PF3 Web Display
(An alternative to PF3 Display)

Introduction:

PF3 Web Display provides a browser-based alternative to the PF3 Display program included as part of the PF3 package from OnCourse Software. It was developed following enquiries about versions of PF3 Display for Apple and Android devices.

Features:

PF3 Web Display (WebD) shows the hotkeys available to the PF3 user at each stage of a flight, updated each time the ATC frequency, and tuned facility, changes.
It also provides a list of the frequencies for ATC facilities at the origin and destination airports and also frequencies for en-route Center and Radar facilities.

New features in releases 2.4.0 and 2.4.2:

i)   2.4.0 now displays a readable version string at the beginning of the encrypted Web Display template file to assist with problem solving. A 'Troubleshooting' section, covering common problems, has been added to this document.

ii) 2.4.0 adds a new option (AI-ATC), which causes ATC messages for AI aircraft to be displayed in the Remote Text field (default is No).

iii) 2.4.2 adds new options VCP-Hist, ATC-Time and ATC-Hist, which customise the ATC message history, as follows:

VCP-Hist (default is No) records all messages *to* and *from* ATC in the message history; ATC messages are prefixed '<<', user messages are prefixed '>>'.

ATC-Time (default is No) puts a server timestamp in front of every message.

ATC-Hist sets the maximum size of the ATC message history, in the range 10 to 50. If not specified, or invalid, it defaults to 20 messages.

N.B.   These options require Web display Template 2.4.6 or higher.

System Requirements:

The PF3 Web Display server is a Windows application based on .NET Core 3.1.
The software can be run on the same PC as PF3 or on a separate, networked, PC.
The current release (2.4.2) works with PF3 release 3.21.0 or higher.

Installation:

The application is distributed as a zip archive containing 6 files:

```
PF3WebDisplay.exe          (the application itself)
Template.pf3w              (the web page template file)
PF3WebDisplay.pdf          (these notes)
PF3WebDisplay-sample.ini   (sample configuration file)
msfs-ingame.zip            (MSFS in-game panel files)
release.txt                (text file with release details)
```

All of the files should be extracted into a directory on the selected PC, usually the
PC on which PF3 itself is installed. The recommended location is a directory
'PF3_WEB_Display' under PF3\PF3_Displayer; this is the default location when
installed as part of a PF3 update, and is the required location for autostart to
work. However, it can be installed to a different directory on the same PC or to
any directory on a networked PC.

The .NET Core 3.1 runtime library can be downloaded from the Microsoft website
here: .NET Core 3.1.32 download. Run the downloaded file to install the library.

Configuration:

By default the application connects to PF3 on the same PC, using the standard PF3
Display port, 1010, and uses TCP port 7339 to provide the web interface. The
defaults can be changed by providing a PF3WebDisplay.ini file, located in the
same directory as the application itself; details are at the end of this document.

The application automatically runs with administrator privileges as these are
necessary to enable it to create the websocket used for browser access.

The Windows firewall on the PF3 Web Display PC will need to allow incoming
connections on PF3WebPort (default 7339) to enable access from other devices.
If not running on the same PC, the firewall on the PF3 PC will also need to allow
incoming connections on the PF3 Display port for the application to work.

Non-standard PF3 command key assignments can be displayed if an updated
pf3_disp.dat file is available; for details refer to Appendix A.

Operation:

Double-clicking on the application will start it in a command window which can be minimised while it is running. It is recommended that Web Display be started after PF3 has established its connection to FS, but the server will try to connect to the PF3 Display port up to 5 times to allow time for PF3 to become available.

The application first checks that the versions of the server code and template file are compatible; if not, it will flag an error. It will then output a few messages as it starts up; the following example is from a system using the default port numbers:

> PF3 Web Display: Server Release 2.4.2 – Template Release 2.4.6
> .
>
> .
>
> Listening on http://192.168.1.185:7339/
> Listening on http://localhost:7339/

The application will close automatically if PF3 is disconnected from FS (when the PF3 Display port closes); it can also be stopped by closing the command window in which the application is running.

With the server running, PF3 Web Display can be accessed using the URLs shown as 'Listening on …' when the application starts (as above), for example:

> 'http://localhost:7339/'   in a browser on the app PC
> 'http://<IP address>:7339/'   in a browser on a remote device

Remember, the Windows firewall on the application PC will need to allow incoming connections on the web port (default 7339) to enable access from other devices.

