

GUIDE TO THE SEEKER-PC DEMONSTRATION

This document contains several sections to help you get familiar with SEEKER-PC. First you will read about how to install the demonstration files. Next is an overview of SEEKER-PC and some of it's features. This is followed by a Guided Tour where you actually use the program following simple step by step instructions. A Technical section covers details of the demonstration program and hints on how to correct problems which might arise. The last pages are devoted to samples of a few of the reports available in SEEKER-PC.

INSTALLATION

If you received this demo on a floppy disk you should make a backup copy before proceeding. The demonstration has the full capability of the database manager allowing you to delete entries or entire databases.

Although it is not mandatory, we recommend separating the database files from the program, configuration, and driver files. Program and related files should be in a subdirectory called SEEKER. All database files should be in a subdirectory under SEEKER, called DATA. The program and related files are those files with extensions of: .EXE, .CFG, .IMG, and .DRV. As an example, could place all these files in C:\SEEKER. All other files should be placed in the data subdirectory which in this case could be C:\SEEKER\DATA.

SEEKER-PC OVERVIEW

SEEKER-PC is a powerful control program for your modern communications receiver. SEEKER-PC continuously updates and displays the status of all receiver VFO's and the current memory channel. Should you change VFO's, adjust the frequency, etc. from the receiver, SEEKER-PC will immediately reflect any changes on the display! More simplistic programs do not have this capability.

Operating Modes

SEEKER-PC has four operating modes, each of which has a supporting database. These features are fully explained in the "SEEKER-PC Data Sheet".

The goal with SEEKER-PC was to make a program which would operate your communications receiver much as you would when seeking out existing, new, or rare signals. To meet this goal we needed to design a system which would not only control the receiver unattended, but which could control a tape recorder or other logging device, and continuously report the progress of scanning operations to a printer and database. Accurate decisions about activity required that SEEKER-PC be able to read the actual strength of the signal being received, not just the squelch level status.

In the Auto-Record operating mode, SEEKER-PC will automatically record programs based on the day and time of the program. To record Radio

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enter a start time of 00:50, an end time of 01:25 and the available frequencies. Just prior to the start time, SEEKER-PC tests all the frequencies, choosing the frequency with the strongest signal and turns on a tape recorder. If the signal fades, SEEKER-PC will automatically retest all the frequencies and choose the strongest. A printout is created for each program recorded listing all the basic information in the database and the time of signal acquisition, loss, and re-acquisition.

The remaining operating modes and databases allow you to scan a range of frequencies unattended during any time period you request, or scan a listing of discrete frequencies or manage the receivers internal memories. The automated unattended scanning modes allow tape recorder control, status reporting to an attached printer, automatic database creation and logging activity to a database. Complete details are contained in the "SEEKER-PC Data Sheet".

AUTOSEEK

AUTOSEEK is the system of automation which gives SEEKER-PC it's intelligence. When AUTOSEEK is off the program is in the manual mode and you are in total control. With AUTOSEEK on, the program uses the databases to scan, record communications and log information to databases and the printer. AUTOSEEK gives SEEKER-PC the power to perform unattended communications monitoring based on your precise needs.

THE MAIN SCREEN

(Row numbers placed to the left are referenced in the following description of the screen. Some of the characters, text, and spacing in the screen image below were modified to fit on a standard printed page.)

