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Welcome to OPSLOG

Yet another Logging program

Welcome to the Telescope Operations Logging System or OPSLOG for short. Operations of an NRAO telescope (or systems of telescopes, arrays) typically require the on-duty operator to record different kinds of information during their shift at the console. The constraints on the kind of information that must be recorded is dictated by both NRAO management in connection with the type of reports required, internal operations requirements and the available (or lack of) software tools.

• What does OPSLOG do? This simple program is used to record various types of information related to the progress during an operator's shift. This includes such information as major hardware/software failures, observing projects, overall progress of astronomical observations and other details.

• Features and Benefits. OPSLOG was originally designed to replace all three paper logs the current GBT operators use. The type of information to be entered by the operator allows the program to automatically calculate the amount of telescope time spent doing various activities (such as maintenance, tests, astronomical observations, ...) and provide a running summary of activities during specific shifts. The program also calculates lost observing time. In principle the benefits include reduction of the information recorded and entered into the system (for example the Operators Supervisor at presents hand enters the current paper log information into spread sheets); more consistent entry of required information, and more speedy availability of observing statistics.

• Although OPSLOG was designed as the GBT operators logging program, this in principal could be utilized for any NRAO telescope.

Note:
The program requires certain types of information to be entered with different constraints. Although the Getting started chapter will give a very brief overview of using the program the chapter Using OPSLOG covers more of the details, options and constraints.
What's new in this release

Version designation for this program is of the form \( n.m.o \) where \( m, n \) and \( o \) are integers. The least significant changes (mostly minor bugs) will be reflected by a change in the least significant number (\( o \)) while major program changes (mainly significant enhancements or critical bug fixes) will be reflected by a change in the most significant number (\( m \)). Intermediate bug fixes or minor enhancements will be indicated by a change in the intermediate number (\( n \)). This section will contain a history of bug fixes and enhancements.

**Version 1.1.1 02/26/2002**

- Any operator can now re log into a shift previously owned by someone else (see Logging into OPSLOG).
- Only one operator can be logged into a specific shift at one time.
- Some minor bug fixes.
- A new report is now available to list the equipment status for any given date.

**Version 1.1.0 02/24/2002**

- Fixed the 'not always calculating lost time records' when Lost Time tab selected
- Operator Log in details have been changed. It is now **always** important to specify Observing type, proposal code, observer, receiver, etc when applicable. Re logging into a shift now defaults these parameters to the values set when last logged out. See Logging into OPSLOG for more details.
- Logging out of a shift no longer brings up the log in screen. The program is exited immediately. See Logging out of OPSLOG for more details.
- **Failure** log entries when first created can be closed at the same time. See Failure Entry Type.
- Lost time (behind the scenes) handling has been made slightly more robust. Also entering lost time for a one time event during the shift has been made somewhat smarter and slightly simplified for the operator. See Lost Time for details.
- A few more details added to shift summary: the log key and observing code for each log entry. Some minor cosmetic changes as well.
- A few other minor bugs fixed.

**Version 1.0.0 02/16/2002** This is the first release of the program.

The basic features include:

- **Security**
  - All users of the system must log in using their windows user name and a unique password.

- **Logging events**
  - Type of events: maintenance activity, weather info, Project/proposal change, Receiver changes, scan info, general info, failure
  - Types of failures: power related, weather, comp hardware, computer software, front ends, back ends, ...
  - Text describing Feature 2

- **Lost Time**
  - Lost time is tracked by failures that have been marked as 'lost time tracking'. Although the system determines which failures are still open the operator enters the actual hours lost against projects.

- **Equipment status**
  - A basic equipment list is maintained to gain a quick summary of the current hardware status (for front ends, back ends, ...)

**Note:** See Using OPSLOG for a more detailed description of the features and options.
Getting started

System requirements

This program is designed to run under windows on an IBM compatible PC. It is a 32-bit Windows application which can be run from a Citrix server for access from Unix/Linux machines as well as windows. It is a multi-user application whose data is stored in dBASE tables (could easily be stored in one of several different Client/Server dbms systems [would require some program changes]).

Hardware

The minimum hardware requirements are:

- **CPU:** Pentium III or later
- **Memory:** 128MB or greater
- **Disk required for program installation:** About 5 MB
- **Disk space required after installation:** >=10 MB

Software

The minimum software requirements are:

- **Operating System:** Windows 95, Windows NT 4.0 or Windows 2000 or later
- **Other software:** None
Installing OPSLOG

There is currently no installation program for installing the program on any PC. This could easily be setup. It has been installed on one of Green Banks Citrix servers, specifically Rome. OPSLOG may be moved to another (more general purpose) Citrix Server during the next year or so.
Starting OPSLOG

The following instructions apply to starting the program on either a Windows operating system or a Unix / Linux operating system. The

To start OPSLOG on Windows

There are several possibilities. The choices available depend upon how the Citrix System Administrator has setup your PC.

