



Owner's Manual

BR180
On-Site Business Radio



Version 0.4.0
March 8, 2021

Table of Contents

INTRODUCTION.....	3
FEATURES	3
FCC NOTICE	3
GETTING TO KNOW YOUR RADIO-QUICK START	5
<i>CONTROLS.....</i>	5
<i>INSTALLING THE BATTERY.....</i>	6
<i>INSTALLING THE HOLSTER.....</i>	7
<i>INSTALLING EXTERNAL ACCESSORIES.....</i>	7
<i>CHARGING THE BATTERY PACK.....</i>	7
<i>USE AND CARE.....</i>	8
ABOUT COVERAGE.....	8
OPERATING YOUR RADIO	9
<i>POWER ON/OFF AND VOLUME.....</i>	9
<i>TRANSMITTING AND RECEIVING A CALL.....</i>	9
<i>CHANNEL SELECTION.....</i>	9
MENU FUNCTIONS.....	10
PROGRAMMING YOUR RADIO.....	11
<i>PROGRAMMING SOFTWARE.....</i>	11
<i>KEYPAD PROGRAMMING.....</i>	11
<i>SET THE WEATHER CHANNEL.....</i>	12
<i>RADIO TO RADIO CLONING.....</i>	13
FREQUENCIES	13
<i>DEFAULT FREQUENCIES AND PRIVACY CODE CHART.....</i>	13
<i>AVAILABLE FREQUENCIES CHART (Channel Bank).....</i>	14
PRIVACY CODES.....	15
<i>CTCSS PRIVACY CODES CHART.....</i>	15
<i>DCS PRIVACY CODE CHART.....</i>	16
TROUBLESHOOTING GUIDE.....	17
SPECIFICATIONS	17
LIMITED WARRANTY.....	18
ACCESSORIES	19

INTRODUCTION

For over half a century, Midland Radio has been providing radio communication with superior Quality, Reliability, and Strong Value. With these Core Values in mind, the Midland BR180 provides a communication solution for Restaurants, Retail, Hospitality and other Businesses.

FEATURES

- 1-Watt transmit power
- 4-Channels
- 99 Frequency selection channel bank
- 142 Privacy codes
- LCD display with backlighting
- NOAA Weather alert
- Li-Ion rechargeable battery
- Up to 14 hours of battery life
- 4 Hr. rapid recharge
- Battery save mode
- Battery gauge with low battery alert
- Keypad tones
- Keypad lock
- VOX
- Auto squelch
- 5 Call alerts
- Vibrate alert
- Silent operation
- Monitor
- Scan
- Time-Out-Timer
- Keypad and PC programming
- Radio to radio cloning
- Factory Reset

FCC NOTICE

The radio operates on UHF frequencies which require an FCC (Federal Communications Commission) license. You must be licensed prior to operating on these frequencies. Serious penalties could result from unlicensed use of these frequencies, in violation of FCC rules, as stipulated in the Communications Act's Sections 501 and 502 (amended).

You will be issued a call sign by the FCC which should be used for station identification when operating the radio on these channels. You should also cooperate by engaging in permissible transmissions only, avoiding channel interference with other users, and being prudent with the length of your transmission time.

To obtain a license or ask questions about the license application, contact the FCC at 1-888-CALL FCC or go to the FCC's website: <http://www.fcc.gov> and request form **601**.

EXPOSURE TO RADIO FREQUENCY ENERGY

Your Midland radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:

- United States Federal Communications Commission, Code of Federal Regulations: 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI)/Institute of Electrical & Electronics Engineers (IEEE) C95.1-1992
- Institute of Electrical and Electronics Engineers (IEEE) C95.1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

To control your exposure and ensure compliance with the occupational or controlled environment exposure limits, transmit no more than 50% of the time. The radio generates measurable RF energy exposure only when transmitting.

BODY WORN OPERATION

If you wear the radio on your body when transmitting always use Midland supplied or approved belt clip, holster, case, or body harness for this product. Use of any accessories not supplied or approved by Midland may exceed FCC/ Health Canada RF exposure guidelines. If you do not use accessories supplied or approved by Midland, **ensure the radio and its antenna are at least 1 inch (2.5cm) from front of face when transmitting.**

IMPORTANT: Changes or modifications to this unit not expressly approved by MIDLAND RADIO CORP could void your right to operate this unit. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the COMMUNICATOR to exceed those limitations. Any adjustment to your radio must be made by qualified technicians.