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1 SEEKER-PC  File  Knobs  Mode  Utility  Setup  HELP           CHANNEL SCAN
*-----*-----*-----*-----*-----*-----*-----*
3 | TIME/DATE | UTC: 16:43:15 Friday | LOCAL: 11:43:15 Friday | 09-29-1989 |
*-----*-----*-----*-----*-----*-----*-----*
5 | VFO A: 12.345.670 AM | SIGNAL LEVEL: 123456789 |
6 | VFO B: 9.590.000 LSB | CUTOFF LEVEL: ^ |
7 | MEM # 26: 0.580.000 RTTY |
8 | STEPSIZE: 0.000.100 | DATABASE: MARINE |
*-----*-----*-----*-----*-----*-----*-----*
10 | STATUS (OFF/ON) | AUTOSEEK PRINT LOG | RECORDER |
*-----*-----*-----*-----*-----*-----*-----*
12 | Evaluator: AUTOSEEK IS OFF | Loops complete: |
*-----*-----*-----*-----*-----*-----*-----*
14 | CHANNEL SCAN DATABASE |
15 | STATUS: ACTIVE | RECORD 110 of 111 |
16 | NOTE: Marine channel 1608 |
17 | SOURCE: Paradox database MARINE.DB | USER TYPE CODE: M |
18 | FREQ (Mhz): 16.481.700 | OFFSET FREQ (Mhz): 0.772.900 |
19 | MODE (A-U-L-C-R-F): U | MINIMUM SIGNAL LEVEL (0-9): 3 |
20 | MINIMUM TEST PERIOD (Seconds): 1 | MAXIMUM PAUSE (0=Continuous): 30 |
21 | ENTERED: 09-20-1989 TEST: 09-30-89 ACTIVE: 09:29:89 |
22 | AT: 00:00 AT: 03:21 AT: 23:46 W/ SIGNAL OF: 7 |
*-----*-----*-----*-----*-----*-----*-----*

```

Highlighting

When we refer to the displays, we will often mention that something is Highlighted. Highlighting will vary based on the type of display monitor and video adapter you have on your computer. Highlighting will make an area of the screen stand out by displaying the text in reverse video (dark letters on a light background) or by making the letters appear brighter than those in the surrounding area.

Menu Bar

The left side of Row 1 displays the program name and Menu Bar, while the

right side displays the program mode. A Menu is pulled down by pressing the Alt key plus the first letter (highlighted) of the choice or by clicking the mouse on the desired choice. The program mode status display always shows the current SEEKER-PC operating mode.

Time and Date

Row 3 contains current time, date and day of the week information for both UTC and Local time. This information is based on your PC's internal clock and the UTC vs. Local time difference you set in the Setup pull down menu.

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VFO & Memory Status

The left side of rows 5 to 8 continuously display the frequency and mode status of both VFO's and the current memory channel. Stepsize indicates the current amount a VFO will be shifted by an UP or DOWN frequency request. Stepsize is a function of the receiver and cannot be modified by the user.

The right side of row 5 continuously displays the current received signal strength while row 6 points to the minimum acceptable signal level (MAL). A received signal is considered to be active when the actual signal level equals or exceeds the MAL. This criteria is used to control automatic scanning, recorder control, and printer and database logging.

Row 10 displays the status of several items under automatic control. The items displayed in this area will depend on the current operating mode. The items are identified as being "ON" when they are highlighted.

Row 12 displays the activity of SEEKER-PC's scanning logic. The display will be different in each of the modes. This row also keeps track of the number of times SEEKER-PC has looped through a Channel Scan database or Frequency Range.

Database Editor

Rows 14 through 22 contain the database display and editing area. Most of the data in this area will vary depending on the operating mode's database structure. However, there are a few common areas. Row 14 will always display the type of database being displayed. The right side of Row 15 will display which record is being viewed and the total number of records in the database.

The left side of Row 15 displays the Status of the current record. The status can be either ACTIVE, or BYPASSED, or DELETE WHEN SAVED. ACTIVE means that the record contains acceptable data and is to be used in any scanning or auto-recording to be requested. A record with a Status of BYPASSED will not be used in any scanning or auto-recording to be requested. BYPASSED records will be saved in the database and will

continue to keep their BYPASSED Status when reloaded. The F3 key is used to toggle a record between ACTIVE and BYPASSED.

A record with a Status of DELETE WHEN SAVED will not be used in any scanning or auto-recording to be requested. DELETE WHEN SAVED records will NOT be saved in the database but you will be warned of this when attempting a File Save. The Delete key is used to toggle a record between ACTIVE and DELETE WHEN SAVED.

In the Channel Scan mode, Rows 21 and 22 display information about the date and time an entry was entered, tested, and last found active. This data cannot be edited as it is automatically updated by SEEKER-PC.

HELP

Press F1 for a quick-help screen.

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HOT KEYS

When running, certain keys, in addition to the Function keys, are HOT KEYS and can be used to immediately control the receiver. These keys are listed on the QUICK-HELP screen which appears when you press F1.

KEY(s).....What they do...

- 1-9, 0 or period...Begins new frequency entry for the current VFO/Memory channel. Data entry area appears at bottom of screen. Complete entry by pressing <return> or cancel by pressing Esc key.
- E.....Edit frequency in the current VFO/Memory channel. Data editing area appears at bottom of screen. Complete entry by pressing <return> or cancel by pressing Esc key.
- A, C, F, L, R, U...Any single keypress changes the mode of current VFO/Memory channel to Am, Cw, Fm, Lsb, Rtty, or Usb.
