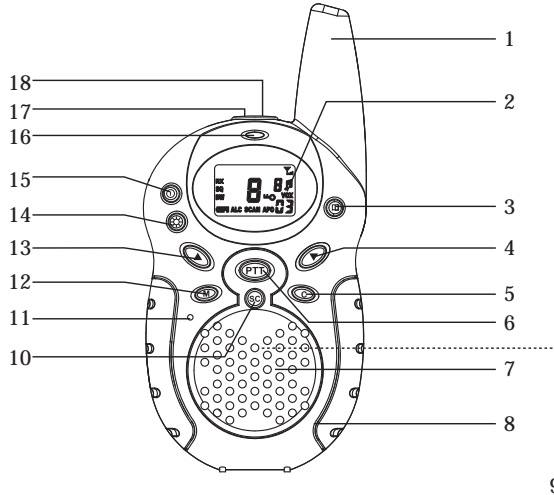


# Digitalk

## COMMUNICATOR MODEL SP103 OWNER'S MANUAL AND OPERATING INSTRUCTIONS



### Communicator Controls

1. Antenna
2. LCD Screen: Displays current channel selection and other radio status symbols.
3. Menu button: Allows you to change channels.
4. Down button (VOLUME/CHANNEL): Press to adjust volume level and change channels.
5. Call button: Press to transmit CALL TONES.
6. PUSH TO TALK PTT button: Press to transmit.
7. Speaker
8. Battery Compartment (LOCATED ON THE REAR): Houses 3 x 1.5V "AAA" alkaline batteries or 3.6V "AAA" Ni-MH rechargeable battery pack (not included).
9. Battery Compartment Cover Latch (LOCATED ON THE REAR): Secures Battery Compartment cover.
10. Scan button: Used to activate/deactivate CHANNEL SCAN.
11. Mic: Microphone.
12. Monitor button: Press to tune in and hold onto weak signals.
13. Up button (VOLUME/CHANNEL): Press to adjust volume level and change channels.
14. Enter/Back Light button: Used to turn LCD Screen LAMP ON/OFF. Buttons are locked when pressed and held.
15. Power On/Off button: Press and hold the button to turn your unit ON/OFF.
16. TX (Transmission)/RX (Receiving) LED indicator: Illuminates red when transmitting and green when receiving.
17. External Sp./Mic. Jack.
18. Belt Clip (LOCATED ON THE REAR)

### Getting Started

Carefully remove your communicator from its Packing. If there is any visible damage, do not attempt to operate this communicator. Return it to the place of purchase.

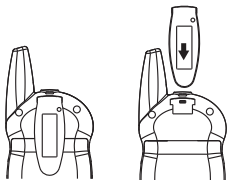


Figure 1.

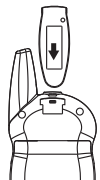


Figure 2.

#### Removing the Belt Clip:

1. Pull the BELT CLIP LATCH away from the unit.
2. While pulling the BELT CLIP LATCH, push up on the BELT CLIP to remove it from the unit. See Figure 1.

#### Installing the Belt Clip:

1. Slide the BELT CLIP into the BELT CLIP SLOT. See Figure 2.
2. A "click" indicates the BELT CLIP is locked into position.

### Battery Installation:

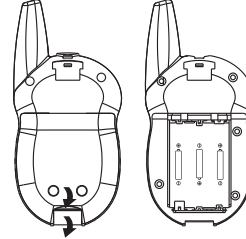


Figure 3.

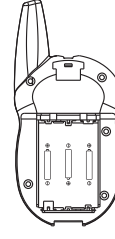
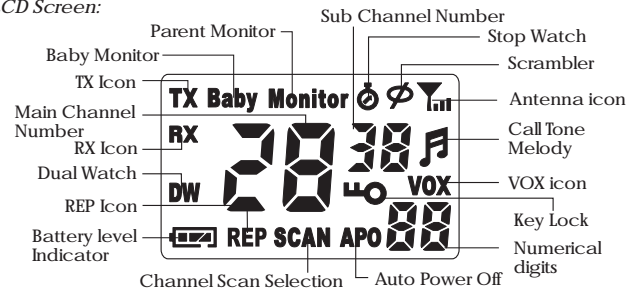


Figure 4.

