

The EVENT HORIZON OF DX TS-990S

Dual TFT Display & Dual Receiver HF/50 MHz Transceiver

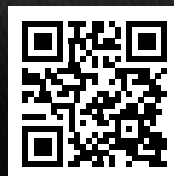


The main receiver has an IP3 in the +40 dB class, and the sub-receiver is the already famous TS-590S receiver. Capable of receiving two signals at once, on different bands. 7-inch and 3.5-inch color TFT displays allow displaying of independent contents. Simplification of complex operations at a glance. Make no mistake, this is not a toy. Finally a serious tool is available for getting the very most from your hobby - of course it's a Kenwood.

- Covers the HF and 50 MHz bands.
- High-speed automatic antenna tuner.
- USB, Serial and LAN ports.
- Various PC applications (free software): ARCP-990 enabling PC control, ARHP-990 enabling remote control, and ARUA-10 USB audio driver.
- Clean 5 to 200 W transmit power through the 50 V FET final unit.
- Built-in RTTY and PSK.
- Three Analog Devices 32-bit floating-point arithmetic DSPs.
- DVI output for display by an external monitor (main screen display only).

KENWOOD

Customer Support: (310) 639-4200
Fax: (310) 537-8235



Scan with your phone to
download TS-990S brochure.

www.kenwood.com/usa



ADS#27415

Escape with the TM-281A

On or off the road, Kenwood's TM-281A is a mobile radio you can always count on.



As tough as nails, this MIL-STD-compliant transceiver delivers powerful performance, excellent audio clarity, and a host of advanced features. It offers superb operating ease day or night thanks to the large backlit LCD and illuminated keys. So the next time you take off, take the TM-281A.

KENWOOD

Customer Support: (310) 639-4200
Fax: (310) 537-8235



Scan with your phone to
download TM-281A brochure.


www.kenwood.com/usa



ADS#27615

EchoLink® Ready



TM-V71A

With the Kenwood TM-V71A you have a choice of where you want your speaker, on the top or on the bottom of the radio. Simply remove the faceplate and flip the main body, then reattach the face, it's that simple! Yet another Kenwood 1st, this dual band transceiver has ten dedicated EchoLink® memory channels as well as EchoLink sysop-mode operation. EchoLink connection to your PC via the optional PG-5H cable kit is easy with no expensive interface needed.

EchoLink® is a registered trademark of Synergenics, LLC. For more information please see: www.echolink.org.



Large dual color amber or green thirteen segment LCD.

KENWOOD

Customer Support: (310) 639-4200
Fax: (310) 537-8235



Scan with your phone to
download TM-V71A brochure.


www.kenwood.com/usa



ADS#27515

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please contact the ARRL Advertising Department today for information on building your business.

Ameritron...The World's High Power Leader!

Ameritron HF+6 1200 W Solid State Amplifier

1.5-54 MHz . . . 1200 Watts PEP Output, Instant Automatic bandswitching, no tuning, no warm-up, SWR protected, Quiet Variable-Speed Cooling . . . PEP FWD/REF Metering . . . PA Balance/ALC Metering and LED Indicator . . . Front Panel Band/Error LEDs . . . more!



ALS-1306
\$3299
Suggested Retail

ALS-1306 1.5-54 MHz solid state near legal limit® FET no-tune Amplifier gives 1200 Watts PEP output on all bands, including 6/10/12 Meters.

ALS-1306 reliability is insured by using eight rugged MRF-150 power FETs. They are mounted on the dual heavy duty heat sink and properly arranged to spread out the heat over a large surface.

The RF deck operates at 50V for efficient, low distortion linear RF power service. Cooled by a whisper quiet cooling fan regulated by temperature sensors, assuring minimum noise for adequate cooling.

Get up to 1200 Watts of clean SSB output (100 Watts gives full rated 1200 Watts output). Only 22 lbs. 10W x 6 1/2" x 18 1/2" in.

Automatic band switching reads band data from your rig and auto changes bands as you make adjustments. Optional interface cable required.

Hash-free fully regulated switching supply is 12 lbs., 10Wx6 1/2"x9 1/2" 50 VDC at 50A. 220 VAC, selectable to 110 VAC. Draws <25A at 110 VAC.; 12A@220 VAC.

ALS-1300, \$2899. 1200W, 1.5-22 MHz. No 6 Meters, automatic band-switching with optional ARI-500, 10/12M with mod.

AMERITRON No Tune Solid State Amplifiers

ALS-500M 500 Watt Mobile Amp



ALS-500M
\$949
Suggested Retail

500 Watts PEP/400W CW output, 1.5-22 MHz, instant bandswitching, no tuning, no warm-up. SWR, load fault, thermal overload protected. On/Off/Bypass switch. Remote on/off control. DC current meter. Extremely quiet fan. 13.8 VDC. 9W x 3 1/2" x 15D in., 7 lbs.
ALS-500RC, \$49. Remote Head.

ALS-600 Station 600 Watt FET Amp



ALS-600
\$1599
Suggested Retail

No tuning, no fuss, no worries – just turn on and operate. 600 Watts PEP/500W CW, 1.5-22 MHz, instant bandswitching, SWR protected, extremely quiet, SWR/Wattmeter, ALC control. 120/220 VAC. Inrush protected. 9 1/2" x 6" x 12D in.
ALS-600S, \$1699. ALS-600 with 10 lb. switching power supply.

AMERITRON . . . 800 Watts . . . \$999!



ALS-811H
\$999
Suggested Retail
4-Tubes, 800 Watts

Get a quiet desktop linear that's so compact it'll slide right into your operating position – you'll hardly know it's there . . . until QRM sets in. And you can conveniently plug it into your nearest 120 VAC outlet.

You get all HF band coverage (with license) -- including WARC and most MARS bands at 100% rated output. Ameritron's Adapt-A-Volt™

Desktop Kilowatt Amplifier



AL-80B
\$1595
Suggested Retail

Whisper quiet desktop amp plugs into 120 VAC to give full kilowatt SSB PEP output. Ameritron's exclusive DynamicALC™ doubles average SSB power out and Instantaneous RF Bias™ gives cooler operation. All HF bands. 850 Watts CW out, 500 Watts RTTY out, extra heavy duty power supply, 3-500G tube, 70% efficiency, tuned input, Pi/Pi-L output, inrush current protection, dual Cross-Needle meters, QSK compatible, 48 lbs. 14W x 8 1/2" x 15 1/2" in. **Two-year warranty.**

ALS-811
\$849
Suggested Retail
3-Tubes, 600 Watts

hi-silicon core power transformer has a special buck boost winding that lets you compensate for high/low power line voltages.