- V.....Change to a different VFO/Memory channel. Press second key of A, B, or M to switch to VFO-A, VFO-B, or Memory channels. Prompt appears at bottom of screen. Pressing second key ends data entry or cancel by pressing Esc key.
- M or #.....In Memory Channel mode only. Data entry area appears at bottom of screen. Enter the number of the Memory channel to which you wish to move. Pressing two digit number ends data entry or complete single digit entry by pressing <return> or cancel by pressing Esc key.

=.....In VFO-A or -B: Prompted for memory channel number, then contents of current VFO are moved to chosen Memory channel number.
 In Memory Channels: Prompted for VFO A or B, then contents of current Memory channel are moved to chosen VFO.

Cursor UP/RIGHT....In VFO-A or -B: Increase frequency of current VFO.
 In Memory Channels: Move to next higher Memory Channel number.

Cursor DOWN/LEFT...In VFO-A or -B: Increase frequency of current VFO.
 In Memory Channels: Move to next higher Memory Channel number.

F10 and Alt+F10....In Channel Scan mode only. Move frequency and mode of current Channel Scan database record to current VFO/Memory channel. Use F10 to move Main frequency or Alt+F10 to move Main frequency with Offset frequency added.

USING A MOUSE

If you have a Microsoft or fully compatible Mouse you'll want to use it. Make sure your mouse driver is installed before you start SEEKER-PC. See your Mouse documentation for details.

To "click" means to quickly press and release the LEFT Mouse button. In modes where you can use the Esc key to ESCAPE or cancel an operation you can also use the RIGHT Mouse key to ESCAPE.

Use the Mouse to select pull-down menus and to change the selected VFO or memory. To execute a menu command, click in the top bar to choose a pull-down menu. Then either drag down the highlight bar while holding the left Mouse button (Macintosh style) or click when the Mouse cursor is on the item of your choice.

To switch to a different VFO or to the Memory Channels, just click when the Mouse cursor is in the data display area for the desired VFO or the memory. In the STATUS area, you can click on the words AUTOSEEK and RECORDER to change their status. However, AUTOSEEK is disabled in the DEMO version and you will get an error message.

When a Mouse is detected a HOT CLICK area is displayed to the immediate right of the VFO and MEMORY data display area. (The sample screen display in this document does NOT show the HOT CLICK area.) Clicking the Mouse cursor in this area allows you to adjust the frequency, channel number,

and the mode of the current selected VFO or Memory channel.

MENU CONTROL

Use Alt + first letter to pull down menus. Then you can either use the first letter to execute a command in pull-down or highlight a command with the cursor and press <return>.

FUNCTION KEYS

F1.....Quick-Help screen display.

F2.....Begin or end editing database records. When completed editing one or more database records, F2 causes SEEKER-PC to test the validity of the records for the current receiver. You may receive an error message about the contents of a certain field. The program then moves to that field so that you may correct the entry.

F3.....Toggle the BYPASS status of the active database record. A record with a status of BYPASSED will not be scanned or used when the AUTOSEEK logic is turned on. However, the record will be saved with the database.

F5.....AUTOSEEK Status toggle. (Not active in DEMO version.)

F8.....RECORDER Status toggle. Rotates through OFF, Automatic, and ON. In Automatic the recorder is turned on when the received signal is equal to or greater than the current minimum acceptable

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signal level. (Recorder control and Signal Strength monitoring require the proprietary SEEKER-PC Interface unit.)

F10.....(Active only in Channel Scan mode with a database loaded.) Move frequency and mode of current Channel Scan database record to current VFO/Memory channel. Use F10 to move Main frequency or Alt+F10 to move Main frequency with Offset frequency added.

GUIDED TOUR

What follows is a step-by-step guided tour which will show a few of the features of SEEKER-PC in an organized fashion. Feel free at any time to take a detour! Because you have a version with an functional database editor and you will be editing data, you should be working with a backup copy of the databases. Have a backup copy of all files in a safe place before embarking. When you see <return> that means you are to press the Return or Enter key on your computer's keyboard.

Because this is only a Demo, you not be able to activate AUTOSEEK, the automated scanning logic. Most of the rest of the program logic is designed to act as though a receiver is attached and give you an accurate simulation of being connected to a .03 - 30.0 Mhz communications receiver

with 2 VFO's and 100 Memory Channels. In the Demo mode the frequency and mode information will NOT change as you move through the different memory channels.

The fully functioning system with the SEEKER-PC Interface allows for the interactive control of a tape recorder or other attached logging device. The Interface also allows SEEKER-PC to continuously monitor the actual strength of the signal currently being received. In the full system the signal strength is indicated by one of the signal strength numbers being displayed in reverse video.

Starting SEEKER-PC

If SEEKER-PC isn't yet started, change to the drive and subdirectory where the program files are stored. For most configurations of video display and monitor you should just type SEEKERPC <return>. If you have a color video display but a non-color display, you may like the screen display more if you start by typing SEEKERPC /B <return>.

