FLMSG Users Manual

4.0

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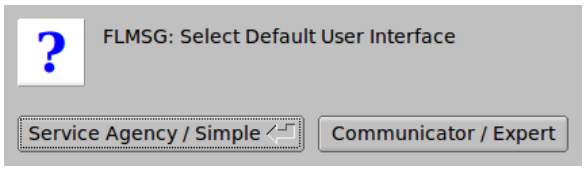
Chapter 1

FLMSG Users Manual - Version 4.0

1.1 Fast Light Message

FLMSG is a simple forms management editor for the amateur radio supported standard message formats. Form data can be transferred between computers either using standard internet email or via radio frequency broadcasts typically made by an amateur radio operator on your behalf. flmsg forms can be very complex and include embedded images and other controls that make data entry less error to prone. The template information is not transferred between computers, only the volatile information contained in the form entry controls. The form template must reside on each flmsg computer that will be used to create, edit, or review the data.

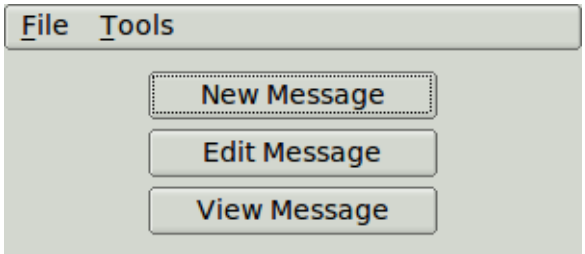
When flmsg is run for the very first time the user will be prompted to select a default user interface.



There are two user startup interface dialogs for flmsg. The simple UI is designed for the non-communicator or served agency personnel. It provides easy access to create, edit, and view messages based on CUSTOM html-5 message forms. This UI is suitable for use by field personnel who are not amateur radio operators.

The advanced, or expert, user interface is applicable to the amateur radio operator. It provides access to all of the flmsg functions including sending and receiving messages using advanced techniques such Automatic Repeat reQuest, ARQ.

1.2 Simple User Interface



Use this interface if you only want to create new messages based on existing custom forms; edit or reply to an existing custom form based message; or view a received message based on either a custom or a built-in form.

Form editing and viewing is done in the default web browser that is installed on the same computer as flmsg. The browser may be Internet Explorer, Chromium, Foxfire, Safari, or some other graphics enabled browser.

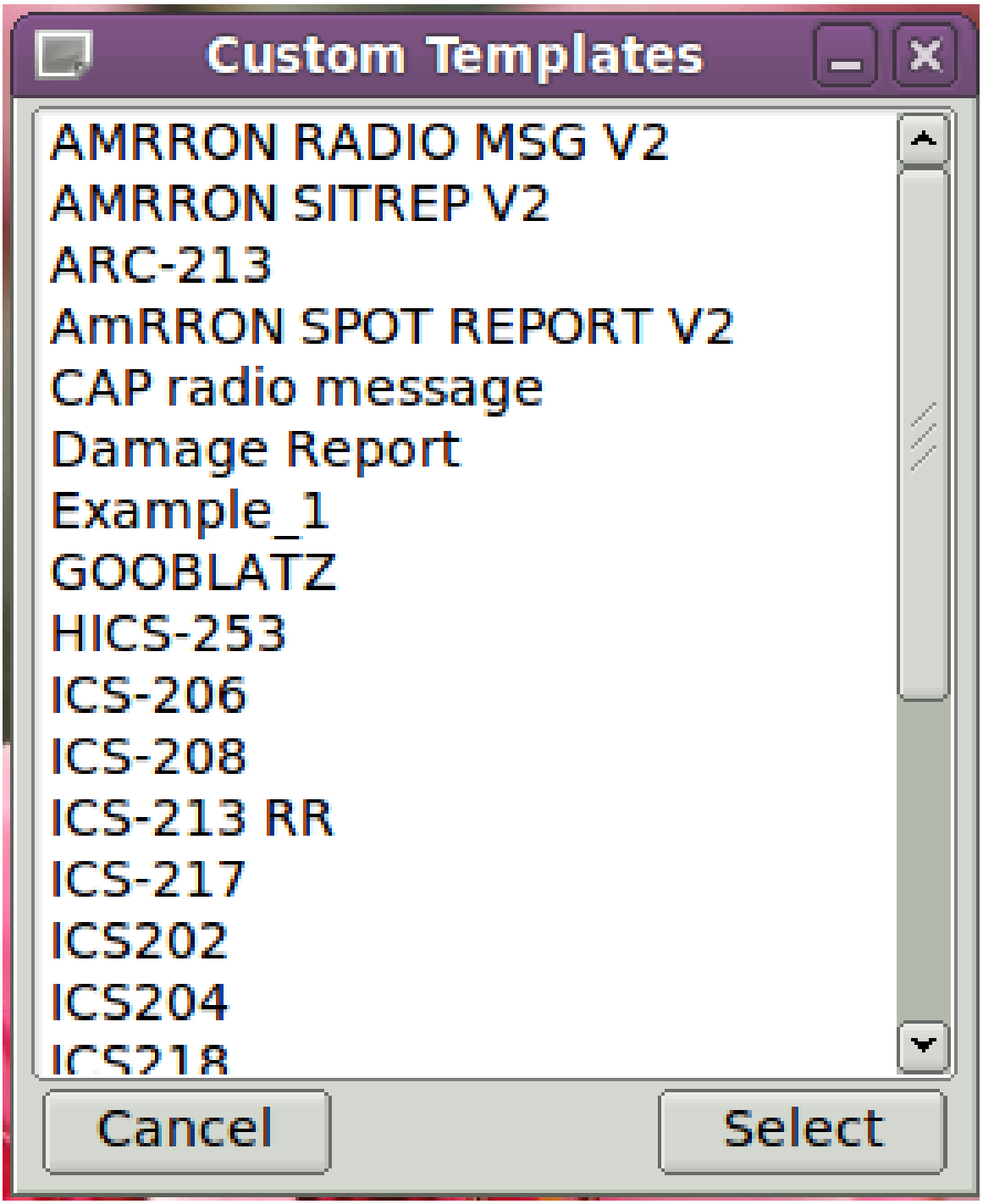
flmsg file storage important to the Simple User Interface is in a

- Templates Folder - NBEMS.files\CUSTOM\
- Messages Folder - NBEMS.files\ICS\messages\

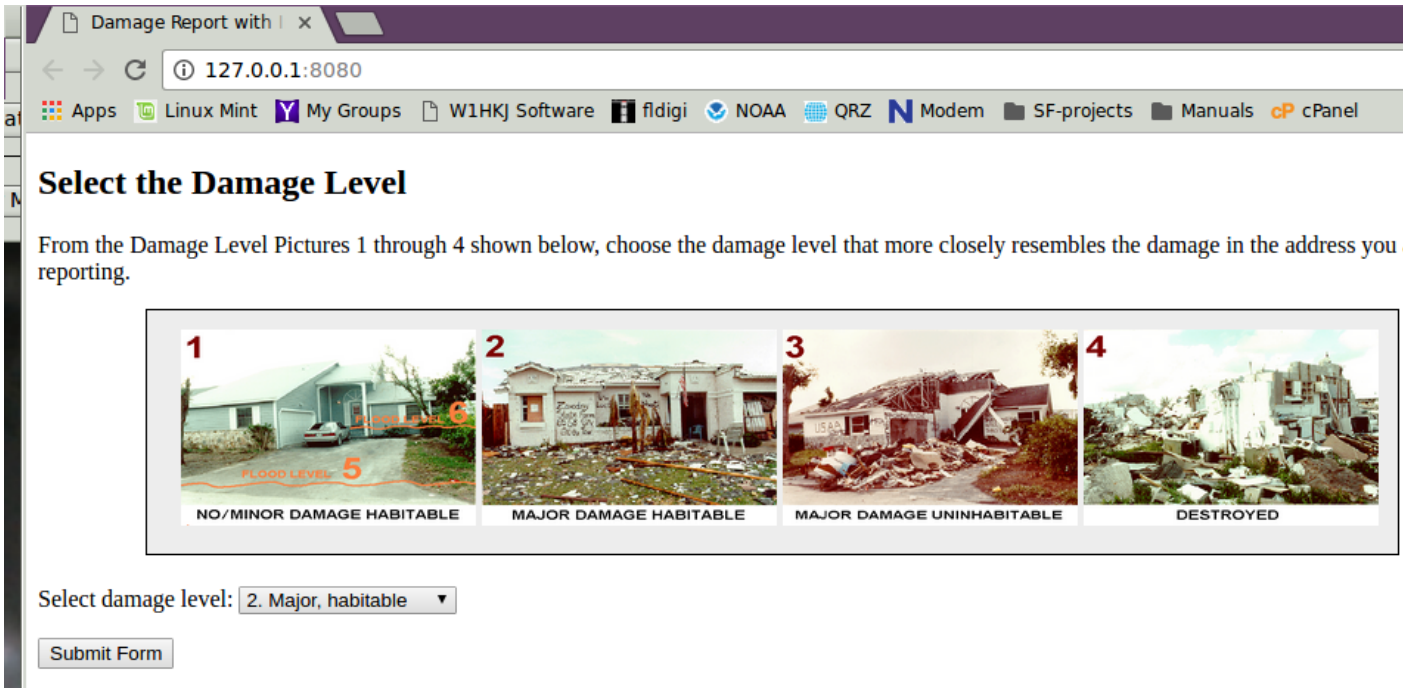
Use the respective menu items to quickly open either of these folders to review their contents. You may occassionally need to create a form that is not on the custom menu. You can access the full flmsg forms system by pressing the *Expert Dialog* menu item.

Create a new message

Press the "Create" button and a custom forms browser will open.



Highlight the desired form and then press the Select button. All custom forms are edited and viewed from your default web browser. flmsg will open the web browser with the form ready to be filled in.



The posted form has a *Submit Form* button at the bottom of the browser page. Press the *Submit Form* button to signal flmsg that the data is ready to be saved. A save file dialog will open and you can assign a unique filename for the newly created document. All custom messages should have file name extension ".k2s". You have the option of aborting the process by pressing the cancel. Exiting the web browser before pressing the submit button will also abort the message creation process.

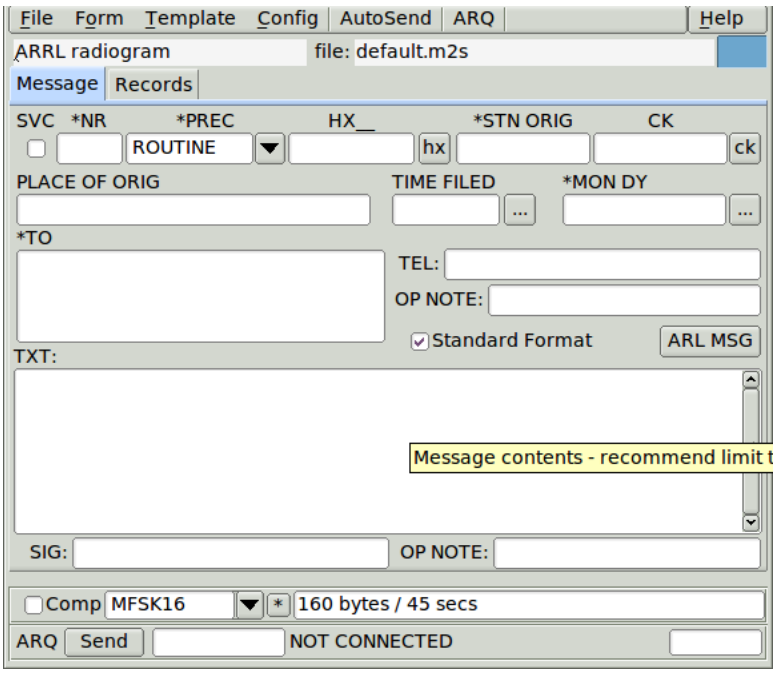
Editing an existing message

The Edit Message button opens an existing message file (k2s extension) for amending. The k2s file is a data file that is keyed to a specific CUSTOM template form. The data prefills the template and the form is displayed and editable in the web browser. Pressing the *Submit Form* button will overwrite the original k2s file.

Viewing an existing message

The View Message button opens an existing message file, either custom or built-in format. The data prefills the associated template and the completed form is displayed in the web browser. The displayed form is not editable, but you can print the form using the web browser print function.

1.3 Expert User Interface



1.4 Menus

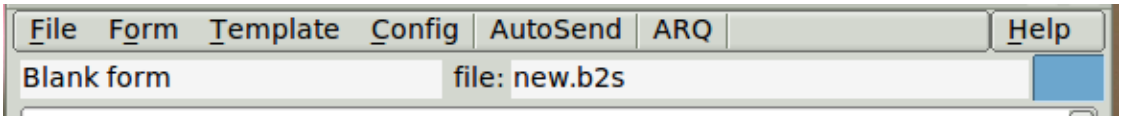


Figure 1.1 Form Name

Figure 1.2 File Name

Figure 1.3 Drag and Drop Target

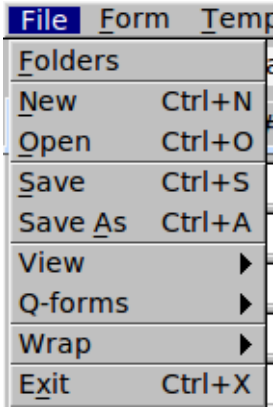


Figure 1.4 File Menu

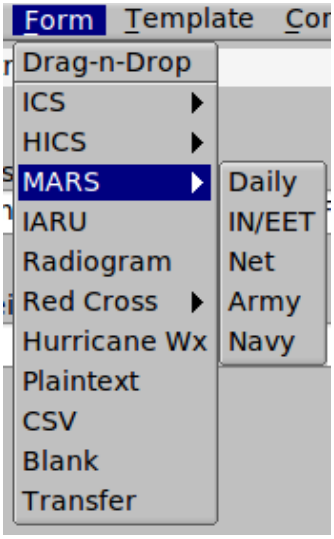


Figure 1.5 Form Menu

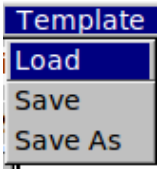


Figure 1.6 Template Menu

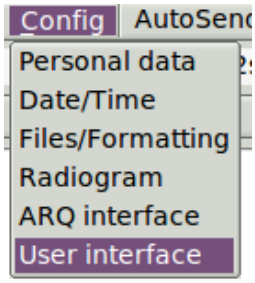


Figure 1.7 Config Menu

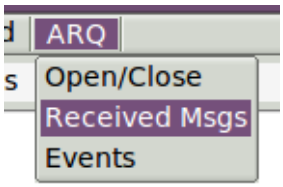


Figure 1.8 ARQ Menu

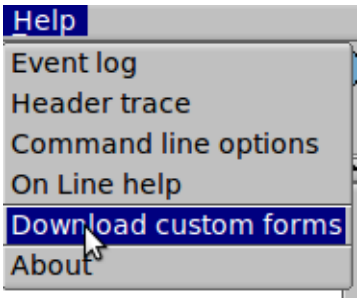


Figure 1.9 Help Menu

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1.5 Built-in forms

Built-in forms are only accessible on the advanced user interface. These currently include:

- ICS-203 - Organization Assignment List
- ICS-205 - Incident Radio Communictions Plan

- ICS-205A - Comms List - special USCG Plan
- ICS-206 - Medical Plan

- ICS-213 - General Message Form
- ICS-214 - Unit log
- ICS-216 - Radio Requirements Worksheet
- ICS-309 - Incident Communications Log
- HICS-203 - Hospital Organization Assignment List
- HICS-206 - Hospital Staff Medical Plan
- HICS-213 - Hospital Incident Message Form
- HICS-214 - Hospital Operational Log
- MARS Daily - Military Auxiliary Radio System Daily report
- MARS IN/EEI - Military Auxiliary Radio System IN/EEI report
- MARS Net - Military Auxiliary Radio System net report
- MARS Army - Military Auxiliary Radio System Army formatted message
- MARS Navy - Military Auxiliary Radio System Navy formatted message

- IARU - International Amateur Radio Union standard message
- Radiogram - NTS message
- Plaintext - generic message format
- CSV-text - Comma Separated Value text file (spreadsheet)
- Blank - very simple text format with no preset fields
- Drag and Drop - target control (widget) that accepts either a data file (.203 etc), a wrapped data file (.wrap), or the text associated with a data file. The later may be a copy and paste from another application such as fldigi or a text editor.
- Transfer - transfer any file using FLMSG wrap and header controls.

It's data files are pure ASCII text that can be sent from point to point using the internet, amateur radio, or other electronic link. The data files are designed to minimize the transfer size. This is particularly important on amateur HF. The data file and the transfer file are one in the same. The transfer file is encapsulated using a process that is compatible with flwrap. Encapsulation allows the program to confirm the received file integrity.

The data file may be sent using flamp or wrapped by flwrap for external transmission. You might want to do that if the file is to be transmitted via internet or a protocol not contained in fldigi. Files transferred in this way will not automatically open in flmsg.

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1.5.1 Expert File Menu

New - clear all fields and name the default file "new.f2s" (new.m2s for radiogram)

Open - open an existing file flmsg data files have the extension

".i2s" for IARU form
".203" for ICS-203 forms
".205" for ICS-205 forms
".25A" for ICS-206A forms
".206" for ICS-206 forms
".213" for ICS-213 forms
".214" for ICS-214 forms
".216" for ICS-216 forms
".H203" for HICS-203 forms
".H206" for HICS-206 forms
".H213" for HICS-213 forms
".H214" for HICS-214 forms
".mds" for MARS daily report
".mis" for MARS IN/EEI report
".mns" for MARS net report
".nas" for MARS Army message
".nns" for MARS Navy message
".m2s" read as "message 2 send" for radiogram forms
".p2s" for plain text, generic forms
".c2s" for comma-separated-value spreadsheets
".b2s" for blank forms

Save - save the current file to the name in the "file:" display box

Save As - save using a new filename that the user provides

View - write the data to specified type of file

Html delivery - viewed in default browser, contains only those elements sent to final recipient
Html file copy - viewed in default browser, contains ALL fields including record keeping
Text - viewed in default text editor - suitable for CW / Voice transmission

Q-forms

Import - Import the data fields from a Qforms eXtended Markup Language (xml) file
Export - Export the data fields to a Qforms compatible xml file

Wrap (Import / Export / AutoSend)

Import the data fields from a Wrapped data file. If the data file is corrupt you will be given the opportunity to either allow flmsg to recover as many fields as possible or to view the file using the default text editor.

Export the data fields to a Wrapped data file

Create a wrapped datafile and save in the NBEMS.files/WRAP/auto directory. If running, fldigi will find and automatically transmit the file.

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1.5.2 Template

Load - load an existing template file - the default extension for the supported files are:

IARU template - "i2t"
ICS-203 template - ".203T"
ICS-205 template - ".205T"
ICS-205A template - ".25T"
ICS-206 template - ".206T"
ICS-213 template - ".213T"
ICS-214 template - ".214T"
ICS-216 template - ".216T"
HICS-203 template - ".H203T"
HICS-206 template - ".H206T"
HICS-213 template - ".H213T"
HICS-214 template - ".H214T"
MARS daily template - ".mdt"
MARS IN/EEI template - ".mit"
MARS Net template - ".mnt"
MARS Army template - ".nat"
MARS Navy templat - ".nnt"
Radiogram template - ".m2t"
Plain text template - ".p2t"
CVS-spreadsheet - ".c2t"
Blank text template - ".b2t"

Save - save the current form as a template file, using the default (or current) filename
Save As - save the current form as a template file, user provides the filename

Note: data files and template files for ICS213 are identical. The only difference is their location in the computer directory structure and their extension. Message files and template files maintain their uniqueness by virtue of their file name. If you reuse a filename the old data will be lost.

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1.6 File locations

On XP: C:\Documents and Settings\<username>\NBEMS.files
On Vista: C:\Users\<username>NBEMS.files
On Linux: /home/<username>/.nbems
On Puppy: /root/.nbems
On OS X: /home/<username>/.nbems

Data files are located in the sub directory "ICS/messages"
Template files are located in the sub directory "ICS/templates"
View files (.rtf, .html, .txt) are located in the "ICS/" subdirectory.

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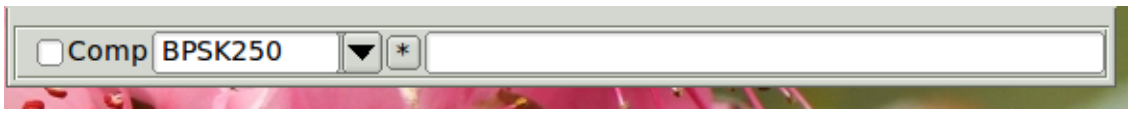
1.7 Compression



The compression panel is at the bottom of the main dialog. You can elect to compress any file during transmission. Compressed data will always be converted to the base-64 character set. A limited subset of digital modem types can be selected from the 2nd combo box. If flmsg and fldigi are executing concurrently then flmsg will command fldigi to change modem when a new modem type is selected in flmsg. Each time these controls are changed (when a change is made to the form itself) the status blocks for transfer size and number of seconds to transfer is updated.

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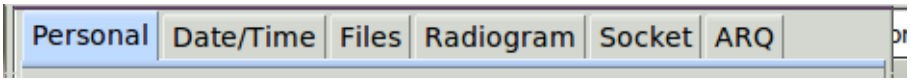
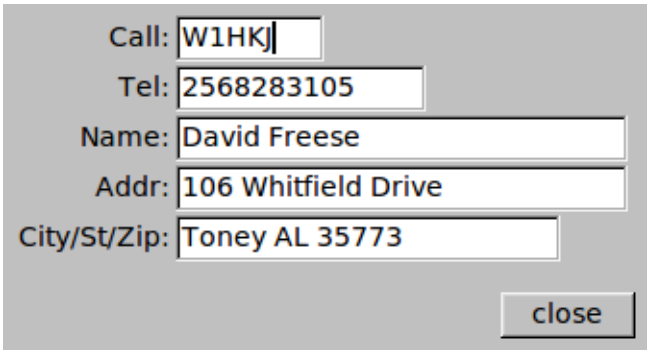
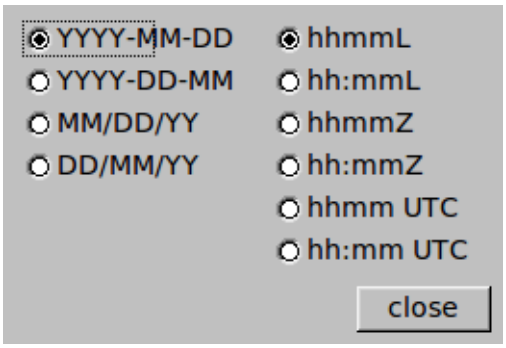
1.8 Configuring

There are six separate configuration dialog tabs for FLMSG:

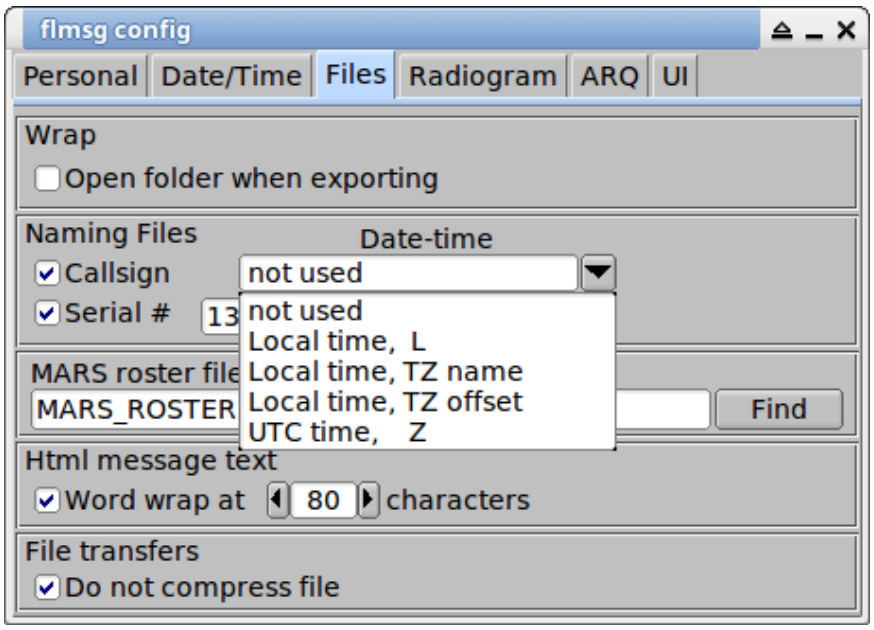




Personal data that will be used on various forms. The Call is a required field. If you leave it blank the program will nag you when you try to save a file, create a wrapped file, or use the autosend function.



- Date format - select the date format that will be used for both ICS213 and Radiogram
- Time format - select the time format that will be used for both ICS213 and Radiogram



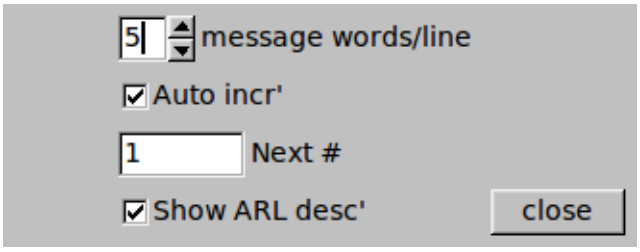
- Wrap - automatically open the target folder (directory) when the file is exported
- All flmsg data streams can be compressed to reduce transmission time. The compression will only be applied to the data part of the transmission, and it will only occur if the compression actually reduces the size of the file. The compression information is recorded in the event log (see below).
- Naming files - automatic file name generation as:
  CALLSIGN-YYYYMMDD-HHMMSS(Z)-NNNN where
  CALLSIGN is the operators callsign
  YYYYMMDD is year, day, month
  HHMMSS is hours, minutes, seconds local or Zulu at time file is created
  The time zone annotation is selectable as 'L', time-zone-name, time-zone-offset, or at UTC 'Z'.
  NNNN is an auto incremented serial number
  You can elect to use any or none of the autogeneration components
  Filename extensions are f2s for ICS-213 data, f2t for ICS-213 templates and
  m2s for radiogram data.

- Radiogram serial numbers can be auto-incremented. The auto-increment number is also used for the file name. In the example shown the next Radiogram will be number 104 and the associated file sill be W1HKJ-104.m2s
- MARS roster file - Callsign entries in the MARS forms is from a combo box that is filled in from a configuration file. This file is a simple CSV, Comma Separated Value, text file. An example of it's contents is:

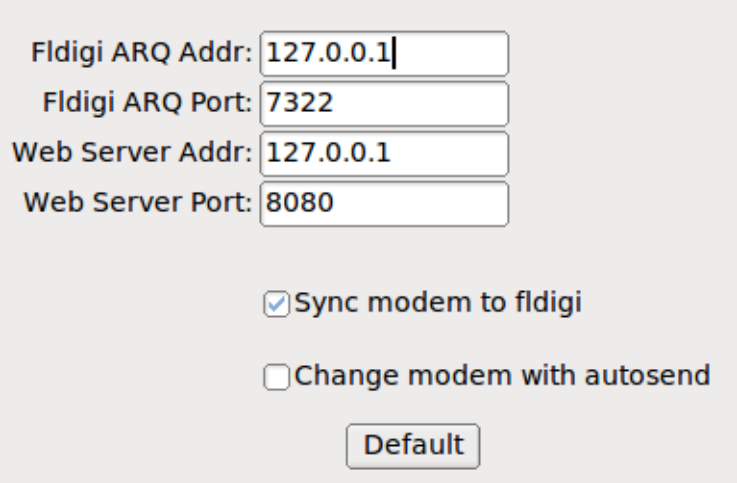
  CALL, LNAME, STATE, BCALL, POSITION
  AAR1AA,LNAME1,VT,,
  AAR1AB,LNAME2,NH,AAQ1EQQ,RS TUV
  AAR1BC,LNAME3,ME,AAQ1ERR,AB CDE

  Note that empty fields are still separated by a comma. This file can be managed using a text editor or any spreadsheet program.

- Html message text - plain text documents are viewed as html documents. Set the number of characters for word wrapping to prevent the need to use horizontal scrolling in the browser.
- File transfers - check this control if you want all file transfers to be fully visible during reception. If unchecked, the file may or may not be compressed depending on whether the compression and subsequent base64 encoding result in a smaller size transmission.



- Radiogram format -
  - # words per line to be used when formating the radiogram message text
  - Auto increment the filename numbering
  - Assign a value to the next auto increment number
  - Add the ARL numeric descriptors to end of html form



Configure server interface to fldigi. Used for xmlrpc interface to fldigi. Allows flmsg to control fldigi modem selection for a limited subset of the fldigi modem types.

Configure html forms server, used to edit and display custom html forms.

Sync modem to fldigi - flmsg modem type will follow fldigi selection.

Change fldigi modem with autosend - send modem change signal to fldigi just prior to beginning flmsg transmission. fldigi does not automatically return to original modem.

Default - restore socket address/port pairs to the default settings.

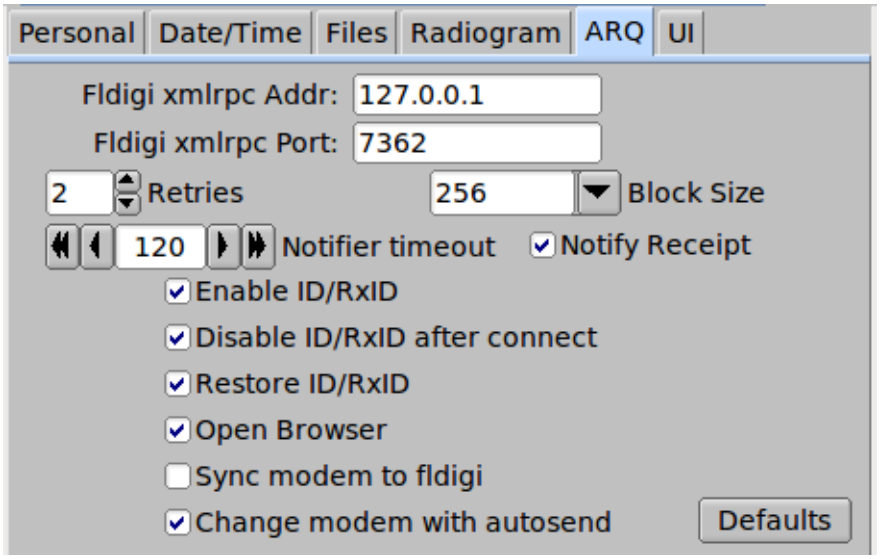


Figure 1.10 ARQ Configure

(see ARQ section for configuration details) ARQ config

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1.9 Auto Send

flmsg can connect directly to fldigi using one of fldigi's socket services. Fldigi acts as the server and flmsg the client. Pressing the "AutoSend" button will initiate an immediate transfer of an encapsulated file to fldigi. You should have fldigi prepared to accept the file for transmission. The frequency (radio and audio) and modem type should be correct and if you are in a QSO then your contact should be prepared to receive the transmission.

