

# **REDXA/NCCC Joint Meeting**

**January 14, 2009**

**Petaluma, CA**

**John, K6MM**



**Thanks!**

**To Our REDXA Cousins  
For Hosting The Meeting**



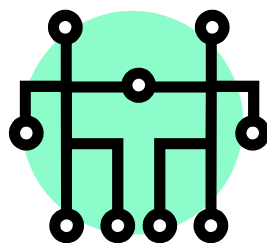
**Greetings & Welcome!**

**NCCC Members and Guests**



# New Member Applications

Welcome



Aboard!

<b>N6JV</b>	<b>Norm Wilson</b> <i>Sacramento</i>
<b>W6ONV</b>	<b>Stephen Toumi</b> <i>Oakley</i>
<b>W6TCP</b>	<b>Ian Parker</b> <i>Pleasanton</i>

**NCCC Members 622, 623, and 624!**



# Primary Goals

- 1. Provide Feedback To Elecraft**
- 2. Answer Your K3 Questions**



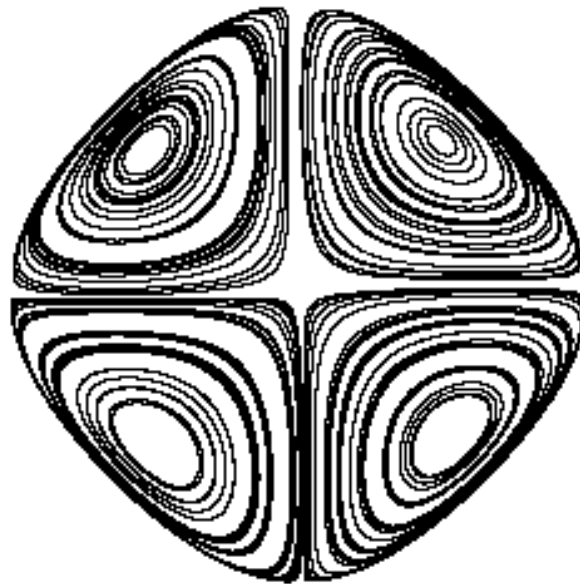
# What's A K3?

**Is it a bed and breakfast guest ranch  
in Cody, Wyoming?**



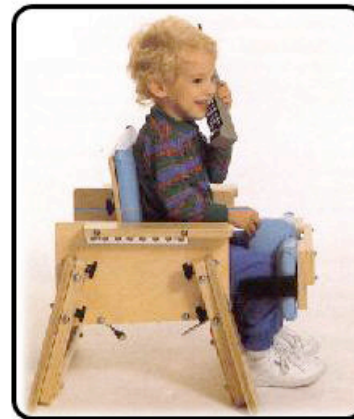
# What's A K3?

**Is it an important and interesting example  
in mathematics of a compact surface in  
the field of complex manifolds?**



## What's A K3?

Is it a “Kinder Chair”, designed for children who need a wide base of support in order to achieve good pelvic position and trunk alignment for stable sitting?



# What's A K3?

Is it a popular Flemish girl band with a Dutch repertoire with three singers named **K**aren **D**amen, **K**athleen **A**erts and **K**ristel **V**erbeke.

