

Airservices Harmony Training (Airlines)

Harmony Web Interface

Harmony Web Interface – Agenda Overview

- Lessons in Harmony Web Interface
 - Home Page
 - Work Views
 - Flight List
 - Demand Graph
 - Map Tools
 - Flight Schedule Upload
 - Flight Creation
 - TMI Parameters
 - Alerts
 - Edit Mode
 - System Settings

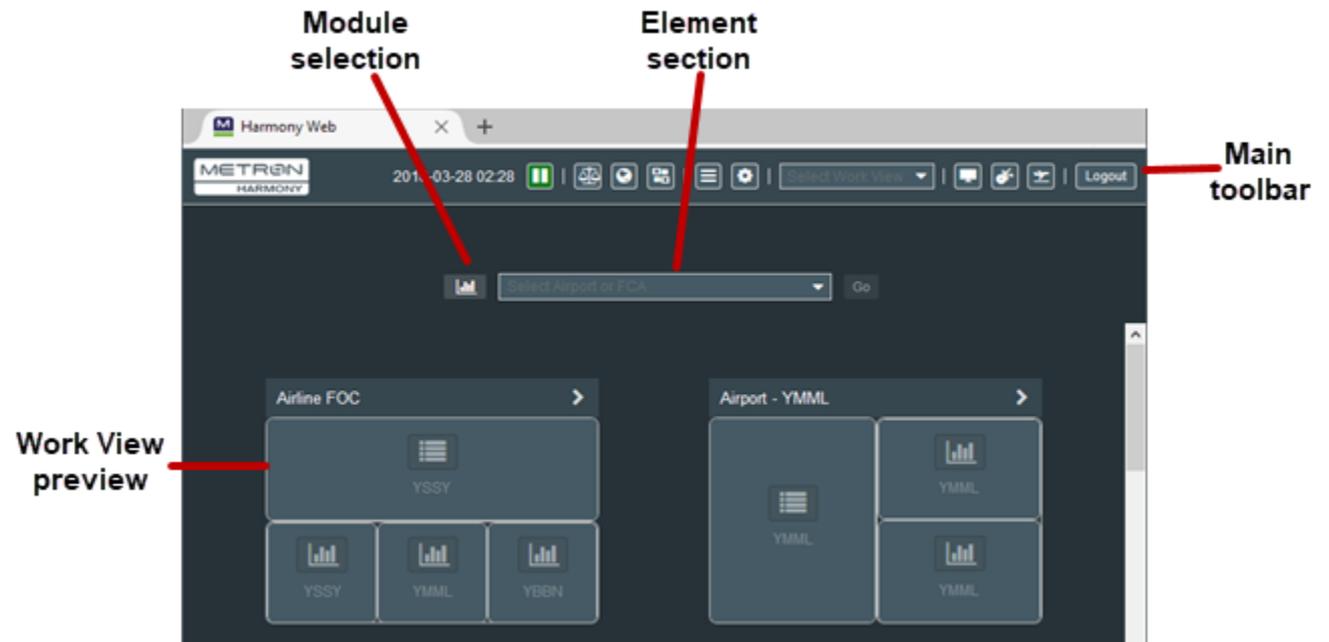
Harmony Web User's Guide
Harmony Web Online Help

Home Page

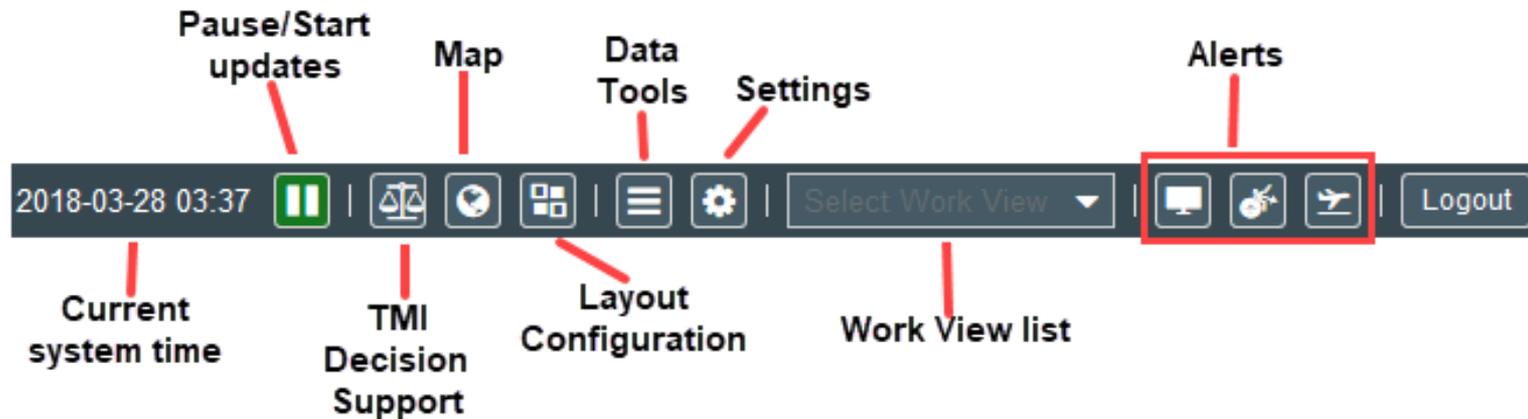
Home Page

Three main components

- Main toolbar
- Module and Element selection
- Work View Preview



Home Page Main Toolbar

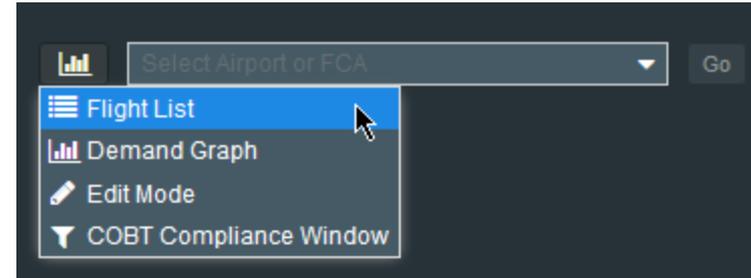


- Pause /Start is a toggle button
- Map is a toggle button with the Home page
- Data Tools
 - Flight Data Upload, Reporting, ATFM Measure Parameters Display, Runway Configuration, and Data Source Report
- Settings
 - System Settings, Help, About
- Alerts
 - ATFM Measure, Resource, Flights

