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November 2019

Filters and Multicoupling

Filters, Combiners, Multicouplers, Isolators & Components

Filters and Multicoupling

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Label Italy filters and combiners

- Band-pass and Notch cavity filters, 87.5-108MHz, N-type female terminations, 100 Watts
- FM 19" rack mounted cavity filters, 87.5-108MHz, 3U rack fit, N-type female terminations, 200-250 Watts - **double and triple cavity**
- FM double cavity filters, 87.5-108MHz, N-type to 3-1/8" termination, 800W-10kW
- FM triple cavity filters, 87.5-108MHz, N-type to 1-5/8" termination, 800W-5kW
- FM star combiners, 87.5-108MHz, 1.5MHz channel spacing, N-type to 1-5/8" EIA - **duplexers, triplexers or quadruplexers**
- FM star combiners, 87.5-108MHz, 2.5MHz channel spacing, N-type to 1-5/8" EIA - **duplexers, triplexers or quadruplexers**
- FM double bridge combiners, 87.5-108MHz, 1.5MHz channel spacing, N-type to 1-5/8" terminations, 1-5kW
- FM double bridge combiners, 87.5-108MHz, 2.5MHz channel spacing, N-type to 1-5/8" EIA terminations, 800W-5kW

Label Italy couplers

- FM hybrid couplers, 87.5-108MHz, N-type to 3-1/8" EIA terminations, 2 x 800W to 2 x 10kW
- FM directional couplers, 87.5-108MHz, N-type to 3-1/8" EIA terminations, 1-30kW
- Star joiners, N-type to 3-1/8" EIA terminations, 4 x 200W to 4 x 2.5kW

ZCG single cavity filters

- FM Radio single cavity band-pass or notch filter, 87.5-108MHz, N-type female or specify requirements, 250 Watts
- Airband single cavity band-pass or notch filter, 118-137MHz, N-type female or specify requirements, 250 Watts
- VHF single cavity band-pass or notch filter, 148-174MHz, N-type female or specify requirements, 250 Watts
- UHF single cavity band-pass or notch filter, 400-520MHz, N-type female or specify requirements, 50 Watts

ZCG mill-block band-pass filters

- VHF band-pass filter, 136-199.5MHz, specify band-pass frequency, N-type female, 100 Watts
- UHF band-pass filter, 563-577MHz, specify band-pass frequency, N-type female or SMA female, 50 Watts

ZCG cavity filter mounting brackets

ZCG 1-5/8" EIA switch frames

- 7-port switch frame patch panel, 87.5-108MHz, 1-5/8" EIA flanged terminations, 10 Kilowatts
- 8-port switch frame patch panel, 87.5-108MHz, 1-5/8" EIA unflanged terminations, 10 Kilowatts

ZCG receive multicoupler

- VHF 136-174MHz, specify 2-8 ports, N-type female terminations, 5MHz bandwidth
- UHF 350-520MHz, specify 2-8 ports, N-type female terminations, 5MHz bandwidth

ZCG receive multicoupler with internal 40dB L.N.A

- VHF 146-152MHz, specify 2-8 ports, N-type female terminations, 5MHz bandwidth - Internal L.N.A

ZCG transmitter hybrid combiner

- VHF 136-174MHz, specify 2-8 ports, N-type female terminations, 50 Watts each port
- UHF 350-520MHz, specify 2-8 ports, N-type female terminations, 50 Watts each port

ZCG TE.T.RA combiner and splitter

- 2-port combiner & 2-port splitter, UHF 450-470MHz, N-type female terminations, 25 Watts
- 4-port combiner & 4-port splitter, UHF 450-470MHz, N-type female and SMA female or N-type female termination, 25 Watts

ZCG mobile duplexer

- VHF 150-174MHz, or UHF 375-520MHz, N-type female/BNC female terminations, 40-50 Watts

ZCG VHF duplexer

- VHF 148-174MHz, N-type female terminations, 100 Watts, 4RU rack mounting

Filters and Multicoupling

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ZCG multi-channel cavity combiners

- 2 Port VHF 136-174MHz or UHF 330-520MHz, N-type female termination, 50 Watts per port
- 4 Port VHF 136-174MHz or UHF 330-570MHz, N-type female termination, 50-200 Watts per port - specify
- 6-8 Port VHF 136-174MHz or UHF 400-520MHz, N-type female termination, 200 Watts per port

ZCG hybrid coupler

- FM radio 87.5-108MHz, 50/50 coupling, N-type female termination or specify requirements, 200 Watts
- UHF 400-570MHz, 50/50 or 75/25 coupling, N-type female termination, N-type male load included, 200 Watts

ZCG coaxial isolators

- FM radio 87.5-108MHz, N-type female termination, 100 Watts
- Airband 118-136MHz, N-type female termination, 100 Watts
- VHF/UHF 225-400MHz, N-type female termination, 120 Watts
- HF through to UHF models with higher power/alternate terminations available - consult ZCG
- VHF 156-174MHz, N-type female termination, 100 Watts - [External Heatsink models](#)

ZCG coaxial circulators

- FM radio 87.5-108MHz, N-type female termination, 100 Watts
- Airband 118-136MHz, N-type female termination, 100 Watts
- VHF 136-174MHz, N-type female termination, 200 Watts
- VHF/UHF 225-400MHz, N-type female termination, 120 Watts

ZCG VHF or UHF Hybrid combiners

- VHF 136-174MHz, 2-way, N-type female termination, 100 Watts
- UHF 350-520MHz, 2-way, N-type female termination, 100 Watts
- UHF 400-470MHz, 2-way, N-type female termination, 100 Watts
- UHF 400-470MHz, 4-way, N-type female termination or SMA female, 200 or 100 Watts

ZCG Channel mounting racks 19" or 23"

ZCG Desktop, floor or Wall mounting racks 19" or 23"

How to order

Terms and Conditions of sale

Contact us

Band-pass and notch cavity filters

N-type female terminated



The below models are available in either band-pass (FDB) or band elimination (FDN).

- High quality construction for a long, reliable service life.
- Suitable for low to medium powered FM broadcast systems
- Standard diameter for reduction in installation space



Specifications	FDB-50	FDB-130	FDB-530-C	FDN-50	FDN-130	FDN-530-c
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE					
Frequency range	VHF 50-60MHz	VHF 160-180MHz	UHF 430-560MHz	VHF 50-60MHz	VHF 140-180MHz	UHF 430-560MHz
Bandwidth (specify)	200kHz		300kHz		N/A	
VSWR	<1.2:1 across specifed frequency or full band depending on model					
Impedance	50 Ohms					
Band-pass Attenuation	0.3-0.9dB			0.3-0.6dB		0.4-0.7dB
Stop-band Attenuation	N/A			>25dB		
Connector/s	N-type female					
Maximum Power	100 Watts					
Weight	9.5kg	4.5kg	2.6kg	9.5kg	4.5kg	2.6kg
Dimensions	H: 1150mm Dia: 120mm	H: 700mm Dia: 120mm	H: 320mm Dia: 120mm	H: 1150mm Dia: 120mm	H: 700mm Dia: 120mm	H: 320mm Dia: 120mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date					

FM cavity filters

Suitable for 19" rack 2U or 3U

The below models of FM cavity filters:

- Fit into any 19" (inch) rack
- High quality components for a long, reliable service life
- Suitable for low power FM broadcast systems
- Ability to be retuned if frequency requirements changes



Specifications	FDB-102-N	FDB-103-N
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE	
Cavity configuration	Double cavity	Triple cavity
Frequency range	FM band 87.5-108MHz	
Bandwidth -3dB - specify	500-800kHz	
VSWR	<1.15:1	
Isolation	<0.5dB	<0.8dB
Impedance	50 Ohms	
Input connector	N-type female	
Output connector	N-type female	
Maximum power - input	200 Watts	250 Watts
Weight	13.0kg	18.0kg
Dimensions	L: 490mm W: 800mm H: 130mm	L: 490mm W: 800mm H: 260mm
Rack spacing size	3U	6U
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date	

See ZCG rack mounting solutions for suitable/available wall/floor or desktop rack mounts

FM coaxial double cavity filters

The below models of double cavity filters are designed for the FM band:

- High quality components for a long, reliable service life
- Available with a wide range of terminations and power ratings
- Dual cavity design for broad bandwidth with improved isolation
- Suitable for low to medium powered FM broadcast systems

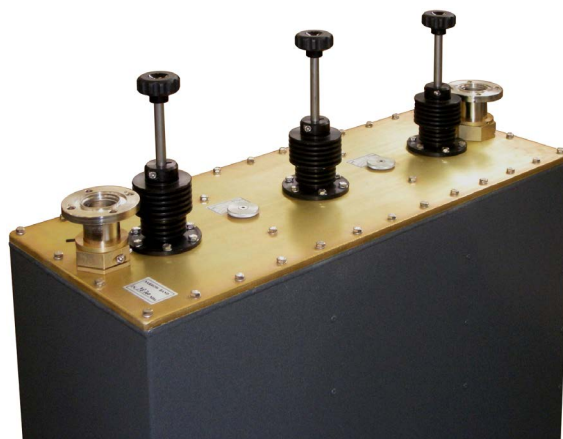


Specifications	FDB-1001-N	FDB-1001-M	FDB-1002-M	FDB-1002-F	FDB-1003-F	FDB-1005-F	FDB-1005-S	FDB-1010-SC
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE							
Frequency range	FM band 87.5-108MHz							
Bandwidth -3dB (specify)	500-800kHz		400-800kHz					400-1000kHz
VSWR	<1.15:1							
Thru loss	<0.4dB		<0.3dB			<0.2dB		<0.15dB
Impedance	50 Ohms							
Input Connector	N-type female	7/16" DIN female		7/8" EIA			1-5/8" EIA	
Output Connector	N-type female	7/16" DIN female		7/8" EIA			1-5/8" EIA	
Maximum Power	800 Watts	1 Kilowatts	2 Kilowatts		3 Kilowatts	5 Kilowatts		10 Kilowatts
Weight	10.0kg	11.0kg	17.0kg	17.2kg	18.0kg	27.5kg	28kg	41.5kg
Dimensions	H: 1000mm W: 200mm D: 220mm	H: 1000mm W: 220mm D: 200mm	H: 1250mm W: 200mm D: 400mm	H: 1250mm W: 200mm D: 400mm	H: 1200mm W: 200mm D: 400mm	H: 1300mm W: 500mm D: 300mm	H: 1300mm W: 500mm D: 300mm	H: 1250mm W: 800mm D: 400mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date							

FM coaxial triple cavity filters

The below models of triple cavity filters are designed for the FM band:

- High quality components for a long, reliable service life
- Available with a wide range of terminations and power ratings
- Triple cavity design for broader bandwidth over a dual cavity design
- Suitable for low to medium powered FM broadcast systems



Specifications	FDB-1031-N	FDB-1031-M	FDB-1033-M	FDB-1033-F	FDB-1035-F	FDB-1035-S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE					
Frequency range	FM band 87.5-108MHz					
Bandwidth -3dB specify	400-1000kHz					
VSWR	<1.15:1					
Thru loss	<0.4dB				<0.35dB	
Impedance	50 Ohms					
Input Connector	N-type female	7/16" DIN female		7/8" EIA		1-5/8" EIA
Output Connector	N-type female	7/16" DIN female		7/8" EIA		1-5/8" EIA
Maximum Power	800 Watts	1.2 Kilowatts	2 Kilowatts	3 Kilowatts	5 Kilowatts	
Weight	12.0kg	18.0kg	25.0kg	27.0kg	39.0kg	42.0kg
Dimensions	H: 1250mm W: 400mm D: 200mm	H: 1250mm W: 400mm D: 200mm	H: 1200mm W: 600mm D: 200mm	H: 1200mm W: 600mm D: 200mm	H: 1300mm W: 730mm D: 300mm	H: 1300mm W: 730mm D: 300mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/ connections from purchase date					

FM star combiners

Dual, Tri & Quad configurations

>1.5MHz channel spacing



The below models of combiners allow for multiple inputs from a transmitter to be combined into one antenna.

