



Professional Two-Way Radio NT Series User Manual

Canadian Models:

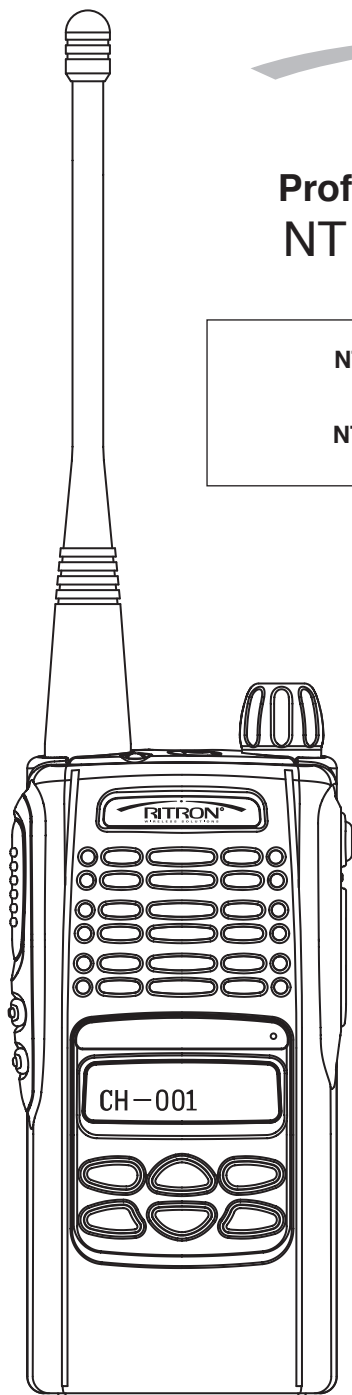
NT-174, (VHF) 136-174MHz, 5W/2W
Industry Canada: 1084A-NT174

NT-470, (UHF) 403-470MHz, 4W/2W
Industry Canada: 1084A-NT470

- **Analog, Wide/Narrow Band Capable**
- **255 Channels**
- **Frequency Channel Steps**
VHF: 2.5/12.5 KHz
UHF: 2.5/6.25/12.5KHz
- **CTCSS/CDCSS Encode/Decode**
- **Selective Signaling Encode/Decode:**
DTMF, Selcal and 2-Tone (300-3000Hz)
- **LCD Dot Matrix 14 Character Display**
- **Radio Status Icons**
- **Scrambler**
- **Priority and Normal Channel Scan**
- **6 Programmable PF Buttons**
- **Loud Audio Output – 1000mW**
- **MIL STD 810F**
Temperature/Humidity/Shock/Vibration
- **IP 65 Certified Resistance to Water/Dust**

800-USA-1-USA (872-1-872)

www.ritron.com



Default Frequencies and Settings

Dear Customer,

Thank you for your purchase of the NT Series radio. Each NT-174 and NT-470 radio comes pre-programmed with the *2 factory default channel frequencies listed below. The frequencies cannot be changed via the keypad buttons. Other factory default radio settings i.e. Programmable Function Buttons are listed on Page 6 to 10.

If your company currently has a license on frequencies other than the default settings, the NT radio can be PC programmed to custom frequencies using optional Ritron PC software, other settings can also be re-configured. Please contact Ritron, Inc. toll free at 800-872-1872 for information on "custom" radio programming services.

Please be advised that operation on the factory default frequencies require that you obtain a Canadian Operator License BEFORE USE.

NT-174 (VHF)

Default Frequency Settings -Operating band *136-174MHz

Ch1 (151.055MHz) Narrow Band - no tone - 2/5 Watts

Ch2 (151.115MHz) Narrow Band - no tone - 2/5 Watts

NT-470 (UHF)

Default Frequency Settings -Operating band *406-470MHz

Ch1 (458.6625MHz) Narrow Band - no tone - 2/4 Watts

Ch2 (469.2625MHz) Narrow Band - no tone - 2/4 Watts

Narrow Band = 12.5KHz bandwidth

Tone = tone codes can be added via the keypad by the radio user.
See page 11 for details.

The standard antenna supplied is cut for operation in the following frequency bands:

VHF: 150-160MHz

UHF: 450-470MHz

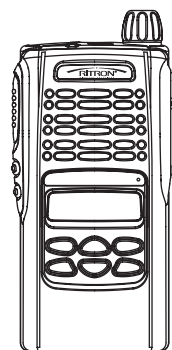
Operation on frequencies outside this range will require a custom cut antenna.

CONTENTS

PAGE

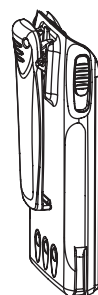
Default Frequencies & Settings.....	1
Included Items.....	2
Accessories.....	3
Controls and Functions	4
Charger Information.....	4
Antenna Installation.....	4
LCD Display Indicators.....	5
Battery Information.....	5
Operating Your Radio	6
Programmable Functions	7-10
Tone Code Tables.....	11
RF Energy Exposure Information...	12
Ritron Warranty Information	13-14

ITEMS INCLUDED WITH EACH RADIO



NT Radio

NT Series
requires 2-pin
audio accessory



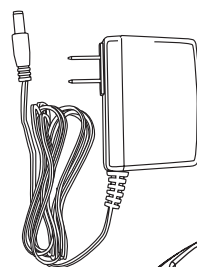
BP-PT18-L (Fits NT)
Li-Ion Battery
w/ Belt Clip



