DELTA
Two-Way Radio

AS-310

Analog Portable Two-Way Radio

IP67 Water Proof Submersible up to 1 metre
Dust Proof

Voice Guide, All Calls, Group Calls and Selective Calls
DTMF, ANI, CTCSS/DCS, VOX, Distant Alarm

Join the
Delta *Revolution*

DELTA

AS-310

MENU   ENT ⚠   VFO/MR

Index

Thanks for choosing Delta! The AS310 is a portable transceiver that has many uses in hospitality, recreation, and most workplace situations.

Delta AS310 is a 16 channel, programmable UHF transceiver.

Combining the latest technology in radio communication along with a sturdy mechanical frame, AS310 is the ideal and effective solution for the professionals who need to stay in touch with the team.

Programming software

Thanks to Delta Programming software, your dealer will set your private commercial channels or selected UHF CB frequencies at your request upon order. These can only be changed by a dealer using the programming software and cannot be changed by the end user.

What's in the box

- 1 AS310 transceiver
- 1 belt clip
- 1 wall adaptor
- 1 1600mAh Li-ion rechargeable battery pack
- 1 desktop charger

Coverage and Range

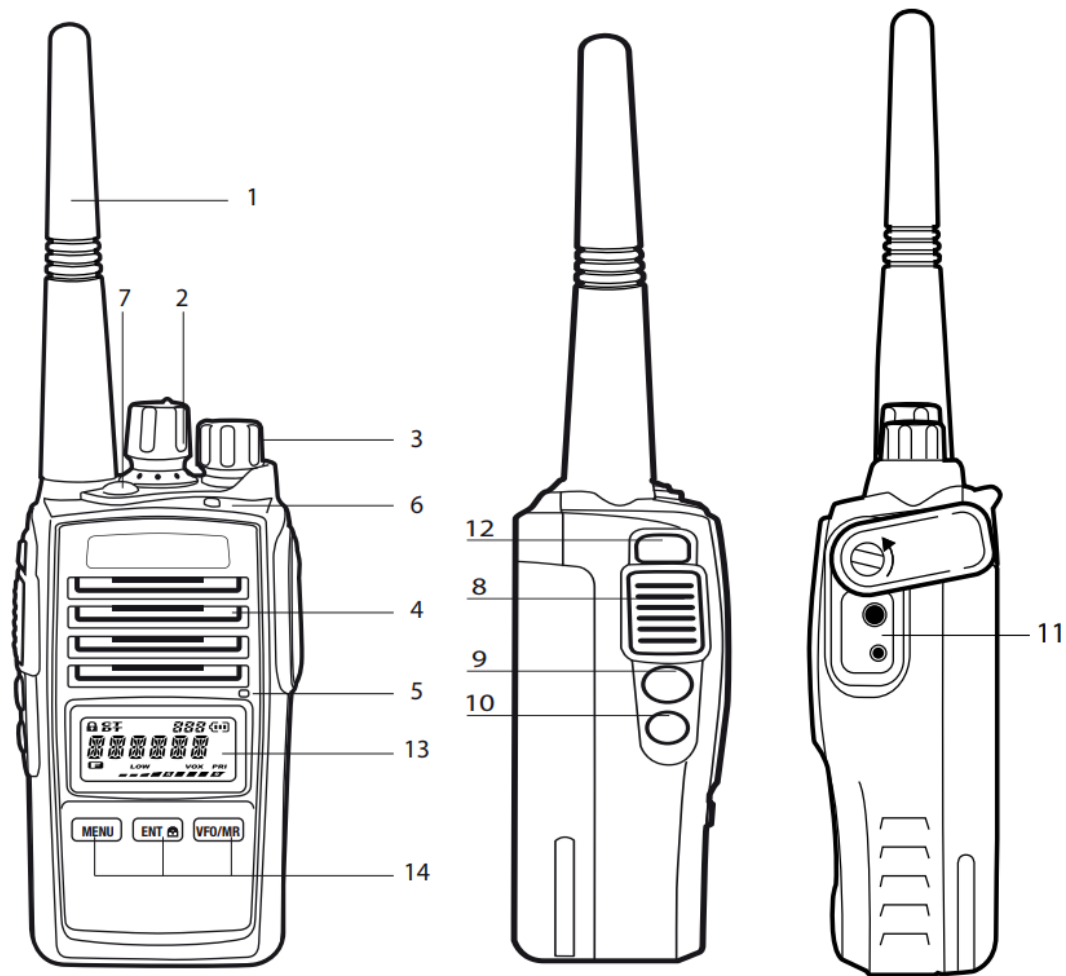The maximum range depends on terrain and is obtained during use in an open space with clear line of sight. The limitations to maximum range are environmental factors such as blockage caused by trees, buildings, or other obstructions. Inside a car or metallic constructions, the range can be reduced. Normally the coverage in the city, with buildings or other obstructions is about **3km.** In open space without obstructions, the coverage can be more than **15km**.
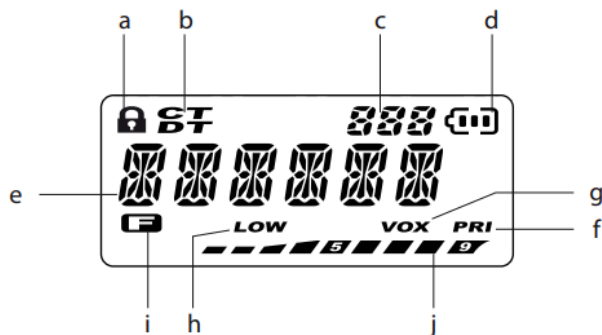
Main characteristics