1. Release the BATTERY COMPARTMENT COVER LATCH located on the rear side of the unit (see Figure 3) and remove the BATTERY COMPARTMENT COVER from the BATTERY COMPARTMENT (See Figure 4).
2. Install 3x1.5V AAA alkaline batteries or 3.6V "AAA" Ni-MH rechargeable battery pack (not included) as shown.
3. Reinstall the BATTERY COMPARTMENT COVER and lock the BATTERY COMPARTMENT COVER LATCH into position.

The COMMUNICATOR has a built in POWER SAVER feature for maximum battery life. But when the COMMUNICATOR is not being used, conserve battery power by pressing the button to OFF. Remove the batteries if the unit will not be used for a long period of time.

### LCD Screen:



<b>TX</b>	TX icon, light on in Transmission mode
	Antenna icon, light on in Receiving mode
<b>RX</b>	Rx icon, Light on in Receiving mode
<b>DW</b>	Dual Watch icon, Displayed during Dual Watch mode.
	Battery level indicators. Displays current Battery level.
<b>Baby</b>	Baby icon, light on in Babysitter unit selection menu and Standby mode when the System is set to become a Babysitter unit.
<b>Monitor</b>	Monitor icon, light on in Parent-monitor unit selection menu and Standby mode when the System is set to become a Parent-monitor unit.
<b>28</b>	Main Channels, Channel number changes from 1 to 40 as selected by user.
<b>SCAN</b>	SCAN icon, light on in Channel scanning mode.
	Stop watch icon, light on in stop watch mode.
<b>38</b>	CTCSS code, Sub Channel Number changes from 1 to 38 selected by user.
	Music icon, Light on in Call Tone Melody selection menu.
	Key lock icon, light on when buttons are locked.
<b>APO</b>	Auto-Power-Off icon, light on in APO selection menu and Standby mode when APO timer is enabled.
<b>VOX</b>	VOX icon, light on in VOX selection menu and Standby mode when VOX function is enabled.
	Numerical digits
	Scrambler icon, light on in Scrambler selection menu and Standby mode when the Scrambler function is enabled.
<b>REP</b>	REP icon, displays Repeater unit.

NOTE: SQ icon only briefly display on LCD screen once turn ON the unit in SELF-TEST mode.

**Turning the Unit ON:**

Press and hold the **ON** button. The unit will "beep" with dual tone and the LCD SCREEN will briefly display a SELF-TEST Screen.

**Turning the Unit OFF:**

Press and hold the **OFF** button. The unit will "beep" with a signal tone and the LCD Screen will turn blank.

**Setting Auto Power Off Timer**

1. Press **MEMU** button 9 times to enter Auto Power Off timer selecting page.
2. Press **s/t** button to set the desired Timer (0, 1, 2, 3, 6 hours). Press **PTT** or **ENTER** button to confirm.
3. The PMR will automatically power off when the timer is time out.

**Adjusting Speaker Volume:**

1. Press the **Up s** button to increase the Speaker Volume.
2. Press the **Down t** button to decrease the Speaker Volume.
3. The Speaker Volume level is indicated by the numbers (1 to 8 level), displayed in the lower right corner of the LCD Screen.

NOTE: Volume **Up s** and **Down t** buttons are disabled during **BUTTON LOCK** mode

**Receiving & Transmitting Radio Signal****Receiving a Signal:**

The unit is continuously in the RECEIVE mode when the unit is ON and not Transmitting. When you receive a signal on the current channel, the LED illuminates GREEN and the RX icon and the Antenna icon are displayed.

- NOTE:
1. The System is continuously in the receiving mode for 6 seconds after Power On and if no any key pressing.
  2. After 6 seconds for the last key pressing, the System enters to the power saving mode.
  3. When a radio signal matches with the existing channel and sub-code setting, the speaker will be turned on.
  4. If a radio signal matches with the existing channel only but the sub-code is wrong, the speaker will be muted.
  5. In order for other people to receive your transmission, they must also be on the same channel you are currently using. Refer to the "Channel Selection" section for more information.

**Transmitting a Signal:**

1. Press and hold the **PTT** button to TRANSMIT. The TX LED Indicator will light up in red and the TX icon is displayed. Hold the unit in a vertical position with the MICROPHONE 2 to 3 inches from the mouth. While holding the **PTT** button, speak into the unit using a normal tone of voice.
2. Release the **PTT** button when you have finished transmitting.

NOTE: Check the channel activity by pressing and holding the **MONITOR M** button. You'll hear static if the channel is unoccupied. Don't TRANSMIT if someone is talking on the channel.

**Channel Selection**

40 basic channels and 38 sub channels are available.

