Manager IV 2.2 Issue 3.0 Documentation Upgrade for System 85 R2V4n

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Manager IV 2.2 Issue 3.0 Documentation Upgrade for System 85 R2V4n

North American Numbering Plan Overview

Purpose: To provide System 85 R2V4n customers at an Issue 3 or higher with the

necessary procedures to implement the North American Numbering Plan

(NANP) into their existing systems.

When? NANP takes effect January, 1995. NANP administration of System 85

R2V4 switches should be implemented before that date.

How? The necessary procedures are provided in this update document to accommodate the NANP changes for System 85 R2V4n users.

New Features The following Manger IV features are affected by the NANP changes:

- The format for **Interchangeable Number Plan Areas (INPAs)** is redefined. This change increases the number of Number Plan Areas (NPAs) to accommodate current and future needs. Previously, the format was *N0/1X*, which meant that the middle digit of an area code could only be 0 or 1. The new format is *NXX*; the middle digit can now handle digits ranging from 0-9.
- Expandable InterExchange Carrier (IXC) formats are redefined to accommodate current and future expansions for IXCs. Previously, an IXC was five-digits in length and had a format of 10XXX (as in 10ATT); The IXC is now seven digits long and the new format is 101XXXX.
- **15-digit International Dialing** has been expanded from fourteen to fifteen digits in length.

Related Changes

- Overlay NPAs superimpose one NPA on one or more existing NPAs. Calls to some office codes in the overlay NPA may be local. The use of overlay NPAs is expected to become more prevalent in the future as the availability of INPAs, and the expansion of FAX, cellular communications and Personal Communications Networks services increase.
- Non-Geographical NPAs are also available. These NPAs are needed because of the increased demand for new services (such as 700, 800 and 900 services) and the availability of INPAs.
- The **IXC Code Unblocking** feature requires that Customer Premise switching equipment now allow end users to freely select an IXC. Users can dial any IXC code they choose.

Miscellaneous Changes

The **Disable Remote Access** feature allows customers to permanently turn off the Remote Access Feature. The purpose of this feature is to block toll fraud through use of the Remote Access feature. However, if the user wants to restore remote access after disabling the feature, then AT&T must be contacted to reverse the block.

Vector Hold allows calls that are in vector processing to be put on hold.

Transactions

The next list are the transactions affected by NANP changes:

- trk-grp
- sys-cos
- ars-pattern
- hnpa
- fnpa
- ars-6-digit
- conversion
- restriction
- aar-pattern
- npa-nxx-designator
- toll-office-codes

Reports:

The following list provides the reports and report fields affected by the NANP changes for R2V4n:

ars-pattern reportaar-pattern report	The IXC/ISDN ID field is now a four-digit field in both these reports. Valid IDs can be three or four digits in length.
hnpa report	The range acceptable for the Off Code field is now 000-003, 011, 110-119 and 200-999.
fnpa reportars-6-dig report	The Foreign NPA field may now range from 200-999 in both these reports.

Note: The next section describes the screens and fields you must administer to incorporate NANP into your System 85 R2V4 switch. To emphasize the NANP feature in this document, new and changed fields have been highlighted. Naturally, they are not highlighted when you are viewing real user interface screens.

Further, be aware that the screens and transaction descriptions included in this update do not contain complete information. Refer to your existing documentation for complete details on these transactions, including dependencies and prerequisites.

Trunk Group Changes

Application:	FM
Area:	admin
	database-admin
	product-admin
Transaction Object:	trk-grp
Transaction Verbs:	add
	change
	display
Purpose	To administer the features that are associated with the
	identified trunk group.
Screen:	Page 3 (of 8)
New NANP Field:	Dial 1 for 10-Digit Calls?
	See the R2V4n Changes note that follows the next screen for details.
PROC/Word:	103/1

