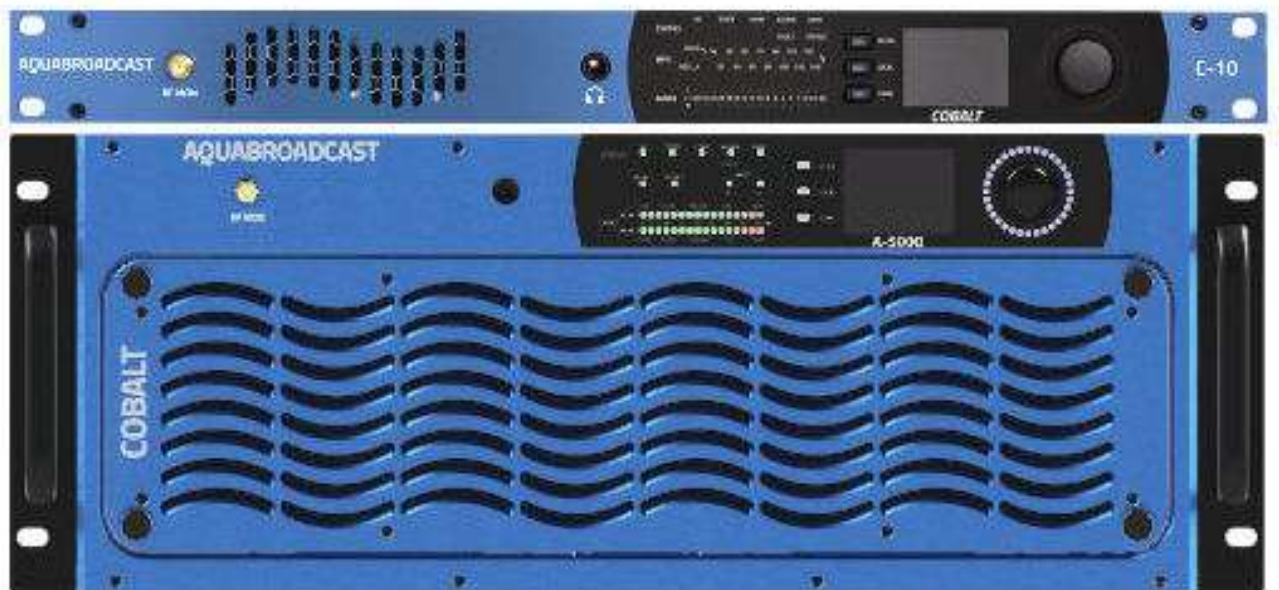


AQUA BROADCAST



A-5000 AMPLIFIER WITH A C-10 DRIVER SYSTEM

QUICK START GUIDE

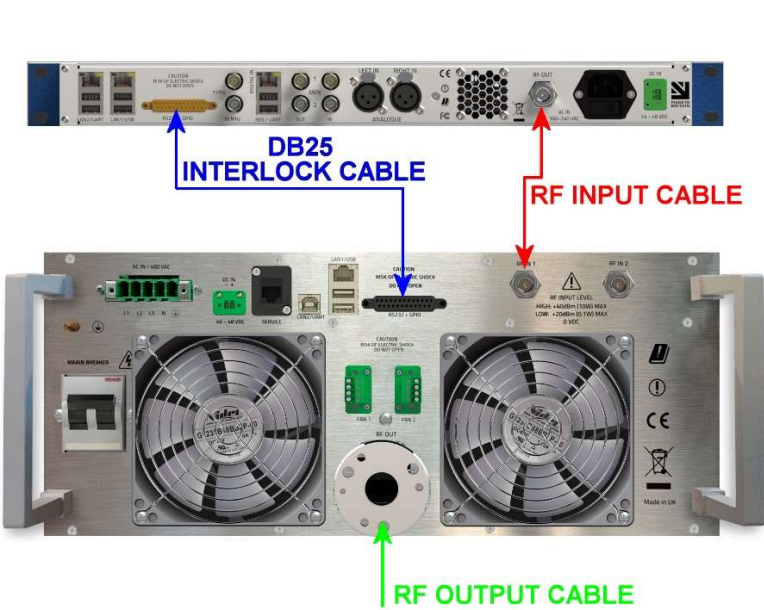
V.18062026.1

In this document we want to easily explain how to setup and use a transmitting system realized with a A-5000 and 1 C-10 exciter as drivers for it, but it works for all models of AQUA amplifiers and drivers.

