



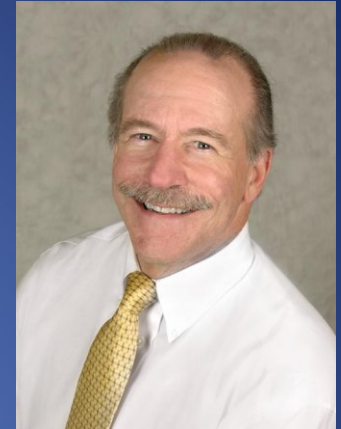
The Latest From Elecraft High Performance HF for DXing, Contesting and Even Mountain Topping!



David Shoaf, KG6IRW



Your Presenter



- David Shoaf/KG6IRW
- Elecraft Worldwide Distribution Tech Support

David's Background

- 30+ yrs. w/Hewlett-Packard, Texas Instruments
- Product Sales, Support & WW Distribution

Today's Agenda



- Introducing the KPA1500



- Elecraft and DXpeditions



- K-Line Evolution



- KX-Line Evolution

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KPA1500



KPA1500 Features

- 1500W (2 ea. Rugged 1400 W LDMOS Transistors)
- Very compact design
4.5h x 13.5w x 11.5d in., 11.5 x 34 x 29 cm
- Matching lightweight switching power supply (same size)
- Fast, silent PIN diode T/R switching
- Built-in Antenna Tuner with dual antenna jacks
- Compatible with nearly any transceiver
- Instantaneous auto-band switching (*RF Freq sense or band data*)
- 160-6 meters
- Introductory price: \$5,995 (*KPA1500 w/ ATU and PS*)

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KPA1500 Rear View



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KPA1500 Power Supply



Today's Agenda



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- Elecraft and Dxpeditions

Early Elecraft DXpedition...



Early SOTA - K2 Style - Sept. 1999 Emigrant Peak, Squaw Valley, CA USA

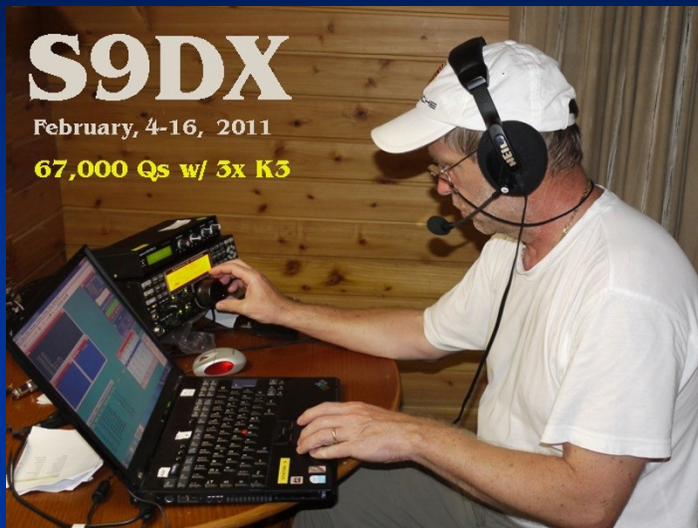


The Summit:
8700 ft; 2,652 m

Eric at 6200 ft;
1,890 m

"Light Weight" K2 SOTA Station





K3, P3 and KPA500: *The DXpedition Standard*



What happens when you ship radios and amps to remote places?



...and in all kinds of environments?

