

## Optional Accessories

**BT-13**  
Battery Case



**PB-42L**  
Li-ion Battery Pack



**SMC-32**  
Speaker Microphone



**SMC-33**  
Speaker Microphone  
with Remote Control



**SMC-34**  
Speaker Microphone  
with Volume & Remote  
Control



**HMC-3**  
Headset with VOX & PTT



**KHS-21**  
Headset without VOX & PTT



**EMC-3**  
Clip Microphone  
with Earphone & PTT



**PG-3J**  
Cigar Lighter Cord  
with Noise Filter



**PG-2W**  
DC Cable



**SC-52**  
Leather Case



Not all accessories may be available, please contact dealers for details.



**JQA-1205 ISO 9001**

Communications Equipment Division  
Kenwood Corporation  
ISO9001 certification

## KENWOOD CORPORATION

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

## KENWOOD ELECTRONICS UK LIMITED

Kenwood House, Dwight Road, Watford., Herts, WD 19 8EB, United Kingdom

## Specifications

### TH-F7E

#### GENERAL

Frequency Range	144MHz: 144 – 146MHz 430MHz: 430 – 440MHz	
Main A-band (TX/RX)	144MHz: 144 – 146MHz 430MHz: 430 – 440MHz	
Main A-band guaranteed range (TX or RX)	144MHz: 144 – 146MHz 430MHz: 430 – 440MHz	
Sub B-band	RX: 0.1 ~ 1300MHz	
Modulation	F3E (FM), F1D (FSK), F2D	
Main A-band	F2D, F3E (FM), A1A (CW), A3A (AM), J3E (SSB)	
Sub B-band (reception)	50Ω	
Antenna Impedance	50Ω	
Current Voltage Range	DC 5.5 V – 7.5V (standard voltage: DC 7.4V)	
Battery terminal	DC 12.0V – 16.0V (standard voltage: DC 13.8V)	
External battery terminal		
Power Consumption (approximate figures)		
Transmission (single band)	144MHz	430MHz
HI: DC 13.8V (DC-IN terminal)	2.0A	2.0A
HI: DC 7.4V (battery terminal)	2.0A	2.0A
LOW: DC 7.4V (battery terminal)	0.8A	0.8A
EL: DC 7.4V (battery terminal)	0.5A	0.5A
Reception		
Standby (single band)	100mA	100mA
Average battery save (single band))	30mA	30mA
Simultaneous reception		
Standby (dual-band)	170mA	170mA
Average battery save (dual-band)	35mA	35mA
Dimensions (W x H x D, mm) / Net Weight (g)		
With PB-42L Li-ion Battery Pack including projections	58 x 87 x 30 61 x 104 x 35 / 250	
With BT-13 Battery Case including projections	58 x 87 x 38 61 x 104 x 38 / 280	
Operating Temperature Range	-20 ~ +60° C	
With supplied Li-ion Battery	-10 ~ +50° C	

#### RECEIVER

Circuitry	Double super heterodyne (except for W-FM) Single conversion (W-FM)		
Intermediate Frequency	A band	B band: FM/AM/SSB	B band: W-FM
1 <sup>st</sup> IF	59.85MHz	57.60MHz	10.8MHz
2 <sup>nd</sup> IF	450kHz	450kHz	
Sensitivity			
Main A band: 144/430MHz (FM 12dB SINAD)	Less than 0.18 μV		
Sub B band: AM (approximate)	7.08 μV (0.3 – 0.52MHz) 2.24 μV (0.52 – 1.8MHz) 0.89 μV (1.8 – 50MHz) 0.40 μV (118 – 250MHz) 0.40 μV (380 – 500MHz)		
Sub B band: FM (approximate)	0.40 μV (5 – 108MHz) 0.28 μV (118 – 144MHz) 0.22 μV (144 – 225MHz) 0.89 μV (225 – 250MHz) 0.40 μV (380 – 400MHz) 0.22 μV (400 – 450MHz) 0.40 μV (450 – 520MHz) 7.08 μV (520 – 700MHz) 1.26 μV (800 – 950MHz) 0.40 μV (950 – 1300MHz)		
Sub B band: W-FM (approximate)	3.16 μV (50 – 108MHz) 2.82 μV (150 – 222MHz) 3.98 μV (400 – 500MHz)		
Sub B band: SSB (approximate)	0.45 μV (3 – 30MHz) 0.40 μV (30 – 50MHz) 0.22 μV (144 – 148MHz) 0.22 μV (430 – 450MHz)		
Squelch	Less than 0.13 μV		
Selectivity			
-6dB	More than 12kHz		
-40dB	Less than 28kHz		
Low frequency output (at 8 ohms, 10% distortion)	More than 300mW at 7.4V		

