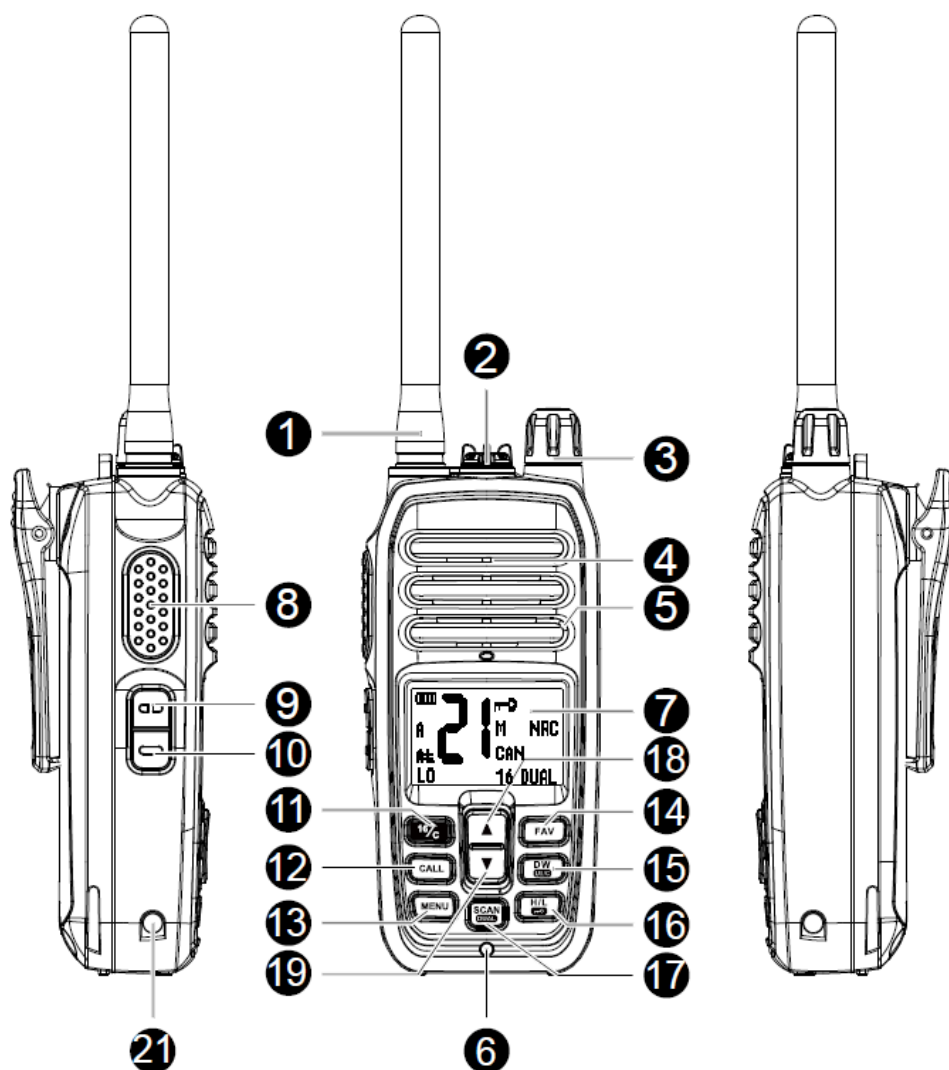


Marine radio

NF-893VHF Manual

Key Feature:

- Floats
- Submersible IP67
- Water Activated Light



Appearance drawing

1: Antenna

● External professional 50Ω antenna

2: External earphone jack

● For connecting optional headphone and data cables.

● When not in use, it needs to be tightened clockwise to waterproof.

3: Volume power switch

● Adjust volume and switch the transceiver

4: Speaker

5: Microphone

● When talking, speak to the microphone hole at an appropriate distance

6: Falling water detection

● When falling into the water, when the detection button and the charging contact are in the water at the same time, the back of the machine will emit a red light to indicate.

