

User Guide

The Blackbox SHIFT two-way radio series is a professional communication product line, developed for commercial, industrial and enterprise users. Look for **"Quick Tips"** that are highlighted.

Thank you for your choice!

Product Inspection

Please open the box carefully and check that the following items are included. If you find any items are missing or have been damaged during shipment, please contact your dealer immediately.

- Two-way Radio Body
- Antenna
- Li-ion Battery
- Belt Clip
- Intelligent Charger
- AC Adaptor
- Wrist Strap
- QR code link to User Guide

Battery Information

In order to avoid damage to the battery, only use the charger provided. The supplied charger is an "intelligent" charger and has automatic and over-protect functions built in. Do not short-circuit the battery pack or dispose of in fire. The optimal charging temperature is between 50°F (10°C) to 95°F (35°C). When charging in temperatures below 50°F (10°C) there may be a leakage of electrolytes which will damage the battery. If charging above 95°F (35°C), battery performance will be reduced.

Turn off radio while charging. Do not charge for more than 6 hours. If continually charged for long periods of time, battery will lose cell capacity at an exponential rate.

Battery Charging

Connect the AC adaptor to the charger. The red LED will light up. Place the battery or the radio with battery attached into the charger. Check that the battery is completely seated. The LED will turn red indicating that charging is in progress. The LED will turn green when the battery is fully charged.



Radio Setup

Installing and Removing the Battery Pack

Place the rechargeable battery onto the back of the radio. It will be a quarter inch below its final position. Press battery up until it clicks in. To remove the battery pack, press the battery release on the bottom of the radio.

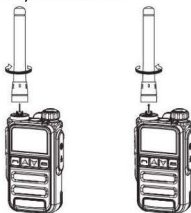


Battery USBc port Charging

The battery has a USBc port on the bottom that can be used for charging with or without being attached to the radio. The LED will turn red indicating that charging is in progress. The LED will turn green when the battery is fully charged.

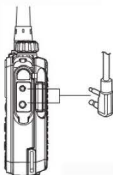
Installing/Removing the Antenna

Screw the antenna into the connector on the top of the radio by holding the antenna at its base and turning it clockwise until secure. To remove the antenna, hold the antenna at its base and turning it counter-clockwise until it be released. Do not carry the radio by the antenna.



Installing an Earpiece/Headset

First release the Speak/microphone cover then insert the speaker/microphone plugs into the SP/MIC jacks. Do not carry the radio by the attached audio accessories. Always turn the radio OFF when attaching or detaching audio accessories.



Installing/Removing the Belt Clip

Attach the belt clip using the two supplied screws.



Radio Features

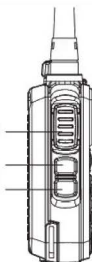


Blackbox **SHIFT™** 2-WAY RADIO

PTT (Push-to-Talk) Button

Programmable Button 1

Programmable Button 2

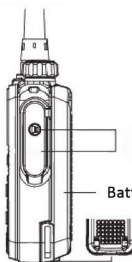


Headset /
Programming Port

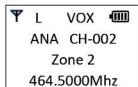
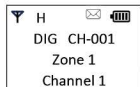
Battery Pack

Charging Contacts

Battery Latch



LCD Display



	RX Signal Strength Indicator
H/L	High/Low Power
VOX	VOX On
	Unread SMS
	Remaining Battery
DIG/ANA	Channel Type
CH-001/2	Channel Number
Zone1/2	Zone Name
Channel 1	Channel Name
464.5000Mhz	Channel Frequency

Programmable Buttons

Programmable buttons 1 & 2 can be assigned to any of the following functions by programming through a PC. Functions can be assigned as a “short press” or “long press” (with long press duration 0.5-3s, default is 1s). Each button can be assigned two functions, one as a “short press” and one as a “long press”. Programmable buttons can have the same function assignments.

