

## Index

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Main indicators/controls .....	4
Accessory installation .....	7
Recharge of the battery pack .....	8
Care and maintenance .....	9
Base functions .....	9
HP108/408 modes .....	9
Functions of the menu key .....	9
Technical specifications .....	15



## HP108/408

### **Reliable, sturdy and light-weight!**

**Alan HP 108/408** represents the new generation of VHF/UHF transceivers, suitable for professional purposes and useful in any situation where reliable communications are needed.

**HP108/408** is supplied with many functions, such as 'Busy Channel Lock Out', 180 memory channels, tx power selectable to 5W (high); some of its features are programmable to customize the equipment according to your needs.

### Main features

- › Frequency band (according to the model):  
VHF 136/174MHz – UHF 400/470MHz and 465/520MHz (export version)
- › Operating mode: VHF-VHF or UHF-UHF depending on the version
- › Output power: 5W VHF/ UHF
- › 180 memory channels
- › 50 CTCSS tones and 107 DCS codes
- › Channel spacing: 12,5KHz
- › Frequency or channel displayed
- › VOX function
- › Scan function
- › Selectable tx power: high (5W)
- › Li-Ion battery pack 7,4V 1600mAh
- › Busy channel lock out (BCLO)
- › Tx power level indicator on the display
- › Scrambler 1/8 levels or voice compressor
- › TOT (Time out timer)
- › Selective call 5 tones and 5+5
- › Squelch
- › Battery save

### The package includes:

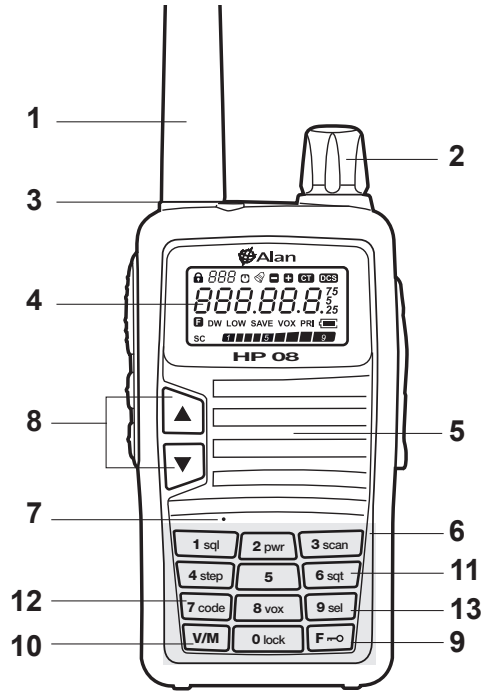
- › HP108/408 transceiver
- › antenna
- › Li-Ion battery pack
- › desktop charger
- › adaptor
- › 1 belt clip
- › user manual

If any of the above-described parts are missing, ask your retailer.

