

MGA software.com

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For information on enabling macros within Microsoft Excel, read [MGA-install.doc](#)

Active Spreadsheet Technology for the aviation sector

Roster system.

The roster utility combines an aircrew rostering system integrated with pilot flight duty period data and an operations staff rostering system. The roster is displayed and edited on a matrix which is selectable by calendar month and opType category.

One calendar month is displayed at any one time and the matrix (or day grid) expands or contracts between 28 and 31 days accordingly.

From the drop-downs, choose month, opType and click 'Load' to begin.

The month options available are always from 4 months previous (or program inception, whichever is later) to 4 months ahead.

The screenshot shows the 'DUTY ROSTER' interface. At the top, there is a 'Load' button, a month dropdown menu (currently showing 'October 2008'), a 'Citation' field, a 'Save' button, and the title 'DUTY ROSTER'. Below this is a grid with columns for days of the week (V, T, F, S, S, M, T, V, T, F, S, S, M, T, V, T, F, S, S) and rows for crew members. The grid shows duty assignments for crew members Sutton Tuiss, Zoot Hilev, and Vic Neene. The grid is color-coded: blue for duty, yellow for off-duty, and orange for flags.

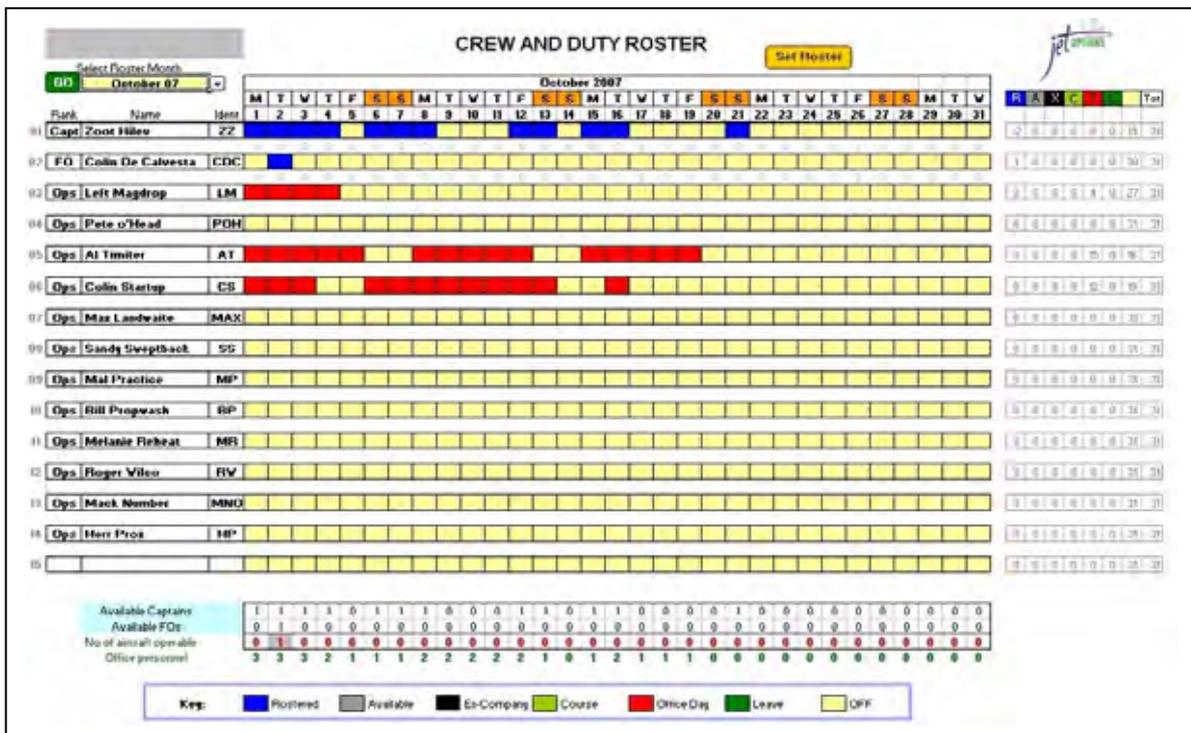
Rank	Name	OpType	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
01	Capt	LT																			
02	Capt	Sutton Tuiss	SUT																		
03	FO	Zoot Hilev	ZZ																		
04	FO	Vic Neene	YNE																		
05																					
06																					

Note **roster** requires the **fdp-duty** module and associated crew datasets to be resident in the MGA folder.