You also get efficient full size heavy duty tank coils, slug tuned input coils, operate/standby switch, transmit LED, ALC, dual illuminated meters, QSK with optional QSK-5, pressurized cooling that you can hardly hear, full height computer grade filter capacitors and more. 13 3/4" x 8" x 16D inches.

AL-811, \$849. Like AL-811H, but has three 811A tubes and 600 Watts output.

HF Amps with 3CX800A7 Tube



AL-800F
1 tube, 1250 Watts
\$1995
AL-800HF
2 tubes, 1.5 kW Plus
\$2745
AL-800, \$2545
AL-800H, \$3845
with Eimac® tubes

These compact desktop amplifiers with 3CX800A7 tubes cover 160-15 Meters including WARC bands. Adjustable slug tuned input circuit, grid protection, front panel ALC control, vernier reduction drives, heavy duty 32 lb. silicone steel core transformer, high capacitance computer grade filter capacitors. Multivoltage operation, dual lighted cross-needle meters. 14 1/4" x 8 1/2" x 16 1/2" in.

AMERITRON Full Legal Limit Amplifiers

AMERITRON legal limit amps use a super heavy duty Peter Dahl Hypersil® power transformer capable of 2.5 kW!

Most powerful – 3CX1500/8877



AL-1500F
\$3395
3CX1500/8877 Tube

AL-1500
\$4295
Eimac® Tube
Suggested Retail

Ameritron's most powerful amplifier uses the herculean 3CX1500/8877 ceramic tube. 65 watts drive gives you full legal output – it's just loafing with a 2500 Watts power supply.

Toughest – 3CX1200/Z7



AL-1200
\$3995
Suggested Retail

Get ham radio's toughest tube with the Ameritron

AL-1200 – the Eimac® 3CX1200Z7. It has a 50 Watt control grid dissipation. What makes the Ameritron AL-1200 stand out from other legal limit amplifiers? The answer: A super heavy duty power supply that loads at full legal power – it can deliver the power of more than 2500 Watts PEP two tone output for a half hour.

Classic – Dual 3-500Gs



AL-82
\$2995
Suggested Retail

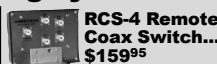
This linear gives you full legal output using a pair of genuine 3-500Gs. Competing linears using 3-500Gs can't give you 1500 Watts because their lightweight power supplies can't use these tubes to their full potential.

Call your favorite dealer for your best price today!

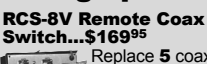
Ameritron brings you the finest high power accessories!



ARB-704 amp-to-rig interface...\$59⁹⁵
Protects rig from damage by keying line transients and makes hook-up to your rig easy!



RCS-4 Remote Coax Switch...\$159⁹⁵
Use 1 coax for 4 antennas. No control cable needed. SWR <1.25, 1.5 - 60 MHz. Useable to 100 MHz.



RCS-8V Remote Coax Switch...\$169⁹⁵
Replace 5 coax with 1! 1.2 SWR at 250 MHz. Useable to 450 MHz. <.1 dB loss, 1kW@ 150MHz.



RCS-10 Remote Coax Switch...\$179⁹⁵
Replace 8 coax with 1! SWR<1.3 to 60 MHz.
RCS-10L, \$219.95
w/lightning arrestors.



The World's High Power Leader 116 Willow Rd, Starkville, MS 39759
■ Tech: (662) 323-8211 ■ FAX: (662) 323-6551 8 a.m.-4:30 p.m. CST, Monday-Friday

Cushcraft...Keeping You in Touch Around the Globe

Cushcraft Antennas

New! Cushcraft R9...80-6 Meters

80 Meters . . .No Radials . . .1500W



R-9 – \$639.95
80-6 Meters

R-8 – \$539.95
40-6 Meters

Cushcraft's world famous R8 now has a big brother!

Big Brother R9 now includes 75/80 Meters for local ragchewing and worldwide low band DX without radials!

Its omni-directional low angle radiation gives you exciting and easy DX on all 9 bands: 75/80, 40, 30, 20, 17, 15, 12, 10 and 6 Meters with low SWR. QSY instantly – no antenna tuner needed.

Use full 1500 Watts SSB/CW when the going gets tough to break through pileups/poor band conditions.

The R9 is super easy to assemble, installs just about anywhere, and its low profile blends inconspicuously into the background in urban and country settings alike.

Compact Footprint: Installs in an area about the size of a child's sandbox – no ground radials to bury with all RF-energized surfaces safely out of reach.

Rugged Construction: Thick fiberglass insulators, all stainless steel hardware and 6063 aircraft-aluminum tubing is double or triple walled at key stress points to handle anything Mother Nature can dish out.

31.5 feet tall, 25 lbs. Mounting mast 1.25 to 2 inches. Wind surface area is 4 square feet.

R8, \$539.95. Like R9 antenna but less 75/80 Meters.

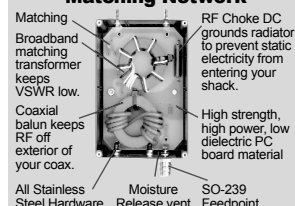
R-8TB, \$79.95. Tilt-base lets you tilt your antenna up/down easily by yourself to work on.

R-8GK, \$59.95. Three-point guy kit for high winds.

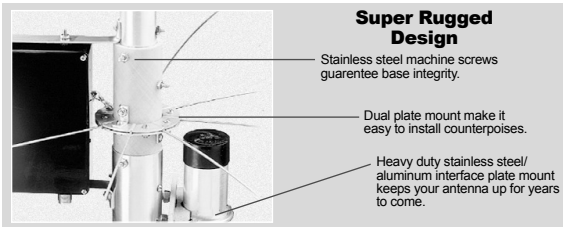
Omni-Directional

Low angle radiation gives incredible worldwide DX.

Matching Network



Super Rugged Design



Cushcraft 10, 15 & 20 Meter Tribander Beams

Only the best tri-band antennas become DX classics, which is why the Cushcraft World-Ranger A4S, A3S, and A3WS go to the head of the class. For more than 30 years, these pace-setting performers have taken on the world's most demanding operating conditions and proven themselves every time. The key to success comes from attention to basics. For example, element length and spacing has been carefully refined over time, and high-power traps are still hand-made and individually tuned using laboratory-grade instruments. All this attention to detail means low SWR, wide bandwidth, optimum directivity, and high efficiency – important performance characteristics you rely on to maintain regular schedules, rack up impressive contest scores, and grow your collection of rare QSLs!

It goes without saying that the World-Ranger lineup is also famous for its rugged construction. In fact, the majority of these antennas sold years ago are still in service today! Conservative mechanical design, rugged over-sized components, stainless-steel hardware, and aircraft-grade 6063 make all the difference.

