



**KANEMATSU CORPORATION**

F-25V/F-25U/F-50V/F-45U/F-70V

Operating Manual

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## INTRODUCTION

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This Manual describes the operation for the Kanematsu Land mobile radio

This Land Mobile is full-featured FM transceiver designed for flexible mobile and base station business communications in the VHF or UHF Land mobile bands.

This Land mobile radio can be programmed with 128 channels. This Land mobile include a 16 segment, 8character, numeric display for channel display.

Important channel frequency data is stored in EEPROM and flash memory on the CPU, and easily programmable by dealers using personal computer and PC EDITER software.

### FCC Requirements

Your radio must be properly licensed Federal Communications Commission prior to use. Your Wireless dealer can assist you in meeting these requirements. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands.

### SAFETY      WARNING      INFORMATION

READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR LAND MOBILE RADIO

- Only qualified technicians are allowed to repair this product.
- Do not operate the radio without a proper antenna attached. As this may damage the radio and may also cause to exceed FCC RF exposure limits.
- Typical electronic systems that may malfunction due to the lack of protection from radio frequency energy present when transmitting. If the vehicle contains such equipment, consult the dealer.
- Just as it is dangerous to fuel a vehicle with motor running, similar hazard exist when operation a mobile radio. Be sure to turn the radio off while fueling a vehicle.
- Do not operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits.
- Do not transmit for more than 50% of total radio use time. Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.
- Always Keep at least 87cm (34.2inches) between the antenna and operator while transmitting.
- Always use authorized accessories.
- Dynamite blasting caps may be caused to explode by operating a radio within 500 feet of the blasting caps. Always obey the "Turn Off Two -Way radios" signs posted where dynamite is being used.

- Do not install the radio in the closed compartment that contains an LP gas container or its fitting.
- No changes or adjustments shall be made to the equipment except by an authorized or certified electronic technician.
- Using your radio to send personal messages is a violation of FCC rules.

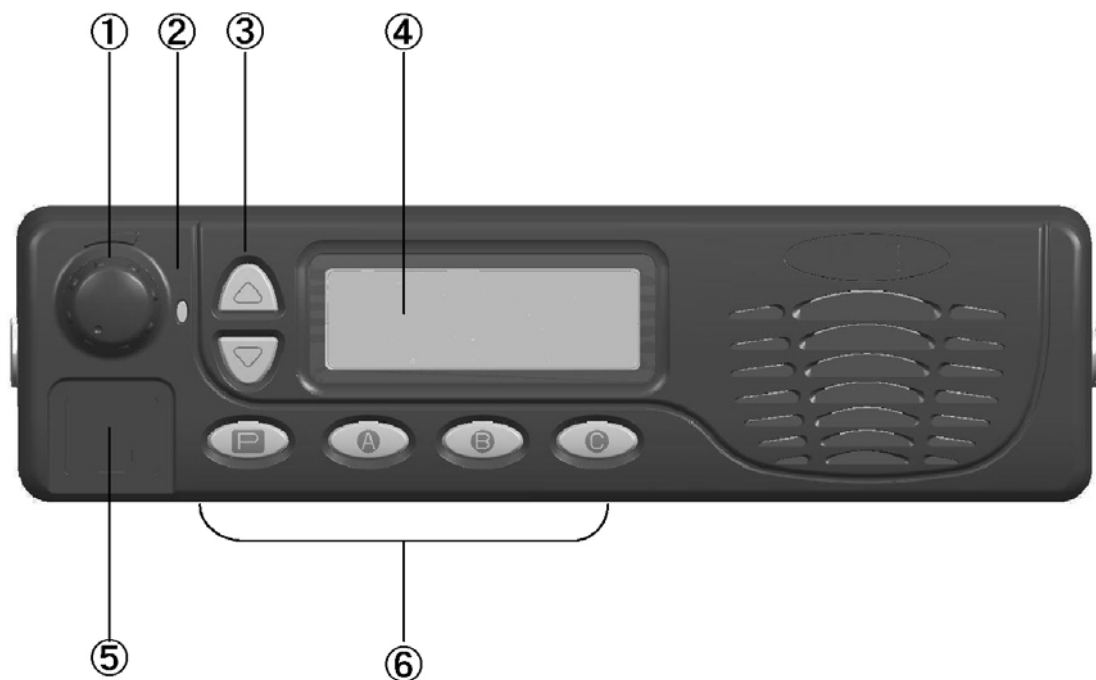
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## Control and Connectors

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### FRONT PANEL

All Buttons on the Front Panel are Programmable Function (PF) Buttons, configured according to your network requirements and programmed by your dealer. The instructions below a typically configured radio



**1 VOL/PWR Knob**

Turn this control clockwise to turn the radio on and increase the volume. Turn it counterclockwise into the click-stop to the radio off.

