Modified ECARS Log Keeping Program V1.6
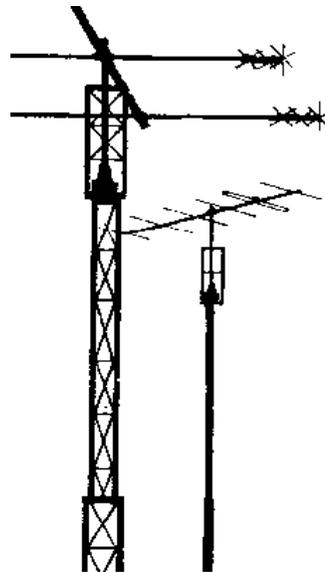
Mod ECARS Logger

Description:

The Mod ECARS Logger is a program designed to assist ECARS Net Control Stations manage call-ins by providing them a computer assisted means to manage the suffix call lists, and to quickly present data from previous ECARS call ins that were saved to the NCS database. It is designed as a modification of the ECARS Custom Net Manager V7.0 design by WB4KTC, Robert Traister.

Features:

Features of the Mod ECARS Logger include:

a. Added new features that present additional information to the Net Control Stations operator, and provide additional options with the data stored in the NCS database. For purposes of this User Guide, there are references to the NCS database and the ECARS database. The term 'NCS database' means the integral database storing contact information from previous NCS operations by the using NCS (and previous NCSs if the program was provided to him by another NCS). This data is historical information obtained from information passed by radio. The term 'ECARS database' means the membership database maintained on the ECARS website (www.ecars7255.com).

   Added features include:

   i. Presents the NCS the option to automatically present QRZ or HamQTH information for a call sign, to help with new calls that are not in the prior contacts database, and to allow checking if the data in the database has changed since the prior login.

   ii. Presents the NCS the option to automatically present the ECARS Member Number from a link to the ECARS database, as a check on the accuracy of the copied ECARS number and as a means to see if the calling station has let his membership lapse.

   iii. By default, and if so configured, presents the Bearing and Distance to a Check-in, when the contact is "checked in". Bearing and distance is calculated based upon the NCS's configured Latitude and Longitude and the Latitude and Longitude reported by QRZ or HamQTH, if either is configured and activated. This can be useful for evaluating band conditions and band length.

   iv. Presents the QTH to a Check-In, if that Check-In screen is selected.

   v. Allows the NCS to export an ADIF file for contacts made on any selected date. This ADIF file can be imported into conventional logging programs to reflect the QSOs made during the NCS ECARS session.

   vi. Provides an NCS Configuration option that includes NCS call sign, NCS latitude, NCS Longitude, elections for use of QRZ and/or HamQTH with associated Usernames and Passwords, and various ADIF file attributes such as Transmitter Power and rig used.

   vii. Allows the NCS to review all database contacts in a datasheet view, and edit any contact information or delete any contacts.

b. Retained the features and basic data flow of the ECARS Custom Net Manager V7.0, except that the 'Notes' section was dropped, and the associated NCS database is part of the Mod ECARS Logger program vice a separate file. Retained features include:

   i. Maintains a database of prior contacts which have checked in with ECARS for this NCS.

   ii. Searches the database of prior contacts, based upon call sign, and provides the NCS the name, city, state, ECARS No, comments, last checked in date, and date contact data was last changed, associated with the call sign from the prior check-in.

   iii. Provides the NCS with a Suffix list, that records the suffixes (or any part of the call sign that the NCS captures) during those periods when the NCS is developing a call list.

   iv. Provides the NCS with a Find list, which lists all call signs in the database that are a match for the information entered in the Find search box.

   v. Selection of a Find List entry automatically populates the Callsign, Name, City, State, ECARS No, and Comment fields of the Mod ECARS Logger form with the data from the database.

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NCS Configuration

        The NCS should fill out that information in the NCS Configuration screen before using the program. The NCS Configuration screen is available by clicking the 'Configure NCS Data' button at the bottom of the main screen. Clicking the 'Configure NCS Data' button presents a screen as shown in Figure 1 but without the author's data populating the fields.

Figure 1

Call Sign Configuration:
Adding the NCS's call sign in this box will cause the main ECARS form header to include the NCS's call sign along with the program name. See Figure 2.

Call Sign Latitude and Call Sign Longitude:
This information is required in order for the program to calculate Bearing and Distance to each contact from either QRZ or HamQTH data. Electing to use either QRZ, or HamQTH, without providing NCS Latitude and Longitude, will result in a Runtime Error.

Option to Use QRZ.com and Option to Use HamQTH.com:
Clicking on these radio buttons enables the NCS to configure the Mod ECARS Logger for use of QRZ.com and/or HamQTH.com. Clicking on either button presents boxes for entry of username and password for the program selected.

