



## Fugawi Tracker 4

### TECHNICAL INTERFACES DOCUMENTATION

#### TCP/IP

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#### Fugawi Tracker 4 - TCP/IP protocol

The TCP/IP protocol can be used to send asset location information from another application on the same computer or across the internet. The Fugawi Tracker TCP/IP protocol is based on a client server model, where Tracker is the Server. The client passes asset information to the server.

- If you wish to send a message between Fugawi Tracker and a client program on the same computer, use the loopback address 127.0.0.1
- Messages are composed of printable ASCII character strings that are terminated with a carriage return-line feed ("r\n") combination.
- The computer running Fugawi Tracker database must have a fixed IP Address.

#### Server Messages:

OK

- o The server is ready to accept messages from the client.

SEND PASSWORD

- o The server requires the client to send a message consisting of the password text.

GOODBYE

- o The server is terminating the connection with the client messages

QUIT

- o The client has finished sending information, and wishes to terminate the connection

\$PFUGTAR

- Inbound Asset position information in PFUGTAR sentence (see following)

\$PFUGCFG

- Outbound Asset information in PFUGCFG sentence (see following)

EVENT

- Inbound event message (see following)

**\$PFUGTAR Message:**

The message received via TCP/IP is as follows:

```
$PFUGTAR,1111.1111,N,22222.2222,E,AAAAAAA,  
BBBBBBBBBBBBB,xxx.x,yyy.y,CCCCCCCC, ddmmyy,hhmmss,zzzzzzz
```

**Where:**

1111.1111 is lat ddmm.mmmm  
N is N for North, S for South  
22222.2222 is lon dddmm.mmmm

E is E for East, W for West  
AAAAAAA is a UNIQUE character target name (or number) <=8 characters  
BBBBBBBBBB is a comment <=20 characters  
xxx.x speed over ground in kilometres per hour  
yyy.y course over ground degrees true  
CCCCCCCC is icon to be used for the target <=8 characters.  
(The string refers to CCCCCCCC.bmp file.  
The icon can also be chosen in the Asset Table of the Tracker Form.)  
ddmmyy is the date (UTC)  
hhmmss is the time (UTC)  
zzzzzz is the numeric alarm code (0 if no alarm). An alarm code of 1 will cause the tracker to track the asset.

**Sample Session:**

The following is an example of a possible session to send asset information to Tracker from a client program. \r\n is used to indicate the carriage return-line feed combination that terminates a message.

[From Server] SEND PASSWORD\r\n

[To Server] SECRET\r\n

[From Server] OK\r\n

[To Server]  
\$PFUGTAR,4330.000,N,07940.000,W,NAME,Comment,10.0,45.0,ICON\r\n

[From Server] OK\r\n

[To Server] QUIT\r\n

[From Server] GOODBYE\r\n

### **\$PFUGCFG Message:**

To enable outbound TCP/IP messages, first the user must, click the 'Enforce unique Asset Labels' tick box under Settings | Interface | Options

If 'Enforce unique Asset Label' is selected and TCPIP interface is selected from Settings | Interface, then Tracker will display a 'Configure Asset' icon on the Track tab.

Selecting on or more assets and clicking this button will cause Tracker to output a TCPIP Message.

The message sent via TCP/IP is as follows:

```
$PFUGCFG,X,ASSET1_ID,ASSET1_LABEL,ASSET1_GROUPNAME,ASSET2_ID,  
ASSET2_LABEL,ASSET2_GROUPNAME,...
```

Where X is the number of Assets in the string.

### **Event Message:**

An alternative input message, the 'Event Message', is as follows:

```
EVENT,AAAAAA,x1,x2,x3,...
```

#### **Where:**

AAAAAA is the asset id.

Each field (x1, x2, x3) contains a ID/value pair separated by an equal sign (=).

The order of the fields does not matter.

Field ID's are not case sensitive.

The decimal separator must be '.' regardless of localization.

Mixing fields with Local and UTC date and time fields in a single record is not allowed.

The "Latitude" and "Longitude" fields are required.

Valid ID's are:

Latitude:	'dd.dddd'
	Latitude in decimal degrees (negative values are south)
Lat:	Same as "Latitude"
Longitude:	'ddd.dddd'
	Longitude in decimal degrees (negative values are west)
Lon:	Same as "Longitude"
Altitude:	ddd.d
	Altitude in metres
Alt:	Same as "Altitude"
AltFeet:	Altitude in feet

Time: 'hhmmss'  
 The time of the event (UTC)  
 TimeLocal: 'hhmmss'  
 The local time of the event.  
 Tracker will calculate UTC based on the current Windows time zone information, and treat the result as a 'Time' field  
  
 Date: 'ddmmyy'  
 The date of the event (UTC)  
 DateLocal: 'ddmmyy'  
 The local date of the event  
 Tracker will calculate UTC date based on the current time zone information, and treat the result as a 'Date' field  
 Speed ddd.d  
 Speed over ground in km/h  
 Course: ddd.d  
 Course over ground in decimal degrees (True)  
 CourseMag : ddd.d  
 Course over ground in decimal degrees (Magnetic)  
 Tracker will convert the course into True, and treat the result as 'Course' field  
 Comment: aaaaaaa  
 Text comment for this event.  
 AlarmCode: dddd  
 Alarm code for this event  
 CallCode: dddd  
 Call code of this event  
 Icon: aaaaaaa  
 Icon to use for displaying asset at this event location  
 UserInt: dddd  
 User defined integer value  
 UserFloat: dd.d  
 User defined Floating point value  
 UserText1: aaaaaaa  
 User defined text value  
 UserText2: aaaaaaa  
 User defined text value