#### TRANSMITTER

RF Output Power (approximate)	144MHz	430MHz
DC IN:	HI / LOW / EL	5 / 2 / 0.5W
LI-ion:	HI / LOW / EL	5 / 0.5 / 0.05W
BT-13:	HI / LOW / EL	0.5 / 0.3 / 0.05W
Modulation	Reactance modulation	
Maximum Frequency Deviation	FM: ±5kHz, N-FM: ±2.5kHz	
Spurious Radiation	Less than -60dB / -50dB / -40dB	
HI / LOW / EL	±5 ppm (-10 ~ 50° C), ±8 ppm (-20 ~ 60° C)	
Frequency Stability	Less than 3% (300 ~ 3kHz)	
Modulation Distortion	2kΩ	
Microphone Impedance		

Except for sensitivity, specifications are guaranteed for Amateur bands only.

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

# KENWOOD

## TH-F7E

144/430MHz FM DUAL BANDER

Simultaneous 2 frequency RX,  
even on the same band

FM/FM-W/FM-N/AM plus  
SSB/CW receive

0.1 ~ 1300MHz  
high-frequency range RX  
(Sub B band)

7.4V 1550mAh  
lithium-ion battery for 5W  
output and extended operation

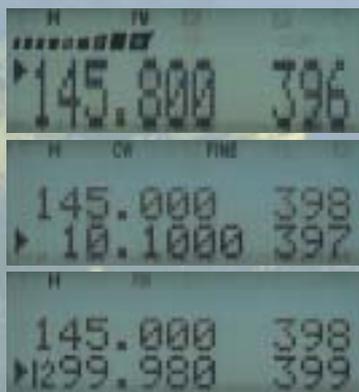
1200/9600bps packet  
function (ext. TNC)



# Small is beautiful: Kenwood's super-compact FM dual bander with dual-channel RX!

## ■ Priority on operating ease

Simple operation is an essential component of this FM dual bander, and Kenwood engineers have ensured that it can be operated effortlessly with one hand. Your attention is drawn to the easy-to-read LCD — equipped with both contrast control and backlight — displaying essential frequency and memory information, intuitive menus, and multi-level battery status. In mono-band mode, the size of the frequency display is doubled for even greater visibility.



## ■ Multi-scroll key & 16-key pad

Operating ease is further enhanced with the multi-scroll key. Similar to the control found on some mobile phones, this can be rocked up & down, left & right with the thumb.



Vertical operation controls frequency, while horizontal movement controls band selection. There is also a 16-key pad with keys that are ergonomically spaced and illuminated for night-time use.

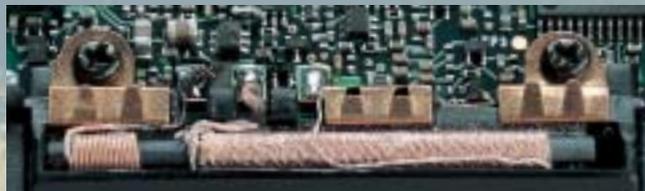
## ■ 434 memory channels, multiple scan functions

Other specifications are equally impressive: 434 memory channels, including 2 call channels and another 20 for programmable scan. A complete range of scan functions is provided — including MHz, memory, call, tone, CTCSS and DCS. Group scan mode covers 8 groups of 50 channels each. And you can choose between time-operated (TO) and carrier-operated (CO) busy-stop-resume (SE).

## ■ Multi-band transceiver (Main band) + wideband receiver (Sub band)

As polished as the user interface may be, it's what is inside that counts. And the TH-F7E counts twice over: it's both a 2-band transceiver (Main A band) and a wideband 0.1-1300MHz receiver (Sub B band). In addition to FM/FM-W/FM-N/AM and SSB/CW, the receiver section offers a special information memory channel RX mode (10 channels), built-in ferrite bar antenna<sup>1</sup> for receiving AM broadcasts, and Fine mode — with selectable increment (33/100/500/1000Hz<sup>2</sup>) — for extra-accurate SSB tuning. What's more, this handheld transceiver can receive 2 frequencies simultaneously, even on the same band. Versatility is first rate.