The roster program is used by simply selecting your preference (ie. what you would **like** to happen); The program then shows what **can** be done. A selected duty that puts a pilot outside limits is flagged at the point where the limit is exceeded. When the roster has been arranged so that no flags are visible, the roster schedule is legally operable.

Roster screen 1

Roster



The roster screen is where all selections are made. Company personnel are annotated at left with Rank ('Capt' - 'FO' - 'Cab' or 'Ops'), Name and their 2 to 4 character code (eg. 'JS' for John Smith). Then from left-to-right a line of coloured squares is presented for each day of the Roster Month. The colour of the squares denotes the duty selected (Default settings shown):

Rostered	Aircrew duty day
Available	Aircrew available for duty should the need arise
Ex-Company	Aircrew operating for another company
Course	Aircrew or Ops member on a Course
Office Day	Aircrew or Ops member working in Office.
Leave	Aircrew or Ops member on scheduled Leave.
OFF	Day Off

When a new roster month is called up all the squares are reset to the OFF condition

Forward Planning

Be aware when using the roster system for forward planning that the system uses preceding historical data to calculate duty day limits for the month being edited. Data entry should therefore be done sequentially. Using the roster program out of sequence may result in unreliable data.

Behind the scenes, 84 days (about 3 months) of historic data (prior to the selected month) is loaded to enable backward checks of duty day limits to be made. To do this the roster program utilises the same datasets as the flight duty periods system.

Roster screen cont.

Roster

Duty day limits (DDLs)

Licensing authorities stipulate minimum OFF days for aircrew (days when a crew member is not available for duty. The minima are described in Flight Time Limitation (FTL) regulations and for UK air transport flight crew are:

- After 7 working days, the next day must be an OFF day.
- In any 14 day period, 2 consecutive days must be OFF days.
- In any 28 day period, a minimum of 7 days must be OFF
- Over a 3 month period an average of 24 days must be OFF.

'Day Flags' Within the roster program, days are flagged where limits are exceeded using '7d', '14d', '28d', or '3mo' warnings on a red background.

Example:

Below the 7d flag is showing on the 5th (remember the program is checking back to the previous month) and on the 11th, the 14d flag is showing. Setting the 4th to an OFF day will clear the 7d flag but you must set TWO consecutive OFF days to clear the 14d flag.

Name	Ident	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Zoot Hilev	ZZ																		
		0	0	0	0	7d	0	0	0	0	0	14d	0	0	0	0	0	0	0

When no flags are visible, the roster is legally operable.

To Set Roster (below):

Highlight days for crew member required and click the 'Set Roster' button. A dialog appears with coloured options as defined on the SetUp screen. Click the appropriate label to roster the day(s) selected (or click 'OFF' to reset). Any appropriate DayFlag warnings will appear on the row immediately below the selected crew member

The screenshot shows a roster grid with crew members listed on the left. A dialog box titled 'Set Roster for CDC' is open over the grid. The dialog box contains several colored buttons: 'Rostered' (blue), 'Available' (grey), 'Ex-Company' (black), 'Course' (green), 'Office Day' (red), 'Leave' (dark green), and 'OFF' (yellow). To the right of these buttons, there is a date range: 'FROM 15-Oct-07 TO 23-Oct-07'. A 'Cancel' button is located at the bottom right of the dialog box.

