Technical data

proAMP108U	
Signal frequency range	470 .. 862 MHz
Gain	3 dB
Noise figure, typical and (max.)	4 (5) dB
Output capability[1]	83 dBµV
Maximum recommended input level[1]	80 dBµV
Isolation between outputs	≥ 16 dB
Input filter characteristics	Rejection (relative to passband gain): ≥ 26 dB for all frequencies ≤ 400 MHz ≥ 8 dB for frequencies ≥ 930 MHz, ≥ 23 dB above 970 MHz
DC power requirement	5 .. 15 V DC[2] at 25 mA
Signal connector type	Type-F (IEC 60169-24)
Operating temperature range	-10 .. +40 °C
EMC standard	BS EN 50083-2: 2001

Notes

1. Signal handling capability is given for 5 analogue TV channels plus up to 6 DTT multiplexes at ≤ -14 dB relative level.
2. Limiting values 4.8 .. 18 V (powered via DC power port or any output).

* "Sky" is registered trade mark of British Sky Broadcasting Group PLC.
†"Freeview" is a registered trade mark of DTV Services Ltd.

2-Year Guarantee

This guarantee covers failure of your *PRO*ception product resulting from manufacturing defect within a period of 2 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.

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

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*PRO*ception

proAMP108U
Compact 8-way UHF amplifier

INSTALLATION INSTRUCTIONS

This addition to the *PRO*ception range is one of the smallest 8-way UHF distribution amplifiers available. The product is ideal for providing up to eight wired TV outlet points from a single aerial in preparation for 'Digital Switchover.' The product is extremely simple to install and can be powered either locally, using an AC/DC power adaptor, or remotely, using a *PRO*ception power unit. It can also be powered remotely from some types of digital receiver box ('Freeview† box').

Features

- Flexible powering: 5 - 15 V, local or remote.
- Input filtered above and below the UHF TV band to reduce risk of interference problems from CB, private mobile radio, TETRA, mobile phones, etc.
- Good noise figure and output capability.
- 'F' connectors for easy connection and good system screening.
- Suitable for both digital and analogue applications, fully DTT-compatible.

Application guide

See application example diagrams on page 2.

This is a UHF-only amplifier and cannot be used to distribute VHF radio signals (FM or DAB). *PRO*ception offers a range of multi-input amplifiers for such applications – please see our Web site or literature for details.

Aerial signal distribution

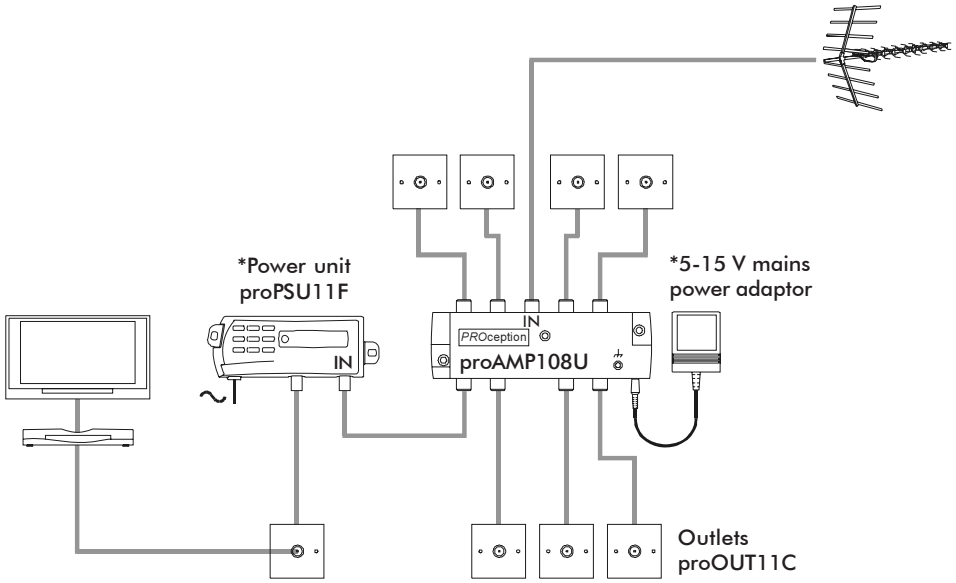
Fig. 1 shows the most common application, where the signal from the TV aerial is distributed directly to up to eight outlet points. For satisfactory reception the aerial should provide good signals to the input of the amplifier. This product operates as an 'active splitter' and distributes the signal from a common aerial to a number of points without deterioration. Its relatively low forward gain (3 dB) is sufficient to compensate for additional downlead cable losses in most systems, whilst avoiding intermodulation and other overload problems which easily result from the use of amplifiers with excessive gain. In most applications this amplifier will not improve a poor aerial signal.

Enhanced signal distribution

Fig. 2 shows an alternative configuration where the aerial signal is 'looped' through set-top box equipment (e.g. VCR, PVR, satellite receiver, etc.) before connection to the input of the amplifier. This allows the output signals from the set-top equipment to be viewed on all TVs connected to the amplifier outputs, in addition to the off-air aerial signals. For this to work each item of equipment concerned must contain a modulator to provide a UHF output (note that these outputs are analogue TV signals but do not usually include NICAM stereo audio). The modulator output channel numbers must be carefully selected to avoid interference, and the remote TVs will need to be tuned-in to the required set-top box outputs. The diagram shows, by way of example, a Sky* satellite receiver with two RF outputs, one feeding the local TV and the other for the amplifier. A separate 2-way splitter will be required if only a single output is available from the final item in the loop-through chain.