If a previous user changed the configuration options, you might first be shown a full screen error message. If this happens just press a key or click the Mouse to continue. You will fix any potential problems later when we tour the Setup Menu.

After the program starts you will see a Welcome screen. After a few tasks are completed behind the scenes SEEKER-PC displays the message "PRESS ANY KEY TO START THE SYSTEM". Guess what you are supposed to do now? SEEKER-PC uses this last line to provide information regarding errors or what to do next.

The Esc Key

Sometimes you will select a Menu command or press the first key of a multi-key command and want to cancel what you've begun. In most circumstances you can cancel by pressing the Esc key. If you have a Mouse, the right button will also cancel many operations.

F1 for HELP!

At most times it is possible to press F1 and get the SEEKER-PC Quick Help screen. SEEKER-PC was designed to be easy to learn and use so in short order you won't need even this help.

Error Messages

If you make an error while using SEEKER-PC an error message will be displayed at the bottom of the screen. In addition to telling you what is wrong, the error message will display "Press any key to continue..." and will not go away until you press a key or click the Mouse. SEEKER-PC will also display information messages to tell you what is happening at certain times. These informational messages do not have the "Press any key..."

notation and are displayed for a short time before automatically disappearing.

Operating Modes

SEEKER-PC has four operating modes, Memory Manager, Channel Scan, Frequency Range Scan, and Auto-Record. The current Operating Mode is displayed in the upper right corner of the screen. In all of the Operating Modes you have direct control of the receiver through the keyboard or the Mouse. The Operating Modes are changed using the Mode pull-down menu.

Operating Modes are briefly explained in the overview section of this document. You will also find a detailed explanation in the publication "SEEKER-PC Data Sheet".

The Memory Manager

When the program starts you are in the Memory Manager mode. You can check this by looking at the prompt in the upper right corner of the screen. From this mode we load and save different databases of Memory Channel data to the receivers internal memories.

Total Control

In ALL operating modes, you can fully control the receiver from the personal computer keyboard or using the Mouse. The things you can control from any operating mode include:

- Switching VFO's or Memory Channels
- Shifting the frequency of a VFO or Memory Channel up or down
- Changing the Mode (AM, CW, FM, LSB, RTTY, USB) of a VFO or Memory Channel
- Editing the frequency currently in a VFO or Memory Channel.
- Swapping data between VFO's and Memory Channels

Changing VFO's

SEEKER-PC has many HOT KEYS which let you quickly control the receiver. Let's learn a few of them and see how they make it easier to control a communications receiver. We will also mention a few of the Mouse features which are even easier than HOT KEYS! When the program starts the highlight shows us that VFO-A is active. To switch to VFO-B we simply press V followed by B. Try it now. Notice the bottom of the screen displays a help area immediately after you press V telling you the proper keys to press to complete the HOT KEY command! If you happen to hit the wrong key, SEEKER-PC will beep and show you which key(s) you can use. (Using the Mouse, you would click VFO A:, VFO B:, or MEM # in the VFO Status display area.)

Entering a Frequency

Let's go back to VFO-A by pressing V and then A. To enter a new frequency in VFO-A, we simply begin typing the frequency in Mhz. Let's try 10.2 Mhz. (You may wish to keep NumLock off, which means you would enter frequencies from the number keys above the letter keys instead of the numeric key pad.) Simply press 1, 0, . (the decimal point), 2, and then <return>. As soon as you press the 1, you see the help area appear at the bottom of the screen. SEEKER-PC shows you the frequency as you enter it and will not allow you to press letter keys. You finish the frequency by pressing <return>. The Demo version allows you to enter frequencies between .03 Mhz. (30 Khz) and 30 Mhz. Anything outside this range and SEEKER-PC will display an error message and allow you to try again.

Thanks to SEEKER-PC's smart editor, you do not need to enter leading zeros or even a decimal point if the frequency is an even Mhz value. Try entering 5.000 Mhz. You simply press 5, then <return>.

During frequency entry you can also erase a partial entry with the backspace key or move left and right through the field with the left and right cursor keys. The Home key takes you to the beginning of the data while the End key will take you to the end of the data. Holding down the Ctrl key and pressing End will erase everything from the current cursor position and beyond to the right. A quick way of erasing the entire data area is to press Home followed by Ctrl+End.

Editing a Frequency

Editing a frequency is even easier. Whether in a VFO or Memory Channel, simply press E. A data entry area with the current frequency appears at the bottom of the screen. You can edit this frequency and press <return> when done or Esc to cancel. Let's switch to the Memory Channels and edit the contents of the current channel. (Just press V, M to get to the Memory Channels, then E to edit the current frequency.) Now change the frequency and press <return> to enter the data.

Tuning

