KENWOOD

NX-240V16P/NX-340U16P ProTalk® DIGITAL

Operating Manual

▼ FCC License Information

Your **KENWOOD** transceiver operates on communications frequencies which are subject to FCC (Federal Communications Commission) Rules & Regulations. FCC Rules require that all operators using Private Land Mobile radio frequencies obtain a radio license before operating their equipment. Application for license must be made on FCC form 601, schedules D and H, and Remittance form 159.

FAX: Forms can be obtained by fax from the FCC Fax-On-Demand system. Call 1-202-418-0177 from your fax machine and request document number 000601 for the form, schedules, and instructions.

MAIL: Forms can be ordered by telephone, and will be sent to you by first class mail. Call the FCC Forms Hotline at 1-800-418-FORM (1-800-418-3676).

INTERNET: Form 601 and instructions can be downloaded from the FCC Forms website at http://www.fcc.gov/formpage.html

Before filling out your Form 601 application Technical Data section, you must decide on which frequencies you will operate. See the frequency tables below.

QUESTIONS? Call the FCC for license application questions at 1-888-CALL-FCC (1-888-225-5322).

▼ CHANNEL SETUP MODE

This transceiver allows you to reprogram each of the channels with different frequencies and QT (Quiet Talk)/ DQT (Digital Quiet Talk)/ RAN (Radio Access Number) settings. The table below lists the default channel settings for Analog and Digital modes. The transceiver comes in ANALOG MODE for both zones.

▼ NX-240V16P

ANALOG MODE					DIGITAL MODE				
Zone Type	Channel Number	Table Number	Frequency (MHz)	QT (Hz)	Zone Type	Channel Number	Table Number	Frequency (MHz)	RAN
Analog	1	(1)	151.6250	67.0	Digital (NXDN)	1	(1)	151.6250	1
	2	(1)	151.6250	77.0		2	(1)	151.6250	2
	3	(1)	151.6250	88.5		3	(1)	151.6250	3
	4	(1)	151.6250	179.9		4	(1)	151.6250	4
	5	(1)	151.6250	100.0		5	(1)	151.6250	5
	6	(2)	151.9550	67.0		6	(2)	151.9550	1
	7	(2)	151.9550	82.5		7	(2)	151.9550	2
	8	(2)	151.9550	94.8		8	(2)	151.9550	3
	9	(2)	151.9550	179.9		9	(2)	151.9550	4
	10	(2)	151.9550	100.0		10	(2)	151.9550	5
	11	(20)	154.4900	67.0		11	(20)	154.4900	1
	12	(21)	154.5150	67.0		12	(21)	154.5150	1
	13	(10)	151.5125	67.0		13	(10)	151.5125	1
	14	(12)	151.6850	67.0		14	(12)	151.6850	1
	15	(5)	151.7000	67.0		15	(5)	151.7000	1
	16	(6)	151.7600	67.0		16	(6)	151.7600	1

▼ NX-340U16P

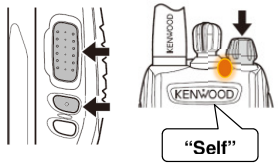
ANALOG MODE					DIGITAL MODE				
Zone Type	Channel Number	Table Number	Frequency (MHz)	QT (Hz)	Zone Type	Channel Number	Table Number	Frequency (MHz)	RAN
Analog	1	(1)	464.5000	67.0	Digital (NXDN)	1	(1)	464.5000	1
	2	(1)	464.5000	77.0		2	(1)	464.5000	2
	3	(1)	464.5000	88.5		3	(1)	464.5000	3
	4	(1)	464.5000	179.9		4	(1)	464.5000	4
	5	(1)	464.5000	100.0		5	(1)	464.5000	5
	6	(2)	464.5500	67.0		6	(2)	464.5500	1
	7	(2)	464.5500	82.5		7	(2)	464.5500	2
	8	(2)	464.5500	94.8		8	(2)	464.5500	3
	9	(2)	464.5500	179.9		9	(2)	464.5500	4
	10	(2)	464.5500	100.0		10	(2)	464.5500	5
	11	(22)	461.3625	74.4		11	(22)	461.3625	1
	12	(30)	464.4875	79.7		12	(30)	464.4875	1
	13	(32)	464.5375	85.4		13	(32)	464.5375	1
	14	(34)	466.0375	91.5		14	(34)	466.0375	1
	15	(36)	466.0875	97.4		15	(36)	466.0875	1
	16	(38)	466.1375	103.5		16	(38)	466.1375	1

▼ SELF PROGRAMMING MODE

• TO CHANGE THE OPERATING FREQUENCIES OF CHANNELS

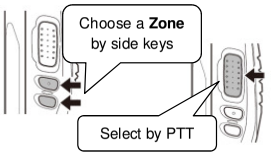
[1] With the transceiver power OFF, press and hold the **PTT** switch and **Side 1** key while turning the transceiver power ON.