Home Page Module & Element Selection & Work View Preview

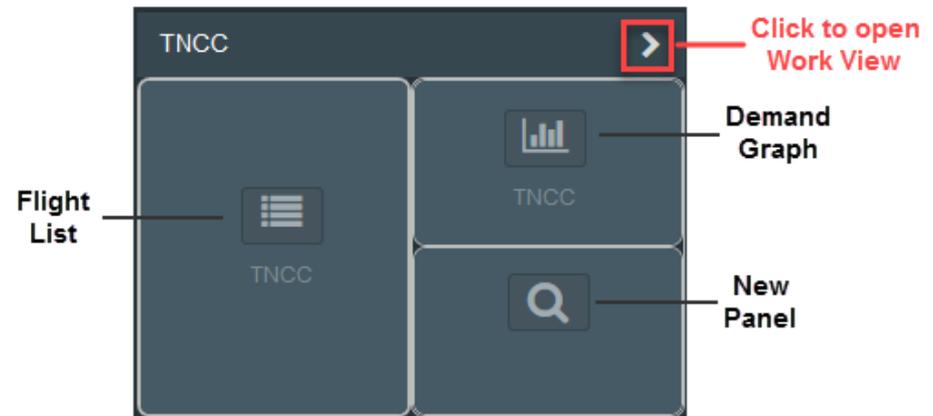
- Module & Element Selection

- Open Module
- Select Element



- Work View preview

- Use control in upper, right corner to open Work View
- Icon identifies module
 - Flight List
 - Demand Graph
 - COBT Compliance
 - Undefined panel (magnifying glass)



Work Views

Work Views

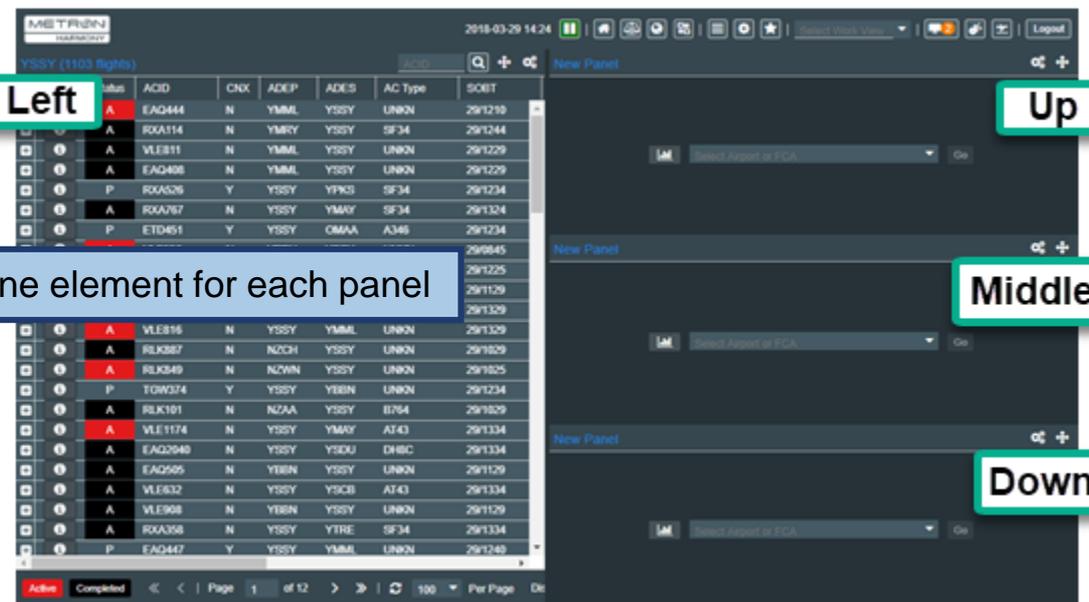
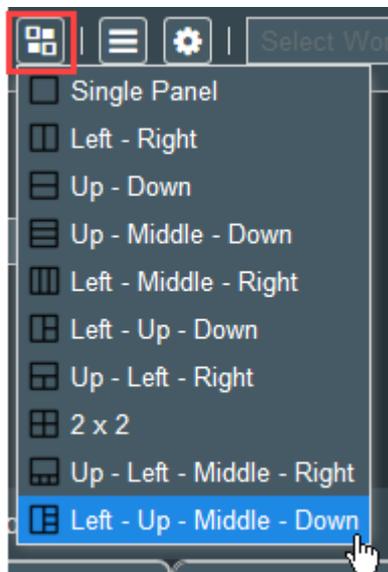
- Saved layouts of Flight Lists, Demand Graphs, and COBT Compliance Windows for any combination of airports
- Can include up to four elements
- Functionality
 - Select Flight Lists, Demand Graphs, and COBT Compliance Windows
 - Save new and existing Work Views
 - Save default Work View to open when you log in
 - Rearrange (move) panels
 - Add and remove panels using Layout Configurations tool
 - Rename panel titles



