

# ANTENNAS & ACCESSORIES

A LOOK AT THE SHACK FROM BOTH ENDS OF THE COAX

## Antenna Column Ramblings—Part II

This month, we'll again ramble on with our usual formula of antenna, software, and book notes. As is our custom, we'll begin just where we should—with antennas. Stay with us. There's lots to come this month.

### Antenna Ramblings

**MFJ Dual-Band Flexible Duck Trio.** The "accessory wizards" at MFJ have come up a trio of new dual-band flexible rubber-duck antennas for handhelds. The MFJ-1717 is 15<sup>3</sup>/<sub>4</sub> inches long and thus performs essentially as a halfwave at 440 MHz, yielding a claimed 2.15 dBi gain on that band. On 2 meters the antenna functions as a quarterwave radiator.

High-Q, low-loss construction is featured, and the \$19.95 antenna comes factory-tuned. The antenna is rugged and is said to be able to take all the bending, twisting, flexing, and tugging you can dish out. The radiator is protected by a durable, synthetic rubber compound, and it has a hard protective safety tip. A strong, rigid base protects the matching network from flexing and possible detuning.

Two other "ducks" complete the series. The mid-size MFJ-1716 version is similar to its big brother, but is smaller at 8<sup>3</sup>/<sub>4</sub> inches in length; this makes it roughly a quarterwave on 440 MHz and a loaded quarterwave on 2 meters. It's \$16.95. Finally, the MFJ-1718 duck is sim-

ilar to its bigger brothers, but is only 4<sup>1</sup>/<sub>4</sub> inches in length; it uses an efficient, high-Q helical-wound radiator. The MFJ-1718 duck is \$12.95.

For more information, contact MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762 (1-800-647-1800).

**New ONV Full-Body Harness.** As we've pointed out previously several times, whenever you climb your tower, you're trusting your life to your own sense of carefulness, to your safety belt, and to whatever else keeps you safe from plummeting to earth. Using a belt also frees up both hands and lets you lean back away from the tower to easily reach tools and hardware. With these factors in mind, be sure that you obtain a high-quality belt that's commercially manufactured, tested, and approved. Above all, be sure to very carefully check your belt's condition **each time** you use it.

As we've noted, one good source of safety belts is the ONV Safety Belt Co. For years they have offered a deluxe belt with a seat harness for \$89.95 that accommodates up to a 42 inch waist; a similar model that handles up to a 56 inch waist is \$10 extra. The regular ONV safety belt is \$74.95. Recently ONV also introduced a "Full-Body Harness" assembly for \$89.95. They also offer a 3 foot accessory rope lanyard for \$33.95.

A special "tower climbing lanyard," three feet in length that has large "gorilla hooks" to clip on ONV safety belts also is available at \$39.95. These large hooks are for an added measure

of safety while you're ascending and descending the tower by keeping you attached to the tower at all times—a requirement many tower climbers fail to observe. Other climbing accessories you may find useful to obtain include tool pouches for carrying tools and hardware, extra snap hooks, safety lines, a hard hat, safety goggles, steel-shank boots, and gloves.

For further information, contact ONV Safety Belt Co., P.O. Box 404, Ramsey, NJ 07446 (1-800-345-5634).

**TX RX Systems Antenna Accessories.** TX RX Systems, Inc., of Angola, New York, offers a variety of specialized RF and antenna accessories of interest to the VHF, UHF, and microwave enthusiast. These include multicouplers, signal boosters, duplexers, cavity filters, and associated hardware.

One of their newest products is the Model 28-25-92358, a 6 meter Vari-Notch® Duplexer that covers 50–54 MHz. It supplements their line of Vari-Notch duplexers for 2 meters, 220–225 MHz, 420–450 MHz, and 1.2 to 1.3 GHz.