The 3-element A3S/A3WS and 4-element A4S are world-famous for powerhouse gain and super performance. **A-3WS, \$499.95**, 12/17 M. **30/40 Meter** add-on kits available.



A-4S \$699.95

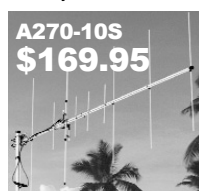


A-3S \$599.95

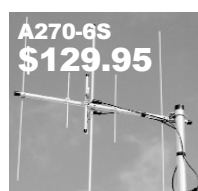
Cushcraft Dual-Band Yagis

One Yagi for Dual-Band FM Radios

Dual-bander VHF rigs are the norm these days, so why not complement your FM base station with a dual-band Yagi? Not only will you eliminate a costly feed line, you'll realize extra gain for digital modes like high-speed packet and D-Star! Cushcraft's A270-6S provides three elements per band and the A270-10S provides five for solid point-to-point performance. They're both pre-tuned and assembly is a snap using the fully illustrated manual.



A270-10S \$169.95



A270-6S \$129.95

MA-5B 5-Band Beam

Small Footprint – Big Signal



MA-5B \$499.95

The MA-5B is one of Cushcraft's most popular HF antennas, delivering solid signal-boosting directivity in a bantam-weight package. Mounts on roof using standard TV hardware. Perfect for exploring exciting DX without the high cost and heavy lifting of installing a large tower and full-sized array. Its 7 foot 3-inch boom has less than 9 feet of turning radius. Contest tough – handles 1500 Watts.

The unique MA-5B gives you 5 bands, automatic band switching and easy installation in a compact 26-pound package. On 10, 15 and 20 Meters the end elements become a two-element Yagi that delivers solid power-multiplying gain over a dipole on all three bands. On 12 and 17 Meters, the middle element is a highly efficient trap dipole. When working DX, what really matters are the interfering signals and noise you don't hear. That's where the MA-5B's impressive side rejection and front-to-back ratio really shines.

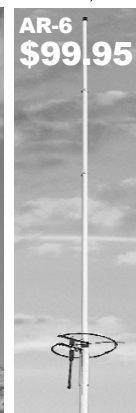
See cushcraftamateur.com for gain figures.

Cushcraft Famous Ringos Compact FM Verticals

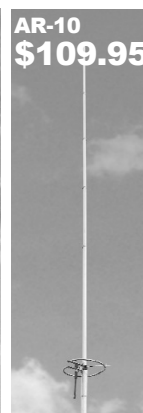
W1BX's famous Ringo antenna has been around for a long time and remains unbeaten for solid reliability. The Ringo is broad-banded, lightning protected, extremely rugged, economical, electrically bullet-proof, low-angle, and more – but mainly, it just plain works! To discover why hams and commercial two-way installers around the world still love this antenna, order yours now!



AR-2 \$64.95



AR-6 \$99.95



AR-10 \$109.95

Cushcraft Amateur Radio Antennas 308 Industrial Pk Rd, Starkville, MS 39759 USA
Sales/Tech: (662) 323-9538 ■ FAX: (662) 323-5803 Open 8-4:30 CST, Mon.-Fri.

Add shipping. Prices and specifications subject to change. 2016 ©Cushcraft.

Cushcraft_R9_R8_081110_QST_031616DS

The First Choice of Hams Around the World!

hy-gain® Antennas and Rotators

HF Verticals

Work amazing DX with these extremely low radiation angle omnidirectional antennas. All self supporting, 1500 Watts PEP SSB, low SWR. Heavy duty, slotted, tapered, swaged, aircraft quality aluminum tubing. Stainless steel hardware. Two year limited warranty.

AV-680, \$549.95. 9 Bands: (6, 10, 12, 15, 17, 20, 30, 40, 80 Meters). 26 ft., 18.5 lbs.

Our most popular vertical now has 75/80 Meters! Lets you work exciting DX with a low 17 degree radiation angle! Easily mount on decks, roofs, patios. No ground or radials needed. Extra wide 2:1 SWR bandwidths. Each band tunable. Auto bandswitching, handle 1.5kW, 80 MPH wind survival, low 2.5 sq. ft. wind surface. Aircraft aluminum tubing, stainless steel hardware.

AV-640, \$449.95. Like AV-680 less 80M. 251/2', 171/2 lbs.

AV-620, \$349.95. Like AV-640 less 40M. 221/2'/101/2 lbs.

AV-14AVQ, \$179.95. (10, 15, 20, 40 Meters). 18 ft., 9 lbs. Classic AV-14AVQ uses same trap design as famous hy-gain Thunderbird beams. 3 air dielectric Hi-Q traps with oversize coils give superb stability and 1/4 wave resonance on all bands. Automatic bandswitching.

AV-12AVQ, \$139.95. (10, 15, 20 Meters). 13 ft., 9 lbs. Lowest priced automatic bandswitching tri-band vertical! Uses Thunderbird beam design air dielectric traps for extremely hi-Q performance in limited space.

AV-18VS, \$119.95. (10, 12, 15, 17, 20, 30, 40, 80M). 18 ft., 4 lbs.

hy-gain's lowest priced vertical gives you 8 bands. Easily tuned to any band by adjusting base loading coil.

See our website for even more hy-gain vertical antennas!

HF Beams

hy-gain beams are stronger, lighter, have less wind surface and last years longer. Why?

hy-gain uses durable tooled components -- massive boom-to-mast bracket, heavy gauge element-to-boom clamps, thick-wall swaged tubing -- no failures!

TH-11DX, \$1159.95.

11-element, 4.0 kW PEP, 10, 12, 15, 17, 20 Meters.

The choice of top DXers. With 11- elements, excellent gain and 5-bands, the super rugged TH-11DX is the "Big Daddy" of all HF beams! Features low loss log-periodic driven array on all bands with monoband reflectors, BN-4000 high power balun, corrosion resistant wire boom support, hot dipped galvanized and stainless steel parts.

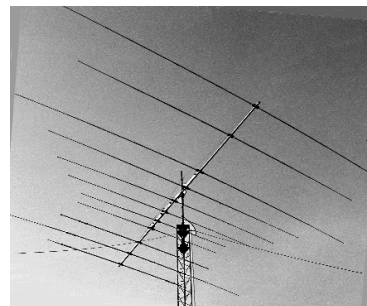
TH-7DX, \$869.95. 7-Element, 1.5 kW PEP, 10, 15, 20 Meters.

7-Elements gives you the highest average gain of any hy-gain tribander! Dual driven for broadband operation without compromising gain. SWR less than 2:1 on all bands. Combined monoband and trapped parasitic elements give you an excellent F/B ratio.

