Power units	proPSU11F Mk 2	proPSU12F
Number of outputs	1	2
Signal frequency range	5 .. 862 MHz	47 .. 862 MHz
Signal insertion loss	≤ 0.5 dB	≤ 4 dB
Isolation between outputs	–	20 dB
Output voltage/current	+12 V regulated DC (± 0.6 V) at 100 mA maximum	
Output protection	Withstands indefinite output short-circuit without damage	
Mains power requirement	230 V 50 Hz at 3 W (4 VA)	
Power and status indicator	2-colour LED: green-normal, red-s/c fault	
Operating temperature range	-10 .. +40 °C	
Standards compliance	Safety: BS EN 60065:2002; EMC: 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. Through-power to the input is not provided (the input is DC-grounded).

Power Unit Safety Instructions

OVERHEATING

This power unit is intended for use in moderate climates only. It should not be used in tropical regions. The recommended ventilation clearances and other precautions given in the relevant section of this instruction leaflet should be observed to prevent overheating. No unit should be fixed where it is likely to become smothered by soft furnishing fabrics such as curtains, or by thermal insulation material in a roof space or building void. Mains powered equipment should not be left resting on a carpet.

WATER AND FIRE RISKS

These power units are not waterproof. They are intended for indoor use only and must not be fixed where they could be exposed to dripping or splashing water. Objects containing liquids should not be placed on or near a power unit. To prevent risk of fire, no object with a naked flame should be placed on or near a power unit, or its associated wiring.

MAINS PLUG AND DISCONNECTION FROM THE SUPPLY

Each power unit is supplied with a standard fused plug fitted. If this is unsuitable, refer to the instructions below. If you need to change the fuse in the fitted plug, a 3 Amp fuse to BS 1362 carrying the ASTA or BSI approval mark must be used. Always replace the plastic fuse carrier when renewing the fuse. The plug (or other means of disconnection from the supply, if used) should remain readily accessible for operation when necessary. The LED power indicator on this equipment should not be regarded as providing reliable indication of supply disconnection.

CHANGING THE PLUG

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

Wiring the New Plug: Instructions supplied with the new plug should be followed. 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 (the unit 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 3 Amp.

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

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

proILA11KIT1F
proILA11KIT2F

'Digi-Amp' In-line Amplifier Kits

INSTALLATION INSTRUCTIONS

These versatile Digi-Amp™ kits are ideal for improving both digital and analogue terrestrial TV reception, and/or feeding two TV outlet points from a single aerial. They are particularly suited to improving an existing aerial installation where the signals are too weak, leading to noise ('snow') on analogue reception and picture break-up on digital.

The use of a separate power unit allows the amplifier to be installed close to the aerial, where it will provide the greatest improvement to a weak signal, without the need for a local mains supply.

Product features

- Amplifier covers the UHF TV band 470 – 862 MHz, suitable for all UK TV transmissions.
- Moderate gain (approx. 12 dB) with low noise figure and excellent signal handling capability.
- Excellent input filtering below 470 MHz attenuates TETRA signals and other potential interference sources.
- 12 V line-powered via the output connector, with LED power indicator to verify correct power connection.
- Suitable for use as a line-extender amplifier for driving long cable runs to remote outlet points.

Application notes

Examples of typical applications are shown in Figs. 1 – 3.

Fig. 1 shows the simplest 'signal booster' application using only parts supplied in the proILA11KIT1F 1-way kit (except aerial and cable). Fig. 2 shows a 2-point TV installation using the proILA11KIT2F 2-way kit, enhanced with outlet plates for a professional installation. Fig. 3 shows how signals from a VHF radio aerial can be added to the system by using an additional diplexer.