- **IP67 certified:** the housing protects the device from dust and from water infiltration up to a depth of 1 metre for 30 minutes.
- Output power: ≤ 5 Watts
- Channel spacing: 12.5KHz
- Scan
- Vocal tuning
- Roger Beep
- Battery save
- Monitor
- Squelch
- Vox

Main controls and parts of the radio

1. **Antenna**
2. **Channel Selector:** rotate clockwise or counter-clockwise to select the desired channel
3. **Power/volume knob** turn clockwise to power on and increase the volume level. Turn counter-clockwise to decrease the volume level and power off.
4. **Speaker**
5. **Built-in microphone**
6. **LED indicator:** RED: TX; GREEN: RX.
7. **Emergency button** (it can be activated through the programming software)
8. **PTT:** push this button to transmit, release to receive.
9. **Function key 1:** Short press: Monitor function activation.
   Long Press: VOX function activation
10. **Function key 2:** Long press: SCAN function activation
11. **External Speaker/Mic Jack**- allows the connection with external devices such as headsets, microphones. Note: Dust cover must be securely fitted to maintain the radio's waterproof rating.
12. **Multi-function key 'FUN':** Allows Activation of secondary functions.
13. **LCD Display**
14. **Multi-function Keys MENU – ENT – VFO/MR**

LCD Display

a. **Keypad lock**
b. **Selected CTCSS tone or DCS code**
c. **Number of the menu/channel indicator**
d. **Battery status indicator**
e. **Channel in use**
f. **Priority scan mode**
g. **VOX function activated**
h. **Low power indicator**
i. **Function key activated**
j. **Indicator of RX and TX signal strength**

Operations

Power on/off and volume adjustment

Rotate the **Power/Volume knob** clockwise to turn the radio on. Rotate the control clockwise /counter-clockwise to adjust the volume level. To turn the radio off, rotate the control counter-clockwise until hearing a mechanical "click".

Transmission

To communicate, all radios in y our group must be set to the same channel. Briefly press the Function key 1 to enable the Monitor feature and make sure that the frequency is not busy, then press the PTT button. For maximum clarity, hold the device at a distance of about 4-10 cm. Release the PTT Key to Receive.

Only one user at a time can talk during radio communications. Therefore, it is important not to transmit when you are receiving a communication and use the transmission mode sparingly to allow other users to talk. Transmission consumes a significant amount of energy and should therefore be used sparingly to prolong the battery life.

If you are unable to contact a station that you have no problems in receiving, the station may be using CTCSS tones or DCS codes.

Monitor

The Monitor feature is for excluding (opening) the Squelch, to listen to signals that are too weak to keep the Squelch permanently opened.
Briefly press the **'Function key 1'** to enable this function.

Scan

This function is enabled by pushing **'Function key 2'** for 3 seconds; The **LED** will alternately blink green. Whenever a signal is detected, scanning will stop on a busy channel. If no functions are selected, scan will start after 5 seconds.
If you press the **PTT**, the radio will transmit on the latest busy channel. After 10 seconds of releasing the **PTT**, the AS310 will return to the default channel and scanning will be active again.

