

Technical data proCOM family

	proCOM21TS		proCOM31T		
	Terrestrial port	Satellite port	FM port	Band III port	UHF port
Operating frequency range(s)	5 .. 854 MHz	950 .. 2300 MHz	87.5 .. 108 MHz	174 .. 230 MHz	5 .. 30 MHz 470 .. 862 MHz
Insertion loss	≤ 1.5 dB ¹	≤ 2.5 dB ²	≤ 1.2 dB	≤ 1.5 dB	≤ 1.5 dB ⁵
Isolation in terrestrial band	—	≥ 50 dB ³	—	—	—
Isolation in satellite band	≥ 36 dB ⁴	—	—	—	—
Isolation in Band II (FM)	—	—	—	≥ 26 dB	≥ 30 dB
Isolation in Band III (DAB or TV)	—	—	≥ 20 dB	—	≥ 30 dB
Isolation in UHF band	—	—	≥ 36 dB	≥ 33 dB	—
Power pass from common port	No	Yes	No	No	Yes
Power pass ratings	20 V max. at 250 mA max.				
Signal connector type	Type-F (IEC 60169-24)				
Operating temperature range	-20 .. +50 °C				
EMC standard	BS EN 50083-2: 2001 (Class B)				

Notes

1. ≤ 2.8 dB in band edge region 780 .. 854 MHz.
2. ≤ 5.5 dB in band edge region 950 .. 1100 MHz.
3. Applies over 5 .. 854 MHz. Typical performance >60 dB.
4. ≥ 23 dB in band edge region 950 .. 1100 MHz.
5. ≤ 0.7 dB in return-path band 5 .. 30 MHz.

*Sky and Sky+ are registered trademarks of British Sky Broadcasting Group PLC.

†Freeview is a registered trademark of DTV Services Ltd.

2-Year Guarantee

This guarantee covers failure of your PROception 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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proCOM21TS
proCOM31T

Band-Selective Combiner/Splitters

PROception

INSTALLATION INSTRUCTIONS

These passive products are used for combining or splitting signals with a minimum of insertion loss. The units are fully-screened and simple to install. The use of 'F' connectors ensure good screening and allows use with a wide range of cable sizes.

Features

- Low in-band insertion loss.
- High rejection of unwanted bands.
- Ideal for both digital and analogue applications.
- Power-pass to the higher or highest frequency band input.
- Robust diecast housings, suitable for outdoor (masthead) and indoor use.

Descriptions

proCOM21TS: This unit is a diplexer for combining or splitting signals in the HF, VHF and UHF 'terrestrial' bands (5 – 854 MHz) with satellite IF band signals (950 – 2300 MHz). It features exceptionally high isolation performance between the satellite and common ports in the terrestrial frequency bands, allowing it to be used to combine a satellite LNB output with low-level terrestrial aerial signals without degradation of the latter being caused by wideband noise from the LNB. A power-pass path is provided between the common and satellite ports; this will also pass the associated 22 kHz and/or DiSEqC control signals.

proCOM31T: This unit is a 3-band combiner/splitter (triplexer) handling signals in Band II (FM radio), Band III (DAB or TV) and Bands IV-V (UHF TV). The UHF port also passes signals in the return-path band (5 – 30 MHz), and DC power.

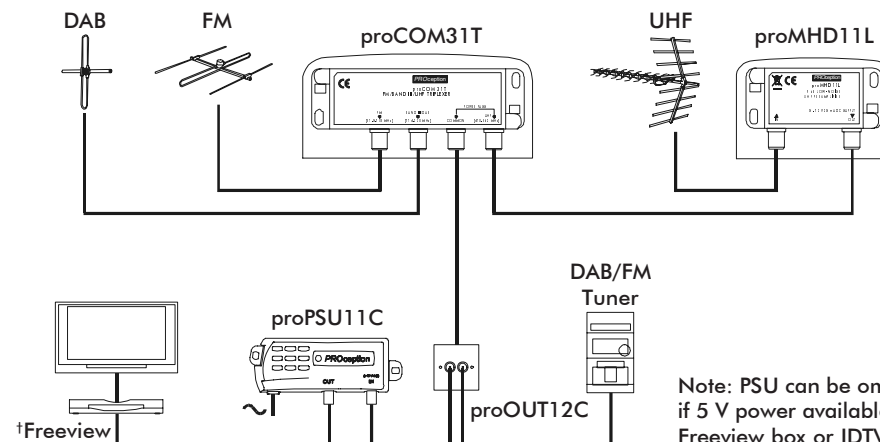
The two units can be connected together to form a 4-band combiner or splitter by linking the common port of the proCOM31T and the terrestrial port of the proCOM21TS (see example, Fig. 2).

