

CATALOGUE NO. 25

Fall & Winter 1983-84

CABLE: "GLENWOOD, VANCOUVER"

Tel.: (604) 984-0404

GLENWOOD TRADING COMPANY LTD.

Electronic Specialists

278 EAST 1st STREET, NORTH VANCOUVER, B.C. V7L 1B3

OPEN 9:00-4:30 MON.-FRI. (except holidays)

INDEX

	Page
ACCESSORIES.....	32-34
AMPLIFIERS HF.....	8
VHF.....	9
ANTENNAS:	
DIPOLE.....	16,33
HF BEAMS.....	17-19
HF VERTICALS.....	20
HF MOBILE.....	21
VHF BEAMS.....	21,22
VHF MOBILE.....	23
SWL.....	33
ANTENNA TUNERS.....	10
ATV.....	27
BALUNS.....	16
BOOKS.....	26
CABLE.....	16
CONNECTORS.....	15
CRYSTALS.....	27
FILTERS.....	32
GENERAL INFORMATION.....	25
HEADPHONES.....	37
KEYERS.....	35
METERS - SWR, WATT.....	11, 12
MICROPHONES.....	36
MONITORSCOPE.....	6
ORDER FORM.....	24
POWER SUPPLIES.....	38
RECEIVERS.....	44-48
ROTORS.....	14
RTTY.....	28-30
SPEECH PROCESSORS.....	31
SWITCHES.....	15
TEST & MEASURING EQUIPT.....	9,11-13
TOUCH-TONE EQUIPT.....	30
TRANSCEIVERS:	
HF.....	2-7
VHF.....	39-43
UHF.....	38,39

GLENWOOD IS WHERE IT'S AT IN CANADIAN HAM RADIO.

NEW

TS-430S

THIS MAY JUST BE THE RIG
YOU HAVE BEEN WAITING FOR.

KENWOOD

\$1199



General coverage, Superior dynamic range, 2 VFO's, 8 memories, Scan, Notch...COMPACT!

The TS-430S combines the ultimate in compact styling with advanced circuit design and performance. An all solid-state SSB, CW, and AM transceiver, with FM optional, covering the 160-10 meter Amateur bands, it also incorporates a 150 kHz-30 MHz general coverage receiver having a superior dynamic range, dual digital VFO's, 8 memories, memory scan, programmable band scan, IF shift, notch filter, all-mode squelch, and built-in speech processor.

TS-430S FEATURES:

- **160-10 meter operation, with general coverage receiver**
With 160-10 meter Amateur band coverage, including WARC 30, 17, and 12 meter bands, it also features a 150 kHz-30 MHz general coverage receiver. Innovative UP-conversion digital PLL circuit, for superior frequency stability and accuracy. UP/DOWN band switches for Amateur bands or 1-MHz steps across entire 150 kHz-30 MHz range. Two digital VFO's conveniently tunable from band to band. Band information output on rear panel.
- **USB, LSB, CW, AM, with optional FM**
Operates on USB, LSB, CW, and AM, with optional FM; internally installed AGC time constant automatically selected by mode.
- **Compact, lightweight design**
Measures only 10-5/8 (270) W x 3-3/4 (96) H x 10-7/8 (275) D, inches (mm). weighs only 14.3 lbs. (6.5 kg).
- **Superior receiver dynamic range**
Use of 2SK125 junction-type FET's in the Dyna-Mix high sensitivity balanced direct mixer circuit provides superior dynamic range.

• **10-Hz step dual digital VFO's**
10-Hz step dual digital VFO's operate independently, include band and mode selection. Different band and mode cross operation possible. Dual torque adjustable STEP switch for tuning in 10-Hz or 100-Hz steps. A-B switch quickly shifts "B" VFO to the same frequency and mode as "A" VFO, or vice-versa. VFO LOCK switch provided. RIT control tunes VFO or memory UP/DOWN manual scan possible using optional microphone.

- **Eight memories store frequency, mode, and band data**
Memories store frequency, mode, and band data. Eighth memory stores receive and transmit frequencies independently. M.CH switch for operation of memory as independent VFO, or fixed frequency.
- **Lithium battery memory back-up**
Estimated five-year life.
- **Memory scan**
Scans memories in which data is stored.
- **Programmable automatic band scan**
Scans programmed band width. Scan speed adjustable. HOLD switch interrupts band or memory scan.
- **IF shift circuit for minimum QRM**
IF passband may be moved to place interfering signals outside the passband, for best interference rejection.
- **Tunable notch filter built-in**
Deep, sharp, tunable, audio notch filter.
- **Narrow-wide filter selection**
NAR-WIDE switch for IF filter selection on SSB, CW, or AM, when optional filters are installed. 12.4 kHz IF filter built-in.

• **Speech processor built-in**
Improves intelligibility, increases average "talk-power."

• **Fluorescent tube digital display**
Indicates frequency to 100 Hz (10-112 mHz).

• **All solid-state technology**
Input rated 250 W PEP on SSB, 200 W DC on CW, 120 W on FM (optional), 60 W on AM. Built-in cooling fan, multi-circuit final protection. Operates on 12 VDC or 120 VAC, or 220/240 VAC with optional PS-430 AC power supply.

- **All-mode squelch circuit, built-in**
- **Noise blanker, built-in**
- **RF attenuator (20 dB)**
- **Vox circuit, plus semi break-in with side-tone**

Optional accessories:

• PS-430 compact AC power supply	\$199
• PS-30	\$189
• SP-430 external speaker	\$63
• MB-430 mobile mounting bracket	\$31
• AT-130 compact antenna tuner, 80-10 m incl. WARC	\$199
• AT-230 base antenna tuner, 160-10 m incl. WARC	\$289
• FM-430 FM tuner	\$69
• YK-88C 1500 Hz or YK-88CN (270 Hz) CW filters	\$89
• YK-88SN (1.6 kHz) narrow SSB filter	\$89
• YK-88A 86 kHz AM filter	\$89
• MC-425 UP/DOWN band microphone	\$39
• MC-60A deluxe desk microphone, UP/DOWN switch	\$109



\$109

\$199

\$1199

\$63

A SUPERLATIVE NEW TRANSCEIVER FROM KENWOOD

- Dual Digital VFO's with Automatic Step Selector
- General Coverage Receiver 150Khz to 30Mhz
- Full Break-in/Semi Break-in Switch
- Variable Bandwidth Tuning
- SSB Slope Tune Control
- Low Distortion Final Power Amplifier
- Optional Automatic Antenna Tuner

- RIT Control
- Speech Processor
- VOX
- AF Tune
- Noise Blanker
- 8 Channel Memory
- IF Notch Filter

\$ 2 3 4 9

WITH AUTOMATIC ANTENNA TUNER

TS-930S



TS-930S FEATURES:

- **10-10 Meters, with 150 kHz - 30 MHz general coverage receiver.** Covers all Amateur frequencies from 140-10 meters, including new WARC, 30, 17, and 12 meter bands, on SSB, CW, PSK, and AM. Features 150 kHz - 30 MHz general coverage receiver. Separate Amateur band switch keys allow speedy band selection. Down bandswitch changes in 1-MHz steps. A new, innovative, quadruple conversion, digital PLL synthesized circuit provides superior frequency accuracy and stability, plus greatly enhanced selectivity.
- **Excellent receiver dynamic range.** Receiver two-tone dynamic range: 100 dB typical (20 meters, 500 Hz CW bandwidth, at sensitivity of 0.25 μ V, S/N 10 dB). Provides the ultimate in rejection of IMD distortion.
- **All solid state, 28 volt operated final amplifier.** The final amplifier operates on 28 VDC for lowest IMD distortion. Power input rated at 250 W on SSB, CW, and PSK, and at 80 W on AM. Final amplifier protection comes with bypassed fan, SWR/Power meter built-in.
- **Automatic antenna tuner, built-in.** Available with AT-930 antenna tuner built-in, or as an option. Covers Amateur bands 10-10 meters, including the new WARC bands. Tuning range automatically

pre-selected with band selection to minimize tuning time. "AUTO-THRU" switch on front panel.

• CW full break-in.

CW full break-in circuit uses CMOS logic IC plus reed relay for maximum flexibility, coupled with smooth, quiet operation. Switchable to semi-break-in.

• Dual digital VFO's.

10-Hz step dual digital VFO's include basic information. Each VFO tunes continuously from band to band. A large, heavy, flywheel type knob is used for improved tuning ease. T.F. Set switch allows fast transmit frequency setting for split-frequency operations. A-B switch for equalizing one VFO frequency to the other. VFO "Lock" switch provides RIT control for ± 0.9 kHz receive frequency shift.

• Eight memory channels.

Stores both frequency and band information. VFO-MEMO switch allows use of each memory as an independent VFO. (The original memory frequency can be recalled at will, or as a fixed frequency. Internal battery memory back-up, estimated 1 year life. Batteries not Kenwood supplied).

• Dual mode noise blunker ("pulse" or "woodpecker").

NB-1, with threshold control, for pulse-type noise. NB-2 for longer duration "woodpecker" type noise.

• SSB IF slope tuning.

Allows independent adjustment of the low and/or high frequency slopes of the IF passband, for best interference rejection.

• CW VBT and pitch controls.

CW VBT (Variable Bandwidth Tuning) control tunes out interfering signals. CW pitch controls shifts IF passband and simultaneously changes the pitch of the beat frequency. A "Narrow/Wide" filter selector switch is provided.

• IF notch filter.

100-kHz IF notch circuit gives deep, sharp notch, better than -40 dB.

• Audio filter built-in.

Tunesable, peak-type audio filter for CW.

• AC power supply built-in.

120, 220, or 240 VAC switch selected. Operates on AC only.

• Fluorescent tube digital display.

Fluorescent tube-digital display has analog type sub-scale with 20-kHz steps. Separate 2 digit display indicates RIT frequency shift.

• RF speech processor.

RF clipper type processor provides higher average "talk-power", plus improved intelligibility. Separate "IN" and "OUT" front panel level controls.

TS-930SAT(WITH AUTOMATIC ANTENNA TUNER)	\$2349
TS-930	\$2129
AT-930	\$269
SP-930	\$119
SO-1 (HIGH STABILITY TXCO)	\$229
YK-88C-1	\$89
YG455-C1	\$139
YG-455-CN1	\$159

FREE MC-60A!
WITH EVERY PURCHASE OF A TS-930

OUR BEST-SELLING HF TRANSCEIVER TS-830S



TS-830S FEATURES:

Variable bandwidth tuning (VBT)

Continuously varies the IF filter passband width to reduce interference. VBT and IF shift can be controlled independently for optimum interference rejection in any condition.

IF notch filter

Turnable high-Q active circuit in 455-kHz second IF, for sharp, deep notch characteristics.

IF shift

Shifts IF passband toward higher or lower frequencies (away from interfering signals) while tuned receiver frequency remains unchanged.

Various IF filter options

Either a 500-Hz (YK-BBCN) or 270-Hz (YK-BBCN) CW filter may be installed in the 6.83-MHz first IF, and a very sharp 500-Hz (YK-455C) or 250-Hz (YK-455CN) CW filter is available for the 455-kHz second IF.

SSB monitor circuit

Monitors IF stage while transmitting, to determine audio quality and effect of speech processor.

6146B final with RF NFB

Two 6146B's in the final amplifier provide 220 W PEP (SSB)/180 W DC (CW) input on all bands. RF negative feedback provides optimum IMD characteristics for high-quality transmission.

More flexibility with optional digital VFO

VFO-230 operates in 20-Hz steps and includes five memories. Also allows split-frequency operation. Built-in digital display. Covers about 100 kHz above and below each 500-kHz band.

Built-in RF speech processor

For added audio punch and increased talk power in DX pileups.

RIT/XIT

Receiver incremental tuning (RIT) shifts only the receiver frequency, to tune in stations slightly off frequency. Transmitter incremental tuning (XIT) shifts only the transmitter frequency.

Adjustable noise-blanker level

Built-in noise blanker eliminates pulse-type noise. Front-panel threshold level control.

\$1249

Built-in digital display

Six-digit large fluorescent tube display, backed up by an analog dial. Reads actual receive and transmit frequency on all modes and all bands. Display Hold (DH) switch.

160-10 meters, including three new bands

Covers all Amateur bands from 1.8 to 29.7 MHz (LSB, USB, and CW), including the new 10, 18, and 24-MHz bands. Receives WWV on 10 MHz.

Wide receiver dynamic range

Junction FETs (with optimum IMD characteristics and low noise figure) in the balanced mixer, a MOSFET RF amplifier operating at low level for improved dynamic range (high amplification level not needed because of low noise in mixer), dual resonator for each band, and advanced overall recover design result in excellent dynamic range.

A COMPLETE LINE OF MATCHING ACCESSORIES

AT-230

Antenna Tuner

\$289



SPECIFICATIONS

(ANTENNA COUPLER) • Frequency Range: 0 amateur bands from 1.8 to 30.0 MHz • Input Impedance: 50 Ω • Output Impedance: 10 to 500 Ω, unbalanced • Through Power: 200 W Max. • WATTMETER • Type: Through line wattmeter • Frequency Range: 1.8 to 20 MHz • Measurable RF power: Up to 200 W switched • Kinds of RF Power: Forward and reflected power, switched • Impedance: 50 Ω • Accuracy: Better than ± 10% of full scale (SWR Meter) • SWR detection: Torsoidal core directional coupler • Measurable Range: 1.1 to 10 • Min. Power Required: 4 W • GENERAL: • Connectors: INPUT: UHF type, 50 Ω; Connectors, ANT-1: UHF type; ANT-2: DHF type; ANT-3: Wire antenna only; GND • Dimensions: 180 (7.3in) x 133 (5.3in) x 287 (11.3in) mm (inch) • Weight: 3.4 kg (7.5 lbs)

VFO-230

Digital Remote VFO

\$419

The VFO-230 digital VFO provides maximum efficiency and flexibility for all operating conditions, including split-frequency operation, by combining a 20-Hz step digital VFO with five memories.

FEATURES

• 20-Hz step digital VFO: Provides excellent stability and smooth tuning on CW and SSB. • Five Memories: Frequency can be transferred from VFO (transceiver) or VFO-230 to memory or from memory to digital VFO (VFO-230). • Built-in digital display: Shows digital VFO or memory frequencies. The display range is selectable automatically to cover 800.0–5999.9, according to the band. Backed up by analog dial with 1 kHz divisions. • Cross-operation flexibility: Easy-to-operate function switch provides: RECEIVE/TRANSMIT, Main RMT, Memo (Mem), Transmitter VFO or FIX, RMT; VFO-230 digital VFO, MEM, Memory • SP SET switch: Allows operator to set transmit frequency exactly. Reverses transmit and receiver frequency momentarily, to prevent transmitting on wrong frequency during split-frequency operation. • Expanded frequency coverage: Allows 100 kHz above and below each 500-kHz band, for MARS and other applications. • Lock switch: To prevent accidental frequency change • MAIN, RMT, and MEM initiators: LEDs show functions in operation. • Capabilities with TS-830S, TS-830B, TS-130, and TS-120 Series.

SPECIFICATIONS

• Oscillating Frequency: 5.4–6.1 MHz • Frequency Stability: 1×10^{-4} , 20 Hz (at normal temperatures), 3×10^{-4} , 20 Hz (10–50°C) • Output Voltage: 0.2V ± 3 dB, -1 dB • Power Requirement: 120V AC (modifiable to 220V AC), 50/60 Hz, 13W • Dimensions: 180 (7.3in) x 133 (5.3in) x 287 (11.3in) mm • Weight: 3.1 kg (6.8 lbs)

SP-230 \$89

TS-830S \$1249

VFO-230 \$419

AT-230 \$289

CW FILTERS

YG-455C

500 Hz CW filter **\$139**

YG-455CN

250 Hz CW filter **\$159**

YK-BBC

500 Hz CW filter **\$89**

YK-BBCN

270 Hz CW filter **\$89**



TS-130SE/130V HF TRANSCEIVER

KENWOOD

FEATURES

- 20-10 Meters, including three new bands
- Built-in speech processor • CW narrow/wide selection • SSB narrow selection • Sideband mode selected automatically • Optional DFC-230 digital frequency controller • Optimum performance in a compact package • All solid-state • Easy to operate • Built-in digital display • IF shift eliminates QRM • Innovative single conversion PLL system • Built-in RF attenuator • Built-in cooling fan (TS-130S only) • protection circuit for final transistor • Expanded frequency coverage • Built-in VOX circuit • Built-in noise blanker • Enhanced selectivity with innovative MCF • Built-in 25 kHz marker • Fixed attenuator • Rugged construction and handsome styling

TS-130SE \$899

TS-130V \$829

SPECIFICATIONS

(GENERAL)

- Frequency range: 3.5~4.0 MHz, 7.0~7.3 MHz, *10.1~10.5 MHz (10.0 MHz WWV), 14.0~14.35 MHz, *18.068~18.108 MHz, 21.0~21.45 MHz, *24.82~24.99 MHz, 28.0~29.7 MHz. *Receiving only. (Transmission on these bands is possible with a small modification) • Mode: SSB/CW • RF output impedance: 50Ω • Power requirement: TS-130SE/130S=RX: 0.7A, 13.8V DC, TX: 1.9A, 13.8V DC, TS-130V=RX: 0.7A, 13.8V DC, TX: 2.4A, 13.8V DC • Dimensions: TS-130SE/130S=241 (9.5W) x 94 (3.8H) x 235 (9.4D) mm (inch), TS-130V=241 (9.5W) x 94 (3.8H) x 235 (9.4D) mm (inch) • Weight: TS-130SE/130S=5.6 kg (12.3 lbs.), TS-130V=4.8 kg (10.8 lbs.)



SAVE
\$40

(RECEIVER)

- Sensitivity: 0.25 μV at 10 dB S/N • Selectivity: SSB/WIDE = 2.4 kHz (-6 dB), 4.2 kHz (1~60 dB), SSB-NARROW=1.8 kHz (-60 dB), 3.3 kHz (-60 dB), with optional YK-88N filter, CW NARROW = 500 Hz (-6 dB), 1.5 kHz (-60 dB) with optional YK-88C filter or 270 Hz (-6 dB) 1.1 kHz (-60 dB), with optional YK-88CN filter • Image ratio: better than 50 dB • IF rejection: better than 70 dB • AF output power: 1.5 W • Audio output impedance: 4 ~ 16Ω

(TRANSMITTER)

- Final power input: TS-130SE/130S=80~15 m 200W PEP for SSB operation, 160W DC for CW operation, 12~10 m 160W PEP for SSB operation, 140W DC for CW operation, TS-130V = All band = 25 W PEP for SSB operation, 20 W DC for CW operation • Carrier suppression: better than 40 dB • Unwanted sideband suppression: better than 50 dB • Spurious radiation: better than 40 dB • Audio input impedance: 500Ω ~ 50kΩ

Differences between TS-130SE and TS-130S

- Cooling fan TS-130SE; option TS-130S/130V built-in • Fix channel TS-130SE; 1ch TS-130S/130V: 4ch

OPTIONAL ACCESSORIES

- VFO-120: remote VFO • VFO-230: digital remote VFO • DFC-230: digital frequency controller • AT-130: antenna tuner • SP-120: external speaker • PS-30: DC power supply (for TS-130SE/130S and TL-120) • PS-20: DC power supply (for TS-130V) • YK-88SN: 1.8 kHz SSB narrow filter • YK-88CN: 270Hz CW narrow filter • YK-88C: 500Hz CW filter • FA-4: fan unit (for TS-130SE) • MC-60(N): deluxe desk top microphone • MB-100: mobile mount

SP-120

EXTERNAL SPEAKER



The SP-120 is a good looking compact speaker matching the TS-130SE/130S/130V, TS-120 series, TR-8000 and TR-9500 styling and is designed for home station use. A low distortion speaker unit provides clear audio reproduction.

SPECIFICATIONS

\$59

- Speaker diameter: 75 mm (3 inch) • Max. input power: 1 W • Input impedance: 8Ω • Frequency response: 300 Hz ~ 5 kHz • Dimensions: 122 (4.9W) x 86 (3.8H) x 235 (9.4D) mm (inch) • Weight: 1.3 kg (2.9 lbs.) approx.

VFO-120

REMOTE VFO



Allows split-frequency operation with TS-130 (or TS-120) series when DX chasing, net monitoring, and finding an unused frequency while retaining the original frequency. The VFO-120 incorporates a T.F. SET switch which prevents transmitting on the wrong frequency during split-frequency operation and also allows quick setting of transmit frequency. LED indicators show VFO functions at a glance.

SPECIFICATIONS

\$219

- Oscillator frequency: 5.5~8.0 MHz • Oscillator circuit: Clapp • Output voltage: 0.2V ±1 dB • Power source: from TS-130 (TS-120) series • Dimensions: 123 (4.9W) x 86 (3.8H) x 235 (9.4D) mm (inch) • Weight: 2.6 kg (5.6 lbs.)

DFC-230

DIGITAL FREQUENCY CONTROLLER



The very compact DFC-230 digital frequency controller provides maximum efficiency and flexibility for mobile and fixed operation, by combining a 20 Hz step digital VFO with four memories.

SPECIFICATIONS

\$379

- Oscillating frequency: 5.4~5.1 MHz • Power requirement: 9V DC, 30 mA, 13.8V DC, 380 mA (obtained from TS-130SE/130S/130V, TS-830S, or TS-120S/120V) • Dimensions: 147(5.8W) x 51 (2.0H) x 166 (6.7D) mm (inch) • Weight: 1.3 kg (2.9 lbs.) approx.

AT-130

SPECIFICATIONS

\$199

(GENERAL)

- Input connector: UHF type (SO23) • ANT connector: UHF type (SO23) • GND: wing nut and stud • Dimensions: 152 (6.1W) x 60 (2.4H) x 150 (4.9D) mm (inch) • Weight: 1.6 kg (3.5 lbs.) approx.

ANTENNA TUNER



The AT-130 is a compact and lightweight antenna tuner designed for base or mobile use (includes the three new bands).

ANTENNA COUPLER

- Frequency range: 8 amateur bands from 3.5 ~ 29.7 MHz • Input impedance: 50Ω • Output impedance: 20 ~ 500Ω, unbalanced • Through power: 150 W max. (3.5 MHz band, 120 W) • Insertion loss: less than 0.5 dB at optimum match

(SWR METER)

- Frequency range: 3.5 ~ 29.7 MHz • Max. power: 150 W • Measurable range: 1:1 ~ 10:1 • Min. power required: 2 W

*FA-4
Fan Unit (for TS-130SE)

PS-30

SP-120

TS-130SE

VFO-120

TS-660

15M~6M

ALL MODE TRANSCEIVER

"Quad Bander"
...dual VFOs,
FM, SSB,
CW, AM
IF shift,
memory,
scan,

\$949



TS-660 FEATURES:

- FM, SSB (USB); CW and AM operation.
- 10 Hz step digital VFO. The frequency step is determined by mode of operation.
- Two antenna terminals provided.
- Noise blanker.
- RIT control.
- F. STEP switch allows alternative step size in each mode.
- Dual VFOs built-in.
- 5 channel memory stores frequency and band information.
- Memory scan scans all bands, skips channels not in use.
- UP/DOWN push-button frequency control on microphone.
- UP/DOWN bandswitch.

