N6TR LOGGING PROGRAM

Version 4.05

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1.0 GETTING STARTED

This chapter is for those who just received their copy of the N6TR Logging Program and want to see it work with a minimum of manual reading. If you were to read the whole manual before trying the program, you might think the program is hard to use because of all the various command you can put in the LOGCFG.DAT file.

What is a LOGCFG.DATXE "LOGCFG.DAT"§ file? The LOGCFG.DAT file is a small file that the LOG.EXE program looks at when it is started. It tells the program what your callsign is and what contest you want to operate. It can also specify many other operating parameters of the program. These are discussed in more detail in section 5.0 and listed in alphabetical order in Appendix A.

Almost all the LOGCFG.DAT parameters have a default value. This means you do not have to specify all the parameters to use the program. It is possible to use the program with only two entries in this file: the contest you want to operate and your callsign.

To make your life easier, if there is no LOGCFG.DAT file present when you start the LOG.EXE program, the program will ask you a few questions and generate one for you. You will be asked for your callsign, which contest you want to operate, the CRT mode you want to use, if you want to use the contest simulator and if you want to select a port for your CW interface.

The program will then save the LOGCFG.DAT file with the appropriate entries so you don't have to answer these questions again. You can look at this file by stopping the program (Alt-X) and then executing the DOS command "TYPE LOGCFG.DAT". You will get something that looks like this:

> **MY CALL = N6TR**
> **CONTEST = CQ WW**
> **DISPLAY MODE = COLOR**
> **SIMULATOR ENABLE = TRUE**
> **KEYER = CPU**
> **KEYER OUTPUT PORT = PARALLEL 1**
> **PADDLE PORT = 1**

This LOGCFG.DAT file would tell the program your call is N6TR, that you want to operate the CQ WW contest, that you are using a color monitor, that you want to use the contest simulator, that the computer will generate CW (as opposed to using the AEA MM3 keyer), that your CW interface is connected to parallel port 1 and that you have a paddle connected to parallel port 1.

When the LOG program is running, you can work a station by typing their callsign and pressing RETURN. The callsign is displayed in the CALL WINDOWXE "CALL WINDOW"§. The window just below the call window is the EXCHANGE WINDOWXE "EXCHANGE WINDOW"§. You can move between these two windows using the up or down arrow keys.

The CQ zone for the station you entered should automatically be displayed in the exchange window. If it is not correct, you can simply type in the correct zone. Use PageUpXE "PageUp"§ and PageDownXE "PageDown"§ or the Alt-SXE "Alt-S"§ command to change CW speed.

When the callsign and exchange are correct, press RETURN again and the contact will be completed and logged. Try this for a few stations. Try a duplicate contact and see what happens.

Put the program into the Search and PounceXE "Search and Pounce"§ mode by pressing the TAB key. The exchange window will appear. Once again, enter a callsign and press return. Press F2 to send your exchange, and then press RETURN when you are ready to log the contact. F1 can be used to send your callsign. Pressing F1 quickly after starting your call will stop the CW. Pressing it after a few seconds will send your call again without the DE.

You can eliminate pressing F2 for your exchange. If you have not sent your exchange, it will be sent for you when the QSO is logged by pressing the RETURN key. This means you can search and pounce by typing a call, press RETURN to call the station, enter the exchange and then press RETURN to send your exchange and log the contact. If the station is a dupe, he will not be called using this procedure.

Finally press Alt-HXE "Alt-H"§ and read through the list of commands available. You can view a help screen for each command by pressing the letter of the command. At this point, you know enough to use the program during a contest!!

To program your CW messages, use the Alt-PXE "Alt-P"§ command. The CW function key memories have one value when you are in the "CQ Mode" and another when you are in the "Exchange Mode." The exchange mode is active whenever you see the exchange window. There are also a group of messages that get sent during the process of a QSO. These can be programmed using the Alt-P command as well and are explained in section 5.2. When you program a CW message using Alt-P, a command will be automatically added to your LOGCFG.DAT file so the messages you program will still be there if you restart the program.

Many of the LOGCFG.DAT options can be programmed while the program is running. This is done with the Control-JXE "Control-J"§ command. This command will show all the parameters that can be changed with their current value. After changing any of the parameters, you will be asked if you want the change added to your LOGCFG.DAT file.

You should find it is possible to get by without ever editing a LOGCFG.DAT file. With the questions asked at the start of the program and the Alt-P and Control-J functions, you can control most everything you normally need to.

The POST program has many post contest functions you will want to use after the contest. See section 7.0 for an overview of its capabilities.

2.0 GENERAL DESCRIPTION

The N6TR logging program is a high performance logging program intended to be used for most any contest or for making contest type QSOs outside of a contest.

The program can handle well over 50,000 contacts with 640K of memory. Since dupe checking is done in assembly language, there is no perceptible wait time, even for large logs. For CW contests, CW can be sent by the computer or with an AEA MM3 keyer. When using the computer to send CW, you can connect a paddle to the parallel port and have the computer function as a keyer. You can even set the weight of the CW to match your taste.

When each contact is logged, disk files are automatically appended. This technique assures that you lose no information in the event of a power failure. All of the information from the last five contacts is displayed and can be edited if necessary. The disk log file is an ASCII file that can be examined and changed with a word processor or with the post contest utility POST.EXE.

Through the use of a configuration file (LOGCFG.DAT), the operation of the program can be tailored to meet your specific requirements. Most of the operating parameters used in the program can be modified using the configuration file. See Section 5.0 for a complete description of the parameters you can control.

A name database can be used to call stations you work by name. When enabled on CW, the program automatically says hello to the people you have entered. It even will send GM, GA or GE! This feature can be set up to automatically defeat itself if the rate reaches a programmable limit. More than 22,000 names can be stored and you can also store up to 1000 club calls.

Much care has been taken to create an efficient way to search and pounce on CW. When you are in the search and pounce mode, typing a call and then pressing RETURN will either send your call (if it is a new station) or tell you it is a dupe. Pressing RETURN after copying the exchange will send your exchange and logs the contact.

The program is also efficient when running stations. A contact can be completed by typing a call, pressing RETURN, waiting for the station to send their exchange (ie: 599 and zone which is already automatically entered for you), and then pressing RETURN to log the contact and send a QSL message. That is just 6 keystrokes for a 4 letter call. You can even eliminate having to press the first RETURN if you want. The program can start sending the call after you have entered a few characters (programmable number) and start the exchange when it has caught up to you.   See AUTO START SEND CHARACTER COUNT and AUTO CALL TERMINATE for details.

There are two different ways to accommodate tailenders and you have your choice of two different QSL messages that can be sent while the contact is being logged. CW is sent while disk operations are being performed.

When working a station, you will automatically be shown information about what bands you still need a QSO or multiplier from the station. This is very useful when you might want to move the station to other bands. You also are continuously shown a list of missing multipliers for the band/mode you are using. For domestic multipliers, a complete list of remaining multipliers is shown. When using country multipliers, a list of 90 common countries is shown. Other countries can be checked by doing a dupe check and viewing the multiplier information window. You can swap between remaining zones or countries with a single keystroke (Alt-G).

As you enter a callsign, partial calls from the dupesheet will be displayed automatically as you enter the call. After entering the call, a list of other stations from your dupesheet and name database that are similar (unique minus ones) is displayed. These calls may be easily selected if you discover one of them is the correct call.

Exchange parameters such as domestic QTH, age, power, name, ITU Society and field day class are stored and recalled automatically when working the station on another band. Both ITU and CQ zones are automatically entered as well. You can create a beam heading data file that will allow the program to display the proper beam heading for the stations you are working.

The program has a simulator mode that will allow you to work simulated stations in some of the contests supported by the program. The simulator pulls callsigns from the name database you have created, so the callsigns are "real". For more information on the simulator, see chapter 6.8.

The POST.EXE utility package has a number of functions that make log processing easy. It can recheck your log for dupes, verify multipliers, accumulate QSO points and multiplier totals, print dupesheets, generate band and mode logs, generate a disk file for the ARRL, create a rate sheet or QSO distribution by continent, edit your log, generate QSL labels three different ways, edit the name database and other similar functions. See chapter 6.0 for more details.

The program has a complete countries list inside of it. You can easily add new countries or make changes to the existing ones using the COUNTRY.ADD file. This can be done automatically in the POST program after the contest. For more information on the COUNTRY.ADD feature, see chapter 6.5.

While the program uses an ASCII format for the log file, there is a binary restart file (RESTART.BIN) which contains the contents of the dupesheet, multiplier list, partial call list and exchange memory. This file can be saved when you exit the program or after each QSO. The RESTART.BIN file allows you to restart the program in a few seconds.

3.0 SYSTEM REQUIREMENTSXE "SYSTEM REQUIREMENTS"§

The program runs under MSDOS. A minimum 512K of RAM is required. If you plan to use the name database, the full 640K is recommended. At this time, there is no use made of expanded memory beyond 640K since over 50,000 QSOs can be worked with 640K.

The program is normally compiled for use on 286 or newer processors. If you need to run the program on an 8088, please contact the factory for a special version that will run on the 8088. A hard disk is almost a necessity as updates are made to the log file after each contact. Most floppy disks are too slow to be used this way without slowing you down. The program can be used with either monochrome or color monitors.

If you are using the AEA MM3 keyerXE "MM3 keyer"§ to send CW, you will need to connect it to a COM port on your computer. The keyer must have revision 10 or newer firmware. You can determine what version you have by pressing the following key sequence on the MM3: *C700. If you keyer sends the number 10 (or higher) in CW, then you are all set. If you hear nothing, your probably have version 6 or older and will need to get an upgrade from AEA. Version 10 or newer can also be verified if your keyer has Doctor DX.

If you are having the computer send CW, you will need to interface either a serial or parallel port to your rig. This is the same type of interface used by the CT and NA programs, except that the PTT signal is supported and you can connect your paddle to the parallel interface and use the computer as a keyer. There are schematics with suggested circuits in appendix B.

It is recommended that you use some sort of disk cache. SMARTDRV doesn't work too well with the program as it hogs the computer and doesn't allow you to process keystrokes when it is doing an update. The Norton NCACHE program is a better choice.

4.0 INSTALLATIONXE "INSTALLATION"§

To install the N6TR logging program onto your hard disk, make a directory called LOG under your root directory. Next, make a sub directory under LOG called NAME. Then copy all the files on the distribution disk into the LOG directory. To do all this, perform the following instructions:

        CD \   Puts you in root directory
        MKDIR LOG   Creates the LOG directory
        CD LOG   Puts you in the LOG directory
        MKDIR NAME   Creates /LOG/NAME
        COPY A:*.*   Copy all files from diskette A:

If your program is distributed on floppy disks, there will be a second diskette to load in. In this case put the second diskette into your floppy drive and type the following command:

        COPY A:*.*   Copy all files from diskette A:

You should end up with the following four files in your /LOG directory:

        LOG.EXE   LOG.OVR   POST.EXE   POST.OVR

Note that there will not be any files in the \LOG\NAME directory yet. This directory will be used by the program if, and when, you generate a name database.

You may also find the file READ.ME. If this file exists, it will have information on new features that may not be documented in this manual. It is a good idea to print out this file and attach it to this manual.

If you don't have FILES=20 in your CONFIG.SYSXE "CONFIG.SYS"§ file, it would be a good idea to do this. This allows the POST program to process band/mode logs without errors.

When configuring the program for a specific contest, it is best to create a directory just for that contest. These can be sub directories of the LOG directory, or separate directories under the root directory. Put the LOGCFG.DAT file you have created for the contest in the directory for that contest. Having a PATH to the LOG directory will allow you to run the program from any directory without having to copy the program into each directory. Refer to your DOS manual for more information on the PATH command.

To set up the MM3, it will need to be in the KEYER mode. If the KEYER LED is not on, press *3. While in the KEYER mode, press *C99 which will set the baud rate to 9600 baud. Finally, press *9 which will put the keyer into RS232 remote mode. For best results, do this step before starting the program. Connect the keyer to the port you want to select using the KEYER OUTPUT PORT command in your LOGCFG.DAT file.

5.0 CONFIGURATION FILE

When the program is first started, it looks for the file LOGCFG.DAT in the directory you are logged into. If this file is missing, the program will ask you some questions to generate a simple one. The LOGCFG.DATXE "LOGCFG.DAT"§ file will tell the program how to set itself up for a specific contest. It is suggested you keep separate directories for each contest you work with the proper LOGCFG.DAT in each.

The simplest LOGCFG.DAT will have two entries in it, one indicating your callsign and the other the type of contest you are operating. An example:

        MY CALLXE "MY CALL"§ = 4U1ITU
        CONTESTXE "CONTEST"§ = CQ WW

This would be enough to use the program in the CQ WorldWide contest. However, as you gain experience with the program, you may find things you would like to change to make the operation more comfortable for you.

EXAMPLE To change the message sent when finishing a contact while running stations to 73 4U1ITU TEST, you would put the following instruction in the LOGCFG.DAT file:

        QSL MESSAGE = 73 4U1ITU TEST

All entries in the LOGCFG.DAT have the format shown above. The parameter you are addressing is followed by an equal sign, followed by the value for the parameter you want to set. If an illegal parameter is specified, an error message will be generated and the program will halt. In this document, all entries will be shown in upper case, but the instructions are case insensitive. It is necessary for the first line of the LOGCFG.DAT file to be the MY CALL statement.

You can change many of the LOGCFG commands while the program is running by using the Control-J command. The commands that can be changed with Control-J have asterisks next to their name in appendix A. They are also shown on the CRT when you execute the Control-J command along with their present values. You only need enter enough of a name to uniquely identify it.

The LOGCFG feature gives you a lot of power to control how the logging program operates. Once you go beyond the simple commands, you can create situations where the program does not behave correctly. If this happens, I will be happy to help you figure out what is going on. In order to do this, I will need to see a copy of your LOGCFG.DAT file. This will allow me to reproduce the same environment you have created and understand the problem.

If you have suggestions for new commands to add, I can usually do this quite easily (including new contests).

5.1 PROGRAMMING CONTEST SELECTION

The second line of the LOGCFG.DAT file normally defines the contest that the program is going to be used for. All major contests and most minor ones can be named here. When naming a contest, a large number of parameters are set up appropriately for that contest. This saves you from having to list every one of the parameters and decide how to set them for the contest you have in mind.

EXAMPLE   CONTESTXE "CONTEST"§ = SWEEPSTAKES

The following contests are presently supported:

ALL ASIAN	KCJ
ALL JA	
ARI (non Italian)	NA QSO
ARRL 10	NRAU
ARRL 160	
ARRL DX	OK DX
CAL QSO PARTY	PACC
COUNTRY HUNTER	
CQ 160	REGION ONE FIELD DAY
CQ M	
CQ WPX	SAC
CQ WW	SOUTH AMERICAN WW
	SP DX (non SP)
FIELD DAY	SPRINT
	SWEEPSTAKES
GENERAL QSO (RST, QTH and name)	
	VK ZL
HA DX	
HELVETIA	WAE
IARU	XMAS
IOTA	
	YO DX
JA INTERNATIONAL DX	

If you are working the XMAS or NRAU contests, you will want to know about the Control-K command which allows you to clear the dupesheet so you can QSO stations again on the second day of the contest. The WAE contest uses Control-Q to access the QTC function. See the help menu (Alt-H) for more information.

Other contests can probably be operated by adding a few commands to the LOGCFG.DAT file. If not, I can often add new features that will allow you to operate them. Please feel free to send me information on the contest, and I will try to add it.