1.10 Automatic Reception

When fldigi recognizes the conclusion of an flmsg 'autosend' data stream it will take one of two actions:

- Start a new instance of flmsg using the data stream file contents
- Pass the data stream contents directly to the currently executing flmsg

The selection of the flmsg transfer option is made on the fldigi configuration tab for NBEMS.

If the data stream is sent to the current flsmg then the following action occurs in flmsg:

- The data stream is saved to the Messages folder using the originators filename
- A popup dialog will open which gives the operator the option of immediately loading and viewing that new message file.

1.11 flmsg-ARQ transfers

flmsg includes a unique Automatic Repeat reQuest, flmsg-ARQ, transfer system. It is similar to, but **not compatible with the flarq ARQ implemention**.

flmsg-ARQ uses packetized frames which allow a Sender and a Recipient flmsg to transfer verifiable blocks of information. The information may be either administrative or file content. Each block is accompanied by a Cycle Redundancy Check value which the Recipient uses to verify the validity of the frame. The frame timing is determined by the modem characteristics; make sure that the fldigi modem type is set from flmsg. The ARQ process will not transmit until several conditions are met

- the required time between ARQ Rx and the next ARQ Tx has elapsed
- there is no signal being received by fldigi as determined by it's squelch detector

If you either disable the fldigi squelch, or the squelch is opening on noise then the ARQ signal will never begin transmit.

The ARQ process is accessed from the ARQ menu:

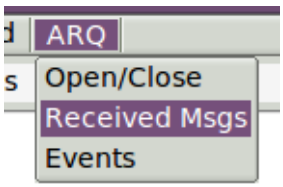


Figure 1.11 ARQ menu

The Open/Close menu item toggles an ARQ drop-down addition to the main flmsg dialog:

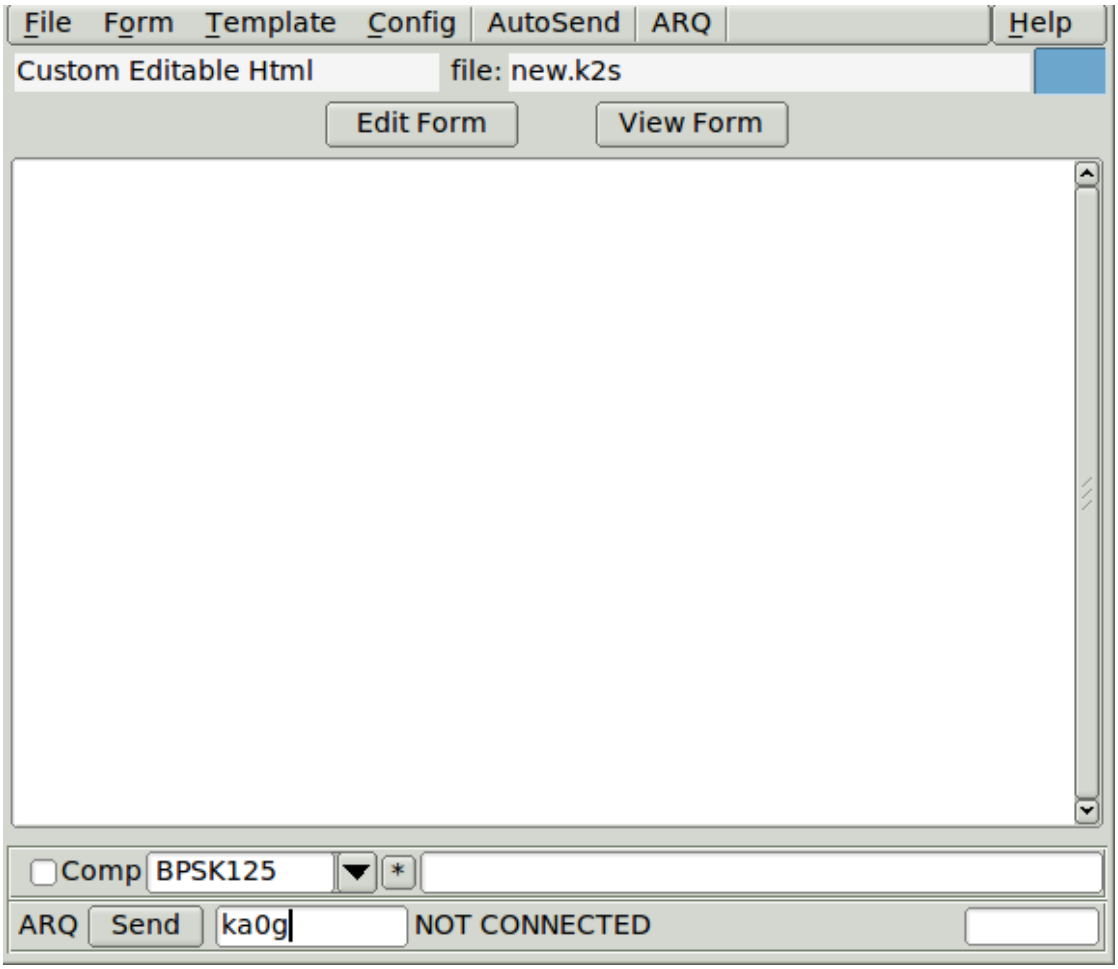


Figure 1.12 ARQ drop down

The Sender enters the callsign, or other unique identifier of the Recipient, in the control to the right of the Send button. This must match the value which the Recipient has entered into his or her flmsg configuration for 'Call'. The Sender opens (or has previously opened) the message intended for transfer, and then presses the Send button. The Sender and Recipient will then start an ARQ session beginning with the Connect negotiation. The Sender will close the ARQ session when the transfer has been successfully completed.

The progress of the ARQ transfer will be displayed on the drop down:

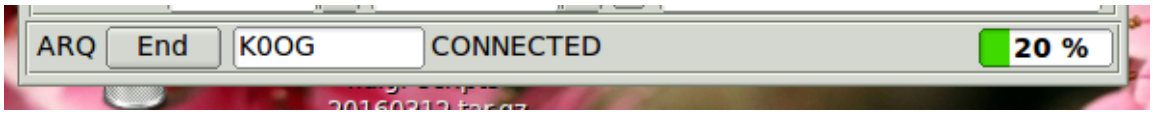


Figure 1.13 ARQ progress

Both the Sender and Recipient should also monitor the ARQ activity on the ARQ events dialog (select the menu item ARQ/Events).

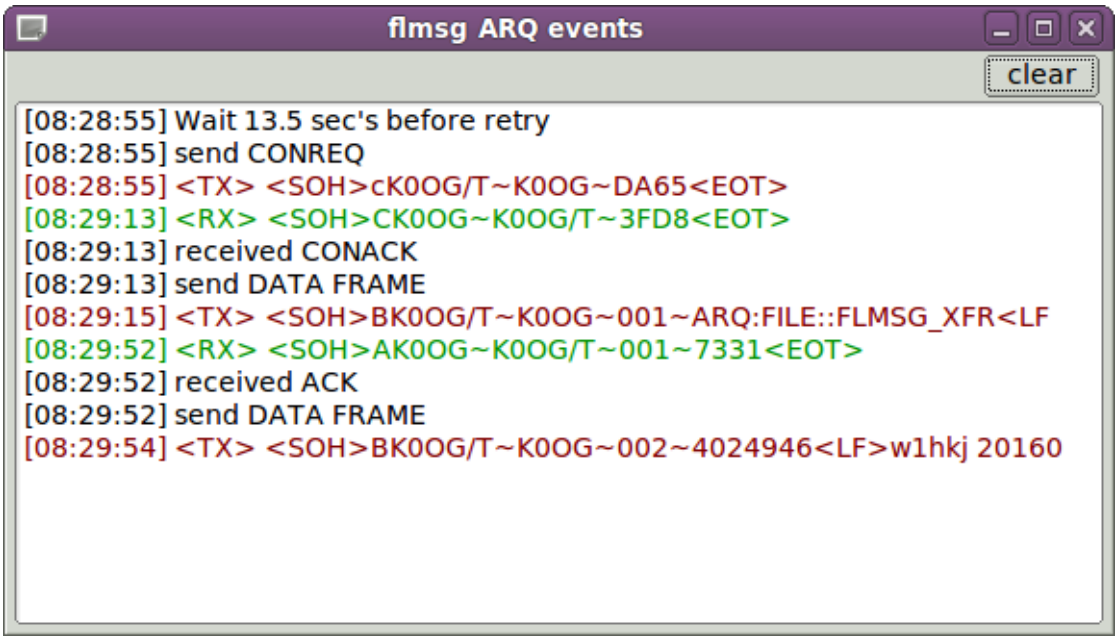


Figure 1.14 ARQ Events

Information lines are shown in BLACK, received lines in GREEN, and transmitted lines in RED.

Both the Sender and the Recipient ARQ process are configured to execute a maximim number of retries in the event that a frame has not been verified. If the retries are exceeded for any one frame then the ARQ session is aborted. The time to wait between retries is computed by the program and is dependent on the digital mode being used. You should have the "Sync modem to fldigi" configuration item checked.

Either station may elect to end the ARQ session. This might be necessary if propogation or interference conditions warrant and the user does not want to wait for the retry process to conclude. The normal end process is to negotiate a 'disconnect' process at both ends of the ARQ session. It is possible to force a complete reset of the ARQ session without the benefit of the disconnect. To force the reset you should hold the control key down while pressing the "End" button. This can leave the other end of the ARQ session in a connected, but disabled state. You should probably tell the other station that you have forced the immediate shut down so that he or she can also do the same.

Both incoming 'AutoSend' and ARQ transfers may be expected during a single flmsg/fldigi session. flmsg does not immediately display a newly received message, but rather populates and opens a received message dialog.

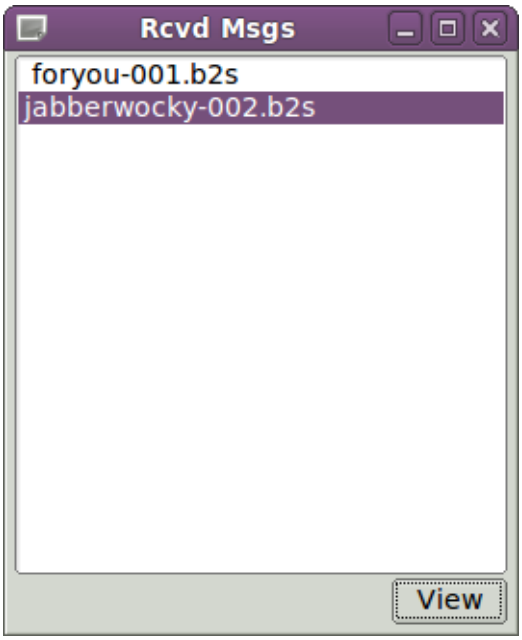


Figure 1.15 Received Messages

This prevents the incoming message from interfering with any editorial work in which the user may be engaged. When convenient select a message for viewing and press the View button.

ARQ is very simple to configure.

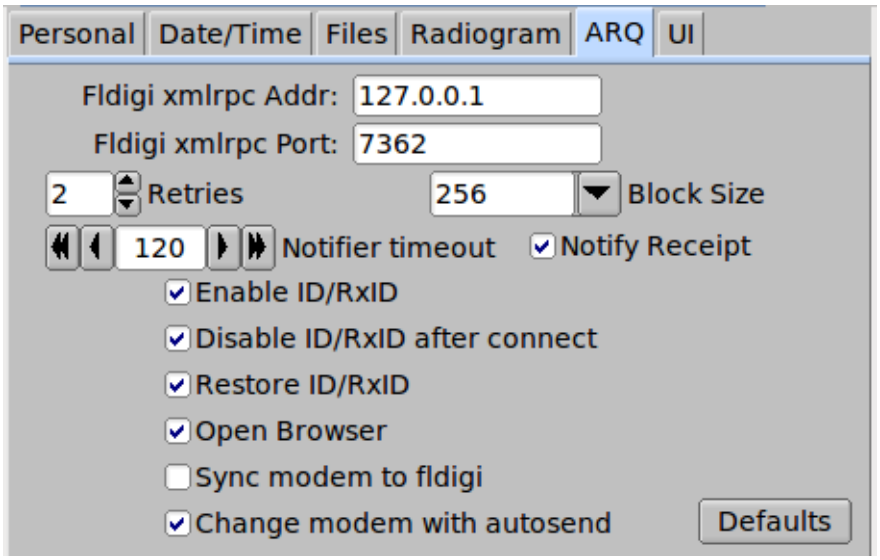


Figure 1.16 ARQ Configure

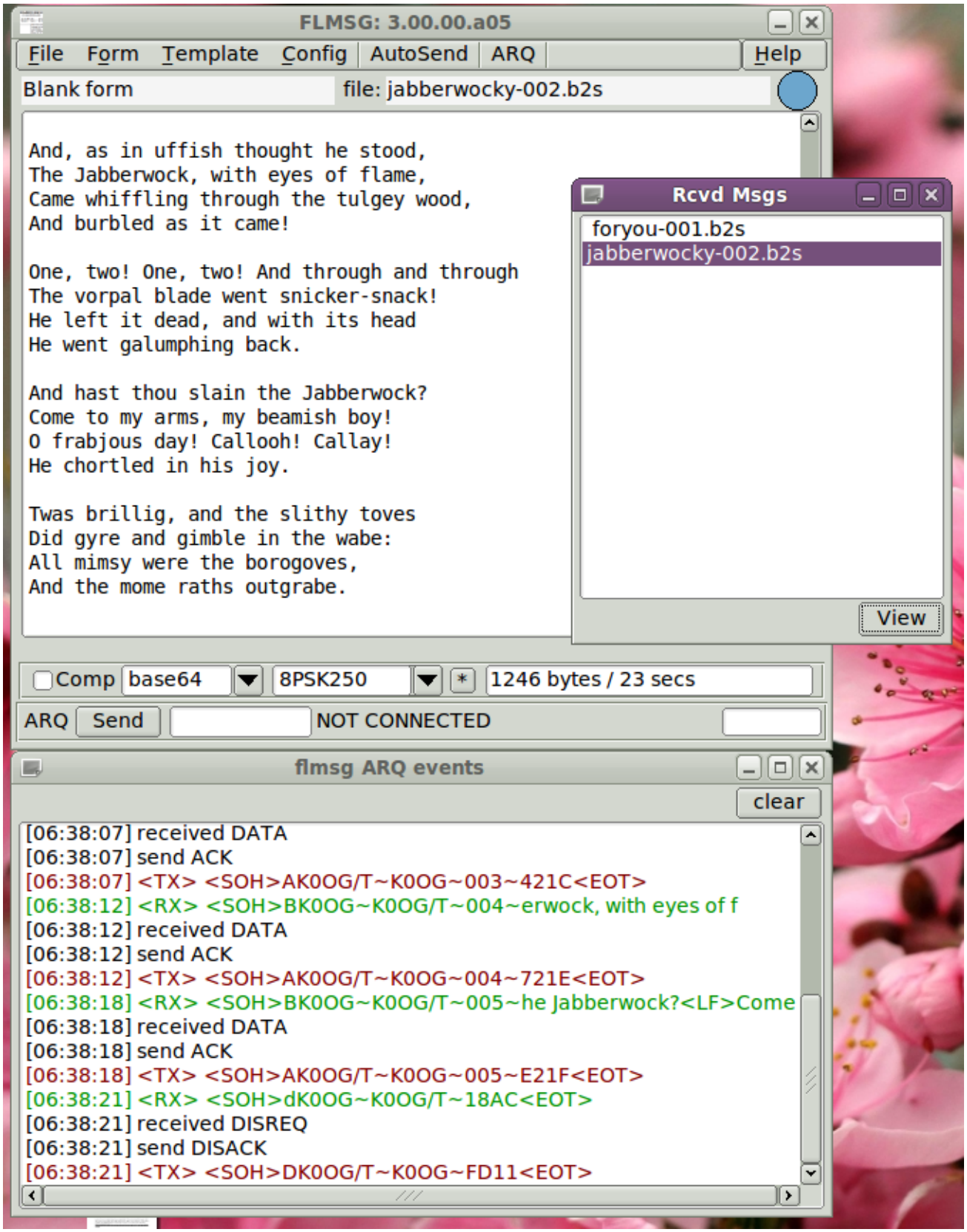
The user can select the number of retries, the data block size, and whether or not to open a browser with the file contents if the transfer is successful. The block size may be 16, 32, 64, 128, 256, 512 or 1024 characters. The data block size is specific to the Sending flmsg. Select a smaller block size if the propogation conditions are very poor.

ARQ is not a remedy for poor propogation. It is only a method to allow a verifiable transfer under average to good propogation conditions.

Successful transfers and various reasons for a failed transfer can be displayed in pop up notification dialogs. The notifier dialog will remain on the screen for the number of seconds specified in the "Notifier timeout" control. Setting the control to zero removes the timeout from the the Notifier dialog. Notifications can be disabled if the "Notify Receipt" is not checked.

- Enable ID/RxID - when checked flmsg will direct fldigi to enable both RsID for both receive and transmit.
- Disable ID/RxID after connect - when checked flmsg will direct fldigi to disable both receive and transmit RsID functions.
- Restore ID/RxID - when checked flmsg will restore fldigi's receive and transmit RsID states to it's original condition.
- Open Browser - Open a browser view of the document when selected.

The configuration image shows the recommended selections for the RsID variables.

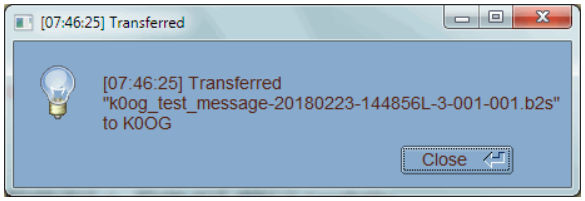


The above image shows the completion of both an 'AutoSend' and an ARQ transfer. Note the 001 and 002 additions to the file names. Both of these files had prior transfers. flmsg will append a new count (up to 999) for duplicate file names.

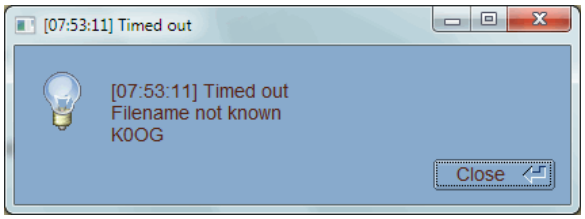
1.11.1 ARQ Notifiers

One of several events may take place during the ARQ transfer. These events are displayed in pop up notification dialogs on both the sending and receiving ends of the transmission.

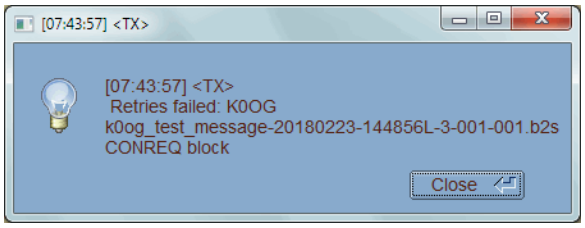
- Successful transfer



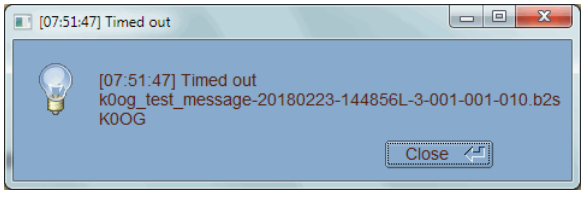
- ARQ connect process failed, RX station



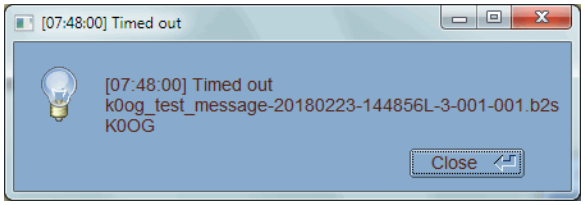
- ARQ connect process failed, TX station



- ARQ lost signal after 21% transfer, RX station



- ARQ lost signal after 11% transfer, TX station



If the Notifier timeout is greater than zero then a timeout clock display will appear on the displayed Notifier dialog. The timeout can be stopped by clicking on the dialog (anywhere but on the Close button).

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1.12 Qform data file

flmsg can read and write Qform ICS213 data files. The Qform data file is larger by virtue of the xml structure. The file size ratio is less when the content is larger.

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1.13 Viewing the data in a printable format

The program can produce a viewable document in ASCII text and Hypertext Markup Language (html) file formats. After creating the document flmsg will request the file to be opened by the default viewer / editor for that type of document.

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1.14 Html Text Format

The html Text Format file that the File/Write menu item produces can be opened with any web browser program. Use that software for printing the report.

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1.15 Command line parameters

Flmsg may be invoked from the command line (or parameters added to the launcher target).

–help
–version
–flmsg-dir "full-path-name-of-folder for all FLMSG folders"
–auto-dir "full-path-name-of-folder for autosend files"
auto-dir and flmsg-dir can be separate and unique
–p FILENAME - print and exit
–b FILENAME - print and stay open

The –p and –b options are used by fldigi when it automatically opens flmsg to display a received flmsg data file.

The –flmsg-dir parameter is used to change the default location of all of the files associated with flmsg. This should match with the same command parameter passed to fldigi. This allows the user to run multiple instances of flmsg / fldigi with each keyed to the other. For example the user might have separate flmsg/fldigi pairs for HF, VHF etc.

The default is:

XP - C:\Documents and Settings\<username>\NBEMS.files\
Vista/Win7 - C:\Users\<username>\NBEMS.files\
Linux/Unix/OS X - $HOME/.nbems/

The –auto-dir parameter is used to further change the name of the folder used to contain the file that is sent automatically by fldigi. Fldigi's command line parameter –auto-dir must match. This is in addition to and over rides the –flmsg-dir parameter.

The default is:

XP - C:\Documents and Settings<username>\NBEMS.files\WRAP\auto
 Vista/Win7 - C:\↩ Users<username>\NBEMS.files\WRAP\auto
 Linux/Unix/OS X - $HOME/.nbems/WRAP/auto/

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1.16 Event Log

Events are recorded at various debugging levels (default is INFO) to assist the user in reporting problems to the developers. The most recent event is at the top of the dialog. The event log is opened from the Help | Event Log menu item:

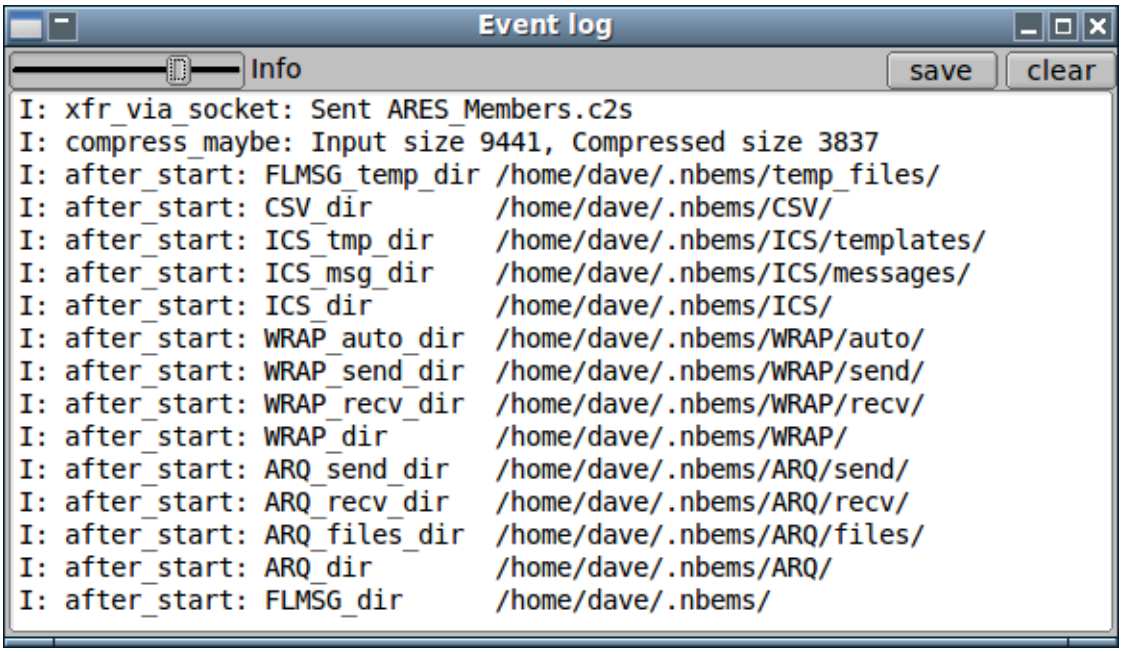

Figure 1.17 Event Log

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1.17 Headers

A new feature in this version of fldigi is the ability of the program to track origination and modification of many of the message types. The program also keeps track of the stations in the transmit path for a specific message.

An example plaintext message:

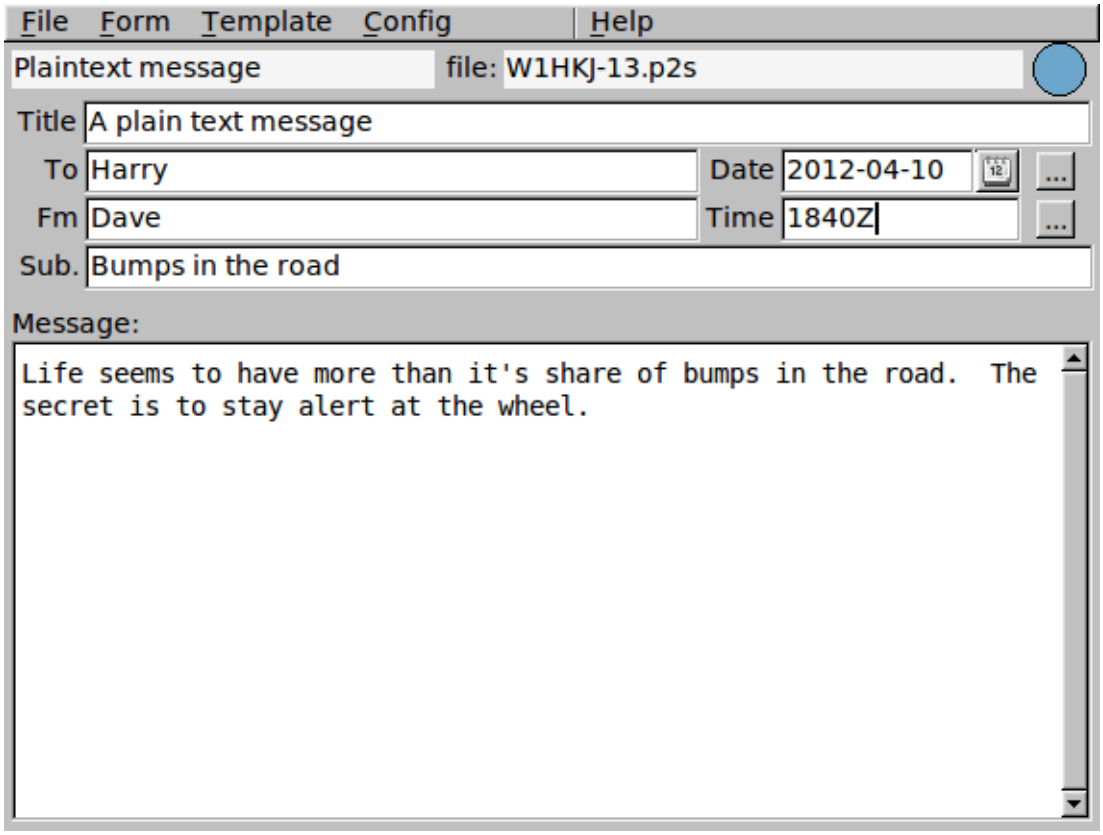

Figure 1.18 Plain Text Msg

When exported as a wrap file becomes:

```
[WRAP:beg][WRAP:lf][WRAP:fn W1HKJ-13.p2s]
<flmsg>1.1.14
:hdr_fm:19 W1HKJ 201214042019Z
:hdr_ed:19 W1HKJ 201210041840Z
<plaintext>
:tt:20 A plain text message
:to:5 Harry
:fm:4 Dave
:dt:10 2012-04-10
:tm:5 1339L
:sb:17 Bumps in the road
:mg:105 Life seems to have more than it’s share of bumps in the road.  The
secret is to stay alert at the wheel.

[WRAP:chksum A358][WRAP:end]
```

The :hdr_fm: is a first-to-last list of sending stations, each separated by a new-line character.
The :hdr_ed: is a first-to-last list of editing / modifying sations, each separated by a new-line character.
Each entry consists of the station callsign and the Zulu date time in YYYYMMDDMMHH format.

These can be viewed from within flmsg using the "Help | Header Trace" menu item:

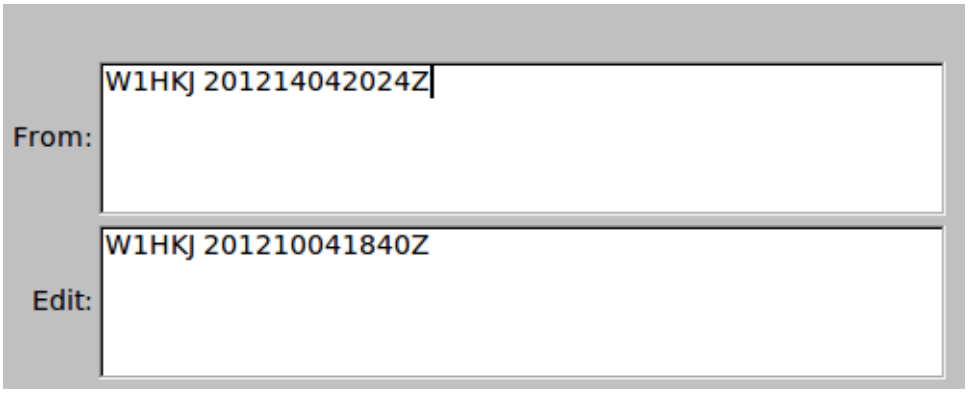

Figure 1.19 Header Trace

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1.18 Custom Forms

flmsg now has the capability of working with locally prepared custom forms. Custom forms may be created either using a special comma separated value (csv) format or with html forms.

1.18.1 Custom Html Forms

The basis of a custom flmsg form is an html form.

You can use LibreOffice to create a form and then export it to an xhtml format. You can also use LibeOffice to import an MS word document first. LibreOffice is available for free for all of the operating systems on which flmsg will execute.

You then use a text / web editor to add some elements; Geany, Gedit, Notepad++ / Bluefish, Kompozer are suitable editors.