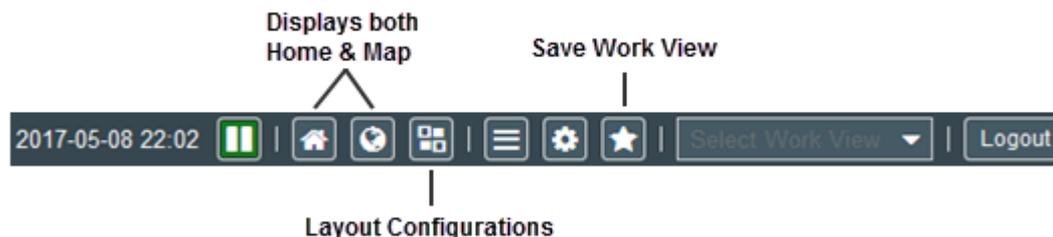
Creating a Work View

Select layout and define panels

Select layout of Work View



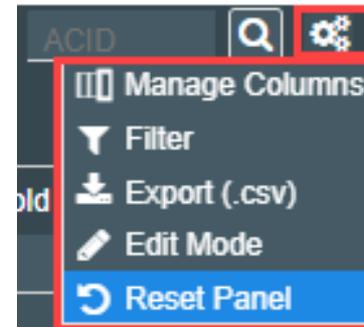
Work View toolbar has additional buttons



Flight List

Flight List Overview

- Lists flights for the selected airport
- Refreshes flight data at an interval configured in System Settings
- Provides flight summaries and flight details for each flight
- Flight List Tools functionality
 - Configure which columns are displayed
 - Filter flights by different data types
 - Export the Flight List to a CSV file
 - Open Edit Mode
 - Reset Panel



Flight List Screen

Open Flight List from Home page or Work View

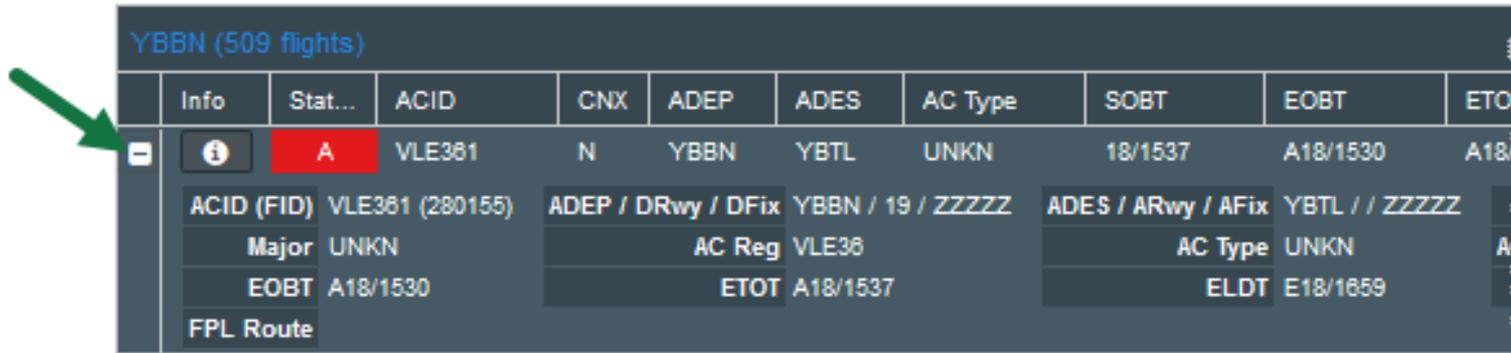
The screenshot shows the METRON HARMONY interface for the flight list. The top navigation bar includes the METRON HARMONY logo, the date and time (2018-03-28 18:40), and various system icons. Below the navigation bar, the page title is "YSSY (939 flights)". A search bar labeled "ACID" is visible. The main content is a table of flight data with columns: Info, Status, ACID, CNX, ADEP, ADES, AC Type, ETOT, and ATOT. The table contains 15 rows of flight data, with some rows highlighted in red. Annotations include:

- Open Flight List Tools**: A callout box pointing to the gear icon in the top right corner.
- Search for ACID**: A callout box pointing to the search bar.
- Page controls to navigate data**: A callout box pointing to the pagination controls at the bottom of the table.
- Legend**: A callout box pointing to the "Active" and "Completed" status filters.
- Refresh data**: A callout box pointing to the refresh icon in the pagination controls.
- Set number of records to display** and **Record count**: A callout box pointing to the "100 Per Page" and "Displaying 1 - 100 of 939" text in the pagination controls.

Info	Status	ACID	CNX	ADEP	ADES	AC Type	ETOT	ATOT
	A	EAQ409	N	YSSY	YMML	UNKN	A28/1722	28/1722
	A	JST503	N	YSSY	YMML	UNKN	28/1722	A28/1707
	A	VLE808	N	YSSY	YMML	UNKN	28/1722	A28/1712
	A	EAQ407	N	YSSY	YMML	UNKN	28/1737	A28/1727
	A	VLE810	N	YSSY	YMML	UNKN	28/1737	A28/1727
	A	CSN301	N	ZGGG	YSSY	UNKN	28/0748	A28/0744
	A	RXA454	N	YGTH	YSSY	SF34	28/1652	A28/1648
	A	EAQ2019	N	YARM	YSSY	DH8C	28/1652	A28/1649
	S	CSN325	N	ZGGG	YSSY	UNKN	28/0941	S28/0941
	A	EAQ582	N	YPPH	YSSY	UNKN	28/1303	A28/1253
	A	EAQ478	N	YMML	YSSY	UNKN	28/1643	A28/1635
	A	JST421	N	YBCG	YSSY	UNKN	28/1653	A28/1645
	A	EAQ404	N	YMML	YSSY	UNKN		
	A	EAQ2180	N	YSSY	YMOR	DH8C		
			MAY	YSSY	SF34			
			ML	YSSY	E170			
	A	RXA1822	N	YSSY	YSDU	B190	28/1747	A28/1742

Flight Summary

Click the expand/collapse control to show/hide Flight Summary



The screenshot shows a flight summary table for YBBN (509 flights). A green arrow points to a minus sign icon in the first column, which is used to expand or collapse the flight details. The table has columns for Info, Stat..., ACID, CNX, ADEP, ADES, AC Type, SOBT, EOBT, and ETOT. The first row shows flight VLE361 with status 'A' (highlighted in red). Below this row, there is an expanded view showing details for ACID (FID), Major, EOBT, and FPL Route, along with corresponding details for ADEP / DRwy / DFix, AC Reg, ETOT, ADES / ARwy / AFix, AC Type, and ELDT.

