

INSTRUCTION MANUAL

**TRIPLE FILTERED (TETRA, 4G & 5G)
Group A/B Masthead Combiner**

BLACOM21AB



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Introduction

Product summary

The Blake Group A/B Masthead Combiner is high-performance and triple-filtered, designed to merge signals from Group A and Group B transmitters. This masthead combiner is useful in applications where there are both Group A and Group B transmitters required, allowing you to receive TV channels from both frequency groups without the need for multiple aerial systems. By integrating advanced filtering technology, it reduces interference from TETRA, 4G, and 5G signals, ensuring clear reception of TV channels from transmitters in both frequency groups.

Features

- Dual Frequency Combination: Combines signals from two frequency ranges (470-606MHz for Group A and 616-694MHz for Group B) for seamless TV reception.
- Advanced Signal Filtering: Triple-filtered for TETRA, 4G, and 5G signals, reducing interference.
- Switchable Power Pass: Supports masthead amplifiers on both inputs for enhanced signal strength.
- Robust Weatherproof Design: Durable casing with foam-sealed cable glands, a 90° wide-opening door, heavy-duty ties, and an earth tag for outdoor use.
- F-Type Connectors: Ensures stable and reliable connections.
- Flexible Mounting: Compatible with mast and wall installations, featuring sturdy wall-mountable lugs with standoff.
- Low Signal Loss: Minimum loss 2dB on Group A and Group B frequencies.
- High Out-of-Band Rejection: 45dB attenuation above 702MHz to reduce interference.

Safety Instructions

Installation Precautions

- Ensure the mounting location is stable and secure.
- Avoid installation near high-voltage power lines or electrical hazards.
- Tighten all connections properly.

Working at Height

- Use safety gear like harnesses, helmets, and non-slip footwear.
- Ensure ladders/scaffolds are stable, in good condition, and on level ground.
- Avoid working during high winds, rain, or adverse weather.
- Secure tools/components to prevent falling.
- Follow local height safety regulations.

Electrical Safety

- Disconnect power before installation or maintenance.
- Ground the device using the earth tag to avoid shock if required.

Weatherproofing

- Keep the combiner's case closed for weatherproofing.
- Do not expose the device to water jets or submersion.

Cable Management

- Use F-type connectors for connections.
- Route cables to avoid sharp edges, moving parts, or damage.
- Verify secure connections for optimal signal performance.

General Usage

- Do not attempt to modify or repair the combiner.
- Inspect for damage regularly, especially after severe weather.

Technical Specifications

BLACOM21AB	470-606MHz, UHF-L (Group A)	616-694MHz, UHF-H (Group B)
Insertion Loss	3dB (typ)	
Return Loss	12dB (typ)	
DC Power Pass	12V 200mA (Switchable Power)	
Impedance	75 ohm	
Dimensions	83x97x43mm	
Weight	150g	

Performance data given are typical unless otherwise stated. We reserve the right to change product designs and specifications without prior notice.

Step-by-step Instructions

Fig. 1 - Combining Aerials

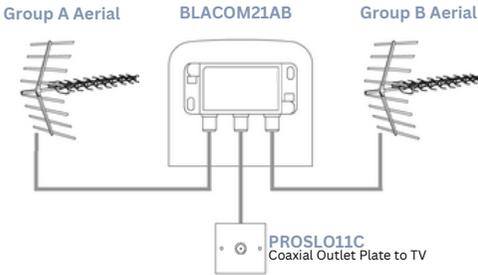


Fig. 2 - Combining Aerials & Using Distribution Amplifier

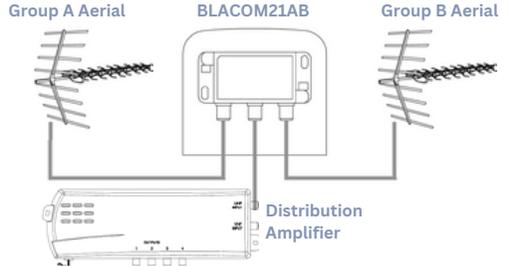


Fig. 3 - Combining Aerials & Using 1 Masthead Amplifier

If you are using 2 Masthead Amplifiers, please refer to Fig. 4

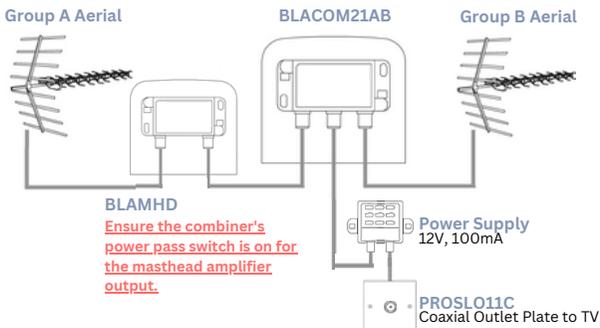
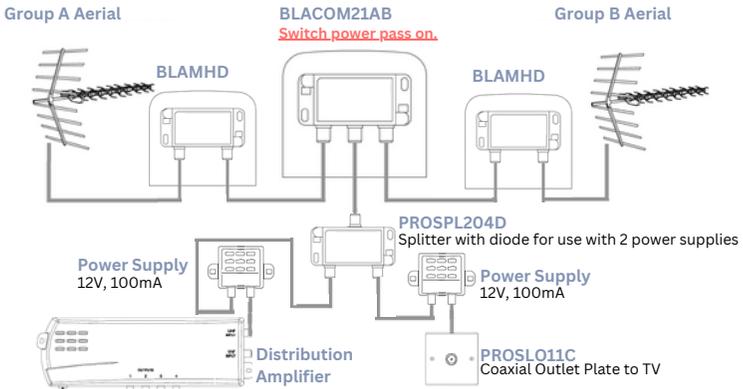


Fig. 4 - Combining Aerials & Using 2 Masthead Amplifiers



Step-by-step Instructions

Fixing:

The unit may be fixed to a mast using the cable tie supplied, or screwed to a wall or other flat surface through the two fixing holes provided in the rear part of the moulded cover.

The cable tie fixing is intended to support the weight of the combiner only; cables should be taped to the mast at intervals of approximately 400mm to ensure that their weight is adequately supported.

For indoor use the diecast module can be unclipped and mounted directly if desired. Do not leave a unit supported only by its cabling.

Signal Connections:

To preserve RF screening integrity the signal connections to the power unit should be made using good quality coaxial cable and connectors. This is particularly important with Digital Terrestrial TV (DTT) to minimise the ingress of impulsive electrical interference from home appliances.

System equipotential bonding:

Bonding (earth) terminals are provided on the casting for use where BS EN 60728-11 compliance is necessary.

Warranty & Compliance

BLACOM21AB



Guarantee statement

The BLACOM21AB is built for exceptional performance and reliability.

This guarantee covers failure of your product resulting from manufacturing defect within a period of 5 years from the date of supply to the end-user. This guarantee does not cover damage to the product caused by abuse, tampering, defective installation or natural causes such as lightning discharge. Repair or attempted repair, other than by the manufacturer, will render this guarantee void. This guarantee does not affect a consumer's statutory rights.