Saving Roster Data

Roster

Saving Roster data

Click the Save Button to save your data. Two prompts will appear:

1 'Save Crew Roster Data'

Click yes to update the crew datasets with roster information for the selected month including stability counters if the roster has been fixed.



2. 'Save Aircraft Operable to SscheduleXX.xls'

Click Yes to save Aircraft Operable data as applicable to the opType selected.



When roster day is set for flight crew, the assigned category (eg. 'Office day' or 'Available') is written as plain text in the 'Scheduled' column of the crew dataset for that day. This will be visible in the accompanying fdpDuty program. Note anything other than 'Leave' or 'OFF' counts as 'duty.'

If the roster has been edited the program will prompt you to save data when either a new month is selected or the program is exited.

Saving **roster** data writes text to the 'Scheduled' column of each crew Dataset (plus associated Roster Stability Counters in the adjacent column). Changes made to the OFF flags are used within the Roster program only and are not saved to crew Datasets. A 'roster' therefore represents a projected duty schedule within the fdpDuty program until actual data is written.

Notes

The roster screen is loaded in the order: 1 Captains, 2 First Officers, 3 Cabin Crew. Thus Captains always appear at the top of the list followed by First Officers etc.

The Subtotals at the bottom of the roster screen show daily totals for:

Captains available, **FOs** available, and as applicable to opType, Cabin Crew available. **Aircraft Operable** is a function of the number of Captains and/or FirstOfficers and/or Cabin Crew available.

NB: '**Aircraft Operable**' data is copied to the **Schedule** module so that the number of Aircraft Operable for each day is presented on the schedule screen.

Day Flags return warnings on a red background whenever the FTL Off-Day minima are exceeded for aircrew. To remove DayFlags, select the day(s) in question, click 'Set Roster' and select OFF or Leave.