TH-3MK4, \$469.95. 3-Element, 1.5 kW PEP, 10, 15, 20 Meters.

Gives most gain for your money in full-power, full-size hy-gain tri-bander! Impressive gain and a whopping average front-to-back ratio and still fits on an average size lot. 95 MPH wind survival.

TH-3JRS, \$359.95. Compact 3-Element, 600 WPEP, 10, 15, 20 Meters. hy-gain's most popular and lowest-priced tri-bander fits smallest lot, 14.75 ft turning radius, 21 lbs. Excellent gain and front-to-back let you compete with the "big guns"! 80 MPH wind survival.



hy-gain® Rotators...the First Choice of Hams Around the World!

HAM-IV – \$649.95

The most popular rotator in the world! For medium communications arrays up to 15 square feet wind load area. New 5-second brake delay! New Test/Calibrate function. New low temperature grease permits normal operation down to -30 degrees F. New alloy ring gear gives extra strength up to 100,000 PSI for maximum reliability. New indicator potentiometer. New ferrite beads reduce RF susceptibility. New Cinch plug plus 8-pin plug at control box. Dual 98 ball bearing race for load bearing strength and electric locking steel wedge brake prevents wind induced antenna movement. North or South center of rotation scale on meter, low voltage control, max mast size of 21/16 inches.

HAM-VI, \$749.95. For medium arrays up to 15 sq. ft. wind load. Like HAM-IV but has new DCU-2 Digital Rotator Controller. Just dial in your beam heading or let your computer control your antenna.

HAM-VII, \$799.95. Like HAM VI but with DCU-3 digital controller with six programmable memories.



Tailtwister T-2X – \$799.95

For large medium antenna arrays up to 20 sq. ft. wind load. Choose DCU-2 digital controller (T-2XD2) or analog control box (T-2X) with new 5-second brake delay and new Test/Calibrate function. Low temperature grease, alloy ring gear, indicator potentiometer, ferrite beads on potentiometer wires, new weatherproof AMP connectors plus 8-pin plug at control box, triple bearing race with 138 ball bearings for large load bearing strength, electric locking steel wedge brake, N or S center of rotation scale on meter, low voltage control, 21/16" max. mast.

T-2XD2, \$899.95. Tailtwister with DCU-2 digital controller.

T-2XD3, \$949.95. Tailtwister with DCU-3 digital controller with six programmable memories.

AR-40, \$349.95. For compact antenna arrays and FM/TV up to 3.0 sq. ft. wind load. Dual 12 ball-bearing race. Fully automatic.

CD-45II, \$449.95. For antenna arrays up to 8.5 sq. ft. Bell rotator design gives total weather protection. Dual 58 ball bearing race.



Digital Rotator Controller with 6 Programmable Beam Headings



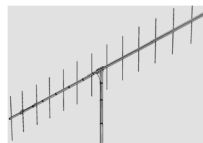
DCU-3
\$449.95

New!

New DCU-3 Digital Controller lets you program 6 beam headings! Gives you fully automatic or manual control of your hy-gain HAM or Tailtwister Rotators.

Push a memory button or dial in your beam heading or let Ham Radio Deluxe (or other program) control your DCU-3. Your antenna automatically rotates precisely and safely to your desired direction.

hy-gain® VHF/UHF Antennas



VB-214FM, \$89.95.

14-element 2-Meter FM beam antenna provides exceptional front-to-back ratio and maximum obtainable gains.

VB-23FM, \$49.95. 3-element.

VB-25FM, \$59.95. 5-element.

VB-28FM, \$79.95. 8-element. Threaded stub for feedpoints. Accepts up to 2 inch mast.

DB-2345, \$89.95. Dual band 144 (3-elements) 440 (5-elements) MHz.

YRC-1, \$329.95.

Replace your Yaesu rotator controller.

More features and a much more robust controller that is far less prone to lightning damage. YRC-1 costs less than repairing your original Yaesu controller!



For a Free hy-gain® Catalog

and nearest Dealer...800-973-6572 Call your dealer for your best price!

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AV680_080910_4C_QST_073013DS

MFJ...the World Leader in Ham Radio Accessories!

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Every MFJ Analyzer is protected by MFJ's famous one year **No Matter What™** limited warranty. We will repair or replace your MFJ analyzer (at our option) for a full year.

Free Dealer/Catalog/Manuals/Instructions - Visit: www.mfjenterprises.com or call toll-free 800-647-1800

MFJ-989D Tuner \$409⁹⁵

Legal-limit antenna tuner has Air-Core™ inductor, 500pF air variable capacitors, fast-tune crank, high voltage balun, 3" meter, dummy load, ant. switch.

MFJ-1778 G5RV \$449⁹⁵

Efficient, all band G5RV antenna is only 102' long, has 32.5' ladder line matching section ending in an SO-239 for feedline. Operate 80-10 Meters with tuner. 1500 Watts.

MFJ-260C Dry Load \$39⁹⁵

300W VHF/HF Dry Dummy Load handles full load for 30 seconds. Derating curve to 5 minutes. SWR below 1.1:1 to 30 MHz. 1.5:1 from 30-650 MHz. **MFJ-264, \$74.95.** 1.5kW load.

MFJ-270 Surge Protect \$19⁹⁵

Safeguard your expensive equipment. Shunts to 5000 Amps of peak impulse current harmlessly to ground. SWR less than 1.1:1, less than 0.1 dB loss. Use to 1000 MHz, 400W PEP.

MFJ-4245MV 45A PS \$149⁹⁵

Switching power supply. 45A surge/40A continuous. 9-15 VDC out. 85-260 VAC in. Low ripple, highly regulated. 5-way posts, cig lighter, quick connects. 5 lbs., 7 1/2" W x 4 3/4" H x 9 D".

MFJ-868B Giant Meter \$149⁹⁵

Largest HF+6M SWR/Wattmeter in the world has 6.5" diagonal scale. 20/200/2000W ranges.

MFJ-281 Speaker \$12⁹⁵

Get speech fidelity you never knew existed! 3" speaker, 8W, 8 Ohms impedance, 6' cord, 3.5 mm mono.

MFJ-108B 24/12 Clock \$21⁹⁵

Read both UTC and local time simultaneously. BIG 5/8 inch digits! Solid brushed aluminum frame. 4 1/4" W x 2 H x 1 D".

MFJ-259C Analyzer \$299⁹⁵

World's best selling antenna analyzer covers 530 KHz to 230 MHz, LCD, SWR and impedance or SWR bargraph, analog meters, signal generator, freq counter.

MFJ-949E Tuner \$189⁹⁵

More hams use MFJ-949E tuners than all others in the world! Large 3" crossneedle SWR/Wattmeter, 8 position antenna switch, dummy load, Match any antenna 1.8-30 MHz.

