SD EI5DI's Freeware Windows Contest Logger

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SD really is different! It's a 32-bit Windows application that combines the power and capacity of Windows with the efficiency and visibility of a DOS-like user interface. SD supports CW and SSB operation in single-op unassisted entries. Spotting networks and multi-op entries are not supported.

SD is fast, simple and effective! It is written for contesters, not for IT specialists who happen to be contesters. It concentrates on the basics and does them right. SD sets the standard for ESM (Enter Sends Message) in both Run and S&P modes.

SD is the only contest logger to offer ASCII files, full-screen editing of any QSO in your log, no multiple keystrokes, and status fields above and below the callsign. The status fields update as you type prefixes, with no need to touch any other key, so that all the information is where you need it – close to the callsign.

SD neither needs nor supports a mouse.

SD is comprehensive! It supports all major international contests, the FOC Marathon, QSO Parties, and dozens of others events worldwide – with over 140 templates supplied. You'll know there are serious compromises in loggers that claim to "support" all HF and VHF events in a single program. That's why you get separate programs for VHF, and for "difficult" HF events such as the IOTA, UBA and Commonwealth contests.

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SD offers single keystrokes for all logging and editing functions.

SD always shows your correct score after each QSO or Edit.

SD gives real-time duping, and auto prefix checking, as you type callsign characters.

SD permits any combination of real-time or post-contest logging.

SD supports 2R and WinKeyer USB.

SD combines ASCII logs and real-time editing of *any* QSO.

SD shows multiplier status and bearing/distance display, as prefixes are typed.

SD gives a full audit trail of QSOs logged and edited.

SD generates Cabrillo and ADIF output files.

SDV tracks any combination of District, Country and Locator Square multipliers.

SDV scores by points/km or points/QSO.

This manual has 18 pages: Help stamp out bloatware – **use SD**.

1st June 2008

Index:

This manual supports the SD family of contest and special-event loggers – including

SD	HF Contests
SDC	Commonwealth Contest
SDI	IOTA Contest
SDU	UBA Contest
SDV	VHF Contests
SDX	DXpeditions & Special Events

The programs share the same look and feel, and references to SD alone may be assumed to apply generally. Please review the HISTORY.DOC file for information about recent additions and changes, as it is updated more often than this manual! The loggers are 32-bit Windows programs operating in text (console) mode. They may look like DOS, but they're not. They run on all versions of Windows, and will not run without Windows.

What's different about SD? It is intended for single-operator unassisted entries. Although it does not support packet cluster or computer networking, you'll soon find it's better at the basics – logging, editing, and identifying potential multipliers. SD uses single intuitive keystrokes for all logging and editing functions – no need for Alt-this or Ctrl-that! SD was written for contesters, not for other programmers.

No other logger displays as much relevant data in real-time as you type callsign prefixes, with no need to touch any other key – and before you move to the next field. For example, in contests with multipliers, you'll see an instant band/multiplier analysis below the callsign – and for both modes when appropriate. Yellow indicates this station or country will be a multiplier on the corresponding band/mode. White means it's needed (has not been worked), but will not be a multiplier. Black means it has been worked already. You have all the information you need to instantly decide if it's worth moving that station to pick up a multiplier. What's more, the information is where you need it – right by the callsign.

SD provides the simplest and most versatile data entry options for any contest logger. You can use any standard character for moving from one field to the next - including Enter (or Return), Tab, Shift_Tab, Right Arrow, and even Space Bar (as a substitute for Enter). However, **Enter is recommended** after all fields.

SD's configuration file, SD.INI, is created the first time you run the program and then updated as you select standard options while logging. SDV uses an *additional* configuration file SDV.INI to hold RSGB cover-sheet data.

INSTALLATION

The programs are supplied as Windows self-installing files at www.ei5di.com. They are placed in the SD folder on your hard disc (C: drive) unless you select another, and shortcut icons are created on your desktop.

SDSETUP.EXE	Files for SD.
SDCSETUP.EXE	Files for SDC.
SDISETUP.EXE	Files for SDI.
SDUSETUP.EXE	Files for SDU.
SDVSETUP.EXE	Files for SDV.
SDXSETUP.EXE	Files for SDX.

Hint: When you use Windows Explorer to see the files in your SD folder (or any other folder), it's useful to have all file extensions visible. Select Tools, Folder Options, View tab, and ensure that "Hide file extensions for known file types" is **not** checked. Finally, select "Apply to All Folders", and click the OK button.

PROGRAM and REFERENCE FILES

SDCHECK.EXE	Post-contest program for SD, SDC and SDU.
SDICHECK.EXE	SDI post-contest program: Prepares Cabrillo log and other analyses.
SDVCHECK.EXE	SDV post-contest program: Prepares entry, analyses and summary sheet.
SDXCHECK.EXE	SDX post-event program: Exports ADIF or text files for integration with your station log.
*.CTY	Reference files for identifying country and continent from callsign prefixes.
*.MLT	HF area multiplier reference files.
*.MLV	VHF multiplier reference files.
*.SD	Rig control files.
SD.INI	HF preset keyer messages and user preferences. Created by running SD.
SDV.INI	VHF Cover Sheet information. Created by running SDV.
HELP.TXT	HELP file – you can edit this yourself.
*.TPL	Templates for individual HF contests.
TEMPLATE.TXT	The template index file.
HISTORY.DOC	History of updates and bug fixes.

STARTING SD.

Start SD by double-clicking its desktop shortcut icon. You are asked for a contest (file) name. What happens next depends on whether you enter nothing, a new name, or the name of an existing contest file.

If you leave the file name blank, SD displays all your contest files. Use the arrow keys to select the one you want, and Enter to reload it, Esc to return to the previous screen, or Z (short for Zap) to delete the file. Zap is handy for deleting test files you no longer need – but be careful not to zap any others!

Your contest file name may be any combination of alphabetic or numeric characters, up to a total of eight. SD removes other characters, including spaces. You should include the year in each contest name, for example ARRLCW08 or IOTA08, so that you can distinguish one year's log from another. HF contest files have a .ALL extension, and it's .VHF for VHF files.

When you enter a new name, SD lists the contests supported (with pre-defined templates). Use the arrow keys, then Enter, to make your selection. If you prefer, Esc takes you to SD's former starting screen where you can configure SD, on the fly, for almost any contest.

Templates have a .TPL extension, and are listed in TEMPLATE.TXT. The latest ones are always available at

www.ei5di.com/sd/template.zip. You're free to add new entries to TEMPLATE.TXT, or remove any you're not interested in.

If you give the name of an existing contest file, SD re-loads it, and displays fixed information such as Callsign, Name and Address – normally copied from the initialisation file SD.INI. When you run SD for the first time, SD.INI will not exist and you will be invited to enter this information. Parameters for the remaining fields are taken from whatever template you've chosen. If you need to change any field on this screen, answer "N" to the "Continue?" question, otherwise Enter takes you to the logging screen.

In VHF contests, it's usual to exchange locators. SDV logs 4 or 6-character locators depending on how many characters you specify for your own locator on the opening screen. To log 4-character locators from other stations, enter your own locator as 4 characters – change it from 6 characters when appropriate.

For HF, your starting mode may be CW or SSB, and FM is supported on VHF. The initial band, for all HF programs, is determined by your radio when rig control is enabled. Otherwise, it's whatever band you last used (stored as SD_BAND in the initialisation file SD.INI). The default is 80m, or 144 MHz, when there is no entry in SD.INI. Without rig control, use any appropriate band change command – use the HELP command or see the "Changing Band or Mode" section or to the Command Summary.

With Windows NT, 2000 and XP you can run SD in full-screen mode, but you must first use the BORDER command to set the border width to 0, and then Alt-Enter to toggle between a window and full-screen. Full-screen mode is not possible with Vista, and with WinME or earlier versions of Windows. To change SD's font (and Window) size, click on the SD icon at the top left-hand-side of SD's window, select Properties, then Font – and experiment with different sizes. The Lucida Console TrueType font is recommended for use with non-UK/US keyboards.

The programs are optimised for real-time logging. Post-contest mode is supported, but you'll miss out on many of the features that make them so efficient. To switch, use the commands REAL and POST (for real-time and post-contest). When you switch to post-contest mode, you're asked for the appropriate logging date – this **must** be entered as 8 characters in the format DD-MM-YY.

UTC.

SD displays UTC, and the corresponding date, at all times. This is dependent upon your PC being set to the correct local time, and time zone – using Windows Control Panel.

LOGGING QSOs.

For most HF contest QSOs, you record only the callsign and area code or serial (the exchange) received. When logging or editing serials, there's no need to include leading zeros - SD takes care of them for you. A received report of 59(9) is assumed, but can be easily changed.

As you type callsign prefixes, the corresponding country and zone are identified, and you know instantly whether the QSO will be a multiplier, or a double multiplier – with no need to press Enter, Space or any other key! In many

contests where you log only certain countries, inappropriate callsigns or prefixes turn red as you type them.

Beam headings and distance are shown in real-time as you type callsign prefixes. No beam heading is shown for own-country calls. Distances are in kilometres – if you prefer miles, change the SD_DISTUNIT record in SD.INI to M rather than K. Reminder: SD.INI is created only after you run SD for the first time.

SD takes your own latitude and longitude from your country record on whatever .CTY file is first used, converts it to a six-character locator and stores it in SD.INI with the description SD_LCTR. You're free to edit your locator to increase the accuracy of SD's beam headings and distance calculations.

While logging, press Enter (Return) after **every** field unless you do not want to complete (log) the QSO. Each QSO will be logged, following an Enter, only when all required data fields are present. Note that "present" is not necessarily the same as "correct"! With Tab or Right Arrow, you can move between fields without logging the QSO.

Don't worry about logging a QSO too soon, or logging an unwanted QSO. If unwanted, ZAP will delete it. If it has to be edited, use Up-Arrow and then tab across to access the field to be changed – followed by Enter to log the edited QSO. Unlike some other contest loggers, you can edit any QSO in the log, and what you see on the screen is what's on disk – at all times!

