

TEKK

International Incorporated

D-200 Digital DMR Tier II

Handheld Radio



Tekk International Inc
1916 Linn St
North Kansas City, MO
Tekk-Radios.com/D-200

Important RF Radiation Information:

This Tekk product is for occupational use ONLY and should only be used under work-related conditions. All users must be fully aware of the hazards of RF exposure and able to control their exposure thereto.

RF Radiation Safety

In order to ensure user health, experts from relevant industries including science, engineering, medicine and health work with international organizations to develop standards for safe exposure to RF radiation. These standards consist of:

- A. United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J;
- B. American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992;
- C. Institute of Electrical and Electronic Engineers (IEEE) C95. 1 – 1999;
- D. Intl. Commission on Non-Ionizing Radiation Protection 1998

FCC Regulations

The Federal Communication Commission, the FCC, requires that all radio communication products should meet the requirements set forth in the above standards before they can be marketed in the United States and that the manufacturer shall post an RF label on the product to inform users of operational instructions, so as to enhance their occupational health against exposure to RF energy.

Operational Instructions and Training Guidelines

To ensure compliance with the occupational RF energy exposure limits in the above standards and guidelines, users should transmit no more than 30% of the time and always adhere to the following procedures: Your radio radiates measurable RF energy only during transmitting (PTT - during talking) and not while receiving or during standby.

EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC. Please note that the above information is applicable to EU countries only.

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**Check out our
full line of rugged
audio accessories!**



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Preparation

Battery Use and Care

The battery is not completely charged at the factory, so please charge it before using. After purchase, or extended storage (more than two months), the battery cannot reach its normal operating capacity. By repeating the charge/discharge two or three times, the operating capacity will increase to its normal capacity.

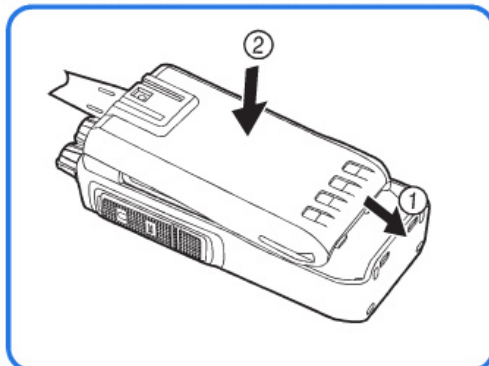


Safety Note: After fully charging, please remove radio and battery from the charger to avoid damage or overcharging.

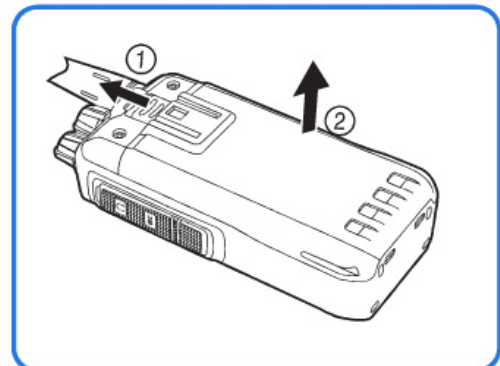
Charging the battery

- 1) The temperature for charging should be between 41F (5°C) and 104F (40°C). The battery cannot be fully charged if out of this range.
- 2) Please clean the battery terminal when it is dusty or dirty.
- 3) Please turn off the radio power before charging.
- 4) Insert radio or battery in the charger. The charger's LED will:
 - A. Light **RED** while charging
 - B. Light **GREEN** when the battery is fully charged
 - C. **Blink RED** if the battery is over-discharged and needs slow charging. It should turn to solid Red in a few minutes. If the flashing continues more than 1 hour, replace the battery
- 5) Please replace with a new battery if it cannot recover normal capacity after fully charging.

INSTALLING THE BATTERY



REMOVING THE BATTERY



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Installing plug-in accessories

Headsets, Microphones and Bluetooth

The radio is equipped with a rubber cover over the audio and accessory jacks to prevent water, dust and other contaminants from entering the radio. The rubber cover can be “peeled” open and rotated 180 degrees so that it points down and is out of the way of the accessory plugs.

Ensure the volume is set low and plug in any appropriate TEKK accessory. Only after installing an ear worn headset, adjust the volume up to an appropriate level . . . always take care as the radio has enough audio power to be damaging to ear function.

Programming

The same connection as above is also used for programming certain special features of the radio. In most countries programming frequencies is reserved, by rule of law, for authorized dealers and specially trained technicians.



