Other Features

●Wideband receive coverage:118-524MHz, 800-1300MHz* ●High power output(50W) ●1,000 multifunction memory channels ●Multiple scan&visual scan ●MC-59 16-Key hand microphone with backlighting ●Programmable memory capable of storing 5 independent operating profiles ●DCS (Digital Code Squelch) with 104 selectable codes ●Separate VOL/SQL for A & B bands ●Packet monitor ●DX cluster ●Waypoint data output ●Clock (date/time) ●6-pin Mini-DIN socket for external TNC ●8-pin Mini-DIN socket for PC connection x 2 (optional programming cable PG-5G or PG-5H required for PC connection) ●Programmable function keys ●Band mask ●Call channel ●S-meter Squelch include hang up time setting ●Monitor function ●Mute ●Auto Power Off ●MHz mode ●Selectable frequency step ●Shift function ●Repeater offset (selectable) ●Reverse ●Auto repeater offset ●Automatic simplex checker ●DTMF memory (10 channels,16 digits) ●DTMF remote control ●Time Out Timer ●Key lock ●Power-on password ●Memory shift ●Programmable VFO ●Beep ON/OFF, volume control ●Mic. program function ●Channel display mode ●Custom start up ●Power-on message ●LCD brightness control, auto brightness ●Switch to external speaker ●Reset (VFO, PART, PM, FULL)
*Excluding cellular blocked + frequencies

Optional Accessories

MC-59 — 16-Key Hand Microphone
SP-50B — External Speaker
VGS-1 — Voice Guide & Storage Unit

PB-3B — DC Line Noise Filter
PG-2N — DC-Power Cable
PG-5A — Data Connector Cable (mobiles)

PG-5F — Extension Cable Kit (4m)
PG-5G — Programming Interface Cable
PG-5H — PC Interface Cable *For EchoLink node terminal operation.

MJ-88 — Microphone Plug Adapter
PS-60 — DC Power Supply
MCP-6A — Memory Control Program
*free software
*The MCP-6A program will be available for download from the Kenwood website from the middle of November 2013.

[Accessories]
●Microphone ●DC power cable ●Cable with a 2.5mm (1/10") 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) ●Warranty Card

TM-D701GA Specifications

GENERAL

Frequency Range

	TX	RX	
	Band A & B	Band A	Band B
	144~148MHz	118~524MHz*	136~524MHz
	430~450MHz		800~1300MHz*
			*excluding cellular band

Mode··F1D,F2D,F3E
Antenna Impedance···50Ω
Power Requirement··· DC13.8V±15%
Operating Temperature Range··· -4°F~+140°F(-20°C~+60°C)
Frequency Stability·····································Within ±5ppm 32 °F~122 °F(-10°C~+50°C)

Transmit

	VHF	UHF
HI	Less than 13.0A	Less than 13.0A
MID	Less than 4.0A	Less than 6.5A
LOW	Less than 4.0A	Less than 5.0A

Current Drain Receive

Less than 1.2A (at 2W audio output)

Dimensions (W x H x D)

Without Protrusions	panel	6.10 x 2.76 x 1.50 inch (155 x 70 x 38 mm)
	body	5.51 x 1.69 x 5.59 inch (140 x 43 x 142 mm)
With Protrusions	panel	6.14 x 2.80 x 2.20 inch (156 x 71 x 56 mm)
	body	5.51 x 1.73 x 6.22 inch (140 x 44 x 158 mm)
Weight (approx.)		Panel 0.7 lbs. (0.3 kg) Body 2.6 lbs. (1.2 kg)

TRANSMITTER

RF Output Power

	VHF	UHF
HI	50W	50W
MID	Approx. 10W	Approx. 10W
LOW	Approx. 5W	Approx. 5W

Modulation··Reactance Modulation
Maximum Frequency Deviation ···Within ±5kHz
Spurious Radiation ···Less than -60dB
Modulation Distortion (300Hz~3kHz)···Less than 3%
Microphone Impedance ··600Ω

RECEIVER

Circuitry ···Double Super Heterodyne

Intermediate Frequency

	1st IF	2nd IF
A Band	45.05MHz	455kHz
B Band	49.95MHz	450kHz

Sensitivity (VHF/UHF)···Less than -16dBμ (0.16μv)
Squelch Sensitivity (VHF/UHF) ··Less than -20dBμ (0.1μv)

Selectivity

	-6dB	-50dB
	More than 11kHz	Less than 30kHz

Audio Output (8Ω) ··More than 2W (at 5% distortion)

■ Typical Sensitivity (excluding VHF / UHF Amateur Band)

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

*Alterations may be made without notice to improve the ratings or the design of the device.
*The photographic and printing processes may cause the coloration of the device to appear different from that of the actual device.