Both QRZ.com and HamQTH allow the automated extraction of information from their sites via XML protocols.

In order to use QRZ.com, the NCS must have an XML level or higher subscription with QRZ.com. The XML subscription is fee based, on an annual basis, about $30 at the time the program was developed. QRZ requires the use of a Username and Password in order to access the account. Filling out the QRZ Username and Password fields provides the data for the Mod ECARS Logger code to log in to QRZ and extract latitude, longitude, name, city, state, amateur license level, and birth year for any call sign of a Ham calling into ECARS.

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No subscription is required In order to use HamQTH.com.   HamQTH instructions require the use of a Username and Password in order to access the account and extract requested XML information. Filling out the HamQTH Username and Password fields provides the data for the Mod ECARS Logger code to log in to HamQTH and extract latitude, longitude, name, city, state, year of amateur license, and birth year for any call sign of a Ham calling into ECARS.

When the 'Option to Use QRZ.com' button, or the 'Option to use HamQTH.com' button, has been selected, an additional radio button appears on the main Mod ECARS Logger screen (see Figure 2). These secondary radio buttons function to allow the NCS to use, or not use, QRZ or HamQTH once they have been configured for use.

Note that a reliable internet link is required to use QRZ.com or HamQTH.com. Requests for data hold up further program use pending responses from QRZ.com or HamQTH.com. The author has not seen any problems with use of these features but has verified that if the link is broken, or interrupted, when activated for use, the program will stop pending a response.

Universal Export ADI File Parameters:
This section allows the NCS to specify six elements of information that will be provided in any ADI file that the program generates. Providing an element of information automatically results in that element being included in the ADI file. Failure to provide an element of information automatically results in that element of information NOT being included in the ADI file.

These optional ADI File elements are ECARS frequency, NCS Gridsquare, NCS Transmitter Power, NCS Rig, RST Sent and RST Received.

If RST Sent and RST Received elements are filled in, these values will be provided for all the QSOs listed in the ADI file, regardless of the actual band conditions for each QSO. The option to provide RST Sent and RST Received in the ADI Files was made available because some people feel like a log entry must have RST values, and because of the growing tendency for Ham's to simply report '59'regardless.

Export / Import File Locations:
This section allows the NCS to specify where in his computer directory structure he will have import and export files written to or read from. If the file location that is entered in this block does not exist, the program will fault when an import or export operation is performed.

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Main Screen:

Routine ECARS NCS functions are performed from the Mod ECARS Logger Main Screen as shown in Figure 2.

Figure2 – Startup Screen when configured for QRZ and HamQTH
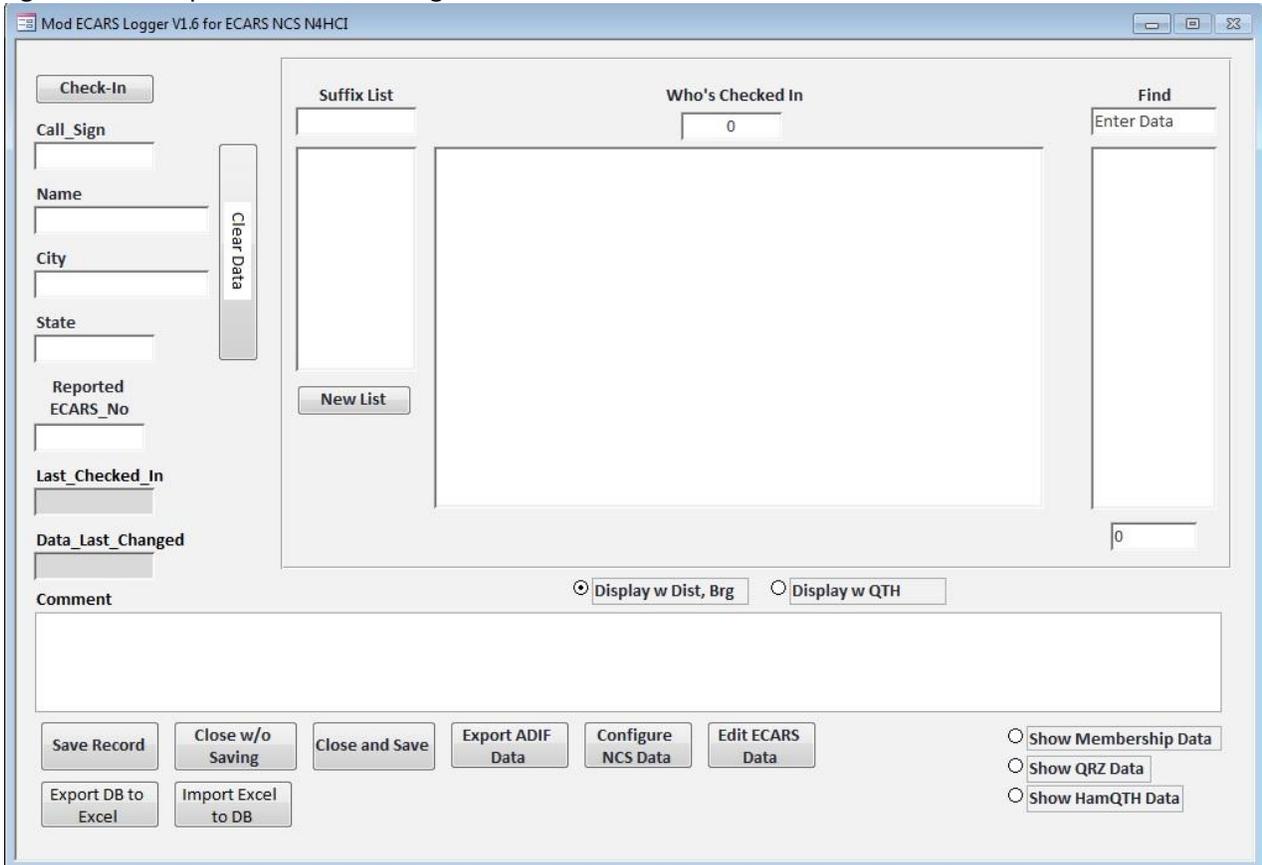
From left to right, across the upper 70% of the screen, are the Call In identification column, the Suffix List Column, the Checked-In column, and the Find List column. This is very similar in look and function to the ECARS Custom Net Manager V7.0 by WB4KTC.