The html flmsg form must include these statements:

```
<META NAME="EDITABLE" CONTENT="true">
<META NAME="MENU_ITEM" CONTENT="Example">
```

in the “header” (between the \tt<HEAD><\tt> and \tt</HEAD><\tt> tags) of the html file:

The second line, “CONTENT=” value is the name of the form as it will show up in flmsg in the Form, Custom menu:

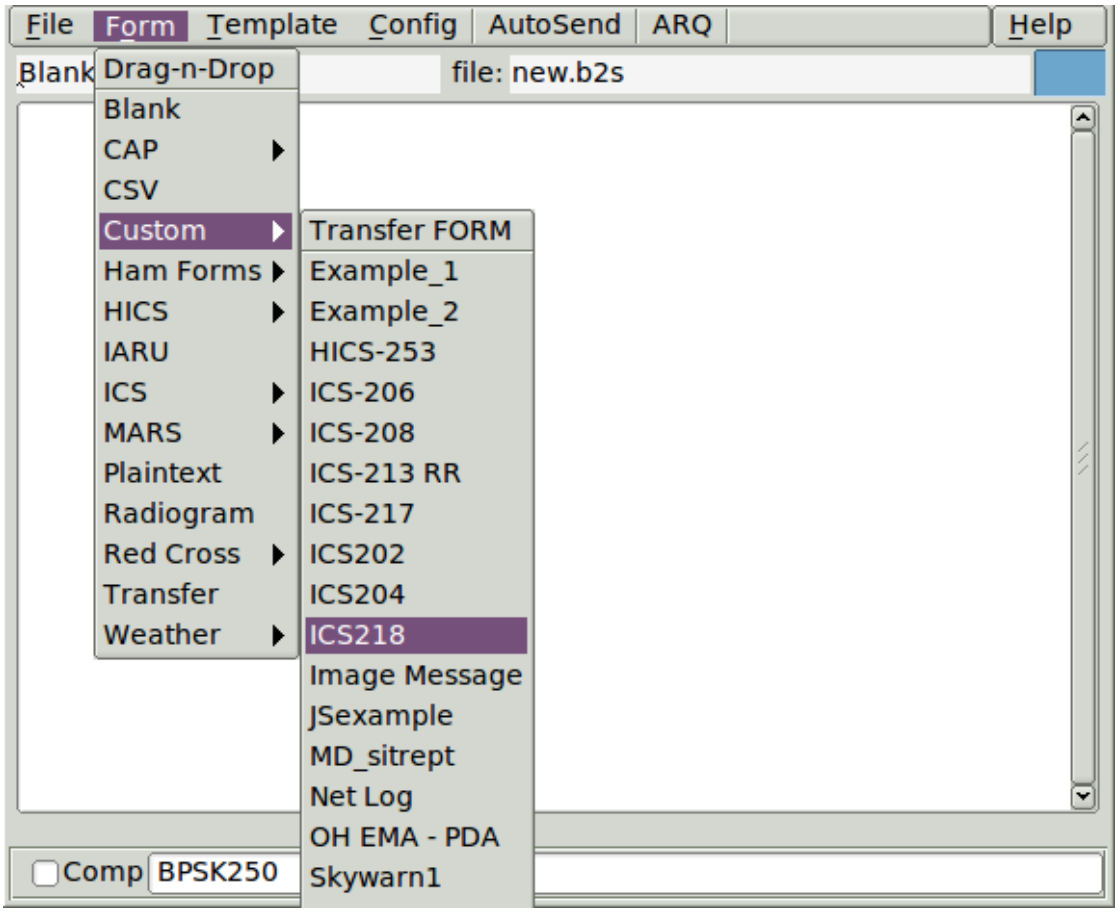


Figure 1.20 Custom Menu

flmsg supports the following html form input types:

- text input
- password input
- check box
- radio box
- select (combo box)
- multi-line "text area"

This is the “Example” form. It demonstrates the use of all of the supported controls.

---------- raw html ----------

```
<h2>A Simple HTML Form Document</h2>
<form>Enter your name: <input name="name" value="W1HKJ" size="20"
maxlength="40" type="text"> and password: <input name="password"
size="9" maxlength="8" type="password"><br>
<p>Please indicate which areas of the world you would like to visit:</p>
<p> <input name="cb1" type="checkbox">Asia<br>
<input name="cb2" type="checkbox">Africa<br>
<input name="cb3" type="checkbox">North America<br>
<input name="cb4" type="checkbox">South America<br>
<input name="cb5" type="checkbox">Antarctica<br>
<input name="cb6" type="checkbox">Europe<br>
<input name="cb7" checked="checked" type="checkbox">Australasia<br>
</p>
<p>Please indicate which area of the world you live:</p>
<p> <input name="rb" value="1" type="radio">Asia<br>
<input name="rb" value="2" type="radio">Africa<br>
<input name="rb" value="3" checked="checked" type="radio">North America<br>
<input name="rb" value="4" type="radio">South America<br>
<input name="rb" value="5" type="radio">Antarctica<br>
<input name="rb" value="6" type="radio">Europe<br>
<input name="rb" value="7" type="radio">Australasia<br>
</p>
<p>
Please select your modem speed:
<select name="speed">
<option value="none">No modem</option>
<option value="vslow" selected="selected">9600 or lower</option>
<option value="slow">19200</option>
<option value="ok">38400</option>
<option value="fast">over 38400</option>
</select>
</p>
Please enter your address:<br>
<textarea name="address" rows="5" cols="50">106 Whitfield Drive
Toney, Alabama 35773</textarea><br>
<p>
</form>
```

---------- normal HTML view ----------

1.18.2 A Simple HTML Form Document

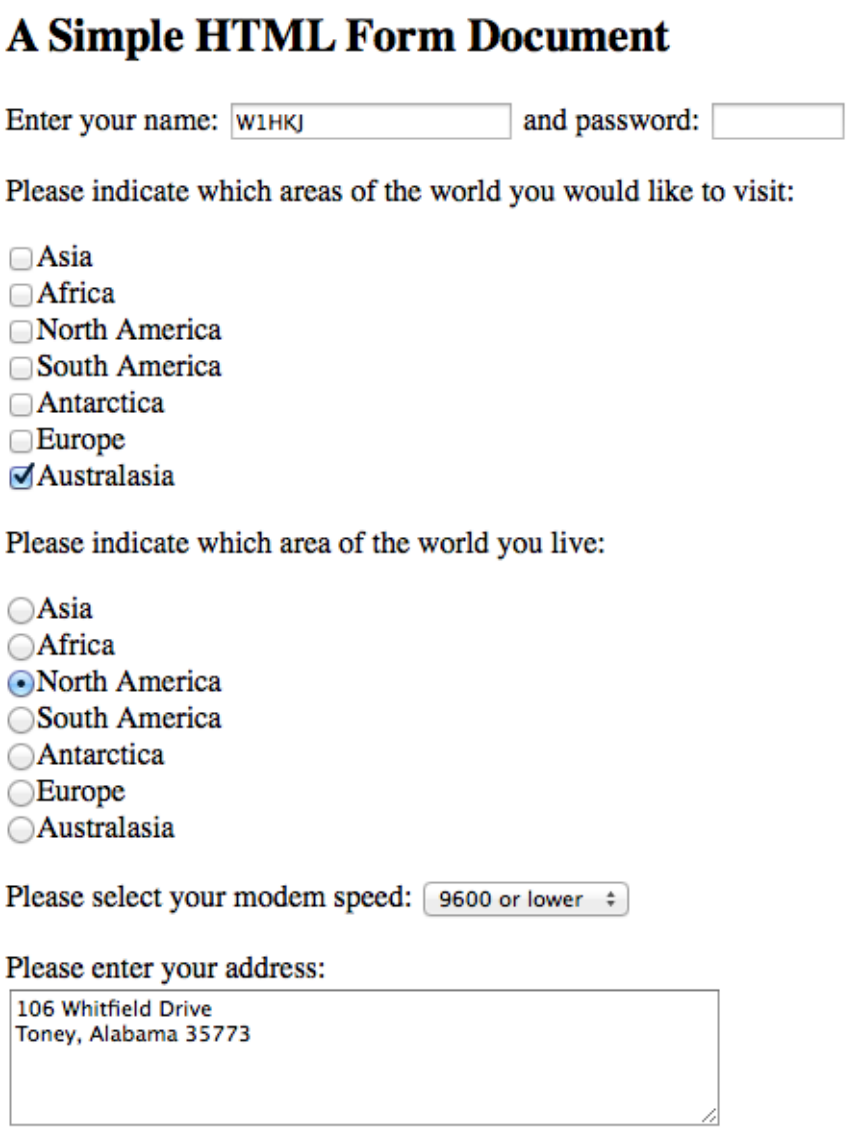


Figure 1.21 Custom Form

The "<INPUT" fields must all be inside a FORM (the "<form>" and "</form>" tags). Use the Example form above as a guide for the curently supported INPUT types.
A good source for understanding basic HTML forms is http://www.w3schools.com/html/html_forms.asp
Once you have your custom form ready, just drop it into the Custom subdirectory in nbems.files (Windows) or .nbems (Linux) directory.
Flmsg checks once a second for any new or deleted custom files and updates the Form, Custom menu.
Once you click on the Custom form in flmsg, it will open a screen like this:

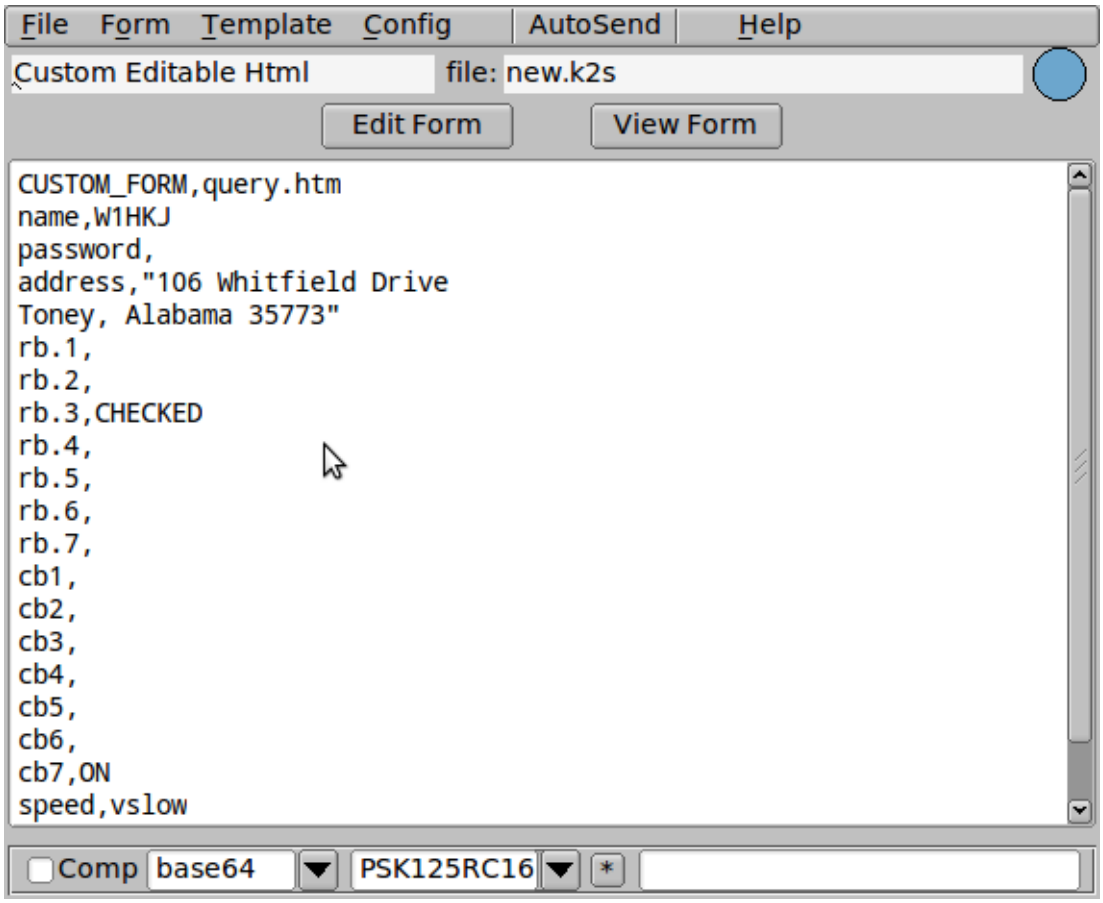


Figure 1.22 Custom Data Fields

Use the “Edit Form” button to open an editable form in your web browser.
flmsg will add a “Submit Form” button to the bottom of your form. Do not add that button during your form development.
Pressing the "Submit Form" button transfers the data back to flmsg.
When you have the data in the form filled out, save it from the File, Save menu and then use the “AutoSend” button in flmsg to send it to fldigi. The receiving end must also have the same custom form in their Custom folder for them to be able to view it in a browser and print it.
Use the “View Form” button in flmsg to view a “Read Only” version of the form.
Of course if you want a printed version, just use the print function of your web browser while viewing the form.
The custom html entry form needs to be at both the sending and receiving end. The raw data can be received without the form, but it will only display as a comma separated value table. The custom html form can be transmitted to new receiving stations via any means, email attachment, "flmsg file transfer", or "flamp file transfer".

1.18.3 On Line Site for Custom Html Forms

Custom forms may be uploaded and downloaded from the NBEMSham groups.io. Access to the custom form file folder can be easily obtained from the "Help | Download custom forms" menu item. Click this menu item will open your default web browser to this site:
https://groups.io/g/nbems/files/Custom_flmsg_forms
You must be a member of the group to have upload/download privileges.

1.18.4 Custom CSV Forms

Custom forms consist of three documents, 1, 2, 3 and 4 as illustrated by the example files in the table below. A custom csv template should also be distributed with your new custom document. That will insure that user documents will correctly correspond to the custom forms. Lines 5 and 6 illustrate a completed spreadsheet and it's transfer document. Lines 7 and 8 are the final view documents for (5).

6	W1HKJ-14.c2s	flmsg transfer document for above completed form (in the ICS/MESSAGES folder)
7	W1HKJ-14.htm	html view of (6), will be written to the NBEMS.files/temp_files folder
8	W1HKJ-14.txt	text view of (6), will be written to the NBEMS.files/temp_files folder

Table links not functional. See FLMSG HTML version at http://www.w1hkj.com/downloads

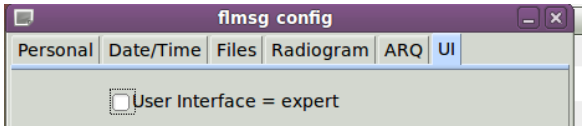
The flmsg spreadsheet (csv) handler detects a first line in the csv body:
CUSTOM_FORM, "form_name"
for example:
CUSTOM_FORM, ARCdaily
Which will cause special handling for both View ... html, and View ... text, when detected and the files "form_↩ name.html" and "form_name.txt" are present in the folder
nbems.files\CUSTOM
then those template files will be used for the viewer. If not found then the standard spread sheet view will be presented to the user. This maintains complete backward compatibility with the current flmsg. flmsg will create a new subfolder under the nbems.files (∼/.nbems) folder hierarchy.

Figure 1.23 Custom Folders

The form templates, html and txt should be placed in the CUSTOM folder.
Good usage dictates that blank spaces in file names and field names be replaced with the underscore character. Field contents should be enclosed in double quotes when the field contains a comma.
It might be advisable to also distribute a how-to file for each custom form. The how-to would detail what each csv line requires, which ones should not be modified, etc.

1.19 Changing default User Interface

The default user interface can be changed after the first-run selection. From the simple user interface select the "Tools / Expert dialog" menu item.
On the Expert dialog form select the "Config / User interface" menu item.



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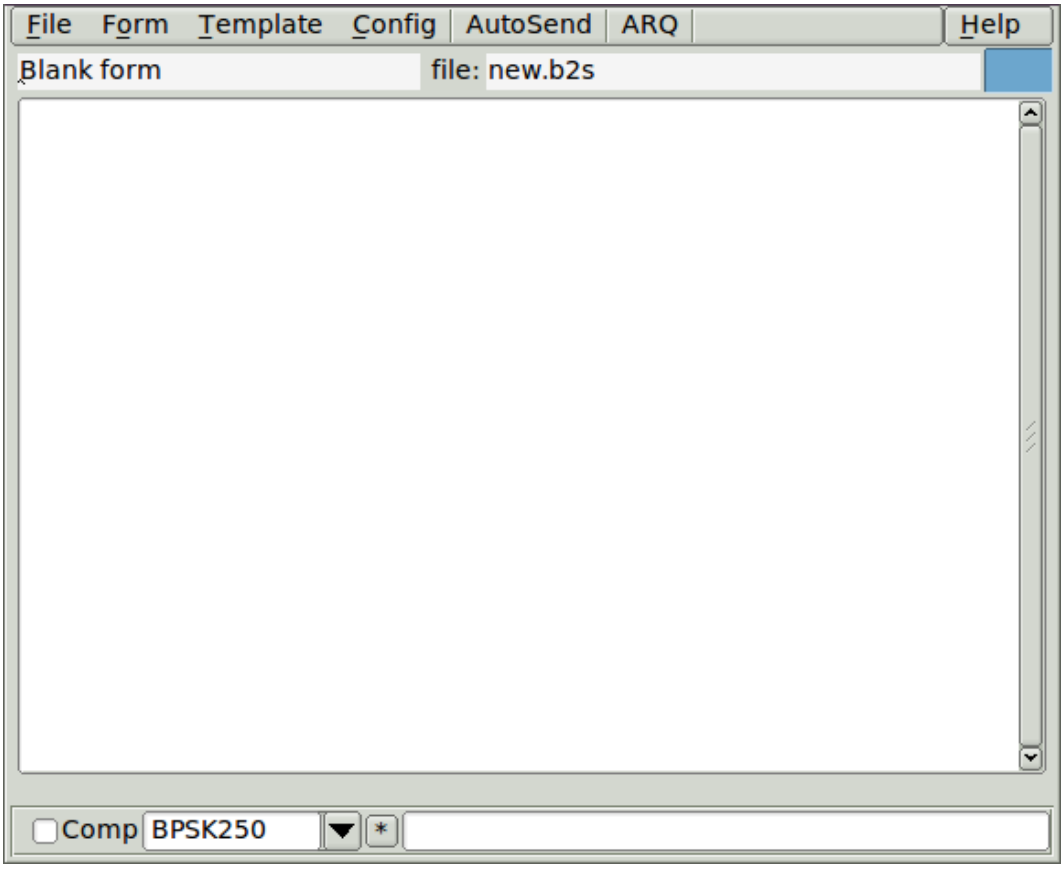
Chapter 2

Blank messages

The user prepares a message using a blank form. This can be used for utility type messages, or for generating a local form that is not covered by any of the other supported emergency communications formats.



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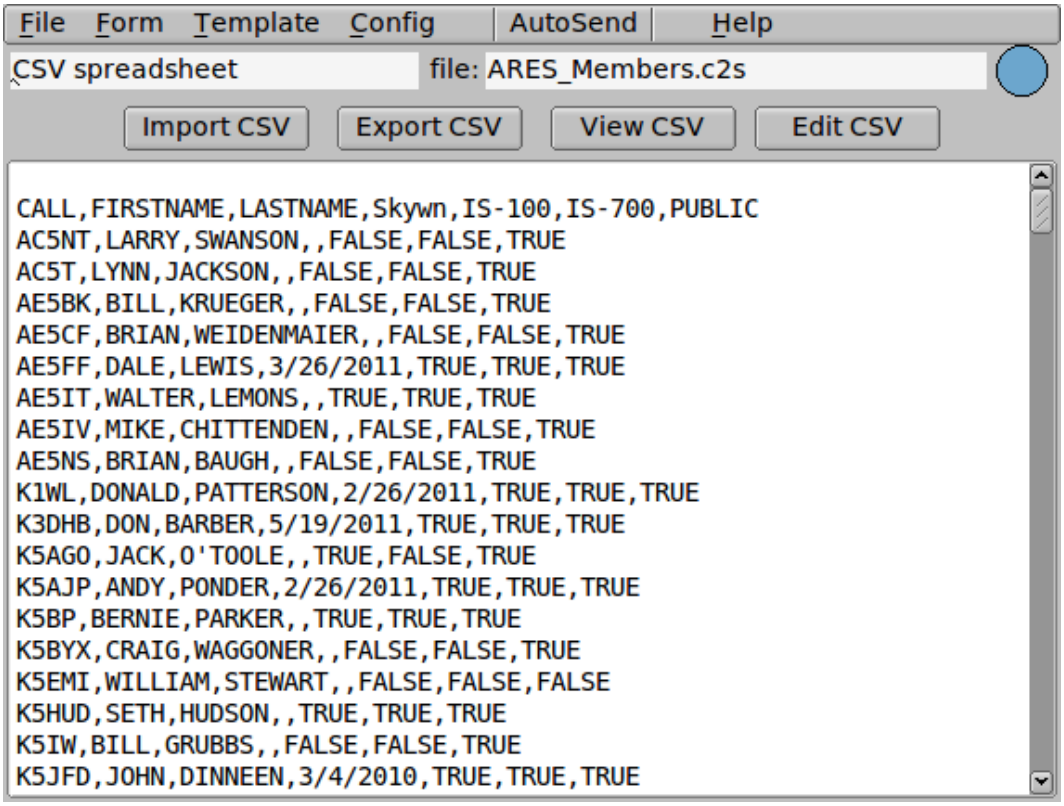
Chapter 3

Comma Separated Value text (spreadsheet) messages

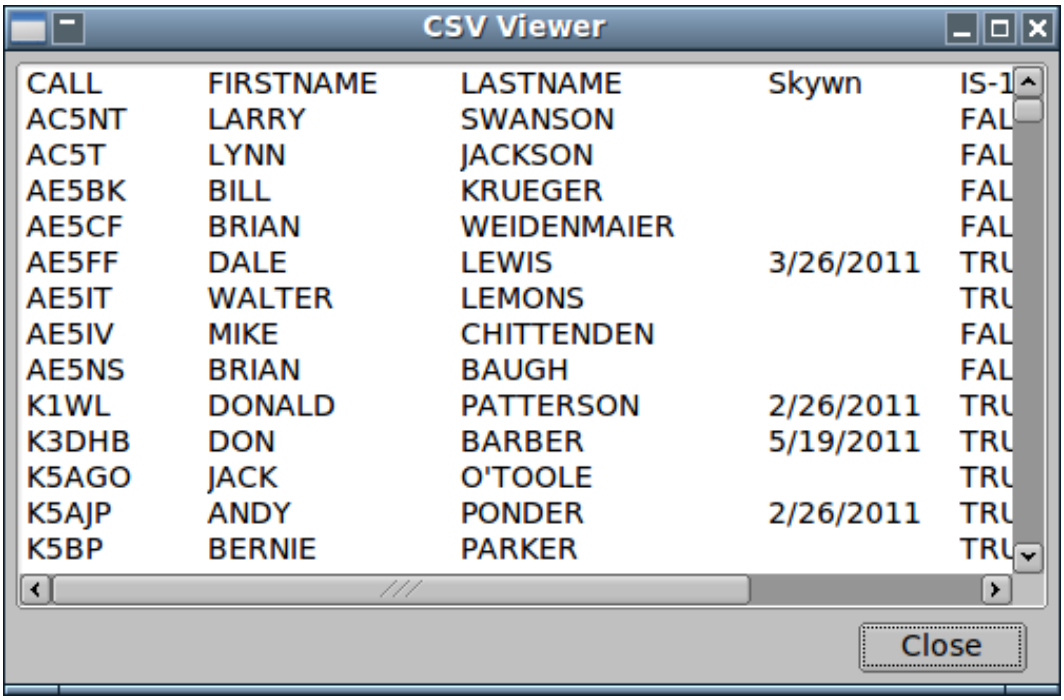
The user prepares, answers and views all data files from the multi-tab user interface dialog:



The user will not usually prepare the csv file using the text panel. CSV files are created using a spreadsheet program such as Excel, Gnumeric or Open Office Calc. The spreadsheet values are then exported to the CSV file. Please note that CSV files do not contain spreadsheet links, spreadsheet formulas, or multiple sheets. They can be used only for transferring a single spreadsheet with the computed values.
The data panel is populated by one of three ways.

1. Pressing the Import CSV button
2. Right clicking on the panel and selecting "Insert file"
3. Dragging a CSV file from the desktop or a file manager window and dropping on the data panel

When you import the csv file the program will parse the csv file name to create the c2s file name.
You can export a csv file so that is can be opened using your spreadsheet program. Left click on the "Export CSV" to perform this operation.
You can export and open the csv file with your spreadsheet program by pressing the "Edit CSV" button. Your file manager must open csv files with the spreadsheet program by default for this action to work.
You can open a read-only view of the data fields by pressing the "View CSV" button:



Viewing the content and printing can be accomplished using the menu item "File | View | Html delivery". A partial view of the html document for the above data:

CALL	FIRSTNAME	LASTNAME	Skywn	IS-100	IS-700	PUBLIC
AC5NT	LARRY	SWANSON		FALSE	FALSE	TRUE
AC5T	LYNN	JACKSON		FALSE	FALSE	TRUE
AE5BK	BILL	KRUEGER		FALSE	FALSE	TRUE
AE5CF	BRIAN	WEIDENMAIER		FALSE	FALSE	TRUE
AE5FF	DALE	LEWIS	3/26/2011	TRUE	TRUE	TRUE
AE5IT	WALTER	LEMONS		TRUE	TRUE	TRUE
AE5IV	MIKE	CHITTENDEN		FALSE	FALSE	TRUE
AE5NS	BRIAN	BAUGH		FALSE	FALSE	TRUE
K1WL	DONALD	PATTERSON	2/26/2011	TRUE	TRUE	TRUE
K3DHB	DON	BARBER	5/19/2011	TRUE	TRUE	TRUE
K5AGO	JACK	O'TOOLE		TRUE	FALSE	TRUE
K5AJP	ANDY	PONDER	2/26/2011	TRUE	TRUE	TRUE

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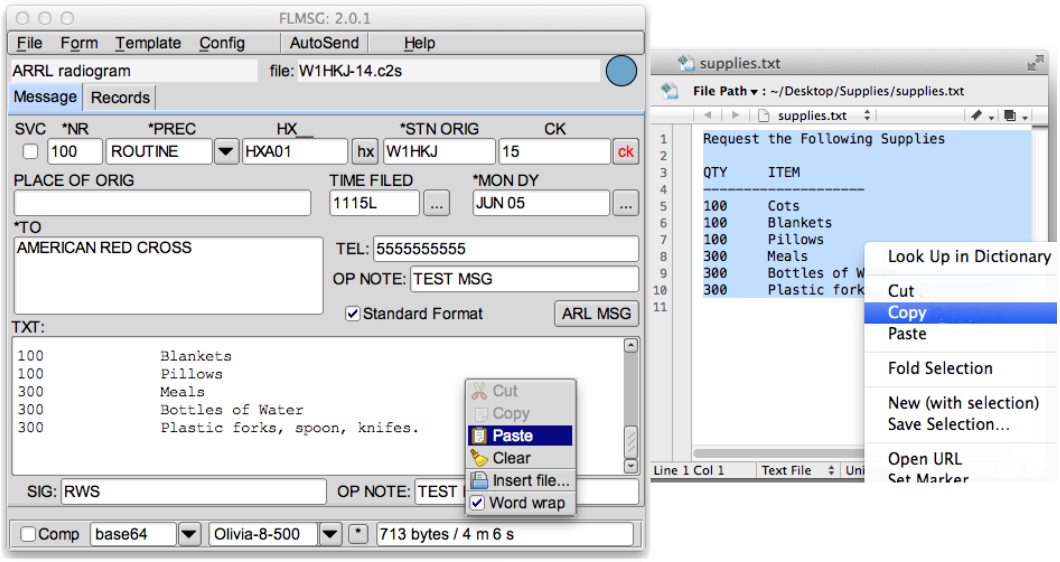
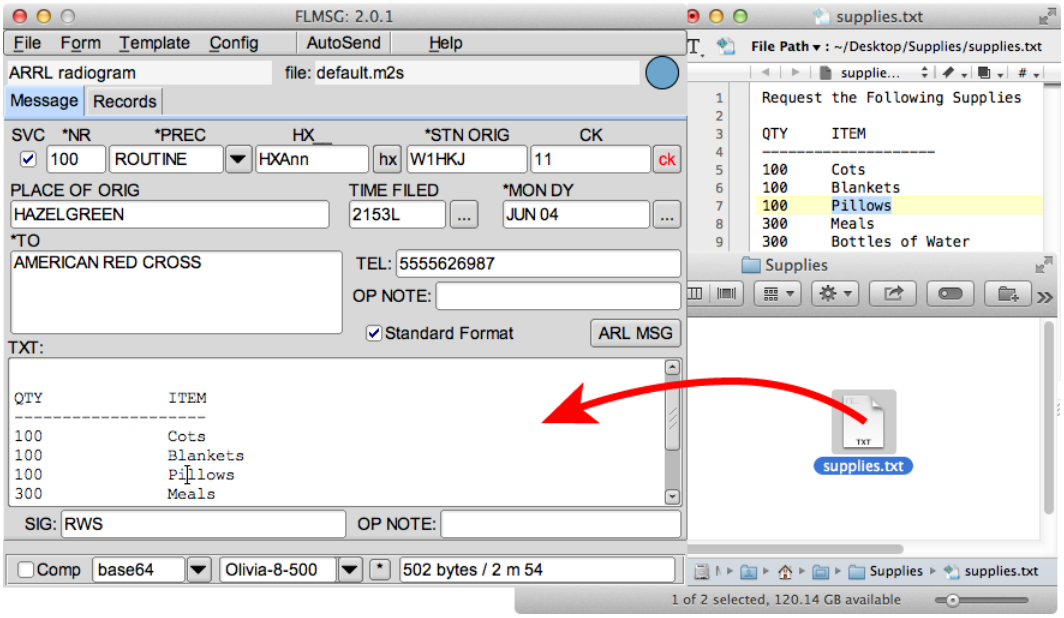
Chapter 4

Drag and Drop

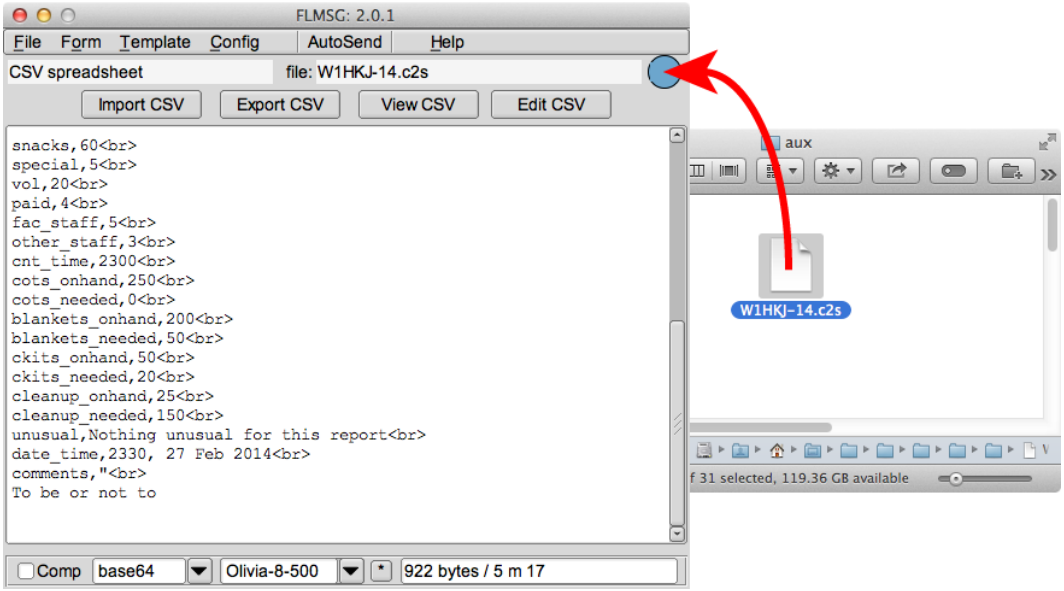
This is not an EMCOMM form, but a convenient way to either open or capture data using the OS window manager resource. The light blue circular target icon in the upper right hand side of the window can accept objects using mouse implemented drag and drop techniques.



