TONE COMMANDER®

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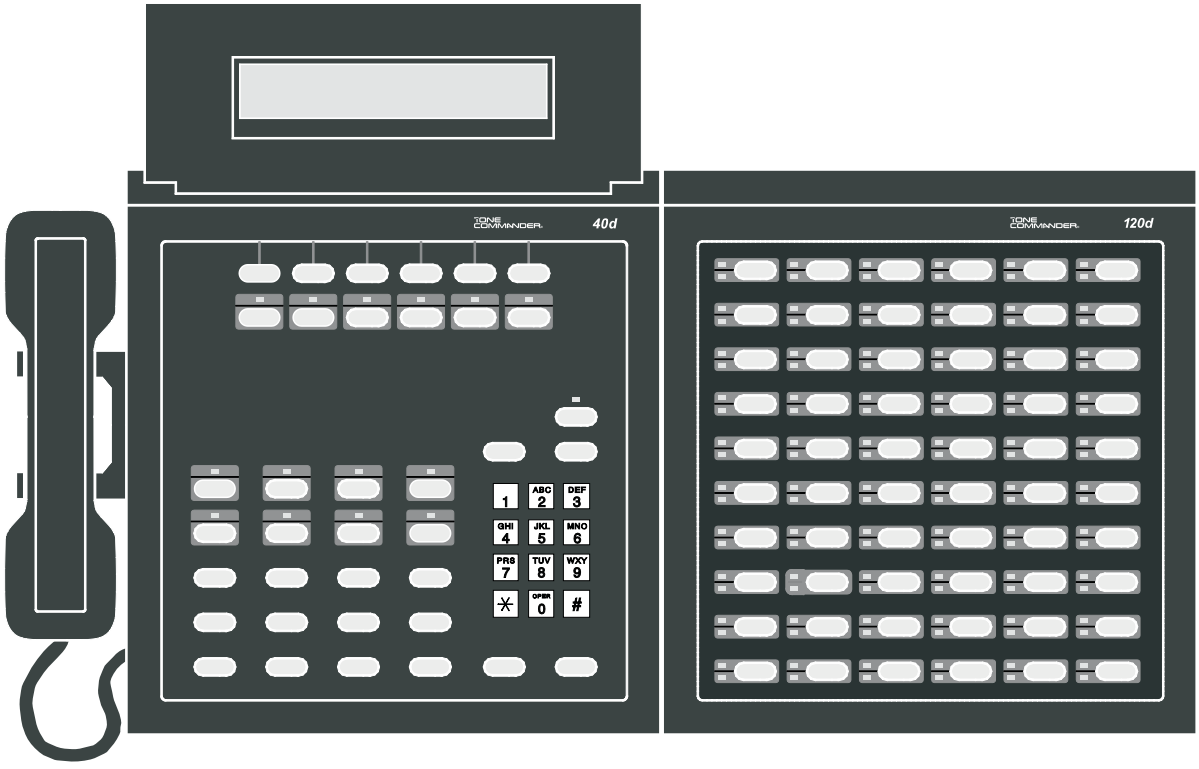
40d120 Installation Instructions



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Changes in this revision –

- updated Translation Order Guides
- added Translation Order Guides for Nortel National ISDN-2

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Contents

Introduction

The Tone Commander **40d** is an ISDN attendant console compatible with Lucent, Nortel, and Siemens National ISDN, and Lucent Custom ISDN services. It is designed to access a maximum of 22 call appearances via a single attendant loop. One to four **120d** 120 station BLF/DSS consoles may be added to simplify station call transfer.

Standard features of the 40d120 system include single button call answering, hold, transfer, conferencing, automatic callback, direct station selection (DSS), name database, autodialing, line privacy, delayed ringing, 4 line (40 characters per line) alphanumeric display, and digital clock. Configuration parameters may be programmed by the installer to accommodate a variety of operating environments.

The 40d and 120d consoles use standard Electronic Key Telephone Service (EKTS) ISDN configurations and connect directly to the Central Office ISDN "U" interface. No external NT1 is required. A separate "U" interface line is required for the 40d and each 120d console.

Call Tone Commander Customer Service at **(800) 524-0024** if you have any questions about features, installation, or operation of the 40d120.

Using This Manual

Tone Commander consoles are easy to install and configure. The step by step instructions in this manual guide the installer through the installation, preliminary testing, programming, and operational testing of the 40d120.

Installation of a 40d120 consists of the following steps:

1. Order the equipment. *(page 6*)
2. Fill out the appropriate Translation Order Guides as required by the telco and order the ISDN lines. *(page 6)*
3. Fill out the Configuration Sheets. *(page 43)*
4. Attach the handset, cradle, and tie bracket to the console. *(page 31)*
5. Connect the power supply to the consoles and ISDN lines. *(page 32)*
6. Enter the console SPIDs and PDN. *(page 43)*
7. Set up console key mapping, ringing call queues, recall timers, and call appearance loop usage as required for this installation. Factory default settings may be adequate for many installations. *(page 47)*
8. Enter the names and telephone numbers for DSS keys and caller identification. *(page 62)*
9. Test the operation of the console.

Available features and ordering requirements vary somewhat among the ISDN service types offered by the telcos. Features and installation steps that are specific to an ISDN service type or C.O. switch are noted in this manual as follows:

National ISDN – Lucent, Nortel, or Siemens National ISDN

Nortel National ISDN-1 – Nortel National ISDN-1 only

Lucent National ISDN – Lucent National ISDN only

Nortel National ISDN-2 – Nortel National ISDN-2 only

Lucent Custom ISDN – Lucent Custom ISDN only

Siemens National ISDN – Siemens National ISDN only

Feature and Operational Differences Between ISDN Versions

National ISDN

Features *Not* Supported in National ISDN

- Automatic Callback (due to lack of uniform multiple callback support)
- Priority Calls (Dial Call Waiting)
- Inspect Feature Key
- Network Time/Date Feature Key

National ISDN

Console Operational Differences with National ISDN

- Console configuration for incoming call identification, queue setups, and call forwarding is different for National ISDN. The functional operation is similar to Lucent Custom ISDN.
- One additional Directory Number (DN) with 2 call appearances, or two additional single call appearance DNs, restricted for originate-only calls should be configured for attendant use to avoid call collisions on earlier versions of National ISDN; sub-address reservation is used to support this recommendation on later versions.
- Network Feature Activation (button) numbers must be assigned for Conference, Connect (Transfer), and Drop keys. Switch type (Lucent, Siemens, or Nortel) must be identified during 40d configuration.

Nortel
National ISDN

Additional National ISDN-1 Differences with Nortel Switches

- On the Nortel NI-1 interface, multiple Appearance Directory Numbers (MADNs) are not allowed for DNs that have Additional Functional Calls (AFCs). Since the 40d uses MADNs to provide busy lamp status, ISDN terminals that have AFCs (multiple call appearances of a single DN) cannot be monitored on the 120d Busy Lamp Field. ISDN key sets that need to appear on the BLF must be configured with individual DNs for each call appearance, arranged in a Key Short Hunt (KSH) group.
- A maximum of 5 call appearances of a single DN (DN + 4 AFCs) are supported by the network. To support the recommended 40d configuration of 8 call appearances, 8 DNs arranged in a Key Short Hunt group must be used on the Nortel NI-1 interface.
- The Primary Directory Number (PDN) of a terminal must appear on Button 1 (CA 1) of its key map. Consequently, the first button position on the 2260d console must be remapped to another call appearance (e.g. CA 61) in order for it to be used for station monitoring – see page 62. On Lucent and Siemens switches, the PDN is assigned to Button 61, which does not use a physical position on the BLF/DSS panel.

Site Requirements

The 40d120 consoles should be installed in a clear work space and away from plants that require frequent watering or counters that tempt the placement of beverages.

Ambient Environmental Requirements

It is recommended that the same environmental conditions be maintained for the consoles as one would maintain for a personal computer (PC) or data terminal.

Transient Surge and Spike Protection

While Tone Commander products comply to FCC rules part 68.306, Hazard Voltage Limitations, in those areas of high lightning activity, the use of external protection devices on all telephone lines and the power source is recommended.

Ordering Equipment

Each 40d is supplied with a handset, handset cord, and line cord; a headset is optional (not available from Tone Commander). The 40d120 Power Supply (model #102612) must be ordered separately. Allow adequate time when ordering to ensure equipment availability at cutover.

Ordering Lines

Fill out the appropriate Translation Order Guides (starting on page 95). Separate sheets are provided for Lucent National, Lucent Custom, Nortel National, and Siemens National ISDN versions; only fill out the sheets that pertain to this installation's ISDN version and switch type. Many fields that apply to all installations have been filled out for you. Instructions for each ISDN version and sample Translation Order Guides are included below.

Allow adequate time prior to cutover for the receipt and testing of all lines and programmed features. Ordering intervals for the telcos are affected by the number of lines ordered, the availability of entry and transmission facilities, and a variety of other variables. Consult your telco for this information. Supply your telco with a copy of the Translation Order Guide when completed.

Lucent National ISDN

Completing the Translation Order Guide for Lucent National ISDN

Translation Order Guide #1 (page 95):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the Digital Subscriber Loop Telephone # (if known). This is the Primary Directory Number of the 40d.

Line 6: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 7: This is the Centrex Pick-up Group Number assigned by the telco, that includes the 40d and all terminals that are served by the 120d. Leave this line blank unless you know the group number that will be assigned.

Line 8: Leave this line blank.

Line 29: This is the button assignment for the first call appearance of the Primary Directory Number (PDN) listed on Line 5. Enter "1" for a primary 40d console. For multiple console configurations, see page 73.

Line 30: This is the total number of sequential PDN call appearances that will be assigned, beginning at the call appearance number listed on Line 28. For a single console configuration, the recommended value is “8”. For multiple console configurations, see page 73.

Line 31: Enter the telephone number from Line 5 under “Directory Number”, PDN Call Appearance from Line 28 under “CA #”, and PDN Call Appearance Quantity from Line 29 under “CA Qty”. Set “Deny Termination” to “No”.

Translation Order Guide #2 (page 96):

Enter any additional special feature key assignments. Make sure the associated BRCS Features on Line 24 of the Translation Order Guide #1 are entered. Typically, no modification to the standard form is required. Make sure this form is sent to the telco along with the other appropriate Translation Order Guides.

Translation Order Guide #3 (page 97):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the Digital Subscriber Loop Telephone # (if known). This is the Primary Directory Number of the 120d for the first 60 DSS/BLF positions.

Line 14: Enter the Primary Directory Number for the second 60 DSS/BLF positions (Keys 61-120).

Line 31: Enter the telephone number from Line 5 under “Directory Number”.

NOTE – One of these Translation Order Guides must be completed for each 60 stations appearing on a 120d console.

Translation Order Guides #4 and #5 (pages 98 and 99):

At the top of each form, enter the PDN of the 120d for the first 60 DSS/BLF positions from Line 5 of Translation Order Guide #3.

For each DSS key, enter the directory number of the desired station to be monitored. Refer to page 42 for DSS key locations on the 120d console.

Also enter the same directory numbers, with the station user names and autodial types, on the 120d Configuration Sheets that are to be left on-site (pages 137-140).

Translation Order Guides #6-8 (pages 100-102)

Follow the instructions for Translation Order Guides #3-5, using the Primary Directory Number that is assigned to the second 60 DSS/BLF positions (keys 61-120). On line 14, enter the PDN for the first 60 DSS/BLF positions (keys 1-60).

Sample Translation Order Guides

The following four pages have Translation Order Guides that have been filled out for a typical installation. Sample information is printed in *italic block font*.

Lucent National ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Digital Subscriber Loop Telephone #:	*(425) 349-1000*
6.	PIC (Preferred Long Distance Carrier #):	*288*
7.	Pick-up Group #:	
8.	Call Forward Busy DN:	
9.	CXR Interconnect Dialing:	Allow
10.	ISDN Service:	National ISDN
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Standard
13.	Number of Terminals:	1
14.	Associated DN:	N/A
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	TCS40DNI
21.	Terminal Type:	C
22.	EKTS:	CACH
23.	TKS:	Yes
24.	Display:	Yes
25.	BRCS Features *(* optional)*:	
	* Call Forward Variable	/CFIV
	* Directed Call Pickup Non Barge-in, Originate	/CPDNO
	* Call Pickup Terminating	/CPUT
	Distinctive Ringing	/DRIC
	Centrex Group	/IDP
	ICLID & OCLID Displays – All (appearances)	/LIDADAO or /LIRCNMA
	ISDN Conference/Transfer Individual All (calls)	/MWICTIA
	6 Party Conference	/MWI6WB2
	Redirecting Number Display	/RND
	Unrestricted Dialing / Route Dial Errors To Tones	/TGUUT
	* Directed Call Park	/CPDPARK
	* Call Park Answer Back	/CPANSBK
26.	Call Preference:	Idle
27.	Autohold:	No
28.	One Touch:	No
29.	PDN Call Appearance:	*1*
30.	PDN Call Appearance Quantity:	*8*

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
31.	*349-1000*	*1*	Primary	8	A	Normal	*No*
32.			Secondary		A	Normal	
33.			Secondary		A	Normal	
34.			Secondary		A	Normal	
35.			Secondary		A	Normal	

Lucent National ISDN

40d120 Translation Order Guide #2

Recommended Switch Configuration Group Definition

Configuration Group:	TCS40DNI
CPE Component:	0
Range:	41
RMK:	Tone Commander 40d ISDN Console

Button List:

Button	Feature	Action	Parameter	Description
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55	/CPANSBK	ANSBACK		Call Park Answer Back
56	/CPDPARK	DPARK		Directed Call Park
57	/CFIV	CFBN		Call Forward Variable
58	/CPDNO	DPN		Directed Call Pickup, Non Barge-in
59				
60	/*	CONF		Conference
61	/*	XFER		Transfer
62	/*	DROP		Drop
63				
64				

Lucent
National ISDN

40d120 Translation Order Guide #3

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-30

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Digital Subscriber Loop Telephone #:	*(425) 349-1100*
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	National ISDN
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Standard
13.	Number of Terminals:	2
14.	Associated DN:	*(425) 349-1101*
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	C
22.	EKTS:	CACH
23.	TKS:	Yes
24.	Display:	None
25.	BRCS Features:	
	Centrex Group	/IDP
26.	Call Preference:	Idle
27.	Autohold:	No
28.	One Touch:	No
29.	PDN Call Appearance:	61
30.	PDN Call Appearance Quantity:	1

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
31.	*349-1100*	61	Primary	1	N	Normal	No

Lucent
National ISDN

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: 425-349-1100

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
1	425-542-4719	1	1	N	NORMAL
2	425-542-4729	2	1	N	NORMAL
3	425-542-4711	3	1	N	NORMAL
4	425-542-4712	4	1	N	NORMAL
5	425-542-4715	5	1	N	NORMAL
6	425-542-4720	6	1	N	NORMAL
7	425-542-4716	7	1	N	NORMAL
8	425-542-4717	8	1	N	NORMAL
9	425-542-4718	9	1	N	NORMAL
10	425-542-4721	10	1	N	NORMAL
11	425-542-4722	11	1	N	NORMAL
12	425-542-4737	12	1	N	NORMAL
13	425-542-4736	13	1	N	NORMAL
14	425-542-4723	14	1	N	NORMAL
15	425-542-4713	15	1	N	NORMAL
16	425-542-4714	16	1	N	NORMAL
17	425-542-4724	17	1	N	NORMAL
18	425-542-4725	18	1	N	NORMAL
19	425-542-4726	19	1	N	NORMAL
20	425-542-4728	20	1	N	NORMAL
21	425-542-4727	21	1	N	NORMAL
22	425-542-4730	22	1	N	NORMAL
23	425-485-4416	23	1	N	NORMAL
24	425-443-5694	24	1	N	NORMAL
25	425-543-6598	25	1	N	NORMAL
26	425-747-6521	26	1	N	NORMAL
27	425-523-5645	27	1	N	NORMAL
28	425-883-5400	28	1	N	NORMAL
29	425-542-4741	29	1	N	NORMAL
30	425-542-4744	30	1	N	NORMAL

Lucent Custom ISDN

Completing the Translation Order Guide for Lucent Custom ISDN

Translation Order Guide #1 (page 103):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the Digital Subscriber Loop Telephone # (if known). This is the Primary Directory Number of the 40d.

Line 6: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 7: This is the Centrex Pick-up Group Number assigned by the telco, that includes the 40d and all terminals that are served by the 120d. Leave this line blank unless you know the group number that will be assigned.

Line 8: Leave this line blank.

Line 28: This is the button assignment for the first call appearance of the Primary Directory Number (PDN) listed on Line 5. Enter “1" for a primary 40d console. For multiple console configurations, see page 73.

Line 29: This is the total number of sequential PDN call appearances that will be assigned, beginning at the call appearance number listed on Line 28. For a single console configuration, the recommended value is “8”. For multiple console configurations, see page 73.

Line 37: Enter the telephone number from Line 5 under “Directory Number”, PDN Call Appearance from Line 28 under “CA #”, and PDN Call Appearance Quantity from Line 29 under “CA QTY”.

Lines 38-41: For a single console configuration, leave these lines blank. For multiple console configurations, see page 73.

Translation Order Guide #2 (page 104):

Enter any additional special feature key assignments. Make sure the associated BRCS Features on Line 24 of the Translation Order Guide #1 are entered. Typically, no modification to the standard form is required. Make sure this form is sent to the telco along with the other appropriate Translation Order Guides.

Translation Order Guide #3 (page 105):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the Digital Subscriber Loop Telephone # (if known). This is the Primary Directory Number of the 120d for the first 60 DSS/BLF positions.

Line 14: Enter the Primary Directory Number for the second 60 DSS/BLF positions (Keys 61-120).

Line 37: Enter the telephone number from Line 5 under “Directory Number”

NOTE – One of these Translation Order Guides must be completed for each 60 stations appearing on a 120d console.

Translation Order Guides #4 and #5 (pages 106 and 107):

At the top of each form, enter the PDN of the 120d for the first 60 DSS/BLF positions from Line 5 of Translation Order Guide #3.

For each DSS key, enter the directory number of the desired station to be monitored. Refer to page 42 for DSS key locations on the 120d console.

Also enter the same directory numbers, with the station user names and autodial types, on the 120d Configuration Sheets that are to be left on-site (pages 137-140).

Translation Order Guides #6-8 (pages 108-110):

Follow the instructions for Translation Order Guides #3-5, using the Primary Directory Number that is assigned to the second 60 DSS/BLF positions (keys 61-120). On line 14, enter the PDN for the first 60 DSS/BLF positions (keys 1-60).

Sample Translation Order Guides

The following four pages have Translation Order Guides that have been filled out for a typical installation. Sample information is printed in *italic block font*.

Lucent Custom ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration –Tone Commander 40d Console

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Digital Subscriber Loop Telephone #:	*(425) 349-1000*
6.	PIC (Preferred Long Distance Carrier #):	*288*
7.	Pick-up Group #:	
8.	Call Forward Busy DN:	
9.	CXR Interconnect Dialing:	Allow
10.	ISDN Service:	Lucent Custom
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Point-to-Point
13.	Number of Terminals:	1
14	Associated DN:	N/A
	Bearer Service:	
15.	B1 Channel: DMD 16. B2 Channel: None 17. D Channel: SX	
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	TCS40D
21.	Terminal Type:	D
22.	TKS:	Yes
23.	Display:	Yes
24.	BRCS Features *(* optional)*:	
	* Automatic Call Back Calling	/ACBC
	* Call Forward Variable Feature Button	/CFVFB
	* Directed Call Pickup Non Barge-in, Originate	/CPDNO
	* Call Pickup Terminating	/CPUT
	* Dial Call Waiting	/CWD
	Deluxe Display	/DIDLX
	Distinctive Ringing	/DRIC
	Centrex Group	/IDP
	ICLID & OCLID Displays – All (appearances)	/LIDADAO or /LIRCNMA
	ISDN Conference/Transfer Individual All (calls)	/MWICTIA
	* 6 Party Conference – All Calls	/MWI6WC
	Unrestricted Dialing / Route Dial Errors To Tones	/TGUUT
	* Directed Call Park	/CPDPARK
	* Call Park Answer Back	/CPANSBK
	* ISDN Intercom	/ICM
25.	Call Preference:	Idle
26.	Autohold:	No
27.	One Touch:	No
28.	PDN Call Appearance:	*1*
29.	PDN Call Appearance Quantity:	*8*
	Subaddress Definition:	
30.	SAR QTY (Number of CAs to be Reserved):	*2*
31.	SAR ORIG (Reserve CA for originations):	*Yes*
32.	SAR TERM (Reserve CA for terminations):	*No*
33.	Incoming:	*No*
34.	Intercom:	*No*
35.	ORIG CW:	*No*
36.	PP:	*No*

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
37.	*349-1000*	*1*	Primary	*8*	A	Normal	No
38.			Secondary		A	Normal	No
39.			Secondary		A	Normal	No
40.			Secondary		A	Normal	No
41.			Secondary		A	Normal	No

Lucent Custom ISDN

40d120 Translation Order Guide #2

Recommended Switch Configuration Group Definition

Configuration Group:	TCS40D
CPE Component:	0
Range:	41
RMK:	Tone Commander 40d ISDN Console

Button List:

Button	Feature	Action	Parameter	Description
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51	/IC*	[1-4]COM		ISDN Intercom
52	/CPANSBK	ANSBACK		Call Park Answer Back
53	/CPDPARK	DPARK		Directed Call Park
54	/DI*	TODUSE		Time & Date
55	/DI*	INSUSE		Inspect
56	/CWD	CWDLU		Priority Call (Dial Call Waiting)
57	/CFVFB	BNTOG		Call Forwarding On/Off
58	/CPDNO	DPN		Directed Call Pickup w/o Barge-in
59	/CB*	ACBFBP		Auto Callback On/Off
60				
61				
62				
63				
64				

Lucent Custom ISDN

40d120 Translation Order Guide #3

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Digital Subscriber Loop Telephone #:	*(425) 349-1100*
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	Lucent Custom
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Multipoint
13.	Number of Terminals:	2
14.	Associated DN:	*(425) 349-1101*
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	D
22.	TKS:	Yes
23.	Display:	None
24.	BRCS Features:	
	Centrex Group	/IDP
25.	Call Preference:	Idle
26.	Autohold:	No
27.	One Touch:	No
28.	PDN Call Appearance:	61
29.	PDN Call Appearance Quantity:	1
	Subaddress Definition:	
30.	SAR QTY (Number of CAs to be Reserved):	None
31.	SAR ORIG (Reserve CA for originations):	None
32.	SAR TERM (Reserve CA for terminations):	None
33.	Incoming:	None
34.	Intercom:	None
35.	ORIG CW:	None
36.	PP:	None

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
37.	*349-1100*	61	Primary	1	N	Normal	No

Lucent
Custom ISDN

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: 425-349-1100

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
1	425-542-4719	1	1	N	NORMAL
2	425-542-4729	2	1	N	NORMAL
3	425-542-4711	3	1	N	NORMAL
4	425-542-4712	4	1	N	NORMAL
5	425-542-4715	5	1	N	NORMAL
6	425-542-4720	6	1	N	NORMAL
7	425-542-4716	7	1	N	NORMAL
8	425-542-4717	8	1	N	NORMAL
9	425-542-4718	9	1	N	NORMAL
10	425-542-4721	10	1	N	NORMAL
11	425-542-4722	11	1	N	NORMAL
12	425-542-4737	12	1	N	NORMAL
13	425-542-4736	13	1	N	NORMAL
14	425-542-4723	14	1	N	NORMAL
15	425-542-4713	15	1	N	NORMAL
16	425-542-4714	16	1	N	NORMAL
17	425-542-4724	17	1	N	NORMAL
18	425-542-4725	18	1	N	NORMAL
19	425-542-4726	19	1	N	NORMAL
20	425-542-4728	20	1	N	NORMAL
21	425-542-4727	21	1	N	NORMAL
22	425-542-4730	22	1	N	NORMAL
23	425-485-4416	23	1	N	NORMAL
24	425-443-5694	24	1	N	NORMAL
25	425-543-6598	25	1	N	NORMAL
26	425-747-6521	26	1	N	NORMAL
27	425-523-5645	27	1	N	NORMAL
28	425-883-5400	28	1	N	NORMAL
29	425-542-4741	29	1	N	NORMAL
30	425-542-4744	30	1	N	NORMAL

Nortel National ISDN-1

Completing the Translation Order Guide for Nortel National ISDN-1

Translation Order Guide #1 (page 111):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 6: Enter the local 3-digit area code.

Line 7: Enter the 7-digit Primary Directory Number (PDN) of the 40d (if known).

Line 19: For a single console configuration, enter individual directory numbers for Keys 1-7 in the “Directory Number” column. Set DN Type to “DN”. Leave “MADN Type” and “Primary” columns blank. For multiple console configurations, see page 73.

Line 20: Enter any additional special feature key assignments. Typically, no modification to this section is required. For multiple console configurations, see page 73.

Translation Order Guide #2 (page 112):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 6: Enter the local 3-digit area code.

Line 7: Enter the 7-digit Primary Directory Number (PDN) of the 120d for the first 60 DSS/BLF positions.

Line 18: Enter the 7-digit Primary Directory Number for the second 60 DSS/BLF positions (keys 61-120).

Line 20: Leave this section blank. No feature key assignments are required for the 120d.

NOTE – One of these Translation Order Guides must be completed for each 60 stations appearing on a 120d console.

Translation Order Guides #3 and #4 (pages 113 and 114):

At the top of each form, enter the PDN of the 120d for the first 60 DSS/BLF positions from Line 7 of Translation Order Guide #2. Enter this number also for Key 1.

For each DSS key, enter the directory number of the desired station to be monitored. Refer to page 42 for DSS key locations on the 120d console.

Also enter the same directory numbers, with the station user names and autodial types, on the 120d Configuration Sheets that are to be left on-site (pages 137-140).

Translation Order Guides #5-7 (pages 115-117):

Follow the instructions for Translation Order Guides #2-4, using the Primary Directory Number that is assigned to the second 60 DSS/BLF positions (keys 61-120). On line 18, enter the PDN for the first 60 DSS/BLF positions (keys 1-60).

Sample Translation Order Guides

The following three pages have Translation Order Guides that have been filled out for a typical installation. Sample information is printed in *italic block font*.

Nortel
National ISDN-1

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	PIC (Preferred Long Distance Carrier #):	*288*
6.	SNPA (area code):	*425*
7.	Directory Number:	*349-1000*
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	NONE

19. **Directory Number Assignments**

Key	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1	*DN*	*349-1000*			YES	NO
2	*DN*	*349-1001*			YES	NO
3	*DN*	*349-1002*			YES	NO
4	*DN*	*349-1003*			YES	NO
5	*DN*	*349-1004*			YES	NO
6	*DN*	*349-1005*			YES	NO
7	*DN*	*349-1006*			YES	NO
8					YES	NO
9					YES	NO
10					YES	NO
11					YES	NO
12					YES	NO
13					YES	NO
14					YES	NO

20. **Feature Assignments**

	Key	Feature	Description
a.	1	KSH N *1 2 3 4 5 6*	Key Short Hunt, No Overflow
b.			
c.	7	DTM	Deny Termination
d.	8	AFC	Additional Functional Call
e.	10	GIC or ICM	Group or EKTS Intercom
f.	57	CFU N *$ I*	Call Forward Universal, No Overflow
g.			
h.	60	FC 3	Flexible Calling, 3 party conference
i.	61	XFER CTALL	Call Transfer, All Call Types
j.	62	DROP	Drop last party from conference

Nortel
National ISDN-1

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	PIC (Preferred Long Distance Carrier #):	*288*
6.	SNPA (area code):	*425*
7.	Directory Number:	*349-1100*
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	*349-1101*

19. **Directory Number Assignments**

See the 40d120 Translation Order Guide #3 and #4.

20. **Feature Assignments**

None required.

