Maintenance Malfunction Information Report

MMIR User's Manual

Helicopter Association International

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About MMIR

The Maintenance Malfunction Information Reporting (MMIR) computer program is a paperless solution to the time consuming process of hand writing MMIR forms. The computerized program fulfills FAA Service Difficulty Reporting (SDR) requirements and concomitantly creates manufacturer warranty claim forms.

Since 1982, the Helicopter Association International (HAI) has been working to develop a system that will facilitate the collection and collation of empirical data, including Service Difficulties, on any removable part of aircraft or engines, and timely analysis of that data. In 1985 HAI's Maintenance Technical Committee took the lead in this effort, which became known as the Maintenance Malfunction Information Report (MMIR) System.

With approval of HAI's Board, including the necessary financial backing, and supported by the HAI staff, the Maintenance/Technical Committee designed a one-page, four-copy, self-carboning MMIR form. This "universal" form was accepted by manufacturers for warranty claims and by the FAA in lieu of the SDR. Initially HAI printed and circulated 10,000 copies of this form for field trial use.

Acceptance of the new form was very high. Some minor modifications were made based on user response, and additional copies were printed and distributed. The procedure was for a reporting organization to retain one copy and submit one copy each to the FAA, the manufacturer, and the HAI. At first all processing was manual. The data was extracted from the hard copies and entered into a computer system. This was undertaken as an interim measure, with the realization that the sheer volume of reports would soon overwhelm a manual system.

Using the off-the-shelf software development program "FoxPro," which has licensing and other advantages for multiple users, HAI developed a software version of the MMIR form. The MMIR software package uses "Lookup" tables to access data such as ATA codes, Part Numbers, Aircraft Model Numbers, or Addresses. The Lookup tables ensure data accuracy and reward the user with fast form completion.

The MMIR software has been fine tuned and improved through extended field evaluations with operators such as Petroleum Helicopters, ERA Aviation and others. Some significant improvements have thus been made to the MMIR software,

including the additions of default data fields, a duplicate record function, a key word search, and the creation of MMIR Lite. MMIR 4.0 is an up-to-date Y2K compliant program written for the 32 bit operating systems Windows 95, Windows 98, and Windows NT Server.

The data is collected at HAI and analysis reports are available on the MMIR Web site http://*www.mmir.com* 24 hours a day, 7 days a week. These reports provide crucial information for trend monitoring, which has the potential to detect incipient failures on a real-time basis as well as to supply justification data to extend or modify part life limits, overhaul times, and maintenance cycle scheduling.

Benefits to Operators

Participants in the MMIR Program include both operators and maintenance operations that contribute data to the MMIR system, either in paper format or the preferred electronic format.

Using the software to complete MMIR forms reduces workload tremendously. The program allows the person entering the data to customize the database tables for future use, thus decreasing the amount of time spent entering data and increasing the accuracy of the data entered. The MMIR program stores key information about the aircraft and engines maintained by the organization and this information is available at the touch of a key.

The completed electronic form can be sent by modem to HAI's main MMIR database at *http://www.mmir.com*; participating manufacturers and the FAA will electronically retrieve the data, as appropriate. Contributing operators can access MMIR online at any time to run analysis reports by part number. The program has other reporting capabilities such as providing outstanding warranties, direct operating costs, parts and model analysis reports.

Benefits to Manufacturers

Participating manufacturers are those who supply part number Lookup data (to reduce data entry time and errors) and accept MMIR warranty claims electronically. Filing warranty claims through the MMIR system reduces the need for manual data entry, creating a reduction in workload and an increase in accuracy.

Participating manufacturers can download data from MMIR online for their aircraft. This data set is comprehensive, including every data field in the program, and is used by the manufacturer to complement their reliability engineering.

Benefits to FAA

In the past, the FAA had expressed concern about the ability of the Service Difficulty Report (SDR) system to meet the current need for such reports. Consideration was made within the FAA of initiating the design of a revised system, which would use current technology, and would have the growth potential to meet future FAA/Industry "SDR" and related needs.

The MMIR system was designed for use by the helicopter community and is a proven entity. It has evolved over a sixteen-year period, with a majority of the development occurring within the past ten years.

The MMIR program is a helicopter industry standard because it is a multi-purpose, universal system. It gives operators a strong economic incentive to use MMIR software to file warranty claims and it automatically generates an SDR report. The entire process is now computerized, adding functionality and efficiency to the process. MMIR data can be transferred electronically, in all directions, between operator, manufacturer, FAA, and HAI.

The FAA benefits from this proven method, because the system is already designed, built, and in use. The only expense to the FAA is for a feasibility demonstration .

Current Status

The MMIR software has been sent to over 600 operators and to several manufacturers. Due to an overwhelming response, there are now over 50,000 completed reports in the MMIR central database in HAI headquarters. Part number analysis reports can be run 24 hours a day on the MMIR Web page at *http://www.mmir.com*.

Summary

The MMIR data format has established a standard for reporting Service Difficulty Reports and warranty claims. Industry-wide, data entry is reduced from manual input into four computer systems to just one, and the one-time data entry is faster and more accurate. Manufacturers and the FAA have quick access to reliability data, which is critical to the continued safe operation of aircraft.

Helicopter Association International (HAI)

Overview

The Helicopter Association International (HAI) is a nonprofit professional trade association of over 1,250 member organizations from 60 nations. Since 1948, HAI has been dedicated to promoting the helicopter as a safe and efficient method of transportation and to the advancement of the civil helicopter industry.

HAI's Membership

HAI's membership structure enables the Association to provide continuing meaningful exchange between operatiors and manufacturers. Member companies include operators of civil helicopters, manufacturers, and peripheral industry supporters.

HELI-EXPO

HELI-EXPO, HAI's Annual Meeting and Exposition, is the world's largest display of helicopter products and services. This annual event attracts over 12,000 helicopter professionals from around the world. HELI-EXPO allows industry representatives to meet with leaders in the industry, examine the latest in helicopter and equipment and applications, participate in professional development courses, and attend open meetings of HAI's 20 active committees. HELI-EXPO features over 400 exhibiting companies and over 60 helicopters on display.

Government Affairs

With its headquarters located just outside of Washington, D.C., HAI works closely with the Federal government and other industry affiliated associations. HAI monitors and works to influence governmental actions that affect the commercial industry. HAI represents its membership at programs such as FAA's Rotorcraft Task Force (ROTAF), the Aviation Rulemaking Advisory Committee (ARAC) and with the Joint Airworthiness Authority (JAA) in conjunction and the International Civil Aviation Organization (ICAO).

Publications

HAI distributes publications for the benefit of the helicopter industry. The award winning Helicopter Annual continues to be the unrivalled reference source of the civil helicopter industry. Other publications include HAI's quarterly ROTOR Magazine; Operations and Maintenance Updates; Preliminary Accident Reports as reported by the FAA and NTSB, compiled and published quarterly; and regulatory newsletters.

Installing and Removing MMIR 4.0

Thank you for participating in MMIR! This program should help enhance aircraft safety and reliability.

What You will Need to Run MMIR 4.0

To use MMIR 4.0 you will need:

Microsoft Windows 95 or 98, or Windows NT 3.51, 4.0, or 5.0.

At least 16 MB of memory (32 or more MB RAM is recommended for all Windows 95 programs)

28.1 megabytes of hard disk space is required to install MMIR. You will need to have additional space as your database grows. We recommend keeping a minimum of 50 MB free on your computer at all times so that Windows can make optimal use of your programming resources.

You will need Internet access if you wish to take full advantage of all the features of this program.

Starting Setup

Before you begin, make sure all Windows programs are closed.

Place the MMIR 4.0 CD in your computer's CD-ROM drive.

Double click **My Computer** on your desktop.
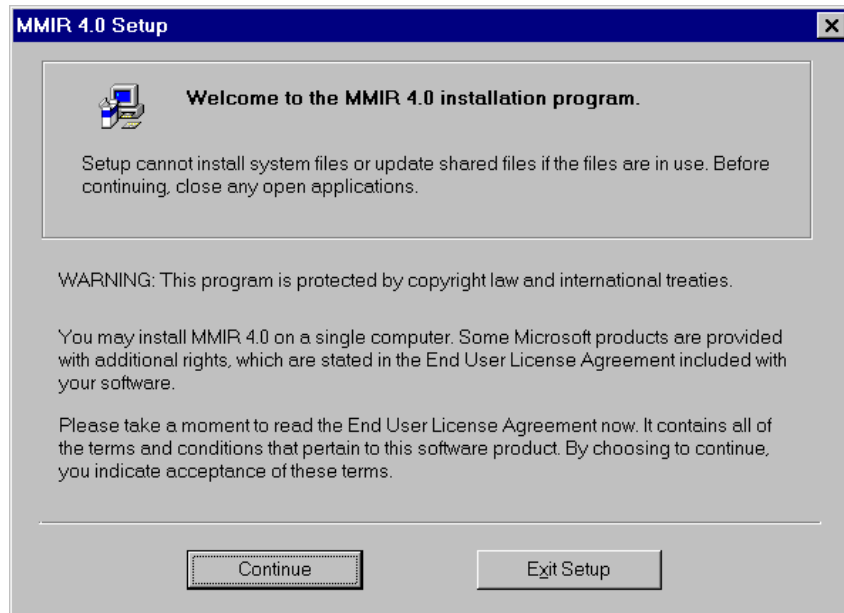
Double click your CD ROM drive.

Double click **SETUP.exe**.

Follow the prompts.

If you have MMIR 3.0, you can load your old database into

MMIR 4.0 by using the Convert Data utility under the Utilities menu..

WARNING: Please do not install MMIR 4.0 into the same folder that contains an earlier version of MMIR or you will lose all your old data.

This is the first screen you will see when you install MMIR 4.0

Click **Continue** after you have read and agreed to these terms.
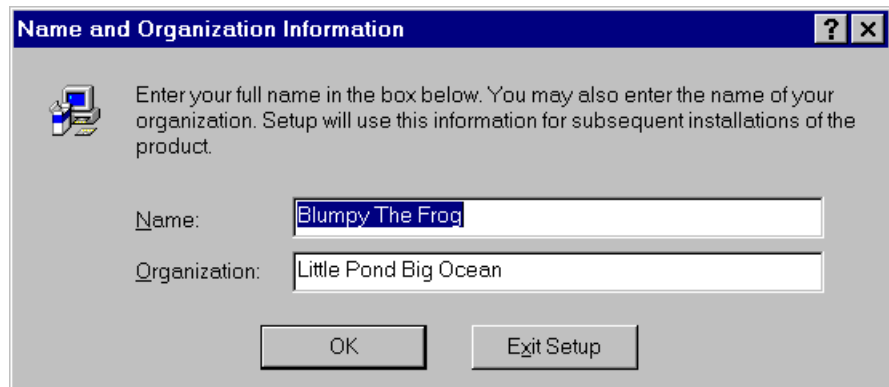
This is the second screen of the MMIR 4.0 Setup. Click **OK** after you have typed in your name and organization.
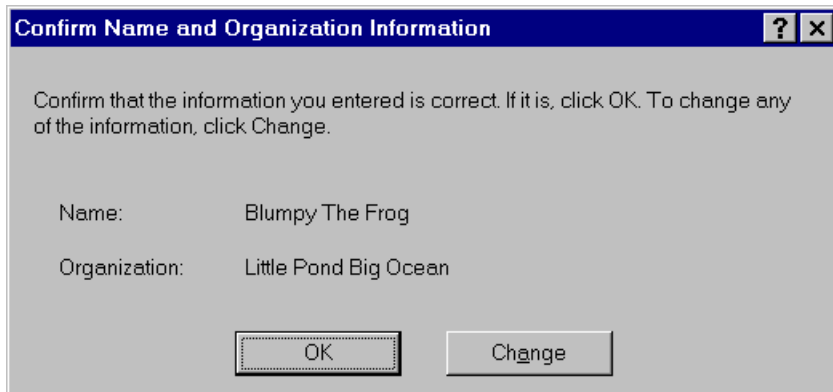
This is the third screen of the MMIR 4.0 Setup. You can just click **OK** if everything is correct.
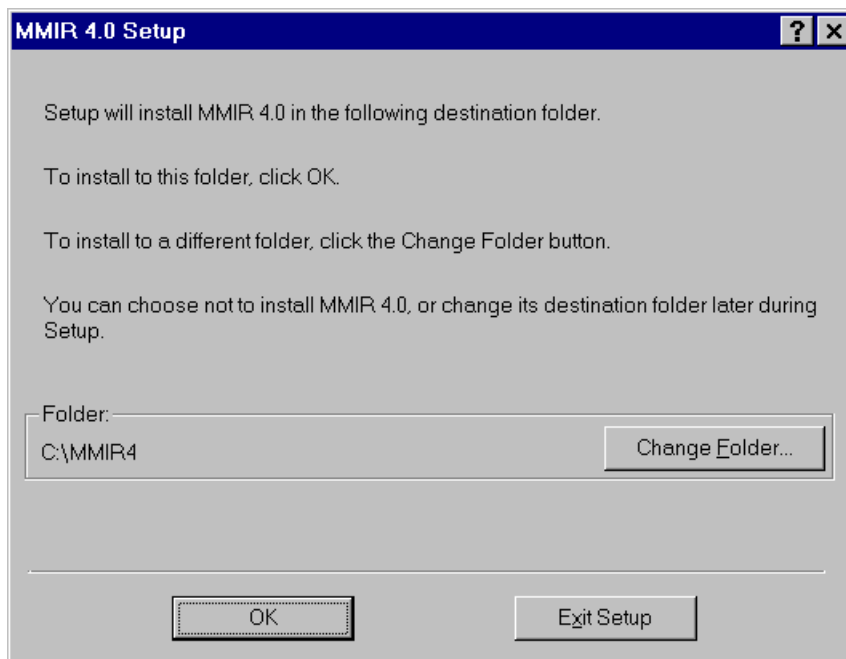
You can just click **OK** if you want to accept the default installation. At this point you may wish to write down the destination folder for MMIR 4.0.
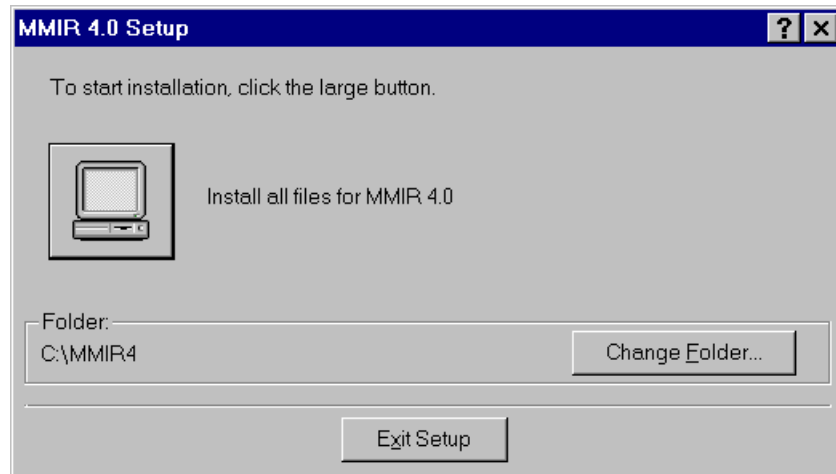
This is the only tricky screen. The large button referred to is the one that looks like a desktop computer. Click on the computer monitor to continue, or you can change the destination folder now.
If you exit Setup, you can always install MMIR later.
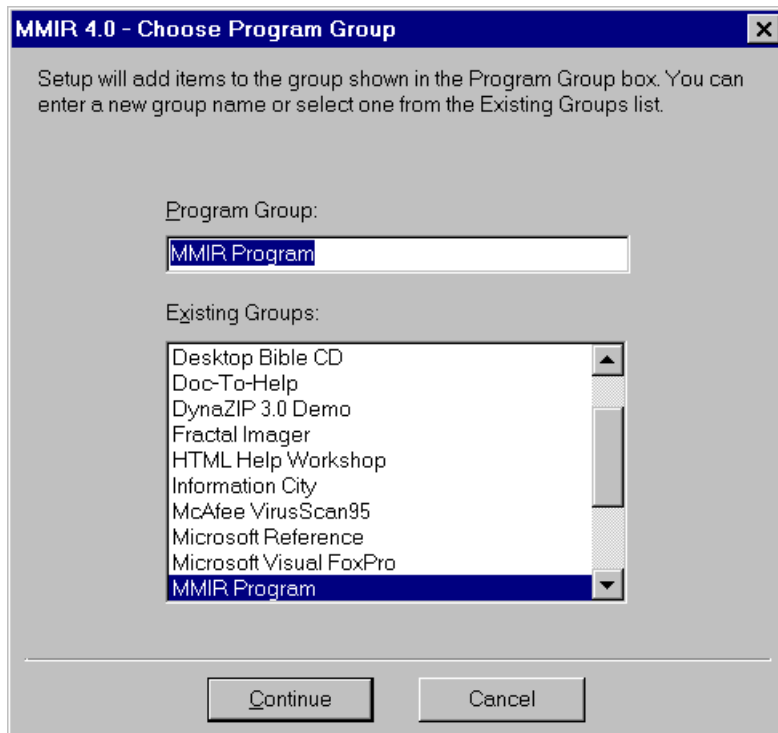
This is the last screen of the installation process in which you can change your mind about installing MMIR 4.0 to your computer. When you click **Continue**, Setup will begin copying MMIR and MMIR Lite onto your computer's hard drive.
At the end of the installation procedure, you will get one more window announcing the installation was successful and is now complete. Click **OK**.