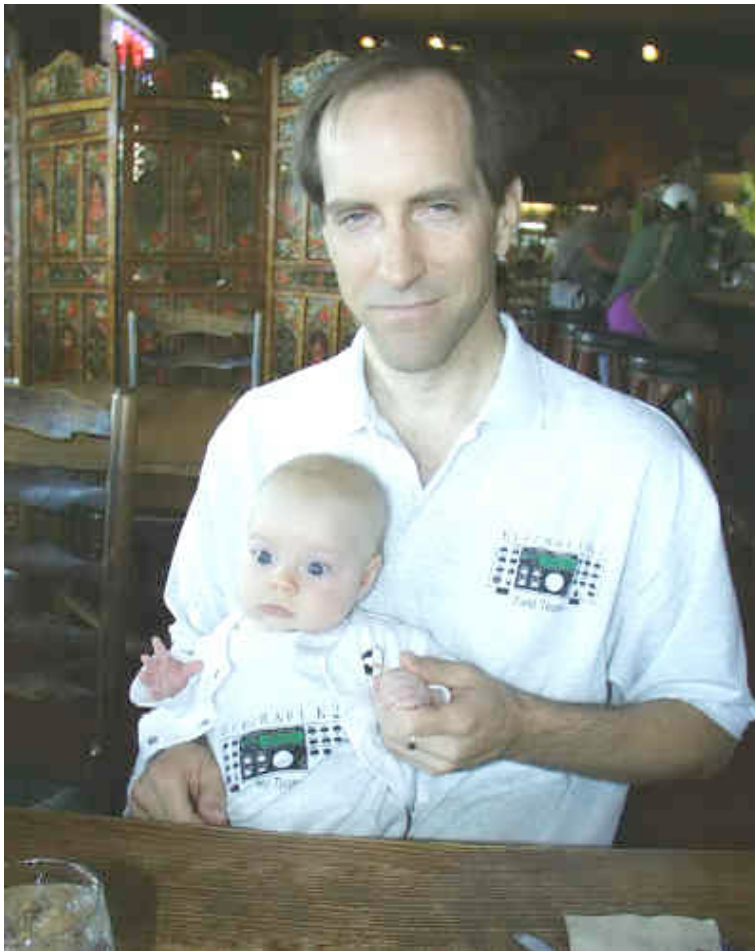


# What's A K3?

Is it a little black box with some cool stuff inside?



