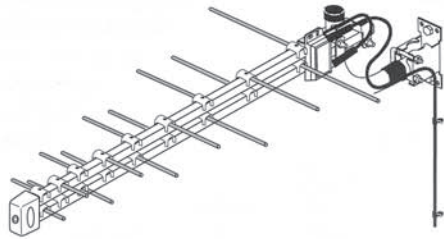


# 27885LAB Megaboost TV Aerial

**Labgear**



## PRODUCT FEATURES AND APPLICATIONS

- Compact high performance amplified TV aerial – the small aerial with the BIG performance.
- Ideal for both analogue and digital TV reception.
- Log-periodic antenna design for consistent performance across the whole UHF TV band.
- Excellent front-to-back ratio minimises interference and 'ghosting' on analogue reception.
- Suitable for all UK TV transmitters and channels (UHF group W). 'Future-proof' in the event of transmitter channel changes.

The Megaboost aerial is suitable for indoor (loft) or outdoor use. It is intended for mounting on to a 1" to 2" diameter pole and is supplied with a mounting kit for fixing to a suitable vertical or horizontal surface such as a wall or a fascia board.

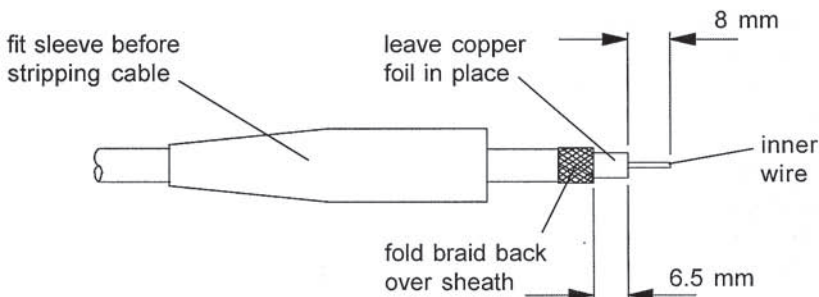
This aerial is suitable for use in almost all areas of the UK, including 'fringe' areas of low signal strength. *It is not suitable for use in areas of extremely high signal strength, e.g. where a local high power main TV transmitter is clearly visible and is only a few miles away. In these circumstances a lower gain passive aerial should be used.*

## INSTALLATION INSTRUCTIONS

### 1. Prepare and connect the cable

Fit the tapered waterproofing sleeve over the cable **before** preparing the end as shown in *Fig. 1*. If the sleeve is tight on the cable apply a little silicone grease to act as a lubricant.

Fold the braid wires of the cable back over the sheath and fit one of the screw-on type-F plugs – *Fig. 2*. The inner wire of the cable should protrude about 2 mm (not critical) beyond the nut end of the plug.



*Fig.1 – Cable preparation and stripping details*

To connect the cable to the aerial, remove the dust cap from the amplifier output socket. Offer up the cable, with 'F' plug attached, ensuring that its inner wire enters the socket's centre contact. Screw the nut part of the plug onto the the connector body and tighten with a spanner (11 mm). **Do not leave this connection finger tight as this may result in unreliable reception.** Finally, slide the waterproofing sleeve as far as it will go over the connector body, so that it butts up against the amplifier housing – Fig. 3.