- **None:** No functions
- **Zone Up:** Switch to the previous zone (Range: Zone 1-Zone 4)
- **Zone Down:** Switch to the next zone (Range: Zone 1-Zone 4)
- **Power Adjustment:** Switch between HIGH/LOW power output.
- **Squelch OFF:** In analog mode, squelch will be ON after press [PF1] and [PF2] press again to exit. Note: This function is invalid in digital mode.
- **Monitor:** In analog mode, press pre-programmed monitor key to open signaling squelch so that audio conversation can be heard when the signal is weak. Note: this function is invalid in digital mode.
- **Talk Around:** Press this programmed key, the RX frequency will be used in place of the TX frequency when transmitting. Note: After Talk Around function is activated, both receiving frequency and receiving signaling will be used in place of the transmitting frequency and signaling when transmitting.
- **Scan ON/OFF:** Press the programmed Scan key to initiate radio scanning from the current channel. Scanning ascends through the channel numbers in scan list. The green/blue LED flashes when scanning proceeds and solidly glows when a signal is received with signaling match on a channel. Press the scan key again to exit radio scanning. The scan status will not be memorized after the radio has been restarted.
- **VOX ON/OFF:** After inserting an earpiece, press the programmed VOX ON/OFF key to activate or disable VOX function. Note: This function is invalid without being inserted with an earpiece.
- **Local Alarm:** Press the programmed key to activate/disable local alarm function. Radio will emit on-site alarm tone after activated. This function is helpful for emergency rescue.
- **Remote Alarm:** Press the programmed key to activate remote alarm function in the pre-defined radio. Once remote alarm function activated successfully the calling radio will receive acknowledgement message sent from the pre-defined radio. Note: This function is valid only in digital mode.
- **Remote Monitor:** Press the programmed key to activate remote monitor function in the pre-defined radio. Once remote monitor function activated successfully the calling radio will be able to Monitor the conversation in the pre-defined radio. Note: This function is valid only in digital mode.
- **Remote Stun:** Press the programmed key to remote stun the pre-defined radio by sending remote stun code. Only receiving is allowed for a stunned radio (Transmitting is prohibited). Note: This function is valid only in digital mode.
- **Remote Kill:** Press the programmed key to remote kill the pre-defined radio by sending remote killcode. Transmitting and receiving are prohibited for a killed radio and can be revived only by PC software programming with revived code. Note: This function is valid only in digital mode.
- **Remote Activation:** Press the programmed key to remote revive the pre-defined radio having been stunned by sending remote revive code. Note: This function is valid only in digital mode.
- **DMR Dial:** Press the programmed key to select the desired channel for private call.
- **Channel Select:** Press the programmed key to select the desired channel.
- **One-touch All-call:** Press the side key to change the current existing digital contact call mode to all call, then the user is able to place all call by pressing PTT button. Note: This function is valid only in digital mode.
- **Battery Prompt:** Turn the ON/OFF switch for a low battery level alert.

Function and Operation

Radio ID

Each radio can be assigned with an ID number which is useful and can be identified by other users to place an individual call/group call or to send text info etc. ID Range: 1-16776415. Note: This function is valid only in digital mode.

SQ (Squelch Level)

Squelch level can be programmed from level 0 to level 9, receiving sensitivity is the lowest when set in level 9.

Battery Save

If this function is programmed, the radio will automatically switch to battery save mode when there is no receiving and no operation for more than 10 seconds. When the radio receives an incoming signal or is used to transmit, the battery save mode switch off automatically. Battery Save can be programmed ON/OFF by PC software programming.

Time-out Timer (TOT)

The purpose of the Time-out-Timer is to prevent any caller from using a channel for an extended period and avoid any damage caused by long time transmission. Once a continuous transmission exceeds the preset time (programmable by dealer), the radio will automatically stop transmitting and emit a warning tone until the PTT is released. Time-out Timer range:30-600s, steps:30s, default is 180s.

VOX Function

VOX can be programmed ON/OFF by PC software programming or activated/disabled by pre-programmed key, VOX ON allow users to place a voice-activated hands-free call on the pre-programmed channels. Whenever microphone detect voice, the radio will automatically transmit and stop transmitting when voice disappear or pre-programmed TOT time expires.

