

QUICK START GUIDE for HAYABUSA V5

1 Connect the Battery Pack

Connect the battery pack to the detector.

- 1** Align the battery cable connector with the battery connector on the detector.


- 2** Insert the connector straight in until it is fully seated.


- 3** Tighten the locking sleeve by turning it clockwise.


- 4** Verify that the connection is secure. Make sure the cable is not twisted or under tension.



Connection Overview



Battery Pack



Detector (Connected)

Important

- Never connect or disconnect the battery pack in wet conditions.
- Ensure the connector is firmly secured.
- After use, wipe off moisture or dirt and store in a dry place.
- Store in a cool, dry location and avoid direct sunlight.

Battery Connector (Detector Side)



Battery Cable Connector (Battery Side)



Tip

When the connection is made correctly, the system will automatically detect the battery when the power is turned on.

2 Power On

Turn on the detector and allow the system to complete initialization.

- 1** Press the Power button.

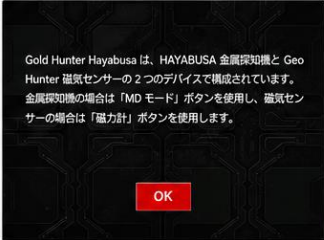
Press and release the Power button on the front panel.


- 2** Wait for the startup screen to appear.

The system will start initialization automatically.


- 3** Allow the system to complete initialization.

Initialization may take a few seconds. Do not operate any buttons during this process.


- 4** The Main Menu will appear automatically.

The detector is now ready to use.



About Power On

The detector performs a self-check and system initialization when powered on. This ensures stable and accurate operation.

- Do not press any buttons during initialization.
- Keep the search coil away from metal objects during startup.
- If an error message appears, refer to the Troubleshooting section.

Important

- Do not turn off the power during initialization. This may cause data errors.
- If the system does not start, check the battery connection and battery level.
- Use only the authorized battery pack. Using other batteries may cause malfunction.

Main Menu Overview

Six main functions are available from the Main Menu. Select the desired function by tapping the icon.



MD Mode



GPS



MagnetoMtr



Preference



Ground



Help



Tip

If the detector does not turn on, ensure the battery is properly connected and charged. Refer to the Battery Connection section for details.

3 Set the Threshold Point

Set the threshold (faint background audio) for maximum sensitivity and stable operation. Follow the steps below, then run Auto Sensitivity.

1 Open Metal Detection Mode

1 Main Menu

From the Main Menu, tap "探知モード(Detection Mode)".



2 Detection Mode Selection

Select "金属探知機(Metal Detector)".



3 Metal Detection Screen

The Metal Detection screen is displayed.



2 Locate the Sub Adjustment Dial

The Sub Adjustment Dial (threshold control) is used to set the threshold point.



**SUB ADJUSTMENT
(Threshold Control)**

3 Rotate the Dial Slowly

Turn the Sub Adjustment Dial slowly while listening to the audio through headphones.

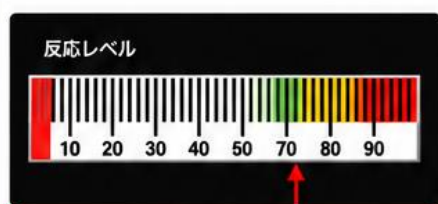


Counterclockwise
(-)

Clockwise
(+)

4 Find the Threshold Point

Find the point where the audio is very faint and continuous. This is the threshold point.



Find a very faint,
continuous background audio.

- ✓ Very faint, continuous audio is heard.
- ✓ Stable operation.
- ✓ Maximum sensitivity.

5 Start Auto Sensitivity

After setting the threshold point, press the "自動感度 (Auto Sensitivity)" button.



The detector will automatically set the optimum sensitivity.

Threshold Audio Guide

CORRECT (Optimal)



Very faint, continuous audio.
Best sensitivity.
Stable operation.



TOO LOW



Audio is very faint or intermittent.
Sensitivity is insufficient.
Detection depth will be reduced.



TOO HIGH



Audio is loud or unstable.
Noise increases and operation becomes unstable.



Important

- Always set the threshold before running Auto Sensitivity.
- Do not set the threshold too high in an attempt to increase sensitivity. This may cause unstable operation and reduce detection accuracy.
- If the threshold is set too low, deep or small targets may not be detected. Always start from low and increase slowly until the correct point is found.



