

Thank you for your interest in our products. This manual will help you to master the operation and use of the AWR-D6500. This manual should be read and studied to ensure that the user understands the operation of the AWR-D6500. Please read the Safety Information Manual before use.

This manual applies to the model,  
AWR-D6500 series digital handheld.

## **TO THE USER**

Thank you for purchasing this digital / analog two-way radio designed and manufactured by the Fujian New Century Communications Co., Ltd. This product is designed and developed according to EU standards and advanced international technologies. The radio has an ergonomic design and a comprehensive set of functions to deliver an advanced communication solution. It will bring you a whole new operation and digital communication experience, improve your work efficiency, and provide reliable communications. Our products are tested to strict and rigorous test procedures using advanced test instruments and equipment to internationally recognized standards.

This manual should be read and studied to ensure that the user understands the operation of the AWR-D6500. Please read the Safety Information Manual before use.

## USER NOTICES

### SAFETY:

The user should be aware of and understand the general hazards in operating a two-way radio transceiver. We cannot guarantee the safety and operation of our transceiver with aftermarket accessories unless they have been tested and sold by us.

Our transceiver should be maintained and serviced by a qualified two-way radio dealer and their technical staff. Failure to do so may violate our warranty.

### WARNING:

No two-way radio transceiver including ours shall be operated including powered on in hazardous areas such as explosive atmospheres including Inflammable gas, dust particles, metallic powders, grain dust, etc. This shall include confined spaces where these hazards exist, in areas where blasting or blasting products are in use or stored, and while fueling at refueling centers. In any of these conditions or where hazards exist, the transceiver shall be powered off.

### PRECAUTIONS

Observe the following precautions to prevent fire, personal injury and transceiver damage.

- Do not modify or attempt to adjust this transceiver for any reason.

- Do not expose the transceiver to direct sunlight for long periods, nor place it close to a heat source.
- Do not place the transceiver in a dusty, humid or wet area, nor place on unstable surface.
- If an abnormal odor or smoke is detected coming from the transceiver, switch OFF immediately and remove the battery pack from the transceiver. Contact your dealer.

### How to use this user manual

This manual introduces the basic operation DMR / Analog handheld transceiver.

Your dealer or system administrator may have already preset the features of this radio based on your operational requirements. Please consult with your dealer or system administrator about the details.

The icons below are used for distinguishing between analog and digital features.



This icon indicates the function is only available in Analog mode



This icon indicates the function is only available in Digital mode

## [ Contents ]

<b>Packing list</b> .....	4
<b>Radio controls</b> .....	5
Parts description.....	5
Status icons.....	6
LED indicator.....	6
<b>Preparation for operating the terminal</b> .....	6
Install the antenna.....	6
Install the battery pack.....	6
Install the belt clip.....	6
Install the audio accessories.....	6
Charge the battery pack.....	7
Programmable keys.....	7
Programmable functions.....	7
Keys & ENC usage and operation.....	8

## [ Contents ]

3X4 Alphanumeric Keyboard Operation.....	9
Recognition of transmitting and receiving ICONS.....	9
<b>Basic operations</b> .....	10
<b>PTT call</b> .....	10
Digital channel call.....	10
Analog mode initiating and receiving calls (no signaling)..	10
<b>Access menus and operations</b> .....	11
<b>Menu items list</b> .....	11
<b>Main functions description</b> .....	12
<b>General guide for fault handling</b> .....	14
<b>Maintenance and clean</b> .....	16
<b>Standard accessories</b> .....	17
<b>Optional accessories</b> .....	18

## Packing list

The following items are contained in the gift box. If any item is missing or damaged, please contact your dealer.