	Info	Stat...	ACID	CNX	ADEP	ADES	AC Type	SOBT	EOBT	ETOT
		A	VLE361	N	YBBN	YBTL	UNKN	18/1537	A18/1530	A18/1537
	ACID (FID)	VLE361 (280155)		ADEP / DRwy / DFix		YBBN / 19 / ZZZZZ		ADES / ARwy / AFix		YBTL / / ZZZZZ
	Major	UNKN		AC Reg		VLE36		AC Type		UNKN
	EOBT	A18/1530		ETOT		A18/1537		ELDT		E18/1659
	FPL Route									

Flight Details

Click the information control (i) to open the Flight Details

1. Flight Information
2. Flight Leg Information
3. Flight Event Times
4. ATFM Measure Information
 - Controlling ATFM Measure is outlined in green
 - Slot Time, Runway (for Runway GDPs) is listed
 - As you click an ATFM Measure, the Slot Time, Runway information updates for the selected ATFM Measure
 - This section is not displayed for uncontrolled flights

Flight Details for VLE264

VLE264 (As of 03:21)

1 Flight Information

ACID	VLE264	Major	UNKN
AC Type	E170	AC Type Group	JET
AC Reg	VLE26		
Delay Status	AFP	Alarm	CC EC EA
FPL Route	YSCB..YMML		

2 Flight Leg Information

	Departure	Arrival
Airport	YSCB	YMML
Runway	35	16
Fix	ZZZZ	BOYSE
Estimated Fix Time	12/2216	12/2244

3 Flight Event Times FCA:

	OBT	TOT	DFix	Entry	Exit	AFix	LDT	IBT	EET
Estimated (E)	12/2202	12/2207	12/2216			12/2244	12/2256	12/2300	49
Actual (A)		12/2207					12/2256		49
Calculated (C)	13/0306	13/0311					13/0357	13/0401	46
Flight Plan (P)	12/2207						12/2236		49
Aircraft Operator (L)									
Strategic Airport Slot (R)									
Marketing Schedule (S)	12/2207							12/2257	
Initial (I)	12/2207	12/2212					12/2258	12/2302	46
Earliest Aircraft Operator (EL)	12/2207	12/2212					12/2258	12/2302	
Original (O)	12/2207	12/2212					12/2258	12/2302	
Base (B)	12/2207	12/2212					12/2258	12/2302	
Original Calculated (OC)	13/0306	13/0311					13/0357	13/0401	

4 Traffic Management Initiatives Controlling TMI

FCACIRCLE1 AFP (12/1900 - 13/1359)

FCAJS3 AFP (12/1430 - 13/1359)

YMML GDP-A (12/1845 - 13/0259)

13/0311A, ---

Control Type	Control Exempt	Pop-Up
AFP	<input type="checkbox"/>	<input type="checkbox"/>

Flight List Tools: Manage Columns

Drag and drop columns between Available Columns and Displayed Columns

The screenshot shows a dialog box titled "Add/Remove Columns" with a close button (X) in the top right corner. It is divided into two main sections: "Available Columns" on the left and "Displayed Columns" on the right. Both sections contain a table with "Name" and "Description" columns. The "ACID" column in the "Displayed Columns" table is highlighted in yellow. At the bottom of the dialog, there are "Save" and "Cancel" buttons.

Available Columns		Displayed Columns	
Name ↑	Description	Name	Description
AC Reg	Aircraft Registration	Status	Flight Status
AC Type Group	Base Aircraft Type Group	ACID	Aircraft ID
AEET	Actual Elapsed En Route...	CNX	Cancelled
AENTRY	Actual FCA Entry Time	ADEP	Departure Airport
AEXIT	Actual FCA Exit Time	ADES	Arrival Airport
AFix	Arrival Fix	AC Type	Aircraft Type
AIBT	Actual In Block Time	ETOT	Estimated Take Off Time
ALDT	Actual Landing Time	ATOT	Actual Take Off Time
AOBT	Actual Off Block Time	EENTRY	Estimated FCA Entry Time
ARwy	Arrival Runway	EEXIT	Estimated FCA Exit Time
Airborne Max Delay	Airborne Max Delay	ELDT	Estimated Landing Time
BEntry	Base Estimated Entry Time	FPL Route	Flight Plan Route
BExit	Base Estimated Exit Time	Ctl TMI ID	Controlling TMI Identification
BIBT	Base Estimated In Block ...	Ctl Slot Hold	Controlling Slot Hold Flag
BLDT	Base Estimated Landing ...	Elem TMI ID	Element TMI Identification
BOBT	Base Estimated Off Bloc...	Elem Slot Hold	Element Slot Hold Flag
BTOT	Base Estimated Take Off ...		
CAFT	Calculated Arrival Fix Time		
CEET	CLDT - CTOT		
CIBT	Calculated In Block Time		

Flight Tools: Filter

- Filter data by Aircraft, Route, and Times data
- Select values from dropdown lists
- Select AND/OR operators
 - The OR statement consists of the multiple values within the “includes” or “does not include” fields. That is, the data does not have to meet all the listed criteria.
 - The AND statement is a joining of the set of “includes/does not include” criteria within an individual data element group (i.e., Aircraft, Route, and Times). That is, the resulting data needs to satisfy both the inclusion and exclusion criteria.
 - As you add new filters within a data element group, the filter criteria is joined by AND to the other data element groups.