Nortel National ISDN-1

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: 425-349-1100

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1	1	DN	425-349-1100		YES	YES	NO
2	2	MDN	425-542-4729	SCA	NO	YES	NO
3	3	MDN	425-542-4711	SCA	NO	YES	NO
4	4	MDN	425-542-4712	SCA	NO	YES	NO
5	5	MDN	425-542-4715	SCA	NO	YES	NO
6	6	MDN	425-542-4720	SCA	NO	YES	NO
7	7	MDN	425-542-4716	SCA	NO	YES	NO
8	8	MDN	425-542-4717	SCA	NO	YES	NO
9	9	MDN	425-542-4718	SCA	NO	YES	NO
10	10	MDN	425-542-4721	SCA	NO	YES	NO
11	11	MDN	425-542-4722	SCA	NO	YES	NO
12	12	MDN	425-542-4737	SCA	NO	YES	NO
13	13	MDN	425-542-4736	SCA	NO	YES	NO
14	14	MDN	425-542-4723	SCA	NO	YES	NO
15	15	MDN	425-542-4713	SCA	NO	YES	NO
16	16	MDN	425-542-4714	SCA	NO	YES	NO
17	17	MDN	425-542-4724	SCA	NO	YES	NO
18	18	MDN	425-542-4725	SCA	NO	YES	NO
19	19	MDN	425-542-4726	SCA	NO	YES	NO
20	20	MDN	425-542-4728	SCA	NO	YES	NO
21	21	MDN	425-542-4727	SCA	NO	YES	NO
22	22	MDN	425-542-4730	SCA	NO	YES	NO
23	23	MDN	425-485-4416	SCA	NO	YES	NO
24	24	MDN	425-443-5694	SCA	NO	YES	NO
25	25	MDN	425-543-6598	SCA	NO	YES	NO
26	26	MDN	425-747-6521	SCA	NO	YES	NO
27	27	MDN	425-523-5645	SCA	NO	YES	NO
28	28	MDN	425-883-5400	SCA	NO	YES	NO
29	29	MDN	425-542-4741	SCA	NO	YES	NO
30	30	MDN	425-542-4744	SCA	NO	YES	NO

Nortel National ISDN-2

Completing the Translation Order Guide for Nortel National ISDN-2

Translation Order Guide #1 (page 119):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 6: Enter the local 3-digit area code.

Line 7: Enter the 7-digit Primary Directory Number (PDN) of the 40d (if known).

Line 19: Enter all call appearances (CAs) of the primary that will appear at the console in the "Directory Number" column. Set DN Type to "MDN", MADN Type to "CACH", Primary to "Controller" for call appearance 1, "Primary" for other call appearances.

Line 20: Enter any additional special feature key assignments. Typically, no modification to this section is required.

Translation Order Guide #2 (page 120):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 6: Enter the local 3-digit area code.

Line 7: Enter the 7-digit Primary Directory Number (PDN) for the DSS/BLF positions (the same number entered on Line 18 of Translation Order Guide #1).

Line 18: Enter the 7-digit Primary Directory Number for the second 60 DSS/BLF positions (keys 61-120).

Line 20: Leave this section blank. No feature key assignments are required for the 120d.

NOTE – One of these Translation Order Guides must be completed for each 60 stations appearing on a 120d console.

Translation Order Guides #3 and #4 (pages 121 and 122)**:**

At the top of each form, enter the PDN of the 120d for the first 60 DSS/BLF positions from Line 7 of Translation Order Guide #2. Enter this number also for Key 1.

For each DSS key, enter the directory number of the desired station to be monitored. Refer to page 42 for DSS key locations on the 120d console.

Also enter the same directory numbers, with the station user names and autodial types, on the 120d Configuration Sheets that are to be left on-site (pages 137-140).

Translation Order Guides #5-7 (pages 115-117):

Follow the instructions for Translation Order Guides #2-4, using the Primary Directory Number that is assigned to the second 60 DSS/BLF positions (keys 61-120). On line 18, enter the PDN for the first 60 DSS/BLF positions (keys 1-60).

Sample Translation Order Guides

The following three pages have Translation Order Guides that have been filled out for a typical installation. Sample information is printed in *italic block font*.

Nortel
National ISDN-2

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	PIC (Preferred Long Distance Carrier #):	*288*
6.	SNPA (area code):	*425*
7.	Directory Number:	*349-1000*
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	SLBRI:	N
12.	CS: PS:	NI2 N
13.	Version: Issue:	FUNCTIONAL 2
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	NONE

19. **Directory Number Assignments**

Key	DN Type	Directory Number	MADN Type	Primary	CA	Ringing	Bridging
1	*MDN*	*349-1000*	*CACH*	*Controller*	*1*	YES	NO
2	*MDN*	*349-1000*	*CACH*	*Primary*	*2*	YES	NO
3	*MDN*	*349-1000*	*CACH*	*Primary*	*3*	YES	NO
4	*MDN*	*349-1000*	*CACH*	*Primary*	*4*	YES	NO
5	*MDN*	*349-1000*	*CACH*	*Primary*	*5*	YES	NO
6	*MDN*	*349-1000*	*CACH*	*Primary*	*6*	YES	NO
7	*MDN*	*349-1000*	*CACH*	*Primary*	*7*	YES	NO
8	*MDN*	*349-1000*	*CACH*	*Primary*	*8*	YES	NO
9						YES	NO
10						YES	NO
11						YES	NO
12						YES	NO
13						YES	NO
14						YES	NO

20. **Feature Assignments**

	Key	Feature	Description
a.	1	*4253491000*	Controller
b.			
c.	7	DTM	Deny Termination on MDN
d.	8	DTM	Deny Termination on MDN
e.			
f.	57	CFU N	Call Forward Universal, No Overflow
g.			
h.	60	FC 3	Flexible Calling, 3 party conference
i.	61	Transfer IMP CTALL	Call Transfer, All Call Types
j.	62	DROP	Drop last party from conference

Nortel
National ISDN-2

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	PIC (Preferred Long Distance Carrier #):	*288*
6.	SNPA (area code):	*425*
7.	Directory Number:	*349-1100*
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	SLBRI:	N
12.	CS: PS:	NI2 N
13.	Version: Issue:	FUNCTIONAL 2
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	*349-1101*

19. **Directory Number Assignments**

See the 40d120 Translation Order Guide #3 and #4.

20. **Feature Assignments**

None required.

Nortel National ISDN-2

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys: 425-349-1100

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1	1	DN	425-349-1100		YES	YES	NO
2	2	MDN	425-542-4729	SCA	NO	YES	NO
3	3	MDN	425-542-4711	SCA	NO	YES	NO
4	4	MDN	425-542-4712	SCA	NO	YES	NO
5	5	MDN	425-542-4715	SCA	NO	YES	NO
6	6	MDN	425-542-4720	SCA	NO	YES	NO
7	7	MDN	425-542-4716	SCA	NO	YES	NO
8	8	MDN	425-542-4717	SCA	NO	YES	NO
9	9	MDN	425-542-4718	SCA	NO	YES	NO
10	10	MDN	425-542-4721	SCA	NO	YES	NO
11	11	MDN	425-542-4722	SCA	NO	YES	NO
12	12	MDN	425-542-4737	SCA	NO	YES	NO
13	13	MDN	425-542-4736	SCA	NO	YES	NO
14	14	MDN	425-542-4723	SCA	NO	YES	NO
15	15	MDN	425-542-4713	SCA	NO	YES	NO
16	16	MDN	425-542-4714	SCA	NO	YES	NO
17	17	MDN	425-542-4724	SCA	NO	YES	NO
18	18	MDN	425-542-4725	SCA	NO	YES	NO
19	19	MDN	425-542-4726	SCA	NO	YES	NO
20	20	MDN	425-542-4728	SCA	NO	YES	NO
21	21	MDN	425-542-4727	SCA	NO	YES	NO
22	22	MDN	425-542-4730	SCA	NO	YES	NO
23	23	MDN	425-485-4416	SCA	NO	YES	NO
24	24	MDN	425-443-5694	SCA	NO	YES	NO
25	25	MDN	425-543-6598	SCA	NO	YES	NO
26	26	MDN	425-747-6521	SCA	NO	YES	NO
27	27	MDN	425-523-5645	SCA	NO	YES	NO
28	28	MDN	425-883-5400	SCA	NO	YES	NO
29	29	MDN	425-542-4741	SCA	NO	YES	NO
30	30	MDN	425-542-4744	SCA	NO	YES	NO

Siemens National ISDN

Completing the Translation Order Guide for Siemens National ISDN

Translation Order Guide #1 (page 127):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the local 3-digit area code.

Line 6: Enter the 7-digit Primary Directory Number (PDN) of the 40d (if known).

Line 7: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 14: This is the Centrex customer group number assigned by the telco, that includes the 40d and all terminals that are served by the 120d. Leave this line blank unless you know the group number that will be assigned.

Line 23: Enter the telephone number from Line 6 under “Directory Number”. For a single console configuration, no other entries are required. Call appearances 1 through 8 are assigned to this DN. Feature button 57 is assigned to Call Forward Variable for this DN. For multiple console configurations, see page 73.

Lines 24-27: For a single console configuration, leave these lines blank. For multiple console configurations, see page 73.

Translation Order Guide #2 (page 128):

Lines 1-4: Enter the Customer Name, Customer Contact, Service Address, and Billing number.

Line 5: Enter the local 3-digit area code.

Line 6: Enter the 7-digit Primary Directory Number (PDN) of the 120d (if known).

Line 7: Enter the 3-digit carrier access code for the desired long distance carrier.

Line 10: Enter the Primary Directory Number for the second 60 DSS/BLF positions (Keys 61-120) for “Other Associated Terminal DN”.

Line 14: Enter the customer group number (if known). This must be the same number that was entered on Line 14 of Translation Order Guide #1.

NOTE – One of these Translation Order Guides must be completed for each 60 stations appearing on a 120d console.

Translation Order Guide #3 (page 129):

At the top of the form, enter the PDN of the 120d for the first 60 DSS/BLF positions from Line 6 of Translation Order Guide #2.

For each DSS key, enter the directory number of the desired station to be monitored. Refer to page 42 for DSS key locations on the 120d console.

Also enter the same directory numbers, with the station user names and autodial types, on the 120d Configuration Sheets that are to be left on-site (pages 137-140).

Translation Order Guides #4 and 5 (pages 130 and 131):

Follow the instructions for Translation Order Guides #2 and #3, using the Primary Directory Number that is assigned to the second 60 DSS/BLF positions (keys 61-120). On line 10, enter the PDN for the first 60 DSS/BLF positions (keys 1-60).

Sample Translation Order Guides

The following three pages have Translation Order Guides that have been filled out for a typical installation. Sample information is printed in *italic block font*.

Siemens National ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Area Code (NPA):	*425*
6.	Directory Number (DN):	*349-1000*
7.	Long Distance Carrier (PIC):	*288*
8.	Maximum B Channels (BCHDN):	1
9.	Bearer Capability BCDN: BCHCT: IBCHCT: OBCHCT: CT:	 SP & AU3 2-VI & 0-CMD & 0-PMD 2-VI & 0-CMD & 0-PMD 2-VI & 0-CMD & 0-PMD VI
10.	Terminal Limit (TERMLIM): Other Associated Terminal DN:	1 None
11.	Terminal Class of Service (TSPCOS):	ICHD & NOTIFY & EKTS & CACH & BRGCE & DN3PBRG
12.	Centrex Class of Service (CXSCOS):	CT
13.	Feature Activators (FA): Feature Indicators (FI):	58-DPN 60-TWC 62-DLPA 55-CALLPARK 56-CALLRTRV 58-DPN 60-TWC 55-CALLPARK 56-CALLRTRV

Customer Group Configuration

14.	Customer Group Number (CSTMGRP):	*1*
15.	Customer Group Type (TYPE):	EKTS
16.	EKTS Timer Value (EKTST1):	18

Directory Number Configuration

17.	Call Type (CT):	VI
18.	Class of Service (COS):	EKTS & ICND & NOICCNTN & RND
19.	Call Diversion (DIV):	CFV & UPCFVDN & NOCFIND & NORRNG & CCNOAREQ
20.	Category (CAT):	EKTS
21.	Customer Group Number (CSTMGRP):	*reference Customer Group Number in item 14 above*
22.	Traffic Restrictions (TRARSTR):	CARDT7 & CARDT8

Directory Number Call Appearance Assignments

Directory Number (DN)	Call Appearance Assignment (DNCA)	Features (FA/FI)	Call Forward Authorize (AUTH)	Alerting Pattern (ALERTPAT)
23. *349-1000*	1-1 & 2-2 & 3-3 & 4-4 & 5-5 & 6-6 & 7-7 & 8-8	57-CFV	UPCFVDN	NORMAL
24.				
25.				
26.				
27.				

Siemens National ISDN

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	*Tone Commander*
2.	Customer Contact:	*Steve Walker*
3.	Service Address:	*11609 49th Place West*
4.	Billing Telephone #:	*(425) 349-1000*
5.	Area Code (NPA):	*425*
6.	Directory Number (DN):	*349-1100*
7.	Long Distance Carrier (PIC):	*288*
8.	Maximum B Channels (BCHDN):	1
9.	Bearer Capability	
	BCDN:	SP & AU3
	BCHCT:	1-VI & 0-CMD & 0-PMD
	IBCHCT:	1-VI & 0-CMD & 0-PMD
	OBCHCT:	1-VI & 0-CMD & 0-PMD
	CT:	VI
10.	Terminal Limit (TERMLIM):	2
	Other Associated Terminal DN:	*349-1101*
11.	Terminal Class of Service (TSPCOS):	ICHD & NOTIFY & EKTS & CACH & BRGCE
12.	Centrex Class of Service (CXSCOS):	
13.	Feature Activators (FA):	
	Feature Indicators (FI):	

Customer Group Configuration

14.	Customer Group Number (CSTMGRP):	*1*
15.	Customer Group Type (TYPE):	EKTS
16.	EKTS Timer Value (EKTST1):	18

Directory Number Configuration

17.	Call Type (CT):	VI
18.	Category (CAT):	EKTS
19.	Class of Service (COS):	EKTS & ICND & NOICCNTN & RND
20.	Call Diversion (DIV):	
21.	Customer Group Number (CSTMGRP):	*reference Customer Group Number in item 14 above*

Directory Number Call Appearance Assignments

See the 40d120 Translation Order Guide #3.

Siemens
National ISDN

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-60

PDN for DSS keys 1-60: 425-349-1100

DSS Key	Directory Number	DNCA	Alerting Pattern
1	425-542-4719	1-1	NORMAL
2	425-542-4729	2-1	NORMAL
3	425-542-4711	3-1	NORMAL
4	425-542-4712	4-1	NORMAL
5	425-542-4715	5-1	NORMAL
6	425-542-4720	6-1	NORMAL
7	425-542-4716	7-1	NORMAL
8	425-542-4717	8-1	NORMAL
9	425-542-4718	9-1	NORMAL
10	425-542-4721	10-1	NORMAL
11	425-542-4722	11-1	NORMAL
12	425-542-4737	12-1	NORMAL
13	425-542-4736	13-1	NORMAL
14	425-542-4723	14-1	NORMAL
15	425-542-4713	15-1	NORMAL
16	425-542-4714	16-1	NORMAL
17	425-542-4724	17-1	NORMAL
18	425-542-4725	18-1	NORMAL
19	425-542-4726	19-1	NORMAL
20	425-542-4728	20-1	NORMAL
21	425-542-4727	21-1	NORMAL
22	425-542-4730	22-1	NORMAL
23	425-485-4416	23-1	NORMAL
24	425-443-5694	24-1	NORMAL
25	425-543-6598	25-1	NORMAL
26	425-747-6521	26-1	NORMAL
27	425-523-5645	27-1	NORMAL
28	425-883-5400	28-1	NORMAL
29	425-542-4741	29-1	NORMAL
30	425-542-4744	30-1	NORMAL

DSS Key	Directory Number	DNCA	Alerting Pattern
31	425-542-4745	31-1	NORMAL
32	425-542-4746	32-1	NORMAL
33	425-542-4747	33-1	NORMAL
34	425-542-4748	34-1	NORMAL
35	425-542-4749	35-1	NORMAL
36	425-542-5212	36-1	NORMAL
37	425-542-5619	37-1	NORMAL
38	425-542-4750	38-1	NORMAL
39	425-542-4751	39-1	NORMAL
40	425-542-4752	40-1	NORMAL
41	425-542-4753	41-1	NORMAL
42	425-542-4754	42-1	NORMAL
43	425-542-4755	43-1	NORMAL
44	425-542-4756	44-1	NORMAL
45	425-542-4757	45-1	NORMAL
46	425-542-4758	46-1	NORMAL
47	425-542-4759	47-1	NORMAL
48	425-542-4760	48-1	NORMAL
49	425-542-5214	49-1	NORMAL
50	425-542-5215	50-1	NORMAL
51	425-542-4761	51-1	NORMAL
52	425-542-4762	52-1	NORMAL
53	425-542-4763	53-1	NORMAL
54	425-542-4764	54-1	NORMAL
55	425-542-4765	55-1	NORMAL
56	425-542-4766	56-1	NORMAL
57	425-542-4767	57-1	NORMAL
58	425-542-4768	58-1	NORMAL
59	425-542-4769	59-1	NORMAL
60	425-542-4770	60-1	NORMAL

Installation

Important Safety Instructions

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

Contents of Shipping Boxes

Please compare the contents of the shipping boxes with the lists below. Contact your distributor if any items are missing or damaged.

40d:

- (1) 40d console
- (2) 7', 8 conductor straight-through line cords
- (1) handset with cord
- (1) handset cradle
- (2) cradle mounting screws
- (31) clear keycaps
- (3) sheets of keycap labels
- (1) Installation Instructions (this manual)
- (1) Attendant's Guide
- (1) Setup Utility diskette
- (1) Setup Utility User's Guide
- (1) PC interface cable

120d:

- (1) 120d console
- (2) 7', 8 conductor straight-through line cords
- (1) 12", 4 conductor line cord
- (61) clear keycaps
- (1) console tie bracket + (4) screws
- (2) sheets of keycap labels
- (1) Installation Instructions (this manual)
- (1) Attendant's Guide

Power Supply:

- (1) 40d120 Power Supply #102612
- (1) Instructions

Console Assembly

40d

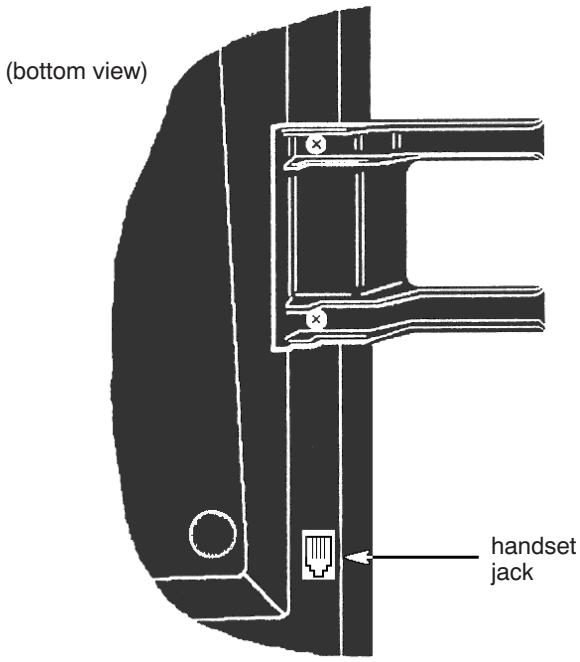


Figure 1

1. Install the handset cradle on the 40d console using the screws provided. The cradle is usually installed on the left side, near the handset jack, but may be installed on either side of the console.
2. Plug the handset's cord into the jack beneath the front left edge of the console.
3. Use the supplied printed keycap labels or type feature names on blank labels. Place the labels beneath the clear plastic keycaps, then snap the keycaps onto the keys.

120d

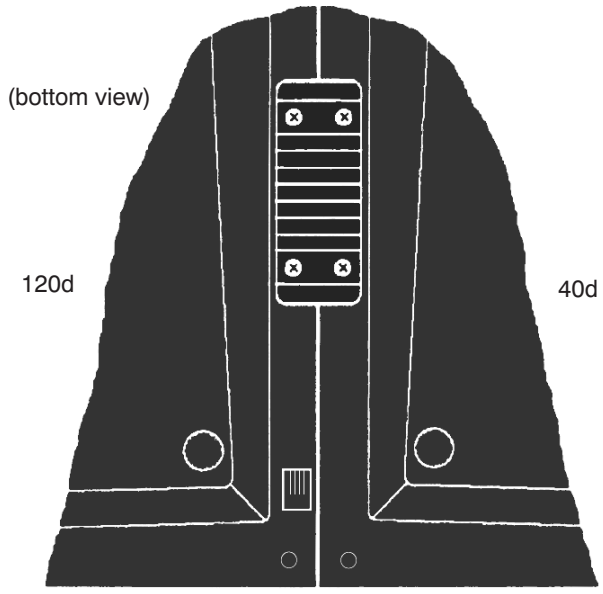
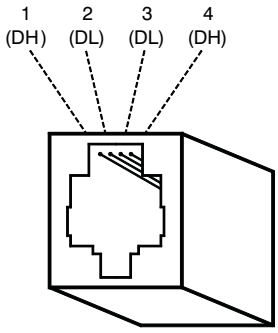


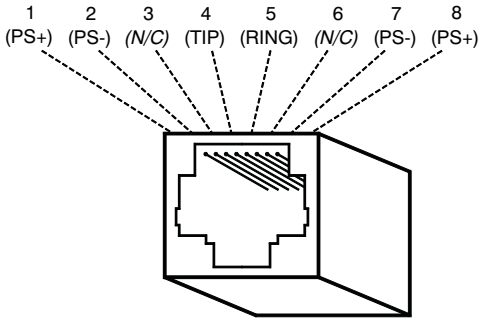
Figure 2

1. Fasten the console tie bracket beneath the left edge of the 120d console using the supplied mounting screws.
2. Fasten the other end of the tie bracket beneath the right edge of the 40d console using the supplied mounting screws.
3. If the attendant position has two 120d consoles, attach the second 120d console to the first in the same manner.
4. Fill out the keycap labels with station names or numbers (refer to the configuration sheets). Place the labels beneath the clear plastic key caps, then snap the keycaps onto the DSS keys.

Console Connections



DSS



Line/Power
(U)

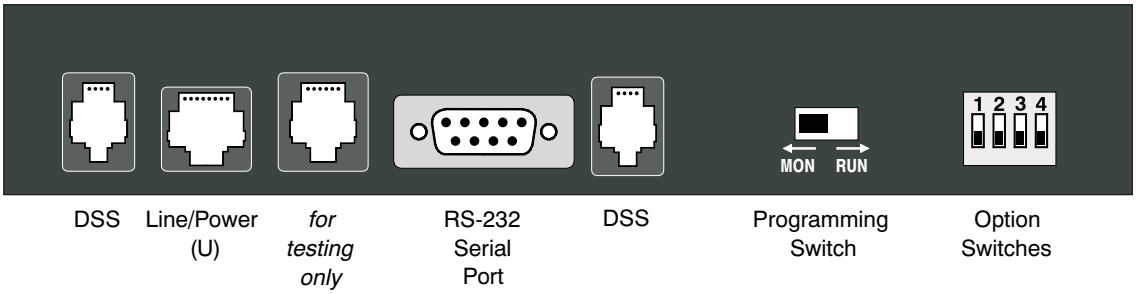


Figure 3 **– 40d and 120d Console Rear Panel**

120d Data Connection

In addition to the power and telco connection explained below, each 120d console requires one data connection to the 40d or adjacent 120d console.

Refer to Figure on page 34.

1. 120d #1 – plug the supplied 4 conductor modular cord into the nearest “DSS” jack on the 40d console.
   If installing a second, third, or fourth 120d console, plug the supplied modular cord into the unused “DSS” jack on the preceding 120d.
2. Plug the other end into either “DSS” jack on the 120d console (second 120d if applicable).

Power and Telco Connection (one per 40d or 120d console)

Each power supply can power three 40d and/or 120d consoles. Use an additional power supply if the attendant position has three or four 120d DSS consoles.

Power supplies may be installed at the console location or in a remote equipment room.

POWER

Use only the Tone Commander 40d120 Power Supply (model #102612) with the following ratings:

120 VAC @60 Hz

Refer to Figure on page 34.

1. Plug a supplied 8 conductor modular cord into the telco ISDN U-interface jack.
2. Plug the other end into a “LINE” jack on the power supply.
3. Plug the second supplied 8 conductor modular cord into the matching “CONSOLE” jack on the power supply.
4. Plug the other end into the “LINE/POWER” jack on the console rear panel.
5. When ready to test the system, plug the power supply into a standard 120 VAC, 60 Hz outlet.

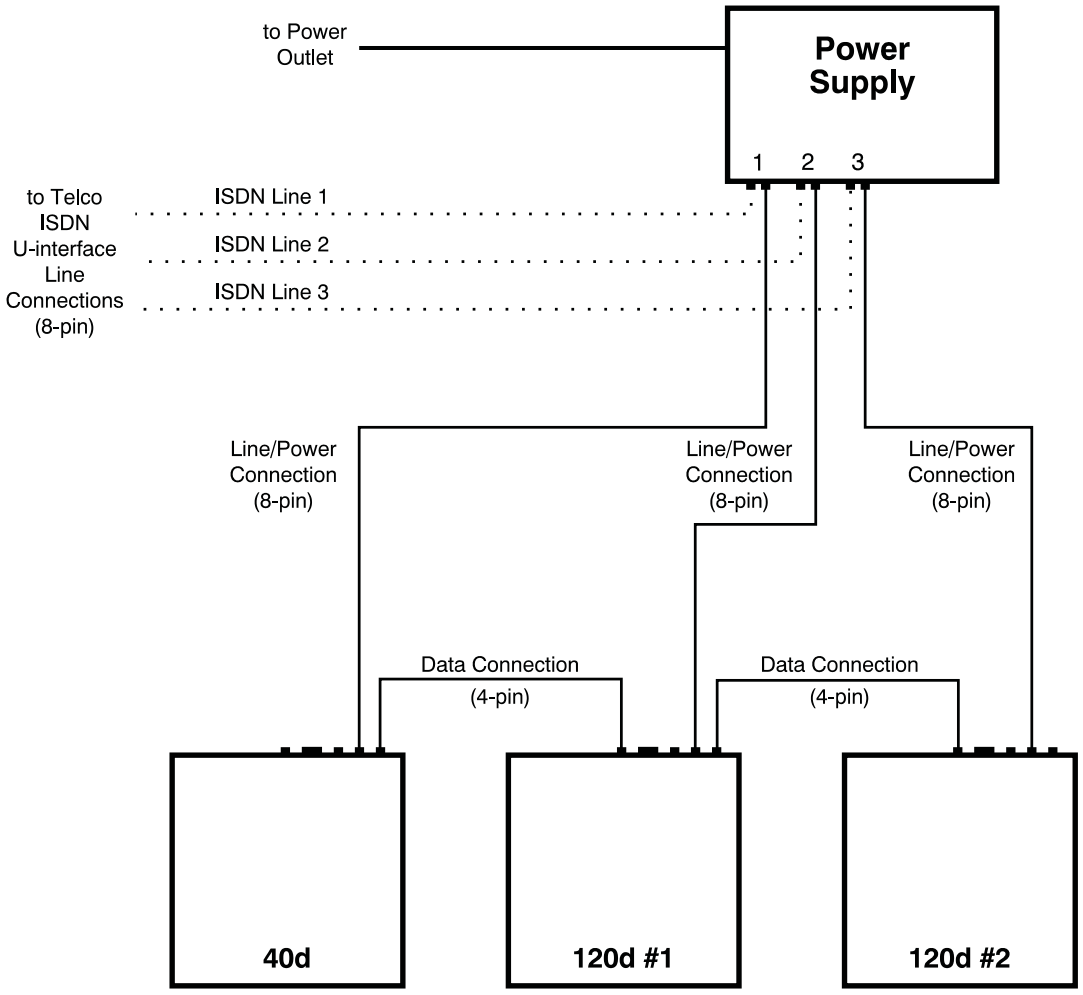


Figure 4 – **Typical Installation**

System Programming

Several network interface and operation parameters are programmable by the installer, allowing compatibility with a wide variety of central office features. The system is pre-programmed at the factory; many installations will require few changes to these values. Programming is retained in the 40d's memory when power is disconnected. A parameter or feature may be altered at any time without reprogramming the entire system.