To Run MMIR 4.0 After Installation

Click **START** on your task bar. A column will popup listing your Startup

Programs. Highlight MMIR Program.

Click on the MMIR 4.0 flag that appears.

The initial screen will appear.

```
┌──────────────────────────────────────────────────────┐
│ INITIAL                                                │
│                                                        │
│                                                        │
│         Enter a password for writing access.           │
│                                                        │
│     ┌────────────────────────────────────────────┐     │
│     │                                            │     │
│     │   Enter Your Initials:  [    ]             │     │
│     │                                            │     │
│     │   Enter The Password:  [            ]      │     │
│     │                                            │     │
│     └────────────────────────────────────────────┘     │
│                                                        │
│                                       ┌──────────┐     │
│                                       │ Continue │     │
│                                       └──────────┘     │
└──────────────────────────────────────────────────────┘
```
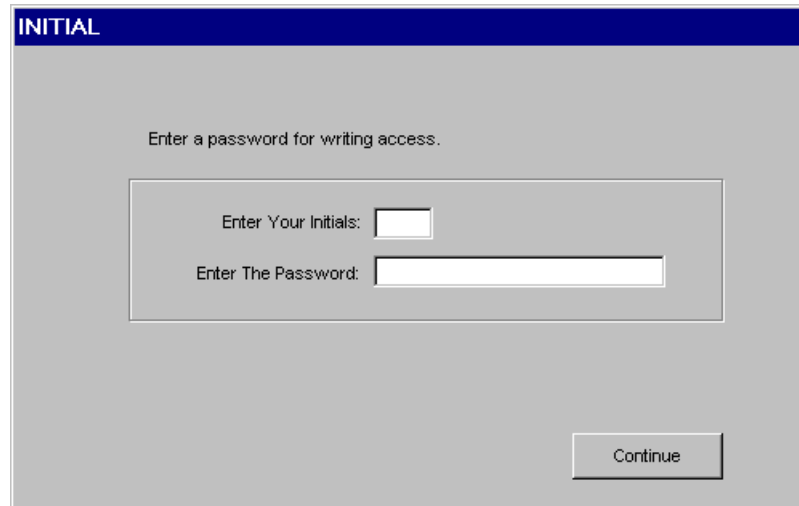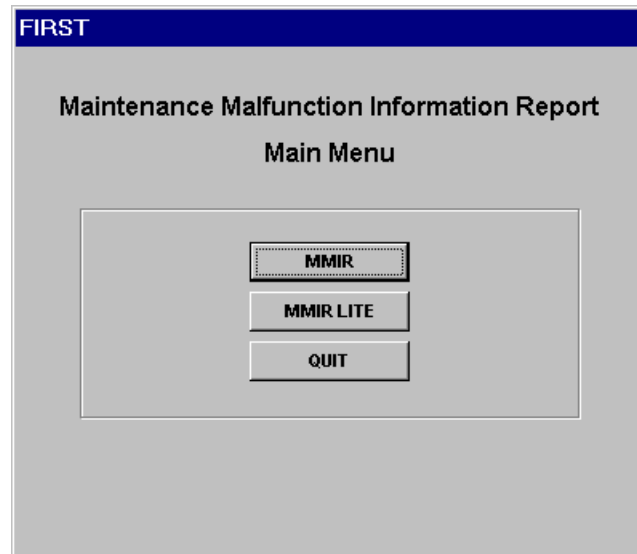
Type in your initials. You won't need to press ENTER, the cursor will move into the Password box.The first time you use MMIR, the password is PASSWORD.

You can change your password once you are inside either MMIR or MMIR Lite. To change your password, click Utilities on your title bar menu, then click on the Change Password utility. For now, just type in PASSWORD and click **Continue**.

```
┌──────────────────────────────────────────────────────┐
│ FIRST                                                  │
│                                                        │
│      Maintenance Malfunction Information Report        │
│                   Main Menu                            │
│                                                        │
│        ┌────────────────────────────────┐              │
│        │         ┌──────────────┐        │              │
│        │         │    MMIR      │        │              │
│        │         └──────────────┘        │              │
│        │         ┌──────────────┐        │              │
│        │         │  MMIR LITE   │        │              │
│        │         └──────────────┘        │              │
│        │         ┌──────────────┐        │              │
│        │         │    QUIT      │        │              │
│        │         └──────────────┘        │              │
│        └────────────────────────────────┘              │
│                                                        │
│                                                        │
└──────────────────────────────────────────────────────┘
```

Select either MMIR or MMIR Lite by clicking on your choice.

To Create a Shortcut for MMIR 4.0

Double click **My Computer** on your desktop.

Double click the icon of the drive onto which MMIR 4.0 is installed.

> The default installation drive is C.

Double click the folder into which MMIR 4.0 is iinstalled.

> The default folder is MMIR4.

Click on the MMIRLITE icon. It looks like a helicopter, with red MMIR letters around it.

Drag the MMIR Lite icon onto your desktop to where you want it.

You can rename the shortcut by right clicking on the shortcut icon and selecting Rename from the window menu that pops up.

To run MMIR and MMIR Lite from your desktop using the shortcut, double click on the helicopter icon.

To Remove MMIR 4.0 From Your Computer

You will need to:

Delete the program itself

Remove the program from your Program Menu on your Task bar

Delete the Shortcut if you have made one.

To Delete The MMIR 4.0 Program

Double click **My Computer** on your desktop.

Double click the icon of the drive onto which MMIR 4.0 is installed.

> The default installation drive is C.

Right click the folder into which MMIR 4.0 is iinstalled.

> The default folder is MMIR4.

Click **Delete** on the Windows menu that drops down when you right click the MMIR 4.0 folder.

To Remove MMIR Program From Your Task Bar

Click **START** on your Windows Task Bar. A menu will pop up.

Highlight the **Settings** menu item. Another menu will popup.

Select **Task Bar** from the menu listing. The **Task Bar Properties** window will appear.

Click on the **Start Menu** tab.

Under **Customize Start Menu**, select **Remove** program by clicking on the **Remove** button.

Highlight **MMIR Program** and click **Remove**.

Select **Yes to All** when you are asked whether you want to remove this program from your computer.

To delete the shortcut, right click on the shortcut icon and choose **Delete**.

You can empty your Recycle Bin whenever you like.

MMIR 4.0 does not need to be uninstalled. You can simply delete it following the procedure outlined above.

MMIR Basics

About The MMIR Database

Lookup Files

The MMIR program is a multi-file, relational database. The data is stored in a main MMIR database. To make data entry more efficient and accurate, most items are stored in Lookup tables. The following Lookup tables exist:

LOOKUP	DATA FIELDS IN LOOKUP
Address	Company Name, Address, Phone, Fax, Main Contact
Parts	Part Number, Nomenclature, Manufacturer, List Prices
Aircraft	Registration Number, Model, Serial Number, Manufacturer, Delivery Date, Delivery Hours
Aircraft Model	Aircraft Model, Manufacturer
ATA Code	ATA Code, ATA Description
Operator Designator	FAA Operator Designator, Company, District Office, Submitter Code
Engine	Serial Number, Model Number, Manufacturer, Purchase Date, Delivery Hours
Engine Models	Manufacturer, Model

After the data is entered into a Lookup table, subsequent MMIR reports can use the same information thus ensuring accuracy and consistency of data entry. The MMIR software as distributed, includes 120,000 records in the Parts Lookup, all standard ATA codes, most FAA Operator Designators, all known aircraft models, and most engine models.

MMIR Screens

The MMIR program has eight main screens. You can click on the title of the screen you want or you can move sequentially through the program by clicking the **NEXT SCREEN** button at the bottom right corner of each screen. The main MMIR screens are listed below along with the data fields each screen contains:

Address Information (Screen 1)

FAA Operator Designator, Occur Date, Control Number, Submitted To, Submitted By, Submitted For, Record Number, Report Date, Report Time, Entered By

Warranty Claim (Screen 2)

Customer Order, Warranty Claim (Part Cost, Labor Cost, three descriptive fields for the parts used and their costs), Open or Closed, Total Repair Cost

Aircraft Information (Screen 3)

Registration Number, Serial Number, Delivery Date, Hours at Delivery, Model, Manufacturer, Hours at Occur, Cycles

SDR Information (Screen 4)

Defect, Stage of Flight, Precautionary Procedure, File with FAA?

Part Information (Screen 5)

Reported Part: Part Number, Part Name, Serial Number, Quantity, Location, ATA Code, Hours at Occur, Cycles, Original Equipment?, A/C Hours at Install, Install Date, Purchase Order Number, Invoice Number, Waybill Number, Carrier, Shipping Date, Vendor

Replacement Part: Part Number, Part Name, From Inventory?, Serial Number, Quantity, Reconditioned?, Invoice Date, Purchase Order Number, Invoice Number, Invoice Cost, Part Hours, Part Cycles, Waybill Number, Carrier, Ship Date, Vendor

Engine Data (Screen 6)

Serial Number, Model Number, Manufacturer, Part Number, Hours at Delivery, Purchase Date, Total Hours, Cycles

Major Assembly (Screen 7)

Part Number, Part Name, Serial Number, Part Hours, Cycles

Reason and Action (Screen 8)

Reason for Report, Action Taken, Manufacturer's Comments

MMIR Data Fields And Their Colors

MMIR data fields are color-coded according to what kind they are and as to how they accept user input.

Field Color	Corresponding Field or Function
Light Blue	Lookup table is available; you can type into these fields and what you type will correspond to a record stored in a Lookup table.
White	Data entry fields you can type into; these fields are not bound to a Lookup
Light Grey	Lookup tables automatically fill in these fields, or else they have been disabled because you don't need to enter any data into them.
Dark Blue	Highlights the field in which the focus is set. Indicates this is the field into which you can type next.

You can make choices using:

Combo Boxes. These look like rectangles that have a down arrow on the right hand side. Click on the down arrow and a list of choices will be offered to you from which you can select by highlight or clicking on your choice.

Radio Buttons. These are circles and you select your choice by clicking in the circle you choose.

Set Defaults screens are light green.

Main data entry screens are grey.

The Record Sort Order Combo Box

At the lower left corner of every screen in MMIR and MMIR Lite is a combo box which indicates the sort order by which you are viewing your MMIR records. There are several keys by which MMIR records are indexed. This combo box allows you to specify an index, or sort order. When you click on the down arrow on the right hand side of this box, a list will drop down from which you can choose the sort order in which you would like to browse your MMIR records. When you use the Search button, choose a Search parameter, and type a specific value for Search, this combo box will automatically display the Search parameter you have selected and the Next and Previous buttons will move through your record database according to the result set of your Search. Each time you open MMIR and MMIR Lite, the sort order will by default be according to Record Number and the last record in your database will automatically be displayed.