5.2 PROGRAMMING CW MESSAGESXE "CW MESSAGES"§

A group of LOGCFG.DAT parameters define CW messages that will be sent either as part of a QSO or in response to a function key. There are some special characters that can be put into these messages that will perform special functions.

EXAMPLE To send a QSO number as part of a CW message, put a # in the message where you want it sent. A simple exchange of RST and QSO number would look like this:

     CQ EXCHANGE = 599 #

You can also program any of the CW messages after starting the program with the Alt-P command. Any changes you make will be saved in your LOGCFG.DAT file.

A complete list of these special characters follow:

      #   - QSO Number
      @   - Station's callsign as entered in call window
      $ - Send salutation and name if known (ie: GE MASA)
      %   - Send name from name database (adds a space at end if name present)
      :   - Send characters from keyboard until a RETURN or ESCAPE.
      ~   - Send proper salutation without name (GM, GA or GE).
      \   - Send call used in contest (as set by MY CALL =).
      | - Send name that was copied into exchange window.
      [- Wait for a number to be typed to make RST and send it.
      ]   - Repeat complete RST as sent with [command.
      _   - Space (use at the start or end of message where spaces in LOGCFG are ignored).
      ^   - Half space. Try CQ^TEST instead of CQTEST or CQ TEST.
      }   - Send prefix or suffix only of corrected call (callsign has been changed since
answered).
)   - Send callsign of last QSO in editable window.
      (- Send name of previous sprint QSO (see description on next page).
      >   - Clear RIT (see section 6.12 for more information).
      +   - End of message (AR)
      <   - End of work (SK)
      =   - Double dash (BT)
      !   - Understood or QRL? (SN)
      &   - Wait (AS)
   Control-A - Send message on inactive radio (ie: call CQ while copying exchange on run band).
   Control-F - Increase speed by 6 percent.
   Control-S - Decrease speed by 6 percent
   Control-R - Generate and send random five character code group.
   Control-T - Repeat code group generated from last Control-R.
   Control-U - Update CallsignICameBackTo variable (used to determine if corrected call).

The Control characters can be programmed using the Alt-P command by pressing Control-P and then

the control character desired (ie: Control-P and then Control-F).

The # character can be followed by a + or -, and a single integer. This will either increment or decrement the QSO number that will be sent by the integer. This might be used to create a message to send the QSO number of the previous QSO.

If you are using the CPU to send CW with, you can change the code speed in the middle of a message. To do this, use the Control-F character to speed up the CW by six percent and the Control-S character to slow it back down by six percent. You can insert these characters easily by programming them from the LOG.EXE program using the Alt-P command. To insert the control characters, first press Control-P and then either Control-F or Control-S. The Control-F character is displayed as a spade and the Control-S character is displayed as double exclamation points. You may put several of them together to change the speed as much as you want.

If you want to change speed with the MM3, you can put control commands to the MM3 in your message. Sending a control C to the MM3 will put it in a command mode. You can then change speed or whatever else you want to do. End your command with a *9 which will put it back into the CW send mode. Refer to the MM3 manual for a description of the various commands you can execute. These commands are not supported in the CPU keyer mode.

Note that the only special characters supported when using the auto CQ feature (Alt-C or Alt-Q) is \ and >. This are normally the only special characters you would need to use in a CQ message.

The (character can be used to send the name of the previous Sprint QSO you have made. The name used for your first QSO can be defined by the MY NAME command in your LOGCFG.DAT file.

If you are using two radios, you may find the Control-A character to be useful. If this character appears at the start of a CW message, it will be sent on the inactive radio. For example, in the Sweepstakes, you might program one of the exchange memory keys with Control-A CQSS CQSS \ \ SS. Then you can send this message while copying an exchange on your run radio if you want. Any CW messages initiated afterwards will stop the CQ (f it isn't already done) and be sent on the active radio. If you receive an answer to the CQ, use the Alt-R command to swap radios so you can complete the QSO.

The SSA XMAS contest requires a random five character code group as part the exchange. The Control-R character will generate a random group and send it. The Control-T character will repeat the same group without generating a new one. The group will automatically be logged.

The following is a complete list of the CW messages that can be programmed in LOGCFG.DAT. Remember you can program these with the Alt-P command while the program is running.

  CALL OK NOW MESSAGE
  CQ EXCHANGE
  CQ EXCHANGE NAME KNOWN
  CQ MEMORY F1 to CQ MEMORY F10
  CQ MEMORY AltF1 to CQ MEMORY AltF10
  EX MEMORY F3 to EX MEMORY F10
  EX MEMORY AltF1 to EX MEMORY AltF10
  QSL MESSAGE
  QSO BEFORE MESSAGE
  QUICK QSL MESSAGE

REPEAT S&P EXCHANGE
S&P EXCHANGE
TAIL END MESSAGE

The **CALL OK NOW MESSAGE**XE "CALL OK NOW MESSAGE"§ gets sent when you are finishing a contact while running stations and the callsign in the Call Window is different than when you first came back to the station. Normally this is set to send the call of the station and "OK".   There are cases when you will want to update the callsign from the one you originally came back. Pressing Alt-F10 will send the message "IS UR CALL W6XYZ?" and update the variable CallsignICameBackTo to W6XYZ. You can also do this in any of your CW messages with the Control-U character. This will take the current value of the Callsign Window and store it in this varaible for future comparision.

The **CQ EXCHANG**XE "CQ EXCHANGE"§**E** is sent when running stations who have responded to your CQ. The program will automatically send the station's call before the CQ EXCHANGE is sent.

The **CQ EXCHANGE NAME KNOWN**XE "CQ EXCHANGE NAME KNOWN"§ message works the same way as the CQ EXCHANGE, except it is sent when the program knows the name of the station you are working. If there is no CQ EXCHANGE NAME KNOWN message, the CQ EXCHANGE message is always used.

CQ MEMORIESXE "CQ MEMORIES"§ are sent when pressing the corresponding function key and you are in the CQ mode. The CQ mode is simply the mode you are in if the Exchange Window is not up. One you have started a contact, or go into the Search and Pounce mode, the Exchange Window will appear.

If the Exchange Window is up, you are in the Exchange Mode and the **EXCHANGE MEMORIES** are now active. **EXCHANGE MEMORY**XE "EXCHANGE MEMORY"§ **F1** is reserved for sending your callsign and **EXCHANGE MEMORY F2** is reserved for sending either S&P EXCHANGE**XE "S&P EXCHANGE"§ or REPEAT S&P EXCHANGE**XE "REPEAT S&P EXCHANGE"§. The S&P EXCHANGE gets sent the first time the exchange is sent while working a station. If he asks for a repeat and you press F2 again, the REPEAT S&P EXCHANGE will be sent. If the REPEAT S&P EXCHANGE is not programmed, the S&P EXCHANGE will always be sent.

The **QSL MESSAGE**XE "QSL MESSAGE"§ is activated when you are running stations and are finishing a QSO. The **QUICK QSL MESSAGE**XE "QUICK QSL MESSAGE"§ allows you to send a shorter message when you have a pileup. The **TAIL END MESSAGE**XE "TAIL END MESSAGE"§ is sent if you are finishing a contact, but have another call from a tailender station that you want to send right away.

The **QSO BEFORE MESSAGE**XE "QSO BEFORE MESSAGE"§ gets sent when a dupe tries to work you. You will need to make sure it starts off with a space (if you want one) as it is sent right after the call.

EXAMPLE To program the QUICK QSL MESSAGE to be R, put the following command in LOGCFG.DAT:

      QUICK QSL MESSAGE = R

The following defaults are used if no entry in the LOGCFG.DAT file is found:

CALL OK NOW MESSAGE = } OK %

CQ MEMORY F1 = CQTEST \ \ TEST
CQ MEMORY F2 = CQTEST CQTEST CQTEST \ \ TEST
CQ MEMORY F3 = Repeat S&P Exchange
CQ MEMORY F4 = 73 \ TEST
CQ MEMORY F6 = DE \
CQ MEMORY F7 = SRI QSO B4 73 \ TEST
CQ MEMORY F8 = AGN
CQ MEMORY F9 = ?
CQ MEMORY F10 = :

EX MEMORY F8 = EE
EX MEMORY F9 = ?
EX MEMORY F10 = :
EX MEMORY ALTF1 = UR CALL?
EX MEMORY ALTF2 = AGN?
EX MEMORY ALTF10 = IS UR CALL @?

QSL MESSAGE = 73 \ TEST
QSO BEFORE MESSAGE = _SRI QSO B4 73 \ TEST
QUICK QSL MESSAGE = TU
TAIL END MESSAGE = R

The AltF10 key will automatically update the variable CallsignICameBackTo with the contents of the call window. This prevents the program from using the CALL OK NOW MESSAGEXE "CALL OK NOW MESSAGE"§ if you now have the call correct. If you want to update the CallsignICameBackTo variable with the call window with a different message, put the Control-U character in the CW message.

5.3 PROGRAMMING WINDOW COLORSXE "WINDOW COLORS"§

The LOGCFG.DAT file can be used to select the colors used for any of the windows when in the color mode. There are no colors to setup for the monochrome mode. You can select which mode to use with the command DISPLAY MODE. If DISPLAY MODE is set equal to COLOR, then the color set of colors will be used. Otherwise, the default monochrome set will be used. Note that the DISPLAY MODE command must come after all the commands setting up the colors, otherwise the commands will be ignored.

EXAMPLE To use the window colors for color mode put the following command in LOGCFG.DAT after all your COLOR commands:

        DISPLAY MODEXE "DISPLAY MODE"§ = COLOR

For each window, there is a background and foreground color that can be specified.

EXAMPLE To set the foreground color to Yellow and the background color to Blue for the Call Window when using the color mode, you would put the following commands into LOGCFG.DAT:

        CALL WINDOW COLOR = YELLOW
        CALL WINDOW BACKGROUND = BLUE
        DISPLAY MODE = COLOR

The following windows are available to be modified:

ALARM WINDOW	Shown when alarm is set
BAND MODE WINDOW	Shows band and mode near date
BEAM HEADING WINDOW	Shows beam headings
BIG WINDOW	Used for Control-J and Control-O
CALL WINDOW	Where calls are entered
CLOCK WINDOW	The time shown near the date
CODE SPEED WINDOW	Lower left, WPM
CONTEST TITLE WINDOW	Top and center
DATE WINDOW	Date shown near the time
DUPE INFO WINDOW	Just below free memory window
DUPESHEET WINDOW	Covers editable log when active
EDITABLE LOG WINDOW	Five lines above call win
EXCHANGE WINDOW	Below call window when active
FREE MEMORY WINDOW	Upper right corner
FUNCTION KEY WINDOW	Bottom line
INSERT WINDOW	To the right of call window
MULTIPLIER INFORMATION WINDOW	Upper right when active
NAME PERCENTAGE WINDOW	Bottom right in %
NAME SENT WINDOW	To the right of call window
POSSIBLE CALL WINDOW	Second line from bottom
POSSIBLE CALL WINDOW DUPE	Colors used when a possible call is a dupe
QSO INFORMATION WINDOW	Upper right when active
QSO NUMBER WINDOW	Between call and ex window
QUICK COMMAND WINDOW	Third line from bottom
RADIO WINDOW	Lower right, QSOs per hour
REMAINING MULTS WINDOW	Just below total window
TOTAL SCORE WINDOW	Upper left corner, Pts =
TOTAL WINDOW	Upper left, shows band totals
WHOLE SCREEN WINDOW	Used for errors at start

The following colorsXE "colors"§ may be specified: Black, Blue, Green, Cyan, Red, Magenta, Brown, Light Gray, Dark Gray, Yellow, Light Blue, Light Green, Light Cyan, Light Red, Light Magenta, and White.

The defaults for the color mode can be found in Appendix A.

5.4 SWITCHESXE "SWITCHES"§

Switches are simple TRUE or FALSE switches that turn on or off various features of the program.

EXAMPLE To enable each contact to be printed on a printer during the contest, put the following command into your LOGCFG.DAT file:

        PRINTER ENABLE = TRUE

The switches that are available are:

		Default
*	AUTO CALL TERMINATE	FALSE
*	AUTO DUPE ENABLE	TRUE
	DC ENABLE	CONTEST dependent
*	DE ENABLE	TRUE
	EIGHT BIT PACKET PORT	FALSE
*	EXCHANGE MEMORY ENABLE	TRUE
	INCREMENT TIME ENABLE	FALSE
	INSERT MODE	TRUE
*	LEADING ZEROS	FALSE
*	LEAVE CURSOR IN CALL WINDOW	FALSE
	MULT BY BAND	CONTEST dependent
	MULT BY MODE	CONTEST dependent
	MULTIPLE BANDS	CONTEST dependent
	MULTIPLE MODES	CONTEST dependent
	NAME MEMORY DISABLE	FALSE
*	PARTIAL CALL ENABLE	TRUE
*	PARTIAL CALL LOAD LOG ENABLE	FALSE
*	POSSIBLE CALLS	FALSE
	PRINTER ENABLE	FALSE
	QSO BY BAND	CONTEST dependent
	QSO BY MODE	CONTEST dependent
	QTC ENABLE	CONTEST dependent
	QTC MINUTES	FALSE
*	SAY HI ENABLE	FALSE
*	SHORT INTEGERS	FALSE
	SIMULATOR ENABLE	FALSE
*	SPRINT QSY RULE	FALSE
*	TWO RADIO MODE	FALSE
	UNKNOWN COUNTRY FILE ENABLE	FALSE
*	UPDATE RESTART FILE ENABLE	TRUE
*	VHF BAND ENABLE	FALSE
*	VISIBLE DUPESHEET	FALSE
*	WARC BAND ENABLE	CONTEST dependent

The switches listed with asterisks can be changed while the program is running using the Control-JXE "ControlJ"§ command. An explanation of the functionality of each of these switches follows:

The **AUTO CALL TERMINATE**XE "AUTO CALL TERMINATE"§ command controls the Auto Call Terminate function. When this flag is enabled and you are on CW, the program can automatically terminate callsigns that you enter in response to a CQ. When coupled with the Start Sending Now Key or the AUTO SEND CHARACTER COUNTXE "AUTO SEND CHARACTER COUNT"§ command, the program will assume a call is complete when all the characters entered in the call window have been sent. For example, assume 4U1ITU has answered you. If you press the start sending now key after entering 4U1I, the program will start sending 4U1I. If you have entered a new character before it finishes, it will send that character as well. If there are no new characters to send, it will automatically go on to send the CQ EXCHANGE. It works the same way if the AUTO SEND CHARACTER COUNT function starts sending the callsign. In this case, it is possible to respond to a station by using the same number of keystrokes that are in his callsign.

AUTO DUPE ENABLEXE "AUTO DUPE ENABLE"§ is only meaningful when you are sending CW. If it is set TRUE, a dupe who calls you will be sent the QSO BEFORE MESSAGEXE "QSO BEFORE MESSAGE"§ instead of the regular exchange. If it is set to FALSE, the normal exchange will be sent and the contact will be logged with zero QSO points. The default is TRUE. It is handy to set this to FALSE when entering a hand log after the contest.

The **DC ENABLE**XE "DC ENABLE"§ flag determines if the District of Columbia counts as a domestic multiplier. It is normally controlled by the contest you have selected, but if you are changing how the domestic multiplier works, you can use this command to enable DC as a domestic multiplier.

