

## Specialist in Digital TV Distribution Solutions







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# MASTHEAD AMPLIFIERS



SHIELDED



NON-SHIELDED

All Kingray mastheads have been designed for user friendly installation and peak operating performance for the digital environment of today and well into the future. A masthead amplifier is designed to amplify low level off-air signals, so a very low noise figure is necessary as part of the amplifier design.

Kingray masthead amplifiers include LTE filtering for protection against the increasing number of 4G/5G LTE transmissions, the wideband and VHF models also include low band filtering. They are available in shielded and non-shielded models, incorporating the latest surface mount technology.

Jumper links make the FM traps switchable in our wideband models. A jumper link has also been used to make the combined or separate input feature selectable. The masthead amplifiers can be powered by the Kingray 14V DC & 17.5V AC power supplies.

Increased use of surface mount technology has resulted in the ability to produce a smaller PCB with increased reliability and performance. All Kingray mastheads, including distribution amplifiers and passive products are HD and 4K compatible.

## Kingray

**4G LTE**  
Filter

**5G**  
Filter

**HD**

Digital Picture  
Compatible

**4K**

ULTRA HD



## LTE – WHAT IS IT?

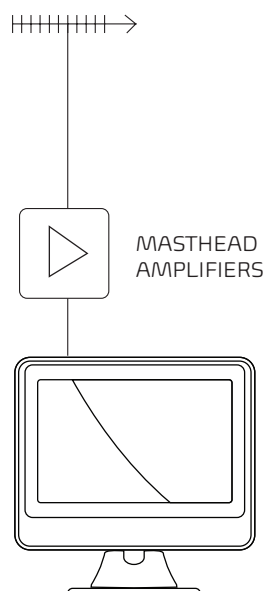
LTE stands for Long Term Evolution and is the name given to the 4G transmissions being used by mobile phone carriers. Transmissions of the 4G LTE services commenced in January 2015.

5G is the next major evolution in mobile network technology & services began in 2019. As with 4G before it, 5G is focused on mobile data. Australian 5G networks will use a combination of technologies & spectrum. 5G runs on similar frequencies to what 4G network uses right now, but on the higher end of the spectrum, currently using 3.5GHz spectrum for their 5G networks.

## BE PROTECTED

Kingray masthead amplifiers are engineered to maximise interference rejection of 4G LTE & 5G signals. The range includes both wideband, VHF and UHF only models where all services above 694 MHz are filtered and therefore minimize interference.

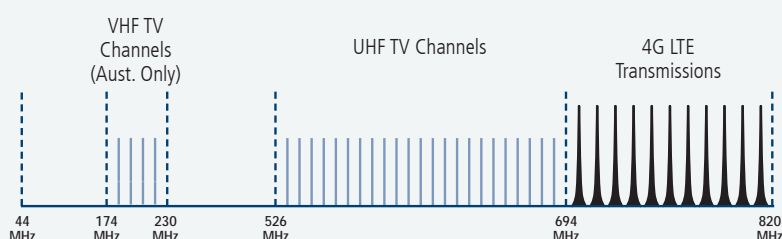
In addition to filtering mobile phone frequencies in masthead amplifiers, we have also included low band filtering to eliminate interfering services below 174 MHz.



## CURRENT DIGITAL TELEVISION CHANNELS SUPIMPOSED ONTO THE PREVIOUS ANALOG SPECTRUM



## DIGITAL SPECTRUM





## VHF MASTHEAD AMPLIFIERS

The MHV25F is designed for areas where there is VHF transmission only. The Band 1, 2, 4 and 5 filtering ensure only channels 6 to 12 are amplified, attenuating unwanted frequencies including those in the LTE band, while amplifying channels 6-12.



MHV25F



### MHV25F

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
VHF	174~230	25	1	<2.5dB	Up to -10dB	06 or 08 Series	60	N/A	108dBμV

F-Type masthead designed to amplify a VHF antenna.  
Packed without power supply.

## VHF & UHF MASTHEAD AMPLIFIERS

The VHF/UHF (combination) masthead amplifiers are designed for today's digital television environment. Bands 1 & 2 are filtered out, as are frequencies above 694MHz to reduce 4G/LTE interference.



MHW25F



### MHW25F

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
VHF	174~230 88~230*	12~15	1, 2 or comb.	<3.5dB	TILT -7 to -4dB	06 or 08 Series	60	-25dB	108dBμV
UHF	520~694	25		<2.6dB	Up to -10dB			N/A	

F-Type masthead designed to amplify separate VHF and UHF antennas or a combined VHF/UHF antenna.  
Packed without power supply.

\* FM Pass option



MHW25FE



### MHW25FE

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
VHF/ UHF	174~694 88~694*	22~25	1	<3.5dB	Up to -10dB	06 or 08	80	-25dB	108dBμV

Single input F-Type masthead designed to amplify either a separate VHF or UHF antenna or a combined VHF/UHF antenna.  
Packed without power supply.

\* FM Pass option



MHW35F



MHW35FS



### MHW35F, MHW35FS & MHW35FDP

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
VHF	174~230 88~230*	22~26	1, 2 or comb.	<3.5dB	TILT -16 to -12dB	06 or 08	80	-25dB	108dBμV
UHF	520~694	35		<3.0dB	Up to -15dB			N/A	

F-Type masthead designed to amplify separate VHF and UHF antennas or a combined VHF/UHF antenna.  
Optional shielded (FS) or non-shielded (F) models available. Packed without power supply.  
MHW35FDP is non-shielded and includes a PSK06F power supply.

\* FM Pass option



MHW43FS



### MHW43FS

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
VHF	174~230 88~230*	27~35	1, 2 or comb.	<3.5dB	TILT -16 to -12dB	06 or 08	80	-25dB	108dBμV
UHF	520~694	43		<3.0dB	Up to -10dB			N/A	

F-Type masthead designed to amplify separate VHF and UHF antennas or a combined VHF/UHF antenna.  
Available in shielded model only. Packed without power supply.

\* FM Pass option

# MASTHEAD AMPLIFIERS

## UHF MASTHEAD AMPLIFIERS

The Kingray MHU series are UHF masthead amplifiers. They are supplied with F connections and are available in shielded and non-shielded models.

MHU25F & MHU25FS									
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
UHF	520~694	25	1	<2.6dB	Up to -10dB	06 or 08	60	N/A	108dBμV

F-Type masthead designed to amplify a UHF antenna.



MHU25F 

MHU35F, MHU35FS & MHU35FDP									
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	FM TRAP OPTION	OUTPUT FIGURE DIN45004B
UHF	520~694	35	1	<3.0dB	Up to -15dB	06 or 08	80	N/A	108dBμV

F-Type masthead designed to amplify a UHF antenna.  
Optional shielded (FS) or a non-shielded (F) models available. Packed without power supply.  
MHU35FDP is non-shielded & includes a PSK06F power supply.



MHU35F 



MHU35FS 

## MASTHEAD BOX

### MHB001

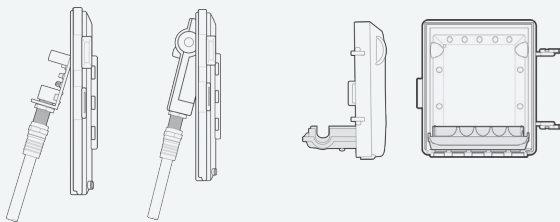
Kingray's trademark 100% weatherproof masthead box. Must be mast mounted vertically as shown in picture

Available individually to house indoor filters, splitters and outdoor connections.



PCB PIVOTS FROM THE CASE TO ALLOW EASIER ACCESS TO THE CONNECTORS.

MHB001 COVER DESIGNED TO TEMPORARILY HOLD LID FROM SHIELDED MODELS.



### BOARD MARKINGS

All separate VHF/ UHF gain controls, filters/ traps are marked on the masthead boards for easy identification.

### GAIN CONTROLS

The gain control provides a number of functions depending on the mastheads design, including:

- Flat Gain Response
- Positive Tilt Gain Control



## DOMESTIC & COMMERCIAL AMPLIFIERS

Kingray's terrestrial distribution amplifiers are designed for today's digital television environment. Our wide range of distribution amplifiers makes it easy to select the ideal product for your application.