When first opened the webpage displays a header message and the default set of commands, in a similar way to PF3 Display. This is followed by a line which will initially show the versions of the Server and Template file in use, similar to that shown above. After 3 secs this will change to show 'Awaiting waypoint info …'; this is where waypoint information will later be displayed (see Appendix D).

Below this is a series of buttons which can be used to change the display of the dynamic area between commands for the Current Facility, Center Frequencies, Radar Frequencies, Origin Frequencies and Destination Frequencies.
In the frequency lists the current ATC facility will be highlighted in green; a different frequency can be set by clicking a row when it is highlighted in blue.
This feature is not enabled by default; for details refer to Appendix A.

The area below this is for dynamic information which initially shows 'Connecting websocket …'. Upon successful connection this changes to 'Awaiting ATC info …'; when the first update is received from PF3 it displays details of the current facility. 'Error connecting websocket …' will be seen if the browser is unable to connect.

Supported Browsers:

Correct operation has been verified with the following browsers:

Windows:	Edge, Chrome, Firefox
Android:	Chrome, Firefox, Samsung Internet (some versions)
Linux:	Chromium

The application supports multiple concurrent browser sessions (during testing I have had 3 different browsers, on separate systems, running at the same time). A browser session can be connected/refreshed at any time and the display will automatically synchronise with the latest information available from PF3.

The message 'Websocket error …' indicates a browser incompatibility; the only known way to resolve this is to use a different browser.

Revision History:

Release 2.2.0 Support for ATC History and webpage background colour.
Release 2.3.0 Support for setting ATC Message and History colour.
Release 2.3.1 Support for autostart by main PF3 program.
Release 2.4.0 Support for readable template file header and AI-ATC option.
Release 2.4.2 Support for options VCP-Hist, ATC-Time and ATC-Hist.

Known Limitation of this Software:

The software cannot be used at the same time as the standard PF3 Display as it connects to the same PF3 port; it is intended as an alternative to PF3 Display. Also, although it can run alongside the Remote Text app they cannot share a port.

Acknowledgement:

I am extremely grateful to Dave March for enhancing the PF3 Display interface to support the extra features I added to Web Display; he really didn't have to do it! This software uses the FSUIPC Client DLL for .NET by Paul Henty; thank you Paul.

Support:

PF3 Web Display is not part of the OnCourse software PF3 package, it is provided free, on an as-is basis, and is supported directly by the developer, a PF3 user. Please file bug reports or change requests in the PF3 WEB Display Support section of the OCS Support forum; they will be addressed on a 'best endeavours' basis.

Updates:

Updates to the application will be made available with new PF3 releases or, if necessary, via the forum. These may consist of a new zip file with updated application and template file, or just the template file for less complex changes.

Developer:

Martin Cockerell (OCS forum name: pointy56)

PF3 Web Display Release 2.4.2

Troubleshooting:

There are a few things that can easily be checked if Web Display doesn't seem to be working as expected. Messages are displayed in the console window, and are also recorded in the file PF3WebDisplay.log found in the Web Display folder.
For optional features to be working you will need to see this message in the log:
PF3WebDisplay.ini file found, reading values …

If the ini file is not found you will see this message in the log:
PF3WebDisplay.ini file not found, using default values

Also, the following start-up message shows which ports are being used:
PF3 address 127.0.0.1, PF3 Display port 1010, PF3 RemoteText port 1009, WebSocket port 7339

Error Message: **Template Release x.y.b not compatible with Server Release x.y.a**

Web Display checks that the server and template versions are compatible as it starts up. The major and minor version numbers must match, because some changes made to Web Display affect the data that the server provides to the web page, so they must be kept in step. In practice, any template version x.y.b will work with any server version x.y.a; significant updates to Web Display processing would result in both being updated.

Unable to use Remote Text program while running Web Display

Web Display and the Remote Text program both use a connection to PF3 to obtain their data, but they cannot use the same port – PF3 has 2 ports, so to try to avoid problems, Web Display defaults to using Remote Text Port#2.