Continue to hold the PTT switch and Side 1 key until the LED lights **orange** and the transceiver announces **"Self."**



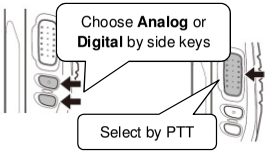
[2] Release the **PTT** switch and **Side 1** key.
- The transceiver announces **"Zone #"** that you were operating.
- Pressing the Side 1 key or Side 2 key will toggle between Zone 1 and Zone 2.
- Press the **PTT** switch to choose the Zone that you want to modify.

Zone Selection



- Then, the transceiver announces **"Analog"** or **"Digital"** whichever the selected zone was operating.
- Pressing the Side 1 key or Side 2 key will toggle between "Analog" and "Digital."
- Press the **PTT** switch to choose the mode that you want to operate in the selected zone.

Mode Selection



- Upon choosing the mode (above **[2]**), the transceiver announces Zone#, Channel#, and **"Channel."**

[3] Rotate the Channel selector to your desired channel#.
To change the frequency of the selected channel, Press the PTT switch.

To change the QT or DQT, press the Side 1 or 2 key to toggle between "Channel", "QT", and "DQT". **[If the channel is in ANALOG Zone]** and press the PTT.

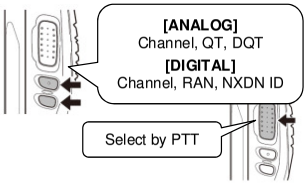
To change the RAN or NXDN ID*, press the Side 1 or 2 to toggle between "Channel", "RAN", and "NXDN ID," **[If the channel is in DIGITAL Zone]** and press the PTT.

Channel Selection

[4] Press the Side 1 / Side 2 key to increment/ decrement the table number, to select a frequency, QT/DQT/RAN, and NXDN ID.
- Press and hold the Side 1 or Side 2 key to increment / decrement the number by 5 at a time.

• Channel Table
• QT/DQT/RAN
• NXDN (Digital) ID

[5] Press the **PTT** switch to save the setting.
- A beep will sound.
- Repeat steps **[3]** to **[5]** to set up another channel.



[6] Turn the transceiver power OFF and then ON again to activate the new settings.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

VHF Frequency Selection Table

Channel Setup Number	Frequency (MHz)	Channel Setup Number	Frequency (MHz)	Channel Setup Number	Frequency (MHz)	Channel Setup Number	Frequency (MHz)
(01)	151.625000	(08)	151.835000	(15)	151.775000	(22)	154.527500
(02)	151.955000	(09)	151.805000	(16)	151.865000	(23)	154.540000
(03)	152.885000	(10)	151.512500	(17)	151.895000	(24)	153.005000
(04)	152.915000	(11)	151.655000	(18)	151.925000	(25)	154.547500
(05)	151.700000	(12)	151.685000	(19)	152.900000	(26)	158.400000
(06)	151.760000	(13)	151.715000	(20)	154.490000	(27)	158.407500
(07)	152.945000	(14)	151.745000	(21)	154.515000		