1. If the OPSLOG icon appears on your desktop simply double click it. You will be presented with the standard NRAO GREY SCREEN (see step 6 below); click OK. You will see the standard NRAO windows log in screen (see step 7 below). Use your windows user name and password. Your will be presented with a second Windows NRAO log in screen (don't ask me why). Upon completing this log in OPSLOG will load and you will have the OPSLOG log in screen (see Getting started).
   OR
2. Double Click the Citrix Neighborhood icon on the Windows desktop. The following screen is displayed. If the screen in step 4 is displayed skip to 5.

3. If the OPSLOG icon appears in the window double click the icon. You will then be presented with the OPSLOG log in screen. Or
4. Double click the Application Set Manager icon. The following screen appears.

5. Double click the Custom ICA Connections icon and the following screen appears.
6. Double click the Server icon (in this case it is Rome). The following Citrix log in screen appears.
7. Click the OK button and the following screen presents itself
8. Now enter your standard Windows user name and password. You will be presented with the following.
9.  Double click the **OPSLOG** icon and you will be presented with the OPSLOG log in screen.

**To start OPSPLOG on a Unix or Linux System**

The basic instructions for running a program on the Citri Server from a Unix or Linux terminal are outlined in detail on a GB NRAO Computing web page. You access the Citrix Metaframe instructions from the GB Computer divisions home. Select the *How do I use the ICA Client?* and the Unix/Linux option. The basic instructions are summarized here (without screen shots):

1. Open a new X terminal on the host workstation.
2. At the x-terminal type, `wfcmgr&` and press the enter key.
3. If this is the first time starting an ICA client, you must specify the server you want to connect to. If you want to do this select the Entry/New from the menu. Enter **Rome** in the description and the server name and then click OK.
4. Double click the "Rome" entry in the Citrix ICA Client window.
5. You will then be presented with the Windows "GREY SCREEN" (see step 6 in previous section) and the Windows Log in screen (see step 7 in previous section).
6. Once logged onto the server you will see a windows desktop with the OPSLOG icon. Double click this icon and proceed to Using OPSLOG/Logging into OPSLOG.
Moving around in OPSLOG

As an introduction, the screen provides a visual overview of the main areas the program. The opening screen of OPSLOG consists of these main areas:

- Menu and tool bar.
- Tab access to the basic operators data.
- Current shift information.
- Data order and speed search.
- Current observing type and proposal code, receiver.
- Log entry Browse window.
- Current log entry information.

Click an area on the image below for more information.

A pop up menu is activated by right clicking anywhere on the OPSLOG screen. With this menu you can navigate the log entries, edit existing log entries, add new log entries, save changes or cancel changes.
The **Edit** option from the menu bar will bring up similar options to the pop up menu for adding new log entries, changing existing entries as well as saving or cancelling changes.

The **Maintenance** from the Menu bar allows navigating the log entries.
The tool bar also has the usual fair of options. The first option (open door) will close the program resulting in the log out screen being presented. In addition there are navigation buttons as well as a "change the mode to edit" to allow editing and save and cancelling any changes buttons.
Basic features of OPSLOG

Operations of an NRAO telescope (or systems of telescopes, arrays) typically require the on-duty operator to record different kinds of information during their shift at the console. This program is used to record various types of information related to the progress during an operator's shift. This includes such information as major hardware/software failures, observing projects, overall progress of astronomical observations and other details.

Key features of OPSLOG include the following:

- **Easy to enter shift information**
- **Determines which lost time needs to be tracked** when the correct failure information is entered
- **Provides** print outs of shift summaries and equipment status.
Basic steps to use OPSLOG

A brief list of the steps to follow when using OPSLOG are:
- Startup OPSLOG and log into the program on the relevant shift.
- Make log entries relevant to your shift and add any appropriate comments to previous log entries.
- Update equipment status for event taking place during your shift.
- Check and update lost time for your shift.
- Log out at the end of the shift and print a summary of the shifts activities

Tip: There are many details left out. Please and become familiar with the details in the chapter Using OPSLOGS.
Customizing OPSLOG

There are currently no features that allow customizing the user interface. In some future release the ability to change OPSLOG passwords will be implemented.
Getting Help

The basic source of information for help is this help file. It is available in printed form as well.

There are various ways to get help on OPSLOG:

- **Online application Help**
  From the OPSLOG Help menu, select **Contents**.
- Help on the Web
- User Communities
- Technical Support

**Tip:**
Using OPSLOG

Log into OPSLOG

The log in screen for OPSLOGS is shown below. There are three boxes for information.

Each of these boxes represent different information all of which are important.

1. **User Name and Password** The Operator identification is defaulted to their windows username, following the standard NRAO definition for determining employees usernames. The password is unique within the OPSLOG program and is NOT the same as the windows or unix passwords. In some future version each operator to change their OPSLOG password. The **Operator** identification/username can be either lower or upper case or a mixture. The **Password** IS case sensitive.

