Basic Setup Manual for RF Mono via Baozam

Introduction: Working with RF Electronics in Baozam Cloud

Baozam Cloud is an online platform designed to monitor and configure Iridium RF electronics remotely. It allows technicians to connect to any antenna, check its live parameters, and adjust all main settings directly from a web browser.

Once the RF board is online, Baozam displays real-time communication between antennas, detection activity, and synchronization data. Each connected antenna can be individually opened, configured, and saved under its assigned name.

Working in Baozam is based on two types of fields:

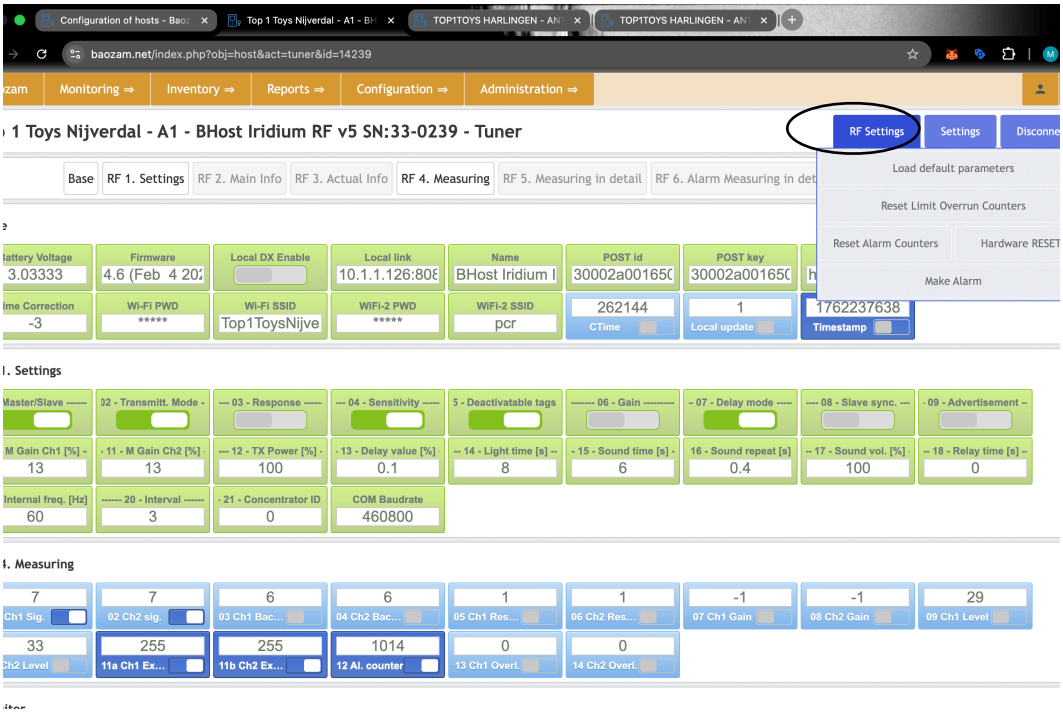
- **Green fields** – used for entering and changing values.
- **Blue fields** – used for reading current parameters and live data.

The platform enables you to:

- Adjust antenna sensitivity and detection parameters (Gain, Threshold, Filter).
- Calibrate synchronization between master and slave antennas.
- Monitor real-time detection and noise levels.
- Save and export configuration profiles.
- Diagnose errors and log antenna activity.