SPECIAL OFFER (VALID UNTIL FEBRUARY 29th 1984)

FREE WITH EACH TS-660 PURCHASED YOUR CHOICE OF EITHER ONE HA-3 VERTICAL ANTENNA OR ONE VOX-4 SPEECH PROCESSOR PLUS ONE CW FILTER

HA-3

\$179

SPECIFICATIONS

- Frequency: 15m, 10m, 6m band • VSWR: 16m band = less than 1.5 : 1 (250 kHz) center frequency, 10m band = less than 1.5 : 1 (450 kHz) center frequency, 6m band = less than 1.5 : 1 (1.5 MHz) center frequency • Input impedance: 50Ω • max. input power: 150W PEP continuous, 300 W PEP • Dimensions: vertical = 2.7m approx., horizontal = 1.7m approx. • Weight = 2.2 kg (4.8 lbs.) approx.

- Frequency lock function switch.
- IF SHIFT circuit built-in.

- Fluorescent digital display shows Tx/Rx frequencies.
- Squelch circuit for FM, SSB, CW and AM.
- CW semi break-in circuit, with CW side tone.
- 10 W RF output on SSB, CW, FM, 4 W on AM.

OPTIONAL ACCESSORIES:

- SP-120 external speaker. \$58
- MB-100 mobile mounting bracket. \$49
- YK-BBC normal CW, (500 Hz) filter or YK-BBCN narrow band CW, (270 Hz) filter. \$89
- YK-BBA AM (6 kHz) filter. \$89
- VOX-4 speech processor/ VOX unit. \$89

SAVE

\$179

VOX-4
VOX/SPEECH
PROCESSOR



The VOX-4 allows voice operated transmit/receive control. Features built-in speech processor, with VOX GAIN, ANTI-VOX, DELAY TIME, and output level controls. Makes possible increased talk power, with VOX control convenience.

TEST AND MEASURING EQUIPMENT

SM-220

MONITOR SCOPE



Based on a wide-frequency-range specification (up to 15 MHz), the SM-220 station monitor features, in addition to a regular monitor, a built-in harmonic generator and a wide variety of waveform-measuring capabilities. An optional feature is a unique con-figurable capability. The SM-220 provides efficient station operation as a monitor, transmitted waveforms, and it also serves as a high-sensitivity, wide-frequency-range oscilloscope for various adjustments and experiments.

SPECIFICATIONS

- Frequency range: 1.8 ~ 150 MHz • Maximum power: 2kW (1.8 ~ 54 MHz), 100W (150 MHz)
- Deflection sensitivity: more than 1 div. at 2W
- Attenuator: 6 steps • Power supply: 120/220/240V AC, 50/60 Hz, 20W • Dimensions: 215 (8.8")W x 163 (6.1")H x 355 (13.4")D mm (inch) • Weight: 5 kg (11 lbs.)

OPTIONAL ACCESSORIES

- Pan Display Unit
- BS-5 adaptor (for TS-620), BS-6 adaptor (for TS-530S, TS-630 and TS-180) • Input center frequency: 3.395 MHz (BS-5), 8.830 MHz (BS-6)

SM-220

\$529

BS-5

\$109

BS-6

\$109

TOP QUALITY AT A ROCK-BOTTOM PRICE

TS-530S



TS-530S FEATURES:

Narrow/wide filter combinations

Any one or two of three optional filters YK-88SN (1.8 kHz) SSB, YK-88C (200 Hz) CW, YK-88CN (270 Hz) CW may be installed for selecting jwth "N-W" wide and narrow bandwidths on CW and/or SSB.

Wide receiver dynamic range

Greater immunity to strong signal overload, with MOSFET RF amplifier operating at low level for improved IMD characteristics, junction FET's in balanced mixer, low noise figure, and dual resonator for each band.

Built-in speech processor

Combines an audio compression amplifier with change of ALC time constant for extra audio punch and increased average SSB output power, with suppressed sideband splatter.

160-10 meter coverage, including three new bands

Transmits and receives LSB, USB, and CW on all Amateur frequencies between 1.8 and 29.7 MHz, including the new 10, 18, and 24 MHz bands. Receives WWV on 10 MHz.

Built-in digital display

Large, six digit, fluorescent-tube display shows actual receive and transmit frequencies on all modes. Backed up by analog subdial.

IF shift

Moves IF passband around received signal and away from interfering signals and sideband splatter.

Advanced single-conversion PLL system

Improved overall stability and improved transmit and receive spurious characteristics.

RIT/XIT

Front-panel RIT (receiver incremental tuning) shifts only the receiver frequency, for tuning in stations slightly off frequency. XIT (transmitter incremental tuning) shifts only the transmitter frequency, for calling a DX station listening off frequency.

Adjustable noise-blanker level

Pulse-type (such as ignition) noise is eliminated by built-in noise blinder, with front-panel threshold level control.

RF attenuators

The 20-dB RF attenuator may be switched in for rejecting IMD from extremely strong signals.

Two 6146B's in final

Runs 220 W PEP/180 W DC input on all bands.

A COMPLETE LINE OF MATCHING ACCESSORIES

VFO-240

Remote VFO

\$239



The VFO-240 remote analog VFO is a valuable, yet affordable station addition for split-frequency operation, memory QSY and fast return to a net frequency, searching for a clear frequency, and other applications.

FEATURES

* V-F SET switch: allows operator to set transmit frequency quickly, reverses transmit and receive frequency momentarily, to prevent transmitting on wrong frequency during split-frequency operation. * Cross operation function switch * RIT control * MAIN and RIT indicators.

SPECIFICATIONS

* Oscillating Frequency: 5.5-6.0 MHz * Oscillator Circuit: Modified clapp * Output Voltage: 0.2 V ± 1 dB * Frequency Stability: Within 100 Hz per 30 minutes after 3 minutes warm up * Solid-state Components: FET: 2; Transistor: 2; Diodes: 6 * Power Source: From TS-530S * Dimensions: 160 (7.25W) x 133 (5.3H) x 288 (11.5D) mm (inch) * Weight: 2.4 kg

YK-88SN SSB NARROW FILTER 1.8 kHz

YK-88CN CW NARROW FILTER 270 Hz

YK-88C CW FILTER 500 Hz

\$89 EACH



SP-230 External Speaker



\$89

The SP-230 external speaker matches the TS-530S HF transceiver.

It is a low-distortion speaker with selectable frequency response for high intelligibility in any mode. The frequency response is determined by the built-in audio filters, which are effective in improving signal-to-noise ratio under certain interference conditions, or when receiving weak signals.

On the front panel is a headphone connector, for listening to audio output passed through the filters.

Also on the front panel is a switch for selecting either of two audio inputs to the SP-230.

SPECIFICATIONS

* Maximum Input (nominal): 2W * Impedance: 8 Ω * Frequency Response: 300 Hz to 5 kHz * Filter Cut-off Frequency: Low = 400 Hz/-3 dB, High 1 = 3 kHz/-3 dB, High 2 = 1.5 kHz/-3 dB, High 3 and High 2 = 1.0 kHz/-3 dB * Filter Attenuation Characteristic: -6 dB/Oct. * Dimensions: 180 (7.2W) x 133 (5.3H) x 288 (11.5D) mm (inch) * Weight: 1.8 kg (4.0 lbs)

SP-230

TS-530S

VFO-240

AT-230



LINEAR AMPLIFIERS

Clairemont Industries, Inc.

CI-110	
Frequency Range	3.32 mhz
Power Input	25 Watts
Average Power Output	130 Watts @ 60% efficiency
D.C. Supply Voltage	13.5 volts @ 20 amps negative ground
A.C. Exciter Signal Drive	430 Watts
Input Impedance	50 ohms unbalanced
Output Impedance	50 ohms unbalanced into loads not exceeding 3:1 swt
Harmonic Levels	-45 db or better
Operating Modes	AM, FM, CW, SSB, RTTY and slow scan TV
Receive Pre-Amp	Nominal gain of 10 db at less than 2 db noise
Physical Dimension	5" x 7" x 3" (127 x 178 x 76 cm)
Weight	\$239



ALSO AVAILABLE IN
6 METER VERSION
FREQUENCY
RANGE 30-56 MHz
PRICE AND OTHER,
SPECS THE SAME

KENWOOD

TL-922

3-500Z TUBES
(USES TWO)



\$1399
without tubes



SHIPPED FREIGHT COLLECT

SPECIFICATIONS

- Frequency Range: 160 meter band—1.8 to 2.0 MHz, 80 Meter band—3.5 to 4.0 MHz, 40 meter band—7.0 to 7.3 MHz, 20 meter band—14.0 to 14.35 MHz, 15 meter band—21.0 to 21.45 MHz, 10 meter band—28.0 to 29.7 MHz
- Mode: SSB, CW, RTTY
- Drive power: 80 Watts or more for full output
- RF Input Power: SSB: 2,000 Watts PEP, CW, RTTY: 1,000 Watts
- DC Circuity: AB1 Class Grounded-grid Linear Amplifier
- Input Impedance: 50 ohms
- Output Impedance: 50 to 75 ohms
- Tubes: EIMAC 2 x 3-500Z
- Dimensions: 390 (15-3/8W x 190 (7-1/2H x 407 (16D mm (inch))
- Weight: 31 kg (68 lbs)

A NEW 25 WATT AMPLIFIER FOR THE TR-2500

KENWOOD

2M FM POWER AMPLIFIER
VB-2530



\$129

BUILT-IN SWR PROTECTION CIRCUIT LARGE HEAT SINK 25W OUTPUT

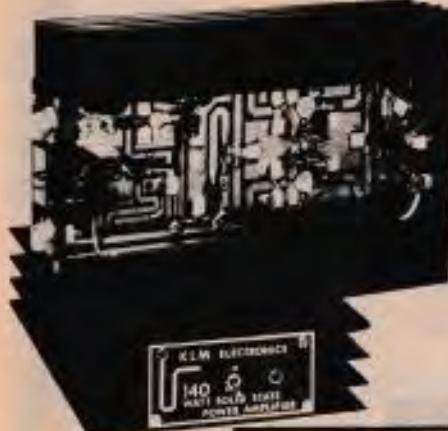
VB-2530 SPECIFICATIONS

- Transmit Frequency Range: 144.000 — 147.995MHz
- Mode: F3
- RF Output Power: 25W (at 13.8V DC and 50 ohms antenna impedance)
- Drive Input: 2.5W
- Input Impedance: 50 ohms
- Antenna Impedance: 50 ohms
- Spurious Radiation: Less than -60dB
- DC Current (with TR-2500): Less than 5A (13.8V DC, switch ON position)
- Power Supply: 13.8V DC ± 15%
- Grounding: Negative
- Dimensions: 75 (3.0) W x 48 (1.9) H x 170 (6.8) D mm (inch)
- Weight: 600g (1.3 lbs.) approx.

DOC REGULATIONS NOW REQUIRE THAT PURCHASERS OF LINEAR AMPLIFIERS COMPLETE SCHEDULE IV. PROSPECTIVE PURCHASERS SHOULD ENCLOSE A COMPLETED COPY OF THIS FORM WITH THEIR ORDER. THESE FORMS ARE AVAILABLE FROM YOUR LOCAL DOC OFFICE OR ON REQUEST FROM GLENWOOD.

CI

LINEAR AMPLIFIERS



KLM electronics

FREQ.	MODEL NUMBER	PWR INPUT (WATTS)	NOM. PWR OUTPUT (WATTS)	NOM.* CURRENT (AMPS)	PRICE
144-148	PA 15-40BL	5-15	40	5	\$209.00
144-148	PA 15-80BL	5-15	80	10	\$329.00
144-148	PA 15-160L	5-15	140	15	\$449.00

*AT 13.5 VDC. L DENOTES LINEAR

DIGITAL WORLD HAM CLOCK.

HC-10

THE HC-10'S EXCITING FEATURES INCLUDE:

- Two 24-hour displays with a high-precision quartz time base.
- Preprogrammed time differences of 10 major cities around the world (GMT, PARIS, TOKYO, SYDNEY, HONOLULU, LOS ANGELES, CHICAGO, NEW YORK, CARACAS, RIO DE JANEIRO) plus two additional programmable regions.
- Large fluorescent display tubes, to allow fast, easy reading.
- "TOMORROW" and "YESTERDAY" indications, to prevent confusion on date and hour at individual cities.
- Memorization of present time (such as QSO starting time) and recall later (such as QSO ending time). Recalled starting time is shown on left display, and ending time on right display.
- Alternative functional layout, with switch buttons on front panel. Cabinet is triangular prism shaped for stability. With a pleasing color combination and modern styling, the HC-10 will enhance the appearance of any ham shack.



\$179

DIP METER DM-81



FEATURES

- Measurable frequency range is 200kHz to 250MHz in seven bands.
- A capacitive probe allows measurements without removing coil shields.
- All seven clip meter coils, capacitive probe, earphone and ground clip lead, can be carried within the unit for easy transport and storage.
- Convenient for both indoor and outdoor measurements; all solid-state and built-in battery.
- HC-25U and FT-243 sockets enable use as a crystal checker and marker generator.
- Amplitude modulation is convenient in aligning receivers.

when using your DM-81 as a signal generator. Also, when used as the marker generator, amplitude modulation is helpful in precisely calibrating the dial scale even for a receiver having no SFD.

- An FET and transistor are used in the meter circuit to provide extremely good sensitivity.
- As an absorption frequency meter, your DM-81 is both to align transmitters and measure field strength.
- An earphone plug allows you to monitor transmit signals.
- It is possible to measure resonant circuit frequencies of toroidal coils. This is not possible with conventional dip meters.

APPLICATIONS

(1) Measure Resonant Frequency by Inductive or Capacitive Coupling.	(4) ITST Checker or Marker Generator. Use a Crystal in Place of Coil	(7) Use as a Heterodyne Frequency Meter or CW Monitor. Use as an AM Modulation Monitor
(2) Antenna Resonant Frequency. Antennas One-Turn Loop	(5) Measure Tank Circuit Resonance. By Either Absorption or D.L.	(8) Measure an Unknown C. Standard Inductance
(3) Signal Generator. 2-3 Turn Pick-Up Coax IP	(6) Measure Field-Strength. 50cm Int. Antenna One Turn Loop to Case Ground	(9) Measure an Unknown L. Standard Capacitance

\$159

KENWOOD

ANTENNA TUNERS

AT-130 \$199

The AT-130 is a compact and lightweight antenna tuner designed for base or mobile use. (Includes the new three bands).

SPECIFICATIONS

(Antenna Coupler) • Frequency Range: 8 amateur bands from 3.5 to 29.7 MHz • Input Impedance: 50Ω • Output Impedance: 25 to 500Ω, unbalanced • Through Power: 150W max. (3.5 MHz band, 120W) • Insertion Loss: Less than 0.5 dB at optimum match (SWR Meter) • Frequency Range: 3.5 to 29.7 MHz • Max. Power: 150W • Measurable Range: 1.1 to 10:1 • Min. Power Required: 2W (General) • INPUT Connectors: UHF type (SO21) • ANT Connector: UHF type (SO21) GND: Wing nut and STUD • Dimensions: 152 (6.11W) x 60 (2.40H) x 189 (4.90D) mm (inch) • Weight: 1.6 kg (3.5 lbs) approx.



AT-230 \$289



The AT-230 antenna tuner includes the new three bands and functional features such as a through-line wattmeter, SWR meter and antenna selector switch.

The AT-230 greatly adds to the effectiveness of your station.

SPECIFICATIONS

(ANTENNA COUPLER) • Frequency Range: 9 amateur bands from 1.8 to 30.0 MHz • Input Impedance: 50 ohms • Output Impedance: 10 to 500 ohms, unbalanced • Through Power: 200 watts max. (WATTMETER) • Type: Through line wattmeter • Frequency Range: 1.8 to 30.0 MHz • Measurable RF power: Up to 20/200 watts, switched • Kinds of RF Power: Forward and reflected power, switched • Impedance: 50 ohms • Accuracy: Better than ±10% of full scale (SWR METER) • SWR detection: Toroidal core directional coupler • Measurable Range: 1.1 to 10 • Min. Power Required: 4 watts (GENERAL) • Connectors: INPUT: UHF type, 50 ohms • Connectors: ANT-1: UHF type; ANT-2: UHF type; ANT-3: Wire antenna only; GND • Dimensions: 180 (7.21W) x 333 (13.0D) x 287 (11.50D) mm (inch) • Weight: 3.4 kg (7.5 lbs)

AT-230 Automatic Antenna Tuner



Covers 160-10 meters incl. WARC bands.
Automatic Band Changing with the TS-430S
Manual band changing with other transceivers
Built-in SWR/POWER meter
Four sets of antenna terminals.

\$489

MFJ

MFJ 941C Versa Tuner II



Fastest selling MFJ tuner... because it has the most wanted features at the best price. SWR + dual range wattmeter (300 & 30 watts full scale, forward and reflected power). Sensitive meter measures SWR down to 5 watts output. More flexible antenna switch selects 2 coax lines, direct or through tuner, random wire balanced line, or tuner bypass for dummy load. 12 position efficient airwound inductor for lower losses, more watts out.

\$139

NEW MFJ Compact 3 KW Antenna Tuner Has Roller Inductor



MFJ-949

\$499

Meet "Versa Tuner V". It has all the features you asked for, including the new smaller size to match new smaller rigs — only 10Wx4½Hx14¾D. Matches coax, balanced lines, random wires 1.8-30 MHz.

Deluxe aluminum low-profile cabinet with sub chassis for RFI protection, black finish, black panel with raised letters; tilt build; requires 12 VDC for meter light.

3 KW PEP — the power rating you won't outgrow. (250 pf-5KV caps). Roller inductor with a 3-digit turns counter plus a spinner knob for precise inductance control to get that SWR down to minimum every time.

Built-in 300 watt, 50 ohm dummy load. Built-in 4:1 ferrite balun.

Built-in lighted 2% meter reads SWR plus forward and reflected power in 2 ranges (200 & 2000 w).

6-position antenna switch (2 coax lines, through tuner or direct, random/balanced line or dummy load). SO-239 coax conn., ceramic feed-throughs, binding post ground.

The KW e-Zee Match is designed to provide an improved system of matching between a Transmitter output or Receiver input and an antenna system. The unit covers bands 10-80 meters inclusive and enables resistive loads from 15 ohms to 5,000 ohms to be matched. Reactive components in an antenna system can be considerably reduced and the standing-wave-ratio (S. W. R.) improved. This will also tend to improve results when dealing with television interference (TV 1).

\$129



HAMRADIO TEST INSTRUMENTS

Hansen

IDEAL FOR MOBILING

TEST AND MEASURING EQUIPMENT**SWR-50B****\$43**

Measuring Method	Directional Coupler
Maximum Handling Power	1 KW
SWR Indication	1:1 - 3:1
Frequency Range	3.5 - 150 MHz
Circuit Impedance	50 ohm
Measuring Accuracy	RF Power ±20%
Connector	SO-239
Meter Sensitivity	SWR Meter 100µA F.S.D., POWER Meter 100µA F.S.D.
Accessories	Connector cable for illumination lamp Magic fastener x 2, pcs.
Dimensions	150(W) x 70(H) x 65(D) mm
Weight	400 g.

PEAK POWER SWR METER

These models are the precision built through-line type watt meter providing P.E.P. and average power indication. The newly designed CT method directional coupler by toroidal core enables to read out highly accurate and flat frequency response.

At the power measurement, RMS and P.E.P. 2 mode, measurement is available. Especially P.E.P. mode, measurement and hold the SSB, PEP & Peak Power while transmitting is possible by selecting FOLLOW/HOLD two functions.

The SWR scale of these models are duplicated with L (low power) and H (high power) to enable more accurate reading for SWR value.

FS-500H**\$99****FS-301M****FLAT RESPONSE POWER & SWR METER****\$79****FS-601 MH
PEAK POWER
SWR METER****\$89****Specifications:****FS-301M**

Frequency	1.8 - 30MHz
Power range	0 - 20, 200W - 2 ranges ±10%
VSWR	1:1 - 1:3
Impedance	50 - 52 ohms
Connector	M TYPE (SO-239)
AC source	
Dimensions	160(W) x 70(H) x 110(D) mm
Weight	800 g

FS-500H

Frequency	1.8 - 30MHz
Power range	0 - 20, 200, 2000W 3 range ±7%
VSWR	1:1 - 1:3
Impedance	50 - 52 ohms
Connector	M TYPE ISO-239
AC source	AC 100V/220V(4V A) (PEP measurement only)
Dimensions	205(W) x 100(H) x 140(D) mm
Weight	1.5 kg.

FS-601MH

Frequency	1.8 - 60MHz (V.H.F band)
Power range	0 - 200, 2KW - 2 ranges ±10%
VSWR	1:1 - 1:3
Impedance	50 - 52 ohms
Connector	M TYPE ISO-239
AC source	AC100V/220V (4V A) (PEP measurement only)
Dimensions	160(W) x 70(H) x 110(D) mm
Weight	1 kgs

A NEW LINE OF SWR METERS FROM KENWOOD**SW 100 \$55****SW 2000 \$129****SW 200 \$119**

Model No.	SW 100A	SW 100B	SW 200A	SW 200B	SW 2000
Freq. Range (MHz)	1.8-150	140-450	1.8-150	140-450	1.8-54
Power Range (W)	0-50	0-150	0-2000	0-20/200	0-200/2000
Accuracy	+ 10% OF FULL SCALE				
Size (mm)	92x64x36	92x69x36	193x62x79	193x62x79	193x62x79
Wt (kg)	3.8x2.5x1.4		7.8x2.4x3.1		
Weight	360g with detector		700g		
Price	\$55	\$55	\$119	\$119	\$129

OPTIONAL COUPLERS: SWC-1 (1.8-150 MHz) Coupler for SW 200, SW 2000 \$37
 SWC-2 (140-450 MHz) Coupler for SW 200, SW 2000 \$37
 SWC-3 (1.8-54 MHz) Coupler for SW 2000 \$39

TEST AND MEASURING EQUIPMENT

Model 1000-A Wattmeter

The Model 1000-A Wattmeter measures RF power in 50 ohm coaxial cables and transmission lines. It accepts plug-in elements that range from 0.1 watt to 5000 watts full-scale, and from 2MHz to 1000 MHz.