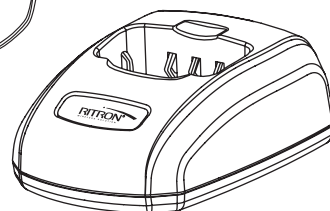
VHF AF-X155-PT
(Fits NT)
Antenna



UHF AF-X460-PT
(Fits NT)
Antenna



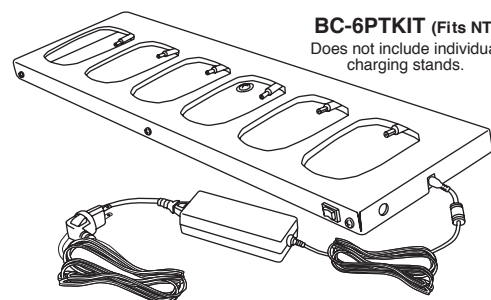
#40000001
AC Adaptor
110-220V



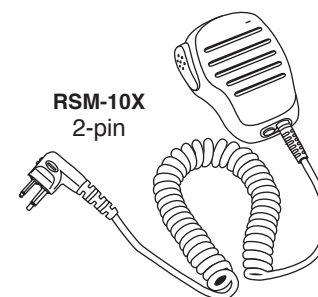
BC-PT (Fits NT)
Single Slot Rapid Charger

For pictures of accessories go to: <http://www.ritron.com/accessories.html>

ACCESSORIES	Part No.
Ear Loop with PTT & Microphone, 2 Pin Conn	RHD-16X
Speaker Microphone, 2 Pin	RSM-10X
Replacement, Battery Pack	BP-PT18-L
Replacement, Belt Clip	CB-PT
Gang Charger Kit	BC-6PTKIT

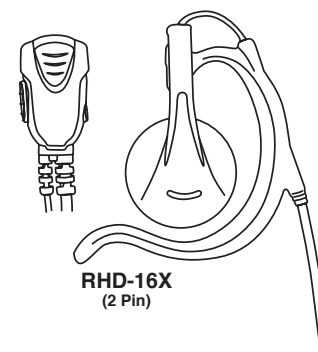


BC-6PTKIT (Fits NT)
Does not include individual
charging stands.



RSM-10X
2-pin

RSM-10X and RHD-16X not VOX capable.
Contact factory for VOX capable item.



RHD-16X
(2 Pin)

Installing Audio Accessories

1. Flip open protective rubber cover on the side of the radio.
2. Plug 2-Pin connector of Audio Accessory into 2.5mm and 3.5mm holes.

Battery Installation/Removal

1. Turn the radio OFF.
2. Align tabs at bottom of battery pack with the slots at the bottom of the radio body.
3. Pivot the top of the battery towards the radio body until you hear the spring latches engage with a click.

To Remove

1. Turn radio OFF.
2. Slide both side latches down until they release.
3. Gently rotate the top of the battery pack away from the radio.

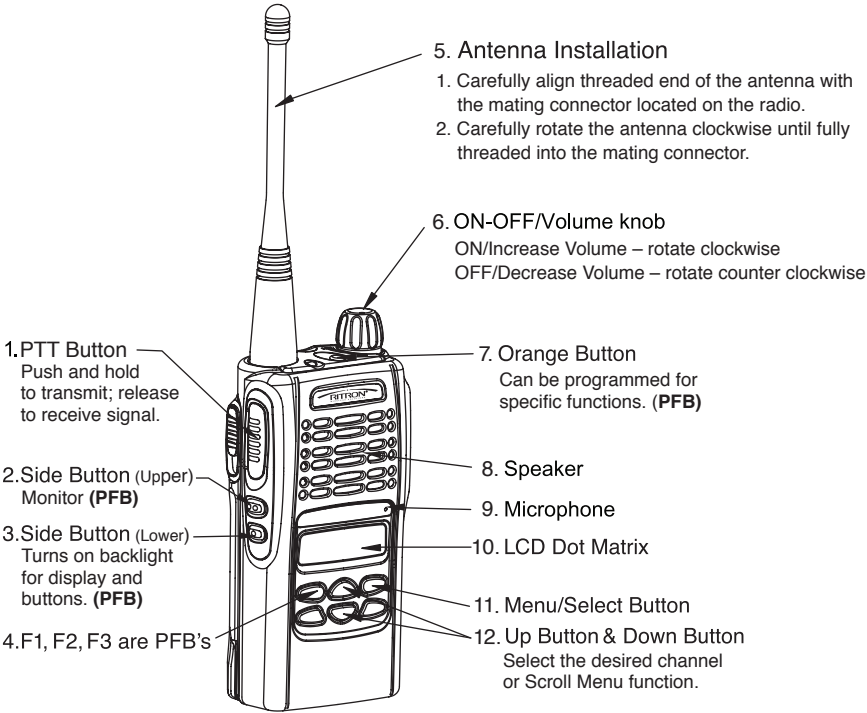
Models Description

NT-174	VHF, *136-174MHz 5 Watt or 2 Watt 255 Channel Capacity
NT-470	UHF, *403-470MHz 4 Watt or 2 Watt 255 Channel Capacity

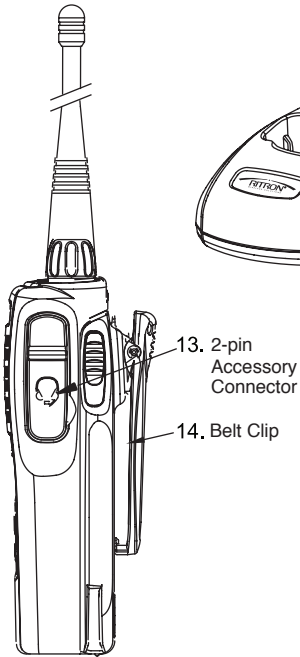
*Standard antenna supplied is cut for operation in the following frequency ranges:

VHF: 150-160MHz
UHF: 450-470MHz

Getting To Know Your NT Series Radio



PFB Programmable Function Button
(see page 6.)



