COBALT
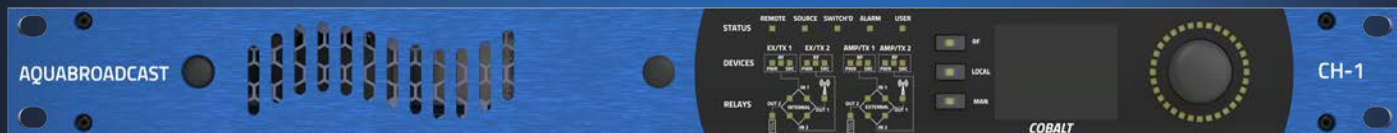

CH-1 Changeover Switch

Datasheet and Specifications

Our Innovation

The COBALT CH-1 changeover switch has the best available technologies developed by our in-house R&D team. Our innovative solutions are designed to be compact, efficient and use the very latest techniques and components.

Secure control and monitoring interface

Like all products in the COBALT range, the CH-1 supports HTTPS, enhancing security through encrypted communication between a user's browser and the accessed website making it difficult for third parties to intercept and read the data being transferred, providing greater privacy and security to confidential information in the configuration and monitoring of your transmitter.

Already compatible with SNMPv1 and SNMPv2c, and SNMPv3 all COBALT products deliver improvements in performance, flexibility, and security.

COBALT CH-1

The Aqua Broadcast CH-1 is a versatile controller unit designed to monitor and manage redundant broadcast systems for FM radio transmission. This system ensures smooth transitions between transmitters, minimizing downtime in the event of a failure. It offers both automatic and manual operation modes with remote control or local management for maintenance and system testing.

Built on the proven COBALT platform, the CH-1 gives you added confidence when using a secondary or backup transmitter. The unit features a built-in DPDT relay, offering more flexibility than standard SPDT relays and adding the possibility of testing the backup exciter on a dummy load without interrupting the main transmission.

You can use the internal relay for exciters or low power transmitters but if you require to switch greater power transmitters you can easily integrate external RF switches from renowned brands like Spinner through the rear connectors.

A set of interlocks on the rear panel is also included, along with a +48VDC power input for added redundancy in critical scenarios.

To simplify system configuration, most settings can be adjusted via software. This includes input status, output controls and interlock polarities, fault detection methods (both digital and analogue), timers, and analogue thresholds. All are fully user-programmable in software for added convenience

Controls and monitoring are available through various methods, including web, SNMPv1, v2C, and v3, as well as email alerts and notifications.

The front panel includes the easy-to-use COBALT joystick and a clear OLED display. A set of LED indicators provides real-time status updates, with a clear diagram showing the current system operation.

Setup via the GUI is quick and intuitive. You can set up various time settings to allow for faster changeovers when needed and define the number of permissible automatic switches. On the local mode, full control from the control panel is given to the engineers during maintenance without external interference. By using the handy scheduled tests you will ensure the backup transmitter is always ready when it is most needed.

Built for redundancy, designed for safety, and engineered for excellence, the Aqua Broadcast Changeover System keeps your broadcast on air, no matter what.

Standard Features

- ∼ Linux OS
- ∼ RGB screen and LED synoptic
- ∼ Built-in DPDT RF relay switch (latching), 100W max.
- ∼ Built in RF power measurement for internal RF relay inputs
- ∼ Built in automatic failover logic with RF power detectors
- ∼ Automatic and Manual switching modes
- ∼ Dummy load connection for exciter testing
- ∼ Dedicated interlocks outputs (relay) and interlock inputs (antenna systems and loads)
- ∼ Ethernet Control and SNMP

AQUABROADCAST

GENERAL

Input ACV @ 50/60Hz	100-240 (277 North America only)
Input DCV	+48V
Power Connector	IEC 13A filtered
Power consumption	<70W @ max power
Dimensions WxDxH [inch]	19 x 15 x 1RU (1.75")
Dimensions WxDxH [cm]	48.3 x 38 x 4.45
Weight	3.4 Kg / 7.5lb

ANT/LOAD/GPIO INTERFACE

Connector type	D-Sub25 female
External Supply Voltage	12V DC @0.75A
Digital Input	4x (optical isolated)
Digital Output	4x (optical isolated)
Analogue Input	2x, 0-6V range

RF INTERFACE

RF Input	2 x N-Type female (up to 100W)
RF Output	2 x N-Type female (up to 100W)

INTERLOCK INTERFACE

Connector type	Pluggable Terminal Block 8 Pos 3.81mm pitch
Output configuration	4x (Relay or Open collector optical isolated type)
Relay configuration	NC or NO
Output type selection and configuration	Internal DIP switches