MFJ-929 AutoTuner \$229⁹⁵

Compact 200 Watt IntelliTuner™ tunes any unbalanced antenna ultra-fast! 20,000 Virtual Memories, Antenna Switch, Efficient L-network, Matches 6-1600 Ohms from 1.8-30 MHz.

MFJ-16XX HF Sticks \$149⁹⁵

Rugged, sleek 6-40M mobile HamTenna™ antennas, \$14.95 each band. 250 Watts, 7' extended, collapse to about 4 feet for storage. Quickly screws into any 3/8-24 female mount for quick band changing. **60-75M, \$19.95.**

MFJ-1702C Ant Switch \$39⁹⁵

2-position antenna switch has center ground, auto grounding of unused position, 2.5 kW PEP and works to over 500 MHz. Lightning surge protection. SO-239 Connectors. **MFJ-1704, \$79.95.** 4 positions.

MFJ-392B Headphones \$24⁹⁵

Perfect for Ham Radio and shortwave listening - SSB, FM, AM, data and CW. Super lightweight (8 oz.) padded headband and ear cushioned design. Each earphone has own volume control. 3.5mm/1/4" plugs, 9' cord.

MFJ-4275MV 75A PS \$259⁹⁵

Switching power supply. 75A max/70A cont. Great for ALS-500M solid state amp. Adjustable 4-16 VDC. Input 110/220 VAC. Battery charger. 10.5 lbs.

MFJ-1026 Noise Cancel \$199⁹⁵

Wipe-out interference! 60 dB null. SSB/CW/AM/FM. BCB to lower VHF. RF sense T/R switch.

MFJ-461 CodeReader \$89⁹⁵

Decodes and displays Morse code on two-line high-contrast LCD. Just hold close to receiver.

MFJ-1724B Mobile \$249⁹⁵

World's Best Selling 2Meter 440 MHz magnet mount antenna has 3.5" magnet, 19' stainless steel whip, handles 300 Watts, 15 feet coax.

MFJ-269C Analyzer \$399⁹⁵

Upgraded MFJ-269C has all features of MFJ-259C plus 415-470 MHz, 12-bit A/D converter, characteristic impedance 0-600 Ohms, coax calculator, parallel equivalent R/X.

MFJ-969 Tuner \$229⁹⁵

World's only 6-160 Meters 300 Watt AirCore™ Roller Inductor antenna tuner gives you absolute minimum SWR. 3" cross-needle meter, true peak reading meter, dummy load, 8 pos. antenna switch.

MFJ-993B AutoTuner \$269⁹⁵

Select 300 Watts (6-1600 Ohms) or 150 Watts (6-3200 Ohms) with the world's only dual power automatic tuner. 1.8-30 MHz, 4:1 current balun, LED lighted cross meter, backlit LCD, more!

MFJ-2289 BigEAR™ \$179⁹⁵

7.0-55 MHz BIGEar™ antenna has 34 feet of radiating elements for BIG signal! Backpack portable, fast set-up/tune, 1 kW PEP SSB/CW, rugged construction.

MFJ-915 RFI Isolator \$29⁹⁵

Prevents unwanted RF from traveling on your coax shield into your expensive transceiver. Prevents stray RF that cause painful RF "bites" and erratic operation. Heavy duty weather protected PVC is 2W x 5H inches. 1.5 kW. 1.8-30 MHz.

MFJ-4230MV 30A PS \$89⁹⁵

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Weather-proof window feedthrough panels bring coax, balanced lines, HF/VHF/UHF antennas, random wire antennas, ground, rotator/antenna switch cables and DC/AC power into your ham shack without drilling through walls!

MFJ-4416B BattBoost \$159⁹⁵

Keep mobile rig operational. Boosts low battery voltage. Up to 25 Amps. 7 3/4" W x 4 H x 2 1/8".

MFJ-557 CodeOsc/Key \$39⁹⁵

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MFJ-1728B Mobile \$269⁹⁵

5/8 wave 2M mobile antenna gives maximum possible gain of any single element antenna. 1/4 Wave 6M. 300W, magnet mount, 12' coax, 53" whip.

MFJ-226 Analyzer \$339⁹⁵

MFJ VNA Antenna Analyzer covers 1-230 MHz with 1 Hz resolution. Read SWR, impedance, resistance, reactance, phase angle, complex return loss, smith chart. Amazing accuracy with OSL (open-short-load) calibration.

MFJ-962D Tuner \$319⁹⁵

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MFJ-998 AutoTuner \$699⁹⁵

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MFJ-1786 Hi-Q Loop \$419⁹⁵

10-30 MHz Super Hi-Q loop, remote control. 36" dia. all welded construction, butterfly tuning capacitor. ABS plastic housing. **MFJ-1788, \$499.95.** 7-22 MHz.

MFJ-918 4:1 Balun \$249⁹⁵

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MFJ-4035MV 30A PS \$149⁹⁵

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MFJ-434B VoiceKeyer \$149⁹⁵

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MFJ-564 Iambic Paddles \$69⁹⁵

Deluxe iambic paddles. Tension/contact spacing adjustments, steel bearings, precision frame, non-skid feet. Chrome or Black.

MFJ-1729 Mobile \$399⁹⁵

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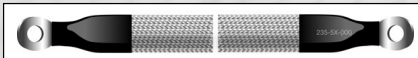
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2213A RG213/U MIL-SPEC
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.

Attenuation per 100ft	Power Rating	Efficiency%
0.6dB @ 10MHz	3.43kW	87%
1.0dB @ 30MHz	1.95kW	79%
1.4dB @ 50MHz	1.5kW	73%
2.4dB @ 150MHz	.83kW	57.1%
4.5dB @ 450MHz	.45kW	35.8%

Part #	Length/Ft
2213A-PL-3	3
2213A-PL-25	25
2213A-PL-50	50
2213A-PL-75	75
2213A-PL-100	100
2213A-PL-150	150



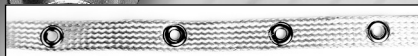
1" Tinned Copper Flat Ground Braid. 7ga 85/Amps
w/1/4" Stud Ring Terminals. Quick &
Easy Grounding Terminations.

Part #	Length/Ft
235-5X-20	20
235-5X-10	10
235-5X-5	5
235-5X-3	3



1/2" Tinned Copper Flat Ground Braid. 10ga 53/Amps
w/#10 Stud Ring Terminals. Quick &
Easy Grounding Terminations.

