

CATALOGUE NO. 24
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CABLE: "GLENWOOD, VANCOUVER"

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GLENWOOD TRADING COMPANY LTD.

Electronic Specialists

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

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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 continuously 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 25K(25 junction type) PETA 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 information. Different band and mode cross operation possible. Dial 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.
- **Tuneable notch filter built-in**
Deep, sharp, tuneable, audio notch filter.
- **Narrow-wide filter selection**
NAR/WIDE switch for IF filter selection on SSB, CW, or AM, when optional filters are installed. (2.4 MHz IF filter built-in)

- **Speech processor built-in**
Improves intelligibility, increases average "talk-power".
- **Fluorescent tube digital display**
Indicates frequency to 100 Hz (10 Hz modifiable).
- **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 (base) 80-10 m incl. WARC **\$199**
- AT-230 base antenna (base), 80-10 m incl. WARC **\$289**
- FM-430 FM unit **\$69**
- YK-88C (500 Hz) or YK-88C-N (270 Hz) CW filter **\$89**
- YK-88SN (0.8 MHz) narrow SSB filter **\$89**
- YK-88A (6 kHz) AM filter **\$89**
- MC-42S UP/DOWN band microphone **\$39**
- MC-60A deluxe desk microphone, UP/DOWN switch **\$109**



\$109

\$189

\$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

TS-930S

\$ 2 3 4 9

WITH AUTOMATIC ANTENNA TUNER



TS-930S FEATURES:

- **160-10 Meters, with 150 kHz - 30 MHz general coverage receiver.**
Covers all Amateur frequencies from 160-10 meters, including new WARC, 30, 17, and 12 meter bands, an SSB, CW, PSK, and AM. Features 150 kHz - 30 MHz general coverage receiver. Separate Amateur band access keys allow speedy band selection. UP/DOWN handswitch 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 3M distortion.
- **All solid state, 28 volt operated final amplifier.**
The final amplifier operates on 28 VDC for lowest 3M distortion. Power input rated at 250 W on SSB, CW, and PSK, and at 80 W on AM. Final amplifier protection circuit with cooling 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 80-10 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 band 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 provided. RIT control for 29.9 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 blanker ("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.**
Tuneable, 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.

SPRING SPECIAL FREE MC-60A!

WITH EVERY PURCHASE OF A TS-930

(OFFER VALID UNTIL JUNE 30th 1983)

TS-930SAT(WITH AUTOMATIC ANTENNA TUNER)	\$2349
TS-930S	\$2129
AT-930	\$259
SP-930	\$119
SO-1 (HIGH STABILITY TXCO)	\$229
YK-88C-1	\$89
YG455-C1	\$139
YG-455-CN1	\$159

TS-130SE/130V III TRANSCEIVER

KENWOOD

FEATURES

- 80~10 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 MCP • Built-in 25 kHz marker • Fixed channels • Rugged construction and handsome styling



\$899

NEW LOW PRICE

SPECIFICATIONS

[GENERAL]

- Frequency range: 3.5~4.0 MHz, 7.0~7.3 MHz, *10.1~10.15 MHz (10.0 MHz WWV), 14.0~14.35 MHz, *18.068~18.168 MHz, 21.0~21.45 MHz, *24.89~24.99 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: 19A 13.8V DC, TS-130V=RX: 0.7A 13.8V DC, TX=4A 13.8V DC • Dimensions: TS-130SE/130S=241 (9.6)W x 94 (3.8)H x 293 (11.7)D mm (inch), TS-130V=241 (9.6)W x 94 (3.8)H x 235 (9.4)D mm (inch) • Weight: TS-130SE/130S=5.6 kg (12.3 lbs.), TS-130V=4.9 kg (10.8 lbs.)

[RECEIVER]

- Sensitivity: 0.25 μV at 10 dB S/N • Selectivity: SSB/CW WIDE = 2.4 kHz (-6 dB), 4.2 kHz (-60 dB), SSB NARROW=1.8 kHz (-60 dB), 3.3 kHz (-60 dB), with optional YK-885N filter, CW NARROW = 500 Hz (-6 dB), 1.0 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, 140 W 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 • 7x 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-885N: 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-80(N4): 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-9000 and TR-9000 styling and is designed for home station use. A low distortion speaker unit provides clear audio reproduction.

SPECIFICATIONS

- Speaker diameter: 75 mm (3 inch) • Max. input power: 1 W • Input impedance: 8Ω • Frequency response: 300 Hz ~ 5 kHz • Dimensions: 123 (4.9)W x 96 (3.8)H x 235 (9.4)D 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

- Oscillator frequency: 5.5~6.0 MHz • Oscillator circuit: Clapp • Output voltage: 0.2V ±1 dB • Power source: from TS-130 (TS-120) Series • Dimensions: 123 (4.9)W x 96 (3.8)H x 235 (9.4)D mm (inch) • Weight: 2.5 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

- Oscillating frequency: 5.4~6.1 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(5.8)W x 51 (2.0)H x 166 (6.7)D mm (inch) • Weight: 1.3 kg (2.9 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).

SPECIFICATIONS

- Input connector: UHF type (50Ω) • ANT connector: UHF type (50Ω) • GND: wing nut and stud • Dimensions: 152 (6.1)W x 60 (2.4)H x 159 (4.9)D mm (inch) • Weight: 1.6 kg (3.5 lbs.) approx.

[ANTENNA COUPLER]

- Frequency range: 8 amateur bands from 3.5 ~ 29.7 MHz • Input impedance: 50Ω • Output impedance: 20 ~ 300Ω, 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



\$29

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

Tunable 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-88C) or 270-Hz (YK-88CN) CW filter may be installed in the 8.83-MHz first IF, and a very sharp 500-Hz (YG-455C) or 250-Hz (YG-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.

8146B final with RF NFB

Two 8146B'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 receiver design result in excellent dynamic range.

A COMPLETE LINE OF MATCHING ACCESSORIES

	AT-230	Antenna Tuner	\$289
	SPECIFICATIONS (ANTENNA COUPLER) • Frequency Range: 9 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: 5.8 to 30 MHz • Measurable RF power: Up to 20/200 W switched • Kind of RF Power: Forward and reflected power, switched • Impedance: 50 Ω • 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 W (CENTRAL) • Connectors: INPUT: 50 Ω • Connectors: ANT 1: 50 Ω type, ANT 2: 50 Ω type, ANT 3: wire antenna only, GND • Dimensions: 180 (7.25) x 135 (5.31) x 267 (11.50) mm (inch) • Weight: 3.4 kg (7.5 lb)		
	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 signal VFO or memory frequency. The display range is selected automatically to cover 300.0–500.0 or 400.0–095.0, according to the band. Backed up by analog subdial with 1 kHz divisions • Cross-operation flexibility: Easy-to-operate function switch provides RECEIVE/TRANSMIT: Main, RMT, Memo (Main, Transceiver VFO or FLX, RMT: VFO-230 digital VFO, MEM: Memory) • T.F. SET switch: Allows operator to set transmit frequency quickly. Reverses transmit and receiver frequency momentarily, to prevent transmitting on wrong frequency during split-frequency operation • Expanded frequency coverage: About 100 kHz above and below each 500 kHz band, for MARS and other applications • Lock switch: To prevent accidental frequency change • MAIN, RMT, and MEMO indicators: LEDs show functions in operation • Compatibility with TS-930S, TS-830S, TS-130, and TS-120 Series.		
	SPECIFICATIONS • Oscillating Frequency: 5.4–6.1 MHz • Frequency Stability: 1×10^{-6} 20 Hz (at normal temperature), 3×10^{-6} 20 Hz (0–50 °C) • Output Voltage: 0.5 V +3 dB, -1 dB • Power Requirement: 120V AC (variable to 220V AC), 90/60 Hz, 13W • Dimensions: 180 (7.25) x 122 (5.31) x 207 (11.50) mm • Weight: 3.1 kg (6.8 lb)		
		CW FILTERS	
		YG-455C	\$139
		500 Hz CW filter	
		YG-455CN	\$159
		250 Hz CW filter	
		YK-88C	\$89
		500 Hz CW filter	
		YK-88CN	\$89
		270 Hz CW filter	
	SP-230	TS-830S	\$1249
	\$89	VFO-230	\$419
		AT-230	\$289



TOP QUALITY AT A ROCK-BOTTOM PRICE

TS-530S



\$989

TS-530S FEATURES:

Narrow/wide filter combinations

Any one or two of three optional filters... YK-88SN (1.8 kHz) SSB, YK-88C (1500 Hz) CW, YK-88CN (270 Hz) CW may be installed for selecting with "N-W" switch) 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 with 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 blanker, with front-panel threshold level control.

RF attenuator

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, temporary QSY and fast return to a net frequency, searching for a clear frequency, and other applications.

FEATURES

• T.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 class • Output Voltage: 0.3 V; 1 dB • Frequency Stability: Within 100 Hz per 30 minutes after 3 minutes warm-up • Solid-state Component: TET-2, Transistor; 2 Diodes • Power Source: From TS-530S • Dimensions: 160 (1.21W) x 133 (5.31H) x 208 (11.6) 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



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 1 and High 2 = 1.0 kHz/-3 dB • Filter Attenuation Characteristic: -6 dB/Oct. • Dimensions: 160 (7.21W) x 133 (5.3) x 287 (11.57D) mm (inch) • Weight: 1.8 kg (4.0 lbs)

SP-230 External Speaker



\$89

SP-230

TS-530S

VFO-240

AT-230



\$89

\$989

\$239

\$289

TS-660

15M-6M

KENWOOD
ALL MODE TRANSCEIVER

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

**TS-660 FEATURES:**

- FM, SSB (USB), CW and AM operation.
- 10 Hz step digital VFO. The frequency step is determined by mode of operation.
- 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.
- 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.
- Two antenna terminals provided.
- Noise blanker.
- RIT control.

**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.

OPTIONAL ACCESSORIES:

- PS-20 power supply. \$129
- SP-120 external speaker. \$69
- MB-100 mobile mounting bracket. \$49
- YK-88C, normal CW, (500 Hz) filter. \$89
- YK-88CN narrow band CW, (270 Hz) filter. \$89
- YK-88A AM (6 kHz) filter. \$89
- VOX-4 speech processor/VOX unit. \$89

\$949**TEST AND MEASURING EQUIPMENT****SM-220****MONITOR SCOPE**

Based on a wide frequency range oscilloscope top to 10 MHz, the SM-220 station monitor features, in combination with a built-in two-tone generator, a wide variety of waveform shaping capabilities. An optional feature as a direct guard display capability. The SM-220 provides efficient station operation as it monitors transmitted waveforms, and it also serves as a high-precision, 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 input
- Attenuator: 6 steps
- Power supply: 120V/220/240V AC, 50/60 Hz, 20W
- Dimensions: 215 (8.6)W x 153 (6.1)H x 355 (13.4)D mm (inch)
- Weight: 5 kg (11 lbs.)

OPTIONAL ACCESSORIES**Pen Display Unit**

- BS-5 adaptor (for TS-520), BS-8 adaptor (for TS-530G, TS-830 and TS-180)
- Input center frequency: 3.395 MHz (BS-5), 8.830 MHz (BS-8)

SM-220	BS-5	BS-8
\$529	\$109	\$109

LINEAR AMPLIFIERS Clairemont Industries, Inc.