Item Name	Quantity (pc)	Item Name	Quantity (pc)
Radio unit	1	Antenna	1
Battery pack	1	Belt clip	1
Charger	1	Hand strap	1
Power supply	1	User manual	1

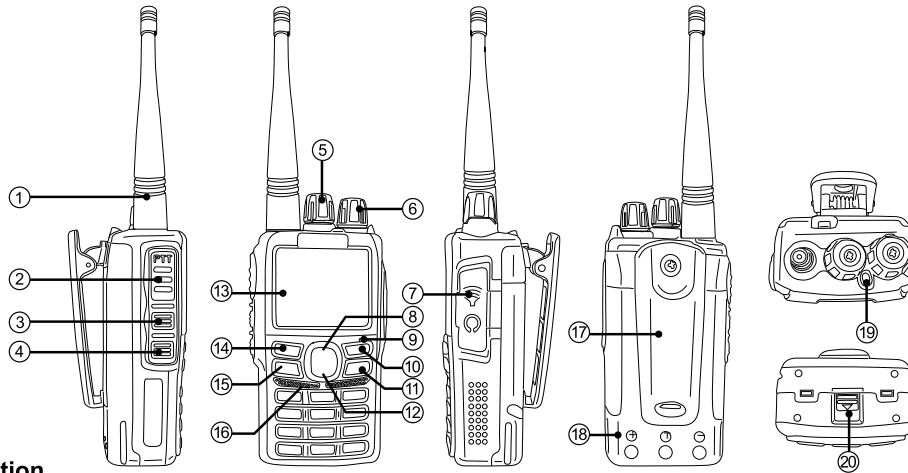
---

 **Note:**

After purchase, please check the items and quantity in the box to ensure everything is correct.

---

## Radio Controls



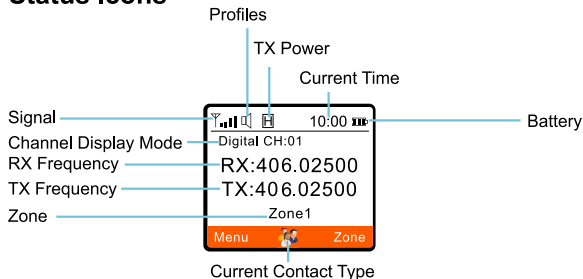
### Parts description

No.	Part Name	No.	Part Name	No.	Part Name	No.	Part Name
①	Antenna	⑥	Power switch /Volume control	⑪	Programmable key PF3	⑯	Speaker
②	PTT key	⑦	SP/MIC connector	⑫	Down key	⑰	Belt clip
③	Side Key (PF1)	⑧	Up key	⑬	LCD display	⑱	LED indicator
④	Side Key (PF2)	⑨	MIC	⑭	OK / Menu key	⑳	Battery latch
⑤	Channel selector	⑩	Back /Zone key	⑮	Programming key PF4		

### Note:

Antenna gain: 1.7dBi , Must use the matching antenna and must not be replaced.

## Status Icons



- |   |   |
|---|---|
| Indicates High Power                                      | Indicates GPS is on                         |
| Indicates Low Power                                       | Indicates Scan is on                        |
| Indicates no signal                                       | Indicates the terminal is in Emergency Mode |
| The more bars indicate stronger signal                    | Indicates the Encryption is on              |
| The more bars indicates higher battery capacity           | <b>QT</b> Indicates CTCSS is on             |
| Indicates the terminal is monitoring the selected channel | <b>DQT</b> Indicates DCS is on              |
| Indicates VOX is on                                       | Standard Mode                               |
|   | Silent Mode                                 |

## LED Indicators

LED indicator	Radio Status
Green	Receiving
Red	Transmitting
Fast Flashing Green	Scanning
Slow Flashing Red	Low battery

## Preparation for operating the terminal

### Install the antenna

**⚠** Do not hold the antenna with your hand, as this will reduce the radio performance.

1. Screw the threaded end of the antenna into the top antenna port on the main unit.
2. Tighten the antenna clockwise.

### Install the battery pack

Press the battery pack firmly while pushing it in the forward direction until a "click" sound is heard.

#### Note:

To remove the battery, turn off the radio, push the bottom battery button down, and then remove the battery in the backward direction.

### Install the belt clip

1. Use a screwdriver to remove the belt clip screw from back housing of the main unit.
2. Align the belt clip mounting holes with the threaded holes on the main unit, insert screws, and tighten the screws to hold the belt clip.

### Install the audio accessories

1. Open the dust cover of the accessory interface.
2. Insert the audio accessory plug into the accessory connector.

## Charge the battery pack



### Note:

- Please charge the battery pack with the designated charger.
- Please refer to the charging safety information before charging to obtain the necessary battery safety information.