### KDA20 DOMESTIC SINGLE INPUT/ SINGLE OUTPUT AMPLIFIER

	FREQUENCY (MHz)	MAX. GAIN (dB)	NOISE FIGURE	GAIN ADJUSTMENT	INPUTS	OUTPUTS	OPERATING VOLTAGE	OPERATING TEMPERATURE	OUTPUT FIGURE DIN45004B
VHF/ UHF	44~860	20	<3.5dB	-10dB	1	1	240V AC	-10~50 degrees C	104dBμV

The KDA20 is VHF/UHF television amplifier with one input and one output. Designed to plug directly into the power point, the KDA20 has the innovative feature of a 240 volt piggyback plug.

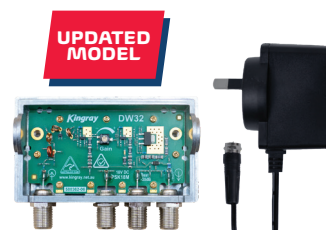


KDA20

### DW32 VHF/UHF SPLIT BAND DISTRIBUTION AMPLIFIER

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	O/P TEST POINT	OUTPUT FIGURE DIN45004B	FOXTEL IPL NO.
VHF/ UHF	174~694	32	1	5.0	Up to -10dB	PSK18M	140	-30dB	110dBμV	F10055

F-Type distribution amplifier designed for a separate VHF or UHF antenna or a combined antenna via jumper link at the input. Can be remotely powered to the output. Packed with a PSK18M DC power supply.



DW32



### DA44 VHF/UHF WIDEBAND DISTRIBUTION AMPLIFIER

	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	O/P TEST POINT	OUTPUT FIGURE DIN45004B	FOXTEL IPL NO.
VHF/ UHF	174~694	44	1	<3.5dB	Up to -10dB	PSK18M or PSK182F	300	-30dB	118dBμV	F31216

The DA44 is a VHF/UHF distribution amplifier with one RF input & one RF output. Can be remotely powered via the RF input or RF output. Packed without power supply.



DA44



ISO 9001:2015  
AU97\0906  
List of certified  
characteristics available  
at [www.sgs.com](http://www.sgs.com)

Our ISO9001 accreditation ensures every product is tested to meet or exceed all quality standards prior to packing, enabling fault-free installation every time.

GME remains committed to the research and development of its Kingray products. They are designed and manufactured in our state of the art facility in Sydney, utilising the latest software, RF and CAD techniques.



# SATELLITE DISTRIBUTION AMPLIFIERS

Kingray’s satellite distribution amplifiers have been designed to suit today’s digital television environment. The technology used is hybrid bipolar and GaAs, which allows for a greater output capacity, whilst having a lower noise figure. All models have mid stage gain controls for increased performance, flexible powering options and are housed in a full diecast housing.



SAT40S



SAT40S										
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	CURRENT (mA)	EQ	OUTPUT FIGURE	FOXTEL IPL NO.
SAT	950~2400	40	1 x SAT I.F.	<10dB	-20dB	PSK18S or PSK18F	260~410mA*	0~15dB	122dBuV–35dB IMR	F30949

Single input satellite distribution amplifier, ideal for use in a Foxtel single coax cable multistacker satellite distribution system. Features high output with adjustable gain and equalisation controls.  
\*Depends on current drain by LNB.  
Packed without power supply.

# SMATV DISTRIBUTION AMPLIFIER

The Kingray DSB38F is a super broadband high gain distribution amplifier used in SMATV applications amplifying both terrestrial and satellite television signals. This amplifier features a combined single input with fully adjustable gain and equalization controls as well as switchable fixed input attenuation for each band. Includes a -30dB output test point and multiple powering and power through options.



DSB38F



DSB38F SUPER BROADBAND AMPLIFIER											
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	NOISE FIGURE	GAIN ADJUSTMENT	ADDITIONAL INPUT ATTENUATION	POWER SUPPLY	CURRENT (mA)	EQ	OUTPUT FIGURE	FOXTEL IPL NO.
TER	47~862	36	1	<10dB	Up to -10dB	-10dB Selectable	PSK18M or PSK183F	560mA @ 12V DC 370mA @ 18V DC	0~10dB	120dBuV–60dB IMR	F30977
SAT	950~2400	40				-10dB Selectable			0~10dB	122dBuV–35dB IMR	

Packed without power supply.

The Kingray Active Taps are used for the distribution of terrestrial and satellite signals.

They feature high output with adjustable gain and equalisation control.



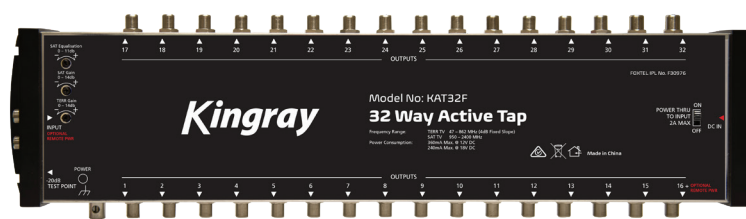
KAT8F



KAT16F



KAT24F



KAT32F

PART NO.			KAT8F	KAT16F	KAT24F	KAT32F
PARAMETERS			SPECIFICATIONS			
Frequency Range	Terrestrial (TER)		47~862MHz			
	Satellite (SAT)		950~2400MHz			
Input / Output	TER+SAT		1 x Input / 8 x Taps	1 x Input / 16 x Taps	1 x Input / 24 x Taps	1 x Input / 32 x Taps
DC_IN / GND Post			1 / 1			
Insertion Gain	TER	47 MHz	10dB			
		862 MHz	14dB			
	SAT		14dB		15dB	14dB
Gain Adjustment	TER		-14dB			
	SAT		-14dB			
Slope Adjustment	SAT		11dB at low frequencies			
Fixed Slope	TER		4dB			
Out-band Rejection	SAT / TER		37dB			
Output Isolation	TER		30dB			
	SAT		35dB			
Return Loss	SAT / TER		12dB			
Max. Output Power Level	TER ( 60dBuV IMA3 @ EN60728-5 )		96dBμV			
	SAT ( 35dBuV IMA3 @ EN60728-3 )		97dBμV		96dBμV	
DC_IN			2A/12V Optional External PSU			
DC from / to Input			DIP SW CTRL and 2A max.			
Power Source			12VDC/2A @ PSU or Input Port			
Power Consumption			150mA Max.@ 12VDC/ 100mA Max.@ 18VDC	240mA Max.@ 12VDC/ 150mA Max.@ 18VDC	380mA Max.@ 12VDC/ 250mA Max.@ 18VDC	430mA Max.@ 12VDC/ 300mA Max.@ 18VDC
Foxtel IPL No.			F31011	F31010	F31095	F31076

# INDOOR AMPLIFIED SPLITTERS

Kingray provide a complete range of amplified splitters for all applications and they are designed for peak performance for digital terrestrial environments. The characteristics of the components selected provide a very low noise figure, a high output level and low return loss.



SA124FDP

SA124FDP								
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	OUTPUTS	NOISE FIGURE	GAIN ADJUSTMENT	POWER SUPPLY	OUTPUT FIGURE DIN45004B
VHF	174~694	12	1	4	<3.5dB	N/A	PSK06	100dBµV
UHF								

F-Type single input 4 Way VHF/UHF amplified splitter, supplied with PSK06 power supply & adaptor.



SA162F

SA162F								
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	OUTPUTS	NOISE FIGURE	GAIN ADJUSTMENT	MAINS	OUTPUT FIGURE DIN45004B
VHF	44~860	12-14	1	2	<3.5dB	N/A	230~240V AC	100dBµV
UHF		16						

F-Type single input 2 Way VHF/UHF splitter amplifier, supplied with adaptors for conversion to Belling Lee connection.