	CI-110
Frequency Range	3-32 mhz
Power Input	215 Watts
Average Power Output	130 Watts @ 60% efficiency
D.C. Supply Voltage	13.8 volts @ 20 amps negative ground
A.C. Exciter Signal Drive	410 Watts
Input Impedance	50 ohms unbalanced
Output Impedance	50 ohms unbalanced into loads not exceeding 3:1 SWR
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 or less than 2 db noise
Physical Dimension	5" x 7" x 3" (127 x 178 x 78 cm)
Weight	2.5 lbs. (1.136 kgs)



CI

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

\$239

What makes one linear amplifier different than all the rest? Check out these features:

Full amateur band coverage — Includes 160 meters.

Instant heating filaments — The 3-500Z tubes require no warm up period. Just turn it on and go!

Time delay fan circuit — Even after you turn the TL-922 off, the super quiet fan continues to work for approximately 2 minutes to greatly extend tube life.

Adjustable ALC output voltage — Lets you tailor the ALC voltage to your exciter.

Standby position — Provides amplifier bypassing without having to turn the AC power off.

Two independent safety interlocks — One disconnects AC line voltage and the second shorts B+ to ground when tripped.

Vernier plate control — For smooth, easy tune-up.

Diecast side panels — Includes functional carrying handles for easy transportation.

Thermal protection of power transformer — Amplifier automatically switches to standby if power transformer temperature exceeds 145°F.

Tuned input circuit — Means improved spurious characteristics.

Line voltage selector — Easily switched between 120 and 240 VAC.

Plate Current Meter — Separate meter allows continuous monitoring of plate current.

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 • Circuitry: AB1 Class Grounded-grid Linear Amplifier • Input Impedance: 50 ohms • Output Impedance: 50 to 75 ohms • Tubes: 6X4 2 x 3-500Z • Dimension: 390 (15.3/8)W x 190 (7-1/2)H x 407 (16)D mm (inch) • Weight: 31 kg (68 lbs)

A NEW 25 WATT AMPLIFIER FOR THE TR-2500

KENWOOD

**2M FM POWER AMPLIFIER
VB-2530**

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

VB-2530 SPECIFICATIONS



\$129

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.

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

Linear Bias

- all-mode operations, AM, FM, SSB, CW
- third order IMD better than 30 dB below 35W PEP out put (EIA Standard)

RF keyed T/R relay

- KLM bias circuit reduces SSB switching distortion
- adjustable drop-out delay for SSB
- keys with less than 100mW drive

Compact: 3" x 6 1/4" x 2 1/4"

- Up to 40 Watts OUT
- more than 11dB gain

MA-35BL for 2 meters

Broadband response . . . 143-149 MHz

- less than 1.5:1 Input VSWR

Receive Preamp

- more than 9 dB gain, 144-148 MHz
- better than 2.5 dB N.F.

Built-in Battery Charger

- overcharge protection (auto-cycling)
- adjustable up to 12VDC



DIP METER DM-81



\$159

FEATURES

1. Measurable frequency range is 700kHz to 250MHz in seven bands.
2. A capacitive probe allows measurements without removing coil shields.
3. All seven dip meter coils, capacitive probe, earphone and ground clip-lead, can be carried within the unit for easy transport and storage.
4. Convenient for both in indoor and outdoor measurements; all solid-state and built-in battery.
5. HC-25U and FT-243 sockets enable use as a crystal checker and marker generator.
6. 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 BFO.

7. An FET and transistor are used in the meter circuit to provide extremely good sensitivity.
8. As an absorption frequency meter, your DM-81 is both to align transmitters and measure field strength.
9. An earphone plug allows you to monitor transmit signals.
10. 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.



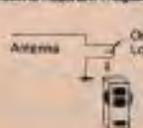
(4) Xtal Checker or Marker Generator.



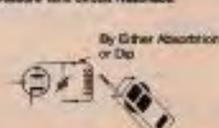
(7) Use as a Heterodyne Frequency Meter or CW Monitor.



(2) Antenna Resonant Frequency.



(5) Measure Tank Circuit Resonance.



(8) Measure an Unknown C.



(3) Signal Generator.



(6) Measure Field Strength.



(9) Measure an Unknown L.



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: 20 to 300Ω, 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 Connector: UHF type (50Ω) • ANT Connector: UHF type (50Ω) GND: Wing nut and STUD • Dimensions: 152 (6.01) x 60 (2.41) x 159 (6.26) 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 (7.21) x 133 (5.31) x 287 (11.60) mm (inch) • Weight: 3.4 kg (7.5 lbs)



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 I)

\$129



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.

Built-in 4:1 balun for balanced lines. 1000V capacitor spacing. Matches everything from 160-10 meters: dipoles, inverted vees, random wires, verticals, mobile whips, beams, balanced and coax lines. Easy to use, anywhere. Measures 8x2x6", has SO-239 connectors, 5-way binding posts, finished in eggshell white with walnut-grained sides.

\$139

NEW MFJ Compact 3 KW Antenna Tuner Has Roller Inductor



MFJ-989
\$499

Meet "Versa Tuner V". It has all the features you asked for, including the new smaller size to match new smaller rigs — only 10 1/2" W x 4 1/2" H x 14 1/2" D. 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 bail; requires 12 VDC for meter light.

3 KW PEP — the power rating you won't outgrow. (250 pf-6K V 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.

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 tuner small enough to carry in your hip pocket! Ultra compact 2x3x4 inches.

Operate from your apartment with a wall to wall antenna, or mobile 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-

pare for an emergency. Take it on a Dikpedition or Field Day. One year unconditional guarantee.

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

\$69



HAMRADIO TEST INSTRUMENTS

Hansen**TEST AND MEASURING EQUIPMENT****IDEAL FOR MOBILING****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 $\pm 20\%$
Connector	: SO-239
Meter Sensitivity	: SWR Meter 100 μ A F.S.D. POWER Meter 100 μ A 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.

Specifications:

Impedance	: 50 - 52 ohms
Frequency Range	: 3.5 - 150MHz
Power Range	: 0 - 20, 200W - 2 ranges $\pm 10\%$
SWR Measuring Range	: 1:1 - 1:3
Punctual Power	: 3.5 - 30MHz (HF Band) 200W 50 - 150MHz (VHF Band) 50W
Meter Sensitivity	: 100 μ A F.S.D.
Connector	: M Type ISO-239(1 x TX, 2x ANT)
Dimensions	: 150(W) x 65(H) x 70(D) mm
Weight	: 400 g.
Accessory	: Bar Antenna 1pc.

Power Cable 1 pc.
Magic Fastener x 2 pairs

This model is a compact through-line type Power-SWR & FS meter designed for the wide frequency range measurement for the amateur radio station. Equipped "On the Air" LED light up in accordance with the output power. Reversible two antenna systems or antenna and dummy load by easy switch operation.

**SWR-3S****\$45****FS-500H****\$99****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-301M FLAT RESPONSE POWER & SWR METER**\$79****FS-601MH PEAK POWER SWR METER****\$89**

Specifications:	FS-301M
Frequency	: 1.8 - 30MHz
Power range	: 0 - 20, 200W - 2 ranges $\pm 10\%$
VSWR	: 1:1 - 1:3
Impedance	: 50 - 52 ohms
Connector	: M TYPE ISO-239(1)
AC source	: AC 100V/220V (4V A)
Dimensions	: 160(W) x 70(H) x 110(D) mm
Weight	: 800 g

Specifications:	FS-500H
Frequency	: 1.8 - 30MHz
Power range	: 0 - 20, 200, 2000W 3 range $\pm 7\%$
VSWR	: 1:1 - 1:5
Impedance	: 50 - 52 ohms
Connector	: M TYPE ISO-239(1)
AC source	: AC 100V/220V (4V A) (PEP measurement only)
Dimensions	: 205(W) x 100(H) x 140(D) mm
Weight	: 1.5 kgs

Specifications:	FS601MH
Frequency	: 1.8 - 60MHz (V.HF band)
Power range	: 0 - 200, 2KW - 2 ranges $\pm 10\%$
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	: 160(W) x 70(H) x 110(D) mm
Weight	: 1 kgs

DUMMY LOADS

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

\$27

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

Run 1 KW CW or 2 KW PEP for 10 minutes, 1/2 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 non-inductive resistor. Oil cooled. Includes high quality, industrial grade transformer of (contains NO 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

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 1/4" 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 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 1000A WATT METER CASE 996.



Power Range

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	2008-2010, 979		2012-2052		975
5000 watts	2010					

PLUG-IN ELEMENTS

INTERCHANGEABLE WITH BIRD MODEL 43 ELEMENTS.

SPECIFY TYPE N OR SO-238 CONNECTORS.

Specifications: Model 1000-A

Power Range..... 0.1 W-5KW

Frequency Range..... 2-1000 MHz

VSWR... 1.05:1 max., with N connectors

Accuracy..... ±5% of full scale

Impedance..... 50 ohms

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 ± 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

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

PHONE PATCH CONTROLLER



KENWOOD

SPECIFICATIONS

- Impedance levels
- Line: 600Ω nominal • TX in: 8Ω nominal
- SP out: 8Ω nominal • Mic: 50kΩ nominal
- (available only where phone patch operation is legal)

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.



046-001

\$85

OSKERBLOCK®

SWR-200B



\$97

SWR Meter	200 B	POWER Meter
Type: Directional Coupler	Type: Through-Line	
Ratio: 1:1 to 1:10 & ∞	Power Range:	
Frequency Range: 1.5 MHz to 200 MHz	0-200W, 0-20W at 3.5/7MHz	
Impedance: 75 Ω or 50 Ω	0-20W, 0-200W, 0-2W at 14, 21, 28MHz	
Full Scale Maximum Power:	Accuracy: ±1% at SWR 1	
100W at 3.5/7MHz	Scale Range: 10W at SWR 1.5:1	
50W at 10MHz	20W at SWR 1.5:1	
10W at 14MHz	20W at SWR 3:1	
5W at 21, 28MHz		
1W at 28.34MHz		

Meters Sensitivity: 90dB D.C.
 Connector: B Type or UHF Type (50 Ω)
 Measurement: 70W at High 210W at Low (220W at High 100W at Low) at 70 Ω
 Weight: 1.20kg (2.6 lb net)

SWR-300



\$109

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

SWR Meter	POWER Meter
Directional Coupler Type	Through-Line Type
Ratio: 1:1 to 1:10 & ∞	Power Range:
Frequency Range: 3.5 MHz to 300 MHz	0-20W, 0-200W, 0-2W at 3.5/7/14/21MHz
Add SWR & Power Coupler	0-20W, 0-200W at 27/28MHz
Model SPC-6B: 50MHz to 144MHz	Accuracy: ±1% at SWR 1
Model SPC-2B: 144MHz to 148MHz	Scale Range:
Model SPC-07A: 430MHz to 430MHz	20W at SWR 1.5:1
Impedance: 50 ohms	20W at SWR 3:1
Full Scale Maximum Power:	
10W at 3.5MHz, 7MHz	
1W at 14 MHz, 21MHz	
0.5W at 27 MHz, 28MHz	
0.5W at 10 MHz, 144MHz, 430MHz	

Meter Sensitivity: 90dB D.C.
 Connector: UHF type (50-250) or B Type
 Dimensions: 95mm H x 220mm W x 115mm D.
 3 1/2" H x 8 1/2" W x 4 1/2" D. Weight: 1.40kg (3.2 lbs) net

MODEL D1200

\$499

DIGIMAX

D612

\$399

with AC-12 ac adapter

D1200 has a built in audio multiplier.