289 Poplar Drive, Millbrook, AL 36054

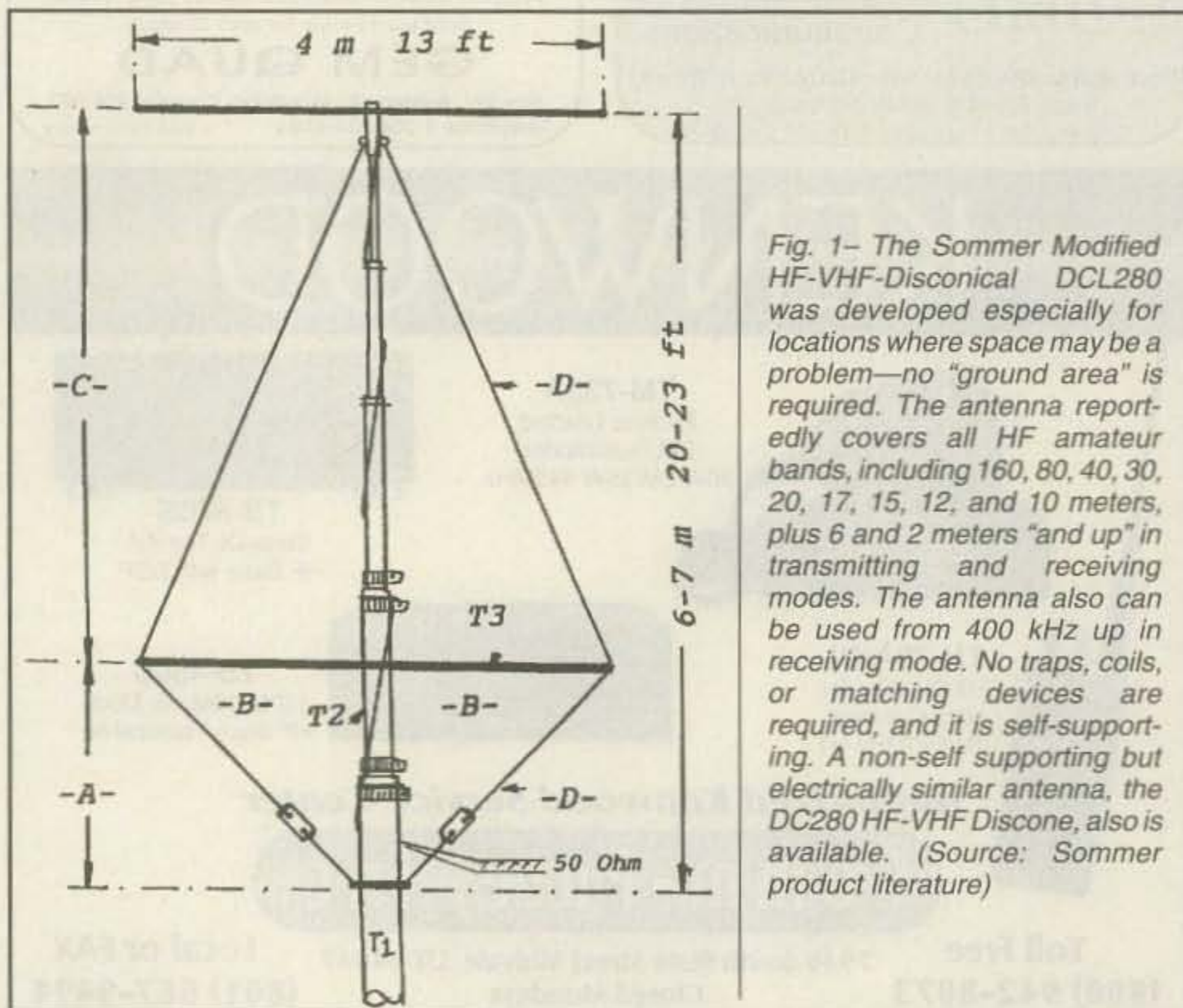
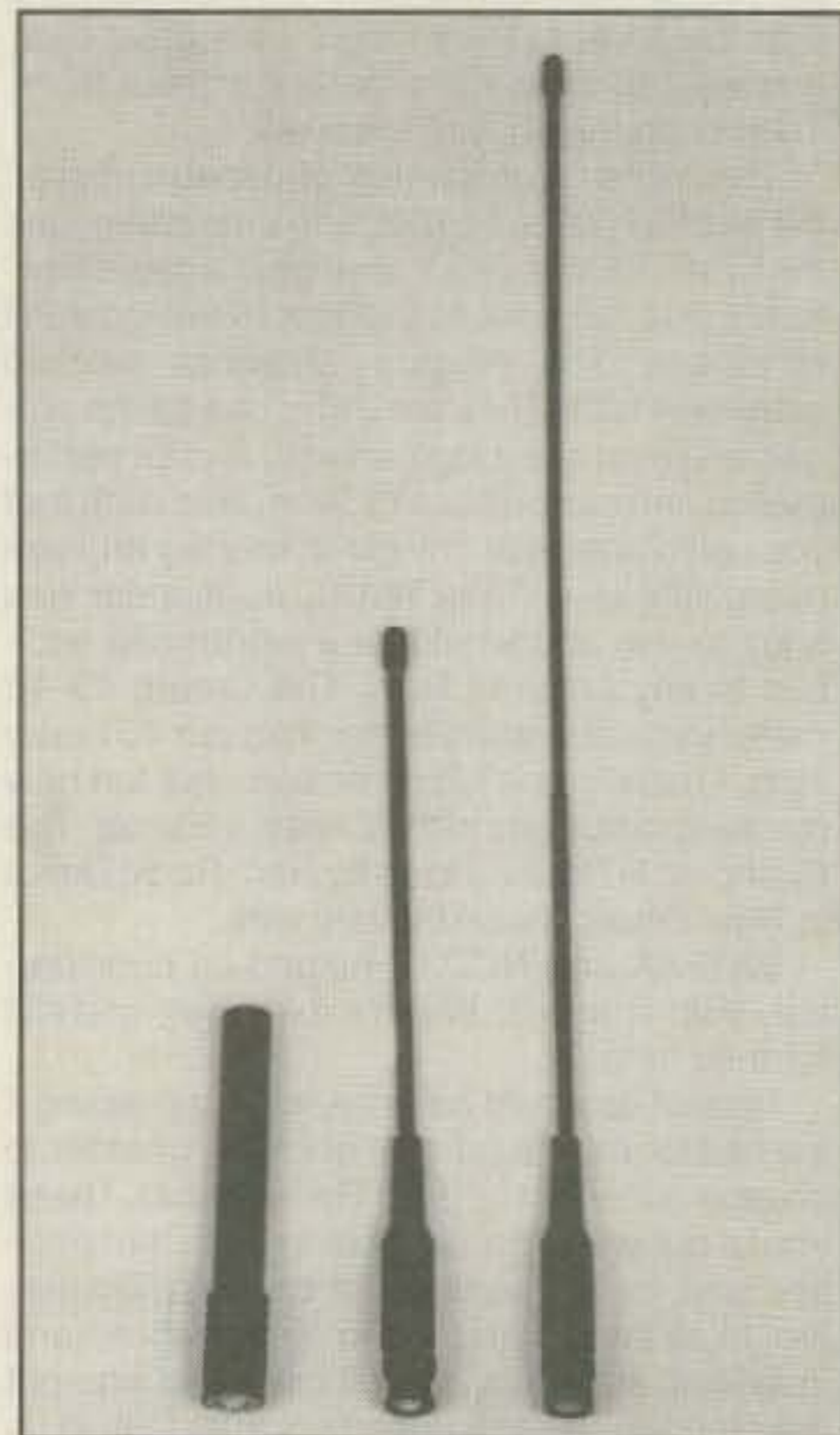


Fig. 1—The Sommer Modified HF-VHF-Disconical DCL280 was developed especially for locations where space may be a problem—no "ground area" is required. The antenna reportedly covers all HF amateur bands, including 160, 80, 40, 30, 20, 17, 15, 12, and 10 meters, plus 6 and 2 meters "and up" in transmitting and receiving modes. The antenna also can be used from 400 kHz up in receiving mode. No traps, coils, or matching devices are required, and it is self-supporting. A non-self supporting but electrically similar antenna, the DC280 HF-VHF Discone, also is available. (Source: Sommer product literature)



MFJ has come up with a trio of new dual-band flexible rubber duck antennas for handhelds. The MFJ-1717 (right) is 15<sup>3</sup>/<sub>4</sub> inches long and effectively works as a halfwave at 440 MHz; on 2 meters the antenna is a quarterwave. Two other "ducks" complete the series. The MFJ-1716 (at center) is smaller at 8<sup>3</sup>/<sub>4</sub> inches in length, while the MFJ-1718 "shorty" duck (left) is similar to its bigger brothers, but is only 4<sup>1</sup>/<sub>4</sub> inches in length. (See text.)

The new 6 meter unit is a four-cavity duplexer that uses full quarterwave coaxial cavity resonators with the patented Vari-Notch coupling devices to achieve over 100 dB transmitter-to-receiver isolation at even very narrow frequency separations. The TX RX design is said to offer significant suppression of transmitter spurious radiation at TV channel 2, which has proven to be a very troublesome channel for 6 meter operation.

The 6.625 inch diameter, temperature-compensated cavities can easily handle 250 watt repeaters while providing the high degree of filtering required for higher power operation. The duplexers are shipped factory tuned to your repeater frequencies, but easily can be retuned to new frequency pairs.

For more information on the company's products, contact TX RX Systems, Inc., 8625 Industrial Parkway, Angola, NY 14006 (716-549-4700).

**Sommer HF-VHF Discone.** In several columns, we featured the rather unusual HF antennas offered by Walfried Sommer, W4/DJ2UT. In one previous column we described the heart of the Sommer product line, the Sommer trapless multiband beams.

As we noted, these clean, no-trap driven arrays were developed to overcome trap losses to try to make multiband beams perform as well as monobanders despite the problems and shortcomings involved with closely spaced designs. The resultant Sommer multibanders, available in several three- and four-band designs, effectively use a complex system of active and inactive driven elements, depending on the particular band in use.

