load. - The system restarts after the load completes with all the initial site programming intact. 4. Once the system restarts: - Remove the software upgrade CompactFlash card. - Insert the IntraMail CompactFlash card.

- Reset the system. 1 2 10 93 09 720 Figure 28: Loading System Software from a CompactFlash Card 46 Installation DSX-40 Hardware Manual Installing Optional Equipment Optional Equipment Installing IntraMail Installing IntraMail Setting Up IntraMail for the First Time A default system (with no voice mail installed) provides the Built-In Automated Attendant. See Automated Attendant, Built-In in the IntraMail section of the Software Manual for more. If you have another (external) voice mail installed, you must disconnect and unprogram it before installing IntraMail. DSX-40 Hardware Manual Optional Equipment 47 Installing IntraMail To set up IntraMail: 1. Plug the IntraMail CompactFlash card into the Main Equipment Cabinet. 2. Reset the system. The IntraMail automatically installs. - If updating from the Built-In Automated Attendant, just rerecord your Instruction Menu Messages.

Your Answer Schedule and Dial Action Table programing remain intact. - By default, the first 16 (300-315) mailboxes are active/enabled and the IntraMail Automated Attendant does not answer outside calls. - See Start-up IntraMail Programming in the front of the IntraMail section of the System Guide for more.

1 2 10 93 09 721 Figure 29: Installing IntraMail 48 Optional Equipment DSX-40 Hardware Manual Installing a DSX Analog Door Box on a Built-In Door Box Port Installing a DSX Analog Door Box on a Built-In Door Box Port Connecting a DSX Analog Door Box to a Built-In Door Box Port Do not connect a DSX Analog Door Box to a digital station port. The DSX Analog Door Box (P/N 922450) is a self-contained Intercom unit typically used to monitor an entrance door.

A visitor at the door can press the DSX Analog Door Box call button (like a door bell). The door box then sends chime tones to all extensions programmed to receive chimes. To answer the chime, the called extension user just lifts the handset. This lets the extension user talk to the visitor at the door box. You can connect up to 2 DSX Analog Door Boxes to your system, at station ports 25 (extension 324) and 26 (extension 325).

Each DSX Analog Door Box also has an associated control relay. You can use this relay to release an electric strike on the entrance door. After answering the Door Box chimes, the extension user can press FLASH or a soft key to enable the DSX Analog Door Box's relay, which in turn unlocks the door. Optional Equipment Relay Contact Specifications Important! Be sure the devices connected to the system's relay contacts are compatible with the following specifications. Contact Configuration: Maximum Load: Maximum Initial Contact Resistance Normally Open 0.5A @ 120 VAC 1A @ 24 VDC 100 mOhms The Analog Door Box is a weather-tight unit, with an operating temperature range of -20 to 60 degrees C (-4 to 140 degrees F) and a relative humidity range of 10-95%, non-condensing. To connect to the built-in DSX-40 analog door box ports and relays: 1. Using Figure 30: Connecting to the Built-In Analog Door Box Ports (page 50) as a guide, on Station Block 2 punch down the Installation Cable in standard color code-order. 2. Plug the appropriate installation cable plug into jack DOOR 1-2 on the Main Equipment Cabinet.

3. Install a modular jack for each relay and optionally for each door box within 6 feet of each door box location. (For the next two steps, leaving a service loop in your station cable will make adds, moves, and changes easier.) 4. For each relay: - Run one-pair 24 AWG station cable from the station block to the associated modular jack. - @ @5. For each door box: - Run one-pair 24 AWG station cable from the station block directly to the door box terminals. OR - Run one-pair 24 AWG station cable from the station block to the associated modular jack. - Then, terminate the station cable WHT/BLU - BLU/WHT leads to the RED and GRN lugs in the modular jack. 6.

Install bridging clips as required. 7. Connect to the door boxes and relays as shown in Figure 30: Connecting to the Built-In Analog Door Box Ports (page 50). 8. Refer to the Door Box feature in the DSX Software Manual for programming details.