**2 BUSY/TX Indicator**

Indicate transceiver Transmit/Receive Status

Steady Red: Transmitting in progress

Steady Green: Busy Channel

**3 UP/DOWN Buttons (Programmable Function Buttons)**

Pressing either button changes the current channel (and displayed name).

#### 4 LCD

The display includes an 8-character alphanumeric section showing channel names, status and identity information, and error messages.

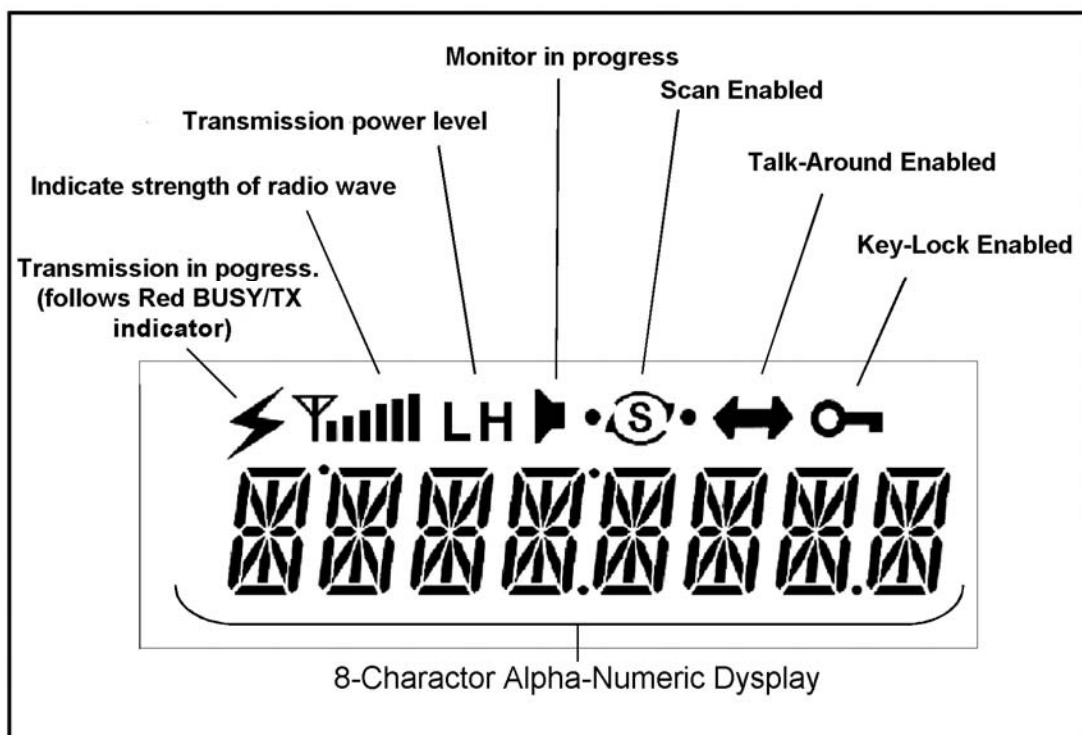
#### 5 Microphone Jack

Connect the microphone plug to this jack.

