



FRINGE

TELEVISION AERIAL ACCESSORIES

3 YEAR GUARANTEE

ISSUE 10



P R O D U C T G U I D E

THE FRINGE COMMITMENT

A commitment to product quality and reliability has made Fringe a leading brand name in the market since 1978.

We maintain our reputation by ensuring all design and assembly processes are carried out in-house at our Clipstone factory.

Products are 100% tested and masthead amplifiers receive an additional air test to ensure full performance before final packing.

Every product is also made completely traceable by use of quality control labels, which carry individual assembly codes.

All fringe products are guaranteed for a period of three years from date of purchase. This is on a “return to base” basis. Please contact us if you would like to claim repair or replacement under these terms. Statutory rights are not affected. All Fringe manufactured products contain coded date of manufacture information.



FRINGE ELECTRONICS LIMITED **ELECTRONIC EQUIPMENT MANUFACTURERS**

Fringe House, 4 Highfield Road,
Clipstone, Mansfield,
Notts. NG21 9ER

Tel: 01623 643802

enquiries@fringeelectronics.co.uk

sales@fringeelectronics.co.uk

www.fringeelectronics.co.uk

MADE IN THE UK

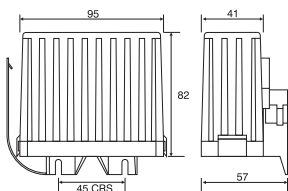
Products & Information

ENCLOSURE DETAILS	4
SIGNAL FINDERS	
UHF TV Signal Finder	5
Worldwide Signal Finder	6
PRO TV and Satellite Signal Finder	7
PRO+TV and Satellite Signal Meter	8
12V LEISURE RANGE	
Easy Tune /Easy Boost	9
MASTHEAD AMPLIFIERS	
SDR Range Vari Gain with Eezi-Fit	10
SDR Range Fixed Gain with Eezi-Fit	11
Standard UHF Range	12
Standard VHF Range	13
Super UHF Range	14
Supreme UHF Range	15
WB22/2 and Cascade	16
POWER SUPPLY UNITS	
P1285 Range	17
SET BACK RANGE	
Single and Multiple Outlets	18
DISTRIBUTION AMPLIFIERS	
Mini 4 Range	19
LDU Range with F Connectors	20
6 Way, 7 Way, 8 Way, HOP and SHOP	21
T6 Splitter Range	22
PASSIVE ACCESSORIES	
Splitters	23
Filters and Joint Box	24
Diplexers UHF - UHF	25
ADDENDUM	
UHF Channel Allocations	26 - 30
RTE Saorview Digital TV Channels	30
Channel Centre Frequencies	31
db to Voltage Conversion	32
Details of Specifications	33
Eezi-Fit	34

All masthead amplifiers and duplexers are housed in a weather proof enclosure. Membrane grommets are used to ensure a sealed cable entry, the coaxial cables are clamped by a brass, one piece, spring loaded cable clamp.

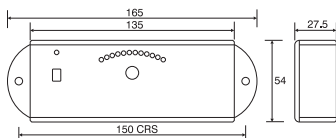
A releasable plastic strap fits any diameter mast. Holes are provided for surface mounting.

OUTDOOR ENCLOSURES



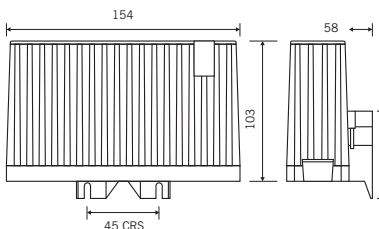
Colour: Green

EASY TUNE/EASY BOOST ENCLOSURE



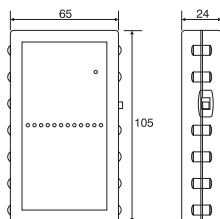
Colour: White

OUTDOOR 4 ENCLOSURE



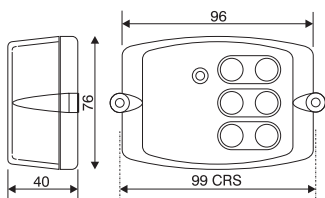
Colour: Green

SIGNAL FINDER ENCLOSURE



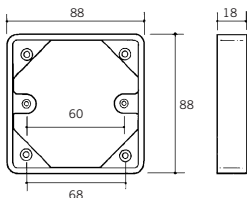
Colours: Grey and Black

INDOOR ENCLOSURES



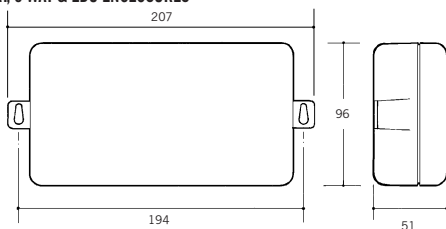
Colour: White

T6 ENCLOSURES



Colour: White

6 WAY, 7 WAY, 8 WAY & LDU ENCLOSURES



Colours: Black and White

All dimensions in millimetres.

UHF TV Signal Finder



The UHF TV signal finder is designed for use where TV is received over UHF frequencies. Especially with caravan / motorhome / boat users with directional TV aerials in mind.

Technical Specification

Part Number	213-200	
Power Requirement	9V PP3 Battery. Avg. 60mA.	
Battery Life	Zinc (6F22) – 6Hrs continuous use. Alkaline (6LR61) – 10Hrs continuous use.	
Frequency Response	UHF, 470-790Mhz, (CH21-60)	
Through Loss	<4db	
Mid Band Sensitivity	(5 TV Channels / 6 digital MUX +/-3db)	
1 LED	47dB μ V	Weak signal, not all TV services may be available
2 LED's	50dB μ V	Weak signal, not all TV services may be available
3 LED's	53dB μ V	Weak signal, not all TV services may be available
4 LED's	56dB μ V	Weak signal, not all TV services may be available
5 LED's	59dB μ V	Optimum signal
6 LED's	62dB μ V	Optimum signal
7 LED's	65dB μ V	Optimum signal
8 LED's	68dB μ V	Optimum signal
9 LED's	71dB μ V	Optimum signal
10 LED's	74dB μ V	Optimum signal
11 LED's	77dB μ V	Optimum signal
12 LED's	80dB μ V	Strong signal, attenuation may be required.

Worldwide Signal Finder



The Worldwide VHF/UHF TV signal finder is designed for use in any country that transmits TV over VHF or UHF frequencies. Especially with caravan / motorhome / boat users with VHF/UHF directional TV aerials in mind.