DSX-40 Hardware Manual Optional Equipment 49 Installing a DSX Analog Door Box on a Built-In Door Box Port 1093097 - 27 25-PAIR CABLE RJ61X BLOCK TERM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 COLOR CODE WHT-BLU BLU-WHT WHT-ORN ORN-WHT WHT-GRN GRN-WHT WHT-BRN BRN-WHT WHT-SLT SLT-WHT RED-BLU BLU-RED RED-ORN ORN-RED RED-GRN GRN-RED RED-BRN BRN-RED RED-SLT SLT-RED BLK-BLU FUNCTION 324 T 324 R 325 T 325 R NC NC NC NC Door 1T Door 1R Relay 1T Relay 1R Door 2T Door 2R Relay 2T Relay 2R NC NC NC NC 310 T RJ61X 5 4 3 6 2 7 1 8 5 4 3 6 2 7 1 8 5 4 3 6 2 YEL BLU-WHT 1 2 Door 1 Relay 1 Door 2 Relay 2 625 Modular Jack BLK WHT-BLU 3 Station Block 2 RED GRN Relay 2T Relay 2R To Relay 2 Optional BLU-WHT YEL 625 Modular Jack BLK WHT-BLU RED GRN Door 2T Door 2R To Door 2 YEL BLU-WHT 625 Modular Jack BLK WHT-BLU RED GRN Relay 1T Relay 1R To Relay 1 Optional YEL 625 Modular Jack BLK WHT-BLU BLU-WHT RED GRN Door 1 Door

1T Door 1R Figure 30: Connecting to the Built-In Analog Door Box Ports You can also connect a DSX Analog Door Box to a 2PGDAD Module. See Installing a DSX Analog Door Box and 2PGDAD Module (page 51) for more. 50 Optional Equipment DSX-40 Hardware Manual Installing a DSX Analog Door Box and 2PGDAD Module Installing a DSX Analog Door Box and 2PGDAD Module Connecting a DSX Analog Door Box to the 2PGDAD Module The DSX Analog Door Box (P/N 922450) is a self-contained, weather-tight Intercom unit typically used to monitor an entrance door. The Door Box connects to a 2PGDAD Module (P/N 0891027), which in turn connects to an available digital station port. Each 2PGDAD Module provides connection and relays for two door boxes.

The maximum number of DSX Analog Door Boxes you can install is determined by the number of 2PGDAD Modules, which in turn is limited only by the availability of digital station ports. Important! Do not connect a 2PGDAD Module to station ports 21-24 (extensions 320-323). Preparation To prepare the 2PGDAD Module for installation: 1. Find a suitable indoor location for the 2PGDAD Module. - The 2PGDAD Module has the same environmental requirements as a DSX keyset.



[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)

<http://yourpdfguides.com/dref/2311101>

- When choosing a location, keep in mind that the front side of the module contains the status LEDs (important for troubleshooting) while the back of the unit has the cabling access. 2. Remove the screw securing the module cover and lift off the cover. 3. Using a flat blade screwdriver, pry off the plastic disc covering the cable knockout.

4. Following standard station cabling procedures, install a modular jack connected to a digital station port at the 2PGDAD Module location. 5. At this point in the installation, do not connect the 2PGDAD Module to a digital station port. Optional Equipment CH1 CH2 CH1 = Door 1 CH2 = Door 1 On = Door Box Busy or Ringing Off = Door Box idle Flashing = Jumpers set incorrectly To Digital Station Port Not Used 1 - 22 097 093 Remove Prior to Cabling Figure 31: Removing the 2PGDAD Module Cover DSX-40 Hardware Manual Optional Equipment 51 Installing a DSX Analog Door Box and 2PGDAD Module Connecting PGDAD Door Boxes and Relays To connect a Door Box: 1. Find a suitable location for the DSX Analog Door Box. - The door box is a weather-tight unit and can be installed outdoors. 2. Run one-pair 24 AWG station cable from the door box to the 2PGDAD Module. 3.

At the door box, strip each conductor about 3/8", connect as shown, then mount the door box. 4. At the 2PGDAD Module, strip each conductor about 1/4" and connect to the block as shown. - To make a connection, use a small flat-blade screwdriver to push down on tab, insert the wire, then release the tab. 5. Be sure all module jumpers are in the open position. To connect a relay: 1. Run one-pair 24 AWG station cable from the relay location to the 2PGDAD Module. 2. At the relay, connect the station cable following the instructions provided with the relay.

3. At the 2PGDAD Module, strip the wires about 1/4" and connect to the block as shown. - To make a connection, use a small flat-blade screwdriver to push down on tab, insert the wire, then release the tab. 4. Be sure the relay you choose is compatible with the 2PGDAD Module relay contact specifications. 2PGDAD Module Relay Contact Specifications Configuration: Maximum Contact Ratings: Normally open 250 mA @ 120 VAC 500 mA @ 24 VDC 1093097 - 23 All Jumpers Open To Door 1 Relay To Door 2 Relay To Door 2 Door Box To Door 1 Door Box 08 93 48 09 6 - Figure 32: Connecting PGDAD Door Boxes and Relays 52 Optional Equipment DSX-40 Hardware Manual Installing a DSX Analog Door Box and 2PGDAD Module Mounting the 2PGDAD Module and Connecting to the System To mount and connect the 2PGDAD Module: 1. Mount two suitable fasteners (such as #8 sheet metal screws) about 3 15/16" apart either horizontally (for horizontal mounting) or vertically (for vertical mounting). - Leave the heads exposed about 1/4" 2. Place the 2PGDAD Module over the screws and slide down into place. 3.