7: Display screen

● Indicates various functional states of the transceiver

8: PTT KEY

● Receiving and transmitting, press PTT to transmit, release PTT to receive.

9: NRC noise reduction function key

● Press again to turn off the noise reduction function, press it once to turn on the noise reduction function,

● Press the KEY1 and CH+ buttons at the same time for 2 seconds for the horn drain function. The horn emits a large low-frequency sound and stops after 10 seconds.

10: Monitor function key

● Press it once to turn on the speaker sound and the icon is displayed on the screen. Press again to turn off the icon. Turn off the monitoring function.

11: 16/C KEY

● 16 channels are the default channels with the base station, used for emergency channels, It will monitor 16 channels at the same time in dual-watch

● short press to return to the 16th channel

● long press for 1 second to enter the set common transceiver communication channel.

● When the frequently-used radio channel flashes by long pressing, press the up and down keys to select the corresponding channel, and then press the 16/C key to select the channel as the frequently-used transceiver channel.

12: CALL KEY

● After pressing CALL once, a series of warning signals will be sent. After 30 seconds, press CALL again to send another series of warnings. It cannot be sent continuously

● Note: If the NRC function is turned on, the alarm sound cannot be received, but it does not affect the sounding of the alarm sound

13: MENU is the menu function key

● After pressing to enter the menu option, press the up and down keys to select. After selecting, long press MENU to save the modification.

14: FAV KEY

● When there is a favourite channel, short press FAV will appear as the favourite channel, and M will be displayed next to the favourite channel. At this time, short press the FAV key continuously to switch the favourite channels

- when there is no favourite channel, short press the FAV key is invalid, long press the FAV key for 1 second to add and clear the favourite single channel.

- When the scanning function is turned on, only the favorite channels and the current weather channel will be scanned

15: DWKEY

- switch between the intercom channel and the weather channel.

- Short press to enter the weather channel, and then press the up and down keys to select the weather channel. Then short press the DW key to exit.

- Long press for 1 second to switch channels in different regions. There are three different channels for international (display INT), Canada (display CNA), and the United States (display USA). The frequency table is shown in the figure.

- The weather channel can be dual-watch with the emergency channel.

16: H/LKEY

- Short press the H/L key to switch between high and low power, and the screen displays HI and LO.

- Long press for 2 seconds to lock the keyboard, at this time, only the PTT key can be used, and then press and hold the key to unlock.

17: SCANKEY

- short press to scan, only the favourite transceiver channel and current weather channel scan during scanning, short press SCAN key to exit the scan.

- Long press the SCAN button for 1 second to perform dual-watch for the current intercom A channel and emergency 16 channels. Short press the SCAN key to exit.

Definition of dual-watch:

When dual-watch, A will flash when the A channel signal is received. When 16 channels are received, the 16 channels at the bottom of the screen will flash, indicating whether the received signal is from A channel or 16 channel.

- The dual-watch uses the last received channel as the main transmitting transceiver frequency point when transmitting. If channel A receives the signal last, press the PTT button to transmit at frequency A, and channel A will be displayed on the screen. And the reception only works on the A channel. At this time, channel 16 cannot receive signals. Only when the A channel stops working for 5 seconds, it will re-enter the dual-watch.

- If it is 16 channels that the signal is received last, press the PTT button to transmit on 16 channels, and the screen displays 16 channels, and the reception only works on 16 channels. At this time, the A channel cannot receive the signal. Only when the 16-channel transceiver work is stopped for 5 seconds, the dual-watch will be re-entered.

- Press and hold the SCAN button for 1 second, DUAL flashes. At this time, the dual-watch is on the common channel and the 16 channel. When the 16 channel is received, there will be two beeps.