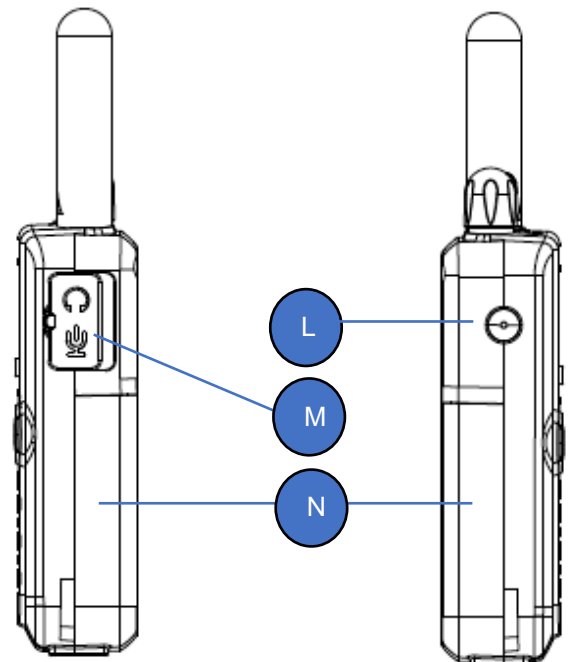
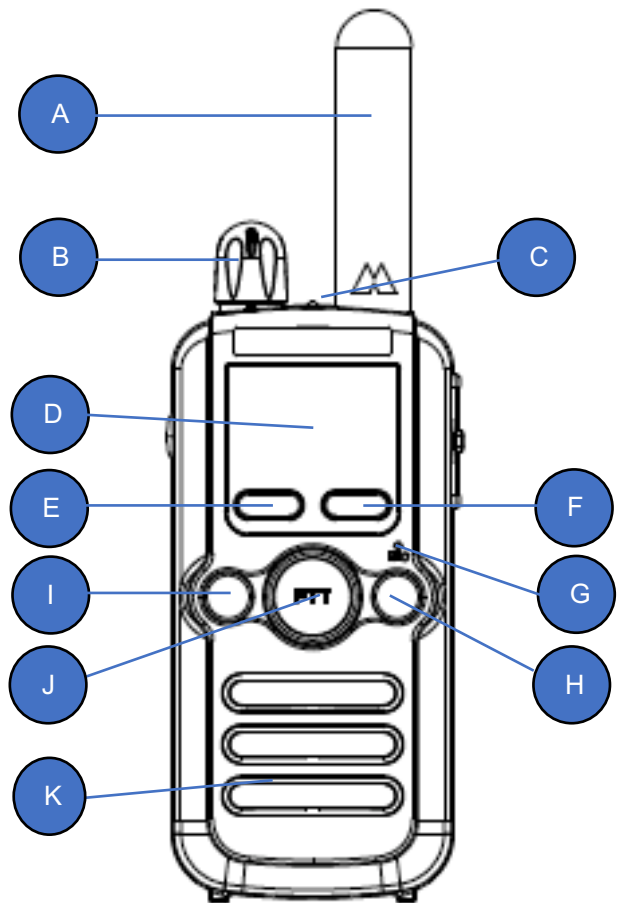
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device does not cause harmful interference, and (2) this radio must accept any interference that may cause undesired operation.

To maintain compliance with FCC's RF exposure guidelines, for body-worn operation, this radio has been tested and meets the FCC RF exposure guidelines when used with Midland Radio Corp. accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

GETTING TO KNOW YOUR RADIO-QUICK START

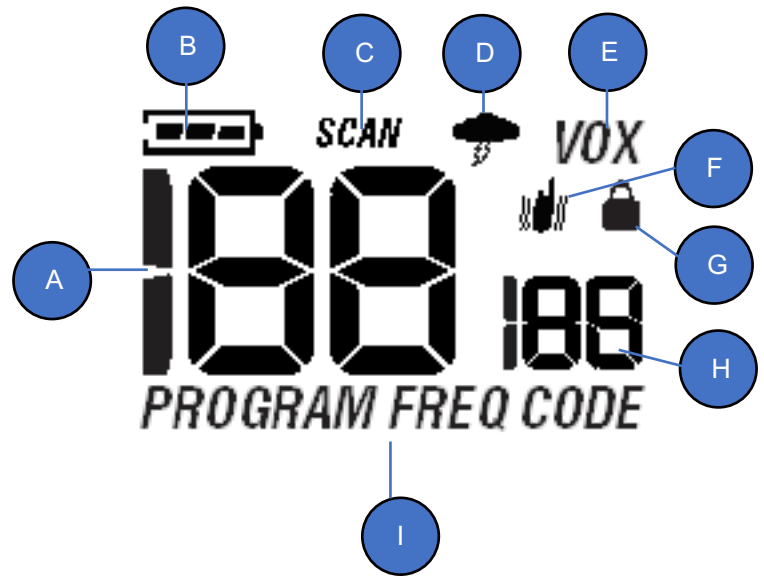
CONTROLS

- A. Antenna
- B. Power/Volume
Turn clockwise to turn the power on and increase the volume level.
Turn counter-clockwise to decrease the volume level and turn the power off.
- C. LED Indicator
Solid Red indicates TX
Solid Green indicates RX
Flashing Red indicates low battery
Flashing Green indicates Scan on
- D. LCD Display
See the section below for details
- E. Call/Menu
Single press to send a call alert, press and hold to activate menu.
- F. Weather/Keypad lock
Single press to listen to the weather, press and hold to lock the keypad.
- G. Microphone
- H. Channel or Menu Up
- I. Channel or Menu Down
- J. PTT (Push-To-Talk)
Press and hold to transmit voice communication.
- K. Speaker
- L. Side Key, Scan/Monitor On/Off
- M. Accessory Speaker/Mic Jack
- N. Rechargeable Battery Door