BC-PT Charger Information

- Specification
- Input voltage: 12VDC, 1A, 110-220VAC
 - Output voltage: 8.4VDC, 850mA
 - Charge time: 2 1/2 hours

- Operating instruction
- Plug the AC power cord of the charger into a wall outlet.
 - Turn the transceiver off.
 - Insert the battery pack into the charger with or without the transceiver attached.

Color Status of Charger LED

- Steady RED.....Battery Charging
Steady GREEN....Battery Charging Complete
Steady AMBER....Trickle Charge, Replace Battery
Blinking AMBER...Abnormal Temperature
Blinking RED.....Replace Battery

Display Indicators

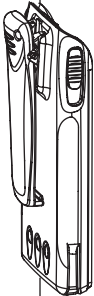


Ritron NT-470

Indicator	Description
	Indicates relative signal strength level.
	Power Level Indicator. "H" is high power. "L" is low power.
	Keypad Lock Indicator. Appears when keypad lock function is ON.
	Alert(Beep) ON/OFF Indicator. Appears when keypad tones are ON.
	Battery Level Indicator. Indicates remaining battery power.
	Hands-free VOX Indicator. Appears when VOX function is turned ON.
	Channel Scan Indicator. Appears when Scan function is activated.
	Scramble. Appears when Scrambler Function is enabled.
	Talk - Around Indicator.
	TONE Indicator. Appears when the frequency is set with Tone.
	Monitor Indicator. Appears when Monitor Button is pressed.

Battery Information

- Fully charge the battery before use to keep the optimum capacity and for safe operation.
- The battery is designed for the NT Series charger only. Please do not charge the battery with any other brand charger.
- Turn the radio off before charging.
- Do not disassemble.
- If the battery terminal is contacted with any metals or conductive substances, it may do harm to the body or battery.
- **Battery Type:** Rechargeable Lithium-Ion
- **Battery Life:** Duty cycle: 5% transmit, 5% receive, 90% standby = more than 12 hours



Operating Your NT Series Radio

- Select the desired channel by using the Scroll UP/DWN button. When button is held, channels change continuously.
- To Talk, press and hold the PTT button, speak into the microphone on the radio, and release to listen.
- To Monitor traffic on the channel, press the Monitor button.




Note: For maximum clarity hold the radio 2-3 radio inches away from your mouth and speak in a normal tone of voice.

Programmable Function Buttons (PFB's)

Programmable Function Buttons (PFB) provide easy, one-button access to a specific feature/function. When momentarily pressed, the PFB can be PC programmed to operate as follows:

- No function when pressed
- Turn ON or OFF a specific feature assigned to that PFB,
- Send a Call Tone
- or other functions if noted as Yes under the heading **PFB Assignable** in the tables starting on page 6.








The table listed below indicates the **Factory Default settings for each of the PFB's on your radio.** The default function can be changed via PC programming, contact Ritron for details.

Factory PF Button	Default Function	Description of Function
#6. Orange	Emergency	Momentary press will activate Emergency tone. The word [Emergency] will appear on receiving radio's display.
#2. Side Button (Upper)	Monitor	If radio is programmed with tone code, a momentary press of the Monitor Button (left side), will turn tone code OFF, a second press will "open squelch" and you will hear a continuous squelch noise. Icon will appear on display.
#3. Side Button (Lower)	Backlight	Momentary press will turn backlight of display and keypad ON. Backlight turns OFF after a few seconds.
F1 (VHF NT-174) Transmit PWR Hi/Lo (UHF NT-470)		Transmitter Power will toggle between high and low power. Icon will appear on display.
F2 Keypad Lock		Press and HOLD until LOCK icon appears in display accompanied by tone. Keypad buttons will not respond when LOCK is ON. Repeat process to UNLOCK
F3 Scan		Radio will begin to scan designated channels. A channel <i>must be flagged</i> using PC Programmer in order to be included in scan list. Scan symbol will appear in display.
#11.  Scroll DWN	Nuisance Channel Delete while in Scan Mode	Allows user to temporarily delete nuisance channels from the scan list. When radio is in scan mode and stops stops on the nuisance channel, PRESS and HOLD the Scroll Down Button. Display will flash "DELETED" when complete. Nuisance Channel is now temporarily deleted from scan list. To restore deleted channel, turn the radio OFF then ON again.
#11. 	Scroll Up Scroll Down	Scroll Channels or feature sub-list. Scroll Channels or feature sub-list.
#10. 	MENU/ENTER	Allows access to MENU enabled features and/or ENTER key.

Using The Menu/Enter Button

Listed below are instructions for accessing factory default features/functions from the radio MENU button. The NT radio can be customized using special PC software to enable or disable certain features and functions – see features listed below.