SA164F

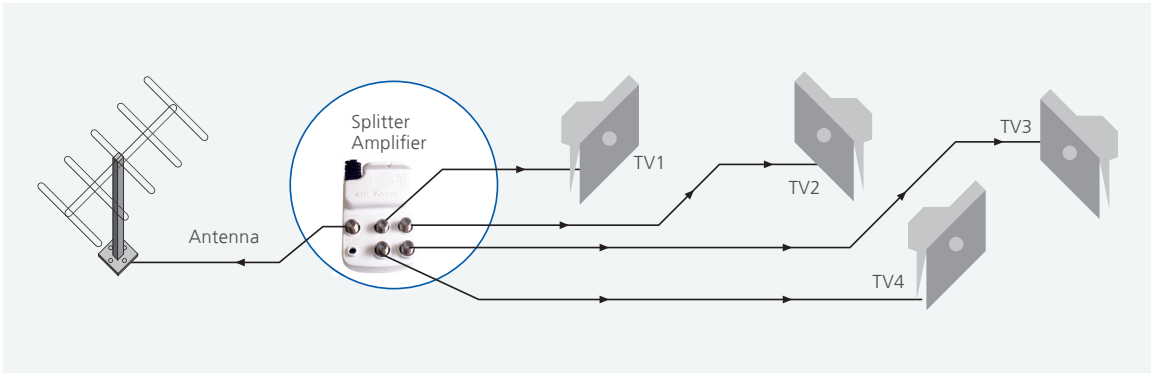


SA164F								
	FREQUENCY (MHz)	MAX. GAIN (dB)	INPUTS	OUTPUTS	NOISE FIGURE	GAIN ADJUSTMENT	MAINS	OUTPUT FIGURE DIN45004B
VHF	44~860	12-14	1	4	<3.5dB	-8dB TILT	230~240V AC	100dBµV
UHF		16			<3.5dB	N/A		

F-Type single input 4 Way VHF/UHF splitter amplifier, supplied with adaptors for conversion to Belling Lee connection.

## TYPICAL AMPLIFIED SPLITTER INSTALLATION

Amplified Splitters are used when you have enough signal to run one TV outlet but not enough for multiple outlets.





# RF DISTRIBUTION OVER ETHERNET CABLE

At the heart of the Kingray CATTV™ system is the CAT01 high output distribution amplifier – capable of supplying quality signal to up to four television receivers.

The CAT01 amplifier incorporates master gain and tilt controls, plus individual gain controls for each outlet, delivering a balanced output level regardless of cable lengths.



CAT01

CAT01										
FREQUENCY (MHz)	MAX. GAIN (dB)	OUTPUT LEVEL	MIN INPUT LEVEL	TILT CONTROL	GAIN CONTROL	NOISE FIGURE	RETURN LOSS	ISOLATION	TEST POINT	POWER CONSUMPTION
47~750	32	95dB (42 Ch. CENELEC)	63dBuV	0~15dB	0~20dB	-8dB	-10dB	-20dB (port to port)	-20dB	800mA

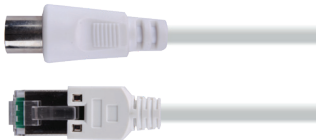
The PSK5S power supply is included with the CAT01.

Available separately is the Kingray KLE02 impedance matching balun cable for connection between the RJ45 wall outlet and the television ensuring optimal performance at all times. This lead is 2.0m in length with an RJ45 connector on one end & a PAL male connector on the other end.

Rounding out the range is the KB02 19" rack mounting bracket which can house 2 x CAT01 units.

### FEATURES

- High Output
- 32dB maximum gain
- -20dB test point
- Wide bandwidth 47~750 MHz
- Can be rack mounted



KLE02



KB02



PSK5S

# POWER SUPPLIES

Kingray power supplies maintain a reputation as being one of the most reliable and highest quality options within the industry. They feature posistor protection circuitry which fully complies with Australian and New Zealand energy standards, including MEP’s compliance.



PSK06



PSK06F



PSK08



PSK08F



PSK18M



PSK182F



PSK12S



PSK18F



PSK18S

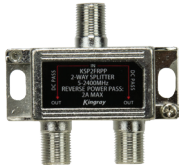
POWER SUPPLIES									
	VOLTAGE	INJECTOR TYPE	FOXTEL IPL NO.	MHW Series MHU Series MHV Series	MDA Series	SAT25S SAT40S	DW32	DA44 MD100VS MD100US	KAT8F KAT16F KAT24F KAT32F DSB38F
PSK06	14V DC 150mA	PAL		•	•				
PSK06F		Female F-Type		•	•				
PSK08	17.5V AC 100mA	PAL		•					
PSK08F		Female F-Type		•					
PSK12S	12V DC 1000mA	2.5mm DC	F10288				•	•	
PSK18F	18V DC 1000mA	Female F-Type	F10287			•		•	
PSK18S		2.5mm DC	F10289			•			
PSK18M		Male F-Type	F31096				•	•	•
PSK182F	18V DC 2.0A		F31212						•

## F-TYPE SPLITTERS 5-2400MHZ

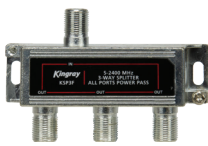
These splitters have high isolation, are power pass on all ports and have greater than 100dB RF shielding.



KSP2F



KSP2FRPP



KSP3F



KSP4F



KSP4FRPP



KSP6F



KSP8F

PART NO.		KSP2F/ KSP2FRPP*	KSP3F	KSP4F/ KSP4FRPP*	KSP6F/ KSP8F
PARAMETERS		SPECIFICATIONS			
Insertion Loss (dB)	5~40MHz	4.0	7.5	8.0	11.0
	40~1000MHz	4.5	8.0	8.5	12.0
	1000~1750MHz	5.0	9.5	10.0	13.0
	1750~2400MHz	5.5	10.0	10.5	15.0
Return Loss (dB)	5~2400MHz	>10			
Foxtel IPL No.		F30950/ F30998	F30951	F30952/ F30997	F30964/ F30965

\*The KSP2FRPP & the KSP4FRPP have been specifically designed for use in a multistacker system. These splitters pass power from the input port to the output ports, which allow the active taps to be power remotely. The other splitters pass power in the traditional configuration, which is from the output ports to the input port.

## F-TYPE TAPS 5-2400MHZ

The Kingray passive taps are designed to cover the Terrestrial and Satellite Bands from 5 to 2400MHz.

Note: Power Pass on through port only.



KT212F



KT215F



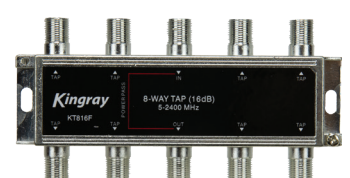
KT412F



KT415F



KT420F



KT816F

PART NO.		KT212F	KT215F	KT412F	KT415F	KT420F	KT816F
PARAMETERS		SPECIFICATIONS					
Frequency Range		5~2400MHz					
Ports		2	2	4			8
Insertion Loss (dB)	40~1000MHz	2.0	2.0	4.0	3.0	2.2	4.0
	1000~1750MHz	2.5	2.5	4.5	3.5	2.5	4.5
	1750~2400MHz	3.0	3.0	5.0	4.5	3.5	5.0
Mutual Isolation (dB)	40~1000MHz	>30					
	1000~1750MHz	>26	>28	>28			>35
	1750~2400MHz	>25					
Return Loss (dB)	40~2400MHz	>12					
Tap Loss (dB)	40~2400MHz	12	15	12	15	20	16
Foxtel IPL No.		F31057	F31056	F30954	F30955	F30956	F30969



# SATELLITE MULTISWITCHES

The Foxtel approved Kingray multiswitches have a low power consumption & are manufactured in a compact zinc die-cast housing.



KMS24



KMS28

SATELLITE MULTISWITCHES								
PART NUMBERS	FREQUENCY (MHZ)	MAX. GAIN (dB)	INPUTS	OUTPUTS	OUTPUT FIGURE	CURRENT (mA)	DIMENSIONS (mm)	FOXTEL IPL NO.
KMS24	950~2150	0 ~ +2	2	4	100dBµV Max.	<50	110(L) x 90(W) x 21(H)	F31104
KMS28				8		<65		F31103

# LEADS AND BRACKETS



KLE030



KLE150W



KLE200W



KLE200IMIMW

LEADS & BRACKETS			
PART NUMBERS	LENGTH	DESCRIPTION	FOXTEL IPL NO.
KLE030	450mm	DC Y Splitter Power Lead with 2.1mm Connectors	N/A
KLE150W	1.5m	1.5m White RG6 Tri-Shield Flylead F-Type Connectors	F31116
KLE200W	2.0m	2m White RG6 Tri-Shield Flylead F-Type Connectors	F31117
KLE200IMIMW	2.0m	2m White RG6 Tri-Shield Flylead PAL Male Connectors	F31160

Kingray power injectors allow power to be fed into a coaxial cable. Using a suitable power supply, this allows distribution amplifiers/masthead amplifiers/modulators/active taps/multistackers to be mounted in locations where power might not normally be available.