2. **Formal Shift** The formal shift is defined by the operator shift schedule. It is **NOT** the actual time the operator arrived on shift or left from shift. The default shift (date and time) upon log in is set by the time of day the log in screen was displayed. It is very important to get the shift boundaries exact (to the nearest 5 minutes). Any specific shift can be logged into more than
once by the same operator who first logged into the specific shift.

3. **Basic Observing Information at this Login Time** These parameters are **ALWAYS** important whether first logging into the shift or logging back in. It is always important to get them correct. The fields are what was in effect at the formal time of the shift start.

The different observing information required include:

- **Obs Type** This is the type of observing that is in progress. The different possibilities are listed from the drop down list.
- **Observer** The observer(s) on duty in the control room.
- **Proposal** This is the formal proposal code assigned to the project when it is Astronomical observing.
- **Receiver** This is the particular receiver in use at the formal log in time. The receiver can be selected from the drop down list.
- **GO Project id** This is the project id assigned with the GO program and it specifically represents the sub directory in which the observing data is stored.

**Re Logging into a Shift**

It is possible to log into and out of a particular shift many times (limited only by disk space). There are some restrictions.

- The first operator to log into a particular shift 'owns' that shift. Any other operator may log into this shift - if the operator logging in does not own the shift a warning is given. The new operator will be allowed to log in or to cancel out. If the operator wishes to log in the ownership of that shift is changed to the new operator. A note about this change is recorded in the **Login Log entry**.
- **Only one operator is allowed to log into any specific shift at one time.** If you try to log into a shift which someone else is already logged into you will be warned and not allowed to log in.
- Any operator may log out of any shift (even those 'owned' by other operators).
- Re logging into a particular shift is accomplished by specifying the exact formal shift start and end for that shift.
- The Basic Observing Information should **ALWAYS** be set correctly for the time of log in. On the first log in this information must be correct for the time of the beginning of the **formal shift**. On successive log ins to a shift this information must be correct for the actual time of the log in, for reasons specified next.
- On successive log ins **OPSLOG will default the Basic observing information to the values when last logged out.** These values can (and should if appropriate) be changed so that they are accurate for the time of this log in. If some of this Basic Observing information is changed from the default, **OPSLOG will automatically generate some additional log entries depending on the details of the change.** In particular if the Observing Type or Proposal code is changed the program will add a **Project change** log entry or if the Receiver is different from the time of the last log out a **Receiver change** log entry will be generated. In either case you will be presented with the following screen to confirm the change, set the appropriate time for this change and to proceed with generating these log entries. **If the cancel option is selected no entries are made to the log and furthermore the Basic Observing information reverts to the values at the time of the last log out.**
NOTE Important points to remember:

1) The formal shift times MUST be specified correctly.
2) The Observing information MUST be correct at each log in.
3) A particular shift can be logged into repeatedly (see above restrictions) by any operator but not simultaneously.
Log Entries

Introduction to Log Entries

It is important to establish some definitions before proceeding into the different Log Entries. OPSLOG uses a mode or state to allow and disallow editing or adding new data. This is discussed in this section as well. The topics discussed are:

- Types of Log Entries
- Types of Observing
- Fields common to all Entries
- Program Mode or State

Type of Log Entries

There are formally 12 different types of Log Entries. Their definition reflects when these entries should be made. All log types are entered directly by the operator with the exception of Operator Login and Operator Logout.

1. **Failure** This entry is used to indicate whenever there has been hardware, software or other failure that results in either lost observing time or may have an impact on the quality of data collected. All lost time is tracked using a Failure entry in the system, even when lost time is associated directly with weather (e.g., stow due to high winds, too much snow/rain/sleet, ....).

2. **Information** This is basically the catch all in that if events happen during the shift which do NOT fall under one of the other Log Entry Types this type should be used.

3. **Maintenance Activity** During maintenance day there are some maintenance activities that need to be tracked in the log. For example, inspecting brakes, greasing bearings, installed a ladder, repairing HVAC, ... These activities are essentially the major tasks being accomplished by the groups signing the access log for the antenna during maintenance days. Although these entries would reflect the major maintenance tasks on the GBT during maintenance days when NRAO gets into the situation of performing some inspections while observing those activities would be entered into the log under this log type.

4. **Observer arrival** is used to indicate which observers are present for their observations and when they arrived. This is usually used in conjunction with the Observer departure type to keep track of observers.

5. **Observer departure** is used to indicate which observer have left the control room and when.

6. **Operator Login / Operator Logout** These log entries are made automatically by the program when the operator logs in and out respectively.

7. **Project change** This type of log entry is used whenever the type of observing changes or the formal proposal code changes for Astronomical and Test observing types. It is NOT used to indicate receiver changes (see the next type). This is an important entry since these entries along with Failure, Receiver change, Restore to Operation, Operator login and Operator logout types are used to determined lost time requirements.