Squelch

The Squelch function suppresses noises on free channels and allows receiving of even weak signals.
AS310 has 10 different Squelch levels that can be set by programming software or the menu: 0 means that the Squelch is turned off. Level 1 to level 9 allows different levels of noise reduction. The higher the level, the louder the Squelch will be set.
By default, the Squelch is set on **Level 5**

To select the Squelch Level:

1. Press the Menu Button;
2. Turn the encoder/channel knob until "SQL" is displayed;
3. Press the **ENT** button;
4. Turn the Encoder/Channel knob and select the desired squelch level;
5. Confirm your selection with **ENT**.

Make sure you do not set an excessively high squelch level because in this case you may not be able to receive weaker signals. Alternately, an excessively low Squelch value could enable the Squelch even when no signals are present. Squelch must always be adjusted when no signals are present.

Battery recharge

The AS310 is equipped for using a 7.4V Li-ion rechargeable battery pack which can be charged by the supplied charger.
It takes approximately 4 hours to fully recharge the radio. The **LED** of the desktop charger indicates the charge status: **Red** = charging, **Green** = full charge

For maximum battery life, charge the battery pack when the **AS310** is off, and the battery pack is fully discharged.

Using a different battery charger other than the one specified can cause damage to your device or may even cause explosions and personal injuries.

The **Battery power saving** feature enables a reduction in consumption of up to 50%. If it has been set, it automatically activates when the transceiver does not receive any signals for more than 5 seconds. Power save can be disabled through Programming software.

Roger Beep (End transmission tone)

When the PTT button is released, the radio will beep to confirm to other users that your transmission has ended, and speech can begin. The Roger Beep can be enabled through the programming software.

VOX

The VOX feature enables hands free conversation without using the **PTT** of an optional **VOX Microphone.** Just speak in the direction of the microphone and the communication will automatically activate. The VOX sensitivity can be adjusted in 10 different levels (0,1,2,3…9) through the menu or programming software:

0 means that the VOX is turned off, level 1 is set by default and has the lowest VOX sensitivity, 9 is the highest one.

To activate the VOX levels, follow these steps:
1. Press the **MENU** button;
2. Turn the encolder/channer knob until the display shows **"VOX";**
3. Press the **ENT** key;

4. Turn the encoder/channel knob again and select the desired **VOX** level: 1= Low sensitivity; 9 = highest sensitivity.
5. Confirm your selection with **ENT.**

Maintenance

Your **AS310** is designed to fulfill any statutory warranty obligations and to provide many years of service.

As is true all electronic devices, we recommend following these few suggestions:

- Do not attempt to open the unit. Non-expert handling of the unit may damage it and annul the warranty.

- High temperatures can shorten the life of electronic devices and warp or melt certain plastics.

- If it appears that the Radio emits a peculiar smell or smoke, please shut off its power immediately and remove the charger or battery from the Radio.

- Do not transmit without an antenna.

LED - Backlight

To enable/disable the LCD backlight:

1. Press the **MENU** button;
2. Turn the Encoder knob until **"LED"** is displayed;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob to activate/deactivate the backlight. There are 3 available options: **"ON"**, **"OFF"** and **"AUTO"**.
   AUTO: the display backlight activates when any key is pressed and lasts a few seconds.
   OFF: back light off.
   ON: backlight always on. Attention: in this mode the power save is off, therefore the battery consumption will increase.
5. Confirm your selection with **ENT**.

Keypad Beep on/off

Every time a button is pressed, you will hear a Beep tone. The keypad beep tone is activated by default.
To disable the beeps, follow this procedure:

1. Press the **MENU** button;
2. Turn the Encoder knob until **"BEEP"** is displayed;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob to activate/deactivate the Beep tones:
   "ON" (to activate it), or **"OFF"** (to deactivate it);
5. Confirm your selection with **ENT**.

Keypad lock (KEYBO)

It is possible to choose between two types of Lock Mode:

1. Press the **MENU** button;
2. Turn the Encoder knob until **"KEYBO"** is displayed;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob and choose between **"MANUAL"** or **"AUTO"**.
5. Confirm your selection with **ENT**.

As previously mentioned, there are two ways to lock the keypad:
"MANUAL": to lock the keypad, simply press **FUN** and **ENT** keys for 3 seconds. 🔒 will be displayed.
"AUTO": the keypad will be automatically locked after 20 seconds.
To unlock the radio, press **FUN** and **ENT** keys.