Frequency Selection not working

Check that the ATCRadio option has been enabled in the .ini file.
You should see a message like this in the log if it has been set correctly:
Will set ATC frequency on COM1 using the FSUIPC Client DLL for .NET by Paul Henty

Error Message: **pf3_disp.dat processing requested but file not found – skipping**

The DispDat option has been enabled in the .ini file, but the necessary file cannot be found. This option is only required if PF3 hotkey assignments have been changed from the defaults and an updated pf3_disp.dat file has been created.

(The DispDat option is not required by the majority of PF3 Web display users, but was confusingly included in a previous sample ini file; it can safely be removed.)

Appendix A: PF3 Web Display Options

A number of options can be specified in the file PF3WebDisplay.ini

If a PF3WebDisplay.ini file is not found in the application directory the default values will be used and the webpage will display standard PF3 command keys.

If default PF3 port numbers are used then a minimum .ini file, enabling Remote Text and clickable frequency change support would be:

[PF3WebDisplay]
RemoteText=Yes
ATCRadio=COM1

Please note: If PF3 is set to auto run Web Display then options PF3Port and RemoteText are ignored; the port numbers are provided directly from PF3, using the values set on the Options#2/Advanced page. When auto run, Web Display Remote Text support will only be started if it is enabled in PF3.

The provided sample file (PF3WebDisplay-sample.ini) can be used as a template, but please make sure that the options specified are suitable for you.

Note: Options that require 'Y' or 'N' only check the first letter, and ignore case.

The following options should be specified in a section called [PF3WebDisplay]:

PF3Port=pppp	Port used to connect to PF3 Display (default 1010) (Must match the value set in PF3 Advanced Options)
PF3Host=a.b.c.d	IP address of PC running PF3 (defaults to 'this' PC)
WebPort=wwww	Port used to access the PF3 Web server (default 7339) (Can be any unused value from 1024 to 65535)
ATCRadio=COMx	This enables the server to set the ATC COM frequency. This requires FSUIPC to be available to the PC on which WebD is running; please refer to Appendix B for details. ***Please note: This feature is disabled by default.*** Specifying 'N' will also disable the feature
RemoteText=rrrr	Port used to connect to PF3 RemoteText; specifying an invalid numeric value (or 'Y') will default to port 1009. Remote Text must also be enabled in PF3 Advanced Options, and the port number here should match port#2; the port cannot be shared with the Remote Text program. ***Please note: This feature is disabled by default.*** Specifying 'N' will also disable the feature.
AI-ATC=Y	This causes the Remote Text display to include ATC messages to & from AI aircraft, when enabled. ***Please note: This feature is disabled by default.*** (AI-ATC messages will not be included in the ATC history)

VCP-Hist=Y	This causes messages from the aircraft to ATC to be included in the ATC message history, when enabled. Messages to ATC will be prefixed '>>', from ATC by '<<' ***Please note: This feature is disabled by default.***
ATC-Time=Y	This causes messages in the ATC message history to start with a server timestamp, when enabled. ***Please note: This feature is disabled by default.***
ATC-Hist=nn	This sets the maximum number of messages to be retained in the ATC message history store, range 10-50. An invalid value uses the default value of 20.
DispDat=Y	This causes the server to display PF3 command key assignments read from an updated pf3_disp.dat file. The server will look for this file in the parent directory (PF3_Displayer for a recommended installation), and also in the application directory for custom installations. ***Please note: This option is not usually required and the feature is disabled by default; this causes the server to display the default PF3 command set.***
HTMLColor=<name>	This sets the colour to use for the displayed webpage text. See 'Standard HTML colours' below for valid values. If an invalid name is specified the colour defaults to Black.
BGColor=<name>	This sets the background colour to use for the webpage. See 'Standard HTML colours' below for valid values. An invalid name uses the browser default (usually white).
FontSize=fff	Font size (%) used for webpage text, range 40-800. An invalid value uses the default of 100%.
ATCColor=<name>	This sets the colour to use for ATC Messages and History. See 'Standard HTML colours' below for valid values. An invalid name defaults to the HTMLColor setting.