The PC-based Setup Utility provided with the 40d120 offers a user interface that simplifies setup and name/number entry. Please refer to the 40d120 Setup Utility User's Guide, doc. #14-280177, that accompanies the utility diskette.

All setup information may also be entered using only the console keys, by placing the console in Maintenance Mode as explained in this section. The following features may be accessed from Maintenance Mode:

1. **System Setup Parameters**: SPID numbers, Key assignments, Call queues, Recall timers, Call processing loop modes
2. **Name/Autodial Database**
3. **Time of Day Clock Setting**
4. **System Usage Statistics**
5. **System Diagnostics**

Using Maintenance Mode

The Maintenance Mode must be entered prior to attempting any of the following programming procedures. Enter this mode only when the console is idle, i.e., no calls are in progress or on hold.

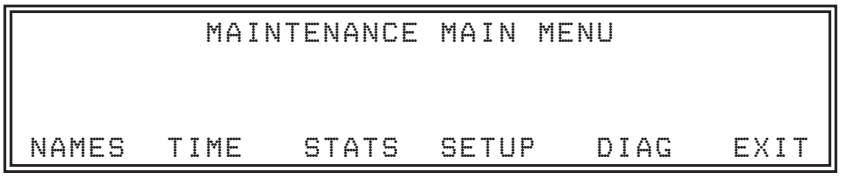
To **enter** Maintenance Mode:

- Press the MAINT key.

  The display will indicate that Maintenance Mode has been entered. Name programming, time setting, system statistics, system setup, or Maintenance Mode exit may be selected with the Hold Loop keys.

  Normal key and display operations are suspended. The console will continue to ring and place incoming calls in queue.

  In maintenance mode, the six hold loop keys directly below the display act as "soft" function keys. Key functions are identified in the bottom line of the display.



To **exit** Maintenance Mode and store all programming:

- Press the Hold Loop key associated with EXIT or DONE from any programming screen until the main menu is displayed, then select EXIT from the main menu.

  Normal key and display operations will resume. The main menu will be displayed the next time the MAINT key is pressed.

  or

- Press the MAINT key.

  Normal key and display operations will resume. The last-used menu will be displayed the next time the MAINT key is pressed. This allows you to answer a call, then resume programming where you left off.

Password Protection

To prevent inadvertent or unauthorized changes to console programming, you can enable password protection. Passwords consist of four digits entered with the dial pad or the Setup Utility. Three separate passwords are provided:

Mode	Default Password
Console Setup	7743 (SPID)
Name/Autodial	6263 (NAME)
Statistics Reset	7828 (STAT)

When passwords are enabled, the console will prompt for a password whenever a user attempts to access one of the above programming modes.

- Enter the password digits with the dial pad when the Enter Password prompt appears.
  Asterisks are displayed to hide the entered password.
- Select DONE.

Enabling/Disabling Passwords

To enable passwords, set option switch 2 ON, then power up the console. If the console is already powered up, disconnect power for a few seconds.

Setting option switch 2 OFF, then cycling console power, disables passwords.

Changing Passwords

You can change any of the passwords. All passwords must consist of four digits.

- Passwords must be enabled.
- Enter Console Setup (page 43), Name/Autodial Programming (page 62), or Statistics Reset (page 67) mode.
  The Enter Password prompt for the selected mode is displayed.

- At the Enter Password prompt, enter the current password with the dial pad.
  If you don't know the password, restore the defaults - see Default Passwords below.
- Select CHANGE to change the password for the mode shown in the upper right of the display.

- Enter the new password with the dial pad.
- Select NEXT, then enter the new password again for confirmation.
- Select DONE to enable the new password.

Default Passwords

The default passwords listed in the table above are reloaded whenever the password mode is changed from disabled to enabled.

Use this procedure if you forget a custom password.

- Set option switch 2 OFF.
- Cycle power to disable all passwords.
- Set option switch 2 ON.
- Cycle power again to enable default passwords.

Lucent
National ISDN

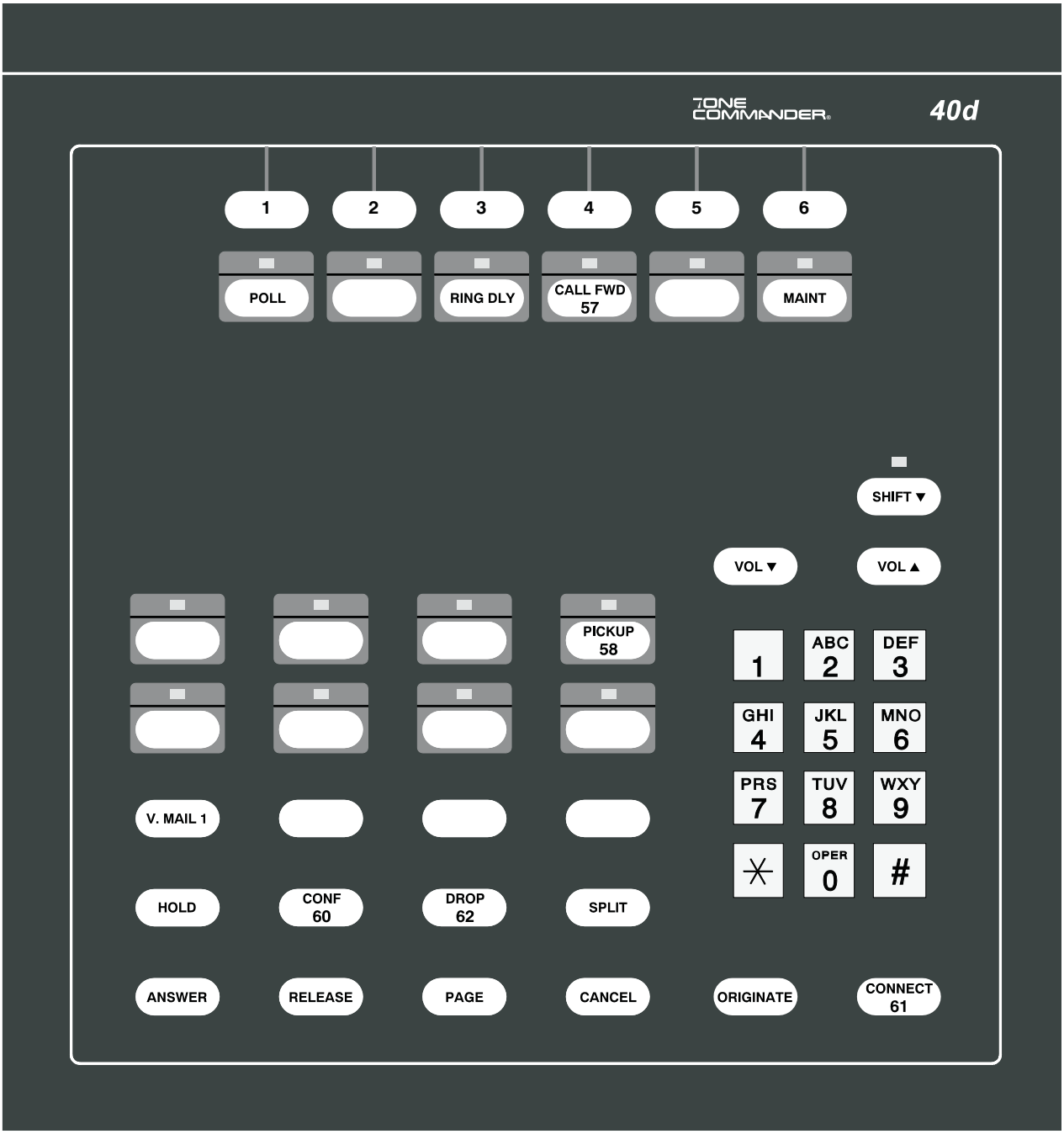


Figure 5 **– 40d Console Default Key Assignments, Lucent National ISDN**

Lucent Custom ISDN

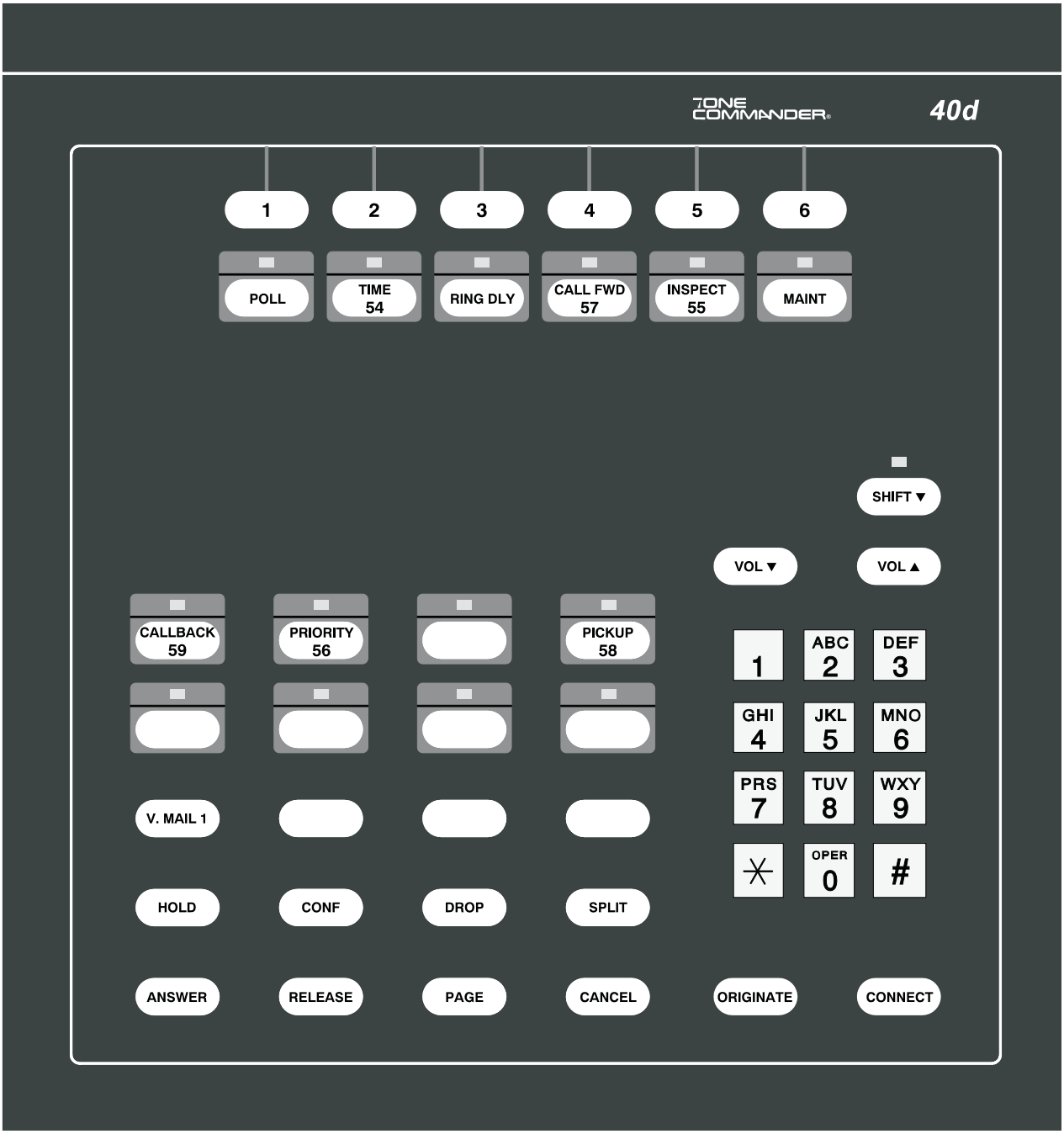


Figure 6 – **40d Console Default Key Assignments, Lucent Custom ISDN**

Nortel
National ISDN

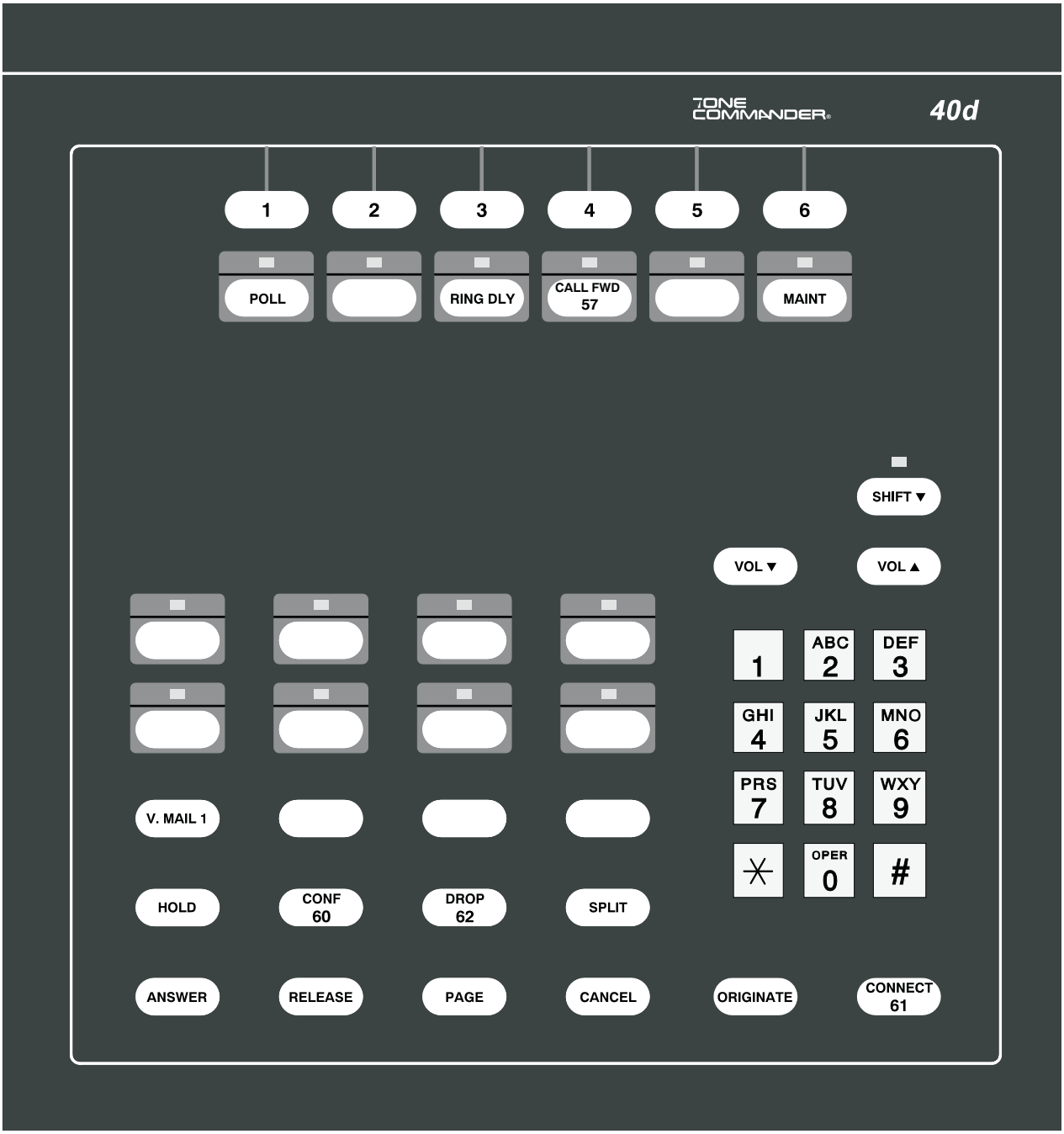


Figure 7 **– 40d Console Default Key Assignments, Nortel National ISDN**

Siemens National ISDN

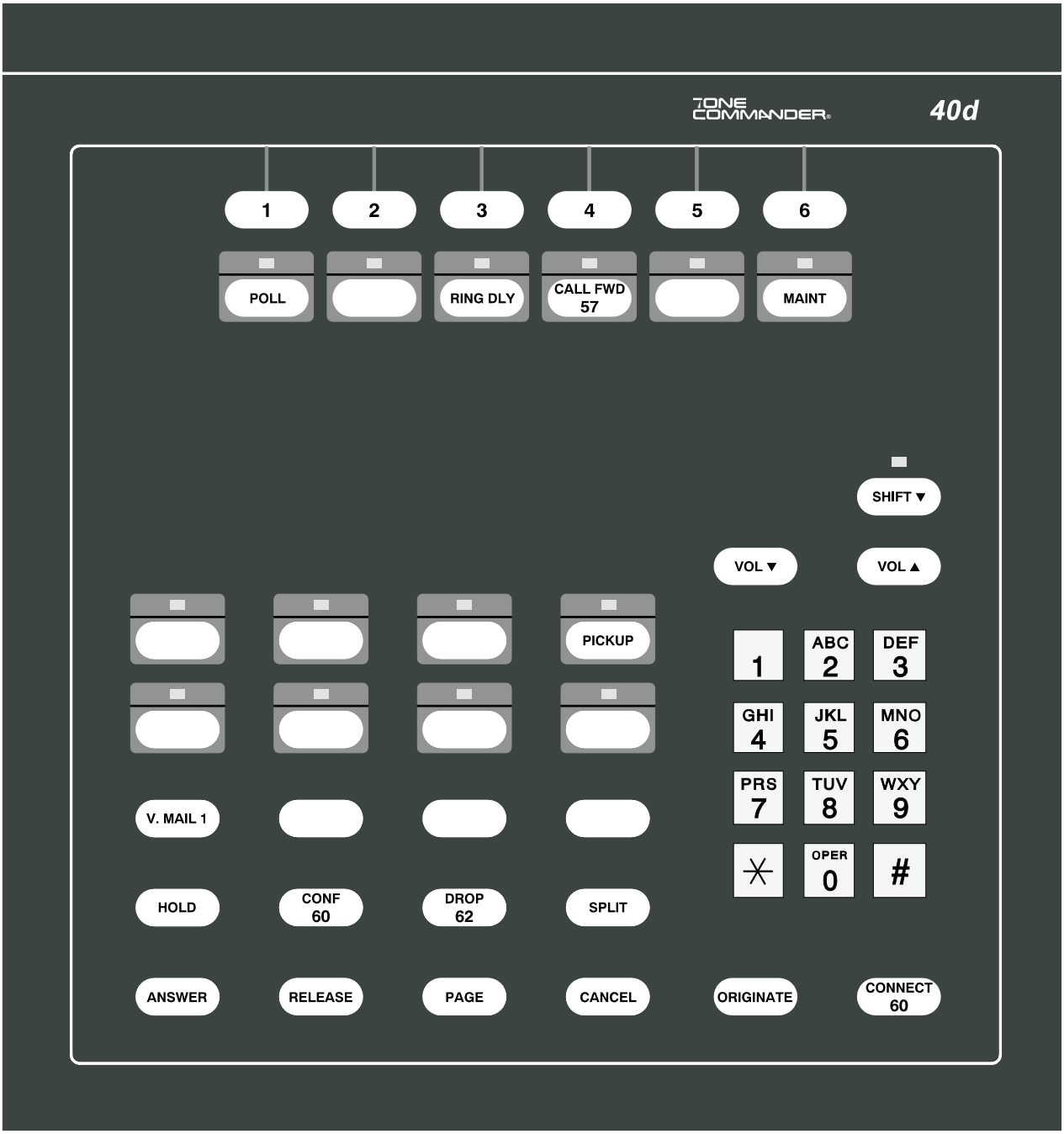
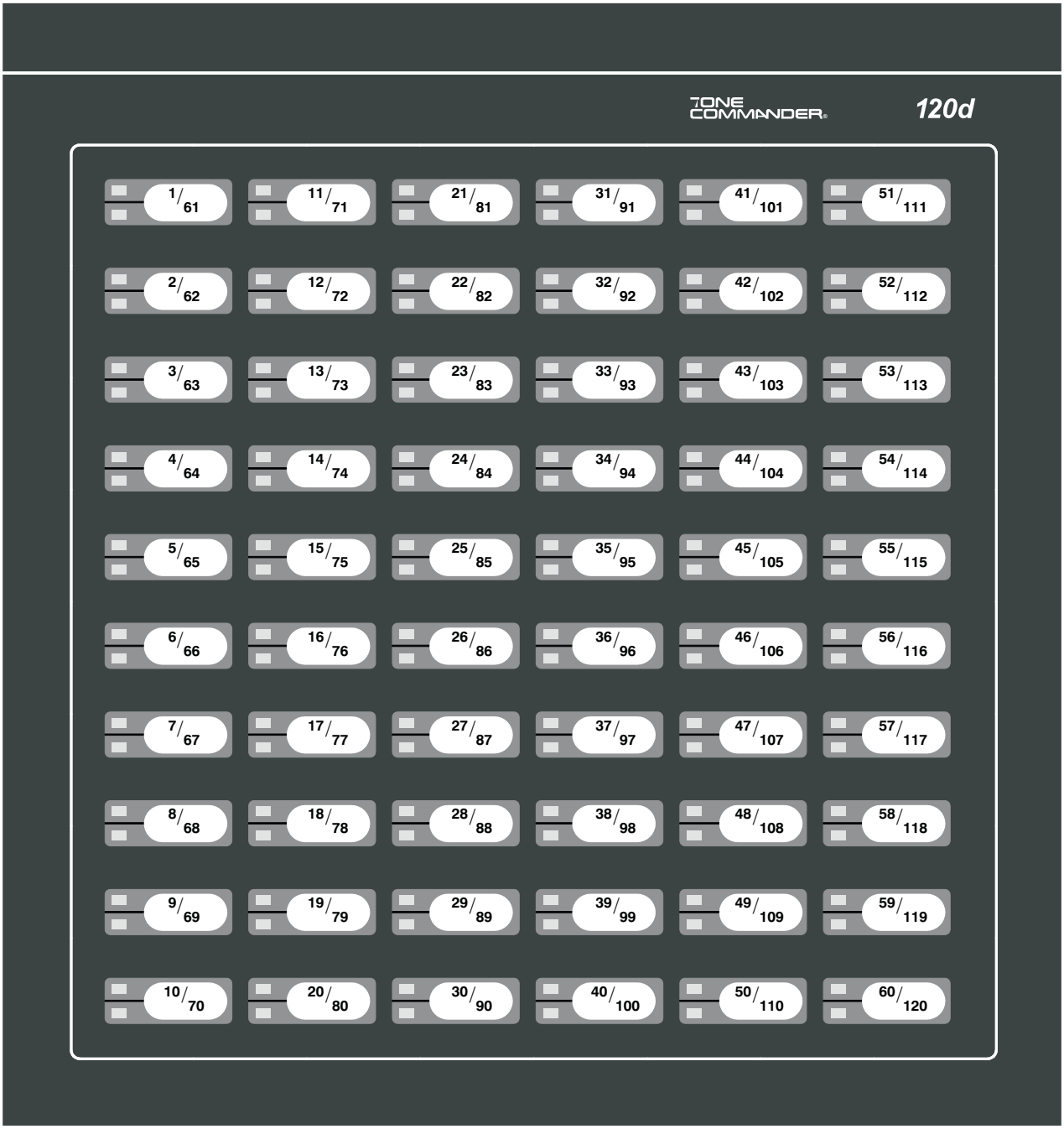


Figure 8 **– 40d Console Default Key Assignments, Siemens National ISDN**



Key positions 61-120 are accessed by first pressing the SHIFT key on the 40d console.

Add *120* to all numbers for 120d console #2, *240* for 120d #3, *360* for 120d #4.

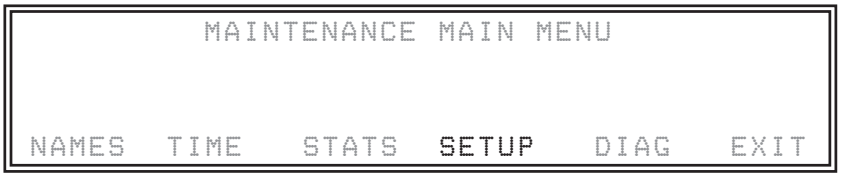
Figure 9 **– 120d DSS Key Numbers**

Configuration Sheet Preparation

The configuration sheets attached to the back of this manual (starting on page 133) should be filled in with the setup information for this installation. Instructions for each configuration sheet table, and sample configuration sheets, are included in this chapter. Sample information is printed in *italic block font*. **Please leave a copy of the configuration sheets on site.**

System Setup

- Press the MAINT key to enter Maintenance Mode.



- Select SETUP.

  The Setup menu will be displayed.

SPID, PDN, and C.O. Switch Type

Lucent Custom ISDN lines may be configured for either multipoint or point-to-point operation. Multipoint lines can have multiple terminal devices connected to the same ISDN line. Point-to-point lines can have only one terminal device connected to the line. **National ISDN lines are always multipoint.**

The 40d may be connected to either a point-to-point or multipoint ISDN line. A 120d console configured for 60 stations may use either a point-to-point or multipoint line; a multipoint line configuration is required for 120 stations.

Consoles must be programmed with 10-digit **S**ervice **P**rofile **Id**entifier (SPID) numbers obtained from your local telephone company. The SPID uniquely identifies the console when it is connected to the network. The 40d has one SPID. Each 120d may have one or two SPIDs; two are required for more than 60 stations. In this application, the 120d appears as two distinct ISDN terminals to the network, each having 60 call appearances.

National ISDN For National ISDN lines, the SPID format should consist of your 10-digit PDN (Including area code), followed by “0101”.

Lucent Custom ISDN For Custom ISDN lines, the SPID format should consist of “01” + the 7-digit PDN (excluding area code) + “0”.

IMPORTANT – Although a SPID number is not required for a point-to-point ISDN line, failure to enter one for the 40d will not allow it to initialize. Contact your service provider if the SPID format does not work.

Additionally, the 40d console must be programmed with a **P**rimary **D**irectory **N**umber (PDN).

Configuration Sheet

Fill out Configuration Sheet #1 (page 133) with the PDN for the 40d console, and SPID numbers for the 40d and all 120d consoles. Check the appropriate ISDN Version box.

40d120 Configuration Sheet #1

SPID and PDN Numbers

40d	
SPID *(3-20 digits maximum; exactly 10 digits for Lucent Custom ISDN)*	*42534910000101*
PDN *(10 digits required for proper operation)*	*4253491000*

ISDN Version *(check one)*	☑ Lucent National ISDN ❑ Lucent Custom ISDN ❑ Nortel National ISDN ❑ Siemens National ISDN

120d		SPID
120d #1	Keys 001-060	*42534911000101*
	Keys 061-120	*42534911010101*
120d #2	Keys 001-060	*42534920000101*
	Keys 061-120	*42534920010101*
120d #3	Keys 001-060	*42534930000101*
	Keys 061-120	*42534930010101*
120d #4	Keys 001-060	*42534940000101*
	Keys 061-120	*42534940010101*

Selecting the Console

- Select SPID from the Setup menu.

  The SPID menu for the 40d console will be displayed.

```
40d:  S/W 2.11  H/W 1.23          [SPID]
SPID:
PDN:                  SWITCH: NORTEL NI-1
NEXT   LAST   EDIT                  EXIT
```

- NEXT and LAST display SPID information for 120d consoles in the system.

  If a 120d is connected to the 40d console but not "installed", "120d Unit #1: Not Installed" or "120d Unit #2: Not Installed" is displayed depending on the number of 120d consoles being used.

  If a 120d is connected to the 40d console and is "installed", "120d Unit #1: Rev. x.xx" or "120d Unit #2: Rev. x.xx" with the programmed SPID number is displayed.

