



BAA is wideband antenna booster especially designed to allow using long cables with broadband wireless receiver system working in 470-960MHz thanks to a very high OIP3 of 40dBm.

Operation

The BAA is powered by the receiver system through the coaxial cable attached to its output connector, and accordingly the receiver system must have the antenna feeding function.

BEWARE: BAA need 100mA @ 12V to operate and it can feed a further antenna booster up to 100mA @ 12V.

BAA housing is in ruggedized aluminum, with waterproof sealing (suitable for outdoor installations):

- 2 holes for wall-installation (M4 screw type)

Radiofrequency connectors are BNC-Female type:

- **Input connector**, to antenna. it is possible to power up a remote booster (up to 100mA). When input power is active, "INPUT DC BIAS" led is on. If there is fault on remote booster (i.e. a short circuit) then a L appear on left digit of gain display .
- **Output connector**, to receiver system. BAA is powered thru this connector (100mA + 100mA if input powering), if there is a fault (low power) a L appear on right digit of gain display .

GAIN SETUP

BAA gain can be setup in 16 steps (0÷15 dB typical) using +/- buttons.

A multi-colored (RGB) led will indicate the gain level band and also main alarms.

TECHNICAL SPECIFICATIONS

- Frequency : 470 ÷ 960 MHz (rev.4), 470 ÷ 870 MHz (previous rev.)
- Input/output impedance : 50 ohm (SWR = < 1:1.5; typ. = 1:1.4).
- Connectors : BNC-female type.
- Max Gain : 16 dB ± 1 dB
- Gain adjustment : selectable in 16 steps of 1 dB (+/- button)
- OIP3 : **+43dBm (Output 3° order Intercept Point) typ.**
- Gain flatness : ± 1 dB, in the whole working window.
- Powering thru coax : +12 V, 100mA+100mA (→ if power input activated).
- Size (L x H x P) : 120mm x 39mm x 24mm

Typical attenuation of most used coax. cables (for length = 100 m):

Cable type	Diameter (mm)	Attenuation @ 400 MHz	Attenuation @ 900 MHz
RG 58 C/U	4.95	32 dB	52 dB
RG 213 /U	10.3	13 dB	22 dB
RG 218 /U	22.1	7 dB	14 dB
Cellflex - ¼" foam dielectric	8.8	8.4 dB	12.8 dB

BOOSTER MODULE SETUP

- 1 2 digits LED display with booster **gain indication [dB]**.
Brightness can be adjusted through the user menu.
- 2 Signaling LED, multicolor:
 - white* : when turning-on indicates the booster start up
 - yellow* : booster bypassed, antenna becomes passive
 - green* : active booster with gain between 1 ÷ 8 dB
 - blue* : active booster with gain between 9 ÷ Max Gain
 - red* : fast blinking, powering insufficient (lower than ≈ 9,5Vdc)
- 3 + / - , adjusting buttons
- 4 MENU/SAVE, selection button allows to edit the following parameters (after 5 second gain indication is restored by default).



BOOSTER GAIN SETUP

, from normal indication:

- Push **MENU/SAVE** to enter gain edit mode,
- Then edit the gain with + / - ,
- Push again **MENU/SAVE** for confirm or wait 5 sec to return without saving.

It is possible to setup the gain between 1 ÷ 15/16 dB in steps of 1dB. Decreasing gain to the lowest value, **“bP”** is displayed: booster is bypassed and antenna operates in a passive way. Confirm the new setup value within 5 sec by pressing one more time on the MENU/SAVE button. Without any confirmation within 5 sec. the modification is cancelled.

DISPLAY BRIGHTNESS

 (first digit “d”, second digit value from 0 to 8)

- Push **twice MENU/SAVE** to enter brightness edit mode,
- Then setup your desired brightness with + / - ,
- Push again **MENU/SAVE** for confirm or wait 5 sec to return without saving.

PASS THROUGH SETUP

- Push **3 times MENU/SAVE** to enter brightness edit mode,
- Then setup your pass through with + / - :
- “b0” is no 12V pass through
- “b1” is 12V pass through Enabled.
- Push again **MENU/SAVE** for confirm or wait 5 sec to return without saving.



ON/ALARM BLINK IN RED TO INDICATE LOW VOLTAGE ERROR → FEEDING VOLTAGE UNDER 10V:

- CHECK YOUR FEEDING CABLE
- CHECK YOUR ANTENNA (TAKE OUT THE INPUT CONNECTOR AND CHECK)
- CHECK YOUR FEEDING DEVICE (SPLITTER, RECEIVER) TO BE ABLE TO SUPPLY ENOUGH CURRENT (100mV @ 12V)