



Function Reference (FUNC)

For

TKR-750/850 Version2

TKR-751/851

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K

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About this manual

This manual describes the functions of the TKR-750/850 version2 and TKR-751/851 and how to configure these functions.

How to read this manual

This manual has the following sections. In each section, each function has the reference data in order to find the cross-referenced information. As for the functions that you can configure using KPG-91D, you can see the reference data since it is described as (< Configuration on the KPG-91D).

The abbreviation of sections are used to specify the documents.

Function Reference (FUNC)

This section describes every function.

Field Programming Reference (FPRG)

This section describes how to configure using KPG-91D.

Modification Information (MOD)

This section describes how to modify the hardware.

About notations

Following are notations used in this manual.

□

The characters in parentheses indicate the name of the operating portion of the TKR-750/850 version2 and the key of the PC.

““

The characters in these marks indicate the name of the functions, buttons, and menus displayed on the display of KPG-91D.

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Description of the TKR-50 Series

■ About the TKR-50 Series

The TKR-750/850/751/851 is the rack-mounted repeater operating with the UHF/VHF band and it can be controlled by external devices and the Air Remote. You can build the most advanced communications system by using the monitoring function and the remote control function.

■ Features of the TKR-750/850 version 2 and 751/851

- Field Programming by KPG-91D.
- 16 channel capability.
- Firmware update into flash memory through the external source.
- QT/DQT signalling on each channel and decode up to 16 QT/DQT tones.
- DSP is processing audio frequency response.
- Time Out Timer limiting duration to make a continuous transmission.
- The Priority Scan allows you to configure the channels to be periodically scanned.
- CW ID function, you can configure the speed, transmission interval, and the frequency on each channel.
- Remote control by connecting the Remote Controller.
- Detect the malfunctions and report the status from the AUX terminal.
- External terminal for connecting the external controller to make Trunking systems.
- TKR-750/850 version2 has DTMF Air Remote function.
- Courtesy Tone notifying that is transmitted at end of the transmission.
- Multi-mode.

TKR-750/751 Wide:30/25 kHz Narrow:15/12.5 kHz

TKR-850/851 Wide:25 Narrow:12.5 kHz

You can configure following items through the PC using the KPG-91D.

- CW ID Deviation
- DQT Deviation
 - Maximum Deviation
 - QT Deviation
- Repeat Gain Level
- TX Power
- RX Audio Signal Output (RA)
- RX Detector Signal Output (RD)
- Test Tone Deviation
- TX Audio Input (TA)
- DTMF Deviation
- Battery Operation Tone

- Battery Warning Tone
- Courtesy Tone
- Squelch
- Frequency
- DQT Balance
- Power Down Detect

■ About the TKR-*50 Series Programming Software

You can program each functions into TKR-750/850 version2 by KPG-91D through KPG-46 programing cable. In this manual, the description of each function in the Function Reference may have the corresponding reference in the Field Programming Reference. Therefore, you can configure the function by referring to the function also appearing in the Field Programming Reference.

1 BASIC OPERATION

1.1 Functions and Panel Layout

■ Front Panel

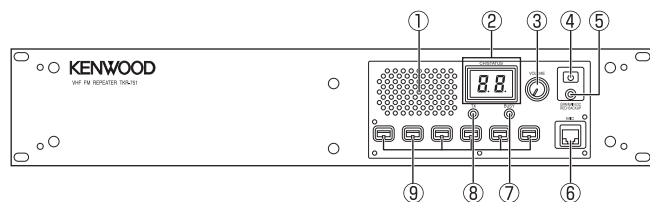


Figure 1-1 Front Panel

① Speaker

The speaker emits the received audio signals and alert tones.

② Channel/Status display

Two 7-segment LEDs can display channel numbers, name and the status.

③ Volume Knob

The volume increases while turning the volume knob clockwise and decreases while turning it counterclockwise.

④ Power switch

Press this switch to turn ON and press it again to turn OFF.

⑤ POWER LED

The LED lights green while using with main power (DC) or lights red while using with the backup power.

⑥ Microphone connector (8-pin connector)

You can connect a microphone with this connector. (Refer to Table 1-1 Assigning signals to the 8-pin connector.)

⑦ BUSY LED

This LED lights green while receiving signal.

⑧ TX LED

This LED lights red while transmitting.

⑨ PF key (Programmable Function key)

Press a PF (Programmable Function) key to activate the assigned function. A key LED lights orange while the assigned function is activated.

Table 1-1 Assigning signals to the 8-pin connector

Pin number	Pin name	Description
1	NC	No connection
2	SB	Switched + B output: 10.8 - 15.6 V/ 0.2 A max.
3	GND	Ground

Pin number	Pin name	Description
4	PTT/TXD1	PTT signal input./ PC serial data from TKR-750/ 850/751/851. PC read, PC tuning, Firmware programming
5	MIG	-
6	MIC	-
7	HOOK/RXD1	HOOK signal input. / PC serial data to TKR-750/850/ 751/851. PC write, PC tuning, Firmware programming
8	NC	No connection

■ Rear Panel

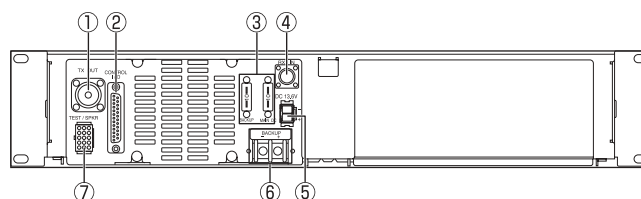


Figure 1-2 Rear panel

① Antenna jack for transmission

This jack allows you to connect the transmission antenna, duplexer or RF amplifier.

② Control Interface jack (25-pin connector)

This jack allows you to connect an external device or controller. (Refer to Table 1-2 Assigning signals to 25-pin connector.)

③ Fuse

You can attach a 10 A fuse.

④ Antenna jack for reception

This jack allows you to connect the reception antenna, duplexer or Pre-selector.

⑤ Power connector

This connector allows you to connect a power cable. With this code, DC 13.6 V (K-type) power are supplied into TKR-750/850/751/851.

⑥ Backup Battery terminal

This terminal allows you to connect the backup battery.

⑦ TEST/SPKR jack (15-pin connector)

This jack allows you to connect an external speaker. You can use this jack for making input/output tests. Also some signals arrive on these connector. (Refer to Table 1-3 Assigning signals to the 15-pin connector.)