TOT- TX timeout timer

G18 can be programmed with a transmission timer that temporarily blocks transmissions if the radio has been used beyond the maximum time permitted.
The radio is forced to reception mode if it continues transmitting after the preset timer threshold has been reached.
To restart the transmission, release the **PTT** key.
To enable this function:

1. Press the **MENU** button;
2. Turn the Encoder knob until **"TOT"** is displayed;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob and set a timer from 30 to 270 seconds.
5. Confirm selection with **ENT**.

SCAN mode settings

Press **MENU** and then rotate the Encoder knob. The display will show "**SCANS**".
Press **ENTER** and then rotate the Encoder knob to choose the type of Scan (TO/CO/SE).
Confirm your selection with **ENT**.

TO - Time-operated Scan

Whenever a signal is detected, the radio will suspend the scan for 5 seconds, and then will continue to scan even if the signal is still present.

CO: Carrier-operated Scan

Whenever a signal is detected, the radio will stop scanning.
It will **resume scanning** once the signal is no longer detected.

SE: Search Scan

The radio will stop scanning and exit the Scan mode once a signal is detected.

VOICE function

With this function, a voice can be activated to inform of current operation/selection.
To activate, follow these steps:
1. Press the **MENU** button;
2. Turn the Encoder knob until "**VOICE**" is displayed;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob to activate/deactivate the function: "**ON**" (to activate it), or "**OFF**" (to deactivate it);
5. Confirm your selection with **ENT**.

C-CDC / R-CDC / T-CDC

The CTCSS tones can be added to the channels for creating new private channels. They are similar to access codes and enable the radio to communicate only with the users that are tuned on the same channel and have set the same code. For each channel you can set up to 50 CTCSS tones and 105 DCS codes.

To select a CTCSS tone:

1. Press the **MENU** button;
2. Turn the Encoder knob until "**C-CDC**"(in TX and RX); "**R-CDC**"(only in RX) or "**T-CDC**" (only in TX) appears on the display;
3. Push **ENT** to enter the function;
4. Turn the Encoder knob and select the desired CTCSS tone;
5. To confirm, press the **ENT** button.
The setting of a CTCSS tone disables all DCS codes, because these functions cannot be used simultaneously.

To use and select a DCS code, instead of a CTCSS tone, follow these steps:

1. Press the **MENU** button;
2. Turn the Encoder knob until: "**C-CDC**"(in TX and RX); "**R-CDC**"(only in RX) or "**T-CDC**" (only in TX) appears on the display;
3. Push **ENT** to enter the function;
4. Press the **Function key 1**;
5. Turn the Encoder knob and select the desired DCS code;
6. Confirm the selection by pressing the **ENT** button.
The setting of a DCS code disables all CTCSS tones, because these functions cannot be used simultaneously.

PRI (Priority Scan)

When activating this function, the radio will alternately scan the standard channels and the priority one. The priority channel can be selected only with the programming software. The default priority channel is **CH1**.

POW – Setting the transmission power

G18 has 2 power levels.
To select the desired level:
1. Press the **MENU** button;
2. Rotate the Encoder knob till the display shows **"POW"**;
3. Press **ENT**;
4. Rotate the encoder knob and select the desired power level;
5. Press **ENT** to confirm. If low power is selected, the display will show **"LOW"**

Technical specifications

In the Box

- AS310
- Antenna
- Belt clip
- 1600mAh Li-Ion Battery
- Desktop Charger
- AC Adaptor

NOTE: This radio is certified to meet standards AS/NZ 4365:2011 and AS/NZ 4295:2004

General	
Output Power	5 Watts
Channels	16 (Dealer Programmable)
Frequency Range	450 Mhz – 520 Mhz
Channel Width	12.5 khz (narrow band)
Operation Mode	Simplex
Antenna Impedance	50Ω
Input Power	DC 7.4V
Water/Dust Protection	IP67
Scan	Yes
Battery Save	Yes
Monitor	Yes
Key Lock	Yes
Roger Beep	Yes
Squelch	Yes
VOX	Yes
Working Temperature	-20° ~ +55°C
Dimensions (excl Antenna)	114H x 58W x 38D mm
Typical Range	15 km Line of Sight

