MATV

CLIPSAL
LIVING ELECTRICAL

TV Cabling Solutions Catalogue

When it comes to antenna installation, the choice is clear ▷

Choosing the Right Antenna

The new version of TV Across Australia will include the most up to date planning and implementation of all analogue and digital broadcast TV services throughout the country.

It will also include an antenna selection for each transmitter making choosing the right antenna a very simple exercise. You cannot afford to be without this great reference guide.

What frequencies are being broadcast in the location of the installation?

- Every TV transmitter Across Australia
- Clipsal Antenna part number for every TV transmitter
- Location maps for every TV transmitter Across Australia
- Analogue and Digital TV channels broadcast from every TV transmitter

Part No: **3105TVA**

Contents

Terminology

Amplification
The increase of signal strength. Amplification does not improve the signal quality received but can improve the picture quality viewed on TV due to low signal strength.

Attenuation
The loss of signal strength. To Attenuate the signal strength is to decrease the level of the signal strength. Attenuation occurs naturally over a length of cable. Refer to cable losses on page 8 for values.

BER
Bit Error Ratio is the number of errors in a Video Broadcast. Typically 2 errors in every 1,000,000 will be acceptable.

Forward Gain
The amount an antenna increases the signal strength in the air.

Front to Back ratio
The difference in signal level received from the front of the antenna verses the back of the antenna. Antennas are designed to reject signals received from the back of the antenna. Good Front to Back ratio reduces the chance of ghosting.

Ghosting
Two images of the same source on the one TV Screen caused by two signals received by the same Antenna from two different directions. Often there is the main signal source and a secondary source reflected off a building or mountain.

Losses
The signal strength is decreased over cable, splitters and connectors. Compensation for losses must be made when designing a MATV system.

RF
Radio Frequency.

Skin effect
TV frequencies travel around the circumference of the copper conductor in a coax cable. It is important to make sure that when terminating coax cable for MATV or Satellite TV applications that a properly designed stripping tool is used. Avoid scoring or ringing the copper conductor as TV frequencies travel on the outside circumference of the copper conductor.

UHF
Ultra High Frequency.
UHF channels are broadcast from channel 21-69. Digital and analogue frequencies.

VHF
Very High Frequency.
VHF Low are channels 0-5A. analogue frequencies.
VHF High are channels 6-12. Digital and Analogue frequencies.
Digital TV will only be broadcast on VHF channels 6 and above as well as all UHF channels.

Terminology

Amplifier
An amplifier will increase the signal strength. Amplifiers DO NOT improve the signal quality.

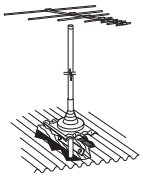
Antenna
Antennas receive TV frequencies broadcast from TV Transmission Towers. They need to be mounted in a location that will receive a good quality signal. There are different types of antennas that are designed for receiving different types of frequencies. Refer to TV Across Australia reference guide for your needs.

Cable
Quality Television Coax Cable is designed to carry the television frequencies from the antenna to the television without any interference to the signal and resultant picture quality. You should only use a good quality cable.

Diplexer
Diplexers combine TV signals fom 2 antennas through 1 coax cable.

Drop Tap
A Drop Tap will decrease the signal level by a set amount over the Tap Leg. If the signal is too high the use of a Drop Tap is an easy way to get the signal to the ideal level.

Fly Lead
A Fly Lead connects the outlet to the television or recording device such as a Digital Video Recorder. A good quality Fly Lead should always be used as it is under the most stress from bending behind television cabinets and induced voltage from cords behind the television.



Mounts
There are various antenna mounts for different applications such as roof mounts, wall mounts, masts and extensions. Get the best possible signal by mounting the antenna properly.

Splitter
A splitter will enable the connection of multiple outlets to 1 antenna. Splitters have losses associated with them. The more splits the greater the losses will be.

Television Outlet
Television outlets are part of the cabling infrastructure and should be of a high quality for sustained signal distribution. F-Type outlets are the industry preferred television outlet due to the quality of connection and performance.

TV Signal Strength

TV signal strength is measured in decibel Micro Volts (dBuV) more commonly known as dB.