Entering/Editing SPID & PDN, Selecting Switch Type

This option is not available for 120d consoles that are displayed as "Not Installed" – see Adding (Installing) 120d Consoles below.

- Select EDIT from the SPID menu.

  The SPID/PDN/Switch editing screen for the selected console will be displayed.

```
40d:  S/W 2.11   H/W 1.23          [EDIT]
SPID: 42534910000101
PDN: 4253491000      SWITCH: ATT NI
NEXT    <--    -->   DELETE  ABORT  DONE
```

- The blinking cursor will be in the SPID field initially. Using the dial pad, enter the SPID as assigned by the telco.

  Overwrite desired digits where necessary, or select DELETE to delete your choice of a single character (CHAR), all characters in a field (FIELD). The arrow keys move the cursor position in a field.

- (40d only) – Select NEXT to move to the PDN field. Enter the PDN for the selected console.
- (40d only) – Select NEXT to move to the SWITCH field. Press either arrow key until the correct C.O. switch type for this installation is displayed.
- Select DONE to store changes and return to the SPID menu.

  or

  Select ABORT to restore the previous settings and return to the SPID menu.

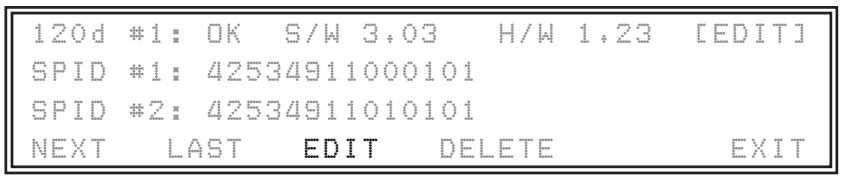
Adding (Installing) 120d Consoles

IMPORTANT – This option is only available for connected 120d consoles *that have not previously been installed*, or previously installed 120d consoles that have been removed (uninstalled) using the procedure described in the Removing 120d Consoles section below.

120d SPID and console number information is stored in both the 120d and 40d consoles. A 120d console that has been previously installed on any system cannot be added until this information has been cleared from the 120d's memory.

Before adding a 120d, connect it to the 40d console and press NEXT or LAST to view all installed consoles as explained above. If the new 120d console appears in any of the four 120d positions, remove it by selecting DELETE before attempting to add the console.

- Select ADD from the SPID menu.
  ">>> PRESS ANY Key ON 120d Unit #x <<<" is displayed.
- Press a key on the appropriate 120d console.
  A SPID entry screen is displayed.



- Enter the SPID number(s) – see Editing SPID & PDN above. A PDN entry is not required for 120d consoles.

Removing 120d Consoles

Use this option to remove the SPID entry for 120d consoles. If possible, the 120d to be removed should be connected to the 40d and the power supply; this will clear the console number and SPID from the 120d's memory.

- Select DELETE from the SPID menu.
  "UNINSTALL THIS 120d UNIT? YES NO"
  is displayed along with the 120d console data in question.
- Select YES to remove the console, store the changes, and return to the SPID menu.
  or
  Select NO to keep the 120d as is and return to the SPID menu.

  NOTE – The SPID number is stored in the console's memory. Deleting a console does not automatically delete the associated SPID number.

Key Mapping

Most call processing functions can be assigned to any 40d key. All keys except the MAINT, VOL, SHIFT, and Hold Loop keys are programmable. Available key assignments are listed below.

NOTE – Ring Delay and network features must be assigned to buttons with indicator lamps.

Key	Type of Key	Supplementary Info Required
Answer	Local Function	
Call Back ‡	Network Feature	Enter 2-digit Automatic Callback Feature Activator
Call Forward	Network Feature	Enter 2-digit Call Forward Variable Feature Activator (+ destination number *)
Park	Network Feature	Enter 2-digit Directed Call Park Feature Activator
Cancel	Local Function	
Conference	Network Feature	Enter 2-digit Conference Feature Activator (typically 60) *
Connect	Network Feature	Enter 2-digit Transfer Feature Activator (typically 61) *
Drop	Network Feature	Enter 2-digit Drop Feature Activator (typically 62) *
Hold	Local Function	
Inspect ‡	Network Feature	Enter 2-digit Inspect Feature Activator
Intercom 1-4	Network Feature	Enter 2-digit Intercom Feature Activator ‡ or Call Appearance *
Network Call	Network Feature	Enter 2-digit Feature Activator
Network Feature	Network Feature	Enter 2-digit Feature Activator
Originate	Local Function	
Page	Local Function	Enter Paging DN (15 digits max.)
Pickup	Network Feature	Enter 2-digit Directed Call Pickup Feature Activator
Poll	Local Function	
Priority Call ‡	Network Feature	Enter 2-digit Dial Call Waiting Feature Activator
Release	Local Function	
Ring Delay On/Off	Local Function	
Split	Local Function	
Time/Date ‡	Network Feature	Enter 2-digit Time/Date Feature Activator
Unpark	Network Feature	Enter 2-digit Call Park Answer Back ‡ or Call Park Retrieve * Feature Activator
Voice Mail 1-2	Local Function	Enter Voice Mail DN (15 digits max.)

* National ISDN ‡ Lucent Custom ISDN

National ISDN With National ISDN, Feature Activation (button) numbers must be assigned for Conference, Connect (Transfer), and Drop keys. These keys are preassigned when the console is configured for Lucent Custom ISDN – see page 39.

Siemens National ISDN The Connect key should be programmed with the Conference feature activator (typically 60) for Siemens National ISDN.

Configuration Sheet

Fill out Configuration Sheet #2 (page 134) with key locations, network button numbers, and dial access numbers.

- Select KEYS from the Setup menu.
- Key assignments can be restored to the factory defaults as shown on pages 38-41 by selecting RESET.
- Press the key to be programmed.
  The display will show the current key assignment.
- Select EDIT to change the key function.
  The key editing menu will be displayed.

- Select the key function with the arrow keys.
- If the selected function is a network feature, “NEXT” will be displayed. Select NEXT, then enter the network button number with the dial pad.

  DELETE allows you to delete individual characters or an entire field. A delete operation may be canceled by selecting ABORT.
- Select DONE to store changes for this key.
  or
  Select ABORT to cancel any changes.
- You will be returned to the key selection menu. Select another key.
  or
  Select EXIT to return to the Setup menu.

Page Key

The Page key requires a NUMBER TO DIAL entry. Enter the directory number for the dialup paging system, up to 15 digits.

Call Forward Key

National ISDN

With National ISDN, in addition to the network feature code, a forward-to number (18 digits maximum) must be entered in the FORWARD NUMBER field.

```
FUNCTION: Call Forward              [EDIT]
NETWORK BUTTON: 57
FORWARD NUMBER: 8273502
NEXT    <--    -->   DELETE  ABORT  DONE
```

Lucent Custom ISDN

Enter only the call forward button number for Lucent Custom ISDN.

To set the forward-to number, exit Maintenance Mode. Press the ORIGINATE key. Enter the network code used to set the forward-to number. When you hear a new dial tone, enter the forward-to number.

Voice Mail Key

The Voice Mail key has an optional NUMBER TO DIAL field. If the voice mail system has a common dialup access number, enter it here, including any access pauses and common dial codes required by the system. Allowable entries are digits **0**-**9**, **#**, *****, and **P** (a pause; press dial pad key 7 twice to enter).

> *The display will show the number being entered. The character position will not advance automatically – use the arrow keys.*

The first **P** in the dial string causes the console to dial all digits preceding the **P**, then wait for the voice mail system to answer. Subsequent **P** entries pause dialing for 1 second. The digits in a DSS key's VM entry (7 maximum) are appended to the Voice Mail key's dial string (24 maximum). If the Voice Mail key dial string contains a **P**, the DSS key digits are dialed after the voice mail system answers; otherwise, digits from both keys are dialed after the DSS key is pressed.

- If all voice mailboxes share the same dialing prefix, program the Voice Mail key with these common digits. This can be used to overcome the DSS key's 7-digit VM limitation.
- Voice mailbox numbers may be dialed with the dial pad if the NUMBER TO DIAL entry ends with a **P**.
- Leave the Voice Mail NUMBER TO DIAL field blank if each voice mailbox has a unique directory number, i.e., no common prefix or dialup number.

Two keys can be configured as Voice Mail keys, to accommodate two voice mail systems with different access numbers.

```
FUNCTION: Voice Mail 1              [EDIT]
NUMBER TO DIAL:  3486725P

NEXT    <--    -->   DELETE  ABORT  DONE
```

Intercom Keys

Up to four keys may be designated as intercom keys. Intercom calls are originated by pressing an intercom key. Incoming calls to an intercom call appearance are queued for answering, as with other calls.

National ISDN

With National ISDN, each intercom key has an associated call appearance. The call appearance must be set up for intercom use at the central office.

```
FUNCTION: ICM_1                          [EDIT]
CALL APPEARANCE: 12

NEXT    <--    -->   DELETE  ABORT  DONE
```

Lucent Custom ISDN

Intercom calls with Custom ISDN are originated on any originating or nonreserved call appearance by sending a Feature Activation (button) number. Program each intercom key with the Feature Activation number for the intercom group.

```
FUNCTION: ICM_1                          [EDIT]
NETWORK BUTTON: 61

NEXT    <--    -->   DELETE  ABORT  DONE
```

Network Call and Network Feature Keys

These options are used for generic network features that are not predefined in the console.

- Network Call automatically initiates a call before sending the Feature Activation code.
- Network Feature sends a Feature Activation code independent of call state.

Enter the Feature Activation code for the desired network feature in the NETWORK BUTTON field.

```
FUNCTION: Ntwk Call                      [EDIT]
NETWORK BUTTON: 64

NEXT    <--    -->   DELETE  ABORT  DONE
```

```
FUNCTION: Network Feature                [EDIT]
NETWORK BUTTON: 64

NEXT    <--    -->   DELETE  ABORT  DONE
```

Call Queues

Incoming ringing calls are prioritized for answering, based on either the ISDN Call Identifier (ICI) or the call appearance that the call is ringing on. This determines which one of nine call queues (0-8) the call is initially placed in; calls in queues with a lower number (higher priority) will be displayed for answering first. After a timeout period has expired, the call may be moved to another queue designated as the Timeout Queue (usually a higher priority queue).

Calls in queues 0-3 have priority over a currently ringing call from a lower queue. An incoming call in queue 0-3 will overwrite the display if a call from a lower priority queue is currently shown. These priority queues are intended for emergency calls; do not use for other call types.

Assigning Incoming Call Identifiers to queues is explained on the following pages. To assign a call appearance to a queue, see page 57.

The Display Translation text in the following tables, which is displayed in place of the 3-letter identifier or call appearance number during call ringing, can be changed for any call type or call appearance.

National ISDN With National ISDN, Incoming Call Identifiers are generated by the 40d based upon messages received from the network.

40d Internal Call Identifier	Default Display Translation	Description
InX	External	Incoming call from external source (outside centrex group).
InI	Internal	Incoming call from internal source (inside centrex group).
Icm	Intercom	Incoming intercom call.
CFA	All from	Call forward all calls.
CFB	Busy from	Call forward busy.
CFN	No Ans from	Call forward no answer.
HLD	Hold Recall	Hold recall timeout.
NXF	NXF Recall	Failed transfer.
Pag	Page Recall	Page hold recall timeout.
Pck	Pickup	Call pickup.
Prk	Park Recall	Parked call recall timeout.
XFR	Xfer Recall	Transferred call recall timeout.
CMP	Camp Recall	Camped call recall timeout.
SER	Serial Rcl	Serial call recall timeout.
FOV	FLASH OVER	Siemens priority call type.
FLA	FLASH	Siemens priority call type.
IMM	IMMEDIATE	Siemens priority call type.
PRI	PRIORITY	Siemens priority call type.

Lucent Custom ISDN

With Lucent Custom ISDN, all Incoming Call Identifiers are sent from the network.

The Incoming Call Identifiers listed below are predefined. You can add other call types as needed.

Network Call Identifier	Default Display Translation	Description
InX	External	Incoming call from external source (outside centrex group).
InI	Internal	Incoming call from internal source (inside centrex group).
Icm	Intercom	Intercom call.
CFA	All from	Call forward all calls.
CFB	Busy from	Call forward busy.
CFN	No Ans from	Call forward no answer.
ACB	Call Back	Automatic callback.
OnL	Online from	On another line (if multiple call appearances).
OuI	Outgoing	Outgoing call to internal destination.
OuX	Outgoing	Outgoing call to external destination.
Pck	Pickup	Call pickup.
Pri	Priority	Priority incoming call.
HLD	Hold Recall	Hold recall timeout.
CBK	CBak Recall	Automatic call back when busy station calls back to attendant.
NXF	NXF Recall	Failed transfer recall.
Pag	Page Recall	Page hold recall timeout.
Prk	Park Recall	Parked call recall timeout.
RCL	Recall From	Recall timeout.
WT?*	WATS ? *	C.O. programmed trunk line identifications.
LN? *	Line ? *	C.O. programmed line identifications.

***** **?** matches any character sent by the network. If *WT1* is sent then *WATS1* is displayed.

Configuration Sheet

Fill out Configuration Sheet #3 (page 135 or 136) with queue assignments for each call identifier. Additional call identifiers or call appearance queue assignments may be entered on the blank lines. Separate sheets are included for National ISDN and Lucent Custom ISDN.

National ISDN

40d120 Configuration Sheet #3

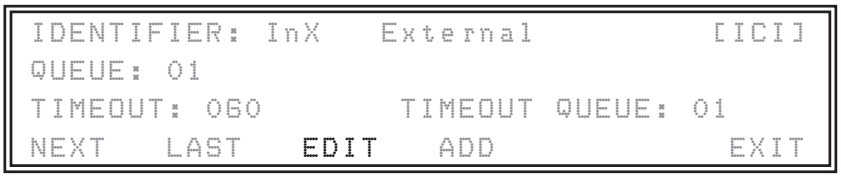
Call Queues

40d Internal Identifier		Default Queue Number	Actual Setting *(0-8)*	Default Timeout Value *(seconds)*	Actual Setting *(000-999 seconds)*	Default Timeout Queue Number	Actual Setting *(0-8)*
InX	External	8	*8*	120	*120*	8	*8*
InI	Internal	8	*8*	120	*120*	8	*8*
Icm	Intercom	8	*8*	120	*120*	8	*8*
CFA	All from	8	*8*	120	*120*	8	*8*
CFB	Busy from	8	*8*	120	*100*	8	*8*
CFN	No Ans from	8	*8*	150	*120*	8	*8*
HLD	Hold Recall	8	*4*	120	*120*	8	*4*
NXF	NXF Recall	8	*8*	120	*120*	8	*8*
Pag	Page Recall	8	*5*	120	*120*	8	*4*
Prk	Park Recall	8	*6*	120	*200*	8	*6*
XFR	Transfer Recall	8	*7*	120	*120*	8	*7*
CMP	Camp Recall	8	*5*	120	*120*	8	*5*
SER	Serial Recall	8	*7*	120	*120*	8	*6*
FOV	Flash Override	0	*0*	120	*100*	0	*0*
FLA	Flash	1	*1*	120	*120*	1	*1*
IMM	Immediate	2	*2*	120	*120*	2	*2*
PRI	Priority	3	*3*	120	*120*	3	*3*

Editing Incoming Call Identifier Queue Assignments

- Select QUEUE from the Setup menu.
  The Queue menu will be displayed.

- Select ICI from the Queue menu.
  The ICI menu will be displayed.



- Use NEXT or LAST to scroll through the Incoming Call Identifiers.
- Select EDIT to change the display translations, queue assignments, or timeout for the displayed call identifier.
- NEXT moves between the IDENTIFIER, QUEUE, TIMEOUT, and TIMEOUT QUEUE fields.
- Enter a text string (Display Translation) that will be displayed on the console to identify the call type. Characters are entered with the dial pad – refer to page 64. If this field is blank, the three character identifier will be displayed.
  *In the example above, **External** is displayed for an **InX** call type.*
  Predefined identifiers cannot be edited – only the Display Translation string can be changed.
- Enter the queue number, timeout value (seconds), and timeout queue number with the dial pad. Queues with a lower number have a higher priority (will be answered first).
  Calls in queues 0-3 will be displayed immediately and displace the currently ringing call. Use these queues only for emergency call types.
  Calls in queues 4-8 remain in queue until the currently displayed call is answered.

  If this call identifier is to remain in the same queue after the timeout period, set QUEUE and TIMEOUT QUEUE to the same value.
- The arrow keys move the cursor position.

  DELETE allows you to delete individual characters or an entire field. A delete operation may be canceled by selecting ABORT.
- Select EXIT to store changes for this call type.
  or

  Select ABORT to cancel any changes.
- You will be returned to the queue selection screen. Select another incoming call identifier.
  or

  Select EXIT to return to the Queues menu.

Lucent Custom ISDN **Adding Incoming Call Identifiers**

New ICIs may be added, if call types other than those preprogrammed in the console are sent from the central office.

- While the ICI screen is displayed, select ADD to to add a new call identifier.

  The Add ICI menu will be displayed.

```
IDENTIFIER:                          [ADD]
QUEUE: 01
TIMEOUT: 060        TIMEOUT QUEUE: 01
NEXT    <--    -->   DELETE  ABORT  DONE
```

- Enter the three character identifier as sent by the central office. Characters are entered with the dial pad - refer to page 64.

  *A **?** may be entered as a "wildcard" character. It will match any incoming character in its position. Enter the **?** character by pressing # on the dial pad until **?** appears in the display.*

- Program the other fields as explained above in Editing ICI Queue Assignments.

  *? "wildcard" characters may be included in the Display Translation string. The character received in the last "wildcard" position of the Identifier field will replace any **?** character in the display translation string during call display.*

- Select DONE to add this ICI.

  or

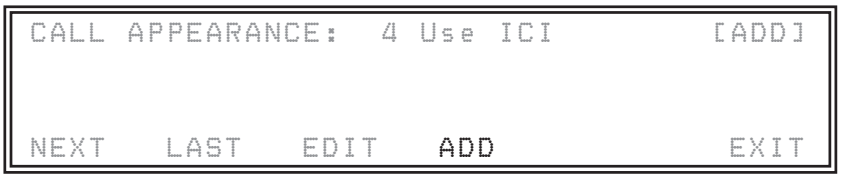
  Select ABORT to cancel adding this ICI.

Adding Call Appearances to Queues

Any call appearance may be assigned to a queue. All calls ringing on that call appearance will be prioritized for answering based on the call appearance number, *not* the Incoming Call Identifiers.

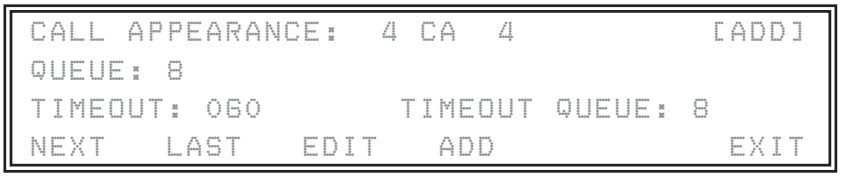
- While the CA menu is displayed, select NEXT or LAST until the call appearance that you want to add is displayed.

  "Use ICI" will be displayed if the call appearance is not assigned to a queue.
  A call appearance already has a queue assignment if "Use ICI" is not shown; use the EDIT function explained above to change the queue settings or to use ICIs for this call appearance.



- Select ADD to to add a new call appearance.

  The Add Call Appearance menu will be displayed.



- Edit the four fields as explained on the following page in Editing Call Appearance Queue Assignments.
- Select DONE to add this call appearance.

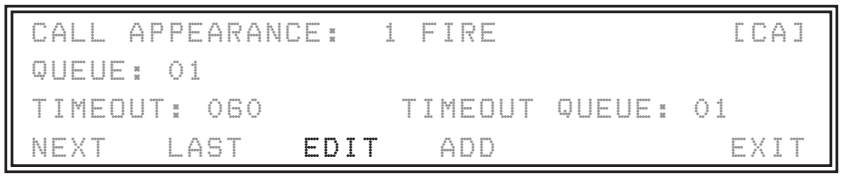
  or

  Select ABORT to cancel adding this call appearance.

Editing Call Appearance Queue Assignments

- Select QUEUE from the Setup menu.
  The Queue menu will be displayed.

- Select CA from the Queue menu.
  The Call Appearance menu will be displayed.



- Use NEXT or LAST to scroll through the 22 call appearances.
- Select EDIT to change the display translations, queue assignments, or timeout for the displayed call appearance.
  If "Use ICI" is displayed, calls ringing on this call appearance will be prioritized based on ICIs. To assign the call appearance to a queue, use the ADD function explained on the next page.
- NEXT moves between the CALL APPEARANCE, QUEUE, TIMEOUT, and TIMEOUT QUEUE fields.
- Enter a text string (Display Translation) that will be displayed on the console to identify the call appearance. Characters are entered with the dial pad – refer to page 64. If you do not edit this field, "CA" followed by the call appearance number will be displayed.
  *In the example above, **FIRE** is displayed for call appearance 1.*
  To remove a call appearance's queue assignment and revert to using ICIs, select DELETE while the cursor is in the Display Translation field, then select ENTRY.
- Enter the queue number, timeout value (seconds), and timeout queue number with the dial pad. Queues with a lower number have a higher priority (will be answered first).
  Calls in queues 0-3 will be displayed immediately and displace the currently ringing call. Use these queues only for emergency call types.
  Calls in queues 4-8 remain in queue until the currently displayed call is answered.

  If this call appearance is to remain in the same queue after the timeout period, set QUEUE and TIMEOUT QUEUE to the same value.
- The arrow keys move the cursor position.

  DELETE allows you to delete individual characters or an entire field. A delete operation may be canceled by selecting ABORT.
- Select EXIT to store changes for this call appearance.
  or

  Select ABORT to cancel any changes.
- You will be returned to the Call Appearance menu. Select another call appearance.
  or

  Select EXIT to return to the Queues menu.

Timers

Calls on hold will recall the console after a timeout period. Separate timers are provided for Hold Recall, Page Recall, Call Back Recall, NXF (incomplete transfer) Recall, and Ring Delay. If the console is configured for Lucent Custom ISDN, there will be an additional timer for Callback Recall.

Each recall timer can be set to expire after 1-999 seconds, or disabled.

Configuration Sheet

Fill out the Recall Timers table on Configuration Sheet #4 (page 135) with the actual setting in seconds for each timer.

- Select TIMER from the Setup menu.

  The Timer menu will be displayed.

- Select the timer to be examined/changed with NEXT or LAST. Available recall timers are:

  Ring Delay — Page Recall
  Hold Recall — NXF (incomplete transfer) Recall

  Lucent Custom ISDN A Callback Recall timer is provided for Lucent Custom ISDN only.

  NOTE – The Ring Delay timer allows a backup console to ring only when calls have not been answered at the primary console. Loops must be optioned for Terminate (inbound calls only) to use Ring Delay. When only one 40d console is installed, **do not** use Ring Delay. The default Ring Delay value is 0 (disabled). One ring is approximately equal to 6 seconds.

- When the desired timer is displayed, select EDIT to change the value.
- The arrow keys move the cursor position.

  DELETE allows you to delete individual characters or an entire field. A delete operation may be canceled by selecting ABORT.

- Enter the new timer value with the dial pad. Enter **0** to disable a timer.
- Select DONE to store the new timer value.

  or

  Select ABORT to cancel any changes.

- You will be returned to the timer selection screen. Select another timer.

  or

  Select EXIT to return to the Setup menu.

40d120 Configuration Sheet #4

Recall Timers

Timer	Default Value *(seconds)*	Actual Value *(000-999 seconds)*
Ring Delay	0	24
Hold Recall	120	90
Page Recall	120	60
Call Back Recall	120	90
NXF Recall	120	120

Loop Setup

CA	Default Value • Non-reserved = N • Terminate Only = T • Originate Only = O • Priority Only = P • Intercom = I *(Nat. only)* • UNUSED = blank	Actual Value *(N, T, O, P, I, blank)*
1	N	T
2	N	T
3	N	T
4	N	T
5	N	T
6	N	T
7	N	O
8	N	O
9		
10		
11		

CA	Default Value • Non-reserved = N • Terminate Only = T • Originate Only = O • Priority Only = P • Intercom = I *(Nat. only)* • UNUSED = blank	Actual Value *(N, T, O, P, I, blank)*
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		

Loop Setup

Each call appearance (loop) provided by the telco must be set at the console with the same loop feature that is assigned at the central office. The following options are available:

NOTE – The Ring Delay function works only on loops set for Terminate (inbound calls only).

N/R – Not Reserved (inbound and outbound calls allowed)
TERM – Terminate (inbound calls only)
ORIG – Originate (outbound calls only)
(blank) – Inactive (unused)

Lucent Custom ISDN

PRI – Priority (outbound calls only, unless a priority call rings and no other loop is available) *Lucent Custom ISDN only*

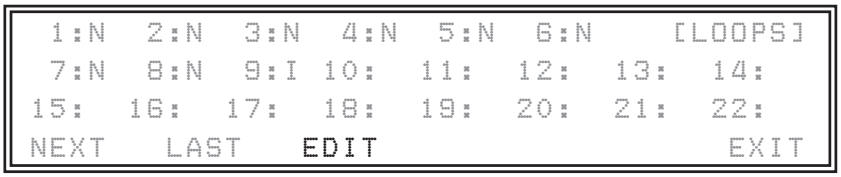
Configuration Sheet

Fill out the Loop Setup tables on Configuration Sheet #4 (page 137) with the actual setting for each loop.

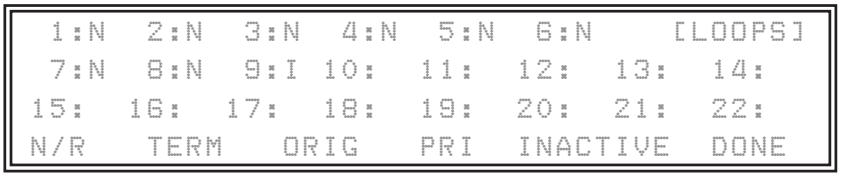
National ISDN

Loops that are assigned to a call appearance for intercom use are denoted with an '**I**' in the display below. The loop assignment for intercom loops cannot be changed here – see Key Mapping - Intercom Keys on page 50.

- Select LOOPS from the Setup menu.
  Current loop settings will be displayed.



- Use NEXT or LAST to select the loop to be changed.
- Select EDIT to change the loop setting.



- Select the new loop setting with the appropriate key as shown in the display.
- Select DONE.
- You will be returned to the loop selection screen. Select another loop.
  or
  Select EXIT to return to the Setup menu.

The recommended loop settings for installations with a single 40d are as follows:
Loops 1-6 – Terminate Loops 7 and 8 – Originate
Please see page 73 for multiple console installations.

All unused loops must be set to *INACTIVE*.

Names/Autodial Programming

An internal 1000 name database identifies callers by name when only directory number information is sent from the central office. Name/number entries may also be assigned to DSS keys on the 120d consoles to simplify call transferring and station dialing.

Spare DSS keys may be programmed to autodial up to 18 digits, including 0-9, *, #. Use this option for one button dialing of frequently-called numbers.

Call Appearance Remapping

The default call appearance for each DSS key corresponds to its key position. For example, for DSS key #43, the default call appearance from the central office switch is 43 on SPID#1. Default call appearances and SPID#s are as follows:

120d Console Number	DSS Key #	SPID #	Default CA#
1	1-60	1	1-60
	61-120	2	1-60
2	121-180	3	1-60
	181-240	4	1-60
3	241-300	5	1-60
	301-360	6	1-60
4	361-420	7	1-60
	421-480	8	1-60

For compatibility with some ISDN switches, you may want to change the call appearance assignment for some or all DSS keys. Some examples:

1. Some telcos require that the PDN for the 120d is assigned to call appearance #1. Changing the call appearance for DSS key #1 allows station monitoring on that key's station lamps.
2. To monitor two call appearances from a single DN, some telcos require that they are assigned to sequential CA numbers on the 120d. Reassign one of DSS key's call appearances to allow both appearances to be monitored on a single DSS key's station lamp pair.
3. Some telcos offer 128 call appearances on a single SPID. Call appearance remapping allows a 120d to monitor all 120 station call appearances on just one SPID.