Below the Checked-In column are toggle buttons to select which of two checked-in display options to present. The default option is to show Distance and Bearing to each contact along with Call Sign, Name, and time of check in. The alternative option is to show the QTH to each contact along with Call Sign, Name, and time of check in.

The 'Comment' block stretched across the main screen below the above columns and is actually part of the Call-In Identification Column.

Below the 'Comment' block on the left 70% of the screen are command buttons to save a new or changed record, to close the program without saving additions or changes, to close the program and save changes, to export ADIF data, to configure NCS data, and to edit data in the ECARS database.

To the right of the command buttons are radio buttons to activate use of QRZ or HamQTH if they were configured for use on the NCS Configuration Screen.   If not configured for use, these options will not be present. If configured for use, but not selected, QRZ and HamQTH database checks are not made and supplemental data from their websites is not presented.

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There is also a radio button to activate ECARS member number checks using the ECARS database at the ECARS website. If not selected, ECARS database checks are not made and the supplemental ECARS number data from the ECARS website is not presented.

Work Flow:

While there is no required work flow to use the Mod ECARS Logger, it was designed with the expectation that the NCS would periodically ask ECARS listeners to call in with their call sign suffixes. Because of this, the cursor defaults to the Suffix Entry box at the top of the Suffix List box.

Developing a Suffix List

As each suffix is heard, the NCS types it into the Suffix Entry box and hits ENTER, which places the suffix into the Suffix List box in the order in which they were entered. If a contact is mobile, the suffix is entered with '/m' at the end. Unlike the ECARS Custom Net Manager, suffixes with '/m' at the end are not put at the top of the list. This was deemed to be unnecessary because the NCS could simple call on the suffixes with '/m' first and in the order in which the mobiles were identified before he proceeded to non-mobile contacts. If the caller gives a full call sign, the full call sign can be typed into the Suffix Entry box and be entered into the Suffix List box.

Calling Contacts from Suffix List

Typically the NCS selects the suffixes, or call signs, listed in the Suffix List in order from top to bottom and mobiles first. As he selects a call suffix, or call sign, in the Suffix List box with his mouse, the selected entry is written into Call Sign box, to the left, and into the Find List Entry box, to the right.

If the selected entry was a full call sign, and if the call sign was in the NCS's ECARS database, the program will fill in the Name, City, State, ECARS No, Last Checked In date, Last Data Changed date, and the Comment fields with the information from the database and the work flow can move to confirming the data before completing a check in.

Upon automatic entry of the selected suffix data from the Suffix List into the Find List Entry box, the Find List automatically populates itself with any Call Signs in the ECARS database that have a match for the partial suffix string in the call sign. For instance, a string of 'PG' might find K3PG and K3PGE in the database. A string of 'A4T' might find WA4THR and WA4TXE in the database. Short strings of letters tend to find too many possible call signs to be of much help in resolving the full call sign.

Use of the Find List

The Find List is intended to supplement the information exchanged over the radio, especially if band conditions are weak. The Find List provides the set of candidate call signs identified with the data in the Find List Entry box and indicates how many matches were found at the bottom of the Find List.

