

laboratory 599
DISCOVERY

HF/50MHz Transceiver **TX-500**

Ultra-compact transceiver
Lab599 Discovery TX-500

Lab599 Discovery radio tailored for adventure, for extremes, for using in places unattainable before, with no sacrifice of performance or features.





Software-Defined Radio



General coverage receiver
 0.5 — 56 MHz



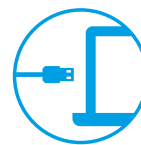
Adjustable output power
 1 — 10W



Digital Hi-Performance Filtering
 (4 receive, 2 transmit)



48 kHz Build-in Hi-Speed
 Pan-adapter



I/Q Output

The Lab599 Discovery covers 160–6 meters, all modes, with a maximum power output of 10W. It comes with true desktop-radio features, like auto-notch, noise reduction, and RX/TX EQ. The transceiver has a built-in fast pan-adapter, for easier search for new contacts and evaluation of band conditions wherever you are, at any time.



Discovery TX-500 — portable highly energy-efficient transceiver

In receive mode, current drain can be as low as 100 mA — a unique feature on the market. Transmit efficiency is also excellent, with improved battery life.

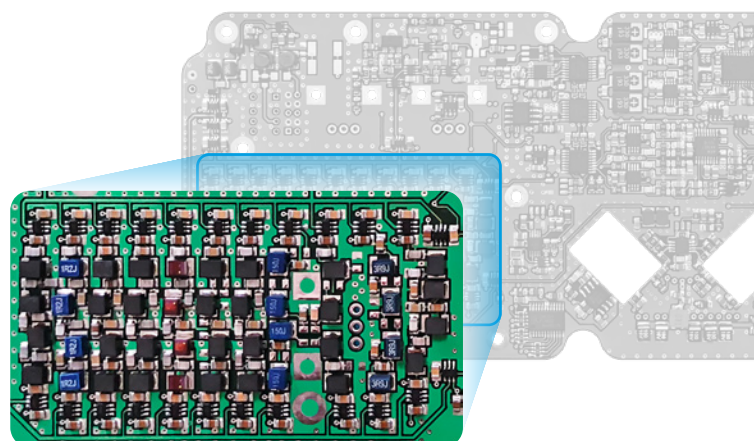


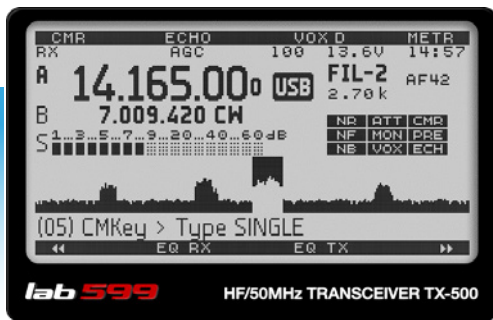
Unique form-factor

The Lab599 Discovery unique form-factor allows you to operate from anywhere. The transceiver is only 30 mm thick, including knobs, weighing only 0.55 kg. Fold out the tilted-feet at the rear for use on a desktop or picnic table.

11 discrete RF band-pass filters

Discovery TX-500 has 11 discrete RF bandpass filters. The RF signal is only passed through one of the band-pass filters — any out-of-range signals are rejected.



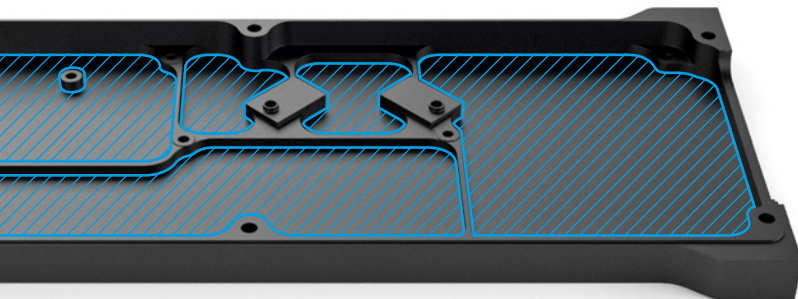
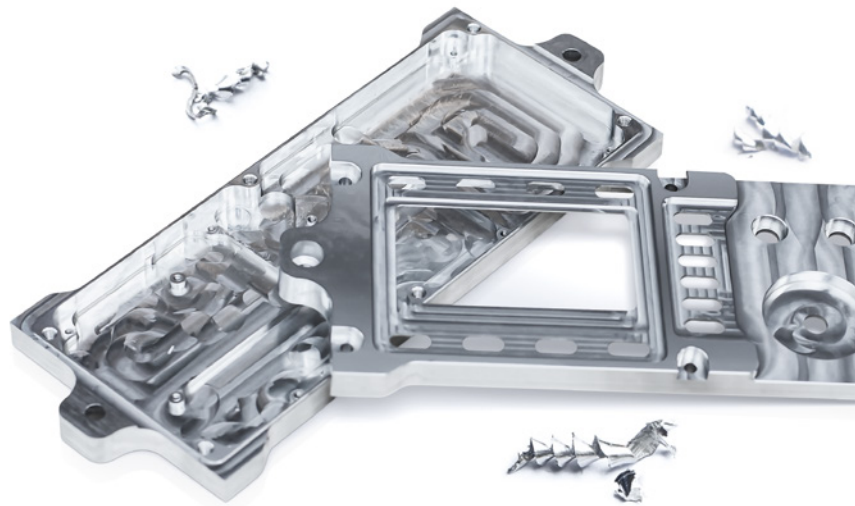


Built-in panadapter

The transceiver features a built-in high-performance panadapter, for better search for new contacts and evaluation of band conditions — wherever you are, at any time.