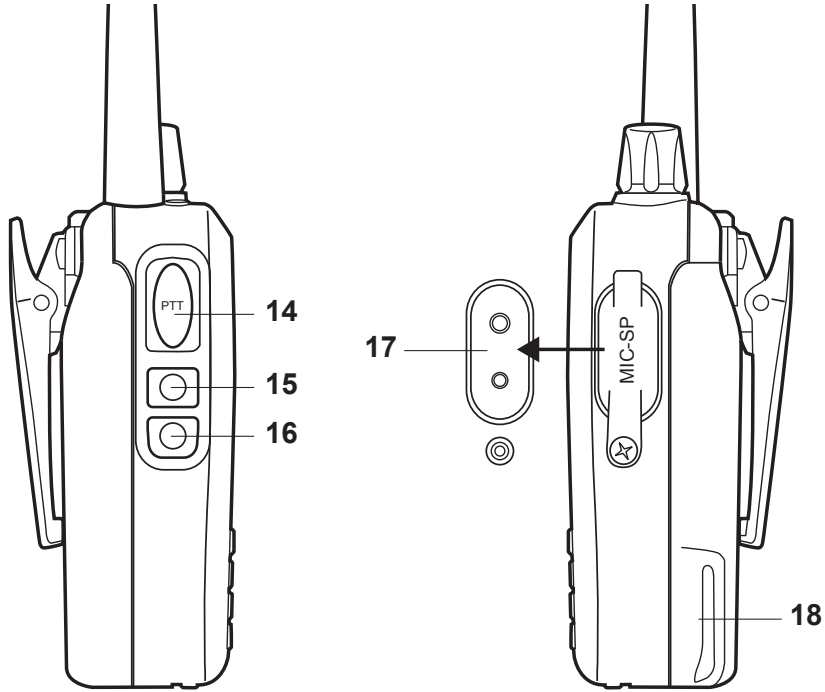
### Warning

- ! Before using the transceiver, enquire about the local rules concerning the use of VHF/UHF equipments.**
- ! Do not attempt to open the radio. You may damage it and therefore invalidate the warranty.**
- ! Do not handle the transceiver by its antenna!**
- ! Do not transmit without antenna.**
- ! Do not wet the radio or use it next to water sources; humidity may corrode the electronic circuits.**
- ! Turn off the radio while parked in a gasoline service station.**
- ! Do not expose the equipment to excessive vibrations or direct sunlight for a long time.**
- ! In case the radio diffuses smell or smoke, switch it off immediately and remove the battery.**
- ! Turn off the transceiver before entering an inflammable and explosive environment.**
- ! To avoid any possible damages to the equipment, use only original accessories.**

## MAIN INDICATORS / CONTROLS



1. **ANTENNA**
2. **ON/OFF/VOLUME KNOB**: to turn on/off the radio and adjust the volume.
3. **LED**: lights red during the transmission and green in reception.
4. **DISPLAY LCD**: shows the operating status of the radio.
5. **LOUDSPEAKER**
6. **ALPHANUMERICAL KEYPAD**
7. **MICROPHONE**
8. **▲/▼**: to select the frequency and the menu contents.
9. **F- $\rightarrow$**  button: to select the radio's functions
10. **V/M** button: to confirm the desired settings
11. **6 sqt** button: to enable the sub-audio tones
12. **7 code** button: to select the sub-audio tones
13. **F- $\rightarrow$  + 9 sel** buttons: to select the menu functions

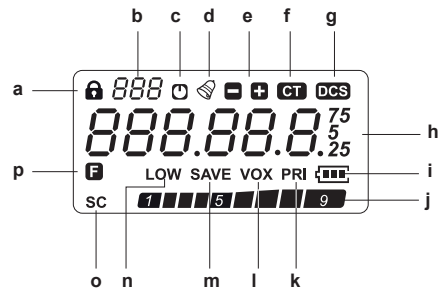


- 14. **PTT**: push it to transmit (led lights red) and release it to receive (green led).
- 15. **BACKLIGHT BUTTON**: push it to activate the display and keypad **Backlight**. If the selective call is enabled, push the button to send it; if a tone is enabled, push this button to send the tone.
- 16. **MONITOR BUTTON**: To enable / disable the squelch.
- 17. **MIC/SPK EXTERNAL JACK**: to connect a microphone, loudspeaker or programming cable.
- 18. **BATTERY PACK**