The Wattmeter includes a built-in line section with connectors for $\frac{1}{2}$ " 50-ohm cables and transmission lines. The connectors may be male or female Quick Match connectors. To use the Wattmeter, simply connect it between the source of RF power and either an antenna or "dummy" load, plug in the appropriate measuring element, select the forward or reflected orientation of the element and read the results on the $4\frac{1}{2}$ " 3-scale display.

The Model 1000-A is a versatile Wattmeter. The built-in line section can be removed and used with accessory cables from 33' up to 200' from the meter. The meter unit is protected by a rugged, shock-proof housing. On the back of the meter are two sockets for storing extra measuring elements. Measuring elements for the Model 1000-A are ordered separately based on the accompanying table.



MODEL 64005 WATT METER CASE \$85.



Power Range	Frequency (MHz)
2-30	25-60 50-125 100-250 200-500 400-1000
5 watts	2012 2020 2028 2036 2045
10 watts	2013 2021 2029 2037 2046
25 watts	2014 2022 2030 2038 2047
50 watts	2004 2015 2023 2031 2039 2048
100 watts	2005 2016 2024 2032 2041 2049
250 watts	2006 2017 2025 2033 2042 2050
500 watts	2007 2018 2026 2034 2043 2051
1000 watts	2008 2019 2027 2035 2044 2052
2500 watts	2009 2020 2028 2036 2045
5000 watts	2010 2021 2029 2037 2046

MODEL NUMBERS

The DIELECTRIC Model 7004 SNIFFER, is a non-directional, adjustable amplitude, RF Signal Sampling Element. It's designed to permit easy coupling into a coaxial line for counting of frequency, spectrum analysis or scope display.

The SNIFFER exhibits extremely low VSWR and insertion loss, plus it is virtually transparent to RF signals within its frequency range of operation. Available at its BNC connector is an unrectified RF signal adjust-

able over a range of 35 dB to 51 dB $\pm 5\%$ below the signal within the coaxial line. The SNIFFER can be used to sample any signal between 2 and 1000 MHz at power levels of up to 1000 Watts. A fine adjustment, over a range of approximately 1 dB, is made possible by rotating the unit within its line section socket, whether it is being used in an auxiliary line section or in the Wattmeter.

MODEL 7004

\$85



A FULL LINE OF RF COUPLERS AND TERMINATING LOAD

RESISTORS ARE AVAILABLE. WRITE GLENWOOD FOR DETAILS

• PC-1A
Phone Patch Controller

\$89

PHONE PATCH CONTROLLER



FEATURES

- Provides connection between a transceiver and a telephone line
- High isolation between receive input and transmit output
- Compact design easy installation in a limited space



NYE VIKING

Used to connect a telephone circuit into any communication installation the NYE VIKING Phone Patch is a compact, automatic, hybrid-transformer type unit which provides push-to-talk, or voice (VOX) control operation. Has adjustable line "null" control, and separate gain controls for transmitter and receiver inputs.

In "PATCH" position, the speaker is de-energized and audio is switched to the telephone handset for undistorted, hum-free audio response. It is effectively shielded - RF filtering and bypassing prevents RF feedback from telephone line. The Phone Patch is easy to install and operate. It comes wired and tested.

KENWOOD

SPECIFICATIONS

- Impedance levels:
 • Line: 600Ω nominal • RX In: 600Ω nominal
 • SP out: 600Ω nominal • Mic: 50kΩ nominal
 (available only where phone patch operation is legal)



046-001 \$85

OSKERBLOCK



\$109

**SWR Meter**

Directional Coupler Type
Ratios: 1:1 to 1:10 & up
Frequency Range: 3.5MHz to 30MHz
Add SWR & Power Coupler
Model SPC-6B: 50MHz to 54MHz
Model SPC-2B: 144MHz to 148MHz
Model SPC-07A: 430MHz to 450MHz
Impedance: 50 ohms
Full Scale Maximum Power:
10W at 3.5MHz, 700Hz
2W at 14 MHz, 21MHz
0.5W at 27 MHz, 28MHz
0.5W at 50 MHz, 144MHz, 430MHz

POWER METER

Through Line Type
Power Range:
0-300W, 0-2KW
at 3.5/14/21MHz
0-20W, 0-200W
at 27/430MHz
Accuracy: ±1% at SWR 1
Safety Rating:
10W at SWR 1.5-1
500W at SWR 1.5-1
200W at SWR 2.5-1

Meter Sensitivity: 6mA FS DC
Connectors: UHF type (SO-239) or M Type
Dimensions: Width: 14" H x 2.25" D W x 1.125" D.

Weight: 1.4kg (3.2 lbs) net
13" H x 8" W x 4.5" D.

OPTIONAL COUPLERS

Basic meter covers 3.5 to 30 MHz. Three optional couplers provide extended frequency coverage.

MODEL SPC-6B 0-20W, 0-200W, at 50 MHz \$35
MODEL SPC-2B 0-20W, 0-200W, AT 144MHz \$35
MODEL SPC-07A 0-2W, 0-20W, AT 430MHz \$49

MODEL D1200 \$499

D1200 has a built in audio multiplier.

Temperature controlled ovens have long been the accepted industry standard for maintaining crystal controlled precision measuring instruments while frequency tolerance over a wider temperature range than is economically achievable using a TCXO (temperature compensated crystal oscillator) time base. Two objectional characteristics of these ovens are: 1. Bulk. 2. High current consumption. DMI technology and research has overcome these objections. Gone are versions of bulky current ovens. DMI presents its latest innovation: A .1 PPM proportional oven that not only operates from external power but from batteries as well. DMI's streamlined high-accuracy low current proportional type 10 mHz oven out-modes all others.

DIGIMAX

D612 \$399

with AC-12 ac adapter

Aging: 8 parts in 10⁹/month typ.
External output: 10 mHz TTL buffered.
External input: For 10 mHz TTL compatible.

INPUT IMPEDANCE

Non-preserved: 1 Meg in parallel with 25 pF
Prescaled: 50 ohms in parallel with 25 pF

SENSITIVITY (typical)

10 mV to 25 mV: 100 Hz to 25 MHz
10 mV to 20 mV: 25 MHz to 250 MHz
15 mV to 50 mV: 250 MHz to 1 GHz
2.5VAC on rear panel/50 OHM R: 1 Meg

DISPLAY

9 LED readouts with the following features:
Easy to read: 5" seven segment characters. Leading zero suppression assures error-free readings. Display blanking to minimize power consumption. When no signal is present, first eight digits are blanked, ninth digit displays 1 or 0.

FREQUENCY RANGE (typical)

Non-preserved: 50 Hz to 50 MHz
Prescaled: 10 MHz to 1.2 GHz

RESOLUTION (selectable)

Non-preserved: 0.1 Hz / 1 Hz / 10 Hz
Prescaled: 10 Hz / 100 Hz / 1 kHz
8 VDC to 14.5 VDC
115 VAC with AC-12 ac adapter
Internal battery pack: 6 "C" cells.
Optional rechargeable NiCad battery pack
Current requirements: 260-500 mA typ.

MODEL D500 \$249

INPUT IMPEDANCE

Non-preserved: 1 Meg in parallel with 25 pF
Prescaled: 50 ohms in parallel with 25 pF

SENSITIVITY (typical)

Non-preserved: 10 - 15 mV 100 Hz - 25 MHz
Prescaled: 10 - 15 mV 50 MHz - 250 MHz
15 - 50 mV 250 MHz - 450 MHz
25 - 75 mV 450 MHz - 1.0 GHz

DISPLAY 8-digit LED, seven segment characters.
Leading zero suppression assures error-free readings.

RESOLUTION (selectable)

Non-preserved: 1 Hz / 10 Hz
Prescaled: 10 Hz / 100 Hz

FREQUENCY RANGE (typical)

Non-preserved: 50 Hz to 50 MHz
Prescaled D500: 50 MHz to 512 MHz
Prescaled D510: 50 MHz to 1 GHz

D510 \$299

with AC-12 ac adapter

**POWER REQUIREMENTS**

8 VDC to 14.5 VDC 100 to 250 mA typical

115 VAC with AC-12 ac adapter

HAM IV \$339

- Designed for medium communications antenna array of up to 15 sq. ft. (1.4 sq. m) wind load area.
- Bell Rotator Design—total weather protection
 - Dual 90 Ball Bearing Race—proven support system
 - Machined Steel Ring Gear—best ever used
 - Machined Stainless Steel Ring Drive Gear Systems—time tested durability
 - Electric Locking Wedge—securely locks antenna in place
 - North or south center scale
 - Illuminated Directional Indicator—easily locates antenna position
 - Zener Regulated Meter Circuit—accurate positional readout
 - Snap-Action Control Switches—lifetime operation
 - Low Voltage Control—safe operation

**Antenna Rotators****\$179 CD 45**

Value packed with professional features. The CD45 will handle 8.5 sq. ft. (.79 sq. m) when mounted inside a tower or 5 sq. ft. (.46 sq. m) when mast adapter is used.

- Bell Rotator Design—total weather protection
- Dual 50 Ball Bearing Race—proven support system
- Diecast Ring Gear—best ever used
- Stamped Steel Gear Drive System—heavy-duty, trouble-free gear train
- North or south center scale
- Illuminated Directional Indicator—easily locates antenna position
- Snap-Action Control Switches—lifetime operation
- Low Voltage Control—safe operation

SOUTH CENTRE KIT**\$10****STANDARD LOWER MAST SUPPORT****\$24****T²X Tailtwister® \$429**

The world famous Tailtwister is capable of handling antennas with wind load areas of 20 sq. ft. (1.9 sq. m)

- Thickwall Castings—handles large loads
- 138 Ball Bearings—large load capacity
- Triple Bearing Race—exceptional lateral control
- Six-Bolt Assembly—superior strength
- Machined Steel Ring Gear—long life with maximum load
- Stainless Steel Drive Gear System—time tested durability
- Electric Locking Wedge—securely locks antenna in place
- North or south center scale
- Illuminated Directional Indicator—easily locates antenna
- Snap-Action Control Switches—lifetime operation
- L.E.D. Control Indicators—positive operational signals
- Zener Regulated Meter Circuit—accurate positional readout
- Low Voltage Control—safe operation

**AR40 \$159**

The AR40...for large FM-TV and compact communication antenna arrays up to 3.0 sq. ft. (.28 sq. m) wind load area.

- Dual 12 Ball-Bearing Race—exclusive in its class
- Automatic Position Sensor—never needs resetting
- Fully Automatic Control
- Solid-State Control—silent operation
- Low Voltage Control—safe operation



	AR40	CD45 II	HAM IV	T ² X (Tailtwister)
ANTENNA WIND LOAD AREA CAPACITY				
Mounted inside tower	3.0 sq. ft. (.28 sq. m)	8.5 sq. ft. (.79 sq. m)	7.5 sq. ft. (1.4 sq. m)	20.0 sq. ft. (1.9 sq. m)
With optional H.O. lower mast adapter*	N/A	N/A	N/A	N/A
With standard lower mast adapter	15 sq. ft. (1.4 sq. m)	5.0 sq. ft. (.45 sq. m)	7.5 sq. ft. (1.4 sq. m)	N/A
MOTOR TURNING POWER — Stall torque	350 in. lbs. (40 N.m)	600 in. lbs. (68 N.m)	800 in. lbs. (93 N.m)	1000 in. lbs. (113 N.m)
BEARING ASSEMBLY — In line assembly eliminates external bearing accessibility	Dual Race 12 Ball Bearings	Dual Race 12 Ball Bearings	Dual Race 98 Ball Bearings	Triple Race 138 Ball Bearings
BRAKE CONSTRUCTION — Holds antenna in place	Motor Armature	Disc Brake	Disc Brake & Electric Wedge	Disc Brake & Electric Wedge
BRAKE POWER — Amount of torque to hold antenna in place	450 in. lbs. (51 N.m)	600 in. lbs. (66 N.m)	3000 in. lbs. (366 N.m)	3000 in. lbs. (366 N.m)

A MATCHING PAIR**KR-500 Elevation Rotator**

KR-500 provides 180° boom rotation for antennas used in OSCAR, EME, etc. Heavy duty, can be used with stacked arrays. Rotation, 1 min. for 180°. Limit switches. Motor disc brake holds to 1750 inch-pounds (2000 cm-KG).

Accommodates booms 1.25-1.625" D (31.75-41.27 mm), masts to 1.5-2.5"D (38-63.5 mm). Weatherproof. Attractive direction indicator. 115VAC, 50/60Hz. Shipping wgt. 14 lbs (6.34 KG).

\$249
+ \$5 FREIGHT

**— FOR YOU SATELLITE BUFFS —****KR-400 Azimuth Rotator**

Medium duty rotator, supports 400 lbs (181 KG). Ideal for Long Boomers, HF tribanders, VHF arrays. Motor disc brake same as KR-500, also limit switches. Rotation is 1 min./360°.

Accommodates masts 1.5-2.5"D (38-63.5 mm). Supplied with functional direction indicator. 115VAC, 50/60 Hz. Shipping weight is approx. 18 lbs. (8.16 KG).

***179**
+ \$5 FREIGHT



COAXIAL ANTENNA SWITCHES

Model 375 Coax Switch

Single Pole
\$39

5 position with grounding of all unused positions.
Axial mounted connectors.


Model 376 Coax Switch

Single Pole
\$39

5 position with grounding of all unused positions. Sixth switch position grounds all outputs.
Radial mounted connectors.


Model 590 Coax Switch

Single pole
\$49

5 position, non-grounding type switch. Axial mounted connectors.


Model 590G Coax Switch

Single Pole
\$49

5 position with grounding of all unused positions. Axial mounted connectors.


Model 592 Coax Switch

Single Pole
\$39

2 position switch, non-grounding.
Axial mounted connectors.


Model 593 Coax Switch

Single Pole
Power
Impedance
VSWR
Cross talk
Dimensions
Weight
Mount

3 Position with grounding of all unused positions.
1 KW-2 KW PEP
50-75 ohms
1.2:1 up to 150 MHz
(measured at 30 MHz) is -45 dB between adjacent outlets and -60 dB between alternate outlets
1-3/4" high, 5" wide, 3" deep
1 lb.
Wall or desk


COAXIAL ANTENNA CHANGEOVER RELAY

Model 377

Economical and reliable. Can be operated from VOR circuit for completely automatic operation or from PTT or manual T/R switch. Receiver input is automatically grounded when the relay is in the Transmit position. Wide AC operating voltage range and low operating current.



Model 377

* specifications

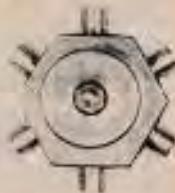
Power Rating	1000 watts CW (2000 watts SSB)
VSWR	Less than 1.15:1, DC to 150 MHz
Power Requirements	0.015 Amps, 48 to 130 volts AC
Connectors	UHF Type SO-239
Dimensions	3-1/2" x 1-1/2"
Shipping Weight	\$40
	1 lb.

Shipping Weight

1 lb.

Model 550A Coax Switch \$49

Single Pole
5 position switch. Radial mounted connectors.


Model 594 Coax Switch \$49

2 Pole 2 Position
Power
Impedance
VSWR
Cross talk
Dimensions
Weight
Mount

1 KW-2 KW PEP
50-75 ohms
1.2:1 up to 150 MHz
-45 dB (measured at 30 MHz)
1-3/4" high, 5" wide, 3" deep
1 lb.
Wall or desk

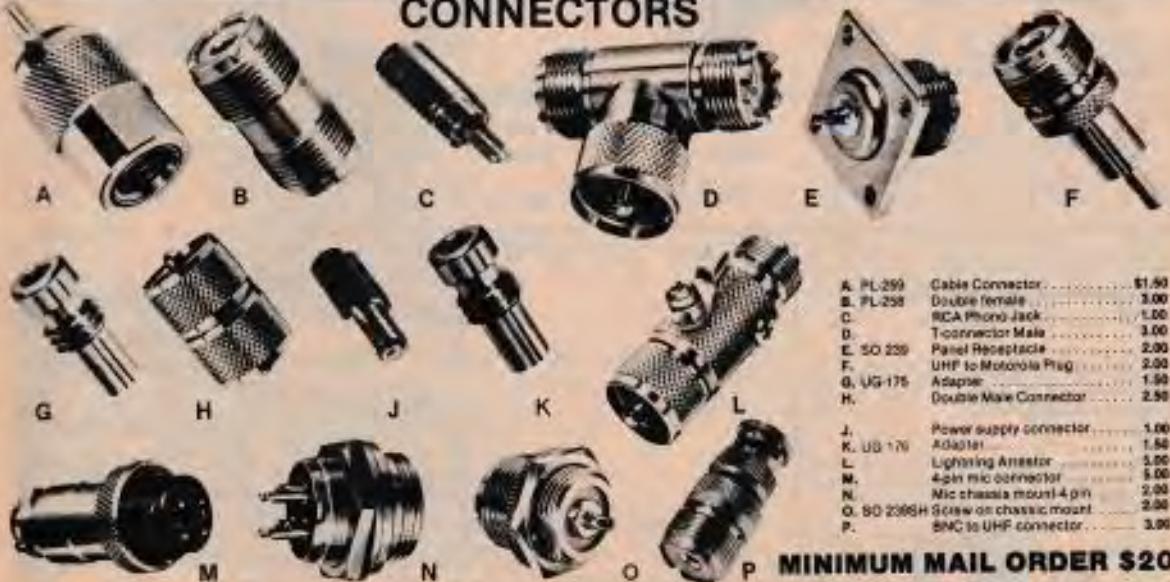

Model 595 Coax Switch \$49

Single Pole
8 Position with grounding of all unused positions.
Power
Impedance
VSWR

1 KW-2 KW PEP
50-75 ohms
1.2:1 to 150 MHz



CONNECTORS



A. PL-299	Cable Connector	\$1.50
B. PL-299	Double female	3.00
C.	RCA Phono Jack	1.00
D.	T-connector Male	3.00
E. SO-239	Panel Receptacle	2.00
F.	UHF to Motorola Plug	2.00
G. UG-175	Adapter	1.50
H.	Double male connector	2.50
J.	Power supply connector	1.00
K. US-176	Adaptor	1.50
L.	Lightning Arrestor	3.00
M.	4-pin mic connector	5.00
N.	Mic chassis mount 4 pin	2.00
O.	SO-239SH Screw on chassis mount	2.00
P.	SNC to UHF connector	3.00

MINIMUM MAIL ORDER \$20

- PG-4 Series: Microphone Cable for MC-60/60A
- PG-4A (for 4 P)
- PG-4B (for 6 P)
- PG-4C (for 8 P)

\$15 each



- MJ Series Microphone Plug Adaptor
- MJ-46 (4P - 6P)
- MJ-48 (4P - 8P)
- MJ-64 (6P - 4P)
- MJ-68 (6P - 8P)
- MJ-84 (8P - 4P)
- MJ-88 (8P - 6P)

\$11 each

- PG-2 Series: DC Power Cable
- PG-2A for TR-8400/9500 \$7
- PG-2B for TR-7730/7880/7950/7930/9130 \$11
- TS-130V/680
- PG-2C for TS-120S/130S \$15
- 130SE/180S



COAX, ROTOR, AND ANTENNA WIRE

Add \$2 per 100' for shipping, minimum charge \$1.

COAXIAL CABLES

		NOMINAL ATTENUATION	
		db/100'	
RG8/u	90¢/FT	MHz	
Foam		50	1.2
		100	1.8
		200	2.6
		300	3.2
		400	3.8
RG8/u	Regular 85¢/FT	100	2.0
		200	3.0
		400	4.7
		500	7.8
RG-213u	85¢/FT	100	2.1
Non-contaminating		200	3.1
		400	5.0
		500	6.8

RG-58u 24¢/FT SOLID CONDUCTOR

100	4.1
200	8.2
400	9.5
500	14.5

RG-58Au 35¢/FT. STRANDED CONDUCTOR

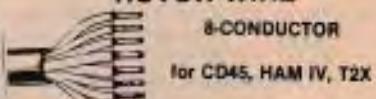
100	5.3
200	8.2
400	12.5
500	20.0

RG-8x 35¢/FT MINIATURE FOAM

100	3.0
200	4.5
400	6.0

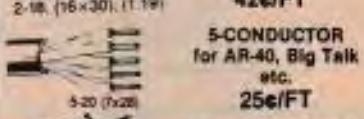
ROTOR WIRE

8-CONDUCTOR



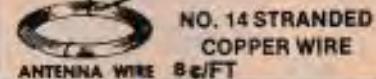
for CD45, HAM IV, T2X etc.

42¢/FT



5-CONDUCTOR for AR-40, Big Talk etc.

25¢/FT



NO. 14 STRANDED COPPER WIRE 8¢/FT

NEW, MOLDABLE PLASTIC

COAX-SEAL®

- Only material that will adhere to poly vinyl or vinyl outer coax jackets.
- Forms and seals over odd shaped and difficult fittings.
- Non-contaminating and non-conductive
- Wide ambient temperature range (-30°F to +180°F).
- Stays flexible for years thus insuring moisture proof connections.
- Reusable—allows you to quickly disconnect fittings and reseal them with the same material.
- A must for satellite TV/microwave work—wire antenna at solder joints in the shack. Packaged in convenient 1/2" x 60" roll.

Seals coax fittings from moisture and corrosion \$4

COAX-SEAL® the new space age material that is quick and simple to apply. Remove backing from approximately 6" of plastic wrap outer covering toward fitting. After wrapping, heat to form a smooth surface and force out air. EFFECTIVE - TOOL PROOF - INEXPENSIVE.



3 for \$10

- ARRESTER Series Lightning & Static Protector



\$59

AL-2: Handles 1 kW output at 50Ω with SO-239 Connector

LA-1
Lightning Arrestor.
Useable for 1.8 to 54 MHz.
Will safely bypass to ground
ten plus lightning strikes.
ORDER NO. 229

\$109

BALUNS



Hy-gain BN-86 Balun.

1 to 1 at 52 ohms.
weighs 1 lb.

\$36



KENPRO-KA-50

Freq: 1.8-50 MHz
Power: 1 KW on CW,
2 KW PEP
Weight: 170 gr.

1 to 1 ratio and only 4 ozs.,

Designed for 50 ohm.

\$30



80 Thru 10 Meters Highest Amateur Power, 52-ohm Impedance

Model 370-11
Pre-assembled antenna, 80-40-20-15-10 Meters. Only two trap adjustments and terminations and ready to use. Approximate length only: 110 feet.

All antennas include antenna wire, traps, two end insulators, and a BAW Model CC-50 Dipole Center Connector. Traps weigh approximately 9 ounces each.



\$125

FIVE BAND TRAP ANTENNA

The MT-240X is a compact multi-band wire antenna.