The below models of dual-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 2.5MHz channel spacing available



Specifications	FDT-403S*	FDT-2000S	FDT-2000S-H	FDT-4000S	FDT-6000S	FDT-10000S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE					
Frequency range	FM band 87.5-108MHz					
Bandwidth - 3dB (specify)	200kHz	300kHz	300-600kHz			
VSWR	<1.15:1					
Min. space between channels	>1.5MHz					
Impedance	50 Ohms					
Thru loss	<0.8dB	<0.6dB		<0.5dB		
Isolation between channels	35dB typical					
Working temperature	+10° to +40°C					
Input connector	2 x N-type female		2 x 7/16" DIN female		2 x 7/8" EIA	
Output connector	N-type female	7/16" DIN female	7/8" EIA		1-5/8" EIA	
Maximum power - input	2 x 200 Watts	2 x 800 Watts	2 x 1.2 Kilowatts	2 x 2 Kilowatts	2 x 3 Kilowatts	2 x 5 Kilowatts
Weight	31.0kg	32.0kg	34.0kg	52.0kg	60.0kg	90.0kg
Dimensions	H: 800mm W: 490mm D: 260mm	H: 1300mm W: 410mm D: 400mm	H: 1300mm W: 410mm D: 400mm	H: 1300mm W: 600mm D: 410mm	H: 1300mm W: 600mm D: 410mm	H: 1300mm W: 730mm D: 700mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date					

* The FDT-403S is suitable for a 19" (inch) 9U rack mounting

FM star combiners

Dual, Tri & Quad configurations

>1.5MHz channel spacing



The below models of tri-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 2.5MHz channel spacing available



Specifications	FTT-603S*	FTT-3000S	FTT-3000S-H	FTT-7500S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE			
Frequency range	FM band 87.5-108MHz			
Bandwidth - 3dB (specify)	300-600kHz			
VSWR	<1.15:1			
Min. space between channels	>1.5MHz			
Impedance	50 Ohms			
Thru loss	<0.8dB	<0.6dB		<0.5dB
Isolation between channels	35dB typical			
Working temperature	+10° to +40°C			
Input connector	3 x N-type female		3 x 7/16" DIN female	3 x 7/8" EIA
Output connector	7/16" DIN female		1-5/8" EIA	
Maximum power - input	3 x 200 Watts	3 x 500 Watts	3 x 1 Kilowatts	3 x 2.5 Kilowatts
Weight	36.0kg	60.0kg	61.0kg	81.0kg
Dimensions	H: 800mm W: 490mm D: 390mm	H: 1300mm W: 620mm D: 400mm	H: 1300mm W: 620mm D: 400mm	H: 1300mm W: 620mm D: 600mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date			

* The FTT-603S is suitable for a 19" (inch) 12U rack mounting

FM star combiners

Dual, Tri & Quad configurations

>1.5MHz channel spacing

The below models of quad-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 2.5MHz channel spacing available



Specifications	FQT/4000S	FQT/4000S-H	FQT/8000S
Construction	Alodine treated aluminium 120 finish, silver plated copper internals and PTFE		
Frequency range	FM band 87.5-108MHz		
Bandwidth - 3dB (specify)	300-600kHz		
VSWR	<1.15:1		
Min. space between channels	>1.5MHz		
Impedance	50 Ohms		
Thru loss	<0.6dB		<0.5dB
Isolation between channels	35dB typical		
Working temperature	+10° to +40°C		
Input connector	4 x N-type female	4 x 7/16" DIN female	4 x 7/8" EIA
Output connector	7/8" EIA	1-5/8" EIA	
Maximum power - input	4 x 500 Watts	4 x 1 Kilowatts	4 x 2 Kilowatts
Weight	74.0kg	75.0kg	118.0kg
Dimensions	H: 1300mm W: 900mm D: 420mm	H: 1300mm W: 900mm D: 420mm	H: 1300mm W: 1300mm D: 420mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date		

FM star combiners

Dual, Tri & Quad configurations

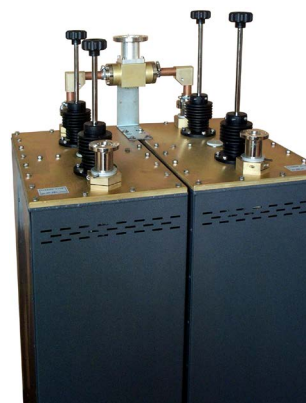
>2.5MHz channel spacing



The below models of combiners allow for multiple inputs from a transmitter to be combined into one antenna.

The below models of dual-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 1.5MHz channel spacing available



Specifications	FDB-201S*	FDB-402S*	FDB-2000S	FDB-2000S-H	FDB-4000S	FDB-6000S	FDB-10000S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE						
Frequency range	FM band 87.5-108MHz						
Bandwidth - 3dB specify	200kHz	500kHz	300-600kHz				
VSWR	<1.15:1						
Min. space between channels	>2.5MHz						
Impedance	50 Ohms						
Thru loss	<0.4dB	<0.5dB			<0.3dB		<0.2dB
Isolation between channels	35dB typical						
Working temperature	+10° to +40°C						
Input connector	2 x N-type female		2 x N-type female		2 x 7/8" EIA		
Output connector	N-type female		7/16" DIN female	7/8"EIA		1-5/8" EIA	
Maximum power - input	2 x 100 Watts	2 x 200 Watts	2 x 500 Watts	2 x 1 Kilowatts	2 x 2 Kilowatts	2 x 3 Kilowatts	2 x 5 Kilowatts
Weight	10.6kg	20.7kg	22.5kg	24.0kg	37.0kg	40.5kg	53.0kg
Dimensions	H: 800mm W: 490mm D: 260mm	H: 800mm W: 490mm D: 260mm	H: 1150mm W: 420mm D: 270mm	H: 1150mm W: 420mm D: 300mm	H: 1300mm W: 410mm D: 400mm	H: 1300mm W: 410mm D: 400mm	H: 1300mm W: 620mm D: 500mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/ connections from purchase date						

* The FDB-201S is suitable for a 19" (inch) 3U rack mounting

* The FDB-402S is suitable for a 19" (inch) 6U rack mounting



FM star combiners

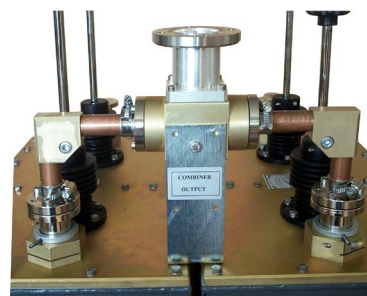
Dual, Tri & Quad configurations

>2.5MHz channel spacing



The below models of tri-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 1.5MHz channel spacing available



Specifications	FTB-602S*	FTB-3000S	FTB-3000S-H	FTB-6000S	FTB-75000S	FTB-15000S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE					
Frequency range	FM band 87.5-108MHz					
Bandwidth - 3dB (specify)	500kHz	300-600kHz				
VSWR	<1.15:1					
Min. space between channels	>2.5MHz					
Impedance	50 Ohms					
Thru loss	<0.5dB			<0.4dB	<0.3dB	<0.2dB
Isolation between channels	35dB typical					
Working temperature	+10° to +40°C					
Input connector	3 x N-type female		3 x 7/16" DIN female		3 x 7/8" EIA	
Output connector	7/16" DIN female		7/8" EIA	1-5/8" EIA		3-1/8" EIA
Maximum power -input	3 x 200 Watts	3 x 500 Watts	3 x 800 Watts	3 x 2 Kilowatts	3 x 2.5 Kilowatts	3 x 5 Kilowatts
Weight	36.0kg	33.0kg	33.0kg	56.0kg	58.5kg	90.0kg
Dimensions	H: 800mm W: 490mm D: 390mm	H: 1150mm W: 620mm D: 270mm	H: 1150mm W: 620mm D: 270mm	H: 1300mm W: 620mm D: 410mm	H: 1300mm W: 620mm D: 410mm	H: 1300mm W: 1000mm D: 620mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/ connections from purchase date					

* The FTB-602S is suitable for a 19" (inch) 9U rack mounting

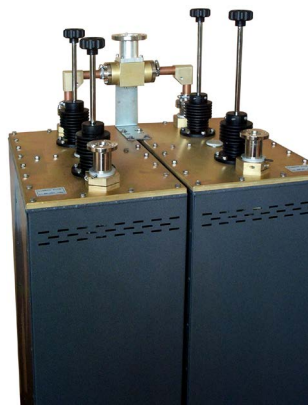
FM star combiners

Dual, Tri or Quad configurations

>2.5MHz channel spacing

The below models of quad-combiners are:

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 1.5MHz channel spacing available



Specifications	FQB-2000S	FQB-2000S-H	FQB-8000S
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE		
Frequency range	FM band 87.5-108MHz		
Bandwidth - 3dB (specify)	500kHz	300-600kHz	
VSWR	<1.15:1		
Min. space between channels	>2.5MHz		
Impedance	50 Ohms		
Thru loss	<0.5dB	<0.6dB	<0.4dB
Isolation between channels	35dB typical		
Working temperature	+10° to +40°C		
Input connector	4 x N-type female	4 x 7/16" DIN female	4 x 7/8" EIA
Output connector	7/8" EIA		1-5/8" EIA
Maximum power - input	4 x 300 Watts	4 x 500 Watts	4 x 2 Kilowatts
Weight	48.0kg	46.0kg	90.0kg
Dimensions	H: 800mm W: 520mm D: 490mm	H: 1150mm W: 540mm D: 410mm	H: 1300mm W: 900mm D: 420mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date		

* The FQB-802S is suitable for a 19" (inch) 12U rack mounting



Double bridge FM Combiners

>1.5MHz channel spacing



The below models of bridge combiners are:

- Consists of 2 filters, 2 hybrid couplers and a balance load
- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 2.5MHz channel spacing available



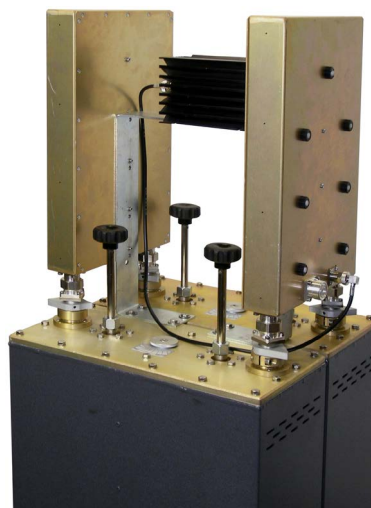
Specifications	FDT-3000	FDT-4000	FDT-8000	FDB-10000
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE			
Frequency range	FM 87.5-108MHz			
Bandwidth - 3dB (specify)	300-600kHz			
VSWR	<1.15:1			
Min. space between channels	>1.5MHz			
Impedance	50 Ohms			
Insertion loss	0.2-0.8dB	0.2-0.6dB	0.2-0.6dB	0.2-0.5dB
Insulation among channels	35dB typical			
Working temperature	+10° to +40°C			
Input connector	N-type or 7/16" DIN female - specify	7/16" DIN female	7/8" EIA	
Output connector	7/8" EIA		1-5/8" EIA	
Maximum power	1-2kW	2 Kilowatts	4 Kilowatts	5 Kilowatts
Weight	47kg	65kg	70kg	85kg
Dimensions	H: 1460mm W: 460mm D: 420mm	H: 1460mm W: 660mm D: 420mm	H: 1460mm W: 680mm D: 420mm	H: 1350mm W: 900mm D: 700mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date			

Double bridge FM Combiners

>2.5MHz channel spacing

The below models of bridge combiners are:

- Consists of 2 filters, 2 hybrid couplers and a balance load
- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life
- Version with 1.5MHz channel spacing available



Specifications	FDB-2000	FDB-3000	FDB-4000	FDB-8000	FDB-10000
Construction	Alodyne treated aluminium 120 finish, silver plated copper internals and PTFE				
Frequency range	FM Radio 87.5-108MHz				
Bandwidth - 3dB (specify)	300-600kHz				
VSWR	<1.15:1				
Min. space between channels	>2.5MHz				
Impedance	50 Ohms				
Insertion loss	0.2-0.6dB		0.2-0.5dB		0.2-0.4dB
Insulation among channels	35dB typical				
Working temperature	+10° to +40°C				
Input connector	N-type female	N-type or 7/16" DIN F	7/16" DIN female	7/8" EIA	
Output connector	7/16" DIN female	7/8"EIA		1-5/8" EIA	
Maximum power	800 Watts	1 or 2kW	2kW	4kW	5kW
Weight	25.5kg	26.0kg	45.0kg	50.0kg	65.0kg
Dimensions	H: 1170mm W: 410mm D: 300mm	H: 1170mm W: 410mm D: 310mm	H: 1460mm W: 460mm D: 420mm	H: 1460mm W: 480mm D: 420mm	H: 1350mm W: 900mm D: 500mm
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/connections from purchase date				

FM hybrid couplers

Suitable for double-deck combiners
or two power amplifiers

The below models of FM hybrid couplers are:

- High quality components for a long, reliable service life
- Suitable for creating dual-deck combiners or adding two power amplifiers
- Available in multiple input/output termination variances
- For low and medium power applications a 50W N-type male dummy load is required. For high power a dummy load for half transmit power is required. Consult ZCG for more information.



Specifications	FRC-1*	FRC-2	FRC-5	FRC-5-H	FRC-10-H
Construction	Alodyne treated aluminium 120 finish and PTFE				
Frequency range	FM band 87.5-108MHz				
VSWR	<1.05:1				
Isolation	>30dB				
Impedance	50 Ohms				
Input connectors	2 x N-type female	2 x 7/16" DIN female	2 x 7/8" EIA		2 x 1-5/8" EIA
Output connector	7/16" DIN female	7/8" EIA	1-5/8" EIA		3-1/8" EIA
Dummy load termination	N-type female				
Maximum power	2 x 800 Watts	2 x 2 Kilowatts	2 x 5 Kilowatts		2 x 10 Kilowatts
Weight	2.0kg	2.5kg	3.0kg	3.0kg	12.0kg
Dimensions	L: 430mm W: 270mm H: 80mm	L: 450mm W: 270mm H: 80mm	L: 500mm W: 270mm H: 80mm		L: 900mm W: 320mm H : 160mm
Dummy load required order seperate	50W	1/2 transmit power			
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/ connections from purchase date				

FM directional Couplers

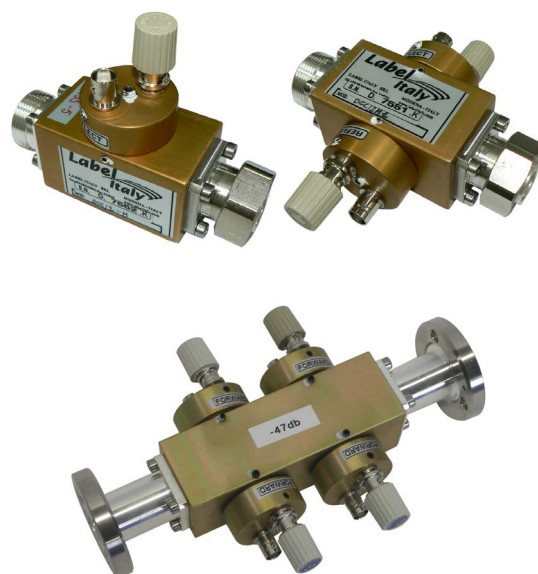
The below models of FM directional couplers allow for forward and reverse power measurements.