8. **Receiver change** would be created whenever a receiver is changed. It is also used to indicate if either the prime focus boom, sub reflector or turret is moved. This is an important entry since these entries along with Failure, Receiver change, Restore to Operation, Operator login and Operator logout types are used to determined lost time requirements.

9. **Restore to Operation** is used to indicate that a Failure entry type is no longer in effect. It is effectively used to close Failure entry. This is an important entry since these entries along with Failure, Receiver change, Restore to Operation, Operator login and Operator logout types are used to determined lost time requirements.

10. **Scan information** is used to record information on observing scans.

11. **Weather** is used to record weather information.

Note
The log entry type is selected at the time the log entry is created by the operator. It cannot be changed later.

Types of Observing
There are formally 8 types of 'observing' states. These are important because they determine some of the observing statistics required by NRAO management. The **Observing type** is set at initial shift log in and by **Project change** log entries.

1. **Astronomical observations** As the name suggests these are the formally scheduled and approved astronomical observations (the GBT observing schedule indicates these by a proposal code). These do NOT include activities covered by the other observing types. Lost time is tracked **ONLY** for this type of observing.

2. **Maintenance** This type indicates scheduled maintenance days or periods.

3. **Test Observations or systems tests** These are the scheduled test (this includes tests as indicated on the graphical schedule or tests scheduled during commissioning). See Note below.

4. **Calibration** This type indicates observations used to calibrate the telescope (see Note below).

5. **Commissioning** These are all the activities that fall under Commissioning on the graphics schedule (see Note below).

6. **Shutdown** This indicates that the telescope is scheduled for shutdown. It does NOT include periods when observing is stopped due to high winds or snow. Formal shutdowns will occur three times a year (Thanksgiving, Christmas and New Years).

7. **Not scheduled** These are periods when there is no observing or scheduled maintenance. It does NOT include periods when observing is stopped due to high winds or snow.

8. **Observation setup** There is now a practice to schedule some extra time prior to the startup of scheduled Astronomical observing to check out the system in readiness for the observing. This is usually an hour in advance of the formal astronomy observing.

**Note**

The distinction between **Tests**, **Calibration**, and **Commissioning** types has not been clearly defined in the past. I propose that we attempt to make this distinction more meaningful beginning with the use of **OPSLOG**. It is not critical to be exact amongst these three types.

**Fields common to log entries**

There are some fields which are common to ALL log entries. These include:

- **Log Date** This is the date and time (always Eastern Time Zone) of the action or state to which the log entry refers to. Some examples: the date and time the receiver failed, the date and time when observations XXXXX began, date and time when the weather was sampled and so on. It does NOT necessarily refer to the date and time the log entry was created (in most cases it will not). **Exception:** The date and time used for Operator login and logout are the formal shift change times.

- **Comment** The comment field is used to enter any information pertinent to log entry that is not covered in other fields. This is in principal a field whose size is not limited (other than by disk space).

- **Log Key** There is a unique number assigned to each log entry. It is used by OPSLOG to 'tie' information together between different tables. It is sometimes useful to the user of OPSLOG.

- **Parent** This is the log key of any log entry that the current one is related to. For example a **Restore to Operation** log entry will have the parent key referencing the original failure entry. Comment log entry types will also have the log key of the entry to which it refers to stored in the parent key.

There are some other common fields that are important which are not common to ALL log entry types. These include:

- **Proposal** This is the formal proposal code for approved Astronomical observations. These codes can be constructed from the GBT graphics schedule and are listed in the Astronomical Summary for each graphics schedule. **Is IMPORTANT** to get these codes correct since they are used for many of the statistics calculated for NRAO management. The form of the proposal code is:
  - **GBT01A-011** for GBT proposals: 01A is the trimester and it refers to the first trimester of 2001; -011 is running number for the trimester
  - **AB123** for VLA proposals: A is VLA; B is the first letter of last name of PI; 123 is running number
  - **BU345** for VLBA proposals: B is VLBA; U is the first letter of last name of PI; 345 is running number
  - **GL026** for global proposals: G is Global L is the first letter of last name of PI; 026 is running number
  - **EVN113** for EVN proposals: 113 is running number
• **(GO) Project id** is the project id established in GO. Among other things it refers to the sub directory (within home/gbtdata) that contains the data for the current observations.