Technical Specification

Part Number	213-210	
Power Requirement	9V PP3 Battery. Avg. 60mA.	
Battery Life	Zinc (6F22) – 6Hrs continuous use. Alkaline (6LR61) – 10Hrs continuous use.	
Frequency Response	UHF, 470-790Mhz, (CH21-60); VHF, 47 -230MHz	
Mid Band Sensitivity	(5 TV Channels / 6 digital MUX +/-3db)	
1 LED	42dBµV	Weak signal, not all TV services may be available
2 LED's	45dBµV	Weak signal, not all TV services may be available
3 LED's	48dBµV	Weak signal, not all TV services may be available
4 LED's	51dBµV	Weak signal, not all TV services may be available
5 LED's	54dBµV	Optimum signal
6 LED's	57dBµV	Optimum signal
7 LED's	60dBµV	Optimum signal
8 LED's	63dBµV	Optimum signal
9 LED's	66dBµV	Optimum signal
10 LED's	69dBµV	Optimum signal
11 LED's	72dBµV	Optimum signal
12 LED's	75dBµV	Strong signal, attenuation may be required.

PRO TV & Satellite Signal Finder



The PRO TV & SATELLITE signal finder is a highly sensitive and accurate combined UHF TV and satellite signal finder. It incorporates both **audio** and **visual** signal indication and UHF signal finding has much improved sensitivity over previous models giving greater accuracy for aerial alignment in areas with poor signal strength.

Technical Specification

Part Number	213-230	
Power Requirement	9V PP3 Battery. Avg. 60mA. (Or automatic power via Satellite Receiver connection 13-18VDC).	
Battery Life	Zinc (6F22) – 6Hrs continuous use. Alkaline (6LR61) – 10Hrs continuous use.	
Frequency Response	TV - 470-790Mhz SAT - 950-2100Mhz	
Mid Band Sensitivity	(5 TV Channels / 6 digital MUX +/-3db)	
1 LED	43dB μ V	Weak signal, not all TV services may be available
2 LED's	46dB μ V	Weak signal, not all TV services may be available
3 LED's	51dB μ V	Weak signal, not all TV services may be available
4 LED's	53dB μ V	Weak signal, not all TV services may be available
5 LED's	56dB μ V	Optimum signal
6 LED's	59dB μ V	Optimum signal
7 LED's	62dB μ V	Optimum signal
8 LED's	65dB μ V	Optimum signal
9 LED's	68dB μ V	Optimum signal
10 LED's	71dB μ V	Optimum signal
11 LED's	74dB μ V	Optimum signal
12 LED's	77dB μ V	Strong signal, attenuation may be required.

PRO+ TV & Satellite Signal Meter

The PRO+ TV & SATELLITE signal meter is a highly sensitive and accurate combined UHF TV and satellite signal finder. It incorporates both **audio** and **visual** signal indication and UHF signal finding. Also incorporated is a 13V LNB power source, providing an aid to dish alignment without the need for connection to a receiver or other power source.



Technical Specification

Part Number	213-240	
Power Requirement	9V PP3 Alkaline Battery. (high performance batteries recommended)	
Battery Life and Recommended Batteries:	Energizer Industrial, Energizer Ultra+ and Energizer Hightech all achieve >50 SAT uses or >10hrs continuous TV aerial use. Ansmann 300AKKU, Ansmann 200 AKKU; nx-ready 9V NiMH all achieve >30 SAT uses or >6hrs continuous TV aerial use.	
LNB Connection	13V +/-0.1V, 250mA max (most modern LNB's are 75-150mA)	
Frequency Response	TV - 470-790Mhz LNB - 950-2100Mhz	
Sensitivity	TV input, 5 TV Channels / MUX's, +/-2dB μ V, 75 Ω	
1 LED	44dB μ V	Low signal, could be background noise / limited TV services
2 LED's	47dB μ V	Low signal, not all TV services may be available
3 LED's	51dB μ V	Minimum signal, not all TV services may be available
4 LED's	54dB μ V	Minimum signal, not all TV services may be available
5 LED's	59dB μ V	Optimum signal
6 LED's	61dB μ V	Optimum signal
7 LED's	64dB μ V	Optimum signal
8 LED's	68dB μ V	Optimum signal
9 LED's	71dB μ V	Optimum signal
10 LED's	74dB μ V	Optimum signal
11 LED's	78dB μ V	Optimum signal
12 LED's	81dB μ V	Strong signal, attenuation may be required.

Easy Tune & Easy Boost

**Easy-Tune 12/24V Signal Booster with built in Signal Finder**

A TRUE FIRST, the Easy-Tune is THE ONLY AMPLIFIER on the market with a fully functional 12 LED BUILT IN SIGNAL FINDER.

One unit allows you to:

- Align your aerial PERFECTLY
- Boost your TV/Radio signal (variable boost)
- Distribute TV/Radio signal to 2 or 4 outlets
- Visual indication of TV signal level

Easy-Boost 12/24V Signal Booster

The Easy-Boost is a simple, no-nonsense, variable boost, aerial amplifier and signal distribution unit, designed specifically for the leisure market for use in Caravans, Motor homes, Boats etc.

One unit allows you to:

- Boost your TV/Radio signal (variable boost)
- Distribute your TV/Radio signal to 2 or 4 outlets

12 Volt power cable and screw fixings included.

**Technical Specification**

Part No	231-310	231-311	231-312	231-313
Model	Easy Tune 4 Way	Easy Tune 2 Way	Easy Boost 4 Way	Easy Boost 2 Way
Operating Voltage	10.5 to 28V DC <2W (12 LED's LIT)		10.5 to 28V DC <1W	
Outlets	4	2	4	2
Variable Gain	2-13db	5-19db	2-13db	5-19db
Frequency Range	47Mhz to 790Mhz (FM / DAB / TV) to all outlets			
Flatness	+/-1.5db	+/-1.5db	+/-1.5db	+/-1.5db
Noise Figure	<2.9db	<2.9db	<2.9db	<2.9db
Max. Output	101dB μ V	104dB μ V	101dB μ V	104dB μ V
Power On Indication	Red LED	Red LED	Red LED	Red LED
Signal Indication Sensitivity	(5 multiplexes) - 41 to 90dB μ V, (6 LEDs = 65dB μ V on outlets)		-	-
Weight	114 grams	113 grams	113 grams	112 grams
Dimensions	165 x 55 x 27mm			

SDR Range Vari Gain with Eezi Fit



FRINGE are pleased to announce our new range of masthead amplifiers. Aimed specifically at today’s and tomorrow’s reception problems.

SDR stands for ‘Super Dynamic Range’ and guarantees correct operation with a maximum **INPUT** signal level at least 85dBµV (dependent on model) without overload.

This method of operation is far more demanding and requires an amplifier of exceptional performance to handle such a high signal at the input.

Other amplifiers are available with variable gain but our “Vari-gain” - SDR amplifiers differ from the rest in four important ways;

1. The input signal handling remains the same regardless of gain setting.
2. The frequency response stays within tolerance regardless of gain setting.
3. The noise figure remains the same within the variable gain range.
4. All Fringe SDR amplifiers include the newly designed “Eezi-Fit” cable connection system which is far quicker and more reliable than an “F” connector.

EEZI-FIT Our newly designed cable connection system. After cable preparation, this unique, fully screened push fit connection system allows three cables to be terminated with two screws. In addition it offers a better connection and the screening factor of an “F” connector. Try it and you’ll see how easy it is.