Using the Keyboard and the Mouse

To Open The MMIR Program For Microsoft Windows™

From Windows 95 Start menu, select "Programs."

Select MMIR Program.

Click MMIR 4.0. A window will popup asking for your initials. Type your initials. These are used only for your organization's internal tracking purposes. After you enter your initials, you will need to type in your password if you want to add new records or edit old ones. When you first install MMIR, the password is **PASSWORD**.

The MMIR Master Menu will appear listing three choices: MMIR, MMIR Lite, or Quit. Click on the command of your choice. You can also just press ENTER unless you want to use MMIR Lite.

Once you are inside MMIR or MMIR Lite, to activate the menus, press the ALT key followed by the corresponding underlined letter of the desired pull-down menu. The first choice on the pull-down menus will be highlighted. Arrow to your desired menu choice and press the ENTER key. Pointing to the menu with a mouse and clicking the mouse button will also activate the menus.

Many shortcut keystrokes are available for use. Whenever you see a command button caption or a menu item with an underlined letter, pressing the ALT key and the underlined letter simultaneously will activate that command or menu item. The chart below lists the available shortcuts:

SHORTCUT	KEY
Help	F1
Copy Submitted By	F7
Copy Part Number	F7
Add Record	ALT+A
Edit Record	ALT+D
End of File	ALT+E
Delete Record	ALT+L
Next Record	ALT+N
Quit Program	ALT+Q
Print Record	ALT+R
Search All Records	ALT+S
Top	ALT+T
Previous Record	ALT+V

Workflow And Navigation

The workflow of MMIR and MMIR Lite is from the top left of each screen to the bottom right of each screen. The only exception to this is Screen 1, where you will begin with the FAA Operator Designator field which is located in the upper right corner under the programmatically controlled Report Information section. On Screen 1, once you have typed in your Control Number the cursor will tab into the Submitted To field which is located in the upper left of the screen. Usually you will have already set the address fields in Set Defaults mode and will only need to fill in the Occur Date and Control Number for the record you are adding, and then you can go to the next screen to continue your data entry for that record.

Navigation in MMIR and MMIR Lite is very flexible. You can use your mouse, and your keyboard keys: TAB, ENTER, and the four arrow keys. You can go from screen to screen by clicking on the title of that screen or you can click the NEXT SCREEN button located at the bottom right corner of each screen if you want to move sequentially from screen to screen through the program. Each time you click NEXT SCREEN or click on the title of a screen, the focus will be on the screen title of the screen when you first get to it. You can see the rectangle around the title indicating the focus is there. Pressing TAB or ENTER, will set the focus into the first data field of that screen, or you can click with your mouse on the data field you wish to use.

We recommend using your TAB key for most data entry, but you will find the utility of combining all the navigational keys in the course of your data entry. The arrow keys are very useful for right handed people especially. The only drawback to relying exclusively on them is that in certain data entry fields they will only move you through one character space at a time in those fields, when you really want to move through that entire field. Using your mouse to jump from field to field is a very good idea when you want to jump across large intervals of space. The only drawback to that is you have to take your hands from the keyboard! With very little practice, you will find your own best methods of using these programs.

Common Keyboard Commands

ALT+A NEW/ADD RECORD: To add a new record. The record will be added to the file in the current open window. When the current window is in the Main Screen Mode, a new MMIR record will be added. The values you typed in Set Defaults Screen will be retained.

ALT+L DELETE RECORD: To delete an entire record. When ALT+L is pressed, a confirmation is required before the record is deleted and a window will popup. To confirm the deletion of this record click YES or press ENTER.

ALT+T TOP OF RECORD FILE: Moves to the beginning of the entire MMIR data file.

ALT+E END OF RECORD FILE: Moves to the end of the entire MMIR data file.

F1 HELP: Accesses the MMIR Help Screens

F7 COPY PREVIOUS FIELD: Only activated in the Submitted For field on Screen 1 or Replacement Part data entry field on Screen 5. In the Submitted For field, hitting the F7 key will copy the address and information from the Submitted By field into the Submitted For field. When the F7 key is pressed in the Replacement Part Data field, the removed Part Number and Part Name is copied to the Replacement

Part Number and Part Name fields. Often, the Replacement Part is the same as the Reported Part and the F7 key makes data entry quicker, easier, and more accurate.

NOTE: When you first startup MMIR or MMIR Lite, you will notice that many items on the screen will appear to be dimmed. This means that you cannot execute that option or command right now. For example, you have to <u>A</u>dd or E<u>d</u>it a record before you can Save it, therefore, the Save button will be disabled until you click <u>A</u>dd or <u>E</u>dit.

MMIR And MMIR Lite Standard Features And Functionalities

Most command buttons and procedures of MMIR and MMIR Lite work the same way in both programs. Becoming familiar with the functionalies of either program will enable you to use both programs with equal facility.

Command Buttons:

Database Navigation

Top
Displays the first record in the MMIR database. Use Top to view or edit records near the beginning of your database. No matter which record you are currently viewing, clicking Top will automatically display the very first record in the MMIR database.

Previous
Displays the record in your database immediately preceding the one you are currently viewing. For example, if you are viewing MMIR record number 563, clicking Previous will display record number 562. This button is disabled when you are viewing the first record in your database.

Next
Displays the record in your database that immediately follows the one you are viewing. For example, if you are viewing MMIR record number 563, clicking Next will display record number 564. This button is disabled when you are viewing the last record in your database.

End
Displays the last record row in the Lookup table. Use End to browse or edit records near the end of your Lookup database. No matter which record you are currently viewing, clicking End will automatically display the very last record in the Lookup table.

Search
Displays the Search options window. Simply select the criteria by which you wish to search your database, enter a value for which to search, and then click the OK button or press your ENTER key. All the records that fulfill your search criteria will be displayed on screen.

NOTE: MMIR by default will always display the last (end) record in your database when you first open the program. Therefore, the Next and End buttons will be disabled. Save and Revert will also be disabled until you click Add or Edit. Additionally, all your Lookup buttons are disabled until you click Add or Edit. However, you can always access all of the Lookups from the Lookup menu, whether you have clicked either Add or Edit or even if you have not.

Data Entry Buttons

Add Creates a new MMIR record. Any data you had entered in Set Defaults mode will be retained and read into the new record. You can edit any field before you Save the record. The record will not be added to your database until you click Save.

Delete Deletes the entire record you are currently viewing. Only use Delete when you are sure you want to remove a record from your database!

Edit Enables you to edit any or all fields in any MMIR record. Use Edit when you want to make changes to an existing record.

Revert Undoes changes to the current record and rereads the original field contents. When you click Revert, if you were editing an existing record, all the changes you had made to that record before you clicked Revert will be written back into the record you were editing. If you were adding a record, all the data entry you had made up until you clicked Revert will be undone, but any defaults you had set in Set Defaults mode will be retained. Revert wipes out all fresh data, restoring the entire contents of the current record to its original state.Use Revert to quickly remove erroneous data entries from your current record.

Save Completes the process of entering a new MMIR record and retains all revisions to a record you have edited. Use Save when you have completely filled all the data fields in the current record and are ready add a new record.

Print Prints a paper copy of the current record.

Quit Exits MMIR**.**

NOTE: When you click Add, or Edit, all Lookup buttons are activated, but all the command buttons are disabled except for Save and Revert. You can only work on one record at a time.

There are no ALT key combinations for Save and Revert.

Lookup Buttons

Add	Adds a new row to the Lookup table so you can make a new entry. Use Add to make a new record in the Lookup table.
Delete	Removes a record from the Lookup table. Use Delete only when you want to delete an entire row from your Lookup. Highlight the record row you want to remove and then click Delete to remove that entire row. When you only want to delete an item from within a cell, just highlight that cell only and type over whatever is in there.
Top	Displays the first record row in the Lookup table. Use Top to browse or edit records near the beginning of your Lookup database. No matter which record you are currently viewing, clicking Top will automatically display the very first record in the Lookup table. It is a good practice to keep a blank record at the top of your Lookups.
End	Displays the last record row in the Lookup table. Use End to browse or edit records near the end of your Lookup database. No matter which record you are currently viewing, pressing End will automatically display the very last record in the Lookup table.
Search	Displays a popup window into which you can type the characters of the item you want to find. Use Search to speed up your browsing or to go directly to the item you wish to find.
Cancel	Closes the Lookup table. Use Cancel when you want to exit from Lookup and return to MMIR without changing the MMIR field you looked up
OK	Closes the Lookup table and selects the item you highlighted in the Lookup. Use OK when you have added a record to the Lookup table and when you have successfully browsed and found the item you want to put into your current MMIR record.
Change Sort	Displays an alternate view of the Lookup table, listing the items by the index method you select. Use Change Sort to speed up your searches.

NOTE: There are no ALT key combinations in the Lookups. However, Help is always available by pressing F1 on your keyboard or by selecting the Help menu with your mouse.

Menu Choices

Each menu option has an ALT key shortcut combination. You can access each menu option by pressing the ALT key simultaneously with the underlined letter of the option you choose.

File Menu

Printer Setup

To select the printer for the MMIR Program. The printer must already be set up in your Windows environment. (See your Windows™ manual). Your default Windows printer is automatically selected. If you have more than one printer, you can select the one you want to use by clicking on a specific printer box and choosing it.

Export Data

This feature allows you to export MMIR data to other programs, to a disk file, or to upload onto the MMIR Web page at *http://www.mmir.com.*.

Import

This feature allows you to import data from other programs or a disk file or to download information.

Quit

Exits from MMIR program to the main menu screen. To exit the MMIR program completely, select option #3, Quit..

Applications Menu

Copy Record

Copies the current record with a new record number. This is a labor saving device that you may use instead of or in addition to the very powerful Set Defaults feature. When you have two or more forms to enter and the data on each form differs only by one or two fields, you can use Copy Record to speed your data entry. This utility automatically adds a new record and copies all the data from your current record and adds a new record with this data. Then you just need to click Edit after you have copied your record and then change which ever data fields you wish to. For example you may have two records in a row in which the only data differences are serial numbers of two parts with the same part number and same part hours. Use Copy Record after you have already entered and saved the first record; this will add a new record. Then click Edit and change the serial numbers of the Reported Part and the Replacement Part.

Locate

Accesses a re-sizable browse screen of all MMIR data in a spreadsheet format. This is useful for finding a record. When you open this, you can scroll through your entire

database. When you highlight a field (a field is a cell in the grid) or a record (a record is an entire row of cells in the grid) and click the OK button, MMIR will go directly to that record and display it in regular MMIR format. The complete MMIR record set of all the data stored in your MMIR database is like a gigantic Lookup table and all the Lookups are subsets of this one main Lookup. If you want to have an alternate "birds eye" view of your entire database and just scroll through it, you can do so with this item.

Reports Menu

Form

This feature allows you to print out a hard copy of each MMIR record. The form is accepted by the FAA as an SDR report, by manufacturers as a warranty claim form, and by HAI to build a collective database accessible to all members.

To print the current record only, click on the Print button located at the bottom of the screen. This will automatically print the current form to your Windows default printer.

To choose a selection of forms for print, access the Reports menu and choose Print Forms. Select from Database to choose a set of MMIR records. A typical selection would be a range of Entry dates. Click the OK button after making your selection, then choose the output destination.

Aircraft Report

This report will be a summary for reported parts in the MMIR database for a specific aircraft serial number. The printed report includes the Part Number, Part Nomenclature, Part Hours, Entry Date and the Total Repair Cost for the part.

Model Analysis

This report will list a summary of removed parts for a specific aircraft model. For each unique Part Number the printout includes Part Nomenclature, the Number of Parts Reported (for both known and unknown part hours), the Lowest Reported Part Hours, the Highest Reported Part Hours and the Average Reported Part Hours.

Part Number Analysis

This report will list a summary for each occurrence of a specific part number. For each reported part, the printout includes the Entry Date, the Part Hours, the Reason for Report, the Corrective Action Taken, the Submitted By State and the Aircraft Model.

This report is accessible on the MMIR Web page twenty-four hours a day, seven days a week. The HAI database has over 50,000 reported parts in its main MMIR database that will facilitate a more complete analysis of a specific part number. Please see Appendix 2 for more information about accessing the MMIR Web page.

Detailed Part Number Report

This report will list a summary for each occurrence of a specific part number. For each reported part, the printout includes the MMIR Record Number, Occur Date, removed part Hours, TSO, TSI, Serial Number, aircraft Registration Number, Aircraft Model, Reason for the Report and the corrective Action taken.

Open Warranty Report

This report will list all outstanding warranties in the MMIR system. The printout includes the Aircraft Registration Number, the Submitted To Company Name, the Part Number, Part Name and Purchase Price of the part. The end of the report gives a grand total for outstanding warranties.

Record Completion Report

This report lists all the fields in the current record which need to be completed in order to file a SDR.

Search Forms Report

This report will print out MMIR records that you specify using any or all of the following fields as parameters: beginning and ending Enter Date; beginning and ending Control Number; beginning and ending Record Number; Company Name Submitted To, Submitted By, Submitted For; Aircraft Serial Number; Aircraft Registration Number; minimum and maximum Aircraft Hours; Reported Part Number; Reported Part Serial Number; minimum and maximum Reported Part hours; Engine Serial Number. Use this report when you want to find records according to multiple search parameters. You can print to your screen to view your Search results. For example, you may want to find all reports for a certain aircraft that were filed within a specific range of dates. Type in the aircraft Serial Number or Registration Number or both, and type in the dates within which you wish to look for this aircraft; you can also specify a part or any other parameter. When you have typed in all the values, click OK. MMIR will search your database record by record, field by field. When MMIR has completed the search, a report window will popup. You can browse through the result set and find exactly the report you were looking for. You can write down the record number you want to print out, close the Search Forms window and use the Search utility to go directly to the report you were looking for and print it out hard copy. Or you can print out all the reports in your result set. *This Report is one of the most useful means of searching your MMIR database!*

Summary Report

This report will list a summary for each occurrence of a specific Part Number. For each reported part the printout includes the Occur Date, Aircraft Registration Number, Aircraft Model, Aircraft Hours, Part Number, Part Name (Nomenclature), Part Serial Number, Part Hours, TSI, TSO, Reason for Report, and the corrective Action Taken.

