

599
lab



PRODUCT
CATALOG **2025**



TX-500 DISCOVERY

HF/50MHz Portable SDR Transceiver

The Lab599 TX-500 DISCOVERY is a compact amateur shortwave transceiver covering the 160–6 meter amateur bands (0.5–56.0 MHz) in all modes, with a maximum output power of 10 watts.

This transceiver provides essential features of a desktop radio, including a notch filter, noise reduction, impulse noise suppression, a 48 kHz-wide panoramic display, receive and transmit audio equalizers, I/Q outputs, CAT control capability, and easy USB firmware updates.

The transceiver's chassis is precision-milled from durable aluminum alloy and coated with an anodized protective layer, giving it a distinctive appearance, reliable impact resistance, and effective heat dissipation for the transmitter's final stage. High-precision machining and a sealed design with no through-holes make the transceiver splash- and dust-resistant, ensuring reliable performance even in extreme conditions.

PART NUMBER: LAB-TX500

MAIN FEATURES:

- 1160-6 meter amateur bands
- Continuous frequency range on receive: 0.5 to 56.0 MHz
- Adjustable power from 1 to 10 watts
- Supported modulations: SSB, CW, DIG, AM, FM
- High-performance 48 kHz wide real-time pan-adapter
- High performance 32-bit floating point DSP processor
- Efficient power consumption — up to 100mA in receive mode
- External DC 9-15V power supply, 1 to 3A in transmit mode
- High contrast monochrome LCD display, 256×128 pixels resolution
- Internal software update via USB interface
- Housing made of aluminum alloy
- Dimensions (L×W×H): 228 × 90 × 30 mm
- Weight: 550 gr.

PACKAGE INCLUDES:

1. HSM-500 Hand Speaker-Microphone — 1 pcs.
2. AD-502 CAT-USB Adapter — 1 pcs.
3. AD-504 Power Cable — 1 pcs.
4. AD-501 MIC/SPK/PTT Adapter — 1 pcs.
5. AD-503 CW Adapter — 1 pcs.
6. GX12 plug, 7 pin — 1 pcs.



TX-500PRO

HF/VHFL Portable SDR Transceiver

The professional compact shortwave transceiver Lab599 TX-500PRO is designed to ensure reliable communication in remote and hard-to-reach areas under challenging operating conditions. It can be used for organizing professional, emergency, or backup communication in various industries and sectors, as well as for tourism and emergency services.

The transceiver offers exceptional reliability thanks to its well-engineered circuitry and durable CNC-milled duralumin chassis. Its splash- and dust-resistant design, coupled with a non-glare, high-contrast monochrome display, ensures usability in demanding environments. Unique features such as ultra-low power consumption, lightweight construction, and compact dimensions provide excellent autonomy and portability.

The user interface is optimized for channel mode operation, making it easy to use even for operators with minimal training. Additionally, channel programming via PC minimizes setup time and allows for quick deployment of the transceiver in the field.

PART NUMBER: LAB-TX500

MAIN FEATURES:

- Continuous frequency range: 0.5 — 56.0 MHz;
- Adjustable power from 1 to 10 W
- 100 programmable channels
- Supported modulations: SSB (USB, LSB), CW, DIG, AM, FM
- Possibility of connecting an external digital speaker microphone
- Efficient power consumption — up to 100 mA in receive mode
- External power supply DC 9-15V, from 1 to 3A (in transmit mode)
- High-contrast monochrome LCD display, resolution 256 × 128 pixels
- Updating the internal software via USB interface
- Software for programming channels from a PC
- Housing made of aluminum alloy
- Dimensions (L×W×H): 228 × 90 × 30 mm
- Weight: 550 g.

PACKAGE INCLUDES:

1. HSM-500 Hand Speaker-Microphone — 1 pcs.
2. AD-502 CAT-USB Adapter — 1 pcs.
3. AD-504 Power Cable — 1 pcs.
4. AD-501 MIC/SPK/PTT Adapter — 1 pcs.
5. AD-503 CW Adapter — 1 pcs.
6. GX12 plug, 7 pin — 1 pcs.