The screenshot displays the 'Flight List Filter' interface. It is organized into three main sections: Aircraft, Route, and Times. Each section has a radio button to toggle between 'includes' and 'does not include' criteria. The Aircraft section shows 'Major' includes ANO, VOZ, and AAL, and 'Flight State' includes ACTIVE and PLAN. The Route section shows 'ADEP' includes YSSY and YMML, and 'ADES' does not include YBBN. The Times section shows 'ELDT' set to 'Absolute' with a date range from 05/0159 to 08/0159. At the bottom right, there are 'Preview', 'Save', and 'Close' buttons.

Demand Graph

Demand Graph

- Monitor the overall demand of an airport or FCA
- Set capacity for an airport
- Select types of data with graphs that are colored by (Status, Data Source, AC Type Group, Carrier, AFix and DFix)
- Display bars for Arrivals, Departures, or both
- Display time bins in minutes (15, 30, 60)
- Show capacity and cancelled flights (roll mouse over bar)
- Display aircraft count (roll mouse over bar)

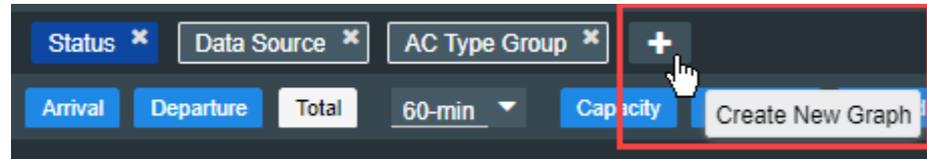


Add New Graph

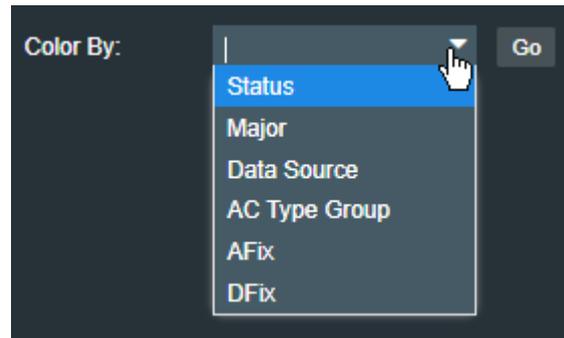
Select types of data with bar graphs that are colored by

- Status, Data Source, AC Type Group, Carrier, AFix, and/or DFix

1. At top of graph, click + plus sign



2. Select Color By data type

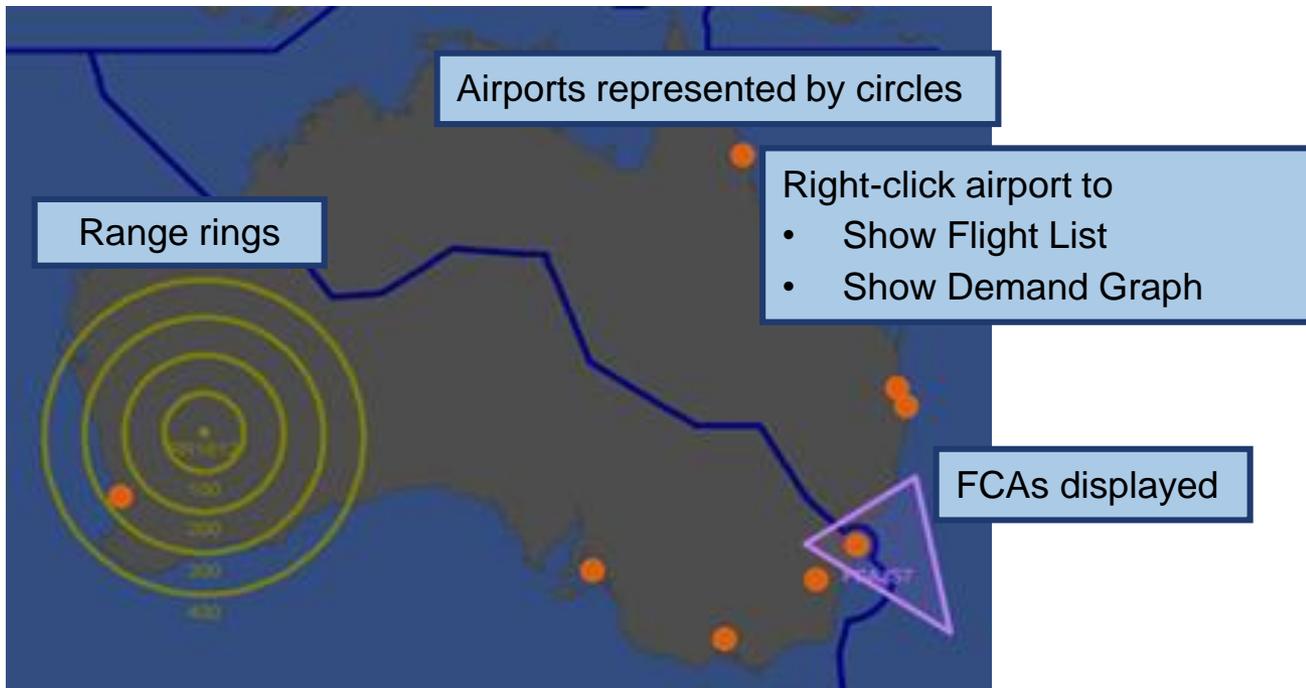
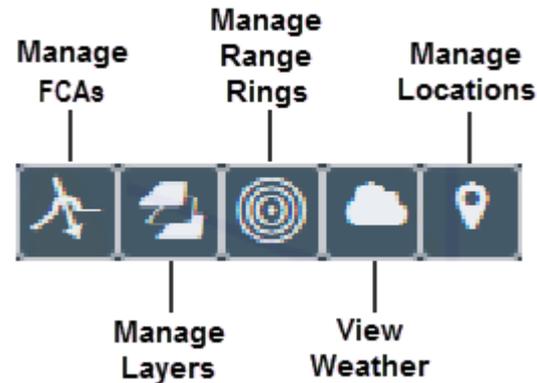