Sometimes you want to tune just slightly higher or lower in frequency. In SEEKER-PC, you just press the UP or DOWN cursor key. Let's go back to VFO-A, and adjust the frequency. Try it now! The amount of the frequency change is based on the step size of the receiver and is displayed below the Memory Channel Frequency and Mode data. (Using the Mouse, you would click on FREQ UP or FREQ DOWN in the HOT CLICK area.) If you want to make anything more than a slight change, it will be faster to enter the new frequency or Edit the current frequency. (In the Memory Channels, the frequency adjustment HOT KEYS and the Mouse HOT CLICK area allow you to jump through the available Memory Channels.)

Changing Mode

To change the Mode of the current VFO or Memory Channel, simply press the first letter of the Mode (AM, CW, FM, LSB, RTTY (sometimes called FSK), USB). Give it a try yourself while we're using VFO-A. (Using the Mouse, you would click on the desired Mode name in the HOT CLICK area.)

Changing Memory Channels

If you are set to a Memory Channel and wish to jump to a new one you simply press M or the # key. In the data area you then enter the number of the Memory Channel to which you wish to jump. Try it now after moving back to the Memory Channels. You can also move up and down the Memory Channels by pressing the UP and DOWN cursor arrow keys. (Using the Mouse, you would click `FREQ UP` or `FREQ DOWN` in the `HOT CLICK` area.)

Memory Channels

If you have used most communications receivers, you will be amazed at how easily SEEKER-PC allows you to change the contents of a Memory Channel. Normally changing the contents of a Memory Channel would require that you copy the Memory Channel data to a VFO, then change the Mode or frequency to the desired value, and then write the contents of the VFO back to the Memory Channel. SEEKER-PC efficiently avoids that work, making direct changes to the receiver's internal memory data. Try it now by pressing a `HOT KEY` to change modes or enter a new frequency.

VFO to Memory Swapping

Copying frequency and mode data between a VFO and a Memory Channel are easy with SEEKER-PC. You should still be on a Memory Channel, so simply press = and you are asked to select whether the data is to go to VFO A or B. The data is moved to the selected VFO and that VFO is then made active.

Now let's adjust the frequency with the cursor keys, change the mode to RTTY and copy the data to a new Memory Channel. Simply press the UP or DOWN cursor until you get a value you like, press R to set to the RTTY mode and then press =. SEEKER-PC asks us the Memory Channel to which we wish to copy the data and has already filled in the current Memory Channel. Use the backspace key to erase the default entry and enter a new channel number. SEEKER-PC copies the frequency and mode to a new Memory Channel and then makes that Memory Channel the active one!

Using Menus

Well, it's time to stop playing and get down to the real power of SEEKER-PC. Let's see how easy it is to load an existing Memory Channel database to the receiver, but first we need to learn how the pull-down menus work. To use the keyboard to pull down a menu, you first hold down the Alt key, then press the first letter of the menu you want. To open the File Menu we hold down Alt and press F. Try it now. If you wish to close a Menu, simply press Esc. From now on we will use a shorthand notation for key combinations. In this case the notation is `Alt+F`. With the Mouse, you simply click on the word Files in the Menu Bar.

Moving Within a Menu

Press the DOWN cursor key and you will see that the word Open is highlighted. The first item in the Menu is New, but the highlight did not stop there. That is because SEEKER-PC has intelligent menus which control the items you can select. The New, Merge, Save, Close, and Print menu items are not available because we have not yet opened a file. Invalid

menu items are displayed in a different color or intensity, depending on your video monitor.

With the File Menu open, use the UP and DOWN cursor keys to see how you can move within a Menu. You can select a Menu item by moving the highlight over the item and pressing <return>, or you can just type the first letter of the item. Pressing an invalid letter will close the menus.

Moving Between Menus

Although you can always open the exact Menu you want, you can also move between different pull-down menus by using the LEFT and RIGHT cursor keys. Use the RIGHT cursor key to move to the Utility Menu. You can now press the DOWN cursor key to highlight the currently valid entries.

If you are using a Mouse, the job is even easier. Click on the Menu Bar choice, then click on the item you want within the pull-down. With the Mouse you can quickly move between pull-down menus by simply clicking on the Menu Bar names or dragging the Mouse cursor across the names. Clicking on an invalid entry will close the menus.

Now for some real work. Let's close the menu by pressing Esc and load a Memory Manager database.

Loading a Database

In each of the operating modes SEEKER-PC knows the file extensions used for database files. When we Open, Merge, Save, Print or Erase files, the File Selection screen will show only those files for the current operating mode. If you saved a file but can't find it for loading you probably have changed the operating mode.

To open a Memory Manager database, we pull down the Files Menu (Alt+F) and select Open by pressing O. The File Selection screen is displayed and the file in the upper left corner of the screen is highlighted. While SEEKER-PC is Opening the file you will see a "WORKING..." message in the upper right corner of the screen while the file is being loaded. How long this message is displayed will depend on the speed of your personal computer, the size of the file, and whether the file is on a hard disk or floppy diskette.

