KENWOOD

Listen to the Future

TM-D710E

Multi Communicator 144/430MHz FM DUAL BANDER

With Kenwood's advanced TM-D710E you can harness today's
most exciting developments in radio communications, including
EchoLink®, AX.25, and the latest features of APRS®.

Peerless Pathfinder

## BUILT-IN 1200/9600BPS TERMINAL NODE CONTROLLER (TNC) COMPLIANT WITH AX.25 PROTOCOL

The built-in TNC is compatible with the AX.25 protocol, enabling easy access to APRS functions. For 1200/9600bps packet communications, simply hook up the TM-D710E to your PC.

APRS® READY (AUTOMATIC PACKET/ POSITION REPORTING SYSTEM)

Cooperating with Bob Bruninga (WB4APR), who first developed APRS, Kenwood has developed system firmware for the TM-D710E that enables easy APRS operation without requiring a PC. When connected to a GPS receiver this radio will display positional information, including direction and distance, and when hooked up to a weather observation device it can display temperature and rainfall information. All of this data can be exchanged with other stations. The information can also be output to a PC for map display using commercially available APRS application software.
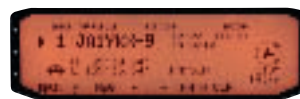
*"APRSdos" was written by WB4APR (Bob Bruninga)*
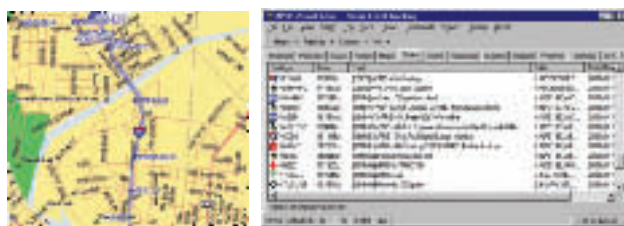
"APRS+SA" was written by KH2Z (Brent Hildebrand)

▌ Positional/directional data: With an NMEA-0183 compatible GPS receiver, in addition to current latitude, longitude and altitude, information is available on the distance, speed and heading of a mobile station.

▌ Meteorological information: The TM-D710E can be connected to Peet Bros or Davis weather stations for access to wind speed/direction, temperature, rainfall, humidity and barometric pressure data.
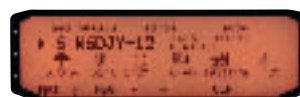
▪ **Station list:** This stores a maximum of 100 stations – including fixed base, mobile, object and weather stations – and offers filtering so you can select from the different types. You can also sort them by call sign, reception time and distance from your own station.

▪ **Versatile messaging:**
- 100 messages (up to 67 characters each)
- Status: 4 x 42 characters (max.),
  1 x 32characters (max.)
- User phrases (preset for rapid message input):
  4 types (up to 31 characters each)
- Special call function: Immediate notification when a message is received from a designated station. The APRS system is capable of transmitting e-mail, so you can send (not receive) e-mail messages from the TM-D710E.

▪ **Wide-range of functions available from more than 60 APRS menus:**
- QSY function
  (Exchange operating frequency via APRS)
- Auto Message Reply
- Digipeater capability
- Packet filter
- Decay Algorithm
- New-N Paradigm
- 29 Graphic icons display
- 3 Grid square locators and more…

SEPARATE PANEL WITH EXTRA-LARGE 2-COLOR SWITCHABLE BACKLIGHT LCD & MULTIFUNCTION KEY DISPLAY

The TM-D710E has a separate control panel with an extra-large display that clearly identifies the multifunction keys for easy operation. To maximize visibility, the backlight color can be switched between warm amber and cool green. And two different stands are supplied: one for on-dash installation, and the other for fixed stations.

Amber   Green

HIGH RF POWER OUTPUT (50W)

The TM-D710E provides an impressive 50 watts of RF power (VHF & UHF), plus a choice of High/Mid/Low output.

DUAL RECEIVE ON SAME BAND (VxV, UxU)

In addition to simultaneous receive on both VHF and UHF bands, this radio can receive two frequencies on the very same band. This means, for example, that you can have both the call channel and local channel, or the repeater channel and local channel, on the same band.

