



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Pharmacy Auto Refill System (BEX)**

Technical Manual

**Version 1.0  
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## **PREFACE**

The purpose of this manual is to provide technical information about the Audiocare Telephone Refill System (BEX) package. Included are a system description, routine descriptions, option descriptions, and a variety of other information.

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## 1.0 Introduction

The Audiocare Telephone Refill System allows RPMS to interact with the Audiocare automated telephone refill system. Pharmacy staff can then refill prescriptions based upon the telephone refill inquiries.

This manual provides IHS site managers with a technical description of the Pharmacy Auto Refill system routines, files, menus, cross references, globals, and other necessary information required to effectively manage the system.

All routines, files, options, and keys are namespaced starting with the letters “BEX.” The file number range for this package is 90350.1 – 90350.2.

## 2.0 Implementation and Maintenance

### 2.1 General Information

The BEX Audiocare Telephone Refill package resides in the BEX namespace. Options, security keys, routines, and globals are name spaced

### 2.2 System Requirements

- Kernel 8.0 or higher
- FileMan 22 or higher
- Outpatient Pharmacy Version 6.0 patch 4

Sites who want to use the AudioCare ® automated refill call-in system will need to contact the company to obtain a contract for the equipment. Account representatives are Alex Seligson, (610) 296-9840 ext. 105, and Wendy Michaels, (610) 296-9840 ext. 170.

### 2.3 Security Keys

| Key Name | Description   |
|----------|---------------|
| BEXZ     | Main Menu key |

## 3.0 Menu Diagram

### Telephone Refill Transaction Menu

|     |                                                                 |
|-----|-----------------------------------------------------------------|
| 1   | TRANSACTION INQUIRY [BEX INQUIRY]                               |
| 2   | REPORT MENU ... [BEX REPORT MENU]                               |
| REF | PROCESS REFILLS [BEX PROCESS REFILLS]                           |
| SIT | Edit Pharmacy Telephone Refill Parameters [BEX EDIT SITE PARAM] |

### Report Menu

|   |                                                             |
|---|-------------------------------------------------------------|
| 1 | TRANSACTIONS BY PATIENT [BEX TRANSACTIONS BY PATIENT]       |
| 2 | PHARMACY TRANSACTIONS BY DATE [BEX PHARMACY TRANSACTIONS]   |
| 3 | RENEWAL TRANSACTIONS [BEX RENEWAL TRANSACTIONS]             |
| 4 | ALL TRANSACTIONS FOR ONE PATIENT [BEX PATIENT TRANSACTIONS] |

## 4.0 Routines

| Routine | Description               |
|---------|---------------------------|
| BEX80   | Supplement for BEX system |
| BEXRPAT | Generated Print Template  |
| BEXPST  | Post Init                 |
| BEXRSRT | Sort Patients and Date    |
| BEXRX   | Process Refills           |

## 5.0 Files and Tables

### 5.1 File List

| File Number | File Name              |
|-------------|------------------------|
| 90350.1     | BEX Refill Transaction |
| 90350.2     | BEX Refill Parameter   |

### 5.2 File Access

The following table indicates Read, Write, Laygo, Data Dictionary, and Delete access security for all BEX files.

| FILE (#) | GL               | RD | WR | LYG | DD | DEL |
|----------|------------------|----|----|-----|----|-----|
| 90350.1  | ^VEXHRX0(19080.1 | Pp | Pp | Pp  | #  | Pp  |
| 90350.2  | ^BEXHRXP         | Pp | Pp | Pp  | #  | Pp  |

### 5.3 Cross References

| Cross Reference | File                          |
|-----------------|-------------------------------|
| B               | 90350.2 .01 SITE              |
| AC              | 90350.1 1 DATE/TIME           |
| B               | 90350.1 .01 PATIENT           |
| C               | 90350.1 1 DATE/TIME           |
| D               | 90350.1 2 PRESCRIPTION NUMBER |
| E               | 90350.1 3 TYPE                |

### 5.4 Table File

**File: 90350.1 BEX Refill Transaction**

| FIELD # | FIELD NAME          | SUBSCRIPT | PIECE    | TYPE     |
|---------|---------------------|-----------|----------|----------|
| .01     | PATIENT             | 0         | 1        | P        |
| .02     | HRCN                | 0         | Computed | Computed |
| 1       | DATE/TIME           | 0         | 2        | D        |
| 2       | PRESCRIPTION NUMBER | 0         | 3        | F        |
| 3       | TYP                 | 0         | 4        | S        |
| 4       | RESULT              | 0         | 5        | F        |
| 5       | RENEWAL FLAG        | 0         | 6        | S        |
| 8       | DRUG NAME           | 0         | 8        | F        |

| FIELD # | FIELD NAME       | SUBSCRIPT | PIECE | TYPE |
|---------|------------------|-----------|-------|------|
| 9       | CHART REQUESTED? | 0         | 9     | S    |