The top line of the screen displays how many files were found. The files are displayed in alphabetical order with file names beginning with a number placed before those beginning with letters. If you receive a message "NO FILES WERE FOUND..." you need to press Esc, go to the Setup Menu (Alt+S), choose Data Path and enter the correct drive and path information to get to the sample data files.

The bottom line displays complete information about the file that is

currently highlighted. Use the cursor keys to select a different file and notice how the bottom line provides details of the file's full name, date and time it was saved, and size. Highlight any file name and press <return> to open it. You could also have pressed Esc to cancel the File Open command.

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With the Mouse, you simply move the Mouse to highlight different file names. When the database you want is highlighted just click and it will be loaded. You can also click the RIGHT Mouse button to cancel the File Open command.

We are returned to the Main Screen and the first record of the Memory Manager database is displayed. (Some receivers refer to the first memory channel as number 0 but database records in SEEKER-PC always start at 1 so the first record is number 1 but the memory channel is 0.)

Moving Through a Database

To move through the records, just press PgDn to go to the next record and PgUp to go to the previous record. The Home key takes you to the first record in the database while the End key takes you to the last record in the database. Holding down the Ctrl key while pressing PgDn or PgUp will move in ten record steps. Try it now!

Closing a Database

To show the powerful editing features of SEEKER-PC let's go to a more complex database. We'll be working in the Auto-Record Mode. Although it is not necessary, let's Close the current file in the Memory Manager Mode before changing to Auto-Record. Press Alt+F for the Files Menu, and C to close the file. If you happened to enter the edit mode for this file, SEEKER-PC will warn you that changes may have been made to the file, and do you want to save it. Just press N to respond No.

Operating Mode Selection

Changing Operating Modes is done in the Modes pull-down. Press Alt+M to see the four operating modes. Now press A to choose Auto-Record. Now you're going to see a powerful database! Let's Open a File (Alt+F then O) and choose the DEMODATA file. As we did before, move around the database to look at some of the records. This is a very small file. You can have hundreds of records in each file and you can have hundreds of databases. When the Auto-Record database is first loaded it is automatically sorted by the start time of the scheduled broadcasts beginning with UTC 00:00.

For Auto-Record you might have databases for each season of the broadcasting year, or databases devoted to international news programs. You can schedule recordings in any mode so the capabilities of the Auto-Record mode go far beyond typical programming. You may have a databases of international press agency RTTY transmissions which could automatically

be recorded or directly routed to your RTTY decoder!

The Auto-Record Mode allows you to use a different Mode (AM, CW, FM, LSB, RTTY, USB) for each frequency, so you might have SEEKER-PC check the normal AM transmissions of an International Broadcaster and add a sideband relay frequency. SEEKER-PC would test all of them and record the strongest signal.

Sorting a Database

Sometimes to find a specific entry it is convenient to Sort the database based on a field. The sorting options are found in the Utility Menu. Those sort options which are available for the current operating mode's

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database will be highlighted. While SEEKER-PC is sorting the file the "WORKING..." message will appear in the upper right corner of the display. The larger the file being sorted the longer the message will be displayed. Try Sorting the file by Frequency (Alt+U then F), then sort the file by Description (Alt+U then D).

Editing a Database

Let's go to the first record by pressing the Home key. We'll Edit the first record and save the changes to a file called MYDATA. To enter the database Edit mode you press the function key F2, or click the Mouse anywhere in the database display area. Try it now!

The Description (DESC:) field is highlighted and the editor cursor is at the end of the field. You can backspace to erase and edit the description or use Home then Ctrl+End to quickly erase all the data in the field. Changes to the data in a field are saved only if you move to the next field. If you press Esc while you are still in a field, any changes are cancelled. This can be very helpful. Of course if you really goof up, all you have to do is Open the file again and tell SEEKER-PC to not save your changes.

You move to the next field by pressing <return>, the TAB key or the DOWN cursor arrow. SEEKER-PC tests each field and will beep and put an error or information message at the bottom of the screen.

While editing, once you reach the last field in a record and press <return>, you will automatically be moved to the first field on the next record. If you where editing the last record in the database, SEEKER-PC will append blank records to the end of the database and you will be moved to the first field in the first blank record. This happens in all of the operating Modes except the Memory Manager mode where the number of records is limited to the number of memory channels in the currently selected receiver.