VOX Level Range:0-9

VOX Delay Time:1-4s

Alert Tone Settings

1. Power-on Tone can be turned on or off.
2. Lower Battery Alert Tone: ON/OFF selective, radio will emit alert tone "do-doot do-doot" if the power is lower than preset value, users should charge the battery or replace with a new battery in time or the radio will stop transmitting if users continue using it.
3. Keypad Tone can be turned on or off.
4. Digital Calling Tone can be turned on or off. In digital mode the radio will emit an alert tone once the PTT is pressed.
5. SMS Tone can be turned on or off.

Channel Information

1. Zone Name: Users can input new names for Zone 1 and Zone 2. The name can be programmed as numbers, symbol or characters up to 9 digits.
 2. Channel Name: Users can input new names for each channel. The name can be programmed as a number, symbol or character up to 9 digits.
 3. Channel Options: RX/TX Frequency - Users are able to change RX/TX frequency for each channel. The frequency must be consistent with the frequency step rule and within frequency range.
- Working Mode: Digital/Analog mode is selectable for each channel.

Functions

- Output Power: High/Low power is selectable for each channel.
- Always Allow - Transmitting is always allowed.
- Channel Free - Transmitting is allowed only when current channel is free.
- CC (color code) Match - Transmitting is allowed only when color code of the incoming call is matched with the radio.
- Bandwidth: 12.5KHz for both digital channels and analog channels.
- RX Only (receive only) option can be set up for a channel.
- RX CC (Receiving color code): Radio will receive incoming call when receiving color code matched. CC is 0-15 selected by PC software programming.
- TX CC (Transmitting color code): TX CC is 0-15 selective by PC software programming.
- TX Contact (Transmitting Contact): There are maximum 128 transmitting contacts for users to select, each transmitting contact can be programmed as Individual Call, Group Call or All Call.
- Dual Capacity Direct Mode (DCDM): feature supports two simultaneous subscriber transmissions within a 12.5 kHz channel bandwidth for Direct Mode transmissions. The radios within the same group must use the same timeslot so that the group using timeslot 1 does not interfere with the group using timeslot. When a 12.5 kHz RF channel is configured for dual capacity direct mode, both timeslots are available for independent and simultaneous radio call conversations.
- RX Group List: This option is to configurate receiving channel list to the current channel. When matched calling group ID from the list is detected, the receiving radio will open the speaker to receive audio. Note: This function is valid only in Digital mode.
- Voice Encryption: This function allows user to program voice encryption code to the current channel; conversation is allowed between radios only when same encryption code is programmed. Code range: OFF, 0-65535.
- RX/TX PL tone options: None/CTCSS/DCS/Reverse DCS
- Digital Contact: Individual call/Group call/All call is available for selection; the radio supports maximum 128 digital contacts. This allows user to add digital contacts and input Alias containing monitored, scan and Chinese characters up to 9 bits. Range of numbers:1-16776415.
- RX Group List: This allows users to create/delete receiving group list by adding/deleting members (contacts), group list name can be changed. The radio supports maximum 32 receiving group lists and maximum 10 members to each group call list.
- Scan List: This function allows user to create/delete scan lists by adding/deleting channels to be monitored. Scan list names can be changed. The radio supports a maximum of 8 scan lists and maximum 16 channels for each scan list.

Basic Operation

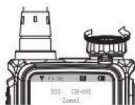
Power On/Off:

Turn the On/Off/Volume knob clockwise to switch the radio on. Turn the On/Off/Volume knob counter-clockwise to switch the radio OFF.



Adjusting the Volume:

Rotate the On/Off/Volume knob clockwise or counter-clockwise to adjust the volume as required. Clockwise increases the volume and counter-clockwise decreases it.



Menu Operation

Operation Steps: Press the green button to enter menu setting, press the up & down arrows to choose desired item menu, press the green button to confirm, or press the red button to go back to previous menu or exit menu setting.