If the data in the Find List Entry box was automatically put there by selecting an entry in the Suffix List, then the only candidate call signs shown will be those that include a match in the call sign. However, if the data in the Find List Entry box was entered manually, the Find List box candidate call signs will include matches in the call sign, name, city, state, and ECARS Number fields of the ECARS database. This latter feature is useful if the NCS heard the ECARS Number, or an unusual name, or city, but is not able to copy the call sign correctly.

Selection of an entry in the Find List causes the selected call sign to automatically be written into the Call Sign block. After writing the call sign in the Call Sign block, the program will fill in the Name, City, State,

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ECARS No, Last Checked In date, Last Data Changed date, and the Comment fields with the information from the database and the work flow can move to confirming the data before completing a check in.

New Call Sign Data Entry:

Every NCS will get new call-ins that are NOT in the ECARS database. To add a new call sign band conditions must be adequate to support a verbal exchange of information and the NCS then manually enters the new call sign into the Call Sign box followed by name, city, state, and ECARS Number and any comments that the NCS desires to make.

If the Mod ECARS Logger has been configured to interface with either QRZ.com or HamQTH.com, and if that interface has been enabled, then information from QRZ or HamQTH is presented to the NCS to help him as he listens to the contact and records the name, city, state, and ECARS number of the contact. The QRZ and HamQTH Supplemental Information pop-ups are shown in Figure 3.

Figure 3

Similarly, the Figure 3 data is useful in confirming name, city, and state information from call signs already in the ECARS database. Under bad band conditions, the prior ECARS database information might have been incorrectly recorded, or the passage of time may have resulted in reassignment of the call sign. Finally, in poor band conditions, this information might help the NCS decide that he has not yet properly understood the call sign of the check in.

Data shown in the QRZ or HamQTH supplemental data popups is NOT automatically entered into the Mod ECARS Logger check in data fields.

After the new call sign information has been completed, or after updating any information for a prior ECARS database entry, the NCS presses the 'Save Record' command button to save this information to the ECARS database.

Check-In

Once the contact information has been resolved, pressing the 'Check In' command button above the Call Sign block writes the call sign, name and time (local hour:minute) into each of two Check In lists, only one of which is visible. If so configured, Distance and Bearing is written to one of the Check-in lists and QTH is written to the other. Selection of which Check In list to present is determined by clicking on the radio toggle buttons below the Check In list.

If the Mod ECARS Logger has been configured to interface with either QRZ.com, or HamQTH.com, and if that interface has been enabled, then the Bearing and Distance from the NCS to the Contact will also be presented with the Check In data in the default presentation, as indicated by a solid circle in the radio toggle button labeled 'Display with Dist, Brg'. See Figure 4A. Bearing and distance are calculated by the

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Mod ECARS Logger based upon the NCS latitude and longitude, configured by the NCS, and the contact's latitude and longitude, extracted from QRZ or HamQTH[i].

Figure 4A – Check-in w Distance & Brg   Figure 4B – Check- w QTH

If the toggle button labeled 'Display with QTH' is selected, then the QTH is shown along with Call Sign, Name, and Time. See Figure 4B

When the Check-In button is clicked, a check is made to see if the call sign has already been checked in. Duplicate check ins are prevented.

If the Check-In command button is pressed before new or changed data is saved, the data will be saved as part of the check in action.

A checked in contact can be deleted from the Check-In List. In order to delete a checked in entry, select the check in of interest. This causes a 'Delete Selected Entry' command button to appear for 5 seconds. Click on the 'Delete Selected Entry' button within the five (5) seconds to delete the entry. In not deleted in five (5) seconds, the button disappears and the selected entry is deselected. Deletion of an entry from the 'Display with Dist and Brg' will delete the same contact from the 'Display with QTH', and vice versa.

Export ADIF Data:

The NCS can export an ADI file from information in the ECARS database. This would be useful if the NCS desired to keep his regular logging program up to date with his ECARS activities or to allow his LOTW account to reflect ECARS activities.

Export of an ADI File is started by clicking on the 'Export ADIF Data' command button, which opens up a popup as shown in Figure 5.

The Figure 5 popup is an unfiltered listing of all contacts in the ECARS database, sorted in descending order by date. The vertical scroll bar enables the NCS to view any QSO in the database but is primarily to allow determining the date of interest for development of the ADI File.

Because the ECARS database only keeps a single record for each call sign, that record reflects the most recent check in and creation of ADI Files for dates, other than the most recent date, may not show all the contacts on that date. This feature is most accurate when used to develop an ADI file at the end of an NCS's session, or at least before a subsequent session.