**Changing Basic Channels**

1. Press the **MENU** button once to enter BASIC CHANNEL SELECTION mode. The current channel number flashes on the LCD Screen.
2. While the channel number is flashing:
  - Press the **Up s** button to move to a higher channel.
  - Press the **Down t** button to move to a lower channel.
  - The channel changes from 1 to 40, or from 40 to 1.
3. Press the **ENTER** button or **PTT** button to confirm the selected channel and return to the NORMAL mode.

**Changing CTCSS Code - Subchannels**

The COMMUNICATOR has 38 available CTCSS subchannels. The sub-codes (CTCSS) help minimize interference by providing you with a choice of code combinations.

To set the CTCSS code:

1. Press the **MENU** button twice until the CTCSS digits flash.
2. While the CTCSS code digits are flashing:
  - Press the **Up s** button to move to a higher subchannel.
  - Press the **Down t** button to move to a lower subchannel.
  - The subchannel changes from 00 to 38, or from 38 to 00.
3. Press the **ENTER** button or **PTT** button to confirm your selection and return to the NORMAL mode.

NOTE: 1. To communicate with other PMR units, both units must be switched to the same channel and CTCSS subchannel.

2. Channel change operations are disabled during **BUTTON LOCK** mode.

3. Refer to the "Channel Table" section of this Owner's Manual for detailed frequency listings.

**Selecting Scrambler mode**

1. Press menu **MEMU** 3 times to enter to Scrambler selecting page.
  2. While Scrambler icon is displayed, and the "OF" icon or digit is flashing, press **s/t** button to select the desired scrambler mode (off, 1, 2, 3, 4)
  3. Press **ENTER** or **PTT** button to confirm.
  4. Both of the Transmission and Receiving units must be set into the same Scrambler mode or disable Scrambler function.
- NOTE: Scrambler feature adds an extra layer of privacy but does not guarantee full secrecy.

**Sending Call Tones**

You can use CALL TONES to alert the other when you are attempting to contact them. You can also use CALL TONES to signal the beginning or the end of a transmission.

1. Press the **CALL C** button, the red TX LED indicator will light up and the CALL TONE continues for 2 seconds.
2. Release the **CALL C** button, your CALL TONES will transmit to nearby receivers set to the same channel.

**Selecting Call Tone melodies**

1. Press the **MENU** button 4 times to enter Call tone melodies selecting page.
2. Press **s/t** button. The Call Tone melody number will be changed ascending or descending in one step (1-10). 10 songs can be selected.
3. Press **ENTER** or **PTT** button to confirm your selection.

**Monitoring Radio Signal:**

You can use the MONITOR feature to check for weak signals in the current channel for 15 seconds.

1. Press the **MONITOR M** button once to activate this function.
2. Rx icon will display on the LCD Screen while this function is activated.
3. Press again the **MONITOR M** button to deactivate the function.

**ENTER / LCD Back-light / Button Lock:**

1. Press and immediately release the **ENTER** button to light up the LCD Screen. The BACKLIGHT will automatically shut off after 4 seconds if no other buttons have been pressed.
2. Press and hold the **ENTER** button until the **BUTTON LOCK** icon is displayed on the LCD Screen.

NOTE: Volume and Channel Change Operations are disabled during **BUTTON LOCK** mode. Press and hold the **ENTER** button again to deactivate **BUTTON LOCK** mode.

**Channel Scan:**

CHANNEL SCAN performs searches for active signals in an endless loop from basic channel 1 to 40.

1. Press **SCAN SC** button to activate CHANNEL SCAN. The channel number on the LCD Screen changes rapidly until an active signal is detected. During CHANNEL SCAN mode.
  - Press **ENTER** button to confirm the selected channel.
  - Press the **CALL C** button to change to CALL function and to send a CALL TONE on that active channel.
  - Press the **SCAN SC** button again to deactivate CHANNEL SCAN mode.
2. When an active signal (one of 40 channels) is detected. CHANNEL SCAN pauses, keeping the active signal broadcasted.
3. Press the **PTT** button to communicate through the active signal channel and CHANNEL SCAN is deactivated.
4. When an active signal (one of 40 channels) is detected, but another channel is desired, press the **Up s** or **Down t** button to bypass the current channel and continue to search for another active channel.

**Dual Watch:**

You can use Dual Watch to monitor 2 channels.