Another Sommer offering we previously profiled was the Tele-Command-System TCS80, a flexible vertical antenna system that covers all HF amateur bands from 75 through 10 meters (3-30 MHz continuously). Still another product we discussed was the HF SKYDISK, a close cousin of the broadband discone popular on VHF and UHF. This antenna effectively does the work of a full, broadband HF discone, without its awkward size, by providing only an element of the cone for each HF band. The 15 foot antenna covers all bands from 10 to 40 meters. It has a single 50 ohm coax feed, low SWR on all bands, and no traps.

Sommer now offers another related Discone-based HF/VHF antenna. It's the Sommer Modified HF-VHF-Disconical DCL280, developed especially for locations where space may be a problem. The antenna effectively covers all HF amateur bands, including 160, 80, 40, 30, 20, 17, 15, 12, and 10 meters, plus 6 and 2 meters "and up" in transmitting and receiving modes. The antenna also can be used from 400 kHz up in receiving mode.

No traps, coils, or matching devices are required, and the antenna handles up to 5 KW RF power. The antenna needs only a simple mast for support; it's self-supporting, so no guy wires are required. The typical DCL280 antenna is about 20-23 feet high and 13 feet in diameter. It's suitable for backyard, roof, or garage installation. A sketch is shown in fig. 1, and typical SWR curves are presented in fig. 2. It's \$490; a non-self supporting but electrically similar DC280 HF-VHF Discone is \$360.

Spec sheets showing the antennas' details and theory of operation are available from Sommer Antennas, P.O. Box 710, Geneva, FL 32732 (phone 407-349-9114; Internet: <summer1@ix.netcom.com>).

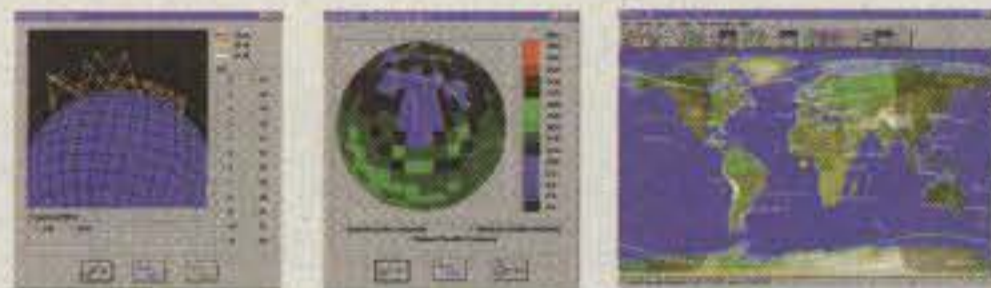
# STILL DXING THE OLD FASHIONED WAY?

*Update your system with HFX™*

With its state-of-the-art propagation models, HFX™ takes the guesswork out of DX. With only a simple set of inputs, HFX™ predicts what frequencies you should use, what time you should use them, and how strong the signal will be. And everything is presented in an intuitive graphical format, no more wading through huge tables of numbers.

HFX™ works on any PC system with a 386 processor or higher, running Windows 3.1 or higher (works on Windows 95 and NT, too!). For more information check out our website at <http://www.psr.com/hfx/>

# HFX™



For more information or to order, call or write us at:  
 HFX, Pacific-Sierra Research Corporation, 2901 28th Street, Suite 300, Santa Monica, CA 90405-2938, USA  
 1-800-820-4PSR, FAX: 310-314-2323, E-mail: [hfx%mgate@psrv.com](mailto:hfx%mgate@psrv.com)  
 Visa and MasterCard accepted, \$129.00 postpaid worldwide

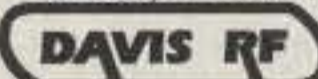
CIRCLE 72 ON READER SERVICE CARD

## REVOLUTIONARY HYBRID PRODUCTS

**FLEX-WEAVE™** 168 and 259 strand (#14 or #12), extremely flexible, strong, ties in knots to insulators, "The Cadillac of Aerial Wire", years of satisfaction world-wide, average cost 13 cents/foot (bare #14). Clear, black or camell. green available.

**BURY-FLEX™** Coax: 50 Ohm low loss, economical and truly buriable (polyeth. jkt. NOT PVC), stranded ctr. cond., 2.9dB/c @400MHz. Avg. cost only 59 cents/ft!! LMR is NOT the only alternative for **LOW LOSS, FLEXIBLE, BURIALE** VHF/UHF to microwave cable!!  
 DEALER INQUIRIES WELCOMED

**DAVIS RF Co.**  
 P.O. Box 730-C  
 Carlisle, MA 01741



24 Hour Orders:  
 1-800-328-4773  
 TECH/INFO:  
 1-508-369-1738  
<http://www.cqinternet.com/davisrf>  
 (Commercial wire/cable please call our 800 #)

## CB-TO-10 METERS

We specialize in CB radio modification plans and hardware. Frequency and FM conversion kits, repair books, plans, high-performance accessories. Thousands of satisfied customers since 1976! Catalog \$3.

**CBC INTERNATIONAL**

LOU FRANKLIN/K6NH - Owner  
 P.O. BOX 31500CQ, PHOENIX, AZ 85046



## VARI-NOTCH® DUPLEXERS

### FOR 2 METERS

The TX RX Systems Inc. patented Vari-Notch filter circuit, a pseudo-bandpass design, provides low loss, high TX to RX, and between-channel isolation, excellent for amateur band applications. TX RX Systems Inc. has been manufacturing multicoupling systems since 1976. Other models available for 220 and 440 MHz, UHF ATV and 1.2 GHz.

#### MODEL 28-37-02A

144-174 MHz  
 92 dB ISOLATION AT 0.6 MHz SEPARATION  
 400 WATT POWER RATING

#### TX RX SYSTEMS INC.

8625 INDUSTRIAL PARKWAY, ANGOLA, NY 14006  
 TELEPHONE 716-549-4700 FAX 716-549-4772 (24 HRS.)  
 A MEMBER OF THE BIRD TECHNOLOGIES GROUP



19" RACK MOUNT



CIRCLE 117 ON READER SERVICE CARD

EVERY ISSUE OF  
**CQ**  
on Microfiche!

The entire run of CQ from January 1945 through last year is available.

You can have access to the treasures of CQ without several hundred pounds of bulky back issues. Our 24x microfiche have 98 pages each and will fit in a card file on your desk.

We offer a battery operated hand held viewer for \$75, and a desk model for \$260. Libraries have these readers.

The collection of over 800 microfiche, is available as an entire set, (no partial sets) for \$360 plus \$5 shipping (USA). Annual updates available for \$10.

Ham Radio magazine available for \$225.

Satisfaction guaranteed or money back!

**BUCKMASTER**

6196 Jefferson Highway  
Mineral, Virginia 23117  
Internet: info@buck.com

540:894-5777-800:282-5628

Fax 540:894-9141

VISA



**TRIDENT** \$699.00  
**1000KHz to 1.00GHz**  
**Spectrum Analyzer System**  
Up to 500MHz Span. Two bands.

All the advantages of a Spectrum Analyzer at a very affordable price. Great for interference and signal hunting. RS232 connect for logging signals to disk. Real time display sweep outputs on any X,Y scope. Variable span and sweep rate. Marker function and selectable bandwidth. Demods in AM/NFM/WFM plus BFO for CW/SSB modes. Call toll free for more information.



