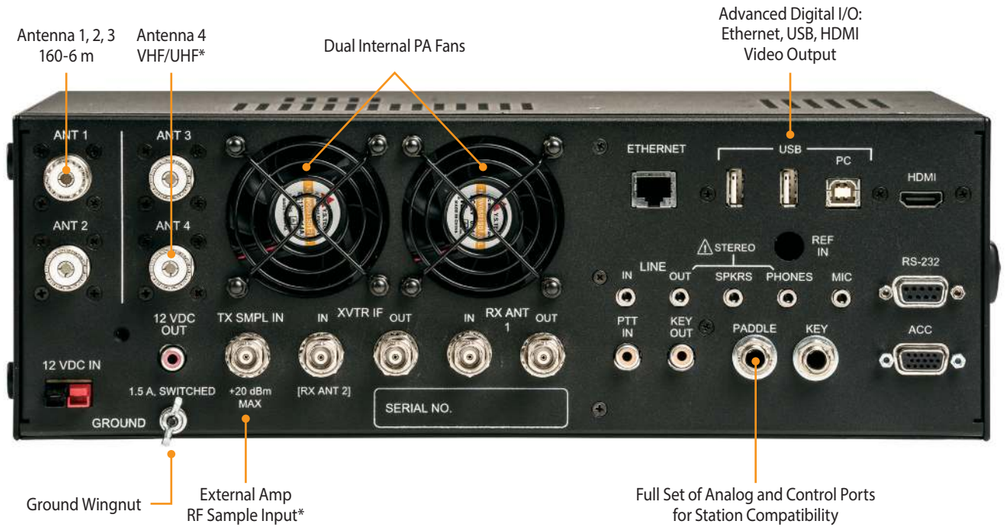
K4 Rear Panel



Models (K4 & K4D upgradeable by the user at any time)

K4: Basic K4 transceiver provides 160-6 m, all-mode coverage; 100 W output; five receive RF sources; and wideband dual watch, allowing the main and sub receivers to be set for the same or different bands.

K4D: Adds KDIV4 option, with a second set of band-pass filters and additional direct-sampling ADC module. This allows the two receivers to use different antennas – a requirement for diversity receive. Having two sets of band-pass filters also optimizes signal handling when the receivers are on different bands and/or antennas.

K4HD: Includes all of the above, plus our dual superhet module, the KHDR4. Ideal for competitive field day, contesting, and DXpedition stations. Each superhet receive section includes two crystal filters: one SSB/data bandwidth, one CW bandwidth. The superhet's 8 MHz IF has excellent dynamic range, so additional crystal filters are not required.

K4 Key Specs and Features

Size: 4.5"H x 13.5"W, 10" D
Weight: Approx. 10 lbs
Supply Voltage: 12-15 VDC
Current: ~2 A RX, ~18-23 A TX
Frequency Range: 100 kHz - 54 MHz (VHF/UHF range to be determined*)
Stablility: +/- 0.25 ppm (TCXO)
Modes: CW, SSB, AM, FM, Data
LCD: 7" color; touch & mouse control
Text modes: CW, PSK31/63, RTTY
KAT4 ATU: 10:1+ range; 3 ant. jacks
RX antenna sources: Up to 5
A-to-D Converter(s): 16 bits
I/O: USB-A x3, USB-B (two virtual com ports + audio), RS232 (DE9), Ethernet, HDMI. front/rear mic, front/rear phones, LINE in/out, speakers, PTT in, KEY out, paddle, key, ACC,12 V out.
CW QSK: Silent, PIN-diode switched
Other: RX/TX EQ, real-time clock,100% remote control including panadapter data, remote antenna switch control*, custom in-box software apps*

K4 Accessories



KPA1500 Amplifier: 160-6 m full-legal-limit amp with silent PIN-diode QSK and built-in wide-range ATU. Matches K4 size and styling.



SP4 Speaker: Hi-fidelity external speaker with A/B source selection. One or two SP4s can be directly driven by the K4 or other transceivers.



K-Pod Controller: Includes a precision, 400-step optical encoder for use as VFO A, VFO B, or RIT/XIT offset, plus 8 dual-function programmable switches. Can be directly connected to any K4 USB-A jack.