# Who Built This Little Black Box?



**Wayne, N6KR**



**Eric, WA6HHQ**

**NCCC**



# The Elecraft K3

## *Hands On Ham Radio™*



# Front Panel Layout

Primary Controls

-----Display-----

Keypad

Memories



Multi-Function

-----VFOs-----

RIT/XIT



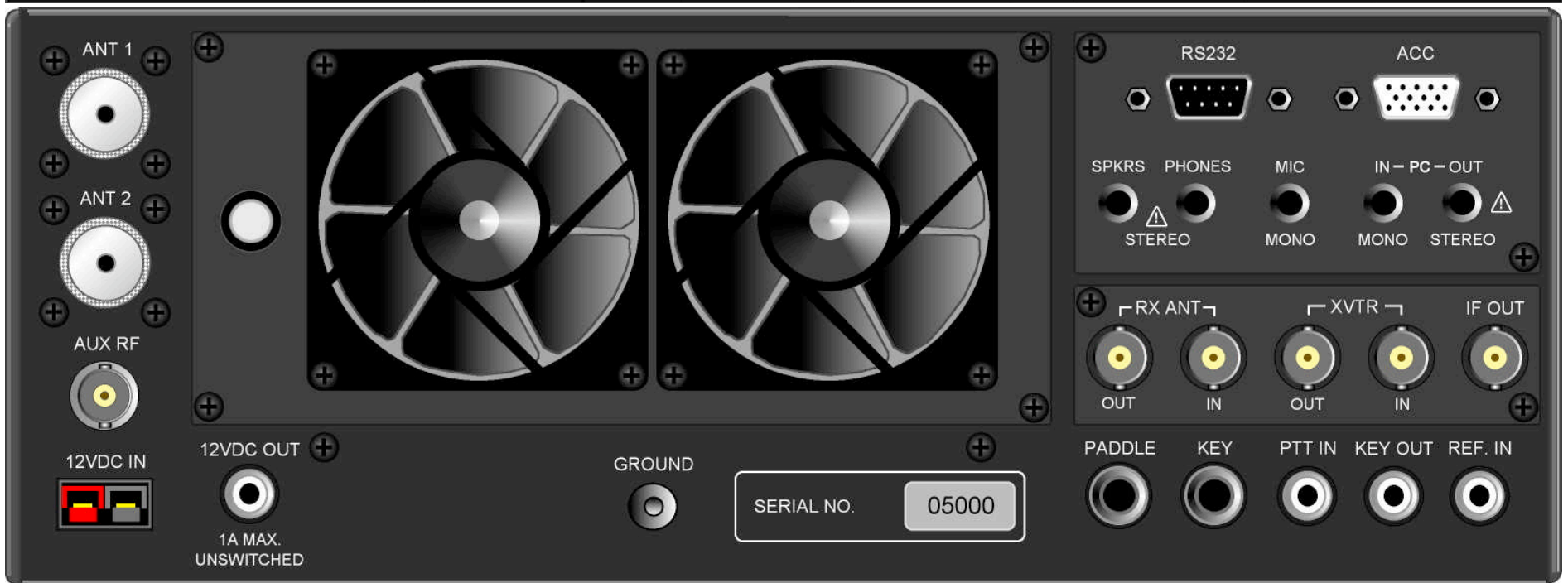
# Modular Integration

Antennas

100 W Upgrade

RX Ant. I/O, IF Output and Xverter





# Contesting With The K3

- 1. K3 Survey Results (K6MM)**
- 2. Demystifying K3 Filters (W0YK)**
- 3. Open Discussion (Panel)**
  - a) Provide Feedback To Elecraft**
  - b) Address Survey Questions/Issues**



# NCCC = K3 Country

## Partial List of K3 Owners

AD6E	K6RB	N3ZZ	N6TQS	W6NV
AE6Y	K6RM	N5KO	N6TV	W6OAT
K2VCO	K6TA	N6BV	N6WG	W6SX
K6CTA	K6TD	N6DE	N6XG	WA5ZNU
K6DGW	K6UM	N6EE	N6XI	WK6I
K6EU	K6UUW	N6GQ	ND2T	
K6GT	K6WG	N6KD	W0YK	
K6IF	K6XX	N6KT	W6DRX	
K6KR	K7GQ	N6RA	W6FQS	
K6MM	K9YC	N6RO	W6JD	

**NCCC**



# Tonight's Distinguished K3 Panel

<b>Ed</b>	<b>K6CTA</b>
<b>Bob</b>	<b>K6XX</b>
<b>Dean</b>	<b>N6BV</b>
<b>Dean</b>	<b>N6DE</b>
<b>Bob</b>	<b>N6TV</b>
<b>Ed</b>	<b>W0YK</b>
<b>Hank</b>	<b>W6SX</b>



## **K3 Survey → NCCC + REDXA**

- **Q1 – Callsign**
- **Q2 – K3 Owner?**
- **Q3 – If Owner, How Many Months?**
- **Q4 – What Do You Like Best?**
- **Q5 – What Do You Like Least?**
- **Q6 – Most Experienced Operating Functions?**
- **Q7 – Improvement, Modification, Upgrade?**
- **Q8 – Attending Meeting?**
- **Q9 – Panel Member?**
- **Q10 - Comments**