1 800 445 7717

10707 E. 106th, Fishers, IN 46038  
International: 317 842 7115 Fax 317 849 8794

CIRCLE 20 ON READER SERVICE CARD

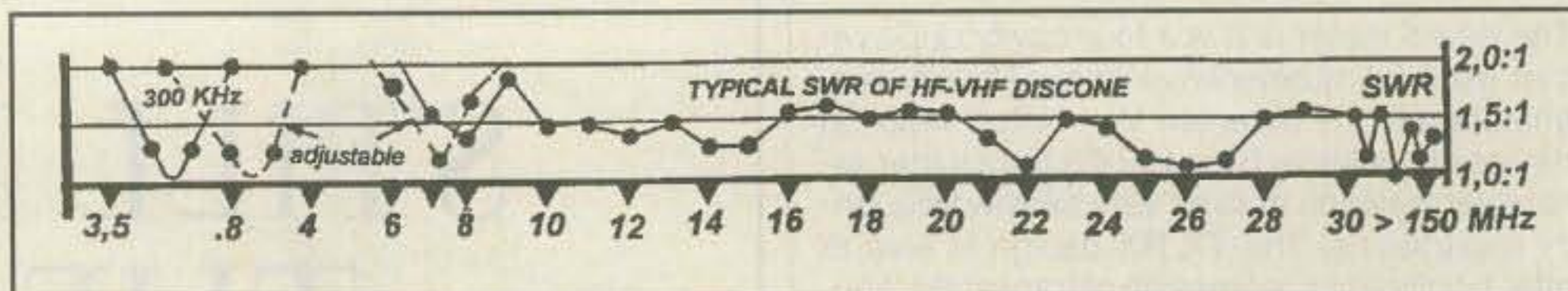


Fig. 2—The Sommer DCL280 claims to offer HF to VHF SWR performance within a very narrow SWR range: a low SWR reportedly is achieved on all frequencies by this top-fed antenna. No tuning is required for 13 MHz and up; some fine tuning at the base is required for 80 and 40 meters. Shown here is a typical SWR curve for the antenna from 3.5 to 150 MHz. Spec sheets showing working details and theory of operation are available from the manufacturer. (Source: Sommer product literature)

**Spi-Ro Manufacturing Catalog Update.** In several columns we've mentioned this small firm as a good source of antenna accessories and parts, although they've moved since we last mentioned them in June 1995. The six-page Spi-Ro flyer shows a number of complete HF antennas, including all-band and limited-space dipoles, multiband trap dipoles and slopers, a SWL "longwire," and single band antennas. Most are assembled, but Spi-Ro offers kit versions of each antenna at up to \$12 less.

Some very convenient products for amateurs with limited space for full-size HF wire dipoles are their Antenna Shorteners. These are loading coil pairs used in series with the antenna flattop to significantly reduce the antenna's physical length. The devices let you to shorten a 40 meter antenna to 38 feet overall, an 80 meter antenna to 69 feet, and a 160 meter antenna to 100 feet. These dimensions represent length reductions over 40 percent. Complete shortened dipoles also are available.

The Spi-Ro flyer also shows baluns, transmatches, center connectors, coax, ladderline, insulators, lightning protectors, support rope, surge protectors, traps, RFI suppression kits, and other antenna parts and accessories. Contact Spi-Ro Manufacturing, Inc., at a new address: P.O. Box 2800, Hendersonville, NC 28793 (1-800-728-7594).

**Alpha Delta Update.** Alpha Delta Communications is another favorite supplier of amateur and SWL HF antennas, lightning protection devices, coaxial switches, antenna hardware, and other antenna accessories. They recently issued a glossy, 12-page catalog that showcases their expanding product line.

The catalog describes their "DX series" HF wire antennas, which include amateur and SWL slopers, no-trap multiband dipoles, and monoband dipoles; the RT, LT, and HV series Transi-Trap™ surge protectors, field-replaceable Arc-Plug™ cartridges, and SEP static cartridges; Delta series two- and four-position coax switches; and antenna hardware kits and insulators.

Alpha Delta is now also the new licensed distributor for all Outbacker products in the U.S., Outbacker's popularity in this country having outgrown the facilities of Don Arnold's QTH. All of Outbacker's products will now be available through Alpha Delta.

For more details and pricing on all of their products, contact Alpha Delta Communications, Inc., P.O. Box 620, Manchester, KY 40962 (606-598-2029). Their catalog is free of charge.

**CUBEX Yellowjacket and Stinger Update.** In the March column we noted the Stinger, an add-on to the popular CUBEX Yellowjacket 4-element, 2 meter quad antenna. As we indi-

cated, the 3-element Stinger is simply added to the directors of an existing Yellowjacket antenna. The result is a solid, 7-element quad antenna with claimed 50 percent more gain than the Yellowjacket working alone. The Stinger add-on comes with a fiberglass boom coupler and an aluminum boom/mast coupler plate.

The Stinger is priced at \$44.95 + \$7 s/h, or \$85.50 + \$9 s/h as a package together with the Yellowjacket. Also, we misquoted the price of the basic Yellowjacket quad in the March column. It's also priced at \$44.95 plus \$6 s/h, as advertised by CUBEX.

In addition to VHF and HF quads and quad kits themselves, CUBEX also offers the do-it-yourself quad builder a complete line of often difficult to find quad hardware and parts. Components offered include end spiders, fiberglass arms, elements, matching transformers, arm clamps, booms, and other goodies.

A brochure and a "quad vs. Yagi" fact sheet are available from CUBEX Company, 2761 Saturn St., Unit "E," Brea, CA 92621 (714-577-9009).

**Down East Microwave Price List and Product Summary.** In August 1994 we highlighted Down East Microwave. Since then the company has relocated to Frenchtown, New Jersey. It continues to manufacture a broad line of RF products for VHF, UHF, and SHF amateurs. It specializes in amateur and commercial antennas, linear power amplifiers, preamplifiers, and transverters. They also distribute some products made by others and stock a variety of microwave components, including transistors, crystals, circuit boards, and specialized cables and connectors.

Interestingly, the firm's price list and product summary is organized primarily by frequency band and wavelength. At first glance this can make it difficult to find things—unless you also note that they also show some functional listings, including antennas, broken out by band; components, organized by type; and accessories. But this style of organization has the advantage that if you're only interested in a particular band, you can immediately see what's available for that band.

Down East's Microwave's band classifications in their price list and product summary run to short wavelengths. They include 6, 2, and 1.25 meters; 70 cm (430–450 MHz); 33 cm (902–928 MHz); 23 cm (1240–1300 MHz); 1691 MHz (WEFAX); 13 cm (2000–2400 MHz); 9 cm (3300–3480 MHz); 5 cm (5760 MHz); and 3 cm (10.4 GHz).

