

Converting ExpressNet II® Files With BUILDX3.EXE

- Before doing the following procedures, you should back up your ExpressNet II® data files.

There are two basic steps to converting old ExpressNet II® files:

- 1) Build new ExpressNet® files from the old ExpressNet II® files.
 - The conversion program creates a set of “TEMP.*” files that can be copied and moved from the DOS prompt.
- 2) Import the “TEMP.*” files into the new ExpressNet® system.

Building New ExpressNet® Files

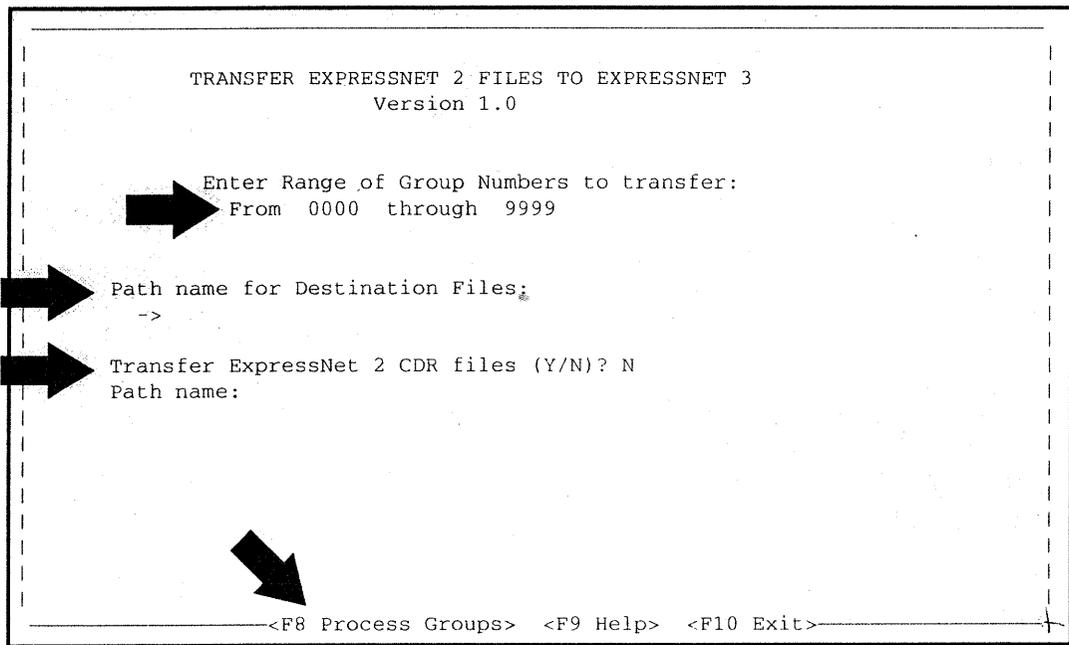
The conversion procedure uses a small program called “BUILDX3.EXE” to translate the old files into a format that the new ExpressNet® system can read. First exit the “ExpressNet®” program and run “BUILDX3.EXE” from the DOS prompt.

- NOTE: The conversion may take several hours to complete. The exact time depends on the number of phone accounts and CDR information to be converted and the speed of your computer.

At the DOS prompt *on your ExpressNet II® computer*:

- 1) Copy the “BUILDX3.EXE” and “BLDX3.TXT” files from the new ExpressNet® disks to your old “XPRESNET” directory.

- 2) In the old “XPRESNET” directory, type “BUILDX3” and press [Enter].
The following screen appears:



- 3) In the “From” and “through” fields, choose the range of groups to convert from the old ExpressNet II® system.
- If you want to convert all of your phones at one time, use the default settings: From group 0000 through 9999.
- 4) In the “Path name for Destination Files” field, enter the path for where you want to save the converted files.
- If the new ExpressNet® system will run on the same computer *and* you installed the new ExpressNet® program to the default directory, enter the following path. Be sure to include the drive letter (usually “C” or “D”):
“Drive Letter”:\XNET\SITES\XNET2.
- OR—
- If the new ExpressNet® system will run on a different computer or you installed the program to a non-default directory, enter the destination path you want. If the path does not exist, it will be created when you convert the files. The path must be to the hard drive—do not use a floppy disk.

5) If you will *not* transfer CDR files into the new ExpressNet® software, skip this step.

- Because of the time required to convert CDR records, it is recommended that you do not transfer CDR files unless they are critical to your business.

If you will move old CDR files into the new ExpressNet® software, perform the following steps:

a) Move the cursor to the “Transfer Expressnet 2 CDR files (Y/N)?” field and type “Y”.

b) Move the cursor to the “Path name” field and enter the path for the location of your ExpressNet II® CDR files.

- Usually this will be the following path:

“Drive Letter”:\XPRESNET

- If you ever changed the ExpressNet II® directory name or changed where your ExpressNet II® software saves CDR files, enter the path to your CDR files.

6) Press [F8] to convert the selected range of groups.

- NOTE: The conversion may take several hours to complete. The exact time depends on the number of phone accounts and CDR information to be converted and the speed of your computer.

- “BUILD3” creates several “TEMP.*” files in the path entered in step 4.

7) When BUILD3 completes the conversion, press [F10] to exit and return to the DOS prompt.

8) Use the information below to decide which step to perform next.

- Did you install the new ExpressNet[®] program to a non-default directory?
Yes-You will have to move the “TEMP.*” files after running this conversion. GO TO STEP 9

—OR—

- Will you run the new ExpressNet[®] program on a different computer?
Yes-You will have to move the “TEMP.*” files after running this conversion. GO TO STEP 9.

—OR—

- If the answers to both questions above is “No,” go to Step 10.

9) Use DOS commands to copy the converted files from the destination you selected (Step 4) to the computer you will run the new ExpressNet[®] program on.

- If you installed the new ExpressNet[®] program in the default directory, copy it to the following path on the ExpressNet[®] computer:
 \XNET\SITES\XNET2\

—OR—

- If you changed the name of the new ExpressNet[®] directory when you installed the program, copy the files to the following path in the directory:
 \SITES\XNET2\

10) If any of your phones *currently* operate on downloaded firmware, copy the downloadable files to the new ExpressNet[®] directory. The files are located in the “DOWNLOAD” directory in the ExpressNet II[®] directory. (The “DOWNLOAD” directory will not exist if no phones operate on downloaded firmware.)