Trunk Group Screen — Page 3

AT&T Mgr IV 2.2	System	85 R2V4	<target></target>
fm database-admin trk-grp	lisplay		Page 3 of 8
Y	U ARE ONLY ACC	CESSING THE DATABASE	
	TRUNK GROUP	ADMINISTRATION	
Trunk Group No.	:		
NETWORK TRUNK PARAMETERS			
Bridge On Allo	wed? _	AAR/ARS Acces	s? _
Trunk Reservation Li	mit: _	Auth. Code Require	d? _
Echo Suppres	sor: _	Facility Restriction Leve	1: _
Data Restric	ted? _	ETS Networ	k? _
AAR Conditional Rout	ing? _		
Digit Collect	ion: _		
AAR/ARS Dialing Pre	fix: _	Bearer Capabilit	y: _
			_
DATA TRUNK FEATURES			
Network Service Valu	e:		
Outgoing MBO Seizur	e? _	Retry: _	
Incoming PRM Seizur	e? _ F	ailure Threshold: _	

R2V4n **Changes:**

A new field is displayed on this screen page (3): Dial 1 for 10-Digit Calls?

When this field is selected the following prompt is displayed:

Enter 'y' if '1' is a 10 digit preindicator for this trunk group, otherwise 'n'.

- A yes entry enables the switch to recognize that an incoming call is ten digits in length by the presence of the digit 1 as the first dialed digit.
- ► A *no* entry may require the switch taking the time to collect digits to determine the length of the call.
- Out-going calls using this trunk group are not affected by this field.

System Class of Service (SYS COS) Changes

Application:	FM or TCM
Area:	admin database-admin product-admin
Transaction Object:	sys-cos
Transaction Verbs:	change display
Purpose:	Displays or changes the standard set of features that accompany the switch.
NANP changes:	Pages 2 and 4 of the sys-cos screens are affected.
	 A new encode is available for the Dial 1 for Toll field that is on Page 2 of the screens.
	 A new field has been added to Page 4 of the screens: IXC Access Code
	See the R2V4n Changes notes that follow Pages 2 and 4 of the sys-cos screens.
Miscellaneous R2V4n changes:	Two new fields have been added to the sys-cos screens:
	■ The Disable Remote Access? field has been added to the Page 1 screen.
	■ The Vector Hold Allowed? field has been added to the Page 2 screen.
	See the notes that follow these screen pages for further details.
NANP Proc/Word	275/3 285/1
Misc. Proc/Word	275/4

System COS Screen — Page 1

fm database admin sys-co	os displa	У			Page 1 of 6
	YOU ARE	ONLY	ACCESSING THE DATABASE		
SYSTEM FEATURES					
Call Waiting	Enabled?	_	Standard Network Enabled?	_	
Cache Memory	Enabled?	_	Multi-Premises Enabled?	_	
Music On Hold	Enabled?	_	DCS Enabled?	_	
Tandem Tie Trunks	Enabled?	_	DCIU Enabled?	_	
Multi-Function Terminal	Enabled?	_	Multi-Machine Node Type:	_	
ISDN	Enabled?	_	Local Node Number:		=
Call Vectoring	Enabled?	_	Switch belongs to CAS?	_	
Tenant Service	Enabled?	_	CAS Main Node Number:	_	
		_			
AUTOVON INTERFACE					

Miscellaneous Changes

The **Disable Remote Access** field has been added to this screen page. When this field is selected the following prompt is displayed:

Enter 'y' to disable Remote Access, otherwise enter 'n'.

When y is entered in this field, the following message is displayed:

CAUTION: ONLY AT&T CAN RE-ENABLE REMOTE ACCESS - USE **ESCAPE b TO BACKUP**

Note: Once this transaction has been executed with **Disable Remote Access** selected, you *CANNOT* change it. Only AT&T can reverse the block.

> However, you can make the following changes if you have not yet executed the transaction:

- If you immediately change your mind while in the Disable **Remote Access** field, type \square and enter n in the field.
- Use ESC b to backup to this field if you are in another field on this screen. (Multiple backups may be necessary if you are several fields away from the Disable Remote Access field.)

Lastly, if you are on another page in this transaction, use

ESC p to backup as many pages as necessary to the page
(Page 1 in this case) that contains the Disable Remote Access field.

Prerequisite:

Remove all remote access trunks (type 50) (using the **fm:trk-grp:remove** transaction) before disabling this feature.

