



DSX

Basic Online Training Quick Reference

(A companion to the DSX Basic
Online Training Course)

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This manual has been developed by NEC Unified Solutions, Inc. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

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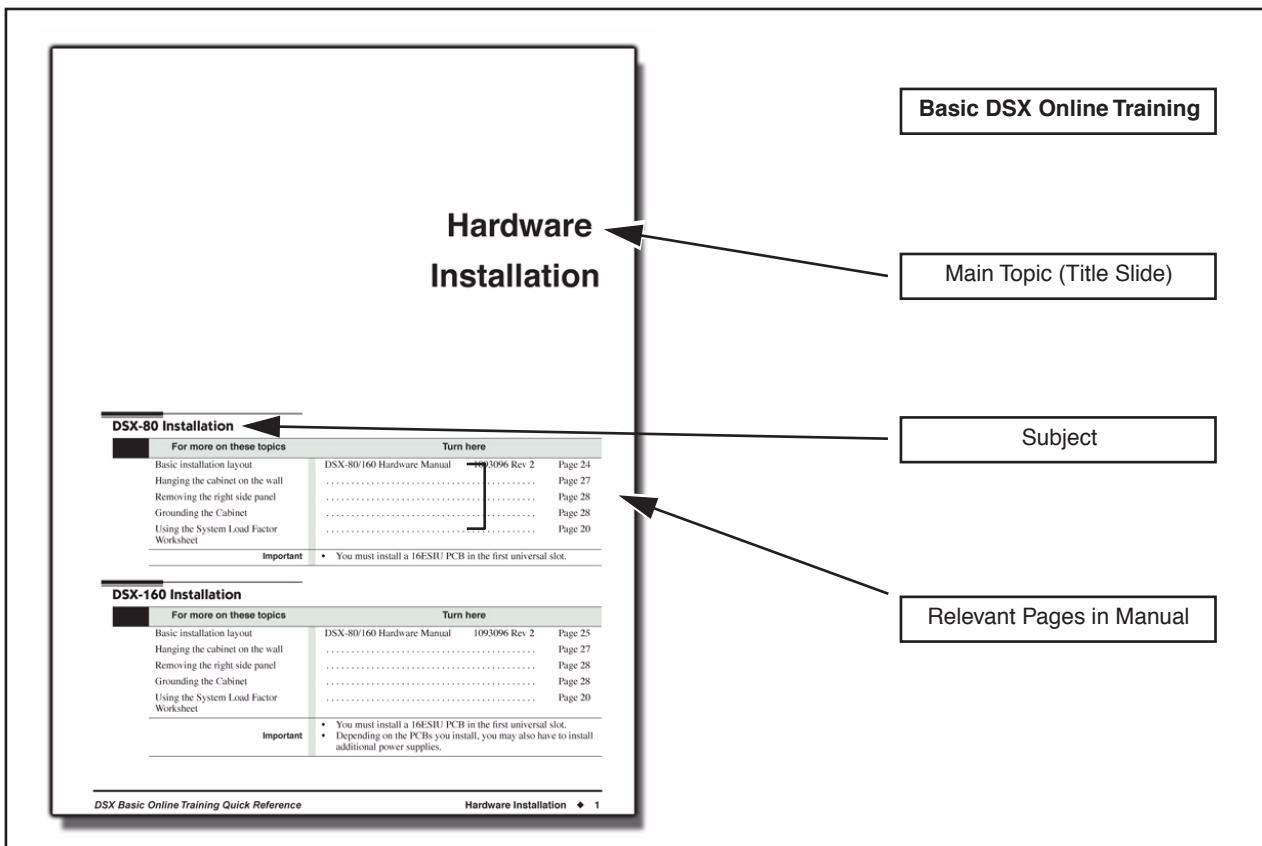
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Introduction

This manual is a companion to the *Basic DSX Online Training* course. When using this manual:

- Each chapter corresponds to a main topic (title slide) in the *Basic DSX Online Training* course. For example, the *Hardware Installation* chapter corresponds to the first section in the course.
- There is a subheading in each chapter for each subject within that section of the course. For example, the topic *DSX-80* in the *Hardware Installation* chapter refers to the first subject in the course.
- Each subheading provides a cross reference to the relevant pages in the DSX manuals. To learn more about a topic, turn to the page in the specified manual.