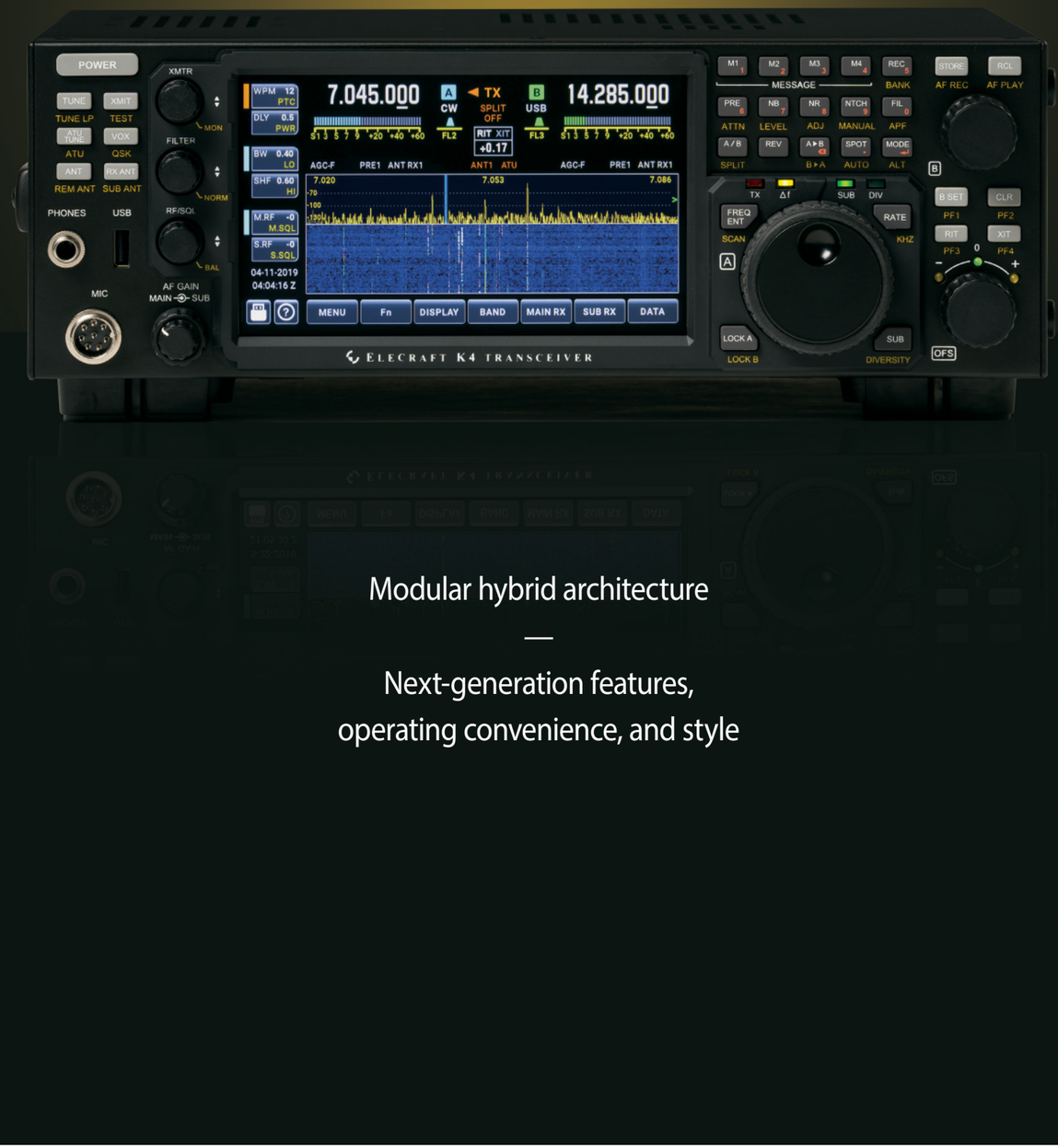
* Planned feature or option

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ELECRAFT K4

HIGH-PERFORMANCE DIRECT SAMPLING SDR

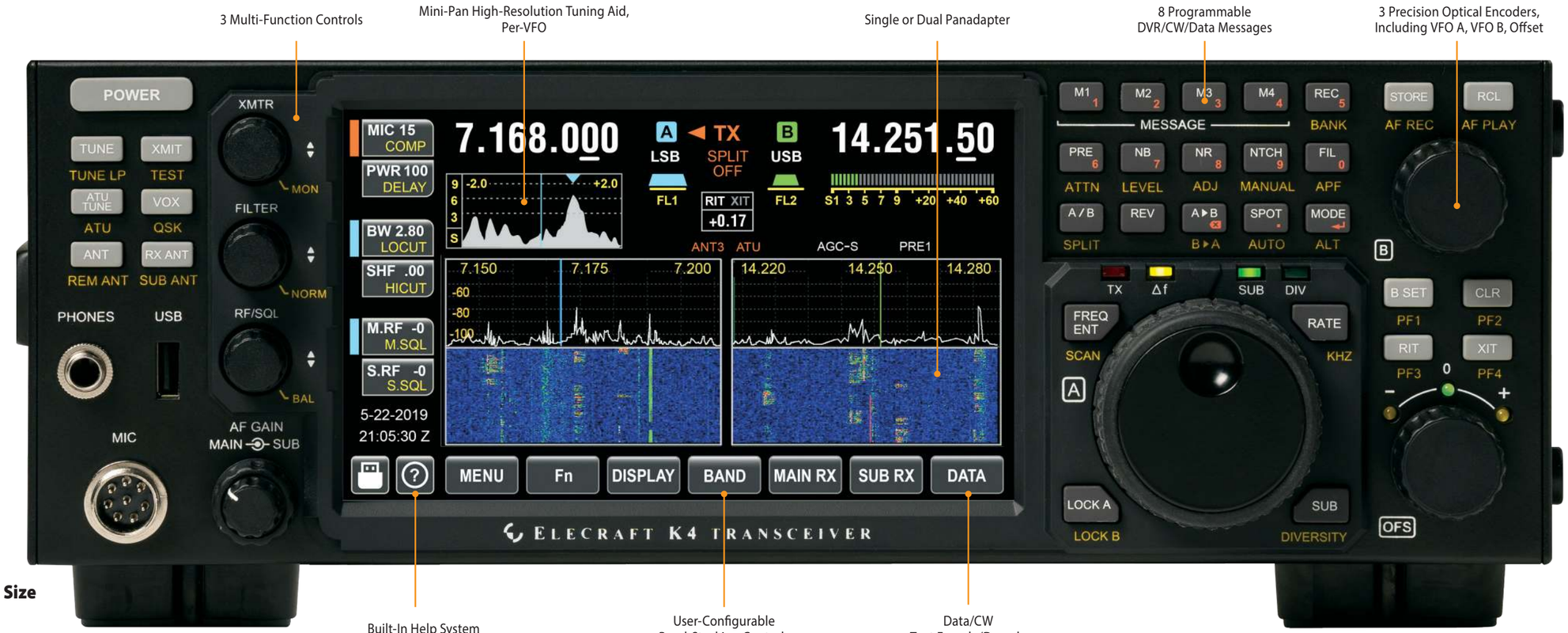


Modular hybrid architecture

—

Next-generation features,
operating convenience, and style

ELECRAFT® K4 Direct Sampling SDR



Actual Size

A direct-sampling SDR you'll love to use

Our new K4 harnesses the latest in signal processing while retaining the best aspects of the K3S and P3. The resulting user interface makes the technology transparent, allowing you to focus on working the world.

160-6 meter, all-mode coverage & dual RX

The K4 includes dual receive over 100 kHz to 54 MHz. Since it utilizes direct sampling, there's no need for crystal filters in the K4 or K4D (see Models, back page). For extreme-signal environments, we offer a dual superhet module (standard in the K4HD). An internal VHF/UHF module is also planned.

High-resolution mini-pan for each receiver

Our advanced fine-tuning aid, with its resampled bandwidth as narrow as +/- 1 kHz, is displayed separately from the main panadapter. You can turn it on by tapping either receiver's S-meter or by tapping on a signal of interest.

Simple operation and setup

The K4 features a large, full-color touch display, combined with a rich set of real controls. Per-VFO transmit metering makes split mode completely foolproof. Band-stacking switches and per-receiver controls are both intuitive and versatile, adapting to operating context. Usage information on these and other features is just one tap away, thanks to our built-in help system.

Rich I/O complement

The rear panel includes all the RF, analog and digital I/O you'll need to complete your station. All K-line accessories are supported, including amps, ATUs, and our K-Pod station controller. The HDMI video output supports an external display with its own user-specified format.