The **DE ENABLE**XE "DE ENABLE"§ flag can determine if DE is sent before your callsign when using the F1 key in the search and pounce mode. If you don't want the program to put DE in front of your call, put the following command in your LOGCFG.DAT file:

        DE ENABLE = FALSE   (default = TRUE)

The **EIGHT BIT PACKET PORT**XE "EIGHT BIT PACKET PORT"§ switch allows you to switch the packet port to eight bit operation instead of the normal 7 bit operation. This is necessary if you connected directory to a packet cluster node which uses 8 bits instead of 7.

The **EXCHANGE MEMORY ENABLE**XE "EXCHANGE MEMORY ENABLE"§ switch allows you to turn on the exchange memory. This is useful when working the same station on different bands or modes, and when the exchange contains either a class (ie: Field Day), power (ARRL DX), age (All Asian) name, ITU Society name (IARU), zone or Domestic QTH. If you have worked the station before, the constant information will appear without you having to enter it. Please note that this information is lost if you stop the program and the RESTART.BIN file is deleted. See chapter 6.10 for more information about this.

The **INCREMENT TIME ENABLE**XE "INCREMENT TIME ENABLE"§ flag determines if the increment time function using Alt-1 to
Alt-10 is enabled. If this flag is set to TRUE, the Alt-1 to Alt-10 keys will increment the time 1 to 10 minutes. This function is handy when entering a hand log. See section 6.3 for more information on entering a hand written log.

The **INSERT MODE**XE "INSERT MODE"§ switch allows you to define the initial condition of the insert mode. This determines if characters are overwritten or inserted when editing a callsign or

exchange.

The **LEADING ZEROS**XE "LEADING ZEROS"§ flag when set to TRUE will add zeros in front of a sent QSO number to make it a three character number.

The **LEAVE CURSOR IN CALL WINDOW**XE "LEAVE CURSOR IN CALL WINDOW"§ command when set to TRUE will leave the cursor in the call window instead of automatically moving it to the exchange window during the QSO process. Some people prefer this mode in contests where a zone comes up as the initial exchange and you rarely need to change it.

MULT BY BANDXE "MULT BY BAND"§ and **MULT BY MODE** are XE "QSO BY MODE"§flags that determine if multipliers can be counted again on different bands or modes. These parameters are set up when the CONTEST statement is executed and normally do not require any changes.

The **MULTIPLE BANDS**XE "MULTIPLE BANDS"§ and **MULTIPLE MODE**SXE "MULTIPLE MODES"§ flags control the ability to change bands or modes while working the contest. If you are working a single mode or single band contest, it is recommended that the corresponding flag be set to FALSE. This will prevent you from accidentally changes bands or modes during the contest. Before you make your first QSO, you will be able to set the band and mode regardless of the status of these flags.

The **NAME MEMORY DISABLE** flag will determine if the names and callsigns of the name database are loaded into memory, or just the callsigns. If you are about to run out of memory during a contest, the Control-Y command will dump the name portion of the database (keeping the callsigns). The Control-Y command automatically add the commen NAME MEMORY DISABLE = TRUE to your LOGCFG.DAT file so you won't run out of memory when the program is restarting.

The **PARTIAL CALL ENABLE**XE "PARTIAL CALL ENABLE"§ flag allows you to control the partial call function. When enabled, partial calls will be shown on the bottom while you are entering a call into the call window after the second character has been entered. The calls shown are from the dupesheet only (not the name database). A partial call is any call that starts with the same letters entered in the call window.

The **PARTIAL CALL LOAD LOG ENABLE**XE " PARTIAL CALL LOAD LOG ENABLE"§ allows the partial call list to be generated from the LOG.DAT file when starting the program. Normally you would not do this as the RESTART.BIN file has this information already. However, if you decided to delete the RESTART.BINXE "RESTART.BIN"§ file or have edited your LOG.DAT file and you want to regenerate the partial call list from the LOG.DAT file, you should turn this feature on.

The **POSSIBLE CALLS**XE "POSSIBLE CALLS"§ flag controls the possible call feature of the program. When set TRUE, the possible call function is turned on. This will show you similar calls from the name database and your dupesheet when working a new station.

The **PRINTER ENABLE**XE "PRINTER ENABLE"§ flag controls printer operation. If you have a printer connected to the computer, you can have each contact printed as it is logged during the contest. Please note that the printer prints the contact as it leaves the editable window, so it will be five contacts behind you. Use the Alt-U command at the end of the contest to print the last five contacts.

The **QSO BY BAND** and **QSO BY MODE** flags determine if QSOs can be counted again on different bands or modes. These parameters are setup automatically when the CONTEST statement in your LOGCFG.DAT file is executed and normally do not require any changes.

The **QTC ENABLE**XE "QTC ENABLE"§ flag is normally turned on internally by the program when the WAE contest is being set up. When you have enabled QTCs, you will need to remember that Control-Q is the magic key to send or receive a QTC (depending on if you are in Europe or not).

The **QTC MINUTESXE "QTC MINUTES"§** flag, when true, will setup the QTC function to only send the minutes of QTC times that are in the same hour as the time previously sent.

The **SAY HI ENABLE**XE "SAY HI ENABLE"§ flag controls the name calling feature of the program. If you have a name database, you can enable the say hi feature by setting this parameter to TRUE. You will then need to include the appropriate special characters in your CW messages to actually send the names. See section 5.2 for a description of these characters.

The **SHORT INTEGERSXE "SHORT INTEGERS"§** flag when set to TRUE will allow short abbreviations for some integers to be used when sent as part of a QSO number. The actual abbreviations that are used can be programmed using the Alt-P - Other command.

The **SIMULATOR ENABLE**XE "SIMULATOR ENABLE"§ flag turns on the contest simulator. See section 6.8 for details on how to use the simulator.

The **SPRINT QSY RULE**XE "SPRINT QSY RULE"§ flag if TRUE will automatically put you in the CQ mode after completing a search and pounce QSO. This eliminates you from having to manually do this. This flag is set automatically when the sprint contest is selected. See Section 6.6 for more information on how to operate the Sprint.

The **TWO RADIO MODE** XE "TWO RADIO MODE "§flag when set to TRUE puts you in the two radio mode. This mode is explained in full under section 6.2.

The **UNKNOWN COUNTRY FILE ENABLE**XE "UNKNOWN COUNTRY FILE ENABLE"§ flag controls the generation of the unknown country file. This file will list QSOs that have a callsign in an unknown country. This is a handy way to find
calls that might be new multipliers for you. The file is named UNKNOWN.CTY as a default, but you can change it using the UNKNOWN COUNTRY FILE NAME command. You can also find unknown countries after the contest using POST's Multiplier Check procedure.

The **UPDATE RESTART FILE ENABLE**XE "UPDATE RESTART FILE ENABLE"§ flag determines if the RESTART.BIN file is automatically updated after each contact, or only when exiting the program. The RESTART.BIN file allows the program to quickly restart without having to read in the LOG.DAT file resulting in quicker initialization. When this flag is set to TRUE, the RESTART.BINXE "RESTART.BIN"§ file will be updated automatically after each contact. Otherwise, it will only be updated when you exit from the program. Refer to section 6.10 for more information on what the RESTART.BIN file does. There is also a report in the POST program that will show you the contents of the RESTART.BIN file.

The **VHF BAND ENABLE**XE "VHF BAND ENABLE"§ flag, when set to TRUE, will allow the selection of 6 and 2 meters. The **WARC BAND ENABLE**XE "WARC BAND ENABLE"§ flag will allow you to operate on 30, 17 and 12 meters. Both are normally set to FALSE, but they are TRUE when you are in the GENERAL QSO mode.

The **VISIBLE DUPESHEET**XE "VISIBLE DUPESHEET"§ flag when set to TRUE will enable a complete dupesheet of the contacts you have made to be displayed. This dupesheet can hold about 200 calls. This is very useful for the sprint contest. When the visible dupesheet is active, the QSO INFORMATION and MULTIPLIER INFORMATION windows are disabled. The dupesheet also

overwrites the multiplier totals and remaining multiplier information. To view this information, use the Alt-E command to bring up the editor, and then press ESCAPE. Pressing ESCAPE again will rewrite the dupesheet.

5.5 CONTEST PARAMETER SELECTION

There are a number of operating parameters that are set to specific values to operate a certain contest. These parameters are normally set when the CONTEST statement in the LOGCFG.DAT file is executed. However, if you are operating a contest that is not covered with a CONTEST statement, you may need to select a contest that is similar to the one you are operating, and then change some of the parameters to make it work correctly for you.

It is important to understand that the instructions in the LOGCFG.DAT file are executed in order and that if you are going to change one of these parameters, you must do it after the CONTEST statement has been executed. Keeping the CONTESXE "CONTES"§T statement as the second statement of your LOGCFG.DAT file is the best way to avoid any problems.

EXAMPLE To operate a contest that is the same as the ARRL DX contest, but where CQ countries are used as multipliers, your LOGCFG.DAT would look like this:

        MY CALL = 4U1ITU
        CONTEST = ARRL DX
        DX MULTIPLIER = CQ DXCC

If the DX MULTIPLIER command appeared before the CONTEST command, it would be ignored since the CONTEST command will reset DX MULTIPLIER to ARRL DX WITH NO USA OR CANADA.

5.5.1 MULTIPLIER TYPES

One set of LOGCFG.DAT commands tell the program what type of multipliers are to be used. There are four different families of multipliers that can be specified: Domestic, DX, Prefix and Zone. In some cases, you will have two of them working at the same time (ie: CQ WW where you have country and zone multipliers). The following chart shows the different possible types for each family:

        DOMESTIC MULTIPLIER
XE "DOMESTIC MULTIPLIER "§   - NONE
                      - ARRL SECTION
                      - CALIFORNIA COUNTIES
                      - HUNGARIAN COUNTIES
                      - JA PREFECTURE CODES
                      - JA PREFECTRURE CODES AND CONTINENTS
                      - STATE PROVINCE
                      - SWISS CANTONS
                      - WYSIWYG (What you see is what you get)

        DX MULTIPLIERXE "DX MULTIPLIER"§
                      - NONE
                      - ARRL DXCC
                      - ARRL DXCC WITH NO ARRL SECTIONS
                      - ARRL DXCC WITH NO I OR IS0
                      - ARRL DXCC WITH NO USA OR CANADA
                      - ARRL DXCC WITH NO USA CANADA KH6 OR KL7
                      - CQ DXCC
                      - CQ DXCC WITH NO HB9
                      - CQ DXCC WITH NO USA OR CANADA
                      - CQ EUROPEAN COUNTRIES
                      - CQ NON EUROPEAN COUNTRIES
                      - NON SOUTH AMERICAN COUNTRIES
                      - NORTH AMERICAN ARRL DXCC WITH NO USA CANADA OR KL7

        PREFIX MULTIPLIER
XE "PREFIX MULTIPLIER"§   - NONE
                      - PREFIX
                      - SAC DISTRICTS
                      - SOUTH AMERICAN PREFIXES

        ZONE MULTIPLIER
XE "ZONE MULTIPLIER"§   - NONE
                      - CQ ZONES
                      - ITU ZONES
                      - JA PREFECTURES

EXAMPLE To select ARRL Sections as the domestic multiplier, put the following command into LOGCFG.DAT after the CONTEST statement:

      DOMESTIC MULTIPLIER = ARRL SECTION

The domestic multiplier selection of STATE PROVINCE XE "STATE PROVINCE "§requires you to use the DOMESTIC PROVINCESXE "DOMESTIC PROVINCES"§ and DOMESTIC STATES commandsXE "DOMESTIC STATES"§. These will determine the number of states (48, 49 or 50) and provinces (8, 11 or 13) that will be used. Using DOMESTIC STATES = 49 will add kL7 to the list and DOMESTIC STATES = 50 adds kH6. You can add the District of Columbia as a domestic multiplier with the command DC ENABLE = TRUE. DOMESTIC PROVINCES = 8 is the eight basic call areas of Canada. DOMESTIC PROVINCES = 11 adds vO1, vO2 and vY1. DOMESTIC PROVINCES = 13 splits vE1 into Nb, Ns and Pei.

If you are using the WYSIWYGXE "WYSIWYG"§ option, make sure you enter QTHs the same way each time or they will be counted a separate domestic multipliers. There is a limit of 250 different domestic multipliers for each band/mode that you are using.

You will note that the domestic multiplier names have at least one lower case character in them when they appear in your log. This is done so the program can tell the difference from a new domestic multiplier and a DX multiplier when restarting the program. If you are editing the log and adding a domestic multiplier in the new multiplier column, you need to make sure it has at least one lower case character in it, or the program will try to process it as a DX multiplier. If the contest you are working only has domestic multipliers, then all multipliers will be processed as domestic, regardless of case.

When the program looks at the exchange information to see if it specifies a domestic multiplier location, it will put a standard name for the multiplier both in the exchange received and multiplier columns of the log.

5.5.2 QSO POINT METHODS

XE "QSO POINT METHODS"§

Another parameter that determines how the program will operate is the QSO POINT METHOD parameter. This will determine how QSO points will be calculated. The possible values for this are:

- NONE
- ALL ASIAN
- ARI
- ARRL DX
- ARRL 160
- CQ 160
- CQ M
- CQ WW
- CQ WPX
- HA DX
- HELVETIA
- IARU
- IOTA
- JA INTERNATIONAL DX
- KCJ
- OK DX
- REGION ONE FIELD DAY
- SCANDINAVIAN
- SOUTH AMERICAN WW
- VK ZL
- WAE
- YO DX
- ONE POINT PER QSO
- TWO POINTS PER QSO
- THREE POINTS PER QSO
- TWO PHONE THREE CW
- TWO PHONE FOUR CW
- ONE PHONE TWO CW

EXAMPLE The following command will set the QSO POINT METHOD to two points per phone contact and three points per CW contact:

QSO POINT METHOD = TWO PHONE THREE CW

5.5.3 ACTIVE EXCHANGEXE "ACTIVE EXCHANGE"§

There are various types of exchanges that the program can accept. Again, the proper one is selected when the CONTEST statement is executed. However, if you need to change the type of exchange, here is how to do it:

EXAMPLE To change the exchange received to RST POWER EXCHANGE, put the following line in the LOGCFG.DAT file after the CONTEST statement:

     EXCHANGE RECEIVEDXE "EXCHANGE RECEIVED"§ = RST POWER EXCHANGE

The available exchange types are:

     CLASS DOMESTIC OR DX QTH (Field day class)
     NAME DOMESTIC OR DX QTH
     QSO NUMBER DOMESTIC QTH
     QSO NUMBER DOMESTIC OR DX QTH
     QSO NUMBER NAME DOMESTIC OR DX QTH
     QSO NUMBER PRECEDENCE CHECK SECTION
     RST AGE
     RST ALL JA PREFECTURE AND POWER
     RST DOMESTIC OR DX QTH
     RST DOMESTIC QTH
     RST DOMESTIC QTH OR QSO NUMBER
     RST NAME QTH
     RST POWER
     RST QSO NUMBER
     RST QSO NUMBER AND DOMESTIC QTH
     RST QSO NUMBER AND POSSIBLE DOMESTIC QTH
     RST QSO NUMBER AND RANDOM CHARACTERS
     RST QSO NUMBER OR DOMESTIC QTH
     RST QTH
     RST ZONE
     RST ZONE AND POSSIBLE DOMESTIC QTH
     RST ZONE OR SOCIETY

The exchange received controls what parameters the program is looking for when entering an exchange, and how the information will be displayed in the log.

