



## **D :: MATV & Distribution**

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NAS is proud to announce that it has been selected to distribute the extensive range of Fagor Electronica products in Australia. From single channel amplifiers and signal processing units for MATV and SMATV systems to tunable filters and high quality antennas, the Fagor range has been one of the premium European brands since the 1970s.

NAS is confident that the Fagor brand will rapidly rise to the top of MATV systems in Australia with traditional module systems and innovative fully programmable integrated units. Keep an eye out for promotional activities this year to find out how Fagor equipment and NAS expertise could help you to win those MATV tenders.



### Desire to Innovate

Fagor Electronica is the world pioneer of the 1st Programmable Terrestrial TV Headend. In addition, Fagor is developing systems that apply new concepts such as the multi-processing range of products. The Fagor R&D department plays an active role in various forums and is at the forefront of industry development, the result of which is a complete, yet specialised product range.

### Recognised Quality

In 1998, Fagor was awarded the Silver "Q" for Quality awarded by the European Foundation for Quality Management (EFQM). More recently, in 1999, Fagor reached a new milestone when it was awarded the QS 9000, an even more rigorous certification than ISO 9000.

## MATV Catalogue

All these fagor products and more are covered in our MATV catalogue.

Please ask an NAS representative for your copy, or visit [www.nasaustralia.com.au](http://www.nasaustralia.com.au) to download a copy.

- Modulators with Vestigial Side Band (VSB) output
- Channel to channel converters with processing via IF
- FM amplifiers that allow FM signal processing in MATV systems
- Single input broadband amplifier
- Programmable Selective Amplifier
- Broadband amplifier with separate VHF and UHF processing
- Reverse Path Broadband amplifier with separate VHF and UHF processing
- MATV Reverse Path Broadband amplifier

## FAGOR Single Channel Amplifiers

### Single Channel Amplifiers

Single channel amplifier, suitable for amplifying and filtering of TV signals in MATV headend systems. These amplifiers are perfect for working in adjacent channels.

Medium to large sized community digital and analogue TV installations located in poor reception areas with large differences in levels between channels.

#### Features:

- Metal chassis integrating the input/output connectors to give the unit greater strength
- High shielding degree
- High reliability and screening factor due to "F" connectors.
- Modular design that allows channel configuration according to installation needs.
- The use of filters with high "Q" factor inductive lines guarantees a high channel selectivity.
- Easy to set up due to its system of splitting at input and combining at output.



#### Technical Specifications

Reference	NEX 401	NEX 402	NEX 403	NEX 445
Channels	0 - 2	FM 87 / 108	6 - 12	28 - 69
Max. output level (DIN 45004K)	123 dBuV	120 dBuV (DIN B -35dB)	123 dBuV	117 dBuV
Gain	40 dB	38 dB	40 dB	40 dB
Gain adjustment	30 dB	30 dB	30 dB	30 dB
Bandwidth	7 MHz	21 MHz	7 MHz	8 MHz
Selectivity				
PV <sub>N</sub> -PA <sub>N-1</sub>	15 dB	35 dB @ -14MHz	14 dB	20 dB
PA <sub>N</sub> -PV <sub>N+1</sub>	15 dB		14 dB	20 dB
PV <sub>N</sub> +20 MHz	>70 dB	30 dB @ +14MHz	70 dB	>70 dB
Return Losses	9 dB	9 dB	9 dB	9 dB
Noise Figures	11 dB	4 dB	11 dB	11 dB
Current Down (24 VDC)	90 mA	65 mA	105 mA	65 mA
Input-Output impedance	75 Ω	75 Ω	75 Ω	75 Ω
Input-Output connectors	F	F	F	F
Packing dimensions	195 x 70 x 32 mm	195 x 70 x 32 mm	195 x 70 x 32 mm	195 x 70 x 32 mm
Weight	.45 Kg	.45 Kg	.45 Kg	.45 Kg

FAGOR head end amplifiers are built on demand to customer spec. When ordering, please specify which channels you require to be amplified.