UHF Frequency Selection Table

Channel Setup Number	Frequency (MHZ)	Channel Setup Number	Frequency (MHZ)	Channel Setup Number	Frequency (MHZ)	Channel Setup Number	Frequency (MHZ)
(01)	464.500000	(26)	462.837500	(51)	467.887500	(76)	452.762500
(02)	464.550000	(27)	462.862500	(52)	467.912500	(77)	452.862500
(03)	467.762500	(28)	462.887500	(53)	469.487500	(78)	456.187500
(04)	467.812500	(29)	462.912500	(54)	469.512500	(79)	456.237500
(05)	467.850000	(30)	464.487500	(55)	469.537500	(80)	456.287500
(06)	467.875000	(31)	464.512500	(56)	469.562500	(81)	468.212500
(07)	467.900000	(32)	464.537500	(57)	462.187500	(82)	468.262500
(08)	467.925000	(33)	464.562500	(58)	462.462500	(83)	468.312500
(09)	461.037500	(34)	466.037500	(59)	462.487500	(84)	468.362500
(10)	461.062500	(35)	466.062500	(60)	462.512500	(85)	468.412500
(11)	461.087500	(36)	466.087500	(61)	467.187500	(86)	468.462500
(12)	461.112500	(37)	466.112500	(62)	467.462500	(87)	468.512500
(13)	461.137500	(38)	466.137500	(63)	467.487500	(88)	468.562500
(14)	461.162500	(39)	466.162500	(64)	467.512500	(89)	468.612500
(15)	461.187500	(40)	466.187500	(65)	451.187500	(90)	468.662500
(16)	461.212500	(41)	466.212500	(66)	451.237500	(91)	456.337500
(17)	461.237500	(42)	466.237500	(67)	451.287500	(92)	456.437500
(18)	461.262500	(43)	466.262500	(68)	451.337500	(93)	456.537500
(19)	461.287500	(44)	466.287500	(69)	451.437500	(94)	456.637500
(20)	461.312500	(45)	466.312500	(70)	451.537500	(95)	457.312500
(21)	461.337500	(46)	466.337500	(71)	451.637500	(96)	457.412500
(22)	461.362500	(47)	466.362500	(72)	452.312500	(97)	457.512500
(23)	462.762500	(48)	467.787500	(73)	452.537500	(98)	457.762500
(24)	462.787500	(49)	467.837500	(74)	452.412500	(99)	457.862500
(25)	462.812500	(50)	467.862500	(75)	452.512500		

QT (0 is OFF)

No.	QT	No.	QT	No.	QT	No.	QT	No.	QT
(001)	67.0	(010)	94.8	(019)	127.3	(028)	173.8	(037)	241.8
(002)	71.9	(011)	97.4	(020)	131.8	(029)	179.9	(038)	250.3
(003)	74.4	(012)	100.0	(021)	136.5	(030)	186.2	(039)	69.3
(004)	77.0	(013)	103.5	(022)	141.3	(031)	192.8	(040)	CUSTOM
(005)	79.7	(014)	107.2	(023)	146.2	(032)	203.5	(041)	CUSTOM
(006)	82.5	(015)	110.9	(024)	151.4	(033)	210.7	(042)	CUSTOM
(007)	85.4	(016)	114.8	(025)	156.7	(034)	218.1	(043)	CUSTOM
(008)	88.5	(017)	118.8	(026)	162.2	(035)	225.7	(044)	CUSTOM
(009)	91.5	(018)	123.0	(027)	167.9	(036)	233.6	(045)	CUSTOM

DQT (0 is OFF)