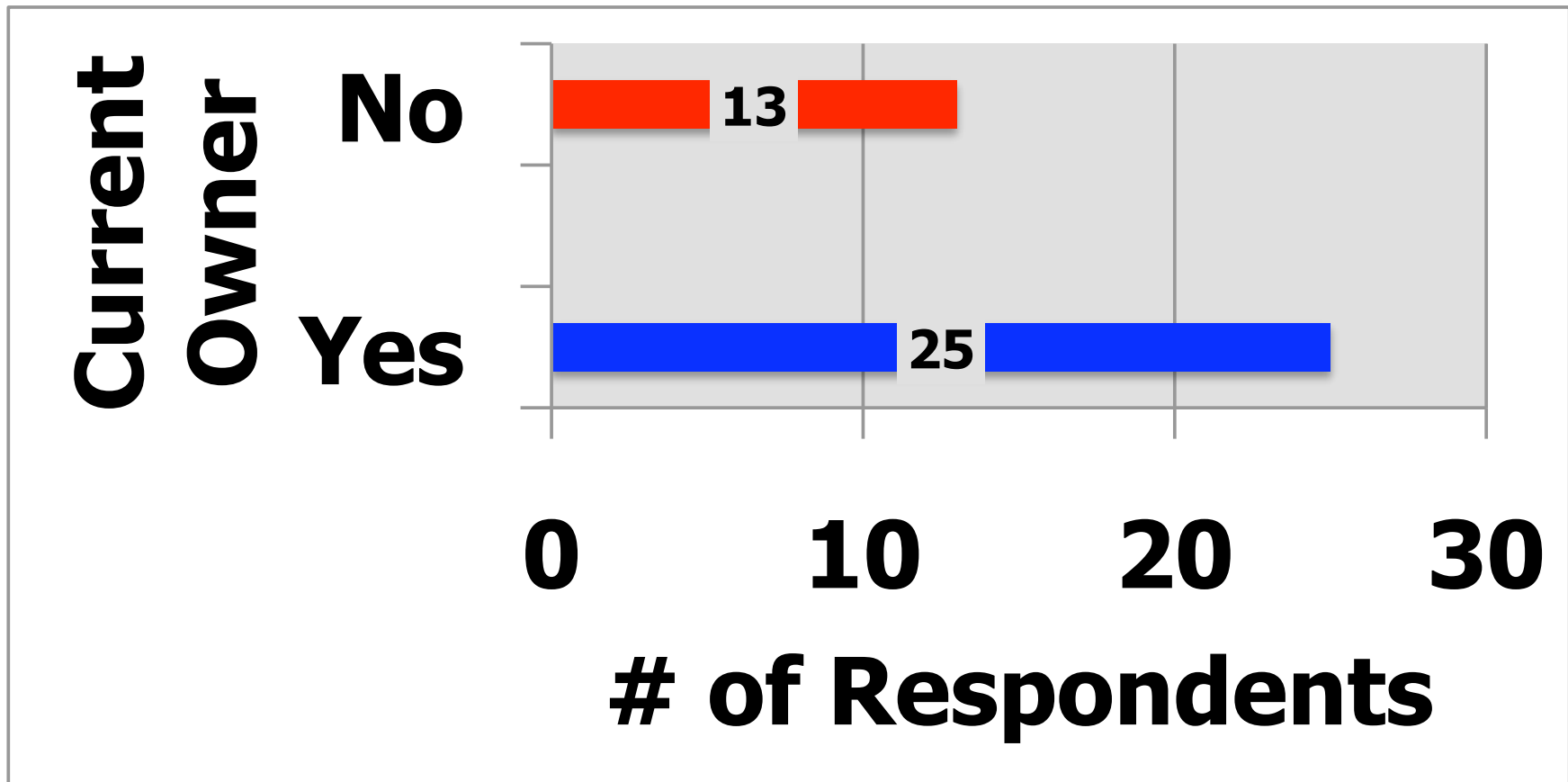


# Q1: Callsign: 38 Respondents

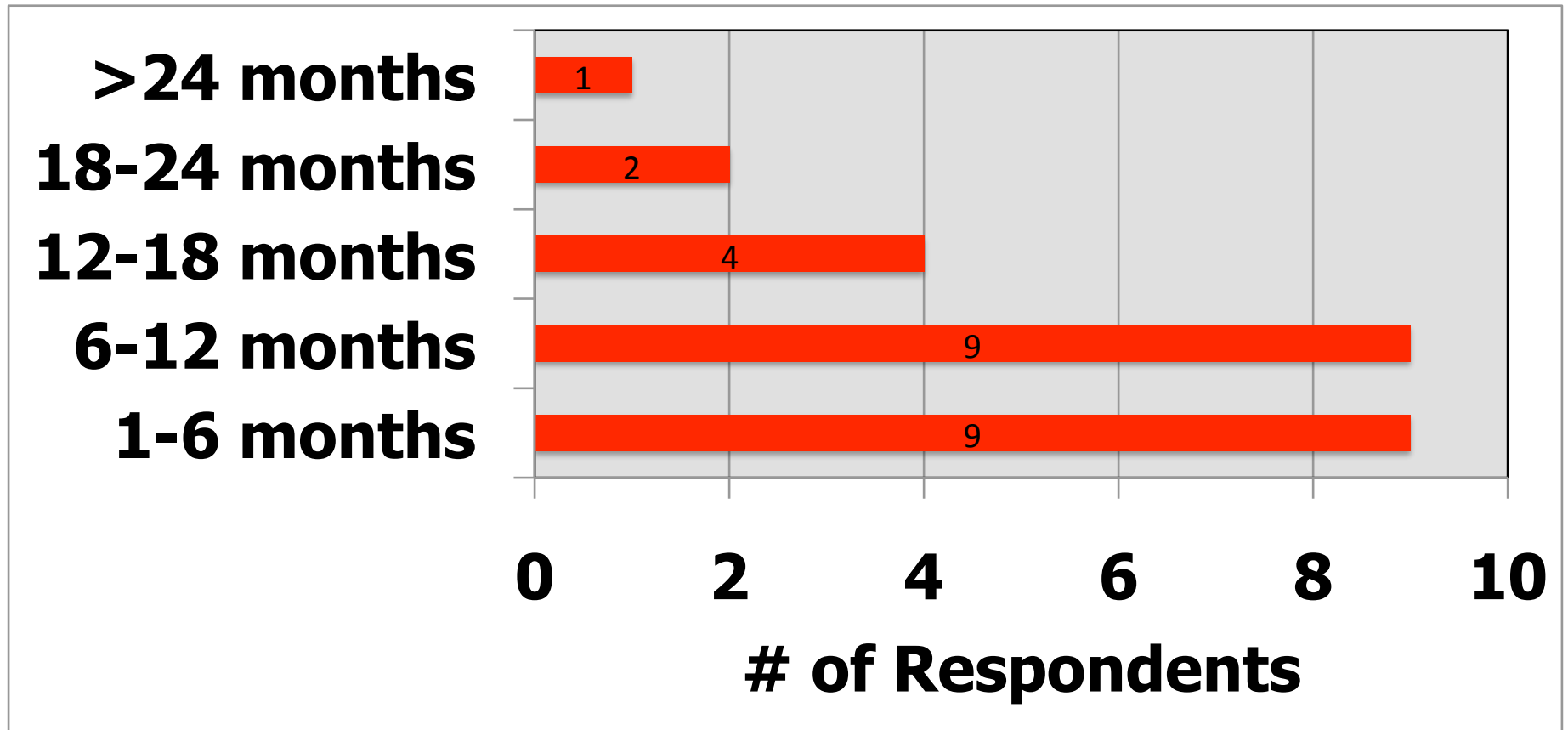
<b>AA6YX</b>	<b>K6UUW</b>	<b>N6GQ</b>	<b>W6DRX</b>
<b>AE6RF</b>	<b>K6WG</b>	<b>N6KD</b>	<b>W6FQS</b>
<b>K6CTA</b>	<b>K6ZWB</b>	<b>N6OJ</b>	<b>W6JD</b>
<b>K6DGW</b>	<b>K7GQ</b>	<b>N6TV</b>	<b>W6NL</b>
<b>K6III</b>	<b>KK6X</b>	<b>N6WG</b>	<b>W6NV</b>
<b>K6KR</b>	<b>N6AJR</b>	<b>N6XG</b>	<b>W6OSP</b>
<b>K6RM</b>	<b>N6BV</b>	<b>N6XI</b>	<b>W6SX</b>
<b>K6TA</b>	<b>N6CK</b>	<b>N6ZFO</b>	<b>WW6D</b>
<b>K6TD</b>	<b>N6DE</b>	<b>NU6T</b>	
<b>K6UM</b>	<b>N6EE</b>	<b>W0YK</b>	



## Q2: K3 Owner – Yes/No



## Q3: Owner Experience



**Q4: From your operating experiences, what do you like best about the K3?**



## Q4: What Do You Like Best?

- Performance, ease of use
- Ability of the receiver to reject crud from strong nearby signals
- The fact that Elecraft is engaged with its customers, and responds quickly to customer observations.
- The field upgradability through frequent firmware updates.