Application examples

Figs. 1 – 6 illustrate a selection of common applications for these products.

Note: SCART and telephone connections have been omitted from some diagrams for clarity.

Fig. 1 – Combining terrestrial aerial feeds, showing optional use of UHF preamplifier.



Note: PSU can be omitted if 5 V power available from Freeview box or IDTV.

Fig. 2 – Combining terrestrial and satellite feeds for a triplexed outlet plate.

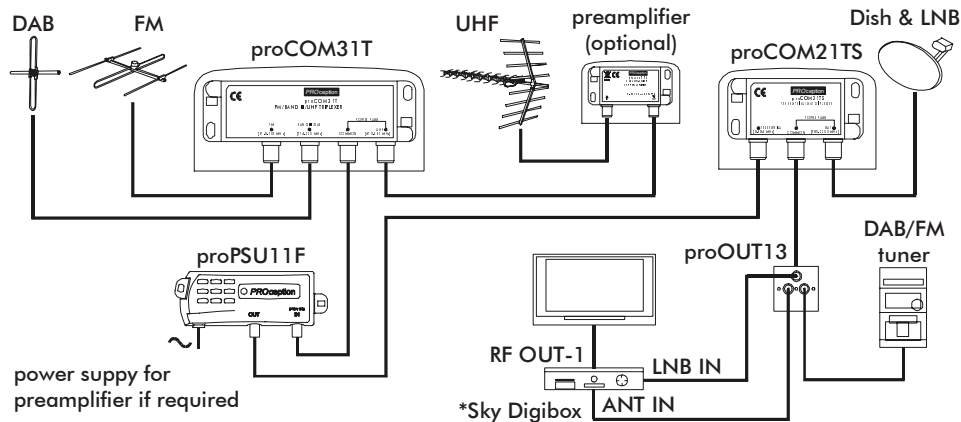


Fig. 3 – Application with proAMP multi-way amplifier to combine VHF aerials and to add LNB feed(s) to one or more outputs. A separate LNB output and proCOM21TS is required for each amplifier output to be satellite-enabled.

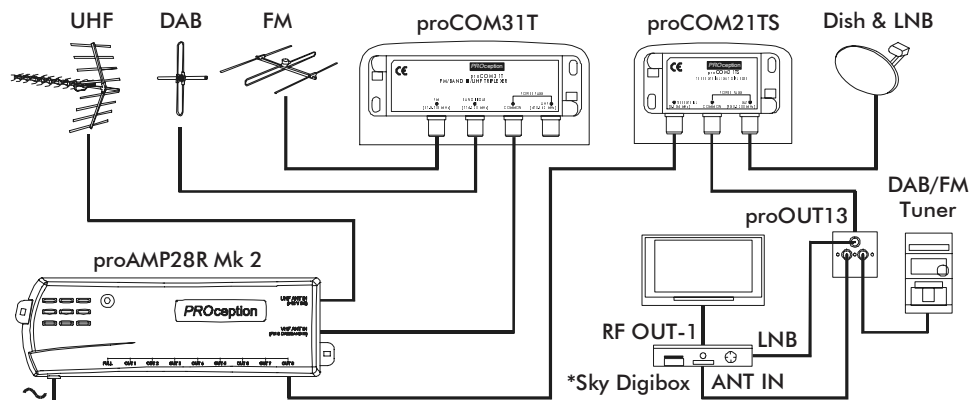


Fig. 4 – Satellite and UHF TV distribution to main TV and up to four remote rooms with remote control of Sky box.

