

# KENWOOD

## FM HANDHELD TRANSCEIVERS TH-22AT/42AT

*It's a small world, and it's getting even smaller with the latest in lightweight, super-compact transceivers from Kenwood.*



● Built-in DTMF keypad

● Tone alert with elapsed time indicator

● Easy-to-use menu system

● MOS FET power module

● Dual scan stop modes (CO & TO)

● Selectable squelch configuration

● Multiple scan functions (VFO, call & memory)

● Built-in CTCSS encoder, optional TSU-8 decoder

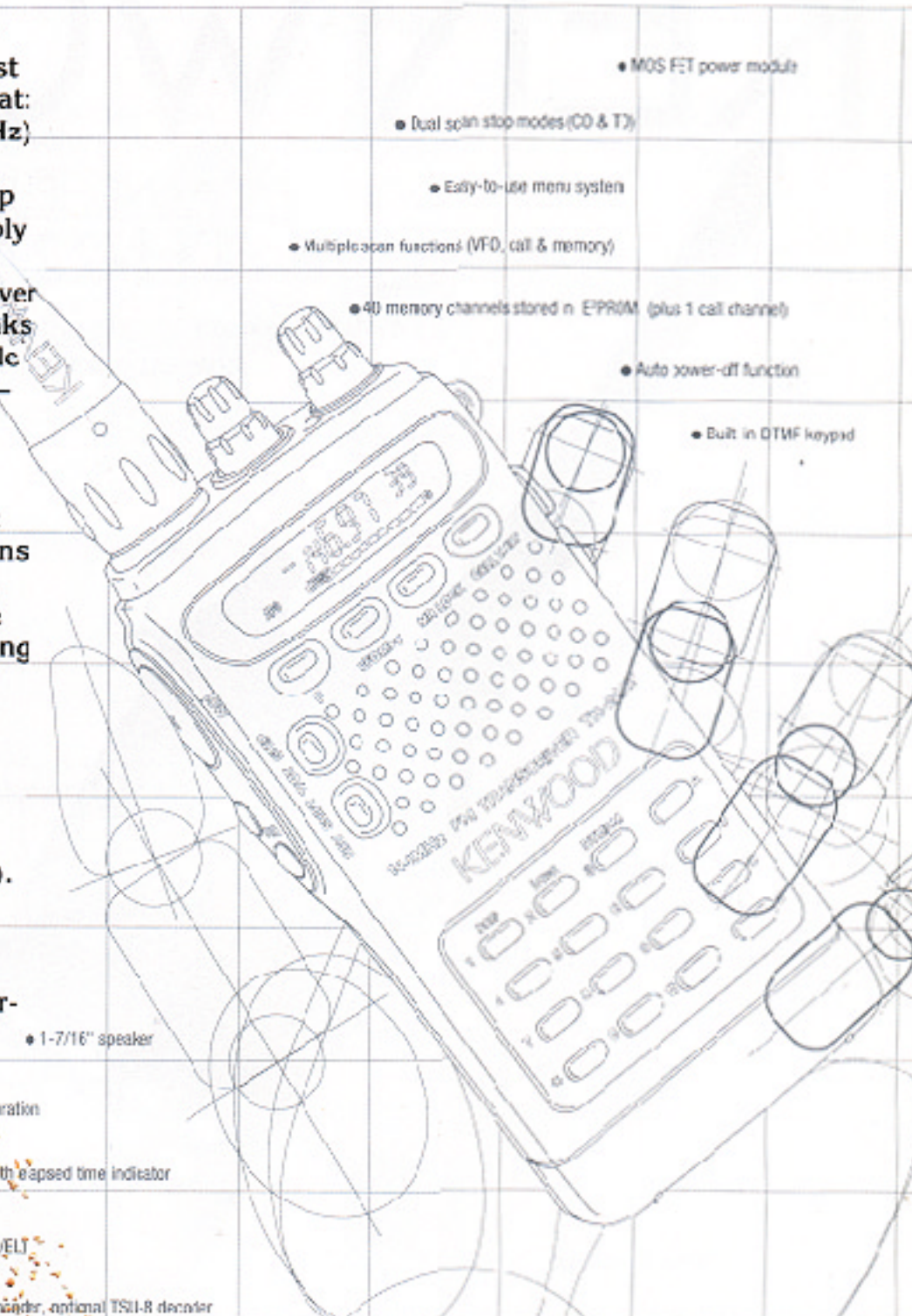
● 40 memory channels stored in EPROM (plus 1 call channel)

● 1-7/16" speaker

● Auto power-off function

● RF output power control (HI/Low/EL)