To access feature/functions via the radio MENU: (see instructions in current manual)

- Press  if enabled, the first feature/function in the list will appear on the LCD display
- Use   to scroll to a specific feature/function or
- Press  to ENTER the feature/function appearing on the LCD display
- Use   to scroll sub-list option settings for the specific feature/function
- Press  to SAVE selection and exit MENU
- The last channel of operation will appear on the LCD display

Programmable NT Series Radio Features

Your NT radio has been factory programmed to allow field-programming of certain features. The first 7 features listed below in **italics** can be accessed by the radio user using the PF buttons. The other features listed can be custom programmed using special PC software. Contact Ritron for details.

Function/Feature

- Tone Code Select** - Tone codes help to block-out other radio chatter not in your talk group, static and noise.
- Each channel can be assigned separate tone codes, on a channel-by-channel basis.
 - All radios in your talk group must be programmed to the same frequency and tone code (transmit and receive).
 - See Tone Code Tables & programming instructions on p.11.

Tone Select (Transmit) Select CTCSS or DCS

Tone Codes to block out unwanted chatter

Yes

Yes

Tone Select (Receive) Select CTCSS or DCS

Tone Codes to block out unwanted chatter

Yes

Yes

*Standard convention requires the same tone code to be programmed in both the transmit and receive frequency of a given channel.

Keypad Lock ON/OFF Prevents accidental activation of the front panel buttons. Icon appears on LCD display is ON.

Yes

Yes

Squelch Level Will display the current squelch level and allow the user to raise or lower squelch with the Up and Down buttons. Smaller numbers increase squelch sensitivity, allowing the radio to hear weak and distant signals. Larger numbers decrease sensitivity, only strong signals are heard.

Yes

Yes

Normal Scan ON/OFF Must be programmed by your dealer. Channels *must be flagged* as eligible scan channels. Normal Scan will periodically check these channels to prevent missed calls. Programmable function button can be set to turn function ON or OFF. Icon will appear on LCD display when scan is ON.

Yes

Yes

Ear PTT ON/OFF Enables or disables microphone on radio. Allows use of earbud (listen only) device while microphone on radio remains enabled.

No

Yes

<u>Function/Feature</u>	<u>PFB Assignable</u>	<u>Menu Accessible</u>
Information Displays firmware resolution and current battery voltage	No	Yes
Group Select When programmed to a programmable function button, allows quick access to a group of up to 10 pre-programmed channels.	Yes	Yes
Go To A Fixed (Pre-Set) Channel #, 1- 4 “Speed dial” for quickly accessing pre-programmed channel(s). Eliminates the need to scroll through channels. A programmable function button can be assigned to 1 of up to 4 pre-set channels.	Yes	No
Keypad Lock ON/OFF* Prevents accidental activation of the front panel buttons. Icon appears on LCD display when ON.	Yes	Yes
Send A Selective Signaling Call Send a 2-tone Page Code (e.g. GateGuard command code, 5 to 7 Tone Page or DTMF ANI Code on a per channel basis).	Yes	No
Alerts ON/OFF Turn keypad tones OFF for silent operation. Icon will appear on LCD display when ON.	Yes	Yes
Send DTMF Digits Radio can be programmed by your dealer to transmit unique DTMF digits on a per channel basis and/or via programmable function button.	Yes	No
Talk Around ON/OFF Causes the radio to transmit on the receive frequency on channels where the RX and TX are not the same. Icon will appear on the LCD Display when ON.	Yes	Yes
Tx/Rx Tone Select* Select CTCSS or DCS encode & decode tone codes on the current operating channel.	Yes	Yes
TX Power Level Set transmit power to high, or low on current operating channel. Icon (H or L) will appear on LCD display.	Yes	Yes
Battery Saver ON/OFF Battery life extended when ON.	Yes	Yes
Missed Call Displays a list of missed Selcall calls.	Yes	Yes
Contact List Select and send from a list of pre-programmed encode codes. E.g. 2-Tone GateGuard Command codes to open different gates, turn on lights, pump control etc.	Yes	Yes
Status List Select & send from a list of pre-programmed “status” messages. E.g. Text messaging.	Yes	Yes
Squelch Level* Will display the current squelch level and allow the user to raise or lower squelch with the Up and Down buttons. Smaller numbers increase squelch sensitivity, allowing the radio to hear weak and distant signals. Larger numbers decrease sensitivity, only strong signals are heard.	Yes	Yes
Missed Call List Delete Clears the Missed Call List.	No	Yes
Missed Call Send Will automatically send the Current Status message if a Missed Call is detected.	No	Yes