For the exchanges that have a domestic or DX QTH, the distinction is done as follows: For the CLASS DOMESTIC OR DX QTH, NAME DOMESTIC OR DX QTH and QSO NUMBER DOMESTIC OR DX QTH exchanges, if the callsign is outside the 50 states and Canada, then the DX QTH will be used. For the QSO NUMBER NAME DOMESTIC OR DX QTH, the call is also DX if it is in Hawaii. The RST DOMESTIC OR DX QTH will look at the DX MULTIPLIER to determine if it is a DX call.

5.5.3.1 EXCHANGE FORMATSXE "EXCHANGE FORMATS"§

You should find that the input format for the exchanges is fairly intuitive. RS(T)s can be left out if you want the default value of 599 or 59 logged. QSO numbers will be assumed as 1 if nothing is entered. Domestic QTHs need only enough characters to uniquely identify the QTH. For example, you can enter Quebec as VE2, PQ, Qu, Que or Quebec and they will all count as vE2. This means you don't have to worry about creating new multipliers if you enter a QTH differently. Domestic multipliers will have at least one lower case character in them when they appear in the log. This is done so they can be distinguished from other multipliers if the program is restarted.

If you have a problem with a specific exchange, the following detailed explanation of each exchange type should help you.

CLASS DOMESTIC OR DX QTHXE "CLASS DOMESTIC OR DX QTH"§ - The exchange must be at least 2 characters in length. For a domestic call, the exchange must have a space with the class appearing before the space and the QTH after the space. The QTH must identify a domestic QTH. A DX station needs only the class. In both cases, the class must be two or three characters in length.

NAME DOMESTIC OR DX QTH XE "NAME DOMESTIC OR DX QTH "§- If the exchange is for a DX station, there is only the name to input. If it is for a domestic station, the name must be first, with the domestic QTH second (separated with a space).

QSO NUMBER DOMESTIC QTHXE "QSO NUMBER DOMESTIC QTH"§ - There must be at least one character in the exchange. If the exchange has a space which separates the QSO number and QTH, the program will figure out which is which. If there is no space, and the exchange identifies a domestic QTH, the QSO number will be assumed as one.

QSO NUMBER DOMESTIC OR DX QTHXE "QSO NUMBER DOMESTIC OR DX QTH"§ - If the station is outside the 50 states, you do not need to enter the QTH. For domestic stations inside the 50 states, you can enter the QSO number and QTH in either order, separated by spaces.

QSO NUMBER NAME DOMESTIC OR DX QTHXE "QSO NUMBER NAME DOMESTIC OR DX QTH"§ - The length of the exchange must be at least 7 characters and always include a QSO number. Each entry of the exchange must be separated by one or more spaces. If the first entry is all numbers, it is assumed to be the QSO number, and the second entry must be the name, and the third the QTH. If the second entry is all numbers, it is assumed to be the QSO number, and the first entry must be the name and the third entry the QTH. If the third entry is all numbers, it is used for the QSO number, and the first entry is used as the name, and the second entry as the QTH. If the station is a DX station, the QTH can be omitted, otherwise the QTH must uniquely identify a domestic QTH.

QSO NUMBER PRECEDENCE CHECK SECTIONXE "QSO NUMBER PRECEDENCE CHECK SECTION"§ - There is much flexibility in how you can input this information. Typical examples are:

1A67LAX	1 A 67 LAX	1A 67LAX	1A N6TR 67LAX
1A 67LAX N6TR	1A 67LAX 23A	1A 67LAX N6TR Q	

The basic rule is that entries near the end of the exchange will overwrite earlier entries. In the last example, the precedence Q will be used. If a callsign is included, it will override the callsign in the call window if it is different. If two digits are found by themselves, and the check has not yet been found, it will be used for the check, otherwise it will be used for the number as would be any number entry with 1, 3 or 4 characters.

RST AGEXE "RST AGE"§ - If you want to use the default RS(T), just enter the age. You can enter just the strength of the RS(T) and the age, or the full RS(T) and the age. The RS(T) portion must always appear before the age and spaces are optional. The age must always be two digits.

RST ALL JA PREFECTURE AND POWERXE "RST ALL JA PREFECTURE AND POWER"§ - Only numbers may appear in the exchange. The RS(T) is optional. If you have two entries, the first is the prefecture number, the second is the power, and the default RS(T) is used. If you have three entries, the first is the RS(T), the second is the prefecture number and the third is the power. You can just enter the strength of the RS(T). The power must be three digits.

RST DOMESTIC OR DX QTHXE "RST DOMESTIC OR DX QTH"§ - The RS(T) is optional. The QTH only need be entered if it is a domestic station. The DX QTH will be calculated from the callsign. If it is a domestic station, there must be a space between the RST and QTH. They can appear in either order.

RST DOMESTIC QTHXE "RST DOMESTIC QTH"§ - Same as RST DOMESTIC OR DX QTH except you must always enter a QTH.

RST DOMESTIC QTH OR QSO NUMBERXE "RST DOMESTIC QTH OR QSO NUMBER"§ - This behaves just like RST DOMESTIC QTH if the station is not a DX station. If it is a DX station, it behaves just like RST QSO NUMBER.

RST NAME QTHXE "RST NAME QTH"§ - This is normally used only in the GENERAL QSO MODE. Each entry must be separated with spaces. The following formats will work:

Entry #1	Entry #2	Entry #3	
			(RS(T) = default, no QTH/name)
Name			(RS(T) = default, no QTH)
Name	QTH		(RS(T) = default)
Name	QTH	RS(T)	(Enter whole RS(T))
Name	RS(T)		(No QTH)
Name	RS(T)	QTH	(Enter whole RS(T))
RS(T)			(Enter whole RS(T), no QTH/name)
RS(T)	Name		(Enter whole RS(T), no QTH)
RS(T)	QTH	Name	(Enter whole RS(T))

RST POWERXE "RST POWER"§ - You can enter just the power and get the default RS(T), or enter the RS(T), a space, and then the power. You can enter just the strength of the RS(T) if you like.

RST QSO NUMBERXE "RST QSO NUMBER"§ - The exchange must have at least one character and all characters must be either integers or spaces. If there are no spaces in the exchange, the whole exchange is used as the QSO number and the default RS(T) is used. If the exchange has a space, the RST is assumed to be the first entry and the QSO number the second. You can just enter the strength of the RS(T) or the whole report.

RST QSO NUMBER AND DOMESTIC QTHXE "RST QSO NUMBER AND POSSIBLE DOMESTIC QTH"§ - Works just like the RST QSO NUMBER exchange, except a domestic QTH is added at the start or end of the exchange. It must have a space separating it from the other entries of the exchange. It must also contain at least one non-numeric character.

RST QSO NUMBER AND POSSIBLE DOMESTIC QTHXE "RST QSO NUMBER AND POSSIBLE DOMESTIC QTH"§ - Works just like the RST QSO NUMBER exchange, except an optional domestic QTH can be added at the start or end of the exchange. It must have a space separating it from the other entries of the exchange. It must also contain at least one non-numeric character.

RST QSO NUMBER AND RANDOM CHARACTERSXE "RST QSO NUMBER AND POSSIBLE DOMESTIC QTH"§ - Works just like the RST QSO NUMBER exchange, except a five letter code group is added at the start or end of the exchange. It must have a space separating it from the other entries of the exchange. It must also contain at least one non-numeric character.

RST QSO NUMBER OR DOMESTIC QTHXE "RST QSO NUMBER AND POSSIBLE DOMESTIC QTH"§ - The following formats will work:

Entry #1	Entry #2	
QSO#		Uses default RS(T). A QSO# is all numbers.
QTH		Uses default RS(T). A QTH has a least one letter.
RS(T)	QSO#	
RS(T)	QTH	

RST QTHXE "RST QTH"§ - This format allows you to enter a RS(T) (optional) and up to 22 characters of QTH information and can include spaces. The RS(T) must appear either at the start or end of the exchange.

RST ZONEXE "RST ZONE"§ - You can just enter the zone, or enter the RS(T), a space, and then the zone. You can enter just the strength of the RS(T) if you like, or omit it for the default. If you are in CW, you can have the zone entered first, a space, and a three digit RST. This allows you to add a non 599 RST to the default zone.

RST ZONE AND POSSIBLE DOMESTIC QTHXE "RST ZONE AND POSSIBLE DOMESTIC QTH"§ - Works just like the RST ZONE exchange, except an optional domestic QTH can be added at the start or end of the exchange. It must have a space separating it from the other entries of the exchange. It must also contain at least one non-numeric character.

RST ZONE OR SOCIETYXE "RST ZONE OR SOCIETY"§ - Allows an ITU Society name to be entered instead of a zone. The society multipliers will be counted as domestic multipliers. You can enter just the strength of the RS(T) if you like, or omit it for the default.

5.5.3.2 INITIAL EXCHANGESXE "INITIAL EXCHANGES"§

The LOGCFG.DAT command INITIAL EXCHANGE is used to select an initial exchange based upon the callsign of the station you are working. This is normally used for contests where a zone is being exchanged. This flag will be set correctly with the CONTEST statement, but if you need to change it, here is how:

EXAMPLE To set INITIAL EXCHANGE to ZONE INITIAL EXCHANGE, put the following statement in your LOGCFG.DAT file after the CONTEST statement:

        INITIAL EXCHANGE = ZONE

The type of zone (ITU or CQ) will be determined from the active multiplier type.

The possible values for the INITIAL EXCHANGE parameter are:

        NONE
        NAME   { Useful for non contest situations }
        ZONE

It is also possible for an initial exchange to come from the exchange memory. If the exchange includes an age, zone, ITU society, power, name, field day class or domestic QTH, these will be stored when you first work a station and used as the initial exchange when you work them on another band. The exchange memory is controlled by the LOGCFG.DAT command EXCHANGE MEMORY ENABLE, and its default is TRUE.

5.6 YOUR LOCATION

There are a number of parameters that have to do with your location. These get set up from the callsign you enter with the MY CALL command. If for some reason you need to manually set these (ie: you have a call that does not uniquely identify your country or zone), here is how:

EXAMPLE To set your continent to Asia, put the following statement in your LOGCFG.DAT file after the MY CALL command:

        MY CONTINENT = AS

The following parameters are available with their possible values listed:

        MY CONTINENTXE "MY CONTINENT"§
                - EU
                - NA
                - SA
                - AF
                - AS
                - OC

        MY COUNTRYXE "MY COUNTRY"§
                - Enter prefix for your country

        MY CQ ZONEXE "MY CQ ZONE"§ or MY ITU ZONE
XE "MY ITU ZONE"§   - Enter the numeric value of your zone

        MY STATE
XE "MY STATE"§   - Enter standard abbreviation for your state. This is used to determine if you are in or   out of a particular state for QSO party purposes.

Make sure you put the these statements after the MY CALL statement but before the CONTEST statement. This is so the CONTEST statement will have your correct QTH if it needs to determine something from your QTH (ie: different exchange format depending on your location).

5.7 REMINDERSXE "REMINDERS"§

You can program messages that will be displayed at a certain time and date.

EXAMPLE To program a message to tell you when sunrise is in Japan for the 25th of November, 1990, put the following two lines in your LOGCFG.DAT file:

        REMINDER = 2142 ON 25-NOV-90 ALARM
        Sunrise is happening now in Japan.

The word ALARM is optional. If it is there, the same alarm used for the Alt-A alarm function is used. If the word ALARM is not there, a simple beep will sound when the message is put up.

Instead of putting the actual date, you can substitute the name of the day of the week:

EXAMPLE To program a message to tell you when the contest starts, put the following two lines in your LOGCFG.DAT file:

        REMINDER = 0000 ON SATURDAY
        Time to start the contest

Using the day name ALL will make your reminder show up every day. You can add reminders during the contest without stopping the LOG.EXE program by using the Alt-O function. You can use the day name TODAY with the Alt-O command if you like. Reminders added with the Alt-O command will be added to your LOGCFG.DAT file. Up to 100 reminders can be stored by the program.

A different type of reminder is the TOTAL SCORE MESSAGE. You can define up to ten messages that will be printed when you achieve a certain score. Use the following syntax in your LOGCFG.DAT file:

        TOTAL SCORE MESSAGEXE "TOTAL SCORE MESSAGE"§ = 1000000
        Congrats on breaking one million!!

The message "Congrats on breaking one million" will be displayed in the Quick command window for two seconds. The congratulations fanfare will be sounded.

5.8 BEAM HEADINGSXE "BEAM HEADINGS"§

The program can display the beam headings for stations that you are working or performing a dupe check on. To do this, you will need to generate a file with the beam headings that are correct for you. The file must have each country on a separate line with a prefix to indicate the country, followed by an equal sign and then the beam heading. For example:

        F1 = 030
        G3 = 031
        4U1ITU = 030

The POST program has a utility that can convert the beam heading output of the MiniProp program to the proper beam heading file format. To use this procedure, you will need a program to redirect the printer output of MiniProp to a file (ie: VPRINT).

You can call this file anything you want. You might want to call it BEAM.DAT and put it in your \ LOG directory. If this is the case, you would put the following statement in you LOGCFG.DAT file:

        BEAM HEADING FILE NAMEXE "BEAM HEADING FILE NAME"§ = \LOG\BEAM.DAT

You can use the beam heading file for other messages if you want. Up to six characters of information can be stored for each country.

If you would like your beam headings to have the degrees symbol after them, use the utility DEGTAG in POST.EXE. It will add the symbol to any entry of your file that doesn't already have one.

5.9 MISCELLANEOUS PARAMETERS

The program can start sending the callsign of a station responding to your CQ after a certain number of characters have been typed in. This is controlled with the **AUTO SEND CHARACTER COUNT** command. For example, if you put AUTO SEND CHARACTER COUNT = 3 in your LOGCFG.DAT file, and 4U1ITU calls you, the program will start sending the call after you have typed 4U1. If you enable the AUTO CALL TERMINATE feature, the program will go on to the CQ EXCHANGE message when it catches up to you. When the AUTO SEND CHARACTER COUNT is non zero, an arrow will show up above the call window indicating which character will start the CW. You can defeat this function with the Alt-Dash command. The arrow will then disappear. To enable it again, press Alt-Dash again and the arrow will appear.

You can delete any unsent characters with the backspace key. If the program starts sending the call when you don't want it to, hit ESCAPE once and the CW will stop. When you are finally ready for the station to be called, press RETURN.

If you are using the program after a contest to enter a log, the **AUTO TIME INCREMENT** feature can be real handy. You would set the increment to occur after the specified number of contacts. A value of zero disables the auto time increment feature. For example, the following command will increment the time by one minute every 4 contacts:

> AUTO TIME INCREMENTXE "AUTO TIME INCREMENT"§ = 4   The default is 0 (disabled)

You can select which **BAND** the program will come up in if no contacts have yet been made. The syntax is as follows:

> BANDXE "BAND"§ = 160 or   BAND = 10

After the program is running, use Alt-B or Alt-V to select your band. Some contests are single band contests and may not let you change bands after a QSO has been made. Use the Alt-H help command for more info on the Alt key commands.

You can select the **CODE SPEED** the program will come up in. Remember a code speed of zero will allow you to set the code speed using the speed knob on the MM3. When using the computer to send CW, you can use the Page Up and Page Down keys to change the code speed in 3 WPM steps. The changes affect any CW being sent instantly (except for the MM3).