Each monitored call appearance can appear on only one station lamp. When a call appearance is assigned to a new DSS key, it is removed from its former position.

Configuration Sheet

Fill out Configuration Sheets #5-8 (pages 138-141) with the station user name, directory lookup number, DSS/autodial number, voice mailbox number, SPID number, and call appearance for each DSS key. DSS number assignments should match those entered on the Translation Order Guides.

Before filling out the Configuration Sheets, make copies as needed for any additional 120d consoles.

120d __#1__ Configuration Sheet #5, DSS Keys 1-30

DSS keys are numbered vertically on the console – see page 42.

DSS Key #	User Name *(18 max.)*	Directory Number *(10 max.)*	DSS or Autodial Number *(18 max.)*	VM *(7 max.)*	CA	SPID
1	John F	425-542-4719	4719	1232	1	1
2	Bill Jones	425-542-4729	4729	1233	2	1
3	Jill K	425-542-4711	4711	1234	3	1
4	Jane W	425-542-4712	4712	1251	4	1
5	Ronnie Y	425-542-4715	4715	1260	5	1
6	Kim L	425-542-4720	4720	1220	6	1
7	Jack S	425-542-4716	4716	1221	7	1
8	William F	425-542-4717	4717	1223	8	1
9	Sarah S	425-542-4718	4718	1225	9	2
10	Robin R	425-542-4721	4721	1224	10	1
11	Joan L	425-542-4722	4722	1227	11	1
12	Bill T	425-542-4737	73	1228	12	1
13	Mike N	425-542-4736	4736	1229	13	1
14	David T	425-542-472	4723	1230	14	1
15	Wayne K	425-542-4713	4713	1255	35	2
16	Phillip R	425-542-4714	4714	1254	16	1
17	Mary S	425-542-4724	4724	1253	17	1
18	Steven E	425-542-4725	4725	1257	18	1
19	Karen G	425-542-4726	4726	1258	19	1
20	Robert T	425-542-4728	4728	1259	20	1
21	Jim W	425-542-4727	4727	1262	21	1
22	Pat K	425-542-4730	4730	1263	22	1
23	Randy A	425-485-4416	4416	1264	23	1
24	Kirk B	425-443-5694	5694	1265	24	1
25	Cliff N	425-543-6598	6598	1266	25	1
26	Paul C	425-747-6521	6521	1267	26	1
27	Norm D	425-523-5645	5645	1268	27	1
28	Art S	425-883-5400	5400	1269	28	1
29	Jo P	425-542-4741	4741	1270	29	1
30	Larry E	425-542-4744	4744	1271	30	1

Programming Procedure

- Press the MAINT key to enter Maintenance Mode.

```
        MAINTENANCE MAIN MENU


NAMES  TIME   STATS  SETUP   DIAG   EXIT
```

- Select NAMES from the Maintenance Main Menu to enter autodial programming mode.
  The current name database entries will be displayed by phone number order.

```
NAME: Bob Brown                        [NAMES]
DN: 4253331111   DSS#:
DSS KEY: 59  VM#:            SPID:2  CA:003
NEXT   LAST   EDIT    ADD   RESET   EXIT
```

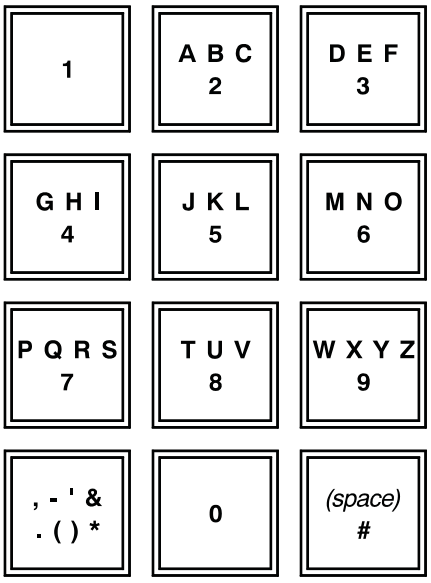
- To edit a name/number that has already been programmed – select NEXT or LAST to view the next or previous name programmed in the name database. When the desired name is found, select EDIT to alter the programming.

  or

  Press DSS key to select the name/number entry associated with the key.
- When the desired name is found, select EDIT to alter the programming.
- To add a new name/number – select ADD.
- Enter names with the dial pad. Most dial pad keys can access several characters. Press the key repeatedly until the desired character appears in the display. To enter lower case letters, first press the SHIFT key; the light above the key indicates lower case mode. Character assignments are shown below.

  Use the <— and —> keys (or the VOL keys) to move between character positions.

DELETE will delete your choice of a single character (CHAR), all characters in a field (FIELD), or the entire name/number entry (ENTRY).



- Select NEXT to move the cursor to the DN field.
- Using the dial pad, enter the full telephone number as sent by the telco for incoming calling name lookup.

  The display will show the number being entered. The character position will advance automatically in this field.
- Select NEXT to move the cursor to the DSS# field.
- Using the dial pad, enter the exact number to be dialed when the DSS key is pressed. This number should include the same digits you would normally dial to call that person (e.g. “914253491000” for a long distance call, “3479” for an internal call, “93491000” for a local call, etc.). Allowable entries are digits **0**-**9**, **#**, and ***.**

  The display will show the number being entered. The character position will advance automatically in this field.
- Select NEXT to move the cursor to the DSS KEY field.
- Press the DSS key to be programmed. Press the SHIFT key first if programming the station on the lower half of a DSS key.

  or

  Enter the desired DSS key number with the dial pad (refer to page 42 for DSS key numbers).

  The DSS key number will be displayed.
- Select NEXT to move the cursor to the VM field.
- Enter the voice mailbox number with the dial pad. Allowable entries are digits **0**-**9**, **#**, *****, and **P** (a pause; press dial pad key 7 twice to enter). See page 49 for a description of the voice mail feature.

  The display will show the number being entered. The character position will not advance automatically – use the arrow keys.

  If you want to change the call appearance assignment for this entry:
  - Select NEXT to move the cursor to the SPID field.
  - With the dial pad, enter the DSS console SPID number, **1-8**, that this key’s call appearance is assigned to (determined by telco mapping).

    The display will show the entered SPID number.
  - Select NEXT to move the cursor to the CA field.
  - With the dial pad, enter the call appearance number, **1**-**128**.

    The display will show the number being entered. The character position will advance automatically.
- Select DONE to store the Names/Autodial information and return to the main Names menu.

  The console will display a “DELETE OLD ENTRY?” warning if you attempt to enter a DN, Call Appearance, or DSS button that has already been used in another entry. Select YES to delete the old entry, or ABORT to return to the editing screen and change the new entry.
- Select an option from the menu (NEXT, LAST, EDIT, or ADD).

  or

  Select EXIT to return to the Maintenance Main Menu.

Resetting Default Call Appearances

All Call Appearance and SPID settings can be reset to the default values (see page 62) by selecting RESET from the Names menu.

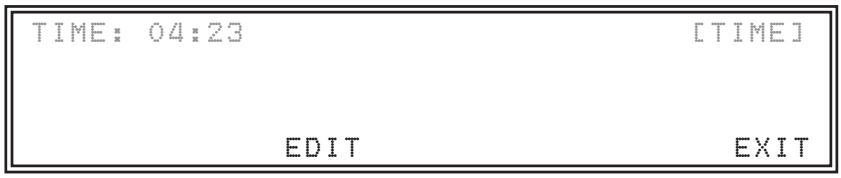
To reset a single DSS key, delete the SPID and CA entries for that key – select DELETE, then select FIELD for both entries. The default SPID and CA values will be displayed after selecting DONE to save the changes.

Time of Day Clock

- Press the MAINT key to enter Maintenance Mode.

- Select TIME.

  The Time menu, along with the current time, will be displayed.



- Select EDIT to change the time setting.

  The following screen will be displayed.

- Enter the time in 12-hour format (AM/PM designation is not required). The leading **0** for hours 1-9 may be omitted.

  The cursor will advance to the next character automatically. Use the arrow keys to manually select the character position.

- Press the DONE key to save the new time setting, or ABORT to exit and discard any changes.

  The console will revert to the previous time setting if an invalid time was entered

Lucent Custom ISDN The console will automatically change its time setting to match Central Office time whenever a time-stamped message is received from the network (e.g. an incoming call).

DELETE will delete your choice of a single character (CHAR), all characters in a field (FIELD), or the entire name/number entry (ENTRY).

Statistics

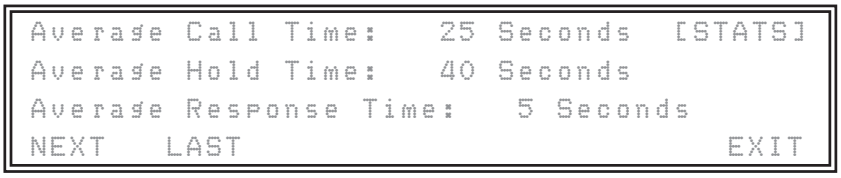
Console statistics such as average length of calls, response time for call answering, and number of recalls are recorded by the 40d. All statistics can be reset by the user.

Statistics and console error logs can be saved to a PC and printed with the 40d120 Setup Utility. Please refer to the 40d120 Setup Utility User's Guide, doc. #14-280177, that accompanies the utility diskette.

Statistics are presented on three display screens. Use the NEXT and LAST keys to move between screens.

- Press the MAINT key to enter Maintenance Mode.

- Select STATS.
  The first Statistics screen will be displayed.

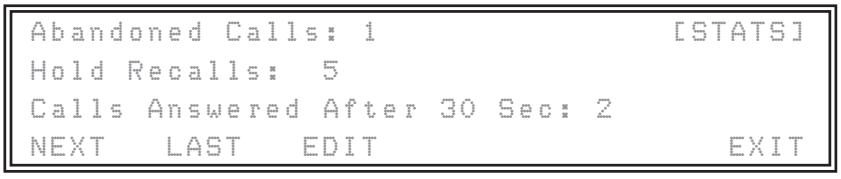


Average Call Time – the average length of a call.

Average Hold Time – the average time that calls are on hold.

Average Response Time – the average time a call is ringing at the console before it is answered.

- Select NEXT to view Statistics screen #2.
  The following Statistics screen will be displayed.

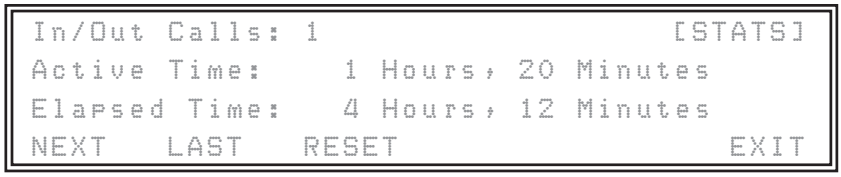


Abandoned Calls – the number of calls that were disconnected by the caller before being answered. Calls that were ringing for less than 10 seconds before disconnecting are not counted in this statistic.

Hold Recalls – the number of calls on hold that recalled the console after the timeout period expired.

Calls Answered After *xx* Sec – the number of calls that were answered after a selected time threshold. To change the time period used for this statistic, select EDIT, then enter the new time in seconds, using the dial pad.

- Select NEXT to view Statistics screen #3.
  The following Statistics screen will be displayed.



In/Out Calls – the number of incoming (ringing) calls and the number of outgoing calls, not including transfers, processed at the console.

Active Time – the total amount of time that the console was active on calls.

Elapsed Time – the time since the last Statistics reset.

Time values are rounded to the nearest whole minute.

- To reset all statistics, select RESET. You will be prompted to confirm the reset.

  NOTE – Removing power from the console does not reset statistics. The elapsed time clock is temporarily suspended when no power is applied.

Diagnostics

System Diagnostics

System diagnostics are accessed by selecting DIAG from the maintenance main menu.

Use this option when directed to do so by Tone Commander Customer Service.

120d Startup Diagnostics

When power is applied to a 120d console, the busy lamps in columns 2-6 indicate various states during initialization with the network.

column 2: Network Termination states
column 3: Layer 2 states for DSS keys 1-60
column 4: Layer 3 states for DSS keys 1-60
column 5: Layer 2 states for DSS keys 61-120
column 6: Layer 3 states for DSS keys 61-120

All lamps will go out (except for normal station busy indications) after successful initialization. If initialization was not successful, the busy lamps will indicate the specific state(s) where the process failed, as shown on the following pages.

Lamps 15, 25, 34, 45, and 54 will remain on if the 120d console is not connected to an active ISDN line.

Figure 10 **– 120d Console Diagnostic Indicators**

NT

Lamp	Diagnostic Status
11	U Synchronized/Activated
12	U Synchronized/Not Activated
13	U Activation Only
14	Sealing Current/U Not Synchronized
15	No Sealing Current/U Not Synchronized
16	No TE Present/No Line Present
17	Seal Current/U Synchronized, No TE
18	Not Activated/EOC Loopback
19	MLT Insertion Loss Test
20	MLT Quiet Termination

DSS Keys 1-60

Layer 2

Lamp	Diagnostic Status
21	Multiframe Established
22	Awaiting Release
23	Awaiting Establishment
24	TEI Assigned
25	Established Awaiting TEI
26	Assign Awaiting TEI
27	TEI Unassigned

Layer 3

Lamp	Diagnostic Status
31	Multipoint
32	Point-to-Point
33	Not Initialized
34	Down

DSS Keys 61-120

Layer 2

Lamp	Diagnostic Status
41	Multiframe Established
42	Awaiting Release
43	Awaiting Establishment
44	TEI Assigned
45	Established Awaiting TEI
46	Assign Awaiting TEI
47	TEI Unassigned

Layer 3

Lamp	Diagnostic Status
51	Multipoint
52	Point-to-Point
53	Not Initialized
54	Down

Paging

The Tone Commander PA-40 Paging/Chime module may be used to interface the 40d console to a paging system. The module includes a night bell chime, and background music control and connects directly to a standard analog “POTS” telephone line. Power is provided separately. Refer to the PA-40 Paging/Chime Module Installation Instructions, doc. #13-102698, for more information.

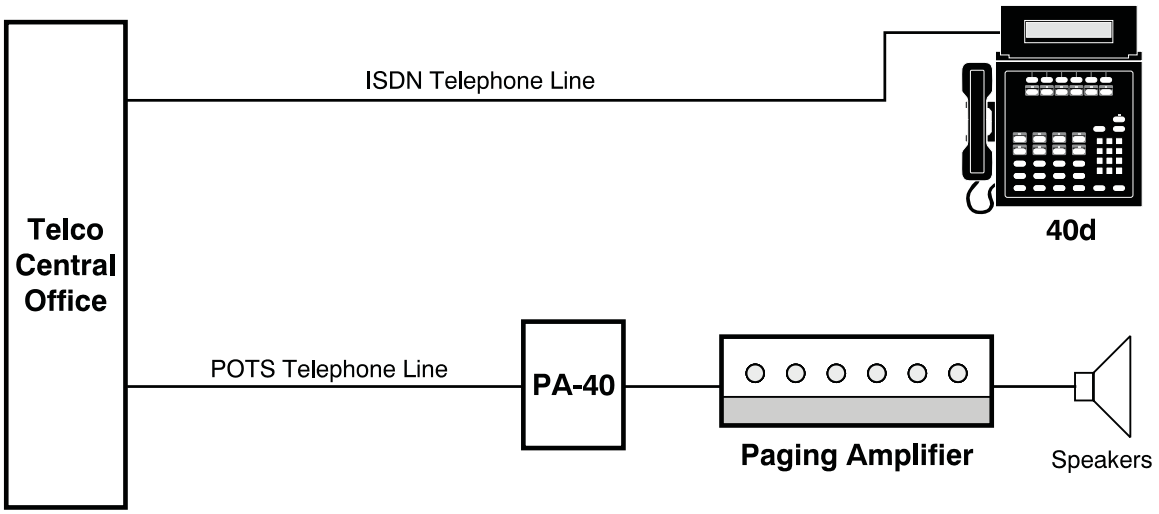


Figure 11 **– Paging Installation**

40d Programming Procedure

The 40d console is shipped from the factory with a preprogrammed PAGE button. Refer to the figures on pages 38-41 of this document.

- Press the MAINT key to enter Maintenance Mode.
- Select SETUP.
  The Setup menu will be displayed.
- Select KEYS from the SETUP menu to enter key programming mode.
- Press the PAGE key.
  The data for the PAGE key will be displayed.
- Select EDIT.
  The Edit menu will be displayed.
- Select NEXT from the menu.
  The cursor will move to the NUMBER TO DIAL field.
- With the dial pad, enter the POTS line telephone number designated for the PA-40 (as you would dial it to access paging).
- Select DONE to store the new Page setup.
  or
  Select ABORT to cancel any changes.

> DELETE will delete your choice of a single character (CHAR), all characters in a field (FIELD), or the entire name/number entry (ENTRY).

Call Forwarding

Forward to Voice Mail or Other Extension

The Call Forward key can be used to forward calls to voice mail or another extension (night attendant, guard station, etc.). No other hardware is required to set up the 40d with this option. To set the forward-to extension number, see page 49.

Another option is to assign the network call forwarding feature to a spare key.

NOTE – No courtesy ring is provided on the 40d when incoming calls are forwarded.

Forward to Night Chime

Call forwarding can also be used to forward calls to a dedicated POTS line which is connected to a Tone Commander PA-40 Paging/Chime Module. The PA-40 must be connected to the customer's paging system.

Refer to the PA-40 Paging/Chime Module Installation Instructions, doc. #13-102698, for more information.

Multiple Consoles

Lucent Custom ISDN **The examples below apply to Lucent Custom ISDN *only*.**

Special consideration must be given to console and network programming when multiple consoles are involved. The following are typical multiple console applications.

Shared Call Appearances

Inbound calls to the Listed Directory Number (LDN) alert at all attendant console positions. When the first responding attendant answers a call, it ceases to alert and display at all consoles, and the next call in queue will alert and display at all consoles. The ringing format for consoles that are active will be abbreviated (shortened). In this example two 40d consoles will be sharing ten call appearances.

Network Programming Issues

Prior to placing your telco order, please fill out the 40d120 Translation Order Guide #1 for each 40d console as explained below.

Console #1

Order twelve Primary Directory Number (PDN) call appearances, beginning at button #1. Enter this information on lines 29 and 28 respectively. Enter the PDN on line 37 (if known). Also, enter the following on line 37: CA # = 1; CA QTY = 12.

Subaddress two of the call appearances for outbound calls only. Enter “2" on line 30 and ”Yes" on line 31.

NOTE – In this application the PDN of console #1 is also the Listed Directory Number (LDN) for the user.

If interposition dialing to this console is desired, order a single secondary-only Directory Number (DN) to appear on button #13. This DN will not be subaddressed. If you know what the DN is, enter it on line 39. Also, enter the following on line 38: CA # = 13; CA QTY = 1.

Console #2

Order three PDN call appearances, beginning at button # 11. Using a copy of the 40d120 Translation Order Guide #1, enter “3" on line 29 and ”11" on line 28. Enter the PDN on line 37 (if known). Also, enter the following on line 37: CA # = 11; CA QTY = 3.

Subaddress two of the call appearances for outbound calls only. Enter “2" on line 30 and ”Yes" on line 31. Also, order 10 secondary-shared call appearances of console #1’s PDN. Enter this information on line 38.

NOTE – When the above is implemented at the C.O., calls to the LDN will be routed by the network to both consoles. Up to 10 inbound calls will be accommodated. The eleventh caller will receive busy tone. Console #1 can be called exclusively by dialing its secondary-only DN. Console #2 can be called exclusively by dialing its PDN.

Console Programming Issues

Enter loop setup data for each console on 40d120 Configuration Sheet #3. Refer to the Loop Setup section for loop programming.

Console #1

- Press the MAINT key to enter Maintenance Mode.
- Select SETUP.
  The Setup menu will be displayed.
- Select LOOPS from the Setup menu.
  Current loop settings will be displayed.
- Program call appearances 1 through 10 and 13 as Terminate (T), 11 and 12 as Originate (O), and 14 through 22 as Unused (blank).

Console #2

- Press the MAINT key to enter Maintenance Mode.
- Select SETUP.
  The Setup menu will be displayed.
- Select LOOPS from the Setup menu.
  Current loop settings will be displayed.
- Program call appearances 1 through 10 as Terminate (T), 11 as Non-reserved (N), 12 and 13 as Originate (O), and 14 through 22 as Unused (blank).

NOTE – When the ORIGINATE button on the 40d or a DSS button on the 120d is pressed, the 40d searches for an idle call appearance using the following order: 1) call appearances programmed as Originate (O) in descending order, then 2) call appearances programmed as Non-reserved (N) in descending order, and finally 3) call appearances programmed as Priority (P) in descending order. Call appearances programmed as Terminate (T) or Unused (blank) are never selected.

IMPORTANT – Each call appearance that is programmed at the 40d to be searched must also be programmed in network translations as: not reserved, reserved for origination, reserved for priority calls and origination. If a selected call appearance at the 40d is not matched by a capable or existing call appearance at the network, any request by the 40d for a call origination on this call appearance will be ignored by the network.

Main and Backup

Inbound calls to the LDN alert at the main attendant's console. These calls will only alert at the backup attendant's console after a predetermined ring delay period. The backup attendant can cancel delayed ringing at any time. Inbound calls to the backup attendant's PDN are unaffected when delayed ringing is invoked.

In this example two 40d consoles will be sharing ten call appearances. The main attendant will be operating console #1, and the backup attendant will operate console #2.

Network Programming Issues

Set up console #1 and console #2 in the same manner as in the Shared Call Appearances section above.

Console Programming Issues

Console #1

- Press the MAINT key to enter Maintenance Mode.
- Select SETUP.
  The Setup menu will be displayed.
- Set up the loops as in the Shared Call Appearances section for console #1 above.
- Select KEYS.
- Press the RING DLY button located between the TIME and CALL FWD buttons.
  Ring delay information will be displayed.
- Select EDIT.
  Press the right arrow (-->) button repeatedly until the FUNCTION field reads "Not Used".
- Select DONE.
- Select EXIT to return to the Setup menu.

IMPORTANT – As a precaution, the RING DLY key is removed from the main attendant's console to prevent inadvertent activation of the ring delay mode at this console.

Console #2

- Press the MAINT key to enter Maintenance Mode.
- Select SETUP.
  The Setup menu will be displayed.
- Set up the loops as in the Shared Call Appearances section for console #2 above.
- Select TIMER.
  The Ring Delay timer should be displayed. If not, press NEXT repeatedly until it is displayed.
- Select EDIT.
- Enter the desired ring delay interval.
  Valid values are 1-999 seconds.
- Select DONE.
- Select EXIT to return to the Main menu.

IMPORTANT – Ring delays will only apply: 1) to call appearances that are programmed in the loops program as Terminate (T), 2) while the status lamp above the RING DLY key is illuminated, and 3) if the Ring Delay timer is programmed with a value greater than 6 seconds (the interval of one ring cycle).

Main & Message Center

Inbound calls to the LDN alert at the main attendant's console and all forwarded calls from busy or unattended extensions alert at the message center console. Either console can be called directly by dialing each console's PDN.

In this example two 40d consoles, each with a different PDN, will be set up. The main attendant will be operating console #1 and the message attendant will operate console #2. In this application, the PDN of console #1 is also the LDN of the user.

Network Programming Issues

Prior to placing your telco order, please fill out the 40d120 Translation Order Guide #1 sheet for each 40d console as instructed below.

Console #1

Order the desired quantity of PDN call appearances, beginning at button #1. Enter this information on lines 29 and 28 respectively.

Subaddress two of the call appearances for outbound calls only. Enter "2" on line 30 and "Yes" on line 31.

Console #2

Order the desired quantity of PDN call appearances, beginning at button #1.

NOTE – Set up each station DN translation to call forward-busy and call forward-no answer to the PDN of console #2. Instruct station users to call forward-variable their extensions to the PDN of console #2.

Console Programming Issues

Set up each console's call appearances using the loops program to match the capabilities programmed in network translations.

Troubleshooting

40d Power-Up Diagnostics

When power is first applied to the 40d ISDN console, certain start-up routines are conducted by the console processor to check its operating integrity. At its conclusion, the following display is shown:

```
NT: No Seal Current/U Not Synched
L2: TEI Unassigned              TEI:N/A
L3: Down              USID:N/A TID:N/A
NEXT  LAST  [40d]                 EXIT
```

Screen 1

When the above is shown, proceed to 40d Line Initialization Diagnostics (page 78).

If the above is not showing, conduct the following checks:

1. Is there another display showing? If NO, proceed to Step 2. If YES, the following display is probably showing.

```
            TCS 40d Monitor
Option Switches: 1: OFF  2: OFF  3: OFF
```

Screen 2

   If it is, set the slide switch on the rear panel of the 40d from MON to RUN. The desired display as shown in Figure 1 will now be shown. Proceed to 40d Line Initialization Diagnostics (page 78).

   NOTE – If another display is showing, write it down verbatim, then conduct the following tests, record the results, and call Tone Commander Customer Technical Support at (800) 524-0024.

   - Can this display be displaced with the Maintenance Display when the MAINT button is pressed? ___Yes ___No
   - Does this display return when the Maintenance Mode is exited? ___Yes ___No
   - If power to the 40d is removed then reapplied, does this display return? ___Yes ___No

2. If the display is blank with backlighting present, proceed to Step 3. If the display is blank without backlighting present:

   - Reseat the modular jack connectors of the console mounting cord at the 40d120 Power Supply (#102612) or alternate console power supply and at the console.
   - Verify that the 40d120 Power Supply or alternate console power supply is plugged into a live AC power receptacle.
   - Verify that the voltage being fed to the console by the power supply is 34.0 to 56.5 VDC. This voltage can be read across pins 7 and 8 on the console-end connector of the mounting cord.
   - Replace the 40d console.

3. Press the MAINT button, the blank display with backlighting should be displaced by the Maintenance Display.

   - If the Maintenance display is not shown, set the slide switch on the rear panel of the 40d to Monitor. The following display should be shown:

```
The RUN/MON switch is set to the MON
position.  Return it to RUN position
to resume normal console operation.
```

Screen 3

- If the display shown in Screen 3 above does not appear, temporarily remove power, reapply it, and repeat Steps 1 through 3. If the results are the same, replace the 40d console.
    - If the Maintenance display displaces the blank display, proceed to 40d Line Initialization Diagnostics below.

40d Line Initialization Diagnostics

When power is applied to a 40d ISDN console that is connected to a fully configured and active ISDN line, the Line Diagnostic display is automatically shown. Information within the display is continuously updated. When the 40d and network are fully initialized, the display clears. A typical display transition is as shown below.

When power is first applied:

```
NT: No Seal Current/U Not Synched
L2: TEI Unassigned              TEI:N/A
L3: Down               USID:N/A TID:N/A
NEXT  LAST  [40d]                  EXIT
```

Screen 4

When Layer 1 initializes:

```
NT: U Synchronized/Activated
L2: Established Awaiting TEI    TEI:N/A
L3: Not Initialized    USID:N/A TID:N/A
NEXT  LAST  [40d]                  EXIT
```

Screen 5

When Layer 2 initializes:

```
NT: U Synchronized/Activated
L2: Multi-Frame Established     TEI:076
L3: Not Initialized    USID:N/A TID:N/A
NEXT  LAST  [40d]                  EXIT
```

Screen 6

When Layer 3 initializes:

```
NT: U Synchronized/Activated
L2: Multi-Frame Established     TEI:076
L3: Multi-point        USID:000 TID:076
NEXT  LAST  [40d]                  EXIT
```

Screen 7

Shortly thereafter, the display clears. Typically the above transition takes anywhere from 30 to 90 seconds. When the display clears, proceed to 40d Call Origination Checkout (page 79).

If the display does not clear, undertake the following:

1. Determine which display continues to show: Screen 4, 5, or 6.
2. Undertake the recommended troubleshooting procedures for the specific display shown.