The ZAP command applies to SD only. You may ZAP all the way back to the start of your log – it's a handy way to get a bit of practice before the contest, and to check that everything is set up correctly. One snag – ZAP may distort your QSO Rate figures!

The LOGONENTER (or L) command toggles the "Log on Enter" option – it's On when you see L on the status line below the Callsign field. The default is Off. To understand its effect, try a test file using the CQWW template. If in doubt, leave it Off.

In HF contests with serials, Enter takes you directly to the Serial field after entering the callsign. Type 0 (zero) to record no serial – it will appear as blank, or spaces, in your final log. If you need to edit RST Received, press Enter in the **empty** Serial field to get back to the RST field. When you've edited the RST, a further Enter returns you to Serial. Simply by pressing Enter, SD takes you to all fields in the correct sequence – even for those rare occasions when you choose to edit RST Received.

To summarise, press Enter after each field, but use TAB or Right Arrow to move around the QSO fields without logging. The QSO will be logged following Enter, but only when all fields are valid.

In contests where you log Serials and Area Codes, you have the option of entering both values in the "Serial field". For example, enter 6AB to see 006 AB in their respective fields

With SDV, you can ignore the Serial and Locator fields if no relevant data is received. Use the Comments field for signal quality reports given or received, and for recording

locations received on 70 MHz in RSGB VHF Field Day. Note that the default setting in SDV assumes you'll always send 59(9) and that you'll skip RST Sent and the Comments field. Use the RST command, in the Callsign field, to toggle this feature On or Off.

If you miss one or more characters in the callsign, you may replace them with asterisks or question marks. These are known as wildcard characters and should be corrected before creating your Cabrillo log with SDCHECK.

When logging, use quotes " to repeat the callsign from the previous QSO – for example, after moving a multiplier station to another band or mode, or working a "rover" on a county boundary.

As each QSO is logged, you'll see an analysis, by continent, of countries worked and needed on the current band and mode. This replaces the Summary Score window for 15 seconds. Use F4 or F5, with Caps Lock Off, to see countries for other continents and bands. Minus restores the Summary Score at any time.

In contests where zones or other fixed area codes are logged, SD pre-fills the field based on what was logged previously, or on the default value (the zone) for the callsign. You are free to overtype whatever is received. If you enter a different value for a station already worked, all QSOs with that station will be updated accordingly, and mults flagged or unflagged as necessary on all relevant QSO, whether with that station or any other. No other contest logger can do this.

CHANGING BAND OR MODE.

Rig control is recommended, because SD then follows any band or mode changes on your rig – and eliminates the risk of logging QSOs on the wrong band or mode. Without rig control, type 20M or 14M, followed by Enter, to go to 20 metres without changing mode, 80M for 80 metres, etc. To change mode (it works for mixed-mode entries only) use C, CW, S or SSB. To change both band and mode, type 20C, 80S etc. You'll soon find that anything reasonable works. On VHF, where rig control is not supported, type 144M, 432M etc. to change band.

With rig control you can QSY directly by entering the new frequency in the callsign field. Your original "run" frequency is stored in Quick Memory and you can restore it by pressing F10 twice. This is very handy for getting back to your run frequency after moving a multiplier station.

On all bands other than 160m, the appropriate mode is automatically selected (CW, LSB, USB).

With rig control enabled, direct frequency entry is the only way to change band from within SD – **the normal band change commands do not work.** Of course, SD will continue to follow frequency or mode changes on your radio, however SD's mode will change only if you selected mixed-mode when starting.

COMMS PARAMETERS & RIG CONTROL.

SD, and the other HF loggers, link to most Icom, Kenwood, Ten-Tec and Yaesu radios to synchronise band and mode. 2R control is supported.

Use the PORTS command to define ports for rig control and for CW output.

CW Port for first Radio
0	Disables CW.
1 – 8	Assigns COM1 – COM8
9 – 12	Assigns LPT1 – LPT4

CW Port for second Radio
0	Disables CW for R2.
1 – 8	Assigns COM1 – COM8
9 – 12	Assigns LPT1 – LPT4

Control Port for Radio 1
0	Disables rig control
1 – 8	Assigns COM1 – COM8 for R1
	Printer ports cannot be used

Control Port for Radio 2
0	Disables rig control on R2
1 – 8	Assigns COM1 – COM8 for R2
	Printer ports cannot be used

Radio-1 Model
Enter (leave blank) to list supported rigs.
Enter "NONE" to clear previous model.

Radio-2 Model
Enter (leave blank) to list supported rigs.
Enter "NONE" if no second radio.

If you enter a COM port number and get the message "No COMX on this computer", you can verify your computer's port numbers as follows (with Windows XP).

With any CW accessories and associated drivers running, select Start - Settings - Control Panel - System - Hardware - Device Manager - Ports (COM & LPT). You cannot assign any port that is not listed.

CW keying defaults to SD's internal keyer, and keying occurs only when sidetone is disabled. The STATUS command displays your settings. The SIDETONE command toggles sidetone, if necessary. With any external WinKey keyer, use the WINKEY command to toggle between internal and WinKey keying. Again, the STATUS command will confirm your settings.

Sometimes, WinKey will not work, or may stop working. If so, try the WKINIT (or INIT) commands.

If nothing seems to work, re-start your PC and run SD again. If you still can't get CW or rig control, delete the SD.INI file in your SD folder, then start SD and use the PORTS command again.

The following default parameters apply the first time you run SD. They are held in SD.INI and stay in effect until you change them.

Bits per second:	4800
Data bits:	8
Stop bits:	2
Parity:	N (None)

Use the PARITY, DATABITS, STOPBITS and BPS commands to edit your serial port parameters. Remember that your rig must be set up to match all these parameters. You should use the highest BPS value your rig supports. Two radios must share the same parameters, except that you can use BPS1 and BPS2 to set separate BPS values, and STOPBIT1 and STOPBIT2 for separate stop bit values.

Again, the STATUS command displays your settings.

Use the LINKTIME and POLLTIME commands to optimise your rig's response to polling signals from SD. You may assign values from 20 to 1000ms for LINKTIME, and 50 to 1000ms for POLLTIME. The faster your rig's BPS rate, the lower both these parameters can be. Select the lowest value for LINKTIME that maintains rig control, then reduce POLLTIME until just above the value that stops the link working.

The LINK command toggles rig-control On and Off - this can be useful when you need to temporarily break the link.

The RESET command restores the comms parameters to their default values. RESET will reset the screen colours and set the Com ports to 0.

With rig control enabled, your frequency (rounded up or down to the nearest kHz) is stored in a compressed ASCII form in each QSO record. However, it appears in full in Cabrillo or ADIF logs created by SDCHECK.

For 2R operation, use backslash "\" to swap rigs, comma "," to swap frequencies (but keep the same rig active), and equals "=" to send the active rig's frequency to the other rig. R1 or R2 appears to the left or right of the Date/Time heading to indicate the active radio.

Again, for 2R operation, Pin 14 on LPT1 is set high when Rig 2 is active. Otherwise, it remains low.

HELP.

The HELP (or H) command displays a summary of all SD's commands and edit functions. The information is held in the HELP.TXT file, and you're free to edit it. For more information, please refer to the Command Summary at the end of the manual. You should try all the commands!

VARIABLE RST SENT.

In some contests, you may prefer to send something other than 59(9). The RST command toggles between fixed and variable reports.

With fixed RST 59(9) on HF (the default), RST Sent is not shown, and you're taken directly to the Serial or Area Code field once you've entered the callsign. You don't have to worry about RST Received unless it's anything other than 59(9).

If you do receive something other than 59(9), press Enter, in the empty Serial Received field, to return to RST Received. Type the changed RST, followed by Enter, to return to the Serial Received field.

With variable RST, on HF, you're taken in sequence between Callsign, RST Sent, RST Received, Serial or Area.

For fixed RST on VHF (SDV), you'll see a line above the RST Sent and Serial Sent fields. SDV's sequence (using Enter after every field) is

Callsign
Serial Received
Locator Received
District Code Received (if applicable).

If you need to, you can tab between all fields regardless of the status of variable RST. This way, you can log any value of RST Sent even though fixed RST has been selected. In most circumstances, Enter is the recommended terminator for all fields.

<Soapbox> In the major international contests, including ARRL DX and 10m, CQWW and WPX, IOTA etc. there is no need to log anything other than 59(9), regardless of what was actually sent or received, because ARRL and CQ ignore signal reports during log-checking. Why, then, is 59(9) still required as part of the exchange? I've asked that question many times, but no one has given an answer – other than the circular argument that it's in the rules. It seems to me there's little point in persisting with a contest exchange that has long lost whatever meaning it may once have had. After all, no signal report (of any kind) is required for ARRL awards, including DXCC.

If, in the circumstances, you would like SD to generate variable reports, the RANDOM command assigns random values between 339 and 599 – integrated with SD's keyer. **</Soapbox>**

Other options for RST include 59A, 59C and 59K, to indicate aurora, chirp and key clicks.

EDITING FIELDS - Call, RST, Serial, Locator.

SD offers versatile editing functions. They're efficient, but may differ slightly from other loggers, and it's worthwhile taking time to get used to them. Many, but not all, of the "standard" multiple keystrokes are supported – so please experiment before the contest.

Esc   Deletes or clears any single field - a second Esc restores it.

Minus   Wipes the current QSO Entry, or abandons an Edit and returns to QSO Entry mode. (Think of Minus as "take away" - it's useful if you get into trouble during an edit or if making corrections to a new QSO takes too long - it lets you start again from the beginning.) Quick Memory is updated.

F11   As Minus, but Quick Memory is not updated.

Home or **[**	Moves to the start of a field.
End or **]**	Moves to the end of a field.
Delete	Deletes the character under the cursor.
Backspace	Deletes the character to the left of the cursor.

