KENWOOD

Welcome to a new world

APRSA &

DIGITAL

The new, brilliantly evolved tribander

144 / 220 / 430 MHz TRIBANDER TH-D74A APRS DIGITAL

438.	500 WOOD AR	9990
	TH-D74	міс
DIGITAL MODE LOW MENU		DUAL A/B (F)
1 M+V ® VFO 4 NEW	ABC MR	3 C.IN
GHI MSG 7 SHIFT PORS REV	JKL LIST	6 OBJ MNO BCN 9 ATT WXYZ PF1
* FINE MHz	O POS	# STEP PF2

*Photo is image of backlight illumination.

APRS & DIGITAL A long-awaited new operating style that follows your



APRS

Compatible with the APRS communication protocol, which allows real-time two-way data transmission by using packet communications, this stand-alone device provides enjoyment of communications that make use of a variety of features, including sharing of local and GPS positional information and message exchange.

Other station positional information, weather station information

The new feature "relative display compass" enables real-time GPS information for your station 'at a glance,' information for your own station set in advance, or the distance/direction/ heading/speed of other stations. It is now easier to confirm the relationship with your own station's position and heading. Weather station information can be displayed in color, such as rainfall, temperature, wind speed/direction, barometric pressure and humidity data.





Own station/other station relative display compass

Station list and object compatibility

A maximum of 100 stations can be stored, including mobile

		•
Station List PTT	:448.088	APRS Object
¶1:₩4DJY-9	12:00F	Object1 DBB
2:WB4APR-9	12:00F	Name:HFEST-20a
3:KJ6H1-7	11:59	Type:Live Object
4:N4DR0-14	11:59F	Method:Auto(30min)
5:W6DJY-2	11:58	N 33*50.42
6:AG6RW-9	11:58F	¥ 118°13.72°
Top	Clear	Back 1/3 OK

Station list

Object settings

stations, base stations, weather stations and objects. It is also possible to limit or sort the kinds of stations received. Local information can also be transmitted as an "object."

Messaging functionality

Real-time messaging is possible between stations running APRS. Messages can be sent by inputting text via the keys on the panel or selecting a message template.



ustomizable message template

QSY Functionality

FM or D-STAR voice channels can be set according to frequencies or D-STAR repeaters information embedded in beacons from APRS stations enabling fast QSY. D-STAR gateway communication is also set automatically.

KISS mode TNC

The built-in KISS mode TNC for APRS enables APRS operation via PC after connection via USB or Bluetooth.

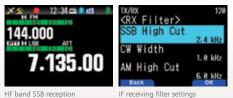
APRS menu settings

The unit is also compatible with a variety of features that expand its scope of operation, including SmartBeaconing, Decay Algorithm, Proportional Pathing and APRS voice.

Improved voice quality and various enhanced features for increased amateur radio enjoyment.

Wideband and multi-mode

Wideband reception is possible on Band B. In addition to DV/DV Fast Data/FM/NFM/WFM/AM on the 0.1~524MHz bands, SSB/CW reception is also possible. The unit comes with a fine mode that achieves zeroing-in with a minimum step frequency of 20Hz*1, and is equipped with a bar antenna*2 for 0.1~10MHz reception. It also has VxV, UxU, and VxU simultaneous receive functionality



IF receiving filter settings

(PTT icon displays operating band) *1: Only for SSB, CW and AM modes *2: Selectable with SMA antenna connector

Built-in IF receiving filter is for comfortable reception

The IF reduces neighboring interference signals during SSB or CW reception, and enables low-interference reception with its excellent skirting capacity. (Selectable range: SSB: 2.2~3.0 kHz, CW: 0.3~2.0 kHz, AM: 3.0~7.5 kHz)

IF output mode

Capable of output to a USB port of an IF signal with a central frequency of 12kHz and a bandwidth of 15kHz, enabling smart reception of all kinds of data via a PC.

High-performance DSP voice processing

The unit comes equipped with an audio equalizer that enables the setting of each of a 5-band reception EQ (0.4~6.4kHz) and 4-band transmission EQ (0.4~3.2kHz), making it possible to adjust sound quality to your preference.

144 / 220 / 430 MHz TRIBANDER 'H-D74A







senses.