Summary

This report will print out a list of all ATA codes.

Create a Custom Report

Create a customized MMIR Report. It is recommended to buy a Visual FoxPro book at your local bookstore or call HAI (703) 683-4646 for assistance.

Run a Custom Report

To print the customized MMIR report that you have created.

Utilities Menu

Re-index Data

This option will re-index and pack the database files. This is necessary if there is a power failure or a hardware failure on the system. It can also speed up searches if many records have been deleted.

Re-indexing is only necessary if the MMIR was running at the time of a system crash such as a power outage. If other Windows software crashes, you do not need to re-index the MMIR data.

Reset Defaults Screen

Blanks out all data in the Set Defaults screen. You can run this utility without being in Set Defaults mode. Click on this menu item. A window will popup with two radio buttons. Click OK. The Reset Defaults window will disappear. Click the Screen Mode button to go into the green Set Defaults mode. All of the data entry fields will be blank and you can now reset the defaults for your next data entry session. You do not have to use this utility to reset your defaulted data fields, but it is a quick and easy way to clear all your defaults.

Check for Completion

Lists all blank data fields of current record. It will also list blank fields which are required by the FAA for a complete Service Difficulty Report.

Find Lost Data

This utility supplies a part name for Replacement Part data fields in your record set which have Part Number, but are missing Part Name. This feature should almost never need to be used, as it was created to fix a problem that occurred when MMIR was running on a network and the network platform was changed. The change in the network resulted in an unforeseeable incompatibility between memory resources of stand-alone computers and network requirements for those resources. This in turn resulted in the loss of certain data elements and the Find Lost Data utility was created to repair the damage done. But should you find the need for it, here it is.

Very rarely you may find that a form will have a Part Number entered but the Part Name field will be blank. You can fix an isolated case by clicking Edit, then clicking the Part Number Lookup control. Your Part Number will be highlighted in the Lookup table and you will see the Part Name. Click OK to return to MMIR and you will find that you have fixed your isolated lost data problem. Should you ever find more than a few instances of this problem in your records, you can run this utility and MMIR will fix your Part Name fields for you. All you will need to do is enter a beginning and ending range of records and click OK. Wait a few moments, and you will find that all your Part Numbers now have Part Names. The Part Names must already be present in your Parts Lookup table in order for this utility to work. You will almost certainly never need to use this utility.

Change Password

Use this utility to make a new password so you can both read and write data. Without a valid password, you will only be able to read your MMIR data. You must have a valid password to add new records and to edit existing records. To make a

new password, click on this menu item and type in the password you want to use. Your new password will be valid the next time you use MMIR You can change your password at any time.

Convert Data

This utility enables you to import data from MMIR 3.0 into MMIR 4.0. To run this utility, select the file in which your old data is held, usually it will be the default MMIR installation folder C:/MMIR. Click the Run button after you have selected the data file you wish to convert; this will convert your old MMIR data from the previous data structure and import your database intact into MMIR 4.0. Depending on the size of your database, you may have duplicate records that you are not aware of. MMIR will prompt you of any possible duplicates and ask you whether you want to import them into your new database.

Lookup Menu

Accesses all of the Lookup tables without entering an MMIR record. Highlight the Lookup you wish to view and click on it.

Communications Menu

Accesses the communications settings and the Send button to submit Service Difficulty Reports to the FAA and MMIR records to HAI..

Settings

This menu item will verify your MMIR user ID and password and will check to be sure you have an open connection to the FTP server at HAI.

If you do not have a user ID and password, please call, write, fax or email MMIR to receive one. There is no charge for this service and you are under no obligation once you receive your MMIR user ID and password.

Send

This menu item presents you with several options. If you have a valid user ID and password, you can use Send to select the records you wish to transmit to the FAA and to HAI. You data will be transmitted simultaneously to both the FAA and to HAI. The MMIR software does the work for you; all you need to do is to select the records you wish to send. If you do not have a valid MMIR user ID or password, you can still copy your data to your hard drive, another network drive and send it as an attachment to and email to *http://www.mmir.com*. Or you can copy your data to a floppy disk and send it to:

MMIR

Helicopter Association International

1635 Prince St

Alexandria, Va 22314-2818

Telephone: (703)683-4646

Fax: (703)683-4745

http://www.mmir.com

Note: **You must have an open connection to the Internet before you can run either of these menu items.** Please check to be sure that you have access to the Internet from your computer.

Search Menu

To search for a specific data file.

Search by Field

This option allows you to Search your database according to five pre-indexed data values. The values by which you can search using this feature are:

- Record Number

- Report Date

- Part Number

- Control Number

- Aircraft Serial Number

 Because the MMIR database has been indexed using these fields your search will be lightning fast! You can only choose one value to search for at a time using Search. You cn use the Search Forms feature within the Report menu if you would like to search your database according to multiple search parameters.

To use Search, you will need to specify one of the above values according to which the search is to be made. The second step in Search is to type the specific value for the item you are trying to find. For example, you can type in a Record Number or a Part Number. The Next and Previous buttons will move through the records of your Search result set according to this parameter. For example, using an Aircraft Serial Number as a Search value will return all the records in your database that deal with that aircraft. Using Part Number as a Search parameter will return the entire set of reports pertaining to that part. However, using Record Number as a Search parameter will return exactly one report, the report with that Record Number. *Search by Field is the fastest way to search your database.* When you want to specify more than one parameter by which to search, you should use the Search Forms item in the Report menu.

Search by Key Word

This allows you to search the Reason Removed, Action Taken, and Comments Fields for a particular word or phrase.

HELP Menu

Help F1

MMIR on-line help.

Calendar

To look at a current calendar. This feature allows you to make note of special maintenance in the future, or when you last shipped information in the diary section of the calendar.

Puzzle

A number puzzle for those stressful days.

Calculator

A very useful tool for performing simple arithmetic. You can keep the calculator open while you enter data. You can move the calculator to the location on your screen most convenient for you; simply click on the title bar of the calculator and drag it wherever you want it to be. When you click back onto the MMIR form, the calculator politely moves to the back, keeping the form on top.

MMIR Set Defaults

The Set Defaults screen is a powerful feature of the MMIR program. The MMIR Defaults screen is used to present fields for each new MMIR record. Values that are typed into the Set Defaults screen are automatically entered into the MAIN screen when a new record is added, saving you the time and effort you would otherwise have to expend typing these same fields over and over again. This is useful for data fields that will have the same values all the way through a set of records in any given session of data entry. Fields such as Submitted By Name & Address, and FAA Operator Designator are very often going to be the same each time you enter data into MMIR. Also it is very common to have multiple part listings for the same aircraft repair, or to have many serial numbers for a given part number as is the case when a set of rotor blades is replaced or sent for repair.

Main mode screens are grey, Set Defaults screens are light green.. *Always be very careful to toggle back into Main Screen mode before you try to add new MMIR records!* Set Defaults is used only for setting values that will be carried through a group of reports you are going to make. You cannot add new records while you are in Set Defaults. For this reason, the <u>A</u>dd button is disabled in Set Defaults mode, although you can still add records to any Lookup table while you are in Set Defaults once you click <u>E</u>dit. You can only add new MMIR records by quitting Set Defaults mode and clicking <u>A</u>dd in Main mode. The easiest way to distinguish between the two modes of MMIR data entry is by the background color of the forms. **Green indicates Set Defaults mode. Grey indicates Main mode.**

In Set Defaults, you can type information into any field which you would like to propagate through all reports in your current session of data entry. The information entered in Set Defaults Mode will appear in each new record. Toggle back to the Main Screen before you begin adding new reports. Set Defaults is a powerful time-saver and accuracy enhancer!

To Use the Set Defaults Feature

When you first start MMIR or MMIR Lite, the upper right corner of the screen will indicate the program mode is Main screen. Click the Screen Mode button on the top right of the screen to switch to the Set Defaults mode.

The Set Defaults screen will appear. The background color of your MMIR form will be green.
Click the Edit button.

The highlighted field will be the Operator Designator field. If you know your four-digit Operator Designator, then type it in. If not, type in the first four letters of your company name. If the automatic operator designator is not correct, then the Operator Designator Lookup screen will appear. Double-check in this screen.

To locate your organization's FAA Operator Designator, change the sort to Company Name. Then click the Search button. Type in the first several characters of your Company Name until your company name appears. Press the ENTER key twice to return to the Operator Designator screen. Click OK to accept the Operator Designator. You will not have to enter the Operator Designator again.

Click the Submitted By button on Screen 1. The Address Lookup screen will appear. Click the Add key on the bottom of the Lookup screen. Enter your Company Name and address, using the TAB key to move around. When you are finished, click OK. You should never have to type your Company Name and address again.

When you have filled in all the fields you wish to have set as defaults, click Save. This will save your Set Defaults and you will not have to enter these data as they will be automatically entered for you. Type once and you can add as many new records as you wish without having to type these fields each time. Set Defaults is a valuable time saver!

Click Save when you are finished setting all the defaults you wish to set.

The Fields Most Commonly Set In Default Mode:

Screen 1

Every field on Screen 1 can be a likely candidate to set as default.

FAA Operator Designator, Submitted By are the most frequently set.

Screen 2

Customer Order

Screen 3

Registration Number is frequently set in Set Default. When you have many parts to report for the same aircraft you will want to set that aircraft as a default. When you have many parts to report on one repair for the same aircraft, the Hours At Occur will probably be the same too.

Screen 5

Very often, there are no fields set on this screen as defaults, except Original Equipment. However, there are times when setting defaults in this screen is an amazingly effective strategy!

There are many fields which may be set as defaults. For example, you may be changing a whole set of rotor blades all of which have the same Part Number and all of which were changed or repaired together as a group. In this case, you can set Part Number, Location, ATA Code, Part Hours at Occur, Original Equipment, all the shipping data fields, A/C Hrs at Install and Install Date in addition to setting other defaults in other screens. You can also set all the corresponding fields in Replacement parts for this case. Then, when you exit Set Defaults mode, all you have to do to add a record for each blade is to add the Serial Numbers for each blade removed and each one installed. This will save you a lot of time and energy when you have a lot of forms to fill out!

Screen 6

Engine Serial Number is frequently set as default.

Screen 7

When many parts are being reported that all come from the same Major Assembly, it is good to set as much of this screen as possible.

Screen 8

Quite frequently, the Action Taken can be set as default.

Set Defaults Strategy

Whenever you have more than a handful of hard copy forms to enter as new records, you are wise to look over your forms and figure out which pieces of information you are going to have to type over and over again. Try to sort your forms before you even open up MMIR. Group your hard copies according to pieces of information (data fields) which are common to all. Then group each of these subgroups. Then, open up MMIR and set your defaults.

For example, you may have twenty hard copies to enter into MMIR. Suppose these twenty forms are divided equally between two aircraft. Sort your forms into two piles, one for each aircraft. Examine one pile. You notice that all of these reports are being sent to one Manufacturer. So already within this pile, you see that you can set at least two defaults, aircraft Registration Number and Submitted To. Further examination reveals that all ten forms pertain to one repair and the Occur Date, Aircraft Hours at Occurrence, Part Hours, Engine Serial Numbers, And Engine Hours and cycles are the same in all ten forms. You can set all of these data values one time in Set Defaults. Furthermore, you notice that the Action Taken is "Removed and replaced" for each part being reported. You can set this as a default too. Repeat the process with the other pile of forms.

Fifteen minutes of familiarizing yourself with your forms and their data, sorting your forms according to patterns of similarity, and setting those as defaults, can save you two hours of data entry time and will also ensure the accuracy of your work. It won't take long for you to become a master data entry strategist!

Entering MMIR Data

Overview

MMIR Data Entry in a Nutshell.

Click Add.

The cursor defaults to Submitted By. Type in your Company Name. Press ENTER, TAB, or arrow to the next field.

Continue this through each field into which you wish to enter new data and go from screen to screen.

MMIR Lite is programmed to follow a tab sequence from top left to bottom right. Submitted By is the first field of data entry, Comments is the last field of data entry. By clicking the NEXT SCREEN button you can move sequentially through the screens from first to last. Or you can click on the screen titles at the top of your screen if you want to skip screens.

When you are finished entering all the new data, click Save. The new record is now entered into the MMIR database. You may undo any changes you have made to a record by clicking Revert. You may edit any record at any time after it has been Saved by going to that record and clicking the Edit button. Make any changes in any order you wish, and then click Save. This will save any changes you have made to that record.

There are four main aspects of data entry using MMIR and MMIR Lite:

1. Getting your hard copy data ready.

2. Typing into the program the data necessary for each record you wish to file.

3. Saving your data in your database.

4. Sending your records to the appropriate parties.

Before you begin your data entry, you may wish to explore the basic functionality of MMIR and MMIR Lite. Just click on things and see what happens! Try tabbing through data fields using ENTER, TAB, and the arrow keys in various combinations. Open up **Lookup** tables just to see what they are like. You can learn most of what

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you will need to know in ten minutes of informal interaction with and exploration of MMIR and MMIR Lite. You already know your aircraft parts and these simple programs will help to make your job easier.

Procedural Overview of MMIR Data Entry

To Set Defaults:

Click the **Screen Mode** button. The caption to the right of the **Screen Mode** button will change from **Main** to **Set Defaults**. The color of the form will change from grey to light green.

Click the **Edit** button. You can see that the **Save** and **Revert** buttons have now been activated and the insertion point will blink in the **Submitted By** text box.

Click in the text box of the field you wish to edit first if it is not **Submitted By**.