Use the **arrow keys** to move right and left within fields, or to move from one field to the next (Right-Arrow only). Up Arrow, in an empty Callsign field, lets you edit previous QSOs.

DATA ENTRY MODES.

The entry mode options are overwrite and insert. The default is overwrite, as shown by OVR under the Callsign field. You can switch to insert mode, shown as INS, by pressing the Insert key.

In Overwrite mode, anything you type replaces what's under the cursor. In Insert mode, whatever you type is inserted (added) before the cursor.

Insert mode can be useful when you have missed the prefix in a callsign and need to complete it after recording the remaining QSO information. In this mode, when you return to the Callsign field, press Home or [to move the cursor to the first character, ready to insert the prefix.

If you're in OVR mode, and need to insert callsign characters, place the cursor as necessary and press the space bar to create a few spaces. Then you can enter the missing characters. It's usually faster to do this than to switch to Insert. Don't worry about leaving extra spaces in the callsign – they'll disappear when you leave the field.

AUTOINSERT (or AI) is a powerful data-entry option. It applies only to the callsign field on the logging line and only when you're in OVR mode.

With Auto Insert On, the "V" in OVR is highlighted. Then, any time you move to the start of callsign field, SD's data entry mode is switched temporarily to Insert and you can enter prefix characters without the need to first type spaces. Once you use any character that changes the position of the cursor, the mode reverts to OVR. This is worth trying – it's what I use myself.

DEALING WITH DUPES.

SD gives auto-prefix checking once you've typed two or more callsign characters. This lets you know about potential and actual dupes without having to type the full callsign.

If a callsign is a dupe, its colour changes to red and you see the word Dupe above it. You can delete the callsign with Esc, Minus or F11. If you have moved to another field, Minus or F11 will wipe the QSO. Enter, in an empty Serial or Area Code field, will wipe a dupe.

To log the QSO as a dupe, type (or accept) the exchange followed by Enter.

<Soapbox> When the caller is a dupe, it's nearly always quicker to send the normal exchange and log the QSO. No one likes to hear QSO B4 – you may have logged his call incorrectly or he may have logged your call incorrectly. You may have thought he had worked you when he had actually logged someone else on the same frequency. Either way, if you don't log the QSO this time, you'll both lose points! SD does not claim points for dupes, so why worry? Surely it's better to keep your rate up than to get into an argument?

With the introduction of the Cabrillo format for contest logs, together with automated log-checking, there is **no penalty for dupes**, whether marked or not. In fact, Cabrillo makes no provision for marking dupes (or multipliers or points). Now that Cabrillo is universal, contest organisers independently score and dupe each log – and the concept of "unmarked dupes" has gone for ever. **</Soapbox>**

For duping purposes, SD tests for calls of the type W6AA, W6AA/9, KP2/W6AA, W6AA/KP2, and ignores the following suffixes.

/P   /M   /A   /MM   /AM   /QRP

For example, if GI3OTV/M has already been logged, GI3OTV will be flagged as a dupe on the same band. This feature applies both to new QSOs and to edits of earlier QSOs.

Use SETDUPE to reset dupe checking at any time – it's intended for contests which are divided into separate time periods and permit you to log, without penalty, the same stations in each period. SETDUPE also resets multiplier checking. You should not edit any QSO logged before the time of the most recent SETDUPE command – otherwise dupe checking may fail.

SEARCHING AND POUNCING.

SD offers fast, simple and powerful options for searching and pouncing.

When searching, the auto-prefix check feature shows potential dupes once you've typed two or three characters of the callsign. The Check Partial window displays a list, in alphabetic order, of all stations already worked with that prefix on any band. Callsigns shown in bold, and in upper case, are needed on this band. If they're yellow, they'll be a multiplier (not applicable to Super Check Partial calls). Those shown in lower case are dupes. If the call would be a dupe, use Esc to clear it – ready for the next callsign or prefix. If the callsign isn't shown in the Check Partial window, then it hasn't been logged on any band and you can go ahead and call.

You can quickly retrieve any needed callsign from the partial call window – sometimes this is faster than typing it in full. Use Up Arrow to go to the window, then any Arrow keys to move around the window. Only calls that are not dupes may be selected. Press Enter to retrieve a selected call and place it on the logging line.

If there's only one needed callsign in the window, Up Arrow (on its own) will retrieve the call. This is neat – please try it!

Auto-suffix check: Full Stop (period) lists all stations worked with any given suffix.

With SDV, you can type a locator in the callsign field (no need for Enter or Tab) to get a display, in the auto-prefix window, of calls already worked or needed for that locator. If nothing is displayed, you'll know you need that station! In addition, the bearing and distance to the locator is shown.

With SDI, type any IOTA reference in the callsign field to get a corresponding band/mode multiplier analysis. Clear the reference with Esc or Minus.

DXPEDITIONS and SPECIAL EVENTS.

SDX is a separate DXpedition and Special Event program. It supports mixed-mode CW and SSB operation, and tracks new countries on all 10 bands from 6 to 160 meters.

SDX is free from www.ei5di.com/sd/sdxsetup.exe.

SUPER CHECK PARTIAL (SCP)

SD uses standard MASTER.DTA callsign databases as references for super check partial with two or more callsign characters.

Use F12, or =, to toggle SCP ON or OFF during a single QSO, or permanently ON with the commands SUPER or SCP. Note – equals does not work for 2R operation.

If a particular combination of characters, for example DL, gives an excessive number of partial matches, nothing is displayed. When this happens, auto prefix checking continues on QSOs already logged.

Up-to-date callsign databases may be downloaded from www.k5zd.com/scp.

KEYBOARD ASCII CHARACTER MAPPING.

SD can be used with *all* keyboards – not just UK and USA. SD.MAP, a character-mapping file, lets you convert any character to any other. In the absence of SD.MAP, no character conversion takes place. You can map "standard" characters, including numbers and letters, but not function keys or cursor control keys. SD.MAP files are supplied for French, Belgian and German keyboards. They give access to the number keys without the need for Caps Lock, so that users retain the option of single-key playback for the F1 – F8 keyer messages.

If your keyboard does not display all the top-row numbers correctly (with Caps Lock off), try the FORCENUM command. This is simpler than character mapping and it guarantees numbers at all times – regardless of the status of Shift and Caps Lock. FORCENUM is also appropriate for non-UK/US keyboards (such as French) where Caps Lock must normally be enabled to access the top-row numbers.

Whatever keyboard you're using, even UK/US, should you find that SD will not accept some characters, or displays incorrect ones, use the SHOW command to indicate what SD sees for each character. Then, create or update SD.MAP with any text editor. Each line in the file has 2 characters (spaces are optional) and represents a mapping from the first character (what SD "sees") to the second (what you expected to see). This is a low-level process, and no assumptions are made about upper or lower case letters. Therefore, you should map both versions of any letter.

Sample SD.MAP file - to exchange A and Q.

```
q   a
Q   A
a   q
A   Q
```

NOTE: Character mapping applies to logging, but not to the fields on SD's opening screens.

When an area multiplier file (.MLT) contains non-English characters, you may have to use the CODEPAGE command to see them displayed correctly. For Norwegian characters, set your code page to 865, and ensure you have selected a TrueType font - see Starting SD on Page 4.

SKEDS and REMINDERS.

SD lets you record any event for which you would like a reminder, and you can also record notes or memos for reference after the contest. Use F7, or enter SKED or MEMO to create skeds, reminders and memos. This writes a timed record to NAME.MMO, where NAME is the name of your contest file.

The difference between a sked (or reminder) and a memo is that skeds include a time. For a memo, leave the time blank. SD tracks your skeds and reminders and displays a one-minute warning before the due time, and also during the relevant 60-second period unless another sked is due. F8 displays the next 7 scheduled events in a table that replaces the Score window. Minus returns you to the Score window.

Minus can also be used to abandon data entry for a Sked.

You can use Skeds as a reminder to do backups (with DUMP or BACKUP), or to check for band openings, or change operators, or fill the generator – anything you want! There's no need to include the time with such comments. If you do enter a time, SD assumes you're recording a sked or reminder.

QUICK MEMORY (QM).

Each time you use Minus to delete a callsign, or to abandon (wipe) a QSO, the callsign is recorded in QM, together with frequency and mode when you're linked to your radio. If you prefer, F11 wipes a QSO without updating QM.

QM holds up to 40 entries, and F10 will display them. Scroll through the table with Up Arrow and Down Arrow. To retrieve a highlighted entry (and set your radio to that frequency and mode, if linked), simply press Enter (or F10). Delete or Backspace will delete a highlighted entry. Any other key will return to normal logging. Please experiment with this – it's very useful when searching and pouncing, and it can be used as the equivalent of a Band Map.

To retrieve the most recently stored entry, press F10 twice. With rig control, and after a QSY by entering the new frequency, this returns your radio to your original frequency (and mode) – very handy after moving a multiplier station to another band.

HF MULTIPLIERS (SD).

There are only two basic types of multiplier in HF contests! The first type is included in the exchange, for example, area multipliers such as zone, state, county or district. For these, SD uses reference files with the .MLT extension. For example, the multiplier file for RSGB contests is RSGB.MLT – this contains a list of the standard UK district codes and names.

The second multiplier type is derived directly from the callsign, and it may represent a country, a zone, an area within the country, or a prefix. These are "country" multipliers. SD's country multiplier files have the .CTY extension. The country multiplier file for most ARRL contests is DXCC.CTY, and for RSGB contests it's RSGB.CTY. Prefix multipliers do not need separate reference files – they're part of the callsign.

Some contests have both country and area multipliers. In most cases, apart from CQWW, a single QSO cannot be both an area and a country multiplier. In CQWW, SD is the only contest logger to alert you to potential country and zone multipliers, in real-time as you type callsign prefixes, with no need to leave the callsign field or touch another key.