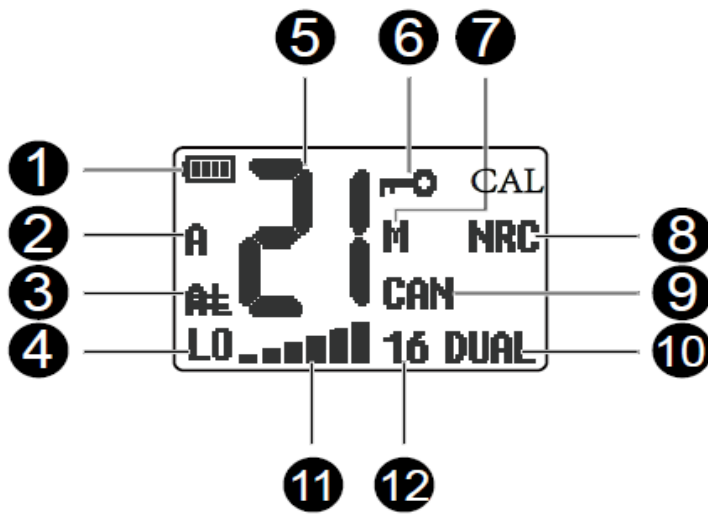
In the normal channel, press and hold the SCAN button for 1 second, DUAL flashes. At this time, the dual-watch is on the common channel and the 16 channel. When the 16 channel is received, there will be two beeps. Short press the SCAN key to exit the dual-watch.

18: CH+

- CH+ Channel and Function up option switch



19: .CH-

●CH- Channel and Function down option switch



Screen display reference

ICON	SHOWDESCRIPTION
	<ul style="list-style-type: none"> ◎battery power ◎Battery bar capacity and charging icon alternate while charging ◎Full display after fully charged ◎When the battery is low, the battery display box flashes and a beep alarm sounds
A	<ul style="list-style-type: none"> ◎When A is displayed, it is sending and receiving the same frequency channel ◎When B is displayed, it is an inter-frequency channel for sending and receiving ◎No display means only receiving and not transmitting channels ◎Please refer to the frequency table for specific frequencies
	<ul style="list-style-type: none"> ◎When the noise function is turned on, the alarm sound cannot be received, but it does not affect the transmission of the alarm sound
LO	<ul style="list-style-type: none"> ◎high power displayHI ◎low power displayLO ◎transmittingdisplayTX ◎Displayed when a signal is receivedRX
21	<ul style="list-style-type: none"> ◎Display work channel
	<ul style="list-style-type: none"> ◎Lock the keyboard function to open the display ◎When the keyboard is locked, only the PTT key can be used
M	<ul style="list-style-type: none"> ◎displayed when there are favorite channels
NRC	<ul style="list-style-type: none"> ◎Displayed when noise reduction is on
CAN	<ul style="list-style-type: none"> ◎display CAN as Canadian frequency group ◎display USA as the US frequency group ◎display INT is the international frequency group

DUAL	◎display Dual-watch
16	◎display Dual-watch ◎6 channels are the default channels with the base station, used for emergency channels
	◎Full grid display during high power transmission◎3-bar display represents low-power transmission◎Received signal strength display
WX 	◎Displayed when a weather signal is received◎A total of 10 weather channels
CAL	◎Displayed when entering a favorite call channel

Charging operation

Put the transceiver into the standard charger for charging. During the charging process, the battery bar will indicate the power level with the battery voltage until the battery is fully charged.

MENU Function setting

▲Short press the MENU key to enter the function setting item

▲SQUELCH

Press the MENU button until SQUELCH is displayed, and presses the up and down buttons to select the SQ level. The squelch level is divided into 0---9 levels. The higher the squelch level, the smaller the chance of interference, but it will have a certain impact on the communication distance. The 0-level horn is normally open. The default is level 3, long press the MENU key to confirm

▲SCAN

Press the MENU key until SCAN is displayed.Press the up and down keys to select TS and CS.