*pre-programmed feature

<u>Function/Feature</u>	<u>PFB Assignable</u>	<u>Menu Accessible</u>
Password Prevents unauthorized use of the radio. At radio turn on user must enter 4 character password before radio will operate. Password is entered using the Up/Dwn scroll buttons and MENU button.	Yes	Yes
Normal Scan ON/OFF* Must be programmed by your dealer. Channels <i>must be flagged</i> as eligible scan channels. Normal Scan will periodically check these channels to prevent missed calls. Programmable function button can be set to turn function ON or OFF. Icon will appear on LCD display when scan is ON.	Yes	Yes
Priority Scan ON/OFF Must be enabled by your dealer. Designates a priority channel that is checked more frequently than other channels to prevent missed calls.	Yes	Yes
Priority Scan Channel Allows the user to set the priority channel from a list of available channels.	No	Yes
Nuisance Channel Delete Allows user to temporarily delete nuisance channels from the scan list. When radio is in scan mode and stops on the nuisance channel, PRESS and HOLD the Scroll Down Button. Display will flash “DELETED” when complete. Nuisance Channel is now temporarily deleted from scan list. To restore deleted channel, turn the radio OFF then ON again.	No	No
“Hands-Free” VOX ON/OFF** Allows “hands-free” use of the radio, with or without an audio accessory. (I.e. a headset). Icon will appear on LCD display when ON.	Yes	Yes
VOX Level** Allows user to select the voice audio level required to “key” the transmitter. VOX Level can be set from 0-15. A higher number makes the VOX circuit “MORE” sensitive (“less” audio is required) to trigger VOX operation. A lower number makes the VOX circuit “LESS” sensitive (“more” audio is required).	No	Yes
Ear PTT ON/OFF* Enables or disables microphone on radio. Allows use of earbud (listen only) device while microphone on radio remains enabled.	No	Yes
LED Indicator ON/OFF LED on top of the radio can be set to “blink” green every 10 seconds.	No	Yes
Lone Worker Useful in situations where the radio user works alone and is either required to or it would be helpful to check in at regular intervals. NT Radio can be programmed to sound a tone to remind the Lone Worker that they must “call in”. If they do not call in within the specified period, radio will automatically send the Emergency code.	No	Yes
Radio Reset See your Dealer for details	No	Yes

*pre-programmed feature

**Standard NT series audio accessories e.g. remote speaker mic and earset are not compatible with VOX function. VOX function requires special VOX capable audio accessories. Contact factory for availability.

Function/Feature

PFB Assignable

Menu Accessible

Caller/Group ID Each transmission (16 possible codes) is uniquely identified. Receiving radios show name of caller/group on LCD display.

No

No

Selcall (Selective Calling) 2-Way Paging Selcall is a voice call to a specific radio or group of radios. The caller selects the radio or group of radios from a pre-programmed “contact list.”

No

Yes

Status Messaging Send and receive pre-programmed alpha/numeric status messages.

No

Yes

[Ack]nowledge Sending radio receives an [Ack]nowledge message confirming that the Selcall or Status Message has been received.

No

No

DTMF Enable/disable encoder and decoder

Yes

Yes

Scrambler Enable/disable to Scramble feature

Yes

Yes

Password Change Change existing password

No

Yes

Frequency Display Change between programmed frequency and channel number

No

Yes

Mic Gain Adjust sensitivity of microphone 1-5

Yes

Yes

Roger Beep Enable/disable beep when transmission is complete

Yes

Yes

Compander Enable/disable Compander feature

No

Yes

LCD Contrast Adjust LCD display contrast

No

Yes

NOTES:

Tone Code Tables

CTCSS (Continuous Tone Coded Squelch System) Frequency Chart

Display Code	Freq	Display Code	Freq	Display Code	Freq	Display Code	Freq
001	67.0	015	110.9	029	179.9	043	177.3
002	71.9	016	114.8	030	186.2	044	No Tone
003	74.4	017	118.8	031	192.8	045	183.5
004	77.0	018	123.0	032	203.5	046	189.9
005	79.7	019	127.3	033	210.7	047	196.6
006	82.5	020	131.8	034	218.1	048	199.5
007	85.4	021	136.5	035	225.7	049	206.5
008	88.5	022	141.3	036	233.6	050	229.1
009	91.5	023	146.2	037	241.8	051	254.1
010	94.8	024	151.4	038	250.3	052	71.0 New
011	97.4	025	156.7	039	69.4	053	198 New
012	100.0	026	162.2	040	159.8	054	202.7 New
013	103.5	027	167.9	041	165.5	00	No Tone
014	107.2	028	173.8	042	171.3		

DCS (Digital Coded Squelch) Code Chart

Display Code	Digital #	Display Code	Digital #	Display Code	Digital #	Display Code	Digital #	Display Code	Digital #	Display Code	Digital #
101	023	119	131	137	261	155	431	173	654	191	252
102	025	120	132	138	263	156	432	174	662	192	255
103	026	121	134	139	265	157	445	175	664	193	266
104	031	122	143	140	271	158	464	176	703	194	274
105	032	123	152	141	306	159	465	177	712	195	325
106	043	124	155	142	311	160	466	178	723	196	332
107	047	125	156	143	315	161	503	179	731	197	356
108	051	126	162	144	331	162	506	180	732	198	446
109	054	127	165	145	343	163	516	181	734	199	452
110	065	128	172	146	346	164	532	182	743	200	454
111	071	129	174	147	351	165	546	183	754	201	455
112	072	130	205	148	364	166	565	184	053	202	462
113	073	131	223	149	365	167	606	185	122	203	523
114	074	132	226	150	371	168	612	186	036	204	526
115	114	133	243	151	411	169	624	187	145		
116	115	134	244	152	412	170	627	188	212		
117	116	135	245	153	413	171	631	189	225		
118	125	136	251	154	423	172	632	190	246		






Tone Code Select

- Tone codes help to block-out other radio chatter not in your talk group, static and noise.
- Each channel can be assigned separate tone codes, on a channel-by-channel basis.
- All radios in your talk group must be programmed to the same frequency and tone code (transmit and receive).



How to Program “Tone Codes” To A Channel

- Use the same Tone Code Number for both TRANSMIT and RECEIVE tone select feature.
- In order for radios to talk to each other, tone codes (TX and RX) AND channel frequencies must match exactly.
- Review these Tone Code Tables to select the display number of the Tone Code(s) you will be using.