   If Screen 4 is showing continuously:

   - Check all line connections from the telco interface to the jack on the rear panel of the console. Be sure to check all associated wiring, cables, connectors and jack panels.
   - Check that the ISDN line has been wired to:
     - pins 4 and 5 on an 8-pin modular jack or
     - pins 3 and 4 on a 6-pin modular jack
     - the appropriate terminals on a 50 position punch-down block
   - Have the telco check the ISDN line at the CPE site.
   - Replace the 40d console.

   If Screen 5 is showing continuously:

   - Check to see if a valid SPID format (3 to 20 numerical digits) is entered in the 40d's SPID Program. If one is not entered, enter one, save, and exit.
   - Initiate a console Reset (select DIAG from the main Maintenance menu/SYSTEM/RESET/YES). The Line Diagnostic display will automatically be shown.
   - Temporarily remove power from the 40d console for at least 30 seconds, then reapply it.

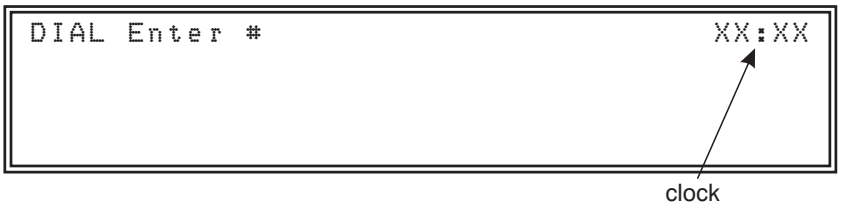
   If Screen 5 persists, contact your service provider to verify that you have the correct SPID for yuor line.

   If Screen 6 is showing continuously:

   - Verify that the correct SPID number is entered in the 40d's SPID Program. If necessary verify the number with a local telco customer support representative. While viewing the SPID display, select EDIT, then DONE.
   - Re-enter the SPID Number, save, and exit.
   - Verify that the SWITCH type value shown in the SPID display matches the serving central office. If it does not, select EDIT, NEXT, NEXT, select the appropriate SWITCH type, DONE, then press the MAINT button.
   - Initiate a Console Reset.
   - Temporarily remove power from the 40d console for at least 30 seconds, then reapply it.
   - If Screen 6 persists, replace the 40d.
3. With successful initialization, proceed to 40d Call Origination Checkout below.

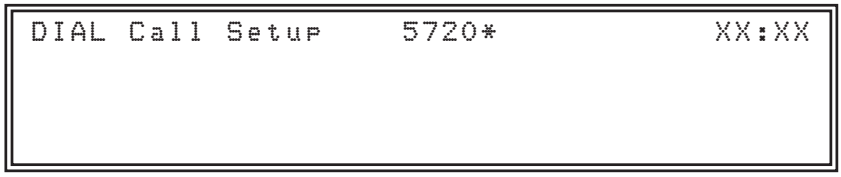
40d Call Origination Checkout

Press the ORIGINATE button. Dialtone should be heard and the following display will be shown:



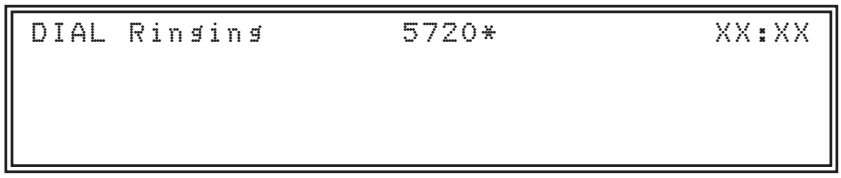
Screen 8

Originate a call to any directory number using the dial pad. When this is done the following transition will be displayed:



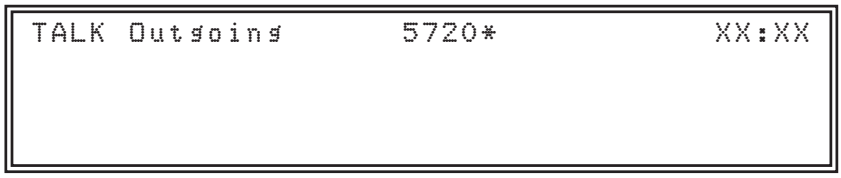
Screen 9

then:



Screen 10

Only if the called party answers, the display will update to:

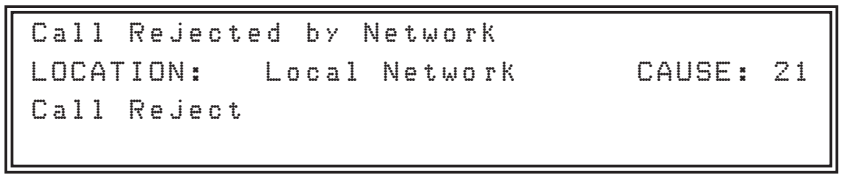


Screen 11

* This field may indicate a 10-digit, 7-digit, or abbreviated directory number (DN). If the DN dialed has been assigned a name in the 40d database, a name will be shown.

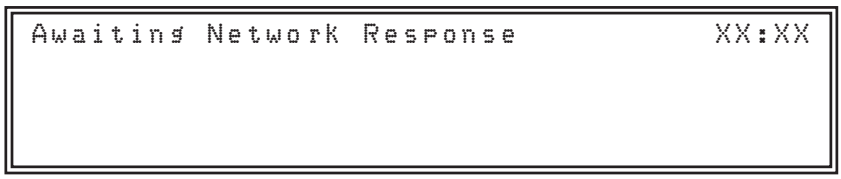
Press the RELEASE button, then proceed to 40d Call Termination Checkout (page 82).

If Screen 8 is displaced by either of the displays below, conduct the following troubleshooting procedures. Screen 12 shows momentarily then clears.



Screen 12

or

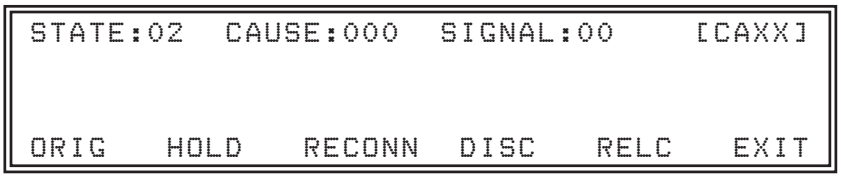


Screen 13

1. Enter the Maintenance Mode, select SETUP, select LOOPS, and view the loop assignments for the 40d console.
2. Verify that all call appearances (CA)s programmed for (ORIG)inate or Non-reserved (N/R) shown in the LOOPS display are operational. To do so, from the Main Diagnostic menu, select, DIAG, CALL, the first CA to be tested, then TEST. The following display will be shown:

Screen 14

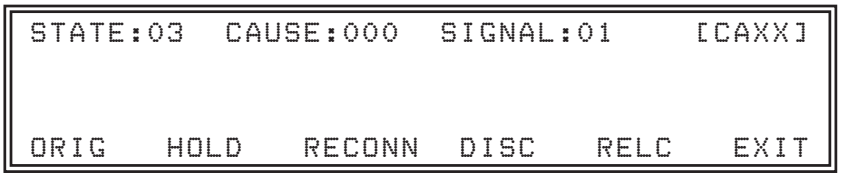
Select ORIG to originate a call. When this is done, dial tone should be heard and the following shown in the display:



Screen 15

where STATE:02 = call initiation

Dial a directory number for a test call. The display should update to:



Screen 16

where STATE:03 = call proceeding SIGNAL:01 = ringback tone ON

Immediately following, the display should update to:

Screen 17

where STATE:04 = call delivered

Select DISC to disconnect the call; select EXIT to exit the test mode for CAXX; select another call appearance by selecting NEXT or LAST; select TEST; then repeat the foregoing test call procedures.

3. Call your telco support representative and ask the following:
   - What are the call appearance assignments for the line?
   - Has the terminal been programmed for both CACH and EKTS? It should be.
   - If the line translations are updated, repeat the procedures in this section after such changes have been completed.

If Screen 8 does not show and an error tone is heard each time the ORIGINATE button is pressed:

1. Enter the Maintenance Mode, select SETUP, select LOOPS, and view the loop assignments for the 40d console.
2. Verify that at least one of the CAs that have been assigned as loops is programmed with either ORIG or N/R. If none are programmed, program the highest numbered CA as N/R. Repeat the procedures in this section.

40d Call Termination Checkout

From another telephone, call the Primary Directory Number (PDN) of the 40d console. When this is done, the console will ring and the following will be shown in the display:

```
                                        XX:XX

RING Internal     717 555-1492
```

Screen 18

Press the ANSWER button. You will be connected to the inbound caller and the console display will be updated to:

```
TALK Internal     717 555-1492        XX:XX
```

Screen 19

Press RELEASE, hang up the other phone, and proceed to 40d Call Transfer Checkout (page 82).

If the 40d console does not respond (i.e. no common audible or display), undertake the following troubleshooting procedures:

1. Verify that the status lamp above RING DELAY button is NOT illuminated. If it is, press the RING DELAY button, verify that the status lamp goes out, then repeat the previous procedures in this section.
2. Enter the Maintenance Mode, select SETUP, select LOOPS, and view the loop assignments for the 40d console. Verify that CAs 1 and 2 are assigned loop values of either TERM or N/R. If they are not, program them accordingly, then repeat the previous procedures in this section.
3. Verify that the 40d is configured in network translations for:
   - EKTS and CACH (when connected to National ISDN networks)
   - Terminal Type D (when connected to Lucent Custom networks)
   - Terminating inbound calls on CAs 1 and 2 above. This means that they have not been subaddressed for Originate-only in the case of Lucent Custom or programmed with Deny Termination in the case of National ISDN.

   If the line translations are updated, repeat the procedures in this section.

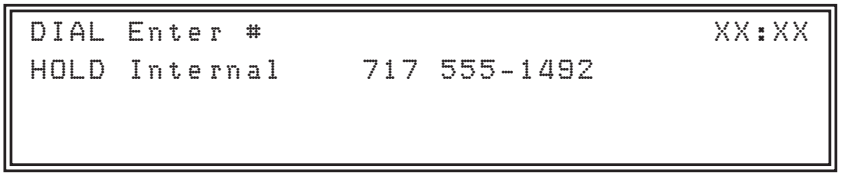
40d Call Transfer Checkout

From another telephone, call the PDN of the 40d console. Answer the call and the following will be shown in Line 1 of the display:

```
TALK Internal     717 555-1492        XX:XX
```

Screen 20

Press the ORIGINATE button. When this is done, the following will be shown:



Screen 21

Press the CONNECT button. When this is done, "Awaiting Network Response" may be seen briefly in Line 1 of the display, then the display will clear.

Proceed to 40d Network Feature Button Checkout (page 83).

NOTE – On occasion, if the CONNECT button is pressed immediately after dialing the last digit of the DN, an error tone may be heard. Press the CONNECT button again.

If after pressing the CONNECT button numerous times, an error beep continues to be heard, enter the Maintenance Mode, select SETUP, select LOOPS, and verify that there are sufficient CAs with loop values of either ORIG or N/R. There should be a minimum of two (2) CAs programmed as ORIG. As a safety factor, it is recommended that an additional one or two of the balance of CAs are programmed as N/R.

If upon pressing the CONNECT button, the following display is shown continuously:

Screen 22

- Enter the Maintenance Mode, select SETUP, select KEYS, press the CONNECT button to view its button number. The factory default is 60.
- Contact your telco representative to verify that network feature activator assigned to TRANSFER (or CONFERENCE on Siemens EWSD) matches the button number viewed in this step.
- After reconciling network translations and the 40d program, repeat the procedures in this section.

NOTE – This test procedure is only applicable when the 40d console is connected to a National ISDN network.

40d Network Feature Button Checkout

At the appropriate point in the call process being tested, press the associated network feature button. Please refer to the 40d120 Attendant's Guide if necessary.

Upon successful initiation of a network controlled feature, the appropriate feedback can be viewed in the display, via the LED above the button pressed, or both.

If upon pressing a feature button an error beep is heard or the network feature does not work properly, enter the Maintenance Mode, select SETUP, select KEYS, then press the button in question. Verify that the console button assignment matches the appropriate network feature activator configured on the line. Make the appropriate programming changes and repeat the previous procedures in this section.

If the network feature still does not work, contact your telco representative to verify that:

- The network feature activator configured on the line matches the button assignment programmed on the console.
- The network feature is properly configured or enabled on the line.

After reconciling network translations and the 40d program, repeat the procedures in the first three paragraphs in this section.

If after pressing the feature button the following is shown in the display:

```
Failure on Network Call Appearance # 09
Circuit/Channel congestion

Press ORIGINATE to continue
```

Screen 23

followed by:

```
Failure on Network Call Appearance # 09
Recovery of timer expiry

Press ORIGINATE to continue
```

Screen 24

- The DN that was used to initiate the desired network feature has not been assigned the feature in network translations.
- Contact your telco representative to determine whether the feature has been assigned to the DN being used.
- After reconciling network translations and the 40d program, repeat the procedures in the first three paragraphs in this section.

If after pressing the feature button the following is shown in the display:

```
AN ERROR OCCURRED SETTING UP THE CALL
LOCATION:   Local Network      CAUSE: 31
Normal, unspecified
```

Screen 25

- All the necessary network events for successful completion may not have occurred. For example, if an attempt is made to pick up a call from a station that is idle, the above may be shown. **No remedial response is required.**

120d Power-Up Diagnostics

When power is first applied to the 120d BLF/DSS console, certain start-up routines are conducted by the console processor to check its operating integrity. At its conclusion, the Line Diagnostic display, which consists of one illuminated LED in columns two through six, will be shown. Typically station positions 15, 27, 34, 47, and 54 will be illuminated. If the 120d is connected to a fully configured and active line, the illuminated LEDs will change position as the various ISDN layers initialize. Proceed to 120d Line Initialization Diagnostics (page 85).

If instead of the above, station position 14 flashes continuously:

- Set the slide switch on the rear panel of the 120d from MON to RUN.
- Remove then reapply power to the 120d console, the Line Diagnostic display as described above will be shown.

If no LEDs are illuminated, conduct the following:

- Reseat the modular jack connectors of the console mounting cord at the 40d120 Power Supply (#102612) or alternate console power supply and at the console.
- Verify that the 40d120 Power Supply or alternate console power supply is plugged into a live power receptacle.

- Verify that the voltage being fed to the console by the power supply is 34.0 to 56.5 VDC. This voltage can be read across pins 7 and 8 on the console-end connector of the mounting cord.
- Replace the 120d console.

120d Line Initialization Diagnostics

When power is applied to a 120d ISDN console that is connected to a fully configured and active ISDN line, the Line Diagnostic display is automatically shown. The display is continuously updated. When all ISDN layers are fully initialized, the display clears and is replaced by BLF indications.

When power is first applied, the following station lamps are typically illuminated:

15, (27), 34, (47), 54

NOTE – Station lamps 27 and 47 will illuminate when power is first applied if there are no SPID number entries made to the 120d SPID Program. If SPID numbers have been previously entered, Station lamps 25 and 45 will displace 27 and 47.

When Layer 1 initializes:

11, (27), 33, (47), 53

When Layer 2 of Terminal #1 initializes:

11, 21, 33, 47, 53

When Layer 3 of Terminal #1 initializes:

11, 21, 31, 47, 53

Shortly thereafter, the diagnostic display clears, and is replaced by BLF status.

NOTE – The 120d Line Diagnostic Display clears when Layer 3 of Terminal #1 initializes. To view the line status of Terminal #2, enter the Maintenance Mode, select DIAG, select LINE, select NEXT to view Terminal #1 of 120d #1, then select NEXT again to view Terminal #2. If 120d #2, #3, or #4 are involved, select NEXT until the desired, status display can be viewed.

Prior to initialization of Layer 2:

```
NT: U Synchronized/Activated
L2: TEI Unassigned                TEI:N/A
L3: Down                  USID:N/A TID:N/A
NEXT  LAST  [120d #1 Lines 61-120]  EXIT
```

Screen 26

When Layer 2 of Terminal #2 initializes:

```
NT: U Synchronized/Activated
L2: Multi-Frame Established       TEI:087
L3: Not Initialized   USID:N/A   TID:N/A
NEXT  LAST  [120d #1 Lines 61-120]  EXIT
```

Screen 27

When Layer 3 of Terminal #2 initializes:

```
NT: U Synchronized/Activated
L2: Multi-Frame Established      TEI:087
L3: Multi-point          USID:000 TID:087
NEXT  LAST  [120d #1 Lines 61-120]  EXIT
```

Screen 28

NOTE – The above information indicates benchmark points in the initialization process. Information and sequences may vary.

If the Line Diagnostic display does not clear, undertake the following:

1. If not already accomplished, connect the 120d console to the companion 40d console using the data link mounting cord.
2. Determine which display or station lamps continue to show.
3. Undertake the recommended troubleshooting procedures for the specific display shown.

   If station lamps **11, (27), 34, (47), 54** are showing continuously:

   - Check all line connections from the telco interface to the jack on the rear panel of the console. Be sure to check all associated wiring, cables, connectors and jack panels.
   - Check that the ISDN line has been wired to:
     - pins 4 and 5 on an 8-pin modular jack, or
     - pins 3 and 4 on a 6-pin modular jack, or
     - the appropriate terminals on a 50 position punch-down block.
   - Have the telco check the ISDN line at the CPE site.
   - Replace the 120d console.

   If station lamps **11, (27), 33, (47), 53** are showing continuously:

   - At the 40d console, enter the Maintenance Mode, select SETUP, select SPID, select NEXT and verify that the 120d console has been "installed" and SPID numbers entered. An installed console is one that has checked-in with the 40d console as shown below:

```
120d #1: OK  S/W 2.05   H/W 1.23  [SPID]
001-060 SPID: 015559012001
061-120 SPID: 015559013002
NEXT   LAST   EDIT   DELETE         EXIT
```

Screen 29

   An "uninstalled" console would appear in the display as shown below:

```
120d #1: Not Installed             [SPID]


NEXT   LAST             ADD           EXIT
```

Screen 30

   - Make the appropriate 40d programming changes. The 120d console should initialize successfully after the changes are entered.

   If station lamps **11, 21, 33, 47, 53** are showing continuously:

   - Verify that the correct SPID numbers are entered in the 120d's SPID Program. If necessary verify the number with a local telco customer support representative.

- Make the appropriate 120d programming changes as required. The 120d will initialize automatically after the changes are entered.

If station lamps **11, 21, 33, 47, 53** persist, temporarily remove power from the 120d console for at least 30 seconds, then reapply it.

If screen 28 is showing continuously:

- Verify that there is a SPID number entered for Terminal #2.
- Make the appropriate programming changes. Layer 2 should initialize as shown in screen 29.

If screen 29 is showing continuously:

- Verify that the correct SPID number is entered in the 120d's SPID Program for Terminal #2. If necessary verify the number with a local telco customer support rep.
- Make the appropriate 120d programming changes if required. Layer 3 should initialize as shown in screen 30.

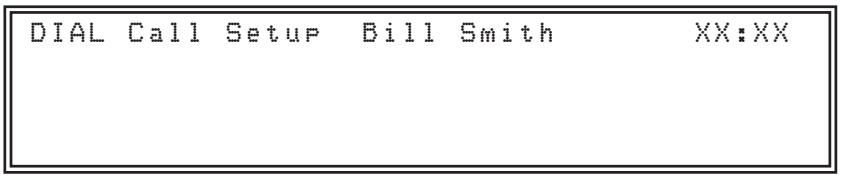
The station lamp states shown below are a special case. Since the success or failure of fully initializing Terminal #1 drives the LED Line Diagnostic Display, the following is shown whenever Terminal #2 initializes fully but Terminal #1 doesn't:

11, 21, 33, 41, 53

- Verify that the correct SPID number is entered in the 120d's SPID Program for Terminal #1. If necessary verify the number with a local telco customer support representative.
- Make the appropriate 120d programming changes as required. Layer 3 should initialize and the LED Line Diagnostic display will clear automatically.

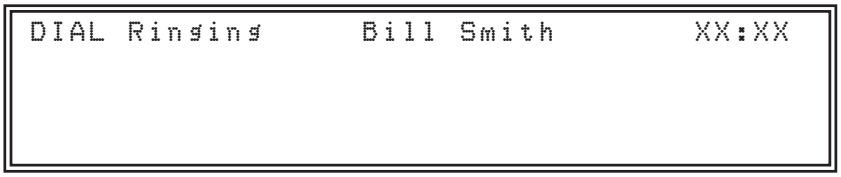
120d Call Origination Checkout

Press any DSS button that has already been programmed. When this is done, the following will be shown:



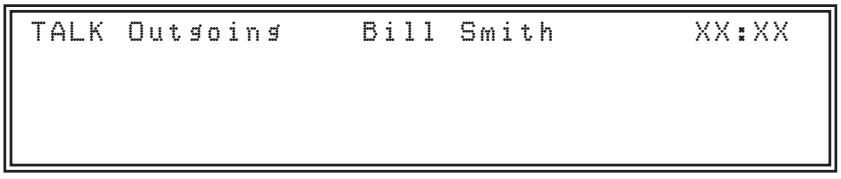
Screen 31

followed by:



Screen 32

Only if the called party answers, the display will update to:



Screen 33

Press the RELEASE button, then proceed to 120d Call Termination Checkout (page 88).

If screen 32 or 33 is not shown, it will most likely be replaced by either of the following:

```
DIAL Congestion  Bill Smith        XX:XX
```

Screen 34

```
DIAL Enter #                       XX:XX
```

Screen 35

- Enter the Maintenance Mode, select NAMES, press the DSS button used in the beginning of this section. When this is done, the following will be shown:

```
NAME: John Smith                   [NAMES]
DN:7063471002    DSS#:1002
DSS KEY:17   VM#:5551436  SPID:1  CA:017
NEXT   LAST   EDIT    ADD   RESET   EXIT
```

Screen 36

- Verify that the DSS# entry is the number to be dialed.
- Make the appropriate changes as required by selecting EDIT.
- Make the appropriate NAMES programming changes as required, then repeat the steps in this section.

120d Call Termination Checkout

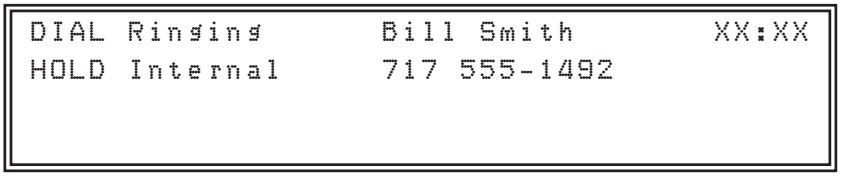
From another telephone, call the directory number that has been configured in network translations to appear at a given position on the 120d console. The desired station LED should flash.

If the wrong or no LED flashes, call your local telco customer support representative and verify the translations set up for the 120d console. Remember, it takes two terminals, using unique SPID numbers to drive 120 LEDs.

If multiple and random LEDs are flashing, temporarily remove power from the 120d console, then after 30 seconds reapply it. If the fault persists, remove both the ISDN line and power, then reapply power only. If the fault persists, replace the 120d console. If the fault clears, contact your local telco customer support representative and ask for a line integrity test. High resistance paths from the ISDN line to ground can cause the above.

40d/120d Call Transfer Checkout

From another telephone, call the PDN of the 40d console. Answer the call and press a DSS button that has already been programmed. The following will be shown:



Screen 37

Press CONNECT. The display will clear and the call will be transferred.

40d/120 Console Inactivity Recovery Procedures

If either the 40d or any 120d console are not functioning:

1. Verify that there is backlighting in the display of the 40d console.
2. If there is no backlighting:
    - Verify that the console power supply is plugged into active commercial power.
    - Verify that the console power supply is providing 34.0 to 56.5 VDC.
    - Reseat and check all console connecting cables.
    - Replace the affected console.
3. If there is backlighting, enter the Maintenance Mode, select DIAG, select LINE. Select NEXT and LAST to view the line status of the 40d and all installed 120d consoles.

    If NT status is not synchronized and activated;

    - Check all line connections from the telco interface to the jack on the rear panel of the console. Be sure to check all associated wiring, cables, connectors, and jack panels.
    - Connect the affected console to another ISDN line to see if it initializes on Layer 1. Such status will be shown in the display of the 40d or via LEDs on the 120d console.
    - Replace the console in question or have the telco check the ISDN line based, on the results of the previous check.

    If L2 or L3 status indicates that the layer is not initialized:

    - Enter the Maintenance Mode, select DIAG, select SYSTEM, select RESET, then select YES.
    - If the fault condition persists, from the Main menu, select SETUP, select SPID, using NEXT and LAST to view the appropriate console. Verify that SPID numbers are entered and they are correct.
    - While in the SPID Program, select EDIT, select DELETE, select FIELD, re-enter the SPID number(s), select DONE.
    - Temporarily remove power from the console for at least 30 seconds, then reapply it.
    - Have the telco check the ISDN line.
    - Replace the affected console.

System Features

Enhanced Incoming Call Identification

The caller's name is displayed when sent from the central office or if the number is found in the console's internal database. Also shown are the type of call (incoming call, unanswered station call, priority call, hold recall, etc.) and current call state.

Programmable 1000 Entry Calling Name Database

Up to 1000 names may be stored in an internal database, allowing identification of callers when number data is sent from the central office.

Prioritized Ringing Calls

Ringing calls and timed recalls are prioritized for sequential answering by user determined call priority. Up to eight call queues may be defined for various call types such as emergency, incoming external, unanswered station calls, etc.

Programmable Ring Delays

Each line and station appearing on a console can be individually programmed to ring at the console immediately, after a predetermined number of ring cycles, or never ring at the console. The Ring Delay feature does not affect ringing at the station.

Single Key Answering

Ringing calls are answered in order of priority by pressing the Answer key.

Abbreviated Ringing

Console ringing is abbreviated during call handling to minimize attendant distractions.

Automatic Call Splitting

The handset is automatically connected to the second party when a DSS key is pressed for call transfer. A Split key toggles between calling and called parties.

Automatic Call Hold

Active calls are automatically placed on hold when a new call is answered.

Hold Recall

Calls left on hold will alert the console after a predetermined time. The length of time calls have been on hold is always shown in the display.

Held Call Polling

Call information for held calls can be displayed by polling the hold loops.

Direct Station Selection

Large, easily labeled keys on the 120d console provide quick access to stations for transferring or originating calls. Unused keys can be programmed to autodial frequently called numbers.

Flexible Busy Lamp Field

Individual status lights for each station show on-hook, off-hook, and ringing states. For multiline ISDN stations, status information is provided for individual call appearances. Busy lamps can be flexibly mapped to match any network configuration.

Call Screening

The attendant can announce calls and converse with a station party privately before transferring a call, or transfer calls without announcing, to meet the individual needs of each call.

Soft Key Assignment

Programmable call processing keys on the 40d console can be arranged on the console as desired or remapped to match a particular central office button map.

Voice Mail Access

Each DSS key can directly access an individual voice mailbox to enable complete voice mail integration.

Single Line per Console

Each 40d or 120d console requires only one ISDN line for accessing multiple call appearances and features.

Built-in Network and Console Diagnostics

Network and data link errors are recorded to aid in trouble analysis. Console traffic statistics are reported.

Computer Telephony Integration

Calls can be managed from a TAPI-compliant Windows application for PC screen-based console operation. A corporate information database can be linked to incoming and outgoing calls to provide directory-based services.

PC Connection for Maintenance and Diagnostics

Key assignments, DSS numbers, and calling name database may be programmed on an IBM-compatible PC. Information can be entered directly or loaded from stored configurations. Console statistics and diagnostic error logs are accessible via the PC.

Built-in NT1

Each console connects directly to an ISDN “U” interface. No external network termination devices (NT1s) are required.

Self Contained, No Backroom CPU

All electronics are contained in the consoles. The only required external equipment is the power supply, which may located near the consoles or in a remote location.

Specifications

40d Console

Network Interface

Termination . . . . . ANSI standard 2B1Q “U” interface

Connector . . . . . 8-pin modular jack

Power Requirements

34 – 56.5 VDC @ 300 mA max., 4.5 W typical (power provided by Tone Commander 102612 Power Supply)

Physical

Dimensions . . . . . 6.5*“* H, 11.75*”* W, 10.75*“ D*
(including handset cradle; display in max. vertical position)

Weight . . . . . 3.4 lbs.

120d Console

Network Interface

Termination . . . . . ANSI standard 2B1Q “U” interface

Connector . . . . . 8-pin modular jack

Power Requirements

34 – 56.5 VDC @ 300 mA max., 7 W typical (power provided by Tone Commander 102612 Power Supply)

Physical

Dimensions . . . . . 3.25*“* H, 9.75*”* W, 10.75*“ D*

Weight . . . . . 2.8 lbs.

40d120 Power Supply (#102612)

Power Requirements

120 VAC, 60 Hz @ 40 VA max.

Output

3 output connectors; 36 VDC @ 300 mA max. per connector

Physical

Dimensions . . . . . 3*“* H, 8.5*”* W, 5*“* D

Weight . . . . . 5.1 lbs.

Console Maintenance

After initial installation, the 40d120 requires little or no maintenance, as long as adherence to the criteria discussed in the Site Preparation section is maintained. The following guidelines are suggested:

DON'T plug any other electrical products into the same circuit as the 40d, even temporarily.

DON'T spray cleaners or solvents directly on to the 40d120 console. Use only a very dilute soap/water solution applied to damp rag.

DON'T use adhesive-backed labels on the face of the console. Such labels may impede button travel. Migrating adhesives could also cause permanent damage.

DO use the provided nonadhesive key designations.

DO conduct periodic inspections to check the above mentioned items.

DO allow adequate ventilation for the power supply.

Service

Repair of the Tone Commander 40d120 must be done by Tone Commander. Prior to equipment removal, call Tone Commander Technical Support for assistance in determining the source of the problem. This critical action can often prevent needless removal of equipment and subsequent customer inconvenience.

Tone Commander
Technical Support Department
11609 49th Place West
Mukilteo, WA 98275-4255 USA

Phone: (800) 524-0024
(425) 349-1000

Fax: (425) 349-1010

E-mail: tech@tonecommander.com

Web: www.tonecommander.com

Tone Commander is committed to meeting the product needs of our customers. Please write or call us with any suggestions for improvement.

Warranty

Tone Commander Product Warranty

For a period of one year from date of dealer purchase, but not to exceed 16 months from date of manufacture, Tone Commander Systems, Inc. (Tone Commander) warrants its products to be free from defects in material and workmanship under conditions of normal use and service. Tone Commander will, at its option, repair or replace any defective product which, in its opinion, has not been misused, damaged, or improperly installed.

Repair or replacement under this warranty will be performed at Tone Commander's factory. Authorization must be obtained from Tone Commander prior to returning a product for repair. Freight must be prepaid for all units returned to Tone Commander. Units repaired under warranty will be return shipped UPS Brown Label (or equivalent), freight prepaid by Tone Commander.

Products which are older than the warranty period, but less than 7 years old, or still manufactured by Tone Commander, may be repaired at the factory for a flat rate charge. Repaired out-of-warranty units are warranted for 90 days from the date of repair.

The repair or replacement of a product under this warranty represents the entire obligation of Tone Commander; Tone Commander will not be liable for any special or consequential damages resulting from or caused by any defect, failure, incapacity or malfunction of any of its products.

> *The foregoing express warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of merchantability, fitness, or adequacy for any purpose or use, quality, productiveness or capacity; Tone Commander, to the extent permitted by law, hereby disclaims all such other warranties.*

FCC Requirements

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

Lucent
National ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	
7.	Pick-up Group #:	
8.	Call Forward Busy DN:	
9.	CXR Interconnect Dialing:	Allow
10.	ISDN Service:	National ISDN
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Standard
13.	Number of Terminals:	1
14.	Associated DN:	N/A
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	TCS40DNI
21.	Terminal Type:	C
22.	EKTS:	CACH
23.	TKS:	Yes
24.	Display:	Yes
25.	BRCS Features *(* optional)*:	
	* Call Forward Variable	/CFIV
	* Directed Call Pickup Non Barge-in, Originate	/CPDNO
	* Call Pickup Terminating	/CPUT
	Distinctive Ringing	/DRIC
	Centrex Group	/IDP
	ICLID & OCLID Displays – All (appearances)	/LIDADAO or /LIRCNMA
	ISDN Conference/Transfer Individual All (calls)	/MWICTIA
	6 Party Conference	/MWI6WB2
	Redirecting Number Display	/RND
	Unrestricted Dialing / Route Dial Errors To Tones	/TGUUT
	* Directed Call Park	/CPDPARK
	* Call Park Answer Back	/CPANSBK
26.	Call Preference:	Idle
27.	Autohold:	No
28.	One Touch:	No
29.	PDN Call Appearance:	
30.	PDN Call Appearance Quantity:	

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
31.			Primary		A	Normal	
32.			Secondary		A	Normal	
33.			Secondary		A	Normal	
34.			Secondary		A	Normal	
35.			Secondary		A	Normal	

Lucent National ISDN

40d120 Translation Order Guide #2

Recommended Switch Configuration Group Definition

Configuration Group:	TCS40DNI
CPE Component:	0
Range:	41
RMK:	Tone Commander 40d ISDN Console

Button List:

Button	Feature	Action	Parameter	Description
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55	/CPANSBK	ANSBACK		Call Park Answer Back
56	/CPDPARK	DPARK		Directed Call Park
57	/CFIV	CFBN		Call Forward Variable
58	/CPDNO	DPN		Directed Call Pickup, Non Barge-in
59				
60	/*	CONF		Conference
61	/*	XFER		Transfer
62	/*	DROP		Drop
63				
64				

Lucent
National ISDN

40d120 Translation Order Guide #3

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	National ISDN
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Standard
13.	Number of Terminals:	2
14.	Associated DN:	
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	C
22.	EKTS:	CACH
23.	TKS:	Yes
24.	Display:	None
25.	BRCS Features:	
	Centrex Group	/IDP
26.	Call Preference:	Idle
27.	Autohold:	No
28.	One Touch:	No
29.	PDN Call Appearance:	61
30.	PDN Call Appearance Quantity:	1

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
31.		61	Primary	1	N	Normal	No

Lucent National ISDN

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
1		1	1	N	NORMAL
2		2	1	N	NORMAL
3		3	1	N	NORMAL
4		4	1	N	NORMAL
5		5	1	N	NORMAL
6		6	1	N	NORMAL
7		7	1	N	NORMAL
8		8	1	N	NORMAL
9		9	1	N	NORMAL
10		10	1	N	NORMAL
11		11	1	N	NORMAL
12		12	1	N	NORMAL
13		13	1	N	NORMAL
14		14	1	N	NORMAL
15		15	1	N	NORMAL
16		16	1	N	NORMAL
17		17	1	N	NORMAL
18		18	1	N	NORMAL
19		19	1	N	NORMAL
20		20	1	N	NORMAL
21		21	1	N	NORMAL
22		22	1	N	NORMAL
23		23	1	N	NORMAL
24		24	1	N	NORMAL
25		25	1	N	NORMAL
26		26	1	N	NORMAL
27		27	1	N	NORMAL
28		28	1	N	NORMAL
29		29	1	N	NORMAL
30		30	1	N	NORMAL

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National ISDN

40d120 Translation Order Guide #5

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 31-60

PDN for DSS keys 1-60: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
31		31	1	N	NORMAL
32		32	1	N	NORMAL
33		33	1	N	NORMAL
34		34	1	N	NORMAL
35		35	1	N	NORMAL
36		36	1	N	NORMAL
37		37	1	N	NORMAL
38		38	1	N	NORMAL
39		39	1	N	NORMAL
40		40	1	N	NORMAL
41		41	1	N	NORMAL
42		42	1	N	NORMAL
43		43	1	N	NORMAL
44		44	1	N	NORMAL
45		45	1	N	NORMAL
46		46	1	N	NORMAL
47		47	1	N	NORMAL
48		48	1	N	NORMAL
49		49	1	N	NORMAL
50		50	1	N	NORMAL
51		51	1	N	NORMAL
52		52	1	N	NORMAL
53		53	1	N	NORMAL
54		54	1	N	NORMAL
55		55	1	N	NORMAL
56		56	1	N	NORMAL
57		57	1	N	NORMAL
58		58	1	N	NORMAL
59		59	1	N	NORMAL
60		60	1	N	NORMAL

Lucent National ISDN

40d120 Translation Order Guide #6

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 61-120

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	National ISDN
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Standard
13.	Number of Terminals:	2
14.	Associated DN:	
	Bearer Service:	
15.	B1 Channel:	None
16.	B2 Channel:	DMD
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	C
22.	EKTS:	CACH
23.	TKS:	Yes
24.	Display:	None
25.	BRCS Features:	
	Centrex Group	/IDP
26.	Call Preference:	Idle
27.	Autohold:	No
28.	One Touch:	No
29.	PDN Call Appearance:	61
30.	PDN Call Appearance Quantity:	1

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
31.		61	Primary	1	N	Normal	No

Lucent
National ISDN

40d120 Translation Order Guide #7

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 61-90

PDN for DSS keys 61-120: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
61		1	1	N	NORMAL
62		2	1	N	NORMAL
63		3	1	N	NORMAL
64		4	1	N	NORMAL
65		5	1	N	NORMAL
66		6	1	N	NORMAL
67		7	1	N	NORMAL
68		8	1	N	NORMAL
69		9	1	N	NORMAL
70		10	1	N	NORMAL
71		11	1	N	NORMAL
72		12	1	N	NORMAL
73		13	1	N	NORMAL
74		14	1	N	NORMAL
75		15	1	N	NORMAL
76		16	1	N	NORMAL
77		17	1	N	NORMAL
78		18	1	N	NORMAL
79		19	1	N	NORMAL
80		20	1	N	NORMAL
81		21	1	N	NORMAL
82		22	1	N	NORMAL
83		23	1	N	NORMAL
84		24	1	N	NORMAL
85		25	1	N	NORMAL
86		26	1	N	NORMAL
87		27	1	N	NORMAL
88		28	1	N	NORMAL
89		29	1	N	NORMAL
90		30	1	N	NORMAL

Lucent National ISDN

40d120 Translation Order Guide #8

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 91-120

PDN for DSS keys 61-120: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
91		31	1	N	NORMAL
92		32	1	N	NORMAL
93		33	1	N	NORMAL
94		33	1	N	NORMAL
95		35	1	N	NORMAL
96		36	1	N	NORMAL
97		37	1	N	NORMAL
98		38	1	N	NORMAL
99		33	1	N	NORMAL
100		40	1	N	NORMAL
101		41	1	N	NORMAL
102		42	1	N	NORMAL
103		43	1	N	NORMAL
104		44	1	N	NORMAL
105		45	1	N	NORMAL
106		46	1	N	NORMAL
107		47	1	N	NORMAL
108		48	1	N	NORMAL
109		49	1	N	NORMAL
110		50	1	N	NORMAL
111		51	1	N	NORMAL
112		52	1	N	NORMAL
113		53	1	N	NORMAL
114		54	1	N	NORMAL
115		55	1	N	NORMAL
116		56	1	N	NORMAL
117		57	1	N	NORMAL
118		58	1	N	NORMAL
119		59	1	N	NORMAL
120		60	1	N	NORMAL

Lucent Custom ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	
7.	Pick-up Group #:	
8.	Call Forward Busy DN:	
9.	CXR Interconnect Dialing:	Allow
10.	ISDN Service:	Lucent Custom
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Point-to-Point
13.	Number of Terminals:	1
14	Associated DN:	N/A
	Bearer Service:	
15.	B1 Channel: DMD 16. B2 Channel:	None 17. D Channel: SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	TCS40D
21.	Terminal Type:	D
22.	TKS:	Yes
23.	Display:	Yes
24.	BRCS Features *(* optional)*:	
	* Automatic Call Back Calling	/ACBC
	* Call Forward Variable Feature Button	/CFVFB
	* Directed Call Pickup Non Barge-in, Originate	/CPDNO
	* Call Pickup Terminating	/CPUT
	* Dial Call Waiting	/CWD
	Deluxe Display	/DIDLX
	Distinctive Ringing	/DRIC
	Centrex Group	/IDP
	ICLID & OCLID Displays – All (appearances)	/LIDADAO or /LIRCNMA
	ISDN Conference/Transfer Individual All (calls)	/MWICTIA
	* 6 Party Conference – All Calls	/MWI6WC
	Unrestricted Dialing / Route Dial Errors To Tones	/TGUUT
	* Directed Call Park	/CPDPARK
	* Call Park Answer Back	/CPANSBK
	* ISDN Intercom	/ICM
25.	Call Preference:	Idle
26.	Autohold:	No
27.	One Touch:	No
28.	PDN Call Appearance:	
29.	PDN Call Appearance Quantity:	
	Subaddress Definition:	
30.	SAR QTY (Number of CAs to be Reserved):	
31.	SAR ORIG (Reserve CA for originations):	
32.	SAR TERM (Reserve CA for terminations):	
33.	Incoming:	
34.	Intercom:	
35.	ORIG CW:	
36.	PP:	

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
37.			Primary		A	Normal	No
38.			Secondary		A	Normal	No
39.			Secondary		A	Normal	No
40.			Secondary		A	Normal	No
41.			Secondary		A	Normal	No

Lucent Custom ISDN

40d120 Translation Order Guide #2

Recommended Switch Configuration Group Definition

Configuration Group:	TCS40D
CPE Component:	0
Range:	41
RMK:	Tone Commander 40d ISDN Console

Button List:

Button	Feature	Action	Parameter	Description
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51	/IC*	[1-4]COM		ISDN Intercom
52	/CPANSBK	ANSBACK		Call Park Answer Back
53	/CPDPARK	DPARK		Directed Call Park
54	/DI*	TODUSE		Time & Date
55	/DI*	INSUSE		Inspect
56	/CWD	CWDLU		Priority Call (Dial Call Waiting)
57	/CFVFB	BNTOG		Call Forwarding On/Off
58	/CPDNO	DPN		Directed Call Pickup w/o Barge-in
59	/CB*	ACBFBP		Auto Callback On/Off
60				
61				
62				
63				
64				

Lucent Custom ISDN

40d120 Translation Order Guide #3

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	Lucent Custom
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Multipoint
13.	Number of Terminals:	2
14	Associated DN:	
	Bearer Service:	
15.	B1 Channel:	DMD
16.	B2 Channel:	None
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	D
22.	TKS:	Yes
23.	Display:	None
24.	BRCS Features:	
	Centrex Group	/IDP
25.	Call Preference:	Idle
26.	Autohold:	No
27.	One Touch:	No
28.	PDN Call Appearance:	61
29.	PDN Call Appearance Quantity:	1
	Subaddress Definition:	
30.	SAR QTY (Number of CAs to be Reserved):	None
31.	SAR ORIG (Reserve CA for originations):	None
32.	SAR TERM (Reserve CA for terminations):	None
33.	Incoming:	None
34.	Intercom:	None
35.	ORIG CW:	None
36.	PP:	None

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
37.		61	Primary	1	N	Normal	No

Lucent Custom ISDN

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
1		1	1	N	NORMAL
2		2	1	N	NORMAL
3		3	1	N	NORMAL
4		4	1	N	NORMAL
5		5	1	N	NORMAL
6		6	1	N	NORMAL
7		7	1	N	NORMAL
8		8	1	N	NORMAL
9		9	1	N	NORMAL
10		10	1	N	NORMAL
11		11	1	N	NORMAL
12		12	1	N	NORMAL
13		13	1	N	NORMAL
14		14	1	N	NORMAL
15		15	1	N	NORMAL
16		16	1	N	NORMAL
17		17	1	N	NORMAL
18		18	1	N	NORMAL
19		19	1	N	NORMAL
20		20	1	N	NORMAL
21		21	1	N	NORMAL
22		22	1	N	NORMAL
23		23	1	N	NORMAL
24		24	1	N	NORMAL
25		25	1	N	NORMAL
26		26	1	N	NORMAL
27		27	1	N	NORMAL
28		28	1	N	NORMAL
29		29	1	N	NORMAL
30		30	1	N	NORMAL

Lucent Custom ISDN

40d120 Translation Order Guide #5

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 31-60

PDN for DSS keys 1-60: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
31		31	1	N	NORMAL
32		32	1	N	NORMAL
33		33	1	N	NORMAL
34		34	1	N	NORMAL
35		35	1	N	NORMAL
36		36	1	N	NORMAL
37		37	1	N	NORMAL
38		38	1	N	NORMAL
39		39	1	N	NORMAL
40		40	1	N	NORMAL
41		41	1	N	NORMAL
42		42	1	N	NORMAL
43		43	1	N	NORMAL
44		44	1	N	NORMAL
45		45	1	N	NORMAL
46		46	1	N	NORMAL
47		47	1	N	NORMAL
48		48	1	N	NORMAL
49		49	1	N	NORMAL
50		50	1	N	NORMAL
51		51	1	N	NORMAL
52		52	1	N	NORMAL
53		53	1	N	NORMAL
54		54	1	N	NORMAL
55		55	1	N	NORMAL
56		56	1	N	NORMAL
57		57	1	N	NORMAL
58		58	1	N	NORMAL
59		59	1	N	NORMAL
60		60	1	N	NORMAL

Lucent Custom ISDN

40d120 Translation Order Guide #6

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 61-120

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Digital Subscriber Loop Telephone #:	
6.	PIC (Preferred Long Distance Carrier #):	N/A
7.	Pick-up Group #:	N/A
8.	Call Forward Busy DN:	N/A
9.	CXR Interconnect Dialing:	N/A
10.	ISDN Service:	Lucent Custom
11.	Line Code (U Interface):	2B1Q
12.	Digital Subscriber Loop Service:	Multipoint
13.	Number of Terminals:	2
14	Associated DN:	
	Bearer Service:	
15.	B1 Channel:	None
16.	B2 Channel:	DMD
17.	D Channel:	SX
18.	Maximum Number of B Channels:	1
19.	Circuit Switched Channel Options:	CSV-Any
20.	Terminal Configuration Group:	None
21.	Terminal Type:	D
22.	TKS:	Yes
23.	Display:	None
24.	BRCS Features:	
	Centrex Group	/IDP
25.	Call Preference:	Idle
26.	Autohold:	No
27.	One Touch:	No
28.	PDN Call Appearance:	61
29.	PDN Call Appearance Quantity:	1
	Subaddress Definition:	
30.	SAR QTY (Number of CAs to be Reserved):	None
31.	SAR ORIG (Reserve CA for originations):	None
32.	SAR TERM (Reserve CA for terminations):	None
33.	Incoming:	None
34.	Intercom:	None
35.	ORIG CW:	None
36.	PP:	None

	Directory Number	CA #	DN Type	CA Qty	Call Exclusion	Ringing Pattern	Deny Termination
37.		61	Primary	1	N	Normal	No

Lucent Custom ISDN

40d120 Translation Order Guide #7

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 61-90

PDN for DSS keys 61-120: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
61		1	1	N	NORMAL
62		2	1	N	NORMAL
63		3	1	N	NORMAL
64		4	1	N	NORMAL
65		5	1	N	NORMAL
66		6	1	N	NORMAL
67		7	1	N	NORMAL
68		8	1	N	NORMAL
69		9	1	N	NORMAL
70		10	1	N	NORMAL
71		11	1	N	NORMAL
72		12	1	N	NORMAL
73		13	1	N	NORMAL
74		14	1	N	NORMAL
75		15	1	N	NORMAL
76		16	1	N	NORMAL
77		17	1	N	NORMAL
78		18	1	N	NORMAL
79		19	1	N	NORMAL
80		20	1	N	NORMAL
81		21	1	N	NORMAL
82		22	1	N	NORMAL
83		23	1	N	NORMAL
84		24	1	N	NORMAL
85		25	1	N	NORMAL
86		26	1	N	NORMAL
87		27	1	N	NORMAL
88		28	1	N	NORMAL
89		29	1	N	NORMAL
90		30	1	N	NORMAL

Lucent Custom ISDN

40d120 Translation Order Guide #8

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 91-120

PDN for DSS keys 61-120: _____

DSS Key #	Directory Number	CA #	CA QTY	Manual Exclusion	Ringing Pattern
91		31	1	N	NORMAL
92		32	1	N	NORMAL
93		33	1	N	NORMAL
94		33	1	N	NORMAL
95		35	1	N	NORMAL
96		36	1	N	NORMAL
97		37	1	N	NORMAL
98		38	1	N	NORMAL
99		33	1	N	NORMAL
100		40	1	N	NORMAL
101		41	1	N	NORMAL
102		42	1	N	NORMAL
103		43	1	N	NORMAL
104		44	1	N	NORMAL
105		45	1	N	NORMAL
106		46	1	N	NORMAL
107		47	1	N	NORMAL
108		48	1	N	NORMAL
109		49	1	N	NORMAL
110		50	1	N	NORMAL
111		51	1	N	NORMAL
112		52	1	N	NORMAL
113		53	1	N	NORMAL
114		54	1	N	NORMAL
115		55	1	N	NORMAL
116		56	1	N	NORMAL
117		57	1	N	NORMAL
118		58	1	N	NORMAL
119		59	1	N	NORMAL
120		60	1	N	NORMAL

Nortel
National ISDN-1

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	NONE

19. **Directory Number Assignments**

Key	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1					YES	NO
2					YES	NO
3					YES	NO
4					YES	NO
5					YES	NO
6					YES	NO
7					YES	NO
8					YES	NO
9					YES	NO
10					YES	NO
11					YES	NO
12					YES	NO
13					YES	NO
14					YES	NO

20. **Feature Assignments**

	Key	Feature	Description
a.	1	KSH N	Key Short Hunt, No Overflow
b.			
c.	7	DTM	Deny Termination
d.	8	AFC	Additional Functional Call
e.	10	GIC or ICM	Group or EKTS Intercom
f.	57	CFU N	Call Forward Universal, No Overflow
g.			
h.	60	FC 3	Flexible Calling, 3 party conference
i.	61	XFER CTALL	Call Transfer, All Call Types
j.	62	DROP	Drop last party from conference

Nortel National ISDN-1

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	

19. **Directory Number Assignments**

See 40d120 Translation Order Guide #3 and #4.

20. **Feature Assignments**

None required.

Nortel National ISDN-1

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1	1	DN			YES	YES	NO
2	2	MDN		SCA	NO	YES	NO
3	3	MDN		SCA	NO	YES	NO
4	4	MDN		SCA	NO	YES	NO
5	5	MDN		SCA	NO	YES	NO
6	6	MDN		SCA	NO	YES	NO
7	7	MDN		SCA	NO	YES	NO
8	8	MDN		SCA	NO	YES	NO
9	9	MDN		SCA	NO	YES	NO
10	10	MDN		SCA	NO	YES	NO
11	11	MDN		SCA	NO	YES	NO
12	12	MDN		SCA	NO	YES	NO
13	13	MDN		SCA	NO	YES	NO
14	14	MDN		SCA	NO	YES	NO
15	15	MDN		SCA	NO	YES	NO
16	16	MDN		SCA	NO	YES	NO
17	17	MDN		SCA	NO	YES	NO
18	18	MDN		SCA	NO	YES	NO
19	19	MDN		SCA	NO	YES	NO
20	20	MDN		SCA	NO	YES	NO
21	21	MDN		SCA	NO	YES	NO
22	22	MDN		SCA	NO	YES	NO
23	23	MDN		SCA	NO	YES	NO
24	24	MDN		SCA	NO	YES	NO
25	25	MDN		SCA	NO	YES	NO
26	26	MDN		SCA	NO	YES	NO
27	27	MDN		SCA	NO	YES	NO
28	28	MDN		SCA	NO	YES	NO
29	29	MDN		SCA	NO	YES	NO
30	30	MDN		SCA	NO	YES	NO

Nortel National ISDN-1

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 31-60

PDN for DSS keys 1-60: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
31	31	MDN		SCA	NO	YES	NO
32	32	MDN		SCA	NO	YES	NO
33	33	MDN		SCA	NO	YES	NO
34	34	MDN		SCA	NO	YES	NO
35	35	MDN		SCA	NO	YES	NO
36	36	MDN		SCA	NO	YES	NO
37	37	MDN		SCA	NO	YES	NO
38	38	MDN		SCA	NO	YES	NO
39	39	MDN		SCA	NO	YES	NO
40	40	MDN		SCA	NO	YES	NO
41	41	MDN		SCA	NO	YES	NO
42	42	MDN		SCA	NO	YES	NO
43	43	MDN		SCA	NO	YES	NO
44	44	MDN		SCA	NO	YES	NO
45	45	MDN		SCA	NO	YES	NO
46	46	MDN		SCA	NO	YES	NO
47	47	MDN		SCA	NO	YES	NO
48	48	MDN		SCA	NO	YES	NO
49	49	MDN		SCA	NO	YES	NO
50	50	MDN		SCA	NO	YES	NO
51	51	MDN		SCA	NO	YES	NO
52	52	MDN		SCA	NO	YES	NO
53	53	MDN		SCA	NO	YES	NO
54	54	MDN		SCA	NO	YES	NO
55	55	MDN		SCA	NO	YES	NO
56	56	MDN		SCA	NO	YES	NO
57	57	MDN		SCA	NO	YES	NO
58	58	MDN		SCA	NO	YES	NO
59	59	MDN		SCA	NO	YES	NO
60	60	MDN		SCA	NO	YES	NO

Nortel National ISDN-1

40d120 Translation Order Guide #5

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 61-120

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	

19. **Directory Number Assignments**

See 40d120 Translation Order Guide #6 and #7.

20. **Feature Assignments**

None required.

Nortel National ISDN-1

40d120 Translation Order Guide #6

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 61-90

PDN for DSS keys 61-120: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
61	1	DN			YES	YES	NO
62	2	MDN		SCA	NO	YES	NO
63	3	MDN		SCA	NO	YES	NO
64	4	MDN		SCA	NO	YES	NO
65	5	MDN		SCA	NO	YES	NO
66	6	MDN		SCA	NO	YES	NO
67	7	MDN		SCA	NO	YES	NO
68	8	MDN		SCA	NO	YES	NO
69	9	MDN		SCA	NO	YES	NO
70	10	MDN		SCA	NO	YES	NO
71	11	MDN		SCA	NO	YES	NO
72	12	MDN		SCA	NO	YES	NO
73	13	MDN		SCA	NO	YES	NO
74	14	MDN		SCA	NO	YES	NO
75	15	MDN		SCA	NO	YES	NO
76	16	MDN		SCA	NO	YES	NO
77	17	MDN		SCA	NO	YES	NO
78	18	MDN		SCA	NO	YES	NO
79	19	MDN		SCA	NO	YES	NO
80	20	MDN		SCA	NO	YES	NO
81	21	MDN		SCA	NO	YES	NO
82	22	MDN		SCA	NO	YES	NO
83	23	MDN		SCA	NO	YES	NO
84	24	MDN		SCA	NO	YES	NO
85	25	MDN		SCA	NO	YES	NO
86	26	MDN		SCA	NO	YES	NO
87	27	MDN		SCA	NO	YES	NO
88	28	MDN		SCA	NO	YES	NO
89	29	MDN		SCA	NO	YES	NO
90	30	MDN		SCA	NO	YES	NO

Nortel National ISDN-1

40d120 Translation Order Guide #7

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 91-120

PDN for DSS keys 61-120: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
91	31	MDN		SCA	NO	YES	NO
92	32	MDN		SCA	NO	YES	NO
93	33	MDN		SCA	NO	YES	NO
94	34	MDN		SCA	NO	YES	NO
95	35	MDN		SCA	NO	YES	NO
96	36	MDN		SCA	NO	YES	NO
97	37	MDN		SCA	NO	YES	NO
98	38	MDN		SCA	NO	YES	NO
99	39	MDN		SCA	NO	YES	NO
100	40	MDN		SCA	NO	YES	NO
101	41	MDN		SCA	NO	YES	NO
102	42	MDN		SCA	NO	YES	NO
103	43	MDN		SCA	NO	YES	NO
104	44	MDN		SCA	NO	YES	NO
105	45	MDN		SCA	NO	YES	NO
106	46	MDN		SCA	NO	YES	NO
107	47	MDN		SCA	NO	YES	NO
108	48	MDN		SCA	NO	YES	NO
109	49	MDN		SCA	NO	YES	NO
110	50	MDN		SCA	NO	YES	NO
111	51	MDN		SCA	NO	YES	NO
112	52	MDN		SCA	NO	YES	NO
113	53	MDN		SCA	NO	YES	NO
114	54	MDN		SCA	NO	YES	NO
115	55	MDN		SCA	NO	YES	NO
116	56	MDN		SCA	NO	YES	NO
117	57	MDN		SCA	NO	YES	NO
118	58	MDN		SCA	NO	YES	NO
119	59	MDN		SCA	NO	YES	NO
120	60	MDN		SCA	NO	YES	NO

Nortel
National ISDN-2

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	CS: PS:	Y N
12.	Version: Issue:	FUNCTIONAL 2
13.	SPID-Suffix:	01
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	NONE

19. **Directory Number Assignments**

Key	DN Type	Directory Number	MADN Type	Primary	CA	Ringing	Bridging
1						YES	NO
2						YES	NO
3						YES	NO
4						YES	NO
5						YES	NO
6						YES	NO
7						YES	NO
8						YES	NO
9						YES	NO
10						YES	NO
11						YES	NO
12						YES	NO
13						YES	NO
14						YES	NO

20. **Feature Assignments**

	Key	Feature	Description
a.	1		Controller
b.			
c.	7	DTM	Deny Termination on MDN
d.	8	DTM	Deny Termination on MDN
e.			
f.	57	CFU N	Call Forward Universal, No Overflow
g.			
h.	60	FC 3	Flexible Calling, 3 party conference
i.	61	Transfer IMP CTALL	Call Transfer, All Call Types
j.	62	DROP	Drop last party from conference

Nortel National ISDN-2

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	SLBRI:	N
12.	CS: PS:	NI2 N
13.	Version: Issue:	FUNCTIONAL 2
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	

19. **Directory Number Assignments**

See 40d120 Translation Order Guide #3 and #4.

20. **Feature Assignments**

None required.

Nortel National ISDN-2

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-30

PDN for DSS keys 1-60: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
1	1	DN			YES	YES	NO
2	2	MDN		SCA	NO	YES	NO
3	3	MDN		SCA	NO	YES	NO
4	4	MDN		SCA	NO	YES	NO
5	5	MDN		SCA	NO	YES	NO
6	6	MDN		SCA	NO	YES	NO
7	7	MDN		SCA	NO	YES	NO
8	8	MDN		SCA	NO	YES	NO
9	9	MDN		SCA	NO	YES	NO
10	10	MDN		SCA	NO	YES	NO
11	11	MDN		SCA	NO	YES	NO
12	12	MDN		SCA	NO	YES	NO
13	13	MDN		SCA	NO	YES	NO
14	14	MDN		SCA	NO	YES	NO
15	15	MDN		SCA	NO	YES	NO
16	16	MDN		SCA	NO	YES	NO
17	17	MDN		SCA	NO	YES	NO
18	18	MDN		SCA	NO	YES	NO
19	19	MDN		SCA	NO	YES	NO
20	20	MDN		SCA	NO	YES	NO
21	21	MDN		SCA	NO	YES	NO
22	22	MDN		SCA	NO	YES	NO
23	23	MDN		SCA	NO	YES	NO
24	24	MDN		SCA	NO	YES	NO
25	25	MDN		SCA	NO	YES	NO
26	26	MDN		SCA	NO	YES	NO
27	27	MDN		SCA	NO	YES	NO
28	28	MDN		SCA	NO	YES	NO
29	29	MDN		SCA	NO	YES	NO
30	30	MDN		SCA	NO	YES	NO

Nortel National ISDN-2

40d120 Translation Order Guide #4

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 31-60

PDN for DSS keys 1-60: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
31	31	MDN		SCA	NO	YES	NO
32	32	MDN		SCA	NO	YES	NO
33	33	MDN		SCA	NO	YES	NO
34	34	MDN		SCA	NO	YES	NO
35	35	MDN		SCA	NO	YES	NO
36	36	MDN		SCA	NO	YES	NO
37	37	MDN		SCA	NO	YES	NO
38	38	MDN		SCA	NO	YES	NO
39	39	MDN		SCA	NO	YES	NO
40	40	MDN		SCA	NO	YES	NO
41	41	MDN		SCA	NO	YES	NO
42	42	MDN		SCA	NO	YES	NO
43	43	MDN		SCA	NO	YES	NO
44	44	MDN		SCA	NO	YES	NO
45	45	MDN		SCA	NO	YES	NO
46	46	MDN		SCA	NO	YES	NO
47	47	MDN		SCA	NO	YES	NO
48	48	MDN		SCA	NO	YES	NO
49	49	MDN		SCA	NO	YES	NO
50	50	MDN		SCA	NO	YES	NO
51	51	MDN		SCA	NO	YES	NO
52	52	MDN		SCA	NO	YES	NO
53	53	MDN		SCA	NO	YES	NO
54	54	MDN		SCA	NO	YES	NO
55	55	MDN		SCA	NO	YES	NO
56	56	MDN		SCA	NO	YES	NO
57	57	MDN		SCA	NO	YES	NO
58	58	MDN		SCA	NO	YES	NO
59	59	MDN		SCA	NO	YES	NO
60	60	MDN		SCA	NO	YES	NO

Nortel
National ISDN-2

40d120 Translation Order Guide #5

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 61-120

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	PIC (Preferred Long Distance Carrier #):	
6.	SNPA (area code):	
7.	Directory Number:	
8.	LTCLASS: Default Logical Terminal:	BRAFS N
9.	EKTS: CACH:	Y Y
10.	Bearer Service Restrictions:	NOPMD NOCMD
11.	SLBRI:	N
12.	CS: PS:	NI2 N
13.	Version: Issue:	FUNCTIONAL 2
14.	TEI:	DYNAMIC
15.	NCOS: RING:	0 Y
16.	Line Class Code:	ISDNKSET
17.	MAXKEYS:	64
18.	Other Terminal PDN associated with this BRI:	

19. **Directory Number Assignments**

See 40d120 Translation Order Guide #6 and #7.

20. **Feature Assignments**

None required.

Nortel National ISDN-2

40d120 Translation Order Guide #6

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 61-90

PDN for DSS keys 61-120: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
61	1	DN			YES	YES	NO
62	2	MDN		SCA	NO	YES	NO
63	3	MDN		SCA	NO	YES	NO
64	4	MDN		SCA	NO	YES	NO
65	5	MDN		SCA	NO	YES	NO
66	6	MDN		SCA	NO	YES	NO
67	7	MDN		SCA	NO	YES	NO
68	8	MDN		SCA	NO	YES	NO
69	9	MDN		SCA	NO	YES	NO
70	10	MDN		SCA	NO	YES	NO
71	11	MDN		SCA	NO	YES	NO
72	12	MDN		SCA	NO	YES	NO
73	13	MDN		SCA	NO	YES	NO
74	14	MDN		SCA	NO	YES	NO
75	15	MDN		SCA	NO	YES	NO
76	16	MDN		SCA	NO	YES	NO
77	17	MDN		SCA	NO	YES	NO
78	18	MDN		SCA	NO	YES	NO
79	19	MDN		SCA	NO	YES	NO
80	20	MDN		SCA	NO	YES	NO
81	21	MDN		SCA	NO	YES	NO
82	22	MDN		SCA	NO	YES	NO
83	23	MDN		SCA	NO	YES	NO
84	24	MDN		SCA	NO	YES	NO
85	25	MDN		SCA	NO	YES	NO
86	26	MDN		SCA	NO	YES	NO
87	27	MDN		SCA	NO	YES	NO
88	28	MDN		SCA	NO	YES	NO
89	29	MDN		SCA	NO	YES	NO
90	30	MDN		SCA	NO	YES	NO

Nortel National ISDN-2

40d120 Translation Order Guide #7

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 91-120

PDN for DSS keys 61-120: _____

DSS Key #	Network CA #	DN Type	Directory Number	MADN Type	Primary	Ringing	Bridging
91	31	MDN		SCA	NO	YES	NO
92	32	MDN		SCA	NO	YES	NO
93	33	MDN		SCA	NO	YES	NO
94	34	MDN		SCA	NO	YES	NO
95	35	MDN		SCA	NO	YES	NO
96	36	MDN		SCA	NO	YES	NO
97	37	MDN		SCA	NO	YES	NO
98	38	MDN		SCA	NO	YES	NO
99	39	MDN		SCA	NO	YES	NO
100	40	MDN		SCA	NO	YES	NO
101	41	MDN		SCA	NO	YES	NO
102	42	MDN		SCA	NO	YES	NO
103	43	MDN		SCA	NO	YES	NO
104	44	MDN		SCA	NO	YES	NO
105	45	MDN		SCA	NO	YES	NO
106	46	MDN		SCA	NO	YES	NO
107	47	MDN		SCA	NO	YES	NO
108	48	MDN		SCA	NO	YES	NO
109	49	MDN		SCA	NO	YES	NO
110	50	MDN		SCA	NO	YES	NO
111	51	MDN		SCA	NO	YES	NO
112	52	MDN		SCA	NO	YES	NO
113	53	MDN		SCA	NO	YES	NO
114	54	MDN		SCA	NO	YES	NO
115	55	MDN		SCA	NO	YES	NO
116	56	MDN		SCA	NO	YES	NO
117	57	MDN		SCA	NO	YES	NO
118	58	MDN		SCA	NO	YES	NO
119	59	MDN		SCA	NO	YES	NO
120	60	MDN		SCA	NO	YES	NO

Siemens National ISDN

40d120 Translation Order Guide #1

Primary Directory Number Configuration – Tone Commander 40d Console

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Area Code (NPA):	
6.	Directory Number (DN):	
7.	Long Distance Carrier (PIC):	
8.	Maximum B Channels (BCHDN):	1
9.	Bearer Capability	
	BCDN:	SP & AU3
	BCHCT:	2-VI & 0-CMD & 0-PMD
	IBCHCT:	2-VI & 0-CMD & 0-PMD
	OBCHCT:	2-VI & 0-CMD & 0-PMD
	CT:	VI
10.	Terminal Limit (TERMLIM):	1
	Other Associated Terminal DN:	None
11.	Terminal Class of Service (TSPCOS):	ICHD & NOTIFY & EKTS & CACH & BRGCE & DN3PBRG
12.	Centrex Class of Service (CXSCOS):	CT
13.	Feature Activators (FA):	58-DPN 60-TWC 62-DLPA 55-CALLPARK 56-CALLRTRV
	Feature Indicators (FI):	58-DPN 60-TWC 55-CALLPARK 56-CALLRTRV

Customer Group Configuration

14.	Customer Group Number (CSTMGRP):	
15.	Customer Group Type (TYPE):	EKTS
16.	EKTS Timer Value (EKTST1):	18

Directory Number Configuration

17.	Call Type (CT):	VI
18.	Class of Service (COS):	EKTS & ICND & NOICCNTN & RND
19.	Call Diversion (DIV):	CFV & UPCFVDN & NOCFIND & NORRNG & CCNOAREQ
20.	Category (CAT):	EKTS
21.	Customer Group Number (CSTMGRP):	*reference Customer Group Number in item 14 above*
22.	Traffic Restrictions (TRARSTR):	CARDT7 & CARDT8

Directory Number Call Appearance Assignments

Directory Number (DN)	Call Appearance Assignment (DNCA)	Features (FA/FI)	Call Forward Authorize (AUTH)	Alerting Pattern (ALERTPAT)
23.	1-1 & 2-2 & 3-3 & 4-4 & 5-5 & 6-6 & 7-7 & 8-8	57-CFV	UPCFVDN	NORMAL
24.				
25.				
26.				
27.				

Siemens
National ISDN

40d120 Translation Order Guide #2

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 1-60

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Area Code (NPA):	
6.	Directory Number (DN):	
7.	Long Distance Carrier (PIC):	
8.	Maximum B Channels (BCHDN):	1
9.	Bearer Capability	
	BCDN:	SP & AU3
	BCHCT:	1-VI & 0-CMD & 0-PMD
	IBCHCT:	1-VI & 0-CMD & 0-PMD
	OBCHCT:	1-VI & 0-CMD & 0-PMD
	CT:	VI
10.	Terminal Limit (TERMLIM):	2
	Other Associated Terminal DN:	
11.	Terminal Class of Service (TSPCOS):	ICHD & NOTIFY & EKTS & CACH & BRGCE
12.	Centrex Class of Service (CXSCOS):	
13.	Feature Activators (FA):	
	Feature Indicators (FI):	

Customer Group Configuration

14.	Customer Group Number (CSTMGRP):	
15.	Customer Group Type (TYPE):	EKTS
16.	EKTS Timer Value (EKTST1):	18

Directory Number Configuration

17.	Call Type (CT):	VI
18.	Category (CAT):	EKTS
19.	Class of Service (COS):	EKTS & ICND & NOICCNTN & RND
20.	Call Diversion (DIV):	
21.	Customer Group Number (CSTMGRP):	*reference Customer Group Number in item 14 above*

Directory Number Call Appearance Assignments

See the 40d120 Translation Order Guide #3.

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National ISDN

40d120 Translation Order Guide #3

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 1-60

PDN for DSS keys 1-60: _____

DSS Key	Directory Number	DNCA	Alerting Pattern
1		1-1	NORMAL
2		2-1	NORMAL
3		3-1	NORMAL
4		4-1	NORMAL
5		5-1	NORMAL
6		6-1	NORMAL
7		7-1	NORMAL
8		8-1	NORMAL
9		9-1	NORMAL
10		10-1	NORMAL
11		11-1	NORMAL
12		12-1	NORMAL
13		13-1	NORMAL
14		14-1	NORMAL
15		15-1	NORMAL
16		16-1	NORMAL
17		17-1	NORMAL
18		18-1	NORMAL
19		19-1	NORMAL
20		20-1	NORMAL
21		21-1	NORMAL
22		22-1	NORMAL
23		23-1	NORMAL
24		24-1	NORMAL
25		25-1	NORMAL
26		26-1	NORMAL
27		27-1	NORMAL
28		28-1	NORMAL
29		29-1	NORMAL
30		30-1	NORMAL

DSS Key	Directory Number	DNCA	Alerting Pattern
31		31-1	NORMAL
32		32-1	NORMAL
33		33-1	NORMAL
34		34-1	NORMAL
35		35-1	NORMAL
36		36-1	NORMAL
37		37-1	NORMAL
38		38-1	NORMAL
39		39-1	NORMAL
40		40-1	NORMAL
41		41-1	NORMAL
42		42-1	NORMAL
43		43-1	NORMAL
44		44-1	NORMAL
45		45-1	NORMAL
46		46-1	NORMAL
47		47-1	NORMAL
48		48-1	NORMAL
49		49-1	NORMAL
50		50-1	NORMAL
51		51-1	NORMAL
52		52-1	NORMAL
53		53-1	NORMAL
54		54-1	NORMAL
55		55-1	NORMAL
56		56-1	NORMAL
57		57-1	NORMAL
58		58-1	NORMAL
59		59-1	NORMAL
60		60-1	NORMAL

Siemens
National ISDN

40d120 Translation Order Guide #4

Primary Directory Number Configuration – Tone Commander 120d Console, DSS Keys 61-120

1.	Customer Name:	
2.	Customer Contact:	
3.	Service Address:	
4.	Billing Telephone #:	
5.	Area Code (NPA):	
6.	Directory Number (DN):	
7.	Long Distance Carrier (PIC):	
8.	Maximum B Channels (BCHDN):	1
9.	Bearer Capability	
	BCDN:	SP & AU3
	BCHCT:	1-VI & 0-CMD & 0-PMD
	IBCHCT:	1-VI & 0-CMD & 0-PMD
	OBCHCT:	1-VI & 0-CMD & 0-PMD
	CT:	VI
10.	Terminal Limit (TERMLIM):	2
	Other Associated Terminal DN:	
11.	Terminal Class of Service (TSPCOS):	ICHD & NOTIFY & EKTS & CACH & BRGCE
12.	Centrex Class of Service (CXSCOS):	
13.	Feature Activators (FA):	
	Feature Indicators (FI):	

Customer Group Configuration

14.	Customer Group Number (CSTMGRP):	
15.	Customer Group Type (TYPE):	EKTS
16.	EKTS Timer Value (EKTST1):	18

Directory Number Configuration

17.	Call Type (CT):	VI
18.	Category (CAT):	EKTS
19.	Class of Service (COS):	EKTS & ICND & NOICCNTN & RND
20.	Call Diversion (DIV):	

Directory Number Call Appearance Assignments

See the 40d120 Translation Order Guide #5.

Siemens
National ISDN

40d120 Translation Order Guide #5

Shared Call Appearance Assignments – Tone Commander 120d Console, DSS Keys 61-120

PDN for DSS keys 61-120: _____

DSS Key	Directory Number	DNCA	Alerting Pattern
61		1-1	NORMAL
62		2-1	NORMAL
63		3-1	NORMAL
64		4-1	NORMAL
65		5-1	NORMAL
66		6-1	NORMAL
67		7-1	NORMAL
68		8-1	NORMAL
69		9-1	NORMAL
70		10-1	NORMAL
71		11-1	NORMAL
72		12-1	NORMAL
73		13-1	NORMAL
74		14-1	NORMAL
75		15-1	NORMAL
76		16-1	NORMAL
77		17-1	NORMAL
78		18-1	NORMAL
79		19-1	NORMAL
80		20-1	NORMAL
81		21-1	NORMAL
82		22-1	NORMAL
83		23-1	NORMAL
84		24-1	NORMAL
85		25-1	NORMAL
86		26-1	NORMAL
87		27-1	NORMAL
88		28-1	NORMAL
89		29-1	NORMAL
90		30-1	NORMAL

DSS Key	Directory Number	DNCA	Alerting Pattern
91		31-1	NORMAL
92		32-1	NORMAL
93		33-1	NORMAL
94		34-1	NORMAL
95		35-1	NORMAL
96		36-1	NORMAL
97		37-1	NORMAL
98		38-1	NORMAL
99		39-1	NORMAL
100		40-1	NORMAL
101		41-1	NORMAL
102		42-1	NORMAL
103		43-1	NORMAL
104		44-1	NORMAL
105		45-1	NORMAL
106		46-1	NORMAL
107		47-1	NORMAL
108		48-1	NORMAL
109		49-1	NORMAL
110		50-1	NORMAL
111		51-1	NORMAL
112		52-1	NORMAL
113		53-1	NORMAL
114		54-1	NORMAL
115		55-1	NORMAL
116		56-1	NORMAL
117		57-1	NORMAL
118		58-1	NORMAL
119		59-1	NORMAL
120		60-1	NORMAL

40d120 Configuration Sheet #1

SPID and PDN Numbers

40d	
SPID *(3-20 digits maximum; exactly 10 digits for Lucent Custom ISDN)*	
PDN *(10 digits required for proper operation)*	

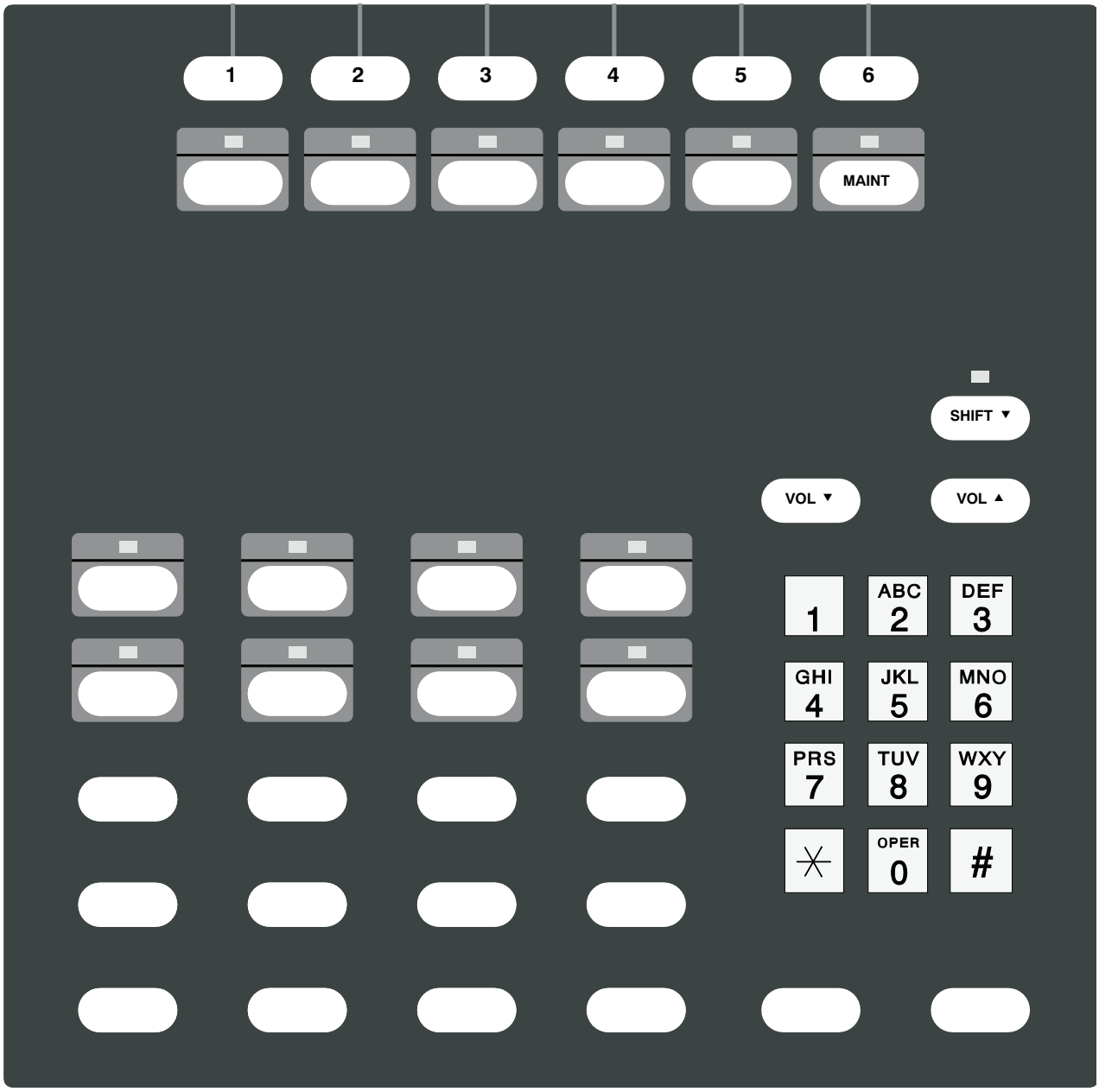
ISDN Version *(check one)*	❑ Lucent National ISDN ❑ Lucent Custom ISDN ❑ Nortel National ISDN ❑ Siemens National ISDN

120d		SPID
120d #1	Keys 001-060	
	Keys 061-120	
120d #2	Keys 001-060	
	Keys 061-120	
120d #3	Keys 001-060	
	Keys 061-120	
120d #4	Keys 001-060	
	Keys 061-120	

If you have any questions about the Configuration Sheets or Translation Order Guides, please call Tone Commander Customer Technical Support at **(800) 524-0024**.

40d120 Configuration Sheet #2, Key Mapping

See pages 38-41 for default key assignments.



Feature Key	Number To Dial
Call Forward	
Page	
Voice Mail 1	
Voice Mail 2	

National ISDN

40d120 Configuration Sheet #3

Call Queues

40d Internal Identifier		Default Queue Number	Actual Setting *(0-8)*	Default Timeout Value *(seconds)*	Actual Setting *(000-999 seconds)*	Default Timeout Queue Number	Actual Setting *(0-8)*
InX	External	8		120		8	
InI	Internal	8		120		8	
Icm	Intercom	8		120		8	
CFA	All from	8		120		8	
CFB	Busy from	8		120		8	
CFN	No Ans from	8		150		8	
HLD	Hold Recall	8		120		8	
NXF	NXF Recall	8		120		8	
Pag	Page Recall	8		120		8	
Prk	Park Recall	8		120		8	
XFR	Transfer Recall	8		120		8	
CMP	Camp Recall	8		120		8	
SER	Serial Recall	8		120		8	
FOV	Flash Override	0		120		0	
FLA	Flash	1		120		1	
IMM	Immediate	2		120		2	
PRI	Priority	3		120		3	

Lucent Custom ISDN

40d120 Configuration Sheet #3

Call Queues

Network Identifier		Default Queue Number	Actual Setting *(0-8)*	Default Timeout Value *(seconds)*	Actual Setting *(000-999 seconds)*	Default Timeout Queue Number	Actual Setting *(0-8)*
InX	External	8		120		8	
InI	Internal	8		120		8	
CFA	All from	8		120		8	
CFB	Busy from	8		120		8	
CFN	No Ans from	8		150		8	
ACB	Call Back	8		120		8	
Icm	Intercom	8		120		8	
OnL	Online from	8		120		8	
Pri	Priority	8		120		8	
HLD	Hold Recall	8		120		8	
CBK	CBak Recall	8		120		8	
NXF	NXF Recall	8		120		8	
Pag	Page Recall	8		120		8	
Prk	Park Recall	8		120		8	
RCL	Recall from	8		120		8	
WT?*	WATS ?*	8		120		8	
LN?*	Line ?*	8		120		8	

*** ?** matches any character sent by the network. If *WT1* is sent then *WATS 1* is displayed.

40d120 Configuration Sheet #4

Recall Timers

Timer	Default Value *(seconds)*	Actual Value *(000-999 seconds)*
Ring Delay	0	
Hold Recall	120	
Page Recall	120	
Call Back Recall	120	
NXF Recall	120	

Loop Setup

CA	Default Value • Non-reserved = N • Terminate Only = T • Originate Only = O • Priority Only = P • Intercom = I *(Nat. only)* • UNUSED = blank	Actual Value *(N, T, O, P, I, blank)*
1	N	
2	N	
3	N	
4	N	
5	N	
6	N	
7	N	
8	N	
9		
10		
11		

CA	Default Value • Non-reserved = N • Terminate Only = T • Originate Only = O • Priority Only = P • Intercom = I *(Nat. only)* • UNUSED = blank	Actual Value *(N, T, O, P, I, blank)*
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		

120d _____ Configuration Sheet #5, DSS Keys 1-30

DSS keys are numbered vertically on the console – see page 42.

DSS Key #	User Name *(18 max.)*	Directory Number *(10 max.)*	DSS or Autodial Number *(18 max.)*	VM *(7 max.)*	CA	SPID
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

120d _____ Configuration Sheet #6, DSS Keys 31-60

DSS keys are numbered vertically on the console – see page 42.

DSS Key #	User Name *(18 max.)*	Directory Number *(10 max.)*	DSS or Autodial Number *(18 max.)*	VM *(7 max.)*	CA	SPID
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						

120d _____ Configuration Sheet #7, DSS Keys 61-90

DSS keys are numbered vertically on the console – see page 42.

DSS Key #	User Name *(18 max.)*	Directory Number *(10 max.)*	DSS or Autodial Number *(18 max.)*	VM *(7 max.)*	CA	SPID
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						

120d _____ Configuration Sheet #8, DSS Keys 91-120

DSS keys are numbered vertically on the console – see page 42.

DSS Key #	User Name *(18 max.)*	Directory Number *(10 max.)*	DSS or Autodial Number *(18 max.)*	VM *(7 max.)*	CA	SPID
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						
101						
102						
103						
104						
105						
106						
107						
108						
109						
110						
111						
112						
113						
114						
115						
116						
117						
118						
119						
120						