No.	DQT	No.	DQT	No.	DQT	No.	DQT	No.	DQT	No.	DQT	No.	DQT
(001)	D023N	(026)	D162N	(051)	D411N	(076)	D703N	(101)	D116I	(126)	D311I	(151)	D606I
(002)	D025N	(027)	D165N	(052)	D412N	(077)	D712N	(102)	D125I	(127)	D315I	(152)	D612I
(003)	D026N	(028)	D172N	(053)	D413N	(078)	D723N	(103)	D131I	(128)	D331I	(153)	D624I
(004)	D031N	(029)	D174N	(054)	D423N	(079)	D731N	(104)	D132I	(129)	D343I	(154)	D627I
(005)	D032N	(030)	D205N	(055)	D431N	(080)	D732N	(105)	D134I	(130)	D346I	(155)	D631I
(006)	D043N	(031)	D223N	(056)	D432N	(081)	D734N	(106)	D143I	(131)	D351I	(156)	D632I
(007)	D047N	(032)	D226N	(057)	D445N	(082)	D743N	(107)	D152I	(132)	D364I	(157)	D654I
(008)	D051N	(033)	D243N	(058)	D464N	(083)	D754N	(108)	D155I	(133)	D365I	(158)	D662I
(009)	D054N	(034)	D244N	(059)	D465N	(084)	D645N	(109)	D156I	(134)	D371I	(159)	D664I
(010)	D065N	(035)	D245N	(060)	D466N	(085)	D023I	(110)	D162I	(135)	D411I	(160)	D703I
(011)	D071N	(036)	D251N	(061)	D503N	(086)	D025I	(111)	D165I	(136)	D412I	(161)	D712I
(012)	D072N	(037)	D261N	(062)	D506N	(087)	D026I	(112)	D172I	(137)	D413I	(162)	D723I
(013)	D073N	(038)	D263N	(063)	D516N	(088)	D031I	(113)	D174I	(138)	D423I	(163)	D731I
(014)	D074N	(039)	D265N	(064)	D532N	(089)	D032I	(114)	D205I	(139)	D431I	(164)	D732I
(015)	D114N	(040)	D271N	(065)	D546N	(090)	D043I	(115)	D223I	(140)	D432I	(165)	D734I
(016)	D115N	(041)	D306N	(066)	D565N	(091)	D047I	(116)	D226I	(141)	D445I	(166)	D743I
(017)	D116N	(042)	D311N	(067)	D606N	(092)	D051I	(117)	D243I	(142)	D464I	(167)	D754I
(018)	D125N	(043)	D315N	(068)	D612N	(093)	D054I	(118)	D244I	(143)	D465I	(168)	D645I
(019)	D131N	(044)	D331N	(069)	D624N	(094)	D065I	(119)	D245I	(144)	D466I	(169)	CUSTOM
(020)	D132N	(045)	D343N	(070)	D627N	(095)	D071I	(120)	D251I	(145)	D503I	(170)	CUSTOM
(021)	D134N	(046)	D346N	(071)	D631N	(096)	D072I	(121)	D261I	(146)	D506I	(171)	CUSTOM
(022)	D143N	(047)	D351N	(072)	D632N	(097)	D073I	(122)	D263I	(147)	D516I	(172)	CUSTOM
(023)	D152N	(048)	D364N	(073)	D654N	(098)	D074I	(123)	D265I	(148)	D532I	(173)	CUSTOM
(024)	D155N	(049)	D365N	(074)	D662N	(099)	D114I	(124)	D271I	(149)	D546I	(174)	CUSTOM
(025)	D156N	(050)	D371N	(075)	D664N	(100)	D115I	(125)	D306I	(150)	D565I		

RAN (0 is OFF)

No.	RAN	No.	RAN	No.	RAN	No.	RAN	No.	RAN	No.	RAN	No.	RAN	No.	RAN	No.	RAN
(01)	01	(08)	08	(15)	15	(22)	22	(29)	29	(36)	36	(43)	43	(50)	50	(57)	57
(02)	02	(09)	09	(16)	16	(23)	23	(30)	30	(37)	37	(44)	44	(51)	51	(58)	58
(03)	03	(10)	10	(17)	17	(24)	24	(31)	31	(38)	38	(45)	45	(52)	52	(59)	59
(04)	04	(11)	11	(18)	18	(25)	25	(32)	32	(39)	39	(46)	46	(53)	53	(60)	60
(05)	05	(12)	12	(19)	19	(26)	26	(33)	33	(40)	40	(47)	47	(54)	54	(61)	61
(06)	06	(13)	13	(20)	20	(27)	27	(34)	34	(41)	41	(48)	48	(55)	55	(62)	62
(07)	07	(14)	14	(21)	21	(28)	28	(35)	35	(42)	42	(49)	49	(56)	56	(63)	63

***NXDN ID** (Blank or 1 to 65519)

NXDN ID (Own unit ID) allows you to configure an identification code consisting of a number from 1 to 65,519 for each transceiver. It can be used to identify the transceiver in an NXDN System (Conventional).

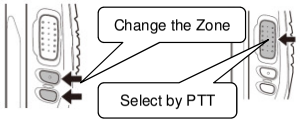
▼ CHANNEL CONFIRMATION MODE

To confirm your channel settings:

[1] With the transceiver power OFF, press and hold the **PTT** switch while turning the transceiver power ON.
- Continue to hold the PTT switch until the LED lights **orange** and the transceiver announces "**Confirm**".

[2] Release the **PTT** switch.
- Transceiver announces "**Zone 1 Analog** (or **Digital**)".