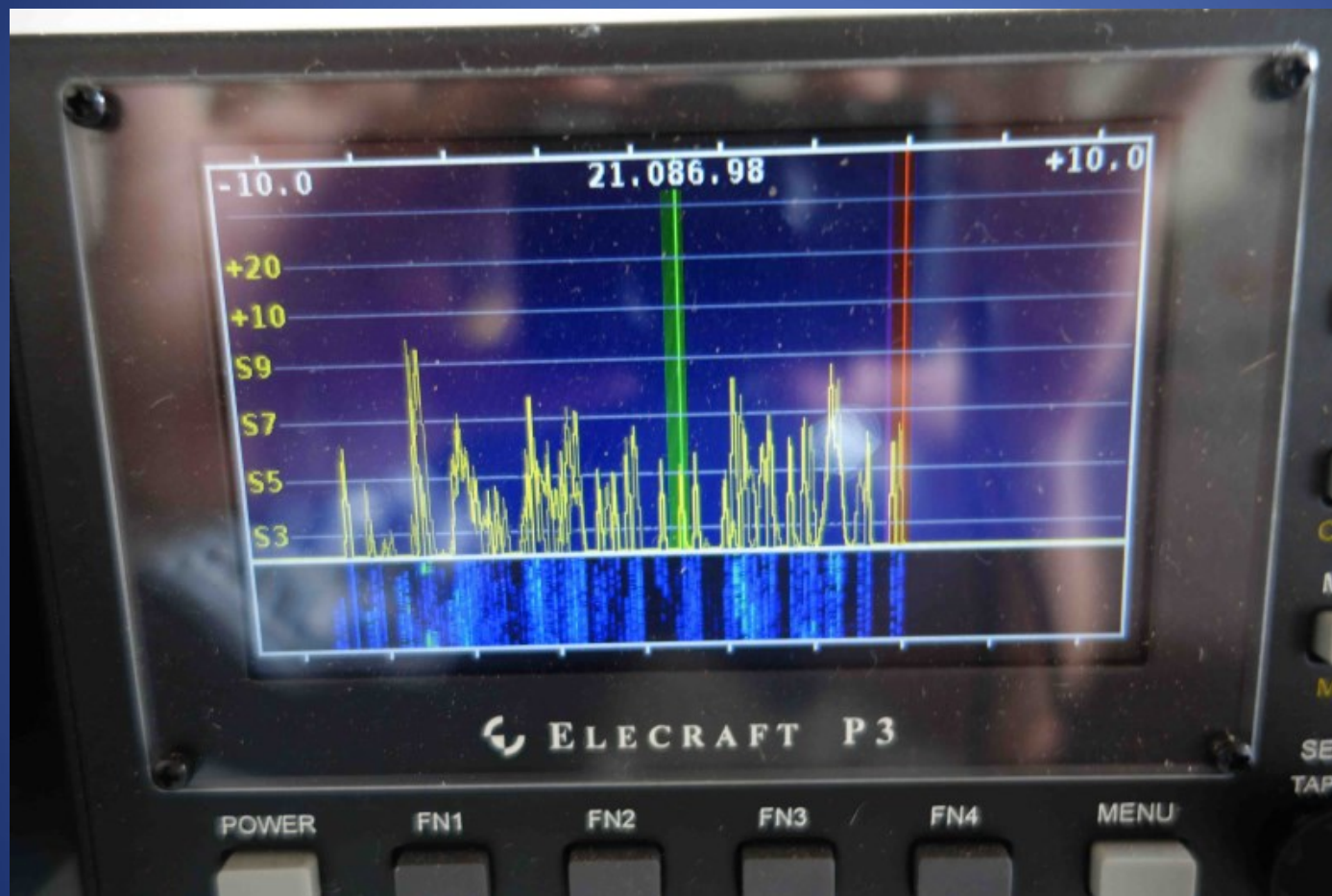


Can you say, Pile-up? Panadapters!



Now they can see what's happening

Can you say, Pile-up?



This is what the 15M RTTY pile up looked like on Navassa

The Radio At Both Ends Of The QSO

ELECRAFT
K3s



"The clean Elecraft K-line transmit signal and incredible receive dynamic range make it possible to run six stations from the same location without adverse impact to the other stations. DXpeditions need superior technology and the Elecraft K-line is first and foremost."

Paul Ewing - N6PSE, VP8 South Sandwich / South Georgia Dxpediton



The Elecraft K3s is the DXer's choice — at home, or at the ends of the Earth.

What do DXpedition leaders look for in a transceiver? Top performance in pileups, for starters, including a bulletproof, software-defined superhet receiver that can turn raw QRM into solid QSOs. But team leaders are also pragmatic; they need radios that won't break their backs or their budgets. That's why the K3s and other Elecraft K-Line gear has been selected for so many high-profile DXpeditions*. The K3s offers proven field reliability, light weight, excellent power efficiency and ease of use, all at a fraction of the price of other elite-class transceivers. It also has the ultra-low-phase-noise, click-free transmit signal that multi-transmitter stations need.

What do you look for in a transceiver? Probably all of the above. Sure, you may decide not to circumnavigate the world. But with the right rig, you can still conquer it.

Elecraft's K-Line — a winning combination for contesters and DXers alike.