Note:

No remote access trunks can be added while this field is disabled.

Errors:

■ If the user attempts to disable remote access without first removing all remote access trunks, the system displays the following warning:

Remove trunk group ### using trk-grp:remove before changing Remote Access.

■ If the user attempts to assign a remote access trunk group when the remote access feature has been previously disabled, the system issues the following message:

Please contact your AT&T authorized representative to enable remote access.

SYS COS Screen — Page 2

```
AT&T Mgr IV 2.2
                                          System 85 R2V4
                                                                           <target>
fm database-admin sys-cos display
                                                                           Page 2 of 6
                       YOU ARE ONLY ACCESSING THE DATABASE
SYSTEM FEATURES (continued)
           Home NPA: ___
                                          Trunk to Trunk Transfer?
 Digits Chimed: _ RemSCEMMARCSSSTSNarDdPWithtEbn?

Digits Forwarded: _ Demand Print Password Required?

Call-Control FRL: _ Info. For Terminal Dialed Calls?
Loudspeaker Paging: _ Integrated Telemarketing Services?
AUTOMATIC CALL DISTRIBUTION (ACD/UCD)
 Abandoned-Call Search Enabled?
                                              Supervisor Console Number:
Call Management System Enabled?
                                                             Warning Tone?
        ACD Lookahead Interflow?
```

When the **Dial 1 for Toll** field is selected the following prompt is displayed: **R2V4n Changes:**

```
Enter Dial 1 for toll Calls encode (0-3).
```

The next table describes the encode choices:

0	= not required
1	= all 10-digit calls using the ARS DAC
2	= all toll calls using ARS DAC
3	= all 10-digit calls using the AAR or ARS DAC

Note: Encode **3** is new for the NANP feature.

Miscellaneous Changes

The Vector Hold Allowed? field has been added to this screen. The following prompt is displayed when this field is selected:

Enter 'y' if call in vector processing can be put on hold, otherwise enter 'n'.

SYS COS Screen — Page 4

AT&T Mgr IV 2.2	System 85 R2V4	<target></target>
fm database-admin sys-	-cos display	Page 4 of 6
	YOU ARE ONLY ACCESSING THE DATABAS	E
	Remote Access Code:	
AA	AR/ARS Authorization Code Enabled? _	
	_	
AUTOMATIC ROUTE SELECT	TION (ARS)	
	ARS Plan Manual Control Mode? _	
	ARS Plan In Effect: _	
AUTOMATIC ALTERNATE RO	OUTING (AAR)	
	AAR Dial Tone Suppressed? _	
	Digit Reserved for AAR Access: _	
UNIFORM NETWORK NUMBER	RING PLAN	
	Number of Location Code Digits:	_
	Number of Extension Digits:	_

R2V4n Change:

A new field, IXC Access Code has been added to this screen page.

The following prompt is displayed when this field is selected:

Enter IXC Code (0=5 and 7 digit IXCs, 1=All IXCs are 7 digits).

The next table provides further details:

Leading Digits	Length
1010	7
1015	7
1016	7
101y	5 or 7
10z	5 or 7

Where:

y = 1, 2, 3, 4, 7, 8 or 9

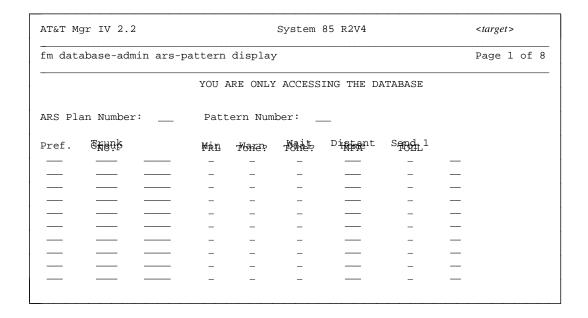
z = any digit except 1

If the field for the IXC access code is set to **0** for leading digits 10z and 101y, then the IXC access code length is five. However if you set this field to **1**, then the IXC access code length is seven. IXC access codes for the leading digits, 1010, 1015, and 1016 are always seven digits in length.