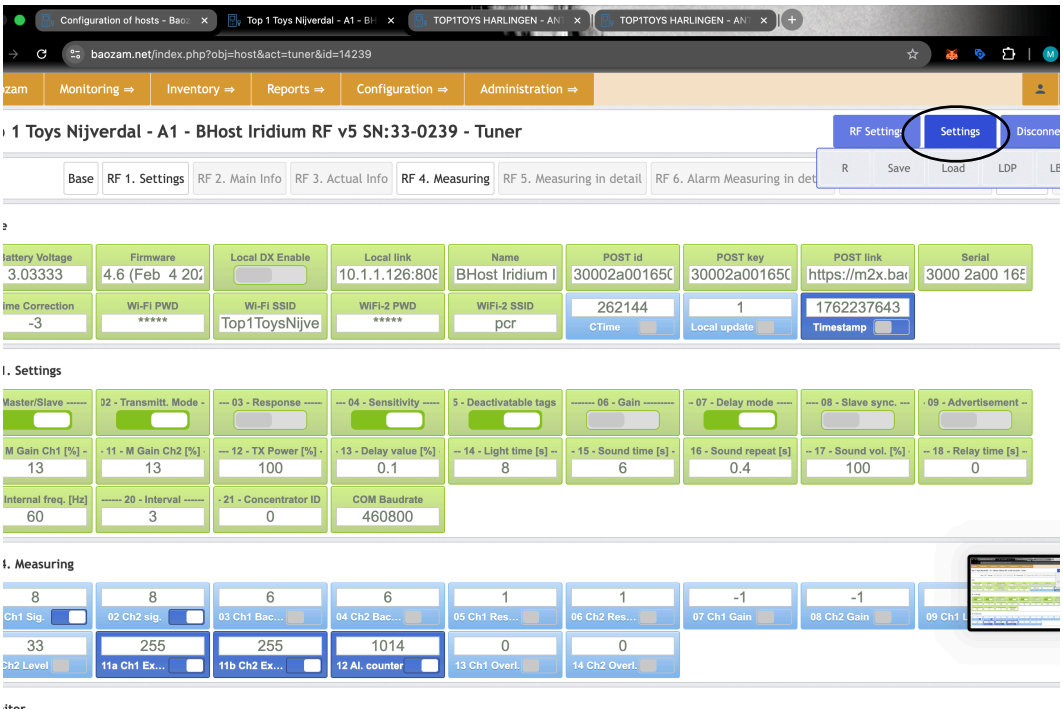
Each change made in Baozam must be confirmed by pressing **Enter** and then saved via the **Save** button in the top-right corner of the Settings window and save. This ensures all modifications are permanently stored in the antenna's memory.

RF Settings – Upper Right Menu Functions



Function	Description
Load Default Parameters	Restores all values to factory settings. Useful if you want to start configuration from scratch.
Reset Limit Overrun Counters	Clears counters of exceeded alarm or signal limits. Use after fixing false
Reset Alarm Counters	Resets total alarm count. Helpful before new testing or calibration.
Hardware Reset	Not used in Baozam. Has no effect on hardware or settings.
Make Alarm	Triggers a manual alarm for testing LED/sound indication or alarm output

Settings – Upper Right Menu Functions



Function	Description
R – Reload	Reloads all current values from the antenna into Baozam. Useful if parameters were changed but not yet visible.
Save	Saves all settings permanently to the antenna. Very important! Always press Save at the end of installation.
Other buttons	Not used. Do not change or click any other options in this panel.

Connect / Disconnect Panel

Function	Description
Connect	Connects Baozam to the RF board. Normally, this happens automatically when the device is online.
Disconnect	Ends the active session with the RF board. Usually not required for standard work.

Main Menu Bar Overview

At the top of the Baozam interface, you will find several tabs such as **Base**, **RF 1. Settings**, and **RF 4. Measuring**.
During standard installation we mainly use these three:

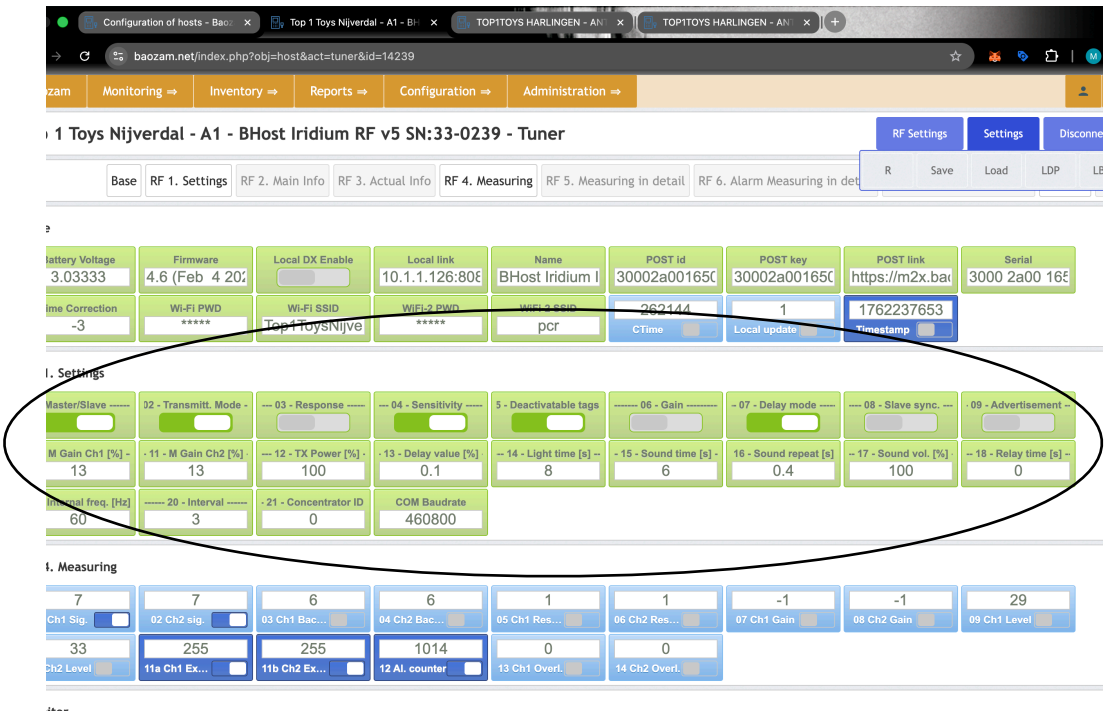
Base – used only for editing the **Wi-Fi SSID** and **Password (PSW)** if you need to connect the antenna to a new network. No other parameters are required here.