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Controls Diagram . . . Please

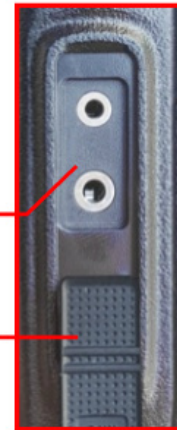


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Review First

RED for Transmit
GREEN for Receive
Flashing RED for Low Battery

Before installing any audio accessory, be sure to turn down the volume.



Audio Jacks

Rubber Protective Jack Cover

To Use A Headset:
Open cover at top
and rotate 180 degrees



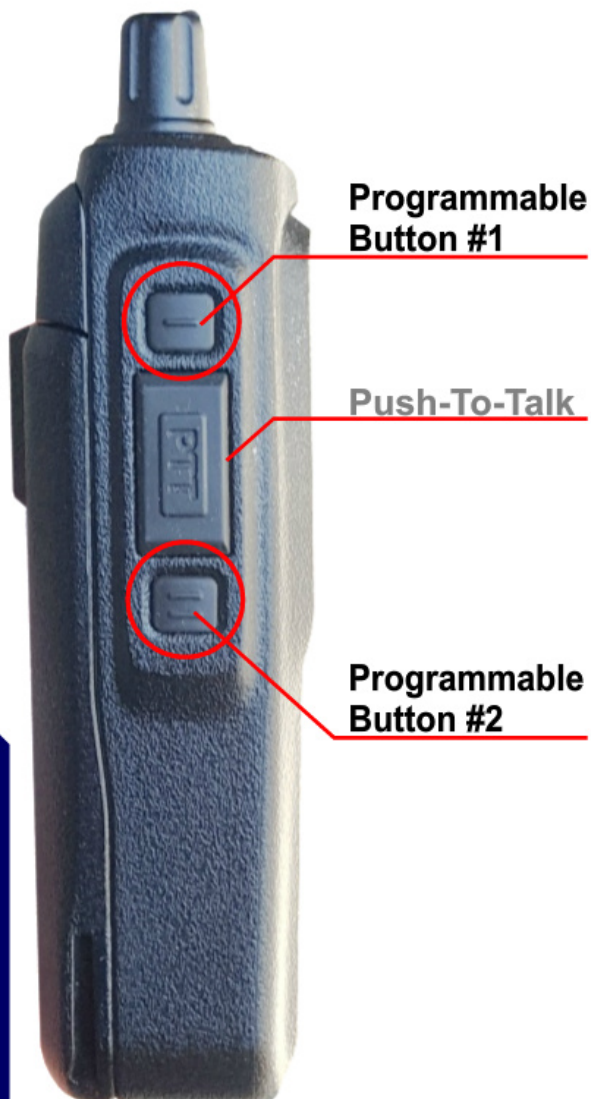
Available
HS-9000BH

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Programmable Buttons

To be pre-programmed to function by programmer.

The Authorized programmer for your radio can set one or both of the 2 programmable buttons to any of the functions in the chart below.



Item	Function
1	Unassigned
2	All Alert Tones On/Off
3	Emergency On
4	Emergency Off
5	High/Low Power
6	Monitor
7	One Touch Access 1
8	One Touch Access 2
9	One Touch Access 3
10	One Touch Access 4
11	One Touch Access 5
12	One Touch Access 6
13	Repeater/Talk Around
14	Scanning ON/OFF
15	Tight/Normal SQ
16	Privacy On/Off
17	VOX ON/OFF
18	Zone Toggle
19	Battery Indicator
20	Lone Worker ON/OFF

Radio Operations

Channel Selection / Turn on the Radio

Rotate the Volume On/Off knob to the ON position to begin operations. The LED light should blink **GREEN**.

Select the appropriate channel for your current need, keeping in mind that the D-200 channel selector shows 16 channels . . . and that the radio supports 2 “Zones” (2 sets of up to 16 channels each). If your system uses both Zones, make sure you are in the correct Zone setting before transmitting.

LED light

The LED will show **RED** during transmit and **GREEN** during receive. Additionally, the LED will *blink RED* continuously when the battery is low.

Zone Selection

Your radio system administrator will inform you if your system is using the “Zones” feature. Zones are simply groups of channels. The D-200 has 16 channels multiplied by 2 Zone, a total of 32 channels. Zones are selected / changed by use of one of the 2 small buttons on the side of the D-200 radio. Pressing the button will change your zone and you will hear a tone indicator when you do so.