Troubleshooting

Problem	Possible Cause	Solution
The radio does not switch on.	The battery pack is discharged or has not been installed correctly.	Verify that the battery pack is charged and that it has been correctly installed.
The radio switches off soon after it has been switched on.	Discharged battery pack.	Recharge the battery pack.
The battery pack does not recharge.	The battery-charger has not been connected or installed correctly.	Inspect the connections of the battery-charger and the installation of the batteries.
The Radio Switches on but is unable to receive signals.	Location of transmission is too shielded.	Move to another Area away from shielding.
	The volume is too low.	Adjust the volume level.
	Incorrect CTCSS or DCS.	Check that the CTCSS tone or DCS Code corresponds to the one set by the parties you are communicating with.
It is not possible to communicate with other parties	An incorrect radio channel has been selected.	Select the same radio channel used by the parties you are communicating with.
	The radio is installed in a shielded area or is too far from the party you are communicating with.	Move to another area.
	Incorrect CTCSS or DCS	Check that the CTCSS tone or DCS code corresponds to the one set by the parties you are communicating with.
Reception is fragmented and/or distorted.	The signal is very weak.	Try Temporarily disabling the squelch by means of the Monitor feature.

Problem	Possible Cause	Solution
	The Transmission distance is excessive or there are obstacles in the transmission path.	Move closer to the party you are communicating with or to another area.
	Other parties are using the same channel.	Check the traffic on the radio channel by means of the Monitor feature and select another channel if required.
	The radio has been installed too close to equipment that causes interference (televisions, computers, etc.)	Increase the distance between the radio and this equipment.

DELTA LIMITED WARRANTY

Delta Incorporated is proud of its advanced technology and the high quality of workmanship and components included in the production of every product. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Delta (Australia) Pty. Ltd., the authorised Delta Distributor, warrants this Delta product within Australia to be free from defects in material or workmanship for the applicable period indicated below:

• **Radios:**
One (1) year from the date of purchase, (excluding accessories), when purchased from an Australian authorised Delta Dealer.

• **Accessories:**
One (1) year from the date of purchase, when purchased from an Australian authorised Delta Dealer.
(i.e., battery, antenna, battery chargers etc)

Delta (Australia) Pty. Ltd. will, at its discretion, and subject to the terms and conditions stated below, repair or replace any goods or component parts which after examination are found to be defective. Unless otherwise expressly provided, any fault arising from defective workmanship or material shall be rectified by Delta where the equipment is returned freight prepaid to Delta (Australia) Attn: Service Dept. Unit 1/10 Alliance Ave, Morisset, NSW, 2264. Telephone (02) 4973 2763, Fax: (02) 4973 2753. Email sales@radioindustries.com.au.

DELTA LIMITED WARRANTY (continued)

This warranty shall not apply:

a) To a Delta Product which has failed due to improper installation, misuse, accident, alteration or unauthorised repair or modification.

b) If any serial number or identification plate attached to the goods has been altered, rendered illegible, or removed.

c) If the goods have been damaged by corrosion, deterioration or the like contributed to abnormal temperatures, the influence of foreign matter or energy or physical or chemical properties of water, steam or chemical compounds.

d) To any Delta product not originally supplied by Delta (Australia) Pty Ltd to an authorised Dealer of Delta (Australia) Pty. Ltd.

Please check with us if you feel a Delta product is being offered for sale that has been sourced from other than Delta (Australia) Pty Ltd.

WARRANTY SERVICE INSTRUCTIONS

If you are having trouble with your Delta equipment:

1. For warranty claims, complete a repair order form located at: https://www.radioindustries.com.au/services.html

2. If the fault is related to the use of a particular accessory or accessories, please include these for inspection with the radio, and list these on the repair order form. Delta (Australia) Pty. Ltd. shall assume no liability for the loss or safe return of an accessory item that is not listed.

3. Please contact Delta (Australia) regarding any compensation that may be payable for reasonable expenses incurred in making a warranty claim.

4. If the requested repairs or services are within the terms of warranty, your equipment will be returned after repair (prepaid) to any designated point within Australia.

5. If the requested repairs of service are not within the terms of warranty, or if you fail to provide acceptable evidence of the date of purchase, return freight will be charged.

This warranty is in addition to and does not limit, exclude, or restrict your right under the Competition and Consumer Act 2010 or any other protection laws that may apply.