Try the editing features. Don't add any important information as we are going to erase this file in just a minute. Remember SEEKER-PC will test the data you enter, especially the frequency information, which is tested

against the frequency range of the receiver. Press F2 when you are done with editing and we will go about saving our edited file.

Saving a Database

To save the database simply select the Files Menu and choose Save (Alt+F then S). At the bottom of the screen SEEKER-PC asks for a file name to use and has already filled in the current database name. We want to use a new file name so use the backspace key to erase the current entry and type MYDATA followed by <return>. If someone hasn't already used this name the database will be saved and we will be returned to the Main Screen. Otherwise, SEEKER-PC will warn us that the database already exists and ask if it should be overwritten. If you get this message, press Y so that your new database will be saved.

Merging Databases

SEEKER-PC also allows you to combine your databases. Merge in the Files pull-down menu will allow you to add the contents of a database to the end

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of the database you are currently editing. To Merge a database with our MYDATA database, simply select the Files Menu and choose Merge (Alt+F then M). Highlight the database named MERGEME and press <return>. Now let's save this new larger database. To save the database simply select the Files Menu and choose Save (Alt+F then S). Accept the default name by pressing <return>. SEEKER-PC will warn us that the database already exists and ask if it should be overwritten. Press Y so that your new database is saved.

Erasing a Database

SEEKER-PC allows you to erase files for each of the Operating Modes. Just as when you Open a database, the Erase File Selection screen will show only databases for the current Operating Mode. Let's erase the database we just saved. Press Alt+F then E. Next highlight the MYDATA database and press <return>. SEEKER-PC warns that you are about to erase MYDATA and asks you to confirm that you really want to do this. Press Y so that MYDATA is erased.

Closing a Database

Although you erased the file from disk, the data is still in your computer's memory while you are editing the database. You are done so let's Close the database and recover the memory. Select the Files Menu and choose Close (Alt+F then C).

End of the Tour

As Tour Guides often say, "This ends the formal part of the tour." You have seen the basic operation of the program and the capabilities of the database management system. You will want to pull down all of the Menus to see the options and features contained within the program. (Some of

the options require the SEEKER-PC Interface be connected to an actual receiver.)

What you cannot yet experience is the power SEEKER-PC when it scans a frequency range unattended. Later you review the printed output, and the tape recording, and even the NEW database which is automatically created! The "SEEKER-PC Data Sheet" provides a wealth of information about each of the Operating Modes. Your own requirements will doubtless bring to mind hundreds of ways in which SEEKER-PC will provide previously unavailable capabilities.

To quit simply select the Files Menu and choose Quit (Alt+F then Q).

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TECHNICAL NOTES

PROBLEMS DURING STARTUP

There is the possibility, especially if someone else has used this demo, that the configuration options of SEEKER-PC may have been incorrectly set and saved. The following instructions will allow you to reset the configuration for use of the demo.

Using the Mouse or Alt+S from the keyboard, pull down the SETUP menu and confirm the following settings in the listed menu item:

RECEIVER select: Select the DEMO driver in the RECEIVER select list.

COM port for receiver: Select NONE for the COM port.

LPT port for printer: If you have a printer, select either LPT1 or LPT2. If you do not have a printer attached select NONE.

Data path: Select and enter the full path to get to the data files. In our hard disk example above, you would enter C:\SEEKER\DATA.

UTC vs. Local time: Select and choose the time difference between your current local time and UTC time. The prompt at the bottom of the screen changes as your highlight different numbers and will help you decide the

correct value to choose.

NEW Configuration save: Select this item to save any changes to the configuration information.

START-UP OPTIONS

When starting SEEKER-PC you can add one or more "switches" to control the operation of the program. These "switches" are one or two letter combinations preceded by the "/" (forward slash) character. These switches can be used to override the automatic setup of the program and they can be used additively as in the example which follows the listing.

- /B.....Use the Black and White mode. This may be best for color display adapters attached to a non-color display. This switch overrides the automatic display adapter selection.
- /C.....Use the Color display mode. This switch overrides the automatic display adapter selection.
- /SS.....Turn on "snow" suppression. Removes screen glitches with older IBM CGA display adapters. Screen updates are also slower.
- /Q.....Turn off the computer sound for all but serious errors and messages.
- /I.....Skip the initial "Welcome to SEEKER-PC..." screen.
- /NM.....Do not use the Mouse, even if attached and installed.

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Example

If you wish to not use an attached Mouse and force SEEKER-PC to use the Black and White mode you would start the program by typing:

```
SEEKERPC /NM /B <return>
```

DATA FILES

Each of the data files for the four operating modes (Memory Manager, Channel Scan, Frequency Range Scan, and Auto-Record) have a unique extension. They have a standard extension for the SEEKER-PC database file and a different extension for a standard comma-delimited Export/Import file.

SEEKER-PC Mode	Database Extension	Export/Import Extension
Memory Manager	.MEM	.XME

Channel Scan	.SCN	.XSN
Frequency Range Scan	.SCF	.XSF
Auto-Record	.REC	.XRC

DATABASE STRUCTURE:

The following is a list of the fields contained in the databases which support each of SEEKER-PC's operating modes.

Memory Manager

Frequency, Mode (AM, CW, FM, LSB, RTTY, USB), and Channel Assignment in receiver.

Channel Scan

Description (70 characters), Source (40 characters), User code (1 character), Main Frequency, Offset Frequency, Mode (AM, CW, FM, LSB, RTTY, USB), Minimum Acceptable Signal, Maximum Evaluation Period, Maximum Pause Time, Entry date and time, Last Tested date and time, and Last Active date, time, and signal strength.

Frequency Range Scan

Description (70 characters), Start Frequency, End Frequency, Frequency Step size, Mode (AM, CW, FM, LSB, RTTY, USB), Minimum Acceptable Signal, Maximum Evaluation Period, Maximum Pause Time, Start time, End time, Maximum number of loops, Log to Recorder status, Log to Printer status, and Log to Database status.

Auto-Record

Description (70 characters), Active field for each day of the week, Start time, End time, Minimum Acceptable Signal, and six pairs of Frequencies and Modes (AM, CW, FM, LSB, RTTY, USB).

SAMPLE REPORTS

FREQUENCY RANGE SCAN REPORT

To get the following report we scheduled an unattended Frequency Range Scan and set the minimum signal to 0. The report shows each signal found in the selected range. The SIGNAL BAR column provides a visual spectrum

analysis.

FREQUENCY RANGE SCANNING REPORT

Page: 1

=====

REPORT STARTED ON (UTC): Sunday 10-29-1989 at 19:55:11

=====

Desc.: Scan for ALL signals in segment of 19 meter band
Freq. Info - Start: 15.210.000 End: 15.270.000 Step size: 0.005.000
Mode: AM Start time: 18:50 End time: 20:30 Maximum loops: 2
Minimum signal: 0 Minimum Test Period: 1 Maximum Pause: 1

=====

FREQUENCY	TIME	UTC DAY	-S-	SIGNAL BAR
=====	=====	=====	=====	=====
15.210.000	19:55:19 UTC	Sunday	S-2	**
15.215.000	19:55:21 UTC	Sunday	S-9	*****
15.220.000	19:55:23 UTC	Sunday	S-5	*****
15.225.000	19:55:24 UTC	Sunday	S-1	*
15.230.000	19:55:26 UTC	Sunday	S-1	*
15.235.000	19:55:27 UTC	Sunday	S-1	*
15.240.000	19:55:29 UTC	Sunday	S-1	*
15.245.000	19:55:30 UTC	Sunday	S-7	*****
15.250.000	19:55:32 UTC	Sunday	S-6	*****
15.255.000	19:55:33 UTC	Sunday	S-2	**
15.260.000	19:55:35 UTC	Sunday	S-7	*****
15.265.000	19:55:36 UTC	Sunday	S-6	*****
15.270.000	19:55:38 UTC	Sunday	S-3	**

<<<< BEGINNING SCAN LOOP: 2 >>>>

15.210.000	19:55:48 UTC	Sunday	S-1	*
15.215.000	19:55:49 UTC	Sunday	S-9	*****
15.220.000	19:55:51 UTC	Sunday	S-5	*****
15.225.000	19:55:53 UTC	Sunday	S-2	**
15.230.000	19:55:54 UTC	Sunday	S-1	*
15.235.000	19:55:56 UTC	Sunday	S-1	*
15.240.000	19:55:57 UTC	Sunday	S-1	*
15.245.000	19:55:59 UTC	Sunday	S-9	*****
15.250.000	19:56:01 UTC	Sunday	S-4	****
15.255.000	19:56:02 UTC	Sunday	S-2	**
15.260.000	19:56:04 UTC	Sunday	S-8	*****
15.265.000	19:56:06 UTC	Sunday	S-4	****
15.270.000	19:56:07 UTC	Sunday	S-5	*****

=====

To get the following report we requested a Channel Scan of the ITU allocated Marine frequencies and set the minimum signal to 3. The report shows each channel where the signal strength was S-3 or greater.

CHANNEL SCANNING REPORT

Page: 1

REPORT STARTED ON (UTC): Sunday 10-29-1989 at 19:56:48

Minimum signal: 3 Minimum Test Period: 1 Maximum Pause: 30

FREQUENCY	MODE	TIME	UTC DAY	-S-	SIGNAL BAR
4.425.600	USB	19:58:30 UTC	Sunday	S-5	*****
Desc: Marine channel 423					
4.428.700	USB	19:58:39 UTC	Sunday	S-5	*****
Desc: Marine channel 424					
4.431.800	USB	19:58:46 UTC	Sunday	S-9	*****
Desc: Marine channel 425					

AUTO-RECORD REPORT

This is the second page of a longer report on the programs scheduled for recording in an Auto-Record database. The report shows details of each program to be recorded and an ongoing log. Note how the signal was lost on one frequency and SEEKER-PC found the signal on an alternate frequency!

AUTO RECORD REPORT

Page 2

DESC: Radio Netherlands, second daily broadcast

START TIME: 03:31 END TIME: 04:25 MIN. SIGNAL: 5

UTC DAYS - SUN? Y MON? Y TUE? Y WED? Y THU? Y FRI? Y SAT? Y

FREQ. 1: 11.720.000 AM FREQ. 2: 9.590.000 AM
 FREQ. 3: ** NONE ENTERED ** FREQ. 4: ** NONE ENTERED **
 FREQ. 5: ** NONE ENTERED ** FREQ. 6: ** NONE ENTERED **

STATUS	TIME UTC	FREQUENCY	MODE	-S-	SIGNAL BAR
Signal immediately acquired	03:30:42	11.720.000	AM	S-8	*****
Loss of signal	04:01:43	11.720.000	AM	S-1	*
Re-acquisition of signal	04:01:57	9.590.000	AM	S-8	*****
AUTOSEEK disengaged	04:02:10	9.590.000	AM	S-8	*****