CS: When the channel detects a signal,the scan pauses until the signal disappears,and then resumes.

TS: When a signal is detected on the channel,the scan pauses for 5 seconds and then resumes.If the signal disappears within 5 seconds,the scan will resume immediately.Long press the MENU key to confirm.

▲PRIWATCH

press the MEAU key until PRIWATCH is displayed.Press the up and down keys to select OFF:scan for cyclic scanning 1-2-3-4·····,ON:scan will first scan 16 channels 1-16-2-16-3-16-4-16·····Long press the MENU key to confirm.

▲CALLTON

Press the MENU key to display CALLTONE.There are 5 types of calling tones to choose from.Long press the MENU key to confirm.

▲BUSYLOCK

Press the MENU key until BUSYLOCK is displayed.Choose whether to lock busy or not.When you choose ON,the screen will display BLC.At this time,it is invalid to press the transmit key when the signal is received.Long press the MENU key to confirm.

▲ROGER

Press the MENU key until ROGER is displayed. When you select ON, the other party has received the end prompt tone after the transmission is completed. Long press the MENU button to confirm.

Note: When the noise reduction function is turned on, the received end tone becomes smaller!

▲BACKLIGHT

Press the MENU key until BACKLIGHT is displayed. There are seven screen background colors to choose or turn off the background light. Long press the MENU key to confirm.

▲BRIGHTNESS

Press the MENU key until BRIGHTNESS is displayed. Press the up and down keys to enter the brightness setting interface, there are 3 brightness options to choose from, press the CANCEL key to cancel the reset and exit.

▲BEEP

Press the MENU key until BEEP is displayed. Choose whether there is a key tone. Long press the MENU key to confirm.

▲BATTERY SAVE

Press the MENU key until BATTERY SAVE is displayed. ON is the power-saving state, the transceiver enters the power-saving state without any action within 10 seconds, and the default is ON. Long press the MENU key to confirm.

▲WEATHER

Press the MENU key until WEATHER ALERT is displayed. Choose whether to receive an alarm sound on the weather channel. Long press the MENU key to confirm.

▲: Press the MENU key until VERSION is displayed. version number

▲: Press the MENU key until FACTORY is displayed. Press the up and down keys to enter the reset interface, then press SURE to reset the setting function, and press the CANCEL key to cancel the reset and exit.

BATTERY CHARGING OPERATION

Put the transceiver into the standard charger for charging, and the transceiver will beep at one time. During the charging process, the battery bar will indicate the power level according to the battery voltage until the battery is fully charged.

The weather channel frequencies are as follows:

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

Frequency points in different regions

Channel Number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	01	01	156.050	160.650
1001	1001 ^{*4}		156.050	156.050
	02	02	156.100	160.700
	03	03	156.150	160.750
	04		156.200	160.800
		1004	156.200	156.200
	05		156.250	160.850
1005	1005 ^{*4}	1005	156.250	156.250
06	06	06	156.300	156.300
	07		156.350	160.950
1007	1007 ^{*4}	1007	156.350	156.350
08	08	08	156.400	156.400
09	09	09	156.450	156.450
10	10	10	156.500	156.500
11	11	11	156.550	156.550
12	12	12	156.600	156.600
13 ^{*1}	13	13 ^{*1}	156.650	156.650
14	14	14	156.700	156.700
15 ^{*3}	15 ^{*2}	15 ^{*1}	156.750	156.750
16	16	16	156.800	156.800
17 ^{*1}	17	17 ^{*1}	156.850	156.850
	18		156.900	161.500
1018	1018 ^{*4}	1018	156.900	156.900
	19		156.950	161.550
1019	1019	1019	156.950	156.950
	2019		RX only	161.550
20	20	20 ^{*1}	157.000	161.600
1020	1020		157.000	157.000
	2020		RX only	161.600
	21		157.050	161.650
1021	1021 ^{*4}	1021	157.050	157.050
		2021	RX only	161.650
	22		157.100	161.700
1022	1022 ^{*4}	1022	157.100	157.100
	23	23	157.150	161.750
1023	1023 ^{*4}		157.150	157.150
		2023	RX only	161.750
24	24 ^{*5}	24	157.200	161.800
25	25 ^{*5}	25	157.250	161.850
		2025	RX only	161.850
26	26 ^{*5}	26	157.300	161.900
27	27	27	157.350	161.950
	1027 ^{*4}		157.350	157.350
28	28	28	157.400	162.000
	1028 ^{*4}		157.400	157.400
		2028	RX only	162.000
	60	60	156.025	160.625