In digital channels, the menu includes: SMS (message), Contacts, Call Log, Scan Setting, Zone Select, Settings and Wireless Earphone. In analog channels, the menu includes: Scan Setting, Zone Select and Settings.

SMS Messages

In digital channel, the radio can send and receive messages. The radio will display "Rec SMS" and emit an alert tone when message received, users can read the message or go back, message icon will display on the top of the screen if there is an unread message.

Inbox (Max 20 SMS store capacity)

SMS Check:

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the green button to choose Inbox and press the green button to enter Inbox.
3. Press the green button to choose desired SMS.
4. Press the green button to confirm and read the message.

SMS Forward:

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the green button to choose Inbox and press the green button to enter Inbox.
3. Press the green button to choose desired SMS and press the green button to read the SMS.
4. Press the green button to enter sub-menu and choose "Forward", press again to choose "Find Contact", use the up & down arrows to choose the existing contact with pre-programmed name/alias.
5. 5) Press the green button to send the message, "Sending" will appear on the screen, and if message is sent successfully, radio will then emit an alert tone "beep".

SMS Delete:

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the green button to choose Inbox and press the green button to enter Inbox.
3. Press the down button to choose desired SMS message and press the green button to read the SMS message.
4. Press the green button to enter sub-menu and choose "Delete".
5. Press the green button again to delete the message.
6. After message deleted, "SMS is deleted" will appear on the screen.

Outbox (Max 20 SMS store capacity)

SMS Check:

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the down button to choose Outbox and press the green button to enter Outbox.
3. Press down button to choose desired SMS.
4. Press the green button to confirm and read the message. Outbox supports message resend, forward and delete.

Common Phrases (Max 20 SMS store capacity)

Common Phrases Check and Sending

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the down button to choose "Phrases" and press the green button to enter.
3. Press the down button to choose desired phrase.
4. Press the green button to confirm and read the phrase.
5. Press the green button to choose "Find Contact", then press the down button to choose the existing contact with pre-programmed name/alias.
6. Press the green button to send the phrase, "Sending" will appear on the screen and if the phrase is sent successfully, the radio will then emit an alert tone "beep".

SMS Delete

1. In digital channel, press the green button to enter the menu, choose SMS, press the green button to confirm.
2. Press the down button to choose "Delete SMS" and press the green button to enter.
3. Press the down button to choose Inbox or Outbox.
4. Press the green button to delete all the messages in the Inbox or Outbox.
5. After all the messages are deleted, "SMS is deleted" will appear on the screen.

Digital Contacts

Digital contacts are an "address book" built inside the radio. Each contact is configured with a specific ID (range:1-16776415), call name (alias contains symbols, letters, and numbers up to 16 characters) and call type (individual call, group call and all call). The radio supports users to place a temporary call, check contacts details, and set default contact.

Note: "Add" and "edit" is available only for individual call contacts.

Place a Temporary Call

1. In digital channel, press the green button to enter the menu, choose "Contacts".
2. Press the down button to choose desired contact name.
3. Press PTT button to place a call and contact name will display on the screen.

Check Contacts Details

1. In digital channel, press the green button to enter the menu, choose "Contacts", press the green button to confirm.
2. Press the down button to choose desired contact name.
3. Press the green button to enter and choose "Details".
4. Press the green button to enter and read the details (Name, ID number, and call type).

Set Default Contact

1. In digital channel, press the green button to enter the menu, choose "Contacts", press the green button to confirm.
2. Press the down button to choose desired contact name.
3. Press the green button to enter and choose "Default".

Call Log (Recent Call History)

The radio will record all recent dialed in and dialed out histories automatically, user is able to check the recent dialed in/out histories and delete the histories.

Dialed In

1. In digital channel, press the green button to enter the menu, choose "Call log", press the green button to confirm.
2. Press the down button to choose "Dialed In".
3. Press the green button to check the dialed details.

Dialed Out

1. In digital channel, press the green button to enter the menu, choose "Call Log", press the green button to confirm.
2. Press the down button to choose "Dialed Out".
3. Press the green button to check the dialed details.