Future products are expected to include satellite up- and down-converters for Phase 3D International Satellite operation; preamplifiers for 13, 9, 5, and 3 cm; new 5760 MHz and 10 GHz transverters; and a variety of SETI (search

**ICOM**

IC-706 HF/6-Mtr./2-Mtr. Xcvr./Gen. Cov. Rcvr. ..	\$1169.00
IC-738 HF Xcvr./Gen. Cov. Rcvr. ....	1269.00
AT-150 HF Automatic Antenna Tuner .....	465.00
AT-180 HF/6-Meter Automatic Antenna Tuner .....	480.00
FL-100 500-Hz., CW Narrow Filter .....	96.00
FL-101 250-Hz., CW Narrow Filter .....	96.00
FL-223 1.9-KHz., SSB Narrow Filter .....	84.00
PS-55 AC Power Supply .....	229.00
SM-8 Desk Microphone .....	138.00
SP-7 Base Station External Speaker .....	68.00
SP-10 Mobile External Speaker .....	50.00
SP-20 Base Station Ext. Spkr. W/Audio Filters .....	209.00
IC-R7000A Communications Receiver .....	1699.00
IC-2350H 2-Mtr./440-MHz., FM, 50/35 Watt Xcvr. ....	468.00
IC-2GXAT-HP 2-Mtr., FM, Handheld With T-T .....	273.00
IC-03AT 220-MHz., FM, Handheld With T-T .....	319.00
IC-T7A 2-Mtr./440-MHz., FM, Handheld W/T-T .....	280.00
IC-W32A 2-Mtr./440-MHz., FM, Handheld W/T-T ..	373.00
AH-32A 2-Meter/440-MHz., Mobile Antenna .....	66.00
BP-4 Battery Case .....	28.00
BP-7 13.2 VDC, 425 mAh., Ni-Cad Batt. Pack .....	88.00
BP-8 8.4 VDC, 800 mAh., Ni-Cad Batt. Pack .....	87.00
CM-96 8.4 VDC, 1200 mAh., Ni-Cad Batt. Pack .....	99.00
BP-160 7.2 VDC, 700 mAh., Ni-Cad Batt. Pack .....	53.00
BP-173 9.6 VDC, 650 mAh., Ni-Cad Batt. Pack .....	108.00
BP-174 12 VDC, 600 mAh., Ni-Cad Batt. Pack .....	78.00
BP-180 7.2 VDC, 600 mAh., Ni-Cad Batt. Pack .....	66.00
BC-35U Desktop Charger, BP-2, 5, 7, 8, 96 .....	108.00
BC-119A Desktop Charger; Adapter Required .....	82.00
AD-28 Battery Pack Adapter For Desktop Charger ..	14.00
AD-51 Battery Pack Adapter For Desktop Charger ..	11.00
AD-56 Battery Pack Adapter For Desktop Charger ..	14.00
CP-12 Cigarette Lighter Cable W/Noise Filter .....	29.00
CP-13 Cigarette Lighter Cable W/Noise Filter .....	32.00
HM-46 Speaker/Microphone .....	47.00
HM-54 Speaker/Microphone .....	66.00
UT-89 Encode/Decode/Pocket Beep/Tone Scan .....	88.00

**BENCHER**

BY-1 Iambic Paddles, Black Base .....	\$71.95
BY-2 Iambic Paddles, Chrome Base .....	89.95

**KANTRONICS**

KAM Plus HF/VHF, Multi-Mode TNC .....	\$279.95
KPC-3 VHF/UHF, Packet TNC .....	114.95

**CUSHCRAFT**

R7000 7, 10, 14, 18, 21, 24, 28-MHz. Vertical .....	\$349.00
AR-2 2-Meter, Ringo Vertical .....	35.00
AR-6 6-Meter, Ringo Vertical .....	50.00
AR-270 2-Meter/440-MHz., Ringo Vertical .....	62.00
AR-270B 2-Meter/440-MHz., Ringo Vertical .....	90.00
ARX-2B 2-Meter, Ringo Ranger II Vertical .....	51.00
ARX-220B 220-MHz., Ringo Ranger II Vertical .....	51.00
ARX-270U 2-Meter/440-MHz., Fiber, Ringo Vert. ..	191.00
CS-270M 2-Meter/440-MHz., Mag. Mt. Mobile .....	61.00
A50-3S 50 To 54-MHz., 3-Element Beam .....	78.00
A50-5S 50 To 54-MHz., 5-Element Beam .....	127.00
A148-3S 144 To 148-MHz., 3-Element Beam .....	33.00
124WB 144 To 148-MHz., 4-Element Beam .....	51.00
A148-10S 144 To 148-MHz., 10-Element Beam .....	60.00
13B2 144 To 148-MHz., 13-Element Beam .....	100.00
224WB 222 To 225-MHz., 4-Element Beam .....	48.00
225WB 222 To 225-MHz., 15-Element Beam .....	104.00
A270-10S 2-Meter/440-MHz., 5/5-Element Beam ...	70.00
A449-6S 440 To 450-MHz., 6-Element Beam .....	42.00
A449-11S 440 To 450-MHz., 11-Element Beam .....	58.00
PE457-6 450 To 470-MHz., 6-Element Beam .....	57.00
LAC-4 Gas Discharge Lightning Arrester .....	35.00