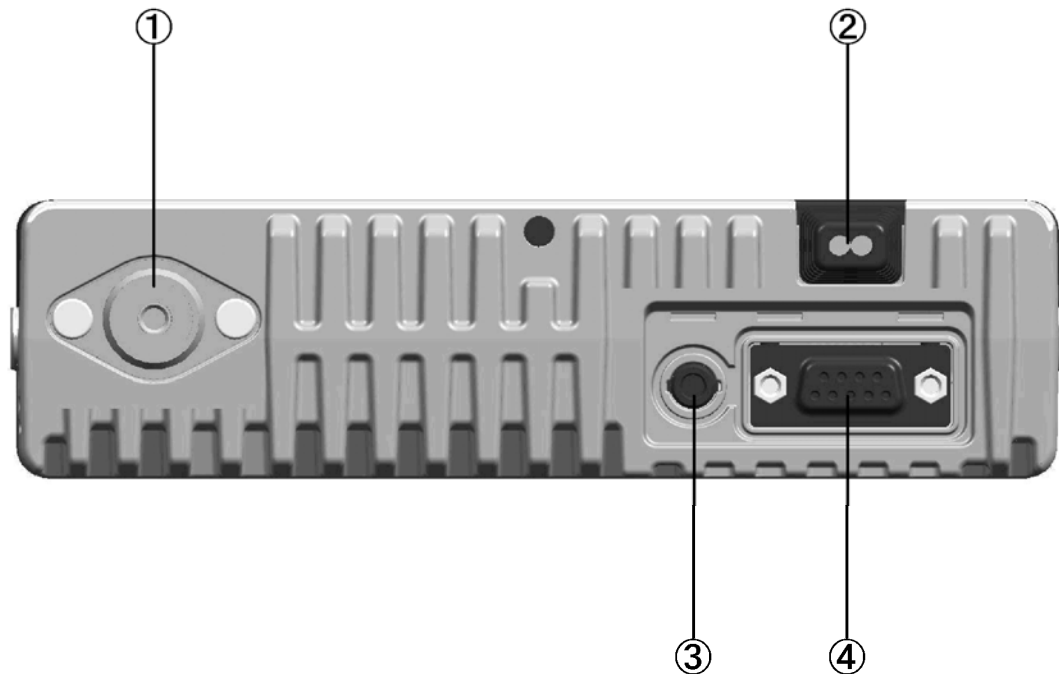
#### 6 [P]-[C] Buttons (Programmable Function Buttons)

These buttons can be set up for the special applications, such as High/Low power selection, Monitor, Talk-Around, etc as determined by your network requirements and programmed by dealer.

### LCD Icons & Indicators



## REAR PANEL



### 1 Antenna Socket

The 50-ohm coaxial feed line to the antenna must be connected here, using a Type-M (PL-259) plug.

### 2 13.8V DC Cable Pigtail with connector

The supplied DC power cable must be connected to this 2-contact. Use only the supplied fused cable, extended if necessary, for power connection.

### 3 External Speaker Jack

An external loudspeaker may be connected to this 2-contact, 3.5mm mini-phone jack

Caution: Do not connect either wire of this line to ground, and be certain that the speaker has adequate capability to handle the audio output (4W) from the radio.

### 4 D-Sub 15-Pin Accessory Connector

External TX audio line input, PTT (Push To Talk), and external RX audio Line output signals may be obtained from this connector for use with accessories such as data transmission.

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## **BASIC OPERATION**

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Important! – Before turning on the radio the first time, confirm that the power connections have been made correctly and that a proper antenna is connected to the antenna jack.

Overview - Your authorized Dealer can program your radio for Conventional format.

### **RECEIVE**

#### **Switching Power ON**

Turn power on by the VOL/PWR knob. The radio will beep, and become illuminated.

Press the UP/DOWN button to choose the desired operating channel. A channel name will appear on the display.

#### **Setting the volume**

Turn the VOL/PWR knob clockwise to increase the volume, and counterclockwise to decrease it.

#### **Select a Channel**

Press the assigned PF button to Up/down Channel.

The display can show channel numbers or channel labels. Technician along programs the display mode and channel labels.

### **Transmitting**

Press PF button, which is programmed to the Monitor feature to listen for channel activity

When receiving a call, transmit only after the incoming call ends. The radio cannot receive a call and transmit simultaneously.

#### **Press PTT switch.**

If the channel is clear, the BUSY/TX indicator will glow red. The radio is now transmitting. While holding in the PTT switch, speak across the face of the microphone in a clear and normal voice. For best transmission, hold the microphone about 1-1/2 to 2 inches away from your mouth. Release the PTT switch to receive.