## Q4: What Do You Like Best?

- Automatic antenna tuner is fast and accurately gets the SWR down to 1:1
- Freedom from extraneous "signals" on crowded bands and lack of desensitization from nearby powerful stations -- resulting from the single-conversion roofing filter architecture



## Q4: What Do You Like Best?

- Very smooth VOX operation, compared to other radios I've tried
- Low band S/N
- Smooth CW and SSB audio
- High, near-in blocking dynamic range
- Great for RTTY
- Outstanding on CW



## Q4: What Do You Like Best?

- RX performance in presence of nearby strong signals
- RX "sound" ... no digital artifacts. Even band noise is less annoying
- The ability to filter QRM down to a nat's ass.....It's really good!



## Q4: What Do You Like Best?

- Outstanding dynamic range and phase noise
- Outstanding internal antenna tuner
- Selectivity options, especially on phone for contesting. I can narrow the filters down to 1500 Hz on SSB and shift the passband tuning to regain full intelligibility of received signals.



## Q4: What Do You Like Best?

- High quality radio in a form factor suitable for a county expedition / DXpedition
- DSP filtering actually works
- Engineering doesn't stop when radio is shipped. Great continued firmware improvements that the user can easily download from home.



## Q4: What Do You Like Best?

- Receiver selectivity / immunity to adjacent strong signal
- The RIT - it's perfect!
- Small footprint & lightweight
- Software updates
- Dual passband RTTY filter



## Q4: What Do You Like Best?

- Outstanding interface connectivity - multiple antenna configurations, RTTY, etc.
- Configurable noise blanker/reduction
- Very good dynamic range, very good sensitivity, DSP filtering works very well
- Good CW radio



## Q4: What Do You Like Best?

- Receiver performance
- Smooth, click-free QSK CW
- Firmware updates that keep making it even better
- Adjustable Noise Blanker
- Alphabetical menus



## Q4: What Do You Like Best?

- Ease of use for RTTY
- Built-in TX Audio Equalizer
- Frequency accuracy
- Excellent selectivity
- Strong signal handling ability



## Q4: What Do You Like Best?

- Adequate audio output
- RX OUT and RX IN BNC connectors on rear
- Separate key and paddle jacks
- Superb QRP radio
- Filtering scheme: variable control with roofing filter switching



## Q4: What Do You Like Best?

- Compact size: easy to use in the field
- 6M capability
- The narrow bandwidth achievable with a combo of IF and DSP filtering and the absence of IMD and other crud, resulting in a far more comfortable contest operating experience.



## Q4: What Do You Like Best?

- DSP filtering, absolutely the best DSP implementation I've encountered.
- Selectable roofing filters provides superior selectivity. True, no ringing, 50 Hz bandwidth. The "uncrunchable" front end – can operate on the same band as W6YX which is only 2 airline miles away. A really useable NR mode.



## Q4: What Do You Like Best?

- It works, without any major weaknesses. Completely reliable. Very satisfying piece of gear to use. We had five of them at HC8N for the recent CQWW CW, and posted the top world score in very low conditions. Everybody liked them, especially after we learned the AGC and other adjustments.



## Q4: What Do You Like Best?

- Pleased with K3 receiver selectivity and dynamic range using FT1000D as standard
- Clean QSK, clean CW keying
- The impressive spec's. Ease of use. CW to RTTY/PSK31 built-in. Small size but certainly can live with it.