**ASTRON**

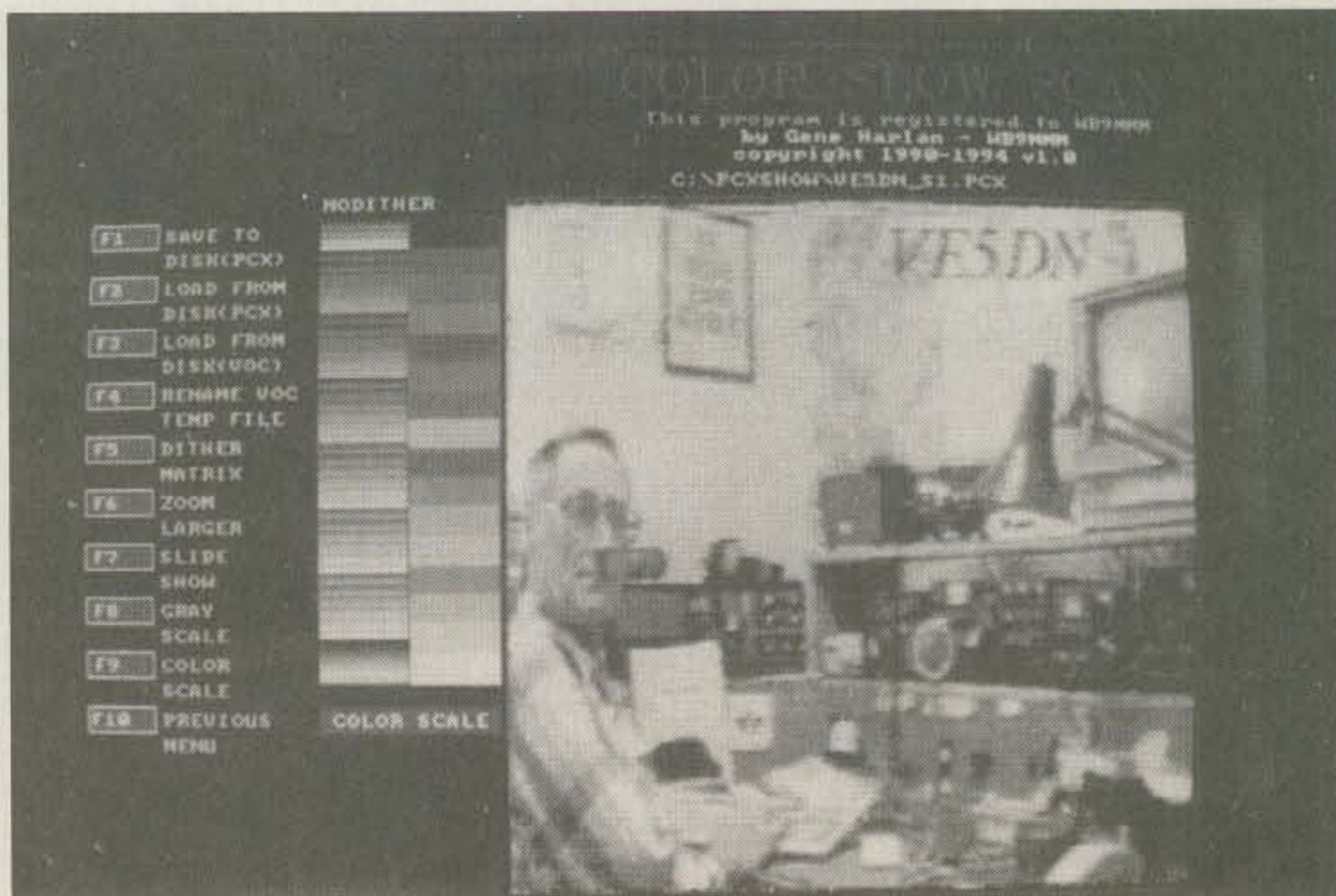
RS-7A 13.8 VDC, 7 Amp Int., 5 Amp Cont. ....	\$49.50
RS-12A 13.8 VDC, 12 Amp Int., 9 Amp Cont. ....	71.50
RS-20A 13.8 VDC, 20 Amp Int., 16 Amp Cont. ....	88.50
RS-20M Same As RS-20A, With Meters .....	108.50
RS-35A 13.8 VDC, 35 Amp Int., 25 Amp Cont. ....	141.50
RS-35M Same As RS-35A, With Meters .....	159.50

MC And VISA Orders Are Accepted  
UPS/Insurance Charges Are Additional  
Prices Subject To Change Without Notice

**LaRue Electronics**

1112 GRANDVIEW STREET  
SCRANTON, PENNSYLVANIA 18509  
PHONE (717) 343-2124

CIRCLE 59 ON READER SERVICE CARD



Color Slow Scan Television for the Sound Blaster's features include receive for Robot 8, 12, 24, and 36 second black-and-white, Robot 36 and 72 second color, Scotty 1 and 2, and Martin 1 and 2 images. The program also offers conversion of images to a "voice file." A color image of VE5DN's SSTV-equipped hamshack is shown in this photo. (WB9MMM photo)

for extraterrestrial intelligence) related products. A free, 16-page catalog is available from Down East Microwave, Inc., 954 Rt. 519, Frenchtown, NJ 08825 (908-996-3584).

**The Radio Works Update.** For several years, we noted the growth of Jim Thompson, W4THU's The Radio Works. Jim is a wire antenna specialist and sells a variety of antennas and antenna accessories, including ready-made antennas, baluns, line insulators, support line, connectors, wire, cable, and more.

A new Radio Works catalog came my way not long ago, and in it I noted a change in Jim's "dual catalog philosophy" in which he eliminated the Reference Catalog. Jim long had issued his General Catalog, but several years ago he also issued what he called a Reference Catalog to read more like a magazine than a conventional antenna catalog. The Reference Catalog included full specifications and descriptions of each Radio Works antenna and balun, along with extensive data and observations on wire, coax, and antenna support line.

More than just a listing of commercial products, the Reference Catalog contained several articles, especially on "high performance" wire antennas. But Jim says he decided not to produce a second edition, instead including some of the most important information in the General Catalog, which now tops out at just under 100 pages.

The General Catalog is \$4 postpaid from The Radio Works, P.O. Box 5169, Portsmouth, VA 23703 (804-484-0140). (Some copies of the original Reference Catalog may still be available, so it's worth your while to inquire of Jim if you want one.)

**Software Ramblings**

**MSCODE: Morse Code Made Easy for Windows.** In the April column we highlighted Ken Bradford's DOS-based shareware program, Morse Code Made Easy. It's a menu-driven

computer learning tool that lets you set the pace in learning the code.

As we noted then, Morse Code Made Easy features three menu-selected modes: Lessons, Practice, and Word Test. You can change the tone, number of words per minute, how many characters are sent at a time, and whether or not the characters are displayed as they are sent. The program checks your progress and displays a score based on the level of difficulty. There are 27 lessons arranged from the least to the most difficult; the practice menu option lets you select either "hear what you type" or "type what you hear"; and the Word Test selection lets you choose one of 27 word lists that start with short, easy words and progress to longer and more difficult words.

Ken now has introduced a new Windows version. The new Windows version (I examined V6.1) includes all of the features of the DOS version, which we described in April. Additional new features include pop-down menus, scroll-through lists, spin button control, and Windows help files that show snapshots of the different screen options and how to use them.

Like the DOS version, the new Windows version is shareware, and you have a 30-day trial period in which to decide if you want to continue to use the program and register it. Registration is \$25 plus \$4 s/h for the latest version. Future program updates are \$5, and your registration number will unlock all future shareware versions.

The program is offered by Brad's Software, 4649 Wyoming Dr., Dallas, TX 75211-7843 (214-339-6920).

**PerCon CD-ROM Databases Update.** In the December 1995 column we noted the wide variety of CD-ROM databases offered by PerCon. The company, an FCC contractor, offers a full line of FCC-related databases for both business and amateur markets on CD-ROM.

PerCon's major business-oriented products are extracts from the FCC Master Frequency

Database, organized by region or group. We noted that more to amateur and listener hobbyists' tastes are several other products, which include SPECTRUM; SPECTRUM for Scout, for use with the Optoelectronics Scout™ handheld frequency recorder; and HAM\_db and Open Repeaters, an amateur radio call sign database with nearly 700,000 records.

PerCon recently issued several new products, as well as new releases of the databases we noted last December. These include the Regional Series Incremental Update CD-ROM; Spectrum Summer '96; Spectrum-Canada Frequency Database, featuring Canadian frequency data; and a new version of HAM\_db and Open Repeaters, which includes over 10,000 open repeater records from Artsci Publications. Various upgrade offers are available to previous PerCon database users.

PerCon's web site, at <<http://www.perconcorp.com>>, provides free access to a sample SPECTRUM database search. The company also now sells Optoelectronics hardware products bundled with PerCon CD-ROM software. For more information, contact PerCon Corporation, 4906 Maple Springs/Ellery Road, Bemus Point, NY 14712 (716-386-6015).