*Google Earth is a registered trademark of Google Inc.
*APRS is a registered U.S.A. trademark of Bob Bruninga.
*EchoLink is a registered U.S.A. trademark of Synergenics, LLC.
*SmartBeaconing is supplied by Ham HUD Nichetroni.
*KENWOOD SKY COMMAND SYSTEM is a registered trademark of JVCKENWOOD Corporation in the U.S.

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KENWOOD

Positioning via GPS Knowledge by APRS

Communicate, navigate, enjoy. In real time

WY6NN-13
0.11" 83°F 180° 7mph 1011hPa 55%

KJ6IHI
APRS12 STATION LIST
1: WY6NN-13   17:14   WEATHER
2: N6LUN   16:32   FIXED
3: KE6JML-7   16:04   TH-D72
4: KE6JMT-14   15:28   TM-D710
5: W6DJY-9   15:08   TM-D710

N6LUN
MESSAGE
TO: W6DJY-9
▶ I will leave home soon.

W6DJY-9
+135°
9.9mi
N 33°50.43'
W118°13.72'

KE6JMT-14
+045°
60.0mi
N33°21.45'
W119°53.16'

Built-in GPS & APRS
144/440MHz FM DUAL BANDER
TM-D710GA
Output:50W

Standard compatibility with GPS, APRS, and EchoLink Sysop Mode.
A new operating style for amateur band VHF/UHF transceivers.

Equipped with GPS unit. Bringing smart APRS operation closer

The GPS unit required for mobile station APRS operation is included in the control panel. Genuine APRS operation is possible with the TM-D710GA alone. GPS Logger, Mark Waypoint, Target Point, and automatic time correction functions are also included, widening horizons for operation using GPS.

GPS Satellite information

Log memory

● **GPS Logger Function**
A maximum of 5,000 points of positional information can be stored in the internal memory. Storage timing can be set according to time interval, movement distance or beacon transmission points (e.g. roughly 14 hours' worth of records is possible when set for a 10-second time interval). GPS log information can also be converted to the Google Earth™ map service-compliant kml file format using the MCP-6A memory control program.

● **A maximum of 100 records possible with Mark Waypoint**
Positional information on your current location (latitude, longitude and altitude, time, name, icon) can be recorded with one touch.

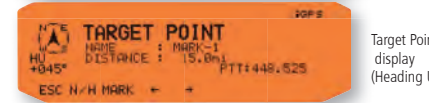Name and icon information can also be edited in the Mark Waypoint list.

Mark Waypoint

● **Target Point function**
The distance and direction to your target locations (maximum of 5 presets possible) are displayed in real time. Directional display can be switched between North Up and the easily understood Heading Up display with one touch.

Target Point display (North Up)

Target Point display (Heading Up)

● **Grid Square Locator Display Function**
The Grid Square Locator for your own station can be displayed.

● **Automatic time adjustment**
On-board clocks required for all operations are adjusted automatically using GPS.

Easy packet transmission with TNC

The device comes equipped with an AX.25 standard TNC (Terminal Node Controller), enabling genuine, stand-alone APRS operation. Connection to a PC also enables 1200/9600 bps packet communication and IGate terminal operation.

APRS standard. Extensive menus enable genuine operation

A program compatible with the APRS system has been developed with the cooperation of Bob Bruninga (WB4APR), the developer of APRS. By making use of this program and the GPS unit*, various APRS operations are possible even without a PC. Messages can also be exchanged to share positional, direction/distance and weather information.
*An external GPS unit can also be used.

● **Station list**
A maximum of 100 stations such as mobile, base, weather and object stations can be maintained, and receive stations can be limited by type using the filter function. Sorting according to call-sign, receive time, and distance from own station (stations within 1mile are displayed in 0.01mile units) is also possible.
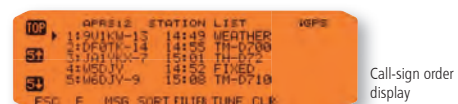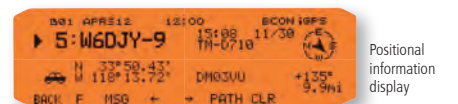
Call-sign order display
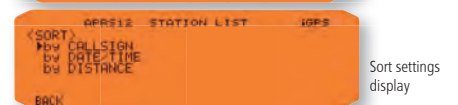
Sort settings display

● **Positional information**
Latitude, longitude, altitude and speed/direction can be shared, and the distance from your station can be displayed using received station information.