For remotely powering active taps or, multistacker or amplifiers, in conjunction with a suitable power supply.



PIK2400

F-TYPE POWER INJECTORS			
PART NUMBERS	VOLTAGE	FREQUENCY	FOXTEL IPL NO.
PIK2400	60V DC 2A Max.	5~2400MHz	F31017



Signal + Power  
Max. 30V @ 300 mA  
Trace on wire = Positive  
Short Circuit Protected

F-TYPE POWER INJECTORS			
PART NUMBERS	VOLTAGE	FREQUENCY	DESCRIPTION
PIK170FDC	30V Max.	5~860MHz	Cigarette Lighter Plug to F-Type Power Injector

# CONNECTORS & ADAPTERS

PCT is widely known for its patented compression connector technology, but is always looking for new ways to improve the quality of the drop.

PCT stands behind the philosophy that a tight connection is always the best connection but understands that an installation completed by a customer or installer may run the chance of being less than perfect. That's why PCT develops products that help avoid service related issues, increase customer satisfaction and lower operational expenses for operators.



COMPRESSION CONNECTORS		
PART NUMBERS	DESCRIPTION	FOXTEL IPL NO.
PCTTRSF6L	RG6 F Compression Connector	F31126
PCTTRSF11L	RG11 F Compression Connector	F31125
PCTTRS59LMG	RG59 F Compression Connector	F31121
PCTTRS6LMG	RG6 F Compression Connector	N/A
PCTTRS6LRA	RG6 Right Angle F Compression Connector	F31124
PCTTRS6IFNT	RG6 PAL Female Compression Connector	F31123
PCTDRS6IMNT	RG6 PAL Male Compression Connector	F31158

The KFTERM01 is a 1kV DC Blocking 75 Ohm Terminator.

KFTERM01				
FREQUENCY RANGE (MHz)	INSERTION LOSS (dB)	ISOLATION (dB)	RETURN LOSS (dB)	FOXTEL IPL NO.
5~862	≤1.0	≥30	≥12	F30999
950~2400	≤1.0	≥40	≥12	



KFTERM01

The KDCBLOCK is an in-line DC block with a voltage rating at 100V DC max.

KDCBLOCK			
FREQUENCY RANGE (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FOXTEL IPL NO.
5~1000	≤0.2	≥12	F31082
1000~2400	≤0.5	≥12	



KDCBLOCK



Filtering and diplexing of RF signals plays an important part in providing quality pictures both domestically and commercially. Kingray has developed numerous types of quality filters and diplexers that can easily solve common reception problems for digital systems.

These band pass filters are ideal for the attenuation of unwanted interfering signals, thus providing a cleaner set of RF signals for distribution. As part of the design, these filters have a rubber o-ring & a rubber seal.

The band pass filters have a minimum of -40dB out of band attenuation with a return loss of greater than -15dB.



FL612BP



FL2833BP



FL3439BP



FL4045BP



FL4651BP

## BAND PASS FILTERS

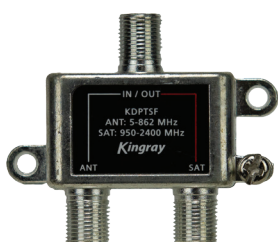
PART NUMBERS	DESCRIPTION	CHANNEL BLOCK
FL612BP	Band Pass Channel Filter – CH6~12	Block A
FL694LP	Band Pass Channel Filter – CH28~33	Block B
FL2833BP	Band Pass Channel Filter – CH34~39	Block C
FL3439BP	Band Pass Channel Filter – CH40~45	Block D
FL4651BP	Band Pass Channel Filter – CH46~51	Block E



FL694LP

## 4G/5G LTE

PART NUMBER	SPECIFICATION	FOXTEL IPL NO.
FL694LP	Attenuates above 694 MHz 55dB @750 MHz	F30940



KDPTSF

## TERRESTRIAL / SATELLITE DIPLEXER

PART NUMBER	SPECIFICATION	FOXTEL IPL NO.
KDPTSF	5~862 / 950~2400 MHz	F30953

## KSTRG596 STRIPPING TOOL

Strips RG59 & RG6 tri and quad shield coaxial cable. Interchangeable & reversible cassette with RG59 & RG6 on both sides.

### FEATURES

- Unique black velcro strip on the bottom to assist in peeling back the aluminium braid
- Suitable for all RG59, RG6 cables
- Foxtel IPL No. F31118



KSTRG596

## KSTRG59611 STRIPPING TOOL

Strips RG59, RG6 & RG11 tri and quad shield coaxial cable. Interchangeable & reversible cassette with RG59 & RG6 on one side & RG11 on the other side.

### FEATURES

- Unique black velcro strip on the bottom to assist in peeling back the aluminium braid
- Suitable for all RG59, RG6 and RG11 cables
- Foxtel IPL No. F31119



KSTRG59611

## PCTAIOCT COMPRESSION TOOL

The PCT-AIO-CT All-In-One compression tool is PCT's solution to the problem of multiple tools in the field. The AIO is a uniquely designed compression tool that eliminates the need for installers to carry more than one tool.

This tool is truly universal and works with almost every connector on the market today. Different compression lengths can be selected with the simple push of a button, and a pop out mandrel allows for quick connector style selections.

The pop out mandrel requires no calibration and is permanently affixed to the tool body to prevent misplacement.

### FEATURES

- Full 360° compression surface
- Flip latch secures connector assembly providing perfect alignment
- Use with multiple types of cable types - Series 6, 7, 11, 59 & 320QR
- Compact, pocket-size design
- Enhanced leverage for easier activation
- Greater durability for longer life
- Foxtel IPL No. F31129



PCTAIOCT

## PCTRHCT COMPRESSION TOOL

The PCT-RH-CT is a One-of-a-Kind compression tool designed with installers' needs in mind. The PCT-RH-CT allows users the benefits and ease of a horseshoe style compression tool.

During compression, the connector is supported a full 360 degrees for balanced and consistent installations.

### FEATURES

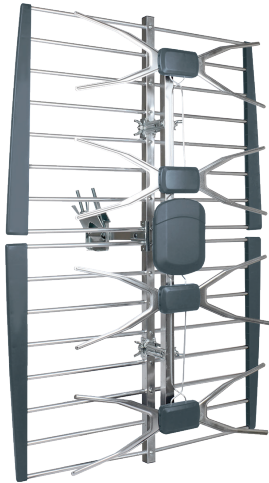
- Slim design allows users to get extremely close to the connector when cable length is limited
- Works on TRS 6 & 59 and DRS 11 connector stroke lengths
- Automatically aligns cable
- Compact, pocket-size design
- Enhanced leverage for easier activation
- Greater durability for longer life
- Foxtel IPL No. F31128



PCTRHCT

The Kingray television antenna range is fast gaining a reputation for exceptional performance and rugged build quality.

The range has been developed to withstand the harsh Australian conditions, with UV stabilised plastics, heavy duty mounting brackets, booms and elements that have all been chosen to ensure many years of trouble free service. All models display the quality you have come to expect in a Kingray product.