DIGITAL

Compatible with D-STAR, the amateur radio communications network that has both voice and data modes. Both local and international communications are possible through diverse operations including simplex communications, single repeater relay communications and inter-repeater gateway communications.

Compatible with D-STAR, as developed by JARL

The unit is compatible with the D-STAR amateur radio digital communication system developed by the Japan Amateur Radio League (JARL). Enjoy a variety of communication methods with the clear voice only digital can deliver.



ode (single band)

RS+DR mode (dual band)

DV fast data mode

The unit features a DV fast data mode that accelerates communication throughput by sending data on unused voice frames to achieve more comfortable data transmission.

Simple operation in DR (D-STAR Repeater) mode

The calling of other stations is made simpler by setting access repeaters and other stations after selecting them from a list. The unit includes a direct reply function that enables a reply after pressing PTT for calling in gateway communications, as well as a function that enables icon-display confirmation of accessibility during kerchunk or gateway communications. A maximum of 120 communication history items can be stored, with other stations able to be easily reset from the communication history.

Setting via the digital function menu

The appeal of D-STAR is being able to enjoy a variety of operating styles. The unit employs a separate menu that enables one-touch operation switching.



Easily updated repeater list

The latest repeater lists can be downloaded from the internet. Updates to the latest information can also be performed via a PC, using a USB cable, via Bluetooth or a micro SD card



Inherit the reputable KENWOOD sound

Enjoy clear-voice and easily heard communications through KENWOOD custom tuned sound quality based on knowhow accumulated over many years and the latest in audio

The perfect combination of visibility, durability and user-friendliness.

Visibility and user-friendliness taken into account

The unit uses TFT transflective color liquid crystals, and using reflected light and a backlight, achieves superior visibility in both dark places and bright places such as in sunlight. In addition to the cross-shaped key structure, the keypad incorporates highly-operable flat and slim key-tops for a



MENU black background) (white background)

Easily understandable pop-up screens

screens. APRS uses blue as a background color, while D-STAR uses green.



APRS pop-up D-STAR pop-up

Built-in GPS

The unit is equipped with a high-performance GPS patch antenna. It also features closest D-STAR repeater search, along with a GPS receiver function that stores movement paths, and an automatic time correction function.



Standard compatibility on a rich interface

The unit features standard compatibility for Bluetooth.

Micro SD / SDHC memory card and micro-USB ports are also included, enabling operation via an interface flexibly linked with a PC



Greater convenience through free PC software

Available software includes the MCP-D74*3 program,

which enables the management of settings including memory on a PC, and the ARFC-D74*3 program, which enables free changing of the unit's frequency via PC.



*3: The MCP-D74 and ARFC-D74 programs are available post-sale for download from the Kenwood website

Other TH-D74A features

●1,000 memory channels ●1,500 repeater lists 4-stage transmission output switching (5/2/0.5/0.05W) •Voice recording functionality (microSD/SDHC) •Voice messaging (4ch) •WEATHER ALERT/RX •Voice guidance •GPS receiver mode •Communication log (microSD/ SDHC)
Scan (Band, MHz, Program, Memory, Memory Group, Call, Priority, D-STAR Repeater) Memory channel lockout
 50 CTCSS frequencies / 104 DCS codes Cross-tone Meter-type switching Frequency direct input ODTMF memory (10ch) Dedicated EchoLink DTMF memory (10ch)
 OTMF remote control OFM radio mode OCustomizable poweron message and bitmap image
Waypoint output Date/time display ●Frequency step switching ●Shift ●VOX ●Auto repeater shift ●Monitor ●Auto poweroff

Battery save
Key lock
APRS lock
Memory shift •Key beep on/off •Programmable function key •Display language change Mic sensitivity switching O3-stage LCD Brightness
Reset (VFO, PART, FULL)

TH-D74A supplied accessories

Antenna, Li-ion battery pack (7.4V/1,800mAh), AC adapter/charger, belt clip, instruction manual, warranty

Example of dual band display

440.000

12 34 48 6

of high-quality aesthetics and operability.

combination

engineering.

IP54/55 standards

We increased dust and water resistance in anticipation of

tough conditions, using heavy-duty specs so you never have

to worry about the dusty outdoors or sudden showers.