Hardware Installation

DSX-80 Installation

For more on these topics	Turn here
Basic installation layout	DSX-80/160 Hardware Manual 1093096 Rev 2 Page 22
Hanging the cabinet on the wall	..... Page 25
Removing the right side panel	..... Page 26
Grounding the Cabinet	..... Page 27
Using the System Load Factor Worksheet	..... Page 19
Important	<ul style="list-style-type: none"> You must install a 16ESIU PCB in the first universal slot.

DSX-160 Installation

For more on these topics	Turn here
Basic installation layout	DSX-80/160 Hardware Manual 1093096 Rev 2 Page 23
Hanging the cabinet on the wall	..... Page 25
Removing the right side panel	..... Page 26
Grounding the Cabinet	..... Page 27
Using the System Load Factor Worksheet	..... Page 19
Important	<ul style="list-style-type: none"> You must install a 16ESIU PCB in the first universal slot. Depending on the PCBs you install, you may also have to install additional power supplies.

Reference for Hardware Installation

Power Supplies

For more on these topics	Turn here
Power Supply Installation	DSX-80/160 Hardware Manual 1093096 Rev 2 Page 29
Power Supply LEDs	..... Page 49
Using the System Load Factor Worksheet	..... Page 19
Important	<ul style="list-style-type: none">• DSX-80 and DSX-160 use the same power supply.• Single line telephones do not require external power.

CPU

For more on these topics	Turn here
CPU Card Installation	DSX-80/160 Hardware Manual 1093096 Rev 2 Page 30
Installing the RFI Suppressor	..... Page 28
CPU LEDs	..... Page 49
Connecting External Paging	..... Page 61
Connecting Music Sources	..... Page 62
Connecting a PC for Programming	..... Page 70
Important	<ul style="list-style-type: none">• CPU Flash RAM stores the system database.• The CPU battery backs up telephone settings (such as contrast).

DSX PCBs

For more on these topics	Turn here
Installing ESIU PCBs	DSX-80/160 Hardware Manual 1093096 Rev 2 Page 31
Installing SLIU PCBs	..... Page 33
Installing T1/E1/PRI PCBs	..... Page 37
Installing COIU PCBs	..... Page 35
Important	<ul style="list-style-type: none">• For details on using DS2000 PCBs in DSX-80/160, see <i>Upgrading DS2000 to DSX-80/160</i> (P/N 1093077).

DSX Modem

For more on these topics	Turn here
Modem description	Built into CPU.
Important	<ul style="list-style-type: none">• External modems are not compatible with DSX. The DSX CPU PCB is used only to output SMDR data.

Door Boxes

For more on these topics	Turn here		
Connecting Door Boxes	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 58
Door Box feature	DSX Software Manual	1093100 Rev 3	Page 147
Door Box programming	DSX Software Manual	1093100 Rev 3	Page 148
Important	<ul style="list-style-type: none"> Connect a 2PGDAD Module to a 16ESIU station port, then connect up to two analog Door Boxes to the 2PGDAD Module. 		

Cabling

For more on these topics	Turn here		
16ESIU PCB cabling	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 32
SLIU PCB cabling	.....		Page 34
COIU PCB cabling	.....		Page 36
Extension cabling	.....		Page 41
Important	<ul style="list-style-type: none"> For your convenience, use pre-made cable P/N 80892. 		

Optional Equipment

For more on these topics	Turn here		
Connecting External Paging	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 61
Connecting music sources	.....		Page 62
Important	<ul style="list-style-type: none"> The DSX CPU PCB provides music inputs and outputs. 		

Data Connections

For more on these topics	Turn here		
Connecting PC Programming and SMDR	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 70
Important	<ul style="list-style-type: none"> PC Programming is not available via the CPU PCB serial port. 		

Data Connections

For more on these topics	Turn here		
Installing IntraMail	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 57
Important	<ul style="list-style-type: none"> The IntraMail CompactFlash card plugs into the CPU PCB. 		