To enter Dual Watch mode:

1. Press **MENU** button 7 times.
2. Press **Up s** and **Down t** buttons to select desired channel.
3. Once Dual Watch is on, automatically scan the channel that between 2 prefixed channel and the carrier stop on either activated channel to receive. Dual Watch restarts when the carrier disappears.
4. Press **MONITOR M** button to monitor weak signal.
5. Press **ENTER**, **PTT** or **CALL C** button to end the Dual Watch mode.

**Stop-Watch:**

1. Press the **MENU** button 10 times to enter Stop-watch page.
2. Press the **Up s** button once, the Stop-watch will start to count.
3. Press the **Down t** button once to hold the Stop-watch. Press **Down t** button again to reset the counter.

**Troubleshooting**

SYMPTOM	SOLUTION
No power.	<ul style="list-style-type: none"> <li>= Check batteries. Ensure that the batteries are installed properly.</li> <li>= The batteries may be weak.</li> <li>= Replace old batteries with three (3) new "AAA" alkaline batteries or 3.6V "AAA" Ni-MH rechargeable battery pack .</li> </ul>
Reception is weak.	<ul style="list-style-type: none"> <li>= Press the Up s button to increase VOLUME.</li> <li>= The receiving signal may be weak and/or out of range.</li> <li>= If this happens, press the MONITOR M button.</li> </ul>
Cannot change channels.	<ul style="list-style-type: none"> <li>= To change channels, press the MENU  button until the channel number flashes on the LCD Screen.</li> <li>= Press the Up s or Down t buttons to change channels.</li> <li>= Batteries may be weak.</li> <li>= BUTTON LOCK  must be deactivated.</li> </ul>
Range is limited.	<ul style="list-style-type: none"> <li>= BATTERIES may be weak.</li> <li>= Replace with new batteries if the BATTERY LEVEL indicator is low.</li> <li>= The maximum range will vary depending on terrain and environment.</li> <li>= Open fields provide the maximum range, while steel/concrete structures, heavy foliage and use in buildings and in vehicles may limit the range significantly.</li> <li>= Wearing the radio close to the body, such as in a pocket or on a belt, will decrease range; change the location of the radio.</li> </ul>
Sound distortion problems.	<ul style="list-style-type: none"> <li>= If you are transmitting, speak in a normal tone of voice, 2 to 3 inches away from the MICROPHONE.</li> <li>= If you are receiving, lower the volume to a comfortable level.</li> <li>= Radios too close. Radios must be at least 5 feet apart; increase your distance.</li> <li>= Radios too far apart. Obstacles interfere with transmission. Talk range is up to 5 Km in clear unobstructed conditions.</li> </ul>

**WARNING: Using batteries**

1. The PMR units operate with 3 1.5V AAA/LR03 regular Alkaline or Ni-MH (nickel metal hydride) batteries.
2. Batteries and rechargeable battery packs should not be thrown with domestic rubbish. You may hand them in at your nearest collection point.
3. Do not leave batteries installed over a long period of time as leakage may occur and this can destroy the radio.

**Specifications:**

Channels Available	40 Channels
CTCSS Sub-channel	38 for each Channel
Output Power (TX)	0.5W
Battery Life	30 Hours (typical)
Range	About 5 Km

CHANNEL TABLE		CHANNEL TABLE	
CHANNEL NUMBER	FREQUENCY (MHz)	CHANNEL NUMBER	FREQUENCY (MHz)
* 1	476.425	21	476.925
* 2	476.450	22	476.950
* 3	476.475	23	476.975
* 4	476.500	24	477.000
* 5	# 476.525	25	477.025
* 6	476.550	26	477.050
* 7	476.575	27	477.075
* 8	476.600	28	477.100
9	476.625	29	477.125
10	476.650	30	477.150
11	476.675	31	477.175
12	476.700	32	477.200
13	476.725	33	477.225
14	476.750	34	477.250
15	476.775	35	477.275
16	476.800	36	477.300
17	476.825	37	477.325
18	476.850	38	477.350
19	476.875	39	477.375
20	476.900	40	477.400

# Emergency calling for both simplex and duplex operation. Please do not use this channel in non-emergency cases.

\* These channels may also be used as repeater channels using 750kHz offset. Channels 1 to 8 inclusive are used for mobile reception and channels 31 to 38 for mobile transmission.




NOTE: The maximum transmission range will vary depending on terrain and environment.

CTCSS ( Continuous Tone Coded Squelch System) Frequency Table.