01 CONNECTIONS SUMMARY

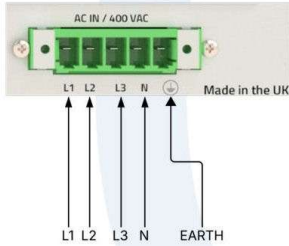
First of all, you have to connect the cables at the back of the devices:

- The INTERLOCK data cable to the GPIO DB25 connector of the exciter and the amplifier (pay attention to the label on the connectors case) as in **picture 1**.
- A coaxial RF cables from the exciter output to the amplifier's input 1 (RG58 cable is enough for this connection)
- All the mains supply cables (for the amplifier refer to **picture 2**)
- The LAN cables
- The Audio signals cables (check the Cobalt C-10 user manual)
- The RF output connection cable

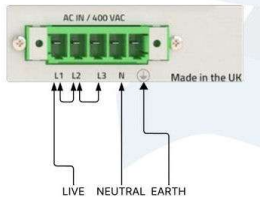


Picture 1

THREE PHASE CONNECTION



SINGLE PHASE CONNECTION

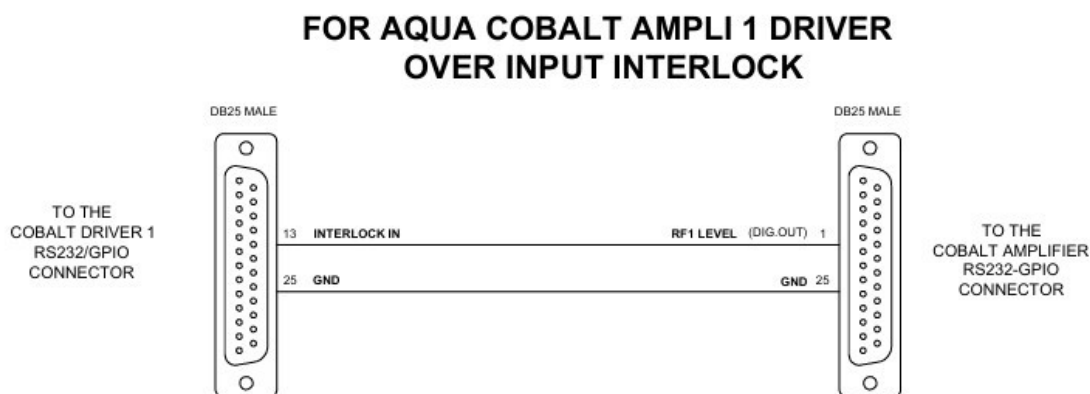


Picture 2

02

SETTING THE DRIVER INTERLOCK

First of all, connect the DB25-DB25 data cable (if not provided by AQUA you can easily make it with the following layout) between the GPIO connectors of the driver and the amplifier.



In the RADIO FREQUENCY menu of the driver is important to select the **INTERLOCK** button to enable the overdrive protection function, then click on the SAVE button.

COBALT C-10 AQUABROADCAST

RF Status

- RF: ON
- Frequency: 108.00 MHz
- FWD Power: 2.03 W
- RFL Power: 0.0 W
- MOD: 12.2%

VSWR: 1.2 | PA Temp: 39.7 °C | PA Voltage: 5.1 V | PA Current: 0.6 A | FAN 1: 6311 RPM

RF Settings

RF Enable: Off On

Frequency [MHz]: 108.00

PA Requested Power [W]: 2.00

External RF Control: RF mute Interlock

Interlock/RF Mute

- Interlock/RF Mute
- Fault
- No Inputs
- SFN

Save

03

SETTING THE DRIVER OUTPUT

To set the output power of the driver you can follow this procedure*:

- Enter in the RADIO FREQUENCY menu
- Click on the red locks to enable the frequency or the power out level editing
- Write the setting value
- Then click on the SAVE button to confirm.