Cut and paste text from text editor to FLMSG edit pane.



Drag file, placing content of file into the edit pane.



Drag message file to the DnD icon.

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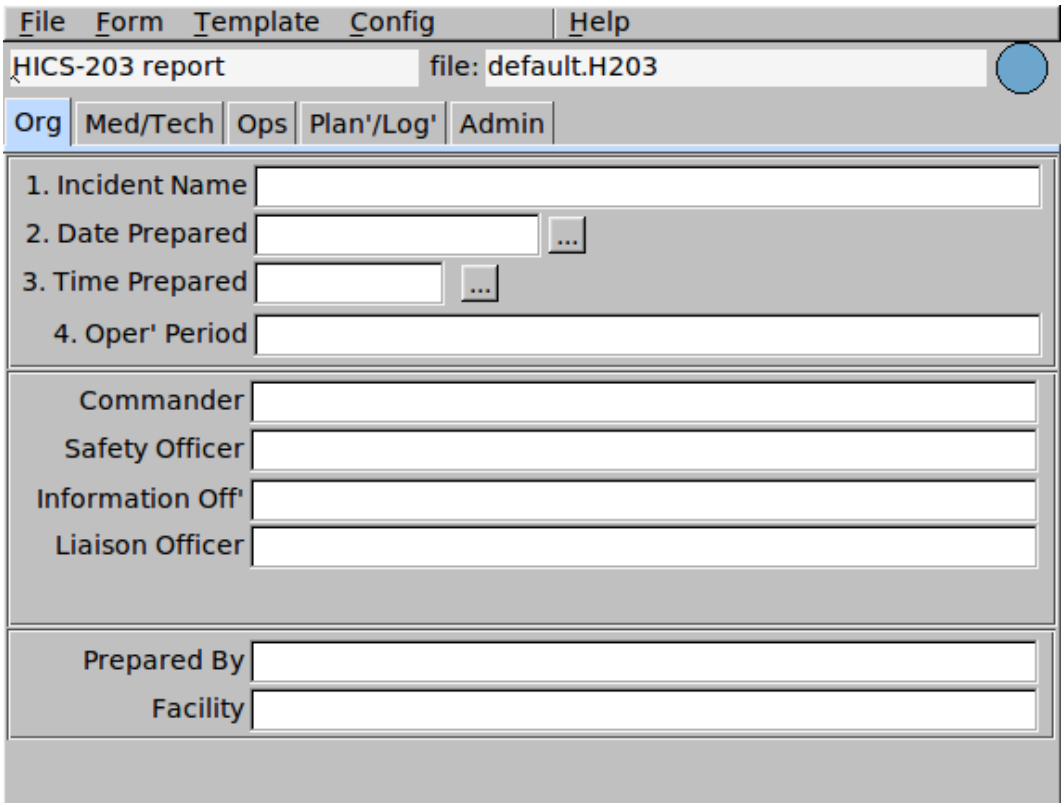
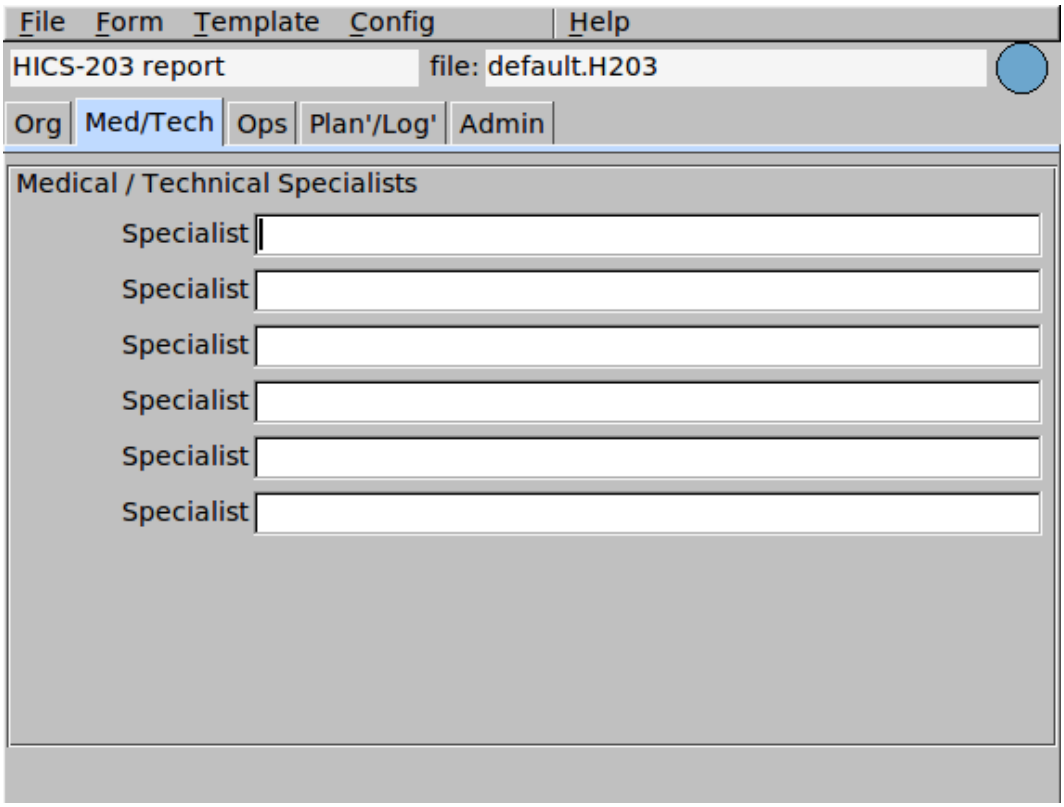
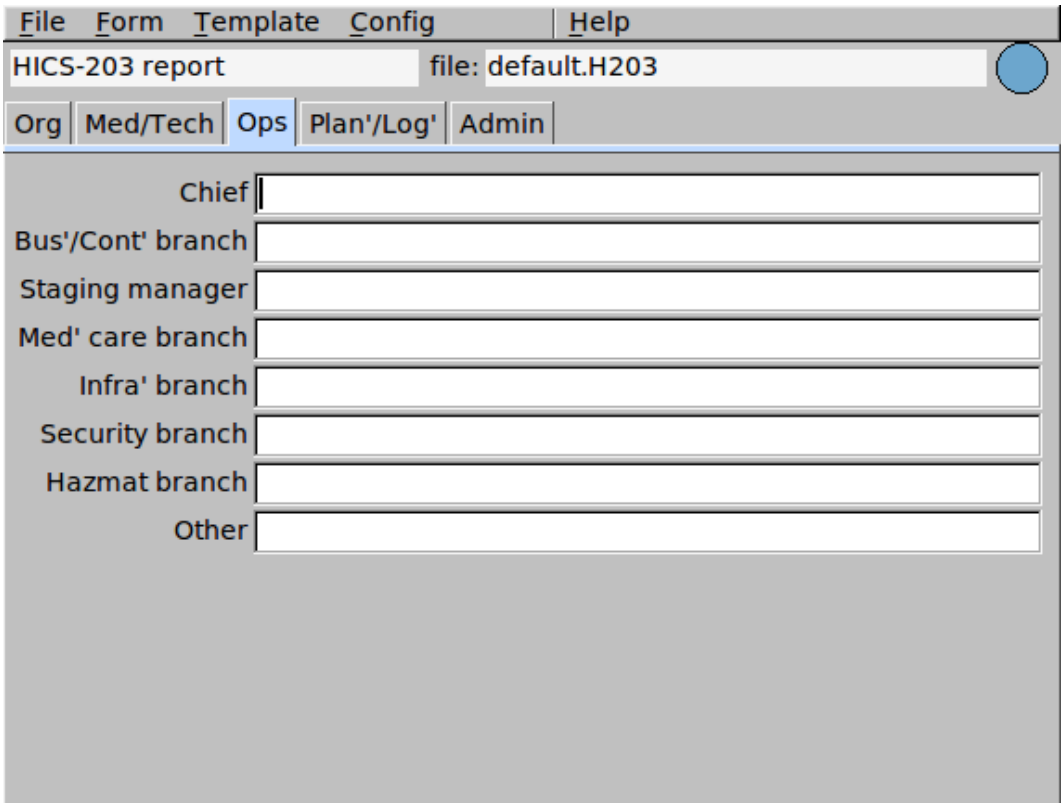
Chapter 5

HICS-203 messages

The user prepares, answers and views all data files from the multi-tab user interface dialog:







HICS203 message files are distinguished by the extension "H203". Template files are assigned the extension "↩ H203T".

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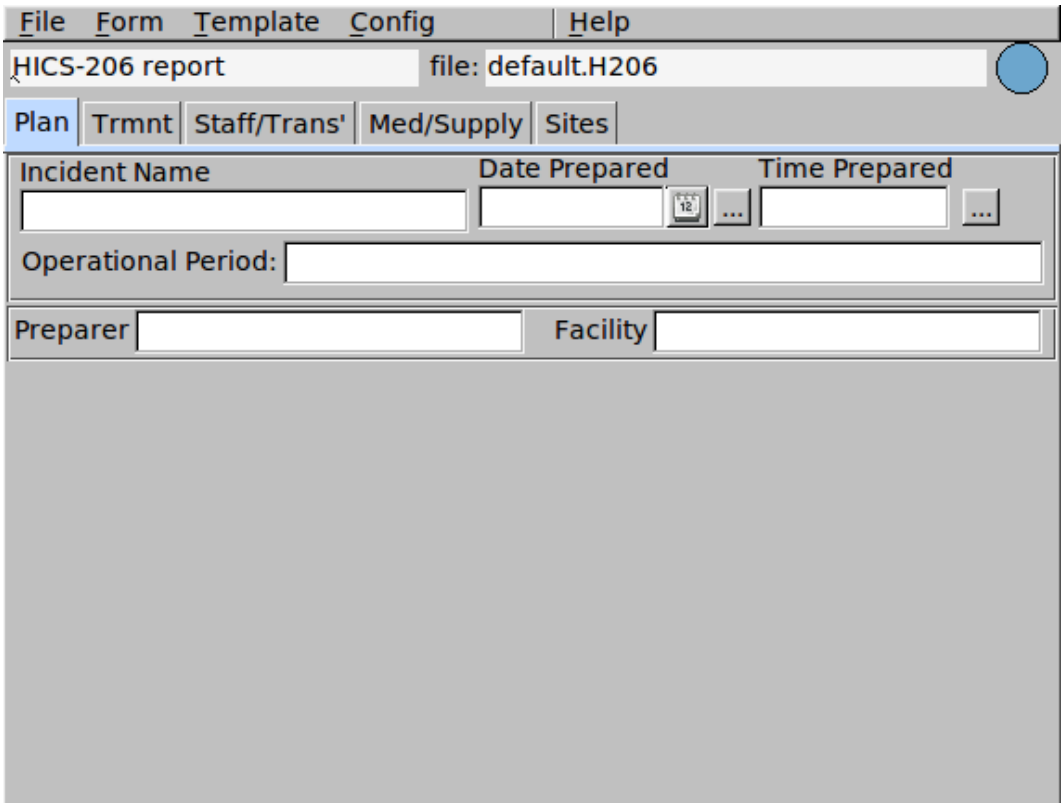
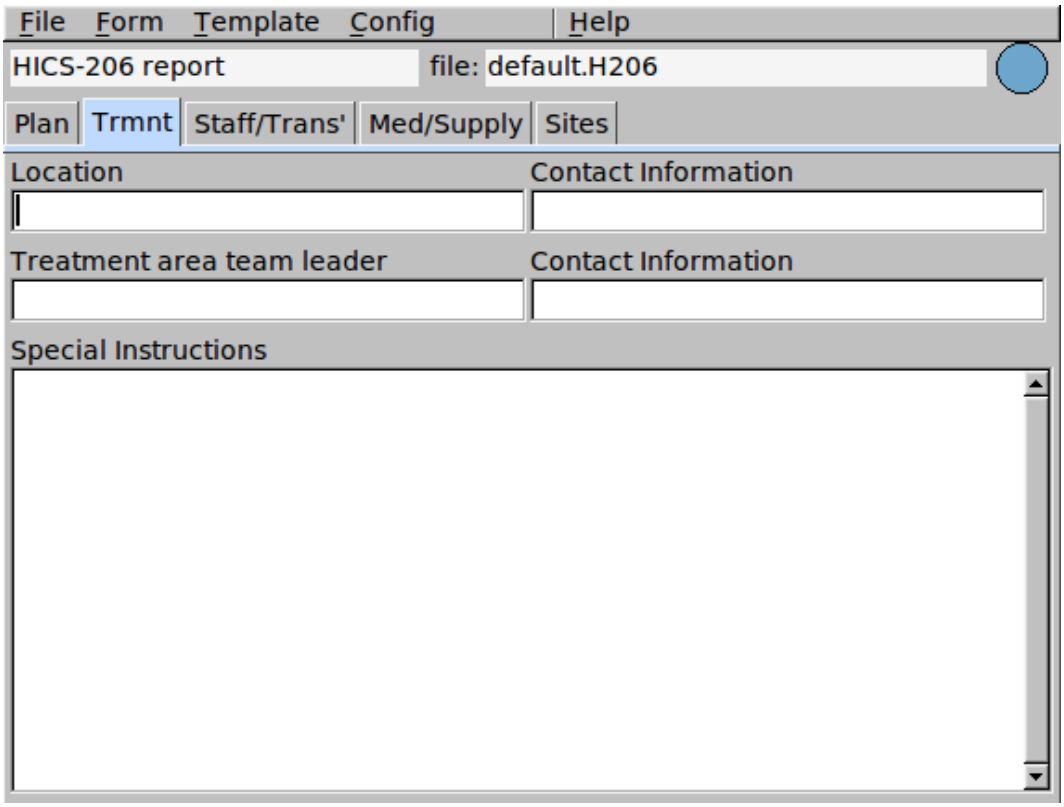
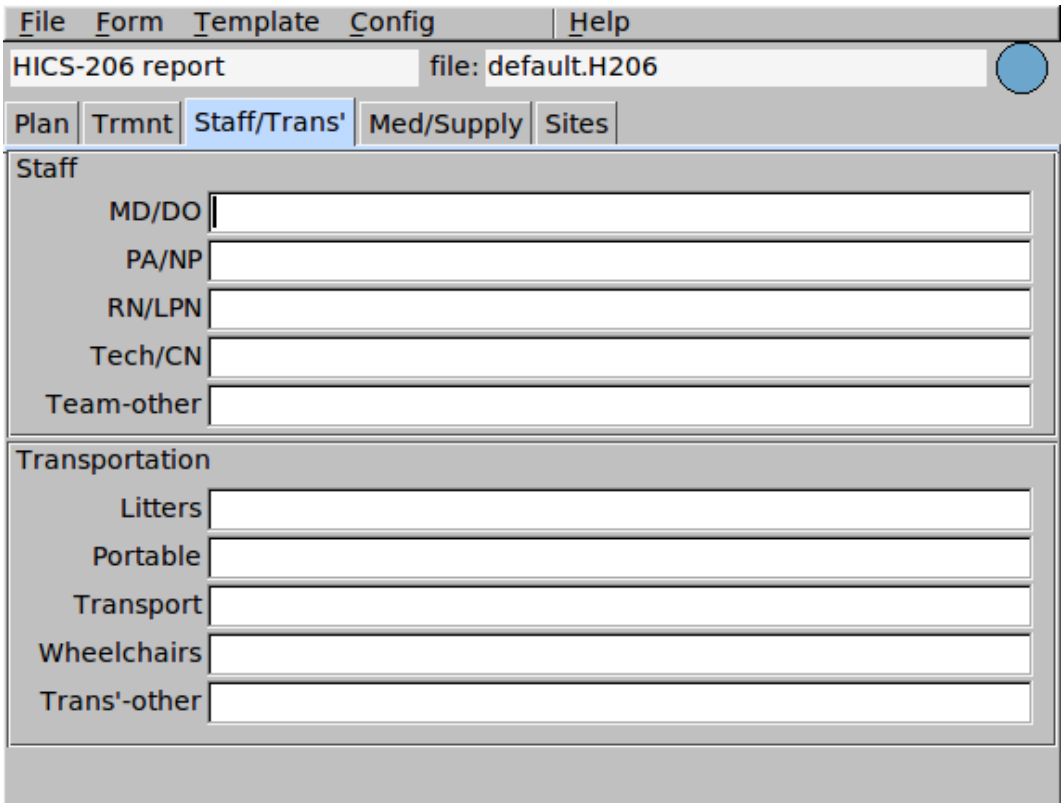
Chapter 6

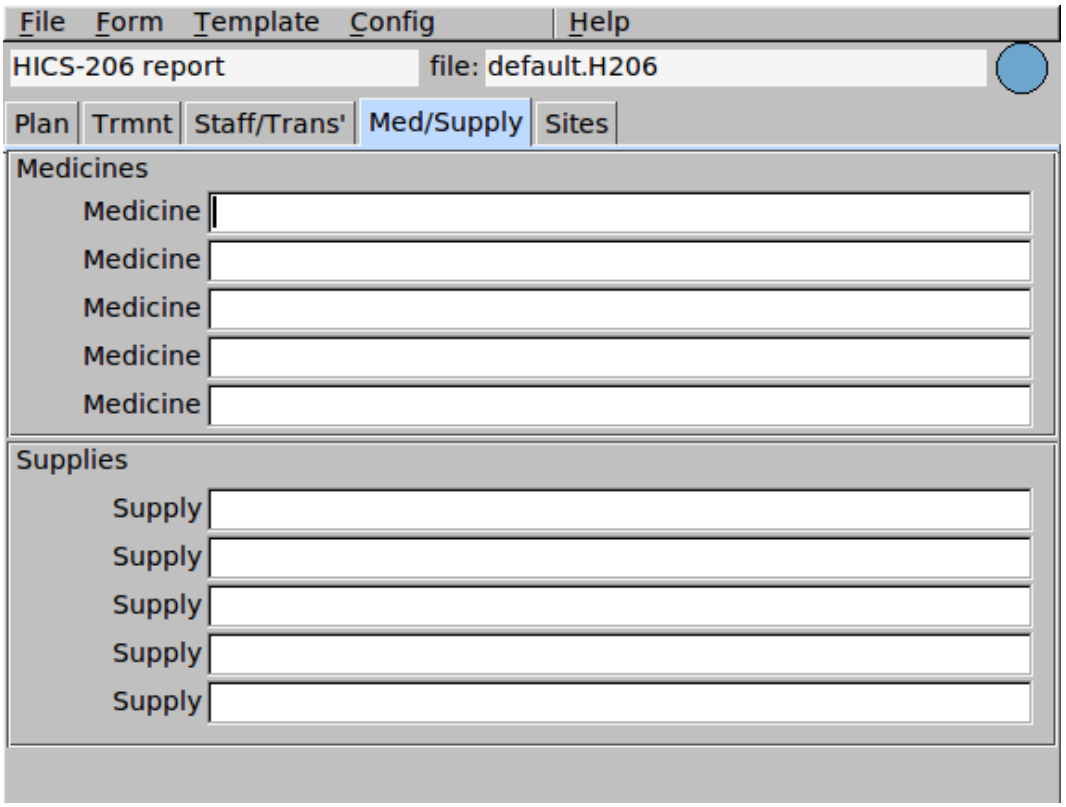
HICS-206 messages

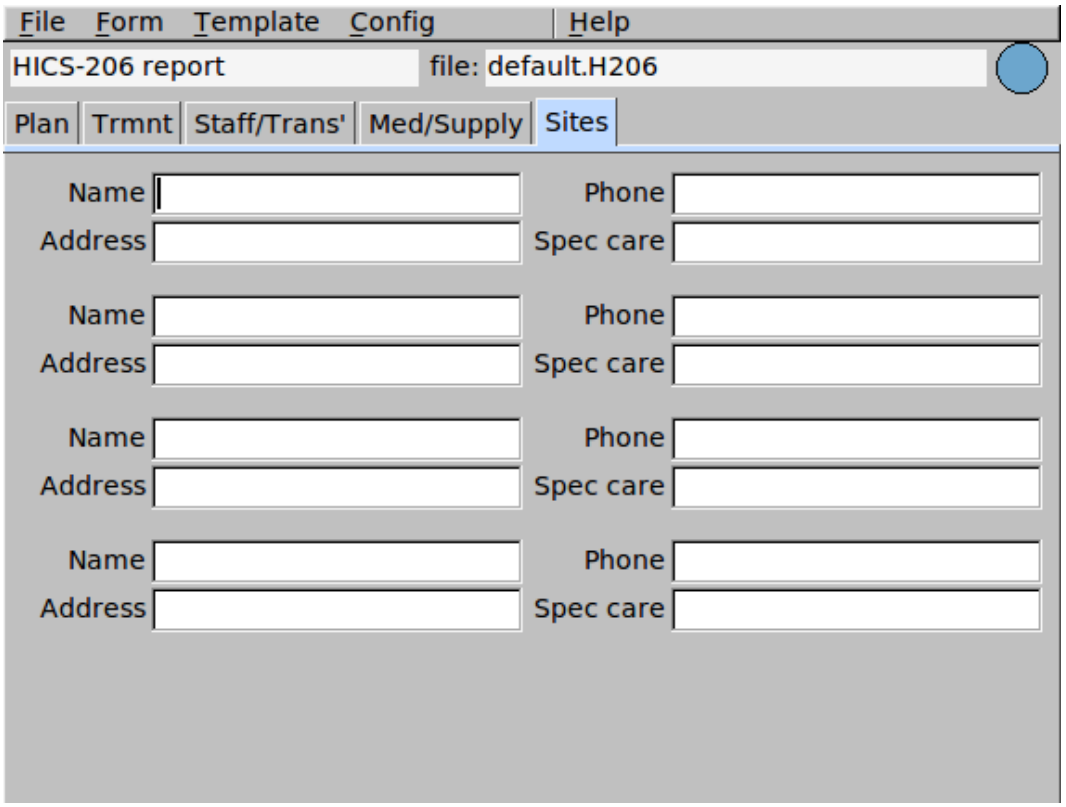
The user prepares, answers and views all data files from the multi-tab user interface dialog:




File Form Template Config Help
HICS-206 report
file: default.H206
Plan Trmnt Staff/Trans' Med/Supply Sites
Location
Contact Information
Treatment area team leader
Contact Information
Special Instructions


File Form Template Config Help
HICS-206 report
file: default.H206
Plan Trmnt Staff/Trans' Med/Supply Sites
Staff
MD/DO
PA/NP
RN/LPN
Tech/CN
Team-other
Transportation
Litters
Portable
Transport
Wheelchairs
Trans'-other





HICS206 message files are distinguished by the extension "H206". Template files are assigned the extension "↩ H206T".

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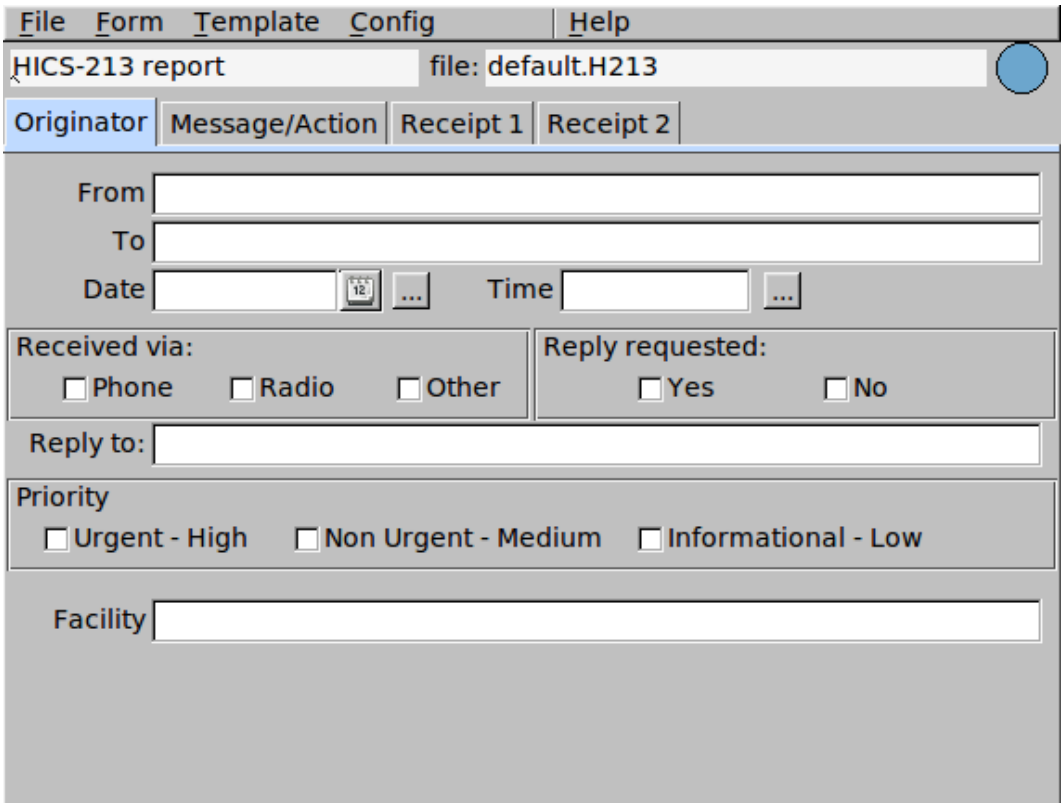
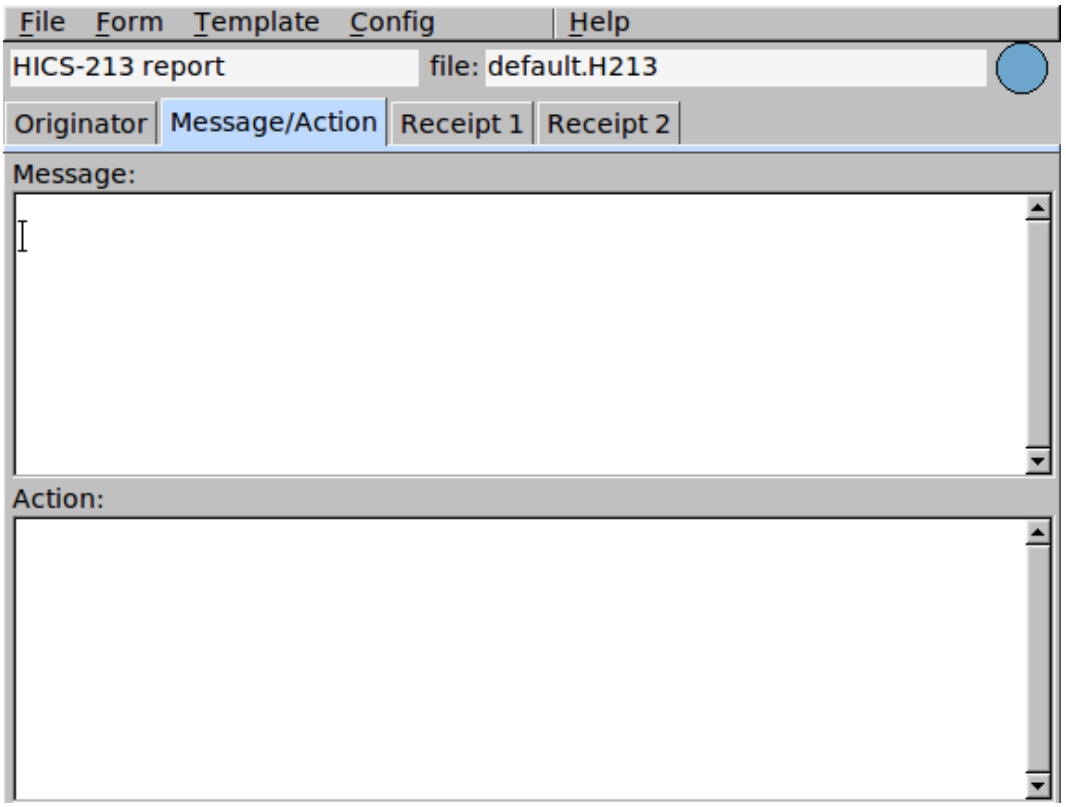
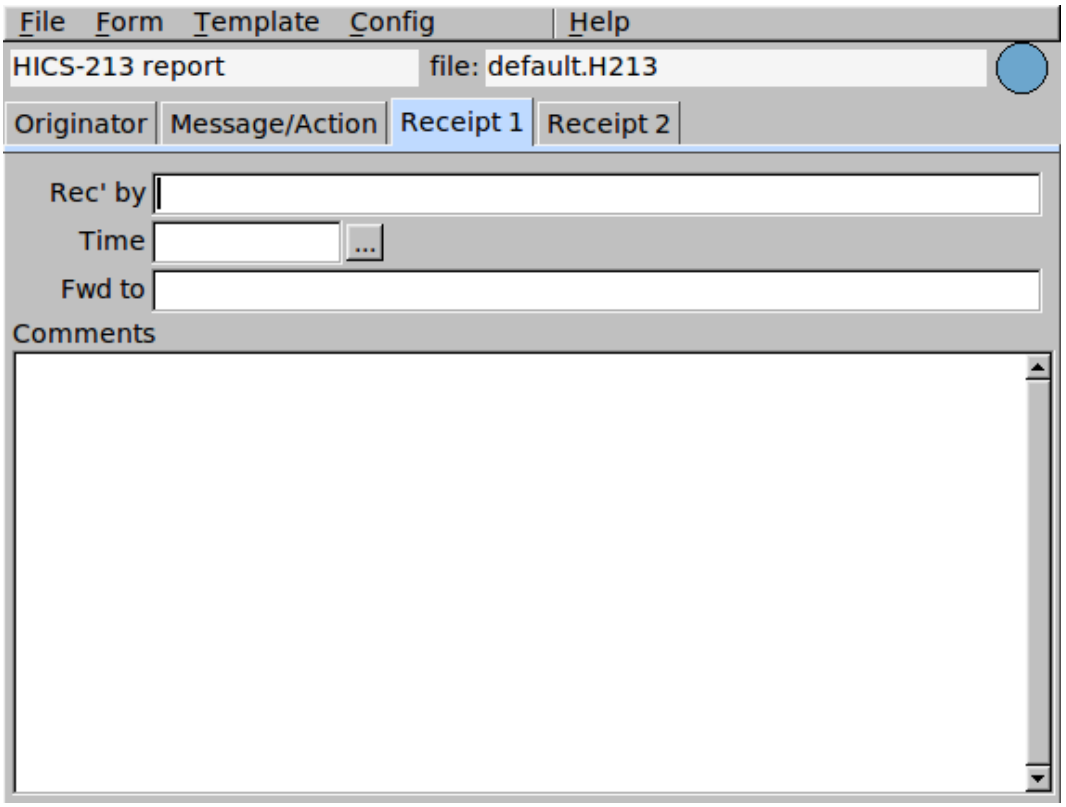
Chapter 7

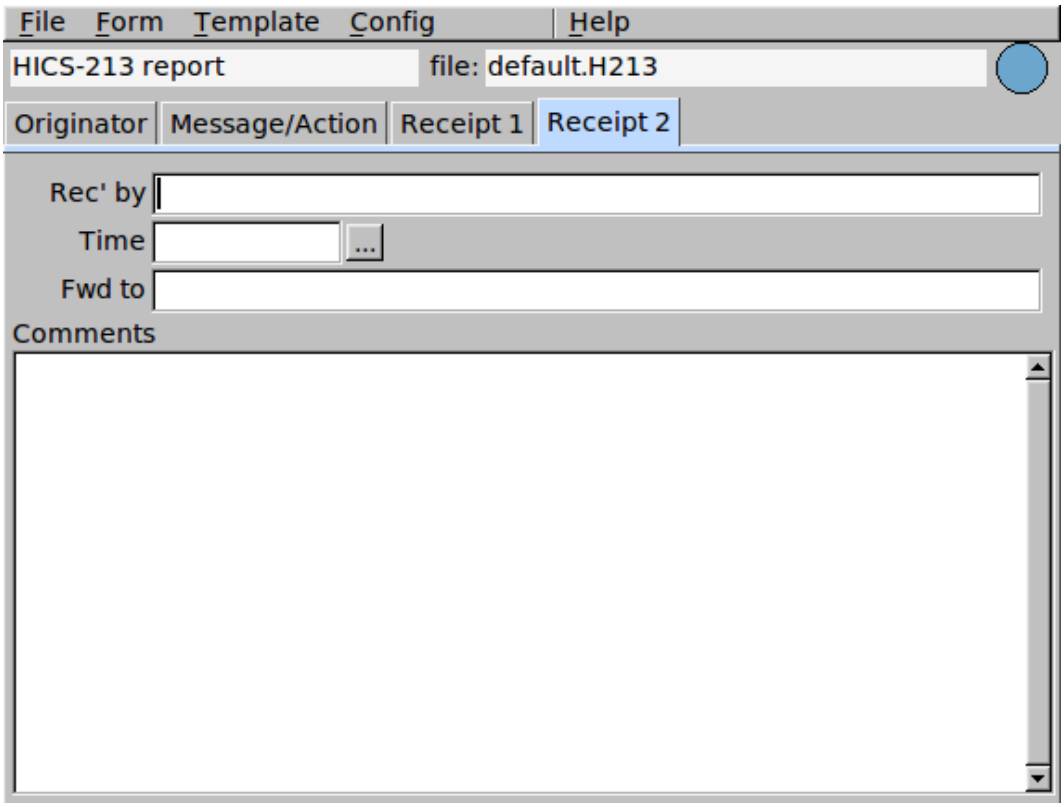
HICS-213 messages

The user prepares, answers and views all data files from the multi-tab user interface dialog:




File Form Template Config Help
HICS-213 report
file: default.H213
Originator
Message/Action
Receipt 1
Receipt 2
Message:
Action:


File Form Template Config Help
HICS-213 report
file: default.H213
Originator
Message/Action
Receipt 1
Receipt 2
Rec' by
Time
...
Fwd to
Comments



HICS213 message files are distinguished by the extension "H213". Template files are assigned the extension "↩ H213T".