Alert Tones (Programmable feature)

Alert Tones, and the buttons that turn them on and off, are programmable by your system administrator who will also inform you which alerts and buttons are in operation. Used properly, these tones will benefit operations.

Channel Open to TX: When a call you receive finishes, your radio will give you 2 quick beeps. You are clear to transmit after hearing the tones.

Talk Delay: When you press the PTT, a fast set of tones is heard . . . begin speaking after the tones. This feature can send your radio’s ID to system.

Emergency Alert: If you send an Emergency Alert, the other radios in the system will begin Beeping loudly to notify of emergency .

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Radio Operations Continued

Monitor the Channel and Check the Volume

Your system administrator may program one of the side buttons to allow listening to the current channel (monitoring) this also allows you to check the volume setting.

Channel selection

Turn the channel knob to the desired channel. The channel knob indicates 16 channels. There are 2 possible “Zones” that can be used which can double the channel capacity to 32 channels. If your system administrator has set up the system to use the 2 Zones available, you will need to make sure you have also selected the correct Zone.

Zone Selection (Programmable feature)

To select a Zone, if programmed, press the assigned side button. You will hear a tone indicating the action. Be sure to set the channel knob to the correct channel after changing zones.

Transmitting

Press the PTT button to transmit. The LED will light **RED** during transmit. Talk in a normal voice and do not “crowd” the microphone. A distance of 1 to 3 inches should be maintained between your lips and the microphone. Check the diagram for the exact location of the microphone.

Open Channel Tone activated (Programmable feature)

If your system has the “Open Channel” feature activated, you must wait until you hear the short tone before transmitting.

Receiving

Release the PTT. The LED will light **GREEN** while receiving. The D-200 can only receive when the PTT is not being pressed.

Private Call Feature (Programmable feature)

Transmits only to one radio the system. One to one communication. Rotate the channel selector to the correct channel/ID. Press the PTT and wait to

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hear the quick tones before talking. If no response in a short time, the “call” will time out, you will hear a short tone and the call is cancelled. If your system has the “Open Channel” feature activated, you must wait until you hear the short tone before transmitting.

One side button can be programmed as a shortcut for this feature.

Group Call, to selected users, and All Call, to all users (Programmable features)

These are similar programmable options and require a channel to be programmed specifically for either of them. To call, you must select the designated channel, then press PTT to talk. If no response in a short time, the “call” will time out, you will hear a short tone and the call is cancelled. If your system has the “Open Channel” feature activated, you must wait until you hear the short tone before transmitting.

Sending Pre-Set Text Messages to LCD Display Radios

You can send a text message from a list of up to 50 pre-set messages. These messages can be read on our **D-500** and **D-600 LCD** model radios sometimes used for **command and control**. Select desired contact first. The LED will flash **GREEN** indicating success or a low tone indicating no message sent.

DTMF Encode and Decode

You can use this feature only in “Analog” mode as it will not function in the Digital mode. Each channel can be programmed with it’s own DTMF code, and one of the programmable buttons can be programmed to send the code.

Encryption (Programmable feature in Digital mode only)

Up to 16 digital channels can be programmed by your system administrator with 4 byte encryption codes. This feature not allowed in Amateur use.

Emergency Alarm (Programmable feature)

If enabled by your system administrator, pressing the assigned button will open loud alert tone signals in the other radios in the system.

Lone Worker (Programmable user safety feature)

If set, the user will hear a tone from the radio at pre-set intervals . . . user must then press the assigned button on the radio. The radio will automatically send an alert if the user cannot or does not press the button.

The logo for TEKK is located on the right side of the page, oriented vertically. It consists of the word "TEKK" in a bold, blue, sans-serif font with a white outline, set against a dark blue background.

Scan Features

Scan List

You can create a list of the channels in the radio to be “scanned” in various ways. A programmable button must be set up to turn the feature on and off. When the radio receives a call while in the scan mode, it can automatically switch to transmit on the received channel if you respond to the call quickly.

Each channel can have its own scan list.

Starting and Stopping Scan

You can select a pre-programmed button to start the scanning or select a scan channel manually. Once scanning begins, you will hear a confirming tone and then the LED will begin to blink **RED**.

Stop the scanning by pressing the assigned button or by changing the channel.

Priority Scan

The scan will listen to the Priority Channel in between each of the other channels in the list.