Part #	Length/Ft
233/2-4X-12	12
233/2-4X-10	10
233/2-4X-5	5
233/2-4X-3	3
233/2-4X-1	1



233/2-G4-(length)
Unique design (Nickel Grommets 4" Spacing) allows
for easy attachment to a vehicle's body or truck bed
to create a "ground plane"
Good option as a buss-bar in the shack
1/2" wide tinned copper 38x48x8/34 10ga 53 amps

Part#	Length/Ft
233/2-G4-10	10
233/2-G4-5	5
233/2-G4-3	3
233/2-G4-1.5	1.5



218XA RG8X (240F) Foil+TC Braid
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.

Attenuation per 100ft	Power Rating	Efficiency%
0.9dB @ 10MHz	2.16kW	80%
1.4dB @ 30MHz	1.24kW	69%
2.1dB @ 50MHz	0.96kW	62%
3.6dB @ 150MHz	1.55kW	43.5%
6.3dB @ 450MHz	1.31kW	23.2%

Part #	Length/Ft
218XA-PL-1.5	1.5
218XA-PL-3	3
218XA-PL-6	6
218XA-PL-9	9
218XA-PL-12	12
218XA-PL-18	18
218XA-PL-30	30
218XA-PL-40	40
218XA-PL-50	50
218XA-PL-75	75
218XA-PL-100	100
218XA-PL-125	125
218XA-PL-150	150
218XA-PL-200	200



RG316/U Teflon® .100" OD
HT jumpers "antenna attachment for better coverage"

Part#	Description	Length/Ft
23316-NM-3	N Male Both ends	3
23316-NM-6	N Male Both Ends	6
23316-SM-SF-3	SMA Male-SMA Female	3
23316-SM-SF-6	SMA Male-SMA Female	6
23316-SM-SF-9	SMA Male-SMA Female	9
23316-SM-SF-12	SMA Male-SMA Female	12
23316-SM-SF-15	SMA Male-SMA Female	15
23316-SM-3	SMA Male Both Ends	3
23316-SM-6	SMA Male Both Ends	6
23316-SM-PL-3	SMA Male-PL259	3
23316-SM-PL-6	SMA Male-PL259	6
23316-SM-SO-3	SMA Male-SO239	3
23316-SM-SO-6	SMA Male-SO239	6



25400F 400-FLEX (RG8/U TYPE) FLEXIBLE LOW LOSS
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.

Attenuation per 100ft	Power Rating	Efficiency%
0.8dB @ 30MHz	2.77kW	83.0%
1.1dB @ 50MHz	2.14kW	78.5%
1.8dB @ 150MHz	1.22kW	65.4%
3.3dB @ 450MHz	0.69kW	47.3%

Part #	Length/Ft
25400F-PL-1.5	1.5
25400F-PL-3	3
25400F-PL-6	6
25400F-PL-12	12
25400F-PL-18	18
25400F-PL-35	35
25400F-PL-50	50
25400F-PL-75	75
25400F-PL-100	100
25400F-PL-150	150



25400F 400-FLEX (RG8/U TYPE) FLEXIBLE LOW LOSS
w/N Male plugs each end. Complete
w/Weatherproof Heat Shrink Tubing (WP-HST)

Attenuation per 100ft	Power Rating	Efficiency%
0.8dB @ 30MHz	2.77kW	83.0%
1.1dB @ 50MHz	2.14kW	78.5%
1.8dB @ 150MHz	1.22kW	65.4%
3.3dB @ 450MHz	0.69kW	47.3%

Part #	Length/Ft
25400F-NM-3	3
25400F-NM-6	6
25400F-NM-12	12
25400F-NM-18	18
25400F-NM-25	25
25400F-NM-35	35
25400F-NM-50	50
25400F-NM-75	75
25400F-NM-100	100
25400F-NM-150	150

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FT-2DR | C4FM/FM 144/430 MHz Txcvr

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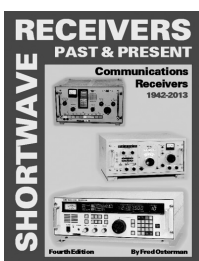


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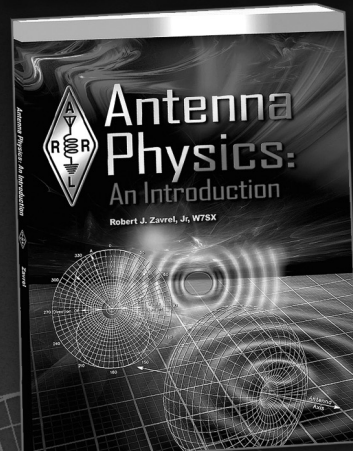
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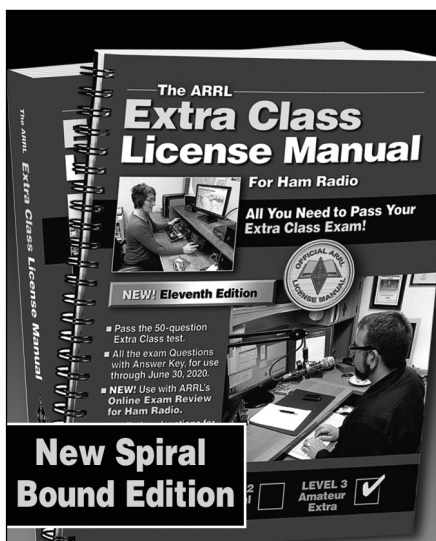
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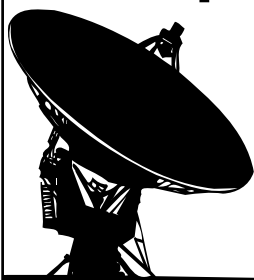
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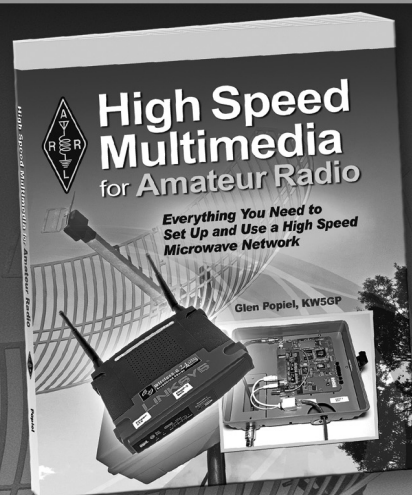
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By Glen Popiel, KW5GP

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High Speed Multimedia for Amateur Radio introduces HSMM networking, explains the basics of how it works, and describes the various technologies in use today. Later chapters explain in detail how to deploy your own HSMM network, along with various applications to put it to work. Well illustrated step-by-step instructions will guide you through the process of installing and configuring software needed to get your HSMM network up and running.

