

HyperTrack™ Antenna

Version 1.3.0 Track Settings

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Revision 1.0

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1 Overview

HyperTrack software and firmware version 1.3.0 makes improvements to the tracking loop. With these improvements new tracking settings were added and old settings removed. It is highly recommended that the track settings are updated to reflect the settings below.

2 Version 1.3.0 Track Settings

1. Open the settings dialog from the toolbar.



2. Navigate to Mission →Track, see Figure 1.
3. Ensure the track settings are set per Table 1.
4. Navigate to Hardware →Feed 1, see Figure 2.
5. Ensure “Scan Frequency” is set to 1000 Hz.

Table 1 - Version 1.3.0 Track Settings

| Setting Name | Value |
|-------------------------------|---------|
| Dynamic Bw Gain | 0.03 |
| Dynamic Bw Threshold | 0.35 |
| Dynamic Bw Threshold Gain | 100 |
| Dynamic Bw Min | 0.5 Hz |
| Dynamic Bw Max | 2.5 Hz |
| Dynamic Est. Smoothing Factor | 50 |
| Error – Matched Filter Length | 10 |
| SCM High Pass Filter | Enabled |
| Loop Update Rate | 100 Hz |

Figure 1 - Version 1.3.0 Track Settings

Settings

Client Preferences

- Error Meter
- Arrow Keys
- Hand Wheels
- Joystick
- Mission**
 - Azimuth
 - Elevation
 - Designates
 - Location
 - Receivers
 - Slaving
 - Status
 - Track**
- Hardware
 - General
 - Date & Time
 - Network
 - Azimuth
 - Elevation
 - Stow
 - Auto Stow
 - Feed 1
 - Feed 2
 - Feed 3
 - Feed 4
 - Dehydrator

Mission - Track

Dynamic Bw Gain: 0.03

Dynamic Bw Threshold: 0.35

Dynamic Bw Threshold Gain: 100.00

Dynamic Bw Min: 0.50 Hz

Dynamic Bw Max: 2.50 Hz

Dynamic Est. Smoothing Factor: 50

Error - Matched Filter Length: 10

SCM High Pass Filter: **Enabled**

Loop Update Rate: 100

Apply

Figure 2 - Version 1.3.0 Feed Settings

Settings

Client Preferences

- Error Meter
- Arrow Keys
- Hand Wheels
- Joystick
- Mission**
 - Azimuth
 - Elevation
 - Designates
 - Location
 - Receivers
 - Slaving
 - Status
 - Track
- Hardware**
 - General
 - Date & Time
 - Network
 - Azimuth
 - Elevation
 - Stow
 - Auto Stow
 - Feed 1**
 - Feed 2
 - Feed 3
 - Feed 4
 - Dehydrator

Hardware - Feed 1

Permissions Limited - You may only edit the scan rate and detector gain table.

Enable: **Enabled**

Type: Quasonix SCM

Mode: Normal

Scan Frequency: 1000 Hz

Swap Lines: Normal

Line 0 Invert: Non-inverted

Line 1 Invert: Non-inverted

Add Band Edit Band Delete Band

| Name | Min Freq. [MHz] | Max Freq. [MHz] | Det. Gain Az [°/V] | Det. Gain El [°/V] | Align |
|--------------|-----------------|-----------------|--------------------|--------------------|-------|
| Lower L-Band | 1435 | 1535 | 7.1 | -5 | |
| Upper L-Band | 1780 | 1850 | 4.7 | -4.4 | |
| Lower S-Band | 2200 | 2290 | 2.2 | -2.3 | |
| Upper S-Band | 2360 | 2395 | 2.8 | -2.4 | |
| Lower C-Band | 4400 | 4940 | -1.5 | 1.5 | |
| Upper C-Band | 5091 | 5150 | -1.5 | 1.5 | |

Apply