**File: 90350.2 BEX Refill Parameter**

| FIELD # | FIELD NAME                   | SUBSCRIPT | PIECE | TYPE |
|---------|------------------------------|-----------|-------|------|
| .01     | SITE                         | 0         | 1     | P    |
| .02     | CHART REQUEST ON REFILL      | 0         | 2     | S    |
| .03     | CHART REQUEST PM CUTOFF TIME | 0         | 3     | F    |
| .04     | CHART REQUEST AM CLINIC      | 0         | 4     | P    |
| .05     | CHART REQUEST CUTOFF CLINIC  | 0         | 5     | P    |
| .06     | AUTO PRINT ROUTING SLIPS     | 0         | 6     | S    |
| .07     | CHART REQUEST AM CUTOFF TIME | 0         | 7     | F    |
| .08     | AM ROUTING SLIP TIME         | 0         | 8     | F    |
| .09     | PM ROUTING SLIP TIME         | 0         | 9     | F    |
| 1       | ROUTING SLIP PRINTER         | 0         | 10    | P    |

## 6.0 Internal Relations

Users should be given access to the appropriate options and keys, as needed. All of the options in this system stand alone.

## 7.0 External Relations

### 7.1 External Calls

#### Routine Called

HRN^AUPNPAT

^BEXRPAT

#### Invoked By

^BEXRSRT

^BEXRSRT

### 7.2 Published Entry Points

This package calls the following documented entry points:

| Routine         | Description                                                |
|-----------------|------------------------------------------------------------|
| EN^XBVK         | Kills variables in supplied namespace                      |
| \$\$HRN^AUPNPAT | Returns chart number for a particular patient              |
| \$\$DIV^ASDUT   | Gets division for ADT                                      |
| ASK^PSOBBC      | Asks Refill questions                                      |
| PROCESSX^PSOBBC | Processes refill requests in pharmacy package              |
| PT^PSOBBC       | Starts a new patient in the refill process                 |
| REFILL^PSOBBC   | Starts a new prescription in the refill process            |
| ^PSOLSET        | Sets pharmacy variables                                    |
| PROFILE^PSORX   | Gets patient profile for pharmacy                          |
| \$\$VAL^XBDIQ1  | Returns the external value of a field/file being passed in |
| ^XBKVAR         | Sets necessary Kernel variables                            |
| EN^XBNEW        | New variables based on namespace passed in                 |

### 7.3 Exported Options

| Option Name                    | Description                               |
|--------------------------------|-------------------------------------------|
| BEX EDIT SITE PARAM            | Edit Pharmacy Telephone Refill Parameters |
| BEX INQUIRY                    | TRANSACTION INQUIRY                       |
| BEX PATIENT<br>TRANSACTIONS    | ALL TRANSACTIONS FOR ONE PATIENT          |
| BEX PHARMACY<br>TRANSACTIONS   | PHARMACY TRANSACTIONS BY DATE             |
| BEX PROCESS REFILLS            | PROCESS REFILLS                           |
| BEX REFILL TRANSACTION<br>MENU | Telephone Refill Transaction Menu         |
| BEX RENEWAL<br>TRANSACTIONS    | RENEWAL TRANSACTIONS                      |

|                                |                               |
|--------------------------------|-------------------------------|
| BEX REPORT MENU                | REPORT MENU                   |
| BEX TASK CHART REQUEST         | Chart Request Tasker          |
| BEX TRANSACTIONS BY<br>DATE    | TRANSACTIONS BY DATE AND TIME |
| BEX TRANSACTIONS BY<br>PATIENT | TRANSACTIONS BY PATIENT       |

## **8.0 Archiving and Purging**

There is no archiving and purging in this package.

## 9.0 Generating Online Documentation

This section describes a few methods to generate Pharmacy Auto Refill system technical documentation. Online Pharmacy Auto Refill system technical documentation, in addition to that which is located in the help prompts throughout the Pharmacy Auto Refill package, can be generated through the use of several Kernel options. These include, but are not limited to, the following:

- %INDEX
- Menu Management
- Inquire Option
- Print Option File
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

Typing ? at the “Select . . . Option” prompt will provide online technical information.

- A single question mark (?) lists all options that can be accessed from the current option.
- Two question marks (??) list all options accessible from the current one, showing the formal name and lock for each.
- Three question marks (???) display a brief description for each option in a menu.
- An option name preceded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities that supply online technical information, consult the DHCP Kernel Reference manual.

### 9.1 %INDEX

This option analyzes the structure of a routine to determine in part if the routine adheres to RPMS programming standards. The %INDEX output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

Running %INDEX for a specified set of routines, allows users to discover any deviations from RPMS programming standards that exist in the selected routines and

to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run %INDEX for the Pharmacy Auto Refill package, type the BEX namespace at the Routine(s)?> prompt.