TX-500PRO ALTAI

HF/VHFL Portable SDR Transceiver

The Lab599 TX-500PRO ALTAI is a professional-grade compact shortwave transceiver designed for reliable communication in remote and hard-to-reach areas under challenging conditions. While originally intended for professional use, it offers features that make it appealing to amateur radio enthusiasts seeking a rugged and versatile device.

The TX-500 ALTAI transceiver stands out with its durable CNC-milled aluminum alloy body, splash- and dust-resistant design, and a high-contrast display that remains easy to read even in bright sunlight. The absence of encoders and extra buttons simplifies operation, reduces the likelihood of user errors, and enhances the unit's sealing against the elements. Its exceptionally low power consumption, lightweight design, and compact size ensure outstanding portability and operational independence.

The user interface is streamlined for channel mode, making it intuitive even for users with minimal prior experience. PC-based channel programming further simplifies setup, allowing for quick and efficient deployment of the transceiver in the field or during portable operations.

PART NUMBER: LAB-TX500ALT

MAIN FEATURES:

- Continuous frequency range: 0.5 to 56.0 MHz
- Adjustable power from 1 to 10 W
- 100 programmable channels
- Modulation support: SSB (USB, LSB), CW, DIG, AM, FM
- Possibility to connect an external digital speaker-microphone
- Efficient power consumption — up to 100 mA in receive mode
- External power supply DC 9-15V, from 1 to 3A (in transmit mode)
- High contrast monochrome LCD display, 256×128 pixels resolution;
- Internal software update via USB interface
- Software for programming channels from PC
- Housing made of aluminum alloy
- Dimensions (L×W×H): 228 × 90 × 30 mm
- Weight: 525 g.

PACKAGE INCLUDES:

1. HSM-500 Hand Speaker-Microphone — 1 pcs.
2. AD-502 CAT-USB Adapter — 1 pcs.
3. AD-504 Power Cable — 1 pcs.
4. AD-501 MIC/SPK/PTT Adapter — 1 pcs.
5. AD-503 CW Adapter — 1 pcs.
6. GX12 plug, 7 pin — 1 pcs.

TX-500MP

HF/VHFL Manpack Transceiver

The TX-500MP is a unique compact portable HF transceiver in a «manpack» format, designed for professionals and enthusiasts who prioritize mobility, responsiveness, and extended autonomy. Built on the proven TX-500 platform, this transceiver has demonstrated its reliability over time.

The transceiver is engineered for demanding environments, featuring a rugged aluminum alloy chassis that protects against mechanical damage. Its sealed design with no through-holes prevents dust and moisture ingress. Exceptionally low power consumption, combined with the BP-550 battery pack, ensures extended autonomous operation.

The TX-500MP offers a comprehensive feature set while remaining user-friendly, appealing to both seasoned operators and those with limited experience. Its channel mode with pre-programmable settings simplifies operation and ensures quick deployment.

A built-in automatic antenna tuner enhances versatility, enabling seamless operation with various antennas, including portable models. This ensures rapid readiness for on-air communication, which is especially critical in emergency situations.



MAIN FEATURES:

- Continuous frequency range on receive: 0.5 - 56.0 MHz
- Frequency range on transmit: 1 - 30 MHz with ATU; 45 - 56 MHz
- Support modes: SSB, CW, AM, FM, DIG
- Built-in automatic antenna tuner, matching range: 6-400 ohms
- Frequency stability: ± 0.5 ppm (-10°C to +60°C);
- High-performance 32-bit DSP processor floating point;
- Power consumption in receive mode - up to 100mA (with screen backlight, without preamplification, without signal);
- External power supply DC 9-15V, 1 to 3A (in transmit mode)
- High-contrast monochrome LCD display, 192x96 pixels resolution
- 100 programmable channels
- Software for programming channels from PC
- Dimensions (LxWxH): 90 x 207 x 21 mm
- Weight without battery pack: 525 g.
- Weight with battery pack (6Ah): about 1150 g.

PART NUMBER: LAB-TX500MP

PACKAGE INCLUDES:

1. HSM-500-GX16 Hand Speaker-Microphone — 1 pcs.
2. AD-511 PWR/DATA/CW adapter — 1 pcs.
3. AD-502 CAT-USB Adapter — 1 pcs.
4. AD-504 Power Cable — 1 pcs.
5. Antenna adapter Type-N to BNC — 1 pcs.