1,000 MULTIFUNCTION MEMORY CHANNELS

There are 1,000 split memory channels for storing essential data – such as transmit and receive frequencies, frequency step, and tone frequency – plus an additional 10 for programmable scan. You can identify each channel with up to 8 alphanumeric characters (Memory Name function). Additionally, memory data can be edited and stored on a PC using the optional PG-5G programming interface cable and MCP-2A Memory Control software (a free download from the Kenwood website*).
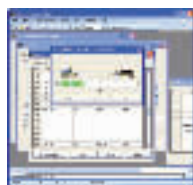
*www.kenwood.com/i/products/info/amateur/software_download.html

MULTIPLE SCAN & VISUAL SCAN

As well as VFO scan, program scan, MHz scan, memory scan and call scan, the TM-D710E offers memory bank scan: the 1,000 channels are grouped into 10 banks for selective scanning. Also featured are scan resume (time-operated, carrier-operated, and seek), memory channel lockout, tone scan, CTCSS scan, and DCS scan. Additionally, using the S meter on the large LCD you can visually display the signal strength (S0~S7) of stations within the scanned range.

EchoLink® Sysop MODE FOR NODE TERMINAL OPERATION

When the TM-D710E is connected to a PC (with the necessary Windows-compatible software installed) using the PG-5H option, it can operate as a node terminal for EchoLink. EchoLink connects radio amateurs through the Internet using VoIP technology: any transceiver with access to a node can connect to any other in the world as long as it too has node access. It is also possible to access the EchoLink network directly from a PC.
To register for EchoLink (using your call sign), access the official website at : www.echolink.org
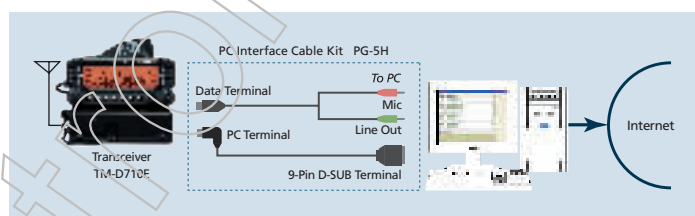
EchoLink® MEMORY (AUTOMATIC DIALER)

Up to 10 DTMF memory channels dedicated to EchoLink can store call signs (or conference names) and Node Numbers. Memory Control is also possible using a PC with the MCP-2A software.

Other Features

▪ Wide reception:118-524MHz, 800-1300MHz	▪ Mute
▪ MC-59 16-Key Hand Microphone with backlighting	▪ 3-hour Auto Power Off
▪ Programmable memory capable of storing 5 independent operating profiles	▪ MHz Mode
	▪ Selectable Frequency Step
	▪ Shift Function
▪ DCS (Digital Code Squelch) with 104 selectable codes	▪ Repeater Offset (selectable)
	▪ Reverse
▪ Separate VOL/SQL for A & B Bands	▪ Auto Repeater Offset (ON/OFF, VHF only)
▪ Packet Monitor	▪ Automatic Simplex Checker
▪ DX Cluster	▪ DTMF Memory (10 channels,16 digits)
▪ Waypoint Data Output	▪ DTMF Remote Control
▪ Clock (date/time)	▪ Time Out Timer
▪ 6-pin Mini-DIN Socket for External TNC	▪ Key Lock
▪ 8-pin Mini-DIN Socket for PC Connection (optional programming cable PG-5G or PG-5H required for PC connection)	▪ Power-on Password
	▪ Memory Shift
	▪ Programmable VFO
	▪ Beep On/Off, Volume Control
▪ Programmable Function Keys	▪ Mic Program Function
▪ Band Mask	▪ Channel Display Mode
▪ Call Channel	▪ Power-on Message
▪ S-meter Squelch & Hysteresis Timer	▪ LCD Brightness Control, Auto Brightness
▪ Monitor Function	▪ Switch to External Speaker
	▪ Reset (VFO, PART, PM, FULL)

Optional Accessories

MC-59
16-Key Hand Microphone

PG-2N
DC-Power Cable

PG-3B
DC Line Noise Filter

PG-5A
Data Cable

PG-5F
Extension Cable Kit (4m)

PG-5G
Programming Interface Cable

PG-5H
PC Interface Cable*
*For EchoLink node terminal operation.