> CODE SPEEDXE "CODE SPEED"§ = 45   The default is 35

You can control the number of **CONTACTS PER PAGE** with the following command:

> CONTACTS PER PAGEXE "CONTACTS PER PAGE"§ = 40   The default is 50

You can select the **CONTEST TITLE** which will be displayed at the top of the screen and on the log pages. The syntax is:

CONTEST TITLEXE "CONTEST TITLE"§ = 1990 CQ WW CW 4U1ITU ITU GENEVA

If you want, you can specify the **CONTEST NAME**, and the program will automatically add your call and the year to the title. The syntax is:

CONTEST NAMEXE "CONTEST NAME"§ = ARMADILLO RUN

You can change the **CQ MENU** which appears on the bottom of the screen while in the CQ mode, or the **EX MENU** which appears in the same place when you are in the exchange mode:

CQ MENUXE "CQ MENU"§ = F1 - CQ Test F2 - Long CQ F9 - ? F10 - Keyboard
EX MENUXE "EX MENU"§ = F1 - My call F2 - Exchange F3 - RST F4 - Zone

Note that if the EX MENU is null, the window will not appear.

If you have a paddle connected to the computer, you can decided which **CURTIS KEYER MODE** you want to use (A or B type). Most keyers use the B type, which is the default. If you would rather use the A type, insert the following command in your LOGCFG.DAT file or use the Control-J command to change it.

CURTIS KEYER MODE XE "CURTIS KEYER MODE "§ = A   The default is B

If you are not using the MM3 to send CW with, the computer can send the CW over its speaker. You can change the tone of this monitor with the following command:

CW TONEXE "CW TONE"§ = 500   The default is 700

Set the tone to 0 (zero) to disable it.

There is the ability to occasionally back up the LOG.DAT file you are generating onto another disk drive. To enable this, set the parameter **FLOPPY FILE SAVE FREQUENCY** to the number of contacts between saves. If the number is 0 (the default), no saves will be performed. The name of the file the back up will be made to is specified using the command **FLOPPY FILE SAVE NAME**. You do not have to specify another drive if you don't want to. You can even make backups to the same directory as long as the file has a different name than the LOG.DAT file.

FLOPPY FILE SAVE FREQUENCYXE "FLOPPY FILE SAVE FREQUENCY"§ = 100
The default is 0 (none).
FLOPPY FILE SAVE NAMEXE "FLOPPY FILE SAVE NAME"§ = A:BACKUP.LOG

The program can add an offset to your computer time to come up with UTC. Using the **HOUR OFFSET** command allows you to subtract or add a number of hours. For example, if you are in France and you computer is one hour ahead of UTC, you could put the following command in your LOGCFG.DAT file to have your log

      HOUR OFFSETXE "HOUR OFFSET"§ = -1   The default is zero (no offset)

The program can increment the time by N minutes by pressing Alt and the number of minutes desired. This feature is normally disabled. To enable it, put the following command in your LOGCFG.DAT file:

      INCREMENT TIME ENABLEXE "INCREMENT TIME ENABLE"§ = TRUE
      (default = FALSE)

You can specify a file name that gets loaded as part of a LOGCFG.DAT file. This allows you to put the LOGCFG.DAT commands that are always the same in one place (ie: radio interface information, beam heading file names, etc). Use the **INPUT CONFIG FILE** command as shown below:

      INPUT CONFIG FILEXE "INPUT CONFIG FILE"§ = \log\name\common.cfg

If you are using the RADIO CONTROL PORT to interface your radio to the program and if you are using two radios, you will want to tell the program which radio is the one connected to the RADIO CONTROL PORT. Otherwise, if you switch bands or modes with the other radio, the interfaced radio will have its band or mode changed. To tell the program which radio is interfaced, use the **INTERFACED RADIO** command as follows:

      INTERFACED RADIOXE "INTERFACED RADIO"§ = RADIO 1   (default = NONE)

Since the program supports both the Kenwood TS series and the Yaesu FT series of transceivers, the **INTERFACED RADIO TYPEXE "INTERFACED RADIO TYPE"§** command is used to select which type of radio you are interfacing.

      INTERFACED RADIO TYPE = TS850S   or   INTERFACED RADIO TYPE = FT1000

The program can be configured to send CW using an AEA MM3 or using either a serial or parallel port. You will need to tell the program how to generate CW with the **KEYER** command as follows:

      KEYERXE "KEYER"§ = MM3 or   The default if NONE (disabled)
      KEYER = CPU

You can specify different keyer types for the two different radios as follows:

KEYER RADIO ONEXE "KEYER RADIO ONE"§ = CPU   The default is NONE (disabled)
KEYER RADIO TWOXE "KEYER RADIO TWO"§ = MM3

You must tell the program what port to used for each keyer. A serial port must specified when using the MM3.

    KEYER OUTPUT PORTXE "KEYER OUTPUT PORT"§ = SERIAL 1   (Does both radios)
    KEYER RADIO ONE OUTPUT PORT = PARALLEL 1
    KEYER RADIO TWO OUTPUT PORT = SERIAL 2

You may specify serial ports 1-4 and parallel ports 1-3. When specifying a serial port for CPU keying, you can add the word INVERT to the port name (ie: SERIAL 1 INVERT). This will invert the CW and PTT signals. This simplifies the interface to a radio with negative voltagesXE "negative voltage keying"§ (ie: Drake T4X). Simply replace the NPN transistors shown in Appendix B with suitable PNP transistors. I like to put clamp diodes on the base as well.

The signal report that shows up in your log can be changed from the default of 59 or 599:

    LOG RS SENTXE "LOG RS SENT"§ = 57   The default is 59
    LOG RST SENTXE "LOG RST SENT"§ = 579   The default is 599

Note that the [character in your CW exchange allows you to enter the strength of the RST sent and this will be put in your log.

You can select which mode the program will come up in if no QSOs have been made with the **MODE** command. Normally you would just use Alt-M to select the desired mode, but if you want to specify it in the LOGCFG.DAT file use one of the following two commands:

    MODEXE "MODE"§ = CW   or   MODE = PHONE   The default is CW.

To connect interface your packet TNC to the program, use the **PACKET PORT** command. You can specify any serial port (1-4).   To activate the packet window allowing you to log into your packet cluster, use the Control-B command. The serial port communicates to the TNC at 2400 baud. A typical LOGCFG.DAT command to set up your packet port looks like:

    PACKET PORT = SERIAL 1   The default is NONE

The **PACKET SPOTS** command allows you to select if you want to see all packet spots, or just new multipliers. The syntax is as follows:

    PACKET SPOTSXE "PACKET SPOTS"§ = MULT SPOTS   (default)
    PACKET SPOTS = ALL SPOTS

To connect a paddle to the computer, use the **PADDLE PORT** command to tell the program which parallel port you are going to use. See Appendix B for connection information.

      PADDLE PORTXE "PADDLE PORT"§ = 1   The default is NONE (disabled)

You can adjust the hold time after finishing CW with the paddle until the PTT drops out with the **PADDLE PTT HOLD COUNT** command. This command determines the number of dit counts that the PTT will be held before being released. The syntax is as follows:

      PADDLE PTT HOLD COUNTXE "PADDLE PTT HOLD COUNT"§ = 10   The default is 14

There are three keys that are used when selecting different possible or partial calls. One will move the possible call cursor to the left one call, another moves it to the right and the third one moves the call with the cursor into the call window.

      POSSIBLE CALLXE "POSSIBLE CALL KEYS"§ LEFT KEY = ,   Default of comma shown
      POSSIBLE CALL RIGHT KEY = .   Default of period shown
      POSSIBLE CALL ACCEPT KEY = ;   Default of semicolon shown

When you are running stations on CW and are finishing a contact, normally you would press RETURN which would log the contact and send the QSL MESSAGE and log the contact. If you want to send the **QUICK QSL MESSAGE** instead, you would press the QUICK QSL KEY instead of RETURN. This default for this key is \, but you may change it as shown:

      QUICK QSL KEYXE "QUICK QSL KEY"§ = +   The default is the \ key

You can interface a Kenwood radio with serial port to the computer. To tell the program which port the radio is connected to, use the **RADIO CONTROL PORTXE "RADIO CONTROL PORT"§** command. You can specify any serial port (1-4). See section 6.12 for more information on radio control. The syntax for the LOGCFG.DAT command is:

      RADIO CONTROL PORT = SERIAL 1   The default is NONE

The program allows you to use two radios. You can switch between them using the Alt-R command. The name for each radio is shown in the lower left corner of the screen. You can change the name from the defaults as shown:

      RIG ONE NAMEXE "RIG ONE NAME"§ = DRAKE   The default is Rig One
      RIG TWO NAMEXE "RIG TWO NAME"§ = TS430   The default is Rig Two

If you have SAY HI ENABLE set to TRUE and are saying hello to the stations who are in your name database, you can disable this feature if your rate exceeds a certain threshold.

SAY HI RATE CUTOFFXE "SAY HI RATE CUTOFF"§ = 100   The default is 200

If you are using **SHORT INTEGERS**XE "SHORT INTEGERS"§ = TRUE, you can specify what abbreviations are used for 0, 1, 2, 9 and 0. These can be done from the Alt-P - Other menu, or using the following commands in your LOGCFG.DAT file:

SHORT 0 = O	The default is T
SHORT 1 = A	The default is A
SHORT 2 = 2	The default is 2
SHORT 9 = N	The default is N

The command **SINGLE BAND SCORE** can be used to force the score calculation to occur only for a single band.   Use the following format in your LOGCFG.DAT file:

SINGLE BAND SCOREXE "SINGLE BAND SCORE"§ = 160   The default is no band.

If you change the SINGLE BAND SCORE parameter during a contest, you will need to delete your RESTART.BIN file before restating the program.

If you are running stations on CW and a station that has answered you has already finished sending his call, but you are not yet done typing his call, you can press the **START SENDING NOW KEY**. This will send the characters you have already typed in, and the ones you type in after hitting the key until you press RETURN. After pressing the RETURN, the normal exchange will be sent. The default for this key is ', but you can change it to suit your keyboard:

START SENDING NOW KEYXE "START SENDING NOW KEY"§ = [The default is the ' key

Another useful key on CW will log the contact, send the TAIL END MESSAGE and send call characters as you enter them. This would normally be used if someone has tailended you and you want to come back to him without sending a QSL message. The default for this key is], but again you can change it to suit your keyboard:

TAIL END KEYXE "TAIL END KEY"§ = \   The default is the] key.

The program can save log entries for QSOs with unknown countries. The file name default if UNKNOWN.CTY, but you can change this by using the **UNKNOWN COUNTRY FILE NAME** command as follows:

UNKNOWN COUNTRY FILE NAMEXE "UNKNOWN COUNTRY FILE NAME"§ = A:COUNTRY.UNK

The program can keep track of how many minutes have gone by since your last QSO. If this number reaches a programmable limit, an alarm will sound once a minute until you work somebody. This is useful for long contests where you operate until brain death and need 20 or 30 minutes to become functional again. Since this is a dangerous time to try to set an alarm, the program will automatically start counting the minutes. To program the number of minutes from your last contact until the alarm goes off, use the **WAKE UP TIME OUT** command as shown:

WAKE UP TIME OUTXE "WAKE UP TIME OUT"§ = 30   The default is 0 (disabled)

The wake up time out alarm is disabled if the alarm has been set. A value of zero disables it.

You can control the **WEIGHT** of the CW generated by the computer with the weight command. The following command will add 5 percent to the dot and dash times:

WEIGHTXE "WEIGHT"§ = 1.05   The default is 1.0

6.0 OPERATIONxe "OPERATION"§

When the program is started, you will be in the CQ Mode. Normally, F1 and F2 are set up with different CQ messages. If the callsign window is empty, you can also call the F1 CQ message by pressing RETURN. When a station calls you, type the call into the call window, and then press RETURN. Now an exchange window will show itself and you type the exchange into this window and press RETURN when you are done. If the exchange and callsign make sense to the program, it will log the contact. You do not need to enter 599 or 59 as the program will assume this is the correct value unless you enter something else.

As you type a callsign into the Call Window and if the PARTIAL CALL ENABLEXE "PARTIAL CALL ENABLE"§ is TRUE, you will be shown callsigns that start with the same characters you have entered. You can select this using
the POSSIBLE CALL CURSOR commands and the POSSIBLE CALL ACCEPT KEY. Calls that are dupes will be highlighted. You can change the highlight color if you like (see Section 5.3). After you press RETURN, you will be shown POSSIBLE CALLSXE "POSSIBLE CALLS"§ instead. These are calls from both the name database and dupesheet that are similar to the one you are working.

You can move between the Call Window and the Exchange Window using the up or down arrow, tab, page up or page down, or Word-star cursorXE " cursor movement"§ commands. The Wordstar commands implemented are:

> ControlA -   Move back one word
> ControlS -   Move back one character
> ControlD -   Move forward one character
> ControlF -   Move forward one word
> ControlX -   Move down one line
> ControlC -   Page down
> ControlE -   Move up one line
> ControlR -   Recall last entry deleted with ESCAPE
> ControlG -   Delete character
> ControlT -   Erase to end of line
> ControlV -   Toggle insert mode
> ControlY -   Erase line (only implemented in editor)

When making a QSO, the ESCAPE keyXE "ESCAPE key"§ has been implemented in such a way as to do the following: If a CW message is being sent by the keyer, it will be terminated. If there was no CW message and
there is an entry in the window the cursor is in, the entry will be cleared. If there is no CW being sent and the window is empty and you are in the Search and Pounce mode, you will return to the CQ mode. If you were in the CQ mode, all QSO information will be erased.

You should find that pressing the escape key becomes a natural way to back up one step in the QSO process. If you are in the process of executing any command, an ESCAPE will abort the command and leave parameters unchanged. Again the thought is to back you up one step in the process. The command will be cleared before any CW or other escape action is taken. If you delete the contents of a window with ESCAPE by mistake, you can recall the entry with Control-R.

To search and pounce, press the TAB key enter the search and pounce modeXE "search and pounce mode"§. Press F1 or RETURN to call a station. F1 will send DE and your call, however RETURN will check to make sure the station is not a dupe first and then send DE and your call. If you press F1 and need to stop sending right away, press it again (or escape). Note that pressing F1 again after a few seconds results in your call being sent again without the DE in front of it. This makes it easy to send you call twice if you want.

The F2 key is used to send the exchange. The first time the exchange is sent, the S&P EXCHANGE is sent. Pressing the F2 key again will send the REPEAT S&P EXCHANGE. If you have not sent the exchange before pressing RETURN, it will be sent automatically while the contact is being logged. The ESCAPE key will exit you from the search and pounce mode and back into the CQ mode.

There is a shortcut way to enter the search and pounce mode and instantly send your call. This is done by pressing the space bar when you are in the CQ mode and the call window is empty. This was developed with the sprint contests in mind, but is useful for all of them.

There are two ways to handle a tailenderXE "tailending"§. You can put a comma in the call window after the call of the station you are working and put the call of the tailender after the comma (no spaces can be
entered here). The other is to use the TAIL END KEY. When you are finished with your present QSO, hit the TAIL END KEY, the TAIL END MESSAGE (normally an "R") will be sent and then you can start entering the call of the tailender. As you enter the call, it will be sent on the air. Pressing RETURN will complete the call and send the exchange. The previous QSO will now be logged and the new one set up. The default for the TAIL END KEY is].

When entering a callsign, you can use the question markXE "question mark"§ as a character. You will have to change it to a proper call character before the program will let you log the contact.

