Short Wave Log
Version 1.13

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Acknowledgements

Short Wave Log started out as a series of dBASE/Paradox tables and C code. As the program grew, so did the bugs. Thanks to the great team of beta-testers who not only found the bugs, but also gave great suggestions.

The code to spawn Short Wave Log to EMS/XMS memory or disk was written by Ralf Brown.

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Development

Short Wave Log started as a dBASE application and has evolved into a Turbo C 2.0/Turbo Assembler 2.0 program using the Paradox Engine 1.0 for database functions and the TCXL 5.52.06 library for screen management.

Introduction

Many listeners of short wave/international radio log broadcasts. With personal computers now affordable to almost everyone, listeners can store their logs in a database such as dBASE or Paradox or a flat-file database. This requires the listener not only to purchase a database, but also to learn the database language. The Short Wave Log program allows the listener to enter

logs directly into a database and harness the power of a database without the cost and time of purchasing and learning a database.

What exactly does the Short Wave Log program do? Each record of a listener's logbook corresponds to a record in a database table. The table is indexed so that the listener can sort and print his logbook by:

- date and time
- frequency
- station name
- transmitter location

In addition to storing the log entries, Short Wave Log also stores station frequencies and addresses, which are used to speed-up the entry of logs and QSL requests. Short Wave Log also writes reception reports in a variety of languages: English, German, Finnish, Spanish, and Swedish. More languages will be added in subsequent updates.

Hardware and Software Requirements

Short Wave Log runs on the IBM PC family and on 100% compatibles. At least 512 kB of conventional memory is required. If present, approximately 400 kB of EMS or XMS memory is used. A hard disk and at least 2 ½ MB of free disk space is recommended; however, Short Wave Log will also run on a 720 kB or higher capacity floppy or RAM drive (although some features will be disabled).

DOS 3.0 or later is required. With DOS 3.30, Microsoft added National Language Support (NLS). Short Wave Log uses the NLS functions to format the date, time, and sort order according the `country` statement in the `CONFIG.SYS` file. (See an DOS manual for more details.) The QSL Writer is heavily dependent upon the NLS functions and cannot be accessed under DOS 3.0, 3.1, or 3.2.

Short Wave Log places rather heavy demands on the system. The minimum number of file handles recommended is 30. (Put a `FILES=30` line in the `CONFIG.SYS` file.)

Short Wave Log is written to take direct advantage of the DESQview multitasking system. When running under DESQview, all screen writes are written to the logical screen buffer. Therefore the "Writes Directly to the Screen" option can be set to "No" even on 8086/8088/80286 machines.

Short Wave Log is compatible with the EGA 43-line and VGA 50-line modes. Set the monitor to one of these modes before running Short Wave Log. Three batch files (`25.BAT` , `43.BAT` , and `50.BAT`) are supplied for this purpose.

Short Wave Log will detect the DOS country code and set the date, time, and floating-point formats accordingly. The sort order of the tables is also determined by the country code. Three sort orders are supported: International, Norwegian/Danish (country codes 047 and 045), and Swedish/Finnish (country codes 046 and 358). The three sort orders differ in how they treat accented Roman characters. The International sort order does not differentiate between accented and unaccented characters. The Norwegian/Danish sort order puts accented characters immediately after unaccented. The Swedish/Finnish sort order puts accented characters at the end of the alphabet.

Installation and Upgrading

Because of the number of archive programs available for the IBM PC and compatibles, Short Wave Log may arrive packaged in almost any format. To extract the file from the archive, follow the instructions of the archiving program. Once the files have been extracted to a subdirectory (e.g. C:\SWLOG), the program is ready to run.

Upon starting the program for the first time, Short Wave Log creates the SWL table in which the log entries are stored. After the SWL table is created, all the tables are keyed. This can take anywhere from one to fifteen minutes, depending on the speed of the machine and hard drive. After the initial keying of tables, the program is ready to run.

When upgrading to a new version of Short Wave Log, move the old version and its associated files into a temporary directory. Extract the new version into the SWLOG directory. Finally copy the *.DB , *.PX , *.X?? , and *.Y?? files from the temporary directory to the SWLOG directory. This will copy over the starter tables with your own tables.