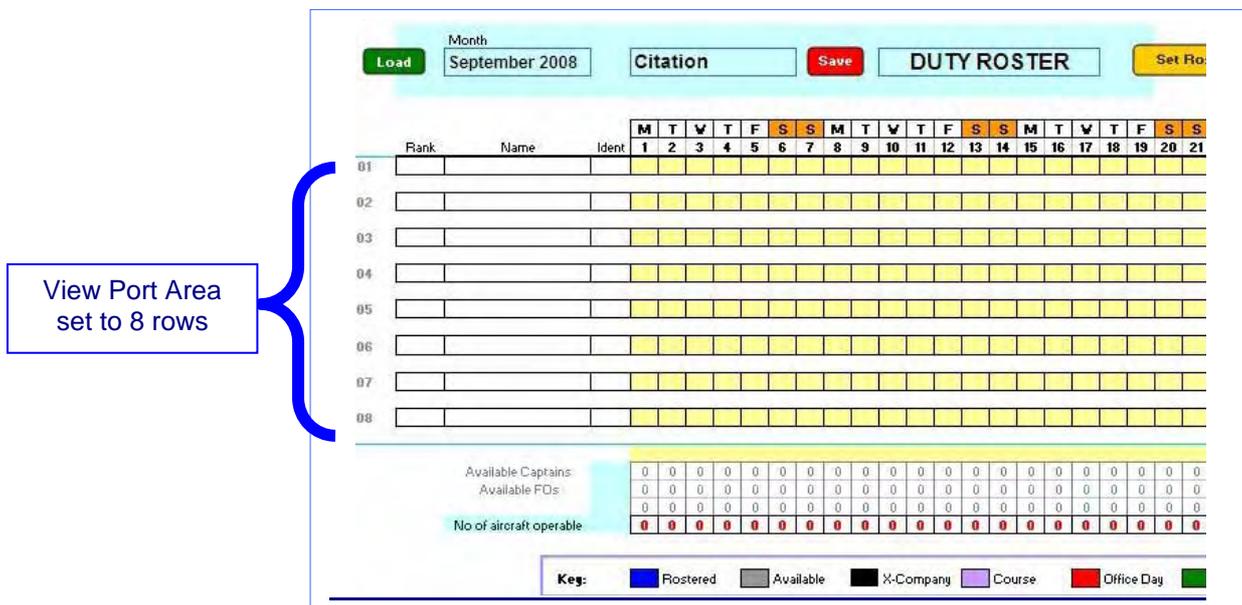
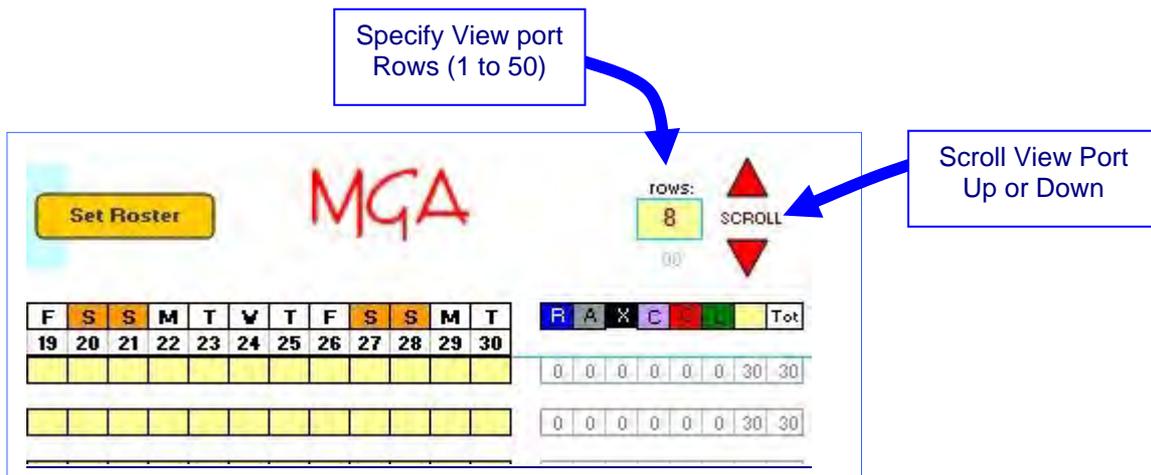
When no flags are visible, the roster is legally operable.

Roster viewport

Roster

The Roster screen displays crew data in a scrollable window which is user-definable in vertical size (v3.3+). In the top right hand corner is a box specifying the number of rows in view. Alongside are up and down arrows. Each click of the arrows will scroll the view port up or down. To effect any change in the number of View Rows, click the up or down arrow.

The Viewport rows value is user-defined - any number between 1 and 50. On the SetUp screen, the parameter, **ScrollBy** (labelled 'Scroll Roster by') controls the number of rows scrolled in one click of the up/down arrows. The default is 5 and the min/max is 1/5. If View Rows is set to less than the ScrollBy value, then ScrollBy value will adjust to View Rows.



SetUp screen

Roster

The SetUp screen allows the user to set parameters such as the colors for roster categories, and nominate staff etc.

The screenshot shows the 'Roster - SetUp' interface. On the left, there's a 'Categories' list with color-coded options: R (Rostered), A (Available), X (X-Company), C (Course), O (Office Day), L (Leave), and OFF. A 'set colors' dialog is open, showing 'CatColors' with a dropdown menu. Below this are 'Program Parameters' including Company Ident (MGA), Dataset fileSpec (CSV), LogImageFile (mga2007.gif), Ops Matrix Forward (120 days), and Scroll Roster by (10). On the right, there are three data lists: 'Ops List' with columns for opList, Ops List, and Crew List; 'Crew List' with columns for pidList and Crew List; and a table for 'opTag' and 'opType' with crew complement details.

Ops List

The ops list (operations staff) is edited on the **SetUp** screen. Use 'Update Ops List' to make changes permanent.

