

# AGC MARINE Telecom

Z.I. Les Trois Moulins – EURO 92 – 282, rue des Cistes  
06600 ANTIBES  
FRANCE

Tél. : +33 (0)4 92 91 96 08 – Fax : +33 (0)4 93 74 47 51 – E-Mail : [info@agcmarine.com](mailto:info@agcmarine.com)



## Sea Tel DAC 2200

The WaveCall Series utilizes the new DAC 2200 antenna control unit. The DAC 2200 ACU is 1 rack-unit in height (1.75 inches) and is configured with an L-band DVB compliant tracking receiver, gyrocompass interfaces for both digital (NMEA 0183 HDT character strings) and most analog gyrocompass systems. A gyrocompass or other ships heading reference is required for proper system operation.

### BASIC FUNCTION OF FRONT PANEL KEYS

Keyboard operation is very simple and straightforward. Basic function of each keys is:

**NEXT**

Press NEXT to sequence through the four main menus ; Ship, Satellite, Antenna and Status (refer to the Operation Flowcharts).

**Ship** – Accesses the *Ship* menus to display, enter or edit current Ships' Latitude, Longitude and gyro compass Heading information.

**Satellite** – Accesses the *Satellite* menus to display, enter or edit current Satellite Longitude, Threshold, Satellite ID Tracking Receiver settings, Network ID and current signal level being received (AGC).

**Antenna** – Accesses the *Antenna* menus to display, enter or edit current Azimuth, Elevation & Relative antenna position and Polarization setting. Current signal level being received (AGC) and Conscan tracking signals are also displayed in some of the sub-menu screens.

**Status** – Accesses control of Tracking Band & ON/OFF selection, Searching ON/OFF selection, Error status and Remote Auxiliary value.

**TRACK**

Press track to toggle the state of Tracking, ON/OFF.

In the Antenna Main menu display, press LEFT arrow to move the antenna left (CCW or AZ down) or the RIGHT arrow to move the antenna right (CW or AZ up).

In a sub-menu display, press LEFT or RIGHT to enter editing mode. This brings up the cursor under the character to the left (or least significant bit) or right of the decimal point.

Press the LEFT/RIGHT arrow key to move the cursor Left or Right to select a character to edit. When the cursor is under a character, it is selected and can be changed.

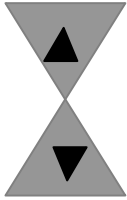
In the *Status – Tracking* window, LEFT or RIGHT sequences through the Tracking **Band** selection choices.

**Setup** – Press **BOTH** the LEFT and RIGHT arrow keys to access the setup parameters (refer to the Setup section of this manual).

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In the Antenna Main menu display, press UP arrow to move the antenna up (EL up) or the DOWN arrow to move the antenna down (EL down).  
Press the UP/DOWN arrow keys to move vertically Up and Down through the sub-menus.  
When a sub-menu item is being edited, use the UP/DOWN to increment/decrement the selected character. This steps the selected entry one increment per sequential key-press or rapidly increments the selected entry when pressed & held.  
In the *Status – Tracking* window, UP toggles Tracking ON/OFF. In the *Status – Search* window, UP turns Search ON, DOWN turns Search OFF. In the *Status – Error* window, UP or DOWN clears the Error display.



ENTER

At a main menu level, press ENTER to access the sub-menu items.  
When viewing one of the sub-menus, pressing the ENTER key will step down through the sub-menu items, like the DOWN arrow does.  
When editing, the cursor is visible under a character in a sub-menu (whether it has been changed or not), press ENTER to execute the present value, and return to display mode of that sub-menu. This does NOT save the new value to NVRAM.



TRACK

Press RESET to reset the processors in the Antenna Control Unit. This also reads all settings & parameters from NVRAM for system use.

## BASIC DESCRIPTION OF FRONT PANEL STATUS LEDES

The basic description of the front panel LED states are:

### Tracking – (Green LED)

**ON** indicates that the ACU is Tracking a satellite signal whose AGC value is greater than the Threshold value AND contains the desired Network ID. The ACU is actively issuing small azimuth & elevation position adjustments to the antenna to optimize the signal level (AGC). If the system was Searching, the SEARCH LED will go OFF when the TRACKING LED turns ON.

**Blinking** indicates that the satellite signal AGC value is less than the Threshold value, OR is not the desired Network ID. The ACU is counting down (the number of seconds specified in the “SEARCH DELAY” parameter). If the AGC does not rise above the Threshold before the count-down is completed, the ACU will automatically start, or continue, a SEARCH to acquire a signal that is greater than Threshold AND contains the desired NID. When the SEARCH LED is ON, the TRACKING LED will be OFF.

**OFF** indicates that Tracking is OFF. This may be due to the operator turning Tracking OFF intentionally or that Tracking was preempted by SEARCH.

### Searching – (Yellow LED)

**ON** indicates that the ACU is Searching a satellite signal whose AGC value is greater than the Threshold value and whose NID matches the save value. When a satellite signal is found, the SEARCH LED will go OFF and the TRACKING LED will come ON. If an adequate satellite signal is not found during the Search, the SEARCH LED will blink as the antenna re-targets to the desired satellite. If an adequate satellite signal is still not found, then the TRACKING LED will begin flashing (count-down) until the next SEARCH is automatically started.

**OFF** indicates that SEARCH is OFF. This may be due to the operator turning Search OFF intentionally or that Tracking was preempted by SEARCH.

### Target – (Yellow LED)

**ON** indicates that the antenna is TARGETING to the calculated Azimuth & Elevation positions of the desired satellite (SAT). When the antenna arrives at the calculated position the TARGET LED will go OFF. If an adequate satellite signal is found at the targeted position Tracking will commence. If an adequate satellite signal is not found at the targeted position, the TRACKING will begin blinking (see above) until the next SEARCH is automatically started.

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**ON also indicates UNWRAP** – Your system will automatically “unwrap” to wind/unwind the cables in the antenna. The need to “unwrap” the antenna is based on how far the ship has turned in one direction or the other. The satellite signal will be lost while the UNWRAP LED is ON. The system will normally reacquire the satellite automatically when UNWRAP has completed (less than 2 minutes).

**Power** – (Green LED)

**ON** indicates that the Antenna Control Unit is energized.

**Initializing** – (Green LED)

**ON** indicates that the Antenna is initializing. Initialization of the antenna will take approximately two minutes.

**Blinking** – After initialization of the antenna, a 1 second “heartbeat” will be observed indicating that STATUS of the ACU & Antenna is normal (no errors or failures).

**Error** – (Red LED)

**ON** indicates that one, **or more**, discrete system errors have occurred. Refer to Status – Error Code information menu to determine which error(s) have occurred.

**OFF** indicates that no errors have occurred.

## DISPLAY & ENTRY OPERATION MENUS

The operation menus are arranged in four groups. Use the NEXT key to cycle through the groups, use the ENTER key to access the sub-menu of a selected group and then use the UP/DOWN arrow keys to move up and down the sub menu items.