## Q4 Summary: K3 (+)

- Audio
- Connectivity
- CW
- Equalizer
- Filtering
- Jacks
- NB
- NR
- Performance
- QSK
- Range
- RIT
- RTTY
- Scanning
- Selectivity
- Sensitivity
- Size
- Support
- Tuner
- Upgradability
- VOX



**Q5: What is it about the K3 that  
you like the least?**



## Q5: What Do You Like Least ?

- The manual. It would be nice if the documentation was as "competitive" as the radio. Much of the Elecraft reflector traffic is simply the result of this issue.
- Main display needs better indication when operating split frequency



## Q5: What Do You Like Least ?

- Three modes of the knobs
- Split operation -- VFO A/B must be on the same band
- Absence of Flexibility on RX/TX Equalizer use and Sub Rx for Cross Band operation.
- The multi-function buttons



## Q5: What Do You Like Least ?

- Ever-evolving hardware modifications
- Nothing, really
- Documentation process needs improvement. Hard to get a sense of using the radio's different features by reading the manual. Makes it more difficult for the guest operator.



## Q5: What Do You Like Least ?

- I forget to Hold Split - leads to justifiable howling on the DX frequency – I feel foolish
- The output power in RTTY mode should not fluctuate between Mark and Space.
- Serious Birdies right in the 80 M CW DX window
- I can't put VFO B on a different band from VFO A -- bummer



## Q5: What Do You Like Least ?

- IMD reduction is not as good as my old radio. When the band is very crowded during a major contest, there is a lot of junk that appears that cannot be identified or filtered out because it is being generated by the radio.
- The tiny RIT knob. The RIT tuning rate is way too slow when main knob is in FINE mode.



## Q5: What Do You Like Least ?

- Knobs or buttons locked out while transmitting.
- The front panel mic. connector is wired so you really can't use Kenwood mics without clipping Pin 8.
- Shift/Width and High/Low should have been Concentric knobs like AF and RF gain
- Too easy to forget that you're in split mode



## Q5: What Do You Like Least ?

- The close spacing between the rear-panel connectors
- The tiny "NR" and "NB" and "T" indicators on the display
- Power Pole power connectors. Almost anything else would be better.
- Sometimes scanning is difficult. Requires some persistence then it works fine.



## Q5: What Do You Like Least ?

- Lack of a panadaptor: Yes LP-PAN is available but requires computer to run
- Too few controls and too little screen space, resulting in "overloading" controls and display elements
- Lack of bandscope



## Q5: What Do You Like Least ?

- All reports are telling me that my SSB audio is terrible. I have spoken with several DXers that were using the K-3 on SSB. They were getting excellent reports on their audio so I know the K-3 is capable of it. Maybe I just haven't learned it all yet.
- It is a bear to configure. Makes my 756 ProIII and 7700 seem easy by comparison.



## Q5: What Do You Like Least ?

- Annoying when tuning outside the ham bands. Band selection will keep the non ham band frequency in the VFO A register. My solution is to keep the VFO register within the band and then load it into the VFO A register
- Push button labels difficult to read in low light situations.



## Q5: What Do You Like Least ?

- The radio does not have an "industrial" feel; and, there is no single button for manual band change
- The delay in CW monitor.



## Q5 Summary: K3 (-)

- Buttons – 3 modes
- Buttons - frozen in TX mode
- Buttons – needed for individual band changes
- Connectors – a bit crowded
- Controls – tight spacing
- Display – small icons
- Display - split mode not EZ
- Documentation & Training
- Labels hard to read in low light
- Learning Curve - steep
- No Panadapter or Bandscope
- RX/TX Equalizer - not flexible
- VFO A/B – no cross band operation



**Q7: Based on your operating experiences to date, what one improvement, modification or upgrade would you like to see for the K3?**



## Q7: Desired Improvement ?

- Better display
- Main and Sub-Receivers on different bands
- Per-band push-down memory stacks for flagging those interesting things heard as you tune through a band, not necessarily for contesting
- Ability to turn EQ setups on/off or, better, to store several by mode, etc.



## Q7: Desired Improvement ?

- Spectrum scope
- VFO A/B on different bands
- RX/TX Equalizer Settings in memory by Mode
- Manual Frequencies Entering in 10's and 100's of Hertz
- To transmit recorded audio from the RX by KDVR3 Module



## Q7: Desired Improvement ?

- K-3 Voice software for blind hams
- Use of Main and Sub RX for Cross Band operation
- Possibility to dim LCD diodes for night operations
- A "big box" version of the K3 – large cabinet with single-function knobs, larger display, with a self-contained power supply.