LCD Display

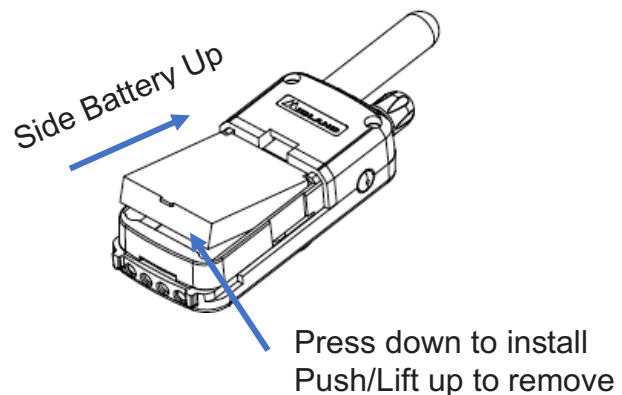
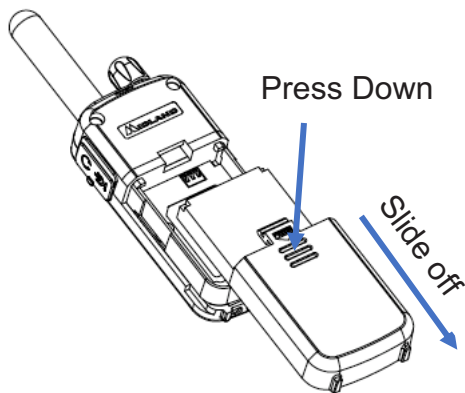
- A. Channel Number
- B. Battery Gauge
- C. Scan On
- D. Weather Alert On
- E. Vox On
- F. Vibrate On
- G. Keypad lock On
- H. Privacy Code Number
- I. Programming Mode

**INSTALLING THE BATTERY**

Your radio operates with a Lithium-Ion battery. Care should be taken when installing or removing the battery as not to short circuit the contacts causing damage to the battery pack.

To install the battery:

1. With the back of the radio facing you, remove the battery door by pressing down on the top center of the battery door and sliding it down from the radio.
2. Place the battery inside the battery compartment making sure the battery contacts are aligned with the radio. Side up and press down to lock the battery into place.



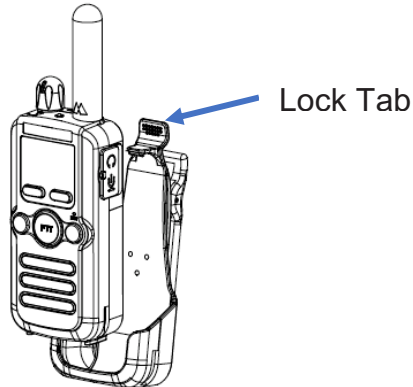
To remove the battery:

1. Remove the battery door as described above.
2. Slide the battery up to un-lock it and lift it up out of the compartment.

INSTALLING THE HOLSTER

With the back of the radio facing you, align the bottom of the holster with the bottom of the radio and push the top of the holster over the top of the radio until the Lock Tab snaps into place.

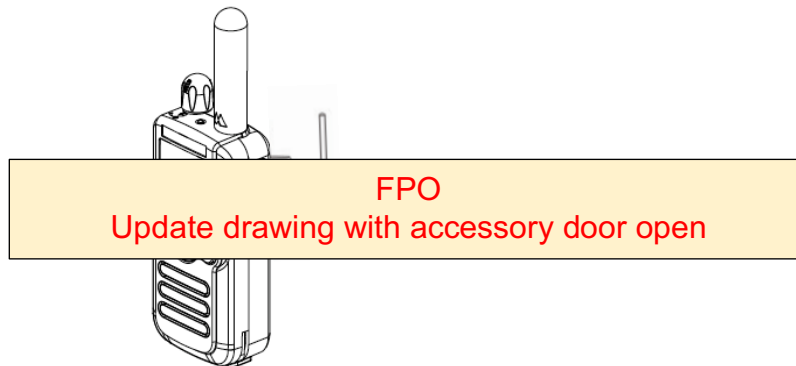
To remove the Holster, push down on the Lock Tab until it releases the radio.



INSTALLING EXTERNAL ACCESSORIES

Pull the accessory jack cover to the side exposing the speaker/mic jacks.

Insert the accessory plug into the speaker/mic jack, making sure it is securely in place and has made a good connection.



CHARGING THE BATTERY PACK

Your radio is equipped with a Lithium-Ion battery pack which can be recharged by inserting the radio or battery into the desktop charger (as described below). You should charge the battery pack when the Charge Battery Alert comes on, and remove the radio from the charger when the charging is finished.