## FAGOR Signal Processing Series



The Fagor multi-processing system enables the MATV professional to easily customise the headend to meet any specific requirements of the consulting engineers. With an extensive range of modules to choose from, the Fagor multi-processing system has your MATV design needs covered. The VSB modulator is filtered to allow for full adjacent channel operation in mono, stereo or dual audio modes and is fully agile covering all television channels plus S and hyperbands. With adjustable audio and video levels and output channel fine-tuning, the SM series modulators are the real deal. The Channel converter with built-in AGC (>30dB) and true VSB output offers a truly versatile channel converter and/or AGC signal processing unit for analogue or digital channels. FM amplifiers offer professional quality FM signal distribution

throughout the MATV system. This is perfect in hotels where TVs and radios need to be fed from the same system. The Fagor broadband VHF/UHF amplifier is a medium to high gain unit that provides exceptional performance at the headend end or in-line.

The Fagor multi-processing system comes with several mounting options including wall mounting and rack mounting as well as ventilated metal housing with lockable door. Each module is fully programmable using the same removable external programming unit. The power supply is suitable for running an entire rack of multi-processing modules.

## FAGOR Programmable Selective Amplifier

### Fagor Programmable Selective Amplifier

#### Available Models:

Fagor Programmable Selective Amplifier



This Intelligent Selective Amplifier can process up to 60 channels and is compatible with digital television. This programmable amplification system allows 10 UHF filtering modules to process up to 60 channels. Each filtering module allows 1-6 channels to be programmed.

#### Application

• Analogue and COFDM Digital Terrestrial MATV systems.

#### Characteristics

- Easy to programme through an external control unit, UCF 200. All functions are automatically memorised and controlled by a Fagor microprocessor
- Automatic recognition
- Incorporates a LED for input level information
- Enables output channel fine tuning to disperse intermodulation between channels
- Screws and power supply cable included



### Technical Specifications

Band	FM	BIII/DAB	AUX	UHF1	UHF2	UHF3
<b>Bandwidth</b>	87.5 ~ 108 MHz	174 ~ 230 MHz	47 ~ 68 MHz 130 ~ 862 MHz	470 ~ 862 MHz	470 ~ 862 MHz	470 ~ 862 MHz
<b>No of amplifiers</b>	1	1	1	10	10	10
<b>Filter width</b>	Fixed	Fixed	Fixed	Variable 1 ~ 6 channels	Variable 1 ~ 6 channels	Variable 1 ~ 6 channels
<b>Configuration of amplifiers per input</b>	No	No	No	6 6 10 9	4 3 0 0	0 1 0 1
<b>Gain</b>	40 dB	40 dB	23 dB	53 dB	53 dB	53 dB
<b>IN Regulation</b>	25 dB	23 dB	No	23 dB	23 dB	23 dB
<b>OUT regulation</b>	25 dB	20 dB	20 dB	20 dB	20 dB	20 dB
<b>Selectivity ~20MHz</b>	N/A	N/A	N/A	22 dB	22 dB	22 dB
<b>NF</b>	6 dB	8 dB	15 dB	8 dB	8 dB	8 dB
<b>Operational input level</b>	71/101 dBuV	70/93 dBuV	90 dBuV	60/83 dBuV	60/83 dBuV	60/83 dBuV
<b>Decoupling between inputs</b>	--	--	--	20 dB	20 dB	20 dB

Outputs	
<b>No of outputs</b>	1
<b>Band</b>	RF
<b>Bandwidth</b>	47 ~ 68 MHz 87.5 ~ 108 MHz 130 ~ 862 MHz
<b>Vo IM3 DIN45004B (2)</b>	121 dBuV

General	
<b>Supply to pre-amplifiers</b>	24V/100mA
<b>Mains supply</b>	230V ± 15%
<b>Working temperature</b>	0-50°C

## Terrestrial Distribution Amplifiers

### Kingray DW32 Wideband Distribution Amplifier

Available Models: **Kingray**  
Kingray DW32 Wideband Distribution Amplifier **AMPDW32**



F type distribution amplifier designed for a separate VHF or UHF antenna or a combined antenna via switch at the input. Can be remotely powered to the output. Packed with a PSK065 power supply. includes a -30dB test point.

