

**Submersible**

1m depth for 2 hrs



# Mission Possible

*a professional Digital & Analogue hand held secure radio for tactical environment*



## Main Features

- Full military range from 30 to 88 MHz
- User selectable Digital or Analogue mode.
- 10 programmable channels
- Built in data modem for data transmit
- Selectable output power: High or Low
- Repeater mode able to lengthen communication distance
- Built-in voice 256-bit AES scrambler
- Built-in CTCSS and DCS
- Wide range of accessories
- Tough and durable construction

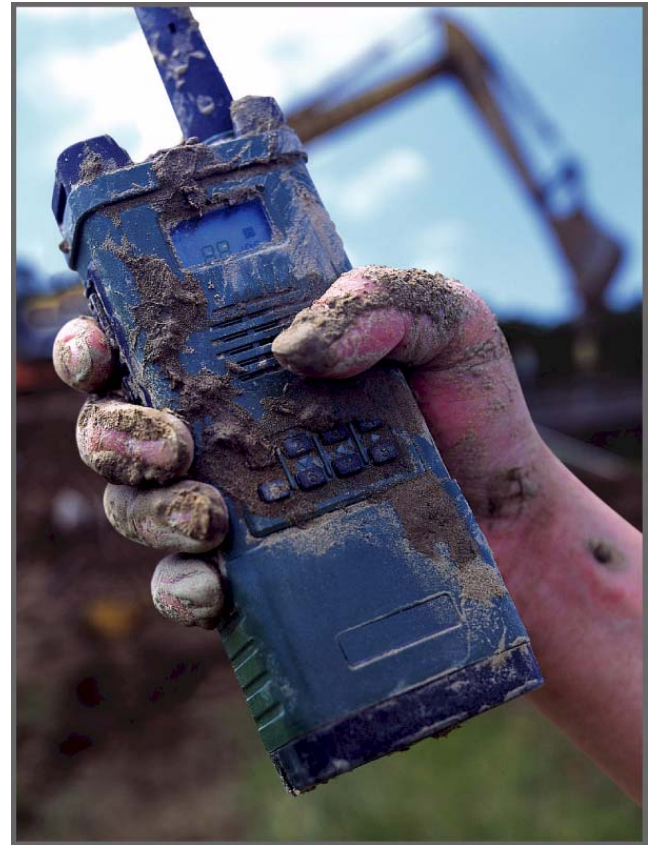
Nabishi

### Nabishi NHT-78A Military band handheld VHF Transceiver

NHT-78A is a VHF Analogue and Digital Mode handheld radio developed for the modern tactical environments. NHT-78A is fully compatible with the old generation radios such as AN/PRC-77 or AN/VRC-12 etc.

The radio provides reliable voice and data communication over the entire military band from 30~88MHz with 25 KHz step. It is equipped with many powerful functions such as transmission of both data and voice ; provides secure communication with scrambler and selectable tone signaling; contains versatile scanning options, dynamic antenna matching circuit and batteries pack auto detection for convenient usage.

Except for the advanced functions, NHT-78A has passed tests according to MIL-STD-810 and MIL-STD-461C to assure its reliability and durability.



#### Full military band

NHT-78A offers handheld tactical communications capability in 30~88MHz. There are 2321 available channels with 25 KHz step as well as an optional channel step of 12.5 KHz with total 4642 available channels.

#### User selectable Digital or Analogue modes with voice Encryption

The radio has Digital or Analogue mode which can be selected by the user. In Digital mode the radio is also encrypted with a 256-bit AES Algorithm for high level speech security.

#### Programmable Channels

You can program up to 10 channels into memory with tone, output power and scrambler settings. Each memorized channel can be customized by all the selectable settings.

#### CTCSS and DCS tone signaling

Except for 150 Hz tone, the built-in 38 CTCSS (Continuous Tone Code Squelch System) and 83 DCS (Digital Code Squelch) capable of your communication group set up.

#### Whisper function

You can keep privacy by activate whisper function, it can transmit the quietest message.