The ideal signal strength at the television outlet is **69dBuV**. The ideal Signal Range is between **65-72dBuV.**

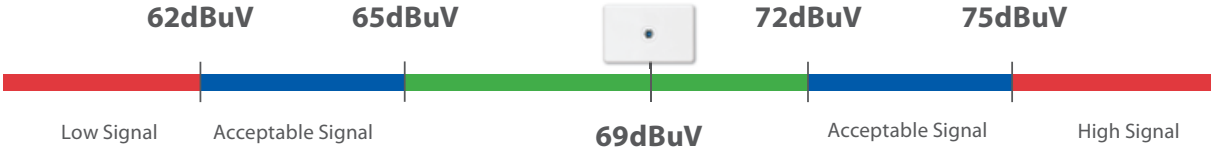
Low signals need to be increased. This can be achieved by using a larger antenna with more gain or by the use of an amplifier.

High signals need to be decreased. This can be achieved by using a drop tap or splitter.

The closer the antenna is to the television transmitter the higher the signal strength is going to be.

The prime reception area is a location that an antenna with minimal gain can be installed to get the ideal signal range or above at the television outlet.

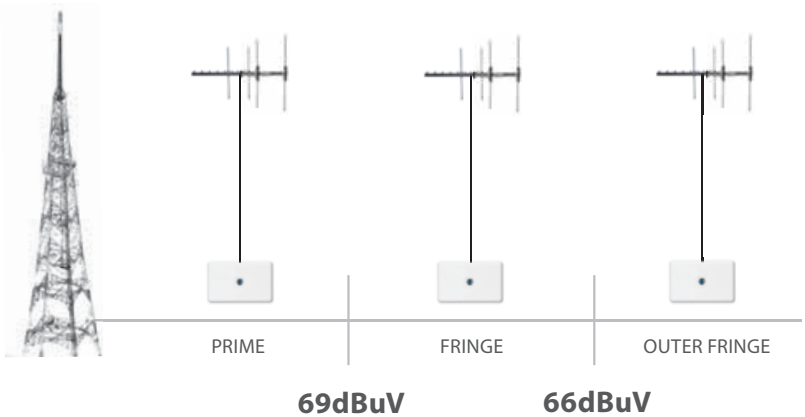
An outer fringe reception area is a location that an antenna with maximum amount of gain must be installed to provide an ideal signal range at the outlet. It is also likely that an amplifier may need to be installed to increase the signal level.



By using the same antenna and 20m of RG6 Quad Shield Coax Cable we can classify the Prime, Fringe and Outer Fringe areas by the level of signal received at the outlet.
If in a Prime reception area the signal strength will be greater than 69dBuV at the outlet.
If in a Fringe reception area the signal strength will be greater than 66dBuV at the outlet.

If in a Outer Fringe Area the signal will be lower than 66dBuV.

To compensate for a Fringe Area reception we can use an antenna with more forward gain to increase the signal strength at the outlet.



Signal Quality

Signal quality is more important than signal strength.

Pixilation or blocking are the result of poor quality digital television signal. When an antenna is installed it must be in a location that has a good quality Digital Television Signal. The difference between quality television reception and annoying pixilation/blocking can be a matter of a few metres. A site survey can be done prior to antenna installation to make sure that the location of the antenna is suitable for high quality digital television reception.

Take a few minutes to walk along the roof with the antenna and field strength meter to find the ultimate location to mount the antenna.

PIXILATION

QUALITY PICTURE

Signal Loss - Cable

Losses are a part of any MATV System. You may start out with an acceptable signal level at the antenna but due to losses in the cable or splitter may not be acceptable when at the outlet.

Signal Strength is lost over a length of cable. The losses are easy to calculate as losses are consistent per meter.

Losses are calculated separately for VHF and UHF frequencies. The golden rule is the higher the frequency the higher the loss. We need to calculate losses for both VHF and UHF in every TV design to ensure that we have a balanced system.

VHF = Very High Frequency - losses are low. (0.053dB per meter RG6 Quad Shield).