Meet the latest in transceiver technology, tailored for utmost efficiency in a palm-size format: Kenwood's TH-22AT (144MHz) and TH-42AT (440MHz). So small and slim, they easily slip into a shirt pocket. Remarkably light too. Yet these super compact FM transceivers deliver impressive performance, thanks to the MOS FET power module — a world-first in this class — which enables low-voltage operation while enhancing reliability. Long hours of operation are possible on just one charge. Size considerations don't mean a compromise on sound quality either: the large speaker ensures that everything is loud and clear. Other welcome features include a built-in luminescent DTMF keypad, easy-to-use menu system, multiple scan functions, and 40 memory channels (plus 1 call channel). You can even choose such options as a CTCSS decoder and a rapid charger. Never before has there been a power-packed package with such futuristic size and style.



# Compact Companion



TH-22AT (side view)



TH-22AT (actual size)



TH-42AT

## MOS FET power module

By adopting an FET power module, Kenwood has made it possible to generate high output (over 5 watts with a 9.6V battery) for longer hours without bulky hardware. A 6V battery pack, which provides 3 watts (TH-22AT) or 2.5 watts (TH-42AT), is supplied.

## Luminescent DTMF keypad

The DTMF memory function allows storage of up to 5 different 15-digit (maximum) DTMF codes for auto-dial and autopatch use. And with DTMF transmit hold, you can send consecutive numbers more easily. Also, the keypad enables direct frequency entry (in VFO mode) and direct recall of memory channels (in MF mode). The luminescent keypad maximizes low-light operating convenience with no battery drain.

## DTSS (Dual-Tone Squelch System) and page

DTSS opens the squelch to allow DTMF access to the receiver, while the page will alert the operator to an incoming call (this can be switched off automatically with the correct paging code).

## User-friendly operation

In addition to the convenient menu system, operation of this transceiver has been made simpler with 6 keys on the front (VFO, MR, CALL, MHz(F), T/CT, and REV) and 3 on the side (PTT, LAMP and MON).



## 40 multi-function memory channels plus 1 call channel

All 41 memory channels can independently store essential data — transmit and receive frequencies, frequency step, tone (CTCSS) frequency, tone on/off, CTCSS on/off, DTSS code, DTSS on/off, shift, reverse on/off — in non-volatile E<sup>2</sup>PRAM, so there's no need for battery backup.

## Powerful multi-scan function

You can choose VFO, call and memory scans (with programmable memory channel lock-out). Scan stop modes include CO (stops on a busy channel and resumes 2 seconds after the signal drops out), and TO (stops on a busy channel for 5 seconds, then resumes).

## Tone alert with elapsed time indicator

To signal the presence of an incoming signal, this tone alert system will cause a distinct audio tone to be emitted from the transceiver for 10 seconds. A flashing bell provides a visual indication, and the time is also shown in the display.

## Busy channel lock-out:

This prevents transmission if a signal is detected on the chosen channel.

## Selectable squelch configuration

Setting the squelch is easy, thanks to the provision of two controls (the encoder is temporarily switched to SQL use).

- Key lock
- Time-out timer (30, 60, 90, 180, 900 sec.)
- Auto battery-saver circuit
- LCD with 2 backlighting modes (on demand or continuous)
- 3-level RF output power control
- Built-in CTCSS encoder and optional decoder
- Auto power-off
- Auto repeater offset (TH-22AT: USA only)
- Battery voltage indicator

## Optional Accessories

### Rapid Charger (KSC-14)

This can perform trickle charging for a pair of battery packs, or—if you're in a hurry—rapid charging for a single pack. This means that even batteries like the KNE series can be charged in just one hour (please refer to table).



### CTCSS Tone Decoder (TSU-8)

No screwdriver needed to install: just open the lid on the side panel and snap the TSU-8 unit into place.



### Battery Recharge Time

Recharge time	Rechargeable batteries
60 minutes	PB-32*, PB-32** PB-33KNE-5/1B-9, PB-11/KNE-7
70 minutes	PB-7/KNB-1, PB-33*, KNB-5A, KNB-7A
90 minutes	KNB-6A

\*For use with TH-22AT/42AT

### PB-32

Standard Battery Pack (6V, 500 mAh)



### PB-33

Longlife Battery Pack (6V, 1200 mAh)



### PB-34

High Power Battery Pack (9.0V, 600 mAh)