RF RELAY INTERFACE

Connector type	D-Sub25 female
External Supply Voltage	24V DC @1.1A
SPINNER compatibility	BN 512690C0002 (2kW)
Relay selection	Internal DIP switches

CONTROL INTERFACE

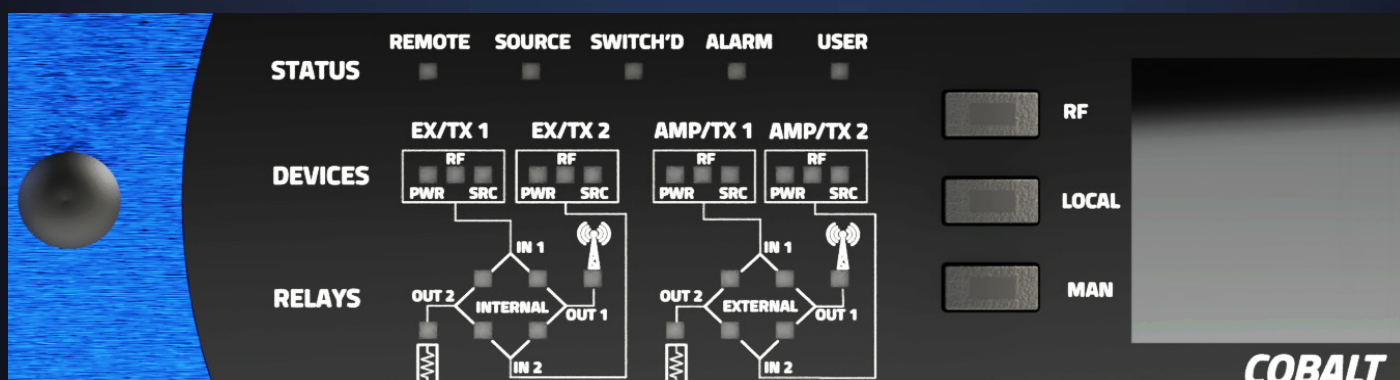|	
UART over USB	USB-B, system control
USB	USB 2 x USB-A, storage & FW upgrade
Ethernet	1 x RJ45
DB25 shared connector	8x dig. output (optical isolated) 8x dig. input (optical isolated) RS232 for system control

EXCITER/TRANSMITTER INTERFACE

Connector type	D-Sub15 female
External Supply Voltage	12V DC @0.75A
Digital Input	6x (optical isolated)
Digital Output	6x (optical isolated)
Analogue Input (optional)	2 x, 0-6V range
Analogue Output (optional)	2 x, 0-6V range

ENVIRONMENTAL

Altitude	15,000 ft / 4,420m AMSL
Temperature range	0 to +45°C, working -10 to +50°C, storage
Humidity	95% @ 35°C, non-condensing

AMPLIFIER CONTROL INTERFACE

Connector type	D-Sub15 female
External Supply Voltage	12V DC @0.75A
Digital Input	6x (optical isolated)
Digital Output	6x (optical isolated)
Analogue Input (optional)	2x, 0-6V range

info@aquabroadcast.co.uk +44 203 411 0387 www.aquabroadcast.co.uk

AQUABROADCAST

Aqua Broadcast was formed by a diverse and experienced team of people with extensive Broadcast and electronics experience. We love Broadcast just as much as you do, and we saw the need to do things differently to all our competitors.

With an international presence and offering multi-lingual staff, Aqua Broadcast has positioned itself as a dynamic and innovative company, driven by its passion for Broadcast and Studio products.

At our core are our customers. We focus on designing and building products for engineers and station owners who demand reliability, ease of use, with cutting-edge design and features. Listening to customer's ideas, feedback and success stories allows us to build products that are feature rich, reliable as well as easy to use.

Our strategically located offices worldwide mean you are never out of touch due to time zones. Sales and support are available round the clock. Whether it's a phone call, or email we are always with you every step of the way.

For details of your local dealer or Distributor, please refer to our website or contact us.

The purchaser will be responsible for all import taxes, customs, duties, freight costs and insurance.

Warranty Information

At Aqua Broadcast Ltd, we are devoted to building the highest quality products and the never-ending pursuit of providing a better experience to our customers.

Our warranty statements are a continued commitment to providing reliable solutions with our technologies. All Aqua Broadcast Ltd benefit from a 2 year Manufacturer's Warranty. Further information on the Warranty can be seen in each products user manual, or by contacting us.

Aqua Broadcast Ltd

Unit 7, First Quarter
Blenheim Road
Epsom
KT19 9QN
United Kingdom

Tel: +44 203 411 0387

www.aquabroadcast.co.uk

info@aquabroadcast.co.uk

MADE IN UK