Selecting The “Transmit” Tone Code For A Channel

1. Turn the radio ON.
2. Scroll to the channel you wish to program
3. Press MENU  button, [TX---Tone] will appear on the display
4. Press MENU  button again, [CTC...] will appear on the display
5. Press Scroll UP or Down button   to select the Display Number of the Transmit Tone code you wish to program into the channel
6. Press MENU  button to SAVE this tone code to the channel

Selecting The “Receive” Tone Code For A Channel

7. Press MENU  button, [TX---Tone] will appear on the display
8. Press SCROLL UP  button, [RX---Tone] will appear on the display
9. Repeat Steps 4-6 to select and Save the Receive Tone Code

Note: You must select the same Tone Code number for both the Transmit and Receive

RF ENERGY EXPOSURE AWARENESS AND CONTROL INFORMATION
RF ENERGY EXPOSURE AWARENESS AND CONTROL INFORMATION, AND
OPERATIONAL INSTRUCTIONS FOR FCC OCCUPATIONAL USE REQUIREMENTS

BEFORE USING YOUR PORTABLE 2-WAY RADIO, READ THIS IMPORTANT RF ENERGY AWARENESS AND CONTROL INFORMATION AND OPERATIONAL INSTRUCTIONS TO ENSURE COMPLIANCE WITH THE FCC'S AND ISED'S RF EXPOSURE GUIDELINES.

NOTICE: This radio is intended for use in occupational/controlled conditions, where users have full knowledge of their exposure and can exercise control over their exposure to meet FCC and ISED limits. This radio device is NOT authorized for general population, consumer, or any other use.

These products generate radio frequency (RF) energy when the PTT button on the side of the unit is depressed. These products have been evaluated for compliance with the maximum permissible exposure limits for RF energy at the maximum power rating of the unit when using antennas available from RITRON. Antennas other than those mentioned below have not been tested for compliance and may or may not meet the exposure limits at the distances given. Higher gain antennas are capable of generating higher fields in the strongest part of their field and would, therefore, require a greater separation from the antenna.

NT-174: Use the AF-X155-PT antenna (included with the product) in a vertical orientation at the 25mm (0.98 inches) minimum expected separation distance to meet Occupational/ Controlled limits. Antennas other than those available from RITRON have not been tested for compliance and may or may not meet the exposure limits at the distances given. Higher gain antennas are capable of generating higher fields in the strongest part of their field and would, therefore, require a greater separation from the antenna. This product is not to be used by the general public in an uncontrolled environment unless compliance with the Uncontrolled/General Population limits for RF exposure can be assured.

NT-470: Use the AF-X460-PT antenna (included with the product) in a vertical orientation at the 25mm (0.98 inches) minimum expected separation distance to meet Occupational/ Controlled limits. Antennas other than those available from RITRON have not been tested for compliance and may or may not meet the exposure limits at the distances given. Higher gain antennas are capable of generating higher fields in the strongest part of their field and would, therefore, require a greater separation from the antenna. This product is not to be used by the general public in an uncontrolled environment unless compliance with the Uncontrolled/General Population limits for RF exposure can be assured.

RF EXPOSURE COMPLIANCE AND CONTROL GUIDELINES AND OPERATING INSTRUCTIONS:

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

GUIDELINES:

- Do not remove the RF Exposure Label from the device.
- This user manual should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

OPERATING INSTRUCTIONS:

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50% of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna), the minimum distance of 25mm away from the face. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in a Ritron approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of other manufacturers' non-approved accessories may result in exposure levels, which exceed the FCC's and ISED's occupational /controlled environment RF exposure limits.
- Use only Ritron approved supplied or replacement antennas, batteries, and accessories. Use of non-Ritron approved antennas, batteries, and accessories may exceed the FCC and ISED's RF exposure guidelines.
- For a list of Ritron approved accessories see this user manual, or visit <http://www.ritron.com> or call Ritron at 800-872-1872.

When used as directed, the NT-174 and NT-470 radios are designed to comply with the ISED RSS-102 Occupational/ Controlled Exposure Limits. In addition, they are designed to comply with the following Standards and Guidelines.

Your Ritron 2-way radio complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR JJ 1.1307, 1.1310, 2.1091 and 2.1093
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95.3-2003
- Institute of Electrical and Electronic Engineers (IEEE) C95.3 2003Edition

CONTACT INFORMATION:

For additional information on exposure requirements or other information, contact Ritron at 800-872-1872.

Have questions? Call 800-USA-I-USA (800-872-1872) or visit our website at <http://www.ritron.com>

INFORMATIONS SUR LA SENSIBILISATION ET LE CONTRÔLE DE L'EXPOSITION AUX ÉNERGIES RF
INFORMATIONS SUR LA SENSIBILISATION ET LE CONTRÔLE DE L'EXPOSITION AUX ÉNERGIES RF, ET
INSTRUCTIONS OPÉRATIONNELLES POUR LES EXIGENCES D'UTILISATION PROFESSIONNELLE DE LA FCC ET ISED

AVANT D'UTILISER VOTRE RADIO PORTABLE À 2 VOIES, LISEZ CETTE IMPORTANTE SENSIBILISATION À L'ÉNERGIE RF ET INFORMATIONS DE CONTRÔLE ET INSTRUCTIONS OPÉRATIONNELLES POUR ASSURER LA CONFORMITÉ AVEC LA FCC LIGNES DIRECTRICES SUR L'EXPOSITION AUX RF.