In contests with area multipliers, the multiplier window appears in the top right of the screen. As you log QSOs, this window shows the relevant areas worked and needed on the current band. You can quickly check multipliers for other bands by using F1 and F2 to go up and down the bands. Multipliers needed remain in bold type, whereas those worked are dimmed and appear in lower-case.

To see the layout of .MLT files, refer to the Questions and Answers section later in this manual.

There are 9 fields in each record of the country multiplier files (.CTY) – each separated by a colon and with semicolon after the last field. Spacing between fields is not critical, but you must not omit any colons or the final semicolon. I've kept the fields aligned vertically because it looks better. You can edit the files with text editors such as Notepad. Word processors are not recommended.

Field 1   Text description
Field 2   CQ Zone
Field 3   ITU Zone
Field 4   Continent
Field 5   Latitude
Field 6   Longitude
Field 7   Time difference (no longer relevant with
             Windows)
Field 8   Standard or reference prefix.
Field 9   Standard and alternative prefixes,
             separated by "=".

VHF MULTIPLIERS (SDV).

SDV tracks any combination of district, country, and locator square multipliers in RSGB contests. As QSOs are logged, the multiplier window shows Counties worked and needed for the current band. The ones you need remain in bold type, whereas those worked are dimmed and appear in lower-case. You can quickly check multipliers for other bands by using F1 and F2.

A 2-character district code is used in RSGB contests. The standard abbreviations shown in the multiplier window are the only combinations permitted. SDV tracks your QSOs with Scottish districts (3 multipliers each) and with BT (Northern Ireland - 6 multipliers). You can see, from the display, how many multiplier QSOs you need with each region. This feature is controlled by the file RSGB.MLV which lists each UK county and records the number of multipliers allowed in each case.

In the log, multiplier QSOs are indicated by the "-" and "=" signs beside the callsign, where "-" represents a single multiplier (either county, country or square), and "=" represents two multipliers. QSOs with three multipliers have a triple bar.

In contests with Locator Square multipliers, F3 displays a summary of squares worked and needed on the current band.

NAVIGATE THE LOG.

To see earlier log entries, use the following keys in the Callsign field (which should be empty).

Up Arrow   Back 1 QSO.
Down Arrow   Forward 1 QSO.

Home   Back 50 QSOs.
End   Forward 50 QSOs.

To see all QSOs for a particular callsign - type the callsign and press F9. Use this to find the QSO number or the serial corresponding to a specific QSO, in the event that you want to edit the QSO. If you press F9 when the Callsign field is empty, you'll get the information for the most recent QSO (or Edit).

EDITING PREVIOUSLY LOGGED QSOs.

SD lets you edit **any** QSO in real-time. There are two simple methods for getting to the one you want. The first is to use Up-Arrow or Down-Arrow.

As an alternative, you can go directly to a QSO by typing its number in the Callsign field followed by Enter. To find the relevant QSO number(s), type the callsign followed by F9. Use Esc to clear the callsign. Note that if you enter a number in the Callsign field followed by TAB, SD assumes you've entered a partial callsign and takes you to the next field (RST).

To move between fields, while editing, use TAB or Right Arrow. With Up and Down Arrow, any changes are logged to disk, and you are taken to corresponding fields in other QSOs. If you change your mind, or get into trouble, you can abandon an Edit with Minus.

SD's editing facilities set it apart from all other contest loggers – intelligent, real-time, full-screen editing on any QSO in your ASCII log.

When you edit a callsign, SD examines all QSOs for dupes and multipliers to be marked or unset, and instantly updates all relevant QSOs, and your score. In addition, the state, zone or district on the edited QSO will be reflected in all other QSOs with the callsign concerned. With the single exception of prefix multipliers, you can edit any combination of fields and everything will be kept consistent, with all dupes, multipliers, and points correctly recorded. Do this on SD, then try the same thing on any other contest logger and see the difference for yourself.

Remember that edits take priority over previous log entries. You can change the state/zone/area for all QSOs with a specific station merely by editing any one such QSO. The software prevents inconsistencies in your log, but will not necessarily stop you from doing something wrong!

If you log a QSO in error, the ZAP command will delete it (SD only) – so long as you've not logged any subsequent QSOs. You can ZAP repeatedly to delete every QSO in your log, if necessary.

You cannot delete individual earlier QSOs because SD uses the QSO number (serial) as an index for various tables which maintain consistency in your log. You should edit the callsign in any such QSO to make it a dupe of the previous QSO. Dupes are not scored and you will not lose any points. Do not delete any records, dupes or otherwise, from SD's .ALL files. If you do, you may have problems reloading the file.

Use the POINTS (or PTS) command to manually change the points for individual QSOs.

VOICE KEYER.

WAV sound files may be created with any Windows audio utility program, and should be named F1.WAV to F8.WAV.

Playback occurs only when your mode is SSB, and the options are similar to SD's CW keyer. With Caps Lock ON, press F1 to play F1.WAV etc. With Num Lock Off, you can use the numeric keypad to play messages.

Suggested message contents, to correspond to SD's CW standards, are:

F1 - your CQ.
F3 - Thanks + your call.

ESM – Enter Sends Message – SSB:

When running, it's convenient to have your CQ and exchange voice messages (F1 and F3) play automatically when you press Enter. Apostrophe toggles ESM. You'll know it's On when "SSB", in the status line below the callsign field, is bright. In these circumstances Enter, with no callsign, plays F1. When you have typed the received exchange, Enter plays F3 and logs the QSO.

If you try to play a non-existent or corrupt WAV file, you'll get a Windows beep (error). To stop playback, play an "empty" WAV file. The file must exist, otherwise you'll hear a beep.

PTT is enabled and disabled with PTTON and PTTOFF. It works in exactly the same way for both CW and SSB, and uses the same serial or parallel ports. On SSB, when PTT is enabled, you cannot interrupt or abort voice keyer messages.

Use the STATUS command to see the status of PTT and other comms parameters.

When you use apostrophe to toggle ESM On, PTT is enabled. PTT remains enabled even when you toggle ESM Off.

EDIT BANDS - QSOs ALREADY LOGGED.

Without rig control, it's easy to change band on-air but forget to do it on the computer. To edit the band on a QSO, move to it, as for an Edit, and then use F1 or F2 (Caps Lock must be Off) as required. This feature is not supported in SDV.

With the exception of prefix multipliers, SD checks your complete log for consistency and instantly updates any relevant QSOs and displays the correct multipliers and score, on both the old band and the new band. **No other contest logger does this**.

QSO RATE METER.

This window gives the QSO rate per hour for your last 10 QSOs, last 100 QSOs, and overall rate since the time of your first QSO. The values are updated every 5 seconds – just to keep you on your toes!

With fewer than 10 or 100 QSOs, the figures relate to the actual number of QSOs completed. They are accurate only when real-time logging is selected for all QSOs, and they have no significance after the contest.

You can stop and restart any log as often as you like – the rate calculations ignore off-periods.

Points/QSO value is shown for all contests with variable points, whether by band, mode or location.

CW KEYER & WinKey.

SD supports internal keying via both serial and parallel ports, and "external", but integrated, keying with WinKey – both WK1, the first generation, and WK2. If you find that SD's internal keying is irregular (often a problem with Windows PCs) try the PRIORITY command – it toggles SD's runtime priority between 0 and 1. In any case, I strongly recommend WinKey. It guarantees smooth and consistent CW from all Windows PCs.

WinKey is an external dedicated keyer. It is controlled by, and integrates with, SD via a serial port or a USB to serial converter (WK1), or directly from a USB port (WK2). I use it myself, and have no hesitation in recommending it to everyone who cares about CW. WinKey lets you change speed with a pot, even while sending a message, and it's fully integrated with the paddles – just touch either paddle to interrupt WinKey, and then continue manually at the same speed. WK2 has separate keying and PTT outputs for two rigs, and doubles up as a free-standing keyer.

For more information, see www.k1el.com. Try www.microham.com for units which combine rig control and WinKey – all from a single USB port.

SD's WINKEY command selects internal or external keying. The default is internal, with WINKEY=0 in the SD.INI file. With WinKey enabled, SD sets the required serial port parameters directly – the parameters in SD.INI are ignored.

SD's SIDETONE command toggles internal CW sidetone from your computer speaker. With WK2, it serves to toggle WinKey's monitor, but has no effect with WK1.

NOTE: When you use SD's internal keyer with sidetone enabled, you'll not have keying (from a port), and vice versa. What you hear from the computer speaker's sidetone is only an approximation of the actual keying – in particular, spacing may vary.

The WKPOT command lets you choose between control of WinKey's speed with its internal pot, or with the keyboard. The default is P (Pot) – corresponding to SD_WKPOT=1 in SD.INI.

Internal keying and PTT are supported via both parallel and serial ports. If you already have leads which work with other contest loggers, they're likely to work with SD.

The PORTS command defines your keying and rig-control ports. To see the current parameters, use the STATUS command. You can share a serial port for both keying and rig control, but not if you're using WinKey. If necessary, set WINKEY to zero, then use the SHARE command (to enable port sharing) followed by PORTS. You should be aware that, when sharing, the DTR and RTS pins are used for keying and PTT, and will not be available to power level converters (if any) for rig control. With WK2, you can assign the same (virtual) serial port to both R1 and R2

Serial keying: You'll need any general-purpose small signal NPN transistor, such as 2N2222, BC182A or BC317, and a 2k resistor. They should fit inside the cover of your 9 or 25-pin D connector to the computer. Data Terminal Ready (DTR) is pin 20 on a 25-pin connector, or pin 4 on a

9-pin connector. Signal Ground is pin 7 on a 25-pin connector, or pin 5 on a 9-pin connector.

Signal ground connects to ground on the transmitter key input. The 2k resistor goes between the base of the transistor and DTR. The emitter goes directly to signal ground, and the collector goes to the positive side of the transmitter key input. If you edit SD_COMTYPE, in the configuration file, to 1, a PTT signal is available from RTS. That's pin 4 on a 25-pin connector, and pin 7 on a 9-pin connector. If you're using WinKey, you must select separate serial ports for rig control and keying.