Sub Channel	Frequency (Hz)	Sub Channel	Frequency (Hz)	Sub Channel	Frequency (Hz)
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2	0	No Tone

NOTE: The maximum transmission range will vary depending on terrain and environment.

*BABY-SITTER and PARENT-MONITOR Function**Setting BABY Unit On/Off*

1. Press the MENU  button 5 times to enter Baby Unit selection page.
2. Press *s* / *t* button to toggle the Baby unit ON or OFF. (If the System has been set to become a Monitor Unit, Baby unit cannot be enabled).
3. Press ENTER  or PTT button to confirm and the BUTTON LOCK is on during Baby-Sitter mode.
4. When the System is set as a Baby unit, VOX function would be also enabled. It allows transmission without pressing the PTT button. But receiver function would be disabled.
5. Press & Hold the Enter  button again to deactivate the Baby Sitter function.



*Setting Monitor Unit On/Off*

1. Press the MENU  button 6 times to enter Monitor Unit selecting page.
2. Press *s* / *t* button to toggle the Monitor unit ON or OFF. (If the System has been set to become a Baby Unit, Monitor unit cannot be enabled). Press ENTER  or PTT button to confirm.
3. When the System is set as a Monitor unit, transmitter function would be disabled.
4. Press the MENU  button 6 times again to turn OFF the MONITOR function.


*Internal VOX Control Function*

On VOX mode, automatically transmitting and receiving signals without pressing any button.

To turn on the VOX function:


1. Press MENU  button 8 times to enter the VOX mode;
2. While the VOX icon (OFF 1-4) is flashing;
  - = Press Up *s* button to select higher VOX sensitivity (OFF 1-4);
  - = Press Down *t* buttons to select lower VOX sensitivity (OFF 1-4);
  - = The most sensitivity level is 4.
3. Press ENTER  or PTT button to confirm the selected mode.

*To turn off the VOX function:*

1. While the VOX icon (OFF 1-4) is flashing, press Up *s* or Down *t* button and to select the "OF" mode.
2. Press ENTER  button to confirm the VOX off mode.

*To activate the VOX sensitivity:*



1. While the VOX mode is on, plug the connector of the headset (not included) into SP/MIC jack of the communicator and then speak through the microphone of the headset to activate the transmitting mode.
2. Transmitting mode will turn on automatically and on standby mode.
3. The TX LED indicator illuminates red when transmitting.

- NOTE: 1. The VOX sensitivity is automatically activated once plug the connector of the Headset (not included) into SP/MIC jack of the communicator. You don't have to push the PTT button of the communicator while transmitting.
2. While VOX mode is on. Pressing ENTER  button can suspend VOX transmission for 4 seconds.

*Battery Level Indicator:*

1. The BATTERY LEVEL is indicated by the number of squares present inside the BATTERY icon on the LCD Screen.
2. When the BATTERY LEVEL is low, a BEEP tone will continue in every 15 seconds to alert the batteries are in low voltage and need to be replaced.

*Repeater Function*

Press  button one time to enter REPEATER mode, press  button one more time to release REPEATER function. During REPEATER on mode, display will show REP icon.

*To Charge The COMMUNICATOR*

The PMR units must be used with original Charger Pod and AC -DC Adaptor (optional).

\* AC -DC Adaptor: input 240 VAC 50Hz - Output 6V DC 200mA.

1. Turn the unit OFF (Do not turn ON the unit during Battery Charge Mode).
2. Install 3.6V "AAA" Ni-MH Rechargeable Battery Pack into the battery compartment of unit.
3. Connect the lead of the AC-DC adapter to the socket at the back of the charger pod (make sure the lead has been fully inserted into the jack with some force). Connect the AC-DC adapter to the mains power supply.
4. Place the unit into the Charger Base.
5. The LED light on the Charger Base will turn RED once electricity get connected.
6. Unplug the Adaptor. Turn the unit ON. The Battery Level Indicator on the LCD Screen will display the new Battery Level.

- NOTE: 1. LED Indicator on the charger base will NOT turn OFF automatically, except take out the unit from the charger base and disconnect the electricity.
2. It takes approximately 6 hours to fully charge the batteries if they are at their lowest level or takes around 14 hours to fully charge the new batteries.

WARNING: DO NOT attempt to charge any type of regular Alkaline batteries in this PMR. Only use the original AC-DC Adaptor with the supplied battery pack (optional) or AAA Ni-MH rechargeable batteries.