**Program Mode or State**

OPSLOG uses a mode or state to indicate if the user is allowed to change or add data. The current state or mode (mode indicator) of OPSLOG is displayed in the upper right of the screen. The user changes mode by:

• Adding a new log entry from the Menu **Edit / New Log Entries** and selecting the type of Log entry from the list **OR** from the popup menu (right mouse click) **Add new log Entry** and choosing the type from the list (**Append** shows in the mode indicator)

• Selecting from the Menu **Edit / Edit current data** **OR** the popup (right mouse click) menu (**Edit** shows in the mode indicator)

• selecting the Menu **Edit / Save Changes** **OR** the **Save Changes** from the popup menu **OR** the edit toolbar icon (**View** shows in the mode indicator)

• selecting the Menu **Edit / Abandon Changes** **OR** the **Abandon Changes** from the popup menu **OR** the cancel toolbar icon (**View** shows in the mode indicator)
**Failure Entry Type**

Any event or "happening" which results in either lost observing time or which can affect the quality of observing data MUST be entered as a **Failure** Log Entry. This includes downtime due to high winds, snow accumulation, rain/ice, etc.

**Synopsis for Creating/Closing a Failure Entry**

The process of managing a Failure log entry is basically a two step procedure.

- Creating and or editing a **Failure** log entry.
- Closing a **Failure** log entry.

**Creating a Failure Entry**

A new data screen for the failure log entry is initiated from the pop up menu (right click) **Add New Log Entry / Failure** or from the Menu Edit / **New Log Entry / Failure** or by using the short cut Ctrl-F.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time of the failure.
- **Type** or Failure Type refers to the type of failure. You select one from the drop down list. This is a mandatory field. The 11 different Failure types include:
  - **Back ends** refer to failures in the DCR, Spectral processor, Spectrometer, BCPM, etc (should be indicated in **Failure Item**)
  - **Receivers** refer to failures in a specific receiver (should be indicated in **Failure Item**)
  - **Computer Hardware** refers to failures in computer hardware (should be indicated in **Failure Item**)
  - **Computer Software** refers to failures in computer software which result in lost time
  - **Interference** refers to time lost due to interference
  - **Telescope** refers to telescope mechanical failures
  - **Weather** refers to bad weather conditions resulting in lost time
  - **Power related** refers to mechanical failures in the power system
  - **Human Error** indicates time was lost due to human error
  - **Other** indicates other causes
  - **Failure Item** Indicates what particular piece of hardware was involved or the cause of the failure (if applicable)
  - **Track Lost Time?** Did this particular failure cause a loss of observing time? This MUST be checked in order to track lost observing time.
  - **WO#** This is the Mainsaver work order number if appropriate
Comment spells out more details of the failure and its impact

Once the new entry is saved the Restore to operation screen appears allowing you to specify a close date for this failure entry (see ). The failure can be left open by canceling out of the screen. If it is to be closed fill in the restore date and time appropriate for the problem being fixed, disappeared, whatever.

Editing a Failure Entry

- The parameters for a Failure log entry can be modified at any time when the operator is logged into the shift that the failure was first created. High lighting the Failure entry in the browse window and selecting the pop up Menu Edit current entry or the Menu Edit / Edit current entry or the pressing the keyboard shortcut Ctrl-E.
- A Failure log entry CANNOT be closed by directly editing the Failure record (see Restore to operation).
- The close option for a Failure (which is presented when the Failure entry was first created) is not available during the edit procedure.

Once a failure entry is added to the log it will remain open until it is closed.

Note
a) Lost time is tracked only for the Astronomical Observing Type
b) Telescope stowing for high winds, snow or icy conditions is tracked as a Weather cause
c) Not all Failures have a lost time impact
d) Some Failures are not “fixed” during the current shift and should be left open if it can result in further lost time.
**Restore to Operation**

This log entry is specifically generated when a *Failure* log entry is closed. It is very important to close a Failure entry when it is a lost time tracking one; all Failure log entries should be closed. You **CANNOT** close a Failure log entry by editing the Failure. There are several mechanisms for closing a Failure:

- When the Failure log entry is first created the operator is presented with the *Restore to Operation* screen and is given the option of closing the Failure when it is first created.
- Whenever a *Failure* log entry is high lighted then selecting the *Close current Failure* from the pop up Menu or from the Menu *Edit / Close current failure* or using the Ctrl-Q keyboard short cut.
- Whenever in the Lost Time entry screen (see Lost Time) and a lost time record is high lighted the relevant Failure log entry can be closed by pressing the Restore/Closed button.

**Closing the Failure Log Type**

Fields are:

- **Repair/Close** date time refers to the time after the Failure is no longer to be tracked because the problem was repair, went away or it is no longer necessary to track lost time for this event.
- **Comment** Any comment as to the resolution of the failure.
Project Change

A **Project change** log entry is created whenever the Observing Type or the proposal code changes.