ENHANCEMENTS

BP-550 Smart Battery Pack



The BP-550 battery pack is designed to power TX-500 series transceivers using replaceable 18650 Li-Ion batteries.

It supports charging via USB Type-C and from power sources with a voltage range of 13–50V, including vehicle power systems, solar panels, and more. The pack features LED charge indicators and provides battery status data directly to the transceiver's display.

The durable housing is made of impact-resistant plastic and includes protection for connectors and buttons against dust and splashes. Foldable legs allow for a convenient tilt angle and prevent accidental activation. An aluminum heatsink ensures optimal operating temperatures for the transceiver.

PART NUMBER: LAB-BP550

MAIN FEATURES:

- Compatibility with transceivers: TX-500 (DISCOVERY, PRO, ALTAI), TX-500MP
- Li-Ion 18650 cells, 6 pcs.
- External power supply DC 13-50V, 3A
- USB-C charging (standards PD 2.0/3.0, BC 1.2, power of the charger not less than 30W)
- Four-segment LED charge level indicator
- Materials:
 - housing: impact resistant plastic
 - heatsink: aluminum alloy
- Dimensions (L×W×H): 207×90×30 mm.
- Weight (without batteries): 350 g.

PACKAGE INCLUDES:

1. USB-C charging cable — 1 pcs.
2. 3 mm Allen key — 1 pcs.
3. 2 mm Allen key — 1 pcs.
4. M4 × 25 mm screws — 4 pcs.
5. User manual — 1 pcs.

Docking station DS-500



PART NUMBER: LAB-DS500

MAIN FEATURES:

- Compatibility with transceivers: TX-500 (DISCOVERY, PRO, ALTAI), TX-500MP
- Supported control protocols:
 - external ATU: Kenwood
 - external PA: Xiegu XPA125B
- Material: polyurethane, nylon, aluminum alloy
- Dimensions (L×W×H): 120×210×180 mm.
- Weight: 700 g.

PACKAGE INCLUDES:

1. Docking station DS-500 — 1 pcs.
2. Bracket — 1 pcs.
3. Fastening kit — 1 pcs.

The DS-500 docking station is a versatile module for TX-500 series transceivers, enabling control of additional external devices such as an antenna tuner (Kenwood protocol) and a power amplifier (Xiegu XPA125B protocol).






The docking station connects directly to the transceiver without the need for additional cabling or external power. Included in the package is a swivel mount, allowing for secure attachment in various orientations and convenient adjustment of the working position.

ACCESSORIES

<p>LFE-12V6 External battery LiFePO4</p>	<p>CW-500 Iambic Paddle Key</p>	<p>CW-500U Universal Iambic Paddle Key</p>
<p>Part number: BAT-LFE12V6</p>  <p>Lithium-iron-phosphate battery (LiFePO4) 12 V, 6 Ah</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI, TX-500MP</p>	<p>Part number: LAB-CW500-GX12P5</p>  <p>Compact direct-mount iambic paddle key for TX-500 series transceivers</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI</p>	<p>Part number: LAB-CW500U-TRS</p>  <p>Compact universal iambic paddle key with 3.5 mm jack connector</p> <p>Compatibility: UNIVERSAL</p>
<p>CR-500 Advanced Pan/Tilt Cradle</p>	<p>EX-550 Protected case</p>	<p>CB-2512 Compact Carry Bag</p>
<p>Part number: AC-CR500</p>  <p>360° rotatable cradle for TX-500 series transceivers</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI, TX-500MP*</p>	<p>Part number: AC-EX550</p>  <p>Compact, shockproof, waterproof case</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI, TX-500MP</p>	<p>Part AC-CP2512KH</p>  <p>Compact bag for carrying and storing the transceiver</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI, TX-500MP*</p>
<p>HSM-500 Hand Speaker-Microphone</p>	<p>HSM-500-GX16 Hand Speaker-Microphone</p>	
<p>Part number: AC-HSM500-GX12P6</p>  <p>Handheld waterproof speaker microphone with PTT, GX-12 6 pin plug</p> <p>Compatibility: TX-500 DISCOVERY, TX-500PRO, TX-500PRO AITAI</p>	<p>Part number: AC-HSM500-GX16P10</p>  <p>Handheld waterproof speaker microphone with PTT, GX-16 10 pin plug</p> <p>Compatibility: TX-500MP</p>	