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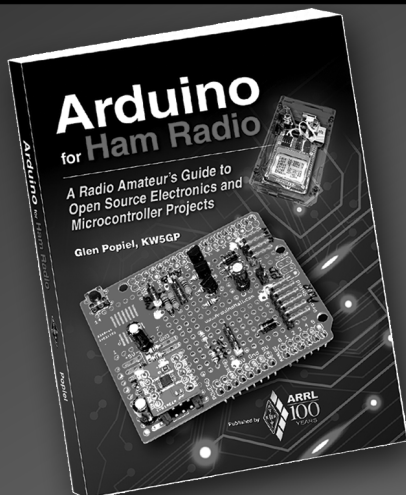
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Arduino for Ham Radio

*A Radio Amateur's Guide to
Open Source Electronics and
Microcontroller Projects*

By Glen Popiel, KW5GP



The Arduino has become widely popular among hobbyists and ham radio operators. Hams are exploring these powerful, inexpensive microcontrollers, creating new projects and amateur station gear. With its Open Source model, the Arduino community freely shares software and hardware designs, making projects easier to build and modify.

Arduino for Ham Radio introduces you to the exciting world of microcontrollers and Open Source hardware and software. It starts by building a solid foundation through descriptions of various Arduino boards and add-on components, followed by a collection of ham radio-related practical projects. Beginning with simple designs and concepts and gradually increasing in complexity and functionality, there is something here for everyone. Projects can be built quickly and used as-is, or they can be expanded and enhanced with your own personal touches.

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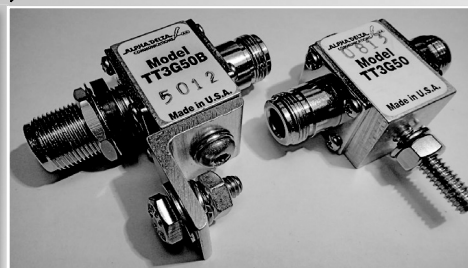
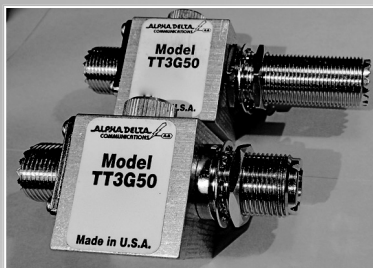


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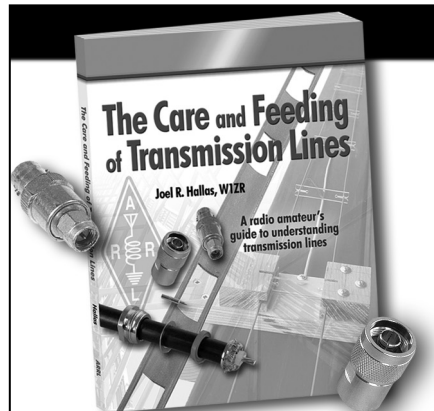
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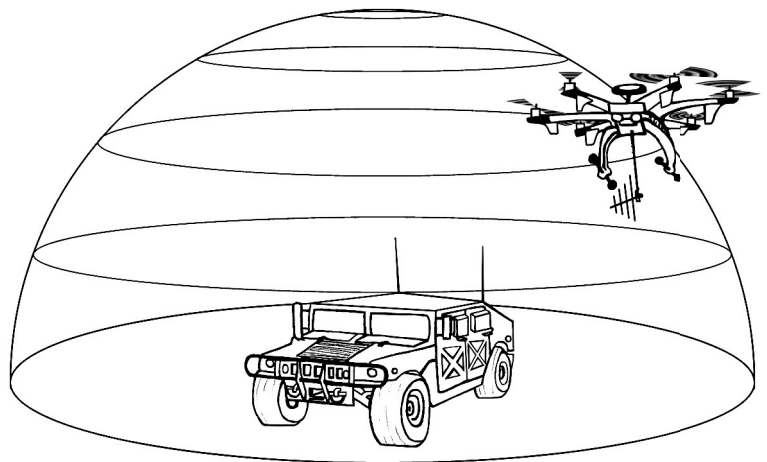
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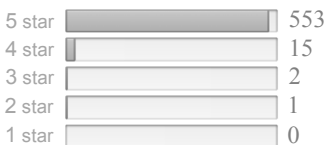
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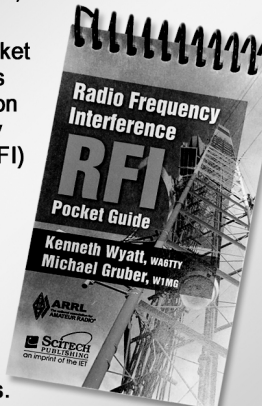
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RFI Pocket Guide

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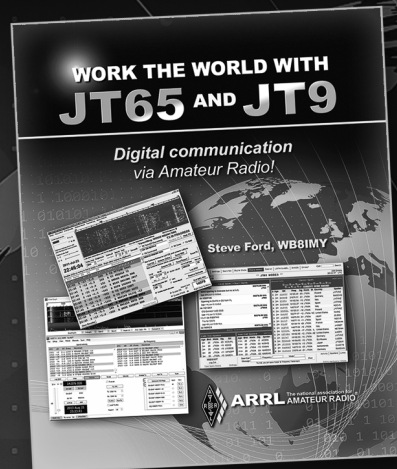
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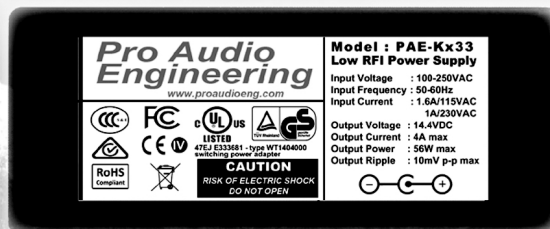
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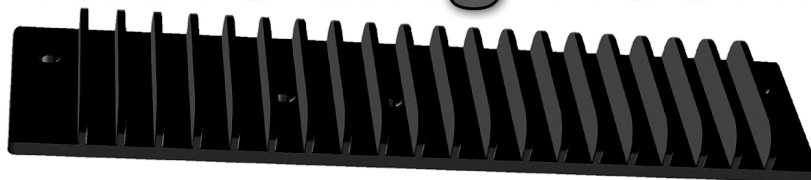
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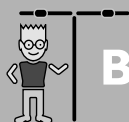
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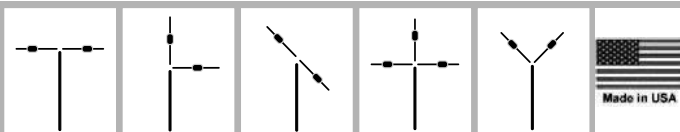