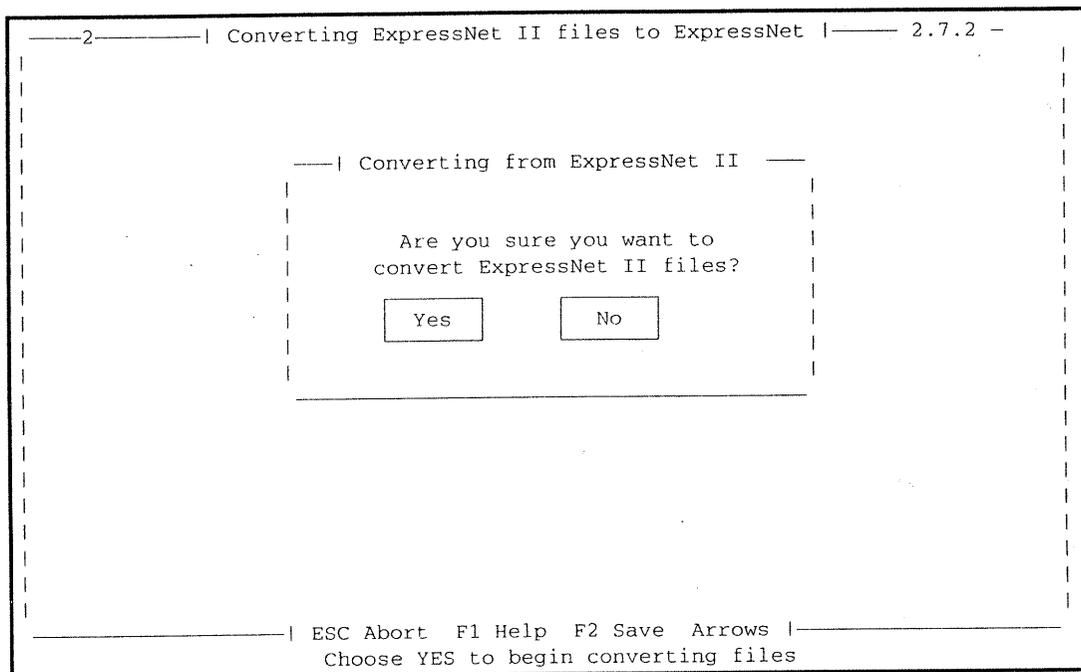
- If none of your phones operate on downloadable firmware, go to the *Converting and Importing ExpressNet II[®] Files* section of this guide. Otherwise, continue with this step.
- Use DOS commands to copy all files in the “DOWNLOAD” directory to the following path in the new ExpressNet[®] directory:
 \PARAM\SOFTWARE\

Converting and Importing ExpressNet II® Files

Once the “TEMP.*” files have been built by BUILDX3.EXE and moved to the correct DOS directory, perform the following steps in the new ExpressNet® program.

- 1) Start the new ExpressNet® program and log on using “Protel” as the user name and the password you created the first time you first logged on.
- 2) From the “Main Menu” screen, press the following keys
[7] for “File Utilities.”
[2] for “Convert Files from ExpressNet II”

The following screen appears:



- 3) Type “Y” or press [Enter]. The program converts and imports the ExpressNet II® files.
 - This will take from a few minutes to several hours, depending on the amount of data you import and the speed of your computer.
- 4) Go to the *Firmware Matrix & Worksheet* section of this guide.

Determining the Firmware Chips You Need

Before you can determine which firmware each phone has, the new ExpressNet® program has to communicate with each phone, so you have to poll the phones. (During the communication, the program receives the firmware version operating in each phone.)

After polling the phones, you have to confirm that the computer successfully communicated with them. Then you can print a report that lists the current firmware in the phones.

- To print a complete report, you have to be certain that the computer communicates with each phone.

Then you can use the report, the *Firmware Matrix* form and the *Firmware Change Worksheet* to count each firmware version you need to replace and what firmware you should use to replace it.

The instructions for these steps are on the following pages.

Before continuing, answer this question and follow the instructions:

- Are **ALL** of your phones Express 2000 Series phones *with downloadable chips* or Express 4000 Series phones ?

No or Don't Know

- 1) Go to the *Polling the Phones* section on the following page and continue with the instructions.

Yes

- 1) Go to the *Replacing the Firmware In Phones WITH a Downloadable Chip* section of this guide.
-

Polling the Phones

The new ExpressNet® program has to communicate with each phone to get the exact firmware version in each phone. There are two options for polling the phones:

1. **Automatic Polling**
Use an Automatic Poll List to poll a large number of phones. The computer can poll them at whatever time you specify.
2. **Manual Polling**
Use manual polling to poll a small number of phones—10 phones or 10 groups of phones—immediately.

Automatic Polling

To create an automatic polling list to poll all phones, start the ExpressNet® program and perform the following steps:

1. At the “Main Menu” screen, press the following keys:
 - [5] for “Modems”
 - [2] for “Auto Polling”
 - [1] for “Polling Lists”
2. The program will prompt you for the name of the new polling list.
 - If there is at least one poll list stored on the computer, the program will display the poll lists. If this is the case, press [F3] to create a new report.

3. Type “All Phones” and press [F2]. The “Edit Polling List -” screen appears:

```
-----12-----| EDIT POLLING LIST - ALL PHONES |----- 2.5.2.1 -----  
|----- 16:23:42 -----|  
  
Description: ALL PHONES  
  
Poll Type: | [ ] Incoming |  
| [x] Outgoing |  
  
Group: Assignment  
  
Start Time: 02:10  
  
Frequency: | (x) Daily |  
| ( ) Weekly |  
| ( ) Monthly |  
  
Reset Call Accounting:  
  
-Polling Actions:-  
| [x] Escrow Relay Check |  
| [x] Download Parameters |  
| [ ] Download Software if change |  
| [x] Upload Call Record Counts |  
| [ ] Upload Billable CDR |  
| [ ] Upload Billable CDR on Err |  
| [ ] Upload Billable CDR if Full |  
| [x] Upload Audit CDR |  
| [x] Upload Call Accounting |  
| [x] Update Date and Time |  
  
Next  
  
-----| ESC Abort F1 Help F2 Save F6 Print Arrows |-----  
| SPACE to toggle selection of Escrow Relay Check |-----
```

4. The cursor will be in the “Description” field. Type “All Phones” and press [Enter].

5. Press the [Arrow Down] key to move the cursor to the “Outgoing” field and press [Space] to select outgoing.

6. Use the [Arrow Down] key to move the cursor to the “Group” field (“Assignment”) and press the following keys:

[Space] to assign groups of phones to the poll list

[F8] to select all groups

[F2] to save and exit

7. Move the cursor to the “Start Time” field and enter the military time the computer should begin polling the phones.

- The time should match the Polling Window settings programmed in the phones with the ExpressNet II® software.

8. Move the cursor to the "Daily" field, and press [Space].
9. Move the cursor to the "Escrow Relay Check" field and press space to select it. Use the [Arrow Down] key to move the cursor to the rest of the "Polling Actions" fields. Press [Space] at the following fields to select them:
 - "Download Parameters"
 - "Upload Call Record Counts" (optional if desired)
 - "Upload Audit CDR" (optional if desired)
 - "Upload Call Accounting" (optional if desired)
 - "Update Date and Time"
- The polling action selections should be the same as those in the example on the previous page.
10. Press the following keys to go to the "Main Menu" screen.
 - [F2] to save and exit (If you are prompted to confirm, type "Y".
 - [Esc]
 - [Esc] to exit to the "Main Menu"
- DO NOT EXIT THE EXPRESSNET® PROGRAM. The computer will automatically poll all phones every day at the time set in the "Start Time" field.
11. After polling the phones, go to the *Confirming Communication* section of this guide.

