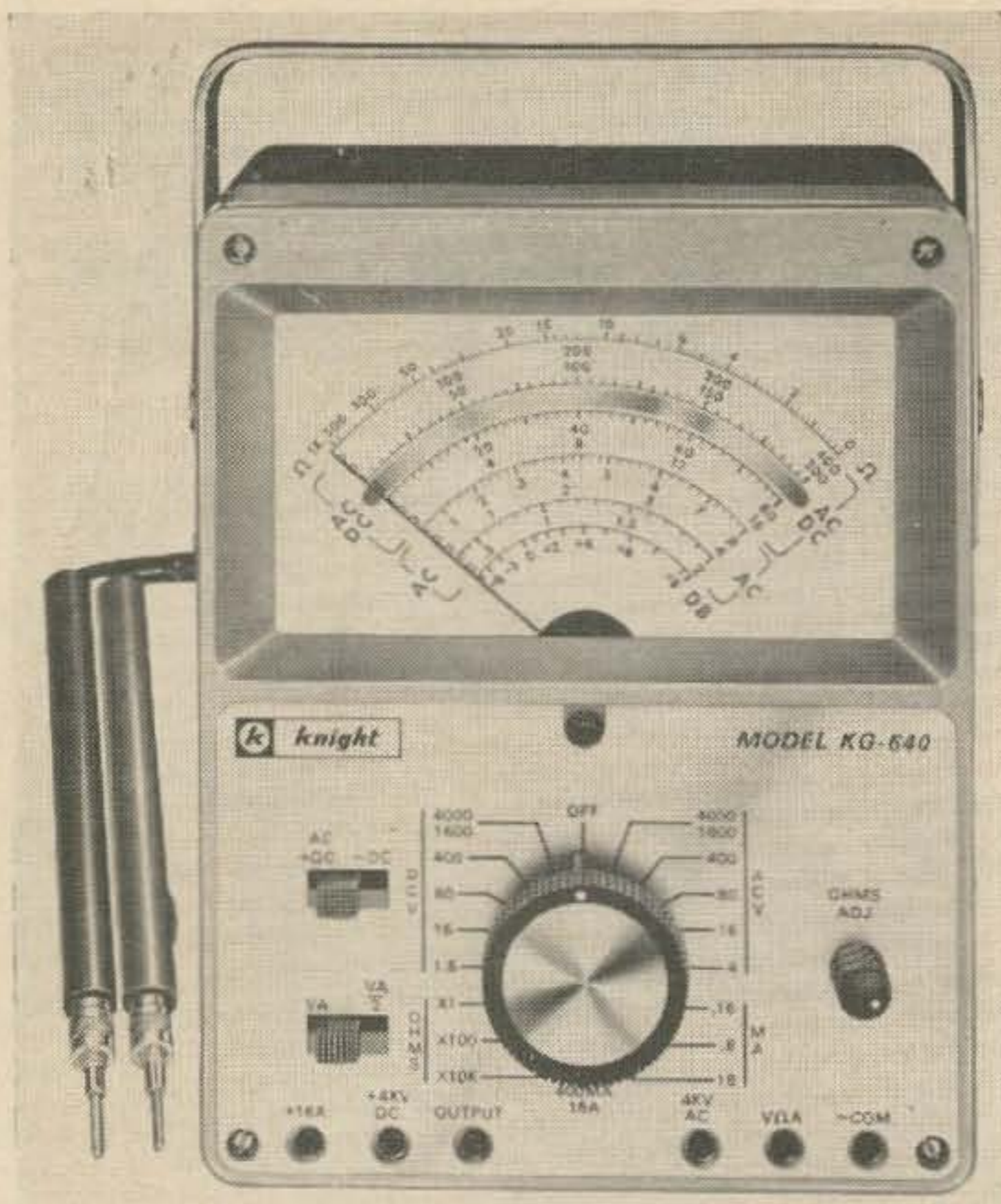


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The Knight-kit KG-640 VOM

If you're in the market for a volt-ohm-milliammeter, the new Knight-Kit KG-640 seems to be an excellent choice. This 20,000 ohms per volt instrument has many plus features that you don't usually find in inexpensive test meters. First of all, the meter is a taut-band unit; that is, the needle is suspended on a thin taut metal band instead of conventional bearings. Bearings, no matter how well designed, introduce a certain amount of friction. On the other hand, with the taut band movement, the friction is nil. This assures repeatability of reading plus dependable reliability. In addition, a mirrored scale on the meter face eliminates any errors that might be caused by parallax.

The KG-640 has a total of 57 different measuring ranges; many more than almost any other VOM on the market. On the DC scale, for example, the readings go from 0.8 VDC full scale (very handy for transistor work) up to 4000 volts. This range is sufficient for almost any DC voltage measurements that a ham is ever likely to make. The other ranges of AC voltage, resistance, current and dB are equally extensive. A complete list is given in the specifications below.

Although this VOM is available completely assembled, there are considerable savings if it is purchased as a kit. It is relatively easy to assemble with the very complete and easy to follow directions which are furnished. Plenty of illustrations are used throughout the text, and with the clear and concise instructions, it is difficult to make an error in construction. Total construction time is reasonable too—it

took me about seven hours to complete the VOM.