Registration and Support

Short Wave Log is distributed as shareware. It is not and never has been in the public domain. Short Wave Log may be freely distributed in any format so long as the archive is kept in tact.

The demonstration program can be used on a trial basis. If you find the program useful, please register by sending $20 (U.S.) (check or money order) to Lee Consulting, P.O. Box 71301, Pittsburgh, PA 15213.

As an alternative to the registration fee, a language module for the QSL Writer can be provided. In particular French, Portuguese, and other European languages are needed. An Internet, CompuServe, or GEnie e-mail address is required for this option. Please contact Lee Consulting for more details.

With registration comes a printed copy of the manual, the latest version of the program, and support via either e-mail or telephone. More importantly, you will receive notification of updates and new versions.

The latest versions of the Short Wave Log can be found on these systems:

- ANARC 913/345-1978
- Binklink 412/766-0732
- CompuServe HamNet Forum
- GEnie Radio Roundtable
- Pinelands 609/859-1910
- Red Onion Express 914/342-4585

If you have any problems with the program or have any comments -- positive or negative -- feel free to use one of these e-mail addresses:

- CompuServe: 71251,1407
- Internet: 71251.1407@compuserve.com
- GEnie: R.SILLETT

Changes from version 1.12 to 1.13

- Trap for Escape before entering the Browse function.
- If run on A: or B: , the program uses only the primary key and blacks out the OS Shell, Browse, Import, and Export functions to conserve disk space.
- The help file is optional to conserve disk space on floppy installations.
- Fixed problem where the abbreviation for Afrikaans would not be displayed.
- The Display Stations function can now display more than 500 stations.
- The OS Shell function is blacked out if running under DESQview as it can spawn DOS processes.
- The TCXL video library has been upgraded to 5.52.06. This fixes some anomalies with the data entry forms.
- The FREQLIST table has been updated with data for winter 1991-92.
- General clean-up of the documentation.

Known Problems

There is an incompatibility between the Paradox Engine and the Zenith EZpc. Unfortunately Short Wave Log cannot run on the Zenith EZpc.

Some EMS memory managers on 286-based computers are incompatible with the memory calls used by Short Wave Log. Short Wave Log requires real hardware EMS 4.0 memory, not software EMS 4.0 memory emulation.

Demo vs Registered Versions

The demonstration and registered versions of Short Wave Log are identical with one exception: the "please register me" message only appears in the demonstration version.

Environment Variable

Short Wave Log displays a clock in the upper right-hand corner of the screen. The clock can be set to either local time or GMT/UTC. If GMT/UTC is the preference, then Short Wave Log must know the time difference between local time and GMT/UTC.

The time difference is read from the DOS environment variable TZ, where TZ=zzz[+/-]d[d]lll . zzz is a three letter abbreviation for the standard time zone. The [+/-]d[d] field contains one or more digits telling the number of hours the local time zone is west of GMT/UTC. For zones east of GMT/UTC, prefix the number with a minus sign (e.g. -1 for Continental Europe). The lll field is used if daylight savings time is currently being used; it too is a three letter field.

Time Zone:	Set TZ to:
Eastern Standard	EST5
Eastern Daylight	EST5EDT
Central Standard	CST6
Central Daylight	CST6CDT
Mountain Standard	MST7
Mountain Daylight	MST7MDT
Pacific Standard	PST8
Pacific Daylight	PST8PDT

Configuration File

The environment variables and command-line options of earlier versions have been replaced by the ASCII configuration file SWLOG.CFG . The following items are set in the configuration file:

- Registration number
- User name and address (used for QSL requests)
- BIOS screen writes

- CGA snow elimination
- Swap to EMS/XMS or disk
- Display the clock using local time or GMT/UTC.
- Monochrome display
- Frequencies shown in MHz or kHz
- Name of an ASCII editor to edit the QSL requests

Main Menu

Once the program is started, an initial welcome screen and copyright notice is displayed. To remove the message, press any key or wait a few seconds until the delay is over. If the demonstration version is run, a "please register me" screen is displayed.