## Q7: Desired Improvement ?

- A better way of communicating to the user about how to use its various features. Elecraft really needs to do this by online videos in real operating environments.
- Should have a built-in spectrum display ("panadapter")
- Would like a watchdog timer on transmit to facilitate simple and safe remote operation.



## Q7: Desired Improvement ?

•The crystal filters may need to be modified to reduce the IMD they generate - perhaps at the loss of a little skirt slope. The key is to develop a good filter and avoid generating more noise than you filter out. I believe that Elecraft is working on this. Perhaps it is best to avoid investing in a lot of expensive filters until they resolve some of the issues.



## Q7: Desired Improvement ?

- An outboard RIT knob with RIT clear button, or a software enhancement that changes the main VFO knob into a second RIT knob whenever you activate RIT.
- Pan adaptor
- Small amplifier
- More RX controls usable while transmitting



## Q7: Desired Improvement ?

- More work with the AGC and other factors affecting pileup behavior, especially many similar strength signals in the presence of noise. Played with slope settings and found we preferred a much higher slope than the default, but not sure we had it optimized.
- PTT for computer and external keyer CW, but VOX for internal paddle, with constant baud rather than milliseconds hang time



## Q7: Desired Improvement ?

- Would like the CMOS Super Keyer timing (KC0Q/N0II) as well as A/B.
- I'd like to have the main knob do RIT with the TX frequency locked, as with the TS-930/PIEXX. The B VFO is needed for the sub-rx, so SPLIT is not as good an option.



## Q7: Desired Improvement ?

- I'd like to see the RIT offset rather than the TX and RX frequencies
- The TUNE power should track the POWER level that's set, so you don't mistakenly blast a sensitive amp
- With our low noise level on the high bands, we need more preamp gain to hear the really weak 10m signals



## Q7: Desired Improvement ?

- An integrated 1.5 KW solid state amplifier with full SO2R capability
- Near term, work with software developers of contesting software (WinTest) to provide full control of DVK, et. al.
- Per mode receive audio equalization
- Bandscope
- Panadapter



## Q7 Summary: Improvements

- Bandscope or panadapter
- Better training via online videos
- Better way of showcasing features & how to use them
- Display – dimming for night operation
- Display – less crowding; easier to read
- EQ setups – turn on/off or store several by mode
- 'K4' = big-box version of K3
- RX controls usable while in TX mode
- Solid State Amplifier
- Tune Power should track Set Power
- VFO A/B on different bands



## Q10: General Comments

- “Hands down the best receiver I've ever used for low band DXing. Multi-function buttons take some getting use to.
- “Great radio, overall! I sold my IC-7800 and do not plan to buy any other radio”
- “Great radio, best I've ever owned”



## Q10: General Comments

- “I'm looking for real world K3 operating tips and a "how-to" on those tips. Even though I've owned a K3 for almost a year, I know that I'm going to be taking notes from the presentation”
- “I would like to learn more about noise reduction settings, diversity receiving, remote control, and SO2R contesting tricks”



## Q10: General Comments

- “I've used my K3 mostly in contests from other parts of the world. Haven't had a lot of time to use it as a main radio for day-in/day-out use”
- “Overall a very nice radio -but it takes some time to get familiar with it. Initially, I didn't like the radio - but after using it in one contest, I have changed my opinion”



## Q10: General Comments

- “Would really like to hear what is next on the priority list regarding firmware upgrade features”
- Interested in how well the K3 does on voice and voice contesting - heard glowing reports re CW and RTTY. Interested in buying one in 2009, and will use it with N1MM and the N1MM DVK via MicroKeyer”



# Contesting With The K3

## “Ask The Panel” Open Discussion



## Q4 Summary: (+)

- Audio
- Connectivity
- CW
- Equalizer
- Filtering
- Jacks
- NB
- NR
- Performance
- QSK
- Range
- RIT
- RTTY
- Scanning
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- Sensitivity
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- Tuner
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