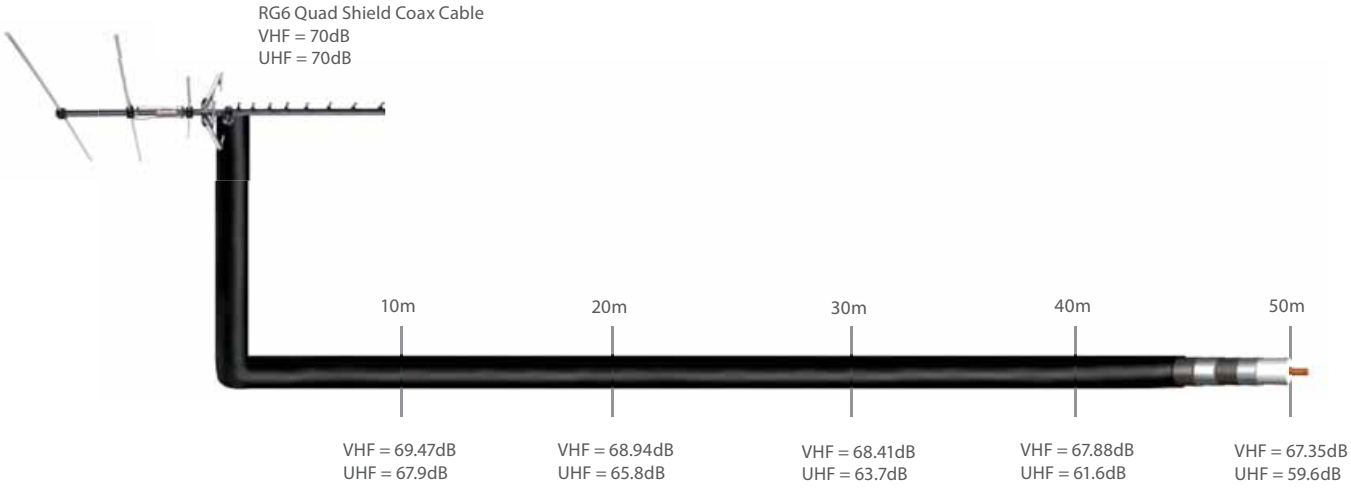
UHF = Ultra High Frequency - losses are high (0.21dB per meter RG6 Quad Shield).

As a general rule of thumb cable runs of up to 50m can be done in RG6. If longer cable runs are required then you would change the cable size to RG11 as the losses on RG11 are much lower.

VHF and UHF losses are an average to cover all frequencies of the VHF and UHF range. This is a guide only. See pages 46-49 for cable losses for frequency ranges.

RG6 Cable Losses	Frequency	1m	10m	20m	30m	40m	50m
	**VHF (0-12)**	0.053dB	0.53dB	1.06dB	1.59dB	2.12dB	2.65dB
	UHF (21-69)	0.21dB	2.1dB	4.2dB	6.3dB	8.4dB	10.4dB

RG11 Cable Losses	Frequency	1m	10m	20m	30m	40m	50m
	**VHF (0-12)**	0.032dB	0.32dB	0.64dB	0.96dB	1.28dB	1.6dB
	UHF (21-69)	0.131dB	1.31dB	2.62dB	3.93dB	5.24dB	6.55dB