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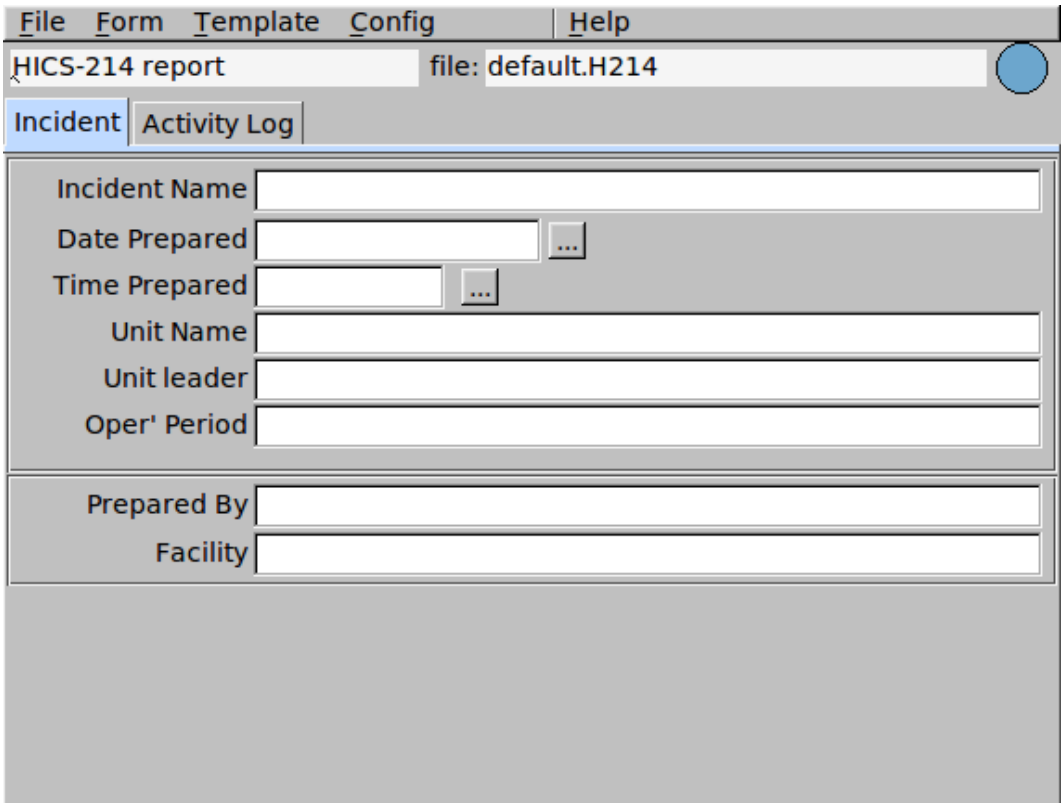
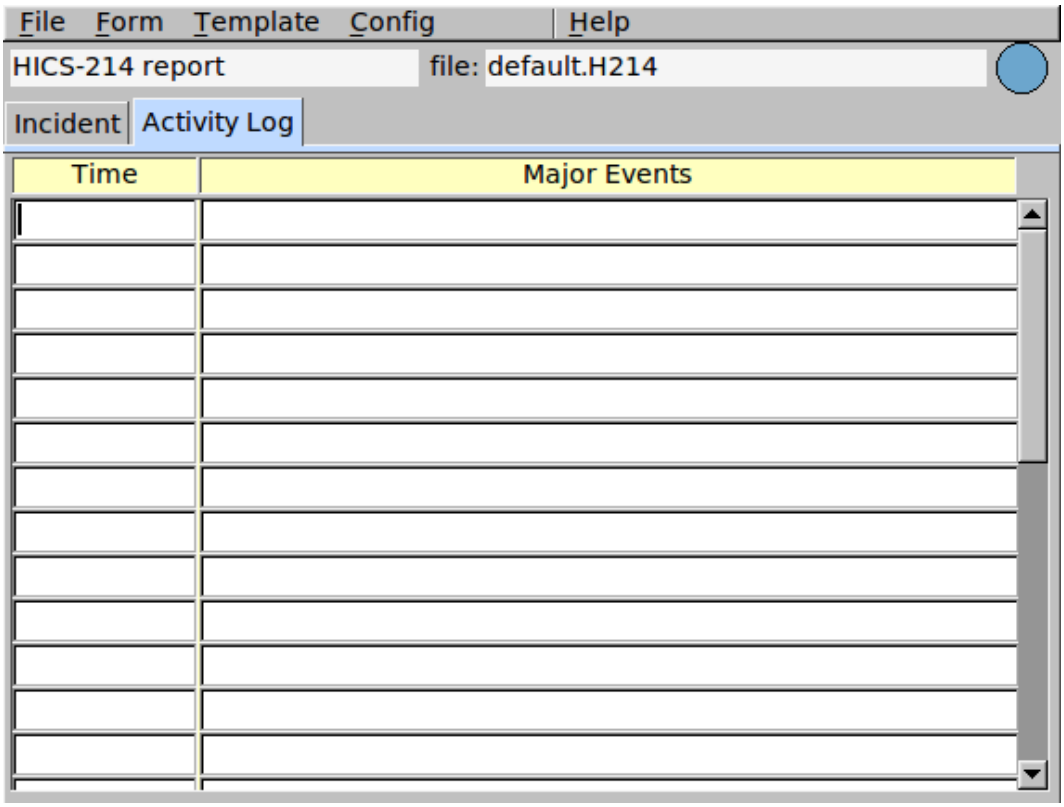
Chapter 8

HICS-214 messages

The user prepares, answers and views all data files from the multi-tab user interface dialog:





HICS214 message files are distinguished by the extension "H214". Template files are assigned the extension "↩ H214T".

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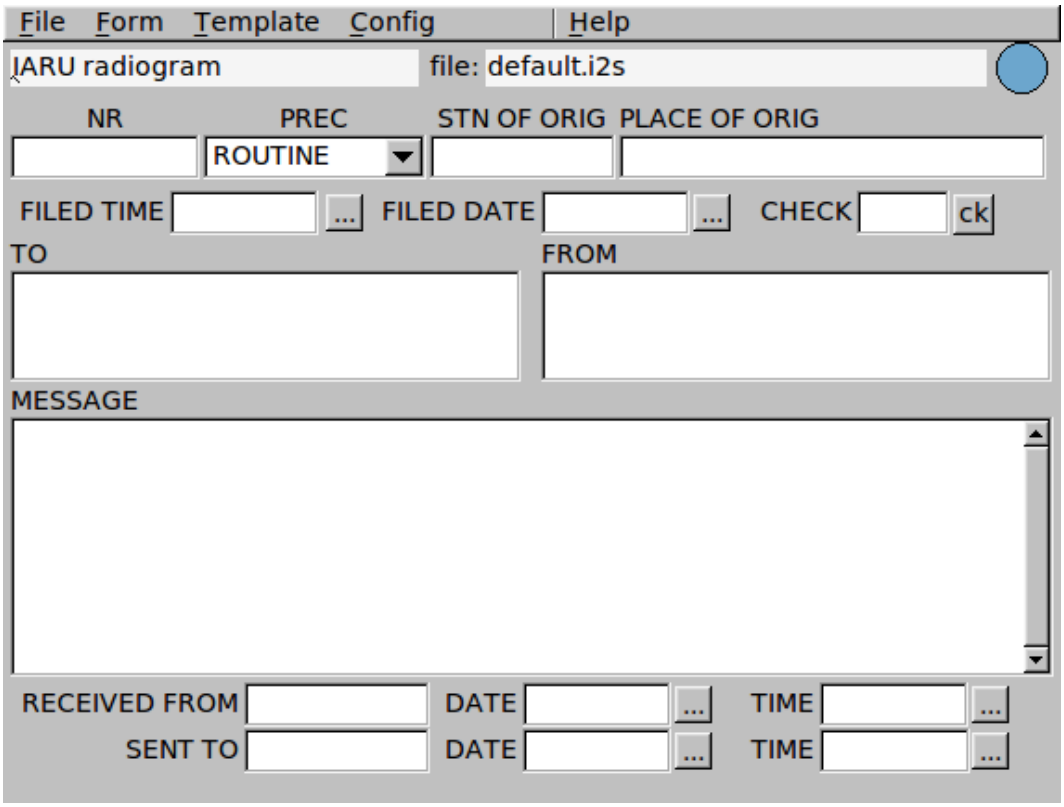
Chapter 9

IARU messages

The user prepares, answers and views all data files from the multi-tab user interface dialog:



IARU message files are distinguished by the extension "i2s". Template files are assigned the extension "i2t".

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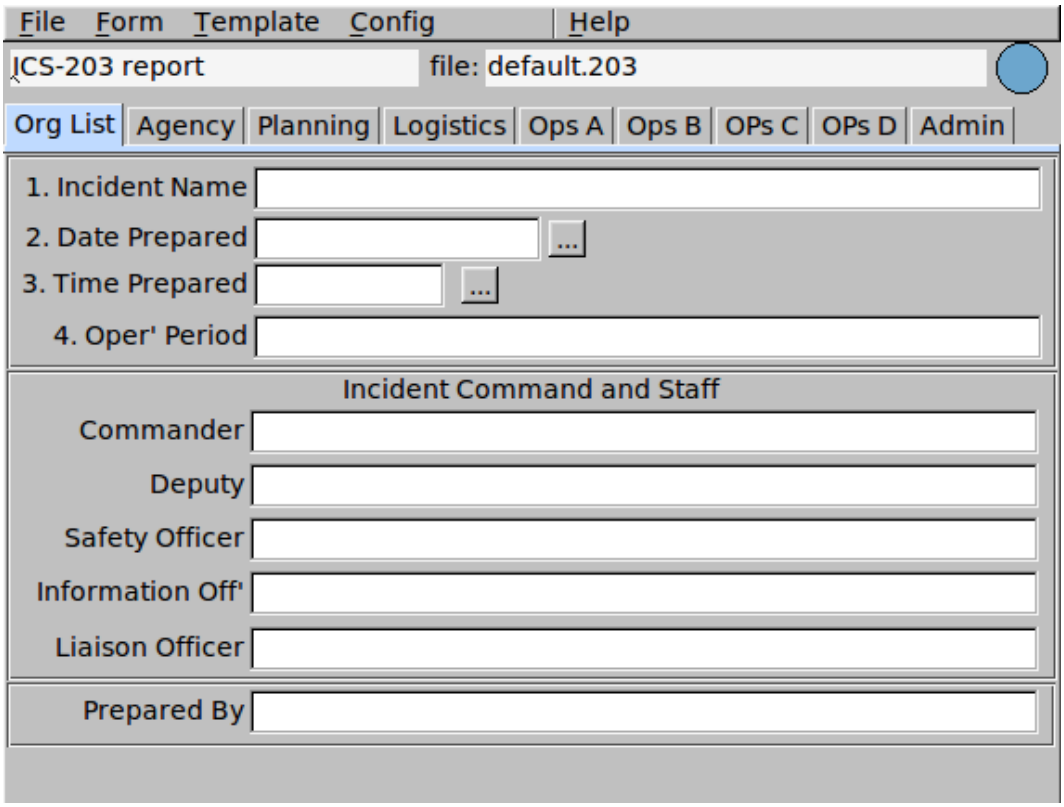
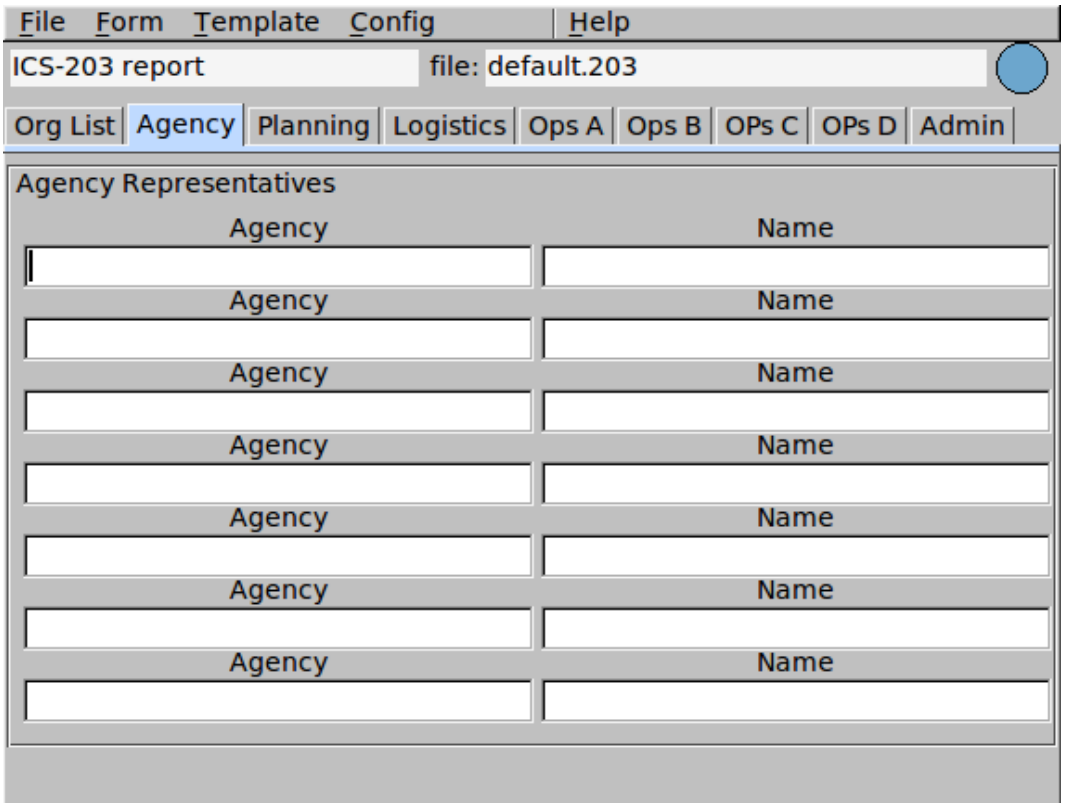
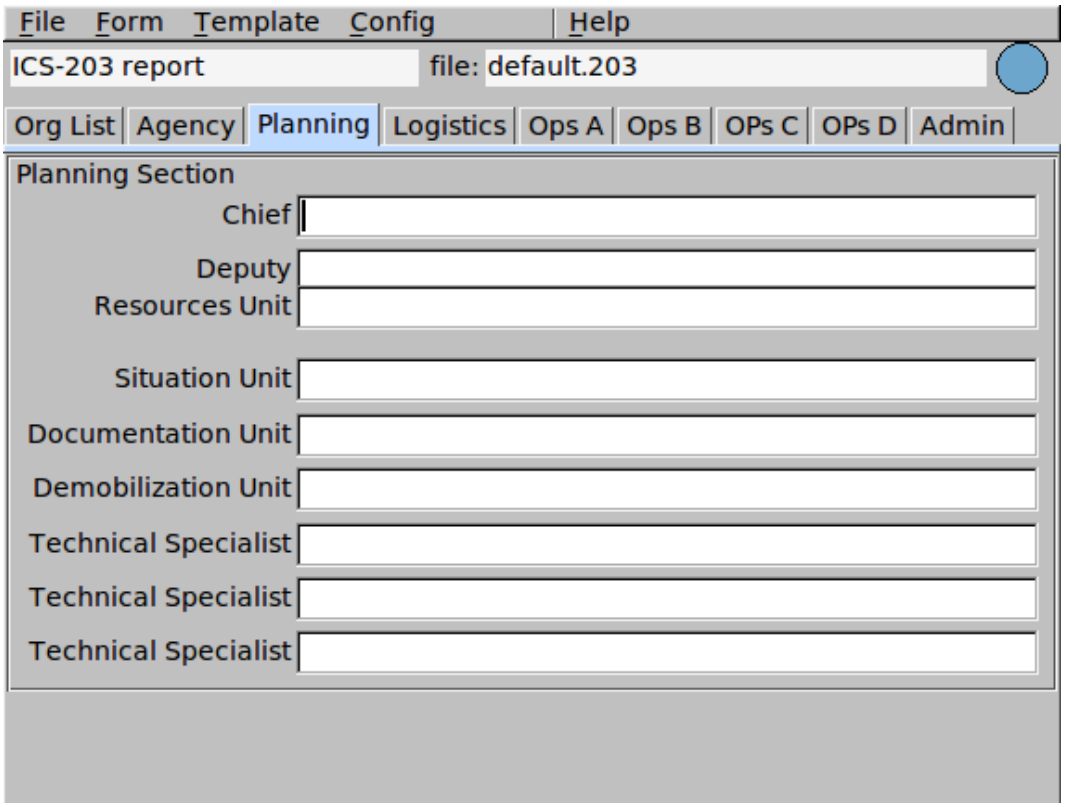
Chapter 10

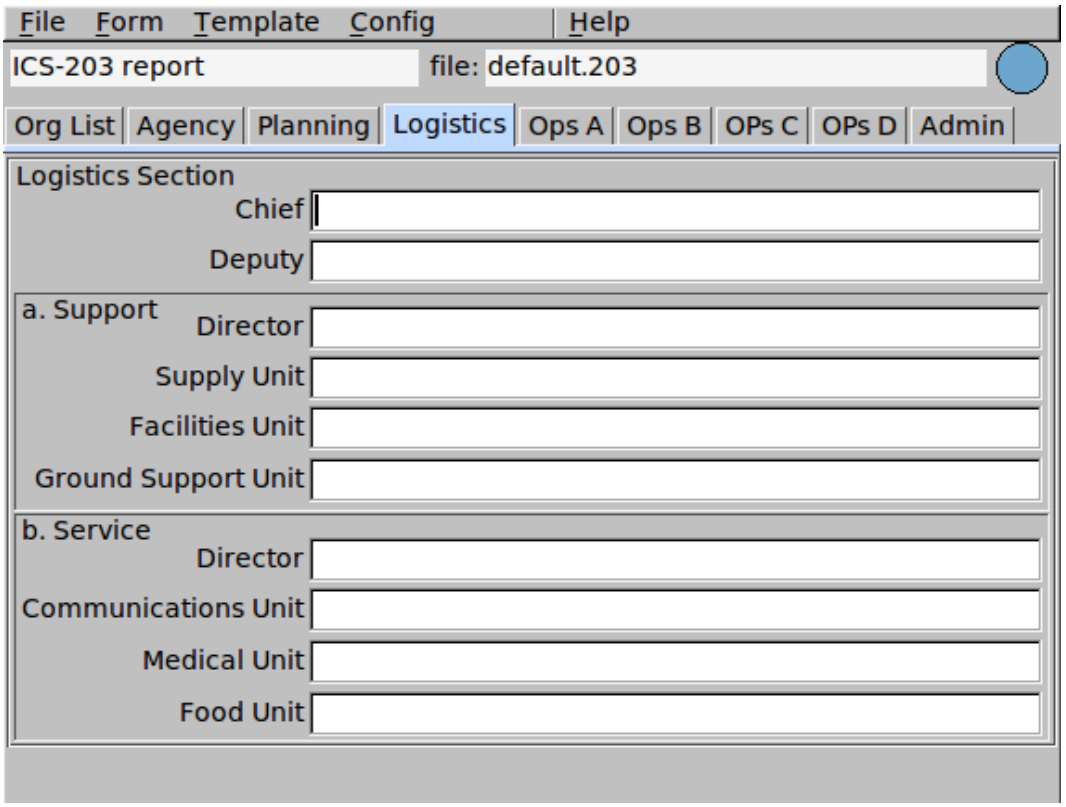
ICS-203 messages

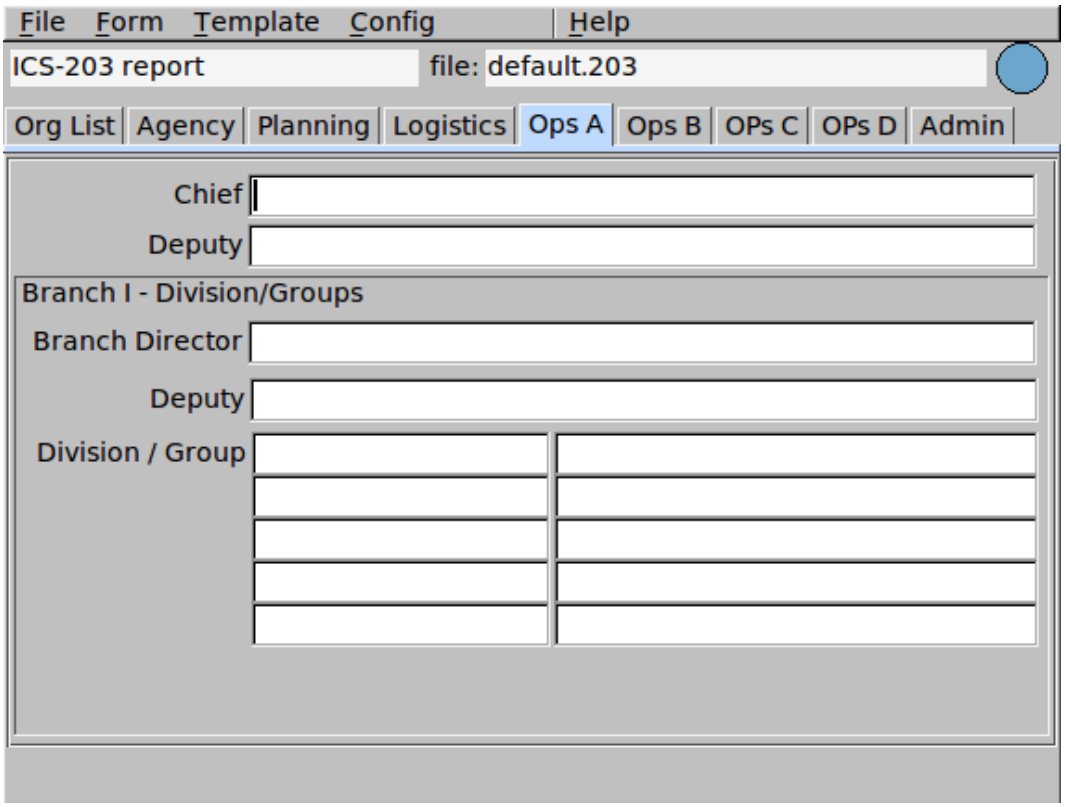
The user prepares, answers and views all data files from the multi-tab user interface dialog:

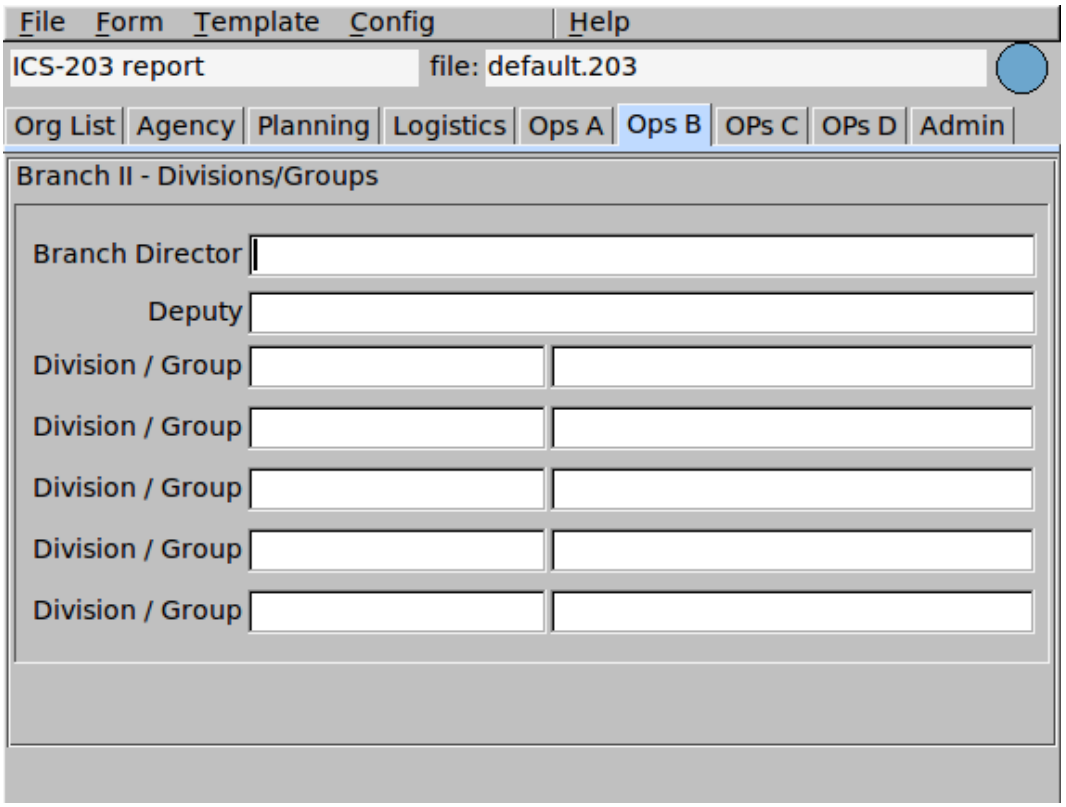


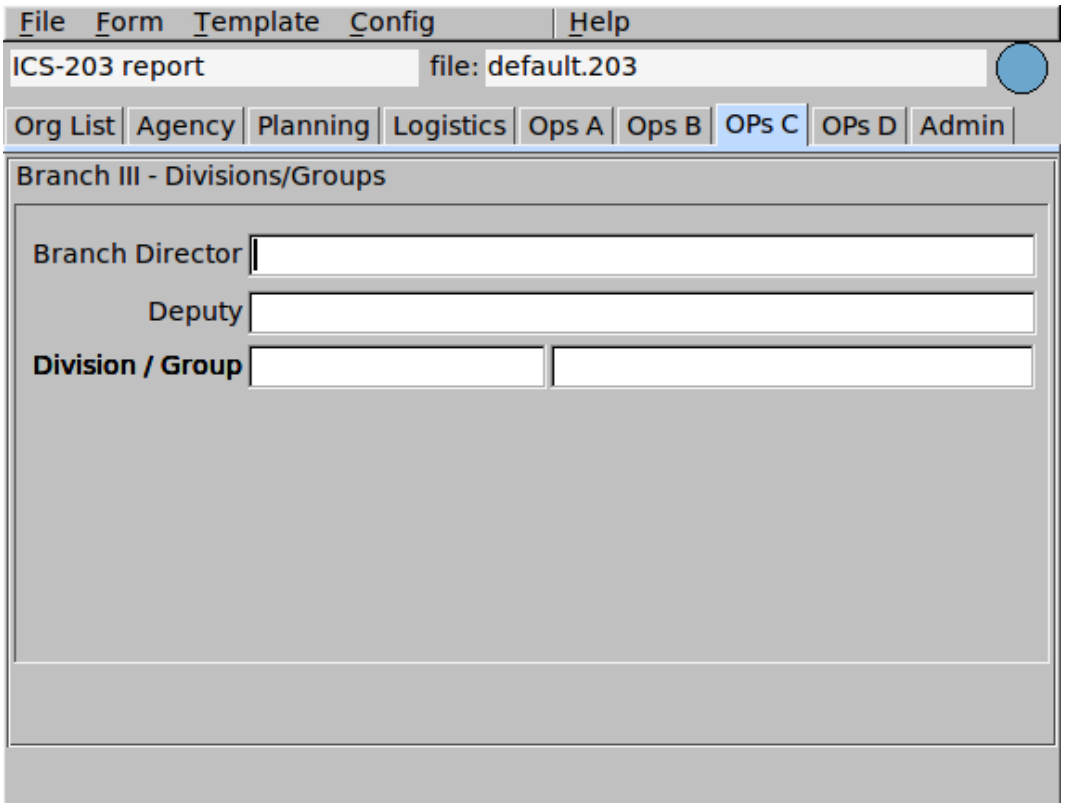

File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Agency Representatives
Agency
Name
Agency
Name
Agency
Name
Agency
Name
Agency
Name
Agency
Name
Agency
Name