Technical Specification

Part No	Model	Band MHz	Outlets	Gain	Flatness	Noise Figure	Max Input	Max Output	Power Requirement
203-141	SDR 5-15	470-790	1	5-15db	+/-1db	2.1db	88dBµV	102dBµV	12V @ 35mA, on any output
203-151	SDR 2-13/2	470-790	2	2-13db	+/-1db	2.2db	88dBµV	101dBµV	
203-223	SDR Outdoor 3	470-790	3	3-13db	+/-1.5db	2.4db	85dBµV	98dBµV	12V @ 45mA, +/-10% on any output
203-225	SDR Outdoor 4	470-790	4	2-12db	+/-1.5db	2.4db	85dBµV	97dBµV	
203-227	SDR Outdoor 5	470-790	5	1-10db	+/-1.5db	2.4db	85dBµV	95dBµV	
203-229	SDR Outdoor 4+1	470-790	4 @ 1 @	0-10db 10-18db	+/-1.5db	2.4db	85dBµV	95/103dBµV	

SDR Range Fixed Gain with Eezi Fit



FRINGE are pleased to announce our new range of masthead amplifiers. Aimed specifically at today's and tomorrow's reception problems.

SDR stands for 'Super Dynamic Range' and guarantees correct operation with a maximum **INPUT** signal level at least 85dBµV (dependent on model) without overload.

This method of operation is far more demanding and requires an amplifier of exceptional performance to handle such a high signal at the input.

EEZI-FIT Our newly designed cable connection system. After cable preparation, this unique, fully screened push fit connection system allows three cables to be terminated with two screws. In addition it offers a better connection and the screening factor of an "F" connector. Try it and you'll see how easy it is.

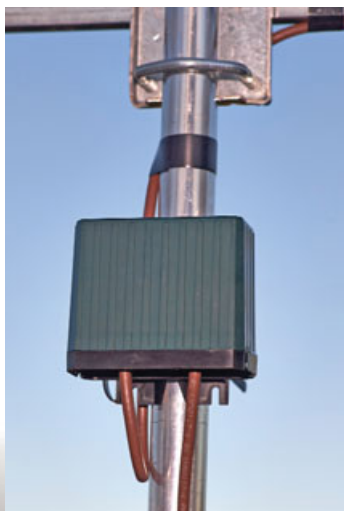


Technical Specification

Part No	Model	Band MHz	Outlets	Gain	Flatness	Noise Figure	Max Input	Max Output	Power Requirement
203-161	SDR 13	470-790	1	13db	+/-1dB	2.1db	94dBµV	107dBµV	12V @ 35mA, +/-10% on any output
203-121	SDR 16	470-790	1	16db	+/-1dB	2.2db	88dBµV	104dBµV	
203-171	SDR 9/2	470-790	2	9db	+/-1dB	2.1db	94dBµV	103dBµV	
203-131	SDR 14/2	470-790	2	14db	+/-1dB	2.2db	88dBµV	102dBµV	
203-222	SDR Outdoor 3	470-790	3	14db	+/-1dB	2.4db	85dBµV	99dBµV	12V @ 45mA, +/-10% on any output
203-224	SDR Outdoor 4	470-790	4	13db	+/-1dB	2.4db	85dBµV	98dBµV	
203-226	SDR Outdoor 5	470-790	5	11db	+/-1dB	2.4db	85dBµV	96dBµV	
203-228	SDR Outdoor 4+1	470-790	4 @ 11db 1 @ 20db	+/-1.5dB	2.4db	85dBµV	96/ 103dBµV		

Standard UHF Range

Four models are available in the U.H.F. range, all featuring low noise figures. Will enhance any U.H.F. T.V. signal at an economical cost.



Technical Specification

Part No	Model	Group	Channel No.	Gain	Flatness	Noise Figure
203-011	A1218	A	21 - 37	18db.	+ -1db.	1.9db.
203-021	B1216	B	35 - 53	16db.	+ -1db.	1.9db.
203-031	CD1213	CD	48 - 60	14db.	+ -1db.	1.9db.
203-041	WB1214	WB	21 - 60	15db.	+ -1db.	1.9db.

Output on all models: Din 45004 – 100dB μ V

Power requirements: 12v. d.c. @ 15ma (use P1285)

C.E. compliance: Approved

Standard VHF Range



Two models are available in the V.H.F range, all feature low noise figures. The V.H.F. 1220-FM. is suitable for the improvement of V.H.F./F.M. radio reception in Europe and the U.K. The V.H.F. 1220-3 is ideal for amplifying DAB signals in remote reception areas.

Technical Specification

Part No	Model	Group	Gain	Flatness	Noise Figure
204-021	VHF1220-FM	Band 2	20db.	+ -1db.	1.8db.
204-031	VHF1220-3	Band 3/DAB	20db.	+ -1db.	1.8db.

Output on all models: Din 45004 – 100dB μ V

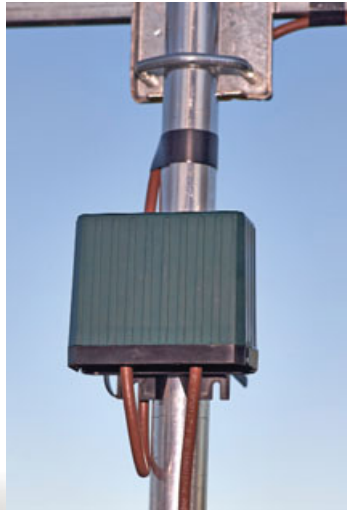
Power requirements: 12v. d.c. @ 10ma (use P1285)

C.E. compliance: Approved

Super UHF Range

Four models are available in this range, all feature high gain and low noise figures.

Ample gain is available to overcome losses incurred in long cable runs, and passive splitting.



Technical Specification

Part No	Model	Group	Channel No.	Gain	Flatness	Noise Figure
202-011	A1228	A	21 - 37	28db.	+ -1.5db.	2.8db.
202-021	B1226	B	35 - 53	26db.	+ -1.5db.	2.8db.
202-031	CD1223	CD	48 - 60	23db.	+ -1.5db.	2.8db.
202-041	WB1222	WB	21 - 60	22db.	+ -1.5db.	2.8db.

Output on all models: Din 45004 – 98dB μ V

Power requirements: 12v. d.c. @ 32ma (use P1285)

C.E. compliance: Approved

Supreme UHF Range



Four models are available in this range, all feature very low noise figures, high gain and high output capability. From 35dB μ V of aerial signal much improved digital quality may be obtained.

Ideal head unit for Cascade systems.