Parallel keying: The standard parallel interface is a 25 pin female D connector. Again, use an NPN transistor and a 2k resistor. Connect the resistor between Pin 17 and the base of the transistor. Connect Pin 1 to the emitter. Connect the collector to the positive side of the transmitter key input, and Pin 18 is the keyer return (Earth/Ground). A PTT signal is permanently available from Pin 16. To use it, you'll need another 2k resistor and NPN transistor. The resistor goes between Pin 16 and base. Connect Pin 1 to the emitter, and the collector to PTT input. Pin 25 is the PTT return (Earth). (Note: Pins 18-25 on the parallel port are all Earth).

With internal keying, some portables expand the first character in a message – it seems they take a while to "waken up", and it's especially noticeable when the first character is a dot. The PTTLEAD command sets any necessary delay (0 to 999 ms) before sending a message (if necessary, use PTTON to enable PTT). This forces the processor into a hard loop, before keying, which seems to fix the problem. Once again, a reminder that WinKeyer USB is preferred – it eliminates CW timing errors with Windows.

I recommend you connect the TX end of the keyer lead in parallel with the output of your present key(er) rather than connecting it to any of your keyer inputs, or directly to the TX. On some computers, when you start your computer with a serial cable connected, DTR may be set to ON which will key your rig. Once you use the keyer from within SD, DTR will be set to OFF.

Remote Band-Switching signals are available from the parallel port. You'll need the same cables and control circuits that are standard with other contest loggers.

	Pin 9	Pin 8	Pin 7	Pin 2
160m	0	0	0	1
80m	0	0	1	0
40m	0	0	1	1
20m	0	1	0	1
15m	0	1	1	1
10m	1	0	0	1

Pin 14 is set high when Rig 2 is active – otherwise, it's low.

KEYBOARD MODE (CW).

Switch to keyboard mode with Ctrl (Windows NT, 2000 and XP) or Alt-K (Windows95, 98 and ME), and use Esc, Minus or Enter to return to logging mode. The initial CW speed is 28 words per minute, and may be set to any value between 99 and 5 wpm using Page Up and Page Down.

Right-Arrow increases weight, Left-Arrow reduces it, and Home restores it to 50%.

Page Up and Page Down will change your CW speed at any time, but you must select keyboard mode to change the weight. With WinKey, the speed pot controls your speed.

SD has 8 CW memories and three methods of using them. When Caps Lock is ON, F1 to F8 replay the memories. The only disadvantage is that you must have Caps Lock OFF to get the standard F1 to F8 functions. You'll know Caps Lock is On when the symbol ^ is visible to the left of the Callsign field. Esc instantly stops playback of any CW memory.

The second keyer option is to use the numeric keypad (with Num Lock OFF). I'd recommend this option as it gives you continuous access to the keyer *and* all the function key options. If you need an alternative, try Alt-F1 to Alt-F8.

With internal keying, SD performs an automatic CW speed calibration each time it starts. Nevertheless, if the speed seems to be incorrect for any reason, use the CALIBRATE command to reset it. Calibration takes place only when your selected keyer port is non-zero. WinKey does not need calibration.

The T(UNE) command enables continuous keying as soon as you press Enter. Once you've started tuning, you can toggle it On and Off using only the Enter key. Use Esc or Minus to clear the callsign field when you've finished.

CW & WinKey COMMANDS   (In the Callsign field)

Command	Description
CAL(IBRATE)	Calibrates internal keyer – not WinKey.
CWSTART / START	Select start character for F2 auto playback.
CWZERO	Select CW zero - Ø, T or O.
PORTS	Set keyer & rig ports.
PTTON	Enables PTT.
PTTOFF	Disables PTT.
PTTLEAD	Set PTT lead delay, 0 – 250 ms.
PTTTAIL	Set WinKey PTT lead delay, 0 – 250 ms.
R	Toggles auto-repeat of F1 (CQ) message
R1 to **R10**	Sets auto-repeat with 1 – 10 seconds delay.
RANDOM	Generate Random RST Sent
SHARECOM	Share a port for CW & Rig Control.
SIDETONE	Toggles Sidetone – but not for WK1.
SWAP	WinKey – reverses paddles.
TUNE	CW key down.
WINKEY	Toggles between WinKey and SD's keyer.
WKPOT	Control speed with the Pot or the Keyboard.
WKINIT / INIT	Initialises WinKey.
WKCOMP	Adds a fixed amount to all dots & dashes.
WKEXTN	Adds a fixed amount to the first dot or dash.
IAMBICA	WinKey – emulates Iambic A.
IAMBICB	WinKey – emulates Iambic B.
ULTIMATIC	WinKey – emulates Ultimatic.
BUG	WinKey – emulates a bug key.
AUTOSPACE	WinKey – toggles AutoSpace support
MINWPM	WinKey – sets minimum WPM.
WPMRANGE	WinKey – sets WPM range.
POTRANGE	WinKey – internal : 127 or 255 (WK1 only).
Esc	Stops memory playback.

ESM – ENTER SENDS MESSAGE – CW.

ESM lets you log CW QSOs, and send the "correct" CW messages at all times without the need to "play" function key memories. The Apostrophe key toggles ESM On and Off, and the Grave Accent key, above Tab, toggles between RUN and S&P modes.

In RUN mode, other stations are calling you. In S&P mode, you're calling other stations. You just have to remember

which mode you're in (not too difficult), and toggle SD as necessary.

At all times SD displays the ESM mode, together with the message to be sent after the next Enter.

SD's ESM standard for RUN mode:

Enter in an empty Callsign field plays your F1 message, (TEST or CQ). To repeat your CQ (F1) message at fixed intervals, use the R1 to R10 commands – the number indicates the interval in seconds. Use the R command to toggle auto-repeat without changing the interval. Auto-repeat works only in RUN mode, and when the callsign field is empty.

Enter, after a callsign, (minimum length 3 characters) plays your F2 message (callsign + exchange). Your F2 message should end with the #E (Enter) parameter. Callsign type-ahead is supported. For example, W3L Enter PL will send W3LPL followed by the exchange.

To leave the callsign field without playing a memory, use TAB.

With ESM enabled, a duplicate callsign followed by Enter plays the F4 message. If you're happy to log dupes, make your F4 message the same as your F2 message - using Shift_F4. Otherwise, set F4 to your dupe message (with #E as the last parameter).

When the QSO is logged, F3 (TU MyCall) plays – but only if you previously used Enter (not Tab) to leave the Callsign field. If you change a callsign before logging the QSO, the new callsign is added to your F3 message to confirm the correction to the other station.

With ESM enabled, you have the option of starting the F2 (exchange) message automatically after a given number of callsign characters – you may complete the callsign while the exchange is being sent. Use CWSTART (or START) to select the starting character – 5 is a good initial option. The status line, under the callsign, then shows RUX instead of RUN – where X represents your chosen starting character.

SD's ESM standard for S&P mode:

Enter, in the callsign field, plays F5 (MyCall) and, if a callsign is present, takes you to next field – Serial or Area.

If the next (exchange) field is empty, Enter again sends MyCall, otherwise it send the exchange (F6) and logs the QSO.

When SD identifies area codes from the callsign, or from previous QSOs, it auto-fills the data in the exchange field. This may be a nuisance in S&P mode, as you then have to use F5 to repeat your own call. The AUTOFILL command toggles this feature On and Off – it has no effect when you're not in S&P mode.

Esc stops the keyer instantly.

If you run into problems, simply disable ESM with Apostrophe. F12 is another option to log a QSO (assuming all fields are valid) without playing the "normal" ESM message.

When using SD's internal keyer, apostrophe does not work during message playback.

To use ESM, you must have enabled a CW port using the PORTS command. Note, your keyer speed is shown only if a CW port has been enabled.

CW MEMORIES - INITIAL CONTENTS.

1	TEST OwnCall OwnCall TEST (Where OwnCall is from the opening screen)
2	Call Logged, Exchange, Enter
3	TU OwnCall Enter
4	Call Logged, Exchange, Enter (Dupe message)
5	OwnCall
6	TU RST, Serial
7	RST Previous Serial
7.	?

On VHF, your locator is appended to the exchange. The following parameters may be embedded in any preset memory message.

#R	Own callsign.
#C	Current or most recent callsign logged.
#S	Current serial (or other exchange data)
#T	RST Sent - Default 5NN
#P	Previous serial
#L	Own locator (SDV only)
#N	Name (after callsign match with LOAD)
#E	Simulates the Enter key.
#B	Simulates the Space Bar.
#1,9	Increase speed (1 – 9 wpm)
#-1-9	Reduces speed (1 – 9 wpm)
#0	Restores normal speed
^	One-half dot space.

For example, #C #T #S#E would send callsign + full exchange followed by Enter - all with a single keystroke. When you get a callsign match after LOADing a .LST file (see Reference Lists below) such as FOC or GQRP, the **#N** parameter will send the other op's name. If there is no match, nothing is sent. When editing keyer memories, with Shift-F1 etc, do not insert a space in front of #N - the space is assumed when a callsign matches.

In contests with serials, leading zeros are sent as "T" and other zeros are sent in full. CWZERO allows you to choose abbreviations for non-leading zeros, the number 1, and the number 9. In addition, you may choose to omit leading zeros, or add extra spacing (serial padding factor) to variable exchange items such as serials, making them much easier to copy.

Use the # keyer parameter followed by a single digit 1 to 9 to temporarily increase speed, and #0 to reset speed to normal. Use a minus for speed reductions.

For example, #6 gives a temporary speed increase of 6 wpm, #8#6 an increase of 14 wpm, and #-4 a reduction of 4 wpm.

If your normal speed is 32 wpm, then the message

```
 #8TEST#0 EI5^DI  EI5^DI #8#8TEST sends
   TEST                    at 40 wpm
   EI5^DI  EI5^DI          at 32 wpm
   TEST                    at 48 wpm
```

Normal speed is reset automatically at the end of a message – there's no need to add a parameter to do this.