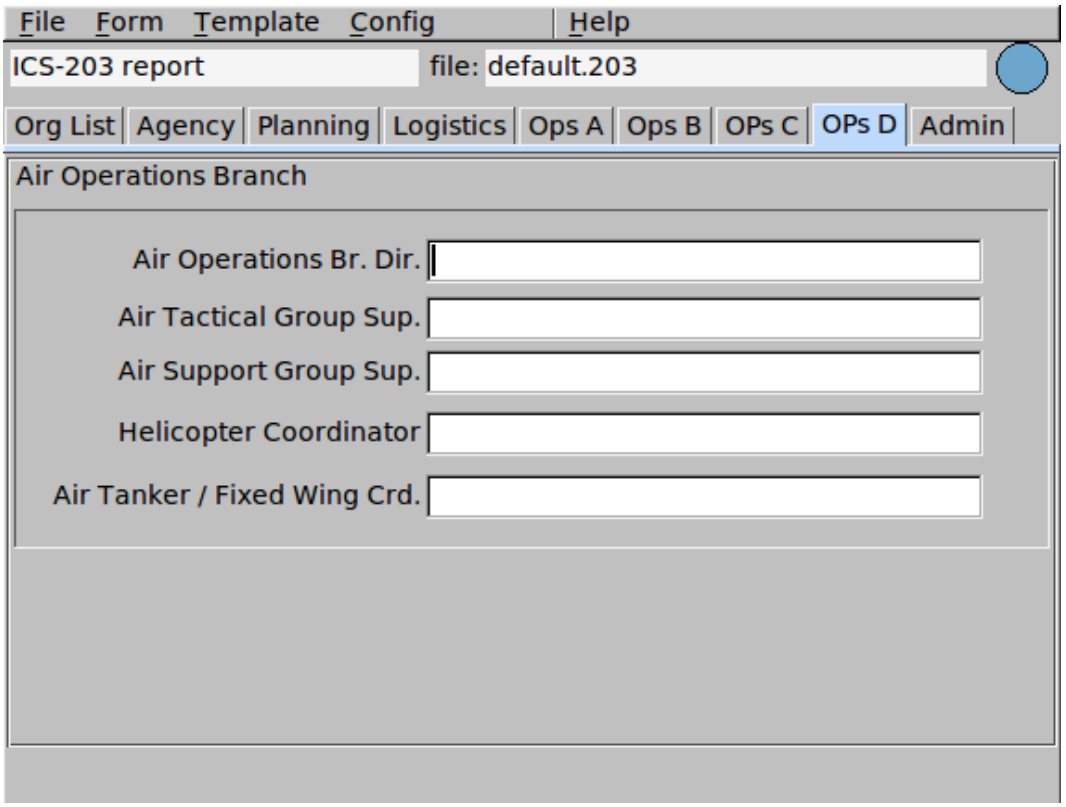

File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Planning Section
Chief
Deputy
Resources Unit
Situation Unit
Documentation Unit
Demobilization Unit
Technical Specialist
Technical Specialist
Technical Specialist

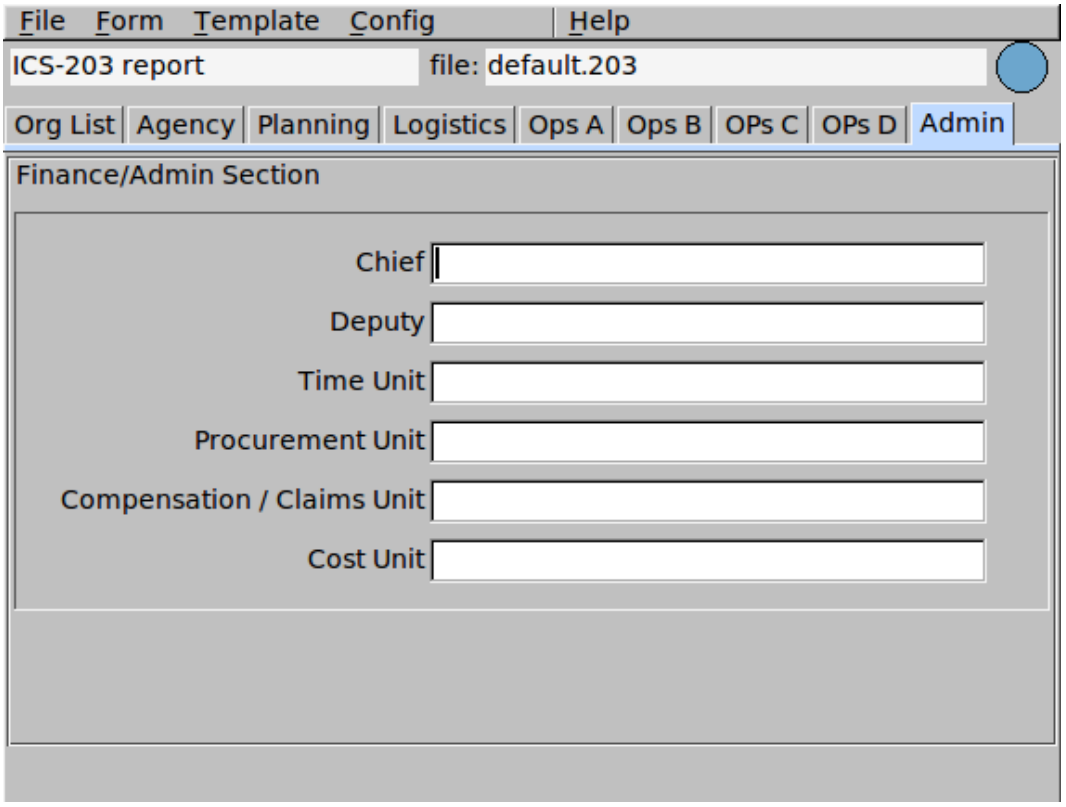

File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Logistics Section
Chief
Deputy
a. Support
Director
Supply Unit
Facilities Unit
Ground Support Unit
b. Service
Director
Communications Unit
Medical Unit
Food Unit


File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Chief
Deputy
Branch I - Division/Groups
Branch Director
Deputy
Division / Group


File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Branch II - Divisions/Groups
Branch Director
Deputy
Division / Group
Division / Group
Division / Group
Division / Group
Division / Group


File Form Template Config Help
ICS-203 report
file: default.203
Org List Agency Planning Logistics Ops A Ops B OPs C OPs D Admin
Branch III - Divisions/Groups
Branch Director
Deputy
Division / Group





ICS203 message files are distinguished by the extension "203". Template files are assigned the extenstion "203T".

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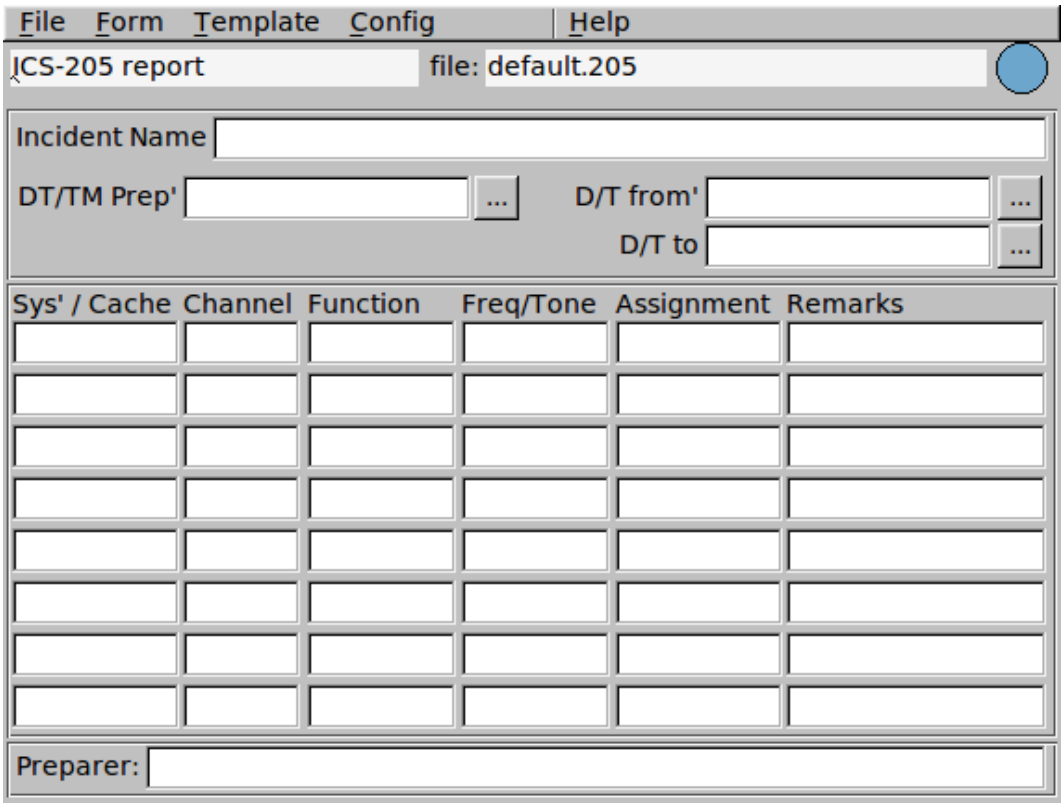
Chapter 11

ICS-205 messages

The user prepares, answers and views all data files from the single user interface dialog:



ICS205 message files are distinguished by the extension "205". Template files are assigned the extenstion "205T".

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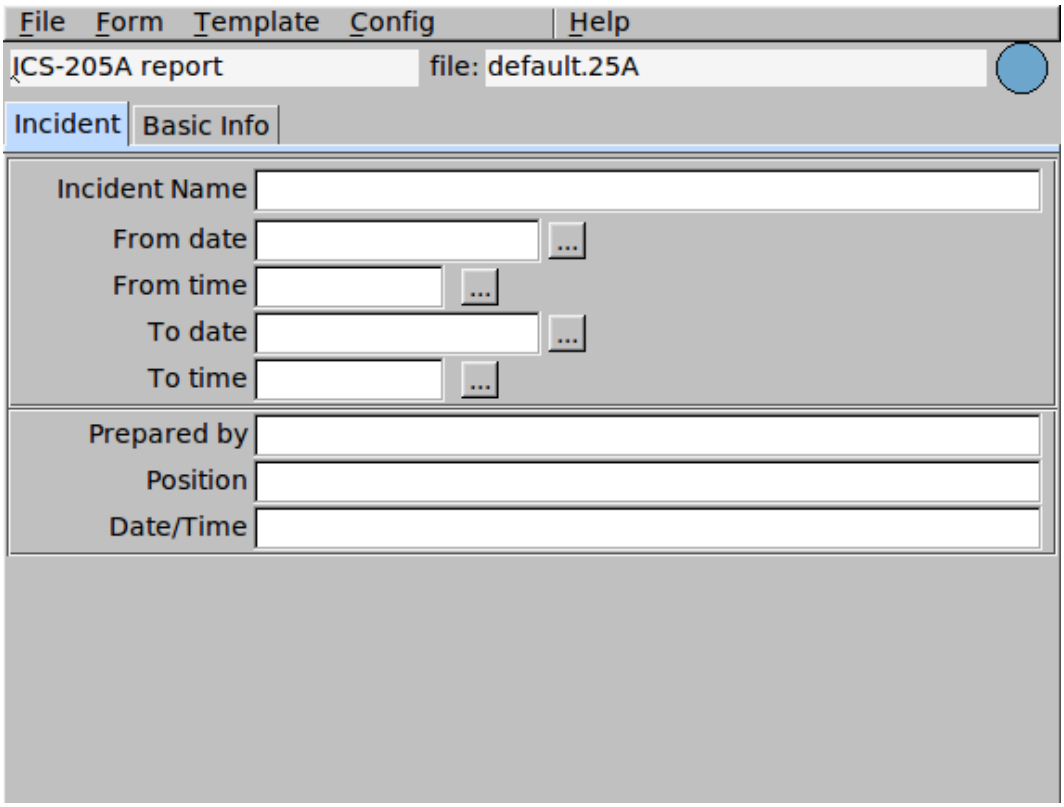
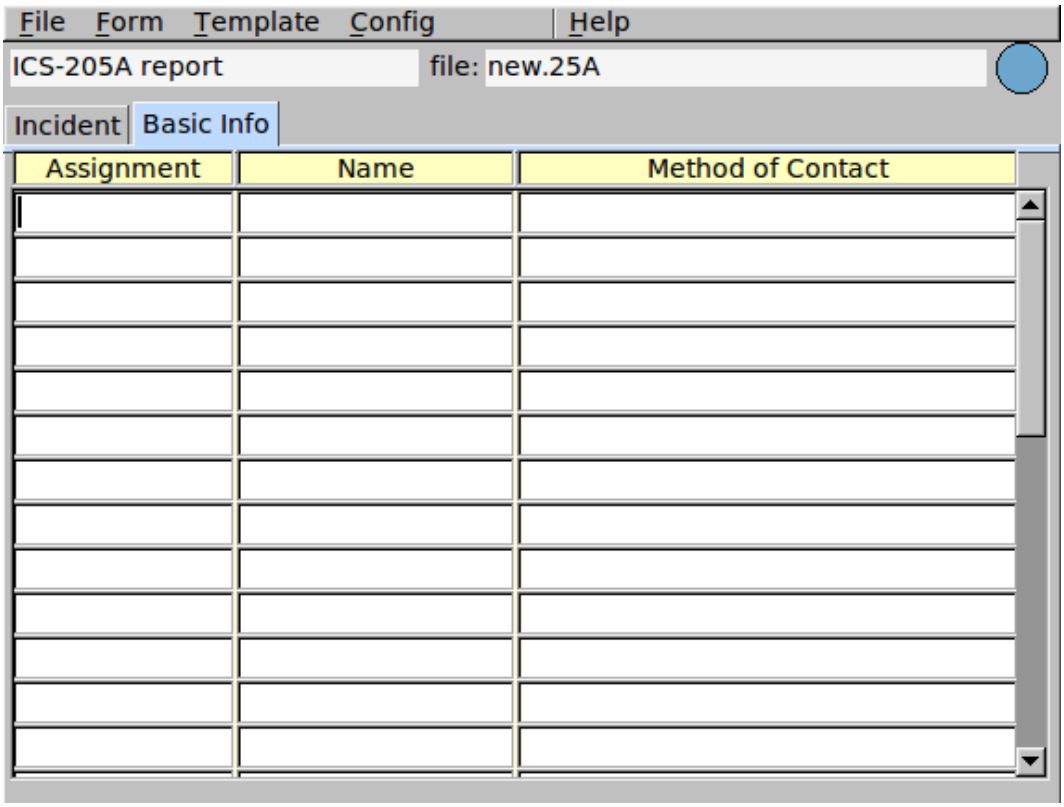
Chapter 12

ICS-205A messages

The user prepares, answers and views all data files from the single user interface dialog:





ICS205A message files are distinguished by the extension "25A". Template files are assigned the extenstion "25T". This optional form is used in conjunction with the Incident Radio Communications Plan, ICS 205. Whereas the ICS 205 is used to provide information on all radio frequencies down to the Division/Group level, the Communications List, ICS 205A, lists methods of contact for personnel assigned to the incident (radio frequencies, phone numbers, pager numbers, etc.), and functions as an incident directory.

1. Incident Name Enter the name assigned to the incident.
2. Operational Period Enter the time interval for which the form applies.
3. Basic Local Comms Enter the communications methods assigned and used for each Information assignment.
   Assignment: Enter the ICS Organizational assignment.
   Name: Enter the name of the contact person for the assignment.
   Contact Method(s): Enter the radio frequency, telephone number(s), etc. for each assignment.
4. Prepared By Enter the name of the Communications Unit Leader preparing the form. Date/Time Enter date (month, day, year) and time prepared (24-hour clock).

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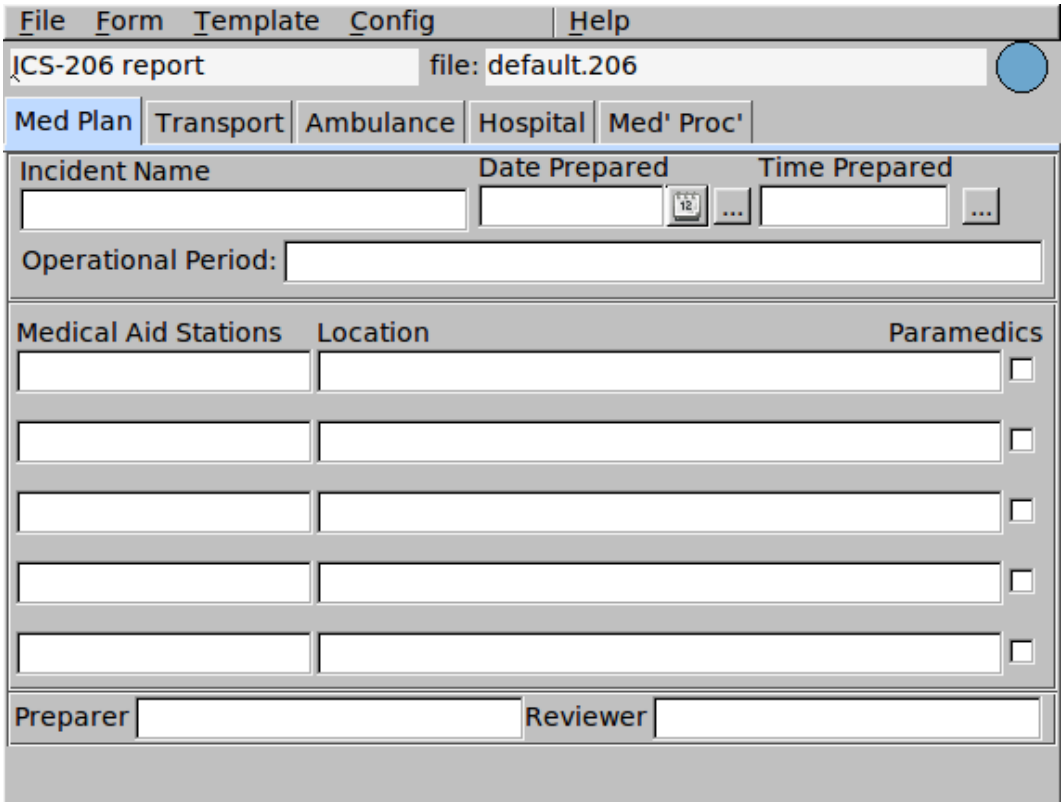
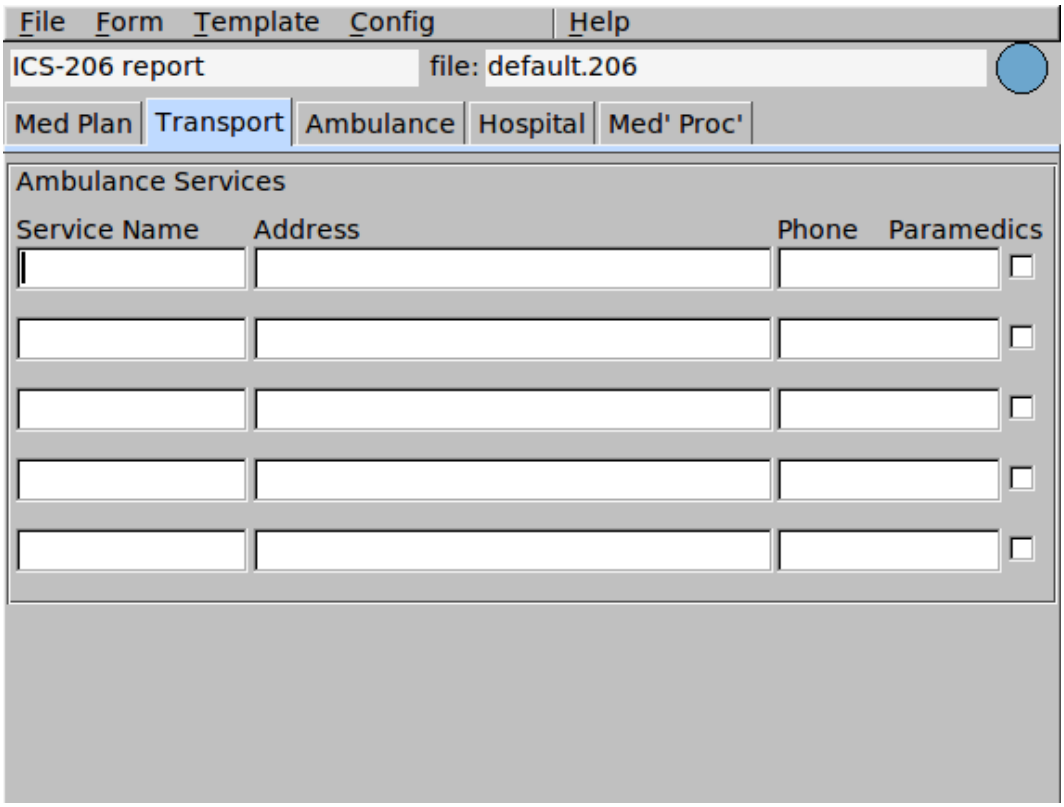
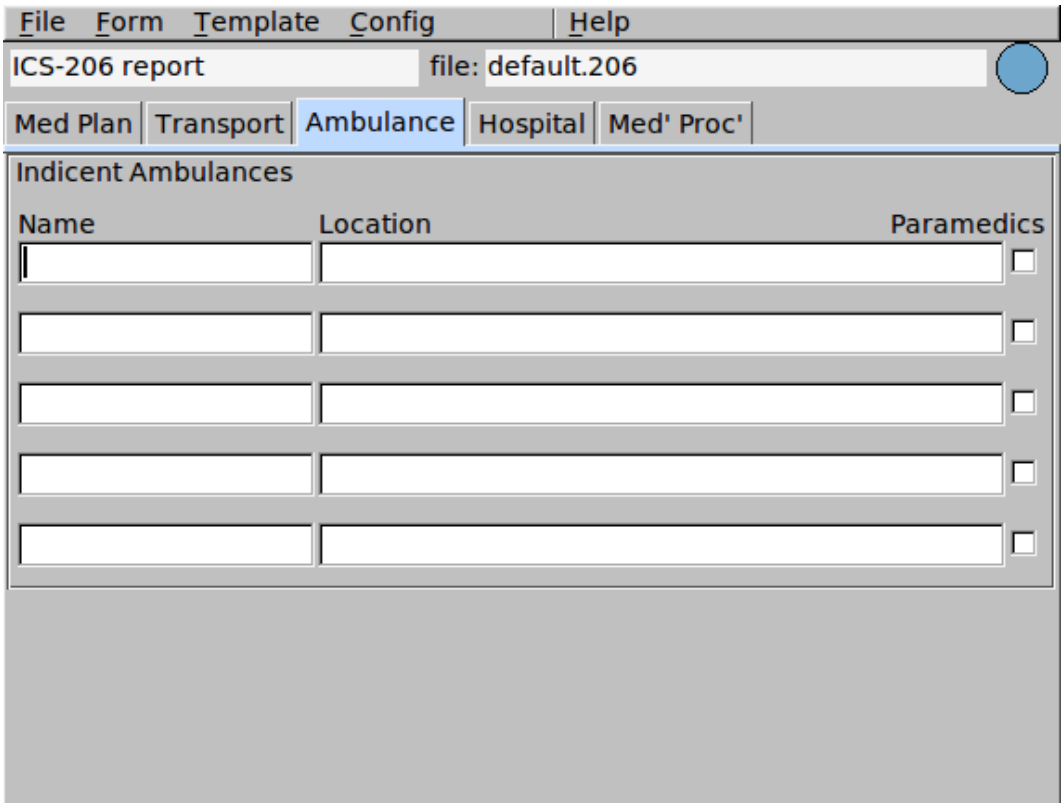
Chapter 13

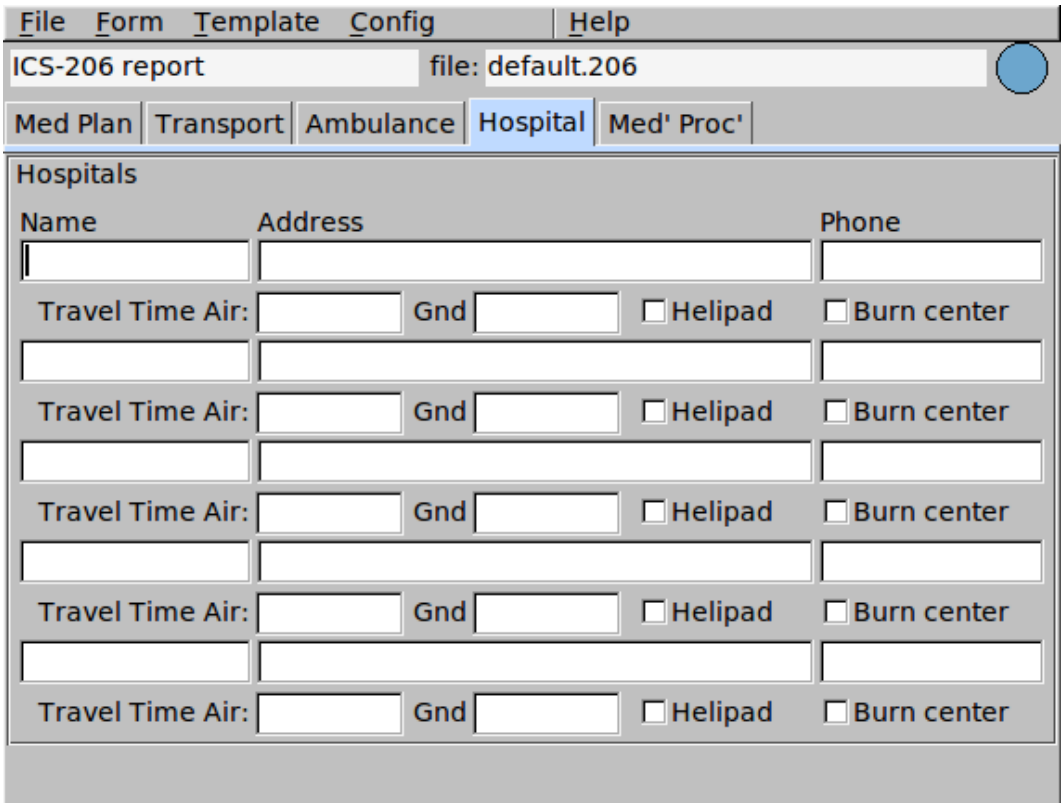
ICS-206 messages

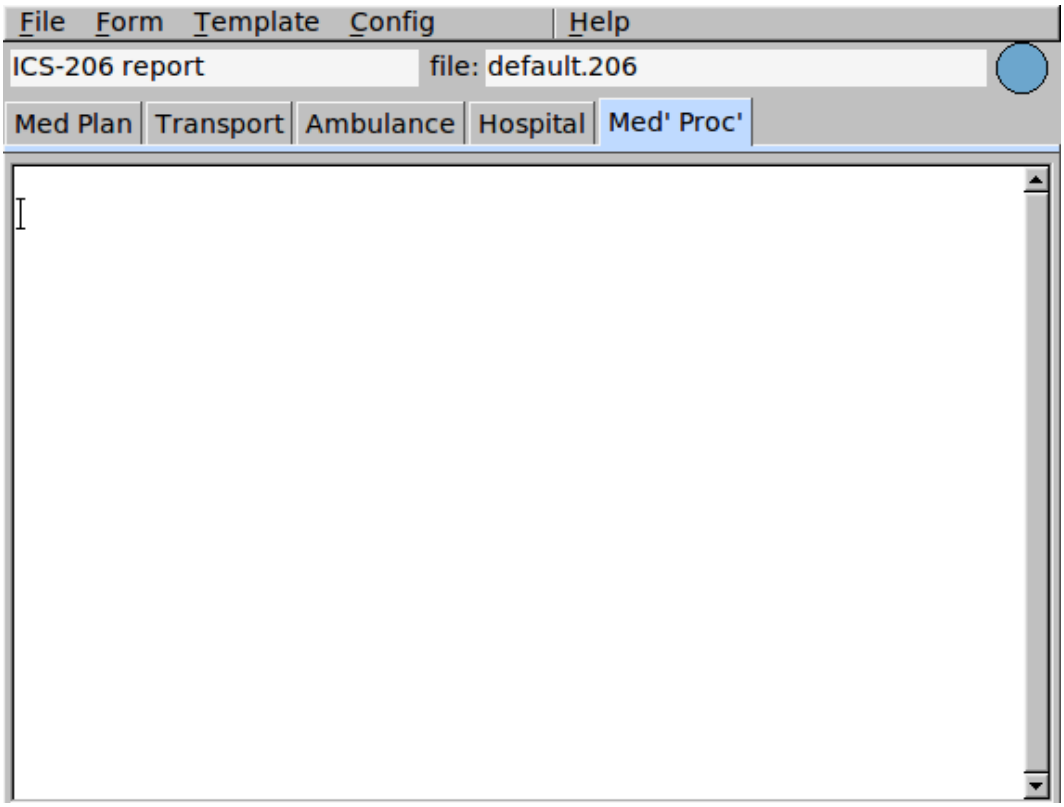
The user prepares, answers and views all data files from the multi-tab user interface. This is a very large form with many repeating entry lines.