A new data entry screen for the Project change log entry is initiated from the pop up menu (right click) **Add New Log Entry / Project change** or from the Menu **Edit / New Log Entry / Project change** or by using the short cut Ctrl-P.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time of the change in observing type or proposal code.
- **Obs Type** is the type of observing. It is important to get this parameter correct.
- **Observer** is the observer(s) who is(are) present in at the time of the change in proposal.
- **Proposal code** is the formal proposal code assigned to approved Astronomical Observing. It is mandatory to fill this in for an observing type of **Astronomical Observations** and desirable for observing types of **Tests** and **Observation setup** when applicable.
- **GO Project id** is the project id that has been assigned in the GO program for these observations.
- **Receiver** is the receiver in use when the observing type or proposal code changed. It is mandatory to fill this in for an observing type of **Astronomical Observations** and desirable for observing types of **Tests** and **Observation setup** when applicable.
- **Comment** spells out more details if necessary

**Note**
Project change is important for keeping track of the amount of time for different types of observing (required for NRAO management statistics).
Receiver Changes

This type of log entry is issued whenever the receiver being used is changed or when either the prime focus boom or the sub reflector or turret are moved.

A new data entry screen for the receiver change log entry is initiated from the pop up menu (right click) Add New Log Entry / Receiver change or from the Menu Edit / New Log Entry / Receiver change or by using the short cut Ctrl-R.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time of the change in receiver.
- **Receiver** is the receiver in use when the observing type or proposal code changed. It is mandatory to fill this in. Select the receiver from the drop down list.
- **PF Boom moved** When checked this indicates that the PF boom was moved.
- **Turret Boom moved** When checked this indicates that the turret was moved.
- **Comment** spells out more details if necessary. If the sub reflector was moved as part of the selection of a receiver then this should be indicated in the comments.

**Note**

If the sub reflector only was moved for test purposes and did not involve selection of a receiver then this information should be entered into a Maintenance activity or Information Log Entry.
**Scan Information**

Whenever information of a scan or group of scans needs to be entered into the log this entry type should be used.

A new data entry screen for the scan information log entry is initiated from the pop up menu (right click) **Add New Log Entry / Scan information** or from the Menu Edit / **New Log Entry / Scan information** or by using the short cut Ctrl-T.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time for the first scan of any sequence.
- **Scan No** This is the M&C system assigned scan number. If the information on only one scan is being logged only the first entry is filled in. If a sequence is logged the to scan number is also filled in.
- **Comment** The other information to be recorded is entered into the comments. This may include the source and/or any other details.
Observers Arrival / Departure

When the Log Entry Type of Observers Arrival or Observers departure is added to the log the following screen is presented (the entry type is displayed in the entry box).

A new data entry screen for the Observers arrival or departure log entry is initiated from the pop up menu (right click) Add New Log Entry / Observers arrival, departure or from the Menu Edit / New Log Entry / Observers arrival, departure or by using the short cut Ctrl-A and Ctrl-L respectively.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time for the observers arrival or departure which every is appropriate.
- **Observer** is the name of the observer.
- **Room** is the room he may be staying (as an aid to the operator)
- **Phone** is the observer’s room phone number
- **Comment** Any other relevant information may be entered into the comments.
Weather and Information

Whenever weather or general Information is entered the screen is identical except the Entry type is marked differently.

A new data entry screen for the Weather or general Information log entry is initiated from the pop up menu (right click) Add New Log Entry / Weather, Information or from the Menu Edit / New Log Entry / Weather, Information or by using the short cut Ctrl-W or Ctrl-I respectively.

The different fields that need to be filled in.

- **Log Date** This is the effective start date and time that is applicable to the weather was sampled or to the information content.
- **Comment** The weather data is to be recorded or the information for other types of information.
Comments

Adding comments to any log entry record is possible either from the main Log Entry screen (log Entry tab) or from the View Log History tab. These additional comments are stored in a separate table from the log entry to which they refer. They are linked using the log key of the parent.

To add a new comment highlight the original log entry or a Comment log entry which refers to the original log entry in the browse window and then select from the pop up menu (right click) **Add New Comment** or from the Menu **Edit / New Comment** or by using the short cut Ctrl-K.

![Add a new comment](image)

Simply enter the comment you wish and press Save.
Miscellaneous Log Entries

As discussed in the Introduction to Log Entries there are three types of log entries that the operator does not entry directly into the system. Rather OPSLOG enters these automatically depending upon certain actions he takes. These Log Entry types are:

• **Operator Log in** is created when the operator successfully logs into OPSLOG. The Log Date is always the formal date and time of the shift start. See Logging into OPSLOG for more details. The comments of the log in entry will list the different times that the operator logged in for the particular shift.

• **Operator Log out** is created when the operator successfully logs out. The Log Date is always the formal date and time of the shift end. See Logging out of OPSLOG for more details. The comments of the log out entry will list the different times that the operator logged out for the particular shift.

• **Restore to operation the Failure** log entry is created in the Lost Time process or from the pop up Menu (See ) or during the creation of the appropriate Failure log entry.
Lost Time

Lost observing time is tracked only for Astronomical observations that are formally approved and scheduled. It does not track time lost during tests, calibration or commissioning.

Synopsis for Creating lost time information.

This is basically a three step process.