[3] Pressing the Side 1 key or Side 2 key will toggle between "**Zone 1**" and "**Zone 2**". Select a zone by pressing the **PTT** switch.



[4] Rotate the Channel selector to your desired channel.
- Transceiver announces the channel table number, tone number, scrambler and VOX settings of the selected channel.

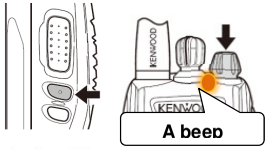
[5] Turn the transceiver power OFF and then ON again to return to normal operation.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

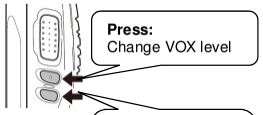
▼ VOX GAIN LEVEL SETUP MODE

To change the VOX Gain level:

[1] With the transceiver power OFF, press and hold the **Side 1** key while turning the transceiver power ON.
- Continue to hold the **Side 1** key until the LED lights **orange** and the transceiver beeps.

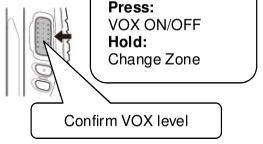


[2] Release the **Side 1** key.
- Transceiver announces the current VOX Gain Level (OFF, 1~10).
  - **OFF**: a double beep
  - **1**: the least sensitive
  - **10**: the most sensitive



[3]
Press the **Side 1** key: Increment VOX gain level by 1.
(this will adjust the VOX gain level of the radio)

Press the **Side 2** key: Turn VOX ON (a single beep)/OFF (a double beep).
(this will change the ON/OFF setting for the current channel of the current zone)
- To change channel: Rotate the Channel selector
- To change zone: Hold the Side 2 key



Press the **PTT** switch: Confirm the VOX Gain Level.

[4] Turn the transceiver power OFF and then ON again to return to normal operation.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

▼ KEY ASSIGNMENT MODE

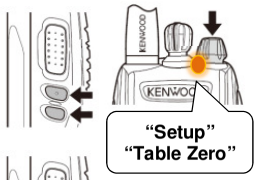
This transceiver allows you to reprogram the Side 1 and 2 keys with any of the functions listed in the table below. Each key can be configured to have two functions by a **Press** and a **Hold**. (some features cannot be assigned as a Press or a Hold function.

Table Number	Function Name	Descriptions	Side 1 Key		Side 2 Key	
			Press	Hold	Press	Hold
(00)	**None**	No Function	O	O	O	O
(01)	**Calling Alert**	Transmits a Calling Alert Tone upon a press of the Calling Alert key. This function cannot be assigned as a Hold function. If "Calling Alert" is selected from the Press dropdown list, None will automatically be configured in the Hold dropdown list, and this configuration cannot be changed.	O	-	O	-
(02)	**CW Message**	Sends the configured CW Message. This function can be configured if a message is configured for CW Message in the CW ID window.	O	O	O	O
(03)	**Key Lock**	Toggles the Key Lock between enabled and disabled. While Key Lock is enabled, key functions will be disabled. Turning the transceiver OFF and ON again will disable the Key Lock, and key functions can be used. Following are keys that are enabled even if the Key Lock is enabled: • PTT switch • Key Lock • Key Lock with Status Memory • Super Lock • Squelch Off • Squelch Off Momentary • Monitor • Monitor Momentary • Selector	O	O	O	O
(04)	**Key Lock with Status Memory**	The Same function as the key lock, however, turning the transceiver OFF and ON again will NOT disable the Key Lock, and keys remain locked.	O	O	O	O
(05)	**Monitor**	Toggles the Monitor between enabled and disabled. While Monitor is disabled, the transceiver allows a carrier to open the squelch regardless of configuration for signaling.	O	O	O	O
(06)	**Monitor Momentary**	While this key is pressed and held, the transceiver is disabled from monitoring the configured signaling and the squelch is opened upon detection of a carrier. This function cannot be assigned as a Hold function. If "Monitor Momentary" is selected from the Press dropdown list, None will automatically be configured in the Hold dropdown list, and this configuration cannot be changed.	O	-	O	-
(07)	**Scan**	Switches the Scan On or Off.	O	O	O	O
(08)	**Scan Temporary Delete**	Temporarily deletes a channel added to the scanning sequence from the sequence. If a channel for which Scan Add is enabled is selected and if a Scan Temporary Delete key is pressed while scan pauses, the channel will be deleted from the scanning sequence. Status of channel deleted from the scanning sequence by this function cannot be retained in the transceiver. Reactivating the scan by pressing the Scan key returns the transceiver to the original state.	O	O	O	O