Automatic Route Selection (ARS) Pattern Changes

Application:	FM
Area:	admin database-admin product-admin
Transaction Object:	ars-pattern
Transaction Verb:	add change display remove insert
Purpose:	Associates an ordered list of trunk groups with routing preferences for calls carried from the private to the public network.
Prerequisites:	Area codes must have been previously assigned to patterns, using either the fnpa or hnpa transactions.
NANP Changes:	■ The following field has been modified in the ars-pattern screen: IXC/ISDN ID
	 Encode changes have been made for the Toll Table No. field.
	See the R2V4n Change note that follows the next screen for further details.
Proc/Word:	309/1

ARS Pattern Screen — Page 1



R2V4n Change:

■ The following field has been modified for the **ars-pattern** screen:

IXC/ISDN ID

The ID for this field has been expanded from three to four digits; enter an ID in the form, **000-9999**, or leave blank if there is no ID assigned.

■ The following encodes are now allowed for the Toll Table No. field:

blank	= all calls are local
0	= all office codes are toll calls
1-63	= the number of the toll table associated with this preference.

Caution:

Be careful when entering a blank in this field; previously, a blank meant that all calls were toll calls. The definition is now just the opposite in meaning: a blank now represents *local calls only*.

Errors

An error message is displayed if fewer than three digits (using leading zeros where necessary) are entered in the IXC/ISDN ID field.

Home Numbering Plan Area (HNPA) Changes

Transaction Object:	hnpa
Application:	FM
Areas:	admin database-admin product-admin
Transaction Verbs:	add change display remove
Purpose	To associate an ARS pattern to an office code in the switch's HNPA (in other words, the local area code.)
Prerequisite:	The ARS pattern must be defined first (using the ars-pattern add command).
NANP Changes:	See the R2V4n Change note that follows the next screen for further details.
Proc/Word:	311/1

HNPA Screen

AT&T Mgr IV 2.2	System 85 R	2V4	<target></target>
fm database-admin hnpa di	splay		Page 1 of 1
	YOU ARE ONLY ACCESSING	THE DATABASE	
Office	e Code	Office Cod	de
			
			
			
			

R2V4n Change

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the Office Code fields have changed. The following prompt is now displayed when the Office Code fields are selected:

Enter Office or Service Codes (000-003,011,110-119,200-999).

Note: If you are entering **0-3**, or **11** as a code, you must preface the code with leading zeros for a total field length of three digits. For example, code 2 would be entered as: *002*.

Select the office or service code based on the following list of information:

- Codes in the form, N11 are processed as service codes, where N = 2-9.
 (For example, 411.)
 A zero (000) is also processed as a service code.
- When this field is less than 200, the second digit must be 0 or 1.
- Codes not included in the valid field range are always sent to interception.
- To assign a routing designator for "01" (international operator assisted) calls, enter 001.
- Enter *011* to assign a routing designator for "011" calls.
- Enter *002* to assign a routing designator for "IXC+0" calls.
- Enter *003* to assign a routing designator for "IXC+01" calls.

Removing an HNPA

The **hnpa:remove** transaction deletes the office or service code from translation.

Errors

- An error message is displayed if an attempt is made to remove an office or service code that is not defined in the database.
 - If the office or service code that is being removed is not correct, then the transaction exits with a failure message.
- Error messages are likewise displayed if a change or display is executed for an office or service code that is not in the database. The system prompts you to add the office or service code.
 - If the office or service code that is entered for an add is already in the database, the transaction exits with a failure message.

Foreign Numbering Plan Area (FNPA) Changes

Application:	FM
Area:	admin
	database-admin product-admin
Transaction Object:	fnpa
Transaction Verbs:	add change display remove (New)
Purpose	To associate an ARS pattern number with an FNPA (a non-local area code) for up to three time-of-day patterns.
Prerequisite:	The ARS pattern must be defined first (using the ars-pattern add command). This transaction also assigns patterns for six-digit routing.
R2V4n Changes:	 The remove operation has been added to this this transaction. See the R2V4n Change note that follows the next screen for further details.
Proc/Word:	311/2

FNPA Screen — Page 1

AT&T Mgr IV 2.2	System 85 R2V4	<target></target>
fm database-admin fnpa	display	Page 1 of 1
	YOU ARE ONLY ACCESSING THE DATABASE	
	Foreign NPA:	

R2V4n Change:

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the Foreign NPA field has changed. The following prompt is now displayed when this field is selected:

Enter Foreign NPA (200-999)

Remove Operation

- The **remove** operation has been added for R2V4n, thereby allowing the user to remove an FNPA from translation. Subsequent calls to unassigned FNPAs are sent to interception.
- Non-existent or incorrect FNPAs should be removed from translation.