Aluminum alloy body

The transceiver's body is made of durable aluminum by the method of precision milling, to ensure a unique shock protection and provide good heat removal from the output part of the transmitter.



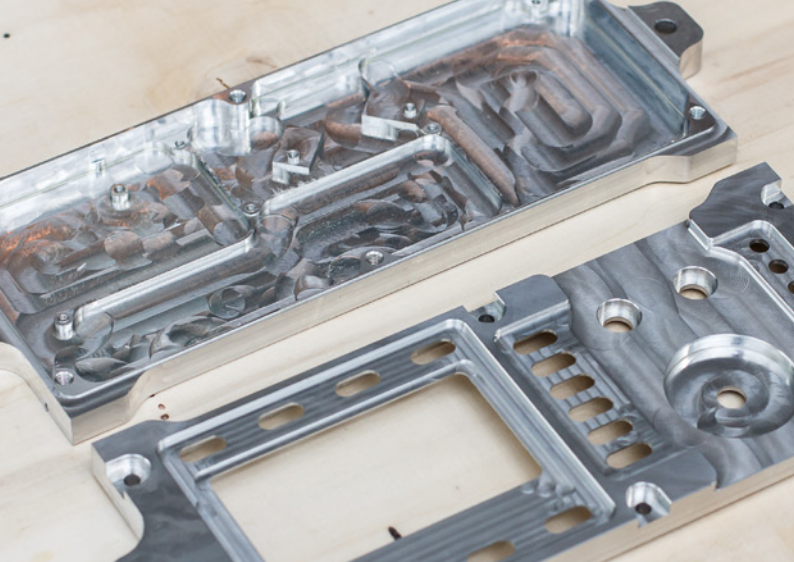
Well shielded inner units

To achieve high sensitivity of the transceiver, separate functional units are isolated from mutual influence and external interference by partitioning walls installed in the device case.

Dust and liquid protection

Thanks to the liquid-protected housing and the absence of through-holes, spatter resistant plugs, valcoders with sealing rings, the transceiver will work reliably in extreme conditions, giving you real pleasure from traveling. The case is also covered with a layer of black anodizing substance, to maintain an attractive appearance for a long time, even during extreme operation.





Specifications

GENERAL FEATURES

- 160–6-meter ham bands;
- General 'receive' coverage 0.5 - 56.0 MHz;
- All modes: SSB, CW, DIG, AM, FM;
- High-performance 32-bit floating-point DSP;
- Current drain as low as 100 mA in 'receive' mode (backlight on, preamp off, no signal);
- External power supply DC 9-15V, 1 to 3A typical in transmit;
- High-contrast LCD with 256×128 px;
- High-performance real-time pan-adaptor (48 kHz wide);
- On-line firmware updates;
- Rear folding kickstands for viewing angle and transportation;
- Ultra-compact size (H×W×D):
90 mm (3.5") × 207 mm (8.1") × 21 mm (0.8");
- Weight: 0.55 Kg (19,4 oz).



RECEIVER *

- Sensitivity (MDS) -136 dBm (typ. with preamp on);
- Quadrature down-sampling mixer compatible with PC-based SDR (software defined radio) applications;
- Receiver I/Q outputs for PC soundcard;
- Switchable low-noise preamp and attenuator;
- 3-band receive audio equalizer;
- 4 adjustable digital filters;
- Automatic notch filtering;
- Adjustable noise reduction and noise blanking;
- Audio Output ext. speaker, 3W typ.

TRANSMITTER *

- Adjustable output, 1 to 10W HF (7W 6m);
- Rugged, SWR and temperature-protected final amplifier stage;
- Carrier Suppression > 50 dB typ.;
- Harmonic / Spurious Outputs > 50 dB below carrier;
- CW Sidetone/Transmit offset 400-1200 Hz, adjustable;
- Spiker-microphone with PTT;
- 3-band microphone audio equalizer;
- 2 adjustable digital filters;
- DSP RF speech processing for excellent 'punch'.

OTHER FEATURES

- Internal CW keyer with 10-300 CPM range;
- 100 general-purpose memories store VFOs, modes, etc.;
- Computer control via USB;
- Full remote-control command set (with kenwood emulates);
- One-click online firmware upgrades (with free PC software).

Package include

1. Speaker-microphone;
2. CAT cable for on-line software update;
3. Power cable for external power source DC 9-15V (battery not include);
4. Headset and mic adapter with PTT (3.5 mm jack);
5. CW adapter (3.5 mm jack);
6. Additional connector GX12 type, 7 pins.



* Specifications apply only within ham bands except as noted. All measurements taken with 13.8 VDC supply

Contact us

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