Technical Specification

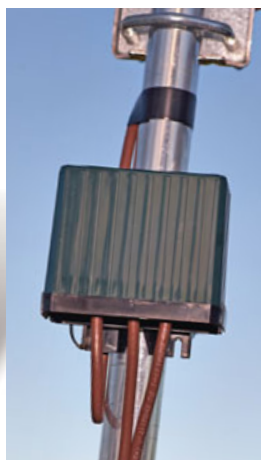
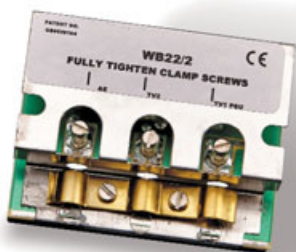
Part No	Model	Group	Channel No.	Gain	Flatness	Noise Figure
201-011	A1230	A	21 - 37	30db.	+ -1.5db.	1.9db.
201-021	B1228	B	35 - 53	28db.	+ -1.5db.	1.9db.
201-031	CD1225	CD	48 - 60	25db.	+ -1.5db.	1.9db.
201-041	WB1225	WB	21 - 60	25db.	+ -1.5db.	1.9db.

Output on all models: Din 45004 – 106dB μ V

Power requirements: 12v. d.c. @ 32ma (use P1285)

C.E. compliance: Approved

WB 22/2 & Cascade



The WB22/2 is a wide band U.H.F. amplifier with in-built low loss splitter. This enables two television sets to operate from one masthead amplifier. The power unit must be switched on to operate either T.V. In strong signal reception areas each leg may be split again using Fringe Inductive Splitters; this enables 2, 3 or 4 set reception.

The Cascade U.H.F. repeater amplifier is a through powered unit, designed to operate in conjunction with any Fringe masthead amplifier. This enables long coaxial cable runs to be used where the T.V. is remote from the aerial. Depending on the model of masthead, channel group, and aerial signal available a distance of 200 metres may be obtained, using standard grade coaxial cable, one masthead, and one Cascade amplifier. A distance of 800 metres may be obtained, by using distribution grade coaxial cable, and three Cascade amplifiers.

Technical Specification

Part No	205-031	206-011
Model	WB 22/2	Cascade
Frequency Range	470-790MHz	470-790MHz
Gain per leg	18db +/-1.5db	23db +/-1.5db
Noise Figure	2.9db	3.5db
Output	2 x 96dB μ V per leg	102dB μ V
UHF Input	CH21-60 470-790MHz	CH21-60 470-790MHz
Power Requirements	12v dc @ 14ma (use P1285)	12v dc @ 32ma (use P1285)
CE Compliance	Approved	Approved

P1285 Range



The P1285 series of power supplies is intended for indoor use only.

The P1285 series are to be used where 12V DC is to be sent via a coaxial down-lead to a masthead amplifier. Suffix 'F' indicates F connector version. Aerial connections: Connect the down-lead from the aerial amplifier to the socket marked 'amp' or 'amplifier' and the lead from the TV/Receiver to the socket(s) labelled 'output' or 'out 1' & 'out 2'

Technical Specification

Part No	Model	Output Voltage	Short Circuit Protection	Input Voltage	Plug Fuse	VHF/UHF thru loss	Power 'On' LED	Size mm
207-011	P1285	12V dc @ 85mA	Yes	230v AC 50Hz +/-10%	3A	40-790MHz < 1db	Yes	110W x 76H x 40D
207-012	P1285F	12V dc @ 85mA	Yes	230v AC 50Hz +/-10%	3A	40-790MHz < 1db	Yes	110W x 76H x 40D
207-031	P1285/2	12V dc @ 85mA	Yes	230v AC 50Hz +/-10%	3A	40-790MHz -3.5db	Yes	110W x 76H x 40D
207-032	P1285/2F	12V dc @ 85mA	Yes	230v AC 50Hz +/-10%	3A	40-790MHz -3.5db	Yes	110W x 76H x 40D

Suffix F - Available with F Connectors

Single and Multiple Outlets



A Range of aesthetically pleasing, flexible, indoor use amplifiers, designed to improve a poor signal, or boost a signal before a long cable run. Available in 1 to 4 way configurations, with option of high gain, wideband versions (Super) of the 1 and 2 Set variants. The Two and Three set models are intended where an aerial (UHF) signal is required to be split without degradation of the original signal. The Super Set Back, if used with T6/14T splitter, can be used as a power splitting amplifier and thus provide distribution of VHF/UHF signals to 6 outlets.

A choice of IEC co-axial or industry standard 'F' type connectors is available to suit the preferences of the installer. Not compatible with Sky Pass.

Technical Specification

Part No	208-011	208-021	209-011	209-081	208-041	208-051
Model	Set Back	2 Set	3 Set	4 Set	Super Set Back	Super 2 Set
Part No	208-011/F	208-021/F	209-011/F	209-081/F	208-041/F	208-051/F
Model	Set Back F	2 Set F	3 Set F	4 Set F	Super Set Back F	Super 2 Set F
U.H.F. only	CH.21 - 60, 470 - 790MHz	CH.21 - 60, 470 - 790MHz	-	-	-	-
VHF - UHF	-	-	47-790MHz	47-790MHz	47-790MHz	47-790MHz
Gain per socket	1 x 14db	2 x 9db	3 x 8db	4 x 7db	1 x 22db	2 x 19db
Noise figure	2.5db	3.3db	3.9db	3.9db	3.9db	3.9db
Output per socket	98dBµV	94dBµV	85dBµV	84dBµV	98dBµV	95dBµV
Band Width	CH.21 - 60, 470-790MHz	CH.21 - 60, 470-790MHz	VHF/UHF 470-790MHz	VHF/UHF 470-790MHz	VHF/UHF 470-790MHz	VHF/UHF 470-790MHz
Supply voltage	230v a.c. 50hz + -10%					
Power Consumption	2 Watts					
Size	110mm L x 76mm W x 40mm D					
C.E. compliance	Approved					

Suffix F - Available with F Connectors

Mini 4 Range

The Mini 4 is a compact, indoor, mains operated amplifier, designed for domestic and commercial use. The unit enables one aerial to supply four outlets simultaneously.

The single input socket is suitable for V.H.F. radio or V.H.F. T.V. and wide band U.H.F. television. Provisions are available to line power any Fringe model Masthead Amplifier, where reception is poor.

The Mini 4-2UK is a compact, mains operated amplifier, designed for domestic and commercial use. The four outputs enable one aerial to supply four televisions and F.M. radios simultaneously. A separate input socket is available for FM radio.

The Mini 4-2 Export is ideal for both FM radio and DAB.