#### Technical Specifications

Gain (dB)	VHF	UHF
	26~ 28dB (44-230MHz)	32 (470-860MHz)
Gain Control	1x 10dB	1x 10dB
Maximum Output	112dBuV	112dBuV

### Kingray DW42 Wideband Distribution Amplifier

Available Models: **Kingray**  
Kingray DW42 Wideband Distribution Amplifier **AMPDW42**

The AMPDW42 is a new product ready for digital applications. Inputs can be separated into UHF/VHF or combined. Power supplies are available for either stand alone or rack mounted applications.



PAYTV Approved

Needs PSK18S

#### Technical Specifications

Gain (dB)	VHF 35~37dB (44 - 300 MHz) UHF 40dB (470 - 860 MHz)
Gain Control	VHF 2 x 20dB (Low Band/ High Band) UHF 1 x 20dB
Maximum Output	VHF 118dBuV UHF 118dBuV

### Kingray DA43 Wideband Distribution Amplifier

Available Models: **Kingray**  
Kingray DA43 Wideband Distribution Amplifier **AMPDA43**

The AMPDA43 is a new product ready for digital applications. Inputs can be separated into UHF/VHF or combined. Power supplies are available for either stand alone or rack mounted applications.



PAYTV Approved

Needs PSK18S

#### Technical Specifications

Gain (dB)	40dB (44-860MHz)
Gain Control	1x 20dB
Switchable slope control	0, 5, 10, 15dB
Maximum Output	118dBuV

## Satellite Distribution Amplifiers

### Kingray SAT42 Satellite IF Distribution Amplifier

Available Models: **Kingray**  
Kingray SAT42 Satellite IF Distribution Amplifier **AMPSAT42**

The SAT42 is a satellite distribution amplifier for use in SMATV multiple dwelling applications. It features medium output, with adjustable gain control.

PAYTV Approved

Needs PSK18S

#### Technical Specifications

Gain (dB)	40dB (950 ~ 2300MHz)
Gain Control	single 20dB
Maximum Output	122dB (-35dB IMR)



### SAT42D Satellite Dual IF Distribution Amplifier

Available Models: **Kingray**  
Kingray SAT42D Satellite IF Distribution Amplifier **AMPSAT42D**

Dual input and F-Type Satellite Distribution Amplifier. Capable of powering both vertical and horizontal LNB's simultaneously via the onboard regulator.

#### Technical Specifications

Gain (dB)	40dB (950 ~ 3000MHz)
Gain Control	single 20dB
Maximum Output	122dB (-35dB IMR)



### SAT29 Satellite Dual IF Distribution Amplifier

Available Models: **Kingray**  
Kingray SAT29D Satellite IF Distribution Amplifier **AMPSAT29D**

Dual input and F-Type Satellite Distribution Amplifier. Capable of powering both vertical and horizontal LNB's simultaneously via the onboard regulator.

#### Technical Specifications

Gain (dB)	29dB (950 ~ 3000MHz)
Gain Control	single 10dB
Maximum Output	122dB (-35dB IMR)



### Zinwell Multi-Input SMATV amplifier

Available Models:  
Zinwell Multi-input SMATV Amplifier **AMPSMA510**



- 5 signal inputs including satellite and terrestrial selections
- Excellent for satellite and terrestrial antenna SMATV one cable solution distribution system
- Single coaxial cable carries satellite IF and terrestrial TV
- Adjustable gain controls on all inputs
- 40~2150 MHz frequency range
- AC/DC adaptor included (15V DC 600 mA)

## Broadband amp with separate VHF & UHF processing

Available Models: **FAGOR**  
Broadband amp with separate VHF/UHF processing **FGRAMPSAB402**  
Reverse path broadband amplifier **FGRAMPSAB301**



The SAB301 & SAB402 can be used as a broadband distribution amplifiers or in-line amplifier in MATV systems. Additionally, the SAB301 covers the return path band 5-30 MHz.