The screenshot shows the COBALT C-10 AQUABROADCAST interface. The left sidebar contains navigation options: Dashboard, Radio Frequency, Inputs, Audio Manager, Audio Processor, RDS, Exciter & Stereo, Outputs, SFN & Sync, Automations, System, and Audio Player. The main panel is divided into two sections: RF Status and RF Settings. The RF Status section displays several key metrics: RF is ON, Frequency is 108.00 MHz, FWD Power is 2.03 W, RFL Power is 0.0 W, and MOD is 12.2%. Below these are smaller indicators for VSWR (1.2), PA Temp (39.7 °C), PA Voltage (5.1 V), PA Current (0.6 A), and FAN 1 (6311 RPM). The RF Settings section includes an RF Enable toggle set to On, a Frequency [MHz] slider at 108.00 with a red lock icon, a PA Requested Power [W] slider at 2.00 with a red lock icon, and External RF Control buttons for RF mute and Interlock. A red arrow points to the Save button at the bottom right.

For all the amplifiers models, to reach the output power level required, a RF signal of 1 to 2W from the drivers is enough.

Over 3W the driver will be stopped by the overdrive protection function.

IMPORTANT: The frequency of the 2 exciters and the amplifier must be the same.

04

OVERDRIVE PROTECTION

This system protects itself from the too high RF input signals coming from the driver but is necessary to connect the data cables included in the box as shown in chapter 1.

When, for some reason, the input power from one of the exciters increases more than about 3W (value set from the factory) the driver will be stopped by the interlock for about 30 seconds then it restarts to check again, then may stop again until the driver level will be lowered below 3W.

During the alarm stopping time the RF button of the driver flashes GREEN/RED.

The screenshot shows the 'Notifications' configuration page for the COBALT A-5000 device. The left sidebar lists navigation options: Dashboard, Radio Frequency, Automations (with sub-items: Failover, Scheduler, Configs, Notifications, GPI Setup, GPO Setup, System), and System. The main content area is titled 'Notifications' and includes a 'Clear notifications' button. Below this, there are tabs for Fault, Alarm, GPI, Automation, and User. The 'User' tab is active, showing a list of notification parameters:

- FWD Power:** Enable (checked), Send on revert (unchecked), GPO: None, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (NOT DETECTED).
- RFL Power:** Enable (checked), Send on revert (unchecked), GPO: None, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (NOT DETECTED).
- VSWR:** Enable (checked), Send on revert (unchecked), GPO: None, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (DETECTED).
- PA Temp:** Enable (checked), Send on revert (unchecked), GPO: None, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (NOT DETECTED).
- PA Fan:** Enable (checked), Send on revert (unchecked), GPO: None, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (NOT DETECTED).
- RF IN 1:** Enable (checked), Send on revert (unchecked), GPO: GPO 1, Log (checked), Email (unchecked), SNMP Trap (unchecked), User Status LED: none R G B Y (NOT DETECTED).

At the bottom of the page, there are controls for 'Condition', 'Threshold [dBm]' (set to 35.00), 'Set delay [s]' (set to 1), and 'Reset delay [s]' (set to 30).

This is the protection factory settings for this function, just for your reference if it will be deleted for some reason or a for factory reset.

DO NOT CHANGE ANY OF THESE VALUE WITH NO REASON OR WITHOUT INFORMING US.
IF YOUR DRIVER IS NOT AN AQUA DEVICE AND HAS SOME DIFFERENT PARAMETERS YOU MUST CONNECT WITH US TO GET ADVICE ABOUT A DIFFERENT SETTING.

05

USER ALARM LED INFO

In the front panel there are a few important LEDs to understand, you can also refer to the User Manual for all the other display indications.