Temperature controlled ovens have long been the accepted industry standard for maintaining crystal controlled precision measuring instruments within frequency tolerance over a wider temperature range than is economically achievable using a TCXO (temperature compensated crystal oscillator) time base. Two objectionable 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.



MODEL D500

\$249

D510

\$299

with AC-12 ac adapter

INPUT IMPEDANCE	
Non-prescaled	1 Meg in parallel with 25 pF
Prescaled	50 ohms in parallel with 25 pF
SENSITIVITY (typical)	
Non-prescaled	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 GHz

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

RESOLUTION (selectable)	
Non-prescaled	1 Hz; 10 Hz
Prescaled	10 Hz; 100 Hz
FREQUENCY RANGE (typical)	
Non-prescaled	50 Hz to 50 MHz
Prescaled D500	30 MHz to 512 MHz
Prescaled D510	50 MHz to 1 GHz

INPUT IMPEDANCE	
Non-prescaled	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 BNC on rear panel 50 OHM & 1 Meg	
DISPLAY	
8 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 four eight digits are blanked with digit display 1 or 0.	
FREQUENCY RANGE (typical)	
Non-prescaled	50 Hz to 50 MHz
Prescaled	10 MHz to 1 GHz
RESOLUTION (selectable)	
Non-prescaled	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 & "C" cells Optional rechargeable NiCad battery pack Current requirements: 250-500 ma typ.	



POWER REQUIREMENTS

8 VDC to 14.5 VDC 100 to 250 mA typical 115 VAC with AC-12 ac adapter

HAM IV \$339**Antenna Rotators****\$179 CD 45**

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 98 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



- 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
MOUNTING PLATE KIT \$18
STANDARD LOWER MAST SUPPORT \$24
HEAVY DUTY LOWER MAST SUPPORT \$99

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	HAM IV	T2X (Tailtwister)
ANTENNA WIND LOAD AREA CAPACITY				
Mounted inside tower	3.0 sq. ft. (1.28 sq. m)	8.5 sq. ft. (1.79 sq. m)	15.0 sq. ft. (1.4 sq. m)	20.0 sq. ft. (1.8 sq. m)
With optional H.D. tower mast adaptor*	NA	NA	7.5 sq. ft. (1.70 sq. m)	NA
With standard lower mast adaptor	1.5 sq. ft. (1.14 sq. m)	5.0 sq. ft. (1.46 sq. m)	NA	NA
MOTOR TURNING POWER—Stall torque	350 in. lbs. (40 N-m)	600 in. lbs. (68 N-m)	800 in. lbs. (90 N-m)	1000 in. lbs. (112 N-m)
BEARING ASSEMBLY—In line assembly eliminates external bearing accessories	Dual Race 12 Ball Bearings	Dual Race 88 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.	493 in. lbs. (51 N-m)	800 in. lbs. (90 N-m)	8000 in. lbs. (888 N-m)	9000 in. lbs. (1017 N-m)

A MATCHING PAIR**— FOR YOU SATELLITE BUFFS****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 1.25-1.825" 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).

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).

\$249
+ \$5 FREIGHT



\$179
+ \$5 FREIGHT



COAXIAL ANTENNA SWITCHES

Model 375 Coax Switch

Single Pole 6 position with grounding of all unused positions. Axial mounted connectors.

\$39

Model 376 Coax Switch

Single Pole 5 position with grounding of all unused positions. Switch position grounds all outputs. Radial mounted connectors.

\$39

Model 590 Coax Switch

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

\$49

Model 590G Coax Switch

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

\$49

Model 592 Coax Switch

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

\$39

Model 593 Coax Switch

Single Pole 3 Position with grounding of all unused positions.

Power 1 KW-2 KW PEP
Impedance 50-75 ohms
VSWR 1.2:1 up to 150 MHz
Crosstalk (measured at 30 MHz) is -45 dB between adjacent outlets and -80 dB between alternate outlets.

Dimensions 1-3/4" high, 5" wide, 3" deep
Weight 1 lb.
Mount Wall or desk

\$43

COAXIAL ANTENNA CHANGEOVER RELAY

Model 377

Economical and reliable. Can be operated from VDR 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.

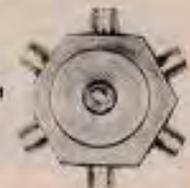
Specifications
Power Rating 1000 watts CW (2000 watts SWR)
VSWR Less than 1.15:1, DC to 150 MHz
Power Requirements 0.015 Amperes, 48 to 130 volts AC
Connectors UHF Type SO-239
Dimensions 3-1/2" x 1-1/2"
Shipping Weight 1 lb.

\$40

Model 377

Model 550A Coax Switch \$49

Single Pole 3 position switch. Radial mounted connectors.



Model 594 Coax Switch

2 Pole 2 Position

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

\$49

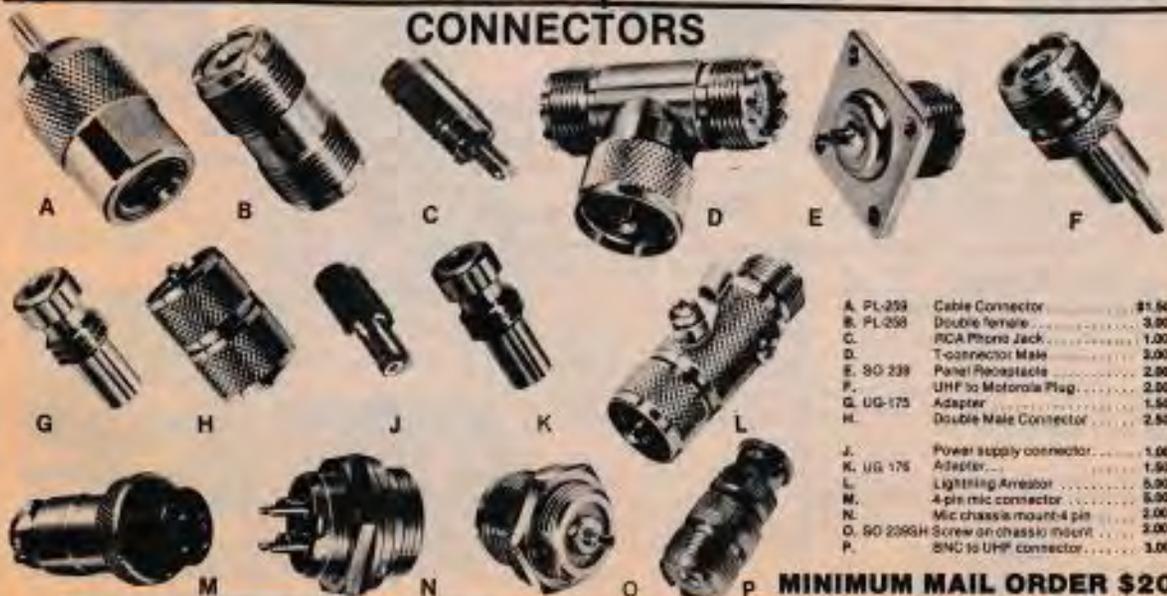
Model 595 Coax Switch \$49

Single Pole 4 Position with grounding of all unused positions.

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



CONNECTORS



A. PL-259	Cable Connector	\$1.50
B. PL-258	Double female	3.00
C.	RCA Phone 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. UG 175	Adapter	1.50
L.	Lightning Arrestor	5.00
M.	4-pin mic connector	5.00
N.	Mic chassis mount 4 pin	2.00
O. SO 209GH	Screw on chassis mount	3.00
P.	BNC 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 5 P)
- PG-4C (for 5 P)

\$15 each



● MJ Series Microphone Plug Adaptor

- MJ-46 (4P - 6P)
- MJ-48 (4P - 8P)
- MJ-54 (6P - 4P)
- MJ-58 (6P - 8P)
- MJ-84 (8P - 4P)
- MJ-85 (8P - 6P)

\$11 each



● PG-2 Series DC Power Cable

- PG-2A for TR-8400/9500 \$7
- PG-2B for TR-7730/7850/
7950/7930/9130 \$11
- TS-130V/660
- PG-2C for TS-120S/130S \$15
- 130SE/180S

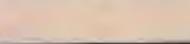


COAX, ROTOR, AND ANTENNA WIRE

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

	NOMINAL ATTENUATION	dB/100 FT.	
		MHz	dB
RG8/u Foam 90¢/FT 	50	1.2	
	100	1.6	
	200	2.6	
	300	3.3	
RG8/u Regular 85¢/FT 	100	2.0	
	200	3.0	
	400	4.7	
	600	7.8	
RG-213u 85¢/FT Non-contaminating 	100	2.1	
	200	3.1	
	400	5.0	
	600	9.6	

COAXIAL CABLES

RG-58u 18¢/FT SOLID CONDUCTOR 	100	4.1
	200	6.2
	400	9.5
	600	14.5
RG-58Au 21¢/FT STRANDED CONDUCTOR 	100	5.3
	200	8.2
	400	12.8
	600	20.0
RG-8x 35¢/FT MINIATURE FOAM 	100	3.0
	200	4.5
	400	6.0
	600	9.0

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



ANTENNA WIRE

8¢/FT

NEW, MOLDABLE PLASTIC

COAX-SEAL

Seals coax fittings from moisture and corrosion

\$4

- Only material that will adhere to poly vinyl or vinyl ester 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

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



INSULATORS



CI
Center insulator for multiband doublets. Accepts 1/4" or 1/2" coax. \$9



EI
End insulators for multiband doublets. Pair of 7" (178 mm) heavily separated end insulators. \$7

KENPRO End Insulators
4" long, 1 1/4" max. diam.



\$6 A Pair.



\$35

Glenco BL-50A Balun 1.8 to 30 MHz made in Japan 1 to 1 toroid balun. New deluxe version. 4000W P.E.P. dipole attachments only 5 1/2 oz.



Hy-gain BN-88 Balun.
1 to 1 at 52 ohms
weighs 1 lb.

\$36

BALUNS



\$33

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



KW BAL-1

1 to 1 ratio and only 4 ozs.
Designed for 50 ohm,

\$30

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

Model 375-11

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 B&W Model CC-50 Dipole Center Connector. Traps weigh approximately 9 ounces each.



\$125

FIVE BAND TRAP ANTENNA MT-240X

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



Impedance :50ohms \$89
Frequency range:3.5-28MHz
Input power :1KW PEP 500W CW
V.S.W.R. :Lower than 1.2:3.5,7,14,28MHz band
Lower than 2.0:21MHz band
Overall length :7m 23ft. Double doublet

TET ANTENNA SYSTEMS

ANOTHER GLENWOOD FIRST!