Manual Polling

To manually poll phones, start the ExpressNet[®] program and perform the following steps:

1. At the "Main Menu" screen, press the following keys:
[5] for "Modems"
[3] for "Manual Polling"

The following screen appears:

The screenshot shows a terminal window titled "MANUAL POLLING" with version "2.5.3" and time "16:28:45". The screen is divided into three main sections: "Actions:", "Sites:", and "Groups:".

Actions:	Sites:	Groups:
<input checked="" type="checkbox"/> Escrow Relay Check	SELECT	SELECT
<input checked="" type="checkbox"/> Download Parameters	1.8136445558	1.
<input type="checkbox"/> Download Software if change	2.	2.
<input checked="" type="checkbox"/> Upload CDR Counts	3.	3.
<input type="checkbox"/> Upload Billable CDR	4.	4.
<input type="checkbox"/> Upload Billable CDR on Err	5.	5.
<input type="checkbox"/> Upload Billable CDR if Full	6.	6.
<input checked="" type="checkbox"/> Upload Audit CDR	7.	7.
<input checked="" type="checkbox"/> Upload Call Accounting	8.	8.
<input checked="" type="checkbox"/> Update Date and Time	9.	9.
<input type="checkbox"/> Reset Call Accounting	10.	10.
<input type="checkbox"/> Reset Audit CDR Buffer		

Below the "Actions:" section is the "Ports:" section with the following options:

- COM 1 IDLE
- COM 2 IDLE

At the bottom of the screen, there is a footer with the following text:

| ESC Abort F1 Help F2 Save F6 Print F8 Poll Sites F9 Poll Groups |
SPACE to toggle selection of Escrow Relay Check

2. The cursor will be in the "Escrow Relay Check" field. Press space to select it. Use the [Down Arrow] key to move the cursor to the rest of the "Polling Actions" fields. Press [Space] at the following fields to select them
 - "Download Parameters"
 - "Upload Call Record Counts" (optional if desired)
 - "Upload Audit CDR" (optional if desired)
 - "Upload Call Accounting" (optional if desired)
 - "Update Date and Time"

3. Use the [Down Arrow] key to move the cursor to the "SELECT" field in the "Sites" box and press the [Space] bar. A list of sites will be displayed.

- Use the [Up Arrow] and [Down Arrow] keys to move the cursor through the list. Press [Space] to select a site. You can select up to 10 sites.

—OR—

Use the [Down Arrow] key to move the cursor to the "SELECT" field in the "Groups" box and press the [Space] bar. A list of groups will be displayed.

- Use the [Up Arrow] and [Down Arrow] keys to move the cursor through the list. Press [Space] to select a group. You can select up to 10 groups.

4. Use the [Arrow Keys] to move the cursor to the modem ports to use for the polling.

- Press [Space] at a port field to select it for manual polling.

5. Press one of the following keys:
[F8] to begin polling selected sites
[F9] to begin polling selected groups

- The program will begin polling the selected phones or groups of phones.

6. You can exit the polling menu while the computer polls the phones. To return to the main menu, press the following keys:

- [F2] to save and exit
- [Esc] to exit to the "Main Menu"

7. After polling the phones, go to the *Confirming Communication* section of this guide.

Confirming Communication

To confirm that the computer communicates, make sure your printer is connected to the computer, it is on line and it is loaded with paper. Then follow these steps:

1. From the ExpressNet® “Main Menu” screen, press the following keys:
[4] for “Reports”
[3] for “Print Reports”
 - The “Print Report” list appears.
2. Use the [Arrow Keys] to highlight the “CONFIRM COMM” report if it is not highlighted and press [Enter]. The following screen appears:

```
-----2----- | Edit Annual Report - Trbl Report |----- 2.4.1 -----  
15:59:36 |  
Date Range From Date: 12/27/94      At: 13:00  
To Date: 12/28/94      At: 15:33  
  
Choose Ranges of: SPACE  ALL  
Order of Report: SPACE  Group  Phone # order.  
Flags to print: SPACE  No Activity,  
  
Destination: (√) Local Printer  
              ( ) Spool To file  
  
Misc. Options:[ ] Disable headings  
  
-----| ESC Abort  F1 Help  F2 Confirm  Arrows |-----  
Choose records that start with this DATE.
```

3. Enter the date and time you imported the ExpressNet II® files into the ExpressNet® program.
 - In the “From Date” field, type the date you imported the files and press [Enter]. The cursor will move to the “At” field.
 - In the “At” field, type the time you imported the files.

2. Press [F2] to confirm the settings and print the report.

- A report similar to the following will print:

12/28/94 15:33	Trouble Report	Page: 1			
All					
From: 12/27/94 13:00 To: 12/28/94 15:33					
Group#	Phone#-----	Description-----	Date	Time	Trouble Desc. InBox
000001	813-555-5555		12/05/94	11:15	No Communications with phone
000001	813-666-6666		12/05/94	11:15	No Communications with phone
000100	813-644-5558		12/05/94	11:15	No Communications with phone
End of report.					

3. Note the phone numbers listed in the “Phone#” column and the description in the “Trouble Desc.” column.

- The phones listed with “No Communications with phone” were not contacted by the computer.
- In your computer you may have some inactive test phones that you never communicate with. You can disregard these phone accounts.

4. Repoll all active phones that the computer did not communicate with and/or troubleshoot them until the computer does communicate with them.

Printing the Site Configuration Report

Before printing the report, make sure your printer is connected to the computer, it is on line and it is loaded with paper. Then follow these steps:

1. From the ExpressNet® “Main Menu” screen, press the following keys:
[4] for “Reports”
[1] for “One-Time-Only Reports”
[1] for “Site Configuration Report”

- The “One-Time-Only Report - Ph Site” screen appears.

2. Press [F2] confirm the settings and print the report.
 - A report similar to the following will print.

Group#	Phone#	Ledger #	Cost Record	Opt. Record	Current S/W	ROM Firmware	Download Fil	Serial #	Date
12/28/94 15:47 Site Configuration Report Page: 1									
All									
000004	813-646-1000		813644.XP3	813644.XP3	CD8814-0045R	CD8814-0045R			02/08/94
000005	813-646-2000		813644.XP3	813644.XP3	CA9210 X010R	CA9210 X010R			02/08/94
000006	813-647-1111		813644.XP3	813644.XP3	CD4315-0007R	CD4315-0007R			06/07/94
000015	813-644-5678	PROTEL	813644.XP3	813644.XP3	CA2209 X007R	CA2209 X007R			/ /
151860	813-645-2505	00000015	813645.XP3	813645.XP3					/ /
151861	813-644-1111		813644.XP3	813644.XP3	CD4316-3341R	CD4316-3341R			/ /
555555	813-644-1234		813644.XP3	813644.XP3	CD4316-3341R	CD4316-3341R	DISABLE		/ /
555555	813-644-1235		813644.XP3	813644.XP3	CD4316-3341R	CD4316-3341R	DISABLE		/ /
555555	813-644-5558	PROTEL	813644.XP3	813644.XP3	CA2209 X007R	CA2209 X007R			/ /
End of report.									

- The “Current S/W” column shows the firmware running in each phone. The “Download Fil” column shows the firmware downloaded from the computer to those phones capable of receiving downloadable firmware. This information will be used when you fill out the *Firmware Matrix* and the *Firmware Change Worksheet*.