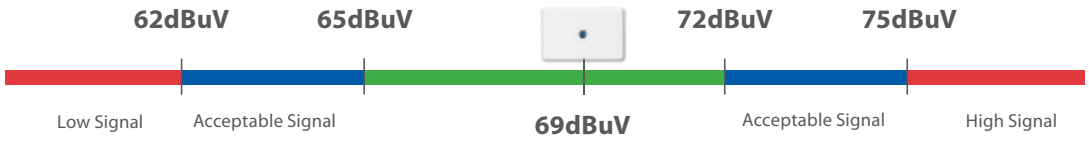


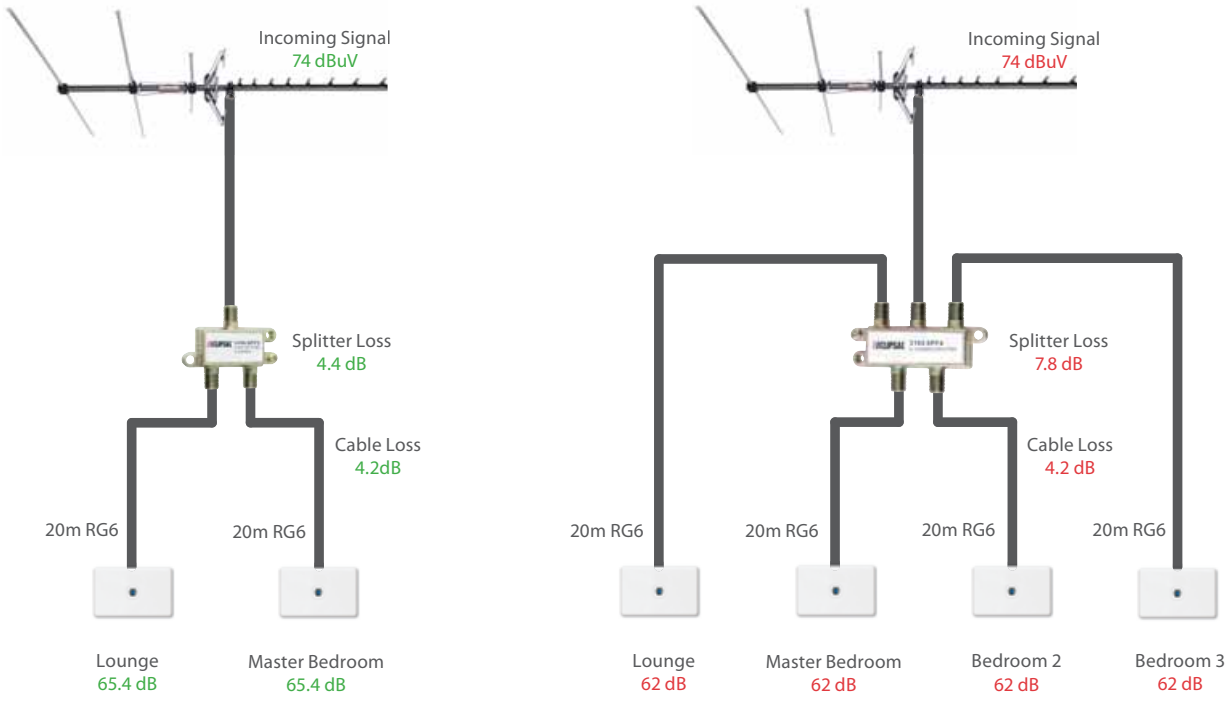
Signal Loss - Splitters

All passive splitters have losses. The signal strength is reduced every time you split the signal. The more ways the signal is split the higher the losses.

When installing or adding to an antenna, the losses for splitters must be taken into account as well as losses over cable.

The example below shows that changing a 2 way splitter for a 4 way splitter can change the signal strength at the outlet and result in poor picture. The example below shows the UHF losses only because these are the highest losses.





LOSSES FOR CLIPSAL TERRESTRIAL SPLITTER RANGE

Frequency	2 Way	3 Way	4 Way	6 Way	8 Way
46-470MHz **VHF**	<3.5dB	<6.1dB	<7.5dB	<10.2dB	<11.2dB
471-860MHz **UHF**	<4.4dB	<6.3dB	<7.8dB	<10.7dB	<11.8dB

HIGH PERFORMANCE

13 Element Combination — 2ANCOM3

	VHF	UHF
Channels	1-12	28-50
Forward Gain	8dB	12dB
F/B Ratio	>12dB	>14dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime	

13 Element Combination — 2ANCOM3WB

	VHF	UHF
Channels	1-12	28-69
Forward Gain	8dB	12dB
F/B Ratio	>12dB	>14dB
Connection	F-Type	
Balun	High Perf. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime	

17 Element Combination — 2ANCOM4

	VHF	UHF
Channels	2-12	28-40
Forward Gain	9dB	12dB
F/B Ratio	>12dB	>14dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Fringe	

28 Element Combination — 2ANCOM6

	VHF	UHF
Channels	2-12	28-40
Forward Gain	10dB	15dB
F/B Ratio	>16dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Outer Fringe	