Standard HTML Colours

There are 140 standard HTML colours which can be used for the options
HTMLColor, BGColor and ATCColor.
<name> is not case sensitive, these are equivalent: Blue blue BLUE bLuE BlUe

The full list of available colours can be viewed here: HTML Color Names

Here is an example of the way the font size and colour options can be used; this
provides a larger, more readable, font using yellow text on a grey background:

BGColor=DimGray
HTMLColor=yellow
FontSize=200%

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Appendix B: Enabling Frequency Changes in Web Display

A feature has been provided since Web Display (WebD) Release 1.1.0 which allows the user to change the tuned ATC frequency by clicking on an entry in the various frequency tables (Center, Radar, Origin & Destination).

This feature requires access to FSUIPC, which is also used by PF3; it is easiest to run the Web Display application on the same PC as PF3. *It is also possible to access FSUIPC across a network using WideFS; details can be found in the FSUIPC documentation.*

To enable this feature the ATCRadio option must be defined in PF3WebDisplay.ini:

ATCRadio=COMx   This requests the server to set the ATC COM frequency when a highlighted row in the facility lists is clicked. 'No' disables the feature. Other possible values are 'COM1' and 'COM2'; any other value selects 'COM1'.

The following screenshots shows how a frequency change request progresses.

Initial screen immediately after connecting to Web Display:

Awaiting waypoint info …

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK Clearance on 121.95

CLEARANCE	0	Initial Check-in... request CLEARANCE
CLEARANCE	2	Request ACARS ATIS for your destination
CLEARANCE	3	Request ACARS Local Frequencies

Clicking on the EGKK Freqs button shows this, 'Clearance' highlighted in green:

Awaiting waypoint info …

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

EGKK Freqs

ATIS	136.52
Clearance	121.95
Ground	121.80
Tower	124.22
Departure	129.72
FSS	122.20

ATIS frequency highlighted in blue as mouse hovers over it:

EGKK Freqs

ATIS	136.52
Clearance	121.95
Ground	121.80
Tower	124.22
Departure	129.72
FSS	122.20

ATIS highlighted in orange as mouse is clicked over it to request change. (Clearance still highlighted in green as frequency change pending):

EGKK Freqs

ATIS	136.52
Clearance	121.95
Ground	121.80
Tower	124.22
Departure	129.72
FSS	122.20

ATIS highlighted in green when frequency change is acknowledged by PF3:

EGKK Freqs

ATIS	136.52
Clearance	121.95
Ground	121.80
Tower	124.22
Departure	129.72
FSS	122.20

Appendix C: Using an MSFS In-Game Panel for Web Display

As Web Display (WebD) is built using browser-based technology it is possible to access the application using the MSFS in-game panel capability; full functionality is available, including the ability to request ATC frequency changes, if configured.

The file msfs-ingame.zip, included with the application, contains an in-game panel configured to access WebD on the MSFS PC on port 7339, the default WebD port. The contents of the zip archive should be extracted to the Community folder (e.g. C:\Users\<user>\AppData\Roaming\Microsoft Flight Simulator\Packages\Community) on the MSFS PC; it will create a folder called pf3webdisplay. When Web Display has been started the in-game panel can then be accessed from the toolbar.

If WebB has been configured to use a different port (the WebPort option), or is running on a separate PC, then the in-game panel will need to be reconfigured. This is achieved by editing the file 'CustomPanel.js' in this folder:

     pf3webdisplay\html_ui\InGamePanels\CustomPanel

Find the following line in the file:

self.iframeElement.src = 'http://localhost:7339';

and change the highlighted section to match the WebDisplay application, e.g.:

self.iframeElement.src = 'http://192.168.1.155:8765';

When MSFS is started it automatically picks up the new configuration.

Acknowledgement

I did not develop the in-game panel; the outline was downloaded from GitHub and is based on excellent work done by an MSFS user called 'maximus'.

Appendix D: Example PF3 Web Display screenshots

The following screenshots were taken from an example flight from Gatwick (EGKK) to Edinburgh (EGPH) using the standard PF3 command keys.

This is the initial screen showing the server and template details:

PF3 Web Display

PF3 Default settings require you to use the Ctrl+Shift+Hotkey combination, together with one of the keys listed below, EXCEPT for keys 0 thru 9, the PTT key or the H and L keys, which only require a single keypress. E.g. For VCP mode use Ctrl+Shift+V but for Initial Check-In you only need to use the Zero key.