There are a number of commands that can be executed by pressing the Alt or Control key and another key. A list of these commands can be viewed by pressing Alt-H (help menuXE "help menu"§). Information for any of the displayed commands can then be accessed by pressing the proper key for that command.   It is strongly suggested that you read the help message for each of these commands before using the program in a contest. A list of these commands follows on the next page.

Alt-H HELP MENU

Alt-A - Alarm set/clear	Alt-P - Program CW mem	Ctrl-B - Talk to packet port
Alt-B - Band up	Alt-Q - Auto CQ resume	Ctrl-J - LOGCFG value edit
Alt-C - Auto CQ	Alt-R - Radio toggle	Ctrl-K - Clear dupesheet
Alt-D - Dupecheck	Alt-S - Set cw speed	Ctrl-L - LOG.DAT file view
Alt-E - Edit QSOs	Alt-T - Set time/date	Ctrl-N - Note entry
Alt-F - Floppy save	Alt-U - Flush edit log	Ctrl-O - Missing mult report
Alt-G - Swap mults	Alt-V - Band down	Ctrl-P - Possible call redo
Alt-H - Help menu	Alt-W - Wake up reset	Ctrl-Q - QTC functions
Alt-I - Increment received #	Alt-X - Exit program	Ctrl-R - Later erased entry
Alt-J - Multiplier Bell	Alt-Y - Delete last QSO	Ctrl-U - Last 10 packet spots
Alt-K - Kill CW	Alt-Z - Redo initial ex	Ctrl-Y - Dump names memory
Alt-L - Log Search	Alt-= - Sidetone toggle	Ctrl-- - 2 radio dualing CQs
Alt-M - Toggle mode	Alt-- - AutoSend toggle	Ctrl-\ - Log QSO without CW
Alt-N - Ask for name	Alt-1 - Increment time	
Alt-O - Add reminder	" - Send multi message	

When using domestic multipliers and mult by band or mult by mode, you can view the multiplier informationXE "multiplier information"§ for a multiplier by entering the first few characters of the multiplier in the call window. The multiplier information window will automatically show the information for that multiplier. To obtain multiplier information for the other types of multipliers (ie: country, prefix or zone), simply put the call in the call window and perform a dupecheck (space bar).

If you are using the computer to send CW with, you can tune your transmitterXE "transmitter tuning"§ by pressing the SHIFT and CTRL keys on the left hand side of your keyboard down together.

6.1 WAE QTCsXE " WAE QTCs"§

XE "QTCs"§

The program is ready to receive or transmit QTCs. It looks at your callsign as set by the MY CALL statement to determine if you are in Europe or not. When you work a station, you will be shown the number of QTCs you have received from them during the contest. To activate the QTC function, press Control-Q during the QSO.

The best way to get comfortable with the operation of the QTC function is to play around with it before the contest. There are easy to follow prompts on what to do after hitting the Control-Q key. If you are outside Europe, you can send QTCs using the contest simulator.

If you are sending QTCs, you can repeat the whole QTC or any of the three elements with a single keystroke. Pressing RETURN will go on to the next QTC. When you have sent them all, you will be prompted to confirm reception and then you are back at the same point of the QSO before you pressed Control-Q.

You can only send QTCs for contacts that have made it into you LOG.DAT file. To send QTCs for the last five contacts that appear in the editable log, use the Alt-U command to put them into the LOG.DAT file. This is necessary to make sure information you have already sent does not get changed.

If you are in Europe receiving QTCs, you may find the program automatically asking people for QTCs! This happens if a station you have already worked calls you, but you need some more QTCs from him. Otherwise, use the Control-Q key to ask a station for QTCs. The program will ask for the correct number of QTCs that the station can still send you. When receiving each QTC, a R will be sent when you press RETURN each time. Some Russian club stations insist on "QRQ" which means they won't listen for you to acknowledge each QTC. To eliminate the R from being sent, use the Alt-K function. CW will automatically enable itself after the last QTC has been entered. You will have the chance to edit any of the QTCs you have received before QSLing. The editor works the same way as when you are using the Alt-E command.

There are two files that are generated during the contest: QTC.DAT and QTCLIST.DAT. Remember to delete these files before starting a contest. QTC.DAT shows all the QTC information you have sent or received. QTCLIST.DAT shows who received how many messages. Since these files are updated after each QTC operation, you will not loose any information if the program is halted in the middle of the contest. Make sure to delete these files before starting the contest.

You can shorten the QTC times that are sent with QTCs by using the QTC MINUTES command. If QTC MINUTES = TRUE is in your LOGCFG.DAT file, times that are sent in the same hour as the previous time sent, will only have the minutes sent.

6.2 TWO RADIO MODE

When the TWO RADIO MODEXE "TWO RADIO MODE"§ flag has been set to TRUE, you are in the two radio mode. This mode has been designed to be very efficient for those operators who like to CQ with one rig, while they are searching and pouncing with the other.

Even without this mode, the Alt-D function will perform a dupecheck on the inactive radio. This can be done while the active rig is CQing or sending an exchange. If a call is not a dupe, it will be displayed in the upper right hand corner of the screen. To work this station, you can press control-L which will make the inactive radio the active radio, enter the stations callsign in the call window, and put you in the search and pounce mode. After you log the contact, you are returned to the previous radio's band and mode and you are back in the CQ mode.

When you enable the TWO RADIO MODE, it takes this process even farther. In this case, when you press the control-L, in addition to the above, the program will call the station for you (ie: DE N6TR). As soon as the call is complete, a CQ will be generated on the original radio. When you go to send your exchange, the CQ will be terminated if it hasn't finished. When you log the contact and your exchange is finished, another CQ will be started on the original radio.

It is impossible to have CW being sent by both radios at the same time. This prevents you from having two signals on the air at the same time.

6.3 ENTERING A HAND LOGXE "ENTERING A HAND LOG"§ AFTER A CONTEST

If you are using the program to enter a hand writtenXE "hand written logs"§ log after a contest, there are a couple of features that will make your life easier. First, setting AUTO TIME INCREMENT = N will automatically increment the time by one minute after N QSOs. Second, setting AUTO DUPE ENABLE = FALSE will allow you to log duplicate contacts. The program will beep to let you know you have worked
the station before. This allows you to mark it in your written log if you want. These contacts will be flagged as dupes when you execute the dupe check command in POST. Finally, setting INCREMENT TIME ENABLE = TRUE will allow you to increment the time easily using the Alt key and the number of minutes you want to move ahead.

If you are entering a log that has separate sheets for each band, you will need to enter one band at a time and rename the LOG.DAT file to a unique name for each band. You can combine them into a single LOG.DAT file using the POST append procedure. Then you can process it like any other log file.

6.4 RUN TIME ERROR CODESXE "ERROR CODES"§

There are some errors that can stop the program from executing. Some of these errors are not explained except for an error number. The following chart may help you understand why the program is terminating.

WARNING!!!

If a runtime error occurs which stops the program, you must reboot your computer by either pressing Control-Alt-Delete, pressing a reset button or power cycling the computer. This will restore the normal DOS interrupt vectors. If you do not do this, your computer may hang or your system clock will operate incorrectly.

Error Code	Condition
100	Disk read error
101	Disk write error
150	Disk is write protected
152	Drive not ready
154	CRC error in data
156	Disk seek error
157	Unknown media type
158	Sector not found
159	Printer out of paper
160	Device write fault
161	Device read fault
162	Hardware failure
201	Range check error
202	Stack overflow error (out of memory)
203	Heap overflow error (out of memory)
208	Overlay manager not installed
209	Overlay file read error (bad LOG.OVR or POST.OVR)

If you get an error code when initially starting the program, make sure you have no TSRs installed (ie: sidekick). These can use up your memory and not leave enough for the program to execute.

If you still can't figure out how to fix your problem, please feel free to give me a call for assistance.

6.5 COUNTRY LIST CHANGESXE "COUNTRY LIST CHANGES"§

The logging program has a very extensive algorithm for determining the country of a given callsign. However, there is always someone with a weird call that the program is not sure of the country. Also, it is necessary to maintain the country list as new countries are added.

It is also desirable to occasionally move a particular station to a different location. If you are tired of AH3C showing up as Johnson Island, you can move him to W7 land where he belongs.

You can do all of this by generating a file called COUNTRY.ADDXE "COUNTRY.ADD"§. The COUNTRY.ADD file is a text file similar to LOGCFG.DAT . The program looks for it in the \LOG\ NAME directory so it will apply to all your contests. You do not need to have a copy of COUNTRY.ADD in each of your contest directories.

To create a new country in the COUNTRY.ADD file, use the following commands:

        NAME FI = Fantasy Island
        CQ Zone = 13
        ITU Zone = 54
        Continent = SA

The FI after the NAME command is the country ID for this country. This is what will show up in the multiplier column when you work this country. It must be different than any of the preprogrammed countries in the program. You can generate a list of all the country ID's in the program from the report menu in the POST program.

Now that you have created this country, you will need to assign some callsigns to it. To do this, use the following CALLSIGN ASSIGNMENT commands:

        FI* = FI
        FJ7* = FI
        4U1FI = FI

These commands will assign any callsign that starts with FI, any callsign that starts with FJ7 and the callsign 4U1FI to the new country. These assignments will take precedence over any preprogrammed assignments. Callsign assignments are analyzed in the order they appear in the COUNTRY.ADD file so that once an expression is found that the callsign fits into, the rest of the list is ignored. This can be useful as shown in the following example:

        KG6DX = KH2
        KG6* = W6

Here, KG6DX will be put into KH2, but all other KG6s will be will handled as if their callsign was W6. Please note these specific instructions are not necessary as KG6DX is already preprogrammed to be in KH2.

There is a small difference between callsign assignment statements for a new country and a pre-programmed country. In the case of the new country, the ID shown must match the ID in the NAME statement exactly. In the case of identifying a preprogrammed country, the ID can be anything that when analyzed as a callsign will indicate the desired country. For example, the following two statements do the same thing:

        EZ6* = UA3
        EZ6* = UA4

You can use this feature to assign different people to their proper CQ zones:

        AH3C = W7   Puts AH3C into zone 3
        AH2M = W1   Puts AH2M into zone 5

After you have made up your COUNTRY.ADD file, you can generate the country list from POST and make sure your additions show up at the end of the list. There is also a utility in POST that allows you to enter a callsign and see the country, zone and continent information for that callsign. All the changes you have made in COUNTRY.ADD will show up.

Don't forget about the UNKNOWN COUNTRY FILE command discussed in section 5.9. This can provide you with the information you need to keep your country list up to date.

There is a very handy log procedure in the post program called Multiplier Check. It will look through your log for any unknown countries and step you through assigning them to a new or existing country. It will automatically update your COUNTRY.ADD file. It will also correct your multiplier count. Use this procedure to keep your COUNTRY.ADD file up to date.

6.6 OPERATING THE SPRINTXE "SPRINT contest"§

The NCJ CW Sprint contest presents one of the toughest challenges to a real time logging program. There are several important shortcuts that have been programmed that will help you operate the CW Sprint efficiently. The simulator can be used to understand how these all work.

During the sprint, you will switch between the CQ and the Search and Pounce mode quite often. The typical mode of operation is to look for a station to call, work him, have someone call you, work them and then go searching up the band again.

Often, you will want to switch to the search and pounce mode and send your call, all in an instant. This happens when you are scanning up the band and have found a place you want to drop your call. You can do this by simply pressing the space bar. This works if you are in the CQ mode and there are no characters in the call window. If you know the callsign of the station you are calling, you can type it in while your call is being sent. After you type it in, you will want to type Alt-Z. This will move the cursor down to the exchange window and put in any initial ex-change information the program might have for the station you are working (ie: name and QTH). You may be able to log the QSO by entering just the station's QSO number.

When you have completed your search and pounce QSO, you may be called by a station that you need to work in the CQ mode. In the sprint, the SPRINT QSY RULEXE "SPRINT QSY RULE"§ variable is set to TRUE. This means
the program will automatically switch from the search and pounce mode to the CQ mode when the search and pounce QSO is completed. If you also turn on the AUTO SEND CHARACTER COUNT feature with the AUTO CALL TERMINATE, you can very quickly respond the a calling station. "TU" is a good QSL MESSAGE to have. If no one answers your QSL MESSAGE, simply hit RETURN again and your F1 CQ will be called (ie: NA N6TR).

The VISIBLE DUPESHEET is also turned on during the sprint. This allows you to see the stations you have already worked without taking the time to type in their callsigns. To maximize the number of calls that can be shown, the multiplier total number is covered up. To see this number, execute the Alt-E command, followed immediately with an ESCAPE.

The simulator can be used to become familiar with these features. You can call CQ (using F1 or F2) and a station will come back. After you work this first station, a second station will call him. When that QSO is completed, you can call the second station and take control of the frequency back. To do this, use the SPACE BAR to send your call and go into the S&P mode. While the station is coming back, type his call and then press Alt-Z. Type in the missing information in the exchange window, then send your exchange by pressing RETURN. These specific keystrokes are required when using the simulator and demonstrate the most efficient way to use the program. It should be noted that this is not a legal method of QSYing during the actual sprint.

There have been some sprint like contests sponsored that required you to send the name received during your previous QSO. This can be done using the (character in your CW message. If you want to define the name to send for your first QSO, use the MY NAME command in your LOGCFG.DAT file. The name you specify will be used for your first QSO.

6.7 USING THE NAME DATABASE
XE "NAME DATABASE"§

Certainly the most unique feature of the N6TR Logging Program is the name database. The name database provides the following functions:

- Display the name of stations while you work them.
- Personalize CW messages with the name of the station.
- Provide possible calls that are similar to the station.
- Generate "real" callsigns for the simulator.
- Personalize QSL labels with the name of the station.

Since so many operations utilize the name database, it is a good idea to create one that is as complete as possible. There are several ways to put calls into your name database:

- POST's name editor in the UTILITY menu.
- Additions made while checking QSL cards in POST.
- Names entered as part of a exchange (including GENERAL QSO).
- Names added using the Alt-N function of the LOG program.

The name database is contained in the file NAMES.CMP. You are not initially given this file, but it is easy to generate one. The first step is to make sure the required directory exists. There MUST be a directory called \LOG\NAME for the name database to work. This directory must be directory off your root directory. In other words something like \HAM\LOG\NAME will not work. Section 4.0 shows you how to create this directory.

To initially generate the NAMES.CMP fileXE "NAMES.CMP file"§, execute the POST program and select the UTILITY menu. The N option to this menu will activate the name editor program. You will see a warning message that you are starting from scratch and have no names in the database.

Enter a callsign of someone who you want to add to the database, then their name. Do this for a few stations. If you type the callsign of someone already entered, you will see their name. You will also hear it on CW. This allows you to go through a stack of QSL cards without having to look at the screen all the time.

When you are done entering calls, execute the X command to exit the name editor. You will now have a NAMES.CMP file in the \LOG\NAME directory.

You can enter club stations by typing their name as CLUB. Club calls will be used for the possible call and simulator functions only. Club stationsXE "Club stations"§ are also detected by the program automatically by the program. If you enter a call like UZ0XWY and put the name VLAD in, the name editor will automatically change the name to CLUB since UZ0XWY is a club call. You will probably find that the name editor knows the syntax for club calls for many more countries than you do.

6.8 CONTEST SIMULATORXE "SIMULATOR"§

The contest simulator is intended as a way to familiarize yourself with the operation of the program. It is a great way to get used to the AUTO SEND CHARACTER COUNT and AUTO CALL TERMINATE functions. It is also a must before trying to use the program in the sprint. As a side benefit, it can be a fun pastime when the band conditions are poor or there is no contest happening.