Another example - with normal speed of 25 wpm:

```
#C #6#6#T #0#-4#S#E sends
    Callsign (#C) + 1 space        at 25 wpm
    5NN (#T) + 1 space             at 37 wpm
    #0 resets normal speed            25 wpm
    Serial (#S)                    at 21 wpm
    Enter (#E) - automatic move to next field
                  to be logged.
```

The ^ character adds a half-dot space between characters. They can be strung together to give better readability with some callsigns. Try G3RTE and G3R^^T^^^E to hear the difference for yourself. I use EI^5^DI for my own callsign – it's subtle but effective, and makes it more readable. If your callsign doesn't need any "tailoring", simply use the #R parameter in keyer messages to represent your callsign.

To edit keyer messages, use Shift-F1 etc. This will display the current message and invite you to enter a new one. If you don't change anything, or use Esc after changes, the original message will be unchanged.

If you get into trouble, either in keyboard mode or when sending a preset message, Esc will stop the message instantly. On the numeric keypad, + works like Esc to stop memory playback.

Use Tab to leave the callsign field without playing a memory. When the QSO is logged, F3 plays, but only if you previously used Enter (not Tab) to leave the Callsign field.

When using SD's internal keyer, I'd recommend you connect it in parallel with whatever alternative keying method you have. If you make a mistake in entering a callsign, it's often quicker to send it on your normal key or paddle and then correct the computer entry later.

In contests with serials, if you've already logged a QSO and need to repeat the exchange, F2 sends the correct callsign and serial - but only if the current callsign (on the logging line) is blank.

CALLSIGN DATABASES.

The LOAD command allows you to load reference files with the extension .LST. These files are typically membership lists showing callsign, name and membership number, and the information will be displayed whenever you enter a corresponding call.

You can use them (with the LOAD command) for lookup either by callsign or by membership number.

    For example, with -

    EI5DI Paul 716
    716 Paul EI5DI

If you type EI5DI, "Paul 716" is displayed and if you type 716, "Paul EI5DI" is displayed.

However, in the second case, if you then press Enter, the callsign is extracted and placed in the callsign field. For this to work, the callsign must be the last or only field in the record – apart from the membership number. This feature is particularly useful in the FOC Marathon.

Use a text editor to create your own reference file. Each record may have up to 12 characters in the callsign and up to 20 characters of other data (HF programs). SDV permits up to 55 characters of other data. There must be at least one space between the end of the callsign and the data. The record length may vary.

For SDI, in the IOTA contest, it's useful to add island references to the .LST records. On a callsign match, they will be extracted and placed in the received IOTA field on the logging line. This makes it easy to identify potential multipliers, using the lists of DXpedition callsigns and island references published before each contest.

LEAVING SD.

To leave the program, type END or QUIT in the Callsign field. If you're using SD in post-contest mode, END and QUIT can be entered in the Time field.

What happens if the power to the computer fails? SD updates the log file on disk after every single QSO is logged or edited. So, when power is restored, simply restart SD, go to the QSO entry screen and you'll see the last QSO logged immediately above the data entry line.

BACKUPS.

All QSOs and edits are written to a separate audit (.AUD) file in the same format as the .ALL or .VHF files. The audit file is opened in append mode, which means that new or edited records are always written to the end of the file. As a result, the .AUD files serve as very reliable backups, and as references from which your log (the .ALL or .VHF files) can be recreated if necessary – this is a standard option in SDCHECK.

The AUDIT command gives the option of saving QSOs and edits, in a simplified form, to a second audit file with a .TXT extension. NOAUDIT stops this feature.

To backup your log, use the DUMP or BACKUP commands. Your log (.ALL or .VHF) and audit (.AUD) files are copied to any device you choose. In each case, the last letter of the file extension is changed to B (for backup).

SDI - IOTA Contest.

SDI, like SD, is intended for single-op unassisted entries. Nevertheless, it is possible to use it for multi-op in IOTA, although it's not ideal. SDI lets you reserve QSOs (serial, band and mode) for the multiplier station by entering a callsign beginning with Q, followed by band in metres or MHz, and mode C or S.

For example: Q28S reserves a 10 metre SSB QSO. The correct band and mode are reserved irrespective of the band and mode in use on the run station. At any convenient time, once the multiplier has been worked, the reserved QSO can be updated with the correct call, serial and IOTA reference.

SDI uses SDIOTA.CTY to identify countries from callsign prefixes and to list corresponding IOTA references. IOTA references with lower-case continent abbreviations, for example **eu005**, identify default values for that prefix while logging. When the continent is in upper-case, no default value will appear. You're free to edit these as you prefer.

AFTER THE CONTEST - SDCHECK

Finally, you'll probably want to email your log to the contest organisers. Use programs SDCHECK or

SDVCHECK, after the contest, to generate whatever file(s) you need. As with SD, you should create desktop shortcut icons for running these programs.

SDCHECK, the HF post-contest program, is used on files created by SD, SDC and SDU.

SDICHECK, the IOTA post-contest program, is used on files created by SDI.

SDVCHECK, the VHF post-contest program, is used on files created by SDV.

SDCHECK has the following options.

1. **Entry File**. Creates your Cabrillo .LOG file to be submitted by email or disk. For VHF, the RSGB format applies. The .LOG file is the **only** file needed with your entry.

2. **An Edit routine**. Edits the .ALL file. Unlike the integrated edit facilities in SD, this routine is "dumb". Use it with care.

3. **Multiplier Summary**. Lists multipliers by band – this is not needed for Cabrillo disk entries.

4. **Dupe Sheets**. These are a legacy of the days before acceptance of email entries. Nevertheless, they're useful for finding "broken" callsigns.

5. **Print File**. Again, this is a legacy of pre-email entries, but you might like a printout to paste into a paper station log.

6. **Export Log as ADIF**. Exports your log in Amateur Data Interchange Format for integration with your station log.

7. **Export Log as Text**. An alternative to ADIF, it's in CSV format, with # as the delimiter, and can be imported directly into Excel, or Access and other databases.

8. **QSO Rate Analysis**. Gives an hourly analysis of your log by QSOs, points and multipliers.

9. **Restore .ALL File**. Restores your .ALL file from the .AUD audit file. Your original .ALL file is saved to a .OLD copy.

All contest organisers now accept logs by email. Send your .LOG file (change the name to your callsign, for example EI5DI.LOG), as an attached file – don't zip or otherwise compress it. For VHF, you'll need to complete (edit) the .SUM file before submitting it.

For HF contests, SDCHECK generates a single .LOG file, in Cabrillo (ARRL Standard File) format, which contains all Summary Sheet and QSO information. While running, you're asked to input the Summary Sheet data one line at a time. You can move around the data fields with Up and Down Arrow.

If you use a general-purpose logger you can import ADIF logs from SD and then generate QSL labels. ADIF stands for Amateur Data Interchange Format – you can get more information from www.hosenose.com/adif.

You should not modify any multiplier files used (.MLT or .CTY) between the time you start the contest and the time you complete your entry including the generation of multiplier lists with SDCHECK or SDVCHECK. If you do, there is a possibility that the multipliers listed may not correspond to the ones actually logged. This does not matter in contests where you submit a Cabrillo log – it will be scored independently by the organisers. Exception: it's usually safe to add new or missing records to the **end** of a .CTY or .MLT file.

COLOURS

Use the COLOUR (or COLOR) commands to choose the Window background colour, the Log (previous QSOs) colour, the QSO entry colour, the Title text colour and the background colour. Colours will be unchanged if you press Enter without first typing a number from the range indicated.

INITIALISATION FILE – SD.INI.

All your selected parameters, including the messages in the memory keyer, are recorded in SD.INI. In addition, other parameters exclusive to SDV are held in SDI.INI.

Whenever you start SD or SDV the appropriate parameters are applied. You can change them singly, using the same commands as before, or use the command RESET to reset them all to their default values.

If the .INI files are not present, or have been deleted for any reason, they will be re-created the next time you run SD or SDV. RESET does not change keyer messages.

Here's a brief explanation of the parameters.

MSG1 to MSG8	Keyer memories, 1 to 8.
CALL	Your Callsign.
NAME	Your Name.
ADD1-5	Your address – lines 1 to 5.
EMAIL	Your email address.
CLUB	Your club
LCTR	Your 6-character locator
SPEED	Keyer speed - WPM
WEIGHT	Keyer weight, default 50%
CALWIN	Your PC's keyer calibration factor.
KEYPORT1	Radio 1 keyer port. 0 if unused.
KETPORT2	Radio 2 keyer port. 0 if unused.
WINKEY	1 = WinKey, 0 = internal keyer.
WKBIT0 - 7	WinKey – internal control bits. See WinKey manual for more info.
WKCOMP	WinKey – all dots/dashes compensation.
WKEXTN	WinKey – first-character extension.
WKRATIO	WinKey – dot/dash ratio – default 50.
WKSWITCH	WinKey – paddle switching point.
WKFARNS	WinKey – Farnsworth WPM.
MINWPM	WinKey – minimum WPM.
WPMRANGE	WinKey – WPM range.
POTRANGE	WinKey – 127 or 255.
PTTON	1 when Enabled.
PTTLEAD	Lead time (ms), before keying.
PTTTAIL	WinKey – PTT tail time (ms).
CQTIMER	F1 (CQ) auto-repeat timer. 1-10 seconds.
RIGPORT1	Radio 1 control port – 0 when unused.
RIGPORT2	Radio 2 control port – 0 when unused.
RADIO1	Radio 1 Name – uses corresponding .SD Control File.
RADIO2	Radio 2 Name – uses corresponding .SD Control file
AUTOFILL	Normally 1.