AVIS: Cette radio est destinée à être utilisée dans des conditions professionnelles / contrôlées, où les utilisateurs ont une connaissance complète de leur exposition et peuvent exercer un contrôle sur leur exposition pour respecter les limites de la FCC et ISED. Cet appareil radio n'est PAS autorisé pour la population générale, les consommateurs ou toute autre utilisation.

Ces produits génèrent de l'énergie radiofréquence (RF) lorsque le bouton PTT sur le côté de l'appareil est enfoncé. Ces produits ont été évalués pour leur conformité aux limites d'exposition maximales admissibles pour l'énergie RF à la puissance nominale maximale de l'unité lors de l'utilisation d'antennes disponibles auprès de RITRON. Les antennes autres que celles mentionnées ci-dessous n'ont pas été testées pour leur conformité et peuvent ou non respecter les limites d'exposition aux distances indiquées. Les antennes à gain plus élevé sont capables de générer des champs plus élevés dans la partie la plus forte de leur champ et nécessiteraient donc une plus grande séparation de l'antenne.

NT-174: utilisez l'antenne AF-X155-PT (fournie avec le produit) dans une orientation verticale à la distance de séparation minimale attendue de 25 mm (0,98 pouces) pour respecter les limites professionnelles / contrôlées. Les antennes autres que celles disponibles chez RITRON n'ont pas été testées pour leur conformité et peuvent ou non respecter les limites d'exposition aux distances indiquées. Les antennes à gain plus élevé sont capables de générer des champs plus élevés dans la partie la plus forte de leur champ et nécessiteraient donc une plus grande séparation de l'antenne. Ce produit ne doit pas être utilisé par le grand public dans un environnement non contrôlé à moins que le respect des Les limites non contrôlées / pour la population générale pour l'exposition aux RF peuvent être garanties.

NT-470: utilisez l'antenne AF-X460-PT (fournie avec le produit) dans une orientation verticale à la distance de séparation minimale attendue de 25 mm (0,98 pouces) pour respecter les limites professionnelles / contrôlées. Les antennes autres que celles disponibles chez RITRON n'ont pas été testées pour leur conformité et peuvent ou non respecter les limites d'exposition aux distances indiquées. Les antennes à gain plus élevé sont capables de générer des champs plus élevés dans la partie la plus forte de leur champ et nécessiteraient donc une plus grande séparation de l'antenne. Ce produit ne doit pas être utilisé par le grand public dans un environnement non contrôlé à moins que le respect des Les limites non contrôlées / pour la population générale pour l'exposition aux RF peuvent être garanties.

DIRECTIVES DE CONFORMITÉ ET DE CONTRÔLE DE L'EXPOSITION AUX RF ET INSTRUCTIONS D'UTILISATION:

Pour contrôler votre exposition et garantir le respect des limites d'exposition professionnelle / environnement contrôlé respectez les procédures suivantes.

DES LIGNES DIRECTRICES:

- Ne retirez pas l'étiquette d'exposition RF de l'appareil.
- Ce manuel d'utilisation doit accompagner l'appareil lorsqu'il est transféré à d'autres utilisateurs.
- N'utilisez pas cet appareil si les exigences opérationnelles décrites ici ne sont pas satisfaites.

MODE D'EMPLOI:

- Ne transmettez pas plus que le facteur de service nominal de 50% du temps. Pour transmettre (parler), appuyez sur le bouton Push-To-Talk (PTT). Pour recevoir des appels, relâchez le bouton PTT. La transmission à 50% du temps, ou moins, est importante car cette radio génère l'exposition à l'énergie RF mesurable uniquement lors de la transmission (en termes de mesure de conformité aux normes).
- Tenez la radio en position verticale devant le visage avec le microphone (et les autres parties de la radio, y compris l'antenne), à une distance minimale de 25 mm du visage. Il est important de garder la radio à la bonne distance car RF les expositions diminuent avec la distance de l'antenne. L'antenne doit être éloignée des yeux.
- Lorsqu'elle est portée sur le corps, placez toujours la radio dans un clip, un support, un étui, un étui ou un harnais approuvé par Ritron pour ce produit. L'utilisation d'accessoires portés sur le corps approuvés est importante car l'utilisation d'accessoires non approuvés d'autres fabricants peut entraîner des niveaux d'exposition qui dépassent les limites d'exposition aux RF de l'environnement professionnel / contrôlé de la FCC et ISED.
- N'utilisez que des antennes, piles et accessoires fournis ou de remplacement approuvés par Ritron. Utilisation de produits non approuvés par Ritron les antennes, les piles et les accessoires peuvent dépasser les directives d'exposition RF de la FCC et ISED.
- Pour obtenir la liste des accessoires approuvés par Ritron, consultez ce manuel d'utilisation ou visitez <http://www.ritron.com> ou appelez Ritron au 800-872-1872.

Lorsqu'elles sont utilisées selon les instructions, les radios NT-174 et NT-470 sont conçues pour se conformer à la norme ISDE RSS-102 Limites d'exposition contrôlées. De plus, ils sont conçus pour se conformer aux normes et directives suivantes.

Votre radio bidirectionnelle Ritron est conforme aux normes et directives d'exposition à l'énergie RF suivantes:

- Commission fédérale des communications des États-Unis, Code of Federal Regulations; 47 CFR JJ 1.1307, 1.1310, 2.1091 et 2.1093
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95.3-2003
- Institut des ingénieurs électriciens et électroniciens (IEEE) C95.3 2003Edition

INFORMATIONS DE CONTACT:

Pour plus d'informations sur les exigences d'exposition ou d'autres informations, contactez Ritron au 800-872-1872.