In addition to the K3s, Elecraft's K-Line includes the P3 panadapter, KPA500 500W+ amplifier, and KATS500 500W+ automatic antenna tuner. All three can be used with the K3s or with other transceivers. The P3 panadapter adds a visual dimension to signal hunting, with fast, real-time spectrum and waterfall displays of band activity. Its superior sensitivity reveals signals down to the K3s noise floor. The KPA500 amp features instant RF-based band switching, plus remote band selection that tracks the K3s. It has a bright alphanumeric status display, LED bar graphs, and a rugged, internal linear supply. The compact KATS500 ATU uses the same fast, high-accuracy tuning algorithm as the K3s 100W ATU. Its LC network automatically tracks the K3s VFO, instantly recalling settings as you tune.

- *The Elecraft K3s and K3 were the radios of choice for these and other top DXpeditions:
- VP85SI/VP85GI - South Sandwich Island, South Georgia Island
- 2016 DXpedition of the Year
- VK0EK - Heard Island, 2016
- KSP - Palmyra Atoll, 2016
- FT4JA - Juan de Nova Island, 2016
- K1N - Navassa Island
- 2015 DXpedition of the Year
- TX3X - Chesterfield Island, 2015
- E30FB - Eretria, 2015
- FT5ZM - Amsterdam Island
- 2014 DXpedition of the Year
- TX5K - Clipperton Island, 2013
- HK0NA - Malpelo Island
- 2012 DXpedition of the Year
- 70GT - Yemen, 2012
- VP80RK - Orkney Island
- 2011 DXpedition of the Year
- ST0R - South Sudan, 2011

K3s BUNDLE SALE! SAVE BIG!
Mix and match the K3s, P3, KPA500 and KATS500!
www.elecraft.com

ELECRAFT®

For complete features and specifications, go to elecraft.com • 831-763-4211

What happens when using High Performance radios?

The Radio At Both Ends Of The QSO **ELECRAFT K3s**



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***The Elecraft K3s and K3 were the radios of choice for these and other top DXpeditions:**

- VP8SSU/VP8SGI - South Sandwich Island, South Georgia Island
- 2016 DXpedition of the Year
- VK0EK - Heard Island, 2016
- K5P - Palmyra Atoll, 2016
- FT4JA - Juan de Nova Island, 2016
- K1N - Navassa Island
- 2015 DXpedition of the Year
- TX3X - Chesterfield Island, 2015
- E30FB - Eritrea, 2015
- FT5ZM - Amsterdam Island
- 2014 DXpedition of the Year
- TX5K - Clipperton Island, 2013
- HK0NA - Malpelo Island
- 2012 DXpedition of the Year
- 706T - Yemen, 2012
- VP8ORK - Orkney Island
- 2011 DXpedition of the Year
- ST0R - South Sudan, 2011

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For complete features and specifications, go to elecraft.com • 831-763-4211

Dxpedition

S. Sandwich/S. Georgia Is

VK0EK Heard Is

FT4JA Juan de Nova

K5P Palmyra Atoll

K1N Navassa

TX3X Chesterfield

E30FB Eritrea

FT5ZM Amsterdam Is

TX5K Clipperton Is

HK0NA Malpelo Is

706T Yemen

ST0RY S. Sudan

VP8ORK Orkney Is.

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What happens when using High Performance radios?

Year	Dxpedition
2016	S. Sandwich/S. Georgia Is
	VK0EK Heard Is
	FT4JA Juan de Nova
	K5P Palmyra Atoll
2016	K1N Navassa
	TX3X Chesterfield
	E30FB Eritrea
2014	FT5ZM Amsterdam Is
2013	TX5K Clipperton Is
2012	HK0NA Malpelo Is
	7O6T Yemen
2011	ST0RY S. Sudan
	VP8ORK Orkney Is.

Can you say, run rates?

Year	Dxpedition	Q-Counts Reported
2016	S. Sandwich/S. Georgia Is	136000+
	VK0EK Heard Is	75000+
	FT4JA Juan de Nova	140000+
	K5P Palmyra Atoll	75000+
2016	K1N Navassa	140000+
	TX3X Chesterfield	50000+
	E30FB Eritrea	4200+
2014	FT5ZM Amsterdam Is	170000+
2013	TX5K Clipperton Is	113000+
2012	HK0NA Malpelo Is	190000+
	7O6T Yemen	162000+
2011	STORY S. Sudan	48000+
	VP8ORK Orkney Is.	63000+



What have we learned?

- Build features for efficient DX/Contesting
- Instrument the high power stuff
- Use the instrumentation to protect the gear
- Tell the operator when they hit the limits
- Enable remote diagnostics/recovery

Today's Agenda



- Introducing the KPA1500



- Elecraft and DXpeditions



- K-Line Evolution



The **K3** and the **K-Line**..

- K3 160-6m High Performance Transceiver
- P3 Direct Sampling DSP Panadapter
- KPA 500 Solid State Amplifier
- KAT500 Fully Automatic Antenna Tuner

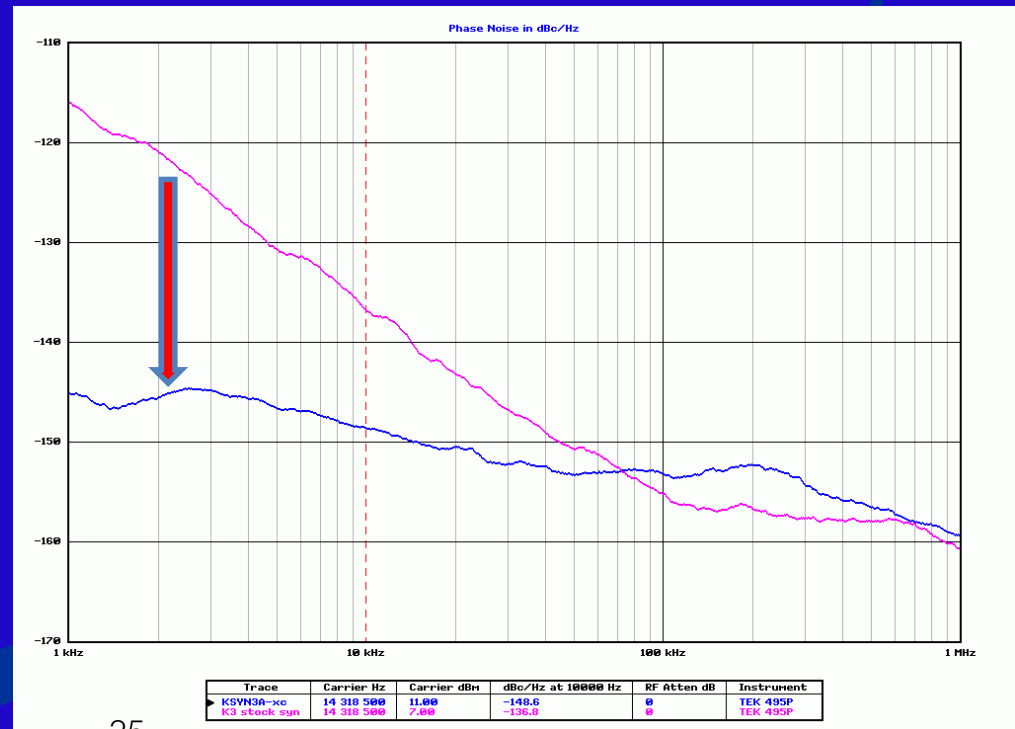
2015: The K3S - Even More Performance



- Low-noise synthesizer for exceptional RX & TX performance
- 4-Layer main RF PCB for even *lower* receive noise floor
- USB — integrated control and audio
- Second preamp for 12-6 m weak signals (on the new KXV3B)
- Redesigned AF speaker output circuitry for outstanding audio

Lower Phase Noise – Why do I care?

- Faster CW Tx/Rx recovery
- Faster Split Operation at 30+ WPM CW
- Diversity Reception phase locks dual receivers
- Expanded LF to 630M



QST Review - K3S KSYN3a

Reciprocal Mixing Dynamic Range

<i>Before</i>	<i>After</i>
<i>20/5/2 kHz offset</i>	<i>20/5/2 kHz offset</i>
<i>115/103/93 dB</i>	<i>119/118/115 dB</i>

Dramatic Improvements

Improved Receiver Dynamic Range

Reduced Transmit spurious output

Bottom Line

The Elecraft KSYN3A synthesizer upgrade for the K3 makes a dramatic improvement in local oscillator phase noise, resulting in improved receiver dynamic range and reduced transmit spurious output near the operating frequency.

Nov. 2016 QST K3S Review



*Reviewed by Rick Lindquist,
WW1ME
ARRL News Editor/
NCJ Managing
Editor*

Let's get it out of the way right off the bat: The K3S is the best-performing transceiver I've ever used



Bottom Line

The Elecraft K3S is a performer *par excellence* in a compact, convenient form factor.