File Form Template Config Help
ICS-206 report
file: default.206
Med Plan
Transport
Ambulance
Hospital
Med' Proc'
Ambulance Services
Service Name
Address
Phone
Paramedics


File Form Template Config Help
ICS-206 report
file: default.206
Med Plan
Transport
Ambulance
Hospital
Med' Proc'
Indicent Ambulances
Name
Location
Paramedics


File Form Template Config Help
ICS-206 report
file: default.206
Med Plan Transport Ambulance Hospital Med' Proc'
Hospitals
Name
Address
Phone
Travel Time Air:
Gnd
Helipad
Burn center


File Form Template Config Help
ICS-206 report
file: default.206
Med Plan Transport Ambulance Hospital Med' Proc'

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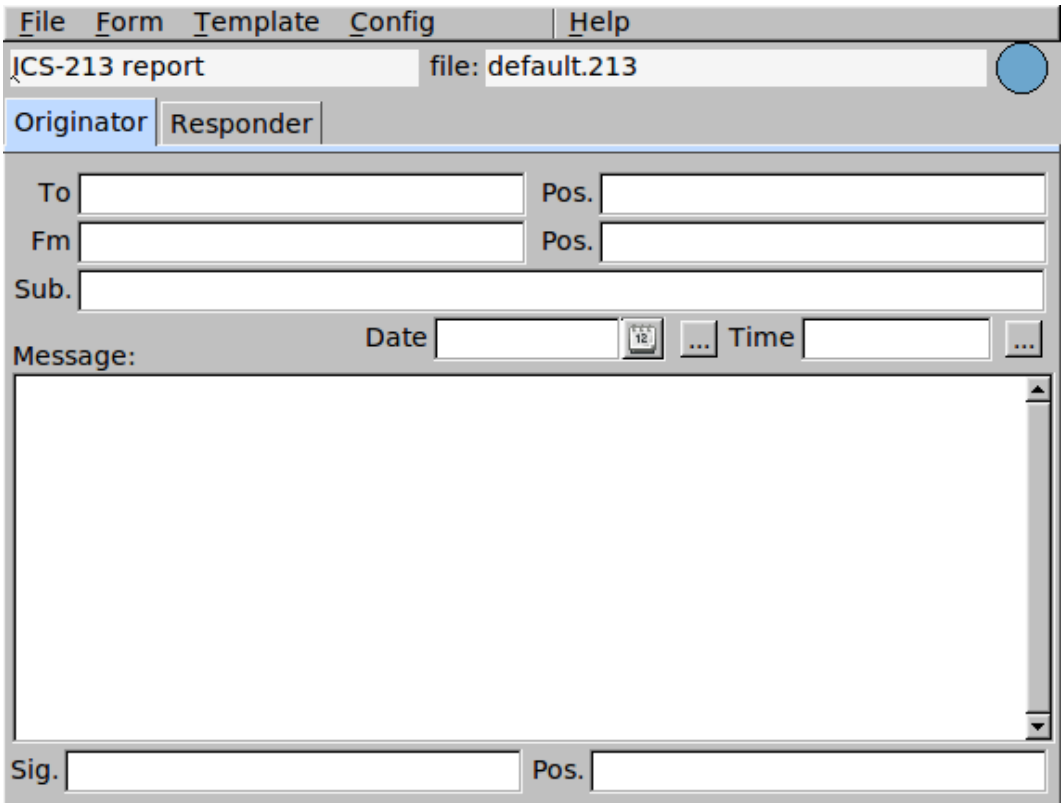
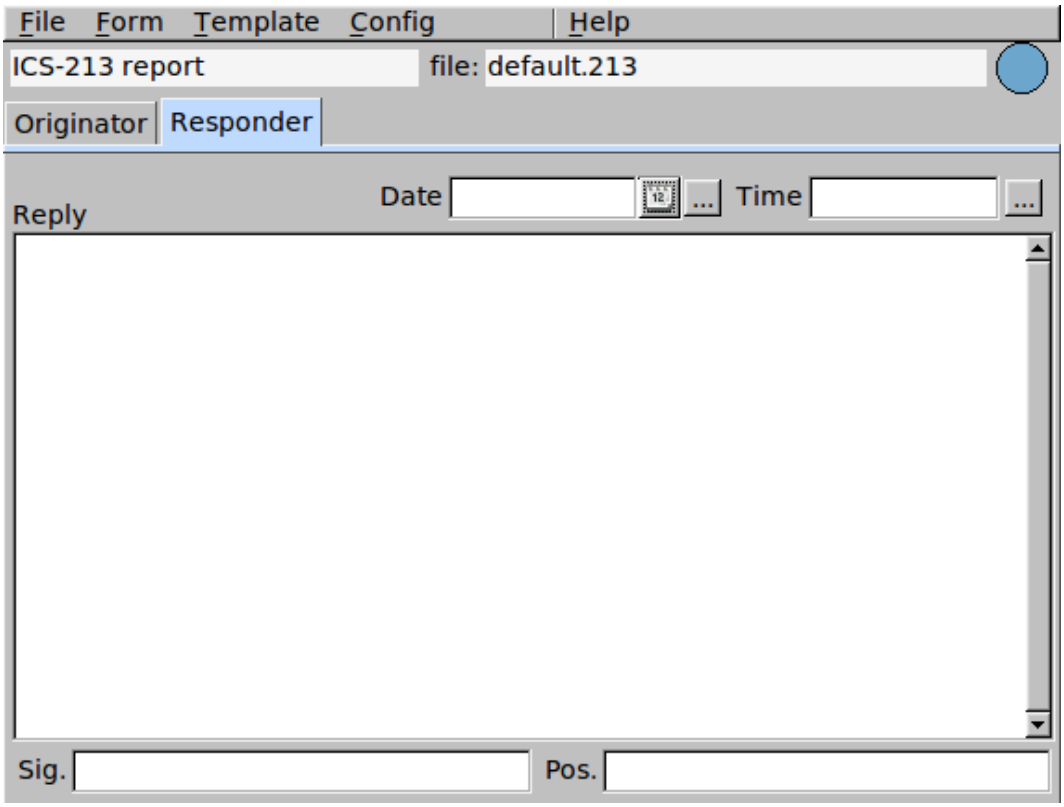
Chapter 14

ICS-213 messages

The user prepares, answers and views all data files from the single user interface dialog:





ICS213 message files are distinguished by the extension "f2s". Template files are assigned the extenstion "f2t". The data file for this example "MedEm_001.f2s" contains:

```
============================== file contents ============================
<flmsg>1.0.0b1
<to:5 k2lbm
<p1:0
<fm:5 w1hkj
<p2:0
<d1:10 2009-09-29
<t1:9 00:03 UTC
<sb:29 Situation Report - F3 tornado
<s1:11 Dave Freese
<p3:16 On scene manager
<s2:12 Helen Freese
<p4:11 Coordinator
<d2:10 2009-09-29
<t2:9 00:22 UTC
<mg:211 1. # injured 4
2. # casualties 2
3. # displaced 30
4. Available doctors 1
5. Available nurses 2
6. Request:
  a. shelter 30
  b. morgue transport 2
  c. ambulance transport 4, from Hazel Green UMC to City Hosp.

<rp:100 Expect ambulance by 03:00 UTC
Coronor pickup by 08:00 UTC
Shelter ready at Hazel Green High School.
============================== file contents ============================
```

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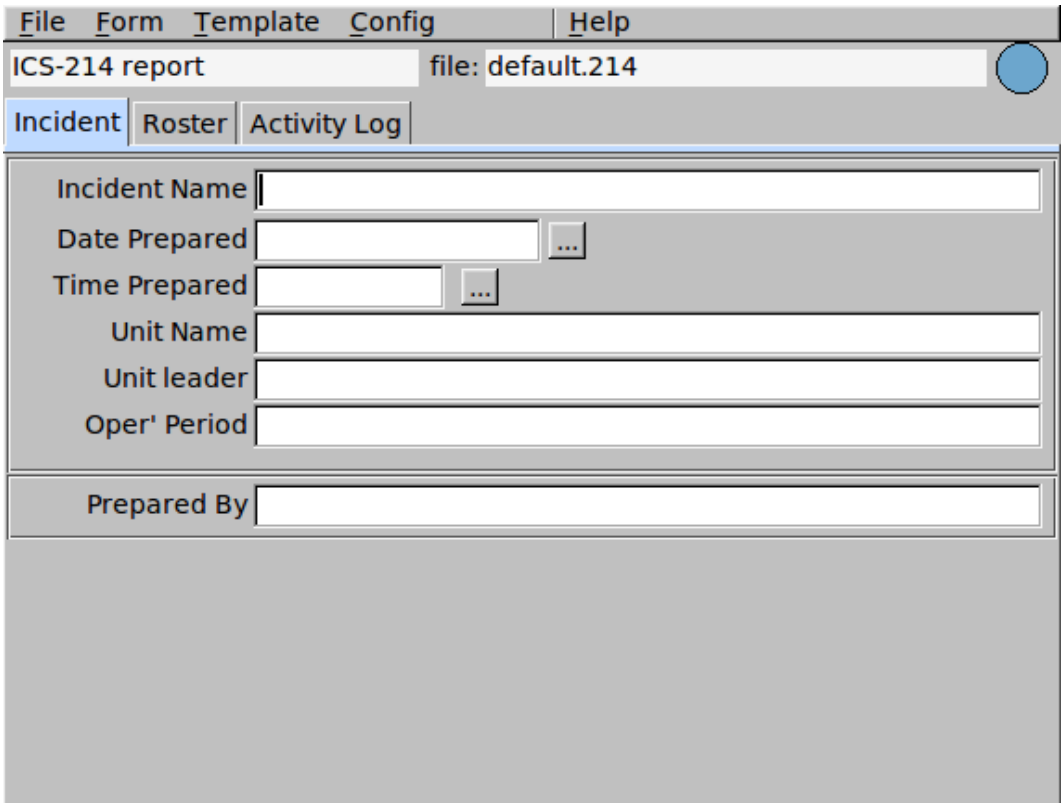
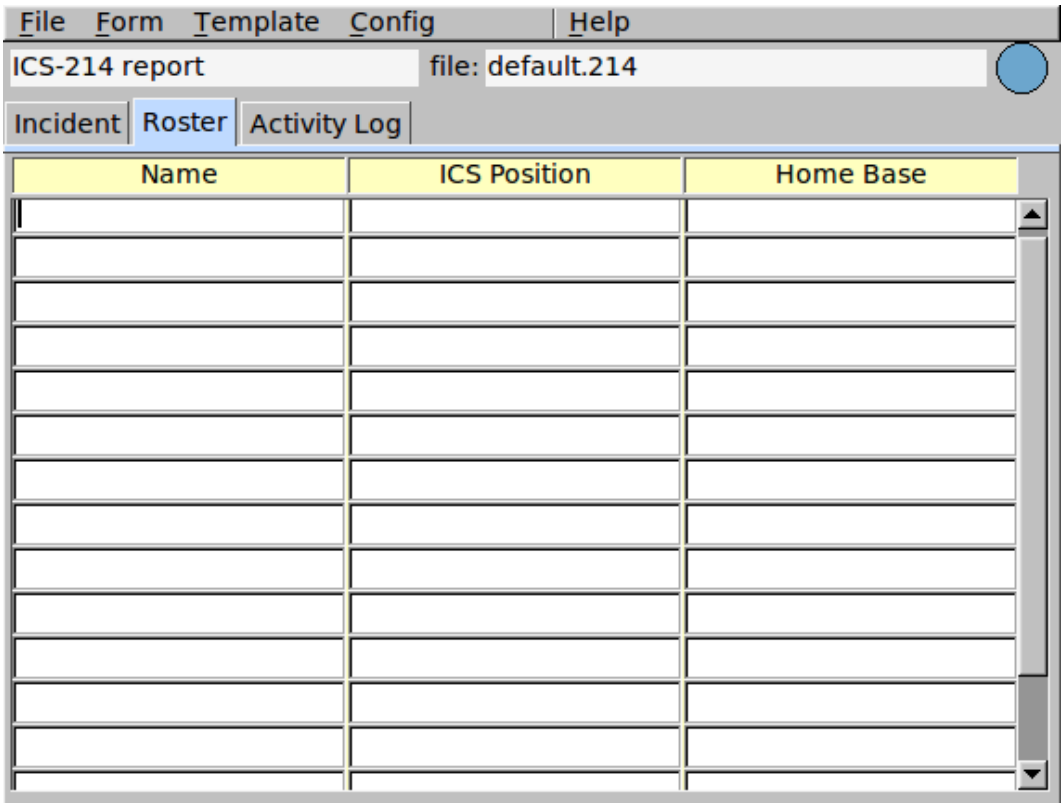
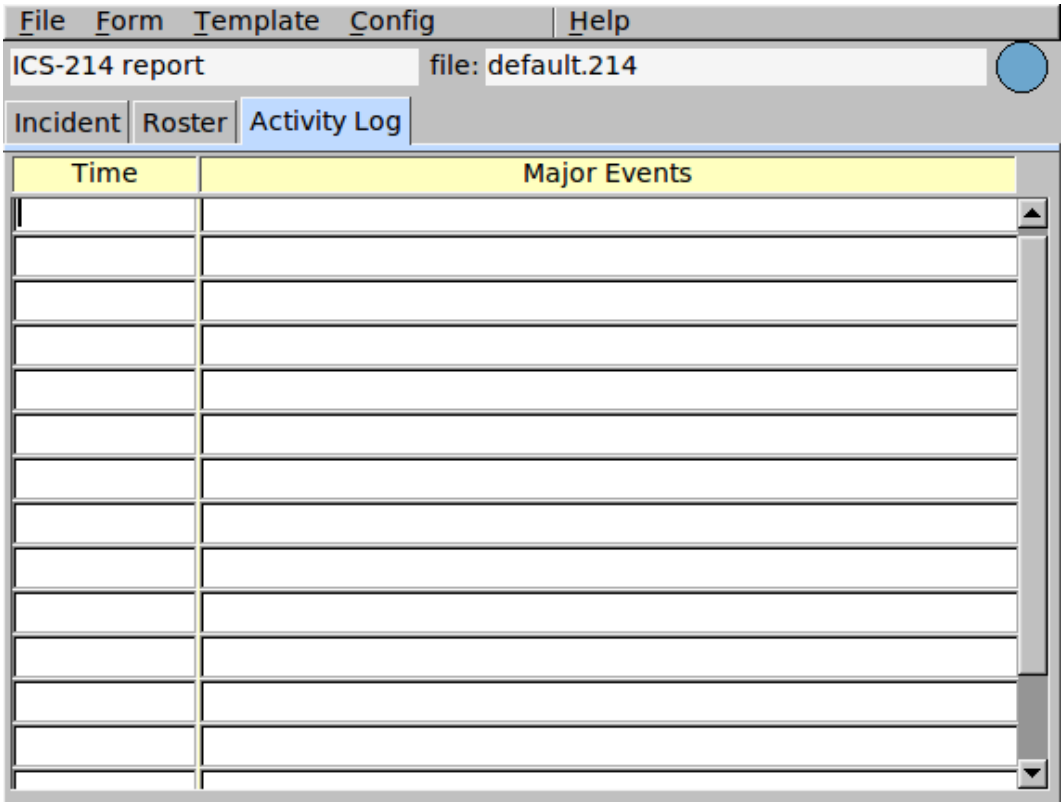
Chapter 15

ICS-214 Unit Log

The user prepares, answers and views all data files from the multi-tab user interface dialog:







ICS214 message files are distinguished by the extension "214". Template files are assigned the extenstion "214T".

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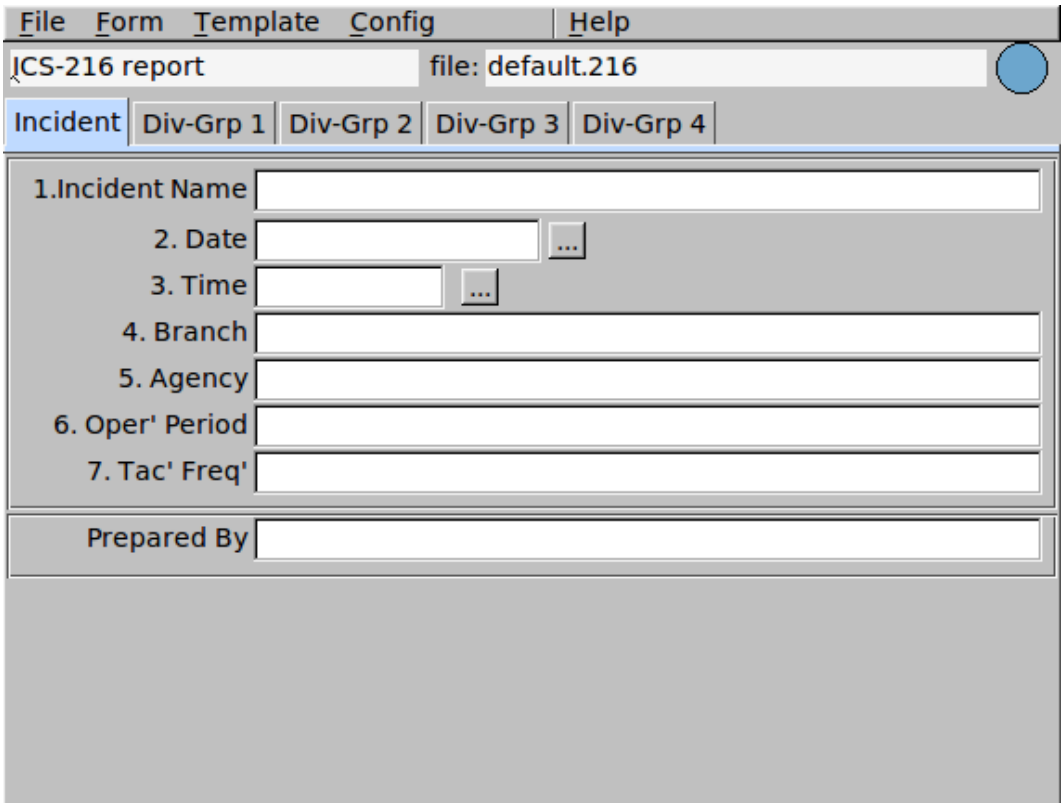
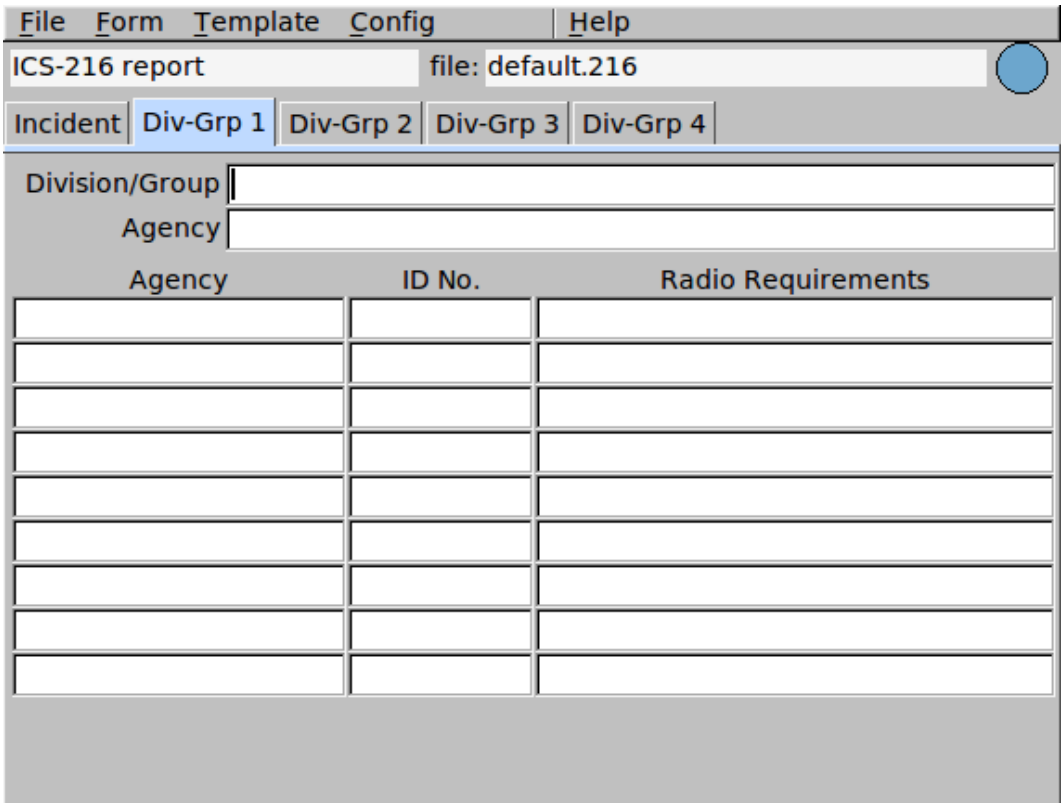
Chapter 16

ICS-216 Radio Requirements Worksheet

The user prepares, answers and views all data files from the multi-tab user interface dialog:





ICS216 message files are distinguished by the extension "216". Template files are assigned the extension "216T".

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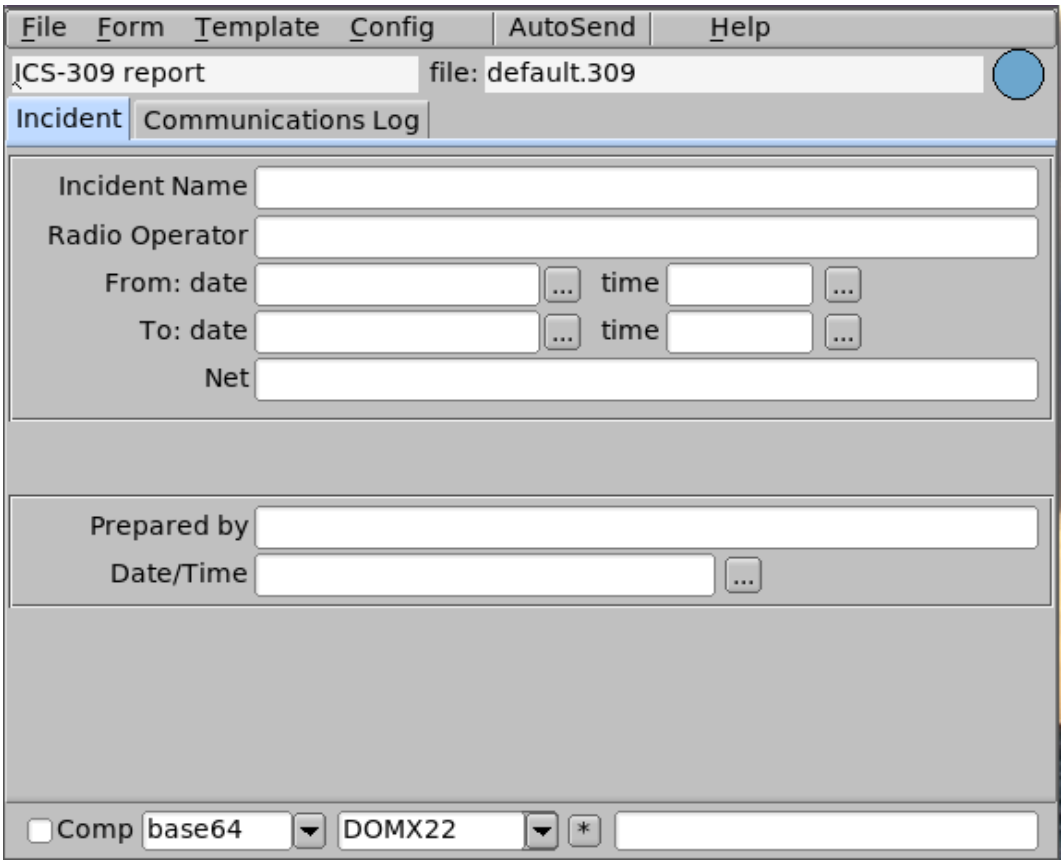
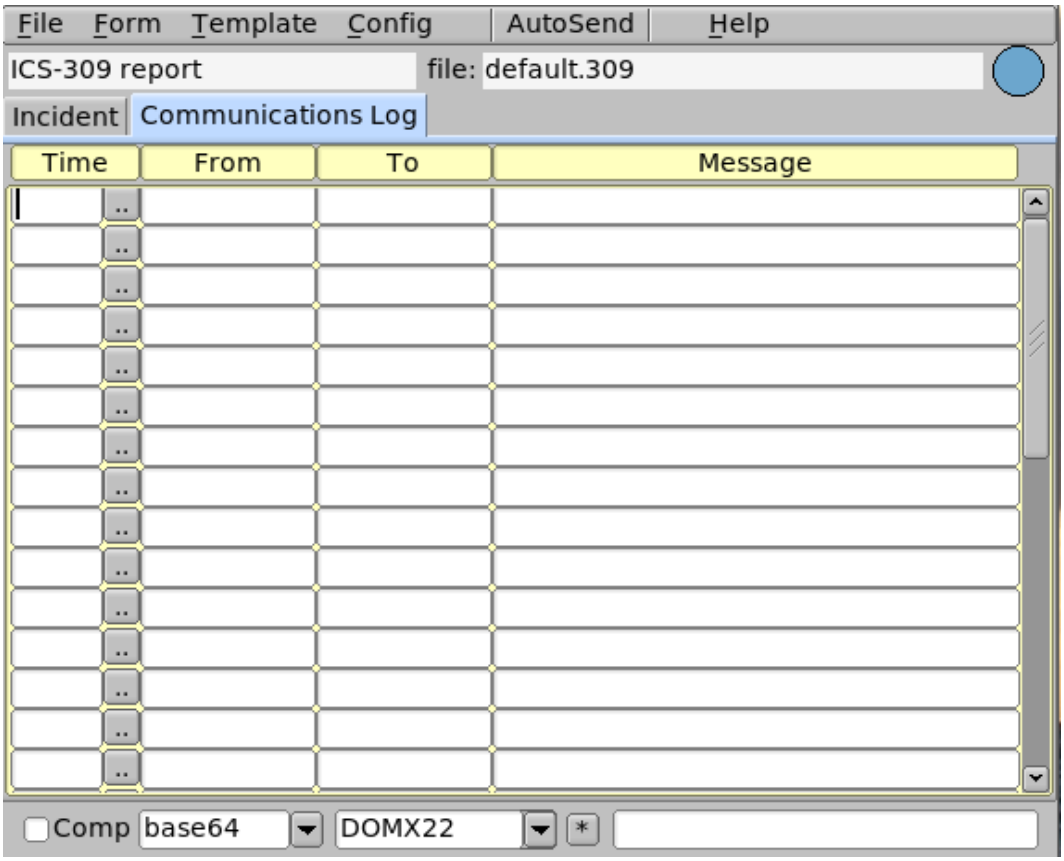
Chapter 17

ICS-309 Radio Incident Communicaions Log

The user prepares, answers and views all data files from the multi-tab user interface dialog:





IC309 message files are distinguished by the extension "309". Template files are assigned the extension "309T".

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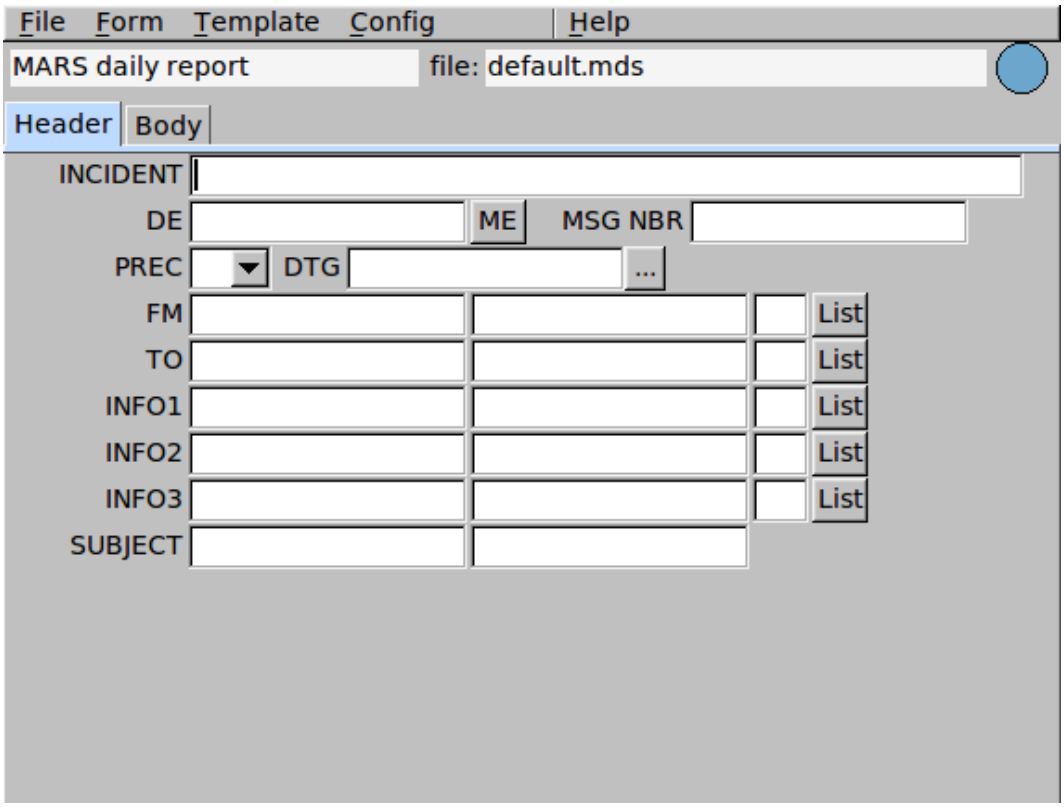
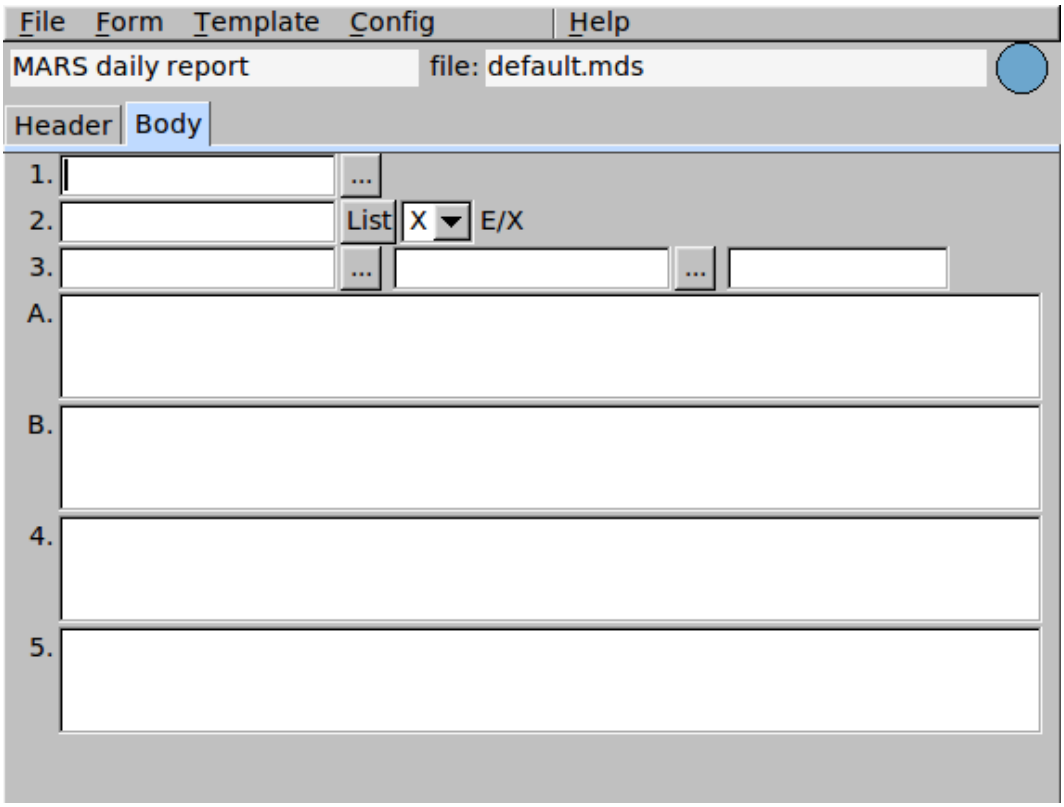
Chapter 18

