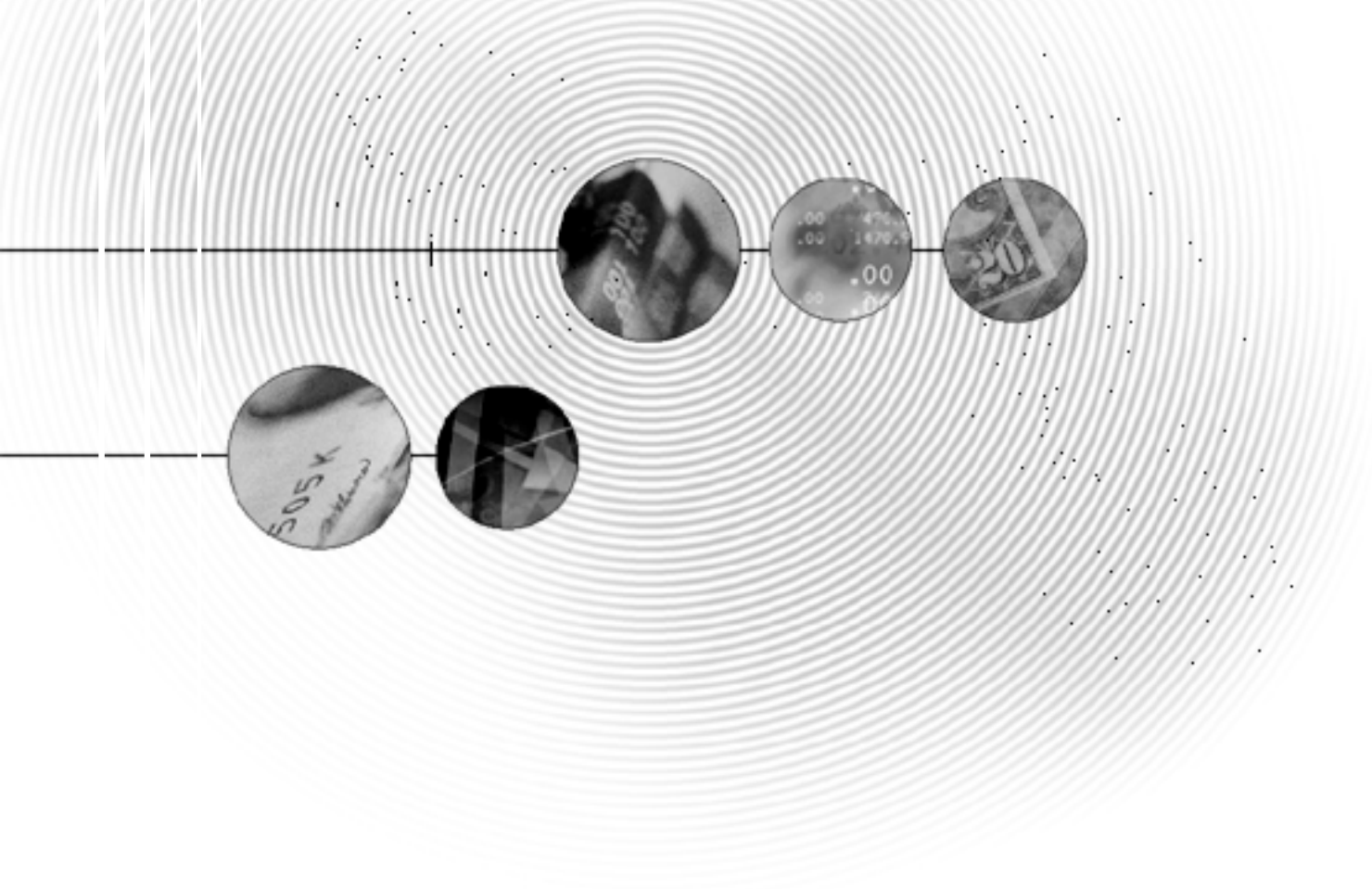
# DXP, DXP Plus, and Impact FX

# General Description for the Common Code Base Software

**Feature Set 14A, Release 162**



The information in this publication is applicable for software feature set 14A, release 162.

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COMDIAL®
The Rising Star™

Comdial® strives to design the features in our communications systems to be fully interactive with one another. However, this is not always possible, as the combinations of accessories and features are too varied and extensive to insure total feature compatibility.

Accordingly, some features identified in this publication will not operate if some other feature is activated. Comdial disclaims all liability relating to feature non-compatibility or associated in any way with problems which may be encountered by incompatible features. Notwithstanding anything contained in this publication to the contrary, Comdial makes no representation herein as to the compatibility of features.