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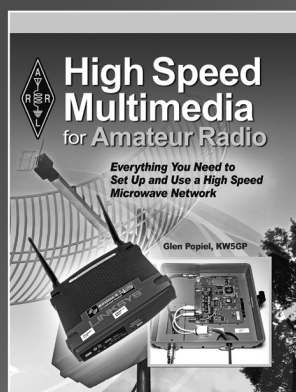
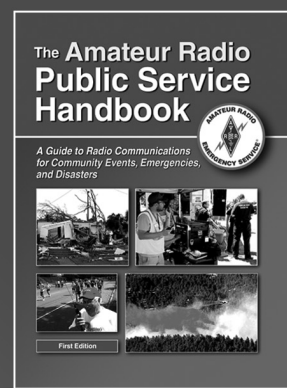
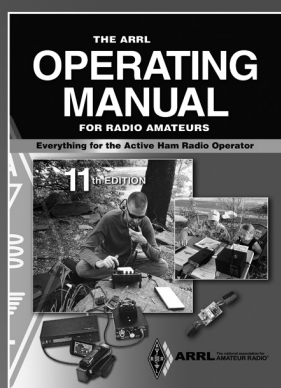
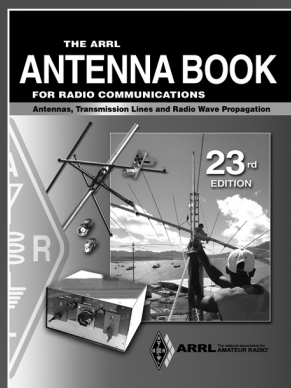
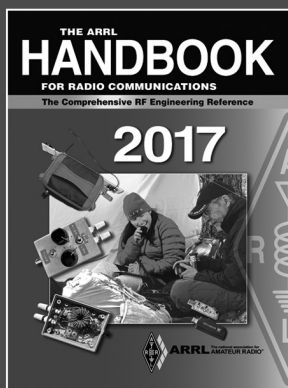
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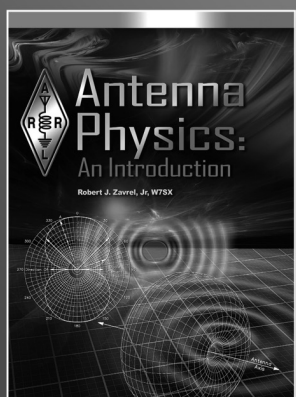
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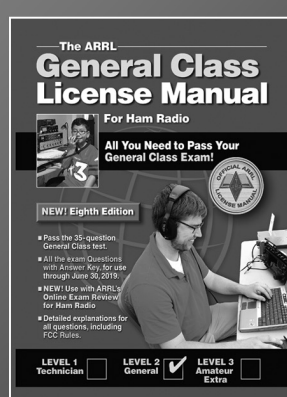
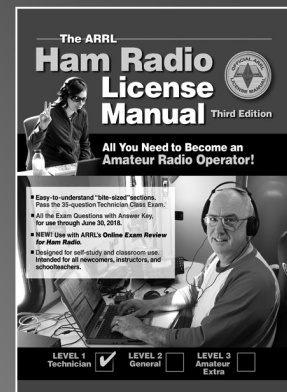


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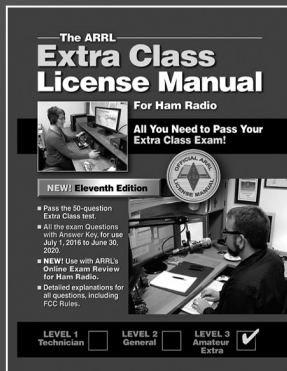
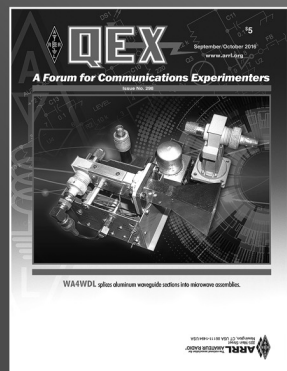
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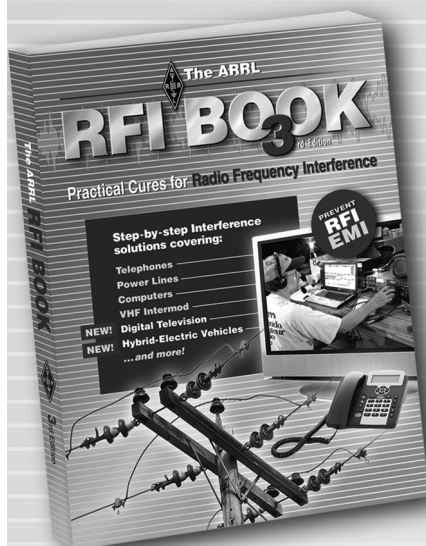
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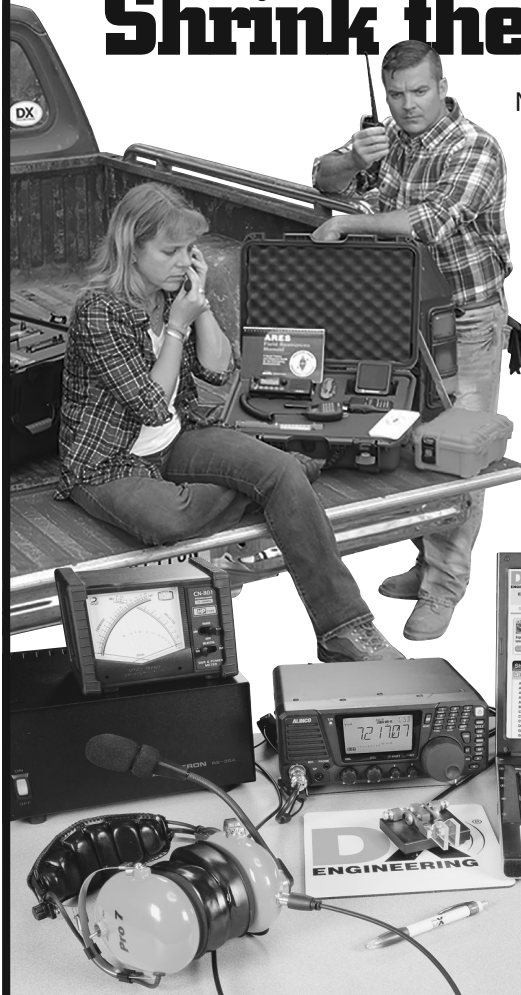


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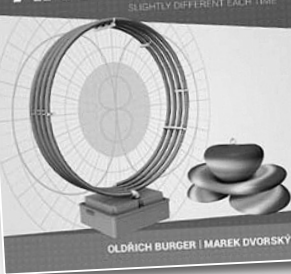
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