

# User Manual

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*AS-84*



Version 02



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### Read first:

- First of all read this manual.
- Clean the device with a slightly damp cloth.
- This device must'nt be exposed to rain, moisture.
- Do not install the device near any heat sources.
- This device must be serviced by a qualified service personnel.
- Specifications are subject to change without notice.
- BSRF is not responsible of any injuries, destruction resulting of improper usage of equipments.

## About AS-84



### Introduction :

The AS-84 is a combiner and a splitter in a small form factor. 4 inputs and 8 outputs. Wideband and tunable narrow band filter are built-in. 4 inputs allow you to do zoning, it means summing signal from antennas to cover a broader area.

### Keypoints :

- 2 antenna input pairs, selectable or summable
- Wideband and tunable narrowband filter built-in
- 12V regulated DC feed
- RF power bargraph
- Compact and rugged



### What is needed with AS-84 :

-Power source (9 -18V) and power cable (4 point push pull type)

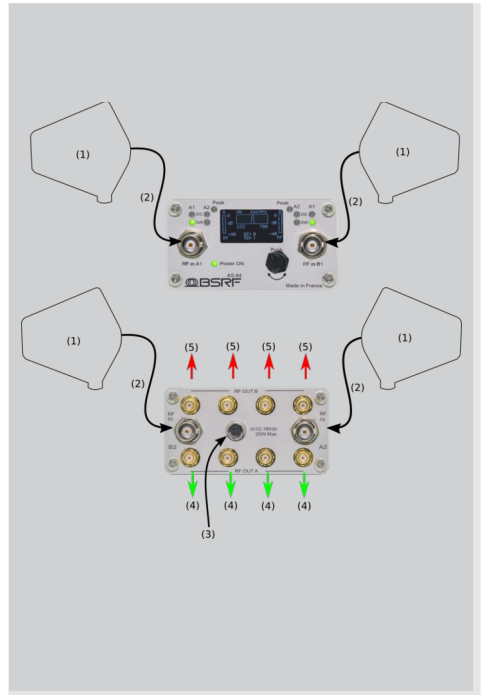
-Two 50ohms coax for antennas(BNC), coax for receivers(SMA) and SMA loads for unused ports.

### Connecting :

- Connects outputs to wireless receiver inputs (or combiner, splitter)[4/5].
- Connects inputs to antenna through coax cable[1/2].
- Connect power to DC[3].

Pinout : 1,2:GND 3,4:VIN

- Add DC feed on requested port (DC) and select the input port (1 or 2 or 1+2 sum).



### Leds :

#### Peak:

- Those leds light up when the signal exceed the RF threshold .This threshold can be set in the menu.

#### DC :

- Those leds light up when the corresponding DC feed is applied to the port. It will blink if a too much is drawn or if there is a short circuit.

#### SW :

- SW leds indicate witch input channel is selected

## Display

### Oled display :

Main screen displays (Illustration 1):

- Filter selected and frequencies
- RF bar power (-40 up to 0dBm)
- DC feed configuration
- RF input selection
- In menu set thresholds



*Illustration 1: Locked*

### Unlock :

- Press the switch for until the locker is unlocked (right bottom side of display)



*Illustration 2: DC feed selection (unlocked)*

### Filter :

- Press the switch and rotate encoder to select WB(wideband) or NB(narrowband) filter. In NB another press will allow you to tune the central frequency of the filter

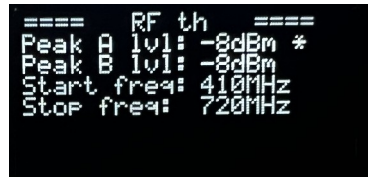
### DC feed & input selection :

- Press encoder to select DC and rotate encoder to change the DC config, do the same to change the SW config aka wich input are selected

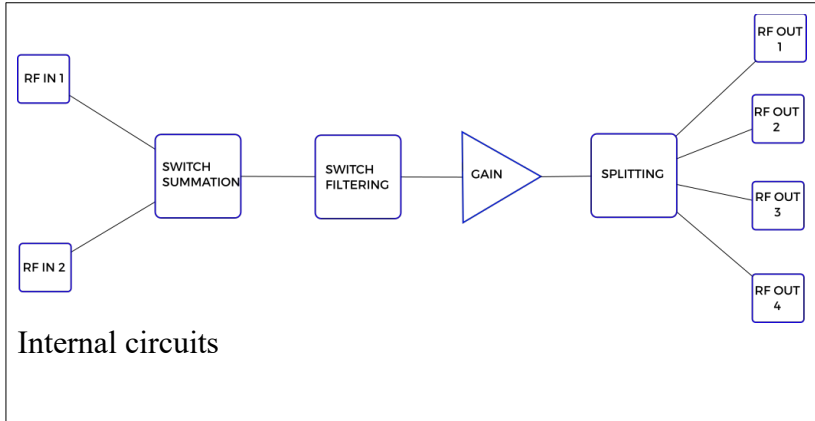
The '\*' appears next item that can be modified using the encoder.



*Illustration 3: NB filter tuning (unlocked)*



*Illustration 4: Menu (default values)*



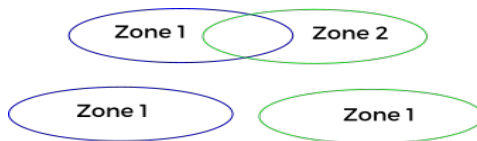
Using 4 antennas, two configuration :

-Extending zone :

area are overlapping. It means that antenna 1 and 2 receive in overlapping zone the same signal.

-Multizone :

area are not overlapping. It means that antenna 1 and 2 don't receive the signal of the other zone (or with attenuation).





## Specifications:

Wideband filter	470-700MHz	@-3dB
Narrowband filter	50 to 70MHz bandwidth	Tunable from 470 up to 740MHz (32 steps)
Gain	1dB	+/-1dB
Max RF in	+20dBm	
Noise figure	<2dB typ.	Amplifiers
A/B isolation	80dB typ.	Channel isolation
OIP3	39dBm typ.	
RF peak thresholds	-5dBm (high) -20dBm (low)	+/-1dB
DC feed	12V/200mA	12V Regulated
DC In	4 pts	(-):1&2 (+):3&4
Supply	12-18V	75mA typ. without DC feed
Dimensions	88 x 84 x 44mm	
Weight	0,25kg	

*(Subject to change without notice)*



### **Warranty:**

This 2 year limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period. During the Warranty Period, BSRF will repair or replace, at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance.

Send an email first at:

**[contact@bs-rf.com](mailto:contact@bs-rf.com)**