To charge using the **Desktop Charger**:

1. Plug the DC barrel plug on the adaptor cord into the connector on the back of the charging base.
2. Plug the AC adaptor into a 120V AC wall outlet, making sure the AC outlet has power.
 - The charger's LED's turns green when power is present.
3. Make sure the battery contacts and charge terminals are clean and in good condition.
4. Slide the radio with installed battery, or a spare battery without radio, into the charger being careful to align the slots on the battery with the tabs inside the charger base.
5. The charger LED's will turn red and begin charging the battery.
6. Charging time depends on the charge level of the battery.

7. After charging is complete the LED will turn Green.
8. Remove the radio from the charger when fully charged.

To charge using the BGC180 Multi Unit Charger accessory:

The (optional) Multi-Unit Charger (MUC) allows the drop-in charging of 6 radios and 6 batteries from a single AC outlet.

1. Plug the barrel plug on the adaptor cord into the connector on the back of the charging base.
2. Plug the AC adaptor into a 120V AC wall outlet. Make sure the AC outlet has power.
3. The charger's LED's turns green when power is present.
4. Make sure the battery contacts and charge terminals are clean and in good condition.
5. Slide the radio with installed battery, or a spare battery without radio, into the charger being careful to align the slots on the battery with the tabs inside the charger opening.
6. The charger LED's will turn red and begin charging the unit.
7. Charging time depends on the charge level of the battery.
8. After charging is complete the LED will turn Green.

It is recommended that the battery pack be charged with the radio turned off to insure it fully charges.



- Only use the Midland Lithium-Ion battery pack.
- Do not attempt to charge any battery packs other than the one indicated in the manual.
- This may cause leakage and damage to the radio or charger and void your warranty.
- For long term storage of the radio, turn the radio OFF and remove the batteries from the radio.

USE AND CARE

- Use only a soft, damp, cloth to clean the radio.
- Do not use alcohol or cleaning solutions to clean the radio.
- Do not immerse the radio in water with the accessory cover removed.
- Dry the radio with a dry lint-free cloth should it get wet.
- Turn off the radio and remove the batteries during long-term Storage.

ABOUT COVERAGE

Your BR180 is designed to give you maximum coverage under optimum conditions.

Industrial	Multi-Level
Inside Steel-Concrete Building	Inside a Multi-Level Building
Up to 200,000 sq. ft.	Up to 15 floors

Optimum Conditions are:

- Open warehouse floor plan or area.
- Open rural areas without obstructions.
- Flat areas where you can see the other person to ensure you get maximum range.
- You are using fully charged batteries - a low battery will cause low power conditions.
- Your radio is set to use its highest transmit power level.

OPERATING YOUR RADIO

POWER ON/OFF AND VOLUME

1. Rotate the **POWER/VOLUME** knob clockwise to turn the radio on and increase the volume level.
2. Rotate the control counter-clockwise to reduce the volume level and to turn the radio off.
3. During Power On, the radio will announce the channel it is set to.

TRANSMITTING AND RECEIVING A CALL

For maximum clarity, hold the radio at least 1 inch (2.5 cm) from your mouth.

1. Press and hold the **PTT** button and speak in a normal voice into the Microphone. The RX/TX LED will glow RED while transmitting.
2. To receive a call, release the **PTT** button. The RX/TX LED will glow GREEN when your radio is receiving a transmission.

CHANNEL SELECTION

1. Press the channel up or down section buttons to the desired channel. (1~4)
2. The radio will display the channel numbers as you scroll up or down the selection.



Make sure you are using the same channel/frequencies as others in your communications group or you *will not* be able to hear or talk to them.

CHANNEL SCAN

Press the Scan/Monitor side key to turn Scanning on or off.

The radio will rapidly scan through all available channels stopping briefly on a channel in use to hear the conversation. You may join the conversation by pressing your PTT button and using the radio normally. The radio will return to scan mode after 5 seconds of inactivity.

MONITOR

Press the Scan/Monitor side key for 3 seconds to turn Monitor on or off.

Monitor is used to check for channel traffic before you transmit.

WEATHER

Press the WX/Keypad lock button to listen to the latest weather information in your area.

KEYPAD LOCK

Press and hold the WX/Keypad Lock button for 3 seconds to lock your settings and help prevent accidental changes.