Filling Out the Firmware Matrix

The *Firmware Matrix* and the *Firmware Change Worksheet* give you an organized way of determining the quantity and version of firmware chips you need for your phones. Follow these steps:

- 1) The “Site Configuration Report” includes a “Current S/W” column. In the “Current S/W” column, note the version for the first account.
 - For CD firmware, note the last letter of the firmware.
 - R-The phone is running from the firmware chip on the phone chassis.
 - E-The phone is running from the downloadable chip on the phone chassis..

Example:

CD4316-0024R is running from the firmware chip.

CD4316-3033E is running from the downloadable chip.

- 2) Find the version on the *Firmware Matrix* at the end of this section and make a tick mark anywhere in the Quantity Column for that version of firmware. (See the example on the next page.)
 - CD firmware ending with “R” should be counted in Blocks 9 through 11.
 - CD firmware ending with “E” should be counted in Blocks 12 through 14.
- 3) Repeat steps 1-2 for each account on the report.
 - Note: Phones that do not communicate with the new ExpressNet[®] program may not have accurate firmware information on the “Site Configuration Report.”

Filling Out the Firmware Change Worksheet

- 1) Once the Firmware Matrix is complete, write the quantities on the appropriate lines on the *Firmware Change Worksheet* near the end of this section. This will give you the total number of each firmware chip and voice chip that you need. (See the example on the next page.)

Example

Firmware Matrix

Firmware	Voice Chip	Quantity
AC1XXX & BC1XXX Firmware—200, 200F, 800 Western		
AC100PH	NA	
AC1020	NA	
AC1021	NA	
AC1024	NA	
AC1025	NA	
BC1013	NA	
BC1015	NA	
BC1015A	NA	
BC1016	NA	
BC1021	NA	
BC1023	NA	
BC1025	NA	
AC2XXX & BC2XXX Firmware—200BB		
AC2023	NA	
AC2024	NA	
AC2025	NA	
BC2014	NA	
BC2015A	NA	
BC2016	NA	
BC2021	NA	
BC2023	NA	
BC2025	NA	
CA2XXX Firmware—200BA, 200CA, 200BB+		
CA2101	CAX101	### 1
CA2102	CAX102	
CA2104	CAX104	
CA2107	CAX107	
Block 3 TOTAL		6
CA2XXX Firmware—200BB		
CA2204	CAX203	
CA2208	CAX203	
CA2209	CAX203	
CA2210	CAX203	
Block 4 TOTAL		8

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Firmware Change Worksheet

Firmware Matrix Block Number	Qty.	Firmware You Need
Line 1 Enter the number from Block 1: _____	BC1010	
Line 2 Enter the number from Block 2: _____	BC2010	
Line 3 Enter the number from Block 3: <u>6</u>	DA2001-01X and Voice Chip CAX203	
Line 4 Enter the number from Block 4: <u>8</u>	DA2001-01X	
Line 5 Enter the number from Block 5: _____	DA4001-01X and Voice Chip CAX203	
Line 6 Enter the number from Block 6: _____	DA4001-01X	
Line 7 Enter the number from Block 7: _____	DA9001-01X and Voice Chip CAX203	
Line 8 Enter the number from Block 8: _____	DA9001-01X	
Line 9 Enter the number from Block 9: _____	DD4317-00-XXX and Voice Chip CDX308	
Line 10 Enter the number from Block 10: _____	DD4317-00-XXX	
Line 11 Enter the number from Block 11: _____	DD4317-33-XXX	
Line 12 If Block 12 is greater than zero, enter 1 here: _____	Download File DD431700-XXX	
Line 13 If Block 13 is greater than zero, enter 1 here: _____	Download File DD431733-XXX	
Line 14 If Block 14 is greater than zero, enter 1 here: _____	Download File DD881700-XXX	

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Firmware Matrix

Firmware	Voice Chip	Quantity	
AC1XXX & BC1XXX Firmware—200, 200B, 800 Western			
AC1009H	NA	Block 1 TOTAL _____	
AC1020	NA		
AC1021	NA		
AC1024	NA		
AC1025	NA		
BC1013	NA		
BC1015	NA		
BC1015A	NA		
BC1016	NA		
BC1021	NA		
BC1023	NA		
BC1025	NA		
AC2XXX & BC2XXX Firmware—200BB			
AC2023	NA		Block 2 TOTAL _____
AC2024	NA		
AC2025	NA		
BC2014	NA		
BC2015A	NA		
BC2016	NA		
BC2021	NA		
BC2023	NA		
BC2025	NA		
CA2XXX Firmware—200BA, 200CA, 200BB+			
CA2101	CAX101	Block 3 TOTAL _____	
CA2102	CAX102		
CA2104	CAX104		
CA2107	CAX107		
<hr/>			
CA2204	CAX203	Block 4 TOTAL _____	
CA2208	CAX203		
CA2209	CAX203		
CA2210	CAX203		

Firmware Matrix

Firmware	Voice Chip	Quantity
CA4XXX Firmware—200ECS		
CA4107	CAX107	Block 5 TOTAL _____
<hr/>		
CA4204	CAX203	Block 6 TOTAL _____
CA4208	CAX203	
CA4209	CAX203	
CA4210	CAX203	
CA9XXX Firmware—Credit Express and Courtesy Plus		
CA9102	CAX102	Block 7 TOTAL _____
CA9104	CAX104	
CA9107	CAX107	
CA9110	CAX110	
<hr/>		
CA9206	CAX203	Block 8 TOTAL _____
CA9208	CAX203	
CA9209	CAX203	
CA9209	CAX203	
CA9210	CAX203	

Firmware Matrix

Firmware	Voice Chip	Quantity
CD4XXX-R Firmware—Express 2000 Series (Without Download Chip)		
CD4207-XXXXR	CDX203	Block 9
CD4303-XXXXR	CDX302	TOTAL _____
CD4304-XXXXR	CDX302	
CD4305-XXXXR	CDX302	
<hr/>		
CD4309-XXXXR	CDX308	Block 10
CD4310-XXXXR	CDX308	TOTAL _____
CD4311-XXXXR	CDX308	
CD4312-XXXXR	CDX308	
CD4313-XXXXR	CDX308	
CD4314-XXXXR	CDX308	
CD4315-XXXXR	CDX308	
CD4316-XXXXR	CDX308	
<hr/>		
CD4316-3341R	CDX333	Block 11
		TOTAL _____
<hr/>		
CD4XXX-E Firmware—Express 2000 Series (With Download Chip)		
CD4309-XXXXE	CDX308	Block 12
CD4310-XXXXE	CDX308	TOTAL _____
CD4311-XXXXE	CDX308	
CD4312-XXXXE	CDX308	
CD4313-XXXXE	CDX308	
CD4314-XXXXE	CDX308	
CD4315-XXXXE	CDX308	
CD4316-XXXXE	CDX308	
<hr/>		
CD4316-3341E	CDX333	Block 13
		TOTAL _____

Firmware Matrix

Firmware	Voice Chip	Quantity
CD88XX Firmware—Express 4000 Series		
CD8811	NA	Block 14 TOTAL _____
CD8813	NA	
CD8814	NA	
CD8815	NA	
CD8816	NA	