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# 1 Introducing the Software Release

## Introducing the Software Release

Software release 14A contains new features and feature enhancements designed to make the common code base (CCB) systems—the DXP, DXP *Plus,* and Impact FX Systems— easier for end users to use.

CCB began with software release 10A and provides a uniformity of features across the spectrum of digital communications system platforms. While hardware capacities may limit feature availability for some CCB systems, the CCB software is completely compatible for all system models.

The software changes and additions are as follows:

- Feature Set and Release Number (All CCB Systems)
- Software Keying (FXS and FXT Systems only)
- VMMI Programming Changes **(**All CCB Systems)
  - File New/File Open As
  - Impact and Impact SCS Telephone Support
  - Board Slot Layout
  - Database Translation
  - Board Configuration Translation

# Detailing Hardware and Software Considerations for the DXP System

## Detailing the Hardware Considerations

The DXP system must be operating on a DXCPU–68K CPU board. The 14A software release is not compatible with systems using a DXCPU–186 CPU board found in earlier DXP systems.

If you are upgrading a DXP system to 14A from software 9C or earlier, you must use the DXPSW–DLRP package. In addition to the 14A software card, this package includes the following items that you must install as part of the software upgrade:

- new cabinet labeling for board configurations,
- new Random Access Memory (RAM) card (DXRAM–EXPC),
- VMMI programming software.

If you are upgrading a DXP system to 13B from software 10A or later, you may only need to change the software card (DXPSW–DLRC) on the existing DXRAM–EXPC Random Access Memory (RAM) memory card; however, since the release of software revision 13A for the DXP digital communications system requires a revision B DXRAM–EXPC memory card, you may also need to upgrade the memory card in your system to revision B.

If your DXP should still include a revision A memory card, you must install an DXRAM–UPC upgrade kit to convert it into a revision B card at the time you upgrade the system software to 14A. The DXRAM–UPC kit includes two memory chips (integrated circuit components) and an upgrade label.

*NOTE: The DXRAM-UPC kit is not available through normal supply distribution channels. You can obtain the DXRAM kit through Comdial Distributor Sales by dialing 1-800-669-2663 and speaking with a Distributor Sales representative.*

## Detailing the Software Considerations

- The PCMMI (off-line) programming procedure is no longer available with 14A software. A windows-based, Visual Man-Machine Interface (VMMI) programming system with help files now replaces the PCMMI.

- The DXP database must be at least revision 9A before you can translate it to 14A. You can ue the 9A revision of the PCMMI programming software to upload your current DXP database and then download it to a data storage area—such as your computer's hard drive—as a revision 9A database.* You must then use the new VMMI feature to translate this stored 9A data into an 14A database before you load it back into the system.

- The PC Attendant Position software must be at least revision 5A. (You must upgrade the software in your PC Attendant to this level to be compatible with the 14A software release.*) It is a good practice to upgrade the PC Attendant Position computer to contain at least 2 megabytes of RAM memory. While this may not be necessary for every installation, upgrading to 2 megabytes of RAM memory ensures that the PC Attendant Position functions properly under all conditions.

  **Remember, you can download the latest VMMI, and PC Attendant software from the Comdial Technical Services Bulletin Board by calling 1-804-978-2583 or from the World Wide Web at: http://bbs.comdial.com.*

# 2 Explaining the Software Release Features

## Feature Sets and Release Numbers

Beginning with software release 14A of the common code base (CCB) operating software, a new convention exists for naming the software and the features that it supports. Hereafter, designation of software consists of two parts: the **release number** and the **feature set.**

**Release Number**: The release number designates a particular build of software but does not define the features contained therein. A release number is permanent and is never used for more that one distinct build of system software. Release numbers are sequential (for example: Release 379, Release 382, and so forth) and indicate the version of software that is running on a system.

**Feature Set**: A feature set is a collection of features referenced as a group and identified with an alphanumeric character string (such as 12B, 13B, 13C, and so forth). A feature set indicates available features but is only loosely connected to a software release number. This means that developers cannot introduce new features as part of a new feature set without introducing a new software release number). For each feature set, a minimum release number exists. This minimum release number is the release number of the software in which the specific feature set first appeared as illustrated in the following list of examples:

- Feature Set 13C introduced with software release 161,
- Feature Set 14A introduced with software release 162,
- Feature Set 15A introduced with software release 163.