**When the terminal is used for the first time without charging, there may be a low battery alert. Please turn it off and charge before use.**

Please follow the below steps to charge:

1. Plug the power supply connector into the jack on the back of the charger.
2. Plug the charger power supply into a power outlet.
3. Install the battery or the radio with the battery into the charger.
4. Observe the charging LED indicators to know the current charging status:








Charger LED Indicators	Current Status
 Red	Charging
 Green	Standby (No load) or Fully charged

## Programmable Keys

- Short Press: press and release quickly (programmable range is from 50ms-750ms).
- Long Press: press and hold for programmed time length (programmable range is from 500ms-5000ms).

## Programmable Functions


If desired, the following terminal features can be preset for programmable keys:

Type	Features	Description
	Radio Revive	Revive a target radio that has been remotely disabled
	Radio Detection	Determine if targeted radio is active
	Radio Kill	Disable targeted radio remotely
	Remote Monitor	Covert activation of targeted radios transmitter without local indicators.
	Encryption On/Off	Turn on/off encryption
	Emergency On/Off	Initiate an emergency alarm mode or call based on programmed preset.
	Contacts List	Direct access to the programmed contact list
	Monitor	Always monitor the selected channel until disabled.
	Zone Switch	Changes from selected Zone to new Zone
	Scan On/Off	Turn scanning on/off
	VOX On/Off	Switch between VOX On and Off.
	Backlight On/Off	Turn backlight On/Off
	Keypad Lock	Switch between keypad lock and unlock.
	High /Low Power	Switch transmit power between high and low power
	Man Down On/Off	Switch between Man Down alarm On and Off (Optional)
	Squelch Level	Allows the adjustment of squelch level.



## Keys and ENC usage and operation

The following buttons can be set for the noted functions.

Keys	Status	Operations	Description
[MENU]	Standby	Short press	Access to Menu
		Long press (3S)	[Lock] or [Unlock]
	In Menu Mode	Short press	[Confirm] or [Selections]
[BACK]	Standby(Channel Mode)	Short press	Access to Zone list
	In Menu Mode	Short press	Return to previous menu
	Standby (VFO Mode)	Short press	※ Edit "VFO" parameters
PF3(Green key)	Standby	Short press	Function works based on programmed preset
		Long press (3S)	Function works based on programmed preset
PF4 (Red key)	In any status	Short press	Cancel or Exit current operation mode
	Standby (VFO Mode)	Short press	※Set the VFO mode, channel space and frequency according to the  icon on the LCD display.
	Standby	Long press (3S)	※ Switch between Channel display and VFO mode
Up key	Standby	Short press	Upward select channel / frequency and set other parameters
		Long press (3S)	Turn on Scan: Upward increase scanning channel / frequency
	In Menu Mode	Short press	Select menu and other set parameters
Down key	Standby	Short press	Downward select channel / frequency and set other parameters
		Long press (3S)	Turn on Scan: Downward decrease scanning channel / frequency
	In Menu Mode	Short press	Select menu and other set parameters
Side key [FP1]	Standby	Short press	Function works based on programmed preset
		Long press (3S)	Function works based on programmed preset
Side key [FP2]	Standby	Short press	Function works based on programmed preset
		Long press (3S)	Function works based on programmed preset
[ENC] (Selector)	Standby	Rotate	※ Decrease / Increase to select channel / frequency and other parameters
	In Menu Mode		※ Decrease /Increase to select menu and other parameters
	Edit (SMS)		※ Move left and right to select editing characters, etc.

### Note:

The items with the "※" symbol is model dependent.

### 3 x 4 Alphanumeric Keyboard operation

The following buttons are used for the character selection.