Full remote control from multiple devices

The K4 can be 100% remote controlled, via Ethernet, from a second K4 as well as a PC, notebook, or tablet. Panadapter data is included on all remote displays.

Modular hybrid architecture

The K4 adapts to your needs, with three models to choose from:

- Basic K4 with wide-range dual receive
- K4D with diversity receive
- K4HD with a dual superhet module for exceptional dynamic range

You can upgrade or add options as desired, or as new technology becomes available. This extensibility applies to software as well. The K4's powerful, fast-starting CPU provides unlimited expansion opportunities.

Fast signal processing

The RF signal chain in the K4 incorporates parallel hardware processing of data streams, including a dedicated DSP subsystem. This, combined with silent, PIN-diode T/R switching, ensures fast CW break-in. Data and speech-processing delays are also minimized.

Standard DSP features include easy-to-adjust, per-mode RX/TX EQ; clean, punchy RF speech processing; full DVR capabilities; and several built-in data decode/encode modes. Direct-sampling technology results in an ultra-flat passband response for clean RX and TX audio. Since the signal chain is software-defined, the DSP can be field upgraded to add new algorithms and operating modes.

KAT4 ATU

The KAT4 ATU has a nominally 10:1 matching range. It includes 3 antenna jacks, any one of which can be selected as an input for one or both receivers.

Internal VHF/UHF module (future option)

An expansion slot is reserved for a high-performance VHF/UHF module, with output of approximately 15 W. This module will support all modes.

Kit version

A no-soldering kit version of the K4 is planned for later release. Builders will learn about advanced radio technology as they proceed. All modules are pre-aligned and tested.