KPANELLTE

## KPANELLTE UHF PHASED ARRAY ANTENNA

### FEATURES

- 694 MHz low pass LTE filter
- Heavy duty mounting bracket with tilt
- Reflector elements individually screwed to boom
- Easy to install
- Horizontal and vertical operation
- UV stabilised weatherproof balun housing



LTE is a trademark of ETSI

KPANELLTE	
GAIN	12.5dB
WIND LOAD	78 (n)
FREQUENCY RANGE	470–694MHz
BEAM WIDTH (HORIZONTAL)	+/-25 degrees
BEAM WIDTH (VERTICAL)	+/-20 degrees
SIZE	815 x 545mm
F CONNECTOR	Yes
WEIGHT	1.65kg
CHANNELS	28 – 51
FRONT TO BACK RATIO	22dB
NO. OF ELEMENTS	4
IMPEDANCE	75 Ohm
F CONNECTOR	Yes



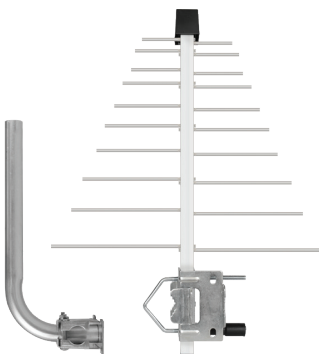
KVHFY6

## KVHFY6 6 ELEMENT VHF ANTENNA

### FEATURES

- Heavy duty 12mm rod
- Heavy duty mounting bracket
- UV stabilised plastics
- Easy to install
- Horizontal and vertical operation
- Suitable for DAB+

KVHFY6	
ELEMENTS	6
BAND	3
CHANNELS	6 – 12
FREQUENCY	174–230MHz
GAIN	10.5dB
F/B RATIO	16dB
OVERALL LENGTH	1275mm
MAXIMUM WIDTH	834mm
F CONNECTOR	Yes



KMLP01

## MINI LOG UHF DIGITAL TV ANTENNA

### FEATURES

- Compact & lightweight antenna
- UV stabilised plastics
- Easy to install
- Horizontal and vertical operation
- Includes 0.3m J-pole

KMLP01	
ELEMENTS	20
BAND	3
CHANNELS	21 – 69
FREQUENCY	470–862MHz
GAIN	7.5dB
F/B RATIO	21dB
OVERALL LENGTH	400mm
MAXIMUM WIDTH	311mm
F CONNECTOR	Yes

# FTA REGENERATING HEADEND

The MLF-300 is a very powerful, all-in-one mini headend device, able to receive up to 4 independent satellite (DVB-S/S2), terrestrial (DVB-T/T2) or cable (DVB-C) signals and convert them either in 4 x DVB-T/C RF output channels or in IPTV streaming using UDP/RTP protocols multicast/unicast.

It supports "pool" technology, meaning that the user is able to select any program from any of the 4 inputs and assign them to any of the 4 RF or IP outputs providing great flexibility. The embedded web server of the MLF-300 provides a very friendly user interface as well as the ability of remote or local control of the device via LAN.

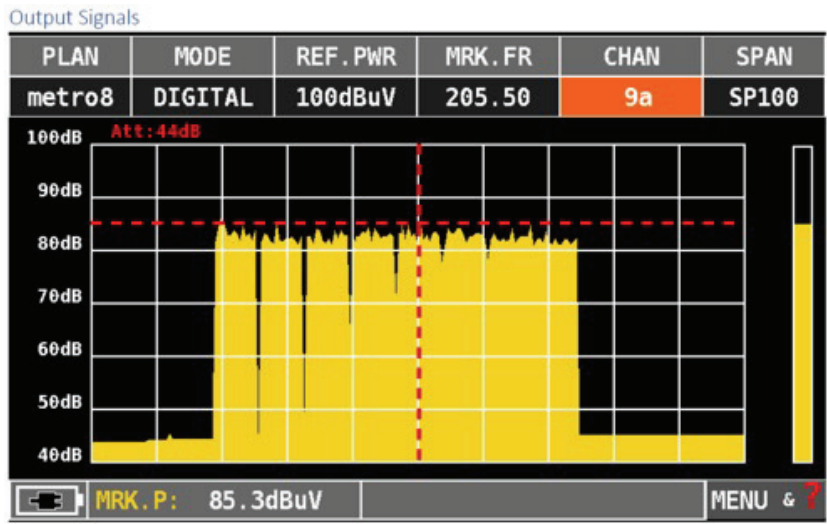
Its small size and its powerful features render the MLF-300 the ideal solution in case we want to distribute FTA (Free-To-Air) TV programs coming from satellite (DVB-S/S2), terrestrial (DVB-T/T2) or cable (DVB-C) sources to a CATV installation using the DVB-T/C or IPTV technology.

### FEATURES

- 4 x independent multi-standard inputs DVB-S/S2/T/T2/C
- 1 x RF output containing up to 4 x DVB-T/C channels (software selectable)
- Gbit IP streaming (up to 64 x SPTS / 4 x MPTS)
- "Pool" technology
- MER value > 42dB
- PID filtering
- Redundancy mode compatible
- Custom NIT/SDT
- Local or remote control via webserver
- User friendly interface
- Wall or rack mount options
- SNMP v2
- Ultra-compact in size
- 3 Year Warranty (KPS12S Power Supply)
- 5 Year Warranty (MLF-300)



MLF-300 FTA REGENERATING HEADEND								
FREQUENCY (MHz)	INPUTS	OUTPUTS	OUTPUT LEVEL dBµV	CHANNEL BANDWIDTH	MER OUTPUT LEVEL	INPUT FORMAT	OUTPUT FORMAT	IP STREAMING
118~900 (FTA) 950~2150 (SAT)	4	1	90 Max.	6, 7 or 8MHz	> 42dB	DVB-S/S2/T/T2/C	DVB-T/C	YES



KOR100



# OPTICAL FIBRE TRANSMITTERS

The KOT001A directly modulated optical transmitter has an input range of 47~2600MHz and is specifically designed for the transmission of Digital TV (DVB-C, DVB-T/T2) and Satellite TV (DVB-S) signals.

This transmitter is Foxtel approved & is ideal for use in a FTTx PON system.

The KOT010 transmitter is a compact wall mountable transmitter & is ideal for point to point applications.

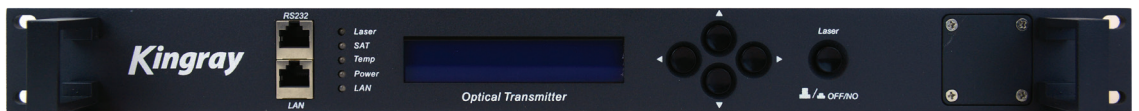
## FEATURES

- Wide Band Type: 47~2600MHz
- Suitable for Digital TV and Satellite TV application
- One fibre can transmit Digital TV (DVB-C, DVB-T/T2) and satellite TV (DVB-S)
- Cooled HGHL DFB laser provides better system stability (KOT001A only)
- KOT001A can be amplified by EDFA to cover large-scale FTTH and is compatible with any FTTx PON technology
- Dual power supply, 1+1 backup KOT001A only)



KOT010

OPTICAL FIBRE TRANSMITTERS		
PART NUMBERS	DESCRIPTION	FOXTEL IPL NO.
KOT001A	Optical Fibre Transmitter 1555nm - 4mW/6dBm, 19" Rack Mount	F31211
KOT010	Optical Fibre Transmitter 1550nm - 4mW/6dBm, Compact & Wall Mountable	F31150



KOT001A

# OPTICAL FIBRE RECEIVERS

**The KOR100 optical receiver uses a high-sensitivity PIN detector.**

The KOR100 next generation optical receiver supports GPON, XGS-PON & NG-PON2 wavelengths & also has AGC on the RF output for a typical RF output level of 85dB.

## FEATURES

- High linearity, suitable for Digital TV and SAT-IF application
- Wide band Type: 47~2600MHz
- Digital TV (DVB-C, DVB-T/T2) and Satellite TV (DVB-S) signal can be received via a single fibre at the same time
- Built-in WDM (KOR100 only) to separate wavelengths of 1550~1560 (CATV) and 1270/1310/1490/1524~1544/1577/1596~1602 (data)
- LED indicator
- Compact in design, wall mountable and light weight



KOR100



KOR002

OPTICAL FIBRE RECEIVERS		
PART NUMBERS	DESCRIPTION	FOXTEL IPL NO.
KOR100	1555nm Optical Fibre Receiver with WDM	F31120
KOR002	1550nm Optical Fibre Receiver	F31076

# OPTICAL FIBRE AMPLIFIERS (EDFA)

The KOA Series are range of low noise, high performance, Fibre to the premises (FTTP) high power, multi-ports optical amplifiers with a gain spectrum bandwidth within 1540~1563nm range. The output port for the optical amplifier has a built-in Coarse Wavelength Division Multiplexer to enable multiplexing with corresponding input ports connecting to a carrier OLT PON port should this be required.