POLLTIME	Time between polling signals (ms).
LINKTIME	Your rig's response time. Set to lowest reliable value, 50 minimum
STEPFREQ	Unused.
DATABITS	Serial Comms – default is 8
STOPBIT1	Rig 1 – default value is 2
STOPBIT2	Rig 2 – default value is 2
PARITY	Serial Comms – default is N (None)
SHARECOM	Set to 1 to share port for rig and keyer.
TIMER	Countdown timer (0-10) between allowable band/mode changes.
TIMERTYP	B-Band, M-Mode, BM Band/Mode
SAMERST	If 1, sets previous RST Sent as default.
FORCENUM	1 to force numerals from top row, regardless of state of Shift or Caps Lock
PRIORITY	SD's runtime priority – normally 0.
BPS1	Rig 1 BPS – default is 4800
BPS2	Rig 2 BPS – default is 4800
SCP	Super Check Partial – using MASTER.DTA. Default is 0 (Off). Toggled with the SUPER command.
MODE	Mode last used. 0=CW, 1=SSB
AUTOINS	1 – Auto Insert mode enabled.
LOGENTER	Log on Enter – default is 0 (Off)
RSTS	RST Sent (HF) always 59(9) – default is Y (Yes)
VRSTS	RST Sent (VHF) always 59(9) – default is N (No)
QTCCHAR	Defines field terminator for QTCs.
AUDIT	Additional audit to .TXT file.
CWSIDETONE	Internal Keyer - 0 keying, 1 sidetone. WinKey – 1 indicates monitor On
CWSTART	Defines callsign start character for F2 exchange message – with ESM enabled.
ESMRANGE	Frequency range excursion within which ESM remains enabled.
CWZERO	5 characters = 019N0 1 – Character for non-leading zeros. 2 – Character for 1 (in serials) 3 – Character for 9 (in serials) 4 – Omit leading zeros. Y/N 5 – Serial Padding Factor 0 –5.
BORDER	0 to 3 – 0 not possible pre WinXP. If 0, full-screen (Alt-Enter) is an option.
DISTUNIT	K=kilometres, M=miles
LOAD	Name of .LST names database loaded at startup. Blank if None.
BAND	Band last used, 1=10m, 6=160m
WINCLR	Window background colour.
DESKCLR	Desktop colour
LOGCLR	Logged QSOs colour
QSOCLR	Logging colour
TTLCLR	Window Titles colour

EDITING THE .ALL FILE.

SD creates ASCII files with the .ALL extension, for example NAME.ALL where NAME is whatever name you gave the contest when you started the program. This holds all the internal reference information for keeping multipliers and points consistent, especially during and after edits done from within SD. The safest way to edit your .ALL file is from within SD itself, otherwise use the edit option in SDCHECK. As a last resort, you can use any external text editor such as NotePad. Do NOT use a word processor – if you change the length of any record, or add an (invisible) new line, you may not be able to load your .ALL file.

Contest File Record Layout (.ALL)

With the exception of SD V13 and later, each record is 56 characters long, made up of 54 data characters terminated with the ASCII characters "13" and "10" (Carriage Return + Line Feed). With effect from V13 of SD alone, each record is 64 data characters together with Carriage Return and Line Feed. The first 12 records are control records and should not be edited. Your first QSO is Record 13. Note: This layout does not apply to Type 12 - Sprint Contests (with no RST).

Field	V13	Earlier
Mode	1 - 1	1 - 1
0=CW, 1=SSB		
Band	2 - 2	2 - 2
1=10, 2=15, 3=20		
4=40, 5=80, 6=160		
Callsign Worked	3 - 14	3 - 14
Date - DDMMYY	15 - 20	15 - 20
Time - HHMMSS	21 - 26	21 - 26
RST Sent	27 - 29	27 - 29
RST Received	30 - 32	30 - 32
Serial Received	33 - 36	33 - 36
Other Data Received	37 - 46	37 - 40
Serial Sent	47 - 50	47 - 50
Frequency (with Rig Control)	51 - 52	
QSO Points	53 - 54	53 - 54
Country Reference Number	55 - 57	41 - 43
Dupe Indicator (D)	58 - 58	44 - 44
Area Multiplier Indicator	59 - 59	45 - 45
Country Multiplier Ind.	60 - 60	46 - 46
Area Code Reference Number	61 - 63	51 - 51
Prefix (in WPX)	37 - 43	37 - 43
RoPoCo (RSGB)	37 - 44	37 - 44

1. Take a copy of your contest file. For example

    COPY CQWWCW08.ALL TEST.ALL

and then work on TEST.ALL

2. Use the Edit facility in SDCHECK to edit TEST.ALL. Don't use a word processor. This way, you cannot change the length, in characters, of any line in the .ALL file.

3 Do not edit the .ALL file until after the contest. If you edit it during the contest, and then go back to logging, the results will be unpredictable.

4. If you get into trouble during or after an edit, go back to Step 1.

EDITING YOUR .VHF FILE.

SDV creates ASCII files with the .VHF extension.

Contest File Record Layout (.VHF)

Each record is 94 characters long, made up of 92 data characters terminated with the ASCII characters "13" and "10" (Carriage Return + Line Feed). The first 12 records are control records and should not be edited. Your first QSO is in Record 13.

Field	Characters	Length
Mode	1 - 1	1
0=CW, 1=SSB, 2=FM, 3=RTTY		
Band	2 - 2	1
1=50, 2=70, 3=144		

4=432, 5=1.2, 6=2.4

Callsign Worked	3 - 14	12
Date - DDMMYY	15 - 20	6
Time - HHMMSS	21 - 26	6
RST Sent	27 - 29	3
RST Received	30 - 32	3
Serial Received	33 - 36	4
Locator Received	37 - 42	6
County	43 - 46	4
Comments or Notes	47 - 65	19
Locator Multiplier Ind.	66 - 66	1
Serial Sent	67 - 70	4
Dupe Indicator	71 - 71	1
County Multiplier Ind.	72 - 72	1
QSO sequence number	73 - 76	4
Country Multiplier Ind.	77 - 77	1
Filler	78 - 82	5
Kilometres	83 - 87	5
Points	88 - 92	5

FAQs.

Q. I've got some QSOs in the .ALL or .VHF file that I want to delete. What do I do?

A. SD (but not the others) lets you delete, with ZAP, the last QSO in the log. You cannot delete earlier individual QSOs from within SD / SDV. If you have a QSO that doesn't count – don't worry, just edit it out of your .LOG file after the contest, using NotePad or another text editor. Make sure you delete the whole record, and nothing else. Remember to take a copy of your log before you do any editing.

Q. Some QSOs are multipliers, and the program hasn't picked them up. How can I correct my score?

A. Use the Edit facility in SDCHECK or SDVCHECK on the QSOs concerned to insert M in the appropriate position. When you reload the .ALL file with SD or SDCHECK, the points, multipliers and summary will be correct. You can edit the points for any QSO with the POINTS command, or by editing the last 2 characters in the QSO record. For Cabrillo logs, you don't have to worry about this, as multipliers are not marked in your entry.

Q. What should I do if the program stops with some strange error message?

A. Assuming there is room on your disk, try reloading your contest file. If you have time to examine the .ALL/.VHF file, check with a text editor that it appears to be formatted correctly. If any record appears to be corrupt, copy it from the .AUD file. If you delete any record other than the last record, and then reload the file, you may not be able to do much more than continue to log - editing will give problems. In any case, you have the option, in SDCHECK, of recreating your .ALL file (in full) from the audit .AUD file.

Error 7	Out of memory.
Error 14	Out of string space.
Error 57	Device I/O error.
Error 61	Disk full.
Error 68	Device unavailable.
Error 70	Disk is write protected.
Error 71	Disk drive not ready.
Error 72	Disk media error.

For HF Type 4 and Type 10 contests, area multiplier codes are held in separate text files corresponding to each contest type. You can edit the multiplier files, using a text editor,

to reflect any necessary changes in existing contests and, more significantly, you can set up new files and templates to cater for other contests. All you have to do is to use the same format as in the existing **MLT** files.

This is a 1 to 5-character multiplier identifier (always the same length for a particular contest – trailing spaces are allowed), followed by an equals "=" sign. You have the option of adding a description of the multiplier after the equals sign. You may have a maximum of 1000 multipliers.

CONTESTS SUPPORTED.

Templates are supplied for over 150 contest options, with additions every month. If you need to configure SD on-the-fly, without a corresponding template file, use Esc to exit from the template screen. This returns you to SD's former startup screen where you can choose from Contest Types 1 to 12. With the introduction of templates, your only relevant choices will be Contest Types 4, 9, 10, and 11 – they let you choose multiplier files and scoring options.

Type 1. ARRL DX Contest – DX side.

Uses SDTYPE1.MLT to identify State and Province multipliers. The State field will accept 1 to 4 characters. Almost any sensible abbreviation will work. In most cases, two characters are necessary. In some cases, such as Florida and British Columbia, the first character is sufficient to uniquely identify the State. QSOs with Quebec will be logged as QC - even if you enter QUE (or QU or PQ).

In the State/Band analysis window, the American states are separated from the 13 Canadian provinces. This makes it easier to see when you're close to "Worked all States" on a particular band.

Do not modify SDTYPE1.MLT.

Type 4. General Purpose - Area multipliers only, no country multipliers. .

Can be used for almost any contest in which you receive serials (optional), and area codes which count as multipliers, and fixed points per QSO (you specify points per QSO for each mode). This includes out-of-state entrants in most QSO Parties. For RSGB contests the areas are district codes, based on Post Codes, and the multiplier file is RSGB.MLT.

SD displays all available multiplier file names should you enter a name that's not appropriate.

Some contests (for example - King of Spain) have area codes of variable length. The corresponding codes in the .MLT file must all be the same length, with spaces added as necessary – see the SPAIN.MLT file.

If you enter a code that's not already in the corresponding list, SD gives the option of adding it. That way, you'll not be caught out with out-of-date .MLT files.

Type 5: CQ 160 Metre contest.

Uses SDTYPE5.MLT. You should not modify this file.