Figure 5
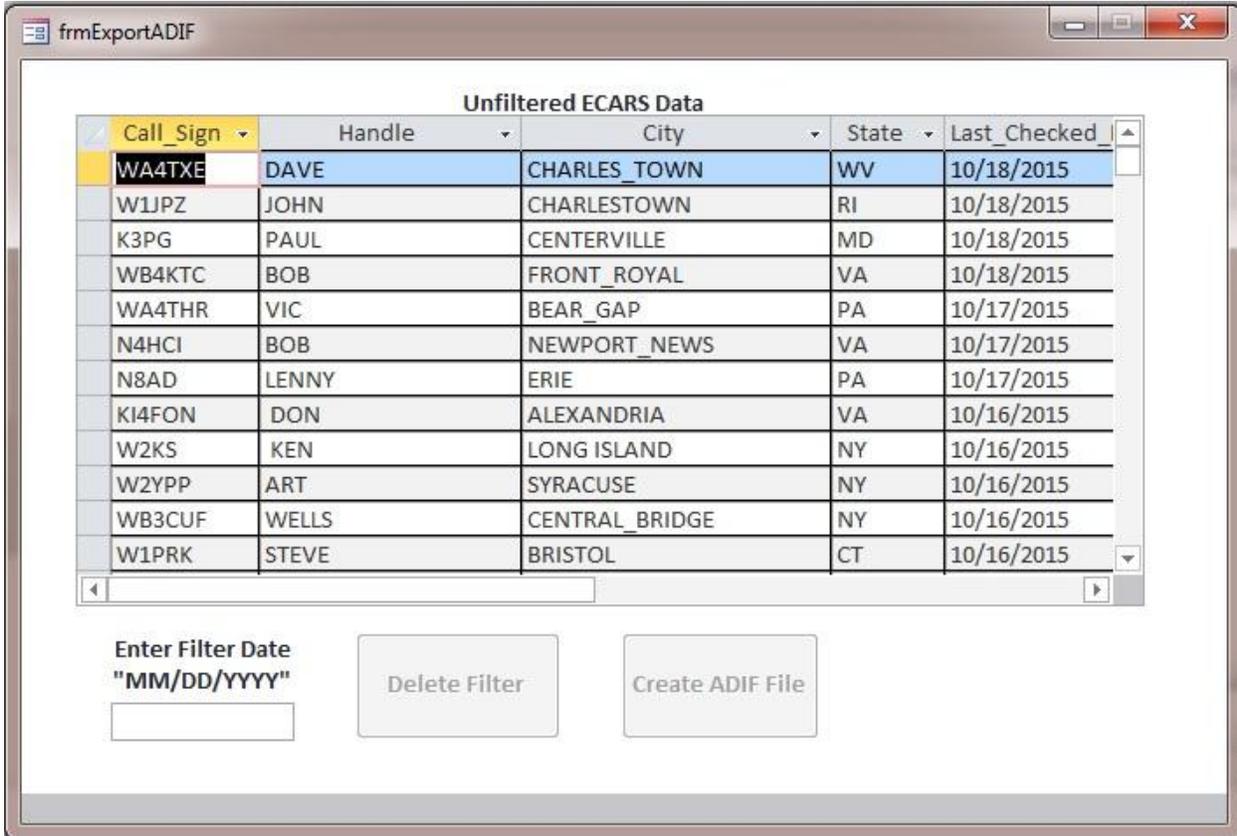
The two command buttons ('Delete Filter' and 'Create ADIF File') are not active pending selection of a date for the ADI File contacts of interest.

To filter the ECARS database for the QSOs of interest, enter the date into the 'Enter Filter Date' box of the Export ADIF box. Date entries are a text string and must include a leading '0' for any months or days less than 10. For example, 1 Sep 2015 must be entered as ''09/01/2015' and not as '9/1/2015' or '9/1/15'. An incorrect format, or a date not in the ECARS database, will produce a Null filtered set of QSOs.

Pressing ENTER after entering a filter date will produce a filtered list as shown in Figure 6.

Entry of the filter date activates the 'Delete Filter' and the 'Create ADIF File' command buttons. The 'Delete Filter' command button is provided to back up in case of a null set due to incorrect filter date format, or because the NCS decided that the filtered set was not the date he really wanted.

Clicking the 'Create ADIF File' command button creates an ADI file named "Mod_ECARS_ADIF_Export.adi" in the directory specified as the Import / Export File Location on the NCS Configuration screen. See Figure 1.   Figure 7 displays the .adi file created for the Figure 6 data.