Blocking Calls to a Particular NPA

To avoid toll fraud, you can block calls to a particular FNPA by changing the pattern numbers to Pattern 1 in each of the time-of-day plans. Pattern 1 routes calls to interception.

Note: The FNPA should not be removed; as stated in the previous statement, changing the pattern number to Pattern 1 blocks fraudulent tolls calls.

Next Procedure:

After running the **fnpa** command, use the **ars-6-digit add** command to designate previously assigned ARS patterns for 6-digit routing to NPA/office code combinations. If specific NPA/office code combinations are not assigned, the first ARS pattern assigned for 6-digit routing in the **fnpa** transaction is used to route calls for all office codes in this FNPA.

ARS Six-Digit Changes

Application:	FM
Area:	admin database-admin product-admin
Transaction Object:	ars-6-dig
Transaction Verbs:	add change display
Purpose	To associate an ARS pattern to a 6-digit NPA/office code (area code/exchange) combination.
Prerequisite:	The ARS pattern must have been previously administered for 6-digit routing using the fnpa command.
NANP Change:	See the R2V4n Change Note that follows the next screen for further details.
Proc/Word:	311/3

ARS Six-Digit Screen — Page 1

&T Mgr IV 2.2			System	85 R2V4	Į		<target></target>
database-admin	ars-6-di	g add				Pag	ge 1 of 1
	Y	OU ARE O	NLY ACCE	SSING TH	IE DATABA	SE	
Foreign	NPA:	_					
OFFICE	PATTERN	OFFICE	PATTERN	OFFICE	PATTERN	OFFICE	PATTERN
CODE	NO.	CODE	NO.	CODE	NO.	CODE	NO.

R2V4n Change:

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the **Foreign NPA** field has changed. The following prompt is now displayed when this field is selected:

Enter the Foreign NPA (200-999)

Conversion Changes

Application:	FM
Area:	admin database-admin
Transaction Object:	product-admin conversion
Transaction Verbs:	add display remove
Purpose	Administers the conversion transaction that is used to convert a Direct Distance Dialing (DDD) number to a private network number.
NANP Change:	See the R2V4n Change note that follows the next screen.
Proc/Word:	312/1

Conversion Screen — Page 1

T&T Mgr	IV 2.	2	<target></target>						
n datab	database-admin conversion display								
			YOU AF	RE ONLY ACC	ESSING	THE DATA	BASE		
	NPA					NPA			
	Area	Office	7-10	Location	Area	Office	7-10	Location	
	Code	Code	Digits	Code	Code	Code	Digits	Code	

R2V4n Change

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the NPA Area Code fields have changed. The following prompt is now displayed when this field is selected:

Restriction Changes

Application:	FM
Area:	admin database-admin product-admin
Transaction Object:	restriction
Transaction Verbs:	add display remove
Purpose	Administers the restriction transaction that blocks the completion of calls to specified Direct Distance Dialing (DDD) numbers.
NANP Fields:	See the R2V4n Change note that follows the next screen for further details.
Proc/Word:	313/1

Restriction Screen — Page 1

AT&T Mgr IV 2.2	System 85 R2V4	<target></target>
fm database-admin restric	ction display	Page 1 of 1
	YOU ARE ONLY ACCESSING THE DATAB	ASE
	NPA	
	Area Office 7-10	
	Code Code Digits	
		

R2V4n Change

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the NPA Area Code field has changed. The following prompt is now displayed when this field is selected:

Enter 3 digit NPA (200-999)