MT-240X



Impedance	: 50 ohms	\$89
Frequency range	: 3.5-28MHz	
Input power	: 1 KW PEP 500W CW	
V.S.W.R.	: Lower than 1.2, 3, 5, 7, 14, 28MHz band	
Overall length	: 7m/23m, Double doublet	

TET ANTENNA SYSTEMS

HB33SP



\$349

- 20, 15 and 10 meters

- Wideband. Low SWR. No tuner needed

- Exclusive phased dual drive gives higher gain

- Transmitter power is radiated not lost in the traps

ANOTHER GLENWOOD FIRST!

- Full power low loss balun. Gives improved beam pattern

- Exclusive coax-lal capacitors have lower losses, higher Q

HB34D



\$399

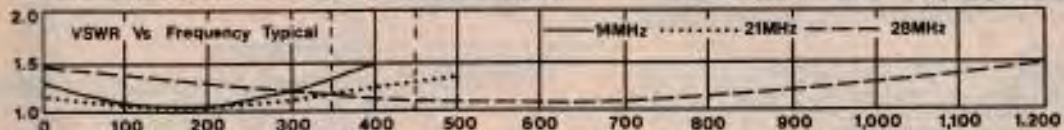
ALL THESE ANTENNAS ARE

SHIPPED FREIGHT COLLECT

HB35T



\$489



- High technology antenna designs provide full band coverage. Antenna tuner not required, even with solid state transceivers.
- Dual driven elements for maximum power transfer. Capacitive coupling for broad bandwidth.
- Highest quality materials throughout. All tubing 6061-T6 aluminum alloy. Stainless steel fasteners for all electrical connections.
- Tubing is cut and drilled to precision tolerances for easy assembly. No tuning adjustments.

MV074

4 element vertical
antenna for 440 Mhz

MV-074

\$49

AX-210N

\$139



TA-8

\$189

All band utility antenna for
7/10/14/21/24.5/26/50/144 MHz

SQ22

\$109



Two 2 element Swiss Quads mounted side by side on a single boom. Complete with phasing harness and all hardware. Shown vertically polarized, it displays very low VSWR across the entire 2 meter band. Also available for 430 Mhz — order SQ 007.

\$129

Band	HB34D	HB35T	HB-33sp	20M3ap	SQ007	SQ22	MV-74	MV-4 BH	MV-5 BH	TA-8	AX-210N
14/21/28MHz	14/21/28MHz	14/21/28MHz	14/21/28MHz	14MHz	432MHz	144MHz	440 Mhz	7/14/21/26	3/5/14	7/10/14/21	144MHz
Element	3MHz	4.5m	3	3	2x2	2x2	4	—	—	—	10x2
Gain	10/12/11dB	10/13/12.5dB	8.5/8.5/10dB	10dB	15dB	16dB	7.4dB	—	—	—	12dBx2
F/B Ratio	20dB	23dB	20dB	20dB	20dB	20dB	—	—	—	—	26dB
V.S.W.R.	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Power R.	2KWpep	2KWpep	2KWpep	250Wpep	250Wpep	250Wpep	1KWpep	1KWpep	1KWpep	—	500Wpep
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm	50ohm
Element L.	8.4m	8.4m	8.0m	6.8m	0.17m	0.57m	1.5m	4.2m	6.6m	1.2m	1.07m
Boom L.	8.0m	8.0m	4.0m	5.0m	0.54m	2.0m	—	—	—	3.5m	3.5m
Turning Radius	4.8m	5.36m	4.89m	3.67m	0.43m	1.06m	—	—	—	—	1.79m
Wind Surface Area	0.61m ²	0.75m ²	0.48m ²	0.29 ²	0.03m ²	0.15m ²	0.04m ²	—	—	—	0.23m ²
Wind Load (EIA STD 50 MPH)	51.0kg	75.9kg	46.0kg	36.7kg	3.0kg	15.0kg	3.4kg	—	—	—	23.0kg
Weight	19.5kg	22.5kg	13.5kg	16.0kg	1.2kg	1.65kg	0.75kg	2.4kg	—	5.1kg	3.5kg
PRICE	\$399	\$469	\$349	\$319	\$129	\$109	\$49	\$99	\$112	\$109	\$139

Directional Triband Antennas

TH7DX

7-Element, Broadband Triband Beam

This amazing new tribander, using a dual driven 7 element system on a 24 ft. (7.3m) boom maintains a VSWR of less than 2:1 on all bands, including ALL of ten meters. No compromise on gain performance was needed to achieve this efficiency. A unique combination of trapped and monoband parasitic elements produces an average front-to-back ratio of 22 dB on 20 and 15 meters and 17 dB on 10 meters. In a parasitic array such as this, high efficiency traps are used rather than parallel stubs. These Hi-Q traps are capable of handling the maximum legal power with a 2:1 safety margin, and are superior to parallel stubbing for ease of assembly and maintenance as well. The TH7DX uses stainless steel hardware for all electrical—and most mechanical connections plus taper swaged 6063-T832 thick wall aluminum tubing. The antenna includes exclusive, die-cast aluminum, rugged boom-to-mast clamp, and heavy gauge element-to-boom brackets. The TH7DX comes complete with a Hy-Gain BN-86 balun.

\$739

**NEW LOW
PRICE**

**SAVE
\$60**

TH5Mk2

\$639

3-Element Triband Beam

TH3JRS

Hy-Gain's Thunderbird Junior offers top performance with a compact design that makes it ideal where space is a limiting factor. Featuring separate and matched air dielectric Hy-Q traps for each band, it feeds with 52 ohm coax, delivers maximum F/B ratio without compromise. The TH3JRS has a SWR of less than 1.5:1 at resonance on all bands. All hardware and clamps are stainless steel. Maximum power, 300 watts dc. Hy-Gain ferrite balun BN-86 is recommended for use with the TH3JRS.

\$319

ALL THESE BEAMS ARE SHIPPED FREIGHT COLLECT

HF Antenna Specifications

Model No.	20	15	10	8	6	5	4	3	Meters	Re.	Wt. lbs.	Sp. Gr.	Sp. Vol.	Sp. Res.	Sp. Ind.	Sp. Cap.	Sp. Ind.	Sp. Cap.
TH7DX	3.5	29.8	1.371	9.4	2.5	2	—	—	20, 15, 10, 8	249	180	1.04	3.4	10	50	10	50	
TH5Mk2	6	20	3.277	14	2	—	—	—	20, 15, 10	131	100	1.04	2.1	40	10	40	10	
TH3JRS	3	20	3.274	8.3	2.7	—	—	—	20, 15, 10	87	60	1.05	1.7	32	70	32	70	
TH3Mk3S	6.5	20	3.913	18	2	—	—	—	20, 15, 10	190	100	1.04	1.4	77	75	75	75	

3-Element Triband Beam

TH3Mk3S

\$459

The TH3Mk3S Thunderbird features separate and matched air dielectric Hy-Q traps capable of handling maximum legal power, and feeds with 52 ohm coax. Hy-Gain Beta Match presents tapered impedance for maximum efficiency on all three bands. Provides dc ground to eliminate precipitation static. The TH3Mk3S delivers an average of 8 dB gain, maximum F/B ratio with SWR less than 1.5:1 at resonance on all

bands. Its mechanically superior construction features taper swaged, slotted tubing and stainless steel hardware and clamps. Comes with cast aluminum, titable boom-to-mast clamp. Hy-Gain ferrite balun BN-86 is recommended.

**OTHER HY-GAIN
BEAMS AVAILABLE
WRITE GLENWOOD
FOR DETAILS**

ANTENNAS FOR APARTMENT DWELLERS

TT-40 NEW

A low profile horizontal antenna that extends 14' to give you up to 500W PEP on 7, 14, 21 and 28 MHz. VSWR 1.3

\$129



model 370-10 portable whip antenna

Designed especially for apartment dwellers and renters who cannot have a permanent antenna. This simple unit tunes the 2, 6, 10, 15, 20, and 40-meter amateur bands, as well as all 40 channels of the 27 MHz CB band. When properly adjusted to the operating frequency, VSWR is 1.1:1. Weight less than 2 pounds, complete with base loading coils,* coaxial feed line, and counterpoise. Disassembled for packing or storage, whip is only 22-1/2" long, mount is 14" long. Whip extends to 57". *Loading coils not used for 6 meters or 2 meters. Power rating is 260 watts CW and SSB.

\$69

MODEL SW - 10 \$65

Model SW-10 is a portable antenna, similar to the 370-10, but designed for short wave listening only. It covers 11-49 meters without the need for counterpoise or coil changes. Comes with 10' of coax feed line. Assembled length - 75".



A4 4 ELEMENT 20 15 10 METERS

A true champion, our new A4 is based on the very successful ATB-34. It outperforms many larger beams because of our high Q traps and excellent spacing to element length ratios. A4 gives maximum performance with good dimensions and turn radius. Improve the number and quality of your contacts with a contest winning A4.

A3 3 ELEMENT 20 15 10 METERS

Make friends of your neighbors with A3 compact dimensions low profile and small turn radius. Satisfy your budget with A3 economy pricing. You will also realize savings by using a lighter weight tower and rotator. This is one compact beam that has the strength and power of most larger antennas.

A3



\$499

4 BAND ADAPTER KITS 30-40 METERS

Add more capability to your A3 or A4 beam with these easy to use add on kits. All components are included to give you 7 MHz or the new 10 MHz WARC band coverage. The adapters simply clamp to the existing element tubing to give four band performance.

A743 7 MHz/10MHz Kit for A3

\$155 each

A744 7 MHz/10MHz Kit for A4

	A3	A4
Forward Gain	8 dBi	8.9 dBi
Front to Back Ratio (Avg)	25dB	25 dB
VSWR	1.2 - 1 Typical	1.2 - 1 Typical
Bandwidth (Avg)	500 kHz	500 kHz
Power Rating	2000 W PEP	2000 W PEP
Feed Point Impedance	50 ohms	50 ohms
Connector	Twin terminal stainless steel takes all coax	Twin terminal stainless steel takes all coax
Boom (ft-in) (cm)	58' x 1.63" - 1.50" 426.7 x 4.13 - 3.81	18' x 2' 548.6 x 5.1
Longest Element (ft-in) (cm)	27.75' x 1.13" - .50" 845.8 x 2.86 - 1.27	32' x 1.13" - .50" 975.4 x 2.9 to 1.3
Wind Surface Area (ft ²) (m ²)	4.35 .47	.53 .05
Weight (lb) (kg)	27 12.8	37 16.8
Turning Radius (ft) (cm)	15.50 4.72	16.4 5.61
Mast Diameter (in) (cm)	1.25 min. 2 max. 3.18 to 5.08	1.25 to 2.13 3.2 to 5.4

A743 5.8 A744	7 MHz Section (40m)	10 MHz Section (30m)
Driven Element (ft-in) with Adapter Kit (in)	33-214 min, 35-4 max 10.12 to 10.77	27-1 1/2 min, 28-4 1/2 max 8.27 to 8.66
Wind Loading (lb) (kg)	.58 .05	.27 .03
Weight (lb) (kg)	3.44 1.58	2.28 1.04
Bandwidth (kHz)	150	150
Side Rejection (dB)	40	40

**ALL THESE
ANTENNAS
SHIPPED FREIGHT
COLLECT**

HF MULTIBAND VERTICALS



4-BTV

- Lowest SWR—PLUS!
- Bandwidth at its broadest! SWR 1.5 to 1 or better at band edges.
- Hustler exclusive trap covers "Spritz" extruded to otherwise unattainable close tolerances assuring accurate and permanent trap resonance.
- Solid one inch fiberglass trap forms for optimum electrical and mechanical stability.
- Extra heavy duty aluminum mounting bracket with low loss—high strength insulators.
- All sections $1\frac{1}{2}$ " heavy wall, high strength aluminum. Length 21'5".
- Stainless steel clamps permitting adjustment without damage to the aluminum tubing.
- Guaranteed to be easiest assembly of any multi-band vertical.
- Antenna has $\frac{3}{8}$ -24 stud at top to accept RM-75 or RM-75-S Hustler resonator for 75 meter operation when desired.
- Top loading on 75 meters for broader bandwidth and higher radiation efficiency!
- Feed with any length 50 ohm coax. + \$6 FREIGHT
- Power capability—full legal limit on SSB and CW.
- Ground mount with or without radials; roof mount with radials.



\$199

TELEX Hy-gain



18HTS \$729
(for 80 through 10 meters)

The 18HTS features automatic band selection achieved through a unique stub decoupling system which effectively isolates various sections of the antenna so that an electrical $\frac{1}{4}$ wavelength (or odd multiple of a $\frac{1}{4}$ wavelength) exists on all bands. Approximately 250 kHz band width at 2:1 VSWR on 80 meters. With the addition of a base loading coil, it also provides exceptional 160 meter performance. Includes all stainless steel hardware, and tilt-over base.

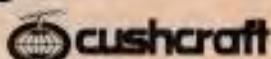
18AVT/WBS \$179
(for 80 through 10 meters) + \$5 FREIGHT

Five band capability with automatic band switching is accomplished through the use of three improved Hy-Q traps featuring large diameter coils for a more favorable L/C ratio. 2:1 or lower SWR at band edges on 40-10 meters. Approximately 40 kHz band width below 2:1 VSWR on 80 meters. Includes all stainless steel hardware.

14AVQ/WBS \$110
(for 40 through 10 meters) + \$5 FREIGHT

The Hy-Gain 14AVQ/WB is a self-supporting, automatic band switching vertical that delivers outstanding performance with exceptional L/C ratio and a very low angle radiation pattern. Includes all stainless steel hardware.

Cushcraft HF verticals are optimized for wide bandwidth and low angle of radiation necessary to long haul DX communications. They feature our new high Q stabilized trap design rated to 2000 watts PEP. The new larger diameter element tubing is 6063-T832 seamless aluminum. The base mount will take up to a $1\frac{1}{2}$ " (41.9 mm) O.D. mast with formed clamps for ground radials and/or guy wires. All models may be either roof or ground mounted. A good ground radial system is recommended for maximum performance.



AV3 Excellent performance and low height for 20-15-10 meters; only 14 ft. 4.2 m high.

AV4 Covers the 40-20-15-10 meter amateur bands with low VSWR. Overall height 19 ft., 5.9 meters.

AV5 Our most popular vertical covers 80-40-20-15-10 meters with excellent bandwidth. The antenna is only 25 ft., 7.4 meters high and it has our new capacitive "X" hat.

\$109

+ \$5 FREIGHT

\$199

+ \$5 FREIGHT

\$219

+ \$5 FREIGHT

OUR LOWEST PRICED VERTICALS.

TET MV4BH

\$99 + \$5 FREIGHT

MV4BH

Vertical for 10-40 meters

MV5BH

\$119 + \$5 FREIGHT



12AVQS

\$85

(for 20, 15, and 10 meters)

The Hy-Gain 12AVQ is a completely self-supporting triband vertical antenna. The 12AVQ delivers exceptionally low angle radiation with 1.5:1 SWR or less on all three bands. Includes all stainless steel hardware.

18VS

\$52

(for 80 through 10 meters)

This 18' (5.5 m) radiator has a loading coil at base that allows precision antenna resonating. The 18VS may be installed on a short 1 $\frac{1}{2}$ " (41.9 m) diameter mast driven into the ground.

14RMQ

\$63

Roof Mounting Kit

The 14RMQ roof mounting kit provides rugged support for Hy-Gain Models 18AVT/WBS, 18VS, 14AVQ/WBS and 12AVQ. Kit includes base plate, mast, radial/guy wires, and mounting hardware.

MV5BH

Vertical for 10-80 meters

KENWOOD

HF MOBILE ANTENNA 5 BAND HELICAL TYPE

HF MOBILE ANTENNA

Band	3.5, 7, 14, 21, 28 MHz	Weight	1.115 kg (2.453 lbs)	Length	Base Element 1245 (49-0) mm (inch) 3.5 MHz Element 185 (7-9/32) mm (inch)
Impedance	50 ohms	Base Element	190g	7 MHz Element	1250 (49-7/32) mm (inch)
VSWR	3.5, 7, 14 MHz 1.5:1 21, 28 MHz 1.3:1	3.5 MHz Element	600g	14 MHz Element	1150 (39-15/16) mm (inch)
Max. Power		7 MHz Element	155g	21 MHz Element	485 (19-3/32) mm (inch)
Input	200W pcp	14 MHz Element	95g	28 MHz Element	165 (6-1/2) mm (inch)
MA-5 10-80 METER HELICAL ANTENNA		21 MHz Element	40g		
		28 MHz Element	35g		
		\$5 FREIGHT		VP-1 BUMPER MOUNT FOR MA-5	\$80



SSM-3 \$37
MODEL MO-1 \$39 + \$5 FREIGHT
 For deck or fender mounting—Fold is at roof line 15" above base.
MODEL MO-2 \$38 + \$5 FREIGHT
 For bumper mounting—Fold is at roof line 27" above base.

Super Hustler Resonators —
Power Rating: Legal Limit SSB
Supers have widest band-width

Super Resonators RM(S)
2 KW PEP
Greatest Coverage

Model	Band	Model	Band
RM-10-S	10 meters	\$30	
RM-11-S	Citizens Band	\$30	
RM-15-S	15 meters	\$30	
RM-20-S	20 meters	\$36	
RM-40-S	40 meters	\$42	
RM-75-S	75 meters	\$68	
RM-80-S	80 meters	\$68	

\$33
Model SSM-2 Ball Mount

\$27
Model QD-1 Quick Disconnect

\$11
Model RSS-2 Resonator Spring

HUSTLER Inc.

Model MO-1
For Deck or
Fender
Location

Rotates 360° in
horizontal plane
for easy ganging

Model BM-1
Bumper Mount

Model MO-2
For Bumper
Mount
Location

MOBILE TRI-BAND ANTENNA ADAPTER

Allows 3 Band Operation

- NO BAND SWITCHING
- NO COIL CHANGES
- ANY 3 BANDS—10-80 METERS
- COMPATIBLE WITH ANY SYSTEM

Stainless Steel

\$10



hy-gain®

\$81

V2S

A 2-meter vertical, 3 dBd or 5.2 dBi; gain derived from the famous extended double zep antenna design. The radiating elements are two collinear 5/8 waves fed in phase. Two sets of 1/4 wave radials properly decouple the lower radiator from the mast.



Shipped Freight Collect

V3S

Same as V2S above except for 220-225

\$99

Same as V2S above except for 440-450 MHz

\$109

- Requires no tuning
- Easy to assemble
- Weather preferred RF connector
- Radiation pattern independent of height or mast length

Hy-Gain 270

The Hy-Gain 270 is a 2-meter mobile antenna designed to eliminate hard tuning, high SWR, poor pattern due to irregular ground plane, and fade from whip flex. Constructed of all white fiberglass and chrome, the 270 develops 6 dB gain through the use of 2 stacked 1/4 wave radiators with a self-contained 1/4 wave decoupling system.

Mobile Antenna \$109

The 270 operates independently from the car body to reduce tune-up problems, minimize pattern distortion, and maximize range in all directions. Fiberglass sealed antenna and feedpoint insure top performance without loss to corrosion. The 270 is designed for use with Hy-Gain Bumper Mount 415, 415 Heavy duty bumper mount \$22 Feedline - RG58/U coax PL-259 connector 3/8"-24 x 1/2 stud base fitting

SWR bandpass, 144 to 150 MHz
 Input impedance, 50 ohms
 Height 8' nominal

Hy-Gain 214



**SHIPPED
FREIGHT
COLLECT**

\$67

CHECK WITH YOUR LOCAL FREIGHT COMPANY FOR AN ESTIMATE AS THE HYGAIN 214 PACKAGE IS 8 FEET LONG AND WEIGHS 3.1 KG

SPECIFICATIONS	214	\$67	203	\$34
Mechanical				
Boom length	188"	43½"		
Longest element	39½"	40"		
Turning radius	25"	43"		
Wind survival	80 mph	80 mph		
Mast diameter	1½"-1¾" O.D.	1¼"-1¾" O.D.		
Boom diameter	1½" O.D.	1½" O.D.		
Wind load area	1.85 ft max.	.496 ft max.		
Net weight	5.5 lbs	2.2 lbs		
Electrical				
Forward gain	13.0 dBd	6.1 dBd		
Front-to-back ratio	20 dB	20 dB		
Maximum SWR	2:1	2:1		
Band width	2 MHz	4 MHz		
Maximum power	250/500 PEP 250/500 PEP			
Impedance	50 ohms	50 ohms		
% power beam width	35° vertical	35° vertical		
Stacking distance	62" min.	62" min.		
Horizontal beamwidth	35° horizontal	60° horizontal		

VHF UHF ANTENNAS

Cushcraft
CORPORATION
ARX-2B \$79**RINGO RANGER II****+ \$5 FREIGHT****ARX-2 S63****AR-2 S53****RINGER****RINGO****FM RINGOS****+ \$5 FREIGHT****ARX-2 S63****AR-2 S53****RINGER****RINGO**

Model	ARX-2B	ARX-2*	AR-2	AR-450B
Frequency, MHz	134-164	137-180	135-175	435-450
2:1 VSWR Bandwidth, MHz	>3	>6	10	>10
Length (ft)	168	112	112	56
(m)	4.3	3.4	3.4	1.7
Wind Area (ft ²)	.50	.33	.21	.2
(m ²)	.05	.03	.02	.02
Max Mast OD (in.)	1.25	1.25	1.25	1
(cm)	3.2	3.2	3.2	2.5
Weight (lb.)	6	4	5	5
(kg)	2.7	1.8	2.3	2.3
Power Rating, Watts	1000	1000	1000	500
	\$79	\$63	\$53	\$79

Support mast between radials and antenna base ring is not included.

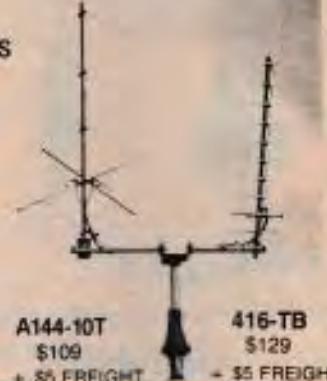
*Two decoupling sections

CONVERSION KITS

For older Ringo Rangers, kits are available to convert them to Ranger II type antennas. The kits have decoupling radials, interconnect harness, coaxial lightning arrester and complete instructions.