## LCD DISPLAY

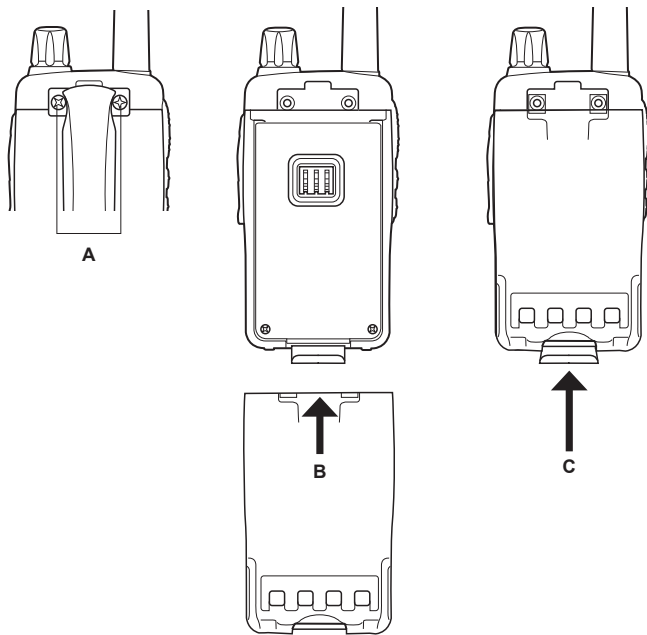
The LCD display continuously shows information on the operating status of the radio.

	ICON	FUNCTION	OPERATION
a		Keypad lock	Press <b>F</b> $\rightarrow$ <b>o</b> (hold it down for 2 seconds)
b	<i>888</i>	Stored channels	Push <b>V/M</b>
c		Automatic switch off	Press <b>F</b> $\rightarrow$ , <b>9 sel</b> and select <b>menu 01</b>
d		Keypad beep	Press <b>F</b> $\rightarrow$ , <b>9 sel</b> and select <b>menu 06</b>
e	+/-	Frequency offset (upwards +, downwards -).	It can be enabled/disabled only with the optional programming software.
f	<b>CT</b>	CTCSS	Push <b>F</b> $\rightarrow$ , <b>6 sqt</b>
g	<b>DCS</b>	DCS	Push <b>F</b> $\rightarrow$ , <b>6 sqt</b>
h	<i>888.88.8</i> <sup>75</sup> / <sub>5.25</sub>	Shows the operating frequency, channel and menu	
i		Battery level	
j		Shows the tx/rx signal strength.	
k	<b>PRI</b>	Channel included in the scan function	Press <b>F</b> $\rightarrow$ , <b>0 lock</b>
l	<b>VOX</b>	VOX activation	Push <b>F</b> $\rightarrow$ , <b>9 sel</b> and select <b>MENU 24</b>
m	<b>SAVE</b>	Battery save	Select <b>menu 4</b>
n	<b>LOW/MID/HIGH</b>	Middle/low power	Press <b>F</b> $\rightarrow$ , <b>2 pwr</b>
o	<b>SC</b>	Scrambler	Select <b>menu 2</b>
p	<b>F</b>	Function selection	Press <b>F</b> $\rightarrow$



## ACCESSORY INSTALLATION

### Installing/removing the battery pack



#### *Installing*

Unscrew the belt clip (A), match the two guides of the battery pack into the grooves of the radio (B) and hook the battery pack with the battery holder (C). Screw the belt clip.

To remove it, unscrew the belt clip, unhook the battery holder and remove the battery pack.

#### **Installing/removing the belt clip**

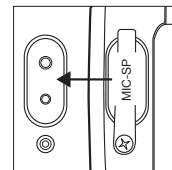
The belt clip can be fixed/removed with the supplied fixing screws (A).

#### **Installing/removing the antenna**

Screw the antenna clockwise into the antenna connector until it firmly locks. Screw it counter clockwise to remove it.

#### **Connecting the mike/speaker (optional)**

Remove the rubber cap of the mike jacks and connect the mike/speaker.




## RECHARGE OF THE BATTERY PACK

**HP108/408** is supplied with a Li-Ion battery pack, 7,4V 1600mAh. Before its first use, the battery pack is not completely charged. The battery provides maximum efficiency after 3-4 full charge/recharge cycles.