After the welcome screen disappears, the program is ready for use. On the top of the screen is a five-part menu and a clock, which displays the current local time or GMT/UTC. The main menu is divided into five sub-menus:

System:	Re-display the welcome screen; Show a list of ASCII characters; Shell to DOS; Display information about the system; Quit the program.
Freqlist:	Append, browse, edit, delete, and print the records in the FREQLIST table.
Logfile:	Append, browse, edit, delete, and print the records in the LOGFILE table.
Stations:	Append, browse, display, edit, delete, and print the records in the STATION table.
Utils:	Export the tables to CSV files; Import data from CSV or dBASE III/III+ files; Generate a reception report; Rekey the tables.

System Menu

General information about the program and computer is accessed through the system menu. There are five choices to the system menu:

About:	This function shows the welcome message that appeared upon first entering the program. The current version of the program is displayed.

ASCII Chart: This function displays an ASCII chart. It may be called at any time via the [Alt-A] key combination. This is useful for entering non-English character on a US/UK keyboard (e.g. Südwestfunk).

OS Shell: This function temporarily exits the program and presents the normal DOS prompt. While in DOS, any DOS command may be issued; however, if any of the database tables are changed or deleted, irreparable damage may be inflicted to the tables.

This function is not available when running under DESQview as it can spawn DOS processes.

System Info.: This function shows various details about the system such as the type of CPU and co-processor, the amount of free conventional, EMS, and XMS memory.

Quit: This function quits the program by closing all open files and reallocating all used memory. This is the only safe way to exit the program. It is not safe to exit by rebooting or turning off the computer since this may destroy all or part of the tables. The program may be quit at any time by using the [Alt-X] key combination.

Freqlist Menu

Access to the FREQLIST table is obtained via the freqlist menu. FREQLIST is a Paradox table with the following structure:

Khz	N
Station	A35
Location	A35
Kw	N

The FREQLIST table is used to aid the entering of a record into the LOGFILE table. For example, say the BBC on 9590 kHz is being entered into the LOGFILE table. The program maps 9590 kHz into the FREQLIST table and finds all matching entries. Both the BBC and Radio Netherlands are found. The user then chooses the correct station and the program presents the user with the corresponding information for the transmitter location and power. If no matches are found, then the user is simply not presented with any suggestions. If the suggestions are incorrect, the user need only press the [Esc] key to disregard them.

Short Wave Log is shipped with a FREQLIST table containing approximately 470 records. The frequencies are current for the winter of 1991.

There are five choices to the freqlist menu:

Append: This function appends records to the FREQLIST table. Once selected, the user is presented a form in which to enter data.

Browse: This function allows the viewing and editing of many records on the screen at one time. This function is contained in the file BROWSE.EXE . The Short Wave Log program is swapped to EMS, XMS, or disk when this function is called. The swapping method may not be compatible with every expanded and extended memory manager. If the swap crashes the system, it can be forced to disk by setting an option in the configuration file.

To make more disk space available for log entries, the browse function is not available when run from a floppy drive.

Edit/Delete: This function edits and deletes existing records in the table. The program maintains keys, or indices, to the table. Prior to entering the edit form, the user is prompted to choose the desired key and enter the search data. The corresponding record is then found in the table.

If run from a floppy drive, only the primary key is used to save disk space.

Print: This function prints the table to a file chosen by the user. The output is sorted according to one of the table's keys: frequency, station name, or transmitter location. To print directly to a printer, give the name of the port to which the printer is attached (e.g. PRN: , LPT1:).

Char Set: This function determines whether the Print Freqlist function uses 7- or 8-bit ASCII characters. While all PC's can display 8-bit characters, some printers cannot.

The Append and Edit/Delete functions share the same data entry form; however, the Edit/Delete form has additional keys defined to allow the user to move from record to record. While in either function, the Escape key aborts the function. The key bindings specific to the Edit/Delete function follow:

[F2]	Choose a new search key.
[F3]	Delete the current record.
[F9]	Go to the first record in the table.
[F10]	Go to the last record in the table.
[PgUp]	Go to the previous record.
[PgDn]	Go to the next record.