Reference for Hardware Installation

Accessing Programming

Accessing and Navigating Programming

	For more on these topics	Turn here		
	Interactive programming tutorial	<i>DSX Interactive</i> at www.necdsx.com .		
	Programs available at each access level	DSX Software Manual	1093100 Rev 3	Page 336
	A quick reference showing the programs required for each feature	DSX Programmers Quick Reference	1093089 Rev 3	-
	Details on each system program	DSX Software Manual	1093100 Rev 3	Page 595
	Cross reference between DS and DSX programs	Upgrading DS2000 to DSX-80/160	1093077 Rev 1	-
	Important	<ul style="list-style-type: none">• Only one extension can be in the programming mode at one time.• You cannot use DS telephones for programming DSX.		

System/IntraMail Utilities

System Initialization

	For more on these topics	Turn here		
	CPU LEDs during initialization	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 54
	Initialize via programming	DSX Software Manual	1093100 Rev 3	Page 917
	Important	<ul style="list-style-type: none">• Initialization returns all programs to their default settings.• Initialization <i>will not</i> erase IntraMail messages and other recordings.		

Resetting the System

	For more on these topics	Turn here		
	CPU LEDs during reset	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 54
	Reset via programming	DSX Software Manual	1093100 Rev 3	Page 915
	Important	<ul style="list-style-type: none">• No programming is lost after a reset.• Resetting disconnects all calls in progress.		

Reference for System/IntraMail Utilities

Upgrading System Software

For more on these topics	Turn here		
CPU LEDs during upgrade	DSX-80/160 Hardware Manual	1093096 Rev 2	Page 56
Upgrade details	.....		Page 56
Important	<ul style="list-style-type: none"> The site database is retained after the upgrade. 		

Checking the Software Version

For more on these topics	Turn here		
Checking system software version	DSX Software Manual	1093100 Rev 3	Page 4
Checking IntraMail version	.....		Page 576
Important	<ul style="list-style-type: none"> The IntraMail version your hear is for the voice prompts. IntraMail programmable options are part of the system software. 		

Default Settings

For more on these topics	Turn here		
Default features for lines	DSX Software Manual	1093100 Rev 3	Page 2
Default features for extensions	.....		Page 2
Default IntraMail setup	.....		Page 396
Built-In Automated Attendant	.....		Page 436
Important	<ul style="list-style-type: none"> Initializing returns all programmable options to default. 		

Ringling Assignments

Line Programming/Ringing

For more on these topics	Turn here
Basic line setup and ring assignments	DSX Software Manual 1093100 Rev 3 Page 75
Overflow options (Key Ring Overflow)	..... Page 214
Important	<ul style="list-style-type: none"> • By default, lines 1-12 Key Ring on line keys 1-12 for extensions 300-315. • Be sure an extension has access to the lines that ring the phone.

Auto Attendant for Unanswered and Night Mode Calls

For more on these topics	Turn here
Application example	DSX Software Manual 1093100 Rev 3 Page 401
Important	<ul style="list-style-type: none"> • Outside lines reroute to the voice mail Automated Attendant when the system is in the night mode. This application is not schedule-based.

Reference for Ringing Assignments

Termination Options

For more on these topics	Turn here		
Key Ring	DSX Software Manual	1093100 Rev 3	Page 214
Key Ring Overflow	.....		Page 214
Direct Inward Line (DIL)	.....		Page 109
DIL Overflow	.....		Page 109
Important	<ul style="list-style-type: none"> By default, lines 1-12 Key Ring on line keys 1-12 for extensions 300-315. 		

Key Ring

For more on these topics	Turn here		
Key Ring	DSX Software Manual	1093100 Rev 3	Page 214
Set ringing mode	.....		Page 214
- Day and night ringing			
- Night ringing only			
- Delayed day and night ringing			
Important	<ul style="list-style-type: none"> By default, lines 1-12 Key Ring on line keys 1-12 for extensions 300-315. 		

Direct Inward Lines (DILs)

For more on these topics	Turn here		
Direct Inward Line	DSX Software Manual	1093100 Rev 3	Page 109
DIL Overflow	.....		Page 109
Important	<ul style="list-style-type: none"> By default, there are no DILs programmed. 		