- Suitable for low to medium power FM radio broadcasting
- Available in multiple configurations of input/output connectors
- High quality construction for a long, reliable service life



Specifications	DCC-1-N	DCC-1-N2	DCC-2-M	DCC-2-M2	DCC-5-F	DCC-5-F2
Construction	Alodyne treated aluminium 120 finish, silver plated copper and PTFE					
Frequency range	FM Radio band 87.5-108MHz					
VSWR	<1.02:1					
Isolation	>35dB					
Impedance	50 Ohms					
Input connector	N-type female	2 x N-type female	7/16" DIN male	2 x 7/16" DIN male	7/8" EIA	2 x 7/8" EIA
Output connector	N-type female		7/16" DIN female		7/8" EIA	
Maximum power	1 Kilowatt		2 Kilowatts		5 Kilowatts	
Weight	0.3kg		0.5kg		0.8kg	
Dimensions	L: 100mm W: 40mm D: 60mm		L: 120mm W: 40mm D: 60mm		L: 170mm W: 70mm D: 60mm	

Specifications	DCC-10-S	DCC-10-S2	DCC-30-R2
Frequency range	FM Radio band 87.5-108MHz		
VSWR	<1.02:1		
Isolation	>35dB		
Impedance	50 Ohms		
Input connector	1-5/8" EIA	2 x 1-5/8" EIA	
Output connector	1-5/8" EIA		
Maximum power	15 Kilowatts	15 Kilowatts	30 Kilowatts
Weight	0.8kg		2.0kg
Dimensions	L: 180mm W: 110mm D: 90mm		
Warranty	2 Year warranty on manufacturing defects, connections from pu		



Star joiners

For Duplexers, triplexers or quadriplexers

The below models of star joiners for combiners, duplexers, triplexers or quadriplexers. A star joiner allows for multiple outputs from multiple filters to join into one antenna or transmitter input.

Constructed from high quality silver plated copper, brass and PTFE insulators, Label Italys range of star joiners are a reliable, high quality component in your transmission line.



Order code	Description	Maximum Power	Input Connector	Output Connector
GSD50M2N	Star joiner for diplexer	2 x 800 Watts	N-type male	7/16" DIN male
GSD50F2M90	Star joiner for diplexer - 2 x 7/16" DIN male, 90° offset	2 x 1 Kilowatts	7/16" DIN male	7/16" DIN male
GSD60F2M90	Star joiner for diplexer - 2 x 7/16" DIN male, 90° offset	2 x 2 Kilowatts	7/16" DIN male	7/8" EIA
GSD105S2F90	Star joiner for diplexer - 2 x 7/8" EIA , 90° offset	2 x 3 Kilowatts	7/8" EIA	1-5/8" EIA
GSD105S2FLR	Star joiner for diplexer - 2 x 7/8" EIA , 90° rigid line	2 x 5 Kilowatts	7/8" EIA	1-5/8" EIA
GST50M3N	Star joiner for triplexer	3 x 500 Watts	N-type male	7/16" DIN male
GSD50F3M90RG	Star joiner for diplexer - 3 x 7/16" DIN male, 90° offset	3 x 1 Kilowatts	7/16" DIN male	7/8" EIA
GST105S3FLR	Star joiner for diplexer - 3 x 7/16" DIN male, 90° rigid line	3 x 3 Kilowatts	7/8" EIA	1-5/8" EIA
GSQ60S4M90	Star joiner for quadriplexer - 4 x 7/16" DIN male, 90° offset	4 x 800 Watts	7/16" DIN male	7/8" EIA
GSQ70S4M09	Star joiner for quadriplexer - 4 x 7/16" DIN male, 90° offset	4 x 1.5 Kilowatts	7/16" DIN male	1-5/8" EIA
GSQ70S4F90	Star joiner for quadriplexer - 4 x 7/8" EIA, 90° offset	4 x 2.5 Kilowatts	7/8" EIA	1-5/8" EIA
Warranty	2 Year warranty on manufacturing defects, 1 Year warranty on termination/ connections from purchase date			

FM Radio cavity filters

Single cavity Band-pass or notch filters

FM Radio 87.5-108MHz



ZCG's range of FM Radio cavity filters are available in either band-pass or notch (band-reject) configurations for military or civilian applications within 87.5-108MHz. Alternate frequency models for Airband, VHF or UHF are also available.

Constructed from gold anodised aluminium, PTFE insulators and a INVAR tuning rod, the ZCG filter range are designed and manufactured for a reliable and long term service life.

Consult ZCG on your specific requirements if you cannot see a solution below.

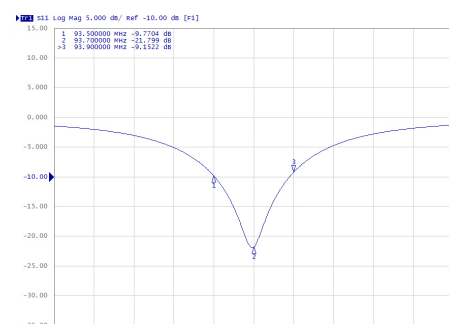
Specifications	ZVBF-18887-200	ZVBF-HP-18887-200	ZVBFN-18887-200
Construction	Gold anodised aluminium body, invar tuning bar, and PTFE insulators		
Filter type	Single cavity band-pass		Single cavity notch
Frequency range	FM radio 87.5-108MHz		
Bandwidth - specify	200kHz around specified frequency	Single channel	
Tuning	Factory/field tune - can be tuned anywhere within band		
VSWR	<1.2:1		N/A
Impedance	50 Ohms		
Band-pass attenuation	0.3-0.5dB		N/A
Input connector	N-type female	7/16" DIN female	N-type female
Output connector	N-type female	7/16" DIN female	N/A
Maximum Power	250 Watts	2 Kilowatts	250 Watts
Weight	8.0kg	10.0kg	8.0kg
Dimensions	Height: 800mm Diameter: 203mm		
Accessories	Scaled coupling leads can be order separately		T-junction adap- tor supplied
Mounting hardware order separate	Wall mounting: 1 x SWB-CH-400 or 2 x SWB-100-F Rack Mounting: 1 or 2 x A-2806-2		



T-junction adaptor supplied with notch filter



Scaled coupling cables order separately



ZVBF-18887-200 performance

Airband Cavity filters

Single cavity Band-pass or Notch filters

Airband 118-137MHz



ZCG's range of Airband cavity filters are available in either band-pass or notch (band-reject) configurations for military or civilian applications within 118-137MHz. Alternate frequency models for FM Radio, VHF or UHF are also available.

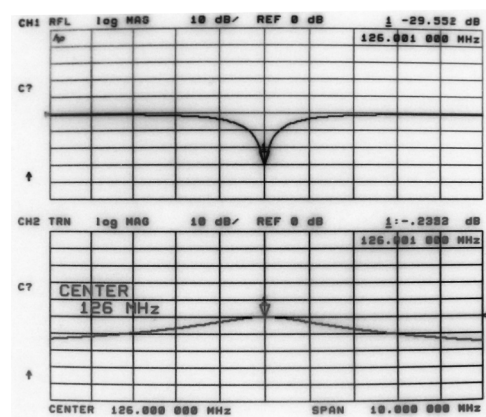
Constructed from gold anodised aluminium, PTFE insulators and a INVAR tuning rod, the ZCG filter range are designed and manufactured for a reliable and long term service life.

Consult ZCG on your specific requirements if you cannot see a solution below.

Specifications	ZVBF-136AB	ZVBFN-136AB
Construction	Gold anodised aluminium body, invar tuning bar, and PTFE insulators	
Filter type	Single cavity band-pass	Single cavity notch
Frequency range	Airband 118-137MHz	
Bandwidth - specify	200kHz around specified frequency	Single channel
Tuning	Factory/field tune - can be tuned anywhere within band	
VSWR	<1.2:1	-
Impedance	50 Ohms	
Band-pass attenuation	0.3-0.5dB	-
Input connector	N-type female or specify requirements	
Output connector	N-type female or specify requirements	-
Maximum Power	250 Watts	
Weight	5.5kg	
Dimensions	Height: 600mm Diameter: 203mm	
Installation accessories	Scaled coupling leads can be order separately	T-junction adaptor included
Mounting hardware order separate	Wall mounting: 1 x SWB-CH-400 or 2 x SWB-100-F Rack Mounting: 1 or 2 x A-2806-2	



Scaled coupling cables available



ZVBF-136AB performance

Higher power rated 7/16" DIN models are available upon request, please Consult ZCG for more information

VHF Cavity filters

Single cavity Bandpass or notch filter

VHF 148-174MHz



ZCG's range of VHF cavity filters are available in either band-pass or notch (band-reject) configurations for military or civilian applications within 148-174MHz. Alternate frequency models for FM Radio, Airband or UHF are also available.

Constructed from gold anodised aluminium, PTFE insulators and a INVAR tuning rod, the ZCG filter range are designed and manufactured for a reliable and long term service life.

Consult ZCG on your specific requirements if you cannot see a solution below.



Specifications	ZVBF-18886-150	ZVBFN-1888-150
Construction	Gold anodised aluminium body, invar tuning bar, and PTFE insulators	
Filter type	Single cavity band-pass	Single cavity notch
Frequency range	VHF 148-174MHz	VHF 156-172MHz
Bandwidth - specify	400kHz around specified frequency	Single channel
Tuning	Factory - can be tuned anywhere within band Tune can be altered if required. Consult ZCG	
VSWR	<1.2:1	N/A
Impedance	50 Ohms	
Band-pass attenuation	0.3-0.5dB	N/A
Input connector	N-type female or specify requirements	
Output connector	N-type female or specify requirements	N/A
Maximum Power	250 Watts	
Weight	4.1kg	
Dimensions	Height: 450mm, Diameter: 150mm	
Installation accessories	Scaled coupling leads can be order separately	T-junction joiner included
Mounting hardware order separate	Wall mounting: 1 x SWB-CH-400 or 2 x SWB-100-F Rack Mounting: 1 or 2 x A-2806-2	



T-junction adaptor supplied with notch filter



Scaled coupling cables order separately

Higher power rated 7/16" DIN models are available upon request, please Consult ZCG for more information

UHF Cavity filters

Single cavity Band-pass or notch filters

UHF 400-520MHz



ZCG's range of UHF cavity filters are available in either band-pass or notch (band-reject) configurations for military or civilian applications within 400-520MHz. Alternate frequency models for FM Radio, Airband or VHF are also available.

Constructed from gold anodised aluminium, PTFE insulators and a INVAR tuning rod, the ZCG filter range are designed and manufactured for a reliable and long term service life.

Consult ZCG on your specific requirements if you cannot see a solution below.

Specifications	ZUBF-18883	ZUBFN-18883
Construction	Gold anodised aluminium body, invar tuning bar, and PTFE insulators	
Filter type	Single cavity band-pass	Single cavity notch
Frequency range	UHF 400-520MHz	
Bandwidth - specify	200kHz around specified frequency	Single channel
Tuning	Factory/field tune - can be tuned anywhere within band	
VSWR	<1.2:1	N/A
Impedance	50 Ohms	
Band-pass attenuation	0.3-0.5dB	N/A
Input connector	N-type female or specify requirements	
Output connector	N-type female or specify requirements	N/A
Maximum Power	50 Watts	
Weight	1.55kg	
Dimensions	Height: 170mm Diameter: 150mm	
Installation accessories	Scaled coupling leads can be order separately	T-junction adaptor supplied
Mounting hardware order separate	Wall mounting: 1 x SWB-CH-400 or 2 x SWB-100-F Rack Mounting: 1 or 2 x A-2806-2	



ZUBF-18883 in rack mount



T-junction adaptor supplied with notch filter



Scaled coupling cables order separately



A-2806 19" rack mounting bracket

ZDVBF Band-pass filter series

N-type female termination

VHF 136-199.5MHz



The ZDVBF range of VHF band-pass filters is constructed from a central solid milled aluminium block. Suitable for emergency services, transport companies, mining, security and also in use with military and emergency services.

Please note: Band-pass frequencies and rejection frequencies must be stated when ordering.

Maximum dimension are: Length: 250mm (9.6"), Width: 166mm (6.5") and Height: 54mm (2.1")

Antennas, coaxial cable, adaptors and other installation accessories are available separately.