With the Impact FX Systems, it is possible to install new software (software with a newer release number) without incrementing the feature set supported by the specific installation. For these systems, a new software keying mechanism controls the feature set provided by the installed software. This mechanism allows installers to upgrade the system software for maintenance reasons without modifying the software feature set. Refer to the feature description titled, *Software Keying on page 4*, for a description of this software keying mechanism.

# Software Keying

Beginning with release of 14A of the common code base (CCB) software, each Impact FX System includes a software keying mechanism. This keying mechanism, or key, is an encrypted string of characters, that installers obtain from a Comdial representative and enter into VMMI programming during the initial software enable or subsequent software upgrade operations.

A software key enables the following components:

- feature sets (such as, 13C, 14A, and so forth),
- slot count/port size (such as, seven slots/112 ports, 15 slots/ 224 ports, 29 slots/464 ports),
- standalone features (such as, Networking, Impact or Impact SCS telephone support and so forth).

*NOTE: Stand alone features are often for a special purpose and operate in addition to a feature set grouping.*

The software key controls the active feature set of the installed software by controlling access to the database configuration of all features. For example, if an installer used a software key that only provides support for feature set 13C to install release 162, VMMI will enable only the programming options allowed under the 13C feature set even though release 162 can support feature set 14A.

Comdial ships both the Impact FXS and Impact FXT systems with a test mode software package that allows these systems to run for one hour and operate as a six slot (FXS) or seven slot (FXT) platform. The test mode allows installers time to set up the system and request the software key.

## Using the Software Key

Installers use the VMMI program to enable the software key, thus they must have the software file (the xxxxxxxx.bin file) stored on the PC from which they plan to run the VMMI program. Further, they must determine the system serial number and then call a Comdial representative to obtain a software keying character string that the system uses to enable the software.

NOTE: Installers do not need to install a hardware mechanism (or key) onto the serial port of the PC to enable the software although they do need to do so when obtaining the magic number needed to turn on the CTI applications. Having that mechanism installed does not interfere with system software enabling.

### *Understanding Some Factors that Affect Software Keying*

It is possible for system installers to not have the correct component in order to proceed with either an installation or software upgrade. The following paragraphs detail such situations and describes how to detect them.

- Installers could select a system software file that does not support the features specified by the software key. In this case, VMMI detects this situation by checking the supported features within the system software file against those specified by the software key. If the software file does not support the features specified by the software key, VMMI informs installers that a newer system software file is required.

- Installers could attempt to connect VMMI to systems that do not support the system software that they are attempting to load. This situation may result from a hardware incompatibility, and VMMI informs the installer of this incompatibility.

- The VMMI in use may be older than the release of system software to which it is connected. In some cases (such as, if the format and content of the database has not changed), VMMI can configure the newer system software. If VMMI is not capable of configuring the newer system software, it allows the connection to proceed as a restricted login and warns installers that a newer VMMI release is needed. Remember, VMMI is backwards compatible with system software revisions beginning at 12A.

### *Enabling the Software*

The sequential software enabling procedure is detailed below:

1. Obtain the software .bin file and store it away on the PC. (Usually this file is available on the Comdial bulletin board (BBS) for downloading.
2. Determine the system serial number from the label that is located on the CPU board's faceplate. (If necessary, installers can log into the system with VMMI and determine the system serial number in that manner. Remember, the system operates in a test mode for one hour before it turns itself off.)
3. While not necessary at this point in the software enabling sequence, installers should run the Key Update Utility program to determine the CTI application's key serial number and current magic number. Installers need to provide this information to the Comdial representative so the representative can, in turn, provide the information the installer needs to turn on the CTI applications. **Performing step three now will save making a second telephone call later to obtain this needed application information**.

    a. With the mechanical application software key installed on the computer's parallel printer port, locate the software key icon on the main desktop menu and double click on it. If the icon is not available, use the Start/Programs/Keymod menu to locate the software key program and double click there. This action opens the Key Update Utility program.

    b. From the update utility, click the **Examine Key** button. The system responds by displaying the following information in the key update screen: the key's serial number and the current magic number of the installed key.