Tough weatherproofing meeting





TH-D74A Specifications

GENERAL	
Frequency Range	
Band-A	TX: 144 - 148, 222 - 225, 430 - 450 MHz RX: 136 - 174, 216 - 260, 410 - 470 MHz
Band-B	RX: 0.1 - 76, 76 - 108 MHz (WFM) 108 - 524 MHz
Mode TX	F3E, F2D, F1D, F7W
RX	F3E, F2D, F1D, F7W, J3E, A3E, A1A
Operating Temp. Range with Incd. KNB-75L	$\begin{array}{c} -4^{\circ}F\sim \ +140^{\circ}F \ (-20\ ^{\circ}C\sim \ +60\ ^{\circ}C \) \\ +14^{\circ}F\sim \ +122^{\circ}F \ (-10\ ^{\circ}C\sim \ +50\ ^{\circ}C \) \end{array}$
Frequency Stability	+/- 2.0 ppm
Antenna Impedance	50 Ω
Operating Voltage	
1 5 5	DC 11.0 - 15.9 V (STD: DC 13.8 V)
	DC 6.0 - 9.6 V (STD: DC 7.4 V)
Current Consumption TX	EXT.PS 13.8 V / Battery:7.4 V
(TYP.)	H M L EL
DC-IN	1.4 A 0.9 A 0.6 A 0.4 A
BATT	2.0 A 1.3 A 0.8 A 0.5 A
Current Consumption RX	
(TYP.) SINGLE	260 mA (Rated Power)
	135 mA (SQ Close)
	48 mA (Avg. Save on)
DUAL	310 mA (Rated Power)
	185 mA (SQ Close)
	50 mA (Avg. Save on)
GPS receiver mode	115 mA
Battery Life Approx.	Single, Save on, Rate 6:6:48 sec, GPS off
	H M L EL
KNB-75L (1,800 mAh)	6 hours 8 hours 12 hours 15 hours
KNB-74L (1,100 mAh)	4 hours 5 hours 7 hours 9 hours
KBP-9 (Alkaline 6AAA)	3.5 hours
	Approx. 10 % shorter when GPS is ON
Dimensions (W x H x D)	Projections not included
with KNB-75L	2.20 x 4.72 x 1.33 in 56.0 x 119.8 x 33.9 m
	2.20 x 4.72 x 1.15 in 56.0 x 119.8 x 29.3 mm
	2.20 x 4.72 x 1.42 in 56.0 x 119.8 x 36.0 mm
Weight (net) Body only	7.13 oz 202 g
	12.2 oz 345 g (w/ Antenna, Belt Clip)
with KNB-74L	11.1 oz 315 g (w/ Antenna, Belt Clip)
with KBP-9	7.13 oz 360 g (w/ Antenna, Belt Clip, 6AAA Battery)

RECEIVER		Band-A	Band-B
Circuitry			
	Double Super Heterodyne	1	
	Triple Super Heterodyne		
IF Frequency			
1st IF		57.15 MHz	58.05 MHz
2nd IF		450 kHz	450 kHz
	J3E, A3E, A1A		10.8 kHz
Sensitivity (TYP.)			
Amateur Band			
FIVI	12 dB SINAD	0.18/ 0.22 uV	0.10/0.24
	FM/ NFM 144 MHz FM/ NFM 220/430 MHz		
	DND/GMSK 4 Skhor	0.16/ 0.22 uv	0.20/ 0.25 uv
DV	BFR 1%		
	144/ 430 MHz	0.20 uV	0.22 uV
	220 MHz		0.24 uV
SSB	10 dB S/N		0.16 uV
AM	10 dB S/N		0.50 uV
Except above Amateur Band	-		
AM	10 dB S/N		
	0.3 - 0.52 MHz		4 uV
	0.52 - 1.8 MHz		1.59 uV
	1.8 - 54 MHz		0.63 uV
	54 - 76 MHz		1.12 uV
	118 - 174 MHz		0.50 uV
	200 - 250 MHz		0.63 uV
	382 - 412 MHz		1.12 uV
	415 - 524 MHz 12 dB SINAD		1.12 uV
FIVI	28 - 54 MHz		0.32 uV
	54 - 76 MHz		0.56 uV
	118 - 144 MHz		0.36 uV
	148 - 175 MHz	0.50 41	0.36 uV
	200 - 222 MHz		0.36 uV
	225 - 250 MHz		0.36 uV
	382 - 400 MHz		0.50 uV
	400 - 412 MHz		0.36 uV
	415 - 430 MHz		0.36 uV
	450 - 490 MHz	0.36 uV	0.36 uV
	490 - 524 MHz		0.63 uV
SSB	10 dB S/N		
	1.8 - 54 MHz		0.40 uV
	54 - 76 MHz		0.79 uV
	144 - 148 MHz		0.16 uV
	222 - 225 MHz 430 - 450 MHz		0.20 uV 0.16 uV
	430 - 430 MHZ	l	10.10 UV