CALL ALERT

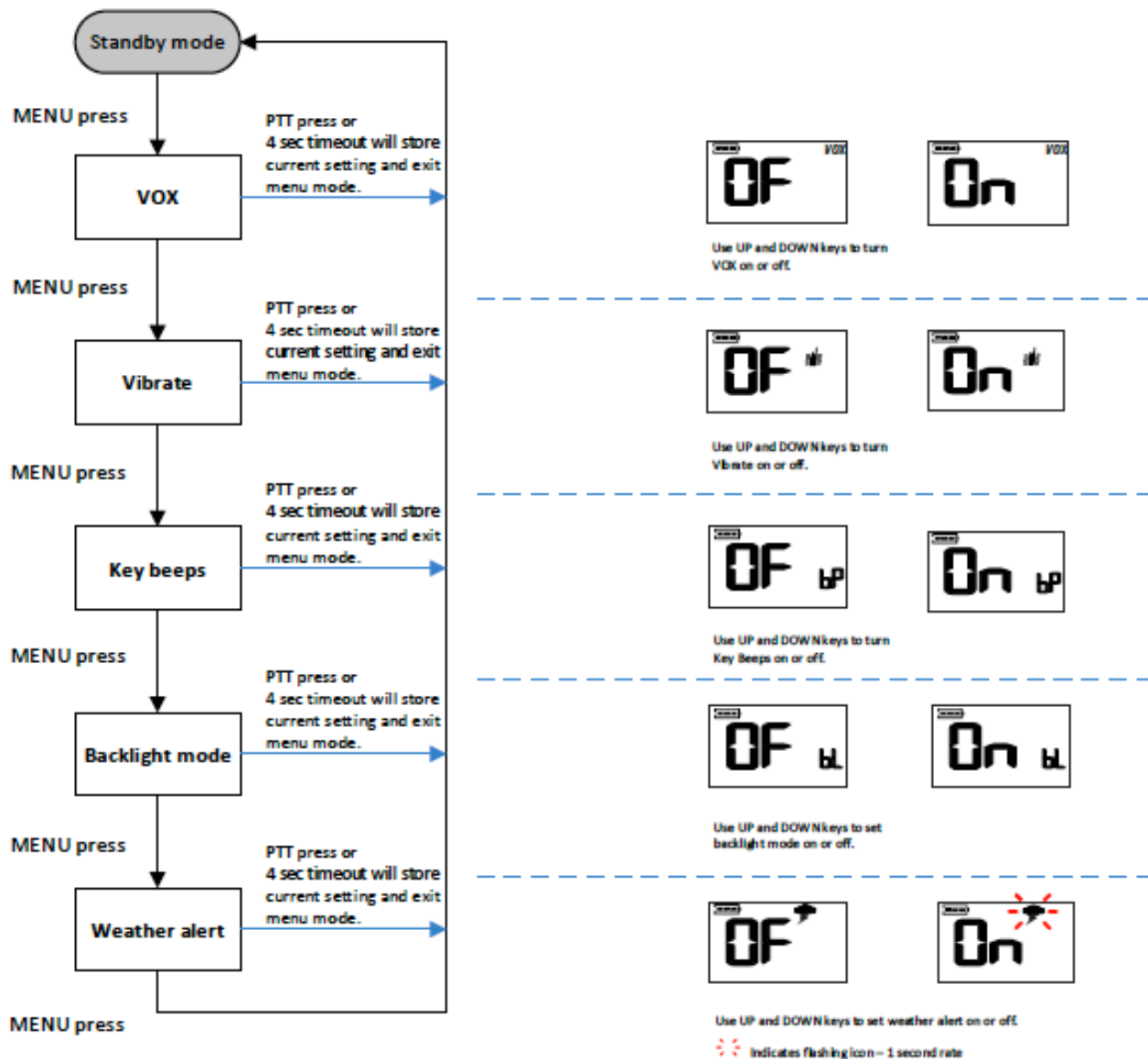
Press the Call Alert/Menu button to send an alert to your co-workers.

MENU FUNCTIONS

Press and hold the Menu button for 3 seconds to enter the Menu mode.

Once you are in the menu, you can activate features as shown below.

- Only the menu, PTT, up and down arrow buttons are active when using the menu function.
- Press the PTT to exit the menu at any time.
- The menu function will time out after 4 seconds of inactivity.



PROGRAMMING YOUR RADIO

You can easily configure your BR180 radio by using the FREE Programming software or by using the Keypad programming outlined below for basic functions. You can transfer the entire programming from one radio to another using the Radio to Radio cloning feature.