3. Data type above bar graph. Click the Data Type button (e.g., Status) to display the corresponding data

Map Tools

Map Tools

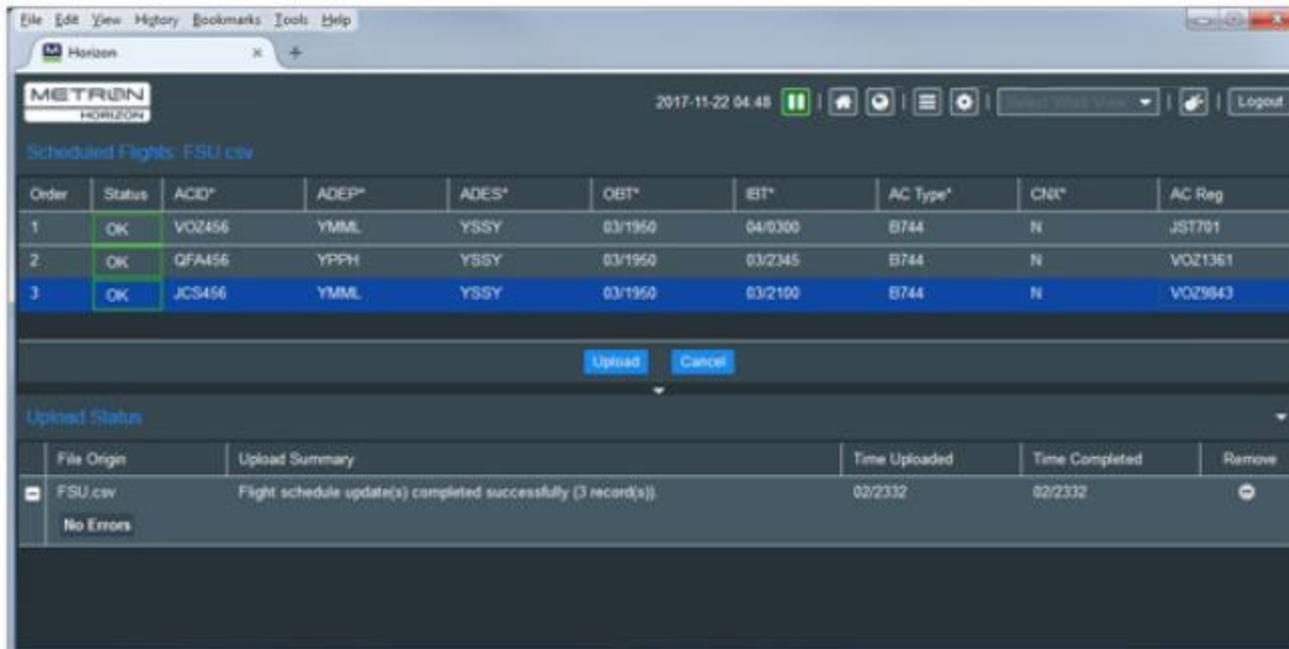
- Configure map layers
- Create and manage range rings
- Display weather
- Manage locations (map views)



Flight Schedule Upload

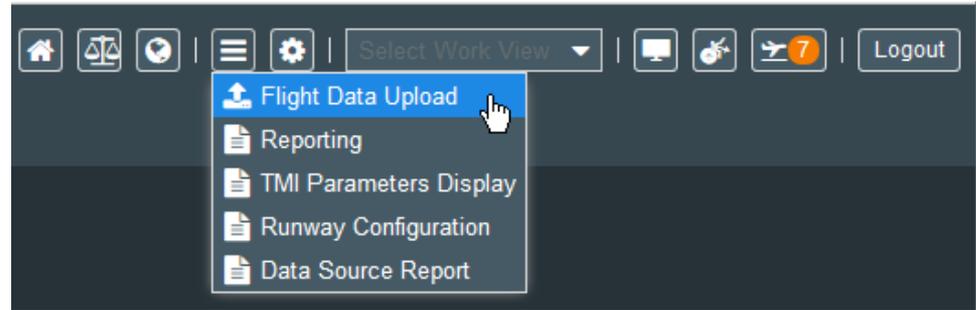
Flight Schedule Upload

- The Flight Schedule Upload component is used to upload your flight data into the Harmony system
- The Flight Schedule data includes ACID, ADEP, ADES, OBT, IBT, AC Type, CNX, and AC Reg
- OBT and IBT will be entered as Aircraft Operator times, which have an L prefix