Tips

- Use headphones in a quiet environment for better accuracy.
- If the audio is too faint or intermittent, rotate the dial clockwise (+).
- Re-adjust the threshold whenever ground conditions change.

4 Run Automatic Sensitivity (Auto Sensitivity)

After you have set the threshold point, run Auto Sensitivity to let the detector automatically analyze the environment and set the optimum sensitivity.

1 Open the Metal Detection Screen

After setting the threshold point, make sure the Metal Detection screen is displayed.



2 Tap “自動感度” (Auto Sensitivity)

Tap the “自動感度 (Auto Sensitivity)” button to start.



3 Calibration in Progress

The calibration screen will appear and the detector will begin analyzing the environment automatically.



Please wait while the detector analyzes the environment and target conditions.

4 Calibration Complete

When calibration is complete, the progress bar reaches 100 and the detector is set to the optimum sensitivity automatically.



Tap “OK” to return to the Metal Detection screen.

What Auto Sensitivity Does

Auto Sensitivity automatically analyzes:

- Ground conditions
- Environmental noise
- Target conditions

It then sets the optimum sensitivity for maximum depth and stability.



During Calibration

- Do not move the coil.
- Keep the coil in the air or on the ground without moving.
- Wait until the progress bar reaches 100.



After Calibration

- ✓ Optimum sensitivity is set automatically.
- ✓ Stable operation is achieved.
- ✓ Maximum detection depth is enabled.



Important

- Always set the threshold before running Auto Sensitivity.
- Do not set the threshold too high or too low. Incorrect threshold may cause unstable operation.

- If the environment changes (different location or soil), run Auto Sensitivity again.
- Use headphones for best results.



Tips

Auto Sensitivity takes only a few seconds. Be patient and wait for calibration to complete.

5 Search for Target

After Auto Sensitivity is complete, you can start searching for targets. Follow the steps below to scan the area and identify possible targets.

1 Return to Metal Detection Screen

After Auto Sensitivity is complete, tap “OK” to return to the Metal Detection screen.



Tap “OK” to return to the Metal Detection screen.

2 Hold the Detector Properly

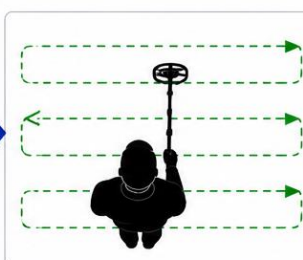
Hold the detector with both hands and keep the coil parallel to the ground. Move slowly and steadily.



- ✓ Keep the coil close to the ground.
- ✓ Maintain a steady height and speed.

3 Scan the Area

Sweep the coil left and right in a smooth, overlapping motion. Cover the entire area systematically.



Sweep left and right in parallel lines. Overlap each sweep slightly.

4 Detect and Identify Targets

When a target is detected, the unit will produce an audio response and the response level will increase. Check the response level and audio to evaluate the target.



- ✓ Higher response level = stronger target.
- ✓ Use audio tone and level to judge the target.

Audio Response Guide

反応レベル (目安)	音の強さ	意味
10 - 30	弱い音	弱い信号 (小さな目標や深い目標) Weak signal (small or deep target)
30 - 60	中程度の音	中程度の信号 (中間的な目標) Moderate signal (medium target)
60 - 90	強い音	強い信号 (大きな目標や浅い目標) Strong signal (large or shallow target)

Tips for Searching

- ✓ Sweep slowly for best results.
- ✓ Keep the coil close to the ground.
- ✓ Avoid rapid or jerky movements.
- ✓ Scan from different directions to confirm the target.
- ✓ Mark the target location if necessary, then investigate further.



Target Evaluation

To evaluate a target:

- Check the response level
- Listen to the audio tone
- Rescan from different angles
- Narrow the area to pinpoint the target location



Important

- Do not swing the coil too high from the ground. This may cause weak signals or missed targets.
- Recalibrate (Auto Sensitivity) if the ground conditions change.



Tips

- Use headphones for better audio response.
- Practice in known areas to become familiar with target responses.
- Patience and slow, steady sweeping will improve your results.