PROGRAMMING SOFTWARE

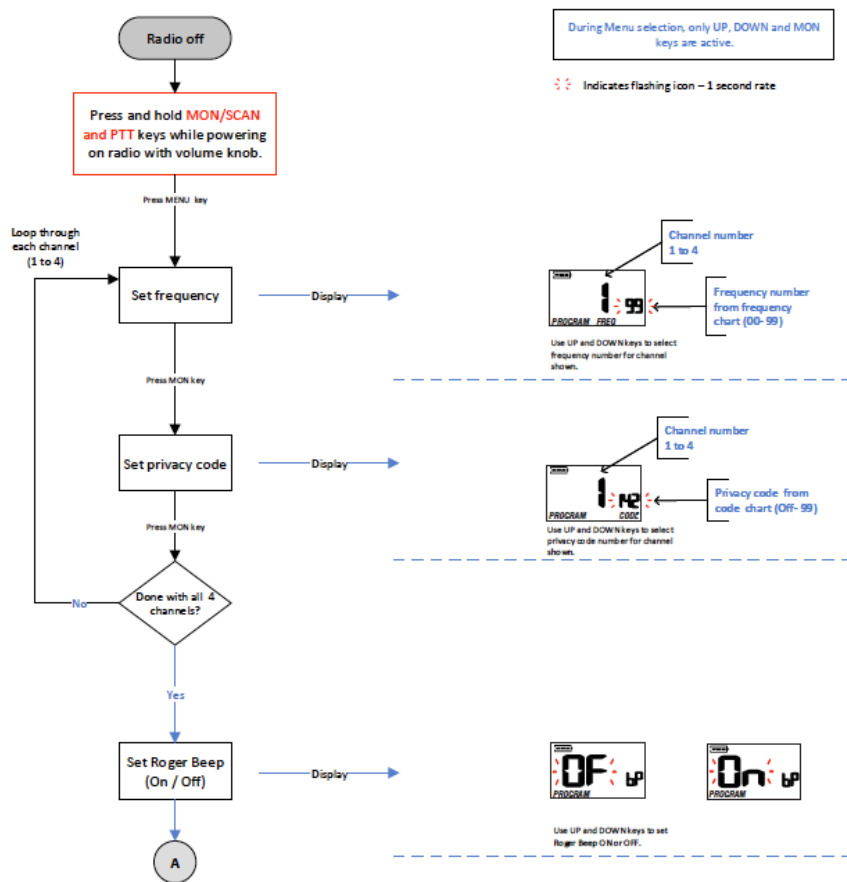
Your BR180 radio is preprogrammed with 4 commonly assigned frequencies, and you can program your authorized frequency or frequencies into any of the available 4 channels with the free software available on the Support page at the www.midlandusa.com website.

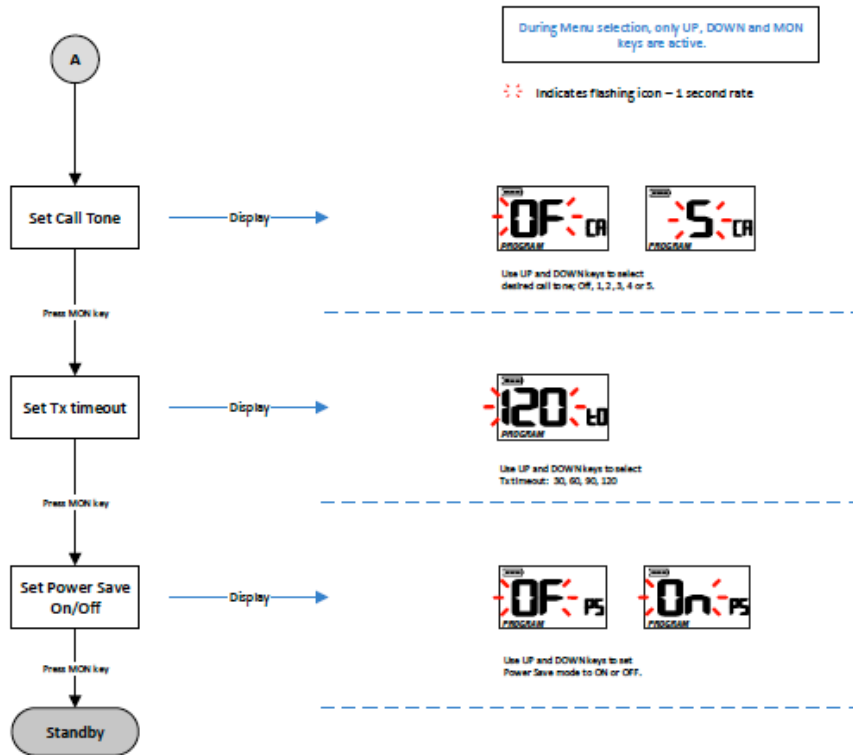
The BA1 programming cable is required to program your radio. It is listed in the back of this manual and available on the www.midlandusa.com website.

KEYPAD PROGRAMMING

The basic functions of the radio can be configured using the Keypad programming feature.

Before programming, go to the Available Frequency (Channel Bank) chart and the Privacy code charts below and make note of the Frequency and Privacy Code number you will program in to the radio.

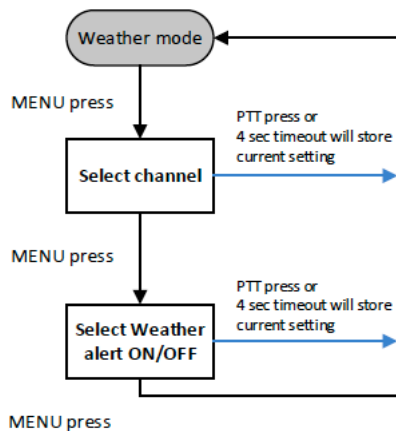




SET THE WEATHER CHANNEL

Follow the steps below to set the weather channel.

1. Scroll through the weather channels until you receive the strongest signal.
2. You may receive a weather broadcast on more than one channel. Check with the National weather service office in your area to make sure you are on the right channel, or get more information on the NWS website at https://www.weather.gov/nwr/station_listing



In Weather mode, the MON/SCAN key is inactive.