Firmware Change Worksheet

Firmware Matrix
Block Number

Qty. **Firmware You Need**

- Line 1** Enter the number from Block 1: _____ BC1030

- Line 2** Enter the number from Block 2: _____ BC2030

- Line 3** Enter the number from Block 3: _____ DA2001-01X and Voice Chip CAX203
- Line 4** Enter the number from Block 4: _____ DA2001-01X

- Line 5** Enter the number from Block 5: _____ DA4001-01X and Voice Chip CAX203
- Line 6** Enter the number from Block 6: _____ DA4001-01X

- Line 7** Enter the number from Block 7: _____ DA9001-01X and Voice Chip CAX203
- Line 8** Enter the number from Block 8: _____ DA9001-01X

- Line 9** Enter the number from Block 9: _____ DD4317-00-XXX and Voice Chip CDX308
- Line 10** Enter the number from Block 10: _____ DD4317-00-XXX
- Line 11** Enter the number from Block 11: _____ DD4317-33-XXX

- Line 12** If Block 12 is greater
 than zero, enter 1 here: _____ Download File DD431700.XXX

- Line 13** If Block 13 is greater
 than zero, enter 1 here: _____ Download File DD431733.XXX

- Line 14** If Block 14 is greater
 than zero, enter 1 here: _____ Download File DD881700.XXX

Replacing The Firmware In Phones *WITHOUT* a Downloadable Chip

All phones counted in Block 1 through Block 12 on the *Firmware Matrix* do not have downloadable chips, so you have to physically change the chips on the phones. Use the *Firmware Worksheet* to order the correct firmware. Then use the check lists in the *Field Check Lists* section of this guide.

Replacing The Firmware In Phones *WITH* a Downloadable Chip

The phones with downloadable chips can be upgraded from the computer. Follow these steps:

- 1) Start the new ExpressNet® program and go to the “Main Menu” screen.
- 2) Press the following keys:
 - [1] to view the list of sites
 - [Space] and [Enter] to move to the top of the list
 - [Enter] to view the first site record

A screen similar to the following will appear:

```
-----2-----| EDIT SITE RECORD - ANI: 8136445558 |----- Screen 2.1 -----
                                     13:34:36
-----|-----
| Group: 000001          Ledger Nr:          Type: CD
| Desc:  KIDRON ROAD, PHONE 3
|
|----- Updating Control Fields -----
| Costing Record: 813644 CD          Firmware Vers: CD4316-3341R
| Options Record: 814644 CD          Current Vers:  CD4316-3341R
| EEPROM file:
| S&F COST RECORD: Select Authcodes   Checksum OK ?  N
|                                         Percent Full:  0
|                                         Force Update ?  Y
|
|----- Phone Communications -----
| Trans  Trans  Flag          Total      Last      Amount
| Date   Time   Code          To Date   Collected In Box
|
| No communications available..
|
|----- Site Location -----
| Name:
| Address:
|
|-----| ESC Abort  F1 Help  F2 Save  F7 Utils  Up/Dn Arrow |-----
          Group number MUST be entered for a phone site
```

- 3) Press the following keys:
 [TAB] to move the cursor to the “Updating Control Fields” section.
 [Down Arrow]
 [Down Arrow] to move the cursor to the “EEPROM file” field
 [Space] to view the “Software Files” list

- 5) The software you should select depends on which firmware chip is already in the phone. Note the firmware version in the “Firmware Vers” field and use the [Arrow Keys] to highlight the correct firmware based on the following table.

If the “Firmware Vers” field is...	...use this download file in the “Software Files” list
CD43XX-XX	DD43XX00.XXX
CD43XX-33	DD43XX33.XXX
CD88XX	DD88XX00.XXX

- 6) When the correct software file is highlighted, press [Enter] to assign it to the site leave the “Software Files” list.

- 7) Press [Ctrl-Down Arrow] to move to the next site. Repeat steps 5 and 6 for all the phones that have a downloadable chip.

- 8) Poll the phones. The computer will automatically update the new firmware to the phone.
 - NOTE: The download of firmware will take between 10 and 20 minutes for each phone. Plan for more polling time to account.

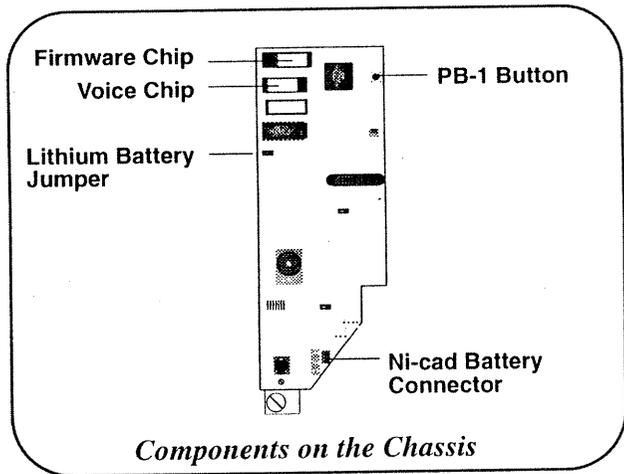
NANP Firmware Upgrade Field Checklist

Express 2000 on a B1 Line (COCOT/COPT Line)

Follow These Steps

1) Confirm that you have the correct replacement chip:

Firmware Chip On Chassis	Replacement Chip
CD4207	DD4317-00 and Voice Chip CDX308
CD4303	
CD4304	
CD4305B	
CD4309	DD4317-00 only
CD4310	
CD4311	
CD4312	
CD4313	
CD4314	
CD4315	
CD4316-00	
CD4316-33	DD-4317-33



2) Lift the receiver off hook and then dial “*#2”.

- Wait approximately 2-3 minutes for the phone and computer to communicate.

3) Dial “*#6” and listen for current date and time.

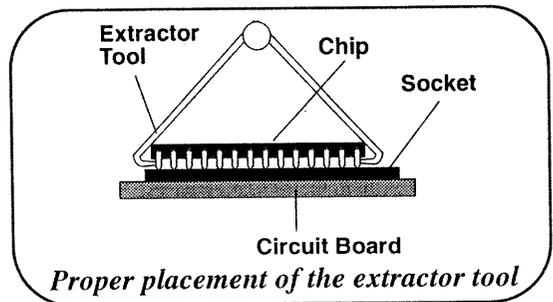
- If you don't hear current date and time, repeat step 1.

4) Disconnect the batteries.

- Disconnect the ni-cad battery connector (BT1).
- Move the lithium battery jumper (JP10) to the “out” position.

5) Remove the firmware chip (U3) from the socket using an IC extractor tool.

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)



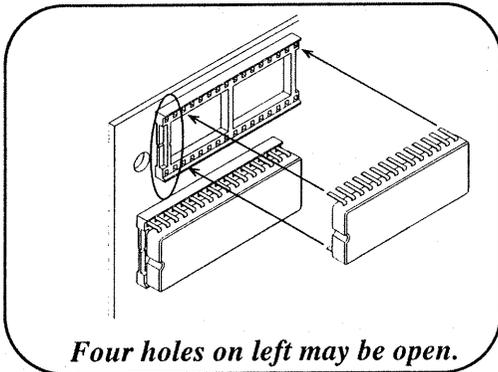
- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

(See Step 6 on the other side.)

6) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is on the left side of the chassis assembly.

NOTE: The firmware socket may be a 32-pin socket; however, the firmware chip may be a 28-pin chip. If this the case, make sure the four holes on the left side of the socket remain empty.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

7) If you need to replace the voice chip, use the same method to remove the old voice chip and replace it.

8) Reconnect batteries.

- Connect the ni-cad battery lead to connector (BT1).
- Move the lithium battery jumper (JP10) to the "in" position.

9) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial "00"
 - Dial the phone's 10-digit telephone number
 - Dial "*" and listen for a single beep.
- Enter the remote computer's phone number.
 - Dial "25".
 - Dial the remote computer's phone number
 - Dial "*".
- Download program from remote computer.
 - Dial "*#3".
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Dial "*#6" and listen for the current date and time.

10) Perform an operational test.

- Proper rating and completion of calls
- Coin collect and refund
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.

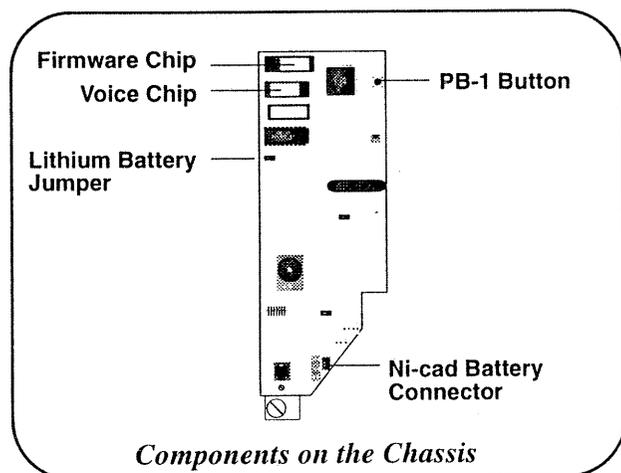
NANP Firmware Upgrade Field Checklist

Express 2000 on a Coin Line

Follow These Steps

1) Confirm that you have the correct replacement chip:

Firmware Chip On Chassis	Replacement Chip
CD4207	DD4317-00 and Voice Chip CDX308
CD4303	
CD4304	
CD4305B	
CD4309	DD4317-00 only
CD4310	
CD4311	
CD4312	
CD4313	
CD4314	
CD4315	
CD4316-00	
CD4316-33	DD-4317-33



2) Lift the receiver off hook and then dial “*#2”.

- Wait approximately 2-3 minutes for the phone and computer to communicate.

3) Dial “*#6” and listen for current date and time.

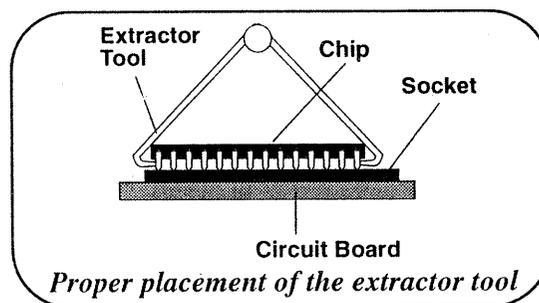
- If you don’t hear current date and time, repeat step 1.

4) Disconnect the batteries.

- Disconnect the ni-cad battery connector (BT1).
- Move the lithium battery jumper (JP10) to the “out” position.

5) Remove the firmware chip (U3) from the socket using an IC extractor tool.

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)



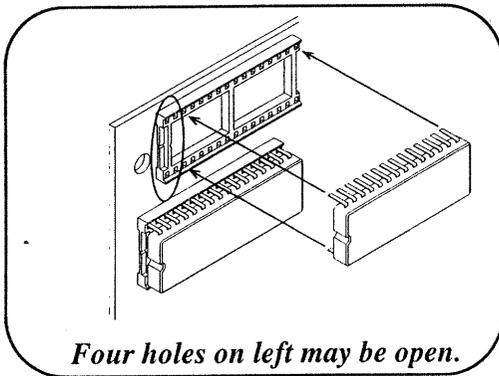
- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

(See Step 6 on the other side.)

6) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is on the left side of the chassis assembly.

NOTE: The firmware socket may be a 32-pin socket; however, the firmware chip may be a 28-pin chip. If this the case, make sure the four holes on the left side of the socket remain empty.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

7) If you need to replace the voice chip, use the same method to remove the old voice chip and replace it.

8) Reconnect batteries.

- Connect the ni-cad battery lead to connector (BT1).
- Move the lithium battery jumper (JP10) to the "in" position.

9) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial "01"
 - Dial the phone's 10-digit telephone number
 - Dial "*" and listen for a single beep.
- Enter the remote computer's phone number.
 - Dial "25".
 - Dial the remote computer's phone number
 - Dial "*".
- Download program from remote computer.
 - Dial "*#3".
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Dial "*#6" and listen for the current date and time.

10) Perform an operational test.

- Proper rating and completion of calls
- Coin collect and refund
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.

NANP Firmware Upgrade Field Checklist 200BB+ and 200ECS

Follow These Steps

1) Confirm that you have the correct replacement chips:

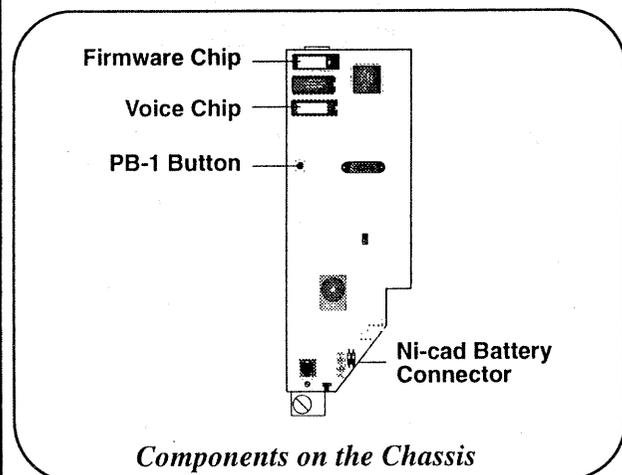
<u>Firmware Chip On Chassis</u>	<u>Replacement Chips</u>
CA2204 } CA2208 } CA2209 } CA2210 }	DA2001 only
CA2101 } CA2102 } CA2104 } CA2107 }	DA2001 and Voice Chip CAX203
CA4204 } CA4208 } CA4209 } CA4210 }	DA4001 only
CA4107 }	DA2001 and Voice Chip CAX203

2) Lift the receiver off hook and then dial “*#2”.

- Wait approximately 2-5 minutes for the phone and computer to communicate.

3) Confirm the computer and phone communicated.