MARS Daily message

The user prepares, and edits from either the MARS Daily tabs





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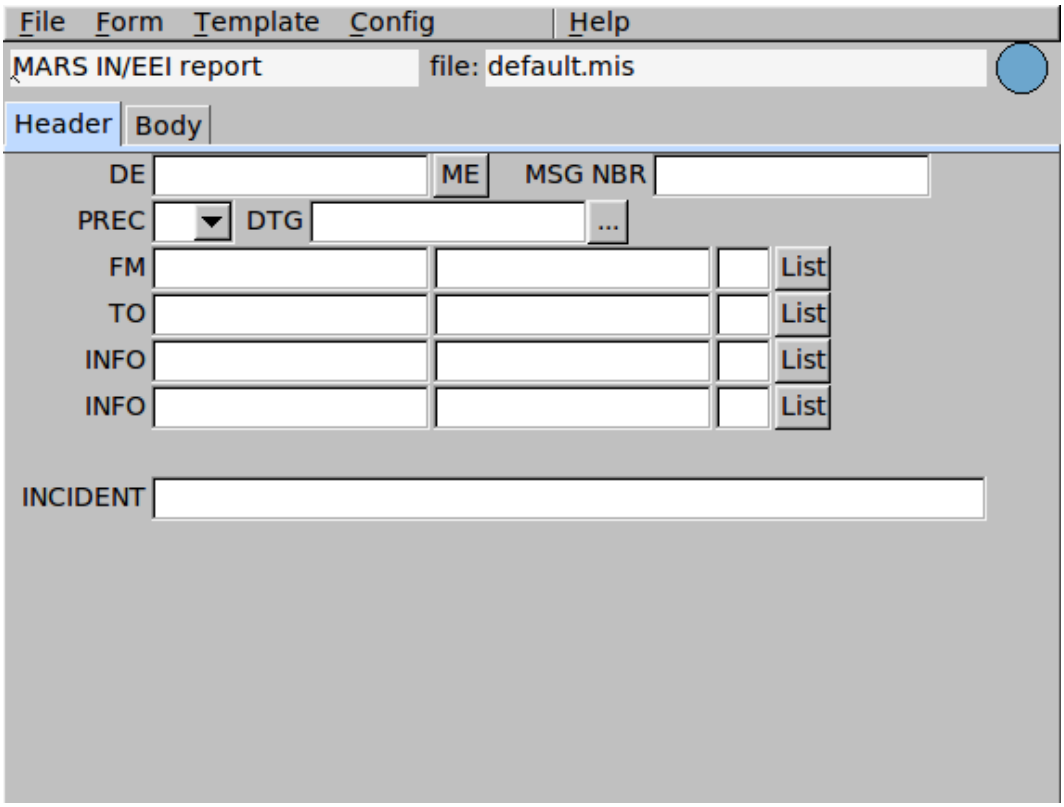
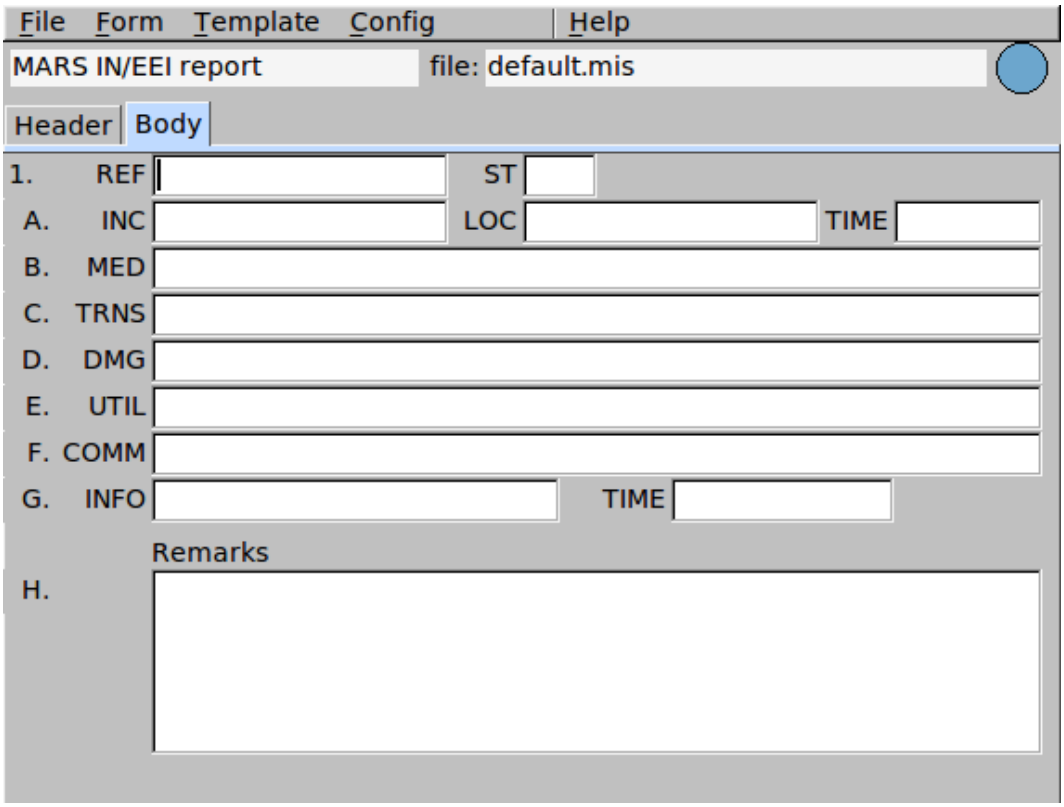
Chapter 19

MARS IN/EEI message

The user prepares, and edits from either the MARS IN/EEI tabs:





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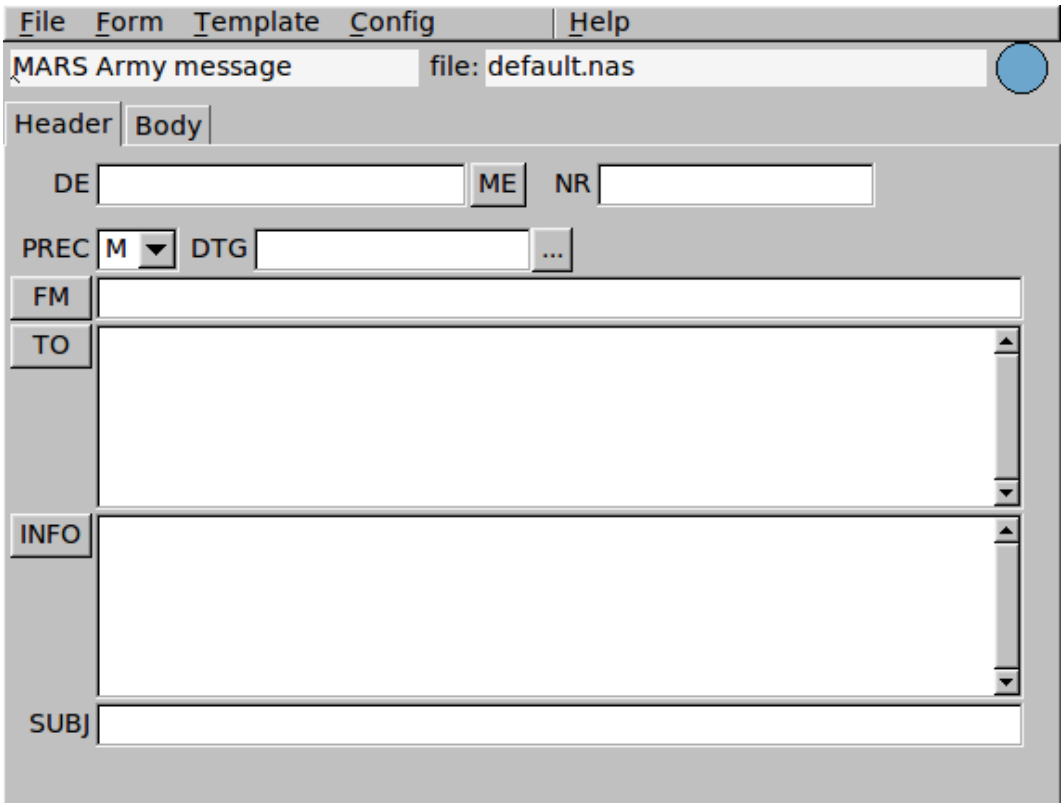
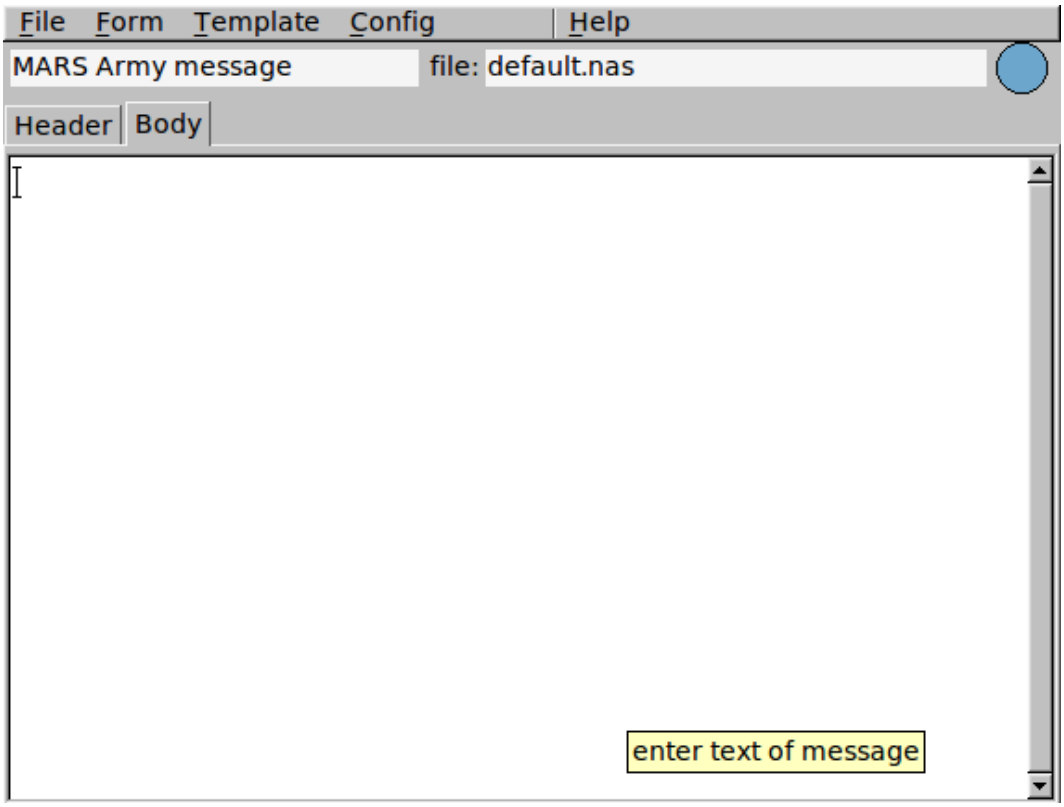
Chapter 20

MARS message

The user prepares, and edits from either the MARS Army or the MARS Navy tab:





Both use a common body for the text of the message.
The principal difference is in the assignment of message precedence.

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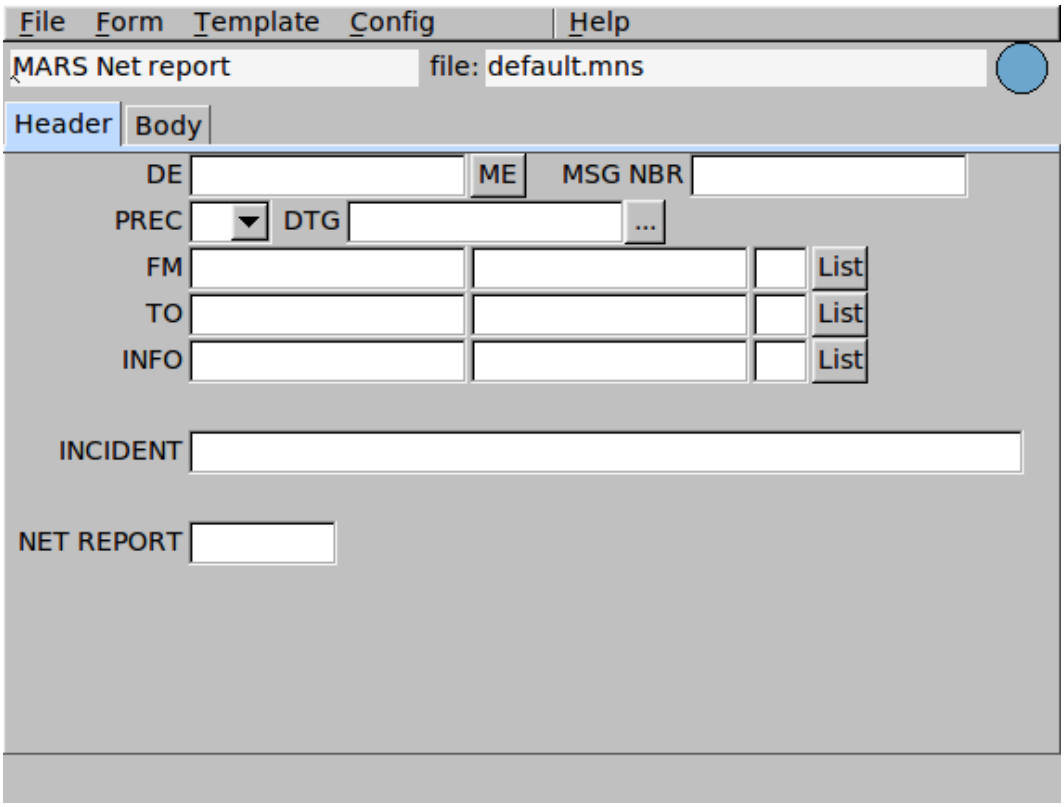
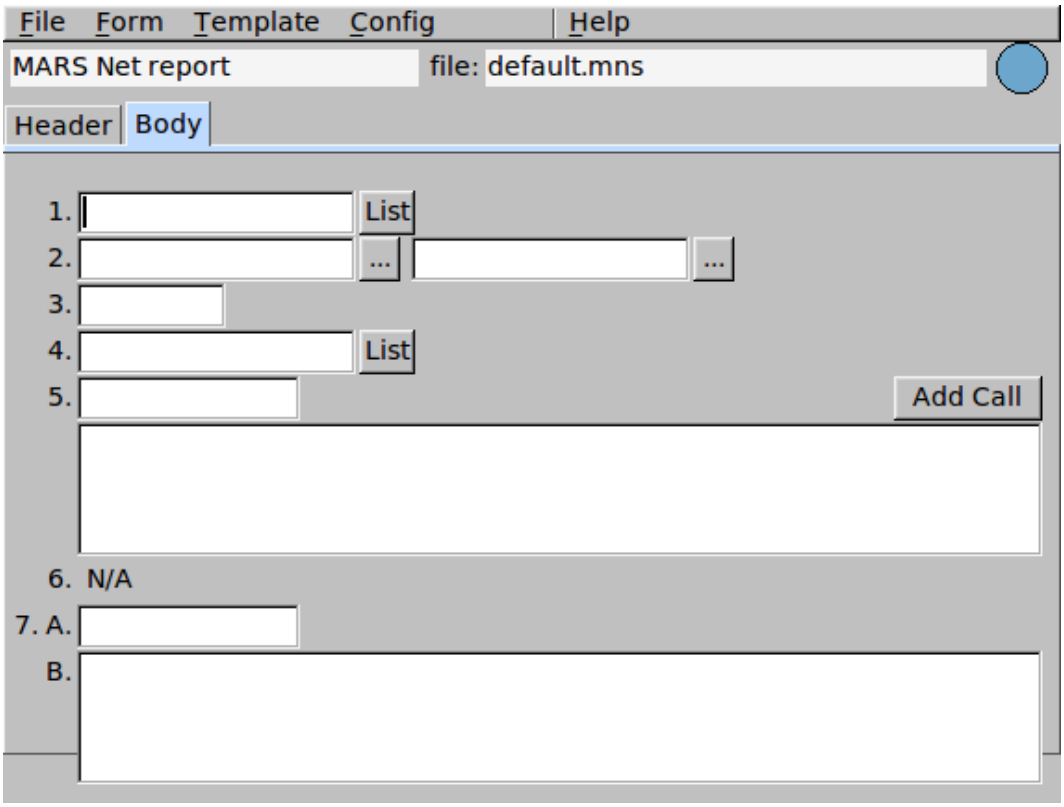
Chapter 21

MARS Net message

The user prepares, and edits from either the MARS Net tabs:





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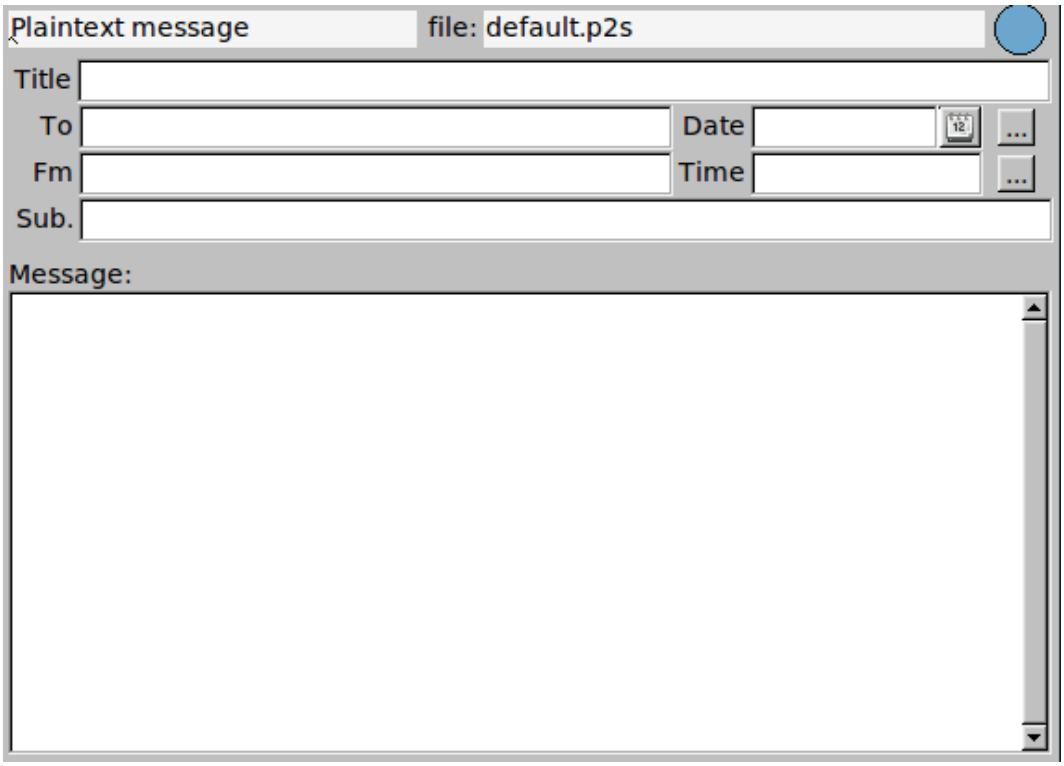
Chapter 22

Plain text (general) messages

The user prepares and views all data files from the single user interface dialog:



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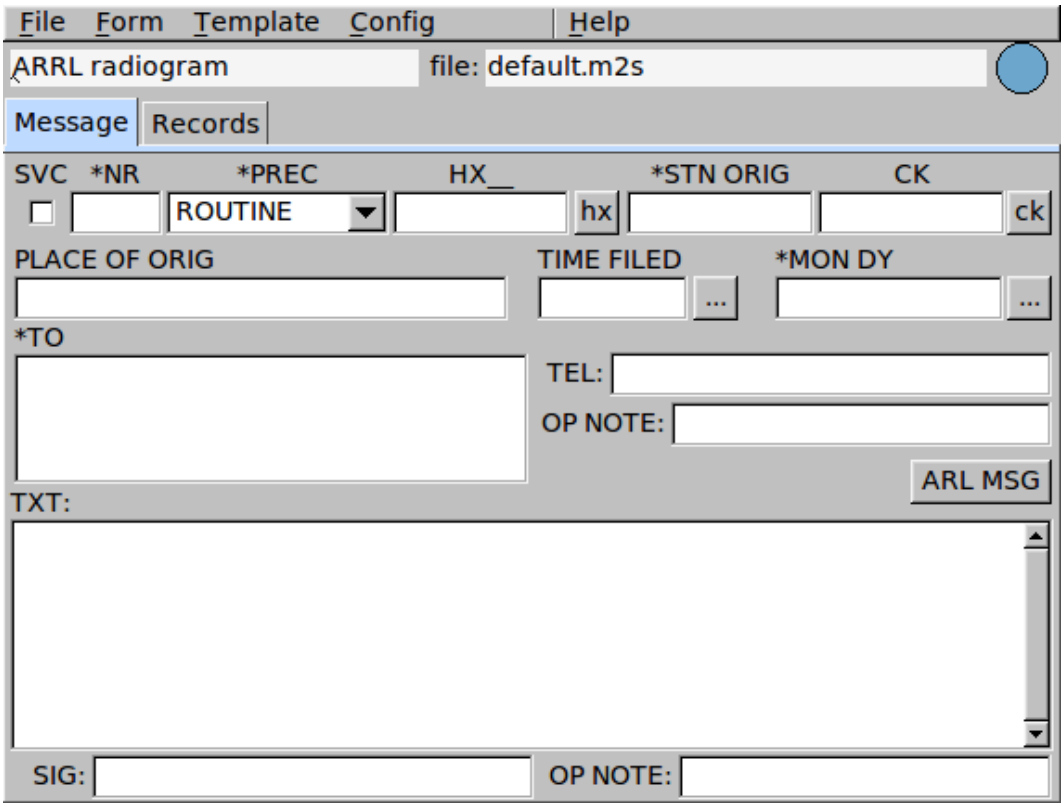
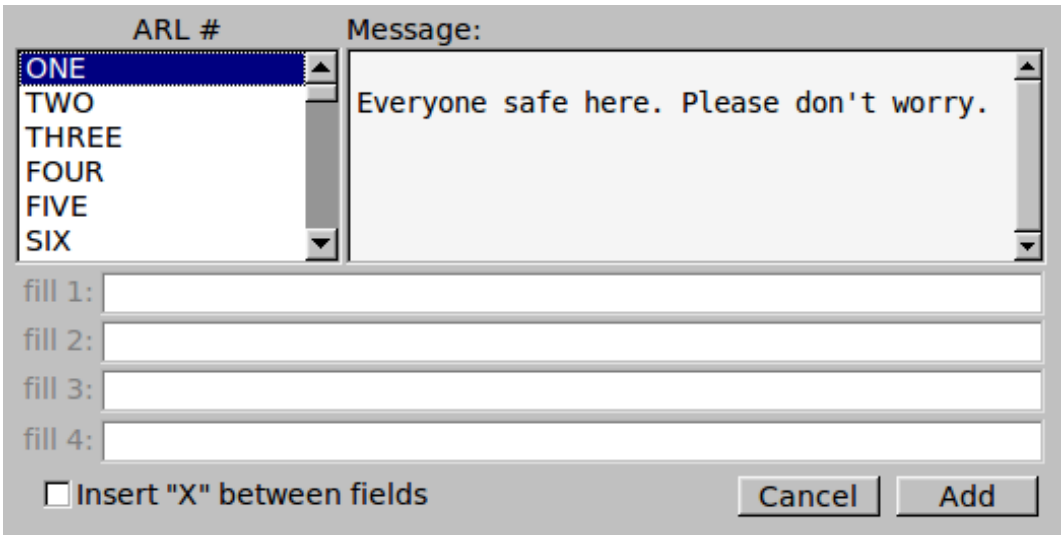
Chapter 23

Radiogram message

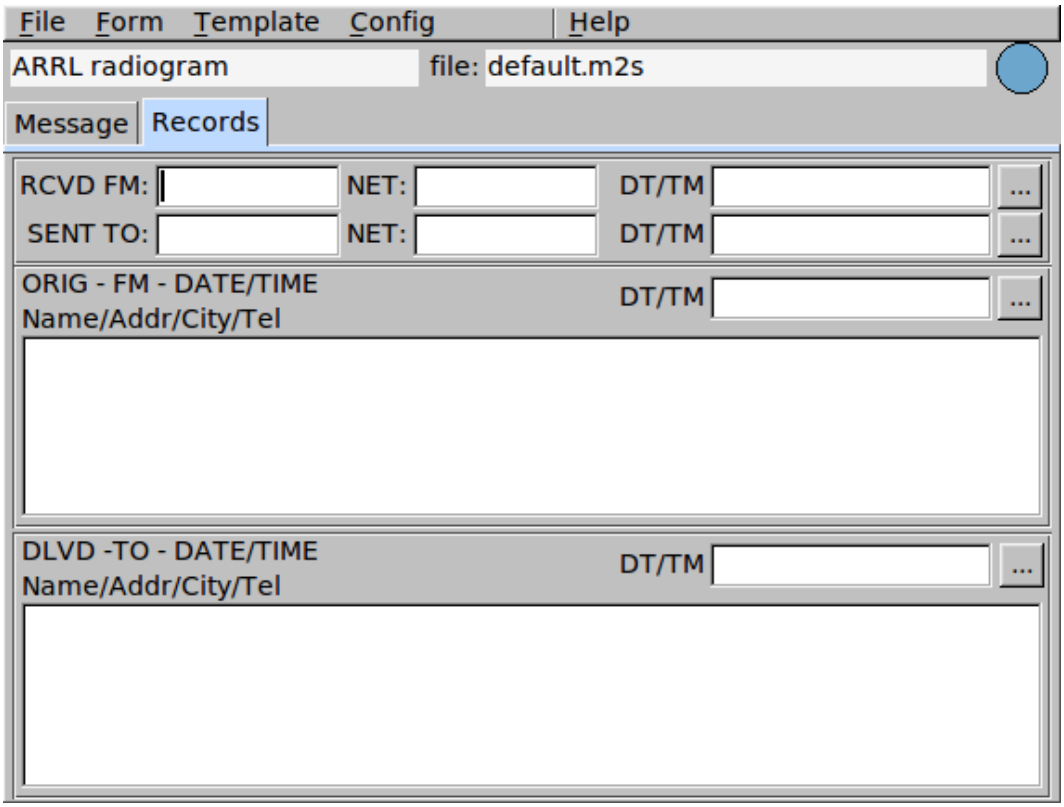
The user prepares, and edits from the Radiogram tab:



The CK value will be computed for you when the data is saved or a text document created for printing or transmission. You can also force a CK by pressing the "ck" button.
ARL message creation is aided by a dialog which is exposed when the ARL MSG button is pressed



The number of "fill" edit entries will vary with the requirement of the selected ARL message. Multiple ARL messages may be inserted into the Message text.
Pressing the Check button on the maint Radiogram tab will force all of the fields to be tested for correctness. The Message text will be converted to upper case, the leading and trailing spaces and end-of-line characters removed. Periods and commas will be converted to the stop character character, 'X', unless they are an integral part of a word, such as NBEMS.files. The precedence and handling fields are fixed to the selector values. You may optionally elect to insert X between each field. This might help to increase readability of long fields with multiple words.
The records tab contains data relevant to the transmission and receipt of the message:



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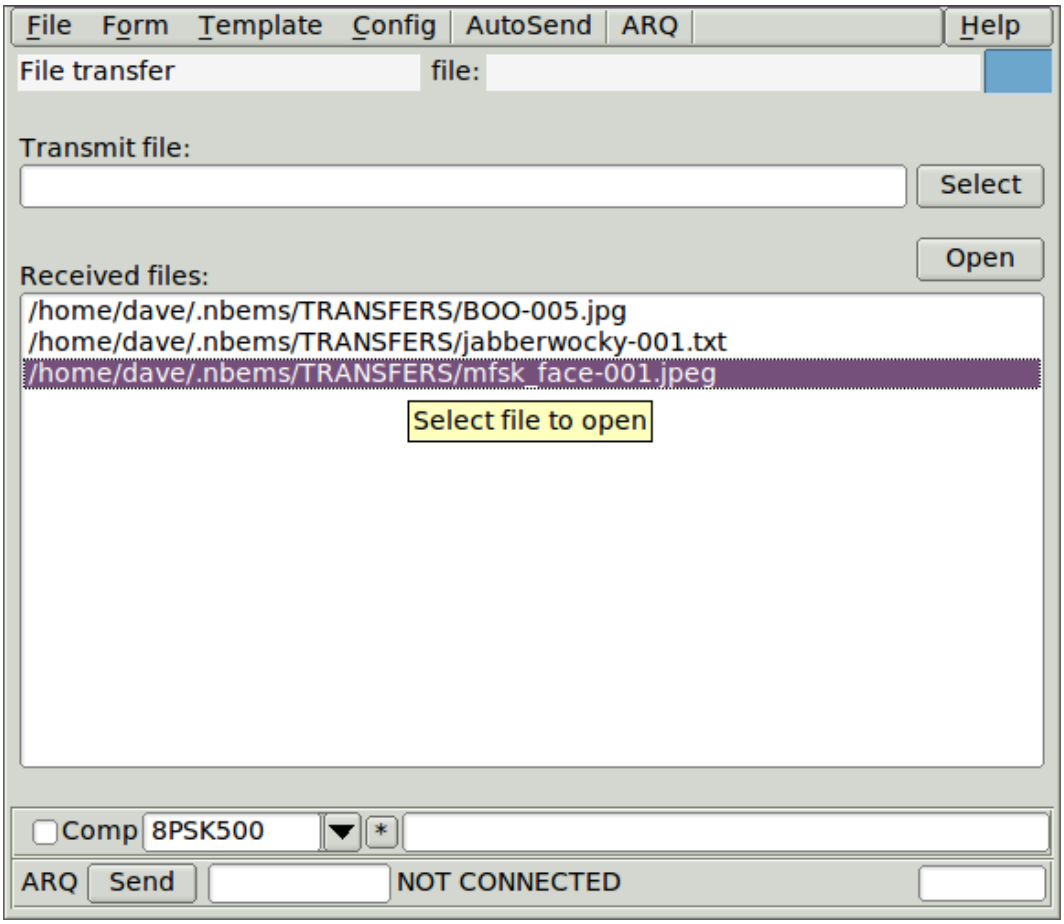
Chapter 24

Transfer file

File transfers are always executed using compression and base-64 encoding.



Newly received files during any one execution session are sequentially added to the received files browser. Highlight the desired file and then press open. flmsg will direct that file to be opened with the default application for that file type.

Files will be transferred in compressed format (if that results in fewer transmission bytes) unless the "Do not compress file" box is checked on the configuration tab "Files".

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