Today's Agenda



- Introducing the KPA1500



- Elecraft and DXpeditions



- K-Line Evolution



- KX-Line Evolution



- 2011: **KX3** All-Mode HF Transceiver Introduced
- Next Generation KX-Line Evolution from the KX1 TFR
- 160-6 m (+2 m) All Mode, Up to 15 W, 1.5 lbs, all SMD, up to 8 layer PCBs
- Large, Easy to Read Display - Same as the K3's
- Enhanced with the PX3 Panadapter and KXPA100 Amp
- Became the Ultimate Home-Travel-DXpedition and SOTA Station



- The KX3 is about twice the size of the KX1 by weight and volume, but with all-band/all-mode coverage.
- While the KX3 *can* be used hand-held, at about 2 pounds with internal AA batteries, it's a bit heavy for this. Also, many KX3 owners asked us for a smaller, lighter, and lower-cost version. So....

**ELECRAFT
KX2**

KX2 Transceiver



Performance That Fits in your Pocket





KX1 – KX2 Size Comparison



Almost the same size as the KX1

SOTA and KX2 on the cover of QST

Aug. 2016

Steve - WG0AT



EXTREME SOTA!

Emil Kostadinov - DL8JJ



The composite image is set against a blue background. The main part of the image shows a hiker in an orange and blue snow suit standing on a rocky, snow-dusted mountain peak. A long, thin antenna wire extends from the hiker's hands across the sky. In the top left corner, there is a small red and green SOTA logo. To its right, the text "Summits On The Air" is displayed in white. Below this, the Elecraft logo is shown, consisting of a stylized 'E' and the word "ELECRAFT" in a serif font, with "Hands-On Ham Radio™" in a smaller font underneath. To the right of the Elecraft logo, the text "To be the best, just take the best." is written in white. In the top right corner, there are two Elecraft KX2 transceivers. The top one is mounted on a rock and has a red "NEW!" sticker; its display shows "1420000". The bottom one is also mounted on a rock and its display shows "14195000".

SOTA

Summits On The Air

ELECRAFT
Hands-On Ham Radio™

To be the best, just take the best.

ELECRAFT KX2 TRANSCEIVER
NEW!
1420000
1421000

ELECRAFT KX2 TRANSCEIVER
14195000
14205000

DL/WS-003 Mt Schneefernerkopf
2875m (9,432 ft.)

Emil Kostadinov - DL8JJ





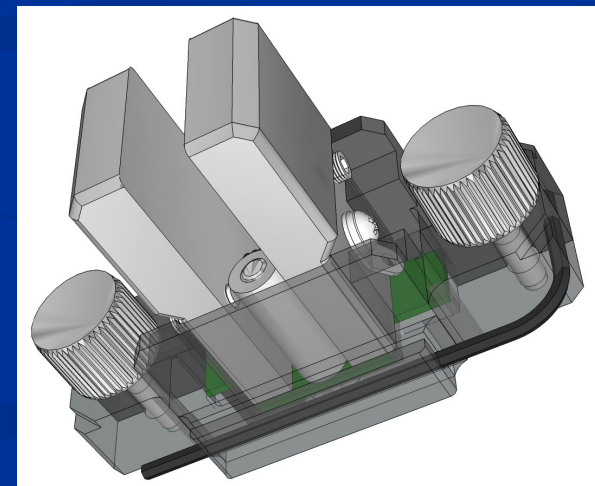
KX2 – Key Features

- 1/2 The volume of the KX3 cabinet
- Similar User Interface as K3S and KX3
- Ideal for Rapid deployment, SOTA Ops and Mobile Operation
- 10 W typical on SSB, CW, Data Modes
- Same size display as the KX3 and K3S
- Pure SDR RX/TX Architecture for flexibility and upgradability
- Dual watch RX for split operation