### BT-9

Battery Case for 4 AA-size batteries



### SC-37

Soft Case for PB-32



### SC-39

Soft Case for PB-33 & PB-34



### SMC-32

Speaker Microphone



### SMC-33

Remote Control Speaker Microphone



### SMC-34

Speaker Microphone with 3 Function Keys & Volume Control



### Approximate Battery Life

Battery	Power	TH-22AT			TH-42AT		
		6	LOW	EL	H	LOW	EL
ET-9, 4-alkaline batteries	6	21	40	15	24	40	
PB-32	4	8.1	12	3.5	6	12	
PB-33	8	17	24	7	16	24	
PB-34	2.5	8.1	12	3	6	12	

Assuming a regular cycle of General transmit, 4-second receive, 10-second standby with TSU-8. (Unit: hour)

### Approximate Transmit Signal Output

Battery	Power	TH-22AT			TH-42AT		
		6	LOW	EL	H	LOW	EL
ET-9, 4-alkaline batteries	2	0.3	30m	1.5	0.5	30m	
PB-32	3	0.3	30m	2.5	0.5	30m	
PB-33	3	0.1	30m	2.5	0.5	30m	
PB-34	5	0.3	30m	5	0.5	30m	
External power (13.8VDC)	5	0.3	30m	5	0.5	30m	

(Unit: watts)

### PG-3J

Filtered Cigar Lighter Cord



### HMC-3

Headset with VCX/PTT



### WR-2

Water Resistant Bag



### PG-2W

DC Cable



## Specifications

	TH-22AT	TH-42AT
<b>GENERAL</b>		
Frequency range	144 - 148MHz	433 - 450MHz
Mode	F3E (FM)	F3E (FM)
Operating voltage		
External power	5.0 - 16.0V DC	5.0 - 16.0V DC
Battery power	4.0 - 15.0V DC	4.0 - 15.0V DC
Power requirement		
External power	13.8VDC	13.8V DC
Battery power	6.0V (C)	6.0V DC
Current drain (approx.)		
Transmit HI (13.8V/9.6V)	1.4A	1.6A
HI (3V)	1.3A	1.6A
LOW (0V)	0.5A	0.5A
CL (3V)	230mA	200mA
Receive	45mA	45mA
Battery save	13mA	13mA
Grounding	negative	negative
Operating temperature	-20° C to +60° C	-20° C to +60° C
Antenna impedance	50Ω	50Ω
Microphone impedance	2kΩ	2kΩ
Dimensions, W/H/D (in / mm)	2-3/16" / 1 / 4-5/8" (56/24.5/116.5) with PB-32	2-3/16" / 1 / 4-5/8" (56/24.5/116.5) with PB-32
Weight, net (oz./g)	10.2/290 with PB-32, antenna, handset and belthook	10.2/290 with PB-32, antenna, handset and belthook
<b>TRANSMITTER</b>		
RF output power		
HI (13.8V/9.6V)	5W approx. 3W	5W approx. 3.5W
HI (3V)	approx. 0.5W	approx. 0.5W
LO	approx. 30mW	approx. 30mW
EL		
Modulation	Reactance modulation	Reactance modulation
Frequency tolerance	within ±10PPM (-10° C to +50° C)	within ±10PPM (-10° C to +50° C)
Max. frequency deviation	±5kHz	±5kHz
Spectrum relation		
HI	<-60dB	<-60dB
LOW	<-50dB	<-50dB
EL	<-40dB	<-40dB
<b>RECEIVER</b>		
Circuitry	Double conversion superheterodyne	Double conversion superheterodyne
Intermediate frequency		
1st IF	45.05MHz	45.05MHz
2nd IF	455kHz	455kHz
Sensitivity, 12dB SINAD	<0.16μV	<0.16μV
Selectivity		
-6dB	<12kHz	<12kHz
-45dB	<28kHz	<28kHz
Spectrum response	>50dB	>50dB
Squelch sensitivity	<0.1μV	<0.1μV
Audiooutput level	>200mW (at 8 Ω, 10% distortion)	>200mW (at 8 Ω, 10% distortion)

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



ISO 9001  
JQA-1205

Communications Equipment Division  
Kenwood Corporation  
ISO9001 certification

## KENWOOD CORPORATION

14-6, 1-chome, Dogenzaka, Shibuya-ku, Tokyo 150-8501, Japan

KENWOOD COMMUNICATIONS CORPORATION

AMATEUR RADIO PRODUCTS GROUP

P.O. Box 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745, U.S.A.

Customer Support/Brochures (310) 639-6300

Repair Locations/Parts (800) KENWOOD Bulletin Board Service (BBS) (310) 761-R294

KENWOOD ELECTRONICS CANADA INC.

3070 Keele Road, Mississauga, Ontario, Canada L5T 1S8