Positional information display

● **Message function**
Messages can be sent and received between APRS-operating stations. In addition to keyboard input using the included microphone, easy mobile operation has been pursued with the inclusion of automatic reply and set-message functions. A special
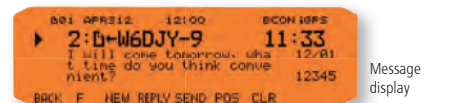
Message display

call function also lets you know the instant you receive a message from a dedicated station.

● **Weather information**
Weather information can be received to display wind direction/speed, temperature, rainfall, humidity and atmospheric pressure. Easy operation of weather stations can also be enjoyed after connection (certain devices only) to Peet Bros. or Davis weather observation devices.
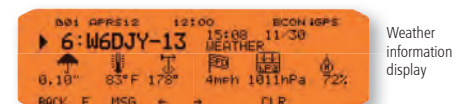
Weather information display

● **Stand-alone Digipeater function**
The TM-D710GA can operate as a stand-alone digipeater station. Temporary relay stations can be configured in a variety of outdoor situations, enabling support for data transmission from locations such as basins surrounded by mountains.

● **QSY function**
TM-D710GA voice channels can be set with one touch using information such as frequency, tone and shift buried in beacons from APRS stations, enabling speedy QSY.

● **SmartBeaconing**
SmartBeaconing is a function that efficiently sends a beacon concerning the positional information of your station based on speed and direction data. The transmission interval can be changed depending on your speed, and beacons are sent when direction changes are detected, so a close approximation of your actual route can be recorded with a minimum of beacon transmissions.

● **APRS lock function**
Prevents errors during APRS operation.

KENWOOD SKYCOMMAND SYSTEM II+

You can use the TM-D710A for remote control of KENWOOD HF transceivers, enabling the enjoyment of HF access even while making a quick trip to the local store. The HF band frequency is displayed, making operation easy.

KENWOOD SKY COMMAND SYSTEM II uses a pair of TH-D72A/TM-D710GA transceivers.
*The TS-2000 series doesn't require a transporter.

Operate node terminals with EchoLink Sysop mode function
You can easily set up an EchoLink node terminal by connecting the TM-D710GA to a PC with EchoLink software installed on it*1. Simultaneous operation as an IGate terminal and/or digipeater is also possible while functioning as an EchoLink node terminal*2.
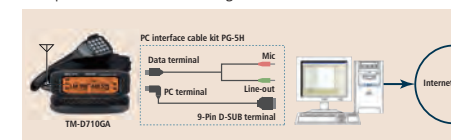
*1: Connection requires the optional PG-5H
*2: When connecting the internal TNC to a PC for packet mode, a serial transmission cable (PG-5G) is required in addition to the PG-5H used for EchoLink Sysop mode.

EchoLink memory – simple access to node terminals
A maximum of 10 EchoLink-dedicated DTMF memories can store call-signs, node numbers and control commands. EchoLink memory management is also possible with the MCP-6A.

Improved operation with large separate panel
The large separate panel has a liquid-crystal display for each key, enabling prompt access to a variety of functions. Two different stands are included: one each for in-vehicle (panel-angle) and table-top (base-stand) installation. The LCD backlight color can be selected from 2 colors (amber/green).

Dual wave receive on same band (VxV, UxU)
In addition to simultaneous receive on both VHF and UHF bands, the device can receive two frequencies on the very same band.

Memory control program compatible (MCP-6A)
By using the MCP-6A memory control program*1, data creation, editing and management for memory channels, APRS, all EchoLink function settings, and custom start-up screens are possible on a PC*2. ARRL TravelPlus information can also be import to the TM-D710GA. There is a PC connection port on the back of the main body and on the rear of the panel, so you can choose the one that is the fit for your operation style.

*1: The MCP-6A program will be available as a free download on the Kenwood website from the middle of November 2013.
*2: Connection to a PC requires the optional PG-5G or PG-5H.

Weather alerts / weather station scanning
The device can emit a warning tone when warnings are announced on the NOAA Weather Band. Registered weather channels can also be scanned.

Voice guidance and storage compatibility with VGS-1 (optional)
By installing this option, key operations can be confirmed via voice announcements (APRS menus can be read out). Voice messages and 30 seconds of continuous recording are also possible.

Catch a variety of information in real time with APRS

Easy settings make IGate and EchoLink node terminal operation possible

144/440MHz FM DUAL BANDER
TM-D710GA
Output:50W