Channel Number			Frequency (MHz)	
USA	INT	CAN	Transmit	Receive
	61		156.075	160.675
		1061	156.075	156.075
	62		156.125	160.725
		1062	156.125	156.125
	63		156.175	160.775
1063	1063 ^{*4}	1063	156.175	156.175
	64	64	156.225	160.825
		1064	156.225	156.225
	65		156.275	160.875
1065	1065 ^{*4}	1065 ^{*1}	156.275	156.275
	66		156.325	160.925
1066	1066 ^{*4}	1066 ^{*1}	156.325	156.325
67 ^{*1}	67	67	156.375	156.375
68	68	68	156.425	156.425
69	69	69	156.475	156.475
71	71	71	156.575	156.575
72	72	72	156.625	156.625
73	73	73	156.675	156.675
74	74	74	156.725	156.725
	75 ^{*2}	75 ^{*1}	156.775	156.775
	76 ^{*2}	76 ^{*1}	156.825	156.825
77 ^{*1}	77	77 ^{*1}	156.875	156.875
	78		156.925	161.525
1078	1078	1078	156.925	156.925
	2078		RX only	161.525
	79		156.975	161.575
1079	1079	1079	156.975	156.975
	2079		RX only	161.575
	80		157.025	161.625
1080	1080 ^{*4}	1080	157.025	157.025
	81		157.075	161.675
1081	1081 ^{*4}	1081	157.075	157.075
	82		157.125	161.725
1082	1082 ^{*4}	1082	157.125	157.125
	83		157.175	161.775
1083	1083 ^{*4}	1083	157.175	157.175
		2083	RX only	161.775
84	84 ^{*5}	84	157.225	161.825
85	85 ^{*5}	85	157.275	161.875
86	86 ^{*5}	86	157.325	161.925
87	87	87	157.375	157.375
88	88	88	157.425	157.425

*1 Low power only

*2 Low power only except the AUS version

*3 RX only

*4 For only the USA and EXP versions

*5 For only the AUS versions

Main performance parameters

Basic parameters	Model:NF-893V
Frequency range	Emission: 156.050-157.425MHz
	Receive: 156.050-163.275MHz
Channel spacing	25kHz
frequency	Synthesizer (PLL)

synthesis	
Modulation type	FM(F3E)
Size	146 (H) X 62(W)X 41(D)mm
Weight (include battery)	About 273g
Transmitter	
Output power	6w/1w
Frequency stability	/-2.5ppm (-10°C~+50°C)
Emission spurious	≤-36dBm
frequency offset	≤+/-5kHz
audio distortion	≤5%
Receiver	
Sensitivity	12dB signal-to-noise ratio≤0.25uV
Adjacent channel selectivity	≥60 dB
Intermodulation anti-interference	≥65 dB
Distortion	≤5%
Audio output power	16R 1W (<10% distortion)

FCC Statement:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

SAR tests are conducted using standard operating positions accepted by FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each product are performed in positions and locations as required by the FCC.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with and accessory designated for this product or when used with and accessory that contains no metal.

To maintain compliance with FCC RF exposure guidelines hold the transmitter and antenna at least 25mm from your face and speak in a normal voice, with the antenna pointed up and away from the face.

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.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.