Type the data you would like to have automatically entered in your next set of MMIR records. You can **Set Defaults** for as many or as few fields as you wish.

When you have finished setting all the fields, click **Save**.

Check your work. When you are satisfied the information you have typed in is what you want, you are ready to begin adding new records to the MMIR database. The data you entered while in **Set Defaults** mode will appear on each record just as you typed it.

Click the **Screen Mode** button. Now you have switched back to the **Main** screen. You can verify this by looking at the caption to the right of the **Screen Mode** button. **Main** is displayed. The color of the form is grey. The data you entered while you were in the light green **Set Defaults** mode will not appear until you click the **Add** button.

You can change the data in any field while in the **Main** screen. Even the fields you have filled out in the **Set Default** mode can be edited or overwritten at any time.

To Add a New MMIR Record:

Click the **Screen Mode** button and go into the **Set Defaults** screen.

Verify that the defaults have been set to best meet your data entry needs for this session.

Click the **Screen Mode** button and return to the **Main** screen.

Click the **Add** button. You will notice that the **Save** and **Revert** buttons have now been activated.

Click in the text box into which you wish to enter data.

Type in the data you wish to add to your new record.

When you have completely filled in your field, move the insertion point to the next field. You may press ENTER, TAB, use your mouse, or use the arrow keys on your keyboard to move from field to field within MMIR. You can always type over any data you would like to change.

When you have completed your new record and are satisfied with your work, click **Save**. Your new record has now been added to the MMIR database. You may edit this record at any time.

When you are ready to enter a new record, click **Add**.

To Edit a Record

Click the **E_d_it** button.

Click on the text box of the field you would like to edit. You may also TAB or use the arrow keys on your keyboard to move from field to field within MMIR.

Type in the changes you wish to make. When you are finished, click **Save**.

Lookup Tables

All **Lookup** tables have the same general functionality. You can browse every **Lookup** table by scrolling. Some **Lookup** tables allow you to search according to two different sorts or indexes. You may toggle between these sorts by clicking the one of the **Sort Order** radio buttons on these tables. For example, you may look up an aircraft according to the aircraft's **Registration Number** or by its **Serial Number**. An aircraft part may be found by its **Part Number** or by its **Part Name**.

After the **A_d_d** or **E_d_it** buttons have been clicked you can access any **Lookup** table by clicking on the control button of the **Lookup** you want. You may also access any **Lookup** at any time by clicking **Loo_k_up**s on the menu at the top of the screen and selecting the table of your choice. For our example we will use the **Parts Lookup**. **Parts Lookup** has one feature no other Lookup has. The feature unique to **Parts Lookup** is the **Part Number Checking** window. This feature has been added in order to doubly ensure the accuracy of data entry.

To Lookup a Part

Click **A_d_d** or **E_d_it** to enable all the **Lookups**.

Click in the **Part Number** text box.

Type in at least the first three characters of the Part Number you wish to look up.

Click the **Part Number Lookup** control button or press ENTER.

The **Parts Number Checking** dialog window will popup on top of the **Main** MMIR screen. By clicking in one of the two radio buttons presented to you, you can choose to add the part number you typed to the MMIR database or you can browse the **Lookup** table to see if your part may already be in the database under a slightly different part number than what you typed in. Simply click in the circle of your choice.

The part number you typed in will be highlighted in the **Lookup** table. If you only typed in the first three or more characters of the **Part Number** you are trying to find, MMIR will highlight the closest match. You may scroll up or down the **Lookup** table to find the exact part you are searching for.

To Find a Part by Part Name

Open the **Parts Lookup** table.

Click in the Nomenclature **Sort Order** radio button. This will switch the way MMIR lists the parts from a listing by **Part Number** to a listing by **Nomenclature**.

Click the **Search** button. The **Search** window will pop up.

Type in the name of the part you want to find. Click **OK** or press ENTER. The **Search** window will disappear and MMIR will go to the Part Name you typed in. There may be many listings under the name you typed in. Scroll down the **Lookup** table until you find the one you are looking for.

Sometimes the part you want to find has been entered into the database under a different name or spelling, so you may wish to try Searching again, but type in an alternate name for the same part.

To Add A New Part To The Lookup Table

Go to **Parts Lookup**.

Click the **Add** button in the **Parts Lookup** screen. A blank row will appear highlighted for you to enter the new part

Type in the part number. Press ENTER or TAB when you are finished. MMIIR will automatically insert your new part into the correct place sequentially by part number as soon as you press ENTER. MMIR will automatically bring your cursor into the **Nomenclature** cell of the **Lookup** table

Type in the new **Part Name**.   Press ENTER.

Type in the **Manufacturer** name. Press ENTER.

Type in the price of the new part, if you need to. Press ENTER. You are finished adding a new part to the **Lookup** table.

Click OK to return to the **Main** screen.

Entering Records

You are now ready to enter individual MMIR records. These can serve as Service Difficulty Reports and/or as Manufacturer Warranty Claims. You can use MMIR Lite when you only need to file an SDR or to keep track of parts. You can use the full MMIR program for filing SDR's and Manufacturer Warranty claims simultaneously. Lite was designed for the quickest, easiest and most straightforward part tracking but does not have the full functionality available in the Main MMIR program for filing Warranty Claims. Once the data is entered you can print the information out and mail one copy to the manufacturer. Please copy the records to a floppy disk for HAI and the FAA or file your reports to both the FAA and HAI through the MMIR web page at *http://www.mmir.com.*

Make sure you are entering information in the Screen Mode Main Screen. If the upper right hand corner says "Screen Mode: Set Defaults," click the Screen Mode button to toggle to the MMIR Main screen. The box in the upper right hand corner of the screen should read Screen Type: Main and the color of the MMIR form should be grey. If you see green, the Screen Mode is still in Set Defaults.

Click <u>A</u>dd to add a record. A new record will appear on the screen with the information entered in the Set Defaults mode already filled in for you. Your initials will appear in the upper right hand corner along with the time, date of entry, and a computer assigned record number.

NOTE: All data entry in MMIR and MMIR Lite will be automatically upper case letters. The only exceptions to this are the Reason For Report, Action Taken, and Comments edit boxes. All other data fields including every Lookup will always return an upper case value. You do not need to set your CAPS LOCK key.

In the MMIR Basics of this manual the Common Keyboard Commands and other helpful hints are listed for your convenience. Please call MMIR Technical Support at (703) 683-4646 if you have further questions.

Backing Up MMIR Data

As with any computer application, it is recommended that you backup your files. If the files become corrupt, if the files are accidentally deleted, or your hard disk crashes, and re-indexing does not correct the problem, the backup files will save you many hours of re-entering data.

If your system is on a network, check with the network administrator. Most companies run a backup daily or weekly.

Screen 1

Report Information

The program automatically fills in the Report Date, initials of the data entry person, and the time the report was created. You can see these fields in the upper right corner of Screen 1 under the Screen Mode command button.

Be sure you are in Main screen mode. Main mode screens are grey. Set Default screens are light green. Click Add to begin entering data into a new record.

FAA Operator Designator

Enter your FAA Operator Designator if it is not already completed by the Set Default. This is a mandatory field the FAA uses to index their computer records and track reporting organizations. If you do not have an FAA Operator Designator in the Lookup menu, contact your local Flight Standards District Office, then notify HAI of your Designator for addition to the database. For more detailed information please refer to Appendix 3 of this manual.

Occur Date & Control Number

Enter the Occur Date and the Control Number. The date format in MMIR is month, day, year: *mm/dd/yy*. When you type in the Occur Date, MMIR will check the date. If the date you type in is more than six months past the current date, a message window will popup asking you to please check the Occur Date. This window will disappear as soon as you press any key. Also if you type an incorrect date, such as 13/32/98, MMIR will notify you. An invalid date must be corrected before you can continue. MMIR is Y2K compliant and uses a four digit system for reckoning the year. You only need to type in two digits for the year, MMIR will automatically convert what you type into a four digit year.

The Control Number is a number assigned by you to provide in-house control reference. It could be the work order number, or some other unique number associated with the part reported. The Control Number you assign can be a combination of numbers and letters; it does not have to be only numeric.

Submitted To, Submitted For, Submitted By

To enter the information in the Submitted To field, type the first few letters of the manufacturer's name then press TAB or ENTER. This will automatically call up the Address Lookup screen. If the name and address of the manufacturer are not already entered in the Lookup, you can add them at this time.

To add a name to the Address Lookup, click on the Add button in the bottom of the table. A blank row will appear at the top of the data grid. Type the manufacturer name then press TAB.. The program will automatically put the name in alphabetical order with the rest of the list.

Then TAB to the Address field and type the mailing address. Use the TAB key to move around and type in the information you know. When you have completed adding the information, click the OK button at the bottom of the table. This action will bring you back to Screen 1 and automatically fill in the Submitted To fields.

Your cursor will now be on the Submitted By field. Repeat the same actions for the Submitted By as you did for the Submitted To.

In many instances the submitting company is submitting the information for themselves. If this is the case, when the cursor is in the Submit For field, you can press the F7 function key of your keyboard and this will copy the information from the Submitted By fields into the Submitted For fields. If this is not the case, then repeat the same steps as used above to fill out the other Submit fields.

Once the Submitted To, Submitted By, Submitted For, Operator Designator, Occur Date and Control Numbers are completed, click the NEXT SCREEN button to move on to Screen 2, Warranty Information.

Screen 2

Customer Order

To activate the pull down menu, click the arrow button on the right of the highlighted Customer Order box. Scroll through the choices. When you have highlighted the correct one, press TAB. This moves you into the Warranty Claim Information box.

Warranty Claim

This information only needs to be completed if the MMIR will serve as a Warranty Claim. You can use MMIR Lite if you are not in need of filing for a Warranty Claim.

Enter the appropriate data for parts costs, hours, amount per hour, and any other related charges (i.e. shipping.) The totals will be calculated automatically. There are three Description fields in which you can characterize the parts used for the repair. For example, you may total the parts into Desc1, the paint into Desc2, and any lubricants or other consumables into Desc3. At the bottom of the Warranty Claim box, you have the choice of marking whether the claim is Open or Closed. To pick the correct choice, use the TAB key to move between the two or click on the dot with the mouse. The Open/Closed feature serves as a tracking device for your Warranty Claims – internal purposes only. When a new warranty MMIR is created, mark the form Open. Then you can periodically run the Open Warranty Report from the Reports menu. This will print out a list of all uncollected Warranty Claims. When the warranty comes in, simply mark the record closed.

When you have completed the Warranty Information, click NEXT SCREEN to go to the Aircraft Data screen.

Screen 3

MAINTENANCE MALFUNCTION INFORMATION REPORT

PART INFORMATION	ENGINE DATA	MAJOR ASSEMBLY	REASON & ACTION
ADDRESS INFORMATION	WARRANTY CLAIM	AIRCRAFT INFORMATION	SDR INFORMATION

Record # UNKN0000005

AIRCRAFT DATA:

Registration No		Serial Number		Deliv Date / /	Hrs. At Deliv -1.00

Model	Manufacturer		Hrs. At Occur -1.00	Cycles -1

Order by RECORD # ▼ | Top | Previous | Next | End | Search | Add | Edit | Save | Revert | Delete | Print | Quit

Next Screen

Aircraft Data

Type the Registration Number. If this aircraft is already in the Aircraft Lookup, enter the first three digits of the registration number (example: N563) and press ENTER. This will take you automatically to the Lookup screen where you can select your aircraft or add a new ship. If you need to add a new aircraft to the aircraft database, click the Add button at the bottom of the Lookup table. A blank record row will appear at the top of the list. Then type the new Registration Number. Press TAB.   Type in the aircraft model. The model must be a standard model number.

Next enter the aircraft Serial Number of the aircraft you wish to add to the Lookup table. Enter the number of engines. Then enter the aircraft Delivery Date and Hours At Delivery. Click OK after the desired aircraft is entered.

You can enter your entire fleet at this point or enter additional aircraft when you need to report on them. Once the aircraft data is entered, future MMIR entries need only select the aircraft Registration Number (not re-typing all of the data as this will automatically be written in the appropriate field boxes once the aircraft Registration Number has been typed into the Registration Number box). This is your fleet database. In the future, input the complete Registration Number, press TAB, and MMIR will automatically fill in the information if the aircraft has already been entered in the Aircraft Lookup. An incomplete or incorrect entry of the Registration Number will automatically take you into the Lookup table and the closest match in the database will be highlighted. From the Lookup screen you may select the correct aircraft based on Registration Number or you may Search for the correct aircraft by Serial Number by changing Sort Order and searching again. MMIR will always take you directly to the closest match of the data you type into any Lookup field.

Type in the aircraft Hours at Occur.

Click NEXT SCREEN

Screen 4

Service Difficulty Reporting (SDR)

"File with FAA?" The choices offered are Yes or No. To select an answer, click on the desired choice with the mouse or use the arrow keys to move between the two choices and press the SPACE BAR for the correct one.

If you answer with a "Yes" a data file will be created for the current entry when you export the data, and a file will automatically be sent to the FAA. If "N" is selected, the current record will not be output with the FAA data file.

To select the Part Defect, click on the Defect button with the mouse. This accesses a Lookup file of standardized Department of Transportation terms regarding the malfunction or defect. Scroll through the choices, highlight your choice and click OK to make your selection. To view a definition, click on the Condition Definition button to the right of the term. This will display a definition and other related terms.

Stage of Flight and Precautionary Procedure answers are derived from standard FAA tables. Click on the arrow at the far right of the Stage of Flight entry field. A pull down menu will appear or use the arrow down and up keys to scroll through the choices. When you have highlighted your choice, press TAB. This will take you to the Precautionary Procedure box. Complete this field the same way.

When you have finished entering data on this screen, click NEXT SCREEN to go to the Part Information screen.