### Warnings on the use of battery packs

- › Use the original battery pack only. Other types of batteries may cause explosions or personal injuries.
- › Never dispose batteries into fire and never expose them to high temperature, they may explode causing fire or explosions. Strictly follow the disposal regulations of your country.
- › While charging is in progress, the ambient temperature should be between 0° and 40°.
- › The equipment is best charged with the radio off.
- › Replace the battery pack when the operating time decreases even though it is fully charged.
- › Partial recharges reduce the battery life.
- › Do not charge the radio/battery pack if they are wet!

### Recharge

When the display shows , the battery pack is discharged. Please recharge it. The charge indicator shows the charge status as follows:

LED	CHARGE STATUS
Red (fix)	Charging
Green (fix)	Completed

- › *The use of non-original battery packs may cause serious damages to the equipment, explosions or personal injuries.*

### Recharge of the battery pack:

1. Connect the jack of the wall adaptor into the desktop charger plug.
2. Connect the socket of the wall adaptor to a mains power socket.
3. Place the transceiver/ battery pack into the desktop charger slot.
4. The battery contacts must be properly connected to the charging terminals. The charger led lights red.
5. After 3 hours approx. the charge is completed; the charger led lights green. Remove the radio/battery pack.

### Attention

- › If the charger led blinks before placing the battery pack into the charger, switch it off: this means a malfunctioning of the charger itself.
- › Remove the radio/battery pack from the charger only when the recharge is completed!
- › If the led continues to blink even though the charge is completed, the battery pack is probably damaged.



## CARE AND MAINTENANCE

Clean the radio with a soft cloth. Do not use alcohol or abrasive substances!  
When you do not use the equipment, cover the MIC-SP connector.

## BASE FUNCTIONS

### Switching on/off

To turn on the radio, rotate the **ON/OFF/VOLUME** knob clockwise until you hear a beep. Rotate it counter-clockwise to switch it off.

### Volume adjustment

Turn the **ON/OFF/VOLUME** knob clockwise to increase the volume, counter-clockwise to reduce it.

### Squelch adjustment

The squelch is a feature able to reduce the background noise when no signals are received.

Squelch can be adjusted in 9 different levels.

Hold down **F** → and **1 sq1**: the current squelch level is displayed.

Select the desired level by means of the **▲/▼** buttons.

To confirm your selection, press any key except **BACKLIGHT** and **MONITOR**.

### Transmission

Press and hold **[PTT]** and speak in a normal voice. For maximum clarity, hold the radio 5cm from your mouth.

During the transmission, the led lights red.

To extend the battery life, you can select the low power. You can choose amongst 3 power levels: high, middle and low.

To receive, release the **PTT**.

## HP108/408 MODES

### 1) Memory channel mode (CH) - Channel name displayed

With **CH** mode, you can access the stored channels: select the stored channel by using **▲/▼**. This mode is possible if you have set at least one channel.

### 2) Menu Mode (MENU)

To select the menu of the radio, press **F** → (F blinking) and then **9 sel**. The menu settings can be changed by means of the **▲/▼** buttons.

## FUNCTIONS OF THE MENU KEY

Menu includes the radio's settings that can be modified upon your needs.

### General use of the menu

Press **F** → till **F** blinks on the display; push **9 sel** to enter the menu.

Select the desired function by pressing **▲/▼**.

Press **F** → to enter the desired setting; select the activation/deactivation with **▲/▼** and confirm your selection by pressing **F** →/**PTT/V/M**.

Push **V/M** to exit.

### Menu functions

MENU	Displayed function	Setting
1	APO(Automatic switch off)	OFF, 1-15 hours
2	APRO	OFF/COMP/SCRAMB
3	BANK(Channel group)	BANK, NO BANK
4	BATSAV (Battery save)	ON/OFF
5	BCL0(Busy channel lockout)	OFF/WAVE/QT-DCS
6	BEEP(keypad beep)	ON/OFF
7	SCR NO(scrambler)	1-8 groups (optional)
8	DC VLT(DC voltage)	Battery voltage
9	LAMP(BACKLIGHT)	OFF/CONT/KEY