If the Busy Channel Lockout feature has been programmed on a channel, the radio will not

transmit when a carrier is present. Instead, the radio will generate a continuous low-pitched tone while PTT switch is pressed. Release the PTT switch and wait for the channel to be clear of activity.

If CTCSS or Digital Code Squelch (DCS) Lockout has been programmed on a channel, the radio can transmit only when there is no carrier being received or when the carrier being received includes the correct CTCSS tone or DCS code.

### **Time-Out Timer**

If the selected channel has been programmed for Time-Out Timer, you must limit the length of each transmission. While transmitting, a beep will sound 10 seconds before time-out.

Another beep will sound just before the deadline; The TX indicator will disappear the transmission will cease soon thereafter. To resume transmitting, you must release the PTT switch and wait for the "penalty timer " to expire (if you press the PTT switch before this timer expires, the timer restarts, and you will have to wait another "penalty" period)



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## ADVANCED OPERATION

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### Programmable Function Buttons

This land mobile radio includes six Programmable Function (PF) Buttons. The PF button functions can be customized, via programming by your dealer, to meet your communication requirements. Some features may require the purchase and installation of optional internal accessories. The possible PF button programming features are illustrated below, and these functions are explained on pages to follow.

For Future details, contact your dealer. For future reference, check the box next to the function that has been assigned to each PF button on your particular radio, and keep it handy.

### MONITOR

Press the assigned PF button hears background noise (unmute the audio); the BUSY/TX indicator will grow green.

### SCAN 1- 4

The Scanning feature is used to monitor multiple channel programmed into the transceiver. While scanning, transceiver will check each channel for the presence of a signal, and will stop on a channel if a signal is present.

Press the assigned PF button to active scanning.

The scanner will search the each channels, looking for active ones; it will pause each time if finds a channel on which someone is speaking.

Press the assigned PF button again to disable scanning. Operation will revert to the before scan start channel.

Note: Your dealer may have programmed your radio to stay on one of following channels if you press the PTT switch during scanning pause:

‘Scan List Top channel’

‘Priority channel 1’

‘Priority channel 2’

### SCAN Skip

Press the assigned PF button to delete the current pause channel for Scanning.

## **POWER**

Press the assigned PF button to set the radio's transmitter to the "Low Power" mode. Press this button again to return to "High Power" operation when in difficult terrain.

## **Talk Around**

Press the assigned PF button to activate the Talk Around feature when you are operating on duplex channel system (separate receive and transmit frequencies, utilizing a "repeater" station). The Talk Around feature allows you to bypass the repeater station and talk directly to a station that is nearby. When TA is on, the radio transmit on the receive frequency of the selected channel.

## **CALL 1-4**

Press the assigned PF button to send your radio's identification code (ANI) to the dispatcher (requires the Optional DTMF pager UNIT)

## **EMERGENCY**

This land mobile radio includes an "Emergency" feature, which may be useful if you have someone monitoring on the same frequency as your transceiver's channel.

Press the assigned PF button to initiate an emergency call. For future detail contact your dealer.

## **Display Invert**

Press the assigned PF button to invert the LCD display to backward-facing readout.

Press the assigned PF button again to return the LCD display to frontward-facing readout.

## **Display Aliases**

Press the assigned PF button to change the display information to channel aliases (Alphabet 8 character number).

Press the assigned PF button to change the display information to channel number.

## **SQL**

Press the assigned PF button to squelch adjust mode. The current squelch level is displayed on the LCD. The Squelch level is changed by pressing this button, current level is counted up. Return to channel by pressing the other button again.

Tuning the tightens the squelch setting, allowing only stronger signals to open the squelch and heard.

**Public Address**

Press the assigned PF button to turn the Public Address system on or off. When PA is on, pressing the microphone PTT switch cause audio to rout the audio amplifier without enabling the transmitter.

**Key Lock**

Press and hold in the assigned PF button for 2 second to lock the front panel buttons; this can be enabled to prevent radio setting from being disturbed.

**MEMO CH 1,2**

Press the assigned PF button to recall the programmed channel directly.

**DTMF system**

(Requires the optional DTMF Unit)

This system allows selective calling, using DTMF tone sequences.

When your radio paged by a stations bearing a tone sequence, which matches yours, your radio's squelch will open and the alert ringer will sound.