<sup>1</sup> Switchable with external antenna. <sup>2</sup> Increment figures are approximate.



Internal ferrite bar antenna

## ■ Tough construction

The smaller a transceiver, the farther it is likely to travel. Fortunately, the TH-F7E is built to take rough treatment in its stride, satisfying the stringent MIL-STD 810 C/D/E standards for resistance to vibration, shock, humidity and light rain.



Nestled in the palm of your hand, Kenwood's new TH-F7E is incredibly small — just 58 x 88 x 29 mm (WxHxD). How could so much be packed into such a super-compact design? Impossible! But it's true. This little wonder is an FM dual bander (144/430MHz) with dual-channel RX capability, 16-key pad, multi-scroll key, and no fewer than 434 memory channels. Other attractive features include a built-in ferrite bar antenna for AM broadcasts, LCD with backlight, and a lithium-ion battery. Small enough to slip into a pocket, the TH-F7E allows you to roam freely while enjoying the clear, reliable communications for which Kenwood is renowned. And despite its smart looks, it's tough enough to meet MIL-STD criteria for withstanding the rigors of outdoor use, while delivering superb performance.



### ■ Lithium-ion battery

Equipped as standard with a powerful 7.4V 1550mAh lithium-ion battery, offering high output — with selectable HI/LOW/EL settings — and longer operation than a Ni-Cd battery. And as the charging circuitry is built-in, the battery can be charged while the TH-F7E is operating from a DC (13.8V) supply.

Operation time: duty cycle @ 6-6-48 (hours)

		144MHz	430MHz
Supplied Li-ion battery	HI	6.5	6
	LOW	12	11.5
	EL	16	14.5
Optional alkaline batteries with BT-13 battery case	HI	5	5
	LOW	6	6
	EL	8	8

Approximate figures

- Compatible with external 1200/9600bps TNC
- Selectable squelch configuration
- Memory shift
- Key lock
- Built-in CTCSS (42 subtone frequencies), DCS (104 codes), 1750Hz tone burst
- Large frequency display for single-band use
- Time-out timer & APO (OFF/30/60 min)
- Automatic simplex checker
- ATT (attenuator) on/off
- Internal VOX
- MCP Software (Free download from Kenwood website)

### Supplied accessories

- Belt hook
- Whip antenna
- Hand strap
- 7.4V 1550mAh lithium-ion battery
- AC adapter

### Wideband reception: Cautions regarding use

- The sub band is used for wideband reception. It offers more basic performance than a dedicated band receiver. In an area of very strong signals, it may be advisable to switch the attenuator on for certain bands. Remember that the antenna determines reception quality. You will enjoy better reception, therefore, if you devise an antenna that is tailored for your target band.
- The SSB/CW filters offer basic performance, so in some cases you may experience interference.
- In addition to dual watch, this product is designed for wideband reception. Consequently, multiple beats (cross and internal) are generated from the frequency structure. Those frequencies effectively blocked by the major crossbeat signals can be calculated using the formula given in the user manual.\* Note that it is possible to move an internal beat away from the target signal using the beat shift function.
- If output is set to HI (5W) while using an external power source, for safety reasons an automatic protection mechanism is engaged if the product becomes too hot. Output is then reduced to 0.5W. (Exactly when this is engaged will vary depending on ambient temperature, but for example continuous transmission for about 5 minutes at room temperature will be sufficient to trigger the mechanism.) For heavy-duty use, you should set output to LOW (2W).
- When operating this product from an external power source, if the latter's voltage rises above 14.5V, transceiver output will be automatically switched to 0.5W.

\*Formula and more details on wideband reception cautions are available on our website: [www.kenwood.com/i/products/info/amateur.html](http://www.kenwood.com/i/products/info/amateur.html)



- Simultaneous 2 frequency RX
- High-frequency range RX
- FM/FM-W/FM-N/AM plus SSB/CW receive
- 5W output and extenden operation

Actual size