10	LOCK (Keypad lock)	K+S /PTT/KEY/ALL
11	MSGSET (Message edit)	Programmable
12	NAME (Channel name displayed)	FREQ/ALPHA
13	NM SET (Channel name edit)	Programmable
15	OPNMSG (Welcome message displayed)	OFF/DC/MSG
16	PSWD (open password)	ON/OFF
17	PSWD W (password setting)	Programmable
18	ROGER (end transmission tone)	ON/OFF
19	SCN MD (scan mode)	TO/CO/SE
20	STE(side tone eliminate)	ON/OFF
21	TOT (time-out timer)	OFF/from 6 sec to 7 min
22	TXSTOP (transmission stop)	ON/OFF
23	VOX	ON/OFF
24	VOX D (VOX delay)	1S, 2S, 3S, 4S
25	VOX S (VOX sensitivity levels)	1-8
26	VXB (busy VOX)	ON/OFF

### Automatic switch off (APO)

With this function, the unit automatically turns off at a preset time (from 1 to 15 hours from the setting). One minute before the switching off, "APO" blinks on the display and a warning beep is heard.

To enable/disable the APO feature:

Access **menu 1** by pressing **F** and **9 sel**, choose the desired setting with the **▲/▼** and confirm by pressing again **9 sel**.

### Voice mode (APRO)

From menu 2 you can activate two different voice modes:

- › **COMP**: voice compression
- › **SCRAMB**: scrambler

(to activate one of these modes, follow the general procedure described in par. 'General use of the menu' at page 9).

### Channel groups

When this function is enabled, the stored channels belong to groups of channels.

#### **BANK**: channel group function activated.

180 channels will be divided into 12 channel groups

BANK1: ch1-16	BANK5: ch65-80	BANK9: ch129-144
BANK2: ch17-32	BANK6: ch81-96	BANK10: ch145-160
BANK3: ch33-48	BANK7: ch97-112	BANK11: ch161-176
BANK4: ch49-64	BANK8: ch113-128	BANK12: ch177-180

**NO BANK**: channel group function deactivated; the 180 channels are displayed in sequence, with no group of belonging.

### Battery Save (BATSAV)

The battery save feature allows to reduce the consumption in order to extend the battery life. It is interrupted when you press any button or open the squelch. To enable this feature, select the '**BATSAV**' (04) menu and follow the general procedure described in paragraph 'General use of the menu' at page 9.

When the battery save is active, '**SAVE**' appears on the display.

### Busy Channel Lockout (BCLO)

When the radio receives a signal, it stops transmitting to avoid interferences on the busy channel.

To enable/disable the BCLO, enter the **menu 05 (BCLO)** and follow the procedure described in paragraph 'General use of the menu' at page 9.

### Keypad tone (BEEP)

When you press any key, a beep is heard.

To activate/deactivate this tone, enter the **menu 06 (BEEP)** and follow the procedure of paragraph 'General use of the menu'.

### Scrambler setting (SCR NO)

The scrambler is designed to protect your communications: they can be heard only by the users that have set the same level as yours (8 levels available). You can activate this feature from **menu 2** and choose the option '**SCRAMB**'. (Follow the general procedure described in par. 'General use of the menu' at page 9).

The scrambler does not guarantee the total safety of your communications.

### Battery voltage (DC VLT)

To display the battery voltage, select the **menu 08** and push **F ↵**.

### Display and keypad backlight(LAMP)

To enable/disable the keypad/display **BACKLIGHT**, enter the **menu 09** and push **F ↵**. You can choose amongst 3 options:

- › **OFF**: No backlight
- › **KEY**: backlight activated(5 seconds for every operation).  
It will automatically interrupt if no operation is done.  
To interrupt the backlight, press **BACKLIGHT**.
- › **CONT**: Continuous backlight.

To illuminate the display and the keypad in stand-by mode, press **BACKLIGHT** and release it to stop it (stays active for 5 seconds).