Type 6. CQ WPX, All Asia and Oceania.

Used for contests with prefix multipliers – with hard-coded options for **W**PX, **A**ll Asia, and **O**ceania.

Type 9. General Purpose, Country Multipliers.

Used for any contest with country multipliers only.

When you use Type 9 for WAE, the QTC command lets you record QTCs (European entries) or send QTCs – for stations outside Europe. For CW QTCs, whether sent or received, ESM should first be enabled.

For sending QTCs, use the QTCCHAR command to define your preference for the Enter, Tab, or Space keys to send the data in CW – Enter is the default option. To move from one QTC to another, use the Up and Down Arrow keys. You can repeat any QTC when it is highlighted. When done, use Down Arrow on the last QTC – then confirm the callsign and QTC sequence.

For both Type 9 and Type 10 contests, you may select points by any individual combination of mode, band and location (own country, own continent and other continent - up to 36 variations). To access this feature, you must first specify 0 points per QSO (variable points) on the opening screen.

Note: You're advised to "comment out" (with # as the first character in the corresponding line of the .CTY file) records corresponding to countries that do not count as multipliers - for example UK countries in RSGB contests for UK entrants.

Type 10. General Purpose for contests with both Country and Area Multipliers.

This includes in-state entrants in most QSO Parties. You have a choice of multipliers or bonus QSOs as with Type 9. You may select any of the .CTY country multiplier files and .MLT area multiplier files supplied with SD - or indeed make up your own. Press Enter without any name to see a list of all the multiplier files. The .MLT files contain some records beginning with $. These indicate which countries (in the selected .CTY file) give an area code in addition to a serial. For example, all UK countries in RSGB contests, or W and VE for the ARRL 10m Contest.

As with Type 9, choose 0 points per QSO if QSO points vary by band, mode or location.

Type 11. No multipliers, and five options:
>   A – RSGB AFS,
>   C – RSGB Clubs Championship
>   G – General
>   L – Locator – Stew Perry Topband Contest
>   R – RSGB RoPoCo
>   F – Low Power Field Day

In the Stew Perry contest you exchange 4-character Locators, and your score is dependent on distance. SD shows the distance and points for each QSO.

Type 11 may be used as a last resort option for any other contest not catered for specifically, and at least it will do all

the logging and duping if not the scoring. Use SDCHECK after the contest to correct the score for each QSO.

VHF CONTESTS SUPPORTED - SUMMARY.

SDV supports any combination of area, country and locator square multipliers.   Type 1 is for contests with no multipliers such as RSGB VHF Field Day.

In contest with locator square multipliers you can set a standard of 4 or 6 character locators for the contest when entering your own locator on the opening screen.

If you enter it as 4, that's what you record for each QSO. Distances and bearings are then calculated from the centre of your square to the centre of the square logged. If you enter your own locator as 6 characters, you may record 4 or 6 characters for each QSO. If you record 4, bearing and distance is calculated from your own 6-character locator to the nearest point on the perimeter of the 4-character locator logged.

THIS IS THE SMALL PRINT.

Users must accept this disclaimer of warranty.

This software is provided "as is". You use it at your own risk. EI5DI reserves the right to add modify or discontinue programs or program features without notice.

Known Bugs.

Band edits, on QSOs already logged, in Type 9 or 10 HF contests do not adjust points. This is significant only if you have chosen variable points per band.

Following mode edits, on QSOs already logged in mixed-mode contests, there are no consistency checks for dupes or multipliers.

In Type 6 (Prefix multipliers), no multiplier consistency checking is performed after callsign or band edits on previously logged QSOs.

In CQWW and IARU HF, no Zone checking is done following callsign edits. When you edit a callsign, it's your responsibility to edit the Zone if necessary.

SD and SDV score /AM and /MM callsigns according to the home callsign. This may not be correct in all contests. If necessary, use the Edit facility in SDCHECK, after the contest, to correct the scores.

Multiplier and dupe checking is not integrated with the SCP (Super Check Partial) window.

_____

Use the SD-User mailing to get help from other users, and to hear about updates and bug fixes as soon as they're released. Sign up at :-
http://lists.contesting.com/mailman/listinfo/SD-User.
_____

The following page summarises all the commands. Please try them all, otherwise you will miss some of the features that make SD so efficient.

SD/SDV Command Summary - Please experiment with **all** these options.

LOGGING

Enter	Accepts a completed field.
	Space is an alternative (not recommended)
TAB	Accepts a partial or completed field.
	tab delays logging.
Esc	Deletes or clears a single field.
	A second **Esc** will restore it.
Minus	Wipes a QSO (all fields) - adds data to **Quick Memory (QM)** Table**.**
F11	Wipes a QSO - no QM update.
F12	Enter, without any ESM message.
Home or **[**	(In a field) Move to start of the field.
End or **]**	(In a field) Move to end of the field.
Home	Back 50 QSOs.
End	Forward 50 QSOs.
Serials	No serial received - enter 0

QUICK MEMORY (QM)

F10	Display QM table
Up/Down Arrow	Select entry
Enter or **F10**	Retrieve entry - Call, Freq, Mode (removes entry from QM table)
Del or **Backspace**	Delete highlighted entry
Esc	Return to logging.

WHEN WARNED OF A DUPE

To log it	Enter serial and/or area code.
else	Press Minus.

HUNTING & POUNCING

Full Stop	Partial call search by suffix.
F9	Last QSOs by Call (Caps lock off)
SCP	Toggle Super Check Partial
F12 or **=**	Enable SCP for current QSO only.

CHECK PARTIAL WINDOW

Up Arrow	Move to window
Arrow Keys	Move around the window
Enter	Retrieve callsign
Esc	Return to logging.

EDITING LOGGED QSOs

Use **Up/Down** keys or enter **QSO number.**
Callsign + **F9** gives QSO numbers (Cap Lock off)
Use **TAB** between fields. **ENTER** when complete.

F1	Edit **Band** HF. (Caps Lock off)
F2	Edit **Band** LF. (Caps Lock off)
Minus	Abandon Edit - leaves QSO unchanged.

SKEDS, MEMOS and REMINDERS (Caps Lock off)

F7	Record them.
F8	Display them.

KEYER

Ctrl or **Alt-K**	Toggle **Keyboard/Logging** mode.
Page Up/Down	Increase/Reduce speed 1 WPM
Left/Right Arrow	Reduce/Increase Weight
Home	Restore 50% weight
; (semicolon)	Toggle 20% speed change (QRS)
Apostrophe	Toggle ESM – Enter Sends Message.
Grave Accent	Toggle RUN/S&P mode (ESM)

Memory Playback: (Esc or + to abandon)

F1 to **F8**	With caps lock on **^**
Alt-F1 to **Alt-F8**	With caps lock off
1 to **8**	On Numeric keypad (Num Lock Off)

Edit Keyer Memories: **Shift-F1** to **Shift-F8**

Running: F1-F4   Search & Pounce: F5-F8

F1	TEST #R #R TEST	**F5**	#R
F2	#C #T #S#E	**F6**	#T #S#E
F3	TU #R#E	**F7**	#T #P
F4	#C #T #S#E (dupe message)	**F8**	?

#R	OwnCall	**#C**	Callsign logged
#T	RST Sent	**#S**	Current serial
#P	Previous serial.	**#N**	Name from .LST file
#E	Simulates Enter	**#B**	Simulates Space Bar
#L	Own Locator		
#1	1 - 9, increase speed - wpm		
#-1	1 - 9, reduce speed - wpm		
#0	Reset speed to normal		
^	One half dot space		

MULTIPLIER ENQUIRIES (Caps Lock off)

F1/F2	Area Mults - next band HF/LF
F3	Area Mults - all bands.
F4	Countries worked/wanted by Continent.
F5	Countries worked/wanted by Band.
F6	Single country status by Band.

COMMANDS   (In the Callsign field)

1B - 2B, etc	List calls logged on 1 - 6 bands.
10M, **15M** etc	Change Band - 10m 15m etc.
28M, **21M** etc	Change Band - 10m 15m etc.
10C, **10S** etc	Change to 10m CW/SSB etc.
28C, **28S** etc	Change to 10m CW/SSB etc.
AB	List calls logged on any band.
AUDIT	Create an additional text backup log.
AI	Toggle Auto Insert entry mode.
B10, **B15** etc	Change Band - 10m, 15m etc.
BORDER	Set Border Width – 0 for full-screen.
BPS	Set bits per second.
CALIBRATE	Calibrate CW speed.
COLOUR	Change screen colours.
CW **S**SB	Change Mode.
CWSTART	Set position for auto-start in ESM.
CODEPAGE	Defines the default code page.
DATABITS	Set databits parameter.
DUMP	Backup log.
END or **QUIT**	Leave the program.
FORCENUM	Forces numbers from top-row keys.
HELP	Display HELP.TXT.
LINK	Toggle comms link on/off.
LINKTIME	Adjust your rig's response time.
LOAD	Load *.LST files.
LOGONENTER	Toggle Log on Enter.
MEMO	Enter memo - same as **F7**.
NO160	No 160m Band.
OFF/POST	Post-contest logging.
ON/REAL	Real-time logging.
PARITY	Set parity parameter.
POINTS	Edit QSO points.
PORTS	Set keyer & rig ports.
PRIORITY	Toggle between 0 and 1 levels.
Quotes - "	Repeat previous callsign.
QTC	Record/Send QTCs in WAE contest.
R1 to **R10**	Set time between repeat CQs.
RESET	Reset comms/colours/ports.
RST	Toggle variable RST Sent.
SETDUPE	Reset dupe and mult checking.
SHOW	Show input characters - diagnostic.
SIDETONE	Toggle between sidetone and keying.
SKED	Enter sked - same as **F7**.
STATUS	Display user parameters.
STOPBITS	Set stopbits parameter.
SUPER or **SCP**	Toggle Super Check Partial.
ZAP	Delete previous QSO – SD only.