Technical Specification

Part No	209-021	209-091	209-101
Model	Mini 4	Mini 4-2 UK	Mini 4-2 Export
Part No	209-021/F	209-091/F	209-101/F
Model	Mini 4 F	Mini 4-2 UK F	Mini 4-2 Export F
Frequency range	47-790MHz VHF/UHF	VHF 88-108MHz UHF 470-790MHz	VHF 47-230MHz UHF 470-790MHz
Gain per socket	7db +/- 1db	6.5db +/- 1db	6.5db
Flatness	+/- 1db	+/- 1db	+/- 1db
Noise figure	3.9db	VHF 4.4db UHF 4.9db	VHF 4.4db UHF 4.9db
Output per socket	84dB μ V	84dB μ V	84dB μ V
Isolation between sockets	Not less than 24db		
Ideal input required	50dB μ V to 65dB μ V		
Supply voltage	230V AC 50 Hz +/- 10% 3 watts		
Masthead powering	Internal switch to supply 12V @ 35 m.a. Suitable for all Fringe mastheads		
Fitted with non-rewireable 13A plug	With 3 amp fuse		
LED indicator	Indicates mains switched on		
Size	110mm W x 76mm H x 40 mm D		
Colour	White		
CE Compliant	Yes	Yes	Yes
Mounting	Two fixing hole tabs		

Suffix F - Available with F Connectors

LDU Range with F Connectors



Designed for domestic and commercial use, these amplifiers have two inputs for both VHF radio (FM/DAB) and UHF TV. 'Sky' set top box RF2 signals can be distributed via the UHF socket and if additional remote control 'eyes' are fitted between the outlets and TV, the amplifier will pass the remote control signals back to the satellite receiver. These amplifiers must be fitted indoors and are designed for continuous operation. The remote return path function has a 'test' LED that blinks in unison with the return path signal. This confirms passing of the remote control signal and hence a good cable connection between the LDU and the remote eye.

Technical Specification

Part No	215-011/F	215-021/F	215-031/F
Model	4 Way LDU	6 Way LDU	8 Way LDU
VHF Frequency Range	88 - 235MHz	88 - 235MHz	88 - 235MHz
UHF Frequency Range	47 - 790MHz CH21-60	47 - 790MHz CH21-60	47 - 790MHz CH21-60
Return Path Freq. Range/Gain	5-30MHz / 0-3db	5-30MHz / 0-3db	5-30MHz / 0-3db
Gain per socket	8db	8db	8db
Flatness	VHF, +/-0.5db UHF, +/-1db	VHF, +/-0.5db UHF, +/-1db	VHF, +/-0.5db UHF, +/-1db
Noise figure	VHF, <4.5db UHF, <3.5db	VHF, <4.5db UHF, <3.5db	VHF, <4.5db UHF, <3.7db
Output per socket	95 dB μ V	95 dB μ V	95 dB μ V
Isolation	Typically 38db	Typically 38db	Typically 38db
Maximum Input	87dB μ V	87dB μ V	87dB μ V
Mains Supply	230V AC 50 Hz +/- 10% 3 watts		
Fitted with non-rewireable 13A plug	With 3 amp fuse		
LED indicators	MAINS ON and TEST LED - see above		
Return Path Frequency Gain	5-30MHz/0-3db		
Remote Eye Power	9V @ 10mA at each output		
Size	'F' socket version 207mm W x 96mm H x 61mm D		
Weight	700g		
Compliance	CE approved, ROHS compliant		

6 Way, 7 Way, 8 Way, HOP & SHOP

These TV/FM and DAB Radio Distribution Amplifiers enables one aerial to supply up to 8 TV's/radios simultaneously. Freeview/DVD/Video may be distributed by these amplifiers, via the UHF input socket. In addition, a full output socket on the 7 Way version is provided so that up to 19 points may be served by adding two Fringe T6 splitter units (available separately).



The HOP/SHOP (High Output/Split High Output) amplifiers have a single/double

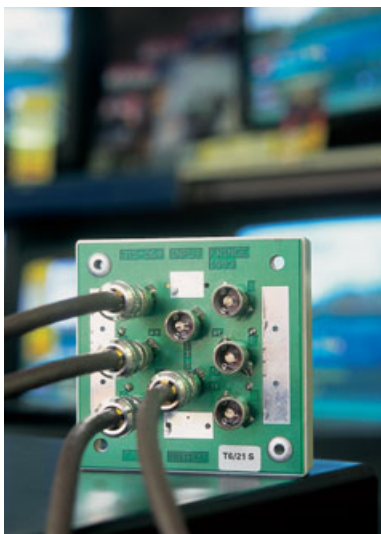
output that may be split to up to 18 outlets for the HOP and 24 outlets for the SHOP, using Fringe T6 splitter units (available separately).

On all models, provision is also available to line power any masthead amplifier connected to the UHF input. For indoor use only. These amplifiers are not suitable for Sky remote pass.

Technical Specification

Part No	209-031	209-061	209-071	209-041	209-051
Model	6 Way	7 Way	8 Way	High Output	Split H. Output
Part No	209-031/F	209-061/F	209-071/F	209-041/F	209-051/F
Model	6 Way F	7 Way F	8 Way F	High Output F	Split H. Output F
VHF Frequency Range, MHz	47 - 230	47 - 230	47 - 230	47 - 790	47 - 790
UHF Frequency Range, MHz	470 - 790	470 - 790	470 - 790		
Channels	21-60 / 1-13	21-60 / 1-13	21-60 / 1-13	1-60	1-60
Gain per socket	6@7db	7@6.5db	8@6.5db	1@28db	2@24db
Flatness	VHF +/-1.5db UHF +/-1.5db	VHF +/-1.0db UHF +/-1.5db	VHF +/-1.0db UHF +/-1.5db	- +/-1.5db	- +/-1.5db
Noise figure	VHF 3.4db UHF 3.8db	VHF 3.4db UHF <3.8db	VHF 3.4db UHF <3.8db	- 3.4db VHF/UHF	- 3.4db VHF/UHF
Max. Output (DIN 45005) Spurs	85 dBµV	85 dBµV	85 dBµV	107dBµV	103dBµV
Side Rejection Worst Case (Isolation)	Typical 38db	30db 36db	33db 38db	N/A	N/A
Ideal Input required	50dBµV min and should not exceed 79dBµV				
UHF Masthead	External switch to supply 12v DC @ 35ma. Suitable for all Fringe mastheads. Shipped in the OFF position				
Mains Supply	230V AC 50 Hz +/- 10% 3 watts				
Fitted with non-rewireable 13A plug	With 3 amp fuse				
Two LED indicators	Indicates MAINS ON and LINE POWER on				
Fixing	Two tabs, fixing centres 193mm				
Size	207mm W x 96mm H x 51mm D				
Weight	700g				
CE Compliance	Approved				

T6 Splitter Range



A range of resistive splitter units, for use with Fringe 7 Way – High Output – Split High Output and Super Setback.

Three models of attenuation are available, fitted with sockets. Supplied with application notes.

Technical Specification

Part No	Model	Tap down	Isolation	Through Loss
210-011	T6/21	-21db.	40db.	3.5db.
210-021	T6/17	-17db.	34db.	3.5db.
210-031	T6/14ST	-14db.	25db.	Terminal

Figures quoted assume all outputs are terminated 75ohm

Frequency range	-	0 - 860MHz
Fixing	-	Two screw holes
Colour	-	White 1 Gang mounting frame
Fixing area	-	88mm L x 88mm W.
C.E. compliance	-	Approved

Splitters



2 Way External Inductive Combiner/Splitter

This unit is an ultra-wideband low loss outdoor unit for combining and splitting VHF & UHF signals. It has a low insertion loss and good isolation between inputs.