Presently, twelve contests are supported by the contest simulator: All Asian, ARRL DX (both stateside and DX), CQ M, CQ WPX, CQ WW, IARU, JA International DX, KCJ, Region One Field Day, Scandinavian, South American WW, Sprint and the WAE (including sending QTCs).

To enable the simulator, the statement SIMULATOR ENABLEXE "SIMULATOR ENABLE"§ = TRUE must appear in your LOGCFG.DAT file. If you are starting the program without a LOGCFG.DAT file, the program will ask you if you want to use the simulator.

When the simulator is enabled, any CW output ports will be disabled to prevent you from keying any transmitter. All CW is sent at the same speed you are sending at.

The simulator is triggered by specific keystrokes, not by the actual CW being sent. To call CQ and have the simulator answer your call, you must use either the F1 or F2 function keys or the RETURN key. F9 can be used as a ? which will make a calling station repeat his callsign. You can log a contact with either the RETURN or QUICK QSL KEY.

The simulator is much more fun when you have a name database with plenty of callsigns in it. Otherwise, callsigns are taken from a short list of internal callsigns.

Except for the sprint contest, you will only be able to call CQ and have stations answer you. For the sprint, there are some tricks discussed in section 6.6 that you will need to know.

The simulator has a debug mode that will make the simulator work itself without any operator keystrokes. To enable this mode, use the CQ WW contest (or other contest that has an initial exchange that is complete enough to log the contact), put the command AUTO DUPE ENABLE = FALSE in your LOGCFG.DAT file, and type LOG DEBUG when you start the program. Pressing any key after starting the program will interrupt the debug mode. Turning off the auto dupe function is necessary so the simulator won't get hung up if a dupe calls. You can turn off all of the CW coming from the speaker by using CW TONE = 0 in your LOGCFG.DAT file. To maximize speed, you might want to put CODE SPEED = 99 in your LOGCFG.DAT file and make your CQ and exchange messages as short as possible. With a fast computer, you should be able to reach rates over 900 an hour.

6.9 MEMORY CONSIDERATIONSXE "MEMORY CONSIDERATIONS"§

The amount of memory used by the program depends on some of the program options. To fully understand the total QSO capability of the program, you need to understand how these options affect the available memory and how much memory it takes to store a contact. The memory available while the program is running (in bytes) is displayed in the upper right hand corner of the screen.

The name database is the biggest chunk of memory you have control over. If you have the name database loaded in, it takes up 138 kilobytes regardless of how many names you have in it. The name database is not loaded if you turn off POSSIBLE CALLS and SAY HI ENABLE, or if the file \LOG\ NAME\NAMES.CMP is not present. If you start up the program with 640K of memory, you should have about 200K of free memory without the name database loaded in or about 70K with it (more if DOS is in extended memory).

A dupesheet consists of blocks that hold 200 calls each. A 6 character (or less) callsign is compressed to 4 bytes so each block consumes 800 bytes. If you exceed the QSO limit of a block, another one is allocated. Therefore a dupesheet that has one call in it will take up as much memory as one with 199 calls. If you are working a contest where QSOs count once per band, then there will be a separate dupesheet for each band that you have made at least one QSO for. (same for modes). The callsign does not enter the dupesheet until it has left the editable log. There is a separate list for calls that are longer than 6 characters (up to 12) and these hold 100 calls each for 800 bytes.

Multiplier sheets use different amounts of space depending on which mults are active. The country and zone sheets for the CQ WW use a total of 1800 bytes for each band with at least one QSO.

Finally, the partial call and initial exchange list uses 5 bytes per entry. Each block holds 200 calls, so memory is used up in 1000 byte chunks. A call appears once in this list, regardless of how many different bands/modes you work the same station on. The partial call list can be turned off with PARTIAL CALL ENABLE.

The initial exchange memory can only hold 255 unique initial exchanges (up to 12 characters each). For a contest where the exchange is a zone, or state/province, age or JA prefecture, this is plenty because there are less than 255 different possibilities for the exchange. It is possible that in field day, you might run out of initial exchange memory and some exchanges will not be remembered from band to band. The initial exchange memory takes up 2040 bytes if it is enabled.

So, if you are working the CQ WW Contest, expecting to work 3000 different stations (3000 X 5) for a total of 6000 QSOs (6000 X 4) on a total of six bands (1800 X 6 for the multsheets), you would need a minimum of about 51K of free memory. This includes one list of calls with more than six characters.

6.10 RESTART.BINXE "RESTART.BIN"§ FILE

The RESTART.BIN file was created to make restarting the program in the middle of a contest happen very fast. Without the RESTART.BIN file, the program would read in the QSO information from the LOG.DAT file. This takes about 1 second for every 100 QSOs. If you have the PARTIAL CALL LOAD LOG ENABLE feature enabled, it will take even longer. Even with PARTIAL CALL LOAD LOG ENABLE, there is initial exchange information that will be lost without the RESTART.BIN file.

The RESTART.BIN file contains the following information:

> - RESTART.BIN file format version number.
> - Dupe sheet totals.
> - QSO Totals (as shown in the QSO total display).
> - Total number of names sent.
> - Total QSO points.
> - Code speed.
> - Dupe sheet entries.
> - Multiplier sheet entries.
> - Number partial calls.
> - Number initial exchanges
> - Partial call list.
> - Initial exchange list.

The RESTART.BIN file is normally updated after each QSO. If your disk is slow, you might want to only update it when you exit the program. To do this, set the UPDATE RESTART FILE parameter to FALSE. This can be done from the Control-J menu or in your LOGCFG.DAT file. If the automatic update is disabled and the program stops "unnaturally" (ie: without typing Alt-X), your RESTART.BIN file will not be current. If the number of contacts that appear to be in the LOG.DAT file is much different than the number in RESTART.BIN, the RESTART.BIN file will be ignored.

If you make changes to your LOG.DAT file and want to have the changes reflected in the LOG program's operation, your RESTART.BIN file will be ignored by the program. The program looks at the date and times for the files and determines if the RESTART.BIN file is older than the LOG.DAT file.

6.11 PACKET INTERFACE

The program can act as a terminal for your packet TNC. It can also monitor your TNC while you are operating the contest and inform you of DX spots for new multipliers. The last 10 spots can be reviewed and any one of them can be easily selected. A separate serial interface can be used to control your radio and have it automatically tuned to the frequency of selected spots.

To set up the packet port, use the PACKET PORTXE "PACKET PORT"§ command in your LOGCFG.DAT file. The syntax for this command is shown in section 5.9. The port will be set up to communicate to your TNC at 2400 baud.

To activate a 13 line window that can be used as your packet terminal, use Control-B. To exit this mode, press ESCAPE. While the window is activated, any characters you send will be sent to your TNC. Also, while the window is active, you can send any of the CQ MEMORY messages by pressing F1 to F10. This is handy if you are CQing on a dead band and are talking to one of your buddies using the packet window.

After you log onto your packet cluster and exit the packet window, the program is still monitoring the TNC. If you again press Control-B, you will be shown the last 12 lines of data from the TNC. This allows you to exit the window, work that JA that finally called you, and then to get back into the packet window, without missing any messages sent to you.

The program also monitors packet activity and will tell you if a spot has been made for a new multiplier. The data for the station is displayed just as if you used the Alt-D function and entered the callsign manually. If you decide to work this station, pressing the space bar with no characters in the call window will set the program into the search and pounce mode, change to the proper band and mode, and put the callsign in the call window. After you have logged the QSO and press ESCAPE to exit the search and pounce mode, the program will return you to the previous band and mode.

To review the last 10 packet spots, use the Control-U command. You will be shown the last 10 spots and can select any of these by moving the cursor with the arrow keys. You can load up this memory using the sh/dx command while using the Control-B packet window. If you select a spot, it will be displayed as if you used the Alt-D function.

If you have a Kenwood or Yaesu radio, you can have the rig QSY to the packet spot frequency automatically. You will need to interface the radio to the computer (see Section 6.12). When a spot is displayed, the B VFO of the radio will be set to the spot frequency. If you decide to work the station (by pressing the space bar with no characters in the call window), the radio will be switched to use VFO B. When the contact is completed or aborted, you will be returned to VFO A to resume your CQ run.

If you are using the TWO RADIO MODE, the interfaced radio will stay on VFO B. This allows you to use it for chasing mults without having it QSY to your run frequency. It also allows you to listen to the spot frequency to time your calls so you can work the multiplier without missing a beat. See section 6.2 for more information on TWO RADIO MODE.

If you want to make a packet spot on the packet cluster, use the Control-B command and type in the necessary information. The last QSO you have made is displayed at the bottom of the window so you can remember the callsign of the station you just worked.

6.12 RADIO INTERFACEXE "RADIO INTERFACE"§

You can interface your Kenwood or Yaesu radio to the computer and control it from the program. The following functions are controlled:

- RIT
- Band and mode
- Active VFO

The RIT control lets you adjust the RIT offset without moving your hands from the keyboard. To QSY the receiver down, press the left SHIFT key. The right SHIFT key will move the RIT up in frequency. Pressing both keys at the same time will clear the RIT.

There is also a special CW character (>) that will clear the RIT when it is included in a programmed CW message. This would normally be used in any CQ message or QSL MESSAGE to clear the RIT so you are ready for a new station to call you.

To interface your radio, you will need to use the RADIO CONTROL PORT command in your LOGCFG.DAT file. This command tells the program which serial port the radio is connected to. You will also need to tell the program which type of radio you are using with the command INTERFACED RADIO TYPE. See section 5.9 for the syntax of these commands.

The rig's band and mode will be updated if you change bands or modes from the program (using Alt-B or Alt-V).   To activate this function, you will need to use the INTERFACED RADIO command to tell the program which radio (1 or 2) is the one connected to the radio control port. Otherwise, when you change bands on the other radio, the interfaced radio will be changing bands as well. Put either INTERFACED RADIO = RADIO 1 or INTERFACED RADIO = RADIO 2 in your LOGCFG.DAT file.

If you are using the packet interface, the radio's B VFO will be tuned to the spot frequency. If you decide to work the station, the radio will switch to the B VFO. If you are using TWO RADIO MODE, the radio will stay on VFO B when the contact is done. If you are just using one radio, the rig will return to the VFO A frequency when the contact is done.

The Kenwood radios have a TTL input for serial data. Instead of spending $100 on the interface Kenwood supplies, I use a series resistor (680 Ohms) and a clamp diode to ground to keep the TTL input from going negative. Since I do not presently ask for any data from the radio, there is no need to connect the serial input to the computer.

6.13 MULTI OPERATIONXE "Multi operation"§

Multiple computers can be interfaced together to allow either multi-single or multi-multi operation. You will need to use only one serial interface port per computer for this interface. A ring configuration is used as shown below:

µ §

While the above example shows 4 computers connected, you can expand the system up to six or more computers.

The serial output of CPU #1 connects to the serial input of CPU #2 and so on, until the ring is completed. You only need to connect the serial input and outputs with appropriate grounds. No other control signals are necessary (ie: RTS or CTS). The baud rate is 2400 baud, so you can use modems for long distances. If you have a DB-25 connector, pin 2 is the output and pin 3 is the input. This is reversed for a DB-9 connector. Pin 7 of a DB-25 or pin 5 of a DB-9 can be used for ground. It is suggested you use shielded cable for the interconnections.

To activate the multi network, you will need to tell the program which serial port to use with the command MULTI PORTXE "MULTI PORT"§ = SERIAL # in your LOGCFG.DAT file, where # specifies the serial port number you are using (1-4).

When a QSO moves from the editable log window, it will be sent to the next computer. The next computer will put the QSO in the bottom of its editable window and pass the QSO that comes off the top the next computer. This process continues until the computer that originated the QSO sees the QSO come back around the loop. This process does introduce a delay in updating the information in all of the computers, but with normal QSO rates, it will only be a matter of minutes.

If you would like to send a messageXE "multi messages"§ to any computer, or all of them, press the double quote key. A window will open up allowing you to input a message. You must start the message with either the band you want the message to go to (ie: 80) or ALL to send it to all of the stations. After putting a space after the destination, type in the message and press RETURN. The message will instantly appear at the appropriate station (there is no delay).

If you only want to forward QSOs that are new multipliers between stations, put the command MULTI MULTS ONLYXE "MULTI MULTS ONLY"§ = TRUE in your LOGCFG.DAT file.

A good way to test your setup is to use the simulator in debug mode. The multi network is fully compatible with simulator operation. See section 6.8 for more information .

7.0 POST CONTEST LOG UTILITIES

Now that you have finished a contest, the POST.EXE program will provide you with the functions you need to get your entry ready to mail in. It can check your log for any duplicates, generate a rate sheet, make a nice looking log with page numbers and totals on each page, give you full QSL label support, generate ARRL compatible files, generate dupesheet and show the geographical distribution of your contacts.

When you start the POST program, you will be presented with a menu. From this menu you can

change the name of the active log file that the other POST functions operate on. The default file name is LOG.DAT. You can specify a different log file by using the F command from the menu, or by including the name of the log file after typing POST before starting the program. The other menu choices will take you to either the QSL menu, the LOG menu, the REPORT menu or the UTILITY menu.

The QSL menu allows you to perform the different QSL functions. Each choice displays an explanation of operation and steps you through the setup. There are three different QSL labelXE "QSL labels"§ modes. One will print a label for each contact. Another will print one label per three contacts with labels sorted by country, and the third will print labels for a specific station (a QSL managers dream come true). The labels are 3½ by 15/16 Inches. Avery number 4410 or Dennison 42-451-1 work great and can be found at most volume warehouse stores (ie: Costco). There is an QSL label estimate command which will tell you how many actual labels will be printed when combining multiple QSOs on one label. It will also tell you how many people worked you on 1 to 6 bands.

The LOG menu contains the operations you might want to do to your log. This includes dupechecking, multiplier verification, creation of band and mode logs with running totals, creation of an ARRL compatible disk file and other similar functions. One of more useful functions is the C command which will allow you to generate logs with page totals for valid QSOs, QSO points and multiplier totals. Again, there is a detailed explanation of each function when you start it.

The REPORT menu allows you to generate the different reports the POST program can provide. This includes dupesheets, continent distribution charts, rate sheets and multiplier lists. You can even generate a report showing QSOs where the logged zone is different than the standard zone for the callsign.

The UTILITY menu provides access to several utilities that are handy to have. This includes the name editor for updating your name database, DEGTAG and BEAM EXTRACT for generating beam heading files and APPEND for combining LOG files into a single history file.

There is also a procedure (POST CONTEST LOG MASSAGE) that can be executed from the first menu. It will step you through the recommended procedure after completing a contest. All of the steps executed by this procedure are accessible individually if you desire.

8.0 TROUBLE SHOOTING GUIDEXE "TROUBLE SHOOTING GUIDE"§

This section has solutions to some of the most common problems users have had with the program. It is intended to keep my phone from ringing too much just before a contest. However, if you still are having difficulty with the software after reading this section, please feel free to give me a call. Most problems can be solved quickly over the phone.

1. The program stops executing before initializing. When this happens, there will usually be an error code displayed. Check section 6.4 to see what the error code means. In most cases, the program is halting because there was not enough memory available for it. Make sure your memory is not being used up with any TSRs (ie: sidekick) and that you are not running the program from a DOS shell of another program (ie: XTREE). If you are still short of memory, you can disable loading the name database. This can be done by putting POSSIBLE CALLS = FALSE into your LOGCFG.DAT file and not having SAY HI ENABLE = TRUE.