4. Once you know the system serial number (and the CTI application information if needed), contact the Comdial representative:
   1-800-669-2663 (calls from within the U.S.A.)
   1-804-978-2290 (international calls)
   To obtain the software enabling key (an encrypted string of characters, that you use to enable the system software) and the CTI application's magic number, you must provide to the representative the following facts:
   system serial number,
   port size of the system,
   feature set desired,
   system software applications desired,
   stand-alone features desired
   CTI applications desired (if applicable),
   method of payment.
   Armed with this information, the representative provides the alphanumeric character strings that represents the software enabling and CTI application enabling for the system.
5. Use VMMI to log into the system, open the **Switch** drop-down menu, and click on System Software Upgrade.
6. Archive the existing database as prompted (if desired) and continue.
7. From the system software upgrade window, click the Provide a New Key line, and type the software keying character sequence into the open block.
8. Click **Next,** browse for and select the software upgrade xxxxxxxx.bin file that you earlier stored in the PC.
9. VMMI provides a new screen that presents the feature set and release number of the software upgrade.
10. Click **Finish** on this screen, and observe that the system loads the software and then resets itself.
11. Reconnect VMMI to the system, and restore the archived database or reprogram the features as needed.
12. Repeat step two to start the Key Update Utility program, and enter the new CTI application magic number into the update utility, and then click the **Update Key** button. The utility menu shows a completion code value to indicate that the procedure is finished. Verify that the completion code matches the completion code that the Comdial representative provided to you, and click the **Done** button to end the session.

By completing the above procedure, Installers enable the system operating software for the telephony portion of the system and enable the CTI applications that run on the computer portion of the system.

# *VMMI Programming Changes*

## *File New / File Open As*

With software release 162, the VMMI provides a new interface for translating an existing database file and for creating a new database file. These new interfaces present a series of dialog boxes to the installer, requesting required information.

In the case of the FXS/FXT systems this new information includes the items controlled by the software key—with release 162 this is limited to the feature set (14A / 13C) and support for Impact and Impact SCS terminals.

## *Impact and Impact SCS Telephone Support (Impact FX Systems only)*

On File-New and File-Open As operations, the installer has the option to enable or disable the programming of the *Impact* and *Impact SCS* family of telephones. To restore a database that supports these telephone, the system must have a software key that enables the *Impact* and *Impact SCS* telephone support.

## *Board Slot Layout (Impact FX Systems only)*

Comdial designers have arranged both the Impact FXS and Impact FXT systems to be expandable by adding expansion cabinets with universal board slots and interfacing these cabinets with the main common equipment cabinet. Augmenting the main equipment cabinet with expansion cabinets increases the total universal slot capacity of the systems to a maximum of 29 universal slots.

### *Identifying the Circuit Board Slots tor an FXS 15 Slot Expanded System*

An unexpanded FXS system has one cabinet with six universal slots and one auxiliary slot. An expanded FXS 15 slot system has one main cabinet and one expansion cabinet. The main cabinet provides six universal slots and one auxiliary slot and the expansion cabinet provides eight universal card slots. The following tables show the slot assignments of the cabinets.

| FXS Main Cabinet–Slot Assignments From Top to Bottom |
|---|
| Universal Slot 6 |
| Universal Slot 5 |
| Universal Slot 4 |
| Universal Slot 3 |
| Universal Slot 2 |
| Universal Slot 1 |
| Services/CPU Board |
| Auxiliary (Slot 7) |

| FXS First Expansion Cabinet–Slot Assignments From Top to Bottom |
|---|
| |
| |
| |
| |
| |
| |
| |
| Universal Slot 15 |
| Universal Slot 14 |
| Universal Slot 13 |
| Universal Slot 12 |
| Universal Slot 11 |
| Universal Slot 10 |
| Universal Slot 9 |
| Expansion Interface |
| Universal Slot 8 |

## Identifying the Circuit Board Slots for an FXS 29 Slot Expanded System

An expanded FXS 29 slot system has one main cabinet and two expansion cabinets. The main cabinet provides six universal slots and one auxiliary slot. The first expansion cabinet provides 15 universal slots and the second expansion cabinet provides eight universal slots. The following tables show the slot assign- ments of the cabinets.

| FXS Main Cabinet–Slot Assignments From Top to Bottom |
|---|
| Universal 6 |
| Universal 5 |
| Universal 4 |
| Universal 3 |
| Universal 2 |
| Universal 1 |
| Services/CPU Board |
| Auxiliary (Slot 7) |

| FXS First Expansion Cabinet–Slot Assignments From Top to Bottom |
|---|
| Universal Slot 22 |
| Universal Slot 21 |
| Universal Slot 20 |
| Universal Slot 19 |
| Universal Slot 18 |
| Universal Slot 17 |
| Universal Slot 16 |
| Universal Slot 15 |
| Universal Slot 14 |
| Universal Slot 13 |
| Universal Slot 12 |
| Universal Slot 11 |
| Universal Slot 10 |
| Universal Slot 9 |
| Expansion Interface |
| Universal Slot 8 |

| FXS Second Expansion Cabinet–Slot Assignments From Top to Bottom |
|---|
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Universal Slot 30 |
| Universal Slot 29 |
| Universal Slot 28 |
| Universal Slot 27 |
| Universal Slot 26 |
| Universal Slot 25 |
| Universal Slot 24 |
| Expansion Interface |
| Universal Slot 23 |

## Identifying the Circuit Board Slots for an FXT 15 Slot Expanded System

An unexpanded FXT system has one cabinet with seven universal slots and one auxiliary slot.