Answering a call during Scan

When the scanning “stops” on an incoming call, the user can return the call automatically without having to change the selector knob to the received channel.

The user must return the call within a pre-set time limit, or scanning will resume. The pre-set time limit is called the “Signal Hold Time” and is set by the system administrator.

If your system has the “Open Channel” feature activated, you must wait until you hear the short tone before transmitting.

The logo for TEK, consisting of the letters T, E, and K stacked vertically in a stylized, bold, cyan font.

Settings

Squelch Adjustment (Programmable Option)

Tightening the squelch setting can reduce or limit noise in analog mode and in digital mode can filter out weak or distant transmissions when the user is sure they need to receive only stronger signals.

One side button can be programmed as a shortcut for this feature.

High / Low Power Setting (Programmable Option)

When in default High Power mode, the D-200 transmits the maximum distance while drawing more current. Selecting Low Power mode can maximize battery life, but the transmission distance will be shorter. Press the assigned button to switch between high and low power settings.

One side button can be programmed as a shortcut for this feature.

Battery Status (Programmable Option)

Pressing the assigned button for battery status will report as follows:

1. Low Battery: One set of 2 tones
2. Medium Battery: Two sets of 2 tones
3. High Battery: Three sets of 2 tones

One side button can be programmed as a shortcut for this feature.

Beeps and Tones OFF (Programmable feature)

Pressing the assigned button for "Tones Off" will silence all button response tones. Pressing the button again will restore the tones.

One side button can be programmed as a shortcut for this feature.

VOX (Voice operated TX, a Programmable Option)

Available, but not recommended for most systems. See system administrator for more information if needed.

One side button can be programmed as a shortcut for this feature.

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Trouble-shooting

When things go wrong . . .

Of course the first thing to do when something goes wrong is to contact your system administrator. In addition to the Battery, the “electro-mechanical” parts of your radio are the most susceptible to problems. These include the: Speaker, Microphone, PTT Button and Audio Jacks.

We are here . . . call us, email us or fill out our web form.

Between 8:00 AM and 5:00 PM USA Central Time, Tekk endeavors to give live response every time you call.

Phone: 800-521-8355

Email: sales@Tekk-Radios.com

Web: Tekk-Radios.com

Guide: For the D-200, Tekk-radios.com/D-200

Experiencing a Problem? - Try this first . . .		
1	No Power	Battery may be drained or defective. If sure that the battery is charged, try exchanging batteries with a working radio.
2	The battery life is very short after charging.	This may indicate the battery can no longer hold a charge. Try a different charger if possible, and replace if the battery still will not hold a normal charge.
3	Cannot talk to others in your work group.	Check channel, privacy code and encryption settings when sure you are within talking distance of your system or group.
4	You hear traffic on you channel that you are sure is not from your system or group.	Check to make sure you are not in “monitor” mode. Also, another system may be using your same settings, you may need to change code or encryption settings.

The logo for Tekk, featuring the word "TEKK" in a stylized, bold, blue font with a white outline, set against a dark blue background.

Privacy Code Reference

These codes are for Analog only. For Digital, use Encryption.

CTCSS Codes by Numeric Order / Hertz			
1-67.0	14-103.5	27-159.8	40-199.5
2-69.3	15-107.5	28-162.2	41-203.5
3-71.9	16-110.9	29-165.5	42-206.5
4-74.4	17-114.8	30-167.9	43-210.7
5-77.0	18-118.8	31-171.3	44-218.1
6-79.7	19-123.0	32-173.8	45-225.7
7-82.5	20-127.3	33-177.3	46-229.1
8-85.4	21-131.8	34-179.9	47-233.6
9-88.5	22-136.5	35-183.5	48-241.8
10-91.5	23-141.3	36-186.2	49-250.3
11-94.8	24-146.2	37-189.9	50-254.1
12-97.4	25-151.4	38-192.8	
13-100.0	26-156.7	39-196.6	

DCS Codes in Numerical Order									
23	71	143	225	266	356	452	532	664	
25	72	145	226	271	364	454	546	703	
26	73	152	243	274	365	455	565	712	
31	74	155	244	306	371	462	606	723	
32	114	156	246	311	411	464	612	731	
36	115	162	245	315	412	465	624	732	
43	116	165	251	325	413	466	627	734	
47	122	172	252	331	423	503	631	743	
51	125	174	255	332	431	506	632	754	
53	131	205	261	343	432	516	645		
54	132	212	263	346	445	523	654		
65	134	223	265	351	443	526	662		