ARX-2 K**CONVERTS****AR-2 - ARX-2****\$37****ARB-2K****CONVERTS****ARX-2 - ARX-2B****\$37****+ \$5 FREIGHT****FOUR POLE**

Model	AFM-4D	AFM-24D	AFM-44D
Frequency, MHz	144-145	220-225	435-450
2:1 VSWR bandwidth, MHz	>10	>15	>20
Power rating, watts	1000	1000	1000
Overall height (ft.)	23	15	8
(m)	7.0	4.5	2.4
Wind Area (ft ²)	.56	.16	.12
(m ²)	.24	.07	.07
Maximum mast OD (in.)	2	2	2
(cm)	5.1	5.1	5.1
	\$155	\$146	\$136

AFM-4D**\$155****+ \$5 FREIGHT****YAGIS****FOR YOU OSCAR OPERATORS****+ \$5 FREIGHT****A449-6 \$63****A147-22 \$279****+ \$5 FREIGHT****A147-20T**
\$145
+ \$5 FREIGHT**A147-4 \$59 + \$5 FREIGHT**
A144-10T
\$109
+ \$5 FREIGHT
416-TB
\$129
+ \$5 FREIGHT
BOOMER

They feature trigon reflectors for additional front-to-back ratio and cleaner patterns. All stainless steel hardware and heavy gauge heat treated aluminum are used throughout. Whatever your choice of two meter amateur activity, the Boomer will fill your needs. For FM use the 228FB or 214FB.

**228FB****\$465****214FB****\$169**

THESE BEAMS ARE SHIPPED FREIGHT COLLECT

Model	A147-4	A147-11	A147-22	A220-7	A449-6	A448-11	214FB	228FB
Frequency, MHz	145.5-148	145.5-148	145.5-148	220-225	440-450	440-450	145.5-	145.5-
2:1 VSWR bandwidth, MHz	>4	>8	>3	>5	>10	>10	148	148
Gain, dBd	10.0	13.2	16.2	11.0	10.5	13.2	15.2	16.2
Front-to-back ratio, dB	16	20	20	20	16	20	24	24
3-dB beamwidth (deg)	66	48	42	67	80	48		
Boom length (ft.)	44	144	80	69	35	60	15	75
(m)	1.3	3.6	2.1	1.7	0.89	1.5	4.57	4.57
Longest element (ft.)	40	40	40	37	12	13	39.50	39.50
(m)	1.2	1.2	1.2	1.1	3.66	3.99	10.03	10.03
Turning radius (ft.)	44	72	80	68	15	60	7.5	9.5
(m)	1.3	2.2	2.5	2.1	4.6	1.5	2.29	2.90
Wind area (ft ²)	.43	1.21	2.62	0.48	0.30	0.28	1.7	4.0
(m ²)	.04	.11	.037	.04	.03	.04	1.6	3.7
Weight (lb.)	3	6	15	2	3	4	5	30
(kg)	1.4	2.7	6.7	0.9	1.4	1.8	3.63	9.98
Maximum mast OD (in.)	2"	1.50	2"	2"	2"	1.50	2"	2"
(cm)	5.0	3.8	5.0	5.0	5.0	3.8	5.0	5.0
	\$60	\$99	\$279	\$95	\$60	\$65		

Larsen**MOBILE ANTENNAS**

5/8 BASE LOADED ANTENNA Handles full 200 watts of power.
(WHIP AND COIL)

Deliver full 3 db GAIN
 over $\frac{1}{4}$ wave whip!

With Larsen Kiltrod Antennas you get:

- Lowest silhouette and smallest dimensions for minimum wind drag.
- Very, very low V.S.W.R. . . less than 1.5 to 1.
- No high RF loss mounting springs to deteriorate effective radiation.
- Tough and reliable base structure guaranteed weather and water resistant.
- Just cut whip for required frequency following the supplied chart.

TMB-34 Bracket for $\frac{3}{4}$ " hole.
 TMB-38 Bracket for $\frac{3}{8}$ " hole.
 TMB-58 Bracket for $\frac{5}{8}$ " hole.

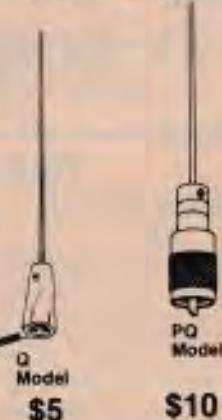


\$5

W-490 (49" WHIP ONLY)

\$11
+ \$5 FREIGHT

**$\frac{1}{4}$ WAVE ANTENNA
 (COMPLETE)**



\$5 \$10



LM-FITTING + \$5 FREIGHT

\$38 + \$5 FREIGHT

FITS ON TO
 THIS SO-239
 SOCKET



$\frac{3}{8}$ " hole; mounts in
 Roof/Trunk/Fender.
 for simplest, very low
 silhouette installation
 using snap-in type
 hardware.

Q Model \$5

PO Model \$10

+ \$5 FREIGHT

LM COIL ONLY \$25

PO COIL ONLY \$27

**OTHER LARSEN VHF & UHF
 ANTENNAS AND FITTINGS AVAILABLE
 WRITE GLENWOOD
 FOR DETAILS**



GUTTER CLAMP



TRUNK LID



Permanent
 Body Mount
 LM-K Mount requires
 $\frac{3}{4}$ " hole in vehicle.
 Only 3 simple parts go
 on quickly following
 easy step by step
 instructions.



TRUNK GUTTER



MAGNETIC MOUNT

All Temporary Mounts come complete with coax and plug. Coax is factory attached to mount.
 Permanent Mounts also include coax, plug & adapter.

	GUTTER CLAMP	TRUNK LID	PERM BODY MOUNT	TRUNK GUTTER	MAGNETIC MOUNT	COIL ONLY	$\frac{5}{8}$ WAVE WHIP	$\frac{1}{4}$ WAVE WHIP
LM FITTING	\$22	\$21	\$10	\$15	\$23	\$25	\$11	\$5
PO FITTING	\$24	\$22	—	—	\$24	\$27	\$11	\$10
NLA FITTING	\$24	\$21	\$11	\$16	\$24	\$27	\$11	\$11

THE CLEARANCE PAGE

A selection of obsolescent stock, samples and hard to find items, all of which are new, unless otherwise noted, and carry a full GLENWOOD warranty. Quantities are limited.

GOT A TS-700S? THEN ADD A MATCHING VFO AT A GIVE-AWAY PRICE—ONLY \$129

MAKE	MODEL NO.	DESCRIPTION	PRICE
Kenwood	ST-1	Base Stand and Quick Charger for TR-2400 handheld	\$ 99
	RA-24	Rubber Ducky antenna for TR-2400, BNC connector	\$ 19
	RA-1	Rubber Ducky antenna for TR-2200A	\$ 15
	PB-15	Battery pack for TR-2200A, TR-3200	\$ 25
	VFO-700S	Outboard VFO for TS-700	\$179
Swan	DK-520	Digital conversion kit for TS-520	\$20
	100MX	Solid state U.S. made 10-80m transceiver noise blanker, R.I.T., Vox 230W	\$699
Atlas	350 PS	Matching AC power supply for Atlas 350 transceiver	\$289
DATONG	FL-1	Frequency agile audio filter.	\$199

GOT A TR-7600 OR 7625? THEN ADD A REMOTE FREQUENCY CONTROLLER AT A GIVE-AWAY PRICE

GLENWOOD TRADING COMPANY LTD.

MINIMUM ORDER \$20 278 EAST 1st ST., NORTH VANCOUVER, B.C. V7L 1B3
RON DE COMMANDE - ORDER FORM

ORDER DESK
5041 984-0405

Catalogue Page No.		Item No.	Quantity Ordered	DESCRIPTION	Prix Chacun Price Each	AMOUNT
Mr.	M.					
Mrs.	Mme.					
Miss	Mlle.					
(Please PRINT)				Call Sign		
<u>Address</u> <u>Address</u>				Postal Code Postale	SALES TAX*	
<u>City</u>		<u>PROVINCE</u>			Shipping/Postage**	
Telephone Area Code:		Phone No.			TOTAL	
I HEREBY AUTHORIZE GLENWOOD TRADING COMPANY LTD. TO CHARGE THE AMOUNT OF THIS ORDER PLUS FREIGHT TO MY VISA OR MASTERCHARGE CARD.						
NO.				BANK	Money Order	
EXPIRATION				SIGNED	<input type="checkbox"/> In the event that we are out of stock, please indicate your preference. <input type="checkbox"/> Back-order the item and advise me of anticipated delivery date. <input type="checkbox"/> Cancel my order and return my payment. <input type="checkbox"/> Collect*** 	
*ADD 7% SALES TAX FOR B.C. RESIDENTS						
**Applies only to Antennas, Rotors, Towers, Cable and C.O.D., collect and charge card orders.						

***MINIMUM 25% DOWN PAYMENT REQUIRED WITH C.O.D. & COLLECT ORDERS. (See page 25 for details.)
ORDERS OVER \$200 CAN NOT BE SENT C.O.D. VIA THE POST OFFICE.

General Information

SHIPPING

Delivery is free on most items, with the exception of towers, antennas, rotors and cables, when the order is prepaid by cheque, money order, cash, telegraphic or bank transfer (R.W.T. and some out of way points excepted.) We accept Visa and Mastercharge. For charge card orders, shipment is account, or where special delivery arrangements are required (such as Air Freight, Air Express, C.O.D.) you pay the full shipping cost and the shipment will either be sent Freight collect, or you will be billed for the shipping. Lighter weight transceivers are shipped via 1st class air mail registered. Heavier equipment is sent via Parcel Post, *Cargo*. Normal delivery is two to three weeks which allows one week for receipt of your order, one week for processing and shipping and one week for delivery. We do our best to fill the orders in the chronological order that they are received. If we are out of stock or anticipate a delay, we will advise you by mail.

You can place your order either by mail, or by phone our order desk (604) 564-0405.

On orders over \$100 we will deduct the cost of your call (up to a maximum of \$5). Sorry, but we can not accept collect calls.

In the event of a mail strike, we hope that we can continue to serve you by returning your order by phone, your payment by charge card or bank transfer. We will endeavour to maintain delivery using alternative carriers.

PRICING

Because of inflationary problems in our economy and those of the countries from which we import, together with currency exchange fluctuations, we are sometimes faced with price increases which we can no longer absorb if we are to remain in business. We therefore reserve the right to change the price of any item in this catalogue, confirmation of your order being subject to your acceptance of the price change. We hope that you will bear with us in understanding these problems. Nevertheless, we will endeavour to maintain our reputation for the finest quality at the lowest possible prices.

RETURNS AND EXCHANGES

A 15% restocking charge will be made on goods returned undamaged within 10 days or on orders cancelled after goods have been shipped. Proof of purchase must accompany returned items and freight or postage should be prepaid. Returned items should be insured to protect you against loss or damage as we cannot accept responsibility for loss or damage to uninsured parcels. Material cut to length or special orders are not returnable or exchangeable.

C.O.D. AND COLLECT ORDERS

Because of customers refusing to accept delivery after ordering C.O.D., resulting in us having to absorb one-way freight charges plus shipping and handling costs, we reluctantly must insist on a 25% down payment on C.O.D. and Collect orders. For faster ordering, you can transfer funds by bank wire to: The Toronto-Dominion Bank, 16th & Lonsdale Branch, North Vancouver, for the account of Glenwood Trading Co. Ltd. On C.O.D. orders the customer pays the shipping, the Post Office only accepts C.O.D. orders for up to \$250 value. If the item you order costs more than this it will be shipped next best way collect, or in accordance with your instructions — but remember in these cases the shipping is on you, and a 25% down payment is required.

WARRANTY AND SERVICE

All the equipment we sell has been Glenwood tested. Specifications are correct to the best of our knowledge. We only advertise what we feel is good equipment. If your desired equipment is not advertised, we can usually sell it to you, but there is probably a reason why we don't advertise it. All our transceivers carry a ninety-day parts and labour and one-year parts-guarantees providing they have not been misused, tampered with or otherwise mishandled. Our charge out rate for service technicians' labour for out-of-warranty work is \$40 an hour, minimum charge one hour. Please write to our service department regarding any malfunction for instructions for return and repair. Tubes and final output transistors are not covered by warranty.

MINIMUM MAIL ORDER \$20

MINIMUM \$5 SHIPPING AND HANDLING CHARGE ON ALL SPARE PARTS ORDERS

Orders less than \$20.00 are subject to \$5.00 handling charge.

Renseignements Généraux

LIVRAISON

Après expédition, sans frais pour le client, la plupart des nos articles, à l'exception des antennes, des pylônes, des rotors et des câbles, quand la commande est payée par dépôt, par chèque, mandat postal, en espèces, transfert télégraphique ou bancaire (excepté pour les Territoires du N.D. et autres lieux très éloignés), les émetteurs-récepteurs de poids léger sont acheminés en première classe recommandée, par avion. Les articles plus lourds sont envoyés au tarif des colis. *Cargo*. Vous pouvez compter un délai normal de 2 ou 3 semaines entre la mise à la poste de votre commande et la réception des articles; c'est le temps requis pour recevoir votre commande, le temps et pour vous expédier les pièces. Nous servons nos clients en donnant la priorité aux premiers arrivants, nous répondons dès que possible à toutes les demandes. Quand nous prévoyons un retard dans la livraison, nous prions soin d'en avertir nos clients.

Vous pouvez passer vos commandes en téléphonant au bureau des commandes (604) 564-0405. Pour des commandes de plus de \$100 nous déclinais le prix de notre appel téléphonique à un maximum de \$5. Nous réservons de ne pouvoir accepter des adeptes à frais vides. Pour accélérer le paiement, nous acceptons les cartes de crédit Visa et Mastercharge. Pour les arrangements de livraison rapide (chèque à dire livraison autre que par la poste, ou pour paiement à la livraison, par carte de crédit, ou envoi à crédit), les marchandises seront soit envoyées en port dû, ou bien vous seraient facturées pour l'expédition. En cas de grève des postes, nous espérons pouvoir continuer à vous servir en recevant votre commande par téléphone, votre paiement par carte de crédit ou transfert bancaire. Nous nous efforçons de maintenir la livraison en utilisant d'autres transporteurs.

PRIX

L'inflation qui touche notre économie et celle des pays dont nous importons, les variations des cours du change nous obligent partout à hausser les prix de certains articles. nous y sommes contraints pour assurer la rentabilité de notre entreprise. Nous nous réservons donc le droit de modifier le prix de n'importe quel article de ce catalogue. Dans les cas où il y a modification dans les prix, la commande devient sujette à l'application du client. Nous souhaitons que nous acceptiez ces contraintes; nous nous excusons des inconvénients qu'en résultent. Soyez assuré que nous nous efforçons de garder cette réputation qui est notre, d'offrir la meilleure marchandise au plus bas prix.

RETOURS ET ÉCHANGES

Une réduction de 15% est faite sur le prix de toute marchandise retournée intacte en moins de 10 jours. La même politique s'applique pour les commandes annulées après réception de la marchandise. Dans le cas d'un retour de marchandise, le preuve d'achat doit toujours accompagner les articles; le coût du transport incombe alors au client. On vous conseille d'assurer ces articles contre la perte ou le bris; nous ne pouvons pas assumer la responsabilité des pertes ou des dommages encourus durant le transport.

Qui ne peut retourner ou échanger les matériaux coupés sur mesure et les articles faisant l'objet d'une commande spéciale.

LIVRAISON CONTRE REMBOURSEMENT (C.R.)

Un remboursement initial de 25% doit accompagner toute commande à être livrée contre remboursement (C.R.). Nous sommes forcés de prendre cette mesure parce que des personnes refusent parfois d'accepter la livraison des articles. En l'occurrence, l'expéditeur est forcé d'assumer la totalité des frais encourus pour l'emballage et le transport aller et retour de la marchandise.

Pour accroître la rapidité des transactions, vous pouvez céder votre paiement à la Banque Toronto-Dominion, 16th & Lonsdale Branch, North Vancouver, pour dépôt au compte de Glenwood Trading Co. Ltd.

Le client paie le transport des commandes, livrées contre remboursement (C.R.). La preuve n'accepte pas les commandes C.R. supérieures à \$200.00. Si l'article commandé coûte plus de \$200.00, il vous sera expédié sur la base "Collect", c'est-à-dire d'un montant à percevoir à personne de destination, ou suivant toute autre plan, à votre convenance. Dans ces derniers cas, cependant, le transport est à vos frais et un versement initial de 25% est exigé.

GARANTIE ET SERVICE

Tous les articles d'équipement que nous vendons, au meilleur de notre connaissance, répondent les spécifications fournies. Nous n'assurons que de bons produits. Si nous vendons d'autres articles, nous pouvons vous les fournir, avec la réserve qu'il y a peut-être une raison pour laquelle nous ne les annonçons pas.

Nos émetteurs-récepteurs sont couverts par une garantie de 90 jours, pièces et réparation. Les pièces qui n'ont pas été l'objet d'abus ou de mauvaise utilisation ont une garantie d'un an. Le tarif horaire des nos techniciens du service de réparation travailent sur des articles non couverts par la garantie de \$40 minimum tarif d'une heure. En cas de panne ou de difficulté, consultez notre service de réparation; celui-ci vous renseignera sur le fonctionnement de l'appareil et, si nécessaire, vous donnera des instructions pour le réparé de l'appareil défectueux.

Tous les lampes et les transistors de sortie ne sont pas couverts par la garantie.

COMMANDE MINIMUM \$20

\$5 MINIMUM D'EXPÉDITION ET DE MANUTENTION POUR DES PIÈCES DE RECHANGE

BOOKS, TECHNICAL PUBLICATIONS AND SUPPLIES

MINIMUM MAIL ORDER \$20

"HAM" RADIO CODE COURSE - 6 PRE-RECORDED CASSETTES \$33

This cassette code course is designed to get the beginner in Amateur Radio on his or her way towards achieving that goal which will lead to the successful completion of the Canadian Amateur Radio Examination as set by the Department of Communications for the Morse code requirement.

The Morse code on these tapes has been computer generated. All characters in this series are sent at 14 words per minute but have much larger spacing between them to give the effect on slower speeds. (With the exception of Tape six side A which is sent at 10 w.p.m. for both.)

Tapes one to four gently introduce the Morse letters, numbers, and the punctuation sounds. Practice sessions are provided every second character learned. They last approximately five minutes long and are progressively more difficult. (The more letters you learn, the larger the alphabet in each practice session.) Major practice sessions are provided every 6th character learned. These are about fifteen minutes long and contain all the letters, numbers, and punctuation that you have learned in the previous set of six characters. These too get more difficult as you learn more and more of the Morse code.

By the time you complete these tapes you will be ready for the last two sessions. Tape five and six are all practice in either plain English and/or Cipher groups. By the end of these tapes you should be ready and able to copy ten words per minute with very good accuracy. You'll need more practice... but you are already well on your way to that goal.

1984 U.S. CALL BOOK

CONTAINS ALL W&K LISTINGS WITH LICENCE CLASSES, NAMES AND ADDRESSES, PLUS MANY CHARTS AND REFERENCES.

\$27

Order both books at the same time for **\$50** including shipping.

CALL BOOKS

1984 FOREIGN CALL BOOK

FOR ALL DX'ERS. CONTAINS OVER 235,000 CALLS, NAMES AND ADDRESSES.

\$26

FROM THE CANADIAN AMATEUR RADIO FEDERATION

Canadian Amateur Certificate Study Guide	\$8.00
Canadian Amateur Radio Regulations Handbook	\$8.00
Advanced Amateur Certificate Study Guide	\$8.00

OPERATING SUPPLIES

LOG BOOKS

8½ x 11 Spiral \$4

Mini Log 4 x 6 \$2

ARRL PUBLICATIONS

- | | | |
|---|--|--|
| <input type="checkbox"/> RADIO FREQUENCY INTERFERENCE
Solutions to a real problem that faces
every radio amateur. \$8.00 | <input type="checkbox"/> FM AND REPEATERS FOR THE RADIO
AMATEUR Complete manual of fm and
repeater operation and equipment de-
sign. \$8.00 | <input type="checkbox"/> THE RADIO AMATEUR'S HAND-
BOOK The standard manual of Amateur
Radio Communications. \$15.00 |
| <input type="checkbox"/> REPEATER DIRECTORY 1982 edition.
listing of U.S. and Canadian repea-
ters \$2.50 | <input type="checkbox"/> HINTS AND KINKS Contains over three
hundred practical ideas for your ham-
shack. \$8.00 | <input type="checkbox"/> ARRL OPERATING MANUAL Definitive
source of good operating practices ap-
plied to over a dozen most popular
Amateur Radio activities. \$8.00 |
| <input type="checkbox"/> SINGLE SIDEBAND FOR THE RADIO
AMATEUR A compilation of the best
s.s.b. articles from QST. \$6.00 | <input type="checkbox"/> ARRL ANTENNA ANTHOLOGY The
best from QST. \$7.00 | <input type="checkbox"/> A COURSE IN RADIO FUNDAMENTALS Classroom text and home study
guide. \$6.00 |
| <input type="checkbox"/> SOLID STATE BASICS Designed to
clear away all the mystery that sur-
rounds, semiconductor devices.
\$8.00 | <input type="checkbox"/> ARRL ANTENNA BOOK Contains theory
and construction of all types of anten-
nas. \$12.00 | <input type="checkbox"/> LICENSE MANUAL Complete text of
amateur regulations, FCC exam syl-
labus, radio theory for Technician
through Extra. \$6.00 |
| <input type="checkbox"/> SOLID STATE DESIGN FOR THE RA-
DIO AMATEUR Practical circuits and
theory. \$9.00 | <input type="checkbox"/> WEEKEND PROJECTS FOR THE RA-
DIO AMATEUR Easy to build projects
from QST, Vol. 1 \$6.00 | |
| <input type="checkbox"/> World Map, 1980 edition Great Circle
map with country prefix list, ITU re-
gion boundaries, time zones and much
more \$6.00 | <input type="checkbox"/> ARRL ELECTRONICS DATA BOOK re-
ference guide of charts, tables, &
circuits. \$8.00 | |

RSGB PUBLICATIONS

VHF/UHF MANUAL

\$24.00

GUIDES TO BROADCAST FREQUENCIES



\$11



\$23

FAST SCAN ATV

P. C. ELECTRONICS

ALL YOU NEED IN ONE BOX.

**TC-1 \$589**

Connect to the ant. terminals of any TV set, add a good 450 antenna, a camera, and you are there . . . Show the shack, home movies, computer games, etc.

FEATURES

- 10 WATT PEP OUTPUT ON SYNC. DC RESTORED MODULATOR ADJUSTABLE SYNC. EXPANDER.
- STANDARD FREQ. AVAILABLE: 439.25, 434.0, AND 428.25 MHZ. SPECIFY XMTR FREQ. AND DOWN-CONVERTER OUTPUT ON CHANNEL 2, 3, OR 4.
- BROADCAST STANDARD 4.5 MHZ SUBCARRIER SOUND WITH HIGHGAIN MIC & VCR LINE MIXER.
- 8 MHZ BANDWIDTH MODULATOR FOR HIGH RESOLUTION VIDEO, COLOR, AND COMPUTER ALPHA-NUMERICSS.
- BUILT-IN REGULATED AC POWER SUPPLY.
- TUNEABLE DOWNSAMPLER COVERS 420 TO 450 MHZ. CONTAINS LOW NOISE .9db NE64535 PREAMP, PLUS HOT CARRIER DOUBLE BALANCED MIXER.
- TRANSMIT DETECTED VIDEO MONITOR OUTPUT FOR SEEING YOUR OWN CAMERA SETUP.
- SMALL 10.5x3x9. CONTINUOUS DUTY TRANSMITTER.