An expanded FXT 15 slot system has one main cabinet with an expanded backplane. An FXT 15 slot system provides 14 universal slots and one auxiliary slot.

| FXT Main Cabinet–Slot Assignments From Top to Bottom |
|---|
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Not available for use |
| Universal Slot 7 |
| Universal Slot 6 |
| Universal Slot 5 |
| Universal Slot 4 |
| Universal Slot 3 |
| Universal Slot 2 |
| Universal Slot 1 |
| Services/CPU Board |
| Auxiliary (Slot 8) |

| FXT Expanded Main Cabinet–Slot Assignments From Top to Bottom |
|---|
| Universal Slot 15 |
| Universal Slot 14 |
| Universal Slot 13 |
| Universal Slot 12 |
| Universal Slot 11 |
| Universal Slot 10 |
| Universal Slot 9 |
| Universal Slot 7 |
| Universal Slot 6 |
| Universal Slot 5 |
| Universal Slot 4 |
| Universal Slot 3 |
| Universal Slot 2 |
| Universal Slot 1 |
| Services/CPU Board |
| Auxiliary (Slot 8) |

### *Identifying the Circuit Board Slots for an FXT 29 Slot Expanded System*

An expanded FXT 29 slot system has one expanded main cabinet that provides 14 universal slots and one auxiliary slot and has one expansion cabinet that provides 15 universal slots. The following tables show the slot assignments of the cabinets.

| FXT Expanded Main Cabinet–Slot Assignments From Top to Bottom | FXT Expansion Cabinet–Slot Assignments From Top to Bottom |
|---|---|
| Universal Slot 15 | Universal 30 |
| Universal Slot 14 | Universal 29 |
| Universal Slot 13 | Universal 28 |
| Universal Slot 12 | Universal 27 |
| Universal Slot 11 | Universal 26 |
| Universal Slot 10 | Universal 25 |
| Universal Slot 9 | Universal 24 |
| Universal Slot 7 | Universal 23 |
| Universal Slot 6 | Universal 22 |
| Universal Slot 5 | Universal 21 |
| Universal Slot 4 | Universal 20 |
| Universal Slot 3 | Universal 19 |
| Universal Slot 2 | Universal 18 |
| Universal Slot 1 | Universal 17 |
| Services/CPU Board | Expansion Interface |
| Auxiliary (Slot 8) | Universal 16 |

### ***Database Translation*** *(Impact FX Systems only)*

Release 162 of VMMI supports many combinations of database translations for the Impact FX Systems. The following table details these combinations for bot software relase and software upgrade.

| **Source** | **Destination** | | | | | |
|---|---|---|---|---|---|---|
| | FXS (7 slot) | FXS (15 slot) | FXS (29 slot) | FXT (7 slot) | FXT (15 slot) | FXT (29 slot) |
| FXS (6 slot) | YES | YES | YES | YES | YES | YES |
| FXS (7 slot) | YES | YES | YES | YES | YES | YES |
| FXS (15 slot) | NO | YES | YES | NO | YES | YES |
| FXS (29 slot) | NO | NO | YES | NO | NO | YES |
| FXT (7 slot) | NO | YES | YES | YES | YES | YES |
| FXT (15 slot) | NO | YES | YES | NO | YES | YES |
| FXT (29 slot) | NO | NO | YES | NO | NO | YES |

## ***Board Configuration Translation*** *(Impact FX Systems only)*

When translating databases from one platform to another, circuit boards typically remain in their original slots. While this is generally true for the FXS and FXT systems, there are a few exceptions that are detailed below.

- When translating from an FXS 7-slot system to a 15-slot or 29-slot system, VMMI automatically moves any universal board located in the seventh logical slot of the source database main cabinet to the first logical slot in the first expansion cabinet of the destination database. The seventh logical slot of the destination system's main cabinet becomes nonprogrammable.