Each output optical port can optically multiplex with GPON or XGS-PON wavelength input data stream to reduce the number of components and improve the reliability of the system.

## FEATURES

- Built-in low noise pre-amplifier
- 1540~1563nm operating bandwidth for optical amplifier
- Can be custom ordered with higher outputs such as 18dBm or 21dBm per port
- Output power can be decreased in 1dBm increments & up to 6dBm in total.
- 4~32 uplink optical ports, for OLT
- 4~32 1550nm output optical ports, multiply 1270/1310/1490/1577 data stream
- Each output optical port includes built-in high performance CWDM, single fibre, to save optical fibre resources
- Compatible with FTTx PON technology: EPON, GPON & XGS-PON
- Carrier level reliability with network management
- SNMP Management interface
- Efficient space, simple and reliable in construction/maintenance
- Dual power supply, 1+1 backup

## AMPLIFIERS WITH WDM

PART NUMBERS	DESCRIPTION
KOA4PX-15	4 Port 1550nm Optical Fibre Amplifier - 15.5dBm per port (23dBm total)
KOA8PX-15	8 Port 1550nm Optical Fibre Amplifier - 15.5dBm per port (27dBm total)
KOA16PX-15	16 Port 1550nm Optical Fibre Amplifier - 15.5dBm per port (30dBm total)
KOA32PX-15	32 Port 1550nm Optical Fibre Amplifier - 15.5dBm per port (34dBm total)

\*customised models available upon request



KOA4PX-15



KOA8PX-15



KOA16PX-15



KOA32PX-15

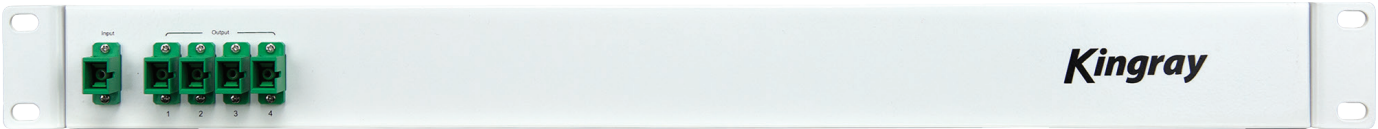
FEATURES

- Low insertion loss, high uniformity
- Low polarization loss
- Wide working wavelength range
- Wide working temperature range
- High stability and reliability
- 19" rack mount

**Planar Optical Waveguide Optical Splitter (PLC Splitter)** is an integration waveguide optical power distribution device that is based on quartz substrate, has a wide working wavelength range, high reliability and excellent uniformity of optical split.

It is especially suitable for connecting a local unit with a terminal unit in passive optical networks (EPON, BPON, GPON, etc.) to achieve optical signal splitting. The main design divides optical signals in optical communication systems into multi-way output.

PART NO.	KPLC104	KPLC108	KPLC116	KPLC132
PERFORMANCE	SPECIFICATIONS			
Outputs	4	8	16	32
Fibre Type	G.657.A			
Working Wavelength	1260nm~1650nm			
Maximum Insertion Loss (dB)	≤7.4	≤10.7	≤13.9	≤17.2
Port Insertion Loss Uniformity (dB)	≤0.6	≤8.0	≤1.0	≤1.5
Wavelength Insertion Loss Uniformity (dB)	≤8.0		≤1.0	
Return Loss (dB)	≥55			
Directivity (dB)				



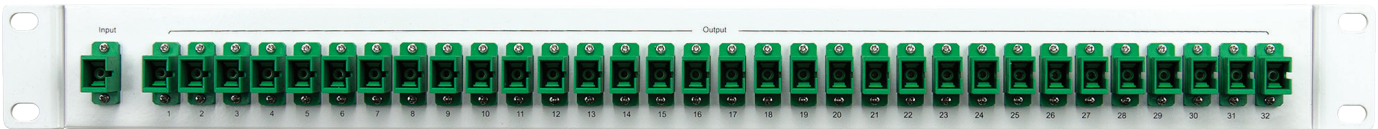
KPLC104



KPLC108



KPLC116

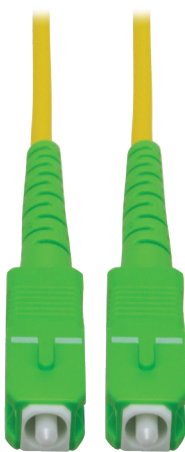


KPLC132

# OPTICAL FIBRE LEADS

Pre-terminated single mode patch leads, with a low smoke zero halogen PVC jacket.  
Available in various lengths.

OPTICAL FIBRE PATCH LEADS 9/125µm, 2.0mm (LSZH)		
PART NUMBERS	LENGTH	DESCRIPTION
KLE010	0.5m	SC/APC to SC/APC Single Mode Patch Lead
KLE011	0.5m	SC/APC to SC/PC Single Mode Patch Lead
KLE012	1.0m	SC/APC to SC/APC Single Mode Patch Lead
KLE013	1.0m	SC/APC to SC/PC Single Mode Patch Lead
KLE014	1.5m	SC/APC to SC/APC Single Mode Patch Lead
KLE015	1.5m	SC/APC to SC/PC Single Mode Patch Lead
OPTICAL FIBRE LEADS 9/125µm, 3.0mm (LSZH)		
PART NUMBERS	LENGTH	DESCRIPTION
KLE10MSC	10m	10m SC/APC to SC/APC Single Mode Lead
KLE15MSC	15m	15m SC/APC to SC/APC Single Mode Lead
KLE20MSC	20m	20m SC/APC to SC/APC Single Mode Lead
KLE25MSC	25m	25m SC/APC to SC/APC Single Mode Lead
KLE30MSC	30m	30m SC/APC to SC/APC Single Mode Lead
KLE35MSC	35m	35m SC/APC to SC/APC Single Mode Lead
KLE40MSC	40m	40m SC/APC to SC/APC Single Mode Lead
KLE45MSC	45m	45m SC/APC to SC/APC Single Mode Lead
KLE50MSC	50m	50m SC/APC to SC/APC Single Mode Lead
KLE60MSC	60m	60m SC/APC to SC/APC Single Mode Lead
KLE70MSC	70m	70m SC/APC to SC/APC Single Mode Lead
KLE80MSC	80m	80m SC/APC to SC/APC Single Mode Lead
KLE90MSC	90m	90m SC/APC to SC/APC Single Mode Lead
KLE100MSC	100m	100m SC/APC to SC/APC Single Mode Lead



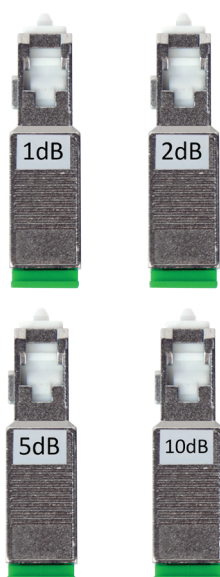
KLE010



KLE011

SPECIFICATIONS			
Connector Type	SC to SC	Polish Type	APC & PC
Fibre Mode	Single Mode 9/125µm	Wavelength	1270/1310/1490/1550/1577nm
Insertion Loss	≤0.3dB	Return Loss	≥60dB
Fibre Grade	G.657A2	Minimum Bend Radius	30mm
Attenuation at 1310nm	0.36 dB/km	Attenuation at 1550nm	0.22 dB/km
Fibre Count	Simplex	Cable Diameter	2.0mm (patch leads) & 3.0mm
Cable Jacket	LSZH PVC	Storage Temperature	-40~80°C
Operating Temperature	-20~60°C		





SC Single Mode Male to Female Attenuator. Designed to attenuate the optical fibre signal (1260~1620) in a stable & desired level without any changes to the original transmission wave.