#### Functional keypad

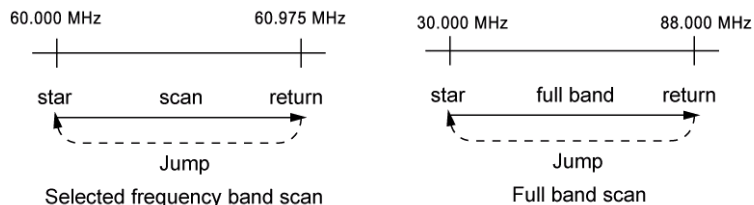
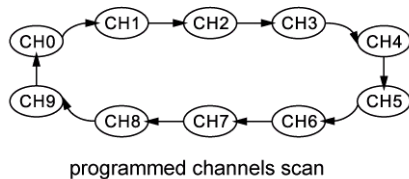
Convenient keys input to permit easy channel presetting and frequency selection.

#### PC Connection

Data can be transmitted through PC via RS232C serial connection. Data can be transmitted wirelessly from PC to PC with connection of NHT-78A.

## Versatile scanning functions

Supports various scanning such as full range scan, programmed channels and selected frequency range scan to provide efficient services.

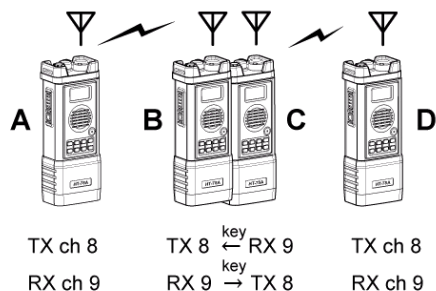


## Built-in dynamic antenna matching circuit

Enables operator to change various lengths of antenna without problems with tuning frequency.

## Repeater Mode

Repeater function can be achieved by connecting several NHT-78A radios together.



Install two NHT-78A (B+C) an interface cable between B and C is needed in the middle point of the distance of A & D to lengthen the communication range.

## PC programming

The radio parameter programming can be accomplished via optional PC program

## LCD backlight

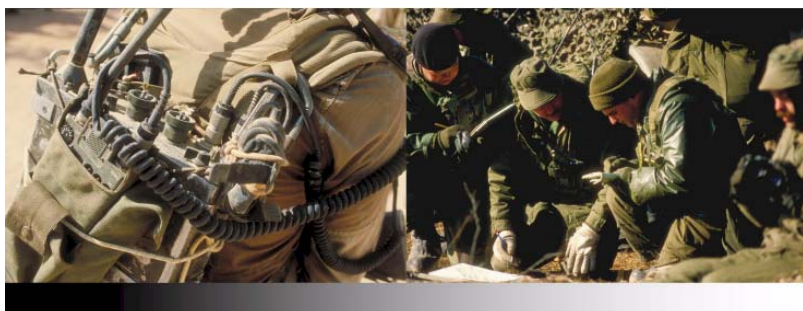
LCD backlight is useful during operating in dark areas.

## Rugged construction

NHT-78A already passed requirement of MIL-STD-810E. It is reliable and robust to be used in harsh field environments. The radios have passed high / low temperature, low pressure, immersion, humidity, salt fog, vibration and shock test.

## Other features

- LCD display • Key lock
- Volume control • Power saver mode



## Technical Specifications

Technical Specifications	
Frequency coverage	30.000-88.000MHz (Full range)
Channel spacing	25KHz / 12.5KHz (Option)
Number of channels	2321 74642 (12.5KHz)
Number of preset channels	10
Power supply requirements	7.4V DC (supplied battery pack)
Current drain (approx )	
Standby	Less than 60mA (Power save model) Less than 140mA (Normal mode)
RX (middle volume)	Less than 250mA
TX (More than 1 Watt)	Less than 800mA
Built-in tone signaling	38 CTCSS, 83 DCS or 150Hz tone
Build in modem	1200/2400bps MSK modem with FEC
Frequency error	±3ppm
PC Interface	RS232C/E
Antenna port	Built-in antenna matching network. An extra SOD output provided (For booster or testing use.)
Protection against	Over heat/current of PA

Mechanical and Environmental	
Dimensions (with BP-18L)	173 x 63 x 42.5 mm (H x W x D)
Weight (approx.)	480g (with BP-18L)
Usable temperature range	-30°C to +65°C
Environmental	per MIL-STD-810 High Temp, Low Temp, Low Pressure, Immersion, Humidity, Salt fog, Vibration & Drop
Immersible to EMI/EMC	1 meter depth of water for 2 hours Meets MIL-STD-461C

**Encryption Security**

The NHT-78A radio incorporates Nabishi's unique 256-bit AES (Advanced Encryption System) Digital scrambler. This is subject to a UK Export license for use and export to certain countries.