Screen 5

Reported Part Data

Part Number

Click in the light blue text box right under the Part Number Lookup button. Type in the first three digits of the part number and press ENTER or TAB. The Part Number Checking window will popup displaying the numbers you typed. A pair of radio buttons will present you with a choice. You can add the part number you typed to the Lookup or you can browse the Lookup to find your part number. Browse is the default selection. Make your choice by clicking in the circle and then pressing ENTER twice or clicking the Continue button. If the part is not in the Lookup table, click the Add button. Enter the new part number, part nomenclature, manufacturer, and price (if known.) Click OK to accept the part and exit the Parts Lookup.

Shortcut: Type in the entire part number and press TAB. If the part is already in the database, MMIR will automatically enter the information and highlight the next field, Serial Number. If the part is not in the Lookup, the program will ask you if you would like to add the part or browse the parts Lookup.

Enter the Serial Number and quantity of the part. In Location, you can type the place on the aircraft from which the part was removed.

ATA Code

If known, enter the ATA code. The first four digits are the standard FAA code. The last two digits are for more detail. The hyphens are placed in automatically.

If the ATA code is not in the ATA Lookup table, the table will highlight the closest match. You can access the ATA Lookup table by entering two characters in the ATA code box and pressing ENTER or by clicking on the ATA code button. You can select an ATA code or enter a new ATA code with the ADD button. Click OK to accept your choice and return to the Parts Information screen.

Hours at Occur

Hours and Cycles data fields automatically default to –1, which is a NULL or unknown value since there could be a legitimate Reported Part with zero hours. Enter the Hours At Occur, Time Since Inspection (TSI), Time Since Overhaul (TSO), Cycles, Cycles Since Inspection (CSI), and Cycles Since Overhaul (CSO), as necessary.

Original Equipment

Click on YES if the part is Original Equipment, or NO if the part has been replaced before. Select UNKNOWN if you do not know if the part has ever been changed before. When you select YES or UNKNOWN, five data fields will be disabled and appear to be greyed out. This is because you won't have any data to put into these fields if the part is original, or if you do not know whether it is or not. The fields disabled (greyed out) are: PO#, Invoice #, Invoice Date, AC Hrs at Install, and Install Date. The program will tab automatically into your next field. When you choose YES or UNKOWN, your next field will be Way Bill Number. If the part was reported in your MMIR system before, then you can Lookup the Aircraft Hours At Installation, Installation Date, Invoice Number, Purchase Order (PO), Invoice Date And Invoice Cost. If a match is found, the data is automatically moved to the current record. Or you can just type in the correct information.

Note: This data is needed for Warranty Claims.

Shipping Data

This is only necessary for your records and/or manufacturer Warranty Claims. The data entry of this section is straightforward. The Vendor field is bound to the Address Lookup.

Replacement Part Data

Repeat the above steps for the Replacement Part data as appropriate. This section is similar to the Reported Part section. When the Replacement Part Number is identical to the Reported Part Number, press F7 while the Replacement Part Number field is highlighted. This will copy the Reported Part Number and Part Name into the Replacement Part Number and Name fields, saving you time.

NOTE: When Replacement Part Number is similar but not identical to the Reported Part number, pressing F7 when your cursor is in the Replacement Part box still saves you time. For example, many Replacement Parts differ from Reported Parts by only one digit, or have an appended digit or letter. Pressing F7 when you have tabbed into the Replacement Part box will copy the Reported Part Number into the Replacement Part field. Your cursor will still automatically move into the Serial Number box, but you may simply arrow back into the Part Number box, press your END key and your cursor will be flashing just to the right of the last digit or number of the Part Number and you can make any change needed for the correct entry you wish. With very little practice you may quickly find the utility in this combination of programmatic features. You can be creative with MMIR and MMIR Lite. These programs are very flexible, and only a few of the known techniques and combinations of techniques are outlined in this manual. You will discover your own best methods of working. Be confident in yourself that you know your job and that you know what you need to do to get your job done! These programs will enable you to do your job well and better than you ever knew you could!

Click NEXT SCREEN when you have completed your parts data entry.

Screen 6

Engine Data

Enter the engine's Serial Number or click the Serial Number button to open the Engine Lookup table.

If the engine is not in the Lookup file, you can add it. Click Add to enter a new engine. Fill in all the engine information. Click OK when finished. The engine model is checked against the Engine Model Lookup (a separate table.)

Shortcut: If the Engine Model was previously entered, just type in the Engine Serial Number and press TAB. All the engine data will be pulled up from the database and automatically be filled in for you.

Enter the Hours and Cycles on Engine One.

Repeat the above steps for up to three engines.

Click NEXT SCREEN to go to the Major Assembly Data screen.

Screen 7

Major Assembly Data

Type in the Major Assembly Part Number or click the Major Assembly button for Lookup. This procedure is identical to the Reported Part Lookup and the same Part Lookup serves each Part Number command button in MMIR and MMIR Lite..

Enter the Major Assembly Total Time, Serial Number, Part Hours and Cycles information. Press ENTER, TAB, or arrow to the next field.

Click NEXT SCREEN when you have completed your engine data entry.

Screen 8

Comments Sections

Reason For Report

The Reason for Report is a description characterizing the reason why the part was removed. There are no length limits.

The defect has already been entered if one was selected in the SDR Information box on Screen 4, but you can add as much to this as you wish. To access a full screen edit, click on the button at the top of the box. If additional information is necessary, please enter the information now. You do not need to press the ENTER key at the end of each line. The words will automatically wrap. However, to indent a paragraph, you will need to press the SPACE BAR or press ENTER if you want to separate your paragraphs with a blank space instead of or in addition to indentation. When you have finished typing your description of why the part was removed, click Close; the information you just typed will appear in the box. Press TAB or click with the mouse into the next field.

Note: Pressing TAB from inside the Reason For Report edit box will take you into the next box!

Action Taken

This field is where the corrective action taken by the submitting company is entered. To access a full screen edit for this explanation, click on the Action Taken button. You do not need to press the ENTER key at the end of each line. The words will automatically wrap. However, to indent a paragraph, you will need to press the

SPACE BAR or press ENTER if you want to separate your paragraphs with a blank space instead of or in addition to indentation. When finished, click Close and the information will appear in the box. Or if you choose to enter directly into the box, TAB or click with the mouse to the next field.

Note: Pressing TAB from inside the Action Taken edit box will take you into the next box!

Manufacturer's Comments

Only the manufacturer uses this field for final comments on the report.

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End of Report

The record is now complete.

Click Save to save your record.

See the instructions below to send the data electronically.

Click the Add button at the bottom of the screen to begin a new record.

Click Edit if if you have already clicked Save and you need to make changes to the record you just completed.

 To quit, click on the Quit button at the lower right of the screen. All your data records are automatically saved.

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Using MMIR Lite

Data Exercises And Tutorials

The purpose of these exercises is to familiarize you with the main functionalities of MMIR Lite.

By following this tutorial step by step you will learn how to use every **Lookup** in the MMIR system and you will learn the basic procedures and workflow of MMIR data entry.

The first exercise is succeeded by a short tutorial on deletion of data. To facilitate your learning of the basic MMIR system, you will enter fictitious data into your database. Afterward, you may wish to remove this fictitious data from your files. By following the tutorial on data deletion you will remove all fictitious data from your system and you will learn how to correct and repair any data entry errors that may be made in the future.

You will very quickly become adept at using MMIR Lite for your all aircraft parts data entry needs. "Practice makes perfect" and these exercises present several ways in which you can perform the most common tasks and procedures of MMIR Lite data entry. In real life, you will almost never need to go through all the steps so many times. The redundancy you will meet in these exercises will develop your data entry proficiency swiftly and easily.

Remember that MMIR Lite has the same powerful Set Defaults functionality as MMIR.

Adding A New Record

Submitted By

Make sure **Screen Mode** is set to **Main**. The MMIR form on your screen should be grey and the caption to the right of the **Screen Mode** button should be **Main**. If the MMIR form on your screen is light green, you are in **Set Default** mode.

Click **Add**.

Type "**Blumpy the Frog**" in the **Submitted By** text box. The **Address Lookup** will appear.

Click **Add**. A new row will be highlighted for you to enter a new address.

Type "**Blumpy the Frog**" in the **Company** name column. Leave all the other cells on that row blank.

Click OK. The **Address Lookup** table will be replaced by MMIR Lite. Your cursor will be flashing in the **FAA Operator** text box.

Type "**AALA**" (The American Airlines Operator Designator). Press ENTER. Your cursor tabs automatically into the **Occur Date** text box.

Type "**01-07-63**". The focus moves automatically to the **Control Number** text box.

Type "**23563B**". **Reg Num** in **Aircraft Data** receives the focus.

Aircraft Data

Type "**N3563**". The **Aircraft Lookup** table appears.

Type "**N3563**" into the highlighted cell in the **Registration Number** column. Press ENTER.

Type "**47C**" in the cell highlighted in the **Model** column. The **Model Lookup** will replace the **Aircraft** Lookup table.

Scroll upward by pressing the UP arrow on your keyboard or by clicking the UP arrow on the scroll bar at the right of the **Lookup** table.

Find **47B**. When **47B** is the model highlighted, select it by clicking OK. **Model Lookup** will disappear and **Aircraft Lookup** will reappear. The aircraft model you have selected, **47B** will be highlighted. Press ENTER. Bell is the manufacturer of the **47B**, so press ENTER again to move into the Serial Number column.

Type "**56323**" as the **Aircraft Serial Number**. Press TAB. The **Delivery Date** will be highlighted.

Type "**10-07-56**" for **Delivery Date**. Press TAB. The date on which you entered this aircraft into your database will automatically be filled in for you. Press ENTER to move into the **Number of Engines** column.

Type "**1**". This is a single engine aircraft. Press TAB to move into the **Hours at Delivery** column.

Type "**23**". Press ENTER. This returns you to the **Registration Number** column. **N3563** will be highlighted.

Click OK and return to MMIR Lite. **Hours at Occur** will be highlighted.

Type "**6356.**" Press ENTER. **ATA Code** is highlighted.

Reported Part Data

Click the **ATA Code** control. The **ATA Lookup** appears.

Click on the **Change Sort** button. The sort will change from **ATA Code** to **Description**.

Click **Search**. The **Search** box will popup.

Type in "**Phase Adapter**" and choose OK by pressing ENTER twice or by clicking the OK button.

The **ATA Code 24-23-00** will be highlighted. That's the one you want. Click OK to return to MMIR Lite.

Click the **Defect** control. The **Part Condition Code Lookup** will appear.

Scroll down and find "**Grooved**." When **Grooved** is highlighted, click OK and return to MMIR Lite. Your cursor will be flashing in the **Part Number** text box.

Type "**56323**." The **Part Number** dialog box will appear. You have two choices, to add **56323** to the **Lookup** table or to browse for this **Part Number**; browse is the default choice.

Click the **Add** radio button and then click the **Continue** button. The **Parts Lookup** table will appear. A new row will be ready for you, with the **Part Number** cell already highlighted.

Type "**56323**." This time, instead of pressing ENTER, use your right arrow key to move into the next field which is in the **Nomenclature** column.

Type "**Sealing Ring**." Press TAB to move into the next field, **Manufacturer**.

Type "**Sooner Mfg**."

Click OK to return to MMIR Lite**. Serial Number** will be highlighted.

Type "**23563**." Press ENTER.

Total Hours will get the focus.

Type "**463**" and then TAB through the next two fields. **-1.00** will be displayed in these fields because this is the Null value for MMIR, expressing an unknown quantity as distinct from a quantity of zero.

Part Number in **Major Assembly Data** has the focus.

Major Assembly Data

Type "**423763**" and press ENTER. The **Part Number** dialog box will popup. Click the **Add** radio button. The **Parts Lookup** table will appear.

The part number you entered, **423763**, will be already entered and highlighted for you. TAB into the next field.

Type "**Tail Rotor Assembly**" and then press ENTER. Skip the manufacturer's name and just click OK to go back to MMIR Lite. **Serial Number** will have the focus.

Type "**45635**" and press ENTER.

Type "**1228**" into the **Total Hours** box, TAB or press ENTER past the **TSI** and **TSO** boxes. **Serial Number** in the **Engine Data** section will have the focus.

Type "**LE45635**" and press ENTER. The **Engine Lookup** will appear, and the closest match for the serial number you just typed in will be highlighted.

Click **Add**, and then type "**LE45635**" into the highlighted cell.

Press ENTER.

Type **GO435** as the **Model** number, then click OK to return to MMIR Lite.

TAB through **Location**. **Engine Total Hours** will receive the focus.

Type "**1228**" for **Total Hours**. TAB or press ENTER through **Engine TSI** and **TSO**. **Comments** receives the focus.

Type "**Part is GROOVED**" Is already typed in for you. This happened when you selected "**Grooved**" in the **Part Condition Code Lookup**.

Press the END key of your keyboard to move to the end of the sentence.

Press your SPACE BAR twice and type "**Removed and Replaced**"

Click **Save**.

Congratulations! You have successfully completed your first MMIR Lite record!

Deleting Data

To delete an entire record:

Click the **Delete** button. This will remove the full record from the MMIR database. However, deleting a record does not remove erroneous data from the **Lookup** tables.

To Delete Data From Lookup Tables:

Click **Edit**. All **Lookup** controls are now enabled.

Click the **Submitted By** button.

The **Address Lookup** will appear, and **Blumpy the Frog** will be highlighted.

Click the **Delete** button. A warning box will popup. Are you sure you want to delete this **Address** record?

Choose "**Delete Record**." **Blumpy the Frog** will be removed from your **Address Lookup**.

Click **Top** to go to the blank record at the top of the **Address Lookup**. If you don't have a blank record there, create one by clicking **Add**, but don't type anything in this record row so it will stay blank in case you ever need to use it again.

Click **OK** to return to MMIR Lite.

Submitted By

The **FAA Operator** text box will be highlighted. Press the DELETE button on your keyboard. The cursor will tab into the **Occur Date** field.

Press the DELETE button on your keyboard to remove **01-07-63**. .

Press ENTER, TAB, or arrow into the **Control Number** box, and delete the fictitious number.