Crew List

The Crew List is refreshed on start-up or when 'Refresh Crew List' option is used. The data is obtained from the 'FlightCrew' page of the fdp-duty module. Use 'Update Crew List' to update fdpDuty with any changes made to Status, Rank & opType made here.

code	Categories	set colors CatColors	Description
R	Rostered	Rostered	Rostered for flight duty
A	Available	Available	Available for Flight duty
X	Ex-Company	Ex-Company	Operating for another
C	Course	Course	On a Course
O	Office Day	Office Day	Working in Office.
L	Leave	Leave	On Leave
OFF	OFF	OFF	Day Off

All except Leave & OFF are fdp duty days
 1. Select text and color scheme required
 2. Click 'SetColors' to program selection

Roster Categories: The Colours (background and text) are user definable. The action of all categories except 'Leave' and 'OFF' will trigger Day Flags.

Notes

- 1 **Roster** picks up the 'dataspec' parameter from fdp-duty on boot-up. At the same time, LogImageFile name is acquired and the logo is loaded to the roster page.
- 2 Only crew or operations staff nominated as 'Active' or 'Training' are listed on the roster matrix.

Stability Counters

Roster

(v2.5 on)

Roster Stability Counters provide management and pilots with statistical analysis of how many times a roster is changed. To do this, Roster25+ allows the operator to nominate a point in time at which the roster is **'fixed'** (ie. ready to be promulgated). Once fixed, counters keep track of any changes made.



At the bottom of the [roster](#) screen the status of the current month's roster is placarded under the legend 'Roster Fixed.' If blank, the Roster is not yet fixed. Click on the adjacent [Fix Roster](#) button to fix the roster for the current month.

When the Roster is fixed, a zero counter is written to column E of the each pilot's fdp-recs. Subsequent changes (beyond the fix date) to a day's roster activity will increment that day's counter according to the following criteria:

<u>Condition</u>	<u>Data written</u>
IF Date is NOT fixed	No action
IF Date is fixed & today is beyond fix date & fdp-recs = '0'	'1'
IF Date is fixed & today is beyond fix date & fdp-recs = '1'	'2' etc

The counters may be checked by visiting the [data](#) screen:

Scheduled			
ii	ZZ	Zoot Hilev	
01-Oct-07	MON		0
02-Oct-07	TUE		0
03-Oct-07	WED		0
04-Oct-07	THU		0
05-Oct-07	FRI		0
06-Oct-07	SAT		0
07-Oct-07	SUN		0
08-Oct-07	MON		0
09-Oct-07	TUE		0
10-Oct-07	WED		0
11-Oct-07	THU		0
12-Oct-07	FRI		0
13-Oct-07	SAT		0
14-Oct-07	SUN		0
15-Oct-07	MON		0
16-Oct-07	TUE		0
17-Oct-07	WED		0
18-Oct-07	THU		0
19-Oct-07	FRI		0
20-Oct-07	SAT		0
21-Oct-07	SUN		0

Note that the approved FTL regime is applied to days spent in the office, or on a course, or working for another company (either flying or as part of the operations staff).

The databases employed by roster are the same as those used in fdpDuty for flight duty periods system (default filename 'fdp-XXX.csv').

Saving roster data

If the flight crew roster has been edited the program will save the roster data to the fdp-recs database when either a new month is selected or the program is exited (v1.7).

Note that only the text in the 'Scheduled' column is saved. The changes made within the Roster program to the OFF flags are not saved to the fdp-recs database. The roster therefore remains tentative until such time when actual data is written via fdp-duty.

Ops and Crew Lists

The ops list (of operations staff) may be edited on the SetUp screen. Click 'update opsList' to make changes permanent. In the case of both the ops List and Crew List, a roster listing is made for members nominated as 'Active' or 'Training' only.

Note that only crew or operations staff labelled as 'Active' or 'Training' are listed on the roster matrix. The status flags for flight crew and ops staff can be switched on the SetUp screen of roster.