- When translating from an FXT 7-slot system to an FXS 15-slo or 29-slot system, VMMI automatically moves any universal card located in the eighth logical slot of the source database main cabinet to the second logical slot in the first expansion cabinet of the destination database. VMMI also moves any universal board located in the seventh logical slot of the source database main cabinet to the first logical slot in the first expansion cabinet of the destination database. The first logical slot of the destination system's main cabinet becomes nonprogrammable.

- When translating from an FXT 7-slot system or or an FXS 15-slot system to an FXT 15-slot or 29-slot system, VMMI automatically moves any universal board in the eighth logical slot to the last logical slot of the main cabinet in the destination database. The first logical slot of the destination system's main cabinet becomes nonprogrammable.

- When translating from an FXT 15-slot or 29-slot system to an FXS 29-slot system, or from an FXT 15-slot system to an FXS 15-slot system, VMMI automatically moves any universal board in the seventh logical slot to the eighth logical slot of the main cabinet in the destination database.

- When translating from an FXS 29-slot system to an FXT 29-slot system, VMMI automatically moves any universal board in the eighth logical slot to the seventh logical slot of the main cabinet in the destination database.

***CAUTION***

*Installers must physically rearrange circuit boards in the cabinets to match any logical rearrangement that VMMI makes in the database.*

# 3 Programming the Features

## Upgrading the DXP Software

To enable VMMI use on the DXP system, you must upgrade the DXP software to at least release 10A (or to whatever software revision that is now current). Further, to preserve your existing database you must convert it through the use of the PCMMI database programming software that is at software release 9x. The upgrade to software release 10A or later requires that you also install a new RAM card (DXRAM–EXPC) as well as the software memory card (DXPSW–DLRC) on the DXP's central processor unit. If you need detailed instructions for installing this circuit board and card, refer to the *DXP System Hardware Instructions* in your service literature.

To ensure that you execute the database conversion and software upgrade correctly, you must perform the following detailed operations in the sequence listed below:

1. Convert The Database
2. Translate The Database
3. Install The Memory Card (and RAM Card if needed)
4. Master Clear The System
5. Connect To The System
6. Restore The Converted Database

Discussions located on the following pages explain each of the above steps in detail.

## Converting the DXP Database

Use this procedure to convert an existing DXP database to a software release 9x compatibility. This action places the database in an arrangement that allows you to translate it. Translating the database makes it compatible with software releases that support VMMI usage (software release 10A and later).

1. Employ a PC with an XMODEM communications program and use the DXP's embedded MMI programming method to store the current DXP database to the PC's hard drive. The saved database does not include the SMDA/SMDR records. If you need these SMDA/SMDR records, you must make a printout of them before you perform the database storage.
2. Disconnect the PC from the DXP.
3. If the stored database is not at least software release 9A, obtain a copy of revision 9A or later PCMMI programming software and load it on your computer.

*NOTE: Remember, you can always down load the latest PCMMI software from the Comdial On-Line Support Server. Reach the Support Server from the Comdial home page on the World Wide Web by connecting at: http://www.comdial.com/.*

4. Use this revision 9A or later PCMMI to restore the existing, or current, DXP database file. Restoring the database using the 9A PCMMI makes the database 9n compatible.
5. Save the converted database to your computer's hard drive using a new file name. Using a new file name prevents the computer from overwriting the original file.

## Translating an Earlier DXP Database to a Common Code Base Database

Use this procedure to translate a DXP database—which you have first converted to be compatible to software release 9x—to be compatible with a common code base software release of 10A and later.

1. From the VMMI window, select the **File** pull-down menu.
2. Select **Open As . . .**.
3. From the *Open database File* window, select the database that you wish to open and **OK** your choice. A prompt asks you to confirm the translation. You must click **OK** to proceed.
4. Specify a new file location where the translated database can reside.
5. Select the destination platform type for the system and **OK** your selection. The *Select Board Type* window opens.
6. Use the *Select Board Type* window to describe the board configuration of the DXP database that you are translating.
   a. For reference before upgrading the software to 10A or later, make a record of the DXP's physical board configuration.
   b. Use the board record information to answer the prompts on the *Select Board Type* window. The prompts first ask for all installed station boards beginning with the DXP's leftmost universal slot in the main cabinet. The prompts then ask for all installed line boards beginning with the DXP's leftmost line slot in the main cabinet. When a slot in the original DXP contains an auxiliary board, select the **No Board** response. When the prompt asks for a station board but a line board occupies that slot in the original DXP, select the **No Board** response. When the prompt asks for a line board but a station board occupies that slot in the original DXP, select the **No Board** response. When you finish listing the board configuration, **OK** your selections.