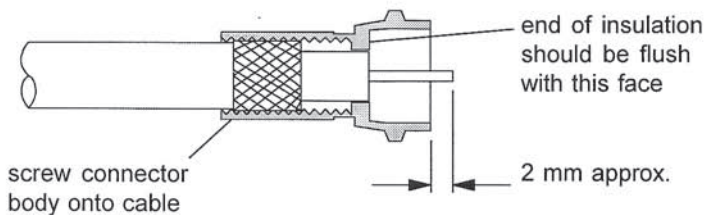


Fig.2 – Fitting the 'F' connector

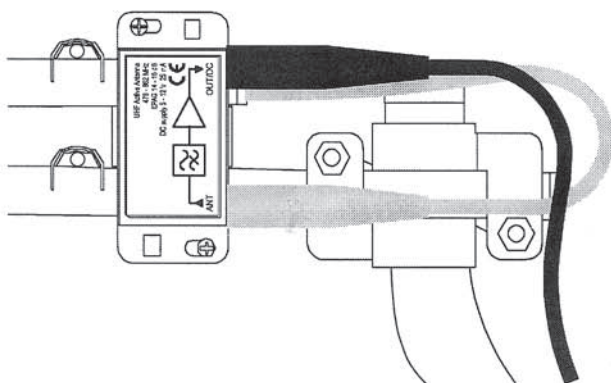


Fig.3 – Completed cable connection to the aerial

## 2. Fix the mounting bracket

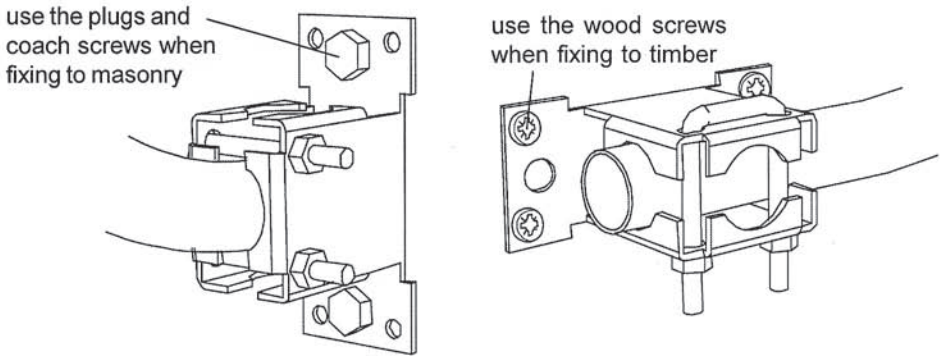
**Safety note: Do not undertake work outdoors at height unless you are competent in the use of ladders and other access equipment. Always use correct equipment and observe appropriate safety precautions.**

Select a mounting position for the aerial. The position should be as high as possible and chosen to give a clear 'view' towards the transmitter. Avoid looking through trees and/or other buildings if possible. Loft mounting will degrade reception performance considerably and is only recommended for analogue reception in strong signal areas. Digital reception with a loft aerial may be affected by electrical interference from mains wiring.

Fix the mounting bracket to a suitable vertical surface such as a masonry wall, fascia board or loft timber – Fig. 4. For fixing to masonry, use the two large wall plugs and coach screws supplied (10 mm drill size required). For fixing to a timber surface use the four woodscrews supplied.

*When fixing to brickwork, do not fix the bracket higher than 300mm below the top of a wall. With standard brickwork this means fixing on the 5th course of bricks down from the top of the wall. Always drill and plug bricks, not the mortar courses. Do not use the mounting bracket*

supplied in conjunction with a pole or mast longer than the one supplied. If a longer mast is required, wall brackets or a chimney lashing kit (not supplied) should be used.



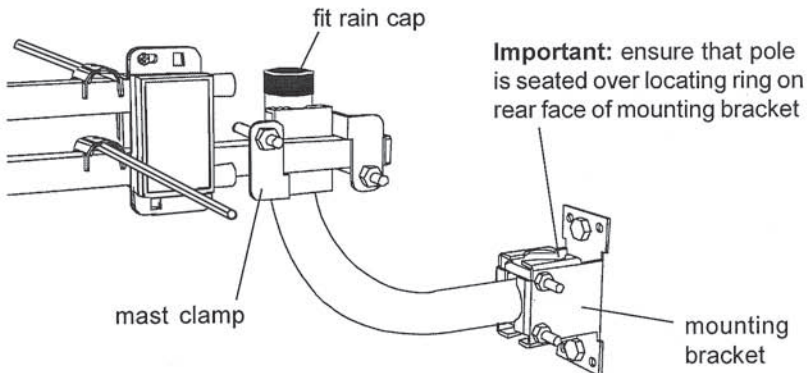
*Fig.4 – Fixing the mounting bracket; the diagram shows two ways of using the bracket, and two fixing methods; fitting the pole as shown on the right will allow mounting on a horizontal surface.*

### 3. Mount the aerial

The aerial and mounting pole can now be attached to the mounting bracket. Usually, it will be found more convenient to fix the aerial to the pole first (this can be done at ground level), and then to attach the pole to the bracket.