SP-50B
External Speaker

MJ-88
Microphone Plug Adapter

Supplied Accessories

■ Microphone ■ DC power cable ■ Cable with a 2.5 mm 3-conductor plug (for GPS) ■ Modular plug cable (for PANEL) ■ Line filter ■ Microphone hanger ■ Mounting bracket ■ Panel holder ■ Panel bracket ■ Base stand ■ Screw set ■ Instruction manual (English / Spanish & French / German, Italian & Dutch) ■ CD-ROM (For a detailed explanation on the operation) ■ Warranty card

Refer to the Acrobat (PDF) file on the supplied CD-ROM for a detailed explanation of TM-D710E setup and operation. To read the PDF file you may need to install Adobe Reader® on your PC.
Adobe Reader® is a registered trademark of Adobe Systems Incorporated.

Not all accessories are available in all markets. For availability, contact your nearest dealer.

■ Typical Sensitivity (excluding VHF/UHF Amateur Bands)

	A Band		B Band
	FM: 12dB SINAD	AM: 10dB S/N	FM: 12dB SINAD
118~135.995MHz	0.32 µV	0.40 µV	-
136~173.995MHz	0.32 µV	0.40 µV	0.32 µV
174~229.995MHz	0.40 µV	0.50 µV	0.40 µV
230~299.995MHz	5.6 µV	5.6 µV	5.6 µV
300~349.995MHz	1.0 µV	1.0 µV	1.0 µV
350~399.995MHz	0.56 µV	0.56 µV	0.56 µV
400~499.995MHz	0.28 µV	0.36 µV	0.28 µV
500~523.995MHz	0.56 µV	0.71 µV	0.56 µV
800~1239.99MHz	-	-	7.08 µV
1240~1299.99MHz	-	-	2.24 µV

Specifications

TM-D710E

GENERAL

Frequency Range Band A & B	TX		144 - 146 MHz
			430 - 440 MHz
Frequency Range Band A	RX		118 - 524 MHz
Band B	RX		136 - 524 MHz
			800 - 1300 MHz
Mode			F1D, F2D, F3E
Antenna Impedance			50 Ω
Power Requirement			DC13.8V ±15%
Operating Temperature Range			-20°C ~ +60°C
Frequency Stability			Within ±5ppm (-10°C~ +50°C)
Current Drain Transmit	VHF	HI	Less than 13.0A
		MID	Less than 5.5A
		LOW	Less than 4.0A
	UHF	HI	Less than 13.0A
		MID	Less than 6.5A
		LOW	Less than 5.0A
Receive			Less than 1.2A (at 2W audio output)
Dimensions (W x H x D) Without protrusions	Panel		155 x 70 x 38 mm
	Body		140 x 43 x 142 mm
With protrusions	Panel		156 x 71 x 56 mm
	Body		140 x 44 x 158 mm
Weight (approx.)	Panel		0.3 kg
	Body		1.2 kg

TRANSMITTER

RF Output Power Hi	VHF/UHF		50W / 50W
MID	VHF/UHF		Approx. 10W / Approx. 10W
LOW	VHF/UHF		Approx. 5W / Approx. 5W
Modulation			Reactance Modulation
Maximum Frequency Deviation			Within ±5kHz
Supurious Radiation			Less than -60dB
Modulation Distortion (300Hz ~ 3kHz)			Less than 3%
Microphone Impedance			600 Ω

RECEIVER

Circuitry			Double Super Heterodyne
Intermediate Frequency 1st IF (A Band/B Band)			45.05MHz / 49.95MHz
2nd IF (A Band/B Band)			455kHz / 450kHz
Sensitivity	VHF/UHF		Less than 0.16 µV
Squelch Sensitivity	VHF		Less than 0.1 µV
	UHF		Less than 0.1 µV
Selectivity	-6dB		More than 11kHz
	-50dB		Less than 30kHz
Audio Output (8 Ω)			More than 2W (at 5% distortion)

Kenwood reserves the right to change specifications and features without prior notice.
These specifications are guaranteed for Amateur Bands only.
APRS® is a registered trademark of Bob Bruninga.
Echolink® is a registered trademark of Synergenics, LLC.

Listen to the Future

Kenwood has always connected with people through sound. Now we want to expand the world of sound in ways that only Kenwood can, listening to our customers and to the pulse of the coming age as we head toward a future of shared discovery, inspiration and enjoyment.

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