Night Ring

For more on these topics	Turn here		
Description	DSX Software Manual	1093100 Rev 3	Page 252
Night Service keys	.....		Page 252
Night Service types	.....		Page 252
Night Service programming	.....		Page 253
Important	<ul style="list-style-type: none"> By default, there are no night keys programmed. 		

Stations/COS

Features

N/A

Class of Service

	For more on these topics	Turn here
	Class of Service (COS)	DSX Software Manual 1093100 Rev 3 Page 88
	Important	<ul style="list-style-type: none">• By default, extension 300 has COS 1. All others have COS 2.

Common C.O.S. Options

	For more on these topics	Turn here
	Night Service	DSX Software Manual 1093100 Rev 3 Page 252
	Conversation Record	..... Page 462
	Important	<ul style="list-style-type: none">• By default, extension 300 has COS 1. All others have COS 2.

Reference for Stations/COS

End User Features

For more on these topics	Turn here		
Prime Line	DSX Software Manual	1093100 Rev 3	Page 274
Prime Line User-Programmable steps	.....		Page 276
Feature Keys	.....		Page 169
Feature Keys User-Programmable steps	.....		Page 176
Off-Hook Signaling	.....		Page 255
Off-Hook Signaling User-Programmable steps	.....		Page 257
Access Level Programming	.....		Page 725
Important	<ul style="list-style-type: none"> • User-Programmable Features may be restricted by an extension's access level. 		

Feature Key Programming

For more on these topics	Turn here		
Feature Keys	DSX Software Manual	1093100 Rev 3	Page 169
Feature Key options	.....		Page 170
Feature Keys User-Programmable steps	.....		Page 176
Extension copy command	.....		Page 921
Line copy options	.....		Page 923
Important	<ul style="list-style-type: none"> • User-programmable Feature Key programming may be restricted by an extension's access level. 		

System Program Features

For more on these topics	Turn here		
Extension Hunting to Voice Mail	DSX Software Manual	1093100 Rev 3	Page 478
Important	<ul style="list-style-type: none"> • When Extension Hunting to Voice Mail is programmed, Call Forwarding to voice mail is not required. 		

Admin/Subscriber Mailboxes

Administrator Mailbox

For more on these topics		Turn here	
System Administrator		DSX Software Manual	1093100 Rev 3 Page 576
Security Code		.....	Page 570
	Important	<ul style="list-style-type: none"> To prevent tampering with the voice mail setup, the System Administrator Mailbox should have a Security Code. By default, the administrator mailbox is 300. 	

System Admin

For more on these topics		Turn here	
Message Delete		DSX Software Manual	1093100 Rev 3 Page 530
Mailbox Name		.....	Page 518
Greeting			Page 493
Security Code			Page 570
System Administrator			Page 576
	Important	<ul style="list-style-type: none"> By default, the administrator mailbox is 300. 	

Reference for Admin/Subscriber Mailboxes

Call Routing Mailboxes

For more on these topics		Turn here	
Call Routing Mailbox	DSX Software Manual	1093100 Rev 3	Page 450
Instruction Menu	.....		Page 507
Dial Action Table	.....		Page 465
Automated Attendant	.....		Page 433
Automated Attendant, Built-in	.....		Page 436
Important	<ul style="list-style-type: none"> By default, Call Routing Mailboxes are 001-008. 		

Announcement Mailboxes

For more on these topics		Turn here	
Announcement Mailbox	DSX Software Manual	1093100 Rev 3	Page 412
Dial Action Table	.....		Page 465
Automated Attendant	.....		Page 433
Automated Attendant, Built-in	.....		Page 436
Important	<ul style="list-style-type: none"> By default, Announcement Mailboxes are 009-016. 		

Subscriber Mailboxes

For more on these topics		Turn here	
Subscriber Mailbox	DSX Software Manual	1093100 Rev 3	Page 574
Mailbox Name	.....		Page 518
Greeting	.....		Page 493
Guest Mailbox	.....		Page 503
Important	<ul style="list-style-type: none"> By default, extensions 300-315 have their Subscriber Mailboxes enabled. Guest Mailboxes don't require physical extensions. 		