Model Code	Band pass MHz	Insertion loss	VSWR Max.	Rejection	Power Watts	Connector type	Temp (°C)
ZVBPF-1361T1385NF	136-138.5	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	SMA female	-40 to +85
ZVBPF-143T1455NF	143-145.5	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-1431T1455NF	143.145.5	2.0dB Ripple 1.0dB	1.5:1	40dB @ 138MHz 40dB @ 160MHz	100	N-type female	-40 to +85
ZVBPF-1465T1515NF	146.5-151.5	2.0dB	1.4:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-150T174NF	150-174	0.7dB	1.4:1	35dB @ Fc ±40MHz	100	N-type female	-40 to +85
ZVBPF-1565T159NF	156.5-159	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-1607T1632NF	160.75-163.25	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-1667T1692NF	166.75-169.25	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-168T1705NF	168-170.5	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	SMA female	-40 to +85
ZVBPF-1845T187NF	184.5-187	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	N-type female	-40 to +85
ZVBPF-197T1995NF	197-199.5	2.0dB	1.3:1	60dB @ 88-108MHz 40dB @ Fo ±6.5MHz	100	SMA female	-40 to +85

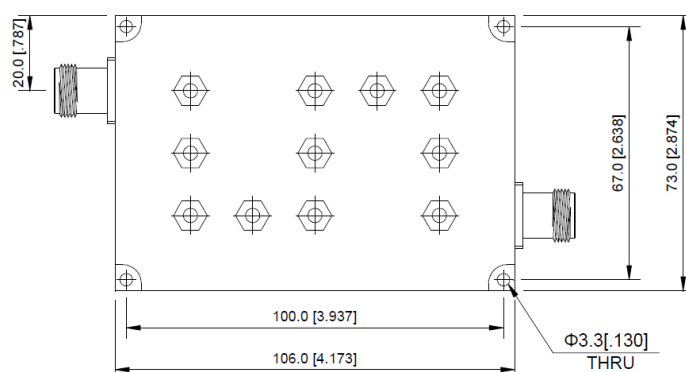
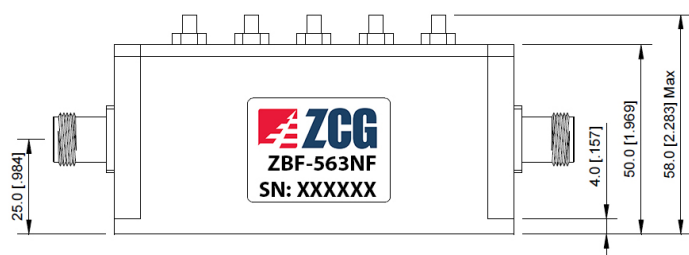
ZBF-563NF

Band-pass Filter
UHF 563-577MHz



- High RF performance
- Suitable for Military or commercial applications
- High quality components for long service life
- Model with SMA female available upon request

Specifications	ZBF-563NF
Construction	Aluminium outer case and external terminations
Frequency Pass band	UHF 563-577MHz
Customer requirements	Specific band-pass frequency Specific rejection and frequency
Insertion loss maximum	1.5dB - maximum
VSWR	<1.5:1 - maximum
Rejection	60dB @ Fo +/- 30MHz
Power rating	50 Watts
Input connector type	Panel mount N-type female
Output connector type	Panel mount N-type female
Approximate size - excluding connectors see below	Length: 106mm Width: 73mm Height: 58mm
Operating temperature	-40°C ~ +85°C



Cavity Filter Brackets

Cavity filter wall and rack mount brackets

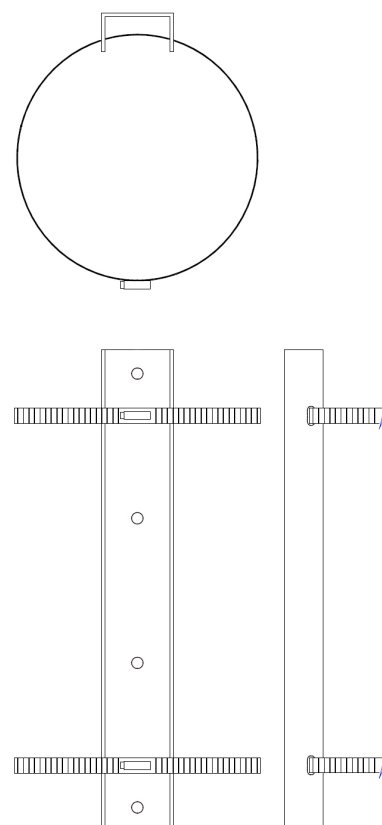
Page 1 of 2



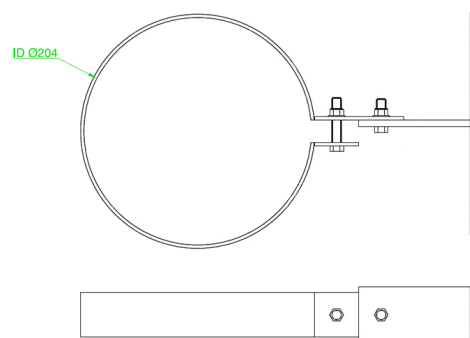
ZCG's range of cavity filters are suitable for either floor, wall or rack mounting. ZCG's range of filter mount brackets are customised for the diameter of the filter. Check below to find the suitable mount bracket.

Consult ZCG on your specific requirements if you cannot see a solution below.

Specifications	SWB-CH-400	SWB-CH-401
Construction	Corrosion resistant aluminium and stainless steel worm drive clamp	
Clamp capability	Single cavity filter	Single cavity filter
Filter diameter capability	203mm O.D. Suits ZCG Airband, FM and VHF filters	140-150mm O.D. Suits ZCG UHF filters
Height	400mm	100mm
Mounting	2 x 304 stainless steel worm drive clamps included	
Mounting requirements	Mount onto any supporting structure or wall using the mounting holes located in the bracket	



Specifications	SWB-100-F	SWB-100-F2
Construction	Corrosion resistant aluminium mount plate and tilt adjustable filter bracket	
Clamp capability	Single cavity filter	Single cavity filter
Filter diameter capability	203mm O.D. Suits ZCG Airband, FM and VHF filters	140-150mm O.D. Suits ZCG UHF filters
Mount plate dimensions	H: 50mm x W: 200mm with 2 x 8.5mm holes	
Mounting	Split ring clamp to secure filter.	
Mounting requirements	Mount onto any supporting structure or wall using the mounting holes located in the bracket	



19" Rack mounting brackets on following page

Cavity Filter Brackets

Cavity filter wall and rack mount brackets

Page 2 of 2



Specifications	A-2806	A-2806-2
Construction	Corrosion resistant aluminium and stainless steel worm drive clamp	
Clamp capability	1-4 cavity filters	1-2 cavity filters Requires 2 brackets
Filter diameter capability	140-150mm O.D. Suits ZCG UHF filters	203mm O.D. Suits ZCG Airband, FM and VHF filters
Height/ rack requirements	7RU spacing maximum or 300mm	19RU spacing maximum or 900mm
Mount plate dimensions	H: 60mm x W: 482mm with	
Mounting	2 x 304 stainless steel worm drive clamps included	
Mounting requirements	Will fit into any 19" standard racking Models for 23" standard racking available consult ZCG	



SF-2768

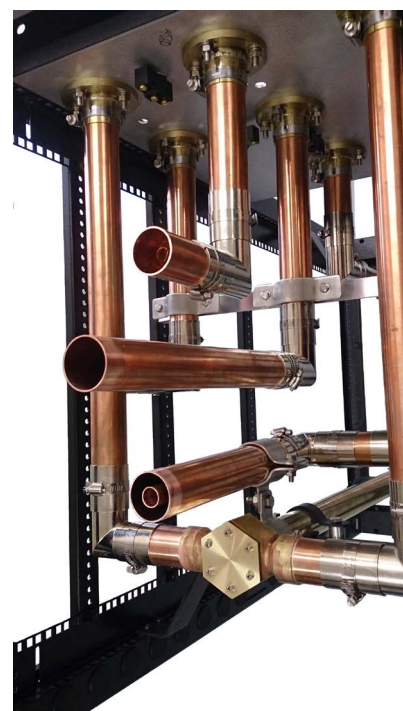
FM 7-port 1-5/8" EIA flanged coaxial rack cabinet patch panel

FM Radio 87.5-108MHz



The SF-2768 7-port switch frame patch panel:

- High quality components and construction for a long, reliable service life.
- Customer specific tuned to your requirements
- Suitable for low to medium broadcast applications
- Alternate terminations available, specify when ordering



Specifications	SF-2768
Construction	Copper rigid line, brass power divider and silver plated terminations
Frequency range	FM radio 87.5-108MHz
Bandwidth	Specify any 20MHz when ordering
VSWR	<1.2:1 across specified frequency
Maximum power	10 Kilowatts
Tx connector	1-5/8" EIA flanged
A & B connector	1-5/8" EIA flanged
Dummy load connector	7/8" EIA flanged
Working temperature	-45C to +80C
Storage Temperature	-40C to +85C
Approximate dimensions	Height: 1342mm, Width: 640mm, Depth: 600mm
Rack spacing	19" inch x 31U
Warranty	2 Years

SF-2768-2

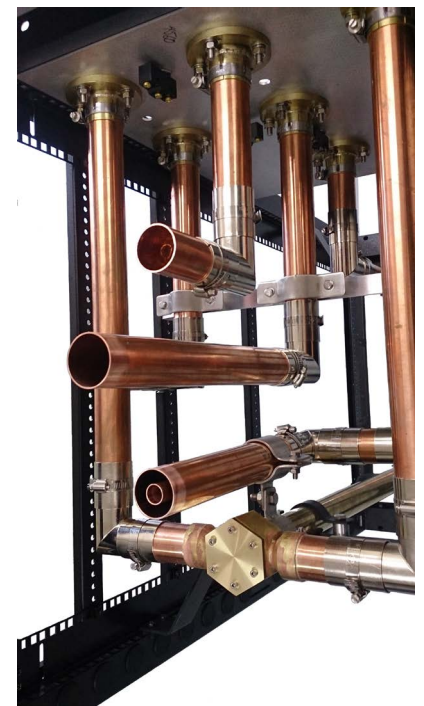
FM 8-port 1-5/8" EIA unflanged coaxial rack cabinet patch panel

FM Radio 87.5-108MHz



The SF-2768-2 8-port switch frame patch panel:

- High quality components and construction for a long, reliable service life.
- Customer specific tuned to your requirements
- Suitable for low to medium broadcast applications
- Alternate terminations available, specify when ordering



Specifications	SF-2768-2
Construction	Copper rigid line, brass power divider and copper rigid line terminations
Frequency range	FM radio 87.5-108MHz
Bandwidth	Specify any 20MHz when ordering
VSWR	<1.2:1 across specified frequency
Maximum power	10 Kilowatts
Tx connector	1-5/8" EIA unflanged
A & B connector	1-5/8" EIA unflanged
Dummy load connector	1-5/8" EIA unflanged
Working temperature	-45C to +80C
Storage Temperature	-40C to +85C
Approximate dimensions	Height: 1342mm, Width: 640mm, Depth: 600mm
Rack spacing	19" x 31U
Warranty	2 Years

Receive multicoupler

N-type terminated

VHF 136-174 or UHF 350-520MHz



A multicoupler combines the input of multiple external receive signals from a single antenna. Suitable for re-broadcast applications.

The 'RX' ports on the rear connects to the receiver/s and the 'ANT' port connectors to the duplexer low port or the receive antenna.

Consult ZCG on your specific requirements if you cannot see a solution below.



Specifications	2 Channel	3 Channel	4 Channel	8 Channel
Construction	Black powdercoated outer case with 3-9 chrome terminations			
Frequency range	VHF 136-174MHz or UHF 350-520MHz - or specify requirements			
Order Code VHF	RXMUX-136-174-2	RXMUX-136-174-3	RXMUX-136-174-4	RXMUX-136-174-8
Order Code UHF	RXMUX-350-520-2	RXMUX-350-520-3	RXMUX-350-520-4	RXMUX-350-520-8
Bandwidth	5MHz			
Ports	2	3	4	8
Gain	≥15dB	≥13.5dB	≥12dB	≥8dB
Rejection	Typical +7MHz ≥23dB - ≥80dB high isolation can be customised			
VSWR	<1.5:1			
Impedance	50 Ohms			
Noise figure	0.61dB			
Power input	12V DC via phoenix termination / 12V DC via RS232 serial connector / 220V AC with 3-pin detachble power lead / 220V AC with fixed cable			
Input connector	N-type female			
Output connector	2 x N-type female	3 x N-type female	4 x N-type female	8 x N-type female
Operating temperature	-25°C to +55°C			
Weight	5.5kg			
Dimensions	Width: 482.6mm, Depth: 300mm, Height: 88mm			



RS232 serial termination



3-pin detachable 220V mains power termination with on/off switch



12VDC Phoenix termination

Receive multicoupler

With internal L.N.A and N-type terminated
VHF 136-174 or UHF 350-520MHz



A multicoupler with internal L.N.A combines the input of multiple external receive signals from a single antenna. Suitable for re-broadcast applications.

The 'RX' ports on the rear connects to the receiver/s and the 'ANT' port connectors to the duplexer low port or the receive antenna.

Consult ZCG on your specific requirements if you cannot see a solution below.



Specifications	2 Channel	3 Channel	4 Channel	8 Channel
Construction	Black powdercoated outer case with internal 40dB L.N.A and 3-9 chrome terminations			
Frequency range	VHF 136-174MHz or UHF 350-520MHz - or specify requirements			
Order Code VHF	RXMUX-136-174-2-LNA	RXMUX-136-174-3-LNA	RXMUX-136-174-4-LNA	RXMUX-136-174-8-LNA
Order Code UHF	RXMUX-350-520-2-LNA	RXMUX-350-520-3-LNA	RXMUX-350-520-4-LNA	RXMUX-350-520-8-LNA
Bandwidth	5MHz			
Ports	2	3	4	8
Gain	≥15dB	≥13.5dB	≥12dB	≥8dB
Rejection	Typical +7MHz ≥23dB - ≥80dB high isolation can be customised			
VSWR	<1.5:1			
Impedance	50 Ohms			
Internal L.N.A	40dBm / 10 Watts			
Noise figure	0.61dB			
Power input	12V DC via phoenix termination / 12V DC via RS232 serial connector / 220V AC with 3-pin detachble power lead / 220V AC with fixed cable			
Input connector	N-type female			
Output connector	2 x N-type female	3 x N-type female	4 x N-type female	8 x N-type female
Operating temperature	-25°C to +55°C			
Weight	5.5kg			
Dimensions	Width: 482.6mm, Depth: 300mm, Height: 88mm			

Installation example on next page...