6 Confirm the Target

Confirm the target by checking the response from multiple directions and rechecking the response level and audio tone. Follow the steps below to accurately confirm the target.

1 Stop Over the Target

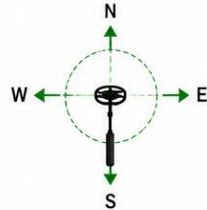
Stop sweeping when you get a strong response. Hold the coil over the suspected target location.



✓ Note the response level and audio tone.

2 Check from Different Directions

Sweep the coil from different directions (North-South, East-West). The target should respond strongly from all directions.



✓ A real target will give a consistent response from all directions.

3 Recheck Response Level and Audio Tone

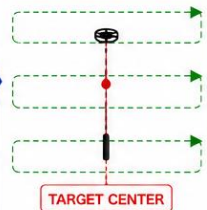
Compare the response level and audio tone from each direction. The readings should be similar and stable.



✓ Stable and similar readings = likely a real target.

4 Pinpoint the Target Center

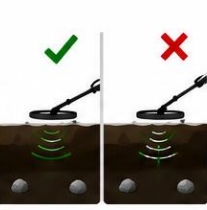
Use short, careful sweeps to pinpoint the exact center of the target.



✓ Mark the center point or spot.

5 Verify with Ground Balance (If Needed)

If the ground conditions are difficult, recheck the ground balance and response. This helps reduce false signals.



✓ Proper ground balance improves accuracy.

6 Confirm the Target

If all checks are consistent and the target responds clearly, the target is confirmed. You can now proceed to mark or dig.



✓ Target confirmed! Proceed to the next step.

What to Look For

Indicator	Good Target	False Signal / Trash
Response from All Directions	Strong and consistent from all directions.	Weak or appears only from one direction.
Response Level Stability	Stable and similar readings.	Fluctuates or changes often.
Audio Tone	Clear and consistent sound.	Irregular, broken, or unstable tone.
Pinpoint Accuracy	Easy to pinpoint the center.	Hard to pinpoint or no clear center.

Tips for Confirmation

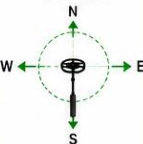
- ✓ Always check from multiple directions.
- ✓ Keep the coil parallel to the ground.
- ✓ Sweep slowly and carefully.
- ✓ Compare readings and audio tone.
- ✓ Good targets are consistent and repeatable.



Visual Example

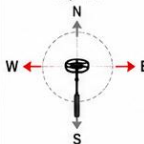
Good Target ✓

Strong response from all directions.



False Signal / Trash ✗

Weak or inconsistent response.



Important

- Do not dig until you are sure the target is real.
- Always confirm the target before marking or digging.
- Proper confirmation saves time and increases your success rate.



Tips

- Use headphones for better audio clarity.
- If you are unsure, repeat the confirmation steps.

- Practice makes perfect.
- The more you confirm, the more accurate you will become.



Accurate confirmation leads to successful detection!

7 Perform Vertical Scan (Vertical Scan)

Use vertical scan to estimate the burial depth of the target. Please follow the steps below to perform a vertical scan.

1 Open Scan Mode

From the main menu, select "Scan Mode", then select "Scanner" to continue.



✓ Select "Scanner"

2 Select Vertical Scan

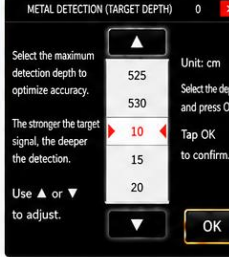
On the scan mode selection screen, select "Vertical Scan".



✓ Select "Vertical Scan"

3 Select Maximum Detection Depth

Select the maximum detection depth up to the target. This will set the maximum depth range of the scan.



✓ Select the maximum detection depth and press OK

4 Start Vertical Scan

Keep the coil at a height of 10 to 15 cm above the ground, then press the "Start Scan" button to begin measurement.



✓ Press "Start Scan" to begin

5 Do Not Move the Coil

During the scan, keep the coil stationary at the same height (10~15 cm) and wait.

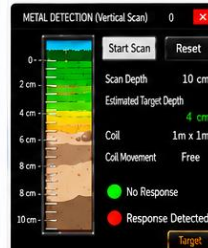


CAUTION

- Do not move the coil
- Do not tilt the coil
- Keep the height (10~15cm)
- Wait until measurement is complete

6 Check the Response

Check the response level and sound. The depth with the strongest response is the estimated target depth.



