

**QK-A015-RX Manual**

**Active AIS/VHF Antenna Splitter**



Designed in UK



**Features**

- 12V-24V powered, low power consumption
- Uses standard SO239 connector for VHF and antenna connections
- Built-in preamplifier providing VHF/AIS signal gain maximises receivers' range
- VHF failsafe function - VHF radio has full priority and will remain functional, even in the unlikely case that the Splitter would fail or lose power
- LED power and status indicator
- Compact & easy to install

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### 1. Introduction

The QK-A015-RX splitter allows one VHF antenna to be shared between,

- VHF radio
- AIS receiver and
- AM/FM radio

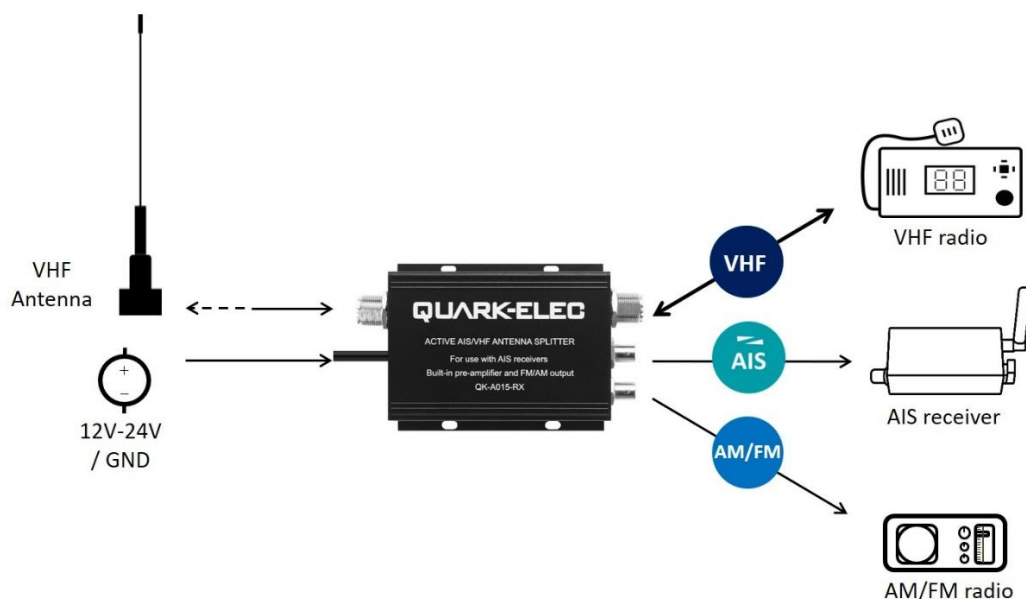
The A015-RX allows the one VHF antenna to provide the following functions:

- Reception of VHF radio, AIS messages and AM/FM radio
- Transmission from VHF radio
- Straight forward connection to all relevant devices, with no configuration required
- VHF radio always has priority and can always transmit in the case that the power to the splitter fails
- Low power consumption

The A015-RX is an active splitter. This is an important feature, as unlike many splitters that cause signal loss, the active splitter actually provides a signal gain. The A015-RX's built-in pre-amplifier amplifies the AIS, VHF, AM/FM signals, thereby increasing the receivers' range.

**Please note:** The A015-RX is compatible with AIS receivers only, it is not designed for AIS transponders/transceivers. For AIS transponders/transceivers you will require the A015-TX.

### 2. Connections



The A015-RX has five connections:

- **Power cable:** 12V-24V DC power
- **VHF Antenna:** SO239 connector for VHF antenna
- **VHF radio:** SO239 connector for VHF radio
- **AIS:** BNC connector for the output of the AIS signal
- **FM/AM:** BNC connector for the output of the FM/AM radio signal

### 3. Installation

The A015-RX is a plug and play device. No configuration required.



**IMPORTANT: Connect the VHF antenna BEFORE connecting any other devices!**

Connecting powered devices to a Splitter before connecting the VHF antenna will damage your devices.



1. **Remove power source from all devices to be connected.**
2. **Connect the VHF antenna to the Splitter before adding any devices.**
3. After the VHF antenna is connected, connect the VHF radio, AIS receiver and FM/AM radio to the A015-RX Splitter.
4. Re-power all devices.
5. Test use checking status LEDs light up when expected.

### 4. Status LEDs

The A015-RX has three LEDs that indicate power and working status.



- **TX:** Transmitting VHF radio
- **RX:** Receiving VHF / AIS / FM/AM signals
- **PWR:** indicates power

The VHF fail-safe means that the VHF radio has full priority and will remain functional, even in the unlikely case that the Splitter would fail or lose power.

### 5. Specifications

Item	Specification
DC supply	9.0V to 35V
Average supply current	135mA
VHF and AIS frequency range	156MHz to 163MHz
AM/FM frequency range	0.5-1.6/88-108Mhz
VHF receive gain	Typical 12dB
AIS receive gain	Typical 12dB
FM/AM receive gain	Typical 10dB
Insertion loss VHF transmit paths	≤1.5dB
Max input Power from VHF port	25W when VHF antenna is connected. The antenna must be connected before the VHF radio.
FM port impedance	75 Ohms
AIS, VHF and antenna port impedance	50 Ohms
Switching time, receiver to VHF transmit	<2ms
Operating temperature	-10°C to +55°C
Storage temperature	-25°C to +85°C

## 6. Limited Warranty and Disclaimer

Quark-elec warrants this product to be free from defects in materials and manufacture for two years from the date of purchase. Quark-elec will, at its sole discretion, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts and labour. The customer is, however, responsible for any transportation costs incurred in returning the unit to Quark-Elec. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs. A returns number must be given before any unit is sent back for repair.

The above does not affect the statutory rights of the consumer.

This product is designed to aid navigation and should be used to augment normal navigational procedures and practices. It is the user's responsibility to use this product prudently. Neither Quark-, nor their distributors or dealers accept responsibility or liability either to the products user or their estate for any accident, loss, injury or damage whatsoever arising out of the use or of liability to use this product. Quark- products may be upgraded from time to time and future versions may therefore not correspond exactly with this manual. The manufacturer of this product disclaims any liability for consequences arising from omissions or inaccuracies in this manual and any other documentation provided with this product.

### Document history

Issue	Date	Changes / Comments
1.0	03-06-2020	Initial release
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For technical support and other enquiries, please go to the Quark-elec forum at <https://www.quark-elec.com/forum/> or email [info@quark-elec.com](mailto:info@quark-elec.com)

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