### Keypad lock (LOCK)

To avoid accidentally changing the radio settings, you can activate the keypad lock.

To lock any key, press and hold **F ↵** for 2 seconds.

Press **F ↵**, **9 sel** to enter **menu 10 (LOCK)**. 4 options are available:

- › **K+S**: Lock of the keypad and **▲/▼** buttons

- › **PTT**: Lock of **PTT** button to avoid accidental transmissions
- › **KEY**: Keypad lock to avoid accidental pressures.
- › **ALL**: Lock of all the keys.  
To confirm and exit push **9 sel**.

### Editing a message when the radio is turned on (MSGSET)

To edit a message, there are 5 alphanumerical characters available.

Procedure:

1. Press **F ↵**, "F" blinks on the display. Press **9 sel** to enter the **menu MSG-SET (11)**.
2. Press **F ↵** to edit the message. The first character blinks; use the **▲/▼** buttons to select numbers/letters or blanks.
3. Press **9 sel** to move to the second character.
4. Repeat steps 2 and 3 and push **F ↵** to end.
5. To delete or write again one character press **7 code**.
6. To write again the whole message, push **V/M**.

### Editing the channel name (NM SET)

To edit the channel name, you have 5 alphanumerical characters at disposal.

Procedure:

Press **F ↵**, "F" blinks on the display; push **9 sel** to enter **menu 13**.

To edit the channel name press **F ↵**. The first character blinks; use **▲/▼** to select numbers/letters or blanks.

To edit the second character push **9 sel**

Repeat steps 2 and 3 and push **F ↵** to end.

To delete or write again one character press **7 code**.

To write again the whole message, push **V/M**.

### Frequency/channel name displayed (NAME)

When a channel is stored, its frequency does not appear on the display. To show it, enter **menu 12** and choose the desired mode by pushing **▲/▼**:

- › **ALPHA**: shows the channel.
- › **FREQ**: shows the frequency.

## Welcome message (OPNMSG)

With this function you can set what will be displayed when you turn on the radio.

Select **menu 15** and choose amongst these options:

- › **OFF**: when you switch on the radio, the frequency or channel is displayed.
- › **DC**: the battery voltage is displayed.
- › **MSG**: the message you set will be displayed.

## Password (PSWD)

To insert the password, enter **menu 17**. The characters to edit are 4 (you can change them by pushing **V/M**). Once defined the password, go to **menu 16** to enable/disable it.

## Roger beep (ROGER)

The roger beep is a short audio tone emitted by the radio when you release the **PTT** button at the end of the transmission.

To enable/disable it go to **menu 18** and follow the general procedure described in par. 'General use of the menu'.

## Scan type (SCN MD)

To select the scan types (TO/CO/SE), enter **menu 19**. (see paragraph 'SCAN').

## Side Tone Eliminate (STE)

This function allows to eliminate the background noise after receiving a signal. It's particularly useful when you use a headset connected to your radio.

**Note: The function must be activated on both radios.**

Enter the **menu 20** to activate/deactivate this function.

## Time-Out Timer (TOT)

Time-Out-Timer temporarily blocks the transmission if it is used over a maximum time previously programmed.

When the maximum time is reached, the radio beeps and is forced in recep-

tion mode.

To activate/deactivate the TOT, enter **menu 21** and use the **▲/▼** buttons for the selection (from 6 sec to 7 min).

**TXSTOP (menu 22)**: if enabled, it is not possible to transmit. .

## VOX (VOX)

The VOX function allows hands-free communications: just speak and the radio switches to transmission.

To activate/deactivate it, enter **menu 23**.

When this function is active, VOX appears on the display.

## VOX delay (VOX D)

This option keeps the radio in transmission mode after you stop talking; it's useful to avoid interrupting the transmission while you are still talking.

To adjust the delay, enter **menu 24** and select the desired level (1s, 2s, 3s, 4s) with **▲/▼** and confirm by pressing **9 sel**.