*NOTE: Under BOARD CONFIGURATION/CABINET VIEW, the VMMI graphically shows the boards installed in the arrangement that you specified and leaves a blank slot for any place that you answered a station or line board prompt with a no board response*

c. A prompt asks that you confirm that conversion has taken place by clicking **OK**.

7. Select **Open As . . .**.
8. Select the file name that you specified in step 4 and **OK** you selection.
9. Specify the destination revision and destination platform for the translated database and **OK** your specification. Database translation now occurs.
10. From the **File** drop-down menu, select **SAVE**.
11. Check the translated results, and under BOARD CONFIGURATION/CABINET VIEW, use your mouse to move the board images to match your plan for the upgraded system. Remember, you must physically move the boards in the common equipment cabinet to match the arrangement that you set with the VMMI program.

## *Master Clearing the DXP System*

To insure that the DXP will perform properly with the new memory card, master clear the system. The DXCPU–68K board provides a method for the master clear to occur automatically at the initial power up after you have changed or upgraded the software card.

***CAUTION***

*A master clear operation erases an existing database. If you wish to preserve the existing database, you must archive it before you master clear the system. You can then restore this database after you master clear the system. Remember, if this database is not at software release 10A or later, you must convert and translate it.*

Execute the following sequence of events exactly as they are stated here:

1. On the DXPCPU–68K circuit board, set DIP switch 8 to its ON position.
2. Connect the DXP's AC power cord to the AC outlet and turn on the AC power switch. At power up, the DXP automatically executes a master clear operation. After the master clear sequence is complete, the indicators on the DXCPU–68K and DXSRV boards turn on steady and the indicators on the station and line boards wink ON for four seconds and OFF for four seconds. The system performs the automatic master clear one time following the initial power up after you have upgraded the software. It will not perform an automatic master clear operation again after subsequent power ups.
3. You can leave DIP switch 8 ON or you can turn it OFF. Leaving it ON will ensure that the DXP will always power up in a master cleared and operational mode after a software upgrade. Turning it off prevents the DXP from becoming operational at power up after a software upgrade. The OFF setting may be acceptable because, should you forget to save your database, you have an opportunity to reconsider your actions before the DXP erases the current database.

# Upgrading the DXP Plus Software

The DXP *Plus* digital communications system includes system software when it ships from the factory. At initial system installation, you do not need to load the system software to make the system operational. Should you need to later reload the system software (for software upgrade purposes for example), you can do so using the supplied system software disk. Use Windows File Manager or MS–DOS commands to save the disk's information from your computer's floppy drive to its hard drive. Having the software on your computer's hard drive allows the data to load into the system's memory much quicker than it would from the computer's floppy disk drive.

To load the system software information, your PC must be connected to the communications system.

***CAUTION***

*The system does not automatically save the existing database during a software upgrade. If you need to preserve the existing database, you must archive it before you upgrade the software. After you upgrade the software, you can restore the existing database to the system.*

1. Archive the existing database.
   a. From the **Switch** pull-down menu, select the **Connect To...** menu item, connect VMMI to the system, and return to the **Switch** pull-down menu.
   b. From the **Switch** pull-down menu, select the **Archive Database** menu item.
   c. Choose a memory storage location for the archive operation to use and **OK** your choice. Since the database can be quite large, you should choose a location on your computer's hard drive to ensure that you have enough memory to store the database.
   d. The system automatically archives its database.
2. From the **Switch** pull-down menu, select the **Connect To..**. menu item, connect VMMI to the system, and return to the **Switch** pull-down menu.
3. From the **Switch** pull-down menu, select the **System Software Upgrade** menu item.
4. The system automatically takes itself out of service.
5. Choose the location where the new software data resides (select disk drive, directory, and file), and OK your choice. The system loads the software data, resets itself, and places itself back in service.
6. Restore the existing database (if desired).
   a. From the **Switch** pull-down menu, select the **Connect To...** menu item, connect VMMI to the system, and return to the **Switch** pull-down menu.
   b. From the **Switch** pull-down menu, select the **Restore Database** menu item.
   c. Choose the memory storage location that contains an archived database and **OK** your choice. The system automatically restores its database.

# Upgrading the Impact FX Software

Each system requires a system software keying code. This keying code, or system software key, is an encrypted string of characters, that you obtain from a Comdial representative and enter into VMMI programming during software upgrade operations. The system software key enables feature sets, system capacity, and special stand alone features as ordered. The system software key controls the active feature set of the installed software by controlling access to the database configuration of all features.