Program the Door Box and 2PGDAD Module before connecting to the 2PGDAD modular jack. - In 1203-01: Secondary Station Port Assignment, for the digital port selected enter an available station port for the secondary port (96-127 by default). - In 2113-02: Ring Group, assign the extensions associated with the 2PGDAD Module and all telephones that should receive door chimes to the same Ring Group. - Refer to the Door Box feature in the DSX Software Manual for additional programming. 4. Using a standard line cord, plug the 2PGDAD Module into its modular jack and verify the LEDs. Optional Equipment 10 93 09 6 - 49 2 1 2 4 3 2 1 2 4 3 Figure 33: Mounting and Connecting the 2PGDAD Module Optional Equipment DSX-40 Hardware Manual 53 External Paging External Paging Installing External Paging The Main Equipment Cabinet provides an External Paging output. You connect the Main Equipment Cabinet Paging output to an audio input on a customer provided Paging system. Be sure the connected Paging equipment is compatible with the following page output specifications: External Paging Output Specifications Output Impedance: Output Level: 600 Ohms 0 dB @ 1.0 kHz To connect to an External Paging Amplifier: 1.

Obtain an audio cable that has a mono audio minijack (1/8") on one end and a connector compatible with the customer's paging amplifier on the other. 2. Plug the mono audio minijack into the Audio Out connector on the Main Equipment Cabinet. 3. Plug the other end of the audio cable into the paging amplifier. Audio Out Audio Cable To customer-provided paging amplifier Figure 34: Connecting External Paging 54 Optional Equipment 10930 97 - 24 DSX-40 Hardware Manual Music Source Music Source Installing a Music Source Your system provides two connections for customer provided music sources. Use these music sources for Background Music and Music on Hold. Be sure the connected music sources are compatible with the following music input specifications: Music Input Specifications Input Impedance: Output Level: 10K Ohms +18 dB (+2 dB) @ 1.0 KHz To connect a music source (two maximum): 1. Obtain an audio cable that has a mono audio minijack (1/8") on one end and a connector compatible with the customer's music on the other.

2. Plug the mono audio minijack into one of the two Audio In connectors on the Main Equipment Cabinet. 3. Plug the other end of the audio cable into the music source. Optional Equipment Audio In 2 Audio In 1 Audio Cables To customer-provided music sources (assigned in programming to Background Music and Music On Hold) Figure 35: Connecting a Music Source 1093097 - 25 DSX-40 Hardware Manual Optional Equipment 55 Power Failure Telephone Power Failure Telephone Power Failure Cut-Through When AC power fails, the system can automatically cut through to a Power Failure Telephone connection. Analog stations 25 and 26 (extensions 324 and 325) are the permanent power failure extensions. When power fails: Analog extension 324 (station 25) automatically cuts through to line 1. Analog extension 325 (station 26) automatically cuts through to line 2. For more on connecting extensions, see Connecting Extensions and Lines (page 28). To test the Power Failure Telephone: 1.

Connect the power failure telephone. 2. Power down the system. 3. At the Power Failure Telephone, lift the handset. - You should hear dial tone on the line you connected. - Place a test call. 56 Optional Equipment DSX-40 Hardware Manual Wall Mounting Wall Mounting Reversing the Handset Hanger Before wall mounting your DSX telephone, you should reverse the handset hanger. The hanger holds the handset in place while the telephone is mounted on the wall. To reverse the wall-mount handset hanger: 1.

Slide out the handset hanger. 2. Reverse and re-insert the handset hanger. Optional Equipment 109309 6 - 29 Figure 36: Reversing the Handset Hanger DSX-40 Hardware Manual Optional Equipment 57 Wall Mounting Wall Mounting a Keypad Wall Mounting a Keypad on a Standard Wall Plate To mount the telephone on the standard wall plate: 1.



[You're reading an excerpt. Click here to read official NEC DSX-40 user guide](http://yourpdfguides.com/dref/2311101)

<http://yourpdfguides.com/dref/2311101>