\$5 EACH		CRYSTALS		\$10 PER CHANNEL	
Transmit	Receive	Transmit	Receive	Transmit	Receive
146.01	146.61	146.37	146.97	147.63	147.03
146.04	146.64	146.40	147.00	147.72	147.12
146.07	146.67	146.46	147.06	147.78	147.18
146.13	146.73			147.81 *	147.21 *
146.16 *	146.76 *	146.52	146.52	147.84	147.24
146.19	146.79	146.58	146.58		
146.22 *	146.82 *	146.70	146.70	147.33	147.33
146.25	146.85	146.76	146.76	147.60	147.60
146.28	146.88	146.94	146.94	CRYSTAL CLEARANCE	
146.31 *	146.91 *			We have the following simplex channels on sale at \$2 per channel. TR-2200: 144.48, 144.72, TR-7200: 144.48, 144.60, 145.32	
146.34	146.94				

OFFER GOOD
WHILE STOCKS LAST

SPECIAL CLEARANCE * BECAUSE WE HAVE A LARGE STOCK OF THOSE FREQUENCIES MARKED WITH A * WE ARE OFFERING THESE CRYSTALS ONLY FOR LIMITED TIME AT \$3.95 EACH. MINIMUM ORDER - \$14, THIS APPLIES ONLY TO XTALS FOR THE MULTI-7, MULTI-11, TR 2200, TR 7200.

MINIMUM
ORDER
\$14

CLEARANCE - LEATHER CASES

Canadian made leather case for IC-2, etc.	\$25
Imitation leather case for KP-202, Wilson 1402, etc.	\$20

RTTY SALE

COMAX TELEREADER**CWR-685E Telereader Terminal**

A versatile, portable radioteletype terminal, the CWR-685E is designed for convenient use in any location. With built-in modems and display screen and an external sending keyboard, the CWR-685E can transmit, receive and display messages in either Morse (CW), Baudot or the computer-standard ASCII code. Among the many special features are high and low RTTY tones, selectable baud rates and frequency shifts, a 15-line transmitting buffer memory, six memory channels, and automatic transmit/receive control. All functions are controlled by front panel push-buttons, for simple and accurate operation. Its compact size and DC power operation make the CWR-685E ideal for use in vehicles, boats and other portable installations. Add nothing more than a power supply and transceiver to create a complete CW/RTTY station.

**COMPLETE WITH KEYBOARD****Main Features**

- CW, Baudot and ASCII transmission and reception
- Built-in 5" green phosphor CRT display
- 4-page display, 32 characters x 20 lines per page
- Built-in RTTY and CW modems
- External detachable keyboard (similar to standard typewriter keyboard) with 3-foot cord
- 6 memory channels (63-character capacity each)
- Transmitting buffer memory (480 characters)
- High and low RTTY tones
- Storage and loading capability using external cassettes
- 13.8V DC power source
- Compact size: 12 3/4" W x 5" H x 11 1/4" D (323mmW x 127mmH x 286mmD)

Code/Speed Flexibility

- Variable transmission/reception speeds
 - CW: 3-40 wpm
 - RTTY (Baudot/ASCII): 45,45 - 300 bauds (six speeds)
 - (300 bauds possible with external modem)
- Variable CW weight
- ASCII transmission/reception of both upper and lower case letters
- CW practice function
- Automatic CW speed tracking during reception
- CW ID function
 - Automatic change for using memory channels
 - Control of transmission buffer change
 - Direct change

Special Features

- Automatic and manual transmission/reception switching
- AFSK modulator
- Echo function for automatic readout of sending of received data
- Normal and reverse sense
- Unshift-on-space function
- CW PLL filter
- Status display indicates:
 - Memory channel in use for transmission
 - Working condition of all circuits
 - Screen picture number
- Built-in monitor circuit with two speakers
 - Output/signal monitor
 - CW sidetone/AFSK output monitor
- Rub-Out function erases one line or 15 lines for transmission correction
- Automatic carriage return, line feed and letter/figure code insertion for RTTY printout
- Cross pattern checking output terminal
- Scroll function

Interfacing

- Printer output: Centronics-compatible parallel interface
- External monitor output
- Cassette tape recorder input and output

CONNECTING CABLE BETWEEN TELEREADER AND PRINTER. \$49

CWR-675EP \$929 Telereader receive only with built-in 5" green CRT **CWR 675E \$799**

- Automatic CW speed tracking
- Display output: 512 characters x 2 pages
- Normal and reverse sense
- Printer output: Centronics-compatible parallel interface
- RF/VHF/video display output
- Oscilloscope output
- 13.8V DC power source
- CW, Baudot and ASCII reception
- Variable reception speeds:
 - CW: 3-50 wpm
 - Baudot/ASCII: 45.45 - 300 bauds (six speeds) (300 bauds possible with external modem)
- Switchable 36 or 72 characters per line
- High/low tone switch



• 40-digit thermal printer

CW: 15-250 characters/min.
RTTY: 45.45 bauds (up to 110
bauds)
161(W)x205(D)x48(H)mm.

Receives CW (Morse), RTTY (Baudot)
and ASCII II. Built-in Centronics com-
patible parallel interface. Displays
576 characters x 2 pages; total 1008
characters.

PRINTER CLEARANCE

DP-8240 Dot Matrix Printer

An inexpensive and compact dot matrix printer, designed to match telereader equipment as well as personal and micro-computers. 40 columns on 4½" wide paper.

\$399

- 55-2400 bauds (six speeds)
- 280(w) x 200(d) x 101(h) mm.
- weight only 4 kg.
- 96 character ASCII character set, plus block graphics characters.

SAVE
\$60

SAVE
\$100

DP-8480 Dot Matrix Printer

\$629

An industrial grade printer at a no-frills price. The DP-8480 dot matrix printer character generator includes 64 block graphic characters.



This compact desk-top dot matrix serial impact printer is ideal for hard-copying CRT displays, and for data communication and peripheral minicomputer terminals. Features include variable fonts, dot graphics, 4-copy capability, print speed of 100 characters per second, 136 characters per line.

8510P Dot Matrix Printer

Centronics-compatible parallel interface for compatibility with Telereader equipment.

- Power source: AC 100/115/220/240V
- Dimensions: 15 (5/8")W x 11 1/4"D x 4 3/4"H (398mmW x 285mmD x 121mmH)
- Weight: 8.5 kg (18.7 lb.)

\$899

SAVE \$100



DTU-2M DEMODULATOR

A complete self-contained Modulator/Demodulator for RTTY and other data transmission



\$139

The demodulator is a phase locked loop AFSK decoder for 170 Hz shift. Automatic turn-on on the RTTY unit on reception of valid frequency shift tones. Anti-space prevents the printer from running open if someone sends a continuous space tone. The printer control disables the keying transistors if the incoming tones get distorted or interfered with. This prevents the printing of garbage.

Visual indicators are provided for a mark and space indication, and an indication for valid tone frequency and push-to-talk operation are provided. The valid tone indicator makes tuning the demodulator very easy. In addition to this there is a scope output for precise tuning of the phase locked loop. Power requirements: 150 volts or 60mA for the printer, 12 volts at 400mA for the unit itself. Connecting wire and 4-Led diodes are included.

The unit does not include power supply, 1 or 2 12V relays, and up to six switches, depending on the controls wanted.

TOUCH TONE® PAD

Automatic Electric

\$47

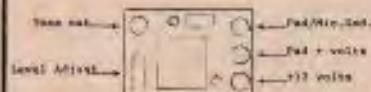


Complete Pad and Tones
Mechanical Type
Less Mounting Box.

TOUCH TONE COUPLER

Audio interface
between TT pad and
any 2 meter rig.
Size: 2.5 cm. x 2.5 cm.

***11**



SUPER TWO

***21**



The most popular 2-MTR Preamp in Canada. Fits any 2 MTR rig. Size 2 cm x 2 cm x 5.5 cm. Takes any 12 V DC source, 18-20 dB gain.

35 MINIMUM ORDER

EXPERIMENTERS — HOME BREWERS

MINIMUM ORDER 35

PRICES SLASHED TO CLEAR — LOOK HERE FOR BARGAINS
R. F. POWER TRANSISTORS 2N2222F Printers — Only \$2 each

RESISTORS — A mixed bag of 0.25W to 3W and 1 ohm to 1 meg ohm. Approx. 100 bag \$1.

RESISTORS — 4.7K ohm 2W Resistors. Bag of 50. Only \$1 per bag

ELECTROLYTIC CAPACITORS. 10μF — 500μF. 5V—15V. Approx. 20 per bag. Only \$2.

CERAMIC DISC CAPACITORS. 0.001μF to 4700 pF. 1V—3KV. Approx. 125 per bag. Only \$2.

ALL ITEMS
NEW AND
UNUSED



\$9.00

HIPOWER ADAPTER

NI-CAD CHARGER MODEL NO. 645CS

IDEAL FOR USERS OF:
PORTABLE RECEIVERS,
CASSETTE RECORDERS,
CALCULATORS,
— AND ESPECIALLY AT CHRISTMAS —
TOYS
CSA APPROVED.

INSTRUCTIONS
The MODEL 645CS nickel charger is provided with 3 "head-on" holders so that you can charge, at one time, two 9V cells, three cells or four cells. Be careful to observe polarity when inserting cells in the holders. That is the positive (+) end of the cell must correspond to the positive (+) marks on the holder. Clip the cell holder firmly to the terminals on the charger and then plug the charger into any standard AC wall outlet. After 15 hours the nickel cadmium cells will be fully charged.

RARE NICADS

In some areas handy-talkie owners are having a hard time finding rechargeable nicad penlight cells. The scarcity, according to one radio store owner, is the result of the popularity of battery powered Christmas toys and games. People are catching on that a small charger and nicad batteries are a better buy than the disposable alkaline and carbon types.

**NICADS — "AA" SIZE
\$3 each**

AFSK GENERATOR

12 Volt operation. Phase Cont. Freq. Shift Provision for both 850 Hz and 170 Hz Shift (Card connector not included)



Size
6.8 cm x 5.2 cm

***45**

TOUCH TONE® DECODER FOR SELECTIVE CALLING

3½" x 5" and with 15 pin connector
Power requirements: 12-18 watts
at 35 mA (excluding load).

SC-1
***137**



May be field programmed for
any 3 or 4 digit combination
of the 16 touch tone digits.
Two saturating transistor outputs:
— One selected continuously
with self reset
— one timed (temporary) with
self reset after 8 seconds.
Standard 2 out of 8 DTMF
signalling.

MORSE TUTOR D-70

DATONG
ELECTRONICS LIMITED

\$169 INSTANT MORSE PRACTICE

Imagine the convenience of having your own source of accurate Morse for instant receiving practice anywhere at any time! The Datong MORSE TUTOR produces digitally a random stream of five character groups at variable speed and with variable extra spacing between letters. You can select letters or numbers or a mixture and unlike records or tapes, the sequence never repeats. A Morse practice oscillator is also built in. Just plug in a standard key to practice sending.

DIPOLE ANTENNA AD270



\$139

A COMPACT INDOOR RECEIVING ANTENNA SYSTEM WITH WIDEBAND COVERAGE FROM 100 KHz to 100 MHz

MODEL AD270 has no adjustment and needs no external tuning units. The actual antenna comprises a wire dipole (overall length only 3 metres) together with a rather special FET/bipolar amplifier unit. The broadband signal from the remotely located antenna is piped via TV-type coax to the interface unit (which now contains a switchable 12dbm amplifier located near the receiver). Although only 3 metres long, MODEL AD270 has the same directional properties as a full-size dipole, even at 60kHz. Despite its short size, signal-to-noise ratios produced by MODEL AD270 at any frequency are similar to those from a conventional dipole cut to resonance for that frequency, and the unit makes an ideal accessory for a good coverage receiver where space for antennas is limited. Needs 9v supply (not included).

OUTDOOR ACTIVE DIPOLE ANTENNA MODEL AD370

Model AD370 makes an ideal outdoor (or indoor) antenna for use with good general coverage communications receivers.

- Weather resistant construction for outdoor use.
- Excellent sensitivity from 200 kHz to well over 30 MHz.
- Strong signal performance to professional standards.
- Overall length only 104 inches. Uses two taper-ground stainless steel whips 50 inches long.
- Fitted with 8 metres of coaxial down lead (easily extended if necessary).
- Good rejection of interference picked up by the feeder due to excellent balance.

\$199



Needs 9v supply (not included).

SPEECH PROCESSORS.

The world famous MODEL RFC is still available and so is MODEL RFC/M which is a fully tested printed circuit board module as used in MODEL RFC.



RFC

\$139



RFC/M

\$79

ASP



\$239

'LEAVE IT SWITCHED, I CAN'T COPY YOU WITHOUT IT'

This is a statement well known to users of our R.F. speech processors. Using the advanced technique of R.F. clipping these units greatly increase your talk power and help your voice punch through the QRM. They work on any rig, with any speech mode, at any power level, and on any band. Simply connect in series with your microphone to get a really punchy speech signal. The use of R.F. clipping technique raises your average power level and also enhances the intelligibility of your speech signal. MODEL ASP, our latest model offers for the first time the ultimate convenience of instant push-button selection of the desired amount of clipping. No manual knob setting or meter watching is required. Advanced circuitry does the work quicker and more accurately. Other features include: "TONE" button (for setting the transmitter microphone gain), switchable microphone impedance, full monitoring by three light emitting diodes.



DATONG ELECTRONICS LIMITED

As the HF communication bands become more and more congested there is an increasing need for counter measures over and above the facilities built into current transceivers.

The Datong Model ANF is designed specifically to solve the problem of unwanted heterodyne whistles. In addition it performs as an effective CW filter.

FEATURES

- Removes tune-up whistles or other heterodynes automatically.
- 10 LED bar-graph type display of audio notch frequency shows search-and-lock mode in action.
- Built-in fully tunable 4 pole CW filter.
- Connects in series with speaker on any receiver.
- Built to professional quality standards.

\$169



FEATURES

- Twelve poles of tunable active filtering bring a new standard of performance to receiver pass-band control.
- Independent low and high-pass filters beat crystal filter standards of skirt selectivity yet cut-off frequencies are continuously variable from 200 to 3500 Hz.
- Built-in independent notch filter.
- Designed specifically to improve reception of SSB, CW, RTTY, AM signals in interference conditions.



\$289

- Gives the benefits of "IF shift" or "pass-band tuning" techniques without the drawbacks.

- Optimal bandwidth selection for RTTY and SSTV reception.
- DX AM broadcast reception.

Model FL2

- Simple push-button selection of operating modes: three calibrated tuning controls with colour-keyed dual mode tuning.
- All functions and controls are designed for convenient and natural operation.
- Works with any receiver, no internal connection required. Simply connect in series with an external loudspeaker or phones.
- Protected 2W output stage built-in.
- 21 multi-function IC's including 32 op.amps.



MODEL FL 3-A NEW AUDIO FILTER WITH AUTO-NOTCH

\$409

A NEW AUDIO FILTER FROM DATONG MODEL FL3

Model FL3 gets it all together! It combines all the power of the FL2 which continues in production with a remarkable new automatic notch filter - a concept which we pioneered with our FL1. In one stylish case Model FL3 offers the complete solution to receiver audio processing. We believe that such a powerful combination of filtering capabilities has never been offered before in one package.

NOTCH FILTER SCANS CONTINUOUSLY

User of our FL1 will confirm the practical advantages of an automatic notch filter. With absolutely no help from you the operator the automatic notch tirelessly scans the receiver's audio output until a continuous audio tone is received. When it is the notch filter locks on and removes it. If the tone changes in frequency the auto-notch follows.

SHOOTS DOWN TUNE-UP WHISTLES AND HETEROODYNES

Imagine the benefits. A tune-up whistle no longer causes any problems after a second or two it simply drops out of earshot. Those troublesome whistles that occasionally descend on a QSO become a thing of the past. Only the "LOCK" lamp on the FL3's panel reminds you of what you are thankfully missing.

PLUS LOW PASS, HIGH PASS AND MANUAL NOTCH

While all this is happening you still have three other independent filters at your disposal. Imagine, for example that another SSB station starts up 2 kHz. high. Instead of trying to copy through all that high-pitched monkey chatter simply wind down the low-pass filter (the right hand knob) and wipe it out. Then perhaps a teleprinter starts up 300 Hz above your carrier frequency. A touch on the high-pass filter knob (the middle one) cures that. Finally maybe a second whistle appears. Since the auto-notch is busy, just bring in the manual notch as well and tune it out (left hand knob).

PHENOMENAL SKIRTS WINKLE OUT CW

For CW and RTTY the low-pass, high-pass and manual notch filters combine to give a 12 pole fully variable filter with remarkable skirt selectivity. Compared with lesser filters you can use a much wider bandwidth for a given interference suppression - this makes tuning easier and reduces ringing effects.

ATTENTION FL2 OWNERS!

At Datong we don't believe in "planned obsolescence". There's no need to throw away your FL2 to get an FL3. Instead you can convert it to an FL3 using our conversion unit, Model FL2/A. This is a fully assembled PCB module with its own board-mounted "IN/OUT" switch and "LOCK" lamp. Installation involves four soldered connections to the existing FL2 PCB and one track cut. Model FL2/A is also suitable for building into other equipment where an automatic notch function is required.

\$129

ACCESSORIES

IMPROVES SENSITIVITY AND SIGNAL-TO-NOISE RATIO OF RECEIVERS AND TRANSCEIVERS IN THE RANGE 5 TO 200 MHz. CONNECTS IN SERIES WITH THE ANTENNA - R.F. SWITCHED. 9 dB GAIN TYPICAL.

\$99



VLF/MW/SWL Antenna Tuner

Greatly improves 10KHz to 30 MHz reception.

\$129



This MFJ-955 VLF/MW/SWL preselecting antenna tuner greatly improves reception of 10KHz thru 30 MHz signals, especially those below 2 MHz.

Lets you peak desired signals while rejecting interference. Reduces overload, background noise, crossmodulation, and intermodulation. VLF signals come running in.

Switch between two antennas and two receivers. Bypass switch connects antenna directly to receiver. 5½x2x3 inches. Black, eggshell white aluminum cabinet.

FEATURES

- Extra wide bandwidth saves separate preamplifiers for each band.
- Handles strong signals without overload (intercept point + dbm).
- Low noise figure.
- Carefully chosen gain level minimizes receiver overload and cross modulation.
- R.F. activated bypass relay allows easy use with transceivers.
- Rugged diecast aluminum case with SO 239 connectors and PTH printed circuit board.

MFJ-1020 NEW INDOOR ACTIVE ANTENNA sits on your desk ready to listen to the world. Rivals, even exceeds reception of outside long wire. Unique **Tuned** Active Antenna minimizes intermod, provides RF selectivity, reduces noise outside tuned band. Also use as preselector for external antenna. Covers 300 KHz to 30 MHz. Four bands: .3-1, 1-3, 3-10, 10-30 MHz. Adjustable telescoping antenna. Controls: Tune, Band Selector, Gain, On-Off/Bypass, LED, FET, bipolar circuitry. 9-18 VDC or 9 V battery for portable use. Phone jack for external ant. 6x2x6 in.

Rivals long wires

\$129



MFJ Dual Tunable SSB/CW Filter "Signal Enhancer"



\$139

Dual filters give unmatched performance. The primary filter lets you peak, notch, low pass or high pass with extra steep skirts. Auxiliary filter: 70 dB notch, 40 Hz peak. Both filters tune from 300 to 3000 Hz with variable bandwidth from 40 Hz to nearly flat. Constant output as bandwidth is varied. Linear frequency control.

Switchable noise limiter for impulse noise. Simulated stereo sound for CW less ears and mind reject QRM. Inputs for 2 rigs, switch selectable. Plugs into phone jack. Two ways for speaker. OFF bypasses filter. 9-18 VDC, 300 mA.

Low Pass Filter

RIGHT: MFJ Tough Nye Viking 2000 Watt Low Pass Filter handles 5000 Watt SSB peaks! 3 Constant K plus 2 - precision tuned - M Derived sections give FLAT, low loss, passband and stopband with over 65dB attenuation.

\$40

Kenwood LF-30 A

\$39

Cutoff freq.: 30 MHz
Attenuation: More than 90 dB (90-300 MHz)
Impedance: 50 ohms
Weight: 560g (1.2 lbs)
Size: 244 x 50 x 40 (mm) (9-1/2" x 2" x 1-1/2")

EL CHEAPO

PHONE PATCH



\$12



ASW-49

SWL ANTENNA

\$69

- Only 40 feet long
- NEW PATENTED HIGH EFFICIENCY TRAPS
- Automatically tunes the popular 11, 13, 15, 19, 25, 31 and 49 short wave bands.
- Can be installed as a flat top, slopes or inverted V.
- Weatherproof construction for long trouble free service.
- Completely assembled. (Less feed cable.) Center insulator terminated with SO-239 Connector.
- Designed to be fed with RG59 coax for maximum efficiency.

DUMMY LOADS

RD-20 50Ω RF dummy load. (DC-500 MHz) 50 W intermittent, 20 W continuous.

\$27



New MFJ-250 VERSALOG kilowatt dummy load lets you tune up fast. Extends life of transmitter finals. Reduces on-the-air QRM.

Rates 1 KW CW or 2 KW PEP for 10 minutes, ½ KW CW or 1 KW PEP for 20 minutes. Continuous duty with 200 watts CW or 400 watts PEP. Complete with derating curve.

Quality 50 ohm 400 inductive resistor. Oil cooled, includes high quality, industrial grade transformer oil (contains ND PCB).

Low VSWR to 400 MHz: Under 1.2:1, 0-30 MHz; 1.5:1, 30-300 MHz; 2:1, 300-400 MHz

\$65



ACCESSORIES

MFJ-16010 RANDOM WIRE TUNER lets you operate all bands — 1.8 to 30 MHz — with a simple random wire. Up to 200 watts RF OUTPUT.

Operate all bands — anywhere, with any transceiver — using a random wire and an antenna small enough to carry in your hip pocket! Ultra compact 2x3x4 inches.

Operate from your apartment with a wall-to-wall antenna, or motel room with a wire dropped from a window. Enjoy ham radio on a camping or backpack trip with a wire thrown over a tree. Pre-

- Operate all bands with a simple random wire.

\$69



pare for an emergency. Take it on a DXpedition or Field Day.

Match low and high impedances by interchanging input and output: SO-239 coax connectors.