- For phones with firmware CAX109 or older, call the computer operator to confirm that the phone and computer successfully communicated.
- For phones with firmware CAX110 or newer, dial “*#6” and listen for current date and time



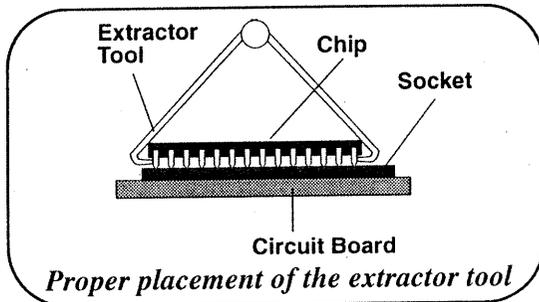
4) Disconnect the battery.

- Disconnect the ni-cad battery connector.

(See Step 5 on the other side.)

5) Remove the firmware chip from the socket using an IC extractor tool.

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)

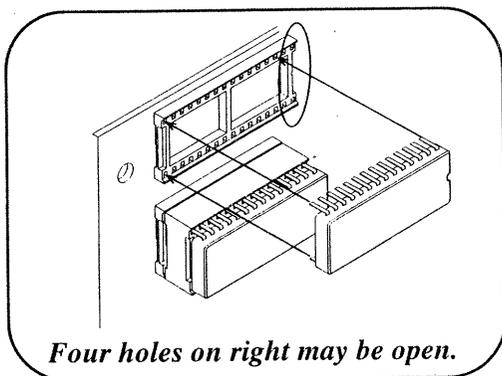


- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

6) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is on the right side of the chassis assembly.

NOTE: The firmware socket may be a 32-pin socket; however, the firmware chip may be a 28-pin chip. If this the case, make sure the four holes on the right side of the socket remain empty.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

7) If you need to replace the voice chip, use the same method to remove the old voice chip and replace it.

8) Reconnect battery.

- Connect the ni-cad battery lead to connector.

9) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial "00"
 - Dial the phone's 10-digit telephone number
 - Dial "*" and listen for a single beep.
- Enter the remote computer's phone number.
 - Dial "25"
 - Dial the remote computer's phone number
 - Dial "*".
- Download program from remote computer.
 - Dial "**#3".
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Dial "**#6" and listen for the current date and time.

10) Perform an operational test.

- Proper rating and completion of calls
- Coin collect and refund
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.

NANP Firmware Upgrade Field Checklist

900 Series—Credit Express and Courtesy Plus

Follow These Steps

- 1) **Confirm that you have the correct replacement chips:**

Firmware Chip On Chassis	Replacement Chips
CA9101	DA9001 and Voice Chip CAX203
CA9102	
CA9107	
CA9110	
CA9206	DA9001 only
CA9208	
CA9209	
CA9210	

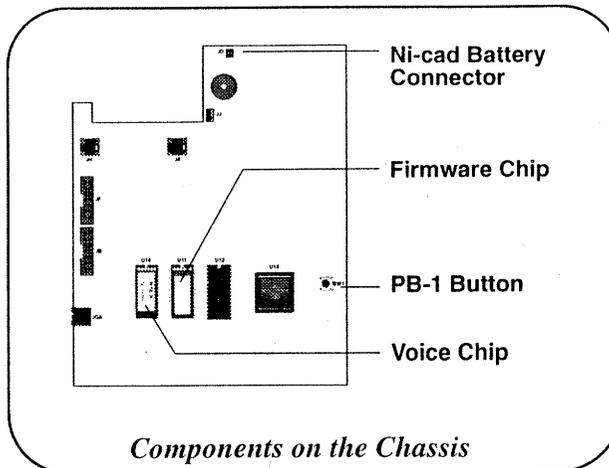
- 2) **Lift the receiver off hook and then dial “*#2”.**

- Wait approximately 2-5 minutes for the phone and computer to communicate.

- 3) **Confirm the computer and phone communicated.**

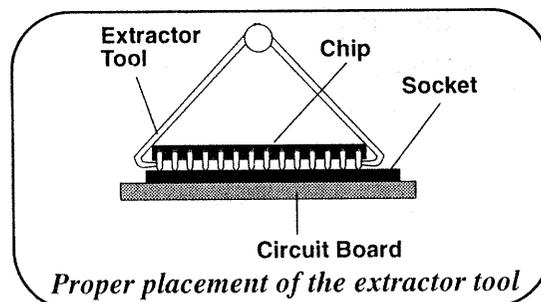
- For phones with firmware CAX109 or older, call the computer operator to confirm that the phone and computer successfully communicated.
- For phones with firmware CAX110 or newer, dial “*#6” and listen for current date and time

- 4) **Open the phone by removing the four perimeter screws on the back of the phone.**



- 5) **Disconnect the battery.**
- Disconnect the ni-cad battery connector.
- 6) **Remove the firmware chip from the socket using an IC extractor tool.**

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)



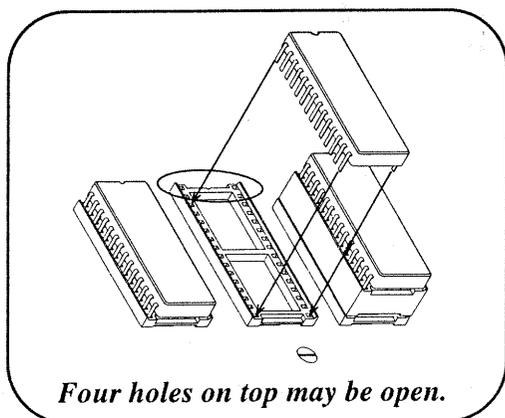
- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

(See Step 7 on the other side.)

7) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is to the top of the chassis assembly.

NOTE: The firmware socket may be a 32-pin socket; however, the firmware chip may be a 28-pin chip. If this the case, make sure the four holes on the right side of the socket remain empty.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

8) If you need to replace the voice chip, use the same method to remove the old voice chip and replace it.

9) Reconnect battery.

- Connect the ni-cad battery lead to the connector.

10) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial "00"
 - Dial the phone's 10-digit telephone number
 - Dial "*" and listen for a single beep.
- Enter the remote computer's phone number.
 - Dial "25".
 - Dial the remote computer's phone number
 - Dial "*".
- Download program from remote computer.
 - Dial "*#3".
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Dial "*#6" and listen for the current date and time.

11) Perform an operational test.

- Proper rating and completion of calls
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.

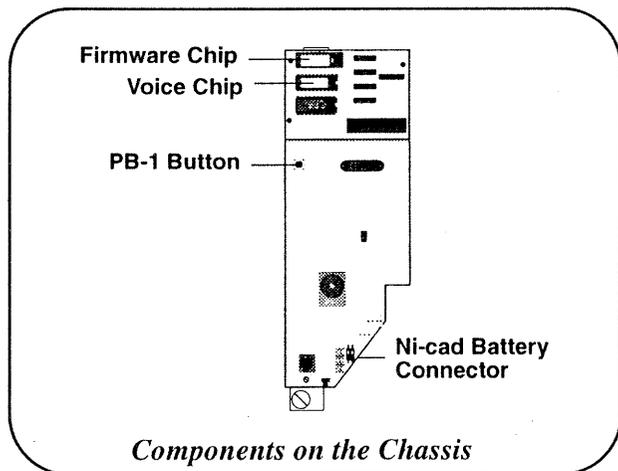
NANP Firmware Upgrade Field Checklist

200BA and 200CA

Follow These Steps

1) Confirm that you have the correct replacement chips:

<u>Firmware Chip On Chassis</u>	<u>Replacement Chips</u>
CA2204	DA2001 only
CA2208	
CA2209	
CA2210	
CA2101	DA2001 and Voice Chip CAX203
CA2102	
CA2104	
CA2107	



2) Lift the receiver off hook and then dial “*#2”.