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Figure 6
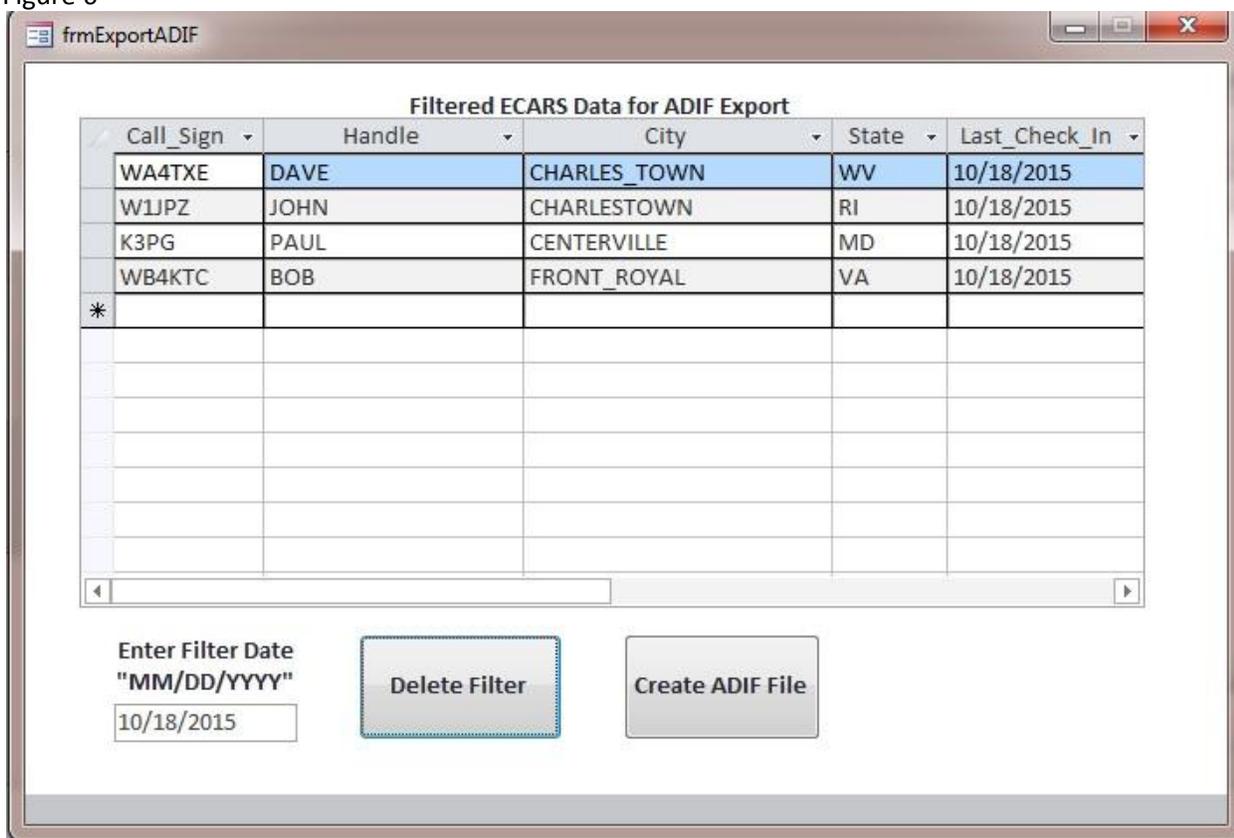
Figure 7

```
#++
#
#  Mod ECARS Logger v1.0 build 01, by Bob Goodwin, N4HCI
#
#  Created: 11 October 2015
#  With credit to ECARS Custom Net Manager Version 7.0 by Robert J Traister, WB4KTC
#
#--

<ADIF_VERS:3>2.2
<PROGRAMID:16>Mod ECARS Logger
<PROGRAMVERSION:20>Version 1.0 build 01
<EOH>

<call:6>WA4TXE<band:3>40m<mode:3>SSB<qso_date:8>20151018<time_on:6>133221<name:4>DAV
E<qth:12>CHARLES_TOWN<state:2>WV<freq:5>7.255<tx_pwr:3>200<my_gridsquare:6>FM17sb<my_
rig:15>Yaesu FTdx 5000<rst_sent:2>59<rst_rcvd:2>59<EOR>
<call:5>W1JPZ<band:3>40m<mode:3>SSB<qso_date:8>20151018<time_on:6>114733<name:4>JOHN<
qth:11>CHARLESTOWN<state:2>RI<freq:5>7.255<tx_pwr:3>200<my_gridsquare:6>FM17sb<my_rig:15
>Yaesu FTdx 5000<rst_sent:2>59<rst_rcvd:2>59<EOR>
<call:4>K3PG<band:3>40m<mode:3>SSB<qso_date:8>20151018<time_on:6>113720<name:4>PAUL<q
th:11>CENTERVILLE<state:2>MD<freq:5>7.255<tx_pwr:3>200<my_gridsquare:6>FM17sb<my_rig:15>
Yaesu FTdx 5000<rst_sent:2>59<rst_rcvd:2>59<EOR>
```

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<call:6>WB4KTC<band:3>40m<mode:3>SSB<qso_date:8>20151018<time_on:6>105226<name:3>BOB
<qth:11>FRONT_ROYAL<state:2>VA<freq:5>7.255<tx_pwr:3>200<my_gridsquare:6>FM17sb<my_rig:1
5>Yaesu FTdx 5000<rst_sent:2>59<rst_rcvd:2>59<EOR>
<EOF>

If desired for any reason, the ADI file can be edited within Notepad.