**Harlan Technologies Update.** In April 1995 we highlighted Color Slow Scan TV for the Sound Blaster, offered by Gene Harlan, WB9MMM, of Harlan Technologies. We noted that it provides full color SSTV send and receive using your PC and its Sound Blaster or compatible sound card. The \$99.95 program's numerous features include receive for Robot 8, 12, 24, and 36 second black-and-white, Robot 36 and 72second color, Scotty 1 and 2, and Martin 1 and 2 images, plus conversion of images to a VOC-format "voice file" for transmit. Color and black-and-white, receive-only versions of the software also are available.

In the meantime, we also learned that Harlan Technologies planned to publish *CyberHam™*, a magazine to combine amateur radio and computers, and to show how they connect. The planned focus is on SSTV, ATV, RTTY, AMTOR, packet, and satellite communications. There also will be an emphasis on computer hardware and programming, beginning computer aspects, reviews of amateur radio shareware and commercial programs, amateur radio on the Internet, ham BBSs, and more. The first issue was planned for September release, so it should be available well before you read this. A one-year (six issue) subscription is \$19.95. Special promotional tie-ins with Gene's SSTV products are available.

For more information, contact Harlan Technologies, 5931 Alma Dr., Rockford, IL 61108 (815-398-2683).

**Norton NT Tools.** Many of our readers are, of course, using Windows 95 on their PCs. In the February and July columns we noted that Symantec Corporation issued a comprehensive set of utility software products for Windows 95 to address a variety of deficiencies and assist you in moving to the new operating system. The three products introduced were Norton AntiVirus, a comprehensive 32-bit antivirus protection utility; the Norton Utilities, a 32-bit utility package that offers continuous system protection and data recovery; and Norton Navigator, for enhanced file management and desktop navigation.

For those brave souls (which doesn't include your columnist) who have gone to the "top of the line" and use the upscale Windows NT oper-

# RT Systems Amateur Radio Supply

# YAESU

**FT-8500**  
Dualband Mobile



**FT-50R**  
Ultra Compact  
DualBand HT



**FT-3000M**  
Hi-Powered  
2Meter FM Mobile



**FREE • FREE  
• FREE •  
Current Sam  
CD-ROM  
With Every  
Radio  
Purchase!**

**FT-900CAT**  
Compact HF



**FT-2500M**  
2M Mobile  
FT-7400, 70cm Model  
FT-2200/7200  
2M or 70cm Models



**FT-1000**  
Full Featured HF

**FT-51R**  
Dualband  
Handheld



**FT-11R**  
2 Meter  
Handheld  
70cm Model  
Available



**1-800-723-6922 1-205-882-9292**  
**8207 Stephanie Dr, Huntsville, AL 35802**

## REPEATER HEADQUARTERS

Make "Commercial Quality" repeaters from GE and Motorola mobiles.

- 45 Watt VHF Micor from ..... \$99
- 40 Watt UHF Master II from ..... \$199

Conversion Information Available!

**VersaTel**  
COMMUNICATIONS

<http://www.versatel.com>  
Orders: 800-456-5548  
Info: 307-266-1700  
Fax: 307-266-3010

## DIRECTION FINDERS



VHF phase sense antennas with audio and led left right indication. Use with any FM Xcvr. From \$139.95.

DF attenuators also. New elt model!



**RADIO ENGINEERS**

7969 Engineer Road #102  
San Diego, CA 92111 619-565-1319

# THE RAIBEAM EATS YAGIS FOR LUNCH

High performance 2, 3 and 4 element mono-band beams for 6m thru 20m featuring WA7RAI's critically coupled, bi-periodic, dual drive system

**Raibeam**  
It's not just another yagi.

## OUR CUSTOMERS SAY IT ALL

"... I'm impressed that the 2 element Raibeam averaged less than 1 S-unit down from my 30' boom, 4 element (20m) quad on DX. It receives as quiet as the quad and the F/B ratio is excellent." ...K5UA

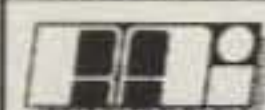
"...placed in the top 3 worldwide on 10m in the 1995 WPX with 400 w and a Raibeam." ...ZL1AXB

"...I was very surprised by the outstanding performance of my 2 element Raibeam..." ...W6TVW

"...only 2 elements and it beat my Log-periodic on DX by 3 to 4 S-units... unbelievable!" ...W5CKP

"...best antenna I've used in 50 years of Ham Radio... and the F/B ratio is fantastic" ...WT4K/KH6

Get the DX edge with higher gain - lower radiation angles - high F/B ratio - lower noise, plus a 100% performance guarantee. • Built with high quality aluminum & stainless steel hardware • 2 KW PEP

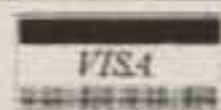


**Raibeam Antennas Int'l**

5638 West Alice Ave., Glendale, AZ 85302

E-mail:

[RAIbeam@aol.com](mailto:RAIbeam@aol.com)



CIRCLE 85 ON READER SERVICE CARD

ating system, Symantec has launched a roughly comparable single set of tools to scan and repair viruses, manage files, and monitor and view key system information under Windows NT. The new product is Norton NT Tools, and it's available on CD-ROM for what looks like a very attractive price (\$49.95).

The new utility offers protection against viruses on the desktop and over the Internet; automatic alert notification of virus definition updates via Internet online services; Internet FTP (file transfer protocol) site access and file downloading with drag-and-drop techniques; browsing of network resources; file compression using any of several formats; real-time system monitoring and status with the built-in "System Doctor"; information on key system resources; and considerably more.

For additional details, contact Symantec Corporation, 2500 Broadway, Suite 200, Santa Monica, CA 90404-3063 (1-800-441-7234).

## The Reference Shelf: Books and Catalogs

**Long-Awaited RSM Transmitter Book.** In several of our columns we reviewed Ray Moore, ex-K1DBR's *Communications Receivers*, in the 1st, 2nd, and 3rd editions. Ray's book, in its several incarnations, is an authoritative guide to American communications receivers from 1932 to 1981—the vacuum tube era. It covers all the major manufacturers, including RME, Hallicrafters, National, Hammarlund, Collins, Morrow, and others. About 400 receivers (over 700 if you count variations) from some 68 companies are profiled.

The 3rd edition (\$19.95, 125 pages) was the best, with improved reproduction of photographs, including some new ones; many new receivers; and several pages of information on military surplus receivers such as the BC-312, BC-348, and BC-454. Over 10,000 copies of the book in its various editions are in print.

Since 1992 Ray has been working hard on a companion transmitter book, which he originally planned to do in two volumes. Volume

One was to cover 1930 through World War II, and the second was to cover the postwar years through 1980. For various reasons, the two planned volumes were combined, with the result a single volume of 144 pages.

The new book, *Transmitters, Exciters, & Power Amplifiers*, is a beauty. It covers some 561 amateur HF-band, U.S.-made transmitters from 118 companies, and there are some 470 photos showing most of the transmitting equipment described. There also is a short historical "transmitter development" section.