Fig.1 – Basic 1-way kit installation

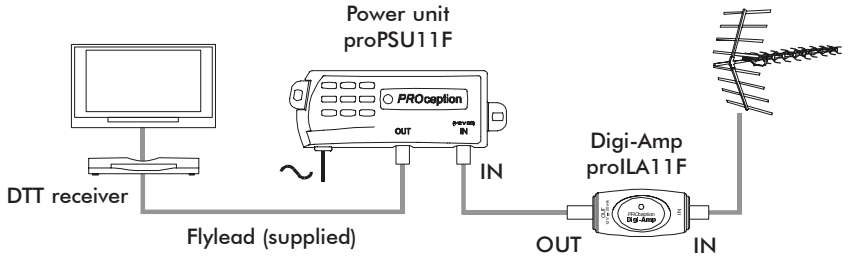
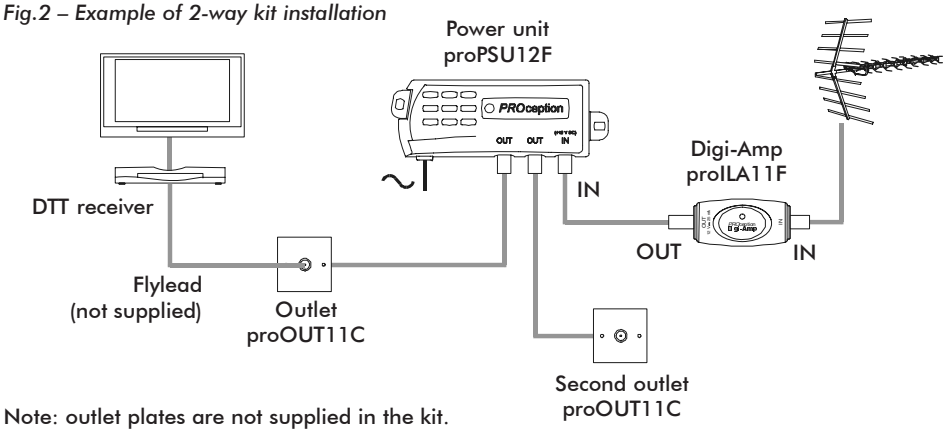
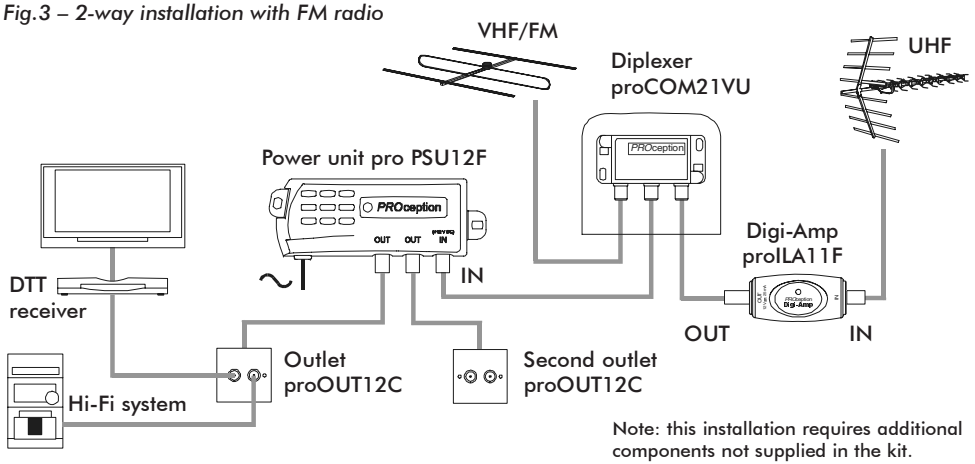


Fig.2 – Example of 2-way kit installation



Note: outlet plates are not supplied in the kit.

Fig.3 – 2-way installation with FM radio



Note: this installation requires additional components not supplied in the kit.

Outlet plates

The use of outlet plates, as shown in Figs. 2 and 3, is entirely optional, but allows a more professional standard of finish to be achieved. For satisfactory digital TV reception it is desirable that all outlet plates used in the system are of the fully-screened type, complying with EN 50083-2.

Note that any outlet plate installed between the power unit and amplifier **must** be non-isolated, otherwise power will not reach the amplifier.

Flyleads

The flylead supplied in each kit is suitable for direct connection between the power unit and a TV receiver. Where outlet plates are used, 'IEC' to 'IEC' flyleads (not supplied) will be required. For satisfactory digital TV reception, all flyleads used should be overall-screened types complying with EN 60966-2-5.