## Using the System Software Key

Since you use the VMMI program to enable the system software key, you must have the software file (the xxxxxxxx.bin file) stored on the PC from which you plan to run the VMMI program. Further, you must determine the system serial number and then call a Comdial representative to obtain the system software keying code that the system uses to enable the software.

**Download the latest xxxxxxxx.bin file from the Comdial Online Support Server**. Reach the Online Support Server through the Comdial Internet home page on the worldwide web at www.comdial.com. Once there, follow the prompts to get to the Support Server and then to get to the location where you can download software upgrades for the FX system.

Determine the system serial number by using the VMMI program, and call the Comdial representative at:
— 1-800-669-2663 (calls from within the U.S.A.)
— 1-804-978-2290 (international calls)

*NOTE: You do not need to install a hardware mechanism on the serial port of the PC to enable the system software (although you do need to do so when you obtain the magic number needed to turn on the CTI applications). Having that hardware mechanism installed does not interfere with system software enabling.*

## Enabling the Impact FX System Software

The following procedure details the sequential software enabling details:

1. Obtain the software .bin file and store it away on the PC if you have not already done so.

   a. Download the latest xxxxxxxx.bin file from the Comdial Online Support Server. Reach the Online Support Server through the Comdial Internet home page on the worldwide web at www.comdial.com. Once there, follow the prompts to get to the Support Server and then to get to the location where you can download software upgrades for the Impact FX system.

2. Log into the system with VMMI and view the system serial number at the lower right corner of the VMMI screen. Remember, the system operates in a test mode for one hour before it turns itself off. (Usually, you can also determine the system serial number from the label that is located on the CPU board's faceplate.)

3. While not necessary at this point in the software enabling sequence, if you are adding CTI applications, you should run the Key Update Utility program to determine the CTI application's key serial number and current magic number. You need to provide this information to the Comdial representative so the representative can, in turn, provide the information you need to turn on the CTI applications. **Performing step three now will save making a second telephone call later to obtain this needed application information**.

   a. Stop the VVP voice mail manager service from the following location: Start/Settings/Control Panel. Select the *Services* icon, highlight *voice mail manager*, and click **Stop**.

   b. With the CTI application's hardware mechanism installed on the PC's parallel printer port, locate the software key icon on the main desktop menu and double click on it. If the icon is not available, use the Start/Programs/Comdial/Keymod menu to locate the software key program and double click there. This action opens the Key Update Utility program.

   c. From the update utility, click the **Examine Key** button. The system responds by displaying the following information in the key update screen:
      the key's serial number,
      the current magic number of the installed key.

4. Once you know the system serial number (and the CTI application information if needed), contact the Comdial representative:
   — 1-800-669-2663 (calls from within the U.S.A.)
   — 1-804-978-2290 (international calls)
   To obtain the system software key and the CTI application's magic number, you must provide to the representative the following facts:
   — system serial number ( located on the CPU board's faceplate),
   — port size of the system,
   — feature set desired,
   — system software applications desired,
   — stand-alone features desired
   — CTI applications desired (if applicable),
   — method of payment.
   Armed with this information, the representative provides the encrypted alphanumeric character strings that represent the system software key and the CTI application enabling magic number.

5. Use VMMI to log into the system, open the **Switch** drop-down menu, and click on *System Software Upgrade*.
6. Archive the existing database as prompted (if desired) by going to Switch/Archive Database on the VMMI screen and continue.
7. From the system software upgrade window, click the *Provide a New Key* line, and type the system software key character sequence into the open block.
8. Click **Next,** browse for and select the software upgrade xxxxxxxx.bin file that you earlier stored in the PC.
9. VMMI provides a new screen that presents the feature set and release number of the software upgrade.
10. Click **Finish** on this screen, and observe that the system loads the software and then resets itself.
11. Reconnect VMMI to the system, and restore the archived database or reprogram the features as needed.
12. If CTI applications are a part of the installation, restart the Key Update Utility program (using the same procedure detailed in step three); enter the new CTI application magic number character sequence into the update utility; and then click the **Update Key** button. The utility menu shows a completion code value to indicate that the procedure is finished. Verify that the completion code matches the completion code that the Comdial representative provided to you, and click the **Done** button to end the session.
13. Restart the voice mail manager service.
    From the Start/Settings/Control Panel Location, select the *Services* icon, highlight *voice mail manager*, and click **Start**.

**By completing the above procedure, you enable the system operating software for the telephony portion of the system** (and enable the CTI applications that run on the PC portion of the system if CTI applications are a part of the installation).

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