The aerial is attached to the pole using the mast clamp supplied – Fig 5. The aerial elements must be aligned either horizontally or vertically to suit the polarisation of the local transmitter. (If in doubt look at aerials on neighbouring roofs. The majority of installations require horizontal polarisation). Do not fully tighten the clamp nuts at this stage.

Insert the pole into the mounting bracket and tighten the the U-bolt nuts (10 mm spanner). Ensure that the pole is vertical and that the aerial is pointing approximately in the direction of the transmitter – Figs 6 & 7.



*Fig.5 – Aerial and mounting pole fixed in the mounting bracket (horizontal polarisation)*

When using the mounting bracket as shown in Fig. 5, it is essential to ensure that the mounting pole is pushed fully home into the body of the bracket so that its end is securely located over the ring around the hole at the back of the bracket.

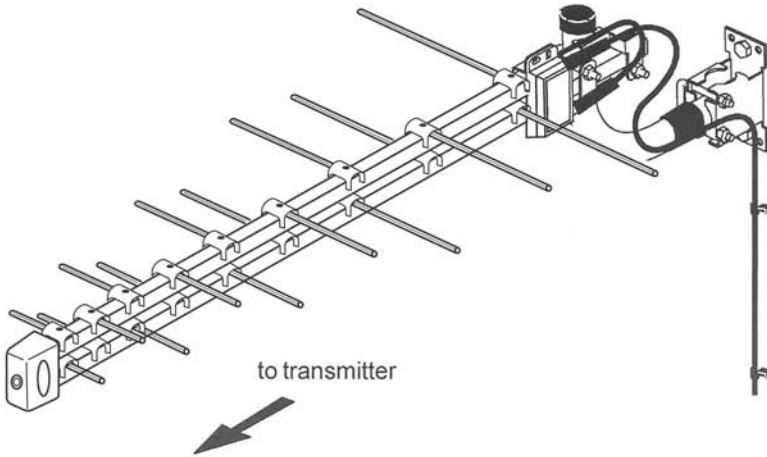


Fig.6 – Completed Megaboost aerial installation for horizontally polarised transmissions

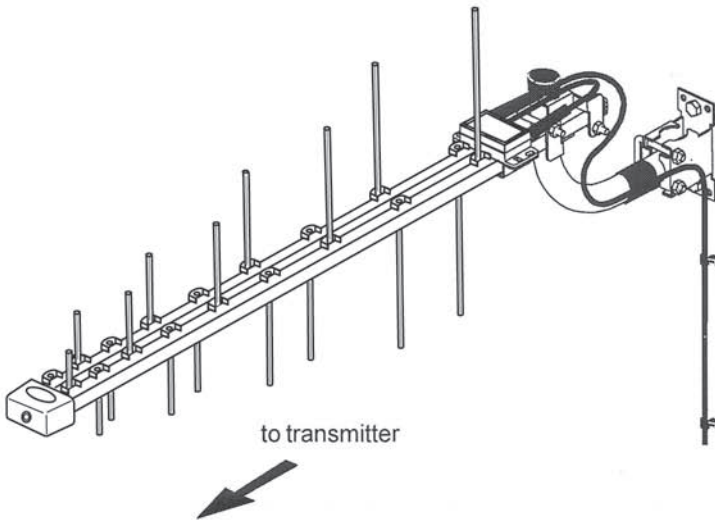


Fig.7 – Completed Megaboost aerial installation for vertically polarised transmissions

#### 4. Run the cable

Run and clip the cable tidily from the aerial to your TV equipment location. The first part of the cable run should be secured to the mounting pole with PVC insulating tape (not supplied) as shown in Figs 6 & 7. Avoid sharp bends in the cable run and avoid running the cable near to mains wiring.

#### 5. Install and connect the power unit

The power unit provides 12 V DC power for the aerial's amplifier. It should be installed close to the TV or digital receiver location, so that the the flylead supplied will reach the relevant aerial socket.

Fix the power unit to a wall, skirting board or similar hard surface. A ventilation gap of at least 25mm should be left around the front and all sides of the unit.