## VOX Sensitivity (VOX S)

You can choose 8 different sensitivity levels. Enter **menu 25**, select the desired level by using the **▲/▼** buttons and confirm by pressing **9 sel**.

## VOX Busy (VXB)

This function is useful to stop the transmission if the radio receives a signal. Vox Busy can be activated/deactivated from **menu 26**.

## Selective Call 5 tones 5+5

The selective call is a signaling system which uses audio tones in sequence (usually "5 tones" selective calls) to call a specific station or group(s). In this case you will only receive calls that have your selective call identification code (a number) or calls sent to the group you belong to.

A selective call is sent by pushing **MONITOR** and **BACKLIGHT**.

You can send a selective call also in 5+5 mode.

This function can be only set by the optional programming software (PRG08).

## CTCSS / DCS

The CTCSS/DCS tones are a sort of 'access codes' and enable the radio to communicate only with the other users set on the same frequency and on the same CTCSS/DCS tone. **HP108/408** has 50 CTCSS tones and 107 DCS codes available (I/N Inverted – Normal).

You can choose amongst 7 different settings:

1. **OFF**: No CTCSS/DCS tone in tx and rx.
2. **TONE**: CTCSS tone set on the tx frequency only.
3. **CTCSS**: CTCSS tone set on both tx and rx frequency.
4. **D CODE**: DCS code set on the tx frequency only.
5. **DCS**: DCS code set on both tx and rx frequency.
6. **T DCS**: CTCSS set on the tx frequency and DCS code set on the rx frequency.
7. **D TSQ**: Reception on the CTCSS tone and transmission on the DCS code.

**CT** or **DCS** icons on the display indicate the activation that you have set.

### Setting the CTCSS/DCS tones

Press **F**  $\rightarrow$  and **6 sqt**; select the desired tone by pushing  $\blacktriangle/\blacktriangledown$ .

To confirm push **F**  $\rightarrow$ .

Set the rx CTCSS/DCS tone by pressing **F**  $\rightarrow$  and **7 code**.

Select the CTCSS/DCS tone with  $\blacktriangle/\blacktriangledown$ .

Press **F**  $\rightarrow$  to set the tx/rx CTCSS/DCS tone; use the  $\blacktriangle/\blacktriangledown$  to select it.

Confirm with **F**  $\rightarrow$ .

### CTCSS tone frequency chart

67.0	103.5	159.8	199.5
69.3	107.2	162.2	203.5
71.9	110.9	165.5	206.5
74.4	114.8	167.9	210.7
77.0	118.8	171.3	218.1
79.7	123.0	173.8	225.7

82.5	127.3	177.3	229.1
85.4	131.8	179.9	233.6
88.5	136.5	183.5	241.8
91.5	141.3	186.2	250.3
94.8	146.2	189.9	254.1
97.4	151.4	192.8	
100.0	156.7	196.6	

### DCS code (I/N) frequency chart

017	073	165	263	365	466	654
023	074	172	265	371	503	662
025	114	174	266	411	506	664
026	115	205	271	412	516	703
031	116	212	274	413	523	712
032	122	223	306	423	526	723
036	125	225	311	431	532	731
043	131	226	315	432	546	732
047	132	243	325	445	565	734
050	134	244	331	446	606	743
051	143	245	332	452	612	754
053	145	246	343	454	624	
054	152	251	346	455	627	
065	155	252	351	462	631	
071	156	255	356	464	632	
072	162	261	364	465	645	

## SCAN

**HP108/408** can scan the previously set channels for activity.

There are three types of scanning:

- › **SE:**
  - › the radio stops on a busy channel and exits from the scanning mode.
- › **TO: Time-operated scan**
- › the scanning will stop when the radio detects a signal on a busy channel and will resume after 5 seconds even though the signal is still present.
- › **CO: Carrier-operated scan**
- › the scanning will stop on an active channel till the signal is detected. It will resume scanning after 2 seconds when the channel is no longer active.