RECEIVER		Band-A	Band-B
FM BC Band			
WFM	30 dB S/N		
	76 - 95 MHz		1.59 uV
	95 - 108 MHz		2.00 uV
Squelch(TYP.)		0.18 uV	0.25 uV
Spurious Rejection	144 MHz	50 dB or more	45 dB or more
	430 MHz	50 dB or more	40 dB or more
IF Rejection			55 dB or more
Channel Selectivity	-6 dB 12 kHz or mor	e	
	-50 dB 30 kHz or less		
Audio Output	7.4 V, 10% Dist.	400 mW or mo	ore / 8 Ω

TRANSMITTER		
RF Power Output		EXT.PS 13.8 V / Battery:7.4 V
		H M L EL
		5 W 2 W 0.5 W 0.05 W
Modulation	FM	Reactance Modulation
	DV	GMSK Reactance Modulation
Modulation Deviation	FM	+/ -5.0 kHz
		+/ -2.5 kHz
Spurious Emissions	HI/ MID	-60 dBc or less
	L	-50 dBc or less
	EL	-40 dBc or less
Microphone Impedance		2 kΩ

GPS	
TTFF (Cold start)	Approx. 40 sec
TTFF (Hot start)	Approx. 5 sec.
Horizontal Accuracy	10 m or less
Receive sensitivity	Approx141 dBm (Acquisition)
Ta = 25°C, Ope	n sky
Bluetooth	
Version, Class	Version 3.0, Class 2
Output Power	-6 < Pav < 4 dBm
Modulation Characteristics	140 ≦ ⊿ f 1avg ≦ 175 kHz
Initial Carrier Frequency	$-75 \leq \text{fo} \leq +75 \text{ kHz}$
Carrier Frequency Drift	±25 kHz (One Slot packet)
	±40 kHz (Three Slot Packet)
	±40 kHz (Five Slot Packet)

*VOX function cannot be used with SMC-32/ 34.

Optional Accessories

Speaker Microphone Remote Control Speaker Microphone* Speaker Microphone Earbud In-line PTT Headset KHS-26 **SMC-32** SMC-34 KMC-45D Free Software Memory Control Program MCP-D74 Rapid Charger DC Cable Filtered Cigarette Lighter Cord DC Power Supply KSC-25LS PG-2W PG-3J **KPS-15** Free Software Frequency Control Program ARFC-D74 *Free software is available post-sale for download from the Kenwood website. Li-ion Battery Case (6AAA Alkaline Battery Pack (7.4V/ 1,800mAh) Batteries)

KNB-75L Same as supplied



*Recommended for Low/ KBP-9 Economic Low power mode

*APRS® (The Automatic Packet Reporting System) is a registered American trademark of WB4APR (Mr. Bob Bruninga). *EchoLink® is a registered American trademark of Synergenics, LLC. *D-STAR is a digital radio protocol developed by JARL (Japan Amateur Radio League). *SmartBeaconing™ is supplied by HamHUD Nichetronix, LLC.

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*Bluetooth uses the 2.4GHz frequency band. Sound interruptions and reduced transmission distances may be experienced due to the surrounding environment,

or radios or devices such as microwave ovens using the 2.4GHz band.

Except for sensitivity, these specifications are guaranteed for Amateur Bands only.

JVCKENWOOD follows a policy of continuous advancement in development. For this reason, specifications may be changed without notice.

*Alterations may be made without notice to improve the ratings or the design of the transceiver.

*The photographic and printing processes may cause the coloration of the transceiver to appear different from that of the actual transceiver.

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