Avoir des questions? Appelez le 800-USA-I-USA (800-872-1872) ou visitez notre site Web à l'adresse <http://www.ritron.com>



RITRON, INC. LIMITED WARRANTY

WHAT THIS WARRANTY COVERS:

RITRON, INC. ("RITRON") provides the following warranty against defects in materials and/or workmanship in RITRON Radios and Accessories under normal use and service during the applicable warranty period (as stated below). "Accessories" means antennas, holsters, chargers, earphones, speaker/microphones and items contained in the programming and programming/service kits.

WHAT IS COVERED
NT Series Radios

FOR HOW LONG
1 year*

WHAT RITRON WILL DO

During the first year after date of purchase, RITRON will repair or replace the defective product, at RITRON's option, parts and labor included at no charge.

Accessories

90 days*

*After date of purchase

WHAT THIS WARRANTY DOES NOT COVER:

- Any technical information provided with the covered product or any other RITRON products;
- Installation, maintenance or service of the product, unless this is covered by a separate written agreement with RITRON;
- Any products not furnished by RITRON which are attached or used with the covered product, or defects or damage from the use of the covered product with equipment that is not covered (such as defects or damage from the charging or use of batteries other than with covered product);
- Defects or damage, including broken antennas, resulting from:
 - misuse, abuse, improper maintenance, alteration, modification, neglect, accident or act of God,
 - the use of covered products other than in normal and customary manner or,
 - improper testing or installation;
- Defects or damages from unauthorized disassembly, repair or modification, or where unauthorized disassembly, repair or modification prevents inspection and testing necessary to validate warranty claims;
- Defects or damages in which the serial number has been removed, altered or defaced.
- Batteries if any of the seals are not intact.

IMPORTANT: This warranty sets forth the full extent of RITRON's express responsibilities regarding the covered products, and is given in lieu of all other express warranties. What RITRON has agreed to do above is your sole and exclusive remedy. No person is authorized to make any other warranty to you on behalf of RITRON. Warranties implied by state law, such as implied warranties of merchantability and fitness for a particular purpose, are limited to the duration of this limited warranty as it applies to the covered product. Incidental and consequential damages are not recoverable under this warranty (this includes loss of use or time, inconvenience, business interruption, commercial loss, lost profits or savings). Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. Because each covered product system is unique, RITRON disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

WHO IS COVERED BY THIS WARRANTY:

This warranty is given only to the purchaser or lessee of covered products when acquired for use, not resale. This warranty is not assignable or transferable.

HOW TO GET WARRANTY SERVICE:

To receive warranty service, you must deliver or send the defective product, delivery costs and insurance prepaid, within the applicable warranty period, to

**RITRON, INC., 505 West Carmel Drive, Carmel, Indiana 46032,
Attention: Warranty Department.**

Please point out the nature of the defect in as much detail as you can. You must retain your sales or lease receipt (or other written evidence of the date of purchase) and deliver it along with the product. If RITRON chooses to repair or replace a defective product, RITRON may replace the product or any part or component with reconditioned product, parts or components. Replacements are covered for the balance of the original applicable warranty period. All replaced covered products, parts or components become RITRON's property.

RIGHTS TO SOFTWARE RETAINED :

Title and all rights or licenses to patents, copyrights, trademarks and trade secrets in any RITRON software contained in covered products are and shall remain in RITRON. RITRON nevertheless grants you a limited non-exclusive, transferable right to use the RITRON software only in conjunction with covered products. No other license or right to the RITRON software is granted or permitted.

YOUR RIGHTS UNDER STATE LAW: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WHERE THIS WARRANTY IS VALID: This warranty is valid only within the United States, the District of Columbia and Puerto Rico.



FCC REGULATIONS LICENSING

The FCC requires the owners or NT Series radios to obtain a station license before using them. The station licensee is responsible for ensuring that transmitter power, frequency and deviation are within the limits specified by the station license.

The station licensee is also responsible for proper operation and maintenance of the radio equipment. This includes checking the transmitter frequency and deviation periodically, using appropriate methods. To get a FCC license for VHF or UHF frequencies, contact your Ritron dealer for help with this process.

SAFETY STANDARDS

The FCC (with its action in General Docket 79-144, (March 13, 1985) has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Ritron observes these guidelines and recommends that you do also:

- DO NOT hold the radio so that the antenna is very close to or touching exposed parts of the body, especially the face or eyes, while transmitting. Keep the radio vertical, four inches away while talking into the front panel.
- DO NOT press the Push-To-Talk except when you intend to transmit.
- DO NOT operate radio equipment near electrical blasting caps or in an explosive atmosphere.
- DO NOT allow children to play with any radio equipment that contains a transmitting device.
- Repair of Ritron products should be performed only by Ritron authorized personnel.

SERVICE

Federal law prohibits you from making any internal adjustments to the transmitter and/or from changing transmit frequencies unless you are specifically designated by the licensee.

If your radio equipment fails to operate properly, or you wish to have the radio programmed, contact your authorized dealer or Ritron.

RITRON, INC.,

505 West Carmel Drive, Carmel, IN 46082 c/o: Repair Department

Phone: 317-846-1201

Fax: 317-846-4978

NOTES:
