

APOLLO VISUAL OIL MONITOR INSTRUCTIONS



Thank you for purchasing the Apollo Visual Oil Level Monitor

The Apollo Visual product consists of:

- 1 x Apollo Ultrasonic Tank Transmitter
- 1 x Apollo indoor receiver plug
- 2 x Stainless steel fitting screws
- 1 x Weather seal



Pin Setting Table

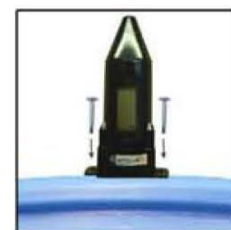
Tank Height mm	Pin Settings in up position	Tank Height mm	Pin Settings in up position
500	1	1750	1,3,4,5,6,7
550	1,7	1800	1,2,8
600	1,6,8	1850	1,2,7,8
650	1,6,7,8	1900	1,2,6,7
700	1,5,7	1950	1,2,5
750	1,5,6	2000	1,2,5,7,8
800	1,5,6,7,8	2050	1,2,5,6,8
850	1,4,8	2100	1,2,4
900	1,4,6	2150	1,2,4,7
950	1,4,6,7	2200	1,2,4,6,8
1000	1,4,5,8	2250	1,2,4,6,7,8
1050	1,4,5,7,8	2300	1,2,4,5,7
1100	1,4,5,6,7	2350	1,2,4,5,6
1150	1,3	2400	1,2,4,5,6,7,8
1200	1,3,7,8	2450	1,2,3,8
1250	1,3,6,8	2500	1,2,3,6
1300	1,3,5	2550	1,2,3,6,7
1350	1,3,5,7	2600	1,2,3,5,8
1400	1,3,5,6,8	2650	1,2,3,5,7,8
1450	1,3,5,6,7,8	2700	1,2,3,5,6,7
1500	1,3,4,7	2750	1,2,3,4
1550	1,3,4,6	2800	1,2,3,4,7,8
1600	1,3,4,6,7,8	2850	1,2,3,4,6,8
1650	1,3,4,5,8	2900	1,2,3,4,5
1700	1,3,4,5,6	3000	1,2,3,4,5,6,8

Step 4 - Fitting the transmitter (after matching)

The procedure is the same for fitting to both old and new tanks.

For Tank with pre-drilled 30/32mm hole

- Remove the cap from the hole and insert transmitter, ensuring the weather seal is securely in place.



- Ensure the transmitter is vertical on top of the tank

- Tighten on to the tank using the 2 stainless steel 19mm long self – tapping screws supplied. **Do not use longer screws. Do not over tighten.**

For a Tank without a predrilled hole

- If a tank is not predrilled, then using a 30/32mm hole saw, drill a hole in the top of tank in suitable area to allow ease of fitting the transmitter and in an area that the transmitter can see the tanks contents. Position so that there are no internal obstructions. (i.e. ribs, stays, side of tank, internal equipment) that might interfere with the ultrasonic signal. Ensure the transmitter is a minimum of 10cm from any tank wall or edge.
- Use the Install Help diagram to insure suitable fitting.
- Ensure the transmitter is vertical on top of the tank.
- Tighten on to the tank using the 2 stainless steel 19mm long self – tapping screws supplied. **Do not use longer screws. Do not over tighten. You have now completed the installation.**



Always set switch 1 up to enable the low level audible warning.

Step 1: Setting your receiver plug

Measure your tank height, from the base of the tank to the base of the Apollo transmitter location. Using the Setting table provided on the right, select the height closest to your tank height.*NB. On a bunged tank measure the inner tank height*

Refer to the lower height available.

E.g. if your tank height is 975mm choose the setting of 950mm on the table.

Set your pins to the required setting. E.g. 1400 mm height pins 1,3,5,6,8 in the up position.



Step 2: Choosing a suitable electrical socket

Choose a suitable electrical socket, located in closest proximity to the tank. The area should be free of other electrical appliances, wiring and any large steel or metal devices which could hinder the FM signal between the tank transmitter and receiver. Plug your receiver plug into the socket and switch on - the top bar will flash to indicate the unit is in learn mode and ready for matching. This bar will continue to flash for a period of 2 Minutes.

Step 3: Matching the units

Note the black dot on the right hand side of the receiver. Note the black dot on the left hand side of the tank transmitter. Whilst the top bar is flashing on the receiver hold the tank transmitter against the receiver as shown, so that the black dots are aligned with the display screens facing you, as shown. Hold together. The bars will increase up the display screens. **ONLY** when all 10 bars are shown, will they flash to indicate that, the unique code is transferred and the units are matched.

Remove the transmitter from the monitor immediately once all 10 of bars are reached.



Changing the battery

- Only change the battery when a low battery warning is showing i.e. **STATIC** triangle with correct number of bars showing.
- Remove the transmitter from the tank.
- The battery can be accessed by removing 4 screws from the base of the unit.
- Remove battery noting the orientation (“+” mark facing outwards). Replace new battery (3V- CR2450)
- Reassemble, ensuring the O ring is undamaged and secured in position.
- Re-position the transmitter on the tank.
- There is no need to rematch.
- Recycle the old battery do not place in household waste.

Specifications

- Tank Depth Measurement: Min depth 0.1m, max 3m.
- Max communication distance: 200m normal ‘line of sight’ conditions.
- Power supply: Receiver 150-250V, 50-60Hz meets EN60335.
- Transmitter: 3 Volt lithium cell.
- Wireless communications: 433 MHz FM transmission. EN300-220.
- Max and Min operation Temp: Operating temperature range -10 C to +60 C.
- Not suitable for pressurised containers.
- Use on tanks vented to atmosphere.
- Suitable for use in tanks for the storage of diesel fuel, kerosene, gas oil types A2, C1, C2, and D as defined by BS 2869. Check with the manufacturer and/or supplier before using with any other fluids.

Warranty

This unit carries a 1 year warranty when used under normal operating scenarios. Warranty is void if transmitter seal broken.

Support

For additional information or to view installation videos please visit our website www.dunravensystems.com

For Support or assistance please email

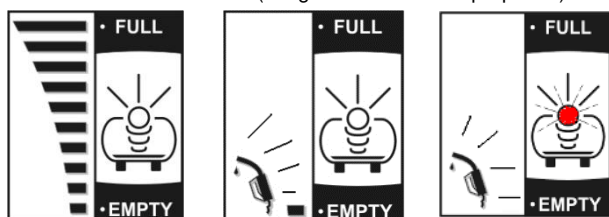
support@dunravensystems.com

Telephone: 00353 (0) 42 9386505

Dunraven Systems
Innovative Monitoring Solutions

APOLLO ULTRASONIC ON SCREEN DISPLAYS

NORMAL MESSAGES (images for illustration purposes)



Tank Full

Early Warning

Almost Empty

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Other Messages:

Blank screen or top bar only after plugging in or following a power failure

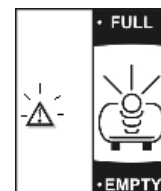
Receiver waiting for signal

- Do Nothing! Signal should be received within one hour.

Flashing triangle, no bars

No radio signal received from transmitter (after waiting for 4 hours)

- Check for correct matching procedure
- Location of receiver to transmitter (try repositioning receiver)
- Check the transmitter seal is undamaged.



No Signal

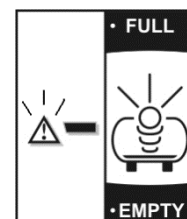
Fixed Triangle only

- Low battery warning, unit will continue to give a reading until the battery is exhausted
- Replace Lithium CR2450 battery in transmitter
- Please see over for further information on removing battery

Flashing triangle, middle bar only

No ultrasonic echo

- Check the transmitter sensor cone is clean
- Check that the transmitter is vertical
- Check that the transmitter seal is undamaged
- If the message persists, check the transmitter is vertical on the tank.



No Echo

- If the oil level is within 6 inches (150mm) of the base of the transmitter this message along with other messages may occur. Wait until the oil level drops below 6 inches for accurate reading.