Receive multicoupler

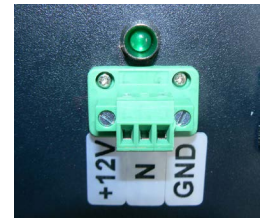
With internal L.N.A and N-type terminated
VHF 136-174 or UHF 350-520MHz



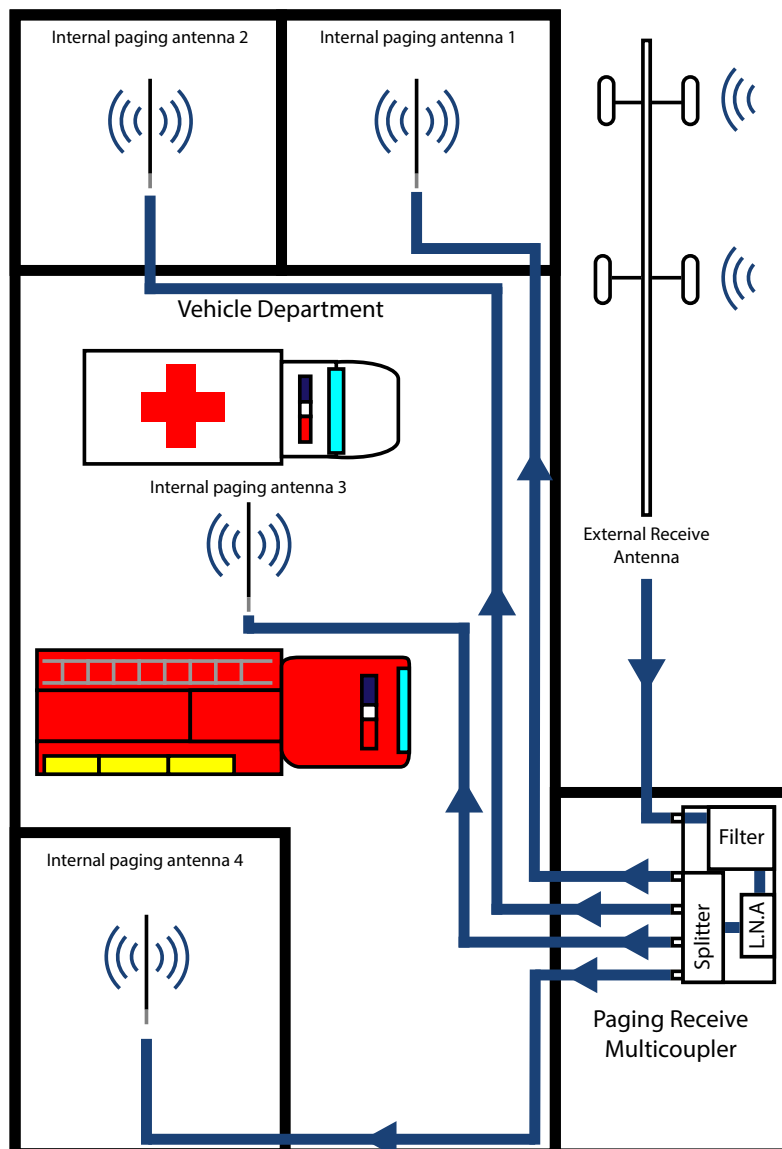
RS232 serial termination



3-pin detachable 220V mains power termination with on/off switch



12VDC Phoenix termination



Transmitter Hybrid Combiners

N-type terminated multi-port Transmitter Hybrid Combiner
VHF 136-174MHz or UHF 350-520MHz



A hybrid combiner, combines the output of multiple transmitters and combines them to be broadcasted through one external antenna.

The 'TX' ports on the rear connects to the transmitters and the 'ANT' port connectors to the duplexer high port or the transmit antenna

Consult ZCG on your specific requirements if you cannot see a solution below.



Specifications	2 Channel	3 Channel	4 Channel	6 Channel	8 Channel
Construction	Black outer shell and front mounting plate and chrome terminations				
Frequency range	VHF 136-174MHz or UHF 400-470MHz - Alternate frequencies available upon request				
Order code VHF	TXCOM-136-174-2	TXCOM-136-174-3	TXCOM-136-174-4	TXCOM-136-174-6	TXCOM-136-174-8
Order code UHF	TXCOM-350-520-2	TXCOM-350-520-3	TXCOM-350-520-4	TXCOM-350-520-6	TXCOM-350-520-8
Frequency spacing	No limitations, typical <5MHz				
Ports	2	3	4	6	8
Port Isolation	>50dB				
Reverse Isolation	>30dB				
VSWR	<1.3:1				
Impedance	50 Ohm - nominal				
Insertion loss	<3.5dB	<7.0dB		<10.5dB	
Maximum input power	Each channel/Port <50 Watts				
Input connector	N-type female				
Output connector	N-type female				
Weight	6.0kg				
Dimensions	Width: 482mm, Depth: 300mm, Height: 88mm (2RU)				
Operating Temperature	-20°C ~ +60°C				

2-port Combiner and 2-port splitter

For UHF / LMR / TETRA communications



The ZCG Tetra 2-port combiner and 2-port splitter combines both a combiner and splitter into a 2U rack fitting profile.

TETRA or TERrestrial TRunked RAdio is a digital licenced version of UHF communications. Used by courier companies, transport companies, mining, security and also in use with military and emergency services.

ZCG also have Filters, combiners, duplexers and multicouplers available.



Specifications	TET-2pcom-2pspl
Construction	Black powdercoated outer case and chrome terminations
Frequency range	TX High: 465-470MHz RX Low: 455-460MHz
Gain	TX High: ≤5.8dB RX Low: 14.5-15.5dB
Port Isolation	TX High: ≥50dB
Tx/Rx Isolation	≥75dB
Maximum power	TX High: +44dBm - 25 Watts RX Low: -10dBm - 0.1mW
VSWR	Tx: ≤1.4:1
Impedance	50 Ohms
Noise figure	TX High: N/A RX Low: 3.5dB
Connector	TX input: 2 x N-type female RX Output: 2 x N-type female Ant Port: N-type female
Input voltage	AC 220V
Operating temperature	-10°C to +50°C
Dimensions	Width: 482.6mm, Depth: 300mm, Height: 88mm
Weight	6.0kg

4-port Combiner and 4-port splitter

For TETRA communications



The ZCG Tetra 4 port combiner and 4 port splitter combines both a combiner and splitter into a 3RU rack fitting profile.

TETRA or TERrestrial TRunked RAdio is a digital licenced version of UHF communications. Used by courier companies, transport companies, mining, security and also in use with military and emergency services.

ZCG also have Filters, combiners, duplexers and multicouplers available.



Specifications	TET-4pcom-4pspl
Construction	Black powdercoated outer case and chrome terminations
Frequency range	TX High: 463-469MHz RX Low: 453-459MHz
Gain	TX High: -10dB RX Low: +16dB
Port Isolation	TX High: 60dB RX Low: N/A
Maximum power	TX High: +44dBm - 25 Watts RX Low: -10dBm - 0.1mW
Impedance	50 Ohms
Noise figure	TX High: N/A RX Low: 3.5dB
Connector	TX input: 4 x N-type female RX Output: 4 x SMA female or 4 x N-type female - specify when ordering Tx/Rx Port: N-type female
Operating temperature	-10°C to +50°C
Dimensions	Width: 415mm, Depth: 500mm, Height: 135mm

Mobile Duplexer

N-type female terminated
VHF or UHF Configurations



The ZSGQ series of VHF and UHF duplexers are a 6 cavity filter design. Suitable for radiotelephones or and VHF or UHF duplexed system. These models come in a 3 sub band range, each designed to work with a certain duplex spacing.

The filters have a very small physical dimension owing to the very high 'Q' helical resonators.

The housing is made from extruded aluminium with a passivated steel chasis. The filter is black vinyl coated for improved corrosion resistance.

Alternate options of input and output connectors are available. Please contact ZCG for more information.



Specifications	ZSGQ-150A	ZSGQ-400	ZSGQ-450	ZSGQ-480	ZSGQ-480H
Construction	Black aluminium outer case, coaxial cable and chrome terminations				
Frequency range	VHF 150-174MHz	UHF 375-440MHz	UHF 400-520MHz	UHF 440-520MHz	
Bandwidth (specify)	±200kHz				
VSWR	<1.5:1				<1.25:1
Impedance nominal	50 Ohms				
Frequency spacing	5.7MHz	5MHz min, 15MHz Max.	5MHz	10MHz	5MHz
Insertion loss	≤1.0dB	1.2dB max. 1.0dB min.	≤1.0dB		Tx: ≤1.0dB Rx: ≤1.2dB
Suppresion	>75dB	N/A	>75dB		
Isolation	>80dB	70+dB min. 75dB max.	>80dB		>75dB
Connector	3 x N-type female		3 x N-type female or 3 x BNC female - specify	3 x N-type female	
Maximum input power	50 Watts	40 Watts	50 Watts		
Dimensions	W: 221mm D: 154mm H: 31mm	W: 156mm D: 127mm H: 35mm	W: 191mm D: 191mm H: 39mm	W: 224mm D: 153mm H: 31.5mm	W: 240mm D: 158mm H: 31.5mm

ZDX526NF

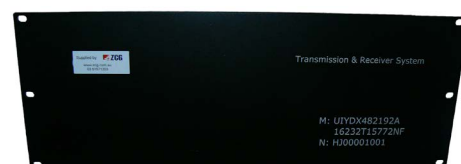
VHF 3-port Duplexer
148-174MHz



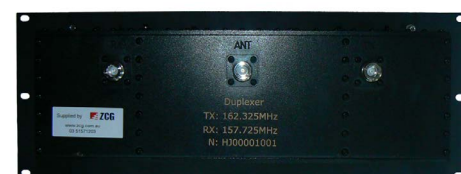
The ZDX526NF VHF duplexer has an input/output for both transmitter and receiver and a single port for the external antenna. Suitable for emergency services, transport companies, mining, security and also in use with military and emergency services.

Please note: Transmit and receive frequencies must be stated when ordering.

Antennas, coaxial cable, adaptors and other installation accessories are available separately.



Specifications	
Order code	ZDX526NF
Frequency range	VHF 148-174MHz
Bandwidth	Transmit and Receive frequencies must be specified when ordering.
Insertion loss	Typical 1.8dB - maximum
Isolation	Typical 80dB - maximum
Maximum power	100 Watts - higher power models available, consult ZCG
VSWR	≤1.3:1
Impedance	50 Ohms
Connector	TX Input: N-type female RX Input: N-type female Ant Input: N-type female
Operating temperature	-35°C to +65°C
Dimensions	Width: 482.6mm, Depth: 188mm, Height: 177.6mm
Weight	5.9kg
Mounting requirements	4U rack mounting suitable - will require mounting hardware or shelf



2 channel cavity combiner

N-type female terminated

VHF 136-174MHz or UHF 400-520MHz



The 2 channel cavity combiners allows for 2 signal inputs to be combined into one output for your transmit antenna.

Suitable for courier/transport companies, mining, security, public transport installations and also in use with military and emergency services.

ZCG also have Filters, combiners, duplexers and multicouplers available.



Specifications				
Order code	Z2CCOM-136-174	Z2CCOM-330-400	Z2CCOM-400-470	Z2CCOM-470-520
Frequency range	VHF 136-174MHz	UHF 330-400MHz	UHF 400-470MHz	UHF 470-520MHz
Minimum channel spacing	300kHz			
Insertion loss	Typical ≤ 3.5 dB			
Isolation	Typical ≥ 80 dB			
Continuous power per channel	≥ 50 W - or specify requirements			
VSWR	$\leq 1.25:1$			
Impedance	50 Ohms			
Connector	Inputs: 2 x N-type female Output: N-type female			
Operating temperature	-20°C to $+60^{\circ}\text{C}$			
Dimensions	Width: 425mm, Depth: 238mm, Height: 176mm			
Weight	9.0kg			
Mounting	4U rack mounting suitable - will require mounting hardware or shelf			

4 channel cavity combiner

N-type female terminated

VHF 136-174MHz or UHF 330-520MHz



The 4 channel cavity combiners allows for 4 signal inputs to be combined into one output for your transmit antenna.

Suitable for courier/transport companies, mining, security, public transport installations and also in use with military and emergency services.

ZCG also have Filters, combiners, duplexers and multicouplers available.



Z4CCOM-136-174 front

Specifications				
Order code	Z4CCOM-136-174	Z4CCOM-330-400	Z4CCOM-400-470	Z4CCOM-470-520
Frequency range	136-174MHz	330-400MHz	400-470MHz	470-520MHz
Minimum channel spacing	≤125kHz	≤125kHz	≤125kHz	≤125kHz
Insertion loss	Typical ≤3.0dB			
Isolation	Typical ≥80dB			
Continuous power per channel	≥50W, 100W, 150W or 200W models available - specify requirements			
VSWR	≤1.25:1			
Impedance	50 Ohms			
Connector	Inputs: 4 x N-type female Output: N-type female			
Operating temperature	-20°C to +60°C			
Dimensions	Width: 435mm, Depth: 365mm, Height: 343mm			
Weight	18.0kg			
Mounting	8U rack mounting suitable - will require mounting hardware or shelf			

6-8 channel cavity combiner

N-type female terminated

VHF 136-174MHz or UHF 400-520MHz



The 6 or 8 channel cavity combiners allows for 6 or 8 signal inputs to be combined into one output for your transmit antenna.

Used by courier companies, transport companies, mining, security and also in use with military and emergency services.

ZCG also have Filters, combiners, duplexers and multicouplers available.