## Optional Accessories

### Battery External Speaker-Microphone

BP-5AA Battery case : AA (R6) x 5 alkaline cells SM-200WP  
 BP-1SL Li-ion battery pack : 7.4V/1850mAh/12Hours (1:1:8)  
 BP-21L Li-ion battery pack : 7.4W2150mAh/15Hours (1:1:8)

### Rapid Charger

AT-3090LW: for 30-88 MHz / 80 cm  
 BC-150 + BA-15 AC Adapter (Desktop charger)  
 Rapidly charges the BP-18L in 2 hours, Regularly charges in 5 hours.

BCBA-15 (Desktop charger):  
 Combine BC150 + BA15 without separable plug,

Rapidly charges the BP-18L in 2 hours, Regularly charges in 5 hours.

### External Speaker-Microphone

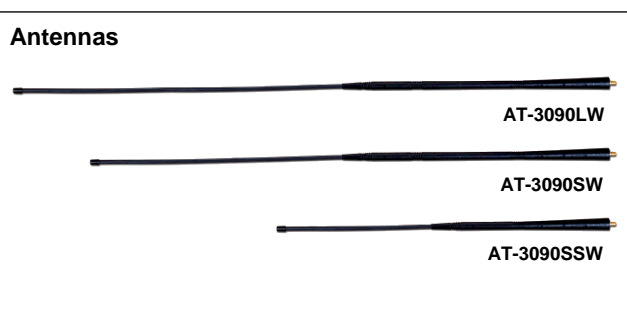
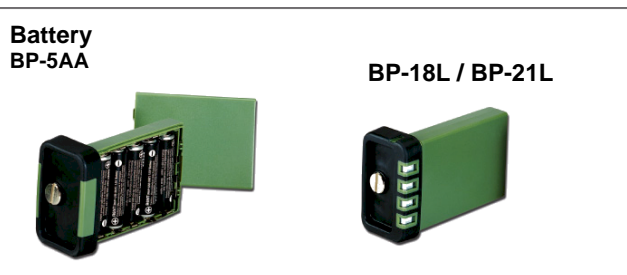
SM-200WP (Water proof type speaker microphone )

### Optional Antennas

AT-3090SW: for 30-88 MHz / 70 cm  
 AT-3090SSW: for 30-88 MHz / 45 cm

### Multi-Function Carrying Case

Helps protect the transceiver from scratches, grime and water etc.



All stated specifications are subject to change without prior notice.

Transmitter	
RF output power	0.5-1.5 Watt, with APC
Modulation system	Variable reactance frequency modulation
Max. permissible deviation	±5KHz / ±2.5KHz (12.5KHz)
Spurious emissions	63 dBc
Harmonic Radiations	Better than 40 dBc (2nd) Better than 55 dBc (4th and above)
Adjacent channel power	65dBc
Audio distortion	5% typical

Receiver	
Receive system	Double-conversion superheterodyne
Intermediated frequencies	1st 130.05MHz, 2nd 450KHz
Sensitivity	(12dB SINAD) 0.4uV (typical)
Squelch sensitivity	0.4uV (at threshold)
IF Rejection	Better than 65dB
Image Rejection	Better than 70dB
Adjacent channel selectivity	60dB (typical)
Intermodulation	60dB (typical)
Audio output power	250mW typical at 5% distortion with an 16D load

## The NHT-78A meets the following US Military specifications

Standard	MIL 810C		MIL 810D		MIL 810E	
	Method	Proc.	Method	Proc.	Method	Proc.
Low Pressure	500.1	I	500.2	I	500.3	I
High Temp.	501.1	I	501.2	I, II	501.3	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II
Humidity	507.1	I, II	507.2	II, III	507.3	II, III
Salt Fog	509.1	I	509.2	I	509.3	I
Vibration	514.2	VIII	514.3	I	514.4	I
Immersion	—	—	—	—	512.3	I
Shock	—	—	516.3	IV	516.4	IV

### Also meets RS03 of MIL-STD-461C

Measurements made in accordance with TIA/EIA-603.

All stated specifications are subject to change without notice or obligation.