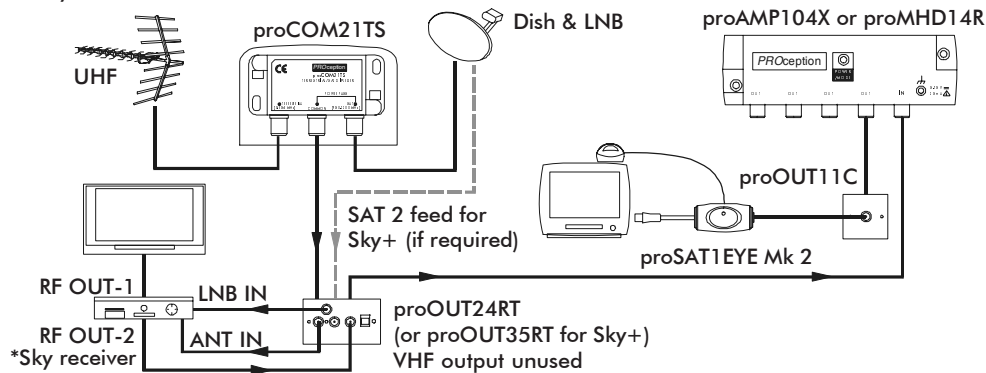


Fig. 5 – VHF, UHF and satellite distribution to main viewing location and up to ten rooms using proAMP310X amplifier.

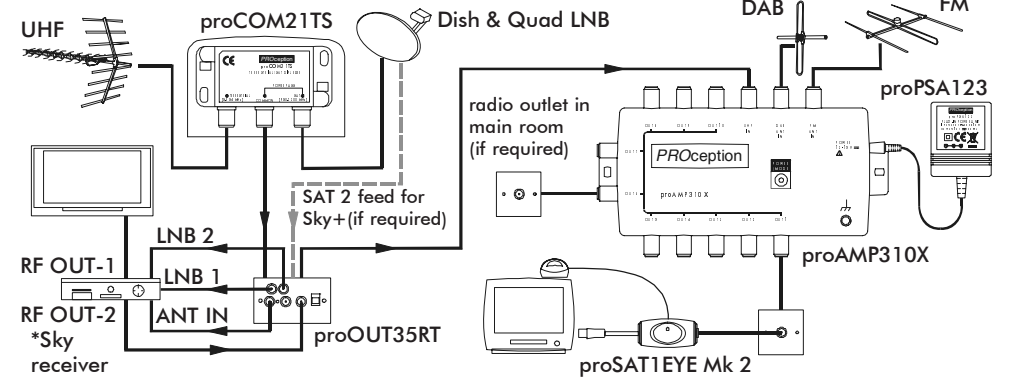
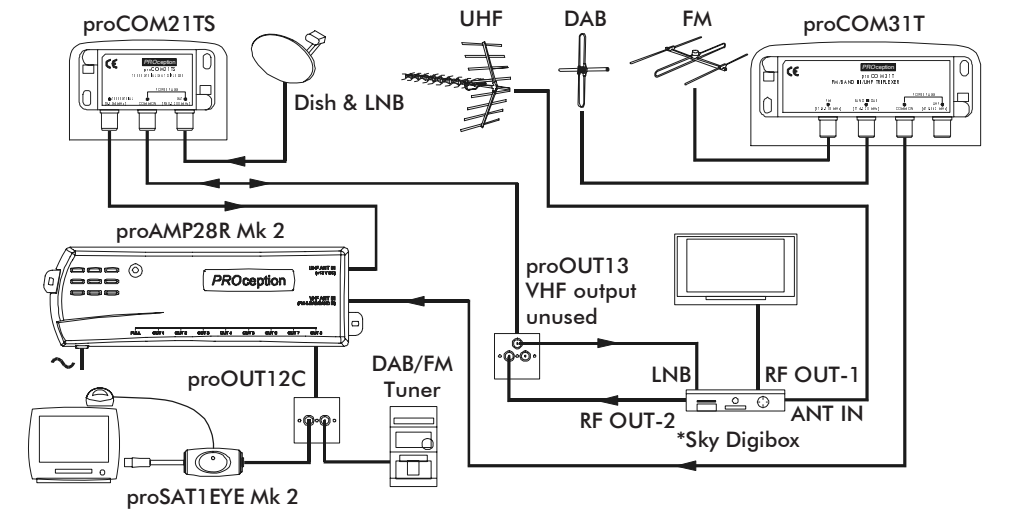


Fig. 6 – Alternative VHF, UHF and satellite distribution system with UHF return diplexed onto LNB cable.



Fixing

The units 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/splitter only; cables should be taped to the mast at intervals of approximately 400 mm 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 unit 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. 'F' connectors should always be tightened with a spanner, not left finger-tight.

System equipotential bonding

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