OPTICAL FIBRE ATTENUATORS	
PART NUMBERS	DESCRIPTION
KOATT1DB	1dB Optical Attenuator F-M SC/APC
KOATT2DB	2dB Optical Attenuator F-M SC/APC
KOATT5DB	5dB Optical Attenuator F-M SC/APC
KOATT10DB	10dB Optical Attenuator F-M SC/APC

# AUSTRALIAN FREQUENCY CHART & DIN TEST

## OUTPUT POWER TESTING STANDARDS FOR AMPLIFIERS

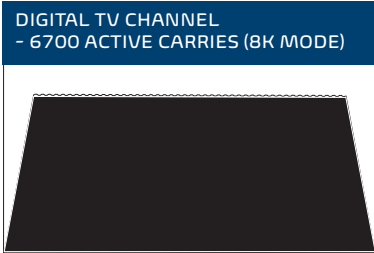
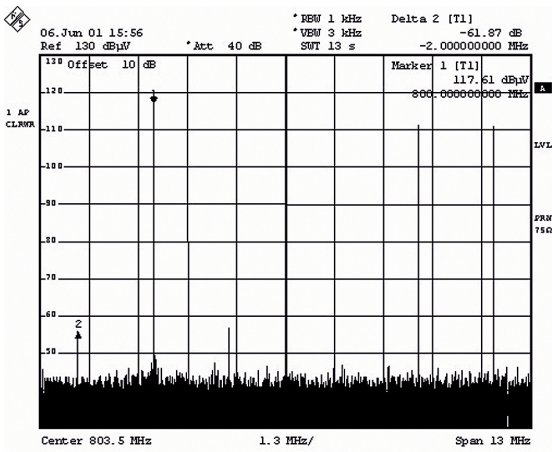
There are many tests used to measure the maximum output of an amplifier and at what stage distortions or inter modulation will occur.

All Kingray amplifiers are tested and measured in accordance with the international specifications of DIN45004-B 6.3 3 tone, which provides one of the best measures for our local environment.

These tests are carried out at VHF and UHF with the lower of the two figures recorded (providing extra headroom). As you can see from the test, the unwanted third order distortion is being measured at the ratio of -60dB from the wanted carrier. You may find amplifiers with extraordinarily high output figures are not quoting DIN45004-B and are using a ratio of -46dB which has provided the better output figure, however there is no room for margin with this method compared with using DIN45004-B @ 60dB.

Put simply, this test provides a rough equivalent of 2 television channels, where the de-rating process can then be started. Once the maximum output figure has been established using DIN45004-B 6.3, the -60dB ratio is maintained by subtracting 3dB every time you double the amount of channels that are running through the amplifier.

For example the DW42:  
2 Channels - 118dB @ -60dB IMR  
4 Channels - 115dB @ -60dB IMR  
8 Channels - 112dB @ -60dB IMR etc.



## BROADCAST BAND CHANNEL EXTENTS AND CENTRE FREQUENCIES (LTE CHANNEL PLAN)

AUSTRALIAN 7 MHz DESIGNATED CHANNEL NUMBER	7 MHz CHANNEL FREQUENCY LIMITS (MHz)	7 MHz DIGITAL CHANNEL CENTRE FREQUENCY (MHz)
BAND III		
A	6	174-181
	7	181-188
	8	188-195
	9	195-202
	9A	202-209
	10	209-216
	11	216-223
	12	223-230
BAND IV		
B	28	526-533
	29	533-540
	30	540-547
	31	547-554
	32	554-561
	33	561-568
	34	568-575
	35	575-582
BAND V		
C	36	582-589
	37	589-596
	38	596-603
	39	603-610
D	40	610-617
	41	617-624
	42	624-631
	43	631-638
	44	638-645
	45	645-652
E	46	652-659
	47	659-666
	48	666-673
	49	673-680
	50	680-687
	51	687-694

DB CONVERSION TABLE

Microvolts (µV)	dBµV	dBmV	dBm	Milli-volts (mV)	dBµV	dBmV	dBm	Milli-volts (mV)	dBµV	dBmV	dBm
10.00	20	-40	-89	1.00	60	0	-49	112.20	101	41	-8
11.22	21	-39	-88	1.12	61	1	-48	125.90	102	42	-7
12.59	22	-38	-87	1.26	62	2	-47	141.30	103	43	-6
14.13	23	-37	-86	1.41	63	3	-46	158.50	104	44	-5
15.85	24	-36	-85	1.59	64	4	-45	177.90	105	45	-4
17.78	25	-35	-84	1.78	65	5	-44	199.50	106	46	-3
19.95	26	-34	-83	2.00	66	6	-43	223.90	107	47	-2
22.39	27	-33	-82	2.24	67	7	-42	251.20	108	48	-1
25.12	28	-32	-81	2.51	68	8	-41	281.80	109	49	0
28.18	29	-31	-80	2.82	69	9	-40	316.20	110	50	1
31.62	30	-30	-79	3.16	70	10	-39	354.80	111	51	2
35.48	31	-29	-78	3.55	71	11	-38	398.10	112	52	3
39.81	32	-28	-77	3.98	72	12	-37	446.70	113	53	4
44.67	33	-27	-76	4.47	73	13	-36	501.20	114	54	5
50.12	34	-26	-75	5.01	74	14	-35	562.30	115	55	6
56.23	35	-25	-74	5.62	75	15	-34	631.00	116	56	7
63.10	36	-24	-73	6.31	76	16	-33	707.90	117	57	8
70.79	37	-23	-72	7.08	77	17	-32	794.30	118	58	9
79.43	38	-22	-71	7.94	78	18	-31	891.30	119	59	10
89.13	39	-21	-70	8.93	79	19	-30	Volts (V)	dBµV	dBmV	dBm
100.00	40	-20	-69	10.00	80	20	-29	1.00	120	60	11
112.20	41	-19	-68	11.22	81	21	-28	1.12	121	61	12
125.90	42	-18	-67	12.59	82	22	-27	1.26	122	62	13
141.30	43	-17	-66	14.13	83	23	-26	1.41	123	63	14
158.50	44	-16	-65	15.85	84	24	-25	1.59	124	64	15
177.80	45	-15	-64	17.78	85	25	-24	1.78	125	65	16
199.50	46	-14	-63	19.95	86	26	-23	2.00	126	66	17
223.90	47	-13	-62	22.39	87	27	-22	2.24	127	67	18
251.20	48	-12	-61	25.12	88	28	-21	2.51	128	68	19
281.80	49	-11	-60	28.18	89	29	-20	2.82	129	69	20
316.20	50	-10	-59	31.62	90	30	-19	3.16	130	70	21
354.80	51	-9	-58	35.48	91	31	-18	3.55	131	71	22
398.10	52	-8	-57	39.81	92	32	-17	3.98	132	72	23
446.70	53	-7	-56	44.67	93	33	-16	4.47	133	73	24
501.20	54	-6	-55	50.12	94	34	-15	5.01	134	74	25
562.30	55	-5	-54	56.23	95	35	-14	5.62	135	75	26
631.00	56	-4	-53	63.10	96	36	-13	6.31	136	76	27
707.90	57	-3	-52	70.79	97	37	-12	7.08	137	77	28
794.30	58	-2	-51	79.43	98	38	-11	7.94	138	78	29
891.30	59	-1	-50	89.13	99	39	-10	8.91	139	79	30
1000.00	60	0	-49	100.00	100	40	-9	10.0	140	80	31