AC Adaptor



\$12.00

- Output DC Voltage: 3, 4.5, 6, 7.5, 9, 12 volts, 300 mA
- Switchable polarity/Universal 4-prong plug

MB-100
Mobile Mount

\$49

- BC-1 AC Adaptor for Memory back-up

\$20



THE ORIGINAL KEY



Deluxe Model: \$114

Presentation Model: \$195

THE VIBROKEYER

The Vibrokeyer is designed for bug operators who want to move to electronic transmitting without relearning keying. The single lever paddle initiates automatic dots and dashes through your electronic transmitting unit. For those who want to combine radio skill with electronic force.

Deluxe Model: \$109 Standard Model: \$84



Deluxe Model: \$109

VIBROPLEX

In 1890 Horace Martin searched for relief from the "glass arm" wireless operators were getting from pounding straight keys. He innovated by placing the key on its side and our semi-automatic key was born. Press the thumb piece and the vibrating lever bar produces dots. Make dashes manually with the finger piece. Speeds as low as 20 wpm or as high as practical can be sent with the speed lever. The original bug is still buzzing whenever speed and perfection are desired.



Standard Model: \$94

THE IAMBIC

We recently took the distinctive look, quality and craftsmanship of Vibroplex and molded them into the finest iambic paddle anywhere. The dual paddle allows operators to utilize automatic dots/dash insertion and other unique features of the modern electronic keyer. Vibroplex distinction for the modern operator.

Standard Model: \$84

All of our keys are available in Standard and Deluxe models. The Original is also available in the Presentation model.

Standard Model: All Standard models come with a neat, crisp, unruined, painted base with polished and chromed top parts. Attention to detail in the finishing process gives Vibroplex an unequalled quality appearance. Highly conductive large coin silver contacts provide a clear, sharp signal, and non-skid rubber feet keep the keyer in its place.

Deluxe Model: All Deluxe models feature a chromed base, buffed and polished to a mirror finish. As in fine watches and other precision instruments, their jeweled movement serves to prolong life, maintain smoother, easier operation and prevent binding.

Presentation Model: The Presentation model is the top of the line at the top. Available only in the Original key, the Presentation features 24 carat gold-plated base top, and an adjustable super speed control metal spring to offer a wider range of sending speed without sacrificing signal quality or causing pendulum drag.

VoCom

5/8 Wave Collapsible 2-Meter Gain Antenna

\$29

- Nearly 10 dB improvement over standard "rubber ducky"
- BNC connector fits most current hand-helds
- 47" extended, only 8" telescoped
- Base spring/tuning coil protects radio and antenna from accidents
- Better than 1.5:1 VSWR across the entire 144-148 MHz band
- Individually tuned matching network for top performance

The simplest, most economical way to improve your hand-held's performance. Try it — you'll never believe what it can do until you've experienced it yourself!

Brass Racer EK-1
The Iambic Paddle
with the Built-in
Keyer

\$189

Brass Racer Iambic
Used with
your favorite
Keyer
\$114



Both have the
unique Magnetic
Tension Adjustment System
"The subtle difference"

TELEGRAPHIC KEYERS



NYE VIKING Speed-X KEYS

**NYE VIKING \$40
CODE PRACTICE SET**



You get a sure, smooth, Speed-X model 400-002 transmitting key, linear circuit oscillator and amplifier, with a built-in 2" speaker, all mounted on a heavy duty aluminum base with nonskid feet. Operates on standard 9V transistor type battery (not included).

The new "Master Key" features an isolated contact assembly that keeps the keying circuit separated from the case, the key arm assembly and all exterior metal parts! Heavy die-cast body, eliminates need for sub-base or securing to operating desk. Gold-plated silver contacts and adjustable action key arm with Navy knob.

No. 330-001



Heavy die cast base with black wrinkle finish. With switch. Smooth adjustable bearings and heavy duty coin silver contacts. Model 310-003



\$199

IAMBIC KEYER

Keys neg. or pos. Keyed transmitter up to 200 Ma at 250 V. 115V AC or internal 9V batt. Built-in audio osc. and speaker 5-50 w.p.m. speed control.

MEMORY KEYER SKM-1

All the features of the SSK-1-K plus selectable 4-256 Bit or 2-512 Bit or 1-1024 Bit Memories with Repeat Switch and Reset Button. Internal Nicad Holds Memories. Automatic Return to Playback after Recording.

\$299



\$149

KP-100 SQUEEZE KEY

- Transistor or relay switching keying
- Semi/Auto switch
- Auto character space switch
- Tone control
- AC 117/220V or DC 13.8V
- Weight control
- 130(W) x 70(H) x 230(D) mm.
- Weights 1.5 kg.



**KATSUMI ELECTRIC
\$179**



EK-150

The best of all CW worlds - a deluxe MFJ Keyer in a compact configuration that fits right on the Bercher iambic paddle! You can buy the combination.

New MFJ Keyer—small in size, big in features. Curtis 8044 IC, adjustable weight and tone, front panel volume and speed controls (8-50 wpm). Built-in dot-dash memories. Speaker, sidetone, and push button selection of semi-automatic/tune or automatic modes.

ELE-KEY MODEL EK-150 FEATURES:

- Speeds from 8 to 60 w.p.m.
- Perfect 3 to 1 Dot to Dash ratio
- Plug-in unit P.C.B. and solid-state circuitry
- Full Dot and Dash memories
- Adjustable Tone and Volume of Side-Tone
- Built-in Speaker, Headphone Jack
- Switch for Semi (Bug)/Auto
- Power Supply 100-120V a.c. (50/60Hz) or 7-13.5V D.C.
- Built-in Relay and Transistor Switch keyed line. Relay rated max. 700V, 500mA; Transistor 150V, 2 AMP DC

KM-22 PADDLE



\$59

KM-22
SIMILAR PADDLE TO THE EK-150
BUT NO ELECTRONICS
HEAVY BASE
—WEIGHS 1.2 KG.



**MFJ-422
Combo**

\$159

Ultra-reliable solid state keying; grid-block, cathode and solid state transmitters (300V, 10 mA max., +300 V, 100 mA max.). Fully shielded. Uses 9 V battery or 110 VAC with optional adapter.

Beautiful functional engineering. The keyer mounts on the paddle base to form a small (4 1/8 x 2 5/8 x 5 1/2") attractive combination that is a pleasure to look at and use.

MICROPHONES

KENWOOD MC-50

50 k Ω /500 Ω
Desk Microphone

\$59


MC-60

DELUXE DESK-TOP MICROPHONE
(50 k Ω /500 Ω)



\$99



\$109

MC-60A

DELUXE DESK-TOP
MICROPHONE
(50 k Ω /500 Ω)

\$109



The MC-60A microphone has built-in pre-amp to retain quality audio sound. The microphone plug adaptor is necessary (AU-20) when using with TR-7950/ TR-7920.

MC-55

Electret condenser microphone.



UP/DOWN Switch.
Freq. range 200-8000 Hz
Power supply 6-14V
Output Imped. 700 Ω

\$79

MC-46

(8 Pin)



\$85

MC-48

(8 Pin)


CURLY CORD


COILED MIC CORD WITH 4-PIN
MIC PLUG
EXTENDED. 18' COILED.

MC-10


MC-10
(50 k Ω)

Hand Microphone

50k Ohm impedance

Freq. response 150 - 5000 Hz.
Also available, MC-10A
500 OHM impedance

\$20

MC-30S MC-35S


MC-30S (500 Ω)
MC-35S (50 k Ω)
Hand Microphone
SELECTABLE NOISE
CANCELLING MIC

\$39

MC-40S

(8 Pin)



(8 Pin)

\$39

UP/DOWN
Microphone
for manual band scan.

500 Ω
DM-90A


\$18
500 OHMS

MC-80

\$89



MC-80 (700 Ω)
Desk Top UP/DOWN Microphone (8 Pin)
(Electret condenser microphone)

MC-85

\$149



Multi-Function Desk Top Micro-
phone (8-pin)

700 Ω Unidirectional Electret Con-
denser Mic. Built-in mic-amp with
output and tone control, meter,
XCVR selector and UP/DOWN
switch. Optional mic cables:
PG-4D (4-pin), PG-4E (6-pin) &
PG-4F (8-pin).

SP-40 Compact Mobile Speaker

Very small, high-quality
mobile speaker, which
can be mounted virtually
anywhere.

\$35

Max. input:

3 W

Impedance:

4 Ω

Dimensions:

68(2.71H x 64(2.61W x
54(2.21D mm (inch))

Weight:

250 g (0.6 lbs) approx.

* KB-1

Deluxe VFO Knob
(Matches TS-530S, TS-630S,
TS-820S, R-820, VFO-230,
VFO-240)

\$19

\$16

* PG-3A
Noise Filter
(for Mobile Transceivers)

HEADPHONES

TELEX.



HFC-91

Ultralight underchin. Acoustic delay of 1 millisecond enhances intelligibility on CW or SSB. Shaped response, 100-3000 Hz. Low impedance, 8-20 ohms. Weight, 1.5 ounces (42.5 g).

ORDER NO. 1300

\$19



HMC-2

Featherweight underchin, adjustable rugged aluminum tone arms direct signals into the ear. Great for contests. 100-3000 Hz. Low impedance, 8-20 ohms. Weight, 1.2 ounces (34 g).

ORDER NO. 1301

\$26



HTC-2

Lightweight dual driver headset. Choice of the "pros" who must wear them for hours. 100-3000 Hz. Low impedance, 8-20 ohms. Weight, 1.6 ounces (45.4 g).

ORDER NO. 1302

\$39



C-610

An ideal lightweight headphone for code courses, code practice or actual operating. Low impedance (8-20 ohms), 50-12,000 Hz. Weight, 8 ounces (227 g).

ORDER NO. 1303

\$20



SWL-610

2000 ohms impedance, 50-12,000 Hz. Weight, 8 ounces (227 g).

ORDER NO. 1304

\$23



PC-100

Full cushion comfort and long life make this dynamic headphone ideal for the novice. 50-12,000 Hz, 8-150 ohms. Weight, 12 ounces (340 g).

ORDER NO. 1305

\$27



C-1320

C-1320 is the "top of the line" Fully cushioned, audiometric type drivers are ultrasonically. It's the DXers' choice. 20-20000 Hz, 8-20 ohms. Weight, 15 ounces (425 g).

ORDER NO. 1307

\$70



C-1210

Ultimate in comfort and performance. Mylar diaphragms assure continued sensitivity for digging out those weak signals. 20-20000 Hz, 8-20 ohms. Weight, 12 ounces (341 g).

ORDER NO. 1306

\$47



HEADPHONE JACK BOX

Ham clubs, field days or contest operation. No more "Jerry rigs" for multiple headphone operation. Six $\frac{1}{4}$ " (6.4mm) phone jacks with individual volume controls. 4' (1.1m) cord with $\frac{1}{4}$ " (6.4mm) phone plug. Ideal for code classes.

ORDER NO. 1308

\$24



**HS-4 (8-ohm)
Headphones**

\$31

MODEL HS-4. Comfortable communications headphones with a natural sound. Freq. response: 300-3000 Hz.



**HS-5 (8-ohm)
Deluxe
Headphones**

\$59

MODEL HS-5. Deluxe communications headphones with interchangeable ear pads for best performance under varying background noise conditions. Freq. response: 150-4000 Hz.



HS-6

\$35

MODEL HS-6. Ultra Lightweight headphones. Freq. response 100-12,000 Hz.



PRO COM 200

The DXer

The dual multi-headset has a powerful, clear MC microphone with a rotating frequency response of 200 to 3500 Hz. The microphone is dual impedance (low 600- high 50,000 ohms). The headphone is low impedance (8-20 ohms) and has a very sensitive 200 to 12,000 Hz frequency response.

ORDER NO. 1313

Weight, 14 ounces (400 g)

\$139



PRO COM 300

The Contester

The ultimate in comfort! Like Pro Com 200, it's an ultralight, single-sided, aviation-style headset with a powerful, electret microphone. The dual impedance (low 600- high 50,000 ohms) microphone has a 200 to 3500 Hz frequency response specifically tailored to the transmit voice. The low 8-20 ohm impedance, dynamic receiver allows one to have a sensitive tailored frequency response of 300 to 3000 Hz.

ORDER NO. 1314

Weight, 7 ounces (200 g)

\$155

• HS-7 (16-ohm)
Micro Headphones



\$21

POWER SUPPLIES

PS-10



\$149

- Power requirement: 120/220/240V AC, 50-60 Hz
- Power consumption: 80W (approx.)
- Output voltage: 13.8V DC
- DC current: 3.5A (intermittent load, 50% duty cycle), 3A (continuous load current)
- Output fluctuation: within ±50 mV (at 3.5 A load current), within 0.1 V (at 0-3.5 A load current)
- Ripple voltage: less than 5 mV at 13.8V DC 3.5 A
- Backup voltage: current: 13.8V DC, 2.5 mA
- Dimensions: 148 (5.83W) x 73 (2.9H) x 180 (7.2D) mm (inch)
- Weight: 3.3 kg (7.3 lbs.) approx.

[SPEAKER]

- Max. Input power: 1.5 W
- Impedance: 8Ω
- Diameter: 68 mm

KDR 123P

\$39



UNIVERSAL 2 MTR. POWER SUPPLY.

117V SUPPLIES 12V at 3 AMP REGULATED.

GOOD FOR MOST 10W 2 MTR. RIGS.

PS-30



\$189

The PS-30 has the large current capacity (with 50% intermittent load duty cycle) of 20A, including 5A of the external terminal load current for convenience when using other instruments or conducting a variety of tests, etc., and supplies DC power of good quality due to the voltage stabilizing and ripple reducing circuits.

SPECIFICATIONS

- Power Consumption: Approx. 600W
- Output Voltage: 13.8V DC
- Output Current: 20A (intermittent load, 50% duty cycle), 15A (continuous load current)
- Output Voltage Fluctuation: Within ±200 mV (at load current 20A)
- Ripple Voltage: Less than 20 mV at 13.8V DC, 20A
- Dimensions: 180 (7-1/16W) x 133 (5-1/4H) x 287 (11-5/16D) mm (inch)
- Weight: 8 kg (18.6 lbs)

KPS-12



\$169

Output Current	12 A Intermittent (50% Duty cycle)
Ripple Component	Less than 1 mV (r.m.s.) (at 10 A output current) 120 VAC ± 10 V input
Regulation	Less than ± 0.05 V
Protection Circuit	Current-limiting circuit activates at 13 ~ 15 A

125P *85

125P
Pilot
Light

HODEC



125 MW *99

125 MW
Volt/Amp.
MeterInput: 117V Output: 13.8V
5 Amps constant, 7 Amps surgeRipple RMS: 10 mV Max.
Load Reg: 0-5V Max.

GOOD FOR MOST 25W 2MTR RIGS.

"Go synthesized on 440 MHz FM".
5 memories, memory/band scan

TR-8400



\$479

TR-8400 FEATURES:

- Synthesized coverage of 440-450 MHz in 25-kHz steps.
- Automatic scan of memories and of 440-450 MHz band (in 25-kHz steps). Locks on busy channel and resumes when signal disappears.
- HOLD or mic PTT button cancels scan.

- TONE switch to activate sub-tone device (not Kenwood supplied). DTMF (Touch-Tone) terminal on rear panel.
- Four-digit frequency display and S/RF bar meter. Other LEDs indicate BUSY, ON AIR, and REPEATER operation.
- HI/LOW (10 W/1 W) RF output power switch.

- Five memories and memory backup terminal on rear panel.
- Two VFOs.
- Offset switch for ±5 MHz transmit offset and simplex operation. Fifth memory allows any other offset by memorizing receive and transmit frequencies independently.

- Up/down manual band scan in 25-kHz steps with UP/DOWN microphone supplied with TR-8400.
- Only 5-3/4 inches wide, 2 inches high, and 7-5/8 inches deep. Weighs only 3.75 pounds.



THREE EXCITING RIGS COVERING THE WORLD OF 70 cm
KENWOOD TW-4000A



MA-4000
2-m/70-cm two band mobile antenna



\$799

KENWOOD's TW-4000A FM "Dual-Bander" provides new versatility in VHF and UHF operations, uniquely combining 2 m and 70 cm FM functions in a single compact package.

TW-4000A FEATURES:

- **2 m and 70 cm FM in a Compact Package**: Covers the 2 m band (142.000-145.995 MHz), including certain MARS and CAP frequencies, plus the 70 cm FM band (440.000-449.995 MHz), all in a single compact package. Only 6 3/8 (160) W x 2 3/8 (60) H x 8 9/16 (217) D inches (mm) and 4.4 lbs. (2.0 kg).
- **Large, Easy-to-Read LCD Display**: A green, multi-function back-lit LCD display for better visibility. Indicates frequency, memory channel, repeater offset, "S" or "RF" level, VFO A/B, scan, busy, and "ON AIR" Dimmer switch.
- **25 Watts RF Power on 2 m/70 cm**: Hi/Lo power switch.

• 10 Memories with Offset Recall and Lithium Battery Backup

Stores frequency, band, and repeater offset. Memory 0 stores receive and transmit frequencies independently for odd repeater offsets, or cross band operation.

• Programmable Memory Scan

Programmable to scan all memories, or only 2 m or 70 cm memories. Also may be programmed to skip channels.

• Band Scan in Selected 1-MHz Segments

Scans within the chosen 1-MHz segment (i.e., 144.000-144.995 or 440.000-440.995, etc.). The scanning direction may be reversed by pressing either the "UP" or "DOWN" buttons on the microphone.

• Priority Watch Function

Unit switches to memory 1 for 1 second each 10 seconds, to monitor the activity on the priority channel.

- **High Performance Receiver/Transmitter**: GaAs FET RF amplifiers on both 2 m and 70 cm, high performance MCF's in the 1st IF section, provide high receive sensitivity and excellent dynamic range. The high reliability RF power modules assure clean and dependable transmissions on either band.

• Rugged Die-cast Chassis

- **Optional Two-Frequency CTCSS Encoder**: Easily mounted inside the radio, allows DIP switch programming of two different tone frequencies, for 2 m and 70 cm.

• "BEEPER" sounds through speaker.

• Easy-to-install mobile mount

• Common Channel Scan

Memory 8 and 9 are alternately scanned every 5 seconds. Either channel may be recalled instantly.

• Dual Digital VFO's

Selectable 5-kHz or 10-kHz for 2 m, and 5-kHz or 25-kHz for 70 cm. Depress "UP" or "DOWN" key on the front panel for band change in 1-MHz steps.

• 16-Key Autopatch UP/DOWN Microphone (Supplied)

• Repeater Reverse Switch

- **Optional "Voice Synthesizer Unit"**: Installs inside the TW-4000A. Voice announces frequency, band, VFO A or B, repeater offset, and memory channel number.

• Front Panel Illumination

TW-4000A accessories:

• VS-1 voice synthesizer	\$49
• TU-4C programmable two-frequency CTCSS encoder	\$69
• SP-40 compact mobile speaker	\$35
• SP-50 high quality mobile speaker	\$39
• MA-4000 dual-band mobile antenna with duplexer	\$59

TR-3500

70 CM FM Handheld

440-449.995 MHz in 5-kHz steps
TX OFFSET switch keyboard
programmable ±5 kHz to ±9.995 MHz
1.5 W/300 mW HI/LOW power switch
Auto. squelch position on squelch control
Tone switch for TU-35B optional programmable CTCSS encoder
Other features include 10 memories, lithium battery memory back-up, programmable automatic band scan, memory scan, UP/DOWN manual scan, repeater reverse, 16-key autopatch, keyboard frequency selection, slide-lock battery.

SAVE \$40

\$399

- TU-35A Variable Tone Encoder \$29
- TU-35B Programmable Tone Encoder for TR-3500 \$55



TR-9500

70 CM SSB/CW/FM transceiver

Dual digital VFO's cover 430-440 MHz in 100-Hz, 1-kHz, 5-kHz, 25-kHz, or 1-MHz steps. Transmit frequency tuning for OSCAR operations, SSB, LSB, CW, and FM modes. Facilitates 70 cm OSCAR operations. 6 memories, with back-up terminal. Automatic band scan of entire band or any 1-MHz segment, memory scan, and SSB, CW search of selected 10-kHz segment. HI-10 W, LO-1 W, power output. Other convenient features include noise blanker, RIT (SSB, CW) RF gain control, FM squelch, CW side-tone, and basic UP/DOWN mic.

\$899



All mode (FM/SSB/CW) 25 watts, plus...!!!

KENWOOD TR-9130



\$719

FEATURES

25 Watts RF output

All modes, (FM/SSB/CW), utilize a new high power linear module, for more reliable FM operation and increased DX on SSB or CW.

FM/USB/LSB/CW all mode operation

For added convenience in all modes of operation, the mode switch, in combination with the digital step (DS) switch, determines the size (100 Hz, 1 kHz, 5 kHz, 10 kHz) of the tuning step, and the number of digits displayed.

Six memories

On FM, memories 1 through 5 for simplex or ± 600 kHz offsets, with the OFFSET switch. Memory 6 for non-standard offset. All six memories may be operated simplex, any mode.

Memory scan

Scans memories in which data is stored. Stops on busy channels.

Internal battery memory back-up

With 9 volt Ni-Cd battery installed, (not KENWOOD supplied), memories will be retained approximately 24 hours, adequate for the typical move from base to mobile. A terminal is provided on the rear panel for connecting an external back up supply.

Compact size and light weight

170 (6-11/16) W x 68 (2-11/16) H x 241 (9-1/2) D mm (inch). 2.4 kg (5.3 lbs.) weight.

Automatic band scan

Scans within whole 1 MHz segments (ie., 144.0-144.999 MHz), for improved scanning efficiency.

Dual digital VFO's

Incorporates two built-in digital VFO's, selected through use of the A/B switch, and individually tuned.

Transmit frequency tuning for OSCAR operations

On SSB or CW, the tuning knob or UP/DOWN buttons on the microphone may be used to adjust the transmit frequency during transmission.

16-key autopatch UP/DOWN microphone

The TR-9130 is available with the MC-46 16-key autopatch UP/DOWN microphone, or with the basic UP/DOWN microphone. Manual UP/DOWN scan of entire band possible using either microphone.

Squelch circuit on all modes (FM/SSB/CW)

The squelch circuit is effective on SSB, CW, and FM.

Repeater reverse switch

For checking signals on the repeater input, on FM.

Tone switch

For activating a tone device, (not KENWOOD supplied).

CW semi break-in circuit with sidetone

Built-in, for convenience in CW operations.

Extended frequency range

Covers 143.9 to 148.999 MHz, which includes certain MARS and CAP frequencies.

Transmit offset switch

High performance noise blanker

Suppresses pulse-type noise on SSB and CW.

RF gain control

For all modes of operation.

RIT (Receiver Incremental Tuning) circuit

Useful during SSB/CW operations.

Amplified AGC

Enhances SSB and CW operation. The AGC time constant is automatically optimized for each mode of operation.

HU/LOW power switch

Selects 25 or 5 watts RF output on FM or CW.