Specifications			
Order code - 6 channel	Z6CCOM-136-174	Z6CCOM-400-470	Z6CCOM-470-520
Order code - 8 channel	Z8CCOM-136-174	Z8CCOM-400-470	Z8CCOM-470-520
Frequency range	136-174MHz	400-470MHz	470-520MHz
Working bandwidth	5MHz typical		
Minimum channel spacing	≤200kHz		
Insertion loss	Typical ≤4.5dB		
Isolation	Port to Port: ≥75dB Opposite: ≥60dB		Port to Port: ≥75dB Opposite: ≥65dB
Rejection	- ≥5dB @ΔF ≥±200kHz ≥15dB @ΔF ≥±1MHz ≥30dB @ΔF≥±5MHz		
Suppression	-	Typical ≥80dB	
OIP3	-	≥80dBm	
Continuous power per channel	100 Watts		
VSWR	Input: ≤1.25:1 Output: ≤1.25:1	Input: ≤1.25:1 Output: ≤1.5:1	Input: ≤1.5:1 Output: ≤1.8:1
Impedance	50 Ohms		
Connector	Inputs: 6 or 8 x N-type female Output: N-type female		
Operating temperature	-20°C to +60°C		-30°C to +75°C
Dimensions	Width: 900mm, Height: 420mm, Depth: 500mm	Width: 440mm, Height: 530mm, Depth: 330mm	
Weight	68.0kg		36.0kg



Z6CCOM-400-470 front



Z6CCOM-400-470 side

FM Radio Hybrid coupler

N-type female terminated

FM Radio 87.5-108MHz



The HBC3-FM hybrid coupler allows for two transmitters output signal to be coupled and broadcast out of a single external antenna.

Filters, combiners, branch feeder cables, and other installation accessories are all available separately.

Specifications	HBC3-FM
Construction	Painted aluminium and chrome terminations
Frequency range	FM Radio 87.5-108MHz
Coupling	3 dB
Coupling ratio (%)	50/50
VSWR	<1.15:1
Insertion loss - maximum*	0.1dB
Isolation - minimum	25dB
Power Handling at 50°C	200 Watts
Connectors	4 x N-type female - on top of coupler
Dummy load	5 watts N-type male - supplied
Dimensions	Length: 855mm, Width: 60mm, Height: 40mm
Weight	900grams
Mounting	Secure to any flat surface using attached end mounting tabs.

* Insertion Loss - is the actual dissipated and reflected loss. It does not include coupling loss.



5W dummy load supplied



Mounting tabs at each end for either wall or rack mounting



Identification labels for ease of connection

UHF hybrid couplers

N-type female terminated

400-570MHz



Hybrid couplers split the input signal between two output ports, or combine two signals whilst maintaining high isolation between them.

Filters, combiners, branch feeder cables, and other installation accessories are all available separately.



Specifications	HBC3	HBC6
Construction	Painted aluminium and chrome terminations	
Frequency range	UHF 400-570MHz	
Coupling	3 dB	6 dB
Coupling ratio (%)	50/50	75/25
Unbalanced*	0.5 dB	
Phase balance	5 degrees	
VSWR	<1.15:1	
Insertion loss - maximum*	0.7dB	0.5dB
Isolation - minimum	25dB	
Power Handling at 50°C	200 Watts	
Intermodulation product	≤ -140 dBc (2 x 43 dBm)	
Connectors	4 x N-type female	
Dummy load - supplied	N-type male - 5W capable	
Dimensions	Length: 184mm, Width: 60mm, Height: 40mm	
Weight	450grams	



* Unbalanced - specifies the maximum coupling loss variation within the specified operating range.

* Insertion Loss - is the actual dissipated and reflected loss. It does not include coupling loss.

Coaxial Isolators

N-type female terminated
FM Radio, Airband or VHF/UHF



- Suitable for military, aeronautical or commercial applications
- Can be single, dual junction or tri-junction for high isolation - request when ordering
- High RF performance in a small profile

Specifications	ZIS108NF	ZIS137NF	ZIS400NF
Construction	Anodised aluminium outer case and chrome terminations		
Frequency range	FM Radio 87.5-108MHz	Airband 118-137MHz	VHF/UHF 225-400MHz
Tuning	Factory		
Insertion loss - maximum	0.6dB	0.5dB	0.8dB
Isolation	20dB		
VSWR - maximum	1.25:1	1.2:1	1.35:1
Forward power - maximum	100 Watts		
Return power - maximum	100 Watts		
Connectors -input/output	N-type female		
Dimensions	Width: 60.0mm Length: 60.0mm Height: 28.0mm		Width: 53.0mm Length: 77.0mm Height: 26.0mm
Working temperature	-20°C ~ +65°C	-30°C ~ +70°C	-40°C ~ +85°C
Installation	Connect terminations as per identification sticker on face of isolator		



45-270MHz Coaxial Isolators

- Suitable for military, aeronautical or commercial applications
- Can be single, dual junction or tri-junction for high isolation - request when ordering
- High RF performance in a small profile



Model number	Frequency range	Insertion loss Max. (dB)	Isolation Min. (dB)	VSWR Max.	Forward Power W	Reverse Power W	Connector	Temp. (°C)
ZIS50SF	45-50MHz	1.5	18	1.3	100	100	SMA-F	-10~+65
ZIS55SF	45-55MHz	1.5	18	1.3	100	100	SMA-F	-10~+65
ZIS5075SF	50-75MHz	1.8	20	1.25	100	100	SMA-F	-10~+65
ZIS5575SF	55-75MHz	1.3	20	1.25	100	100	SMA-F	-10~+65
ZIS65NF	60-65MHz	1.0	20	1.25	100	100	N-female	-10~+65
ZIS70NF	65-70MHz	1.0	20	1.25	100	100	N-female	-10~+65
ZIS88SF	68-88MHz	1.3	18	1.3	100	100	SMA-F	-20~+65
ZIS85SF	70-85MHz	0.8	20	1.25	100	100	SMA-F	-20~+65
ZIS90NF	70-90MHz	1.0	20	1.25	100	100	N-female	-20~+65
ZIS120SF	80-120MHz	1.0	18	1.3	100	100	SMA-F	0~+65
ZIS135NF	85-135MHz	1.0	18	1.3	100	100	N-female	-10~+65
ZIS108NF	87-108MHz	0.6	20	1.25	100	100	N-female	-20~+65
ZIS108NF-200	87-108MHz	0.6	20	1.25	200	100	N-female	-20~+65
ZIS138NF	88-138MHz	1.0	18	1.3	100	100	N-female	-10~+65
ZIS130NF	100-130MHz	0.6	20	1.25	100	100	N-female	-30~+70
ZIS130NF-200	100-130MHz	0.6	20	1.25	200	100	N-female	-30~+70
ZIS150SF	100-150MHz	0.8	20	1.25	100	100	SMA-F	-10~+65
ZIS118NF	108-118MHz	0.5	23	1.2	100	100	N-female	-30~+70
ZIS118NF-200	108-118MHz	0.5	23	1.2	200	100	N-female	-30~+70
ZIS137NF	118-137MHz	0.5	23	1.2	100	100	N-female	-30~+70
ZIS137NF-200	118-137MHz	0.5	23	1.2	200	100	N-female	-30~+70
ZIS180SF	130-180MHz	0.8	20	1.25	100	100	SMA-F	-30~+70
ZIS174SF	136-174MHz	0.5	20	1.25	100	100	SMA-F	-30~+70
ZIS174NF-200	136-174MHz	0.5	20	1.25	200	100	N-female	-30~+70
ZIS200NF	150-200MHz	0.6	20	1.25	100	100	N-female	-30~+70
ZIS225SF	150-225MHz	0.9	18	1.3	100	100	SMA-F	-30~+70
ZIS170NF	170-200MHz	0.5	20	1.25	100	100	N-female	-30~+70
ZIS170NF-200	170-200MHz	0.5	20	1.25	200	100	N-female	-30~+70
ZIS2205MSF	180-220MHz	0.5	20	1.25	100	100	SMA-M to SMA-F	-30~+70
ZIS270NF	200-270MHz	1.0	18	1.3	100	100	N-female	-30~+70

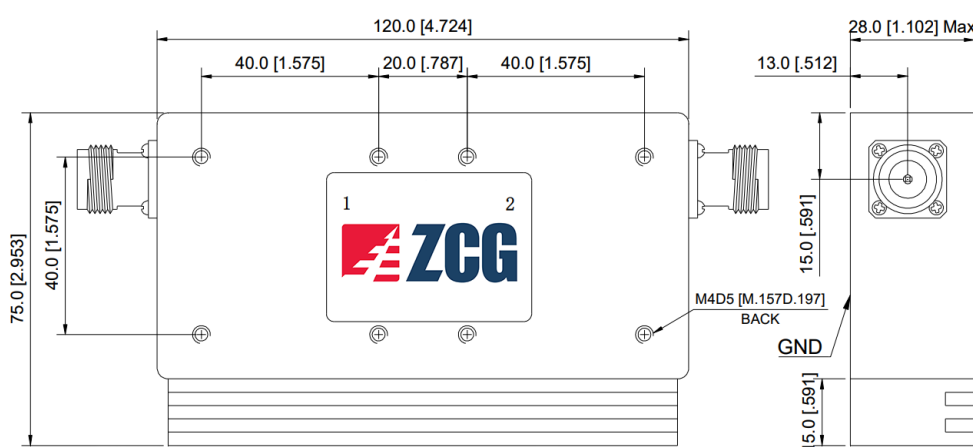
Coaxial Isolator with Heatsink

N-type female terminated

VHF 156-174MHz



- Suitable for military, aeronautical or commercial applications
- Can be single, dual junction or tri-junction for high isolation - request when ordering
- High RF performance in a small profile



Specifications	ZIS174NF
Construction	Anodised aluminium outer case and chrome terminations
Frequency range	VHF 156-174MHz
Tuning	Factory
Insertion loss - maximum	1dB
Isolation	40dB
VSWR - maximum	1.25:1
Forward power - maximum	200 Watts
Return power - maximum	100 Watts
Connectors -input/output	N-type female
Dimensions	Length: 120mm Width: 28mm Height: 75mm
Working temperature	-30°C ~ +70°C
Installation	Connect terminations as per identification sticker on face of isolator

Coaxial Circulators

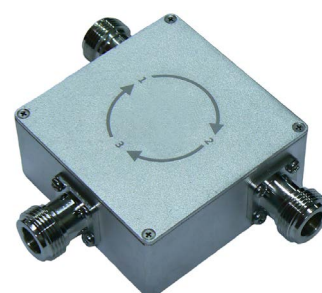
N-type female terminated
FM Radio, Airband or VHF/UHF



- Suitable for military, aeronautical or commercial applications
- Can be dual junction or tri-junction for high isolation - request when ordering
- High RF performance in a small profile

Specifications	ZCI108NF*	ZCI137NF*	ZCI174NF	ZCI400NF
Construction	Anodised aluminium outer case and chrome terminations			
Frequency range	FM Radio 87.5-108MHz	Airband 118-137MHz	VHF 136-174MHz	VHF/UHF 225-400MHz
Tuning	Factory			
Insetion loss - maximum	0.6dB	0.5dB	0.5dB	0.8dB
Isolation	20dB			
VSWR - maximum	1.25:1	1.2:1	1.25:1	1.35:1
Forward power - maximum	100 Watts		200 Watts	120 Watts
Return power - maximum	100 Watts		200 Watts	120 Watts
Connectors -input/output	N-type female			
Dimensions	Width: 60.0mm Length: 60.0mm Height: 28.0mm			W: 53.0mm L: 77.0mm H: 26.0mm
Working temperature	-20°C ~ +65°C	-30°C ~ +70°C		-40°C ~ +85°C
Installation	Connect terminations as per indentification sticker on face of isolator			

* denotes a 200 Watt model is available upon request, specify when ordering.



Hybrid combiners

N-type female terminated

VHF 136-174MHz or UHF 350-520MHz



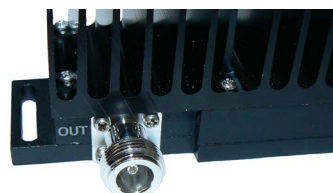
- Suitable for military, aeronautical or commercial applications
- Low insertion loss, high isolation, high power handling
- High RF performance in a small profile

Specifications	ZCO174NF	ZCO520NF	ZCO470NF	ZCI470NF-4*
Construction	Black powdercoated aluminium outer case and heatsink and chrome terminations			
Frequency range	VHF 136-174MHz	UHF 350-520MHz	UHF 400-470MHz	
Tuning	Factory			
Insertion loss	3.7dB - maximum		3.5dB - maximum	6.4dB - maximum
Isolation	23dB - minimum	22dB - minimum	23dB - minimum	20dB - minimum
VSWR - maximum	1.25:1 - maximum			
Power handling	100 Watts - 2 x 50W			200 Watts (4 x 50W)
Connectors	N-type female			
Dimensions	L: 164.0mm W: 45.0mm H: 50.0mm	W: 144.0mm L: 37.2mm H: 58.0mm		W: 305.0mm L: 70.0mm H: 47.0mm
Working temperature	-20°C ~ +70°C			
Installation	Connect terminations as per indentification on faces of hybrid combiner			

* denotes model available with SMA termination with 100W 4 x 25W capability



ZCO470NF



ZCO470NF-4

Channel Racks

Steel or aluminium racks

Page 1 of 4



- Rack mounting available in either baked enamel steel or aluminium
- Suitable for low security locations, such as network communications and/or laboratory equipment
- Supplied in flat-pack configuration for reduced delivery costs and reduced storage space.
- Available in 27RU to 45RU height in steel construction with black finish
- Steel models utilise M6 cage nuts instead of tapped holes
- Available in 27RU to 63RU in aluminium construction with baked enamel BS 631 light grey finish.
- Both models can be either permanently fixed or installed with castor wheels for mobility
- Can be bayed together
- Maximum 300kg - steel and 600kg - aluminium load
- Optional accessories for cable trays, power boards etc.