#### Keystrokes






Keypad	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Note					
	.	o	?	!	:	;	\	"	"	'	'	(	)	«	»																"PY" input mode					
	.	,	*	?	!	-	(	)	@	/	:	_	;	+	&	%	*	=	<	>	\$	[	]	{	}	~	^	*	#	!	"AB" / "ab" input mode					
	A B C																																			
	D E F																																			
	G H I																																			
	J K L																																			
	M N O																																			
	P Q R S																																			
	T U V																																			
	W X Y Z																																			
	Note: in the digital editing mode, a short press of this key enters the value of "0", while long press enters the symbol "+" in the digital, English and Chinese editing mode.																																			
	Note: in the digital, English and Chinese editing mode, a short press of this key enters the "" symbol, and a long press enters a "space".																																			
	Note: in the editing mode of Numbers, English and Chinese, a short press of this key inputs the symbol "#", while a long press switches between the editing input mode of English, Numbers, Chinese (pinyin) (" AB "in upper case, " ab" in lower case, " 12 "in figure, " PY "in Chinese pinyin)																																			

Mode	Type	ICON	Terminal product status
	Private call		Sending a private call
			Receiving a private call
	Group Call		Sending a group call
			Receiving a group call
	All Call		Sending an All Call
			Receiving an All Call
	—		Sending an analog transmission
			Receiving an analog transmission

### Transmit / Receiving ICONS

The following icon appears on the radio screen to indicate the radio status.

## Basic operations

Icon	Operation instruction
	Turn on: turn the [Power/Volume] knob clockwise until you hear "click"
	Turn off: turn the [Power/Volume] knob counterclockwise until you hear a click
	After power on, rotate the [Power/Volume] knob to increase or decrease the volume
	After power on, press [▲] or [▼] to select your desired channel or frequency.
	※ After power on, rotate [Power/Volume] knob to select your desired channel or frequency.

### Note:

The operation item with the symbol " ※ " depends on the product model which has the function is valid or equipped with this part.







## PTT call

To ensure an optimal transmission, hold the radio in a vertical position at one to two inches (2.5 to 5.0 centimeters) away from the mouth.



## Digital channel call

Digital calls are made as a group call, private call or All Call

based on the programming of the radio. An individual channel may be preset to one of these calling functions.

Call type	Operation method	
	Making call	Receiving call
Private call	In standby mode, press [PTT] key to initiate the call. When a call is initiated, the screen displays:  ;	When a private call received, the screen displays:  ;
Group call	When initiated a group call, the screen displays:  ;	When a group call received, the screen displays:  ;
All call	When Initiated an all call, the screen displays:  ;	When an all call received, the screen displays:  ;

## Analog mode initiating and receiving calls (no signaling)






You can initiate calls to all users on the current analog channel by holding down the [PTT] key. When the call is initiated, the TFT display displays shows  ; The display shows  when you receive calls from other users on the current analog channel.

## Access menus and operations

You can access the main menu and sub-menu options of the radio through the following steps, as well as functions such as setting or browsing the parameters and configuration, and viewing and sending short messages.

### Note:

Access to sub-menu:

- Icon "  " or "  " refers to ON/OFF.
- Icon "  " or "  " refers to " Selected " and " Set" .
- Icon "  " refers to access of the next sub-menu.


### Procedures:

When the radio is in standby:

1. Press [MENU] key to access to menu.
2. Press [ ▲ ] or [ ▼ ] key to select a desired setting "main menu", then press [Menu] key to select.
3. Press [ ▲ ] or [ ▼ ] key to a desired "Sub-menu" setting, then press [Menu] to select.
  - ◆ If necessary, you can set each parameter or turn on/off by pressing the [ ▲ ] or [ ▼ ] keys, and then press the [Menu] key to confirm.

### OR

Press [Back] key to back to previous menu.

4. Press [  ] key to exit the current menu operation mode, and the terminal will revert to the standby state.

If necessary, you can continue browsing, viewing, and setting

other functions or parameters by performing steps #2 and #3.

## Menu items list

The menu options supported by the radio are shown in the following table. Please refer to the instruction for the "call" operation of individual call, group call and analog channel call. Other functions require access to the menu for configuration or implementation. [FP] definable key is the function shortcut key.