- Fully shielded amplifier
- Covers the return path band 5-30 MHz (SAB301 only)
- High level of mechanical rigidity with complete protection against electrical interference

## Wideband

### Fagor MATV Reverse path broadband amplifier

Available Models: **FAGOR**  
Fagor MATV Reverse path broadband amplifier **FGRAMPSA354**



Designed to work under adverse weather conditions, where a robust amplifier is needed.

- Fully shielded amplifier
- Covers the return path band 5-30 MHz
- Slope control
- Built in switch mode power supply

## Modulators

### UHF/VHF Kingray Stereo Modulators

Available Models: **Kingray**  
VHF Kingray Stereo Modulator **MODMD100VS**  
UHF Kingray Stereo Modulator **MODMD100US**  
19" sub rack / wall mount **AMPKR001**  
add on passive combiner to suit KR001 **AMPKR002**  
rack packages of 6 or 8 stereo modulators. **MODAP6 / MODAP8**

- Double sideband
- A/V Input - RF Output
- Outputs are phase lock looped (250KHz steps)

Needs PSK18S



#### Technical Specifications

Frequency	VHF (44 - 470 MHz) UHF (470 - 860 MHz)
Gain Control	VHF 3x 40dB UHF 3x 40dB
Maximum Output	VHF 103dBuV UHF 103dBuV

## Kingray Masthead Amplifiers



Photo	Description	Stock code	Connectors	Frequency Range (MHz)		Maximum Gain (dB)		Power Supply
				VHF	UHF	VHF	UHF	
	Masthead distribution amplifier 44-860Mhz.	AMPMDA20L	F-Type	44-	-860		19	Included
	Masthead distribution amplifier 174-860Mhz.	AMPMDA20H	F-Type	174-	-860		19	Included
	Masthead distribution amplifier 520-860Mhz.	AMPMDA20U	F-Type	520-	-860		19	Included
	designed for single VHF/UHF combo antenna.	AMPMHW24G	Screw & Saddle	44-470	470-860	18	24	
	F-type: amplifies separate UHF and VHF antennas or combination antennas.	AMPMHW24F	F-Type	44-230	520-820	12-15	24	
	F-type: amplifies single UHF/VHF antenna or a single combination antenna.	AMPMHW24FE	F-Type	44-820		22-24	24	
	Same as above but fully shielded.	AMPMHW24FS	F-Type	44-470	470-860	20-24	24	
	designed for separate VHF/UHF antennas.	AMPMHW34G	Screw & Saddle	44-230	520-860	20-27	34	
	amplifies separate/combo VHF/UHF antennas.	AMPMHW34F	F-Type	44-230	520-860	20-27	34	
	In-Line Amplifier	AMPMHW34FIL	F-Type	44-230	520-860	20-27	34	
	Fully Shielded, amplifies separate/combo VHF/UHF antennas.	AMPMHW34FS	F-Type	44-230	520-860	20-27	34	
	can amplify either separate or combo antennas.	AMPMHW38G	Screw & Saddle	44-230	520-860	20-28	32-38	
	amplifies UHF antenna. Diplexes VHF antenna.	AMPMHU24T	Screw & Saddle	44-230	520-860	-1	24	
	amplifies UHF antenna. Diplexes VHF antenna.	AMPMHU24F	F-Type	44-230	520-820	-2	24	
	amplifies UHF antenna & Diplexes VHF antenna or amplifies the UHF component of a combo antenna.	AMPMHU34G	Screw & Saddle	44-230	520-860	-1	34	
	amplifies UHF antenna & Diplexes VHF antenna or amplifies the UHF component of a combo antenna. Fully Shielded.	AMPMHU34FS	F-Type	44-230	520-860	-1	34	Included
	amplifies a UHF antenna & Diplexes separate VHF antenna.	AMPMHU44G	Screw & Saddle	44-230	520-860	-1	44	
	amplifies separate Band V only UHF antenna a diplexes separate VHF and Band IV UHF antenna.	AMPMHU44B5G	Screw & Saddle	44-560	600-860	-1	44	
	Amplifies VHF antenna & Diplexes separate UHF antenna.	AMPMHV34G	Screw & Saddle	44-230	520-860	38	-1	
	Amplifies VHF antenna & Diplexes and amplifies a UHF antenna.	AMPMHV44HLG	Screw & Saddle	44-230	520-860	44	10	
	2-way splitter amplifier BL type.	AMP162	Belling Lee	44-470	470-860	12	16	
	2-way splitter amplifier F type	AMP162F	F type	44-470	470-860	12	16	
	4-way splitter amplifier BL type	AMP164	Belling Lee	44-470	470-860	12	16	
	4-Way Splitter Amplifier F-type	AMP164F	F type	44-470	470-860	12	16	
	4-way splitter amplifier Inc Power Supply	AMP164R	F type	44-470	470-860	12	16	Included
	4-way splitter amplifier. Remote power to any output with power through input switch feature.	AMP224	Screw & Saddle	44-470	470-860	12	16	