Edit ECARS Data:

The ECARS database used in the Mod ECARS Logger was extracted from an earlier instance of ECARS Custom Net Manager. There are many years of data shown, totaling over 4200 contacts, from several NCSs.

The edit ECARS data option is provided to allow a user to scan through the ECARS database and correct or delete entries as desired. Editing of the database provided with the Mod ECARS Logger is not necessary for its proper operation but may be desirable by an NCS.

Clicking the 'Edit ECARS Data' command button will cause the popup shown in Figure 8 to be presented to the user.

Figure 8

Figure 8 is a listing of all fields and all contacts in the ECARS database, sorted in call sign order. Each row is a single QSO.

Data can be scanned with the vertical scroll bar. Data can be searched using the 'Search' box at the bottom of Figure 8. Data can be sorted or filtered by use of the arrows to the right of the field names at each column heading.

To edit data of interest, put the cursor in the cell to be edited and type in the correction.

To delete a contact of interest, left click the box to the left of the call sign, and press the 'Delete' key on the computer. Multiple sequential entries can be deleted at the same time by simultaneous selection of the sequential entries and then pressing the 'Delete' key. Deletion of sequential entries of filtered lists (e.g. all QSOs with a name=Jerry) also works.

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Close the Edit screen by clicking the 'X' in the top right corner of the window when finished editing.

Export DB to Excel:

Clicking the 'Export DB to Excel' command button will produce an Excel file, named 'Mod_ECARS_db_Export.xls', and which is comprised of all the records in the Mod ECARS Logger database. The Excel file will be located in the file location specified as the 'Export / Import File Location' in the NCS Configuration Screen (See Figure 1). The program will fault if the file location directory does not exist.

The purpose of this option is to allow an experienced NCS to extract the history of his Check-ins and send it to a new NCS. The new NCS can load this data into his copy of Mod ECARS Logger in order to gain the benefits this data provides in helping an NCS to identify someone who is checking in to ECARS. See 'Import Excel to DB'.

Import Excel to DB:

Clicking the 'Import Excel to DB' command button will import the data from an Excel file named 'Mod_ECARS_db_Export.xls' and located in the file location specified as the 'Export / Import File Location' in the NCS Configuration Screen (See Figure 1). An Excel file provided by another NCS from his copy of Mod ECARS Logger should be properly named. The program will fault if either the file name or directory is incorrect.

The purpose of this option is to allow an experienced NCS to import the history of Check-ins developed by one or more experienced NCS. Importing this data will help a new NCS to identify people who are checking in to ECARS. See 'Export DB to Excel'.

Close Without Saving:

There is an option to close the Mod ECARS Logger without saving any of the new Check-Ins or updated Check-In information when closing the program. This action is NOT reversible. To Close without Saving, click on the 'Close w/o Saving' command button. There is NO CONFIRMATION required for this action to occur.

When the Mod ECARS Logger is started, it makes a copy of the ECARS database with a different name. If the Close without Saving option is executed, the ECARS database, that was modified with each new entry and each changed entry, is deleted and the copy of the database made before the session is renamed to be the ECARS database of record.

Close and Save:

To close and save all the new/changed data entered during the session, click on the 'Close and Save' command button. There is NO CONFIRMATION required for this action to occur.

Database:

Unless otherwise requested, distribution of the Mod ECARS Logger program will have a database of about 4000 contacts that will become more populated as the NCS uses the program and saves the check in information to the database. If desired, the program can be distributed with an empty database.

If the requesting NCS is a prior user of the ECARS Custom Net Manager by WB4KTC, and as a consequence has a database from that program that he'd like to retain, then that database can be loaded into the Mod ECARS Logger when it is distributed. To do this, the NCS would export his existing ECARS Custom Net

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Manager database by use of the 'ASCII Dump' command button. This will create a file named 'Database dump.dbt' but can be renamed to any filename desired.

The 'Database dump.dbt' is a text file that is easily opened and edited by Notepad. It can also be imported by Excel as a space delimited file. An example few rows of an Excel import is shown in Figure 9.

Figure 9

Call_Sign	Data_Last_Changed	ECARS_No	Handle	City	State	Notes	Last_Checked_In
AA2TZ	12/6/2001	2935	JOHN	CAPE_MAY_	NJ	??	12/6/2001
K1IOQ	12/6/2001	Non-Member	ALFRED	BROOKLYN	NY	??	12/6/2001
K1SHH	12/6/2001	Non-Member	DICK	WILMINGTON	MA	??	12/6/2001
K2DCL	12/6/2001	9999	GEORGE	YARMOUTHPORT	MA	??	12/6/2001
K2DX	12/6/2001	9999	PAUL	GRENLOCH	NJ	??	12/6/2001

The data shown in Figure 8 is in the column order of an ASCII dump from the ECARS Custom Net Manager, but the ASCII dump does not have column headings. The column headings shown in figure 9 are the database field names used in the Mod ECARS Logger and should be added exactly as shown in order to ensure an accurate import of the data into the Mod ECARS Logger. Note the use of underscore characters between the words of 'Call_Sign', 'Data_Last_Changed', 'ECARS_No', and 'Last_Checked_In' fields.