No.	Main menu items	Optional items and Settings functional description	Note
1/12	Contact	Includes: Contact list, Create contact, Manual dialing;;	
2/12	Message	Includes: Create MSG, Common MSG, Inbox, Outbox, Draft box;	
3/12	Call dialog	Include: Dialed numbs, Received calls, Missed calls;	
4/12	Scan	Include: Scan switch, scan list, scan mode	
5/12	Zone	Include: Zone list, Channel list, Switching channel, Editing name, Deleting channel	
6/12	Settings	Includes: Language, Keyboard lock, Backlight, LED indicator, Display mode, VOX switch, Channel switch, Factory setting;	

No.	Main menu items	Optional items and Settings functional description	Note
7/12	Parameter	Includes:TOT, Power setting, Time slot, Power saving mode, and encryption setting.	
8/12	Prompt tone	Includes: Profiles, Key tone setting, Low power alert, SMS prompt tone, Private call prompt tone, Group call prompt tone, Call prompt ring tone;	
9/12	Others	Includes: ※ FM radio, Time setting;	
10/12	Record	Includes: Recording set, Record list, Clear record, Inquiry space.	※
11/12	Device info	Includes: Local radio ID, Receiving group list,Default contact, Version.	
12/12	Channel Edit	Includes: All editing items for receive/transmit	※

 **Note:**

The operation items with symbol " ※ " are model dependent.

## Main functions description

Classification	Function	Description
<b>Public Functions</b>	Zone	A zone is a group of channels.The radio supports 16 zones and contains up to 4000 channels.
	Power	The power level is for the transmission power level of the current channel, which can be set to high or low power.
	Scan	When the terminal scans a signal on a channel, it will stay on the channel to listen, so as to understand the current activity status of the relevant team members.
	Emergent alarm	Emergency alarm has the highest priority.
	Vox	The radio transmits when voice is detected by the microphone
	Busy channel lockout	Busy channel lockout prohibits transmission and prevents interference to other users when the radio is receiving traffic.
	TOT	When a transmission times out, the terminal will automatically terminate the transmission and issue a warning sound.

## Main functions description

Classification	Function	Description
<b>Public Functions</b>	Keyboard lock	Keyboard lock is used to lock keys to prevent inadvertent key operation. The radio may be set to automatic or manual lock mode.
	Power saving	Power saving is a preprogrammed function based on time that places radio into a sleep-wake mode to conserve the battery.
<b>Digital functions</b>	Private call	Private call is a one-to-one call.
	Group call	Group call is a one-to-many call.
	All call	All call is a call to all contacts on the current digital channel.
	Talk around	Talk around allows communications on the repeaters output frequency.
	TDMA direct mode	TDMA direct mode is used to divide a direct channel (simplex) into two time slots to allow efficient channel usage. Multiple parties may share the channel without interference depending on slot setting.
<b>Analog functions</b>	Analog channel call	An analog call is a call on an analog channel.
	Squelch ON	This setting exhibits an open squelch condition where both traffic and noise can pass to the speaker.

## Main functions description

Classification	Function	Description
<b>Analog functions</b>	Squelch level	Squelch level allows the manual setting of the squelch from 1 to 9. This controls at what point that audio can be sent to the speaker. The default value is 4. The lower the set value, the more chance of noise and weak signals being heard.
	Monitor	Monitor allows the user to open the receiver squelch manually to listen to on-channel signals.
	CTCSS/DCS	CTCSS / DCS are analog signaling methods used in transmit and receive. They are typically set to the same value for transmit and receive. Only signals that match the preprogrammed values will pass to the speaker.

## General guide for fault handling

Malfunction	Analysis of causes	Handling method
Radio fails to power on	Battery is installed incorrectly	Re-install battery
	Battery power lower than preset value	Please change or charge battery.
	Bad battery contacts or contacts in dirty.	Check and clear the battery contacts.
Receive signal decreases, is unclear or is interrupted.	Battery power gets lower.	Please change or charge battery.
	Volume control at low value.	Adjust the volume to be higher.
	Antenna gets loose or antenna frequency is incorrect.	Power off radio, and re-install antenna, or change antenna with right frequency.
	Speaker is blocked or damaged.	Try to clear the outer speaker or contact your dealer.
	Using the radio under poor working environment or electromagnetic interference	Change working environment or shift antenna direction.
Unable to communicate with group members	The current working channel frequency or signaling value is different.	Change channel or reset signaling and frequency to be same as the group members
	The setting of Digital or Analog channel is incorrect.	Reprogram the current digital or analog channel.
	Out of range of group members	Move back within range
Noise or unrelated communications on current channel	Co-channel user interference	Change frequency or channel.
	Channel not programmed with correct signaling	Reprogram radio to correct signaling or change signaling to prevent interference.
Weak voice traffic with noise during communications	The communication distance is too great	Reduce range between users.
	Signals are blocked during to environment such as buildings and terrain.	Reduce range between users or move to unimpeded line of sight.