## Kingray power Supplies

Description	Stock Code	Connector
240VAC to 12VDC, 100mA	AMPPSK01	PAL
240VAC to 22VAC, 100mA	AMPPSK02	PAL
240VAC to 14VDC, 150mA	AMPPSK06	PAL
240VAC to 14VDC, 150mA	AMPPSK06F	F-Type
240VAC to 17.5VAC, 100mA	AMPPSK08	PAL
240VAC to 17.5VAC, 100mA	AMPPSK08F	F-Type
240VAC to 12VDC, 500mA	AMPPSK12S	2.5mm DC
240VAC to 12VDC, 500mA	AMPPSK12F	F-Type
240VAC to 18VDC, 500mA	AMPPSK18S	2.5mm DC
240VAC to 18VDC, 500mA	AMPPSK18F	F-Type
240VAC to 15VDC, 1.7A	AMPPSK18KR	2.5mm DC

## Power Supplies

### 12 VDC 100mA Power Injector

Available Models: **Kingray**  
12 VDC 100mA Power Injector **AMPPSU01**



### 22 VAC 150mA Power Injector

Available Models: **Kingray**  
22VAC 150mA Power Injector **AMPPSU02**



### 2 VAC 150mA Power Injector

Available Models: **Kingray**  
2 VAC 150mA Power Injector **AMPPIK01**

Power Injector Kingray With DC Plug And With 'F' Type On The TV and Amp. Side.



### Power Injector

Available Models: **Kingray**  
Power Injector **AMPPAK01**

Power Adaptor Kingray 3 Way



### Power Injector

Available Models: **Kingray**  
Power Injector **AMPPIK170**



Dotted Line: -ve

### Power Injector

Available Models: **Kingray**  
Power Injector **AMPPIK1750**



Brown: +ve  
Blue: -ve

## Power Injector

Available Models: **Kingray**  
Power Injector **AMPPIK2000**



## Power Injector

Available Models: **Kingray**  
Power Injector **AMPKLE01**



## 2.5mm Plug ~ 2.5mm Socket

Available Models: **Kingray**  
2.5mm Plug ~ 2.5mm Socket **AMPADC322**



## 2.5mm Socket ~ 4x 2.5mm Plugs

Available Models: **Kingray**  
2.5mm Socket ~ 4x 2.5mm Plugs **AMPADC324**



## UHF Radio & Accessories

### GME Electrophone UHF Handheld Radio

Available Models: **Kingray**  
GME Electrophone UHF Handheld radio **RADTX650**

40 Channel UHF handheld radio transceiver

- .5/1W RF Power Output
- CTCSS (38 Separate Tones)
- VOX
- Signal Strength Indicator
- Low Battery Indicator
- Keypad Lock
- Backlit LCD Display
- Roger Beep Tone
- Calling tone
- Power Save Mode
- Scan • Duplex • Belt Clip



## FSM Hire Services

High Quality Field Strength Meters are available for hire on a per day basis.



From just \$45 a day you can have access to the latest terrestrial and satellite instruments. Contact NAS Directly for more information.