- Wait approximately 2-5 minutes for the phone and computer to communicate.

3) Confirm the computer and phone communicated.

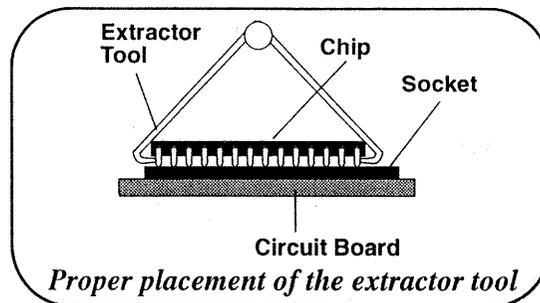
- For phones with firmware CAX109 or older, call the computer operator to confirm that the phone and computer successfully communicated.
- For phones with firmware CAX110 or newer, dial “*#6” and listen for current date and time.

4) Disconnect the battery.

- Disconnect the ni-cad battery connector.

5) Remove the firmware chip from the socket using an IC extractor tool.

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)



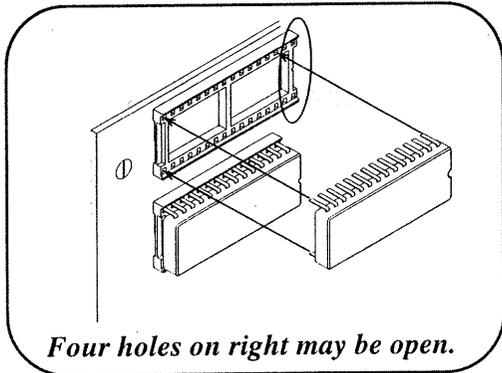
- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

(See Step 6 on the other side.)

6) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is on the right side of the chassis assembly.

NOTE: The firmware socket may be a 32-pin socket; however, the firmware chip may be a 28-pin chip. If this the case, make sure the four holes on the right side of the socket remain empty.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

7) If you need to replace the voice chip, use the same method to remove the old voice chip and replace it.

8) Reconnect battery.

- Connect the ni-cad battery lead to connector.

9) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial “00”
 - Dial the phone’s 10-digit telephone number
 - Dial “*” and listen for a single beep.
- Enter the remote computer’s phone number.
 - Dial “25”.
 - Dial the remote computer’s phone number
 - Dial “*”.
- Download program from remote computer.
 - Dial “*#3”.
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Dial “*#6” and listen for the current date and time.

10) Perform an operational test.

- Proper rating and completion of calls
- Coin collect and refund
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.

NANP Firmware Upgrade Field Checklist

200, 200B and 200BB

Follow These Steps

1) Confirm that you have the correct replacement chips:

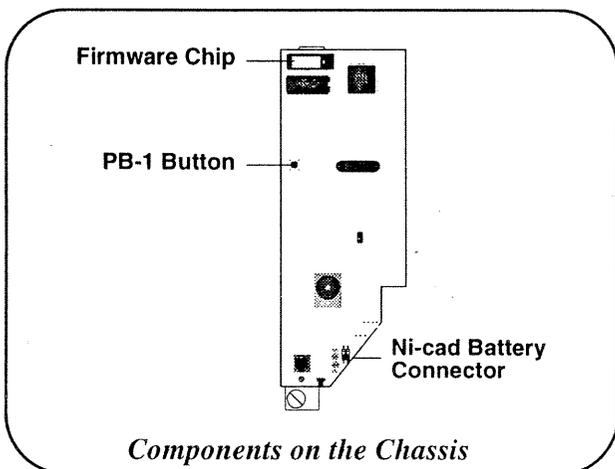
Firmware Chip On Chassis	Replacement Chips
AC1XXX } BC1XXX }	BC1030
AC2XXX } BC2XXX }	BC2030

2) Lift the receiver off hook and then dial “*#2”.

- Wait approximately 2-3 minutes for the phone and computer to communicate.

3) Confirm the computer and phone communicated.

- Call the computer operator to confirm that the phone and computer successfully communicated.

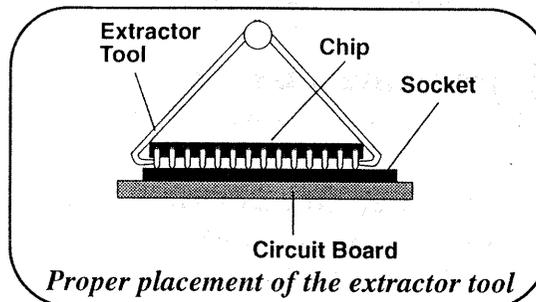


4) Disconnect the battery.

- Disconnect the ni-cad battery connector.

5) Remove the firmware chip from the socket using an IC extractor tool.

NOTE: When you use the extractor tool, make sure it is under the old firmware chip and not under the socket. (See illustration.)

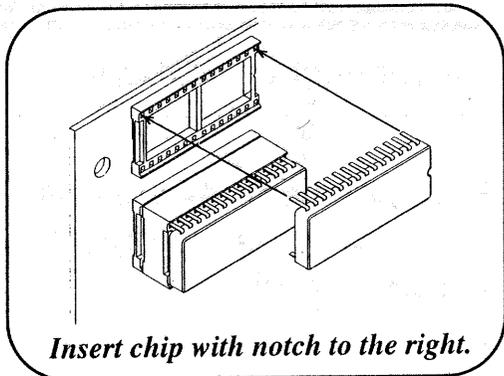


- Apply even pressure as you pull chip out.
- If the chip is difficult to remove, rock the chip out by pulling one end of the chip out slightly and then pull the other end out slightly.

(See Step 6 on the other side.)

6) Insert new chip.

- Insert the replacement chip in the socket.
- Make sure the circular notch in the chip is on the right side of the chassis assembly.



- Be certain that the pins on the chip line up with the holes of the socket and press the chip into the socket until it is firmly in place.
- Make sure the chip is properly seated in place and that there are no bent pins.

7) Reconnect battery.

- Connect the ni-cad battery lead to connector.

8) Initialize the phone.

- Enter programming mode
 - Hold the PB-1 button, come off hook and listen for a single beep.
- Enter phone number of the payphone.
 - Dial "00"
 - Dial the phone's 10-digit telephone number
 - Dial "*" and listen for a single beep.
- Enter the remote computer's phone number.
 - Dial "25".
 - Dial the remote computer's phone number
 - Dial "*".
- Download program from remote computer.
 - Dial "*#3".
 - Listen for phone to call computer.
 - Wait 2-5 minutes.
- Confirm the download
 - Call the computer operator to confirm that the phone and computer successfully communicated.

9) Perform an operational test.

- Proper rating and completion of calls
- Coin collect and refund
- All key pad digits
- Receiver and transmitter
- 0- and 0+ calls. (Make sure operator calls go to the correct operator service.)
- Use your standard company operational test.