**Before installing the power unit read the safety instructions on page 7.**

**Do not leave the power unit resting on a carpet.**

**Do not leave the power unit where it may be smothered with curtains or other fabrics.**

Cut the aerial cable to length, if necessary and fit the remaining screw-on 'F' type plug (as Step 1 except that no sleeve is used at this end of the cable). Then connect the cable to the IN socket of the power unit and connect the flylead between the TV socket and the aerial input of your receiving equipment. Both 'F' connectors should be tightened with a spanner (11mm).

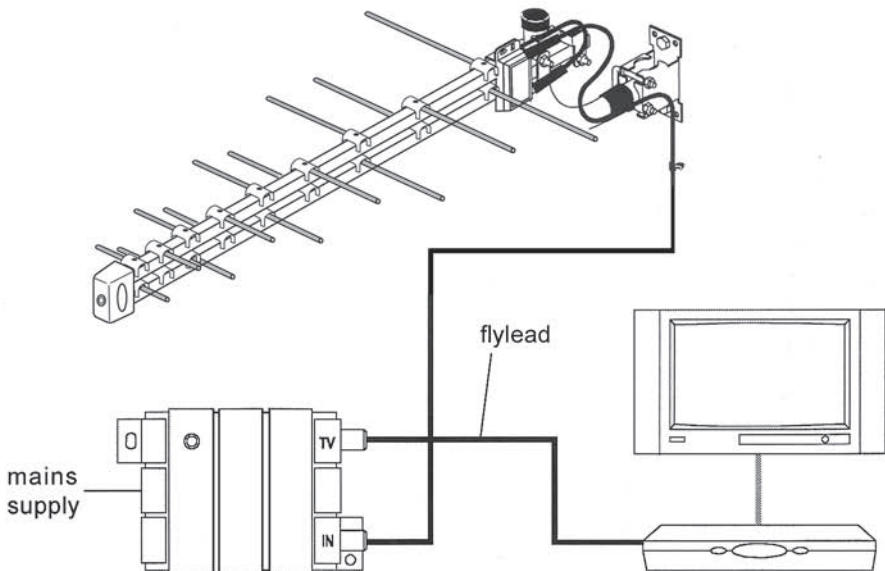


Fig.8 – Power unit and basic receiver connections

## 6. Testing and adjustment

Plug the power unit's supply lead into a mains socket and switch on. Your 'Megaboost' aerial system should now be working. Check reception on all analogue and digital channels.

Final adjustment to the aerial pointing can now be made. Most digital receivers have a signal strength and quality display screen and this can be used with the aid of a helper, to point the aerial for best reception. On completion, fully tighten the nuts on the aerial mast clamp and ensure that all other fixings are secure.

### RECEPTION HINTS AND TROUBLESHOOTING

*See also the recommendations for the aerial mounting position in Step 2 of the installation procedure.*

If it is not possible to get satisfactory reception on all channels, try moving the aerial to a different part of the building.

Height is usually the single greatest factor affecting the strength of signal received by an aerial.

Some areas are covered by two or more transmitters. Experiment to find which gives you best reception.

Digital reception can be affected by interference from sparking switches and thermostats etc. To eliminate this mount the aerial outdoors and always use the cable supplied, or a cable of equivalent quality. If a wall outlet is used it should be fully screened.

### Alternative power unit location and signal distribution

The power unit can be installed at any point in the cable run between the aerial and the receiver, but no other system components should be connected between the power unit and the aerial. If you wish to distribute the aerial signal to more than one receiver, it is convenient to install the power unit in the loft. Then use a 2-, 3- or 4-way passive splitter after the power unit to feed up to four receiver locations. Unless very long cable runs are involved, do not use distribution amplifiers (boosters) with the 'Megaboost' (excessive system gain will lead to signal overload problems).

### Power unit short-circuit protection

The power unit is protected against output short-circuit by a PTC device. Should this protection operate, the power indicator LED colour will change from green to red to indicate a fault condition. The most likely cause of this will be a stray braid wire causing a short in one of the 'F' connectors. After clearing the fault, reset the protection by disconnecting the power unit from the mains and allowing at least one minute for cooling before trying again.