When no flags are visible, the roster is legally operable.

MGAsoftware: General notes

1 Software distributed by MGA has a version number appended to the module name in the form of a two digit number (eg: '21' = version 2.1). Your current software version number can be checked on the **SetUp** screen of the module you use.

2 Any linked files (ie. those used by the module) are accessible from the **SetUp** screen under the legend 'Linked files.' Be aware when an updated module is installed, any module linking to it may need its 'Linked Files' entry edited in order to communicate correctly. Linked filenames may be specified using a relative or absolute folder spec. (absolute being those beginning eg: 'C:\').

3 MGA modules give the Application's plain language description of any file errors which occur when the program attempts to open linked files.

4. Depending on the version of Excel, MGA software may cause error flags to display in certain cells. These can be safely disregarded. To switch them off go to Tools > Options, select the Error Checking Tab and uncheck 'Evaluates to Error Value'.

MGA programs work under any version of Microsoft Excel from Excel 97 upwards

Versions & upgrades

MGAsoftware.com will alert you whenever a substantive revision of your software is available for release. Your current software version number can be checked on the **SetUp** screen of the module you use. When a software is distributed the version number is appended to the module name (as a whole number) For example: qed22.xls identifies software for qed version 2.2.

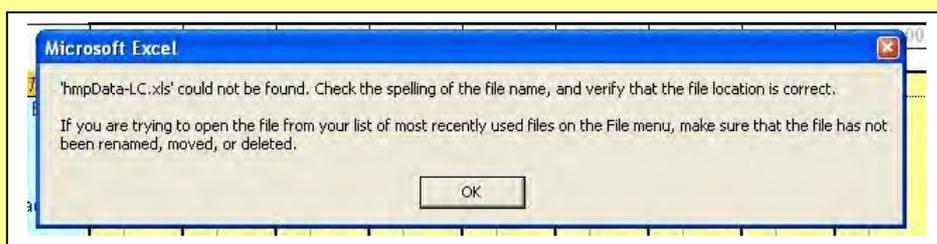
To implement an upgrade:

1. Make a safety back up of your existing file(s) using Windows Explorer.
2. Copy your downloaded or emailed software into your MGA folder.
3. Run the updated software and from the **SetUp** screen:
click 'Import Data' – enter filename of your previous version, click OK.

It's great to have the new functionality to use but remember that new software has a potential for instability. Be sure to back up your previous version (as above) and please do contact MGA if you have any reliability issues with our software. We undertake to fix any reported issues where the software departs from its design functionality without charge.

Excel Folders

When Microsoft Excel is started it refers to its default folder location for any files. Typically this might be for example 'My Documents' in Windows XP. When an Excel file is called up by double clicking on its name in Windows Explorer, or by clicking on a desktop icon, the new instance of Excel invoked by this process does not refer to the folder containing the file called up, but to its default folder location. This can stop MGA files from obtaining information from other files on boot-up resulting in the following message:



If you see this message, check that the folder you are working by going to File | Open and using the dialog to navigate to your MGA folder. Click Cancel to exit the dialog. The folder change is registered in Excel whether or not a file is actually opened at the dialog box and the change will last for the current Excel session.

fdpDuty has a **SetUp** parameter which provides the option to change the working folder of Excel on boot-up in order to circumvent the above problem.

Be aware also that the full path to linked files can be specified on the **SetUp** screens of MGA modules

Use the complementary shortcuts program to generate desk top links to your MGA programs which circumvent the above problem.

Disclaimer:

Some MGA modules may be distributed with time-related validities (details will be published on the **SetUp** page). If the validity of your software is time related, MGA Software is not responsible for any consequences arising from the use of its software after expiry date.

If you have any requirements for software be aware we are happy to investigate the feasibility of bespoke software to your specifics. If it's possible for the job to be automated then we can do it!

For all technical queries contact MGA

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