3/4 Way External Inductive Splitter

The Fringe 3 and 4 Way external inductive splitters are ultra-wideband, low loss units for splitting VHF and UHF signals to up to 4 TV's/Radios. In strong signal areas they provide easy signal distribution, without the need for additional masthead amplification. With Eezi-Fit connections.



Technical Specification

Part No	211-021	211-411	211-412	211-321
Model	2 Way Inductive	3 Way Eezi-Fit	4 Way Eezi-Fit	2 Way Screened
Frequency Range VHF-UHF	40Mhz to 790Mhz wideband			
Average Insertion Loss	-3.5db	-	-	-3.5db
Through Loss	-	1 -7.5db 2 -7.5db 3 -4db	-7.5db	-
Side Rejection	20db	1 to 2 -18db	1 to 2 & 3 to 4 -18db 3 or 4 to 1 or 2 -23db	20db
DC Pass	Common to 1	Common to any	Common to any	Common to 1

Filters and Joint Box



These filters have been designed to help eliminate signals outside the specified group of the filter.

Example: The group B filter will reduce group C- D, group A and VHF signals.

They are useful when a strong out of band signal is present and needs to be reduced to prevent overload, or to prevent reception of unwanted signals from distant transmitters out of region.

The Group Pass Filters and Joint Box have THRU DC power and although they can be used between the aerial and amplifier it is preferable to use them after the amplifier.

Technical Specification

Part No	Model	Pass Channels	Rejection of other channels	Through Loss
212-011	Group A	21 - 34	>15db	Not exceeding 2db
212-021	Group B	39 - 53	>15db	Not exceeding 2db
212-031	Group CD	48 - 60	>15db	Not exceeding 2db
212-032	Group 21-37	52 - 60	>15db	Not exceeding 2db
212-081	Joint Box	0 - 790MHz	N/A	0.25db
Part No	Model	Pass Band	Rejection	Average through loss
212-091	Tetra UHF High Pass	UHF TV 470 - 790MHz	Tetra 380-400MHz typical 35db guaranteed 30db	-1db
212-095	4 G Filter	5 - 782MHz	CH60 -9.5db @ 786MHz LTE Downlink 791-821MHz -15dB to -32db LTE Uplink 832-862MHz -38dB to -51db	<-5db

Diplexers UHF – UHF

Part No.	Description	From Ch to Ch
211-031	A to E	21-34 to 39-60
211-061	A to E thru A	21-34 to 39-60
211-071	A to E thru E	21-34 to 39-60
211-041	K to CD	21-47 to 48-60
211-081	K to CD thru K	21-47 to 48-60
211-091	K to CD thru CD	21-47 to 48-60
211-121	Special K to CD 50/52	21-50 to 52-60
211-131	Special K to CD 50/52 thru K	21-50 to 52-60
211-141	Special K to CD 50/52 thru CD	21-50 to 52-60
211-142	Special K to CD 50/52 thru both	21-50 to 52-60
211-181	A+37 to E	21-37 to 40-60
211-191	A+37 to E thru A	21-37 to 40-60
211-201	A+37 to E thru E	21-37 to 40-60

The diplexers above are supplied as electromagnetically benign apparatus. They should not be used where installation will compromise the integrity of a system. i.e. MATV etc. CE marked product should be used if in doubt.



Diplexers, Eezi-Fit UHF-UHF screened and switchable DC pass. CE compliant.

211-124	A to E switchable both	21-34 to 39-60
211-126	A+37 to E switchable both	21-37 to 40-60
211-128	Special K to CD 46/48 switchable both	21-46 to 48-60
211-125	Special K to CD 50/52 switchable both	21-50 to 52-60
211-127	Special K to CD 51/53 switchable both	21-51 to 53-60

Other combinations available. Please call us with your requirements.



UHF- UHF diplexers are no longer a stock item and are only made to order. Orders for a specific diplexer must be in multiples of 20 units and allow a lead time of 4 weeks from placement of order to dispatch.

UHF Channel Allocation

Programme providers	PSB 1 BBC 1,2,3,4	PSB 2 ITV 1,2 Ch 4,5	PSB 3 HD Channels	COM 4 ITV 3 Drama Quest	COM 5 Sky News Dave Travel	COM 6 BT Sport 4 Music Yesterday	Aerial Group	Polarisation	
STATION	CHANNEL NUMBER								
Borders									
CALDBECK	25	28	30	23	26	29	A	H	
Haltwhistle	59	50	55				CD	V	
Kendal	60	53	57				CD	V	
Whitehaven	43	40	46				B	V	
CALDBECK SCOTLAND	27	24	22				A	H	
Cambret Hill	44	41	47				B	H	
SELKIRK	50	59	55	57	53	60	C/D	H	
Central Scotland									
BLACK HILL	46	43	40	41	44	47	B	H	
Torosay	28	25	22	23	26	29	A	V	
Glengorm	44	41	47				B	V	
DARVEL	22	25	28	23	26	29	A	H	
Millburn Muir	42	45	39				B	V	
Rosneath	49	58	54	53	57	60	CD	H/V	
CRAIGKELLY	27	24	21	42	45	39	WB	H	
ANGUS	60	53	57	54	58	49	CD	H	
Perth	39	42	45				B	V	
Tay Bridge	41	47	44				B	V	
East Anglia									
TACOLNESTON	55	59	50	42	45	39	E/WB	H	
Lowestoft	58	60	56				CD	V	
Norwich Central	46	43	52				B	V	
Kings Lynn	40	46	43				B	V	
Wells next the Sea	57	51	56				CD	V	
West Runton	26	23	29				A	V	
Aldeburgh	28	23	25				A	V	
SUDBURY	44	41	47	58	60	56	WB	H	
SANDY HEATH	27	24	21	51	52	48	WB	H	

Type in capitals indicates a main transmitter. Generally transmitters of less than 200 watts ERP are not included.