ALL	E	Declare an Emergency
ALL	=	Say Again / Repeat
ALL	\	Roger / Readback
ALL	C	Toggle Closed Caption mode ON/OFF
ALL	D	Toggle AI ground traffic detection on/off (default is ON) / Request Direct to... (all other times)
ALL	V	Virtual Co-Pilot Mode - 4 Modes OFF - COMM - COMM PLUS - P.I.C.
ALL	W	Skip to next taxi waypoint when TGS is active (or) Warp to selected waypoint during flight (or) Request another runway for takeoff/landing
ALL	H	Plus one of the number keys (top row) 1 to 9 to request a higher altitude
ALL	L	Plus one of the number keys (top row) 1 to 9 to request a lower altitude
ALL	Y	Positive answer (Yes)
ALL	N	Negative answer (No)
ALL	ESC	This is your PTT switch, used to initiate a pause in PF3 when using Voice Recognition
ALL	T	Toggle the Hotkeys window between Active Hotkeys/Global Hotkeys/Off

Server Release 1.00 - Template Release 1.01

[Current Facility]   [Center Freqs]   [Radar Freqs]   [EGKK Freqs]   [EGPH Freqs]

Connecting websocket ...

The lower section will be updated as below while it awaits information from PF3:

Awaiting waypoint info ...

[Current Facility]   [Center Freqs]   [Radar Freqs]   [EGKK Freqs]   [EGPH Freqs]

Awaiting ATC info ...

All of the frequencies for Gatwick can be displayed by toggling the 'EGKK Freqs' button:

Awaiting waypoint info ...

[Current Facility]   [Center Freqs]   [Radar Freqs]   [EGKK Freqs]   [EGPH Freqs]

EGKK Freqs

ATIS	136.52
Clearance	121.95
Ground	121.80
Tower	124.22
Departure	131.35
FSS	122.20

The normal display can be brought back by toggling the 'EGKK Freqs' button again,

N.B.   *Clicking 'Current Facility' will also revert to the normal display at any time.*

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Tuning to Gatwick ATIS shows the following:

Awaiting waypoint info ...

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK ATIS on 136.52

Retuning to Gatwick Clearance shows the following:

Awaiting waypoint info ...

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK Clearance on 121.95

CLEARANCE	0	Initial Check-in... request CLEARANCE
CLEARANCE	2	Request ACARS ATIS for your destination
CLEARANCE	3	Request ACARS Local Frequencies

We then tune to Gatwick Ground to get push-back and taxi permission:

Awaiting waypoint info ...

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK Ground on 121.80

GROUND	0	Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi
GROUND	1	Deactivate/Reactivate toggle for TGS
GROUND	2	Request ACARS ATIS for your destination
GROUND	3	Request ACARS Local Frequencies
GROUND	5	Clear of the runway... request TAXI to TERMINAL
GROUND	6	Request Radio Check
GROUND	7	Request Altimeter Setting
GROUND	8	Toggle Auto Taxi Speed On/Off when TGS is active

And then, at the runway, we tune to Gatwick Tower for take-off clearance:

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK Tower on 124.22

TOWER	0	Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi
TOWER	1	Initial Check-in for LANDING
TOWER	2	Report entering DOWNWIND
TOWER	3	Report turning BASE
TOWER	4	Report turning FINAL
TOWER	5	Request the Option (Touch 'n Go)/Clear of the runway... request TAXI to TERMINAL
TOWER	6	Initial Check-in... ready for TAKEOFF
TOWER	7	Request Field Advisories
TOWER	8	Report going to ALTERNATE Airport
TOWER	9	Report Go-Around/Missed-Approach
TOWER	W	Request different Runway
TOWER	N	Show another Runway
TOWER	Y	Accept that Runway

After take-off we are handed off to Gatwick Departure and the initial waypoint is shown:

Next waypoint: BPK   Altitude: 30000

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: EGKK Departure on 118.25

DEPARTURE	0	Initial Check-in (if VFR request Flight Following)
DEPARTURE	1	Request Cleared To Final At Pilot's Discretion/Trigger handoff to Approach (VFR Free Flight only)
DEPARTURE	2	Request ACARS ATIS for your destination
DEPARTURE	3	Request lower altitude due to clouds
DEPARTURE	4	Request higher altitude due to clouds
DEPARTURE	5	Request lower altitude due to turbulence
DEPARTURE	6	Request higher altitude due to turbulence
DEPARTURE	7	Request vectors
DEPARTURE	9	Report position