#### **Reception Advice Services**

BBC Reception Advice 08709 100123

e-mail: [reception@bbc.co.uk](mailto:reception@bbc.co.uk)

Website: <http://www.bbc.co.uk/reception/>

Ofcom Engineering information 01962 848647

Website: [http://www.ofcom.org.uk/static/reception\\_advice/index.asp](http://www.ofcom.org.uk/static/reception_advice/index.asp)

# Power Unit

## General Safety Precautions

### TO PREVENT OVERHEATING

The recommended clearances and other precautions given in the installation section of these instructions must be observed to prevent overheating. In addition, the unit should not be fixed where it is likely to become smothered by curtains, or other fabrics, etc., or by thermal insulation materials in a roof space or similar building void. The unit should not be left resting on a carpet.

### OTHER PRECAUTIONS

This appliance is not waterproof. It is for indoor use only and must not be fixed where it could be exposed to dripping or splashing water. Objects containing liquids should not be placed on or near the appliance.

To prevent risk of fire, no object with a naked flame should be placed on or near the appliance, or the wiring to it.

### FITTED MAINS PLUG

This appliance is supplied with a standard fused plug already fitted. If this is not suitable, refer to the instructions below. In the unlikely event that you need to change the fuse in this plug, a 3Amp fuse to 851362 carrying the ASTA or BSI approval mark must be used. Always re-fit the plastic fuse carrier when replacing the fuse.

### CHANGING THE PLUG

If the fitted mains plug is not suitable for the socket outlets in use, it should be cut off and an appropriate new plug fitted.

**Wiring the New Plug:** Any instructions supplied with the new plug should be followed (these may state how much insulation to remove from the wires in the mains cord). The brown wire must be connected to the live (L) terminal of the plug and the blue wire to the neutral (N) terminal. Neither wire should be connected to the earth (E) terminal of a 3-pin plug (this appliance does not require an earth connection). Ensure that the cord grip in the plug is correctly used and clamps the sheath of the cord firmly.

**Fuse Rating:** If the new plug is a fused type, the fuse fitted should be rated at not more than 3Amp.

**Caution:** The old plug should be destroyed promptly since it would be dangerous if plugged into a live socket.

## Contents of Kit

Amplified aerial with mast clamp  
Mounting pole (mast) and bracket  
High quality coaxial down lead cable - 10 metres  
Type-F coaxial plugs, screw-on type - 2  
Mains power unit and F connector to coax plug flylead  
Sundry fittings and fixings pack  
Instruction leaflet

## Technical data

Antenna		
Operating freq. range	470.. 862MHz	
Antenna gain	6 dBd approx.	
Amplifier noise figure	< 2dB	
Amplifier gain	16dB	
Output connector	Type-F	IEC 60169-24
Amp. power requirement	5 .. 12V DC at 25mA approx.	Limits 4.8.. 13V
Power unit		
Signal frequency range	44.. 862MHz	
DC output	12V DC at 100 mA max.	Voltage tolerance $\pm 5\%$
Short-circuit protection	Indefinite, with warning	
Signal insertion loss	0.5dB	
Mains power requirement	230V AC 50Hz at < 3 W	Fitted mains plug to BS 1363
Power indicator	Green LED - turns red if output is shorted	
Operating temp. range	0.. 40°C	

### Guarantee

Your Megaboost aerial is guaranteed against faulty components or poor workmanship for a period of one year from the date of supply.

This guarantee does not cover accidental or malicious damage (including damage from natural causes such as lightning) and will be invalidated by installation or use other than in accordance with these instructions, repair or attempted repair other than by the manufacturer, or opening or removal of the case.

This does not affect your statutory rights as a consumer.

Labgear reserves the right to modify their designs or specifications, in the light of future developments, without prior notice. Performance figures quoted are typical and subject to normal manufacturing tolerances.



Waste electrical and electronic products must not be disposed of with household waste.

Please recycle where facilities exist.

Check with your Local Authority or Retailer for recycling advice.



# Labgear

**For further information contact:**

**Customer Careline: 08457 573 479**

Local rate UK number, Monday to Friday 9am-5pm

**Website:** <http://www.labgear.co.uk>