The proAMP108U does not provide a return path for wired remote control of remote set-top equipment. If this facility is required, alternative *PRO*ception products should be considered, or a separate wireless remote control extender system can be employed.

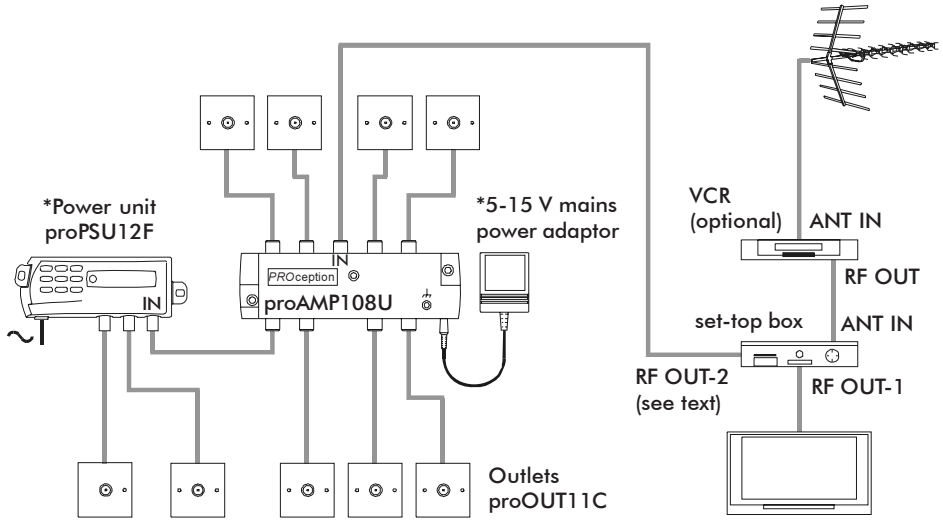
Fig.1 proAMP108U – basic aerial amplifier installation.



*alternative power supply options

Fig.2 proAMP108U – application with distribution of set-top box outputs and showing (optional) use of 2-way power unit.

Note: dish and SCART connections omitted for clarity.



*alternative power supply options

Powering options

Power can be supplied to the amplifier by any of the following three options:

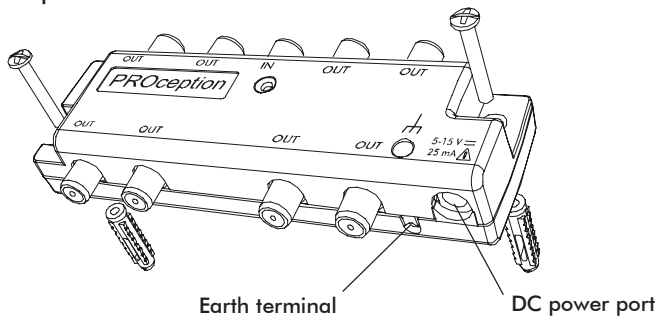
- a *PRO*ception proPSU11F or proPSU12F 12 V power unit connected in any of the output lines. (Use of the proPSU12F 2-way power unit enables an extra outlet point to be installed.)
- a local AC/DC power adaptor capable of providing 5 - 15 V at 25 mA (such as the *PRO*ception proPSA123) connected to the DC power port. The adaptor need not be regulated and needs to have a standard 2.1 mm DC connector with the correct polarity (centre pin +ve);
- one or more DVB-T (Freeview†) receiver(s) of a type which can provide 5 V DC power from the antenna socket. A separate power unit will not be required if this type of receiver is in use on any one or more of the outputs, provided that one can be left connected continuously to the mains supply. The power supply will need to be activated using the receiver's setup menu (refer to receiver instructions).

A green LED indicator on the amplifier confirms that power is being received.

Location and fixing

Choose a location for the amplifier which is dry and not subject to prolonged ambient temperature conditions of less than -10 °C or more than + 40 °C. The unit should be fixed as illustrated in Figure 3.

Fig.3 Fixing the amplifier.



Signal connections

To preserve RF screening integrity the signal connections to the amplifier should be made using good quality coaxial cable and connectors. This is particularly important with DTT to minimise the ingress of impulsive electrical interference. The use of cable 'benchmarked' under the CAI scheme is recommended.

Crimp 'F' connectors, used in accordance with the manufacturer's instructions, will give the best results. The importance of achieving sound braid connections cannot be over-stressed. Connectors should be tightened with a spanner, not left finger-tight.

Mains power supply

Any fixed wiring installed to supply power for this amplifier should comply with BS 7671 (IEE wiring regulations) and, where relevant, Part P of the building regulations.

System equipotential bonding

A bonding terminal is provided on the amplifier for use where necessary (see Fig. 3). Distribution systems supplying signals to more than one household should comply with the safety requirements of BS EN 60728-11. This effectively requires earthed equipotential bonding of the system. (The use of isolated outlet plates is no longer recommended since they compromise screening integrity and allow ingress of interference.)