HIGH PERFORMANCE

Newcastle Antenna — 2ANCOM2NEW

	VHF	UHF
Channels	3 & 5A	28-57
Forward Gain	5dB	13dB
F/B Ratio	>17dB	>20dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

Bunbury Antenna — 2ANCOM2SW

	VHF	UHF
Channels	3 & 5A	30-40
Forward Gain	5dB	13dB
F/B Ratio	>11.5dB	>18dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime/ Fringe	

14 Element Combination — 2ANCOMD14

	VHF	UHF
Channels	6-12	28-50
Forward Gain	7.5dB	12dB
F/B Ratio	>16dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

14 Element Combination — 2ANCOMD14WB

	VHF	UHF
Channels	6-12	28-69
Forward Gain	7.5dB	12dB
F/B Ratio	>16dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

24 Element Combination — 2ANCOMD24

	VHF	UHF
Channels	1-12	28-69
Forward Gain	8dB	15dB
F/B Ratio	>16dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap out	
U bolt	Assembled	
Reception Area	Fringe	

CARAVAN ANTENNA

Caravan Antenna **2ANCOMCAR**

	VHF	UHF
Channels	0-12	28-69
Forward Gain	4dB	8dB
F/B Ratio	>10dB	>14dB
Connection	F-Type	
Balun	F-Type Ferrite Balun	
Reflectors	None	
U bolt	Assembled	
Reception Area	Prime	

VHF Horizontal
UHF Vertical

VHF Horizontal
UHF Horizontal

VHF Vertical
UHF Horizontal

VHF Vertical
UHF Horizontal

ECONOMY MODELS

13 Element Combination Economy — 2ANCOMA13

	VHF	UHF
Channels	2-12	28-36
Forward Gain	5dB	7.5dB
F/B Ratio	>8dB	>20dB
Connection	F-Type	
Balun	Ferrite Balun	
Reflectors	None	
U bolt	Assembled	
Reception Area	Prime	

17 Element Combination Economy — 2ANCOMA17

	VHF	UHF
Channels	2-12	28-36
Forward Gain	6dB	10dB
F/B Ratio	>10dB	>20dB
Connection	F-Type	
Balun	Ferrite Balun	
Reflectors	Snap Out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

32 Element Combination Economy — 2ANVULP2

	VHF	UHF
Channels	6-12	28-69
Forward Gain	8dB	11dB
F/B Ratio	>20dB	>20dB
Connection	F-Type	
Balun	None	
Reflectors	None	
U bolt	Assembled	
Reception Area	Prime/Fringe	

HIGH PERFORMANCE CROSS POLARITY

13 Element Cross Polarity Combination — 2ANUV13WB

	VHF	UHF
Channels	6-12	50-69
Forward Gain	7dB	12dB
F/B Ratio	>12dB	>14dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap Out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

14 Element Cross Polarity Combination — 2ANUV14

	VHF	UHF
Channels	6-12	28-50
Forward Gain	7dB	11dB
F/B Ratio	>12dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap Out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

All vertically mounted antennas will require a 2ANVB15 bracket. Refer to page 31.

HIGH PERFORMANCE CROSS POLARITY

16 Element Cross Polarity Combination — 2ANUV16

	VHF	UHF
Channels	2-12	28-50
Forward Gain	7dB	12dB
F/B Ratio	>12dB	>14dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap Out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

19 Element Cross Polarity Combination — 2ANUV19

	VHF	UHF
Channels	1-12	28-69
Forward Gain	7dB	12dB
F/B Ratio	>12dB	>16dB
Connection	F-Type	
Balun	High Perform. PCB	
Reflectors	Snap Out	
U bolt	Assembled	
Reception Area	Prime/Fringe	

UHF YAGI

12 Element Yagi — 2ANUY12WB

	UHF
Channels	28-69
Forward Gain	12.5dB
F/B Ratio	>14dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Elevat. Tilt Bracket
Reception Area	Prime/Fringe

20 Element Yagi — 2ANUY20WB

	UHF
Channels	28-69
Forward Gain	14.5dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Elevat. Tilt Bracket
Reception Area	Fringe/Outer Fringe