Further information may be obtained from the following web sites www.ukfree.tv www.ofcom.org.uk

UHF Channel Allocation

Programme providers	PSB 1 BBC 1,2,3,4	PSB 2 ITV 1,2 Ch 4,5	PSB 3 HD Channels	COM 4 ITV 3 Drama Quest	COM 5 Sky News Dave Travel	COM 6 BT Sport 4 Music Yesterday	Aerial Group	Polarisation
STATION	CHANNEL NUMBER							
Grampian & Highlands								
DURRIS	28	25	22	23	26	29	A	H
Bressay	28	25	22	27	24	21	A	V
Collafirth Hill	45	42	39				B	V
Gartley Moor	58	49	54				CD	V
Peterhead	50	59	55				CD	V
Rosehearty	44	41	47				B	V
EITSHAL	26	23	29	25	22	28	A	H
KEELYLANG HILL	46	43	40	42	45	39	B	H
KNOCKMORE	26	23	29	53	57	60	WB	H
ROSEMARKIE	45	39	42	43	46	40	B	H
RUMSTER FOREST	27	24	21	30	59	55	WB	H
Skriaig	27	24	21				A	V
London and South East of England								
CRYSTAL PALACE	23	26	30	25	22	28	A	H
Guildford	43	46	40	48	52	49	B	V
Hemel Hempstead	44	41	47	50	59	55	WB	V
Reigate	60	57	53	21	24	27	WB	V
BLUEBELL HILL	46	43	40	45	39	54	WB	H
DOVER	50	51	53	55	59	48	CD	H
Midlands								
OXFORD	53	60	57	50	59	55	CD	H
RIDGE HILL	28	25	22	21	24	27	A	H
SUTTON COALFIELD	43	46	40	42	45	39	B	H
Brierley Hill	60	57	53	50	59	55	CD	V
Bromsgrove	26	23	30	41	44	47	WB	V
Fenton	24	27	21	25	22	28	A	V
Lark Stoke	26	23	30	41	44	47	WB	V
Malvern	53	57	60	50	59	55	CD	V
THE WREKIN	26	23	30	41	44	47	WB	H
WALTHAM	49	54	58	29	56	57	WB	H
Nottingham	27	24	21	51	52	48	WB	V
Stanton Moor	59	50	55				CD	V

UHF Channel Allocation

Programme providers	PSB 1 BBC 1,2,3,4	PSB 2 ITV 1,2 Ch 4,5	PSB 3 HD Channels	COM 4 ITV 3 Drama Quest	COM 5 Sky News Dave Travel	COM 6 BT Sport 4 Music Yesterday	Aerial Group	Polarisation
STATION	CHANNEL NUMBER							
North East								
BILSDALE	26	29	23	43	46	40	WB	H
Whitby	55	59	50				CD	V
CHATTON	45	42	39	41	44	47	B	H
PONTOPI PIKE	58	54	49	50	59	55	CD	H
Fenham	27	24	21	25	22	28	A	V
Newton	26	29	23				A	V
Weardale	44	47	41				B	V
Northern Ireland								
DIVIS	27	21	24	23	26	29	A	H
Kilkeel	45	42	39				B	V
Larne	45	42	39				B	V
BROUGHER MOUNTAIN	28	22	25	21	24	27	A	H
Camlough	59	55	50				CD	V
Newcastle	50	55	59				CD	V
Strabane	45	42	39				B	V
LIMAVADY	50	59	55	54	58	49	CD	H
Londonderry	44	41	47				B	V
North West								
DOUGLAS	53	60	57				CD	V
WINTER HILL	50	59	54	58	49	55	CD	H
Haslingden	26	23	29				A	V
Lancaster	27	24	21	25	28	22	A	V
Pendale Forest	28	25	22	27	21	24	A	V
Saddleworth	45	39	42	51	52	48	B	V
Storeton	28	25	22	23	26	29	A	V
South of England								
FREMONT POINT	44	41	47				B	H
HANNINTON	45	42	39	41	44	47	B	H
HEATHFIELD	52	49	47	42	44	41	B	H
Hastings	25	28	22	23	26	30	A	V
MIDHURST	55	56	58	54	59	50	CD	H
ROWRIDGE	24	27	21	25	22	28	A	H/V

Type in capitals indicates a main transmitter. Generally transmitters of less than 200 watts ERP are not included.

Further information may be obtained from the following web sites www.ukfree.tv www.ofcom.org.uk

UHF Channel Allocation

Programme providers	PSB 1 BBC 1,2,3,4	PSB 2 ITV 1,2 Ch 4,5	PSB 3 HD Channels	COM 4 ITV 3 Drama Quest	COM 5 Sky News Dave Travel	COM 6 BT Sport 4 Music Yesterday	Aerial Group	Polarisation
STATION	CHANNEL NUMBER							
South of England continued								
Findon	44	41	47				B	V
Salisbury	57	60	53	50	59	55	CD	V
Tunbridge Wells	52	49	47	42	44	41	B	V
Whitehawk Hill Brighton	60	53	51	57	56	48	CD	V
Wales								
BLAENPLWYF	27	24	21	25	22	28	A	H
CARMEL	60	53	57	54	58	49	CD	H
Llandrindod Wells	39	42	45				B	V
Kilvey Hill	23	26	29	25	22	28	A	V
LLANDDONA	57	60	53	43	46	40	WB	H
Arfon	41	44	47				B	V
Conway	47	41	44				B	V
Long Mountain	60	53	57				CD	V
MOEL Y PARC	45	39	42	51	52	48	B	H
Storeton	57	53	60				CD	H
PRESELI	43	46	40	42	45	39	B	H
WENVOE	41	44	47	42	45	39	B	H
Abergavenny	39	42	45				B	V
Mynydd Machen	23	26	29				A	V
Pontypridd	25	22	28				A	V
Rhondda	23	26	29				A	H/V
West Country								
MENDIP	49	54	58	48	56	52	CD	H
Bristol I.C.	41	44	47	42	45	39	B	V
Bristol K.W.	43	40	46	53	57	60	WB	V
BEACON HILL	60	53	57	42	45	51	WB	H
CARADON HILL	28	25	22	21	24	27	A	H
Plympton	54	49	58	42	45	56	WB	V
HUNTSHAW CROSS	50	59	55	48	52	56	DC	H
REDRUTH	44	41	47	48	52	51	B	H
STOCKLAND HILL	26	23	29	25	22	28	A	H
Budleigh Salterton	60	53	57				CD	V
Weymouth	47	44	41				B	V

UHF Channel Allocation

Programme providers	PSB 1 BBC 1,2,3,4	PSB 2 ITV 1,2 Ch 4,5	PSB 3 HD Channels	COM 4 ITV 3 Drama Quest	COM 5 Sky News Dave Travel	COM 6 BT Sport 4 Music Yesterday	Aerial Group	Polarisation
STATION	CHANNEL NUMBER							
Yorkshire								
BELMONT	22	25	28	30	53	60	WB	H
Chesterfield	26	23	29	43	46	40	WB	V
EMLEY MOOR	47	44	41	51	52	48	B	H
Keighley	49	58	54	57	53	60	CD	V
Skipton	39	45	42				B	V
Warfedale	25	22	28				A	V
OLIVERS MOUNT	57	60	53	54	58	49	CD	V
SHEFFIELD	27	25	21	42	45	39	WB	V

Type in capitals indicates a main transmitter. Generally transmitters of less than 200 watts ERP are not included.