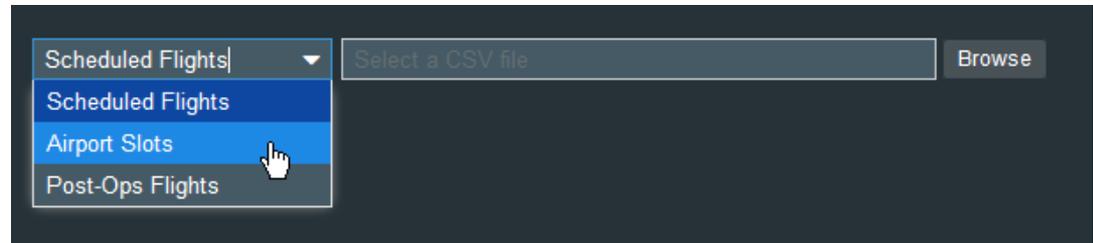


Uploading Scheduled Flights

1. From Data Tools menu, select Flight Data Upload



2. From the Data File dropdown, select *Scheduled Flights*



3. Click Browse to navigate to CSV file location
4. After CSV file loads, click Upload

Flight Creation

Creating a Flight

- Super Users, Flow Managers, and Aircraft Operators can create a flight using information from an existing flight.
- An Aircraft Operator can only create/update flights in its own major and subcarriers

1. Open Edit Mode Flight List
2. Select flight in Flight List
3. Click Create Flight From button
4. Complete fields
5. Click Submit

Or

1. Open Edit Mode Flight List
2. Select manage page drop down
3. Click Create Flight button
4. Complete fields
5. Click Submit

The screenshot shows a web application interface for creating a flight. At the top, there is a navigation bar with a menu icon, a gear icon, a dropdown menu labeled 'Select Work View', and a 'Logout' button. Below the navigation bar is the main form titled 'Create Flight'. The form is divided into three sections: 'Data', 'Contact', and 'Times'. The 'Data' section includes fields for ACID, ADEP (YSSY), ADES (YPMQ), AC Type (AT43), and AC Reg. The 'Contact' section includes fields for Email, Mobile Number, and Mobile Carrier. The 'Times' section includes fields for LOBT, LIBT, ELOBT (19 0504), and ELIBT (19 0558). At the bottom of the form are 'Submit' and 'Cancel' buttons.

Alerts

Alerts Overview

- Alerted to changes to:
 - ATFM measure (e.g., addition, revision, purge, expiration)
 - Flight (e.g., compliance threshold is not met, a flight is bridged, pop-up flight)
 - Resource (e.g., an airport's runway configuration).
- Notified of new events that occur after you log in (i.e., alerts are not displayed for activities that occurred before you logged in)
- Alerts displayed in toolbar and pop-up



Alerts Window

Click alert icon to open Alerts window

Each alert type has window with alert-specific data

The screenshot shows the Alerts Window interface. At the top, there are three tabs: "Compliance Alert (105)", "ISE Bridged Flights (5)", and "Pop-Up Flights". The "ISE Bridged Flights (5)" tab is selected and highlighted in blue. Below the tabs is a table with columns: "Info", "Event Time", "ACID", "ADEP", "ADES", "Major", "Slot", and "Ctl TMI". The table contains five rows of alert data. Each row has an information icon (i) in the "Info" column and an "X" icon in the "Ctl TMI" column. At the bottom of the window, there are two buttons: "Acknowledge All" and "Clear All".

• Tab for each Alert type
• Blue-colored tab indicates selection

X deletes specific alert

Acknowledge All
• Acknowledges alerts
• Keeps alerts in list

Clear All removes alerts from active tab

Info	Event Time	ACID	ADEP	ADES	Major	Slot	Ctl TMI
i	06/1259	EAQ470	YMML	YSSY	QFA		GDP-A(06/1230 - 06/1359) X
i	06/1308	RXA454	YGTH	YSSY	RXA		GDP-A(06/1230 - 06/1359) X
i	06/1314	EAQ404	YMML	YSSY	QFA		GDP-A(06/1230 - 06/1359) X
i	06/1317	RXA3...	YMTG	YMML	RXA		GDP-A(06/1315 - 06/1359) X
i	06/1327	JST785	YPAD	YMML	QFA		X

Edit Mode

Edit Mode

- The Edit Mode All Flights View provides a view of the uncontrolled and controlled flights for airports for the selected airport
- The Edit Mode – ATFM measure View provides a view of airport-specific controlled flights and slots for ATFM Measures

Edit Mode All Flights View

- Edit Mode provides the following capabilities to update flights:
 - Update flight data (ACID, AC Type, AC Reg)
 - Update flight contact information (email address, phone number, mobile carrier)
 - Cancel a flight
 - Reinstate a flight
 - Update a flight's LOBT (the LIBT is calculated from the LOBT)
 - Update a flight's ATOT, ALDT
 - Update a ELOBT (the ELIBT is calculated from the ELOBT) with an option to resume the auto-management of the EL time
 - Add flights (non-controlled or controlled) to an ATFM measure (Super Users only)

Edit Mode – TMI Measure View

- Edit Mode – ATFM Measure View includes much of the functionality found in Edit Mode – All Flights View as well as the additional functionality:
 - Cancel a flight with slot hold
 - Reinstate a controlled flight
 - Perform an ISE request on a pre-departure, controlled flight
 - Free controlled slots in an TMI (Super Users only)
 - Cancel any controlled flight (Super Users only)
 - Swap two flights
 - Swap a flight with an unassigned slot
- Some of this functionality will be addressed in the Slots Substitution training module

System Settings

System Settings

- Configure settings such as data update intervals, layout configurations, alert expirations, compliance thresholds
- System Settings dictate the configuration of components created in the future. That is, the updates do not dynamically change the existing components
- System settings for following components:
 - General
 - Flight List
 - Demand Graph
 - Work Views
 - Map
 - Substitution List
 - Alerts