## Field Strength Meters

### Digital Satellite Finder & Meter

#### Available Models:

Digital Satellite Finder & Meter

FSMSF-3000S

- Frequency range: 950~2150MHz
- Level range: -65dBm ~ -25dBm
- Input resistance: 750ohm
- Symbol rate: 2Mps ~ 45 Mps
- Dimension: 250x120x60(mm)
- Net weight: 0.8Kg
- Gross weight: 1.6Kg
- Working temperature: 0°C ~ +40°C
- Display: 128x64 wide-range temperature liquid crystal display.
- Audio output: build-in speaker
- Port: USB (default)
- Switch: 22 KHz support
- LNB power supply: 'H' +18V, :5500mA; 'V' +13V, :5500mA
- DC power supply: DC8.4V chargeable battery
- Power adapter input: AC 110V/60Hz 220V/50Hz ± 10%
- Power adapter output: 9.6 V DC 800mA
- Working time: working hours 3~4 hours (full charge)
- Charging time: more than 4 hours, less than 5 hours.



#### Accessories

- Common power supply adapter or Cigarette lighter adapter (Note: Adapter is optional.)
- RF input connector GMHF-L3/8-JK
- Instrument bag
- Operator's manual
- CD-ROM
- Data cable

### Sefram 7803b Digital Terrestrial FSM

#### Available Models:

Sefram 7803b Digital FSM

FSMSEFRAM7803B



Advanced digital terrestrial field strength meter with real time measurements and constellation diagram. Comprehensive user manual contains real-world applications and solutions.

- Real-time dynamic measurements
- True hardware measurements
- Shockproof housing for extensive field use
- Easy to use with direct access functions
- Memorisation of measurements, frequency maps & programs.
- BER, MER for terrestrial TV (COFDM)
- Spectrum analysis
- Constellation pattern

#### Technical Specifications

Frequency Band	45MHz to 865MHz
Dynamic Range	20dBuV to 120 dBuV
C-BER/V-BER	Yes
MER	Yes
Spectrum	Yes
Constellation	Yes
Battery Life	3 hours (max)
Remote Supply	Car charger, AC adaptor

### Sefram 7851 Digital Terrestrial / Satellite FSM

#### Available Models:

Sefram 7851 Digital Ter/Sat FSM

FSMSEFRAM7851

7852 Digital Ter/Sat FSM (QAM+Impulse noise)

FSMSEFRAM7852



#### Key Features

- ▶ 6,5 inch panoramic colour screen
- ▶ Light weight: just 2,1 kg
- ▶ Easy-to-use: direct access to functions
- ▶ Fast spectrum analysis
- ▶ Checksat mode for satellite dish antenna
- ▶ Very high sensitivity on terrestrial band
- ▶ DVB-T, DVB-S, DVB-S2
- ▶ Complete digital measurement (BER, MER)
- ▶ COFDM, QPSK, demodulation
- ▶ Quick 1 hour battery charge
- ▶ Rugged carrying bag

TR7836: PC software for all SEFRAM TV Meters  
KIT TR7836 (including software and USB cable) P/N: 978551000

### Sefram 7865 Digital Terrestrial / Satellite FSM

#### Available Models:

Sefram 7865 Digital Terrestrial/Satellite FSM

FSMSEFRAM7865



- Digital terrestrial (DVB-T/H) and analogue
- Digital satellite (DVB-S et DVB-S2)
- Analogue and digital cable networks (DVB-C) with QAM J83-A et J83-B
- All digital measurements: BER, MER
- Wifi signal measurements (with optional accessory)
- Display digital encrypted programs (check with our sales dept)
- Spectrum analysis: ultra fast mode and expert mode
- OSD TV
- Video input / output
- Convenient checksat mode
- OSD TV, NIT, Cell ID, constellation pattern
- Impulse response
- DiSEqC 1.2 (full)
- Easy-to-use
- 7" LCD coloured screen
- Weight: only 2,1kg
- Large autonomy (4H typ.) and fast charge (1h)
- 2 years warranty
- Easy internal software update: USB memory key