Ray's new book obviously was a labor of love, and it fills a void in amateur radio's annals. I enjoyed the book immensely, although I was somewhat disappointed by omission of the long-planned transmitting tube section, the shortened history section, and the only "fair" quality of many of the photos.

The new, perfect-bound book is \$21.95 plus \$3 s/h. It's available from RSM Communications, P.O. Box 1046, Key Largo, FL 33037-1046 (305-853-0379).

**The AMRAD Newsletter Update.** AMRAD is the Amateur Radio Research and Development Corporation, a small but global group of dedicated radio and computer experimenters. Its focus is on developing skills and knowledge among members in radio and electronic technology, advocating design of experimental equipment and techniques, and promoting research. Some of the areas of special interest to AMRAD and its members include spread spectrum, packet radio, RTTY, HF digital communications, digital signal processing (DSP), satellites, and deaf communications.

The association mails the "AMRAD Newsletter" to members six times a year; technical articles, product announcements, and news are featured. Membership in AMRAD, which is \$15 annually, includes the newsletter. Contact the Amateur Radio Research and Development Corporation, P.O. Drawer 6148, McLean, VA 22106-6148 (Internet: <<http://www.amrad.org>>).

**INDEX Publishing Book Update.** We've mentioned the INDEX Publishing Group, Inc.

several times in the column. We've noted editor Bill Cheek's many scanner and radio monitoring publications, including the two volumes of *The Scanner Modification Handbook*, *The Ultimate Scanner*, and *The World Scanner Report*.

The firm now is publishing several titles by other authors. New titles include *Radio Monitoring for Beginners*, by T. J. "Skip" Arey (\$16.95), *Scanner Modification & Antennas*, by Jerry Pickard (\$19.95), and *TRAVELSCAN*, by Henry Eisenson (\$9.95).

A new six-page foldout brochure includes a wealth of interesting, often fascinating book titles on a variety of topics. These include not only books on radio communications and scanner listening, but also books on investigation and privacy, identity and credit, online pursuits, gambling, and "gray markets" (including cellular fraud, spying techniques, etc.).

For a copy of the firm's brochure, contact INDEX Publishing Group, Inc., 3368 Governor Drive, Suite 273, San Diego, CA 92122 (1-800-546-6707).

## Looking Back Five

**Five Years Ago in Antennas and Accessories.** Okay, so now you know what the column is like for November 1996. But what was "hot" in November 1991? That column was "Antenna Notes—Part I," a potpourri of antenna and accessories topics.

Turning first to antennas, the column featured several Austin Custom Antenna designs, including the Spectra and Ferret® scanner antennas; the Signalcraft FSO, an audible field strength oscillator; custom cabling from CAT Wire and Cable; NCG/Comet HF/VHF/UHF antennas; PolyPhaser Corporation's lightning/EMP and grounding solutions products; and the R&D ELSIE-PHASER, an L/C phasing unit for HF phased antennas.

Turning to computers and software, we discussed the R&D Electronics TCOM-777, a software multimode interface for the Tono Theta-777 communications terminal, from Bob Lewis, AA4PB; Quickyagi II and Autolog Plus, antenna analysis software and logging systems from Chuck Smith, WA7RAI; BMKMULTY, a six-module, multimode software package from M.J. Kerry, G4BMK, of Grosvenor Software; a Finnish logging program from OH1AA and OH1MIE; and Norton Utilities V6.0, a comprehensive DOS-based data protection and enhancement utility package from Symantec.

Bookwise, we looked at the *Practical Antenna Handbook*, by Joe Carr, K4IPV, from Tab Books; *A Technical Guide to the MCC at the Johnson Space Center*, by R.H. Nicholson, published by Universal Radio; and various AMSAT publications, including *A Beginner's Guide to OSCAR-13* by Keith Berglund, WB5ZDP; *The Satellite Experimenter's Handbook* by Dr. Martin Davidoff, K2UBC; and *Satellite Anthology*. In closing the column we also noted the Surplus Sales of Nebraska and the Herbach and Rademan catalogs of electrical and electronic components.

## Wrap-Up

That's all for this time, gang. Next time more Antennas and Accessories topics of current interest. See you then.

**Overheard:** Don't call a "CQ" unless you can improve on the band's silence.

73, Karl, W8FX

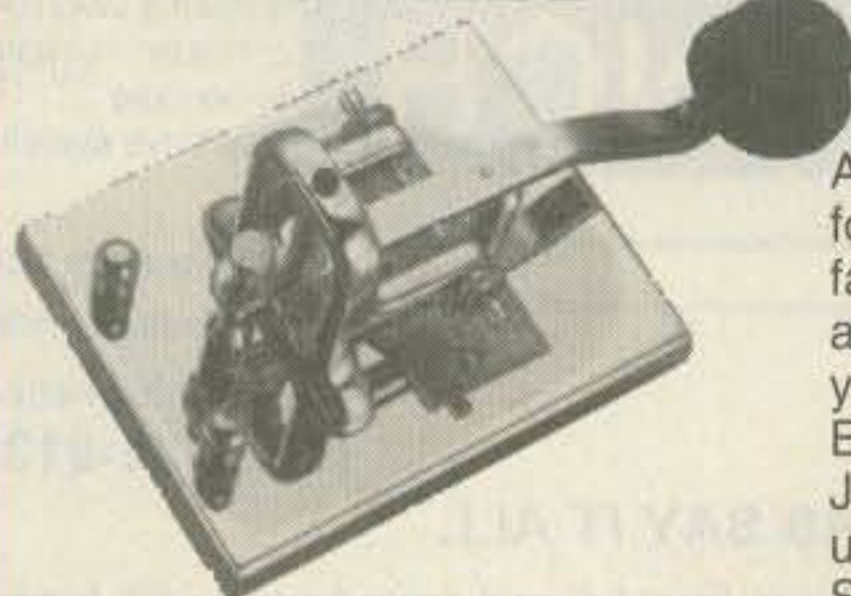
A CQ Advertiser  
Since 1947  
AMERICAN MADE

# VIBROPLEX®

"the oldest name in amateur radio"



"Since 1890"



The Deluxe Straight Key

### NEW VIBROPLEX® STRAIGHT KEY

Another fabulous \*NEW\* key from Vibroplex! Perfect for pounding the brass. Instantly identifiable as a famous Vibroplex. Heavy steel base, same size as the lambic and Vibrokeyer. The perfect key for your station. Precise control for sending good code. Easy to adjust. Same lever shape as the classic J-38. The latest Vibroplex Collectable that you can use every day. The Deluxe model - chrome base, Standard model - black powder coated base. Get yours soon for a low serial number.

Also available - Vibroplex 100th Anniversary Book (\$19.95), Keys II The Emporium (\$15.00), other gift items, parts and parts lists for all current models, dust covers, etc. Write or see your local dealer. VISA, MC and Amex accepted.

The Vibroplex Company, Inc., 11 Midtown Park, E., Mobile, AL 36606

Toll Free 1-800-840-8873

FAX 1-334-476-0465

Dealers wanted outside the US. Call or FAX

CIRCLE 120 ON READER SERVICE CARD