Once the field names have been added to an Excel file created from the ASCII dump file, it can be imported into the Mod ECARS Logger as follows:
   a. Name the Excel file 'Mod_ECARS_db_Export.xls'
   b. Place the Excel file into the file location specified in the Export / Import File Location section of the NCS Configuration Screen (See Figure 1)
   c. Click on the 'Import Excel to DB' command button on the Main Screen (see Figure 2)
   d. Use the 'Edit ECARS Data' option to review the data and verify a proper import occurred.

Alternatively, if the NCS has a full featured copy of Microsoft Access, then he can open the 'ECARS_db' table and import the Excel datasheet that imported the ASCII dump from the ECARS Custom Net Manager.

Finally, if desired, an NCS can email the Figure 8 Excel file to Bob Goodwin, N4HCI at bobgn1@cox.net. I'll import this data into the 'ECARS_db' table of the Mod_ECARS_Logger and return it to the NCS.

Installation:
The Mod ECARS Logger was developed using Microsoft Access 2013. It is distributable as an ACCDB, ACCDE, MDB, or MDE file. It requires the user to have either a full up Access system installed on his computer, or a free Access Runtime module installed.

The Mod ECARS Logger is distributed as a single file that runs in conjunction with a full featured Access system, or an Access Runtime module.

If the user has Access installed, then either an ACCDB or MDB file is appropriate. If the user has, or obtains, an Access Runtime Module, then an ACCDE or MDE file is appropriate.

Microsoft freely distributes their runtime modules at their website at the link
http://www.fmsinc.com/microsoftaccess/runtime/index.htm

While a full featured Access and the Access Runtime Module involve an installation process on the computer that will run them, the Mod ECARS Logger does not require installation. It is simply a file that can be put anywhere on the host computer that the NCS desires. If a desktop icon is desired, the Mod ECARS Logger file can be pasted on the Desktop, or the NCS can paste the file elsewhere and put a

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shortcut on the Desktop by right clicking the Mod ECARS Logger filename, selecting 'Send To' from the popup, and choosing 'Desktop, Create Shortcut' from the popup choices.

Mod ECARS Logger was developed on a Win 7 64 bit computer running a 32 bit version of Access 2013. It has been tested with the full Access system on the development computer, and with the 32 bit Runtime 2013 module running on a laptop that does not have the full up Access program installed.

The program needs to be tested on Windows machines with other operating systems (Win XP, Win 8, Win 10) and with other versions of version of Access installed (2010, 2007, 2003). Testing to date with Win XP SP 3 has not been encouraging.

Anyone who desires to test operate the Mod ECARS Logger on their system can contact the author, N4HCI, at bobgn1@cox.net.

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Release Notes:

1.5   Initial release to WA2DVU.

1.6   Incorporated changes suggested by WA2DVU and WA4THR.
   - Modified the Check In List to put new entries at the top of the list so that the using NCS can always see the 20 most recent Check Ins.
   - Modified the Check In List to present one of two variants. The first Check In List variant is the original release showing Distance and Bearing to each checked in contact if the NCS was using the QRZ or HamQTH supplemental data options. The 2nd Check In List Variant shows the QTH for each Checked In contact. Both Check In Lists are kept up to date and synchronized with additions and deletions. Toggle buttons are provided to change which is shown on the main screen.
   - Corrected the Users Manual to correctly note that duplicate check ins are prevented.

1.6 Build 2 – 11 Dec 2015
   - Cleaned up various cases in which the focus left tboSuffix when it was not supposed to and complicated entry of suffixes and call signs
   - Set Warnings to false for when setting focus or going to a control during data entry into tboCall_Sign, tboHandle, tboCity, tboState, tboECARS_No, tboNotes and returned warnings to true after these setting focus and go to a control commands.

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[i] The author has not found a condition in which QRZ or HamQTH does not have a recorded latitude and longitude for any listed call sign in their database. However, if there is such a circumstance, the program will likely freeze with an error code. QRZ explains in detail how they always assign a latitude, and longitude to every call sign in their database, based in preferential order on direct entry by the call sign owner, or QRZ calculation based upon the center of the assigned grid square, city, or state, in descending order. No such discussion has been found on HamQTH as to how they get their latitude and longitude data or whether latitude and longitude are universally provided for all call signs.