Accessory terminal

A four pin accessory terminal is provided for use with a linear amplifier or other accessory.

Quick release mounting bracket (Supplied)

Digital display with green LED's

High performance receive-transmit design

The use of a low-noise dual-gate MOSFET plus two monolithic crystal filters in the receiver front-end results in excellent two signal characteristics. Care in transmitter design assures clear signals in all modes.

- RD-8 \$69
System Base (for TR-9000/
9500)
- RD-8A \$79
System Base (for TR-9130/
9500)

CLEARANCE SALE TR-9000



ONLY \$599

The TR-9000 combines the convenience of FM with long distance SSB and CW. It is extremely compact... perfect for mobile operation. Matching accessories are available for optimum fixed-station operation.

Five memories... four for simplex or ± 600 kHz repeater offsets and the fifth for a non-standard offset. Memorizes transmit and receive frequency independently.

Two digital VFOs, with selectable tuning steps of 100 Hz, 5 kHz, and 10 kHz. FM, USB, LSB, and CW. Only 6-11/16 inches wide, 2-21/32 inches high, 9-7/32 inches deep.



\$549 TR-7950/TR-7930 \$499



Big LCD, Big 45 W, Big 21 memories, compact.

TR-7950

Outstanding features providing maximum ease of operation include a large, easy-to-read (direct sunlight or dark) LCD display, 21 multi-function memories, automatic offset, programmable priority channel, memory and band scans, built-in lithium battery memory back-up, built-in 16-key autopatch, and a choice of a hefty 45 watts output (TR-7950), or 25 watts output (TR-7930).

TR-7950 FEATURES:

NEW, large, easy-to-read LCD digital display

Easy to read in direct sunlight or dark (back-lighted). Displays transmit/receive frequencies, memory channel, repeater offset, (+, -), sub-tone number (P.O. 1, 2, 3), tone, scan, and memory scan lock-out. Includes LED S/R/F bar meter, and LED indicators for REVERSE, CENTER TUNING, PRIORITY, and ON AIR.

21 NEW, multi-function memory channels
Stores frequency, repeater offset, and optional sub-tone channels. Memories 1 through 15 for simplex or ± 600 kHz offset. Memory pairs 16/17, and 18/19 are paired for non-standard repeater offset. Memories "A" and "B" set upper and lower scan limits, or for simplex or ± 600 kHz offset. In MEMORY mode, a circle of light appears around the memory selector knob. When the memory selector knob is rotated in either direction to channel 1, an audible "beep" will sound.

Choice of 45 or 25 watts output

The TR-7950 provides a hefty 45 watts output, while the TR-7930 features a more modest 25 watts. A HI/LOW power switch allows power reduction to approx. 5 watts.

Frequency Range:
Model:
Power Requirements:
Grounding:
Current Drain:

144.000 - 147.995 MHz
TR-7950
13.8V DC ± 15%
Negative
0.5A in receive mode with no input signal

TR-7950	(Hi transmit mode)	9.5A
	(Low transmit mode)	3.0A
TR-7930	(Hi transmit mode)	6.5A
	(Low transmit mode)	2.5A

Antenna Impedance:

50Ω

Dimensions:

TR-7950: 175 (6-7/8") W x 54 (2-1/2") H x 220 (8-11/16") D mm (inch)
TR-7930: 175 (6-7/8") W x 54 (2-1/2") H x 206 (8-1/8") D mm (inch)

Weight:

TR-7950: 7.9kg (17.5 lbs.)

TR-7930: 5.6kg (12.3 lbs.)

Long-life lithium battery memory back-up
Built-in lithium battery has an estimated 5 year life.

Automatic offset

The microprocessor is pre-programmed for simplex or ± 600 kHz offset, in accordance with the 2 meter band plan. "OS" key allows manual change in offset.

Programmable priority alert

The PRIORITY channel may be programmed in any of the 21 memories. With ALERT switch "ON", a dual "beep" sounds when a signal is present on the PRIORITY channel. An OPER switch allows an easy move to the PRIORITY channel.

Programmable memory scan lock-out
"LO" key for programming scan to skip selected memory channels, without erasing the memory.

Programmable hand-scan width

The lower limit may be programmed into memory "A" and the upper limit into memory "B".

Center stop during band-scan, with indicator
Stops in center of channel during band scan, with center tuning indicator.

Scan resume selectable

Scan stops on busy channel. Selectable automatic time resume-scan lapprox. 5 sec., adjustable, or carrier operated resume-scan. A scan delay of approx. 1.5 seconds built-in.

Scan control using up/down microphone
Momentarily pressing UP or DOWN button on microphone tunes one step in the selected direction, on memory or on 5-kHz step tuning. Holding the button for about 2 seconds starts UP or DOWN automatic scan action. Scan start also possible using "SC" key on keyboard. Scan may be cancelled by momentarily pressing the PTT switch, or by pressing both UP/DOWN buttons simultaneously.

KENWOOD

Modulation:
Spurious Radiation:

Variable resistance direct shift
(HI) Less than -70dB
(LOW) Less than -80dB
A 5kHz

Max. Frequency Deviation:
Microphone:

Dynamic microphone with PTT switch, 500Ω

Frequency:

Double conversion superheterodyne

Intermediate Frequency:

1st IF = 10.695 MHz

Sensitivity:

2nd IF = 465 kHz

Selectivity:

Better than 0.5uV for 30dB S/N

Spurious Response:

Better than 0.25uV for 12dB SINAD

Squelch Sensitivity:

More than 12dB (-6dB)

Audit Output:

Less than 24dB (-6dB)

0.15uV (threshold)

More than 2.0W

Programmable sub-tone channels

Optional TU-79 3 frequency sub-tone unit provides keyboard selectable sub-tone channels, which may be stored in memory.

Built-in 16-key autopatch, with monitor

The keyboard functions as a 16-key autopatch during transmit. DTMF tones appear in the speaker output when a key is pressed during transmit.

Front panel keyboard control

Used for selecting frequency, offset, programming memories, controlling scan, and autopatch encode. Keyboard lighting is provided.

Extended frequency coverage

Covers 142.000-148.995 MHz, in 5-kHz steps.

Repeater reverse switch

Locking-type switch, with indicator.

"Beeper" amplified through speaker

Compact, lightweight design
Easy-to-install adjustable-angle mobile mounting bracket

Optional accessories:

TU-79 3 frequency tone unit.
KPS-12 fixed-station power supply for TR-7950.

SP-40 compact mobile speaker.

TU-79

\$49

3 TONES
CTCSS ENCODER

(The model TU-79 is available only in U.S.A.)



The TU-79 is designed specially for TR-7950/TR-7930 to allow reprogramming of three sub-tones (CTCSS) frequencies.

Ultra-compact and lightweight, priority, memory and band scan, 25 watts...



TM-201A \$449

The KENWOOD TM-201A 2-meter FM mobile transceiver is designed to be the ultimate in compact size and lightweight, allowing maximum flexibility in automotive installations. New microprocessor controlled operating features, improved receive and transmit circuitry, a powerful 25 watts of RF output, and an easy-to-operate front panel control layout are packed into this new, ultra-compact radio, providing extended flexibility and ease of operation. The complete TM-201A system is supplied with a high quality external speaker, and a 16-key autopatch UP/DOWN microphone.

FEATURES

- Ultra compact and lightweight
- Measures 5.6 (141W x 1.6 (39.5H x 7.2 (183D, inch/mm), weighs 2.8 lbs., (1.25 kg.).
- 25-watt output, with HI/LO power switch
- Produces a powerful 25 watts RF output from a surprisingly compact design.
- Audible "BEEPER" confirms operation
- Easy-to-install mobile mount

TM-401A \$499

70-cm FM ultra compact mobile transceiver

• Dual digital VFO's covering 440-450 MHz

Covers 10-MHz of 70-cm FM band in 25-kHz steps.

MHz key for 1-MHz step.

• Dual digital VFO's built-in

Covers 142.000 to 149.000 MHz in 5-kHz steps, includes certain MARS and CAP frequencies. A "MHz" key shifts the frequency in 1-MHz steps.

• 5 memories plus "COM" channel, with lithium battery back-up (est. 5 yr. life)

Memories 4, 5, and the COM (common) channel store transmit and receive frequencies independently, for either odd or standard repeater offsets. COM channel switch for instant recall of frequency and tone (with optional TU-3 tone encoder).

• Priority alert scan

With ALERT switch "ON," once every 6 seconds the unit scans back to memory channel 1 for approximately 0.3 seconds to monitor the activity on the priority channel (channel 2). A dual "beep" will sound if a signal is present on memory 1.

• Memory scan/programmable band scan

Scan skips memories in which no data is stored. UP/DOWN switch on microphone initiates band scan in appropriate direction. Memory 5, set band scan limits. Scanning stops on busy channel, resumes after 6 seconds or when the signal ceases. Scan delay prevents scan resume if signal fades or is momentarily interrupted.

• Highly visible yellow LED frequency display

The MHz decimal blinks while scanning, and the kHz decimal lights when VFO-B is in use. S-RF LED bar meter with "BUSY" indicator, "MR" (memory recall), "ALERT," and "ON AIR" LEDs.

• High performance receive/transmit

GaAs FET RF amplifier for high sensitivity with wide dynamic range. Transmit modulation characteristics selected for best sound and minimum distortion.

• External high quality speaker supplied

(No internal speaker)

• 16-key autopatch UP/DOWN microphone

• Repeater offset switch (+600-2kHz or simplex) and reverse switch

• Optional PC-10 frequency controller \$99

May be easily connected to the TM-201A or TM-401A. Convenient control keys for frequency UP/DOWN, MHz shift, VFO A/B, and MR (memory recall or change memory channel). A green, easy-to-read, back-lit LCD display indicates transmit/receive frequencies, memory-channel number, ALERT, and SCAN (with blinking MHz decimal). Size: 4.4 (112W x 1.4 (35H x 0.9 (22D, inch/mm. Weight: 3.5 oz. (100 g).

ONLY 3 LEFT

FINAL CLEARANCE PRICE

TR-7730

\$419

SAVE
\$30



• 25 watts RF output power

• Automatic band scan

• Four-digit LED frequency display

• Offset switch

• S-RF bar meter and LED indicators

• Five memories

• Memory scan

• Tone switch

• Extended frequency coverage

• UP/DOWN manual scan

• MC-48 16-button autopatch (DTMF)

UP/DOWN microphone

TR-2500 KENWOOD

**BIG performance.
small size...
smaller price!!!**

The TR-2500 is a compact 2 meter FM handheld transceiver featuring an LCD readout, 10 channel memory, lithium battery memory back-up, memory scan, programmable automatic band-scan, HI/LO power switch and built-in sub-tone encoder.

- **Extremely compact size and light weight**
Measures 90.12-5.88 W x 168.90-5.81 H x 40.0-5.88 D, mm thickness. Weights 540 grams. 1.2 lb with Ni-Cd pack (Not shown, actual size).
- **LCD digital frequency readout**
Easy to read in direct sunlight or dark with lamp switch. Low current drain. Shows frequencies and memory channels, plus four "Arrow" mode indicators.
- **Ten channel memory**
Nine memories for simplex or 4000 kHz offset. "MR" memory for non-standard split frequency repeaters.
- **Lithium battery memory back-up**
Built-in Lithium battery (estimated 5 year life) maintains memory when Ni-Cd pack is fully discharged or removed.

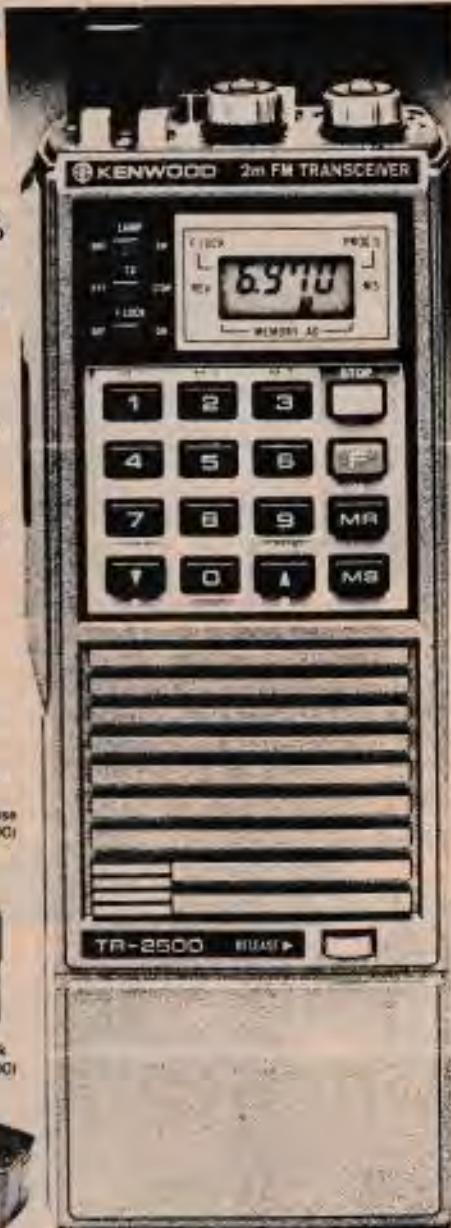
- SC-4
Soft Case with Belt Hook
(for TR-2500/3500)
- LH-2
Deluxe Leather Case
(for TR-2500/3500)

- BT-1
AA Manganese/Alkaline
Battery Case
(for TR-2500/3500)
- PB-25
Ni-Cd Battery Pack
(for TR-2500/3500)

CONVENIENT TOP CONTROLS



- **HI/LO power output selection**
Allows operation at 2.5 watts or 300 mw RF output.



- MS-1
Mobile Stand
(for TR-2500/3500)
- DC-25
DC-DC Converter
for 12V Operation
(for TR-2500/3500)

- ST-2
Base Stand/Quick Charger
(for TR-2500/3500)



\$399

**SAVE
\$40**

• **Memory scan**

Scans only channels in which frequency data is stored. Stops on busy channel, resumes scan approximately 2 seconds after signal ceases.

- **Programmable automatic band scan**
Upper and lower frequency limits and scan steps of 5 KHz and larger (5, 10, 15, 20, 30 KHz, etc.) may be programmed. Scan locks on busy channel, resumes approximately 2 seconds after signal ceases.

• **UP/DOWN manual scan**

Up/Down manual scan in 5 KHz steps.

- **Built-in tunable sub-tone encoder**
Sub-tone encoder, with activate switch, tunable (variable resistor) to desired CTCSS tone. Optional TU-1 programmable (DIP-switch) encoder accessory available.

• **Built-in 16 key autopatch encoder**

16 keys provide telephone dual tone modulation.

• **"SLIDE-LOC" battery pack**

Slides into position, locks into place.

• **Reverse operation**

Shifts receiver to transmit frequency and transmitter to receive frequency.

• **Keyboard frequency selection**

Sets operation frequency across full range.

• **Extended frequency coverage**

Covers 143.900 to 148.995 MHz in 5 KHz steps.

• **Optional power source**

Using optional MS-1 mobile or ST-2 M charger/power supply, radio may be operated while charging. (Automatic drop-in connections).

• **High impact plastic case**

Provides extra strength to resist damage.

• **Battery status indicator**

Flashes to indicate low battery charge level.

• **Two lock switches**

Prevent accidental frequency change and inadvertent transmission.

• **Standard accessories included:**

- Flexible rubberized antenna with BNC connector
- 400 mAh heavy-duty Ni-Cd battery pack
- AC charger
- Plugs for external microphone and speaker.

OPTIONAL ACCESSORIES:

• ST-2 Base station power supply and quick charger (approx. 1 ft.)	\$119
• MS-1 13.8 VDC mobile stand/charger/power supply	\$85
• TU-1 Programmable "DIP-switch" (CTCSS) encoder	\$55
• SMC-25 Speaker microphone	\$45
• LH-2 Deluxe top grain cowhide leather case	\$75
• PB-25 Extra Ni-Cd battery pack, 400 mAH, heavy-duty	\$49
• BT-1 Battery case for AA manganese or alkaline cells (not Ni-Cd)	\$17
• VB-2530 RF power amplifier	\$129
• SC-4 soft vinyl case with belt clip	\$29
• DC-25 12V DC-DC Converter	\$39

JRC Japan Radio Co., Ltd.

WHEN ONLY THE VERY BEST IS GOOD ENOUGH



NRD-515

SPECIFICATIONS

Receiving frequency range	100kHz to 30MHz
Receiving modes	RTTY, CW, USB, LSB, AM
Receiving system	Double superheterodyne
First IF	70.455 MHz
Second IF	455 kHz
ON/SSB	AM
Sensitivity (S/N: 10dB)	Less than 0.5µV
1.6 to 30 MHz	Less than 2µV
100 to 1600 kHz	Less than 24µV
Selectivity:	-6dB
6kHz	4kHz or more
2.4kHz	2.4kHz or more
*0.6kHz	0.6kHz or more
*0.3kHz	0.3kHz or less
Frequency stability	±50Hz per hour after warming up.
Image rejection ratio	70dB or more
IF rejection ratio	70dB or more
Input impedance	50 to 75 ohms, unbalanced
AF outputs:	
Speaker output	1W or more (4 ohms)
Recordline output	1mW or more (600 ohms)
Power requirements	100/117/220/240V AC, 50/60Hz, approx. 50VA
Dimensions	Height: 140mm Width: 340mm Depth: 300mm
Weight	Approx. 7.5kg

\$2000

* MEMORY UNIT NDH-518 \$400

The memory unit can be easily mounted on the receiver, into which the connecting cable connector must only be plugged in. The NDH-518 has a 96-channel capacity, allowing you to enjoy upgraded and sophisticated operation.

• Channels: 96 channels • Input/output: data: 22-bit BCD code • Write-in: Voluntary • Dimensions: 340(W) x 50(H) x 200(D)mm • Weight: Approx. 3.5kg

* LOUDSPEAKER NVA-515 \$80

Beautifully finished to fit the design of the receiver. Clear and soft tone quality assured.

- Impedance: 4 ohms
- Max. input power: 3W
- Dimensions: 130(W) x 140(H) x 200(D)mm
- Weight: Approx. 1kg



NVA-515
Frequency Controller
\$249

* 600Hz FILTER CFL-260 \$85

Provides sharp selectivity, ensuring comfortable CW reception. Must only be plugged into the receiver unit.

• 300Hz FILTER CFL-230 \$125
Provides sharp selectivity in CW reception, rejecting interference

KENWOOD

R-600

COMMUNICATIONS RECEIVER



\$519

R-600 FEATURES:

- 150 kHz to 30 MHz continuous coverage, AM, SSB, or CW.
- 30 bands, each 1 MHz wide, for easier tuning.
- Five digit frequency display, with 1 kHz resolution.
- 6 kHz IF filter for AM (wide), and 2.7 kHz filters for SSB, CW and AM (narrow).
- Up-conversion PLL circuit,

for improved sensitivity, selectivity, and stability.

- Communications type noise blanker eliminates "pulse-type" noise.
- RF Attenuator allows 20 dB attenuation of strong signals.
- Tone control.
- Front mounted speaker.
- "S" meter, with 1 to 5 SINPO scale, plus standard scale.
- Coaxial, and wire antenna terminals for 2 MHz to

30 MHz. Wire terminals for 150 kHz to 2 MHz.

• 100, 120, 220, and 240 VAC, 50/60 Hz. Selector switch on rear panel.

- Optional 13.8VDC operation, using DCK-1 cable kit.
- Other features include carrying handle, headphone jack, and record jack.

OPTIONAL ACCESSORIES:

- DCK-1 DC Cable kit.
- SP-100 External Speaker.

KENWOOD

R-1000 COMMUNICATIONS RECEIVER



\$649

R-1000 FEATURES:

- Covers 200 kHz to 30 MHz continuously.
- 30 bands, each \pm 1 MHz wide.
- Five-digit frequency display with 1-kHz resolution and analog dial with precise gear dial mechanism.
- Built-in 12-hour quartz digital clock with timer to turn on radio for scheduled listening or control a recorder through remote terminal.
- Three IF filters for optimum AM, SSB, CW, 12-kHz and 6-kHz (adaptable to 6-kHz and 2.7-kHz) for AM wide and narrow, and 2.7-kHz filter for high-quality SSB (USB and LSB) and CW reception.
- Effective noise blanker.
- Terminal for external tape recorder.
- Tone control.
- Built-in 4-inch speaker.

- Wire antenna terminals for 200 kHz to 2 MHz and 2 MHz to 30 MHz. Coax terminal for 2 MHz to 30 MHz.
- Voltage selector for 100, 120, 220, and 240 VAC. Also adaptable to operate on 13.8 VDC with optional DCK-1 kit.
- Dimmer switch to control intensity of S-meter and other panel lights and digital display.
- Step attenuator to prevent overload.

OPTIONAL ACCESSORIES:

- | | |
|---|--------------|
| • SP-100 matching external speaker. | \$59 |
| • HS-6 lightweight, open-air headphone set. | \$35 |
| • HS-5 and HS-4 headphones. | \$59
\$31 |
| • DCK-1 modification kit for 12-VDC operation | \$10 |

KENWOOD

CLEARANCE SALE

TR-7800

25W

\$439



FEATURES

- 15 multifunction memory channels, selected with a rotary switch. M1-M13... memorize frequency and offset (\pm 600 kHz or simplex). M14... memorize transmit and receive frequencies independently for nonstandard offset. M0... priority channel, with simplex, \pm 600 kHz, or nonstandard offset. Internal backup for all memories, by installing four AA NiCd batteries (not Kenwood-supplied) in battery holder. LED S/RF bar meter. TONE switch to activate subaudible tone module (not Kenwood-supplied).

- Priority channel (memory "0") and priority alert. Covers 143.900-148.995 MHz, in 5-kHz or 10-kHz steps. Built-in autopatch DTMF (Touch-Tone[®]) encoder. Front-panel keyboard for selecting frequency, transmit offset, and autopatch encoder tones, programming memories, and controlling scan. Automatic scan of entire band (5-kHz or 10-kHz steps) and memories. Manual scan of band and memories, with UP/DOWN microphone (standard). Repeater REVERSE switch. Selectable power output, 25 W (HI)/5 W (LOW).

TR-7850

40W

\$479

NEW LOW
PRICE

R VE3YI 000118026

GLENWOOD TRADING COMPANY LTD.
278 East 1st St., North Vancouver, B.C.
V7L 1B3 Phone (604) 984-0404

LAWRENCE ROBERT YOUNG
270 CEDAR ST
COLLINGWOOD ONT

L9Y 3A8



Canada
Poste
Canadienne

France
Poste
Française

Bulk
third
class
2203

WHAT'S NEW FROM KENWOOD ?

TM-201A (+FC-10)



see p. 42

WRITE GLENWOOD FOR DETAILED SPECS.



see p. 10
AT-250