System Settings: General

System Settings

General Flight List Demand Graph Work Views Map Substitution List Alerts

Auto-Update Interval: 120 seconds

Default Layout: Single Panel

Default Position: Single Panel

Default Module: Demand Graph

Save Reset to System Default Cancel

Update the data update interval, and the default layout, position, and module

System Settings: Flight List

System Settings

General Flight List Demand Graph Work Views Map Substitution List Alerts

Airport
Records Per Page: 100

Airspace

Name ↑	Description
AC Reg	Aircraft Registration
AC Type Group	Base Aircraft Type Group
AC Type	Aircraft Type
AC Type Group	Base Aircraft Type Group
Airborne max Delay	Airborne max Delay
BIBT	Base Estimated In Block Time
BLDT	Base Estimated Landing Time
BOBT	Base Estimated Off Block Time
BTOT	Base Estimated Take Off Time
CAFT	Calculated Arrival Fix Time
CEET	CLDT - CTOT
CIBT	Calculated In Block Time
CLDT	Calculated Landing Time
COBT	Calculated Off Block Time
COBT - NOW	COBT - NOW (minutes)

Name	Description
ACID	Aircraft ID
CNX	Cancelled
ADEP	Departure Airport
ADES	Arrival Airport
AC Type	Aircraft Type
SOBT	Marketing Schedule Off Block Time
EOBT	Estimated Off Block Time
ETOT	Estimated Take Off Time
ATOT	Actual Take Off Time
ELDT	Estimated Landing Time
ALDT	Actual Landing Time
FPL Route	Flight Plan Route

Save Reset to System Default Cancel

- Configure the default number of records per page
- Select which airport or airspace columns are displayed

System Settings: Demand Graph

System Settings

General Flight List **Demand Graph** Work Views Map Substitution List Alerts

Airport

Graph Type

- Status
- Data Source
- AC Type Group
- Carrier
- AFIX
- DFIX

Data Type: Arrival
 Departure
 Total

Time Bin: 60-min

Show Capacity:

Show Cancelled Flights:

Airspace

Graph Type

- Status
- Data Source
- AC Type Group
- Carrier

Data Type: Total

Time Bin: 60-min

Show Capacity:

Show Cancelled Flights:

Save Reset to System Default Cancel

Configure airport and airspace:

- Data type
- Time Bin
- Whether to show capacity or cancelled flights

System Settings: Work Views

System Settings

General Flight List Demand Graph **Work Views** Map Substitution List Alerts

Show System Defined Work Views:

Name	Panel 1	Panel 2	Panel 3	Panel 4	Default	
Airline FOC	(U) FL: YSSY	(R) DG: YBBN	(L) DG: YSSY	(M) DG: YMML	<input type="checkbox"/>	⊖
Airport - YMML	(D) DG: YMML	(U) DG: YMML	(L) FL: YMML		<input type="checkbox"/>	⊖
ATFM - Home	(LU) DG: YSSY	(LD) DG: YBBN	(RU) DG: YMML	(RD) DG: YPPH	<input type="checkbox"/>	⊖
Tower - YBBN	(D) DG: YBBN	(U) DG: YBBN	(L) FL: YBBN		<input type="checkbox"/>	⊖
ATFM Detail - YSSY	(D) DG: YSSY	(U) DG: YSSY	(L) FL: YSSY		<input type="checkbox"/>	⊖
COBT Complianc...	(L) FL: YSSY	(U) FL: YSSY	(D) DG: YSSY		<input type="checkbox"/>	⊖

L: Left, R: Right, U: Up, D: Down, M: Middle, C: Single Panel, LU: Left-Up, LD: Left-Down, RU: Right-Up, RD: Right-Down
FL: Flight List, DG: Demand Graph

Save Reset to System Default Cancel

- Set a default Work View
- Delete Work Views

System Settings: Map

System Settings

General Flight List Demand Graph Work Views **Map** Substitution List Alerts

Intervals

Map Update: 30 seconds

Default View

Latitude:

Longitude:

Zoom: 4

Save Reset to System Default Cancel

- Set refresh rate
- Set default view

System Settings: Substitution List

System Settings

General Flight List Demand Graph Work Views Map **Substitution List** Alerts

Available Columns

Name ↑	Description
AC Reg	Aircraft Registration
AC Type	Aircraft Type
AC Type Group	Base Aircraft Type Group
AEET	Actual Elapsed En Route...
AFix	Arrival Fix
AIBT	Actual In Block Time
ATOT	Actual Take Off Time
Airborne Max Delay	Airborne Max Delay
BIBT	Base Estimated In Block ...
BLDT	Base Estimated Landing ...
BOBT	Base Estimated Off Block...
BTOT	Base Estimated Take Off ...
CAFT	Calculated Arrival Fix Time
CEET	CLDT - CTOT
CIBT	Calculated In Block Time
CLDT	Calculated Landing Time

Displayed Columns

Name	Description
Major	Major Operator
ACID	Aircraft ID
ADEP	Departure Airport
ADES	Arrival Airport
Ctl Type	Control Type
EOBT	Estimated Off Block Time
ETOT	Estimated Take Off Time
ELDT	Estimated Landing Time
COBT	Calculated Off Block Time
CTOT	Calculated Take Off Time
Program Delay	Program Delay

Save Reset to System Default Cancel

Select which airport and airspace columns are displayed

System Settings: Alerts

System Settings

General Flight List Demand Graph Work Views Map Substitution List Alerts

Show Alerts Pop-up:

Pop-Up Duration: 5 seconds

Alerts Expire After: 1 hour

Flight Alert Filter

Majors Only:

Flight Compliance:

Thresholds (CTOT - ATOT) 5 minutes early to 5 minutes late

COBT Compliance Window:

Thresholds (COBT - NOW) 5 minutes early to 5 minutes late

Save Reset to System Default Cancel

- Set duration of pop-up alerts
- Set alert expiration

- Set alerts to display only those belonging to the user's Major
- Set flight compliance threshold to generate an alert

- Set flight compliance threshold for the COBT Compliance Window

