

## X-PLANE

### NAVIGATION DATA FOR PUBLISHED HOLDINGS (EARTH\_HOLD.DAT) FILE SPECIFICATION

#### VERSION 1140

## REVISION HISTORY

11 Dec 2018     Initial Specification

## APPLICABILITY

This specification (XP HOLD1140) is supported in X-Plane 11.40 and later. It is identified in the data files as “1140 Version” on the second row of the file. No prior specification for this type of file exists.

## OVERVIEW & SCOPE

This specification defines all published holdings (those not part of terminal procedures) in X-Plane (EP-records in ARINC424 data). The effect of this data is to:

- Allow default holding pattern parameters being loaded into the FMS when creating a holding pattern at a waypoint not part of a terminal procedure

## BASIC CONCEPTS

- A holding can only be defined at a point that is either listed in the enroute portions of earth\_nav.dat or earth\_fix.dat

## FILE CHARACTERISTICS

The earth\_hold.dat files are plain text files:

- Fields in the data can be separated by one or more white space (space, tab) characters.
- By default, the files are generated so that columns of data are consistently aligned, but this is not required.

## FILE STRUCTURE

In common with most other X-Plane data file specification, header rows of data define the origin (“I” = Intel byte order or “A” = Motorola byte order) of a particular copy of a file and define the file specification version. The file specification must include the four-digit AIRAC cycle date (e.g. 1602 for the AIRAC cycle effective 4-Feb-16, refer to [https://www.nm.eurocontrol.int/RAD/common/airac\\_dates.html](https://www.nm.eurocontrol.int/RAD/common/airac_dates.html) for cycle dates), an 8-digit build date and the reference to this document. A copyright message may be added, while the total length of this line is not to exceed 1024 characters:

```
I
1140 Version - data cycle 1602, build 20160204, metadata HoldXP1140. Copyright © 2016, Robin A. Peel (robin@xsquawkbox.net)...
```

Subsequent rows of data define each waypoint. Sequence is not important, but by default this file is sorted alphabetically by fix name.

The file is terminated by a ‘99’:

```
99
```

## ROW CODES

Unlike other data files, no ‘row codes’ are used for hold data, since the file contains just one type of data.

## EXAMPLE DATA

Here is example data for holdings:

```
LBU ED ENRT 3 178.0 1.0 0.0 L 5000 0 0
LBV ED ENRT 3 110.0 1.0 0.0 R 4000 0 0
```

## DEFINITION OF DATA FIELDS

Each column in each row is defined below, using the example data from shown above. Note that:

Row	Meaning <i>Example value</i>	Comment <i>Explanation</i>	<i>Valid values</i>
[none]	Holding	Published holding over fix, intersection or navaid	No row codes are used, since all data refers to holdings
	LBU	Identifier of fix or navaid	One to five character valid identifier of known fix or navaid
	ED	ICAO region code of fix or navaid	Must be region code according to ICAO document No. 7910
	ENRT	Terminal region identifier or ENRT for no enroute	Airport code for terminal fixes, ENRT otherwise
	3	Type of Fix or Navaid	11 = Fix, 2 = enroute NDB, 3 = VHF navaid (VOR, TACAN, DME)
	178.0	Inbound holding course magnetic	See 424.18 4.1.5.1, 5.26
	1.0	Leg time in minutes, one decimal, or 0 for DME holdings	See 424.18 4.1.5.1, 5.65
	0.0	DME leg length in nautical miles, one decimal, or 0 for timed holdings	See 424.18 4.1.5.1, 5.64
	L	Turn direction L or R	See 424.18 4.1.5.1, 5.63
	5000	Minimum altitude in feet or 0	See 424.18, 4.1.5.1, 5.30
	0	Maximum altitude in feet or 0	See 424.18, 4.1.5.1, 5.127
	0	Holding Speed limit in knots or 0 if the ICAO rules apply	See 424.18, 4.1.5.1, 5.175

## FURTHER INFORMATION

Resources are available for airport and navaid designers at the X-Plane Scenery Gateway at <http://gateway.x-plane.com/>