Installation notes

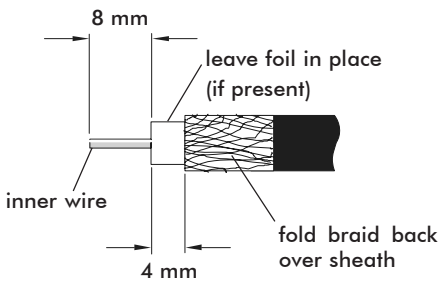
Signal connections

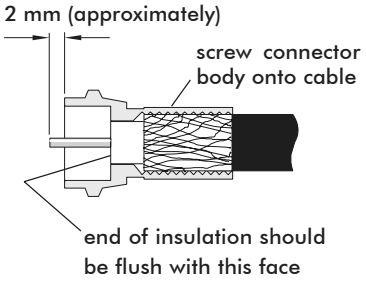
All signal connections to the amplifier and power unit require Type-F connectors. For convenience, screw-on 'F' connectors suitable for the majority of TV cables are supplied in the kits. Correct fitting of these connectors is shown in Fig. 4. When fitting connectors it is essential to ensure that sound braid connections are achieved. Poor or unreliable braid connections will degrade RF screening integrity and may allow ingress of impulsive electrical interference which can degrade digital TV reception. 'F' connectors should be tightened with a spanner, not left finger tight.

Where new cabling needs to be installed, the use of cable 'benchmarked' under the CAI scheme is strongly recommended.

Fig.4 – Fitting screw-on 'F' connector

Prepare the cable end and fit the screw-on 'Type F' plug as shown in the diagrams below. (The inner wire of the cable should extend slightly beyond the end of the plug.)





Amplifier location

The amplifier is suitable for use in a dry indoor environment only, unless mounted in a suitable waterproof enclosure. Precautions should be taken where necessary to ensure that the amplifier is not affected by condensation. The amplifier may be installed in-line on a coaxial cable run, with its weight supported by the cabling. Note that the weight of a vertical cable drop should not be supported by the amplifier or its 'F' connectors – cables should always be supported by the use of cable clips or other suitable means. The amplifier location should allow visibility of the LED power indicator, and should preferably remain accessible for maintenance. When installing the amplifier in a roof space or similar building void, ensure that it is not left resting on or covered by thermal insulation material.

Fixing the power unit

Fix the power unit to a sound vertical surface such as a wall, skirting board, roof timber or equipment mounting board. Ventilation gaps of at least 50 mm should be left around the front and all sides of the unit. More clearance will be required below the unit to allow access for the signal cables.

Do not leave the power unit resting on a carpet or install it where it may become smothered with curtains or other soft furnishing fabrics. When installing the power unit in a roof space ensure that it will not come into contact with thermal insulation material.

Mains supply connection and safety notes

The power supply unit is supplied with a fitted mains plug and may be plugged directly into a 13 A (BS 1363) socket outlet. If socket outlets of a different type are in use, please refer to the safety instructions on page 4. The mains plug should remain readily accessible to permit disconnection of the unit from the supply. Alternatively the plug may be cut off and the power unit wired into a readily accessible fused connection unit, fitted with an approved 3 A fuse to BS 1362. This method of connection is recommended for permanent distribution system applications, since it reduces the risk of tampering and accidental disconnection. If the power unit is **not** connected to the mains using the fused plug supplied, or a fused connection unit, it must be protected by means of a fuse or MCB at the final distribution board of rating not exceeding 6 A. A readily accessible isolating switch should be provided to allow the unit to be disconnected from the supply when necessary.

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

proPSU power units are of Class 2 construction and do not require a protective earth connection. This does not obviate the need to provide a circuit protective (earth) conductor in the supply wiring, as required by BS 7671. Distribution systems supplying signals to more than one household should comply with the safety requirements of BS EN 50083-11. 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. Bonding may be effected using a proBAR5 equipotential bonding bar.

Power unit and output protection

The power unit is internally protected against output short-circuit. If this protection operates, the power indicator LED colour will change from **green** to **red** to indicate a fault condition. A short circuit is most likely to be caused by an incorrectly fitted 'F' connector, or by the use of an unsuitable type of splitter (or similar accessory) between the amplifier output and the power unit. To reset the protection, disconnect the power unit from the mains and allow at least one minute for cooling before re-applying power.

Technical data proILA11F

Signal frequency range	470 .. 862 MHz
Gain	12 dB
Noise figure	3 dB
Output capability[1]	96 dBµV
Max. recommended input level[1]	84 dBµV
Input filter characteristic	≥ 26 dB rejection (relative to passband gain) for all frequencies ≤ 400 MHz
DC power requirement[2]	12 V at 25 mA
Operating temperature range	-10 .. +40 °C
EMC Standard	EMC: BS EN 50083-2: 2001