HB33SP



\$319

- 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

HB34D



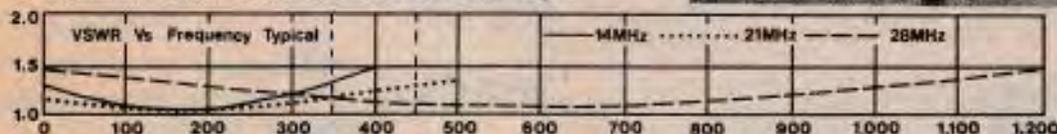
\$359

ALL THESE ANTENNAS ARE
SHIPPED FREIGHT COLLECT

HB35T



\$439



- 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

\$129



TA-8

All band utility antenna for
7/10/14/21/24.5/28/50/144 MHz

\$189



SQ22



\$99

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. **\$119**

	HB34D	HB35T	HB-33sp	20M3sp	SQ007	SQ22	MV0-74	MV-4 BH	MV-6 BH	TA-8	AX-210N
Band	14/21/28MHz	14/21/28MHz	14/21/28MHz	14MHz	432MHz	144MHz	440 MHz 490 MHz	7/14/21/28	35/7/14 21/28	7/10/14/21 24.5/28/50/144	144MHz
Element	3/4/4	4/5/5	3	3	2x2	2x2	4	—	—	—	10x2
Gain	10/12/11dB	10/13/12.5dB	8.5/8.5/10dB	10dB	16dB	16dB	7.4dB	—	—	—	12dB±2
F/B Ratio	22dB	23dB	20dB	20dB	20dB	20dB	—	—	—	—	25dB
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	2KWpep	250Wpep	250Wpep	250Wpep	1 KWpep	1 KWpep	—	500Wpep
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm						
Element L.	8.4m	8.4m	6.9m	6.8m	0.17m	0.57m	1.5m	4.2m	6.6m	1.2m	1.67m
Boom L.	6.9m	8.0m	4.9m	5.0m	0.54m	2.0m	—	—	—	3.5m	3.6m
Tuning Radius	4.69m	5.56m	4.59m	3.67m	0.43m	1.00m	—	—	—	—	1.79m
Wind Surface Area	0.61m ²	0.75m ²	0.46m ²	0.29m ²	0.09m ²	0.15m ²	0.04m ²	—	—	—	0.23m ²
Wind Load (IEA STD 60 MPH)	81.0kg	75.0kg	45.0kg	36.7kg	3.0kg	15.0kg	3.4kg	—	—	—	23.0kg
Weight	19.5kg	22.5kg	13.5kg	16.8kg	1.3kg	1.85kg	0.75kg	2.4kg	—	5.1kg	3.5kg
PRICE	\$359	\$439	\$319	\$299	\$119	\$99	\$49	\$99	\$119	\$189	\$129

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



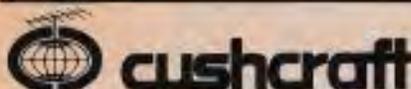
model 375-10 portable whip antenna

Designed especially for apartment dwellers and renters who cannot have a permanent antenna. This simple unit tunes the 2, 5, 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. Weighs less than 2 pounds, complete with base loading coils,* coaxial feed line, and counterpoise. Disassembled for packing or storage, whip is only 32-1/2" long, mount is 14" long. Whip extends to 57". *Loading coils not used for 8 meters or 2 meters. Power rating is 360 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

\$399

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
A744 7 MHz/10MHz kit for A4

\$149 each

A743 & A744	7 MHz Section (43M)	10 MHz Section (20M)
Driven Element (ft-in)	33-2 1/4 min. 35-4 max.	27-1 1/2 min. 28-4 1/4 max.
with Adapter Kit (in)	10, 12 to 10-17	8-27 to 8-66
Wind Loading (ft-in)	58	27
	36	08
Weight (lb)	3.44	2.39
	1.56	1.04
Bandwidth (KHz)	150	150
Side Rejection (dB)	40	40



A4

\$529

	A3	A4
Forward Gain	8 dBd	8.9 dBd
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)	14' x 1.83" - 1.50"	16' x 2"
(cm)	426.7 x 4.13 - 3.81	548.6 x 5.1
Longest Element (ft-in)	27.75' x 1.13" - .50"	32' x 1.13" - .50"
(cm)	845.8 x 2.86 - 1.27	975.4 x 2.9 to 1.3
Wind Surface Area (ft ²)	4.36	5.5
(m ²)	.47	0.61
Weight (lb)	27	37
(kg)	12.9	16.8
Turning Radius (ft)	15.50	18.4
(cm)	4.72	56.1
Max Diameter (in)	1.25 min. 2 max.	1.25 to 2.13
(cm)	3.18 to 5.08	3.2 to 5.4

ALL THESE ANTENNAS SHIPPED FREIGHT COLLECT

HF MULTIBAND VERTICALS

HUSTLER

4-BTV

- **Lowest SWR—PLUS!**
- Bandwidth at its **broadest** SWR 1.6 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 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 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.
- Power capability—**full legal limit** on SSB and CW.
- Ground mount with or without radials, roof mount with radials.

\$199

+ \$6 FREIGHT



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 1/2" (4.7 cm) 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. **\$109**
+ \$5 FREIGHT
- AV4**
Covers the 40-20-15-10 meter amateur bands with low V.S.W.R. Overall height 19 ft., 5.9 meters. **\$189**
+ \$5 FREIGHT
- 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. **\$209**
+ \$5 FREIGHT

TELEX. hy-gain.



18HTS \$729

Shipped Freight Collect
(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 1/4 wavelength (or odd multiple of a 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 SN-over base.

18AVT/WBS \$179

+ \$5 FREIGHT
(for 80 through 10 meters)

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

+ \$5 FREIGHT
(for 40 through 10 meters)

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.

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 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 12AVQS. Kit includes base plate, mast, radial/guy wires, and mounting hardware.



OUR LOWEST PRICED VERTICALS.

TET MV4BH

\$99 + \$5 FREIGHT

MV4BH

Vertical for 10-40 meters
MV5BH

\$119 + \$5 FREIGHT

MV5BH

Vertical for 10-80 meters

KENWOOD HF MOBILE ANTENNA

5 BAND HELICAL TYPE



Band.....	3.5, 7, 14, 21, 28 MHz	Weight.....	1.115 kg (2.453 lbs)	Length.....	Base Element	1245 (49-01) mm (inch)	
Impedance.....	50 ohms		Base Element	190g	3.5 MHz Element	185 (7-9/32) mm (inch)	
VSWR.....	3.5, 7, 14 MHz 1.5:1		3.5 MHz Element	600g	7 MHz Element	1250 (49-7/32) mm (inch)	
	21, 28 MHz 1.3:1		7 MHz Element	155g	14 MHz Element	1150 (39-15/16) mm (inch)	
Max. Power			14 MHz Element	95g	21 MHz Element	485 (19-3/32) mm (inch)	
Input.....	200W pep		21 MHz Element	40g	28 MHz Element	165 (6-1/2) mm (inch)	
MA-5	10-80 METER HELICAL ANTENNA	\$148	28 MHz Element	35g	VP-1	BUMPER MOUNT FOR MA-5	\$80
							+ \$5 FREIGHT

SSM-2
\$37

MODEL MO-1 \$39 + \$5 FREIGHT
For deck or fender mounting—Fold is at roof line 15" above base.

MODEL MO-2 \$39 + \$5 FREIGHT
For bumper mounting—Fold is at roof line 27" above base.

Stainless steel spring

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

Model	Band	Price
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-85-S	80 meters	\$68

Super Resonators RM151
2 KW PEP
Greatest Coverage

Model MO-1
For Deck or Fender Location

Rotates 360° in horizontal plane for easy gauging

The original hinge and servo clutch mechanism

Model BM-1
Bumper Mount

Model MO-2
For Bumper Mount Location

Model SSM-2
Ball Mount

Model QD-1
Quick Disconnect

Model RSS-2
Resonator Spring

HUSTLER INC.

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



hy-gain **Hy-Gain 270** **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

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

Feedline - RG58/U coax
PL-259 connector
3/8"-24 x 1/2 stud base fitting

\$81

V2S

A 2-meter vertical, 3 dBd of 5.2 dBc gain derived from the famous extended double zepp 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.

V3S
Same as V2S above except for 220-225

V4S
Same as V2S above except for 440-450 MHz.

• Requires no tuning
• Easy to assemble
• Weather protected RF connection
• Radiation pattern independent of vehicle or mast length

SPECIFICATIONS	214	\$67	203	\$34
Mechanical				
Boom length	186"		43 1/2"	
Longest element	39 1/2"		40 1/2"	
Tuning radius	95"		43 1/2"	
Wind survival	65 mph		80 mph	
Mast diameter	1 1/4" O.D.		1 1/4" O.D.	
Boom diameter	1 1/4" O.D.		1 1/4" O.D.	
Wind load area	1.85 sq ft max.		4.66 sq ft max.	
Net weight	5.5 lbs.		2.2 lbs.	
Electrical				
Forward gain	13.0 dBc*		6.1 dBc*	
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 mismatch	52 ohms		52 ohms	
1/2 power beam width	35° vertical		95° vertical	
	35° horizontal		60° horizontal	
Stacking distance	82" min.		82" min.	

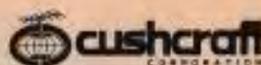
Hy-Gain 214

\$67

SHIPPED
FREIGHT
COLLECT

CHECK WITH YOUR LOCAL FREIGHT COMPANY FOR AN ESTIMATE AS THE HY-GAIN 214 PACKAGE IS 6 FEET LONG AND WEIGHS 3.1 KG

VHF UHF ANTENNAS



ARX-2B \$79

RINGO RANGER II



FM RINGOS

+ \$5 FREIGHT

ARX-2
\$63AR-2
\$47

Model	ARX-2B	ARX-2*	AR-2*	ARX-450B
Frequency, MHz	134-164	137-160	135-175	435-450
2:1 VSWR Bandwidth MHz	>3	>6	10	>10
Length (ft)	166	112	112	99
ft)	4.3	2.8	2.8	1.5
Wind Area (ft ²)	50	33	0.21	2
(m ²)	.95	.09	.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	900
	\$79	\$63	\$47	\$79

Support mast between radials and antenna base ring is not included. *No decoupling section

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
CONVERTSAR-2 = ARX-2
\$37ARB-2K
CONVERTSARX-2 = ARX-2 B
\$37

+ \$5 FREIGHT

FOUR POLE

Model	AFM-4D	AFM-24D	AFM-44D
Frequency, MHz	144-146	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)	2.58	1.85	1.13
(m ²)	.24	.17	.11
Maximum mast OD (in)	2	2	2
(cm)	5.1	5.1	5.1
	\$145	\$145	\$119

Support mast not included.