Material	Overall Height (mm)	Height	19" Weight	23" Weight
Aluminium	1400	27RU	11kg	12kg
	1934	39RU	14kg	15kg
	2200	45RU	15kg	16kg
	2600	56RU	20kg	21kg
	3000	63RU	23kg	24kg
Steel	1347	27RU	8kg	9kg
	1614	33RU	10kg	11kg
	1880	39RU	11kg	12kg
	2147	45RU	12kg	13kg



Channel Racks

Steel or aluminium racks

Page 2 of 4



- Budget model channel rack for lite applications
- Suitable for low security locations, such as network communications and/or laboratory equipment
- Supplied in flat-pack configuration for reduced delivery costs and reduced storage space.
- Available in 22RU to 47RU height
- Utilises M6 cage nuts instead of tapped holes
- Both models can be either permanently fixed or installed with castor wheels for mobility
- Maximum 150kg load
- Optional accessories for cable trays, power boards etc.



Material	Overall Height (mm)	Height
Steel	1119	22RU
	1562	32RU
	1785	37RU
	2007	42RU
	2230	47RU



Channel Racks

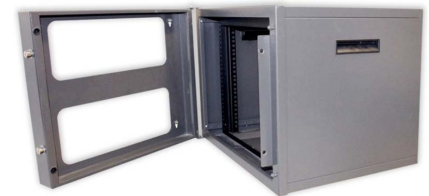
Desktop, Floor mount or wall mount Page 3 of 4



- 19" front and rear frames with adjustable mounting front to rear
- Suitable for small applications such as network communications, AV and security equipment.
- Includes vented top, vented base and side are included.
- Built in flush handles for easy lifting
- Fixed feet for customer whom require a floor mount or desktop solution
- Cable access via removable gland plate in top and base to allow cable access.
- Wall mounting kit, castor wheel kit, floor standing and swingtray accessories are all available separately.
- Metal or acrylic doors available separately. Consult ZCG for more information.



RU	Overall Height (mm)	Overall Depth (mm)	Weight (kg)
4	258	300	6.9
		450	8.2
		600	10.4
6	347	300	8.0
		450	9.5
		600	11.8
8	436	300	9.0
		450	10.7
		600	12.9
10	525	300	10.0
		450	11.7
		600	14.3
12	613	300	10.9
		450	13.0
		600	15.5
18	880	300	13.7
		450	16.4
		600	18.9



Channel Racks

Desktop or Wall mount cabinet

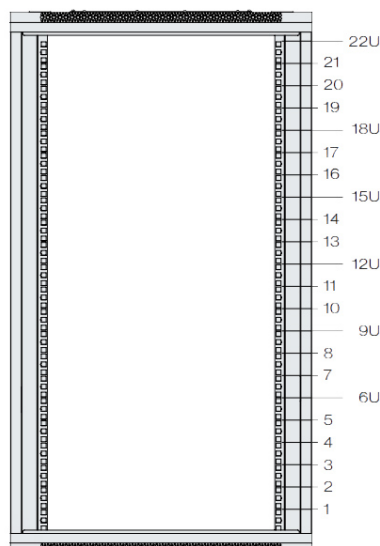
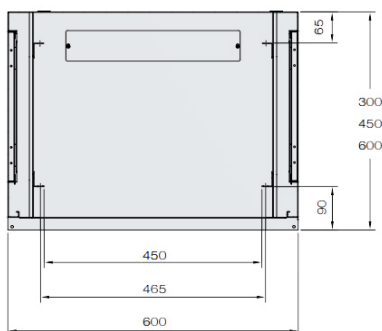
Page 4 of 4



- 19" front and rear frames with adjustable mounting front to rear
- Suitable for budget and small applications such as network communications, AV and security equipment.
- Supplied fully assembled with top, base, removable side, front glass door and pre-installed fans.
- Acrylic or metal door option also available separately.
- Wall mount accessories are included
- Cable access via removable gland plate in top and base to allow cable access.



RU	Overall Height (mm)	Overall Width (mm)	Weight (kg)
6	368	450 600	21.4
12	635	450 600	29.1
18	910	450 600	35.0
22	1082	450 600	42.0



How to order

Page 1 of 2

ZCG distributor trade prices

ZCG scalar retail distributors, RF installer and Broadcasters can contact our team of consultants who will be pleased to assist you with complete detail about our extensive range of Broadcast and Radio Frequency Products. We DO NOT sell direct to the public or quote retail prices.

A written quotation detailing your Trade Discount Prices and product availability will be provided upon request.

Download the latest ZCG Scalar Product Catalogue from our website www.zcg.com.au

Stock items

Certain items are held in stock.

Our consultants can confirm availability of any item depending on the quantity required.

Orders for stock items will normally be dispatched the next working day.

Build items

Antennas and Accessories not held in stock will be manufactured to your requirements. Build times may vary according to the product, quantity required and factory loading.

Typical lead time is 3 working weeks (public holidays excluded) for dispatch ex works in Lindenow, Victoria. Contact our RF Solutions Consultants for advice according to the product required.

The scheduled dispatch date will be confirmed normally within 48 hours. Freight time will depend upon the method of delivery and final destination. Please allow an adequate period before scheduling any antenna installation.

Urgent priority build items

For orders that require a shorter than normal delivery time, ZCG Scalar offer a priority build service depending on the product and quantity.

Priority Build Service attracts a premium charge which RF Consultants will advise.

Placing orders

All Purchase Orders will be required in writing. Send your Purchase Order by fax or email.x

Fax orders to:

ZCG Scalar Head Office, Lindenow, Victoria on (03) 5157 1641 or
ZCG Scalar Branch Office, Brown Plains, QLD on (07) 3800 3651 or
ZCG Scalar Branch Office, Canning Vale, WA on (08) 6253 8645

Email orders to: sales@zcg.com.au or qldsales@zcg.com.au or wasales@zcg.com.au
Or you may send an email message to [any of our RF consultants](#).

PLEASE NOTE THAT ZCG SCALAR TERMS AND CONDITIONS OF SALE WILL APPLY.

Minimum order

ZCG Scalar reserve the right not to accept any purchase order for goods and/or services which totals less than \$50.00, excluding GST and Freight.

Payment

For customers holding a Trading Account with ZCG Scalar, payment is required within 30 days from the date of invoice.

For Non-Account customers, we will require full payment in advance with your purchase order.

ZCG Scalar accept payment by Credit Card, EFT bank deposit, Cash or Cheque.

Order codes

Please use the correct "Order Codes" to identify the products you require when preparing an order.

This will eliminate the potential for any errors and assist us in speedy processing of your order. Product Order Codes appear on our website, in our Product Catalogue and also in our Price List. If in any doubt, our staff will be happy to assist you.

Specific frequency tuning requirements

For any antennas and accessories built for specific frequencies, we will require your Transmit and Receive frequencies (Tx and Rx) to appear in writing on your Purchase Order.

The performance of your RF product will be optimised accordingly. Please take note of the product's frequency range and bandwidth limitations which appear on Specification Sheets. If you require any clarification regarding frequency and bandwidth capabilities, please contact us.

Freight carriers

ZCG Scalar have negotiated competitive rates with our main freight carriers TNT and TOLL IPEC in order to deliver to all destinations around Australia using the fastest and most economical services available. A street address is required for delivery, not a post office box.

We will dispatch via TNT or TOLL IPEC, unless you instruct us otherwise.

Customers can certainly nominate their own preferred freight carrier if they wish. Simply provide us the details.

International customers will need to make their own freight arrangements and provide us details.

How to order

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Freight insurance

ZCG Scalar policy is to INSURE ALL OUTGOING FREIGHT against damage or loss during transit.

The Transit Insurance rate is 1 PERCENT of the value of goods before GST. This amount will be invoiced as a separate line item.

IF YOU INSTRUCT ZCG SCALAR NOT TO INSURE YOUR FREIGHT, then ZCG Scalar accept no responsibility whatsoever for goods.

If you utilise your own freight carrier, then Transit Insurance will not be provided by ZCG Scalar.

Responsibility to check goods upon arrival

When goods arrive at their destination, before signing the Delivery Docket, it is the customer's responsibility to CHECK that all items are present and in good condition.

If anything is found to have been damaged in transit, or is missing, make appropriate notes on the Delivery Docket prior to signing. Then contact ZCG Scalar.

If this is not done, then any subsequent insurance claim will be rejected. ZCG Scalar WILL NOT take any responsibility for uninsured goods or insured goods signed for as being received in good order and condition, but later found to be damaged or missing.

Please instruct your staff accordingly prior to the arrival of goods.

Warranty

ZCG Scalar warrants that all goods sold to the buyer will be free from defects in materials and workmanship attributable to ZCG Scalar for a period of:

- 2 Years from the date of Invoice for Broadcast Antennas and Power Dividers; and
- 1 Year from the date of Invoice for all other Antennas and Accessories.

Should the Buyer find any goods to be defective in materials or workmanship attributable to ZCG Scalar within the stated warranty period, then the Buyer must complete a "Warranty Claim Form" explaining the defect(s) and submit this form to ZCG Scalar. The "Warranty Claim Form" is available to download from our website, or will be provided upon request.

The freight for any items returned under warranty to ZCG Scalar must be arranged and paid by the Buyer. ZCG Scalar at their discretion will either repair, replace or refund the cost of any goods found to have a defect attributable to ZCG Scalar within the stated warranty period.

Return of goods

No goods can be returned for credit unless ZCG Scalar have issued the Buyer with a "Customer Return Authorisation Form" explaining the reason(s) why goods are being returned. Contact ZCG Scalar for this form.

When goods are returned by the Buyer, a minimum Re-Stocking Fee of ~~\$50.00~~ will be payable by the Buyer, or 15 percent of the Invoiced value of the goods returned to ZCG Scalar, whichever is the greater, unless stated otherwise by ZCG Scalar.

Terms and conditions of sale

All sales are subject to our ZCG Scalar Terms and Conditions of Sale.

These Terms and Conditions of Sale appear at the back of our Product Catalogue and are also available to download. Visit our website and select the menu About Us... Terms and Conditions of Sale.

Variations

ZCG Scalar reserve the right to alter product specifications, pricing and availability at any time without notice.

Our consultants are always available to confirm all details for you in this regard.

Terms and conditions of sale

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In these Conditions “**ZCG Scalar**” means ZCG Scalar or any related corporation. The “**Buyer**” means the person, firm corporation or governmental or semi governmental authority purchasing goods and/or services from ZCG Scalar. Unless otherwise clearly stated in writing by ZCG Scalar the following conditions for wholesale sales will apply. “**Goods**” means the goods being purchased from ZCG Scalar, or any part thereof. “**Services**” means services being purchased from ZCG Scalar, or any part thereof.

1) CONTRACT

- a) The matters referred to on the face of this document and these conditions constitute a Contract (“**this Contract**”) between ZCG Scalar and the Buyer. These Conditions shall prevail over any forms of the Buyer that contain provisions contrary to or inconsistent with these conditions and any such forms shall not apply to this Contract nor shall they be deemed to constitute a counter offer by the Buyer.
- b) These terms and conditions shall apply to the exclusion of all agreements, representations and other statements made prior to entering into this agreement and shall constitute all the terms and conditions which govern this agreement.

2) MINIMUM ORDER

ZCG Scalar reserves the right not to accept any purchase order from the Buyer for goods and/or services which **totals less than \$50.00**, excluding GST and Freight.

3) DELIVERY

Unless ZCG Scalar otherwise agrees in writing, GST, delivery, carriage, insurance, handling, storage and packaging and any other expense relating to the goods and/or services shall be charged to and paid by the Buyer.

- a) In the absence of specific instruction from the Buyer, ZCG Scalar will select the carrier and make such contract with the carrier on behalf of the Buyer as ZCG Scalar in its absolute discretion considers reasonable.
- b) In the absence of specific instructions from the Buyer, ZCG Scalar will insure all outgoing freight. If the Buyer instructs that their freight is not to be insured, then ZCG Scalar will not accept any responsibility for goods lost or damaged during transit. When insured goods arrive at their destination, before signing the Delivery Docket, it is the Buyer's responsibility to first check that all items are present and in good condition. If anything is found to have been damaged in transit, or is missing, the Buyer must ensure that appropriate notes are made on the Delivery Docket prior to signing. ZCG Scalar will not take any responsibility for products signed for as being received in good order and condition, but later found to be damaged or missing.
- c) ZCG Scalar will endeavour to deliver the goods and/or services within any delivery period required by the Buyer but subject to Condition 26 shall not in any event be liable for any loss or damage directly or indirectly resulting from any failure to deliver within such period. Time shall not be the essence of this Contract and any delay shall not constitute grounds for cancellation of this contract by the Buyer.
- d) ZCG Scalar shall not be liable for any loss or damage resulting from any failure to give notice of any delay in delivery.
- e) ZCG Scalar reserves the right to deliver the goods and/or services by instalments at its absolute discretion and in such circumstances the Buyer shall accept delivery of such goods and/or services by instalments.
- f) ZCG Scalar shall retain the full legal and beneficial ownership and title in and to goods and/or services delivered to the Buyer unless and until the Buyer has paid to ZCG Scalar or as it directs the invoiced price of those goods and/or services but risk in any such goods and/or services shall pass to the Buyer when ZCG Scalar appropriates the goods and/or services to the Buyer's order. Such goods and/or services shall thereafter be at the risk and expense of the Buyer. If the Buyer defaults or otherwise fails to pay such amount as ZCG Scalar may (but without limiting any other rights or remedies available to ZCG Scalar at law, in equity or by statute) seize, repossess and/or sell the goods and/or services and for such purpose ZCG Scalar or its representatives may enter any premises in or upon which ZCG Scalar believes from time to time the goods and/or services to be located.
- g) If the Buyer sells, transfers or otherwise disposes of the goods and/or services to any personnel or corporation whatsoever (“the Third Party”) and the Buyer has not paid to ZCG Scalar or as it directs the invoiced price of those goods and/or services the Buyer holds as trustee to the extent of the unpaid invoiced price of the goods and/or services the proceeds of sale for ZCG Scalar and shall pay such proceeds to ZCG Scalar in full as soon as is reasonably practicable after receipt by the Buyer and, where the proceeds of sale are less than the amount owing by the Buyer to ZCG Scalar, such proceeds shall be applied in partial satisfaction to be the invoiced price or amount then outstanding.
- h) ZCG Scalar shall have the right to enter the Buyer's premises or any premises upon which the Buyer stores the goods or some of the goods are stored and to take the goods from the Buyer until the goods have been paid for. If ZCG Scalar is unable to resell the goods at the same price or more than the Buyer has paid ZCG Scalar, then ZCG Scalar shall be entitled to make claim, demand or institute, if necessary, an action in order to recover any loss or damage sustained by ZCG Scalar due to ZCG Scalar not being able to obtain the same price as was receivable from the Buyer for the goods.