Channel	Frequency
1	162.400
2	162.425
3	162.450
4	162.475
5	162.500
6	162.525
7	162.550
8*	161.650
9*	161.775
10*	163.275

* Canadian Maritime Frequency

RADIO TO RADIO CLONING

The programmed settings from a BR180 radio can be directly transferred to another BR180 radio bypassing the need to individually program radios. The BA22 cloning cable is required and is listed in the back of this manual and available on the www.midlandusa.com website.

1. Turn off both radios.
2. Connect the programmed (Host) radio to the radio to be programmed (Clone) using the BA22 Cloning cable.
3. Turn on the radio to be cloned.
4. Press and hold both the up and down arrow buttons and turn on the Host radio.
5. "PROGRAM" will flash in the display and the TX/RX LED will begin to flash to confirm the Host radio is in clone mode and ready to transfer the data.
6. Press the PTT of the Host radio to send the data to the radio to Clone.
7. The LED on the Host radio will blink red, and the LED on the radio to be cloned will blink green during the data transfer.
8. When the data transfer is complete, the cloned radio will automatically restart.
9. You may clone another radio by disconnecting the cloned radio and connecting another radio to the Host and following the steps above.
10. Or you may disconnect both radios and turn them off, and back on to return to the normal operation.

FREQUENCIES

The radio come preprogrammed with the most commonly used frequencies and Privacy Codes already assigned to a channel.

DEFAULT FREQUENCIES AND PRIVACY CODE CHART

CH No.	Freq. (MHz)	Privacy Code	CH No.	Freq. (MHz)	Privacy Code
1	464 .5500	1	9	464 .5500	29
2	467 .9250	1	10	467 .9250	29
3	467 .8500	1	11	467 .8500	29
4	467 .8750	1	12	467 .8750	29

You may change the channel assignment using the Keypad Programming or the free Programming Software as shown above.

AVAILABLE FREQUENCIES CHART (Channel Bank)

Code	Freq. (MHz)	Code	Freq. (MHz)	Code	Freq. (MHz)	Code	Freq. (MHz)
1	464 .5000	26	462 .8375	51	467 .8875	76	452 .7625
2	464 .5500	27	462 .8625	52	467 .9125	77	452 .8625
3	467 .7625	28	462 .8875	53	469 .4875	78	456 .1875
4	467 .8125	29	462 .9125	54	469 .5125	79	456 .2375
5	467 .8500	30	464 .4875	55	469 .5375	80	456 .2875
6	467 .8750	31	464 .5125	56	469 .5625	81	468 .2125
7	467 .9000	32	464 .5375	57	462 .1875	82	468 .2625
8	467 .9250	33	464 .5625	58	462 .4625	83	468 .3125
9	461 .0375	34	466 .0375	59	462 .4875	84	468 .3625
10	461 .0625	35	466 .0625	60	462 .5125	85	468 .4125
11	461 .0875	36	466 .0875	61	467 .1875	86	468 .4625
12	461 .1125	37	466 .1125	62	467 .4625	87	468 .5125
13	461 .1375	38	466 .1375	63	467 .4875	88	468 .5625
14	461 .1625	39	466 .1625	64	467 .5125	89	468 .6125
15	461 .1875	40	466 .1875	65	451 .1875	90	468 .6625
16	461 .2125	41	466 .2125	66	451 .2375	91	456 .3375
17	461 .2375	42	466 .2375	67	451 .2875	92	456 .4375
18	461 .2625	43	466 .2625	68	451 .3375	93	456 .5375
19	461 .2875	44	466 .2875	69	451 .4375	94	456 .6375
20	461 .3125	45	466 .3125	70	451 .5375	95	457 .3125
21	461 .3375	46	466 .3375	71	451 .6375	96	457 .4125
22	461 .3625	47	466 .3625	72	452 .3125	97	457 .5125
23	462 .7625	48	467 .7875	73	452 .5375	98	457 .7625
24	462 .7875	49	467 .8375	74	452 .4125	99	457 .8625
25	462 .8125	50	467 .8625	75	452 .5125		

PRIVACY CODES

CTCSS (Continuous Tone Coded Squelch) and DCS (Digitally Coded Squelch) allow several users to share the same channel frequency without disturbing each other. With CTCSS or DCS enabled, the channel is muted to all incoming signals unless they carry the same CTCSS or DCS tone. When a transmission with the same tone is received, the channel un-mutes and the voice audio can be heard. When the transmission ends the channel becomes muted again. Transmissions that do not have the same tone will not be heard.

Your BR180 radio has 142 Privacy Codes, which can be used on any channel. The selected Privacy Code may be different for each channel, but must be the same for a channel on all radios you wish to talk to. Programming a new Privacy Code overwrites any previous code programmed.

Privacy Codes can be set using the FREE programming software that can be downloaded from the www.midlandusa.com website.