RF 1. Settings – this is the main configuration window where you adjust the detection parameters such as Gain, Threshold, Filter, and Synchronization. All tuning and calibration work is done here.

RF 4. Measuring – this tab displays real-time signal and noise graphs. It's used to verify detection stability and to observe tag response during testing. High noise or unstable signal usually indicates interference nearby.

RF 1. Settings – Description of Main Parameters

*When entering any value, you must always confirm it by pressing **Enter**.*
If you move the cursor over each field, a small tooltip will appear showing a short description of what the selected function does.



01 – Master / Slave
Defines if the antenna works as **Master** (independent or main control unit) or **Slave** (synchronized with the Master).
In single installations always use *Master* mode.

02 – Transmit Mode
Defines how the antenna transmits signals.
Keep default for standard operation (network synchronization).

03 – Response
Adjusts the reaction speed of detection.
Higher value = faster detection but may cause false alarms.

04 – Sensitivity
Sets detection sensitivity.
Increase carefully to improve detection distance. Reduce if false alarms occur.

05 – Deactivatable Tags
Enables detection of **paper labels**. Keep enabled unless only hard tags are used.

06 – Gain
Main power control of the antenna's transmitting section.
A higher value increases detection range but can create instability if set too high.

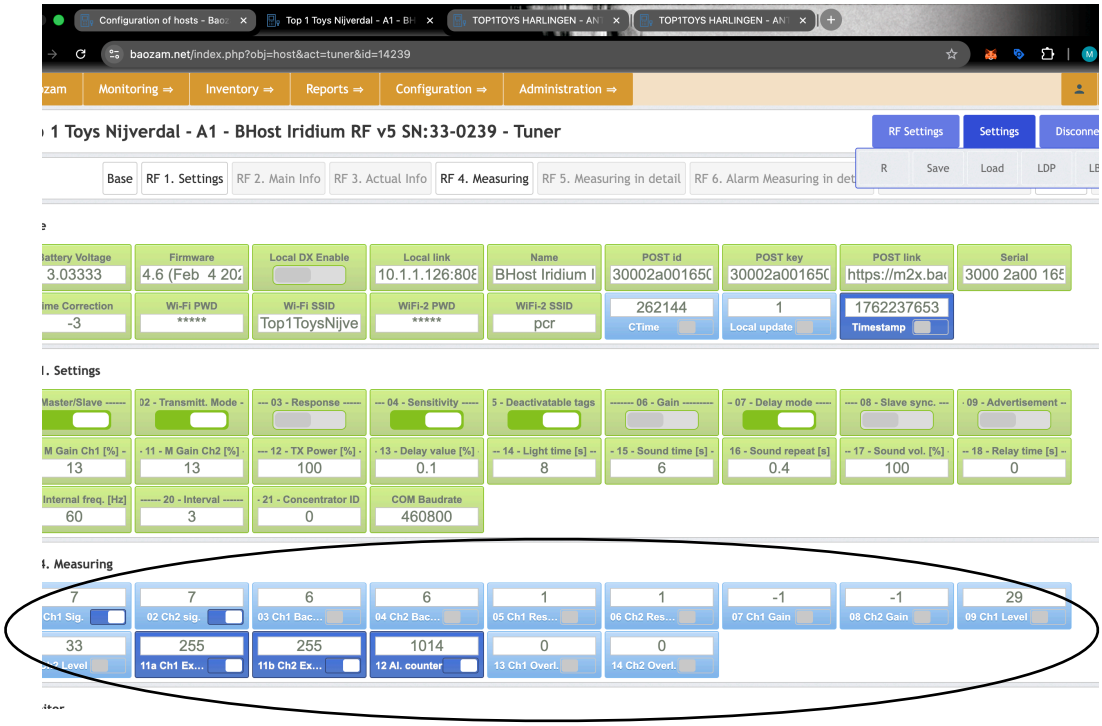
07 – Delay Mode
Adds short transmission delay for synchronization.
Use default setting unless interference is present.
08 – Slave Sync
Used for synchronization timing between Master and Slave antennas.
Keep on *Auto* for standard installations.

