

Elecraft K3 Transceiver

By Chet Thayer, WA3I

Heard on the Air

“There are only two types of hams:

Those who own a K3,

and

Those who are going to own a K3.”

Anonymous

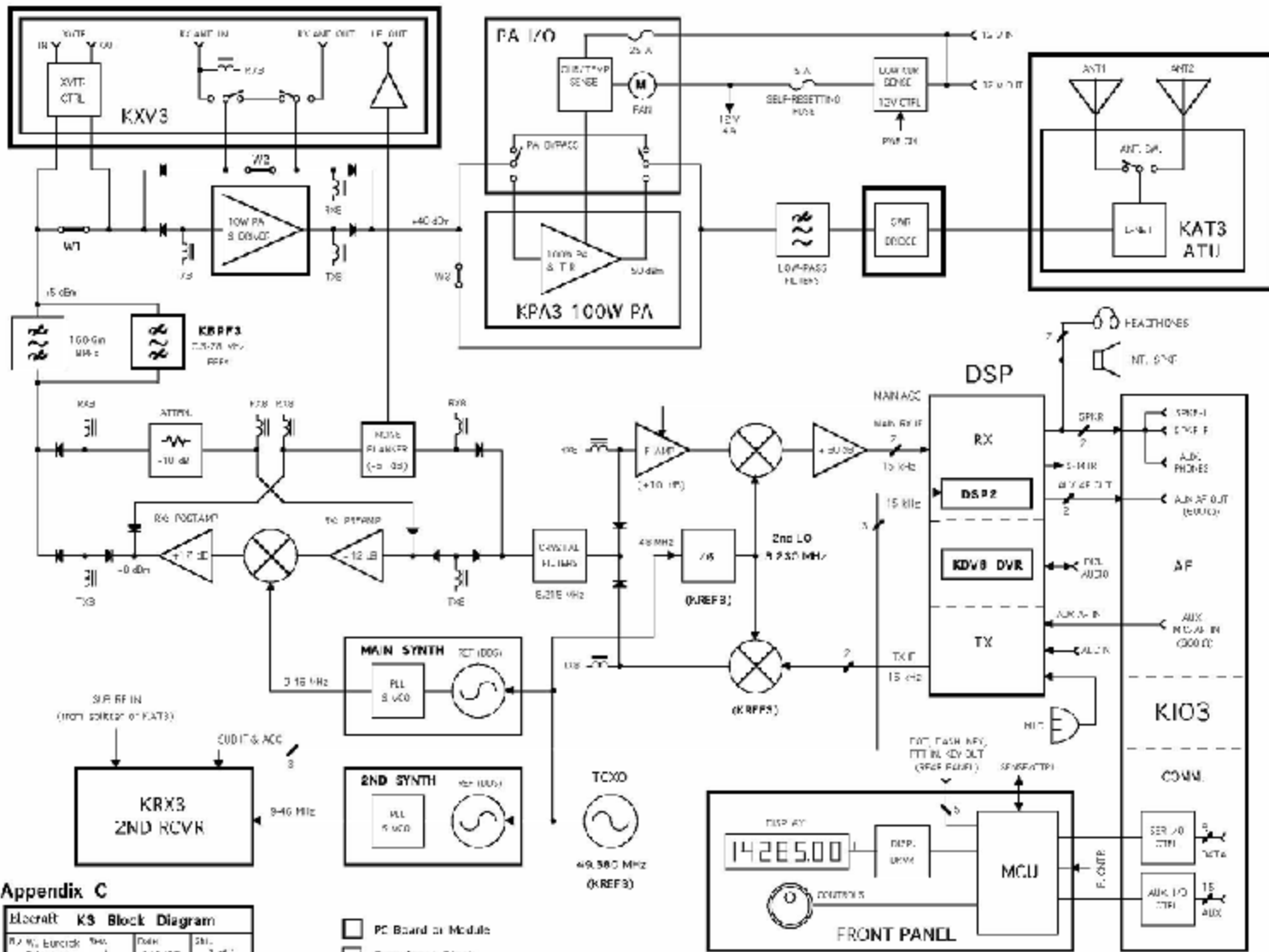
K3 Offers

- 160M through 6M operation
- 100 Watts (with “optional” PA) on all bands
- SSB, CW, Digital Modes
- Digital Signal Processing (after second mixer)
- Variable Bandpass Tuning
- Notch Filter, Noise blanker, CW Tune, etc.
- Excellent Performance Characteristics

QST Ratings

Subject of measurement, band: 14 MHz		Receiver						Transmitter			Listprice in USD (September 2011) \$	
		20 kHz blocking gain compression	2 kHz blocking gain compression	NEW: 2 kHz reciprocal mixing noise	20 kHz 3rd-order dynamic range	2 kHz 3rd-order dynamic range	20 kHz 3rd-order intercept	2 kHz 3rd-order intercept	Tx-Rx turnaround time (SSB tx delay)	Transmit 3rd-order IMD		Transmit 9th-order IMD
Min/max of scale		70/140 dB	70 - 141 dB		50/110 dB	50/110 dB	-40/+35 dB	-40/+35 dB	50/10 ms	-20/-35 dB	-20/-70 dB	
1	Yaesu FTdx5000D, December 2010	136 dB *	136 dB *	-104 dBc	114 dB !	114 dB !	+41 dBm !	+40 dBm !	37 ms	-43 dB #!	-72 dB #!	\$ 7.700
2	Elecraft K3, January 2009	142 dB !	140 dB	-86 dBc	106 dB	103 dB	+29 dBm	+28 dBm	12 ms	-29 dB	-51 dB	\$ 2.200
3	Elecraft K3, April 2008	139 dB	139 dB	-95 dBc	103 dB	102 dB	+26 dBm	+26 dBm	22 ms	-27 dB	-53 dB	\$ 2.200
4	Flex-5000A, July 2008	123 dB	123 dB	-99 dBc	99 dB	99 dB	+35 dBm	+30 dBm	29 ms	-34 dB	-54 dB	\$ 2.799
5	TenTec 599AT Eagle, August 2011	136 dB	121 dB	-95 dBc	98 dB	98 dB	+22 dBm	+22 dBm	16 ms	-28 dB	-48 dB	\$ 1.795

K3 Schematic



“Solderless” Kit

- Can be purchased assembled (kit saves \$250)
- Entire transceiver is built in modules
- Estimated time for assembly is about 5 hours (it took me 10 because I wanted to go slow)
- Very little “tune-up” needed
- Mine worked perfectly after assembly

Things I like

- It is a great CW rig (QSK, “nice” tone, etc.)
- 100 watts, 100% duty cycle (brick on the key)
- Variable bandpass tuning
- A-B VFO arrangement (Touch/Hold “reverse”)
- A tuning knob for each VFO
- CW Tune
- Δf light

Things I Don't Like

- Six turns of the knob to go from 0 watts to 100 watts
- “Touch” versus “Hold for two seconds” controls
- Needs keyboard input and large display

Demonstration of Operation

- CW
 - Semi QSK vs. QSK
 - Keyer Memory
 - Paddle AND Key(or external device)
- SSB
 - Voice Keyer
 - Speech Compressor

Demonstration of Operation

- Data (Digital) Modes
 - CW
 - PSK31
 - RTTY