(09)	**Scrambler/Encryption**	Enables or disables the Scrambler/Encryption.	O	O	O	O
(10)	**Squelch Off**	Toggles the Squelch Off between enabled and disabled.	O	O	O	O
(11)	**Squelch Off Momentary**	While this key is pressed and held, the squelch is open and the transceiver unmutes the speaker. This function cannot be assigned as a Hold function. If "Squelch Off Momentary" is selected from the Press dropdown list, "None" will automatically be configured in the Hold dropdown list, and this configuration cannot be changed.	O	--	O	--
(12)	**Super Lock**	Pressing and holding this key for 4 sec activates the Super Lock function. Super Lock is the function to prevent accidental operation of the transceiver. Even if the transceiver is turned OFF and ON again, the Super Lock status will be retained. To deactivate Super Lock, turn OFF the transceiver, and press and hold the Side 2 key while turning ON the transceiver. Once an LED lights orange, release the Side 2 key within 2 sec. This function cannot be assigned as a Press function. If "Super Lock" is selected from the Hold dropdown list, None will automatically be configured in the Press dropdown list, and 4.0 s will automatically be configured in the Hold Delay exit box, and these configurations cannot be changed. Following keys can still be used while Super Lock mode is On. • PTT switch • Squelch Off • Squelch Off Momentary • Monitor • Monitor Momentary	--	O	--	O
(13)	**Low Transmit Power**	Toggles the Transmit Power of the transceiver between High and Low.	O	O	O	O
(14)	**RX/TX Frequency Scan**	Switches the RX/TX Frequency Scan On or Off for a channel with Repeater Mode enabled and RX/TX Frequency Scan enabled.	O	O	O	O
(15)	**Zone Down**	Decreases the Zone number in steps of 1.	O	O	O	O
(16)	**Zone Up**	Increases the Zone number in steps of 1.	O	O	O	O

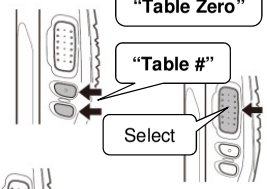
To change the functions of the **Side 1** and **Side 2** keys:

[1] With the transceiver power OFF, press and hold the **Side 1** and **Side 2** keys while turning the transceiver power ON.
• Continue to hold the **Side 1** and **Side 2** keys until the LED lights **orange** and the transceiver announces **"Setup"**.

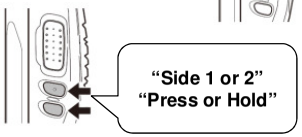


[2] Release the keys, and the transceiver will announce **"Table Zero"**.

[3] Press the Side 1 or Side 2 to increment / decrement the table number and press the **PTT** Switch to select the function that you want to assign to a key (either the **Side 1** or the **Side 2**, a **press** or a **hold**).



[4]
- **Press** the **Side 1** key to assign the function selected in the above **[3]** to the Side 1 key press.
- **Hold** the **Side 1** key to assign the function to the Side 1 key hold.
- **Press** the **Side 2** key to assign the function to the Side 2 key press.
- **Hold** the **Side 2** key to assign the function to the Side 2 key hold.



[5] Beeps will sound at the completion of [4] key assignment.
You will need to repeat **[3]** and **[4]** to assign more functions to press/hold key.

[6] Turn the transceiver power OFF and then ON again to activate the new settings.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

▼ ALL RESET MODE

At some point in time, you may desire to reset the transceiver settings to their default values. This function will reset all channels to their default analog frequencies and QT/DQT, the VOX function to its default status, and all keys to their default functions.

To reset the transceiver:

[1] With the transceiver power OFF, press and hold the **PTT** switch, the **Side 1** key, and the **Side 2** key while turning the transceiver power ON.
• Continue to hold the keys for 2 seconds, until the LED lights **orange**.

[2] Release the keys.
• The keys must be released **within 1 second** after the LED lights orange, otherwise All Reset Mode will cancel.
• The transceiver announces **"Confirm"** and returns to normal operation in the default settings.