Automatic Alternate Routing (AAR) Changes

Application:	FM
Area:	admin
	database-admin
	product-admin
Transaction Object:	aar-pattern
Transaction Verbs:	add
	change
	display
	remove
	insert
Purpose	Administers AAR patterns with their associated preferences.
NANP Fields:	The following field has been modified in the ars-pattern screen: IXC/ISDN ID
	See the R2V4n Change note that follows the next screen for
	further details.
Proc/Word:	321/1

AAR-Pattern Screen — Page 1

AT&T Mgr IV 2.2		Sy	stem 8	5 R2V4		<target></target>	
fm database-admin aar-	pattern a	dd				Page 1 of	1
	YOU ARI	E ONLY	ACCES	SING THE	E DATABA	SE	
Pattern N	umber: _						
Pref	e rbi ik		Min.	TWATEP	roait.	AI 95WEd?	
_			_	-	-	_	
_			_	_	-	_	
_			_	_	_	_	
			_	_	_	_	
_			_	_	_	_	
_			_	_	_	_	
_			_	-	-	_	

R2V4n Changes

The IXC/ISDN ID field title has been modified for NANP. In addition, when this field is selected, the system displays the following prompt:

Enter IXC or ISDN Network Identifier (000-9999) or blank if not assigned.

Errors

If fewer than three digits is entered in this field the system issues the following message:

Three or four digits must be entered for the IXC.

NPA-NXX Designator Changes

Application:	TCM			
Area:	admin			
	database-admin			
	product-admin			
Transaction Object:	npa-nxx-designator			
Transaction Verbs:	add			
	change			
	display			
	remove			
Purpose	Administers the abbreviation that represents an NPA (area code), an NXX (local exchange), and a thousands digits. This npa-nxx abbreviation is assigned to an extension or attendant console.			
NANP Changes:	See the R2V4n Changes note that follows the next screen for further details.			
Proc/Word:	354/3			

NPA-NXX-Designator Screen — Page 1

AT&T Mgr IV 2.2	System	85 R2V4		<target></target>
ccm database-admin npa	-nxx-designator	add		Page 1 of 1
	YOU ARE ONLY	ACCESSING THE	DATABASE	
	NPA-NXX	Designator:		
		NPA:		
		NXX:		
	Thou	sands Digit:	_	

R2V4n Changes:

The NANP changes do not affect the layout of this screen; it is shown for illustrative purposes only. However, the range of valid values for the **NPA** field has changed. The following prompt is now displayed when this field is selected:

Enter area code (200-999)		

Toll Office Codes Changes

Note:

The toll-office-codes transaction is not supported for System 85 R2V4n. If a user attempts to access this transaction, a message is displayed that the transaction is incorrect for R2V4n users.

R2V4n Procs

TABLE 1-1
NANP Procs

Proc(edure)	Word	Field	Area	Command	NANP Changes
100	1		FM	trk-grp	new error code: 44
103	1	16	FM	trk-grp	new field: Dial 1 for 10 Digit Calls?
275	3	1	FM	sys-cos	new encode, 3, for the Dial 1 for Toll field.
275	4		FM	sys-cos	new error codes: 88, 89
275	4	2	FM	sys-cos	new field, Disable Remote Access
275	4	12	FM	sys-cos	new field, Vector Hold Allowed?
285	1	11	FM	sys-cos	new field, IXC Access Code
301	4	all	FM	toll-office-codes	word 4 removed
309	1	9	FM	ars-pattern	new use of encodes
309	1	9	FM	ars-pattern	range change: 0-63
309	1	12	FM	ars-pattern	IXC field expands to 4 digits
309	1		FM	ars-pattern	new error code: 83
311	1	1	FM	hnpa	new encodes: 2,3,11
311	2	1	FM	fnpa	range change: 200-999
311	3	1	FM	ars-6-digit	range change: 200-999
312	1	2	FM	conversion	range change: 200-999
312	2	1	FM	conversion	range change: 200-999
313	1	1	FM	restriction	range change: 200-999
321	1	10	FM	aar-pattern	IXC field expands to 4 digits
321	1		FM	aar-pattern	New error code: 85
354	3	2	TCM	npa-nxx-designator	range change: 200-999