2. The names database does not work. This is almost always caused by one thing. To make the names database work, there must be a directory called \LOG\NAME. This means there must be a directory called LOG directly off your root directory and then a sub directory called NAME. Without this directory, the program does not have a place to store or recall the file NAMES.CMP.

3. The keying interfaceXE " keying interface"§ does not work. The keying interface is disabled when using the simulator.

4. The paddle interface just sends dits or dit-dah-dit-dah. Some computers do not have a pullup resistor on the parallel port inputs. It might be necessary to provide pullups to +5 Volts on the two inputs used by the paddle. The resistor value can be anything from 300 Ohms to 10K-Ohms.

APPENDIX A

Alphabetical listing of legal LOGCFG.DAT commands with legal values and (initial conditions).

COMMAND	LEGAL VALUES
ALARM WINDOW BACKGROUND	See section 5.3 (Red)
ALARM WINDOW COLOR	See section 5.3 (Black)
AUTO CALL TERMINATE *	TRUE or FALSE (False)
AUTO DUPE ENABLE *	TRUE or FALSE (True)
AUTO SEND CHARACTER COUNT *	INTEGER (0)
AUTO TIME INCREMENT *	INTEGER (0)
BAND	160, 80, 40... (160)
BAND MODE WINDOW BACKGROUND	See section 5.3 (Cyan)
BAND MODE WINDOW COLOR	See section 5.3 (Black)
BEAM HEADING FILE NAME	See section 5.8 (None)
BEAM HEADING WINDOW BACKGROUND	See section 5.3 (Cyan)
BEAM HEADING WINDOW COLOR	See section 5.3 (Black)
BIG WINDOW BACKGROUND	See section 5.3 (Cyan)
BIG WINDOW COLOR	See section 5.3 (Black)
CALL OK NOW MESSAGE	STRING (} OK %)
CALL WINDOW BACKGROUND	See section 5.3 (Magenta)
CALL WINDOW COLOR	See section 5.3 (Yellow)
CLOCK WINDOW BACKGROUND	See section 5.3 (Cyan)
CLOCK WINDOW COLOR	See section 5.3 (Black)
CODE SPEED WINDOW BACKGROUND	See section 5.3 (Cyan)
CODE SPEED WINDOW COLOR	See section 5.3 (Black)
CONTEST (No default)	See section 5.1.
CONTEST NAME	STRING (Contest dependent)
CONTEST TITLE	STRING (Contest dependent)
CONTEST TITLE WINDOW BACKGROUND	See section 5.3 (White)
CONTEST TITLE WINDOW COLOR	See section 5.3 (Black)
CODE SPEED	INTEGER (35)
CONTACTS PER PAGE	INTEGER (50)
CQ EXCHANGE	STRING (No default)
CQ EXCHANGE NAME KNOWN	STRING (Null string)
CQ MEMORY F1	STRING (CQTEST \ \ TEST)
CQ MEMORY F2	STRING (CQTEST CQTEST CQTEST)
CQ MEMORY F3	STRING (CQ Exchange)
CQ MEMORY F4	STRING (73 \ TEST)
CQ MEMORY F5	STRING (\) MY CALL
CQ MEMORY F6	STRING (SRI QSO B4 73 \ TEST)
CQ MEMORY F8	STRING (AGN)
CQ MEMORY F9	STRING (?)
CQ MEMORY F10	STRING (:) Keyboard CW
CQ MEMORY ALTF1 to ALTF10	STRING (No defaults)

COMMAND	**LEGAL VALUES**
CQ MENU	STRING (F1/2-CQ F3-Ex F4-73 F5-Call F6-DECall F7-WkdB4 F8-Agn F9-? AltF10-Cfm call)
CURTIS KEYER MODE *	A or B (B)
CW TONE *	INTEGER (700)
DATE WINDOW BACKGROUND	See section 5.3 (Cyan)
DATE WINDOW COLOR	See section 5.3 (Black)
DC ENABLE	TRUE or FALSE (False)
DE ENABLE *	TRUE or FALSE (True)
DISPLAY MODE	COLOR OR MONO (Mono)
DOMESTIC MULTIPLIER	See section 5.5.1. (Contest dependent)
DOMESTIC PROVINCES	8, 11 or 13 (Contest)
DOMESTIC STATES	48, 49 or 50 (Contest)
DUPE INFO WINDOW BACKGROUND	See section 5.3 (Cyan)
DUPE INFO WINDOW COLOR	See section 5.3 (Black)
DUPESHEET WINDOW BACKGROUND	See section 5.3 (Cyan)
DUPESHEET WINDOW COLOR	See section 5.3 (Black)
DX MULTIPLIER	See section 5.5.1. (Contest dependent)
EDITABLE LOG WINDOW BACKGROUND	See section 5.3 (Cyan)
EDITABLE LOG WINDOW COLOR	See section 5.3 (Black)
EIGHT BIT PACKET PORT	TRUE or FALSE (False)
EX MEMORY F3	STRING
EX MEMORY F4	STRING
EX MEMORY F5	STRING
EX MEMORY F6	STRING
EX MEMORY F7	STRING
EX MEMORY F8	STRING (EE)
EX MEMORY F9	STRING (?)
EX MEMORY F10	STRING (:) Keyboard CW
EX MEMORY ALTF1	STRING (UR CALL?)
EX MEMORY ALTF2	STRING (AGN?)
EX MEMORY ALTF3	STRING
EX MEMORY ALTF4	STRING
EX MEMORY ALTF5	STRING
EX MEMORY ALTF6	STRING
EX MEMORY ALTF7	STRING
EX MEMORY ALTF8	STRING
EX MEMORY ALTF9	STRING
EX MEMORY ALT10	STRING (IS UR CALL @?)
EX MENU	STRING (Null)
EXCHANGE MEMORY ENABLE *	TRUE or FALSE (True)

COMMAND	LEGAL VALUES
EXCHANGE RECEIVED	See section 5.5.3 (Contest dependent)
EXCHANGE WINDOW BACKGROUND	See section 5.3 (Magenta)
EXCHANGE WINDOW COLOR	See section 5.3 (Yellow)
FLOPPY FILE SAVE FREQUENCY *	INTEGER (0)
FLOPPY FILE SAVE NAME *	STRING (LOGBACK.DAT)
FREE MEMORY WINDOW BACKGROUND	See section 5.3 (White)
FREE MEMORY WINDOW COLOR	See section 5.3 (Black)
FUNCTION KEY WINDOW BACKGROUND	See section 5.3 (White)
FUNCTION KEY WINDOW COLOR	See section 5.3 (Black)
HOUR OFFSET	INTEGER (0)
INCREMENT TIME ENABLE	TRUE or FALSE (False)
INITIAL EXCHANGE	NONE, NAME, ZONE (Contest)
INPUT CONFIG FILE	See section 5.9 (Null string)
INSERT MODE	TRUE or FALSE (True)
INSERT WINDOW BACKGROUND	See section 5.3 (Cyan)
INSERT WINDOW COLOR	See section 5.3 (Black)
INTERFACED RADIO	RADIO 1 or RADIO 2 (None)
INTERFACED RADIO TYPE	TSxxx or FTxxxx (None)
KEYER	See section 5.9 (None)
KEYER OUTPUT PORT	See section 5.9 (None)
KEYER RADIO ONE	See section 5.9 (None)
KEYER RADIO ONE OUTPUT PORT	See section 5.9 (None)
KEYER RADIO TWO	See section 5.9 (None)
KEYER RADIO TWO OUTPUT PORT	See section 5.9 (None)
LEADING ZEROS *	TRUE or FALSE (False)
LEAVE CURSOR IN CALL WINDOW *	TRUE or FALSE (False)
LOG FILE NAME	STRING (LOG.DAT)
LOG RS SENT	STRING (59)
LOG RST SENT *	STRING (599)
LOG SUB TITLE	STRING
MODE	SSB, PHONE OR CW
MULTI MULTS ONLY	TRUE or FALSE (False) See section 6.13
MULTI PORT	See section 6.13
MULT BY BAND	TRUE or FALSE (Contest)
MULT BY MODE	TRUE or FALSE (Contest)
MULTIPLE BANDS	TRUE or FALSE (Contest)
MULTIPLE MODES	TRUE or FALSE (Contest)
MULTIPLIER INFORMATION WINDOW BACKGROUND	Section 5.3 (Cyan)
MULTIPLIER INFORMATION WINDOW COLOR	Section 5.3 (Black)
MY CALL	STRING
MY CONTINENT	EU, NA, SA, AF, AS, OC (Set by MY CALL)
MY COUNTRY	VALID COUNTRY PREFIX (Set by MY CALL)

COMMAND	LEGAL VALUES
MY CQ ZONE	INTEGER (Set by MY CALL)
MY ITU ZONE	INTEGER (Set by MY CALL)
MY STATE	STRING (None)
NAME MEMORY DISABLE	TRUE or FALSE (False)
NAME PERCENTAGE WINDOW BACKGROUND	See section 5.3 (Cyan)
NAME PERCENTAGE WINDOW COLOR	See section 5.3 (Black)
NAME SENT WINDOW BACKGROUND	See section 5.3 (Cyan)
NAME SENT WINDOW COLOR	See section 5.3 (Black)
PACKET PORT	See section 5.9
PACKET SPOTS *	ALL SPOTS or MULT SPOTS (Mult spots)
PADDLE PORT	NONE, 1, 2, or 3 (None)
PADDLE PTT HOLD COUNT *	INTEGER (13)
PARTIAL CALL ENABLE *	TRUE or FALSE (True)
PARTIAL CALL LOAD LOG ENABLE *	TRUE or FALSE (False)
POSSIBLE CALL WINDOW BACKGROUND	See section 5.3 (Cyan)
POSSIBLE CALL WINDOW COLOR	See section 5.3 (Black)
POSSIBLE CALL WINDOW DUPE BACKGROUND	See section 5.3 (Red)
POSSIBLE CALL WINDOW DUPE COLOR	See section 5.3 (Black)
POSSIBLE CALLS *	TRUE or FALSE (False)
POSSIBLE CALL ACCEPT KEY	CHARACTER (;)
POSSIBLE CALL LEFT KEY	CHARACTER (,)
POSSIBLE CALL RIGHT KEY	CHARACTER (.)
PREFIX MULTIPLIER	NONE, PREFIX (Contest dependent)
PRINTER ENABLE *	TRUE or FALSE (False)
QSL MESSAGE	STRING (73 \ TEST)
QSO BEFORE MESSAGE	STRING (_SRI QSO B4 73 \ TEST)
QSO BY BAND	TRUE or FALSE (Contest)
QSO BY MODE	TRUE or FALSE (Contest)
QSO INFORMATION WINDOW BACKGROUND	See section 5.3 (Cyan)
QSO INFORMATION WINDOW COLOR	See section 5.3 (Black)
QSO NUMBER WINDOW BACKGROUND	See section 5.3 (Cyan)
QSO NUMBER WINDOW COLOR	See section 5.3 (Black)
QSO POINT METHOD	See section 5.5.2 (Contest dependent)
QTC ENABLE	TRUE or FALSE (Contest)
QTC NUMBER WINDOW BACKGROUND	See section 5.3 (Cyan)
QTC NUMBER WINDOW COLOR	See section 5.3 (Black)
QUICK COMMAND WINDOW BACKGROUND	See section 5.3 (White)
QUICK COMMAND WINDOW COLOR	See section 5.3 (Blue)
QUICK QSL KEY	CHARACTER (\)
QUICK QSL MESSAGE	STRING (TU)
RADIO CONTROL PORT	See section 5.9
RADIO ONE NAME	STRING (Rig 1)
RADIO TWO NAME	STRING (Rig 2)

COMMAND	LEGAL VALUES
RADIO WINDOW BACKGROUND	See section 5.3 (Cyan)
RADIO WINDOW COLOR	See section 5.3 (Black)
RATE WINDOW BACKGROUND	See section 5.3 (Cyan)
RATE WINDOW COLOR	See section 5.3 (Black)
REMAINING MULTS WINDOW BACKGROUND	See section 5.3 (Blue)
REMAINING MULTS WINDOW COLOR	See section 5.3 (White)
REMINDER	See section 5.7
REPEAT S&P EXCHANGE	STRING
S&P EXCHANGE	STRING
SAY HI ENABLE *	TRUE or FALSE (False)
SAY HI RATE CUTOFF *	INTEGER (200)
SHORT INTEGERS *	TRUE or FALSE (False)
SHORT 0	CHARACTER (T)
SHORT 1	CHARACTER (A)
SHORT 2	CHARACTER (2)
SHORT 9	CHARACTER (N)
SIMULATOR ENABLE	TRUE or FALSE (False)
SINGLE BAND SCORE	160, 80, 40, 20, 15, 10 (None)
SPRINT QSY RULE *	TRUE or FALSE (False)
START SENDING CALL KEY	CHARACTER (')
TAIL END KEY	CHARACTER (])
TAIL END MESSAGE	STRING (R)
TOTAL SCORE MESSAGE	See section 5.7
TOTAL SCORE WINDOW BACKGROUND	See section 5.3 (White)
TOTAL SCORE WINDOW COLOR	See section 5.3 (Black)
TOTAL WINDOW BACKGROUND	See section 5.3 (Blue)
TOTAL WINDOW COLOR	See section 5.3 (White)
TWO RADIO MODE *	TRUE or FALSE (False)
UNKNOWN COUNTRY FILE ENABLE	TRUE of FALSE (False)
UNKNOWN COUNTRY FILE NAME	STRING (UNKNOWN.CTY)
UPDATE RESTART FILE ENABLE *	TRUE or FALSE (True)
VHF BAND ENABLE *	TRUE or FALSE (Contest)
VISIBLE DUPESHEET *	TRUE or FALSE (False)
WAKE UP TIME OUT *	INTEGER (0)
WARC BAND ENABLE *	TRUE or FALSE (Contest)
WEIGHT *	REAL NUMBER (1.0)
WHOLE SCREEN WINDOW BACKGROUND	See section 5.3 (Yellow)
WHOLE SCREEN WINDOW COLOR	See section 5.3 (Blue)
ZONE MULTIPLIER	See section 5.5.1. (Contest dependent)

An asterisk indicates that the parameter can be changed while the program is running using the Control-J command. All CW messages can be edited using the Alt-P command while the program is

running.

APPENDIX B - SUGGESTED INTERFACE CIRCUITSXE "INTERFACE CIRCUITS"§

XE "Parallel Port"§

MM3 SERIAL INTERFACE

DB-25	DB-9	SIGNAL
2	3	Serial output to MM3.
7	5	Ground
6	6	Jumper A
8	1	Jumper A
20	4	Jumper B
4	7	Jumper B
5	8	Jumper B

CPU SERIAL PORT INTERFACE

DB-25	DB-9	SIGNAL
20	4	CW Key output. Use circuit A.
4	7	PTT out. Use another circuit A.
7	5	Ground

CPU PARALLEL PORT INTERFACE

DB-25	SIGNAL
1	STROBE. Goes to emitter of all circuit B transistors.
16	PTT output. Use separate circuit B, goes to 1K resistor.
17	CW output. Use separate circuit B, goes to 1K resistor.
18	GROUND for CW and PTT (connect to radio).
12	DIT paddle contact.
13	DAH paddle contact.
25	GROUND for paddle.

µ §

CIRCUIT A

Use this circuit for XE "Hardware Interface"§serial port CW and PTT

µ §

CIRCUIT B

Use this circuit for parallel port CW and PTT

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