✓ The strongest response indicates the target depth

6 Save Scan Data

The vertical scan data will be saved.

GPS LOCATION DATA

SLOT 1 EMPTY	SLOT 2
2026/05/30 10:37:20 LAT:35.040613 L	SAVE
SLOT 3 EMPTY	DELETE
SLOT 4 EMPTY	OK

Saved Data Details

- Date/Time: 2026/05/30 10:37:20
 - Latitude: 35.040613
 - Longitude: 136.588744
 - Notes: (Internal data)
- The saved survey location can be recalled later.

Contents Saved

HR Scan Map + GPS Position Data (Latitude / Longitude) + Date and Time = Saved to the Selected Slot

IMPORTANT

- Perform automatic sensitivity adjustment before scanning
- Using headphones makes it easier to hear responses
- Measure on as level ground as possible



TIPS

- If the response is weak, slightly adjust your position and re-scan
- If multiple targets are present, the strongest response will be displayed
- Practice scanning to improve your accuracy
- Increasing the number of scans helps more accurate analysis



Vertical scan is an important function to estimate target depth before excavation.

8 Perform HR Scan (水平スキャン)

Use Horizontal Scan (HR Scan) to determine the target's horizontal position (left/right) and size.
Follow the steps below to perform an HR scan.

1 Activate GPS

Turn on the GPS function before performing HR Scan.



Tap "GPS受信開始" and wait until satellite count is shown.

Make sure GPS is activated before proceeding to HR Scan.

2 Select Scan Mode

From the Main Menu, select "探知モード", then choose "スキャン".



Select "スキャナー (Scanner)".

3 Select Horizontal Scan

From the Scan Mode Selection screen, choose "水平スキャン (Horizontal Scan)".



Select "水平スキャン (Horizontal Scan)".

4 Start the HR Scan

Press "スキャン開始 (Start Scan)" will be displayed.



Horizontal Scan screen (initial display).

5 Sweep Horizontally

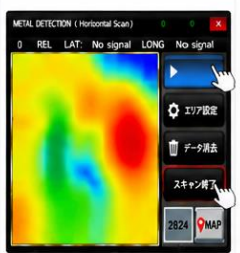
Move the coil left and right horizontally while keeping it parallel to the ground.



Move slowly and steadily. Keep the coil parallel. Do not tilt the coil.

7 Stop the Scan

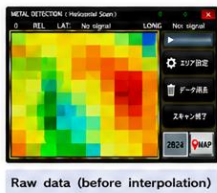
After covering the target area, press "スキャン終了" (End Scan).



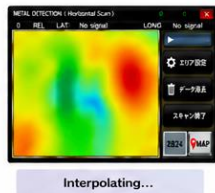
Press "スキャン終了" (End Scan).

After Ending the Scan

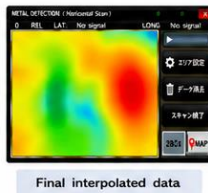
The device will start interpolating (data processing) automatically.



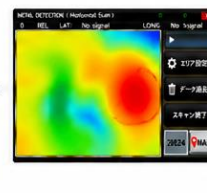
Raw data (before interpolation)
Blocky and coarse data.



Interpolating...
The device is interpolating and processing the data.



Final interpolated data
Smoothed data for better accuracy.



Final Result
The interpolated map shows the strongest response (red area) at the target center.
This map helps you identify the horizontal position and size of the target.



Important

- Perform Vertical Scan first to know the target depth.
- Keep the coil parallel to the ground during scanning.
- Tilting the coil may cause inaccurate results.



Tips

- Use headphones for better audio response.
- If the response is weak, scan again from a different position.
- The more accurately you scan the center, the easier digging will be.



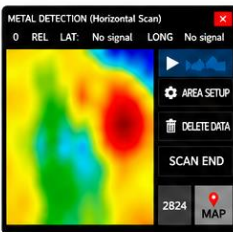
HR Scan helps you find the exact horizontal position of the target.

9 Save Survey Data and GPS Data

Save HR scan map and GPS location information to a slot.
Please follow the steps below to save the data.