09 – Advertisement
Controls LED advertisement lighting (if available). Optional function.
10 – M Gain Ch1 [%]
Manual gain value for channel 1 (0–100 %). Active only when *Gain mode* is manual.
11 – M Gain Ch2 [%]
Manual gain value for channel 2 (0–100 %). Active only when *Gain mode* is manual.
12 – TX Power [%]
Defines transmitting power of the antenna.
100 % = maximum range, lower values can be used for small entrances.
13 – Delay Value [%]
Determines transmission delay when using network synchronization.
Default value (0.1 %) is recommended for most installations.
14 – Light Time [s]
Duration of the light alarm signal (in seconds).
15 – Sound Time [s]
Duration of the sound alarm signal (in seconds).
16 – Sound Repeat [s]
Interval between repeated sound signals during an alarm.
17 – Sound Volume [%]
Sets the volume level of the alarm buzzer (0–100 %).
18 – Relay Time [s]
Defines how long the relay output remains active during an alarm (in seconds).
19 – Internal Freq [Hz]
Operating frequency of the system. Must be identical for both antennas in a pair.
20 – Interval
Defines signal measurement interval used internally for diagnostics. Keep default.
21 – Concentrator ID
Reserved for network grouping. Not used in standard configuration.
COM Baudrate
Communication speed between antenna and system. Do not modify.

RF 4. Measuring – Monitoring Parameters

In the **RF 4. Measuring** window, the fields are used only for monitoring and diagnostic purposes.
During installation, the most important fields are **01, 02, 07, 08, 11a, 11b, and 12**.

01 / 02 – Channel Signal (Ch1 / Ch2)
These windows show the live signal levels for both channels.
For correct operation, the values should normally stay **below 50**.
Higher readings may indicate electrical interference or incorrect sensitivity settings.
07 / 08 – Channel Gain (Ch1 / Ch2)
Visible only when the antenna works in **Automatic Gain mode**.



They show the gain levels currently used by the electronics for each channel.
If false alarms occur and the system operates automatically (for example Ch1 = 19, Ch2 = 20), switch the antenna to **Manual Gain mode** and reduce both values by **1 point**.

11a / 11b – CH Exceeded (Alarm Counter)

These fields display the signal level that was exceeded at the moment of the last alarm.
If the alarm was triggered by a real tag, the values typically reach **255**.
If the alarm was false, the values are usually lower.

12 – AL Counter

Shows the total number of alarm activations detected by the system.
This helps verify stability and confirm that adjustments have reduced false alarms.

Standard Installation Procedure

During installation, connect to the antenna in **Baozam** and keep the electronics in **Automatic Gain mode**.
For installations of up to **six antennas**, all units can operate in **Master mode**.
If **false alarms** occur, follow these steps carefully:

1. Adjusting Transmitting Power

Open **RF 1. Settings** and locate **12. TX Power [%]**.
By default, the value is 100 %.
If false alarms appear, reduce it to **90 %**, confirm with **Enter**, and press **Settings → Save** in the top-right corner.
If the problem continues, lower it further to **80 %** and save again.

A small reduction in transmitting power often stabilizes the system without significantly reducing detection range.

2. Checking Gain Values in RF 4. Measuring

Open **RF 4. Measuring** and observe the windows **07** and **08**, which show the live **Gain values** for each channel (**Ch1 Gain** and **Ch2 Gain**).
These windows are visible only when the antenna operates in **Automatic Gain mode**.

They display the actual gain level the electronics are using to maintain stable detection. If you see that both channels are using high gain (for example **Ch1 = 22**, **Ch2 = 21**) and the system still generates false alarms, it means the automatic mode is working at its limit. In this case, it's recommended to switch to **Manual Gain mode** and reduce the values slightly.

3. Switching to Manual Gain Mode

Go back to **RF 1. Settings** and change the **06 Gain** parameter from *Auto* to *Manual*.
Then manually enter new gain values:

- **10. M Gain Ch1 [%] → 21**
- **11. M Gain Ch2 [%] → 20**

Always confirm each entry with **Enter**, then click **Settings → Save** to store the parameters permanently.

When in **Manual mode**, the antenna no longer adjusts gain automatically.
You can now fine-tune detection manually for each channel.

If false alarms persist, gradually reduce the gain further (e.g. 20 → 19 → 18) until the system becomes stable.
Lower gain values slightly reduce detection range but significantly improve stability.
Once tuning is complete, **don't forget to press "Settings → Save"** in the top-right corner — this step is essential to permanently store all parameters in the antenna memory.

Support

If you encounter a problem that cannot be resolved during installation, please contact our technical support via **WhatsApp** at

📞 **+421 948 335 963**