After the VOM was completed, I was very interested to find out what kind of repeatability and meter linearity I could expect. Using W2DXH's voltage calibrator (see his article in this issue), I was able to accurately measure the linearity of the meter movement. It was remarkable, in fact, almost unbelievable! At

Knight-Kit KG-640 Specifications

DC Sensitivity:	20,000 ohms per volt or 10,000 ohms per volt (function of scale multiplier switch).
Accuracy:	Within 3% of full scale reading on DC to 1600 volts; within 5% of full scale reading on AC to 1600 volts.
Frequency Response:	20 Hz to beyond 200 kHz.
DC Volts:	0 - 0.8 - 1.6 - 8 - 16 - 40 - 80 - 200 - 400 - 800 - 1600 - 2000 - 4000 volts.
AC Volts:	0 - 2 - 4 - 8 - 16 - 40 - 80 - 200 - 400 - 800 - 1600 - 2000 - 4000 volts. Sensitivity 5000 or 2500 ohms per volt.
Output Volts:	0 - 2 - 4 - 8 - 16 - 40 - 80 - 200 - 400 volts.
Resistance:	0 - 1K, 100K and 10 meg-ohms. Center scale values of 12, 1200 and 120K ohms.
Decibels:	-12 to +74 dB. Based upon 1 milliwatt into a 600 ohm line as 0 dB.
DC Current:	0 - 80 μ A, - 160 μ A, - 400 μ A - 800 μ A - 8 mA - 16 mA - 200 mA - 400 mA - 8 A - 16 A.
Batteries:	1 flashlight, type C and 4 penlight, type AA.
Size:	6 $\frac{3}{4}$ " x 5 $\frac{1}{4}$ " x 3 $\frac{3}{4}$ ".

NEW VFO FOR TX-62 or any other VHF TRANSMITTER



NEW AMECO VFO FOR 6, 2 & 1 1/4 METERS

The new Ameco VFO-621 is a companion unit designed to operate with the Ameco TX-62. It can also be used with any other commercial 6, 2, or 1 1/2 meter transmitter.

Because it uses a transistorized oscillator circuit, it is extremely stable. An amplifier stage provides high output at 24-26 MC. The VFO includes a built-in solid state Zener diode regulated AC power supply.

This new VFO is truly an exceptional performer at a very low price **Model VFO-621 \$59.95 net.**

The NEW **AMECO** TX-62

In response to the demand for an inexpensive compact VHF transmitter, Ameco has brought out its new 2 and 6 meter transmitter. It is easy to tune because all circuits up to the final are broadbanded. There is no other transmitter like it on the market!

SPECIFICATIONS AND FEATURES

Power input to final: 75W. CW, 75W. peak on phone.
 Tube lineup: 6GK6—osc., tripler, 6GK6 doubler, 7868 tripler (on 2 meters) 7984-Final. 12AX7 and 6GK6 modulator.
 Crystal-controlled or external VFO. Crystals used are inexpensive 8 Mc type.
 Meter reads final cathode current, final grid current and RF output.
 Solid state power supply.
 Mike/key jack and crystal socket on front panel. Push-to-talk mike jack.
 Potentiometer type drive control. Audio gain control.
 Additional connections in rear for key and relay.
Model TX-62 Wired and Tested only \$149.95

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only one point from one end of the scale to the other did the meter deviate from a linear reading. At the five volt point on the 15 volt range, the meter indication was about 100 millivolts off. And 100 millivolts out of five volts is a pretty small deviation—so small it wouldn't even be noticed in the normal run of measurements.

Next the accuracy and repeatability tests. These were made using the same voltage calibrator. The accuracy of the meter proved to be extremely good. The DC voltage scales, as far as I could tell with my naked eye, were right on the money. Same with the AC ranges. The resistance ranges were checked out with precision 1% resistors; in every case they were very, very close to the known resistor value. Repeatability: I couldn't detect any difference in readings when making the same voltage measurement several times. A 10 volt source showed up as exactly ten volts on the meter each time I put the probes across it.

If you're in the market for a VOM, you should definitely take a close look at the Knight-Kit KG-640. For accuracy, reliability, and dependability, it would be difficult to find a better instrument value for \$39.95.

... WIDTY

CONVERTER SALE

6 METER SOLID STATE RF CONVERTERS

2 db NF, .2 μ v for 6 db signal to noise ratio, mil. spec. epoxy glass printed circuit board, variable forward gain control, built-in power supply available for all models. 2N3823 FET front end available for 1.5 db NF and reduced cross-modulation effects.

THESE CONVERTERS CAN REALLY PULL IN THE DX!

Model	Input MHz	Output MHz	Price
SS610	50-54	14-18	\$21.95
SS610F	Same as above	but FET rf amp.	39.95
SS611	50-54	7-11	21.95
SS610F	Same as above	but FET rf amp.	39.95
SS510	50-54 MHz	rf pre-amplifier	9.95
SS511	50-54 MHz	FET rf pre-amplifier	29.95
SS600X	Special IF (.6-30 MHz)		24.95
SS600XF	FET special IF (.6-30 MHz)		42.95
	For built-in power supply, add		5.00

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