Mailbox Basics

For more on these topics	Turn here		
Security Code	DSX Software Manual	1093100 Rev 3	Page 570
Mailbox Name	.....		Page 518
Greeting	.....		Page 493
Log Onto Voice Mail	.....		Page 515
Important	<ul style="list-style-type: none"> Voice mail uses the extension's number if the name and greeting are not recorded. 		

Next Call Routing

For more on these topics	Turn here		
Next Call Routing Mailbox	DSX Software Manual	1093100 Rev 3	Page 552
Call Routing Mailbox	.....		Page 450
Announcement Mailbox	.....		Page 412
Important	<ul style="list-style-type: none"> By default, while listening to the mailbox greeting a caller can: <ul style="list-style-type: none"> - Dial 0 for the operator. - Dial # to go back to the Automated Attendant. - Dial * to skip the greeting and start recording. 		

Reference for Admin/Subscriber Mailboxes

Automated Attendant

AA Overview

	For more on these topics	Turn here
Automated Attendant	DSX Software Manual	1093100 Rev 3 Page 433
Answer Tables	.....	Page 420
Call Routing Mailbox	.....	Page 450
Dial Action Table	.....	Page 465
	Important	<ul style="list-style-type: none"> By default, a DIL to voice mail will answer outside calls on Call Routing Mailbox 1.

Reference for Automated Attendant

A.S.T.s

For more on these topics	Turn here		
Automated Attendant	DSX Software Manual	1093100 Rev 3	Page 433
Answer Tables	.....		Page 420
Call Routing Mailbox	.....		Page 450
Instruction Menu	.....		Page 450
Dial Action Table	.....		Page 465
Start-Up Programming	.....		Page 396
Application Examples	.....		Page 399
Multiple Company Greetings	.....		Page 550
Important	<ul style="list-style-type: none"> To set up Automated Attendant answering, review the <i>Start-Up Programming and Application Examples</i>. 		

AST Example

For more on these topics	Turn here		
Answer Tables	DSX Software Manual	1093100 Rev 3	Page 420
Start-Up Programming	.....		Page 396
Application Examples	.....		Page 399
Important	<ul style="list-style-type: none"> To set up Automated Attendant answering, review the <i>Start-Up Programming and Application Examples</i>. 		

CRMBs

For more on these topics	Turn here		
Call Routing Mailbox	DSX Software Manual	1093100 Rev 3	Page 450
Instruction Menu	.....		Page 507
Dial Action Table	.....		Page 465
System Administrator	.....		Page 576
Important	<ul style="list-style-type: none"> By default, Call Routing Mailboxes are 001-008. 		

D.A.T., D.A.T. Example, and D.A.T. Routing

For more on these topics	Turn here		
Dial Action Table	DSX Software Manual	1093100 Rev 3	Page 465
Log Onto Voice Mail	.....		Page 515
Quick Message	.....		Page 560
Go to a Mailbox	.....		Page 491
Hang Up	.....		Page 506
Screened Transfer	.....		Page 567
Unscreened Transfer	.....		Page 587
Important	<ul style="list-style-type: none"> • By default, Dial Action Table 1 allows callers to: <ul style="list-style-type: none"> - Dial extensions 3xx-4xx. - Dial 0 for the operator (extension 300). - Remotely log on to their mailbox. - Leave a Quick Message for a co-worker. 		

IntraMail

Directory Dialing

Directory Dialing

	For more on these topics	Turn here
	Directory Dialing	DSX Software Manual 1093100 Rev 3 Page 469
	Directory Dialing Mailbox	..... Page 475
	Names for Extensions and Lines	..... Page 249
	Call Routing Mailbox	..... Page 450
	Important	<ul style="list-style-type: none"> • By default, there are no Directory Dialing Mailboxes or extension names programmed. • Directory Dialing can route on first or last name, depending on how it is set up.

Backup/Restore

Backup/Restore

For more on these topics	Turn here
System Programming Backup and Restore	DSX Software Manual 1093100 Rev 3 Page 335
9041: Backup	..... Page 927
9042: Restore	..... Page 927
Important	<ul style="list-style-type: none">• For convenience, use the IntraMail CompactFlash card for Backup and Restore.• The backed-up data base uses about 500K of space on the CompactFlash card.• You cannot back up more than one copy of the database.

Reference for Backup and Restore

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