The browse function has the following key bindings:

[F1]	Help screen
[UpArr]	Previous record
[DnArr]	Next record
[LtArr]	Next field to the left
[RtArr]	Next field to the right
[PgUp]	Previous page of records
[PgDn]	Next page of records
[Ctrl-PgUp]	Top of table
[Ctrl-PgDn]	Bottom of table
[Home]	First field
[End]	Last field
[Ctrl-End]	Go to a specific record
[Delete]	Delete current record
[BSpace]	Edit current field
[Enter]	Accept edit
[Esc]	Abort edit or exit function

Logfile Menu

Access to the LOGFILE table is obtained via the logfile menu. LOGFILE is a Paradox table with the following structure:

Date	D
Gmt	A4
Khz	N
Mode	A4
Sinpo	A5
Station	A35
Location	A35
Kw	N
Language	A2
Detail1	A50
Detail2	A50
Detail3	A50

The LOGFILE table is used to store the user's logs. When entering a record, the user is presented with pop-up windows for the mode, station name, transmitter location, power, and language. The suggestions for the station name, transmitter location, and power pop-up windows come from data in the FREQLIST table. If there are no corresponding matches in the

FREQLIST table, then there is no pop-up window. If the suggestions are incorrect, the user need only press the Escape key to disregard them.

There are the same options to the LOGFILE menu as the FREQLIST menu with one addition:

Print Key: This function prints only those records matching a given key (e.g. only the records from the BBC). The user is prompted for the filename.

Stations Menu

Access to the STATION table is obtained via the stations menu. STATION is a Paradox table with the following structure:

Name	A35
Address1	A35
Address2	A35
Country	A35

There are the same options to the STATIONS menu as the FREQLIST menu with one addition:

Display: This function presents the user with a pop-up window of all the station names. The user can choose a station (or abort the function via the Escape key) and see the address of the station.

Utils Menu

Contained in the utils menu are functions that do not fit in the other menus. There are four choices to the utils menu:

Export: This function exports the data from the FREQLIST, STATION, and SWL tables into ASCII files formatted to the CSV (Comma Separated Values) specification. A CSV file is a comma-delimited ASCII file with double quotation marks surrounding text fields. The CSV files can then be imported by another database or spreadsheet. The fields are in the same order as described above.

Import: This function imports data from a CSV or dBASE file into the corresponding tables (i.e. the data in a FREQLIST.DBF file is imported into the FREQLIST table). Both the CSV and DBF files must be in a specific format. The required format for each table can be found in the on-line help.

QSL Writer: This function writes a reception report (a QSL request) in a variety of languages. Currently Short Wave Log writes reports in English, Finnish, German, Spanish, and Swedish. The QSL Writer cannot be accessed unless running DOS 3.30 or later.

When this function is selected, the user is presented with two forms. In the first form, the user enters his name and address; the name and address of the station; the date, time, and frequency of the broadcast; the quality of the signal strength, background noise, and overall transmission quality of the broadcast. Finally the user chooses the desired language for the report. A list of stations from the STATION table is presented in a pop-up window for thestation name field. If a station is chosen, its address is placed into the appropriate fields of the form.

In the second form the user enters details about the program that he has heard. If a language other than English is chosen, a pop-up window of program details is presented. The chosen program detail is translated into the appropriate language.

The text for the QSL request is stored in files with the extension of QSL (e.g. ENGLISH.QSL). These files can be edited to the user's taste with any ASCII editor that supports 8-bit ASCII.

When both forms have been completed, the reception report is written to an ASCII disk file. Note that this file is in 8-bit ASCII (to accommodate the non-English characters), and not all printers can print it.

After the QSL request is written to disk, the user is asked if he wants to edit the report. The name of the editor is defined in the SWLOG.CFG file.

Rekey: Since there can be thousands, even millions, of records in a table, there must be a faster method to locate records other than to traverse the entire table from start to end. This is done with a series of keys, or indices.

Sometimes the keys become corrupt. This can happen if the disk drive becomes full or a key is accidentally deleted. If so, the program will detect the error and terminate with an error message. Most often rekeying the tables will eliminate the error.

The tables may have to be rekeyed if the DOS country code is changed. Currently three different sorting orders are used:

International, Norwegian/Danish, and Swedish/Finnish. The sort order is determined by the DOS country code. If the tables and their indexes do not use the same sort order, the program will abort with the obscure error

Backing Up Tables

As with any program, it is a prudent idea to back up the tables often. All the data for Short Wave Log is stored in the FREQLIST.DB , STATION.DB , and SWL.DB files.

On-line Help

All of the information contained in the user's guide is also available within the Short Wave Log program. To access the on-line help, press the [F1] key at any time.