KX2 Options

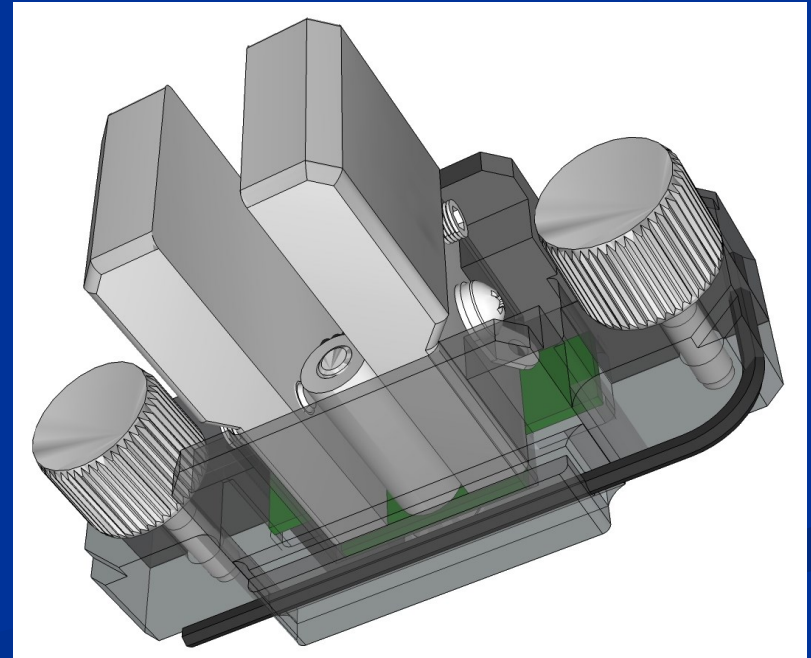
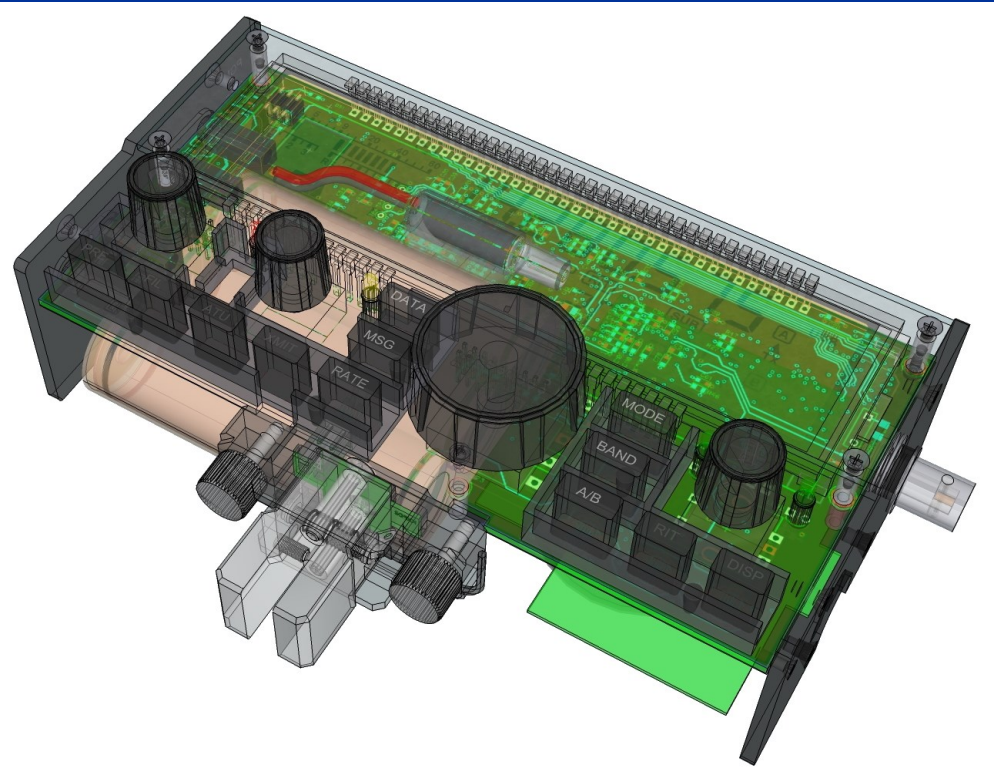
- KXAT2 Wide Range Internal ATU
- KXBT2 Li-Ion Internal Battery (11 V, 2.6 Ah) and ext charger
- KXPD2 Precision compact attached CW Paddle
- KXIO2 Real Time Clock and General I/O
- MH3 Hand Mic.
- KXPA100 100 W External Amplifier
- CS40 and CS60 Compact Padded Carrying Cases





KX2 – Design

- Use Extensive 3-D Modeling (Sketchup, Solidworks CAD)
- Model internal layout and all mechanical design. Try 'what if's'



Wrap Up



- Introducing the KPA1500



- Elecraft and DXpeditions



- K-Line Evolution



- KX-Line Evolution

Questions?



KX2 and KX3 SOTA Ops de WG0AT