# DIGITAL TV CHANNELS

## AUSTRALIAN DIGITAL TV CHANNELS 7MHZ BANDWIDTH

CHANNEL		LOWER CUT-OFF MHz	CENTRE FREQUENCY MHz	UPPER CUT-OFF MHz
VHF	6	174.0	177.5	181.0
	7	181.0	184.5	188.0
	8	188.0	191.5	195.0
	9	195.0	198.5	202.0
	9A	202.0	205.5	209.0
	10	209.0	212.5	216.0
	11	216.0	219.5	223.0
	12	223.0	226.5	230.0
UHF	28	526.0	529.5	533.0
	29	533.0	536.5	540.0
	30	540.0	543.5	547.0
	31	547.0	550.5	554.0
	32	554.0	557.5	561.0
	33	561.0	564.5	568.0
	34	568.0	571.5	575.0
	35	575.0	578.5	582.0
	36	582.0	585.5	589.0
	37	589.0	592.5	596.0
	38	596.0	599.5	603.0
	39	603.0	606.5	610.0
	40	610.0	613.5	617.0
	41	617.0	620.5	624.0
	42	624.0	627.5	631.0
	43	631.0	634.5	638.0
	44	638.0	641.5	645.0
	45	645.0	648.5	652.0
	46	652.0	655.5	659.0
	47	659.0	662.5	666.0
	48	666.0	669.5	673.0
	49	673.0	676.5	680.0
	50	680.0	683.5	687.0
	51	687.0	690.5	694.0
LTE	52	694.0	697.5	701.0
	53	701.0	704.5	708.0
	54	708.0	711.5	715.0
	55	715.0	718.5	722.0
	56	722.0	725.5	729.0
	57	729.0	732.5	736.0
	58	736.0	739.5	743.0
	59	743.0	746.5	750.0
	60	750.0	753.5	757.0
	61	757.0	760.5	764.0
	62	764.0	767.5	771.0
	63	771.0	774.5	778.0
	64	778.0	781.5	785.0
	65	785.0	788.5	792.0
	66	792.0	795.5	799.0
	67	799.0	802.5	806.0
	68	806.0	809.5	813.0
	69	813.0	816.5	820.0

## NEW ZEALAND DIGITAL TV CHANNELS 8MHZ BANDWIDTH

CHANNEL		LOWER CUT-OFF MHz	CENTRE FREQUENCY MHz	UPPER CUT-OFF MHz
UHF	26	510.0	514.0	518.0
	27	518.0	522.0	526.0
	28	526.0	530.0	534.0
	29	534.0	538.0	542.0
	30	542.0	546.0	550.0
	31	550.0	554.0	558.0
	32	558.0	562.0	566.0
	33	566.0	570.0	574.0
	34	574.0	578.0	582.0
	35	582.0	586.0	590.0
	36	590.0	594.0	598.0
	37	598.0	602.0	606.0
	38	606.0	610.0	614.0
	39	614.0	618.0	622.0
	40	622.0	626.0	630.0
	41	630.0	634.0	638.0
	42	638.0	642.0	646.0
	43	646.0	650.0	654.0
	44	654.0	658.0	662.0
	45	662.0	666.0	670.0
	46	670.0	674.0	678.0
	47	678.0	682.0	686.0
	48	686.0	690.0	694.0
LTE	49	694.0	698.0	702.0
	50	702.0	706.0	710.0
	51	710.0	714.0	718.0
	52	718.0	722.0	726.0
	53	726.0	730.0	734.0
	54	734.0	738.0	742.0
	55	742.0	746.0	750.0
	56	750.0	754.0	758.0
	57	758.0	762.0	766.0
	58	766.0	770.0	774.0
	59	774.0	778.0	782.0
	60	782.0	786.0	790.0
	61	790.0	794.0	798.0
	62	798.0	802.0	806.0
	63	806.0	810.0	814.0
	64	814.0	818.0	822.0
	65	822.0	826.0	830.0
	66	830.0	834.0	838.0
	67	838.0	842.0	846.0
	68	846.0	850.0	854.0
	69	854.0	858.0	862.0



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CAT01.....	11
DA44.....	7
DSB38F.....	9
DW32.....	7
FL612BP.....	17
FL694LP.....	17
FL2833BP.....	17
FL3439BP.....	17
FL4045BP.....	17
FL4651BP.....	17
KAT8F.....	9
KAT16F.....	9
KAT24F.....	9
KAT32F.....	9
KB02.....	11
KDA20.....	7
KDCBLOCK.....	16
KDPTSF.....	17
KFTERM01.....	16
KLE02.....	11
KLE010.....	24
KLE011.....	24
KLE012.....	24
KLE013.....	24
KLE014.....	24
KLE015.....	24
KLE020.....	16
KLE030.....	14
KLE10MSC.....	24
KLE15MSC.....	24
KLE20MSC.....	24
KLE25MSC.....	24
KLE30MSC.....	24
KLE35MSC.....	24
KLE40MSC.....	24
KLE45MSC.....	24
KLE50MSC.....	24
KLE60MSC.....	24
KLE70MSC.....	24
KLE80MSC.....	24
KLE90MSC.....	24
KLE100MSC.....	24
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KMS28.....	14
KOA4PX-15.....	22
KOA8PX-15.....	22
KOA16X-15.....	22
KOA32PX-15.....	22
KOATT1DB.....	25
KOATT2DB.....	25
KOATT5DB.....	25
KOATT10DB.....	25
KOR100.....	21
KOR002.....	21
KOT001A.....	21
KOT010.....	21
KPANELLTE.....	19
KPLC104.....	23
KPLC108.....	23
KPLC116.....	23
KPLC132.....	23
KSTRG596.....	18
KSTRG59611.....	18
KVHFY6.....	19
MHU25F.....	6
MHU35F.....	6
MHU35FS.....	6
MHV25F.....	5
MHW25F.....	5
MHW25FE.....	5
MHW35F.....	5
MHW35FS.....	5
MHW43FS.....	5
MLF-300.....	20
PCTAIOCT.....	18
PCTRHCT.....	18
PCTDRS6IMNT.....	16
PCTTRS6LMG.....	16
PCTTRS6LRA.....	16
PCTTRS59LMG.....	16
PCTTRSF6L.....	16
PCTTRSF11L.....	16
PIK170FDC.....	15
PIK2400.....	15

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PSK06.....	12
PSK06F.....	12
PSK08.....	12
PSK08F.....	12
PSK12S.....	12
PSK18F.....	12
PSK18M.....	12
PSK18S.....	12
PSK182F.....	12
SA124FDP.....	11
SA162F.....	11
SA164F.....	11
SAT40S.....	8

## NOTES

## GOVERNMENT APPROVALS

Kingray products have all the necessary Australian and New Zealand Government approvals. All comply with Electromagnetic Emission (EMC) guidelines, represented by the RCM.

For mains operated products, we use the Regulatory Compliance Mark (RCM) to indicate electrical safety and EMC compliance.

## FOXTEL IPL NO.

Throughout this catalogue a number of products have been listed with the Foxtel approval number. These products have been approved by Foxtel for use in their systems.

Refer to the individual company for their 'approved parts list' verification.

## DIN45004B

All Kingray amplifiers are channel loaded and tested to DIN45004B, an internationally accepted standard. This provides an output figure, which is quoted for each amplifier. A simple definition is included on p.28 of this catalogue.

GME Pty Ltd warrants KINGRAY products to be free from defects in material and workmanship from the date of installation and reserve the right to void warranty if the product was misused, improperly installed or damaged by the claimant. See specific product warranty form for the warranty period.

For further information, instruction manuals or specification sheets on any products seen in this catalogue, call your nearest branch or visit:  
[www.kingray.net.au](http://www.kingray.net.au)

# Contact Kingray:

### Australia:

17 Gibbon Road, Winston Hills NSW 2153  
PO Box 96, Winston Hills NSW 2153

**Phone:** +61 (0)2 8867 6000

**Fax:** +61 (0)2 8867 6199

**Email:** [enquiries@gme.net.au](mailto:enquiries@gme.net.au)

**Web:** <http://www.kingray.net.au>

**Sales:** [sales@gme.net.au](mailto:sales@gme.net.au)

**Marketing:** [marketing@gme.net.au](mailto:marketing@gme.net.au)

**Service:** [techsupport@gme.net.au](mailto:techsupport@gme.net.au)

**Facebook:** [facebook/Kingrayaus](https://www.facebook.com/Kingrayaus)

### New Zealand:

Unit A, 11 Echelon Place, East Tamaki, Auckland 2013  
PO Box 58446, Botany Auckland 2163

**Phone:** +64 (0)9 274 0955

**Fax:** +64 (0)9 274 0959

**Email:** [nzbranch@gme.net.au](mailto:nzbranch@gme.net.au)

**Web:** <http://www.kingray.net.au/nz>



# ***Kingray***

Specialist in Digital TV Distribution Solutions