Aircraft Data

Click on the **Reg Num** control. The **Aircraft Lookup** will appear and **N3563** will be highlighted.

Click the **Delete** button then click **Top** to go to the blank record at the top of the **Aircraft Lookup**. Create a blank record if you do not already have one.

Click **OK** to return to MMIR Lite. The **Aircraft Hours At Occur** field will be highlighted and the three aircraft **Lookup** fields are blank.

Delete the **Hours At Occur**.

Reported Part Data

Click in the **ATA Code** box to highlight the entire data entry field. Press your keyboard DELETE button to clear the fictitious **ATA Code.** You do not need to delete the ATA Code in the Lookup because that code is bona fide, but you used it for a fictitious part on a fictitious aircraft for instructional purposes**.**

Click the **DEFECT** control. Scroll to the blank record at the top of the **DEFECT Lookup** and click **OK**.

Click the **Reported Part Number** control. The **Parts Lookup** will appear and the part you want to remove will be highlighted.

Click **Delete**. The Deletion warning box will popup. Choose "Delete Record."

Click **OK** to return to MMIR Lite.

Reported Part Serial Number will be highlighted.

Press the DELETE button on your keyboard, then press ENTER. **Tot Hours** will receive the focus. Clear these hours and TAB, arrow or press ENTER through **TSI** and **TSO**.

Part Number in **Major Assembly Data** has the focus.

Major Assembly Data

Click the **Part Number** control. The **Parts Lookup** will appear and **423763** will be highlighted.

Click the **Delete** button. The Deletion warning box will popup. Choose "Delete Record."

Click **Top** to select the blank record there, create one if you don't have one.

Click **OK** to return to MMIR Lite. **Serial Number** will be highlighted.

Press your keyboard DELETE button, then press ENTER. Delete the **Total Hours**, then TAB, arrow, or press ENTER through **TSI** and **TSO**. **Engine Serial** number will get the focus.

Engine Data

Click the **Eng. Serial** control button. The **Engine Lookup** will appear and **LE45635** will be highlighted.

Click the **Delete** button. The Deletion warning box will popup. Choose "Delete Record."

Click **Top** to select the blank record there, create one if you don't have one.

Click **OK** to return to MMIR Lite. Delete **1228** from **Tot Hours**.

Press ENTER, TAB, or arrow through **TSI** and **TSO**. "**Part is GROOVED. Removed and Replaced**" will be highlighted in the **Comments** text box.

Press the DELETE button on your keyboard.

Good deal! You have now gained a thorough understanding of all the basic aspects of MMIR Lite data entry.

Importing and Exporting Data

Exporting Data

The Export option under the File menu allows the user to create a data file on disk for a range of selections to a variety of different file formats.

1. Type the beginning and ending Entry Dates of the records for export. This will select the MMIR records within the specific date range.

2. Select the "Comma Delimited" as the file format if you are sending the file to HAI.

3. Select a filename. The default file name is MMIR.TXT.

4. Select fields. The default setting is all fields. HAI uses all fields.

5. Click the SAVE button. When the process is complete, the word "Finished" appears in the upper left corner of the screen. Press the Exit button.

6. Copy the file to a floppy disk or attach the file to an e-mail and send it to HAI. The data will be automatically forwarded to the FAA Technical Center in Oklahoma City. A Part Number report will be made available from the HAI database via *www.mmir.com.*.

Importing Data

Data Import is used to read data from external sources into the MMIR program.

1. Select the file name of the file to be imported.

2. Select the data format; please refer to Appendix 1 for details. The choices are "Comma Delimited" or "Line Delimited."

3. Select the fields to import. By default all MMIR fields are selected. The import file structure must match the selected fields order and number exactly.

4. Click the SAVE button. When the word "Finished" appears, click EXIT.

Printing MMIRs

Print Forms

The completed record is accepted as an FAA Service Difficulty Report (SDR) and as a manufacturer warranty claim form. HAI uses the information for a collective database which is accessible to all MMIR users.

To print a MMIR Record:

1. Complete the Printer Setup under the File menu.
2. Choose Forms under the Reports menu.
3. Select "Print Current record" to print the current MMIR record or choose "Select from Database" to choose a set of MMIR records.
4. If you choose "Select from Database," select the parameters for the program to pull records from the database, i.e. a range of Entry dates, and click "OK."
5. Select the output destination to print to either the screen or the printer.
6. Click OK.

Appendix 1: Importing

Data Import

The following table outlines the data structure for the MMIR Import feature. This is found under the file menu of the MMIR software. The Import feature allows data to be imported from other computer programs. The MMIR data structure is outlined below. The Import Data feature allows the user to customize the number and order of the data fields.

The Import Data feature is compatible with the Export Data feature. When a comma delimited export file is created from one MMIR system (at a user site) it can be imported in to another MMIR system (at the local FSDO or at the aircraft manufacturer). In this case both users must be running the same version of the MMIR software.

Dates should be in the following format: 11/02/94 = November 2, 1994. For Y2K compliance, a four digit year is recommended.

Structure for MMIR database import file:

Line	Field Name	Type	Width	Description
1	TO_CONAME1	Character	32	Submit to company name one
2	TO_CONAME2	Character	32	Submit to company name two
3	TO_ADD1	Character	32	Submit to address one
4	TO_ADD2	Character	32	Submit to address two
5	TO_CITY	Character	20	Submit to city
6	TO_STATE	Character	2	Submit to state
7	TO_ZIP	Character	10	Submit to zip code
8	TO_COUNTRY	Character	25	Submit to country
9	TO_PHONE	Character	20	Submit to phone
10	TO_FAX	Character	20	Submit to fax
11	TO_FIRST	Character	15	Submit to first name
12	TO_LAST	Character	15	Submit to last name
13	BY_CONAME1	Character	32	Submit by company name one
14	BY_CONAME2	Character	32	Submit by company name two
15	BY_ADD1	Character	32	Submit by address one
16	BY_ADD2	Character	32	Submit by address two
17	BY_CITY	Character	20	Submit by city
18	BY_STATE	Character	2	Submit by state
19	BY_ZIP	Character	10	Submit by zip code
20	BY_COUNTRY	Character	25	Submit by country
21	BY_PHONE	Character	20	Submit by phone
22	BY_FAX	Character	20	Submit by fax
23	BY_FIRST	Character	15	Submit by first

24	BY_LAST	Character	15	Submit by last
25	FO_CONAME1	Character	8	Submit for company one
26	FO_CONAME2	Character	32	Submit for company two
27	FO_ADD1	Character	20	Submit for address one
28	FO_ADD2	Character	30	Submit for address two
29	FO_CITY	Character	10.2	Submit for city
30	FO_STATE	Character	20	Submit for state
31	FO_ZIP	Character	3	Submit for zip code
32	FO_COUNTRY	Character	20	Submit for country
33	FO_PHONE	Character	20	Submit for phone
34	FO_FAX	Character	8	Submit for fax
35	FO_FIRST	Character	15	Submit for first
36	FO_LAST	Character	15	Submit for last
37	ATA	Character	8	ATA code; use the format xx-yy-zz where x,y, and z are number characters
38	ATA_NAME	Character	32	ATA name; a 32 character description of the ATA code
39	PART_CODE	Character	20	Removed part number; follow the manufacturer's format
40	PART_NOMEN	Character	30	Removed part nomenclature
41	PART_HOURS	Numeric	10.2	Removed part hours
42	OLD_SN	Character	20	Removed part serial number
43	OLD_QTY	Numeric	30	Removed part quantity
44	OLD_WBN	Character	20	Removed part waybill number
45	OLD_CARRIE	Character	20	Removed part shipping carrier
46	OLD_DATE	Date	8	Removed part shipping date
47	OLD_INV	Numeric	15	Removed part invoice number
48	OLD_IDATE	Date	8	Removed part invoice date
49	OLD_COST	Numeric	8.2	Removed part cost
50	OLD_PO	Character	15	Removed part purchase order number
51	OLD_VENDOR	Character	32	Removed part vendor name
52	OLD_ACHOUR	Numeric	8.2	Aircraft hours when the removed part was originally installed
53	OLD_INSDTE	Date	8	Removed part installation date
54	OLD_LOCAT	Numeric	1	Removed part engine location; enter 1 for eng1, 2 for eng2
55	OLD_CYCLES	Numeric	8	Removed part cycles when the part was removed
56	OLD_TSO	Numeric	8.2	Time since overhaul for the removed part
57	OLD_TSI	Numeric	8.2	Time since inspection for the removed part
58	OLD_CSO	Numeric	8.0	Cycles since overhaul for the removed part
59	OLD_CSI	Numeric	8.0	Cycles since inspection for the removed part
60	OCCUR_DATE	Date	8	Removed part removal date
61	AC_HOURS	Float	10.2	Aircraft hours when the part was removed
62	AC_SERIAL	Character	15	Aircraft serial number
63	AC_MANUFAC	Character	32	Aircraft manufacturer name
64	AC_D_DATE	Date	8	Aircraft delivery date
65	AC_D_HOUR	Numeric	102.	Aircraft hours at delivery
66	AC_CYCLES	Numeric	8	Aircraft cycles when part was removed
67	AC_MODEL	Character	10	Aircraft model number
68	REGNUM	Character	20	Aircraft registration number
69	REPL_PART	Character	20	Replacement part number
70	REPL_NOMEN	Character	30	Replacement part nomenclature
71	NEW_QTY	Numeric	3	Replacement part quantity
72	NEW_WBN	Character	20	Replacement part way bill number
73	NEW_CARRIE	Character	20	Replacement part shipping carrier
74	NEW_DATE	Date	8	Replacement part shipping date
75	NEW_INV	Character	15	Replacement part invoice number
76	NEW_IDATE	Date	8	Replacement part invoice date
77	NEW_SN	Character	20	Replacement part serial number
78	NEW_COST	Numeric	10.2	Replacement part cost
79	NEW_PO	Character	15	Replacement part purchase order number
80	NEW_RECORD	Character	1	Was part reconditioned? "Y" for Yes, "N" for No, "U" for Unknown
81	NEW_HOURS	Numeric	8.2	Replacement part hours
82	NEW_TSO	Numeric	8.2	Time since overhaul if replacement part is not original
83	NEW_TSI	Numeric	8.2	Time since inspection if replacement part is not original
84	NEW_CSO	Numeric	8.0	Cycles since overhaul if replacement part is not original
85	NEW_CSI	Numeric	8.0	Cycles since inspection if replacement part is not original
86	NEW_VENDOR	Character	32	Replacement part vendor name
87	NEW_LOCAT	Numeric	1	Replacement part system location
88	NEW_CYCLES	Numeric	8	Replacement part cycles
89	ORIG_EQUIP	Character	1	Was removed part orig. equip? "Y"=Yes, "N"=No, "U"=Unknwn
90	MAJ_PART	Character	20	Major component part number
91	MAJ_NOMEN	Character	30	Major component nomenclature
92	MAJ_SN	Character	20	Major component serial number
93	MAJ_HOURS	Numeric	8.2	Major component hours

94	MAJ_TSO	Numeric	8.2	Major component time since overhaul
95	MAJ_TSI	Numeric	8.2	Major component time since inspection
96	MAJ_CSO	Numeric	8.0	Major component cycles since overhaul
97	MAJ_CSI	Numeric	8.0	Major component cycles since inspection
98	MAJ_CYCLES	Numeric	8.0	Major component current cycles
99	E1_MODEL	Character	15	Engine one model
100	E1_HOURS	Float	10.2	Engine one hours
101	E1_CYCLES	Numeric	10.2	Engine one cycles
102	E1_PART	Character	20	Engine one part number
103	E1_SERIAL	Character	15	Engine one serial number
104	E1_MANUFAC	Character	32	Engine one manufacturer
105	E1_P_DATE	Date	8	Engine one purchase date
106	E1_P_HOUR	Float	10.2	Engine one hours at purchase
107	E2_MODEL	Character	15	Engine two model
108	E2_HOURS	Numeric	10.2	Engine two hours
109	E2_CYCLES	Numeric	10.2	Engine two cycles
110	E2_PART	Character	20	Engine two part number
111	E2_SERIAL	Character	15	Engine two serial number
112	E2_MANUFAC	Character	32	Engine two manufacturer
113	E2_P_DATE	Date	8	Engine two purchase date
114	E2_P_HOUR	Numeric	10.2	Engine two hours at purchase
115	E3_MODEL	Character	15	Engine three model
116	E3_HOURS	Numeric	10.2	Engine three hours
117	E3_CYCLES	Numeric	10.2	Engine three cycles
118	E3_PART	Character	20	Engine three part number
119	E3_SERIAL	Character	15	Engine three serial number
120	E3_MANUFAC	Character	32	Engine three manufacturer
121	E3_P_DATE	Date	8	Engine three purchase date
122	E3_P_HOUR	Numeric	10.2	Engine three hours at purchase
123	PART_COST	Numeric	10.2	Replacement part cost for warranty window
124	LABOR	Numeric	10.2	Hours of labor
125	RATE	Numeric	10.2	Labor rate (dollars/hour)
126	LABOR_COST	Numeric	10.2	Total labor cost (rate x hours)
127	DC1	Character	32	Description one in warranty window
128	COST1	Numeric	10.2	Cost one in warranty window
129	DC2	Character	32	Description two in warranty window
130	COST2	Numeric	10.2	Cost two in warranty window
131	DC3	Character	32	Description three in warranty window
132	COST3	Numeric	10.2	Cost three in warranty window
133	TOTAL_COST	Numeric	10.2	Total repair cost
134	CUST_ORDER	Character	36	Customer order worded exactly like one of the following choices:
				COST EST REQUIRED
				EVALUATION
				EXCHANGE
				INFORMATION
				OVERHAUL
				REPAIR
				RETURN FOR CREDIT
				RETURN FOR SERVICEABLE PART REFUND
				SCRAPPED
				WARRANTY CREDIT
				WARRANTY CREDIT FOR REPLACEMENT PART
				WARRANTY CREDIT FOR LOCAL REPAIR
				WARRANTY MANUFACTURER REPAIR
				WARRANTY REPAIR
135	OP_DESIG	Character	4	FAA Operator Designator look up in FAA MMIR window
136	SUB_CODE	Character	1	FAA submitter code
137	DIST_OFFIC	Character	4	FAA district office code
138	OPTYPECODE	Character	2	FAA Operator type code
139	PREC_PROC	Character	2	FAA precautionary procedure code
140	STAGE	Character	2	FAA stage of flight code
141	NATURE	Character	2	FAA nature of problem code
142	NATUREDESC	Character	25	FAA nature of problem description
143	CONTROL	Character	15	Control number
144	SDR	Character	1	Enter "Y" if record is a FAA service difficulty report
145	REASON	Memo	10	A narrative description of why the part was removed
146	ACTION	Memo	10	A narrative description of the action taken to solve the problem
147	RECONUMUSER	Character	12	4 digit FAA Op. Desig. W/ the record # appended to it; record # is on MMIR screen
148	VENDOR_NUM	Numeric	10	A number assigned to each vendor (to_coname1)
149	NO_ENGINE	Numeric	2	Number of engines on the aircraft