AFM-4D
\$145

+ \$5 FREIGHT



YAGIS

+ \$5 FREIGHT

A449-6 \$55



FOR YOU OSCAR OPERATORS

A147-20T
\$145

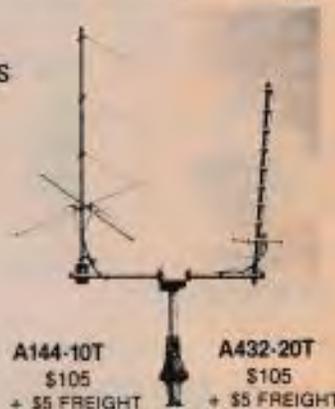
+ \$5 FREIGHT

A147-22 \$249

+ \$5 FREIGHT



A147-4 \$55 + \$5 FREIGHT

A144-10T
\$105

+ \$5 FREIGHT

A432-20T
\$105

+ \$5 FREIGHT

BOOMER

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

Model	A147-4	A147-11	A147-22	A220-7	A449-6	A449-11	214FB	228FB
Frequency MHz	145.5-148	145.5-148	145.5-145	220-225	440-450	440-450	145.5-145.5	145.5-145.5
2:1 VSWR bandwidth MHz	>4	>3	>3	>5	>10	>10	145	145
Gain dBd	10.0	13.2	16.2	11.0	10.5	13.2	15.2	18.2
Front-to-back ratio dB	16	20	20	20	16	20	24	24
3-dB beamwidth (deg)	66	48	42	57	60	48	15	15
Boom length (in)	44	144	80	69	35	60	4.57	4.57
(m)	1.1	3.6	2.1	1.7	0.89	1.5	106.3	106.3
Longest element (in)	40	40	40	27	13	13	7.5	9.5
(m)	1.0	1.0	1.0	0.68	0.33	0.33	2.29	2.90
Turning radius (in)	44	72	65	69	18	60	1.7	4.0
(m)	1.1	1.8	1.5	1.7	0.46	1.5	16	37
Wind area (ft ²)	0.43	1.21	2.62	0.48	0.30	0.39	8	22
(m ²)	.04	.11	0.27	.04	.03	.04	3.13	9.36
Weight (lb)	3	6	15	2	3	4	8	22
(kg)	1.4	2.7	6.7	.9	1.4	1.8	3.63	9.96
Maximum mast OD (in)	2	1.50	2	2	2	1.50		
(cm)	5.0	3.8	5.0	5.0	5.0	3.8		
	\$66	\$85	\$245	\$85	\$65	\$79	\$199	\$425

228FB

\$425



214FB

\$159



THESE BEAMS ARE SHIPPED FREIGHT COLLECT

Larsen MOBILE ANTENNAS

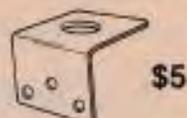
5/8 BASE LOADED ANTENNA Handles full 200 watts of power.
(WHIP AND COIL)

Deliver full 3 db GAIN
over 1/4 wave whip!

With Larsen K01rod 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 3/4" hole.
TMB-38 Bracket for 3/8" hole.
TMB-56 Bracket for 5/8" hole.



W-490 (49" WHIP ONLY)

\$11
+ \$5 FREIGHT

1/4 WAVE ANTENNA
(COMPLETE)

PO-FITTING



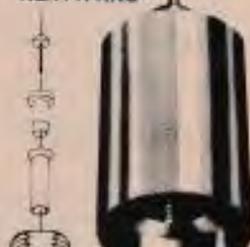
FITS ON TO
THIS SO - 239
SOCKET



\$38

+ \$5 FREIGHT

NLA-FITTING



1/2" hole; mounts in
Roof/Trunk/Fender.
for simplest, very low
silhouette installation
using snap-in type
hardware.



Q Model
\$5

PO Model
\$10



LM-FITTING

+ \$5 FREIGHT

LM COIL ONLY
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
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	1/4 WAVE WHIP	1/4 WAVE WHIP
LM FITTING	\$22	\$21	\$10	\$14	\$23	\$25	\$11	\$5
PO FITTING	\$24	\$22	—	—	\$24	\$27	\$11	\$10
NLA FITTING	\$24	\$21	\$11	\$15	\$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. Many items are ONE OF A KIND.

MAKE	MODEL NO.	DESCRIPTION	PRICE
Kenwood	RM-76	Remote Controller with 6 Memories & Scanning for TR-7600/7625	\$129
	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
	TS-120V	QRP (10W) version of the popular TS-120S solid state 10-80M mobile transceiver	\$599
	DK-520	Digital conversion kit for TS-520	\$20
Swan	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
FDK	Multi-750	2 mtr-10w all mode synthesized transceiver. 800 ch.	\$399
	KP-12A	Speech processor	\$159

GLENWOOD TRADING COMPANY LTD.

ORDER DESK

MINIMUM ORDER
\$20

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

(604) 984-0405

BON DE COMMANDE - ORDER FORM

Catalogue Page No.	Item No.	Quantity Ordered	DESCRIPTION	Price/Charge Price Each	AMOUNT

Mr. M. Mrs. Mms. Mis. Mlle.		COMMANDE PAR - ORDERED BY Call Sign	
(Please PRINT)			
Address		Postal	
Address		Code	
City	PROVINCE	Postal	Code
Telephone Area Code:		Phone No.	
I HEREBY AUTHORIZE GLENWOOD TRADING COMPANY LTD. TO CHARGE THE AMOUNT OF THIS ORDER PLUS FREIGHT TO MY VISA OR MASTERCARD CARD.			
NO. _____		BANK _____	
EXPIRATION _____		SIGNED _____	
*ADD 6% SALES TAX FOR B.C. RESIDENTS **Applies only to Antennas, Rotors, Towers, Cables and C.O.D., collect and charge card orders.			

SALES TAX*	
Shipping/Postage**	
TOTAL	
Money Order	CHEQUE
<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***	
C.O.D.***	

***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 cable, when the order is prepaid by cheque, money order, cash, telegraphic or bank transfer, (N.W.T. and some out of way points excepted.) We accept Visa and Mastercard. For charge card orders, shipments on 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, Postpak or Rapides. 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 post.

You can place your order either by mail, or by phoning our order desk (604) 954-0405.

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 receiving 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 two-way freight charges plus shipping and handling costs, we regretfully 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, 15th and Lombard 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 \$200 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 guarantee providing they have not been misused, tampered with or otherwise mistreated. Our charge out rate for service technicians' labour for out of warranty work is \$30 an hour, minimum charge one hour. Please write to our service department regarding any malfunction for instructions for return and repair. Taxes and final (output) translators 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

Nous expédions, sans frais pour le client, la plupart des nos articles, à l'exception des antennes, des pylônes, des rotateurs et des câbles, quand la commande est payée d'avance par chèque, mandat postal, en espèces, transfert télégraphique ou bancaire (excepté pour les Territoires du N.O. 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, postpak ou rapides. 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, la remplir 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 prenons soin d'en aviser nos clients.

Vous pouvez passer vos commandes en téléphonant au bureau des commandes (604) 954-0405. Pour des commandes de plus de \$100 nous déduisons le prix de votre appel jusqu'à un maximum de \$5. Nous regrettons de ne pouvoir accepter des appels à frais vifs. Pour accélérer le paiement, nous acceptons les cartes de crédit Visa et Mastercard. Pour les arrangements de livraison rapide (c'est à dire livraison suite que par la poste), ou pour paiement à la livraison, par carte de crédit, ou espèces à crédit, les marchandises seront soit expédiées en port dû, ou bien vous serez facturés 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.

PRX

L'inflation qui touche notre économie et celle des pays dont nous importons, les variations des cours du change nous obligent parfois 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'approbation du client. Nous souhaitons que vous acceptiez nos contraintes; nous nous excusons des inconvénients qui en résultent. Soyez assurés que nous nous efforçons de garder cette réputation qui est nôtre, d'offrir la meilleure marchandise au plus bas prix.

RETOURS ET ECHANGES

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

On 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 versement initial de 25% doit accompagner toute commande à être livrée contre remboursement (C.R.). Nous sommes forcés de prendre cette mesure parce que des gens 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 accélérer la rapidité des livraisons, vous pouvez établir votre paiement à la Banque Toronto-Dominion, 15th & Lombard 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 poste n'accoste pas les commandes C.R. supérieures à \$200.00. Si l'article commande coûte plus de \$200.00, il vous sera expédié sur la base "Collect", c'est-à-dire d'un montant à percevoir du destinataire, 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

Nous vendons l'équipement que nous vendons. Au meilleur de notre connaissance, il rencontre les spécifications fournies. Nous n'annonçons que de bons produits. Si vous achetez 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 de nos techniciens du service de réparation travaillant sur des articles non couverts par la garantie de \$30, 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 retour de l'appareil défectueux.

Les lampes et les translateurs 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 punctuations 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.

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

CALL BOOKS

\$27

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

\$26

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Advanced Amateur Certificate Study Guide	\$8.00

OPERATING SUPPLIES

- RADIOGRAM PADS 70 sheets \$2 LOG BOOKS Mini Log 4 x 6 \$2

LOG BOOKS

8 1/2 x 11 Spiral \$4

ARRL PUBLICATIONS

- | | | |
|--|---|---|
| <input type="checkbox"/> RADIO FREQUENCY INTERFERENCE Solutions to a real problem that faces every radio amateur. \$6.00 | <input type="checkbox"/> FM AND REPEATERS FOR THE RADIO AMATEUR Complete manual of fm and repeater operation and equipment design. \$8.00 | <input type="checkbox"/> THE RADIO AMATEUR'S HANDBOOK The standard manual of Amateur Radio Communications. \$15.00 |
| <input type="checkbox"/> REPEATER DIRECTORY 1982 edition. listing of U.S. and Canadian repeaters \$2.50 | <input type="checkbox"/> HINTS AND KINKS Contains over three hundred practical ideas for your ham shack. \$6.00 | <input type="checkbox"/> ARRL OPERATING MANUAL Definitive source of good operating practices applied to over a dozen most popular Amateur Radio activities. \$8.00 |
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RSGB PUBLICATIONS

VHF-UHF MANUAL \$24.00

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FREQUENCIES

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About Stations Broadcasting
in English 24 Hours a Day

\$11

ALL NEWS SERVICES LISTED
BY COMPLETE STATION LISTS

BY COUNTRY LISTED
BY FREQUENCY LISTED
BY ICAO IATA ICAO IATA ICAO IATA

WORLD RADIO TV HANDBOOK

\$23

FAST SCAN ATV

P. C. ELECTRONICS

ALL YOU NEED IN ONE BOX.



TC-1

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 426.25 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-NUMERICS.
- BUILT-IN REGULATED AC POWER SUPPLY.
- TUNEABLE DOWNCONVERTER 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.			
146.34	146.94	TR-2200: 144.46, 144.72, TR-7200: 144.46, 144.60, 145.32			

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 \$3.50 EACH. MINIMUM ORDER — \$14. THIS APPLIES ONLY TO XTALS FOR THE MULTI-7, MULTI-11, TR 7200, TR 7300.

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

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.



\$1349 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 127 mmH 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 or 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

CWR 675E Telereader receive only with built-in 5" green CRT

- 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

\$829**8510P Dot Matrix Printer**

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.

\$999

Centronics-compatible parallel interface for compatibility with Telereader equipment.

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

**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 4 1/2" wide paper.

\$459

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

**DP-8480 Dot Matrix Printer**

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

\$729**CWR-610 Morse Master**

Receives CW (Morse), RTTY (Ba dot) and ASCII. Built-in Centronics compatible parallel interface. Displays 576 characters x 2 pages; total 1008 characters.

\$239

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



CONNECTING CABLE BETWEEN TELEREADER AND PRINTER. \$49

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. Auto-start automatically turns on the RTTY unit on reception of valid frequency shift tone. 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, also 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 at 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.

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**

3 1/2" x 6" card with 15 pin connector
Power requirements: 12-18 volts
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 latched (continuous with self reset)
— one timed (temporary) with self reset after 8 seconds.
Standard 7 out of 8 DTMF signaling.

**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.

\$5 MINIMUM ORDER

EXPERIMENTERS — HOME BREWERS

MINIMUM ORDER \$5



ALL ITEMS
NEW AND
UNUSED

PRICES SLASHED TO CLEAR — LOOK HERE FOR BARGAINS

R. F. POWER TRANSISTORS 2N4375 Final — 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. Bags of 50. Only \$1 per bag.