- Create a Failure log entry which is marked as Lost Time tracking and the Failure Type set appropriately. Details for accomplishing this task are outline under Failure Entry Type.
- Filling in the amount of lost time (see Filling the Amount of Lost Time)
- Close the Failure log entry which describes the cause of the lost time (see Closing a Lost Time tracking log entry).

The reason for such a complication is to allow for tracking lost time against a single 'cause' that may remain open for days, weeks or longer. Most of our requirements fall into the category of single 'causes' which last during part of one shift. In such a case there is a slightly simplified procedure as described below under Single lost time failure for current shift only.

Filling in the Amount of Lost Time

Clicking the Lost Time tab with the mouse brings up the screen.

![Lost Time Tab Screen](image-url)
If there any lost time requirements for the current shift they will be listed in the browse window. Each line represents a record for each proposal - receiver combination for each Failure Log Entry marked as Lost Time tracking and still open.

The text window below the browse displays the comment from the original lost time tracking Failure log entry that is still open.

The operator is required to fill in the total number of hours lost during their shift for each of the records in the browse window. To set the total hours point to the appropriate record in the browse window and select Edit current data from the Menu or pop up menu (right mouse click) or from the tool bar.

Lost time entry appropriate for the current shift may be entered in one of two ways:

- Specifying both the start date and time for the period during the shift along with a fraction (Scale) of the time during this time period OR

- by entering the total lost hours during the shift applicable to the lost time record.

The simplest and most straightforward is the use the latter method.

Closing a lost time tracking log entry

If there will be no more lost time charged to the original lost time tracking failure select one of the lost time records from the browse and click the Repair/Close button.

```
<table>
<thead>
<tr>
<th>Close Failure entry type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair/Close Date</td>
</tr>
<tr>
<td>02/18/2002 19:19:47</td>
</tr>
<tr>
<td>Comment</td>
</tr>
</tbody>
</table>
```

Fill in the fields:

- **Repair/Close date** this is the date and time after which this log entry can no longer accumulate lost time.
- **Comment** Any appropriate comments to putting the piece of hardware back into service or the reason for returning to operations should be entered.

More information on closing a Failure entry is outlined under Restore to operation.

**Single Lost time Failure for current shift only**

Many times the only need for tracking lost time will be an isolated incident (stow due to high winds or snow) during a shift. In this particular case the basic steps are outlined as follows:

1. **When the log entry is being initiated after the 'event' is over (for example after returning to operation).**
   1. Create the Failure entry as outlined above entering the time for the failure when the event started (ie stowing due to high winds)
   2. Fill in the Close Entry screen at the end of the process of creating the Failure entry, setting the Close date to the time that the antenna was returned to service OR

2. **When the log entry is being initiated before the 'event' is over**
   1. Create the Failure entry as outlined above entering the time for the failure when the event started (ie stowing due to high winds)
   2. Cancel the Close Entry screen that pops up at the end of the creating process
   3. When the 'event' is over (for example returning to operations after being stowed) then Close the Failure by following the procedure outlined under Restore to operation. Make sure that
Whenever one of the above two procedures is followed correctly and the Failure is closed with the proper date/times (without logging out and back in during the process) any lost time records that are created will have the correct lost time entered automatically and there should not be any need to edit the lost time record under the Lost Time tab.
**Viewing the Log History**

Any log entry that has ever been entered into the system can be viewed. Further you can enter additional comments to any log entry ever created.

Select the **View Previous Log Entries** tab.

The three basic tabs show the following information:
- **Log Entry** - The log entry record with minimal fields for the entry type.
- **Additional Notes** - All notes added to this log entry.
- **Log Details** - shows all fields in the log entry record.
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Logging out of OPSLOG

The user may log out of the program at point in time. Log out is initiated whenever the window is closed by the operator using one of:

- clicking the windows x in the upper right hand corner
- clicking the door on the tool bar
- accessing the Menu File / Exit sequences
- accessing the Menu File / Log out sequence

The required fields to fill in are:

- **User Name and Password** The Operator identification is defaulted to their windows username, following the standard NRAO definition for determining employees usernames. The password is unique within the OPSLOG program and is NOT the same as the windows or unix passwords. In some future version each operator to change their OPSLOG password. The Operator identification/username can be either lower or upper case or a mixture. The Password IS case sensitive.

- **Formal Shift** The formal shift is defined by the operator shift schedule. It is NOT the actual time the operator arrived on shift or left from shift. The default shift (date and time) upon logout in is set by the time of day the operator logged in. It is very important to get the shift boundaries exact (to the nearest 5 minutes). Any specific shift can be logged out of more than once by the ANY operator.

- **Print Shift Summary** When this box is checked a summary of the shift being logged out of will be printed.