* Without Battery Pack

CABLES AND ADAPTERS

<p>AD-501 MIC/SPK/PTT Adapter</p>	<p>AD-502 CAT-USB Adapter</p>	<p>AD-503 CW Adapter</p>
<p>Part number: AD501-MSP-GX12P6</p>  <p>Headset/speaker and microphone adapter with PTT button</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>	<p>Part number: AD502-CATUSB-GX12P4</p>  <p>Adapter for CAT control and firmware updates via USB</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI), TX-500MP**</p>	<p>Part number: AD503-CW-GX12P5-TRS</p>  <p>Adapter for CW key connecting</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>
<p>AD-504 Power Cable</p>	<p>AD-505 Car Power Adapter</p>	<p>AD-506 PC Audio-Data Cable</p>
<p>Part number: AD504-PWRC-GX12P2</p>  <p>Cable with 3A fuse for connecting an external power supply</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI), TX-500MP**</p>	<p>Part number: AD505-PWRA-GX12P2</p>  <p>Car power (12V) adapter with a 3A fuse</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI), TX-500MP**</p>	<p>Part number: AD506-ADC-GX12P7-2TRS</p>  <p>Audio-data cable for digital mode operation with PC</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>
<p>AD-507 Smartphone Audio-Data Cable</p>	<p>AD-508 USB-C Audio-Data Cable</p>	<p>AD-509 USB PnP Audio Interface</p>
<p>Part number: AD507-ADC-GX12P7-TRRS</p>  <p>Audio-data cable for digital mode operation with smartphones</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>	<p>Part number: AD508-ADC-GX12P7-USBC</p>  <p>USB-C Audio-data cable for digital mode operation</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>	<p>Part number: AD509-ADINT-USB</p>  <p>SB audio interface for digital modes operation with a PC</p> <p>Compatibility: TX-500 (DISCOVERY, PRO, AITAI)</p>

** Via AD-511 adapter

AD-510
Compact CW adapter

Part number: AD510-CWC-GX12P5-TRS

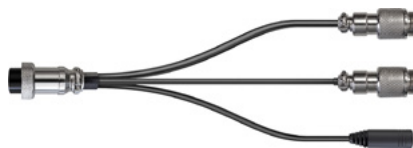


Compact adapter for connecting a CW key

Compatibility:
TX-500 (DISCOVERY, PRO, AITAI)

AD-511
PWR/DATA/CW adapter

Part number: AD511-PDC-GX16P9



Adapter for external power cable AD-504, adapter AD-502 and CW key

Compatibility:
TX-500MP

AD-512
Power Adapter USB-C

Part number: AD512-PWRA-USBC



USB-C PD/QC 12V power adapter

Compatibility:
TX-500 (DISCOVERY, PRO, AITAI)
TX-500MP**

ANTENNAS AND MASTS

xTrap IV 204080
Shortwave antenna

Part number: ANT-XT204080



Inverted V shortwave dipole antenna for the range 20-40-80 m

xTrap IV 2040
Shortwave antenna

Part number: ANT-XT2040



Inverted V shortwave dipole antenna for the range 20-40 m

xTrap IV 4080
Shortwave antenna

Part number: ANT-XT4080



Inverted V shortwave dipole antenna for the range 80 m

DA-HFF
Shortwave antenna

Part number: ANT-DAHFF



Fixed frequency Inverted V dipole antenna

PA-HF27
HF portable antenna

Part number: ANT-PAHF27



27 MHz portable antenna

TM-FG9M
Telescopic Mast

Part number: TM-FG9M



Telescopic fiberglass mast 9 m high

TM-CF9M
Telescopic Mast

Part number: TM-CF9M



Telescopic carbon mast 9 m high

** Via AD-511 adapter

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