150	USERID	Character	3	Initials of the user who entered the record
151	CONDITION	Character	20	Currently not used
152	DATE_ENTER	Date	8	Date the record was entered
153	RECNUM	Numeric	10	Record number
154	FREIGHT	Numeric	10.2	Currently not used
155	TIME_ENTER	Character	8	Time the record was entered
156	TEMP1	Character	10	Currently not used
167	CAMP	Character	1	Currently not used
158	PART_VALID	Character	1	Currently not used
159	AC_VALID	Character	1	Currently not used
160	TEMP2	Character	1	Open warranty; "O" for Open, "C" for Closed
161	TEMP3	Character	1	If the part is copied from inventory, "Y" for Yes, "N" for No
162	TEMP4	Character	1	Currently not used
163	TEMP5	Character	1	Currently not used
164	COMMENTS	Memo	4	Used for final manufacturer comments
165	PARTINVREC	Numeric	10	Part inventory DBF record number
166	CONFIRM	Date	8	Currently not used
167	DATE_SENT	Date	8	Send the record date through the modem
168	LOCATION	Character	16	Part location
169	ENGR_NBR	Numeric	1	Number of engines on aircraft
170	E1_TSI	Numeric	10	Engine one hours Time Since Inspection
171	E1_TSO	Numeric	10	Engine one hours Time Since Overhaul
172	PROP_MANU	Character	32	Manufacturer of propeller
173	PROP_MODEL	Character	15	Model Number of propeller
174	PROP_SN	Character	15	Serial Number o propeller
175	MAJ_MANU	Character	32	Manufacturer of Major Assembly
176	MAJ_MODEL	Character	15	Model Number of Major Assembly
177	ACCI_DATE	Date	8	Date on which accident reported occurred

Total   2485

Structure for PARTS database import file:

1.	PART CODE	Character	20	Part number
2.	PART NOMEN	Character	30	Part nomenclature
3.	COST	Numeric	10.2	Part cost or list price

Appendix 2: MMIR On The Web www.mmir.com

Introduction

HAI's Web site, *www.rotor.com* and the MMIR Web page, *www.mmir.com*, are valuable and convenient resources In addition to providing a wide range of information on helicopter industry issues, the HAI Web site features many searchable helicopter related databases and Web links as well as providing you a chance to run searchable Parts reports from HAI's online MMIR database

Requirements

An Internet connection.

Logging On

1. Type *www.rotor.com* to visit our Web site.
2. Type *www.mmir.com* to visit the MMIR Web page and get the latest information on the program or to run Parts reports.

Appendix 3: SDR Reporting

Overview

The MMIR program has been accepted by the Federal Aviation Administration for the use of Service Difficulty Reporting (SDR) and Maintenance Malfunction/Defect Reporting. This system meets the requirements of FARs 145.63 and 121.313, 127.313, 135.415 when incorporated into approved maintenance and operational programs.

Excerpt from FAA regarding SDRs:

> When a Service Difficulty Report is received by the local Flight Standards District Office, it is reviewed by an Aviation Safety Inspector. It is then sent to the FAA Safety Data Analysis Section in Oklahoma City, where it is analyzed, coded and fed into an automated database. The report is then forwarded to the appropriate FAA Certification Directorate for the affected product where it is evaluated by FAA engineers who decide what is the appropriate course of action to correct a problem. Your report may help support the issuance of an Airworthiness Directive or a manufacturer's service bulletin if it is needed.

Aside from being able to access MMIR data through the MMIR Web site *http://www.mmir.com* hours a day, you can obtain SDR data from the FAA by first contacting the Safety Data Analysis Section at (405)954-4171. This office will help you form a specific request that will have to be presented in writing to the Information Management Section, AFS-624 at the following address: Federal Aviation Administration, Information Management Section, AFS-624, P.O. Box 25082, Oklahoma City, OK 73125-5029.

Questions regarding the SDR analysis should be routed through the Safety Data Analysis Section at the following address: Federal Aviation Administration, Safety Data Analysis Section, AFS-624, P.O. Box 25082, Oklahoma City, OK 73125-5029. To reach this office by phone, please call (405)954-4171 or fax to (405)954-4748.

FAA Operator Designator

Excerpt from the FAA Service Difficulty Report Bulletin, Issue 95-23:

> The four character Operator Designator is an FAA assigned computer code which is used as a convenient way to identify the air carrier or repair station submitting a Service Difficulty Report (i.e., NWAA Northwest Airlines.)

The best way to ensure that proper credit is given is to make sure that the Operator Designator code for the submitting organization is included on each report.

Repair stations can use the operator/district office or the "OPER/D.O." box located at the bottom right hand corner of the Service Difficulty Report, FAA Form 8070-1 to report the designator. On Malfunction or Defect Report (M or D), FAA Form 8010-4, a separate "operator designator" box is provided. Remember that in the MMIR program the designators are available in a handy Lookup file. Plus, the operator designator is usually the same as the first four digits of the repair station or air carrier certificate number. If in doubt, ask your local Flight Standards Inspector for the assigned operator designator code.

MMIR Fields Exported to the FAA

Screen 1
FAA Operator Designator, Occur Date

Screen 3
Aircraft Information: Model, Serial Number, N Number, Manufacturer, Hours, Cycles

Screen 4
SDR Information: Part Defect, Stage of Flight, Precautionary Action.

Screen 5
Removed Part Data: Part Number, Serial Number, Part Description, Hours, Cycles, Inspection Information, and ATA Code.
Replacement Part Data: Part Number, Serial Number, Part Description, Hours, Cycles, Inspection Information, and ATA Code.

Screen 6
Engine Data: Model, Serial Number, Hours, CSI, Manufacturer.

Screen 7
Major Assembly Information: Part Number, Part Name, Serial Number, Part Hours, TSI, TSO, Cycles, CSI, CSO.

Screen 8
Reason for Report
Action Taken

Note: These are the only fields exported to the FAA.

Glossary of Terms

Activate

To make a control button or text box ready for you to use. A control button is activated when you can clearly see its label. When a button is not active, its label will will appear colorless and dimmed. When a text box is activated and it has the focus, it will be highlighted or the cursor will be flashing in it. Most controls and text boxes in MMIR must be activated before you can do anything with them

ATA Code

A standardized code used by the FAA to determine the part location on the aircraft.

Back-up

To save data onto a separate disk – just in case.

Click

To quickly press and release the left mouse button.

Closed Warranty

Manufacturer has answered warranty claim

Column

The visual representation of a field in a database table. In a database or **Lookup** table, a column is a vertical stack showing the value of a field in every record

Comma Delimited

A type of file format. The most popular for importing/exporting data between software applications. The data values are separated by commas

Current Record

The record that you are viewing, editing, or adding to your record set. Only one record at a time can be the current record.

Cursor

A special indicator on a computer screen that marks the place keystrokes will appear. In systems that use a mouse, the on-screen icon that moves with the mouse is often called a cursor, pointer, or insertion point

Customer Order

For Warranty Claim filing, a dropdown menu listing choices regarding reason for part return

Default

A value that is automatically entered in a field or text box when a new record is added. You can accept a default or type a new value over it. In MMIR you can define and set your own default values before and during every data entry session; this practice will simplify your work and help to increase the accuracy of your data entry.

Delete

To permanently remove data files or data entries from the database or the record.

Delimited Text File

A file containing data values which are separated by commas, tabs, semicolons, or other characters

Electronic Format

A way to submit information via modem or floppy disk; requires no paper copies

Entity

The object, or item that a table describes; the subject which is depicted by the data in your data table.

Export

Move MMIR information into another program or save to disk/file

Field

An element of a table, record, or form that contains a specific item of information such as Part Number or Hours At Occur. A field is represented by a column or a cell in a **Lookup** table, or by a text box on the MMIR form

Focus

The ability to receive user input through mouse or keyboard actions. In Microsoft Windows™ programs, only one item at a time can have the focus. In MMIR and MMIR Lite the item with the focus will be highlighted, or the cursor will be flashing at the data entry insertion point within that text box; controls and command buttons are highlighted and have the focus when you can see a thin-lined black rectangle around their label. Whatever you type can only appear in a text box if that text box has the focus. You can set the focus in a text box or a control or command button by clicking on it or by tabbing into it using any of the navigation keys on your keyboard.

Highlight

To make an object on a display screen stand out by displaying it in a different mode from other objects. Typical highlighted objects include menu options, controls, command buttons, and selected blocks of text

Import

To copy data from a text file, a spreadsheet, or database table into an MMIR table. You can import into MMIR any data with a matching data structure

Index

To create an index for a database, or to find records using an index. In database design, an index is a list of keys (or keywords), each of which identifies a unique record. Indexes make it faster to find specific records and to sort records by the index field or search key. A database can have multiple indexes, each one of which is associated with a particular search key. An index stores the values of a search key in sorted order and associates each search key with the records that contain that search key.

Insertion Point

In graphics-based programs, such as Windows™, the insertion point is the point where the next characters typed from the keyboard will appear on the display screen. The insertion point is usually represented by a blinking vertical line. You can reposition the insertion point by pressing arrow keys or by moving the I-beam pointer.

Installation

Loading software onto computer system for use

Lookup

An easy way to retrieve previously entered information from a table

Lookup Table

A rectangular grid which contains records and data fields delineated by rows and columns. Each row represents a record of one entity and each column represents an

attribute of that entity. There are ten Lookup tables within MMIR: Address, Aircraft, ATA Code, Defect, Engine, Engine Model, Operator Designator, and Parts.

Manufacturer Warranty Claim

Used by operator to provide information regarding warranty.

Null

A value that indicates missing or unknown data in a field

Open Warranty

A Warranty Claim not yet answered by the manufacturer

Operator Designator

A four-letter code assigned by the FAA to all certified operators and repair stations. This code is used by the FAA Technical Center to monitor data. If you need a designator please contact your local Flight Standards Office.

Part Condition

The standardized terms designated by the Department of Transportation to state the condition of a removed and replaced part.

Query

A question about the data stored in your tables, or a request to perform an action on the data. A query can combine data from one or more tables.

Re-index

To organize database if the system crashes or a sudden power outage occurs. Only use this if the data was corrupted and is out of order

Radio Button

A display on a form, in a **Lookup** table, or in a popup window that presents you with a set of choices from which you must select. You may also accept the default selection. The buttons themselves are small circles and you select your choice by clicking inside the circle of the option you want. A small black dot indicates the radio button is selected.

Record

An MMIR database object that presents and stores data formatted and organized according to a certain set of predetermined specifications. In a **Lookup** table, a record is represented as a row comprised of the set of all the columns (fields)

Scroll Bar

A bar that appears at the right and/or bottom edge of a window whose contents are too large to be completely displayed. Each scroll bar has two scroll arrows and a scroll box allowing you to scroll within the window, table, or list box

Search Key

The attribute or field or set of attributes which is used to look up records in a file. In this sense, key is an abstract term referring to the data field, attribute, or set of attributes that gives you the center of reference around which and upon which you build your search. For example you may have an aircraft built of many parts. How do you find a part? You need a key by which to search. In this instance, part location may serve as a Search Key. In a database of aircraft parts a good Search Key may be Part Number or Part Name.

Service Difficulty Reporting

Required by the Federal Aviation Administration within a 72 hour period following malfunction/defect occurrence

Set Defaults

A powerful time-saving feature of MMIR and MMIR Lite. Set Defaults allows the user to fill in common information such as FAA operator designator and Submitted By information so you do not have to type the same data over and over again in any given data session. Set Defaults, once typed in will appear on each new record until the defaults are re-set. Accessible under the **Screen Mode**: **Set Defaults**.

Sorting your forms before you begin data entry maximizes the effectiveness of MMIR and also of your own time and energy. Any and all data entry fields in MMIR and MMIR Lite can be set as defaults. You do not have to set any defaults.

Sort

In a database, to organize a set of records according to a particular data field or search key. When you look over your hard copy forms before you begin data entry with MMIR, you will save yourself much time and effort by "sorting" your forms in accordance with your own views of data entry efficiency.

Sort Order

The sequence in which a group of records has been organized based upon a particular search key or sort type. In MMIR Lookup tables, you are able to view your data according to a choice of Sort Orders.

Table

A rectangular display of data values as rows and columns. Each column represents one attribute or characteristic which describes the object or entity you want to keep track of. Each row represents a person or thing that you are interested in. Columns

are fields and rows are entities which are described by the data contained in the fields.

Tab Order

The order in which the focus moves in a form from one field or control button to the next as you press the TAB key, the ENTER key, or one of the arrow keys

Text Box

A rectangle which displays data and into which data may be entered. In MMIR and MMIR Lite, there are two types of text boxes, bound and unbound. A bound text box means the text box is bound to a field in a data table. For example, the Parts Number text box connects directly to the Parts **Lookup** table. An unbound text box is a text box in which the data entered or displayed is not connected to a database table. For example, the Hours at Occur text box contains data which is not connected to a **Lookup** table.

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