Delete Call Logs

1. In digital channel, press the green button to enter menu, choose "Call Log", press the green button to confirm.
2. Press the down button to choose "Delete Logs", press the down button to choose "Dialed In" or "Dialed Out".
3. Press the green button to delete the selected dialed histories and "Call Log is Deleted" will appear on the screen.

Scan Settings

1. Press the green button to enter the menu, choose "Scan Settings", press the green button to confirm.
2. Press the green button to enter the Scan List selection.
3. Press the down button to choose the desired scan list and press the green button to save the selection.

Zone Select

1. Press the green button to enter menu, choose "Zone Select", press the green button to confirm.
2. Press the down button to choose desired zone, then press the green button to save the selection and radio will switch to the target zone.

Settings

Power Output

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the green button to choose "Settings".
3. Press the down button, choose "Power Output" and press the green button to confirm.
4. Press the down button to choose "High Power" or "Low Power", press the green button to confirm.

Squelch Level

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the green button choose "Settings".
3. Press the down button to choose "Squelch Level" and press the green button to confirm.
4. Press the down button to choose desired squelch level (Range:0-9), press the green button to confirm.

Battery Save Mode

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the green button to choose "Settings".
3. Press the down button to choose "Battery Save Mode" and press the green button to confirm.
4. Press the down button to choose battery save on or off, press the green button to confirm.

TOT (Time-out-timer)

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "TOT" and press the green button to confirm.
4. Press the down button to choose desired TOT (Range: off, 30s, 60s, 90s, 120s, 150s, 180s, 210s and 240s), press the green button to confirm.

Vox Level

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "VOX Level" and press the green button to confirm.
4. Press the down button to choose desired VOX level (Range: 0-9), press the green button to confirm.

VOX Delay

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button, choose "Settings" and press the green button to confirm.
3. Press the down button to choose "VOX Delay" and press the green button to confirm.
4. Press the down button to choose desired TOT (Range: 1s, 2s, 3s and 4s), press the green button to confirm.

Alert Tone Set

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "Alert Tone Set" and press the green button to confirm.
4. Press the down button to choose alert tone on or off, press the green button to confirm and save.

Backlight Level

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "Backlight Level" and press the green button to confirm.
4. Press the down button to choose desired backlight level (Range: 0-5), press the green button to confirm and save.

Backlight Delay

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "Backlight Delay" and press the green button to confirm.
4. Press the down button to choose desired backlight delay time. (Range: On, 5s, 10s, 15s.....60s), press the green button to confirm and save.

Keypad Lock

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "Keypad Lock" and press the green button to confirm.
4. Press the down button to choose desired automatic keypad lock time (Range: On, 5s, 10s, 15s.....60s), press the green button to confirm and save.

Slot Set

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Settings" and press the green button to confirm.
3. Press the down button to choose "Slot Set" and press the green button to confirm.
4. Press the down button to choose Slot 1 or Slot 2, press the green button to confirm and save.

Own Info (My Radio Information)

This allow users to check the model, Radio ID, software version and firmware version of the radio, check operation steps are as bellows:

1. Press the green button to enter the menu, choose "Settings" and press the green button to confirm.
2. Press the down button to choose "Own Info" and press the green button to confirm.
3. Press the down button to enter and choose desired item.
4. Press the green button to confirm and read the information.

FCC STATEMENT:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Statement:

SAR tests are conducted using standard operating positions accepted by FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each product are performed in positions and locations as required by the FCC. For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with and accessory designated for this product or when used with and accessory that contains no metal. To maintain compliance with FCC RF exposure guidelines, hold the transmitter and antenna at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away from the face.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Service and Support

Your Blackbox radio comes with a 3-Year Manufacturer Defect Warranty. The battery has a 1-Year Manufacturer Defect Warranty. For Support, contact your dealer or support@kleinelectronics.com

FCC ID is U7GSHIFT

FCC Requirements:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his expense.