<b>Malfunction</b>	<b>Analysis of causes</b>	<b>Handling method</b>
Weak voice traffic with noise during communications	Strong local environmental interference.	Move away from interference source.
Failure to obtain GPS position (Optional)	Radio lacks optional GPS feature or satellite view blocked by environment.	Add GPS feature; move to open site with clear view of sky.

---

 **Note:**

If the above methods fail to solve your problem, or you confront different malfunctions, please contact your local dealer or appointed maintenance station.

---



## Maintenance and Clean

To ensure the best performance and prolong working life, please acquaint yourself with the following for maintenance and cleaning.

### Maintenance

- Ⓞ Please do not scratch or puncture the device with hard or sharp object.
- Ⓞ Please do not place the device in an environment which can corrode electronic circuits or under direct solar radiation.
- Ⓞ Please do not carry the device by its antenna or headset.
- Ⓞ Please make sure the SP-MIC plug is covered when not in use.

### Clean

- Ⓞ Please clean your device regularly by using a dry clean cloth or soft brush to wipe the dust on the surface and on the charger contacts;
- Ⓞ The keypads, control knob and housing of the device may be dirty from use. Please use nonwoven wipes to clean them. Do not use chemicals to clean it such as detergent, alcohol, spray or petroleum products, on the device surface or printed labels. Chemicals can damage the housing, display and remove the printing on the labels. Before power on the radio, please make sure the device is dry completely.

## Standard accessories



AC Adaptor



Charger



Li-pol Battery



Antenna



Belt clip



Tie

## Standard accessories



Speaker microphone



Multi-charger

## SAFETY TRAINING INFORMATION



Our Northfield Telecommunications, Inc. d/b/a Advanced Wireless Communications. radio generators RF electromagnetic during transmit mode. This radio is designed for and classified as "Occupational Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the "General Population" in an uncontrolled environment. This radio has been tested and complies with the FCC RF exposure limits for "Occupational Use Only". In addition, our Northfield Telecommunications, Inc. d/b/a Advanced Wireless Communications. Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- IEEE Std. 1528:2013 and KDB447498, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields- RF and Microwave.



The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates with the FCC RF exposure limits of this radio.

## Electromagnetic Interference/Compatibility

During transmissions, Northfield Telecommunications, Inc. d/b/a Advanced Wireless Communications. radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

## Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

### Attention:

This radio complies with IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating duty factors of up to 50% and is authorized by the FCC for occupational use only. An appropriate warning label is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip). Don't use this device when antenna shows obvious damages.

This product is compliance to FCC RF Exposure requirements and refers to FCC website

<https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> search for (Model:AWR-D6500 , FCC ID : Q9SAWR-D6500 ) to gain further information include SAR Values.

This EUT is compliance with SAR for controlled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with a minimum distance of 2.5cm must be maintained when held-to-face, and body-worn operations are restricted to the approve dorignal acessories(belt clip), a minimum distance of 0 cm.

Cet EUT est conforme aux normes SAR pour les limites d'exposition contrôlée de la norme IC RSS-102 et a été testé conformément aux méthodes et procédures de mesure spécifiées dans les normes IEEE 1528 et IEC 62209. Cet équipement doit être installé et utilisé à une distance minimale de 2,5 cm. être maintenu face à face, et les opérations portées sur le corps sont limitées aux accessoires d'origine approuvés (clip de ceinture), une distance minimale de 0 cm.



Northfield Telecommunications, Inc. d/b/a Advanced Wireless Communications  
20809 Kensington Blvd Lakeville, MN 55044, USA