ELECTROLYTIC CAPACITORS. 16mF — 500mF. 5V—15V. Approx. 20 per bag. Only \$2.

CERAMIC DISC CAPACITORS. 9.001mF to 4700 pf. 1V—3KV. Approx. 125 per bag. Only \$2.

**\$9.00****HIPOWER
ADAPTER**

NI-CAD MODEL
CHARGER NO. 645CS

IDEAL FOR USERS
OF:
PORTABLE TRANS-
CEIVERS.
CASSETTE RECOR-
DERS.
CALCULATORS.
— AND ESPECIALLY
AT CHRISTMAS —
TOYS.
CSA APPROVED.

INSTRUCTIONS
The MODEL 645CS Ni-cad charger is provided with 3 "snap-on" holders so that you can charge, at one time, two 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 (+) mark 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

MORSE TUTOR D-70

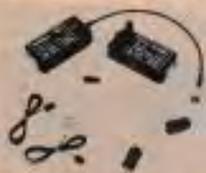


\$169

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 amplified) located near the receiver.

Although only 3 metres long, MODEL AD 270 has the same directional properties as a full-size dipole, even at 60kHz. Despite its small 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.

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



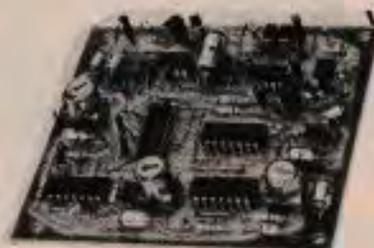
SPEECH PROCESSORS.

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



\$239

AUDIO FILTER

MODEL FL1 is a most unusual audio filter. It is highly versatile add-on unit for communications receivers which gives great flexibility in helping to extract the signals you want (SSB, CW, RTTY etc.) from background interference. It simply connects in series with the loudspeaker or headphones. Fully variable bandwidth and centre frequency plus "flat-topped" pass-band response give similar effects to "I.F. pass-band tuning" for SSB or RTTY reception, and bandwidth down to 20Hz (with limited a.f.c.) gives an amazing capability for pulling weak CW stations out of the QRM.

MODEL FL1 is also completely unique in being able to tune itself when notching out unwanted whistles. That's why we call it the "Frequency-Agile Audio Filter." If a whistle appears on your channel, MODEL FL1 will normally remove it from audibility within a couple of seconds... completely automatically! This ability makes conventional notch filters look positively stone-age and allows the notch width to be so narrow (5Hz) that you lose virtually nothing of the signal you want.

FEATURES

- Twelve poles of tune-table 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.

FL-2

Multimode Audio Filter

Fully variable bandwidth, pass-band and notch filter for improving any receive.



Model FL2

\$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.

- 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 FL3-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.

SHOOT DOWN TUNE-UP WHISTLES AND HETERODYNES

Imagine the benefits. A tune-up whistle no longer causes any problems, after a second or two it simply drops out of ear shot. Those tiresome 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 merrily 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 out. 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

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 minimises receiver overload and cross modulation.
- R.F. activated bypass relay allows easy use with transceivers.
- Rugged diecast aluminium case with SO 239 connectors and PTH printed circuit board.



VLF/MW/SWL Antenna Tuner
Greatly improves 10KHz to 30 MHz reception.

\$129



This MFJ-900 VLF/MW/SWL preselecting antenna tuner greatly improves reception of 10KHz thru 30 MHz signals, especially those below 2 MHz.

Let's you peak desired signals while rejecting interference. Reduces overload, background noise, crossmodulation, and intermodulation. VLF signals come roaring in.

Switch between two antennas and two receivers. Bypass position connects antenna directly to receiver. 5 1/2 x 2 1/2 inches. Black, egg-shell white aluminium cabinet.

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. Phono jack for external ant. 6x2x6 in.

Rivals long wires

\$129



MFJ Dual Tunable SSB/CW Filter "Signal Enhancer"



MFJ-752B \$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 lets ears and mind reject QRM. Inputs for 2 rigs, switch selectable. Plugs into phone jack. Two watts for speaker. OFF bypasses filter. 9-18 VDC, 300 mA.

Low Pass Filter 020-001

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

\$40



Kenwood LP-30 A

\$39



Cutoff freq: 30 Mhz
Attenuation: More than 90 dB (90-300 Mhz)
Impedance: 50 Ohm
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

• BC-1
AC Adapter for Memory
back-up



\$20

• ARRESTER Series
Lightning & Static Protector

\$59



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

SWL ANTENNA

\$65

- Only 40 feet long
- NEW PATENTED HIGH EFFICIENCY TRAPS
- Automatically tunes the popular 11, 13, 16, 19, 25, 31 and 49 short wave bands.
- Can be installed as a flat top, sloper 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.



ASW-49

LA-1

Lightning Arrestor
Usable for 1.8 to 54 MHz.
Will safely by-pass to ground
ten plus lightning strikes.
ORDER NO. 229

\$109



ACCESSORIES

● **SP-40 Compact Mobile Speaker**

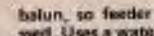
Very small, high-quality mobile speaker, which can be mounted virtually anywhere.

Max. input: 3 W
Impedance: 4 Ω
Dimensions: 88(2.7)W x 64(2.6)H x 54(2.2)D mm (inch)
Weight: 260 g (0.6 lbs) approx.

\$35

● **KB-1 Deluxe VFO Knob** \$19
(Matches TS-830S, TS-830S, TS-820S, R-820, VFO-230, VFO-240)● **PG-3A Noise Filter** \$16
(for Mobile Transceivers)● **MB-100 Mobile Mount** \$49**HA-3****VERTICAL ANTENNA**
(for TS-680)

Covers the three bands 15m, 10m, 6m. Small size and light weight makes it easy to disassemble and relocate. Provided with radials for all bands which can be easily adjusted to obtain optimum performance. Complete coupling between the antenna and feeder is obtained with a built-in balun, so feeder radiation is completely suppressed. Uses a waterproof type trap coil.



\$179

SPECIFICATIONS

● Frequency: 15m, 10m, 6m band ● VSWR: 15m band = less than 1.5 : 1 (260 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.

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!

VIBROPLEX**THE ORIGINAL KEY**

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 wherever speed and perfection are desired.

Deluxe Model: \$114

Presentation Model: \$195

Standard Model: \$84

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 traditional skill with electronic force.

Deluxe Model: \$104

Standard Model: \$84

**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 dot/dash insertion and other unique features of the modern electronic keyer. Vibroplex distinction for the modern operator.

Deluxe Model: \$104

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, textured, 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 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 main spring to offer a wider range of sending speed without sacrificing signal quality or causing pendulum drag.

Keyer Combo MFJ/BencherMFJ-422
Combo

\$159

The best of all CW worlds - a deluxe MFJ Keyer in a compact configuration that fits right on the Bencher 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.

Ultra-reliable solid state keying: grid-block, cathode and solid state transmitters (-300 V, 10 mA max., +300 V, 100 mA max.). Fully shielded. Uses 9V battery or 110 VAC with optional adapter. MFJ 1312, \$9.95.

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.

TELEGRAPHIC KEYS



NYE VIKING Speed-X KEYS

NYE VIKING \$40
CODE PRACTICE SET

You get a sure, smooth, Speed-X model 404-002 transmitting key, linear circuit oscillator and amplifier, with a built-in 2" speaker, all mounted on a heavy duty aluminum base with non-skid 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 base, 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 key arm with Navy knob.

No. 330-001



\$25

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



\$36

Model 321-003
Heavy duty key with navy knob. Coin silver contacts. Chrome plated base with switch.



\$43

Cat. No. SSK-1

Model SSK-1 Features: extra-long form-fitting molded paddles with adjustable spring tension ... adjustable contact spacing. Knife-edge bearings. Extra-large, gold-plated silver contacts. Nickel-plated brass hardware. Heavy die cast base with non-skid feet. Base and dust cover black-crackle finished. Shipping weight, 2 1/4 pounds.



IAMBIC KEYS

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

MEMORY KEYS 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

SSK-1-K

\$199

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 1.6 kg.



\$149

KATSUMI ELECTRIC
\$179

EK-150

ELE-KEY MODEL EK-150 FEATURES:

- Speeds from 8 to 80 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.

BRASS POUNDER KEY

An excellent key for the beginner

\$8



Code Practice Oscillator



\$17

3-way operation: light indicator, variable pitch tone, or light-tone combined. Built-in speaker, terminals for keyearphone. Battery operated transistor oscillator. Two C batteries required. 6 1/4" x 3 1/4" x 2".

MICROPHONES

KENWOOD MC-50
50 k Ω /500 Ω
Desk
Microphone



\$59

MC-60 DELUXE DESK-TOP MICROPHONE
(50 k Ω /500 Ω)



\$99

• N4 - 4 pin



\$109

• S6 - 6 pin (with UP/DOWN switch)
• S8 - 8 pin (with UP/DOWN switch)

MC-60A
DELUXE DESK-TOP
MICROPHONE
(50k Ω /500 Ω)



\$109

The MC-60A microphone has built-in pre-amplifier to obtain quality audio sound. The microphone plug adaptor is necessary (N4-68) when using with TR-7950/ TR-7930.

MC-55

Electret condenser microphone.



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

\$79

MC-46



\$79

MC-46 16-key autopatch
UP/DOWN microphone.

CURLY CORD



\$6

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

MC-10



\$20

MC-10 (50 k Ω)
Hand Microphone
50K Ohm impedance
Freq. response 150 - 5000 Hz.
Also available, MC-10A
500 OHM impedance

MC-30S,35S



\$39

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

MC-40S



\$39

UP/DOWN
Microphone
for manual band scan.
500 Ω

DM-90A



\$18

500 OHMS

HC-10 DIGITAL WORLD HAM CLOCK

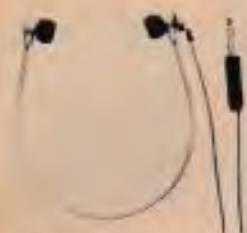


THE HC-10'S EXCITING FEATURES INCLUDE:

- Two 24-hour displays with a high-precision quartz time base.
- Pre-programmed time differences of 10 major cities around the world (GMT, PARIS, TOKYO, SYDNEY, HONG KONG, 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 at QSO ending time). Recalled starting time is shown on left display, and ending time on right display.
- Attractive, functional layout, with switch buttons on slanted panel. Cabinet is trigonal prism shaped for stability. With a pleasing color combination and modern styling, the HC-10 will enhance the appearance of any ham shack.

\$179

HEADPHONES

TELEX.**HFC-91**

Ultra-light 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

\$15**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, 1.8 ounces (45.4 g).

ORDER NO. 1302

\$39**PRO COM 200****The DXer**

This dual driver headset has a powerful electret microphone with a typical frequency response of 300 to 2500 Hz. The microphone is dual impedance (low 800 - 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. 1318

Weight: 1.7 ounces (47.6 g)

\$139**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 ohm 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 ultrasensitive. It's the DXers' choice, 20-20,000 Hz, 8-20 ohms. Weight, 15 ounces (425 g).

ORDER NO. 1307

\$70**CS-7**

The CS-7 is same as C-1320 above except - 600 ohms.