Further information may be obtained from the following web sites www.ukfree.tv www.ofcom.org.uk

RTE Saorview Digital TV Channels

Station	Area	CHANNEL NUMBER			
		Mux 1	Mux 2	Aerial Group	Polarisation
Cairn Hill	Co. Longford	47	44	B	H
Clermont Cairn	Co. Louth	52	56	CD	V
Dungarvan	Co. Waterford	55	59	CD	H
Hollywell Hill	Co. Donegal	30	33	A	H
Kippure	Co. Wicklow	54	58	CD	H
Maghera	Co. Clare	48	55	CD	H
Mount Leinster	Co. Wexford	23	26	A	H
Mullaghanish	Co. Kerry	21	24	A	H
Spur Hill	Co. Cork	45	49	B	H
Three Rock	Dublin	30	33	A	H
Truskmore	Co. Sligo	53	57	CD	H
Woodcock Hill	Co. Clare	47	44	B	H

Only main transmitters are shown

For more information:

www.saorview.ie

www.2rn.ie

Channel Centre Frequencies

Channel	Channel Width = +/-4MHz Centre	Channel	Channel Width = +/-4MHz Centre
21	474	41	634
22	482	42	642
23	490	43	650
24	498	44	658
25	506	45	666
26	514	46	674
27	522	47	682
28	530	48	690
29	538	49	698
30	546	50	706
31	554	51	714
32	562	52	722
33	570	53	730
34	578	54	738
35	586	55	746
36	594	56	754
37	602	57	762
38	610	58	770
39	618	59	778
40	626	60	786

db to Voltage Conversion

db. mv.	uv.	db. uv.	db. mv.	mv.	db. uv.
-40	10.00	20	+11	3.55	71
-39	11.22	21	+12	3.98	72
-38	12.59	22	+13	4.47	73
-37	14.13	23	+14	5.01	74
-36	15.85	24	+15	5.62	75
-35	17.78	25	+16	6.31	76
-34	20.00	26	+17	7.08	77
-33	22.40	27	+18	7.94	78
-32	25.10	28	+19	8.91	79
-31	28.20	29	+20	10.00	80
-30	31.60	30	+21	11.22	81
-29	35.50	31	+22	12.59	82
-28	39.80	32	+23	14.13	83
-27	44.70	33	+24	15.85	84
-26	50.10	34	+25	17.78	85
-25	56.20	35	+26	19.95	86
-24	63.10	36	+27	22.39	87
-23	70.80	37	+28	25.12	88
-22	79.40	38	+29	28.18	89
-21	89.10	39	+30	31.62	90
-20	100.00	40	+31	35.48	91
-19	112.20	41	+32	39.81	92
-18	125.90	42	+33	44.67	93
-17	141.30	43	+34	50.12	94
-16	158.50	44	+35	56.23	95
-15	177.80	45	+36	63.10	96
-14	199.50	46	+37	70.79	97
-13	223.90	47	+38	79.43	98
-12	251.20	48	+39	89.13	99
-11	281.80	49	+40	100.00	100
-10	316.20	50	+41	112.20	101
-9	354.80	51	+42	125.90	102
-8	398.10	52	+43	141.30	103
-7	446.70	53	+44	158.50	104
-6	501.20	54	+45	177.80	105
-5	562.30	55	+46	199.50	106
-4	631.00	56	+47	223.90	107
-3	707.90	57	+48	251.20	108
-2	794.30	58	+49	281.80	109
-1	891.30	59	+50	316.20	110
0	1.00mv	60	+51	354.80	111
+1	1.12	61	+52	398.10	112
+2	1.26	62	+53	446.70	113
+3	1.41	63	+54	501.20	114
+4	1.58	64	+55	562.30	115
+5	1.78	65	+56	631.00	116
+6	2.00	66	+57	707.90	117
+7	2.24	67	+58	794.30	118
+8	2.51	68	+59	891.30	119
+9	2.82	69	+60	1000.00	120
+10	3.16	70			

Details of Specifications

All products listed are 75ohms and measurements are taken at that impedance.

OUTPUT LEVELS

These are to the DIN 45004/B 3 tone test at -60 IMD.

NOISE FIGURES

These are the average of five measurements taken across the full specified bandwidth of the amplifier. The noise figure variation across the bandwidth does not exceed +1db. Measurements are made using a direct reading meter with a modulated solid state noise source.

LIMITS OF ACCURACY

Measurements are taken from random production samples and may deviate by the accuracy of the instruments used. Variations in production can occur but a worst case should not degrade specification by more than 1db. A list of current instruments is available on request.

All products are 100% tested for gain/loss and masthead amplifiers are also given a subjective performance test on a T.V.

CE STANDARDS

Parts of EN50082-1

Parts of EN50081-1

EN55014

Where applicable EN60056



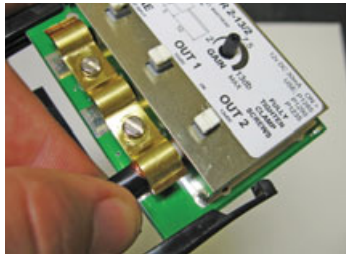
Fringe Electronics Ltd. reserve the right to improve and change specifications without notice.

Eezi-Fit from Fringe

The unique new push fit connection from Fringe.

It's as easy as 123

- 1 Prepare the cable.
There is a handy strip guide on the can label.
- 2 Thread the prepared cable through the case grommet, under the cable clamp and push into the Eezi-Fit fitting.
- 3 Fully tighten the clamp screws.
If subsequent cable removal is required, simply bush the white button and pull the cable out of the fitting.



Try Fringe

We won't let you down

More SDR amplifiers with Eezi-Fit are on the way from Fringe

Manufactured in the UK

U.H.F. RECEIVING AERIAL GROUPS AND COLOUR CODES

CHANNELS	GROUP	COLOUR
21-37	A	RED
35-53	B	YELLOW
48-60	CD	GREEN
35-60	E	BROWN
21-60	W	WHITE
21-47	K	—

GUARANTEE TERMS

All fringe products are unconditionally guaranteed for a period of three years from date of purchase. This is on a 'return to base' basis. Please contact us if you would like to claim repair or replacement under these terms. Statutory rights are not affected. All Fringe manufactured product contain coded date of manufacture information.

COPYRIGHT

Products listed in this catalogue are subject to copyright. This includes mechanical and electrical components, packaging and instruction sheets.

The name Fringe and the logo  is a registered trademark and is duly protected.

Reproduction in part or whole of the catalogue without prior consent is prohibited.

LIABILITY

Every effort has been made to ensure that the information given in this catalogue is correct. The company accepts no liability in respect of loss arising from errors in the information provided.

DEALERS STAMP



FRINGE ELECTRONICS LIMITED ELECTRONIC EQUIPMENT MANUFACTURERS

Fringe House, 4 Highfield Road, Clipstone,
Mansfield, Notts. NG21 9ER Tel: 01623 643802
enquiries@fringeelectronics.co.uk sales@fringeelectronics.co.uk
www.fringeelectronics.co.uk



MADE IN THE UK

ISSUE DATE: JANUARY 2014