4) USE OF GOODS

- a) The Buyer agrees, for so long as it is required by ZCG Scalar so to do, that it will notify ZCG Scalar in writing prior to accepting the supply of any radio communications transmitter or receiver included in a class specified in regulations made under the Radio communications Act 1983 or any corresponding legislation if the particular radio communications transmitter or receiver is one that it intends to operate, or is one in respect of which it must otherwise comply with any law requiring the production to ZCG Scalar of a licence permitting the Buyer to operate or, possess the same. The Buyer warrants that any radio communications transmitter or receiver included in a class specified as aforesaid the supply of which it has accepted without giving the notice to ZCG Scalar required by this Condition is not one that it will operate.

Terms and conditions of sale

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5) DESIGN CHANGES

ZCG Scalar reserve the right to alter the design or specifications of any goods and/or services at any time without notice. ZCG Scalar shall have no obligation to make alterations in the design or construction of goods and/or services previously accepted and delivered even though design changes are incorporated in goods and/or services subsequently being delivered.

6) BUYER'S SPECIAL REQUIREMENTS

Changes to the specifications at the Buyer's request after the placing of any order will only be accepted at ZCG Scalar's discretion. Such changes will only take effect when agreed in writing by the Company and may result in late delivery or increase in price.

7) CONSENTS

It shall be the responsibility of the Buyer to obtain any consent necessary for the importation of goods and/or services into their country. Any contract shall be conditional upon ZCG Scalar obtaining any consent necessary for the export of the goods and/or services from Australia and/or from the country of origin.

8) PAYMENTS

All accounts are payable net cash within thirty (30) days from date of Invoice.

- a) Where payment is not received in accordance within the specified time, the Buyer agrees that ZCG Scalar shall have the right to invoice and the Buyer will pay Late Payment Charges amounting to 2.5 per centum per month on all monies from time to time owing in respect of the goods and/or services including all charges.
- b) ZCG Scalar reserves the right to suspend all and any deliveries to the Buyer where payment is not received in accordance with paragraph (a) of the Clause.
- c) ZCG Scalar reserves the right to withdraw at any time credit facilities extended the Buyer where payment is not received in accordance with paragraph (a) of this Clause or where others acts or omissions of the Buyer are objectionable to ZCG Scalar.
- d) No discount will be allowed except where otherwise agreed in writing by ZCG Scalar.
- e) The Buyer authorises ZCG Scalar (its servants or agents) to make all reasonable enquires to verify the information given to ZCG Scalar by the Buyer is correct and that the Buyer can satisfy the requirements of ZCG Scalar and its commitments under the terms of this agreement.

9) PRICE VARIATION

- a) Subject to paragraph (b) of this clause all prices shall be as quoted in writing or in accordance with ZCG Scalars current price list. Verbal quotations are subject to written confirmation.
- b) ZCG Scalar reserves the right without notice to alter the price of goods and/or services whether or not a deposit or part payment has been received by ZCG Scalar for such goods and/or services and to invoice the Buyer for any such extra amount where the cost of the goods and/or services to ZCG Scalar has altered due to circumstances beyond its control, or to correct errors or omissions.

10) RETURN OF GOODS

- a) No return of goods will be accepted for credit unless :
 - i) A written "**Customer Return Authorisation Form**" has been issued to the Buyer by ZCG Scalar explaining the reason(s) why goods are being returned.
 - ii) The Buyer returns the goods to ZCG Scalar together with the "Customer Return Authorisation Form" within thirty (30) days from the date the form was issued, and
 - iii) The freight charge for the return of goods to ZCG Scalar is paid by the Buyer, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".
- b) No return of goods will be accepted and no credit note will be issued for any goods specially acquired or specially manufactured for the Buyer.
- c) No credit note will be issued to refund the original freight charge to the Buyer, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".
- d) When goods are returned by the Buyer, a minimum Re-Stocking Fee of \$50.00 will be payable by the Buyer, or 15 percent of the Invoiced value of the goods returned to ZCG Scalar, whichever amount is the greater, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".

Terms and conditions of sale

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- e) Where in ZCG Scalar's opinion goods are returned otherwise than in the same condition as when they were delivered to the carrier or directly to the Buyer a charge equal to the cost necessary to restore the goods to their original condition shall be levied and be payable by the Buyer on demand
- f) Where goods are returned to ZCG Scalar and ZCG Scalar are unable to resell the goods to a third party or unable to resell the goods to the third party for the same amount as was sold to the Buyer then ZCG Scalar shall be entitled to charge the Buyer an equal amount to the loss that it has incurred by reason of the Buyer returning the goods to ZCG Scalar.

11) CANCELLATION

To the full extent permitted by law, orders for good and/or services specially acquired by ZCG Scalar for the Buyer shall not be cancelled by the Buyer without ZCG Scalar's written consent. The cancellation of any order shall be made on terms with indemnify ZCG Scalar against all loss.

12) STANDARD SPECIFICATIONS AND FINISH

Goods and/or services ordered by reference to a standard specification shall be an order for goods and/or services of that general description being identified thereby, made to the current standard finish available.

13) INTELLECTUAL PROPERTY PROTECTION

ZCG Scalar does not warrant that the goods and/or services supplied do not infringe any Letters Patent, Registered Design, Copyright or any Trademarks and shall not indemnify the Buyer, its customers or any user of the goods and/or services against any action, suit, proceedings, demand or claim for actual or alleged infringement of any Letters Patent, Registered Design, Copyright or Trademarks brought or made against the Buyer, its customers or any users by reason of the use of goods and/or services supplied.

14) GOVERNING LAWS

The Buyer has the full responsibility of ensuring that he complies with all Acts, Regulations, Ordinances and By-Laws affecting the possession and use of goods and/or services sold including but without limiting the generality of the foregoing any Acts, Regulations, Ordinances and By-Laws regulating transmitting and receiving equipment or connection to a telecommunications network.

15) PRODUCT WARRANTY

ZCG Scalar warrants that all goods sold to the Buyer will be free of defects in materials and workmanship attributable to ZCG Scalar for the period of:

- a) **2 YEARS** from the date of Invoice for all Broadcast Antenna and Power Dividers; and
- b) **1 YEAR** from the date of Invoice for all other Antennas and Accessories

Should the Buyer find any goods to be defective in materials or workmanship attributable to ZCG Scalar within the stated warranty period, then the Buyer must complete a "**Warranty Claim Form**" explaining the defect(s) and submit this form to ZCG Scalar.

Upon receiving a "Warranty Claim Form" from the Buyer, then ZCG Scalar will either:

- a) Issue the Buyer with a "Customer Return Authorisation Form" in accordance with Paragraph (9) to authorise the return of goods to ZCG Scalar for examination, with the freight for items returned under warranty to ZCG Scalar arranged and paid by the Buyer; or
- b) Attend the Buyer's installation site to assess any defect(s) in the goods supplied.

ZCG Scalar at their discretion will either repair, replace or refund the cost of any goods found to be defective within the stated warranty period, provided that the goods have not been:

- a) damaged through improper installation, physical abuse, neglect or accident,
- b) assembled incorrectly
- c) serviced by an unauthorised person, or
- d) used for other than their intended purpose.

Components are only covered by the component manufacturer's normal warranty and should such warranty have expired before the return of goods then new components installed will be charged at cost. Goods repaired under warranty will be returned to the Buyer or ultimate user, carriage paid.

ZCG Scalar accept no responsibility for any costs incurred for removing or re-installing the product or any losses involved while the product is out of service.

The benefits conferred by the Warranty contained in this condition are in addition to all other rights and remedies in respect of the goods which the Buyer has under the Trade Practices Act similar State and Territory laws.

16) REPAIRS AND PARTS

ZCG Scalar does not promise the availability or facilities for the repair of the goods sold or the availability of parts for such goods

Terms and conditions of sale

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17) INDEMNITY

To the full extent permitted by law the Buyer :

- a) Agrees to indemnify and at all times hereafter to keep indemnified and hold ZCG Scalar, its servants and agents and each of them harmless against all claims for loss or damage (whether as a result of negligence or otherwise) arising directly or indirectly out of the Buyer's use, possession, ownership or resale to a third party or out of the use possession or ownership by such third party of the goods and/or services or any part or parts thereof whether separately or in combination with any other equipment or material.
- b) Agrees that the indemnity in paragraph (a) of this Clause shall survive the termination of this Contract and shall extend to cover all alleged default or defect in the goods and/or services or part or parts thereof or instructions supplied for use in connection with the goods and/or services or out of any failure of the goods and/or services to perform a particular task or to achieve a particular result or to comply with any particular specifications.

18) FORCE MAJEURE

To the full extent permitted by law the Buyer releases ZCG Scalar from all and any liability for and in connection with or arising out of any failure or deal in performance of its obligation hereunder due in whole or in part to any cause whatsoever beyond ZCG Scalar's reasonable control.

19) IMPLIED CONDITIONS AND WARRANTIES

All implied conditions and warranties (statutory or otherwise) are hereby expressly excluded from this Contract insofar as they are capable of being excluded by Agreement.

20) COLLATERAL WARRANTY

Any collateral warranty that may have otherwise arisen from any statement or representation oral or in writing that may have been made by any servants or agents of ZCG Scalar prior to the delivery of the goods and/or services is hereby expressly excluded to the full extent permitted by law and to that extent the Buyer releases ZCG Scalar from any liability in connection with any such statement or representation.

21) REPRESENTATION

To the full extent permitted by law the Buyer hereby releases ZCG Scalar from, and ZCG Scalar expressly disclaims, any liability under, in connection with or arising out of any representation or advice, oral or in writing that may have been made by any servant or agent of ZCG Scalar prior to or at the time of delivery of the goods.

22) FITNESS FOR PURPOSE

The Buyer shall not rely on ZCG Scalar's skills and judgement on whether the goods and/or services are fit for the purpose of which they may be required by the Buyer.

23) WAIVER

No forbearance or other indulgence granted to the Buyer shall in any way discharge the Buyer from any of the Buyer's obligations under this contract or otherwise affect any such obligation.

24) EXTENT OF LIABILITY

In any event ZCG Scalar's liability to the Buyer for any loss damage or injury arising directly or indirectly from the sale of non-domestic goods shall be limited to an amount equal to :

- a) the cost of replacing the goods;
- b) the cost of obtaining equivalent goods; or
- c) the cost of having the goods repaired;

whichever is the lesser amount.

25) NOTICES

Any notices or account rendered to be given to the Buyer by ZCG Scalar shall be in writing and may be mailed postage pre-paid, emailed, faxed or hand delivered to the postal address, email address, facsimile number or street address advised by the Buyer in writing. Any such notice or demand shall be deemed to have been received by the Buyer two (2) business days in the place of a receipt after dispatch if sent by mail, or the same business day in the place of a receipt after dispatch is sent by email, facsimile or hand delivery. Any notice rendered to or to be given to the Company by the Buyer shall be in writing and may be mailed postage pre-paid, emailed, faxed or hand delivered to the Company's office as appears in this agreement or any other address that ZCG Scalar may advise in writing for the purpose.

26) LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Victoria, Australia.

27) STATUTORY RIGHTS

The Buyer acknowledges that this agreement is subject to any rights and obligations arising between the parties pursuant to any legislation or by implication of law and specifically acknowledge that this agreement is not intended and will not operate to override any rights and obligations created by the Trade Practices Act of Commonwealth of Australia (1974 as amended). To the extent that any provision of this agreement is void, voidable or repugnant to the provisions of that Act or any other Act of the State of Victoria that provision shall be deleted from this agreement but the remainder of the provisions of this agreement shall continue to apply.



Contact Us

Head Office and Factory

7 Hall Street
PO BOX 7
Lindenow, Victoria, 3865
Australia

Mon-Fri 9am-5pm (AEDT)
Telephone: (03) 5157 1203
Fax: (03) 5157 1641
Email: sales@zcg.com.au

Queensland Office and Warehouse

Unit 14, 8-14 St Jude Court
Browns Plains
Queensland, 4118
Australia

Mon-Fri 8.30am-4.30pm (AEST)
Telephone: (07) 3800 1204
Fax: (07) 3800 3651
Email: qldsales@zcg.com.au

Western Australian Office and Warehouse

Unit 3, 32-34 Vinnicombe
Drive
Canning Vale, WA, 6155
Australia

Mon-Fri 8.30am-4.30pm (AWST)
Telephone: (08) 6253 8950
Fax: (08) 6253 8645
Email: wasales@zcg.com.au

A large, stylized red and white graphic on the right side of the page, resembling a series of parallel lines or a stylized 'Z' shape, extending from the middle section down to the bottom.

www.zcg.com.au