ORDER NO. 1308

\$79**C-1210**

Ultimate in comfort and performance. Mylar diaphragms assure continued sensitivity for digging out those weak signals, 20-20,000 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 1/4" (6.4mm) phone jacks with individual volume controls. 4' (1.2m) cord with 1/4" (6.4mm) phone plug. Ideal for code classes.

ORDER NO. 1309

\$24**PRO COM 300****The Contender**

The volume is in control! The Pro Com 300 is an ultra-light, single-sided, over-ear style headset with a powerful, electret microphone. This dual impedance (low 800 - high 50,000 ohms) microphone has a 200 to 2500 Hz frequency response specifically tailored to the human voice. The low (8-20 ohm) impedance, dynamic headphone element has a sensitive balanced frequency response of 300 to 3000 Hz.

ORDER NO. 1314

Weight: 1.7 ounces (47.6 g)

\$155**HS-4 (80)**
Headphones**\$31**

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

HS-5 (82)
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: 100-10,000 Hz.

HS-7 (1160)
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 150 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 13.8 V DC 3.5 A
- Back-up voltage, current: 13.8V DC, 2.5 mA
- Dimensions: 146 (5.8)W x 73 (2.9)H x 180 (7.2)D mm (inch)
- Weight: 3.2 kg (7.3 lbs.) approx.

[SPEAKER]

- Max. input power: 1.5 W
- Impedance: 8Ω
- Diameter: 66 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: 13.8 V DC
- Output Current: 20A (intermittent load 50% duty cycle), 15A (continuous load current)
- Output Voltage Fluctuation: Within 1700 mV (at load current 20A)
- Within 400 mV at 0-20A of load current
- Ripple Voltage: Less than 20 mV at 13.8V DC, 20A
- Dimensions: 180 (7-1/16)W x 133 (5-1/4)H x 287 (11-5/16)D mm (inch)
- Weight: 9 kg (19.6 lbs.)

KPS-12



\$169

- Output Current : 12 A Intermittent (50% Duty cycle)
10 A Continuous
- 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

HODEC

125 MW \$99

125P
Pilot
Light125 MW
Volt/Amp.
Meter

Input: 117V Output: 13.5V
5 Amps constant, 7 Amps surge

Ripple RMS: 10 MV Max.
Load Reg: 0.6V Max.

GOOD FOR MOST 25W 2MTR RIGS

TR-8400

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



\$599

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/R/F 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.

NEW LOW
PRICESAVE
\$80

THREE EXCITING RIGS COVERING THE WORLD OF 70 cm

KENWOOD TW-4000A

NEW**\$799**

\$59 MA-4000

2-m/70-cm two band mobile antenna



An "FM Dual-Bander", the KENWOOD TW-4000A provides new versatility in VHF and UHF operations, uniquely combining 2-m and 70-m FM functions in a single compact package. Utilizing the latest KENWOOD technology, the TW-4000A design incorporates new operating features allowing for ease and flexibility of operation on the 2-m and 70-m bands.

In addition to the important operations features mentioned in the foregoing, an optional VS-1 voice synthesizer unit provides aural operating frequency and function indication utilizing synthesized voice.

TW-4000A FEATURES:

- **2-m and 70-m FM in a Compact Package**
The TW-4000A covers the 2-m band plus the 70-cm FM bank, all in a single compact package.

- **Large, Easy-to-Read LCD Display**

A green, multi-function back-lighted LCD display is provided for best visibility. It indicates frequency, memory channel, repeater offset, "S" or "RP" level, VFO A/B, scan, busy, and "ON AIR".

- **25 Watts RF Power on 2-m and 70-cm Bands**

The use of new high reliability RF power modules permits operation at 25 watts output on either 2-m or 70-cm, with a resultant extension in operating range.

- **Programmable Memory Scan**

The programmable memory scan is very versatile, in that it can be programmed to scan all memory channels, or scan only 2-m channels, or scan only 70-m channels. It can also be programmed to skip channels that the operator does not wish to monitor.

- **Priority Watch Function**

In the Priority Watch mode, the unit switches back to memory channel 1 for 1 second out of every 10 seconds, to monitor the activity on the priority channel.

- **Common Channel Scan**

COM (common) channels may be programmed in the same manner as other memory channels. During common channel scan, memory channels 8 and 9 are alternately scanned approximately every 5 seconds. Scanning is not interrupted by signals that may be present when the channels are scanned.

- **High Performance Receiver and Transmitter**

The use of GaAs FET's in the RF amplifiers on both 2-m and 70-cm, as well as the use of high performance MCF's in the 1st IF section, provides high receive sensitivity and excellent dynamic range. The high reliability RF power modules assure clean and dependable transmissions on either band, at the full 25 watts output power.

- **Easy-to-Install, Adjustable-Angle mobile mount**

The mounting angle may be easily adjusted for most mobile installations. The bracket includes quick-release levers for easy removal.

- **Optional "Voice Synthesizer unit" \$49**

An optional VS-1, "Voice Synthesizer" is available for easy installation inside the TW-4000A. The voice announces frequency, band, VFO A or B, repeater offset, memory channel number, and date that has already been stored in the selected memory channel.

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. USB, 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 blaster, RTT 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



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 offset, 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 (i.e., 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 version

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 144.9999 MHz, which includes certain MARS and CAP frequencies.

Transmit offset switch

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.

HI/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 clean signals in all modes.



ONLY 2 LEFT

CLEARANCE SALE TR-9000

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 VFO's, 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.

ONLY \$599

SAVE \$100

WAS

\$699

MATCHING ACCESSORIES FOR FIXED-STATION OPERATION:

- PS-20 power supply \$129
- SP-120 external speaker \$57
- BO-9 System Base... with power switch, SEND/RECEIVE switch for CW operation, backup power supply for memory retention (BC-1 backup power adaptor may also be used for this application), and headphone jack \$89

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

NEW



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, (+S-), sub-tone number (0-1, 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:	144,000-147,995MHz
Mode:	FM (F3)
Power Requirement:	13.8V DC +15%
Grounding:	Negative
Current Drain:	0.5A in receive mode with no input signal

TR-7950	(H transmit mode)	3.5A
	(LOW transmit mode)	3.0A
TR-7930	(H transmit mode)	2.5A
	(LOW transmit mode)	2.5A

Antenna impedance:	50 Ω	
Dimensions	TR-7950	175 (6-7/8) W x 84 (3-1/2) H x 220 (8-11/16) D incl. (with)
	TR-7930	175 (6-7/8) W x 84 (3-1/2) H x 208 (8-1/8) D incl. (with)

Weight	TR-7950	1.9kg (4.2 lbs.)
	TR-7930	1.8kg (4.0 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 band-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 (approx. 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:

Max. Frequency Deviation:
Microphone:

RECEIVER

Circuitry:
Inter- μ Frequency:

Sensitivity:

Selectivity:

Spurious Response:

Squelch Sensitivity:

Audio Output:

Variable reactance direct shift
IHF: Less than -70dB
ILOW: Less than -60dB
+5dB

Dynamic microphone with PTT switch, 800 Ω

Double conversion superheterodyne
1st IF = 10.695MHz
2nd IF = 455kHz

Better than 0.2 μ V for 30dB S/N
Better than 0.25 μ V for 12dB SINAD
More than 10kHz (-6dB)
Less than 24kHz (-80dB)

Better than 70dB
0.16 μ V (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

3 TONES
CTCSS ENCODER

\$45

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



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

Miniaturized, 5 memories, memory/band scan

KENWOOD TR-7730



\$449

FEATURES:

- **Smallest ever Kenwood mobile**
Measures only 5-3/4 inches wide, 2 inches high, and 7-3/4 inches deep, and weighs only 3.3 pounds. Mounts even in the smallest subcompact car, and is an ideal combination with the equally compact TR-8400 synthesized 70-cm FM mobile transceiver.
- **25 watts RF output power**
Even though the TR-7730 is so compact, it still produces 25 watts output for reliable mobile communications. HI/LOW power switch selects 25-W or 5-W output.
- **Five memories**
May be operated in simplex mode or repeater mode with the transmit frequency offset ± 600 kHz. The fifth memory stores both receive and transmit frequency independently, to allow operation on repeaters with nonstandard splits. Memory backup terminal on rear panel.
- **Memory scan**
Automatically locks on busy memory channel and resumes when signal disappears or when SCAN switch is pushed. Scan HOLD or microphone PTT switch cancels scan.
- **Extended frequency coverage**
Covers 143.900-148.995 MHz in switchable 5-kHz or 10-kHz steps, allowing simplex and repeater operation on some MARS and CAP frequencies.
- **Automatic band scan**
Scans entire band in 5-kHz or 10-kHz steps and locks on busy channel. Scan resumes when signal disappears or when SCAN switch is pushed. Scan HOLD or microphone PTT switch cancels scan.
- **UP/DOWN manual scan**
With UP/DOWN microphone provided, manually scans entire band in 5-kHz or 10-kHz steps.
- **Offset switch**
Allows VFO and four of five memory frequencies to be offset ± 600 kHz for repeater access (or to be operated simplex during transmit mode).
- **Four-digit LED frequency display**
Indicates receive and transmit frequency during simplex or repeater-offset operation.
- **S/RF bar meter and LED indicators**
Bar meter of multicolor LEDs shows relative receive and transmit signal levels. Other LEDs indicate BUSY, ON AIR, and REPEATER offset.
- **Tone switch**
Activates internal subaudible tone encoder (not Kenwood-supplied).

Optional accessories:

- MC-46 16-button autopatch (DTMF) UP/DOWN microphone

KENWOOD CLEARANCE SALE

ONLY A FEW LEFT

TR-7800

SAVE \$90
25W

\$469



FEATURES

- 15 multifunction memory channels, selected with a rotary switch. M1-M13 ... memorize frequency and offset (± 600 kHz or simplex). M14 ... memorize transmit and receive frequencies independently for nonstandard offset. M0 ... priority channel, with simplex, ± 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 actuate 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
\$499

SAVE \$130

NEW LOW PRICE

TR-2500 KENWOOD

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

\$399

**SAVE
\$40**

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 46 (2.5/8) W x 168 (6.5/8) H x 40 (1.5/8) D, mm (inches). Weighs 540 grams (1.2 lbs) with Ni-Cd pack. (Photo 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 ±600 KHz offset. "M0" 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

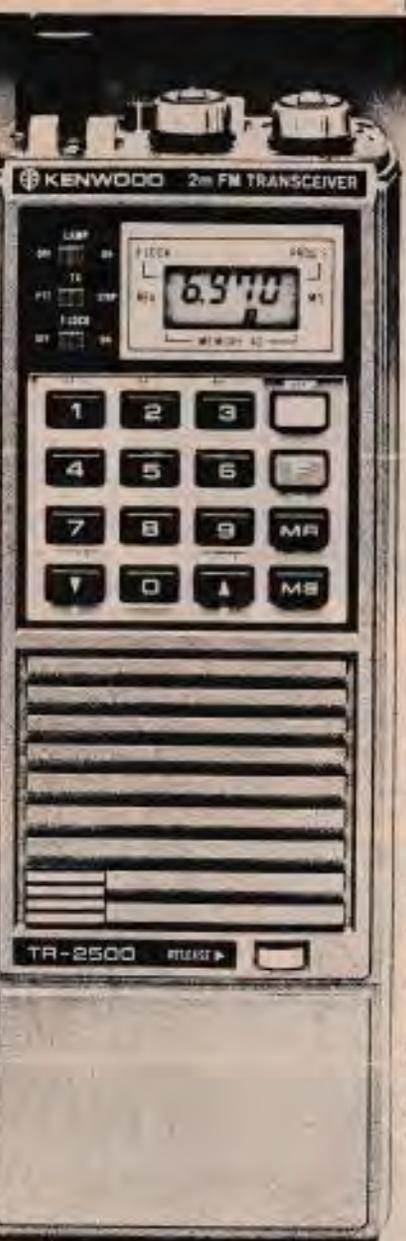
Ni-Cd Battery Pack
(for TR-2500/3500)



CONVENIENT TOP CONTROLS



• HI/LO power output selection
Allows operation at 2.5 watts or 100 mw RF output.