- You will not be able to hear or talk to other radios that do not match your frequency and Privacy Code by channel and frequency.

CTCSS PRIVACY CODES CHART

Code No.	Freq. (Hz)	Code No.	Freq. (Hz)
1	67.0	20	131.8
2	71.9	21	136.5
3	74.4	22	141.3
4	77.0	23	146.2
5	79.7	24	151.4
6	82.5	25	156.7
7	85.4	26	162.2
8	88.5	27	167.9
9	91.5	28	173.8
10	94.8	29	179.9
11	97.4	30	186.2
12	100.0	31	192.4
13	103.5	32	203.5
14	107.2	33	210.7
15	110.9	34	218.1
16	114.8	35	225.7
17	118.8	36	233.6
18	123.0	37	241.8
19	127.3	38	250.3

DCS PRIVACY CODE CHART

No.	CODE	No.	CODE	No.	CODE	No.	CODE
39	23	65	165	91	413	117	731
40	25	66	172	92	423	118	732
41	26	67	174	93	431	119	734
42	31	68	205	94	432	120	743
43	32	69	223	95	445	121	754
44	43	70	226	96	464	122	36
45	47	71	243	97	465	123	53
46	51	72	244	98	466	124	122
47	54	73	245	99	503	125	145
48	65	74	251	100	506	126	212
49	71	75	261	101	516	127	225
50	72	76	263	102	532	128	246
51	73	77	265	103	546	129	252
52	74	78	271	104	565	130	255
53	114	79	306	105	606	131	266
54	115	80	311	106	612	132	274
55	116	81	315	107	624	133	325
56	125	82	331	108	627	134	332
57	131	83	343	109	631	135	356
58	132	84	346	110	632	136	446
59	134	85	351	111	654	137	452
60	143	86	364	112	662	138	454
61	152	87	365	113	664	139	455
62	155	88	371	114	703	140	462
63	156	89	411	115	712	141	523
64	162	90	412	116	723	142	526

TROUBLESHOOTING GUIDE

Problem	Solution
No Power	1. Make sure the battery is fully charged and correctly installed. 2. Check the On/Off Volume control to make sure the radio is turned on.
Can't Receive Messages	1. Confirm the radios are set to the same channel frequency and privacy code setting. 2. Make sure you are within range of the other radio (see About Range). 3. Make sure there are not any major obstructions between you and the other radio (see About Range).
Charger Not Functioning	1. Make sure the contacts on the bottom of the radio are clean, nothing in the way of making connection with the charger contacts. 2. Make sure the charger is plugged in and the outlet has power. 3. Make sure the battery pack is installed properly.

For further assistance, contact the Midland Customer Service Team at (816) 241-8500. Most problems can be remedied over the phone without returning the radio for service.

SPECIFICATIONS

Channels: 4

Privacy Codes: 142

Operating Frequency: UHF Band, 450~470MHz

Power Source: 7.4VDC Li-ion Battery Pack

LIMITED WARRANTY

Midland Radio Corporation will repair or replace, at its option without charge, any Midland UHF transceiver which fails due to a defect in material or workmanship within Two Years following the initial consumer purchase.

This warranty does not apply to water damage, battery leak or abuse. Accessories have a one year warranty from date of purchase, including any antennas, batteries, chargers, or headsets/earphones. This warranty does not include the cost of labor for removal or re-installation of the product in a vehicle or other mounting.

For Product Purchased in the USA:

Performance of any obligation under this warranty may be obtained by returning the warranted product, prepaid freight, along with proof of purchase to:

Midland Radio Corporation
Warranty Service Department
5900 Parretta Drive
Kansas City, MO 64120

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Note: The above warranty applies only to merchandise purchased in the United States of America or any of the territories or possessions thereof, or from a U.S. Military exchange.

For Product Purchased in Canada:

Performance of any obligation under this warranty may be obtained by returning the warranted product, along with proof of purchase, to your dealer in Canada.

This warranty gives you specified legal rights. Additional warranty rights may be provided by law in some areas.

Note: Features & Specifications are subject to change without notice, MIDLAND is not responsible for unintentional errors or omissions on its packaging or owner's manual.

ACCESSORIES

Accessories can be purchased from your local dealer or at www.midlandusa.com



BATT18L
Li-Ion Spare Battery
\$29.99



BA5
Holster
\$19.99



BA 2
Over the Ear
Headset
\$29.99



BA 3
Concealed
Headset
\$39.99



BA4
Speaker
Microphone
\$39.99



BA9
D-Ring Headset
\$29.99



BA1
Programming
Cable for BR180
\$19.99

BA22
Cloning Cable for
BR180
\$9.99

BGC180
Multi-Unit
Charger
(w/o AC Adaptor)
\$99.99



BDC180
Desktop
Charger
(w/o AC Adaptor)
\$14.99



5900 Parretta Drive
Kansas City, MO 64120
Call 816-241-8500

We'd love to hear from you! Let us know what you think of your new Midland product at;



or by visiting us at
midlandusa.com