- **Select Printer** If it is important to select the printer this box should be checked. The default is not to select the printer.
• Any operator with a valid password may log off of a shift (unlike on logging in).
• If it is necessary to change the formal shift times (as such might be the case when an operator falls ill and has to be relieved before the normal end of his shift), this can be done at log out. This must be done carefully because the system is keyed on formal shifts.
• Prior to successful log out the program attempts to determine if any additional lost time information is needed. If it thinks more information is needed it will complain, disallow the log out and point to the Lost Time entry screen.
• Successful log out will trigger behind the scenes calculation of log summary information.
• Successful log out will close the program immediately after all house keeping chores are complete.

Note
a) Any authorized operator can log out of a shift - their password and name must be specified
b) The formal shift times can be changed on log out (important when unexpected illness requires another operator to take over)
c) Shift summaries should always be printed to help data backup
Backing up

The backup procedure has not been implemented in the first release.
**Printing**

Currently the only information which can be printed from OPSLOG is restricted to reports listed under the Reports menu item.

The present reports are limited to an shift summary (equipment list status will follow soon).

**To print from OPSLOG**

Select the Menu **Reports** to display shift summary options.

The two options are printing the current shift or selecting a shift and printing it.
**Advanced tips and tricks**

1. **What do I do when someone else has logged into my shift?** At the moment there is no 'clean' way to deal with this. The correct operator must be logged into the shift so there are two possible approaches.
   1. Send cbignell a message to do a quick fix in the shift table **OR**
   2. Have the original operator log into his shift. The log out of his shift changing the end date of the shift (could try making the end date time exactly the same as the start date time - haven't tried this). The correct operator logs in to his shift.

2. **How do I enter lost time during my shift?** This does depend somewhat upon the details for the lost time. These are covered under Lost Time and the appropriate topics mentioned therein. If the requirement is an isolated event that occurs during the shift entry can be simplified as discussed under Single Lost time Failure.
Keyboard Shortcuts

Adding new log entries

<table>
<thead>
<tr>
<th>Event</th>
<th>Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure</td>
<td>Ctrl-F</td>
</tr>
<tr>
<td>Scan Information</td>
<td>Ctrl-T</td>
</tr>
<tr>
<td>Weather</td>
<td>Ctrl-W</td>
</tr>
<tr>
<td>Project change</td>
<td>Ctrl-P</td>
</tr>
<tr>
<td>Receiver change</td>
<td>Ctrl-R</td>
</tr>
<tr>
<td>Observer arrival</td>
<td>Ctrl-A</td>
</tr>
<tr>
<td>Observer departure</td>
<td>Ctrl-L</td>
</tr>
<tr>
<td>Restore to operation</td>
<td>Ctrl-Q</td>
</tr>
<tr>
<td>Comments</td>
<td>Ctrl-K</td>
</tr>
</tbody>
</table>

Navigating Log Entries

<table>
<thead>
<tr>
<th>Action</th>
<th>Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>First log entry</td>
<td>Ctrl-PgUp</td>
</tr>
<tr>
<td>Previous log entry</td>
<td>PgUp</td>
</tr>
<tr>
<td>Next log entry</td>
<td>PgDn</td>
</tr>
<tr>
<td>Last log entry</td>
<td>Ctrl-PgDn</td>
</tr>
</tbody>
</table>

Editing and Saving (mode change)

<table>
<thead>
<tr>
<th>Action</th>
<th>Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change to edit mode</td>
<td>Ctrl-E</td>
</tr>
<tr>
<td>Save changes</td>
<td>Ctrl-S</td>
</tr>
<tr>
<td>Cancel changes</td>
<td>Esc</td>
</tr>
</tbody>
</table>
Troubleshooting

If there are any problems, errors or enhancements please email cbignell. It is important to give as many specific as possible.
Each line in this browse is a one line summary of the log entries made during the current shift.
The current shift information refers to the presently logged in shift. Displayed information is: (a) operator user name, (b) shift key - unique number assigned to identify the shift, (c) the start date and time of the formal shift and (d) the end of the formal shift.
The data for the current log entry is displayed in this window. The fields displayed will depend upon the type of log entry.
The data order combo box allows selecting between log entries order by log date or by log key. The Search box allows searching for a log entry by typing in the log date (in the form YYYYMMDD) when the Data Order is set to SKLOGDATETIME or by log key (format is just the number) when the data order is set to SKLOGKEY. These settings apply only to the Log Entry data under the Log Entires tab.
These tab options select the main data within OPSLOG: (b) **Log Entries** - log entries pertaining to the current shift only, (b) **Lost Time** entries for the current shift, (c) **Equipment** - lists the status of basic front ends, back ends and servo system and (d) **View Previous Log Entries** lists all log entries (and all of their comments) in the system by log key.
Almost all the program actions are activated through the menu bar. The tool bar is used to (a) navigate data entries in the visible browse window, (b) edit, save or cancel changes made to data entry and (c) close OPSLOGS.
The current settings for the **Observer**, **Receiver** in use, **Proposal** being observed and **Type of observations** are displayed on all pages.
The program uses a mode or state to allow or disallow adding or changing data. Changes between modes are activated through program actions.