• 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 tuneable sub-tone encoder

Sub-tone encoder, with activate switch, tuneable (variable resistor) in 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 AC 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 accidental transmission.

Standard accessories included:

- Flexible rubberized interface 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 hr.) **\$119**
- MS-1 13.8 VDC mobile stand/charger/power supply. **\$65**
- 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 mA, 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**

• 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)



JRC Japan Radio Co., Ltd.

WHEN ONLY THE VERY BEST IS GOOD ENOUGH

NRD-515



\$2000

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
	CW/SSB: AM
Sensitivity (S/N: 10dB):	: Less than 0.5µV
1.6 to 30 MHz	: Less than 2µV
100 to 1600 kHz	: Less than 6µV
	-60dB
Selectivity:	: 4kHz or more
6kHz	: 10kHz or less
2.4kHz	: 5kHz or less
*0.6kHz	: 3kHz or less
*0.3kHz	: 2kHz or less
	* mark denotes option
Frequency stability	: Less than 50Hz per hour after warming up
Image rejection ratio	: 70dB or more
IF rejection ratio	: 70dB or more
Input impedance	: 60 to 75 ohms, unbalanced
AF outputs:	
Speaker output	: 1W or more (4 ohms)
Recording output	: 1mW or more (600 ohms)
Power requirements	: 100-117/220/240V AC, 50/60Hz, approx. 50VA
Dimensions:	
	Height: 140mm
	Width: 340mm
	Depth: 300mm
	Approx. 7.5kg

• **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



NCM-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.

JST-100

NEW!

\$1549

SYNTHESIZED HF TRANSCEIVER



Max. 330 (W) x 130 (H) x 327 (D) mm (incl. projection)
Approx. 10 kg

• **Microcomputer-based Control**

The JST-100 incorporates a microcomputer to control VFOs, band and mode selection and memory access, allowing complicated operating modes such as two-VFO operation, split operation, and channel write-in and recall operation.

• **10Hz-Step Digital Synthesizer**

Three phase-locked loop circuits including BFO circuit are phase-locked with a stable 10MHz standard crystal oscillator, ensuring superior frequency stability and accuracy.

• **Built-in 11-Channel Memory**

The built-in memory with an 11-channel capacity can store and recall not only the VFO frequencies, but also a working frequency band and an emission mode by switches on the front panel.

• **Digital Two-VFO System**

Two digital VFOs incorporated in the transceiver are controlled in 10Hz steps. The use of two VFOs permits various outstanding operation modes such as simplex operation on two frequency channels, split operation on receiving and transmitting frequencies, and cross-mode operation on a single frequency.

• **Memory Finder Capability**

The receiver can recall any of the stored frequencies other than the working VFO frequency. The receiving frequency can be changed, but the transmitting frequency is fixed. The memory finder can be used for monitoring a DX station in pile-up condition, for checking scheduled frequencies and for monitoring club calling frequencies.

• **High Reliability**

The JST-100 is designed for compact and unit construction, and reduced wiring, ensuring high reliability and ease of operation and maintenance.

KENWOOD**R-1000 COMMUNICATIONS RECEIVER**

Now, a high-performance, easy-to-operate Communications Receiver with single-knob tuning system and digital frequency display!

**\$649****R-1000 FEATURES:**

- Covers 200 kHz to 30 MHz continuously.
- 30 bands, each 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**
- DCK-1 modification kit for 12-VDC operation. **\$31**
- **\$10**

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 13.8-VDC 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.

A SUPERLATIVE NEW RECEIVER FROM KENWOOD WITH UNPRECEDENTED NEW FEATURES



SSB, CW, AM, FM, digital VFO's, 10 memories, memory and band scan, dual 24-hour clocks...

R-2000 \$799

The R-2000 is an all mode SSB, CW, AM, FM receiver that covers 150 kHz-30 MHz in 30 bands. New microprocessor controlled operating features and an UP conversion PLL circuit provide maximum flexibility and ease of operation to enhance the excitement of listening to stations around the world. Key features include digital VFO's, ten memories that store frequency, band, and mode information, memory scan, programmable band scan, fluorescent tube digital display, and dual 24-hour clock with timer.

R-2000 FEATURES:

- **Covers 150 kHz-30 MHz in 30 bands.** Uses innovative UP-conversion digitally controlled PLL circuit. UP/DOWN band switches 0.1 MHz step. VFO's continuously tunable across 150 kHz-30 MHz.
- **All mode: USB, LSB, CW, AM, FM.** Provides expanded flexibility in receiving various signal types. Front panel mode selector keys, with LED indicators.
- **Digital VFO's for best stability.** 50 Hz step, switchable to 500 Hz or 5 kHz, using front panel pushbutton switches. F-LOCK switch provided.
- **Lithium battery memory back-up.** (Est. 5 yr. life.)
- **Memory scan.** Scans all memories, or may be programmed to scan specific memories. HOLD switch interrupts scanning. Frequency, band, and mode are automatically selected in accordance with the memory channel being scanned. The scanning time is approximately 2 seconds per channel.
- **Programmable band scan.** Scans automatically within the programmed bandwidth. Memory channels 0 and 0 establish upper and lower scan limits. HOLD switch interrupts scanning. Frequency may be adjusted, using the tuning control, during scan (HOLD).
- **Fluorescent tube digital display (100-Hz resolution).** Built-in 7 digit fluorescent tube digital display indicates frequency or time, plus memory channel number. DIM switch provided. The display may be switched to indicate CLOCK 2, FREQUENCY, CLOCK-1, and timer ON or OFF by the front panel FUNCTION switch.
- **Dual 24-hour quartz clocks, with timer.** Permits programming two different times. Timer for ON and OFF programming. Timer REMOTE output on rear panel (not for AC power).
- **Three built-in IF filters with NARROW/WIDE selector switch.** (CW filter optional.)
4 kHz wide or 2.7 kHz narrow on AM, 2.7 kHz automatic on SSB, 2.7 MHz wide on CW, or, with optional VC-4501 filter installed, 500 Hz narrow, 15 kHz auto mode on FM.
- **Squelch circuit, all mode, built-in, with BUSY indicator.**
- **Ten memories store frequency, band, and mode data.** Complete information on frequency, band, and mode is stored in memory, assuring maximum ease of operation. Each memory may only be stored as a VFO. Original memory frequency may be recalled. AUTO-M-SEARCH for automatic storage of current operating data or, when off select, for storage of data using M-IN switch.
- **Noise blanker built-in.** Eliminates pulse-type noise on SSB, CW, and AM.
- **Large front mounted speaker.**
- **Tone control.**
- **RF step attenuator, (0-10-20-30 dB.)** Four step attenuator, plus antenna fuse.
- **AGC switch, (Slow-Fast.)**
- **"S" meter, with SINPO "S" scale.**
- **High and low impedance antenna terminals.**

100/120/220/240 VAC, or 13.8 VDC operation. (Optional DCR-1 cable kit required for 13.8 VDC.)

A NEW LINE OF SWR METERS FROM KENWOOD

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)	0-150	0-150	0-20/200	0-20/200	0-200/2000
Accuracy	± 10% OF FULL SCALE				
Size (mm)	92x54x36	92x54x36	193x62x79	193x62x79	193x62x79
Wt	3.6x2.5x 1.4		7.6x2.4x 3.1		
Weight	350g with detector				700g
Price	\$55	\$55	\$119	\$119	\$129

SW 200 \$119
 SW 100 \$55
 SW 2000 \$129

OPTIONS: 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

WORLD WIDE RECEIVER

With something for everyone. The digital frequency counter makes accurate tuning easy. Covers everything from Aeronautical and Marine Beacons through AM Broadcast, the entire Short Wave band, and on up through TV, FM Broadcast, Aircraft, Police, Ham, Marine VHF, to the UHF Public Service band. On Short Wave bands, a calibrator, BFO, Upper or Lower sideband switch, wide/narrow band width switch, RF gain control, and an antenna adjust control help you bring in those hard-to-tune stations. A light display switch allows you to turn off the dial light and digital display to conserve power when running on batteries. Truly a receiver that will offer a wide range of enjoyment for the whole family.

GLOBAL NR-82 F1

\$499


Now available in a lower priced model, the NR-82F1-D, which does not have 220/240 volt capability, but all other specifications are the same.

\$479

SPECIFICATIONS

Semiconductors:	1-LSI, 4-ICs, 7-FETs, 34-Transistors, 1-Voltage regulator and 42-Diodes.	
Frequency Range:	LW 145 — 360 KHz MW 525 — 1600 KHz SW1 1.6 — 3.8 MHz SW2 3.8 — 9 MHz SW3 9 — 22 MHz SW4 22 — 30 MHz	VHF1 30 — 50 MHz VHF2 68 — 86 MHz VHF3 88 — 108 MHz VHF4 108 — 136 MHz VHF5 144 — 176 MHz UHF 430 — 470 MHz
IF:	LW/MW/SW1 — 455 KHz SW2-SW4 1st IF: 2 MHz 2nd IF: 455 KHz VHF1,2,3,5/UHF 1st IF: 10.7 MHz 2nd IF: 455 KHz	
Output Power:	5W (Max) 3W (10%)	
Power Supply:	AC 110-120/220-240 Volt, 50/60 Hz DC 12V (8 "D" cells), Ext. DC 12-14V	
Speaker:	12.5cm, Permanent Dynamic Speaker (3.2 ohm)	
Antenna:	Ferrite Bar Antenna for LW, MW & SW1 3 Telescopic Antenna for SW, VHF & UHF	
Display:	LW-SW4 Read-Out up to 1 KHz VHF1-VHF5 Read-Out up to 10 KHz	

FEATURES

- Double conversion
- USB/LSB Switch
- Antenna adjust control
- RF Gain control
- Squelch control
- SW Calibrator
- Highly accurate digital read-out
- BFO
- Speaker/Headphone jack
- Tape record/playback switch
- Bass and Treble controls
- Light display ON/OFF switch
- VUHF ANT, Connector (Coaxial)
- SW Ext. Ant. Terminal (Screw)
- Ext. Battery Jack
- 452mm(W) x 266mm(H) x 130mm(D).
- 17.8 (W) x 11.3(4) x 5.1 (D) in
- Weighs 5.4 kg

GLENWOOD TRADING COMPANY LTD.
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 V7L 1B3 Phone (604) 984-0404

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 En nombre
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WHAT'S NEW FROM KENWOOD ?

R-2000
 COMMUNICATIONS RECEIVER



see p.46

TS-430S
 HF TRANSCEIVER



see p.2

TW-4000A
 FM DUAL BANDER



see p.39

WRITE GLENWOOD FOR DETAILED SPECS.