Next we are handed off to London Control:

Next waypoint: BPK   Altitude: 30000

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Current ATC Facility: London Control on 126.85

CENTER	0	Initial Check-in (if VFR request Flight Following)
CENTER	1	Request Cleared To Final At Pilot's Discretion
CENTER	2	Request ACARS ATIS for your destination
CENTER	3	Request lower altitude due to clouds
CENTER	4	Request higher altitude due to clouds
CENTER	5	Request lower altitude due to turbulence
CENTER	6	Request higher altitude due to turbulence
CENTER	7	Request vectors
CENTER	8	Toggle/Amend Flight Plan to land at Alternate/Origin (or) Report airport in sight
CENTER	9	Report position

The list of Control Center frequencies can be seen by clicking the 'Center Freqs' button:

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

Center Frequencies

126.85	London Control
132.25	London Control
119.65	East Midlands Center
132.25	London Control
124.55	London Control
124.20	Manchester Control
124.55	London Control
123.55	Scottish Control

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The display is kept up-to-date as the flight progresses across the various control zones; towards the end of the flight we are handed over to Scottish Control:

Current ATC Facility: Scottish Control on 123.55

CENTER	0	Initial Check-in (if VFR request Flight Following)
CENTER	1	Request Cleared To Final At Pilot's Discretion
CENTER	2	Request ACARS ATIS for your destination
CENTER	3	Request lower altitude due to clouds
CENTER	4	Request higher altitude due to clouds
CENTER	5	Request lower altitude due to turbulence
CENTER	6	Request higher altitude due to turbulence
CENTER	7	Request vectors
CENTER	8	Toggle/Amend Flight Plan to land at Alternate/Origin (or) Report airport in sight
CENTER	9	Report position

And then to Edinburgh Approach:

Current ATC Facility: EGPH Approach on 130.35

APPROACH	0	Initial Check-in (if VFR request Flight Following)
APPROACH	1	Request Cleared To Final At Pilot's Discretion
APPROACH	2	Request an instrument approach
APPROACH	3	Request lower altitude due to clouds
APPROACH	4	Request higher altitude due to clouds
APPROACH	5	Request lower altitude due to turbulence
APPROACH	6	Request higher altitude due to turbulence
APPROACH	7	Request vectors
APPROACH	8	Report airport in sight
APPROACH	9	Report position

When established on the ILS we retune to Edinburgh Tower:

Current ATC Facility: EGPH Tower on 118.70

TOWER	0	Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi
TOWER	1	Initial Check-in for LANDING
TOWER	2	Report entering DOWNWIND
TOWER	3	Report turning BASE
TOWER	4	Report turning FINAL
TOWER	5	Request the Option (Touch 'n Go)/Clear of the runway... request TAXI to TERMINAL
TOWER	6	Initial Check-in... ready for TAKEOFF
TOWER	7	Request Field Advisories
TOWER	8	Report going to ALTERNATE Airport
TOWER	9	Report Go-Around/Missed-Approach
TOWER	W	Request different Runway
TOWER	N	Show another Runway
TOWER	Y	Accept that Runway

Once we have landed we are handed off to Edinburgh Ground for taxi & parking:

Current ATC Facility: EGPH Ground on 121.75

GROUND	0	Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi
GROUND	1	Deactivate/Reactivate toggle for TGS
GROUND	2	Request ACARS ATIS for your destination
GROUND	3	Request ACARS Local Frequencies
GROUND	5	Clear of the runway... request TAXI to TERMINAL
GROUND	6	Request Radio Check
GROUND	7	Request Altimeter Setting
GROUND	8	Toggle Auto Taxi Speed On/Off when TGS is active

If required, we can display all of the Edinburgh frequencies by clicking 'EGPH Freqs':

| Current Facility | | Center Freqs | Radar Freqs | EGKK Freqs | EGPH Freqs |

EGPH Freqs

ATIS	131.35
Ground	121.75
Tower	118.70
Departure	118.25
Approach	130.35
FSS	122.20

Oceanic Airspace

If a flight crosses oceanic airspace similar to this will be seen at the relevant time:

Current ATC Facility: Oceanic Radio on 119.65

OCEANIC	0	Initial Check-in/Report position