**Note: Scanning is interrupted by pushing MONITOR and resumes working when you release the button.**

### Selecting the scanning type

Press **F**  $\rightarrow$ , **9 sel** and select menu **19 (SCN MD)**.

To enter the menu, press **F**  $\rightarrow$  and by means of the  $\blacktriangle/\blacktriangledown$  buttons, choose the type of scanning amongst SE, CO or TO.

Confirm your selection by pressing **F**  $\rightarrow$  or **PTT** or **9 sel**.

### Scanning the stored channels

To start scanning, press **F**  $\rightarrow$  and **3 scan**.

The scanning starts from the channel currently in use.

To invert the scanning direction, press  $\blacktriangle/\blacktriangledown$ .

To exit from this setting, push **F**  $\rightarrow$  or **PTT**.

**Note: The scan can be done between 2 channels at least.**

Before starting the scan feature, the squelch must be deactivated.

### Scanning exclusion

Some memory channels can be excluded from the scanning.

*Procedure:*

- › Select the channel to exclude.
- › Press **F**  $\rightarrow$  and **0 lock** to set this feature.

**Note: in this case, PRI disappears from the display.**

All the channels that do not show PRI on the display are excluded from the scanning.

## Keypad lock

To avoid accidentally changing the frequency or the radio settings, the keypad can be locked.

Press the **F**  $\rightarrow$  button for 2 seconds to activate/deactivate the keypad lock.

When this function is enabled, the display shows **🔒**.

## Editing from the keypad

Edit the channel number by pressing the keypad buttons (3 digits max, for example '003').

The radio will show the number of the channel.

## TECHNICAL SPECIFICATIONS

General			
Characteristics	Units	Value/Measurements	
Frequency	MHz	HP108: from 136 to 174; HP408L: from 400 to 470; HP408H (export version): from 465 to 520	
Number of Programmable Channels	-	180	
Channel Spacing	KHz	12.5	
Rated Power Supply	Vdc	7.4	
Battery Capacity	mAh	Li-Ion 1.600	
Duty Cycle	hours	5% on TX at the maximum power	
		5% on RX at 60 % of the maximum rated A.F. power	
		90% on RX with closed squelch in power save mode	
Antenna Impedance	Ohm	50	
Speaker Impedance	Ohm	4	
Frequency Stability	ppm	±2.5	
Operating Temperature Range	°C	From: -25 to +55	
Transmitter			
Output Power (±1 dB)	W	0.5 / 5 VHF –UHF	
Spurious Emissions	μW	from 9 KHz to 1 GHz	< 0,25
		from 1 to 4 GHz	< 1
Modulation System	-	F3E (FM)	
Modulation	KHz	± 2,5	
Audio Distortion	-	5 % or less	
Maximum Deviation	KHz	± 2.5	
Adjacent Channel Power Attenuation	DB	< -60 / -70	
Receiver			
Configuration		Double Conversion Superetherodyne	
Sensitivity (at 12 dB SINAD)	μV	< 0.35	

Squelch Sensitivity (SINAD)	DB	10
Selectivity (Adjacent Channel)	DB	At least -65 / -75
Spurious Response Rejection	dB	> 70
Intermodulation	dB	> 65
Hum & Noise Suppression	dB	< -45 / < -40
Audio Output (1 KHz at 5% T.H.D.)	mW	400
<b>Mechanical Specifications</b>		
Size (Battery Pack Included)	mm	97 x 53 x 33 (HxLxD)
Weight (Battery Pack Included)	g	256
Battery	-	Back slide battery
Accessories Connector / Programming	-	2.5 and 3.5 mm standard monophonic jacks
Moisture & Dust Resistance	-	According to the IP55 regulations

Specifications are subject to change without notice.

## Warranty

This product is covered by European warranty rulings and should be returned to the place where purchased for repair or replacement if not repairable. In the event it that it is returned to us by your supplier then we will either repair or replace within 15 working days from receipt.