1 HR Scan Complete

After post-processing, the HR scan map will be displayed. Check the area with the strongest response.



The strongest response (red area) indicates the target location.

2 Move to Target

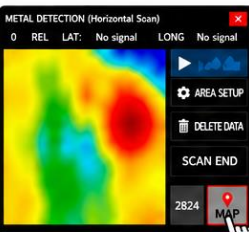
Move to the location with the strongest response. Stand directly over the center of the target.



Stand over the center of the target.

3 Press MAP Button

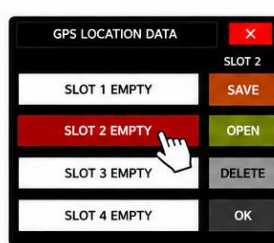
Press the MAP button to save the survey data and GPS position information.



Press the MAP button.

4 GPS Location Data Screen Opens

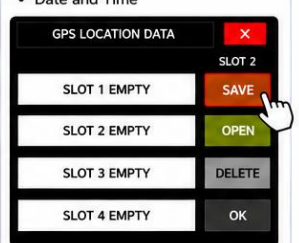
The GPS LOCATION DATA screen will be displayed. Select an empty slot or overwrite existing data.



Select the slot to save to.

5 Press SAVE

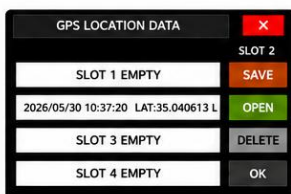
Press the SAVE button to save the data.
Data saved:
• HR Scan Data
• GPS Latitude / Longitude
• Date and Time



Press the SAVE button to save.

6 Save Complete

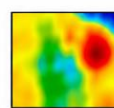
The data will be saved to the selected slot.



Saved Data Details

- Date/Time: 2026/05/30 10:37:20
 - Latitude: 35.040613
 - Longitude: 136.588744
 - Notes: (Internal data)
- The saved survey location can be recalled later.

Contents Saved



HR Scan Map



GPS Position Data (Latitude / Longitude)



Date and Time



Saved to the Selected Slot



IMPORTANT

- Move to the target center before saving the data.
- Start GPS reception before performing HR scan.
- If GPS reception is not available, location information will not be saved.



TIPS

- Using headphones makes it easier to confirm the response.
- If the response is weak, scan from different directions.
- Remeasuring the center improves accuracy.



Saving HR scan map and GPS position information helps you verify the exact location later during the survey.

10 Open Saved Survey Data

Load saved survey data to review previous results and GPS location information.

1 STEP 1 Open the File Screen

Open the File screen from the main menu. A list of saved survey data will be displayed.

2 STEP 2 Select the Data

Select the survey data you want to open. The selected data will be highlighted. Make sure the correct data is selected before proceeding.

3 STEP 3 Press OPEN

Press the OPEN button. The selected survey data will be loaded from memory.

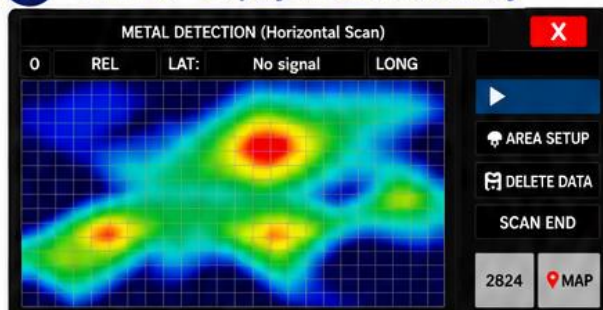
4 STEP 4 Confirm GPS Information

The saved GPS position and survey data information will be displayed. Please check the contents.

5 STEP 5 Press SCAN DATA

Press the SCAN DATA button. Prepare to display the saved HR scan map.

6 STEP 6 Display the Loaded Survey



The HR scan screen will open automatically. The saved survey map will be displayed. You can review and analyze the loaded data.



- A new scan cannot be started while viewing saved data.
- Saved data cannot be modified.
- GPS position data and HR scan data are loaded at the same time.
- Past survey records can always be checked.



Icon Explanations



Starting a new scan will clear saved data



Saved data cannot be modified



GPS information and HR scan data are loaded together



Past survey history can always be checked