<https://aquabroadcast.co.uk/files/attachments/9e50550c9d3b3fb08d0865db42618b0a9f700284.pdf>

The USER LED is set to indicate:

- YELLOW The overdrive alarm is ON, the driver is stopped by the interlock

The RF IN 1 or 2 LEDs indicate the status of the input signal:

- GREEN shows the on-air signal
- YELLOW shows the standby ready signal as backup (only if a second driver is connected)
- OFF shows that no RF signal is present (in case of a single driver)

The RF LED shows the output level of the amplifier:

- GREEN it reached the required power level set.
- YELLOW the power level is rising to reach the set level
- RED the power level is failing to rise

It's important to inform you that the RFL is set to be shown in the display in steps of 50W, it means that under 50W of reflected power you read 0W, then 50W, then 100W until the ALARM stops the amplifier. This is safe for the internal RF components, no worries.



06

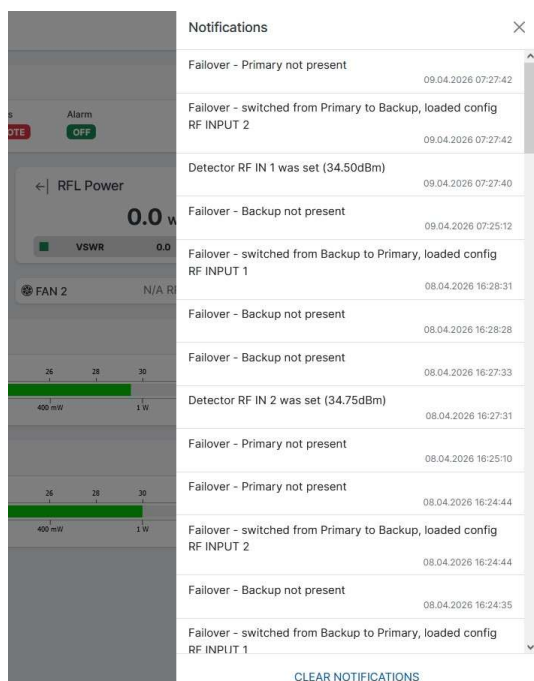
NOTIFICATIONS LIST IN THE DASHBOARD

In the DASHBOARD, the main page of the web menu, there is the list of all alarms that occurred during the device lifetime.

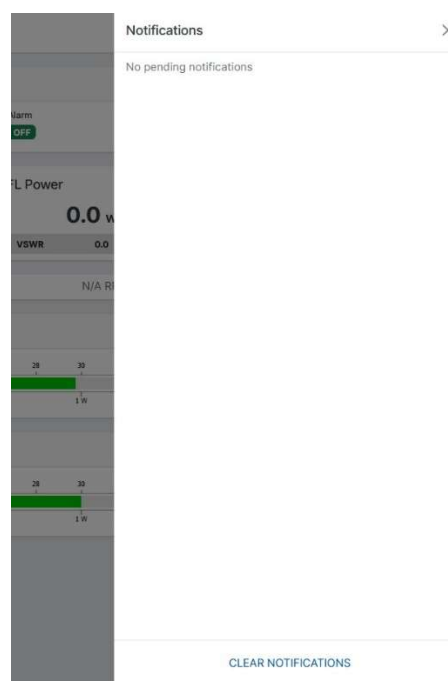
It's hidden behind a little bell in the top right corner and has a red circle with the number of the alarm recorded in it (only if there have been alarms, during tests for example).

When you click on the little bell it appears a window with the alarms recorded and the time that happened (picture 1).

If you want to clear it (the alarms are saved also in the LOG files) you just click at the end of the window (CLEAR NOTIFICATIONS) to get it empty again (picture 2).



Picture 1



Picture 2

IMPORTANT: cleaning the alarms list takes a little time and sometime is necessary to reload the web page using the reload button in your browser.

FOR ANY OTHER INFORMATION YOU CAN CONTACT OUR CUSTOMER SERVICE AT
support@Aquabroadcast.co.uk

THANK YOU