## 9.2 Inquire Option

This menu management option provides the following information about a specified option:

- Option name
- Menu text
- Option description
- Type of option
- Lock (if any)

In addition, all items on the menu are listed for each menu option. To secure information about patient registration options, specify the BEX namespace.

## 9.3 Print Option File

This utility generates a listing of options from the Option file (#19). Users can choose to print all of the entries in this file or specify a single option or range of options. For a list of Pharmacy Auto Refill options, refer to the Exported Options section of this manual.

## 9.4 List File Attributes

This VA FileMan option allows users to generate documentation pertaining to files and file structure. Using the standard format of this option yields the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files that point to the file specified
- Input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- Help prompt
- Cross-references
- Input transform

- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

- All cross-references for the file selected
- Global location of each field in the file
- Input, print, and sort templates

## **10.0 SAC Requirements / Exemptions**

There are no exemptions to the SAC standards for this version.

## 11.0 Glossary

|                             |                                                                                                                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Archiving                   | The storing of historical or little-used data off-line (often on tape).                                                                                                                                                                                                           |
| Banner                      | A line of text with a user's name and domain.                                                                                                                                                                                                                                     |
| Callable Entry Points       | Places in a routine that can be called from an application program.                                                                                                                                                                                                               |
| Cross-reference             | An indexing method whereby files can include pre-sorted lists of entries as part of the stored database. Cross-references (x-refs) facilitate look-up and reporting.                                                                                                              |
| Entry Point                 | Entry point within a routine that is referenced by a "DO" or "GOTO" command from a routine internal to a package.                                                                                                                                                                 |
| Event Type                  | A message that is sent that signifies a particular event on the system. (ie an admit, discharge, etc.)                                                                                                                                                                            |
| File                        | A set of related records or entries treated as a single unit.                                                                                                                                                                                                                     |
| FileMan                     | The database management system for RPMS.                                                                                                                                                                                                                                          |
| Global                      | In MUMPS, global refers to a variable stored on disk (global variable) or the array to which the global variable may belong (global array).                                                                                                                                       |
| HL7                         | Health Level Seven                                                                                                                                                                                                                                                                |
| INDEX (%INDEX)              | <p>A Kernel utility used to verify routines and other MUMPS code associated with a package. Checking is done according to current ANSI MUMPS standards and RPMS programming standards.</p> <p>This tool can be invoked through an option or from direct mode (&gt;D ^%INDEX).</p> |
| Internal Entry Number (IEN) | The number used to identify an entry within a file. Every record has a unique internal entry number.                                                                                                                                                                              |
| ITSC                        | Information Technology Support Center. The IHS personnel responsible for information systems management and security.                                                                                                                                                             |
| Kernel                      | The set of MUMPS software utilities that function as an intermediary between the host operating system and application packages, such as Laboratory and Pharmacy. The Kernel provides a standard and consistent user and                                                          |

|            |                                                                                                                                                                                                                                                                                                                                                                                  |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | programmer interface between application packages and the underlying MUMPS implementation. These utilities provide the foundation for RPMS.                                                                                                                                                                                                                                      |
| Menu       | A list of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).                                   |
| Namespace  | A unique set of 2 to 4 alpha characters that are assigned by the database administrator to a software application.                                                                                                                                                                                                                                                               |
| Option     | An entry in the Option file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.                                                                                                                          |
| Routine    | A program or sequence of instructions called by a program that may have some general or frequent use. MUMPS routines are groups of program lines that are saved, loaded, and called as a single unit via a specific name.                                                                                                                                                        |
| Segment    | An element in an HL7 message that identifies and contains particular pieces of data.                                                                                                                                                                                                                                                                                             |
| UCI        | User Class Identification: a computing area.                                                                                                                                                                                                                                                                                                                                     |
| Up-Hat (^) | A circumflex, also know as a "hat" or "caret," that is used as a piece delimiter in a global. The up-hat is denoted as “^” and is typed by pressing Shift+6 on the keyboard.                                                                                                                                                                                                     |
| Utility    | A callable routine line tag or function. A universal routine usable by anyone.                                                                                                                                                                                                                                                                                                   |
| Variable   | A character or group of characters that refers to a value. MUMPS recognizes 3 types of variables: local variables, global variables, and special variables. Local variables exist in a partition of the main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays. |

## 12.0 Contact Information

If you have any questions or comments regarding this distribution, please contact the ITSC Help Desk by:

**Phone:** (505) 248-4371 or  
(888) 830-7280

**Fax:** (505) 248-4363

**Web:** <http://www.rpms.ihs.gov/TechSupp.asp>

**Email:** [ITSCHelp@mail.ihs.gov](mailto:ITSCHelp@mail.ihs.gov)