Tilt bracket supplied for UHF Antennas

10 Element Yagi Band 4 — 2ANUY10/4

	UHF
Channels	28-35
Forward Gain	12.5dB
F/B Ratio	>16dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Elevat. Tilt Bracket
Reception Area	Prime

18 Element Yagi Band 4 — 2ANUY18/4

	UHF
Channels	28-35
Forward Gain	13.5dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Elevat. Tilt Bracket
Reception Area	Fringe

18 Element Yagi Band 5 — 2ANUY18/5

	UHF
Channels	35-69
Forward Gain	14dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Elevat. Tilt Bracket
Reception Area	Fringe/Outer Fringe

UHF PHASED ARRAY

8 Element Phased Array — 2ANUPA1

	UHF
Channels	21-69
Forward Gain	8-11dB
F/B Ratio	>15dB
Connection	F-Type
Balun	None
Reflectors	Rear X Type
U bolt	Assembled
Reception Area	Prime

16 Element Phased Array — 2ANUPA2

	UHF
Channels	21-69
Forward Gain	13.5dB
F/B Ratio	>20dB
Connection	F-Type
Balun	None
Reflectors	Rear X Type
U bolt	Assembled
Reception Area	Outer Fringe

UHF X TYPE

23 Element X Style — 2ANUX23

	UHF
Channels	21-69
Forward Gain	10dB
F/B Ratio	>17dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Bolt on
U bolt	Elevat. Tilt Bracket
Reception Area	Prime

43 Element X Style — 2ANUX43

	UHF
Channels	21-69
Forward Gain	13dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Bolt On
U bolt	Elevat. Tilt Bracket
Reception Area	Fringe

91 Element X Style — 2ANUX91

	UHF
Channels	21-69
Forward Gain	15dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Bolt On
U bolt	Elevat. Tilt Bracket
Reception Area	Outer Fringe

VHF YAGI

7 Element Yagi — 2ANVY7

	VHF
Channels	6-12
Forward Gain	8.8dB
F/B Ratio	>16dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Assembled
Reception Area	Prime

10 Element Yagi — 2ANVY10

	VHF
Channels	6-12
Forward Gain	11-12dB
F/B Ratio	>16dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Assembled
Reception Area	Fringe

18 Element Yagi — 2ANVY18

	VHF
Channels	6-12
Forward Gain	14dB
F/B Ratio	>20dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	Snap Out
U bolt	Assembled
Reception Area	Prime

VHF LOG PERIODIC

8 Element Log Periodic — 2ANV2WB

	VHF
Channels	0-12
Forward Gain	4-8dB
F/B Ratio	>12dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	None
U bolt	Assembled
Reception Area	Prime

9 Element Log Periodic — 2ANV3WB

	VHF
Channels	0-12
Forward Gain	5-11dB
F/B Ratio	>15dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	None
U bolt	Assembled
Reception Area	Fringe

12 Element Log Periodic — 2ANV4WB

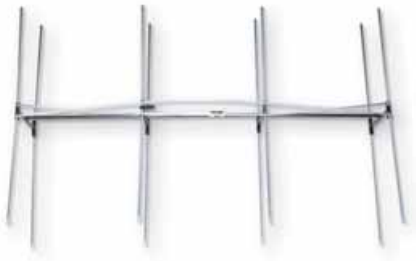
	VHF
Channels	0-12
Forward Gain	6-12dB
F/B Ratio	>15dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	None
U bolt	Assembled
Reception Area	Outer Fringe

VHF PHASED ARRAY

8 Element Phased Array — 2ANVPA1

	VHF
Channels	6-12
Forward Gain	7-9.5dB
F/B Ratio	>16dB
Connection	F-Type
Balun	None
Reflectors	None
U bolt	Assembled
Reception Area	Prime/Fringe

16 Element Phased Array — 2ANVPA2



	VHF
Channels	6-12
Forward Gain	12dB
F/B Ratio	>16dB
Connection	F-Type
Balun	None
Reflectors	None
U bolt	Assembled
Reception Area	Fringe/Outer Fringe

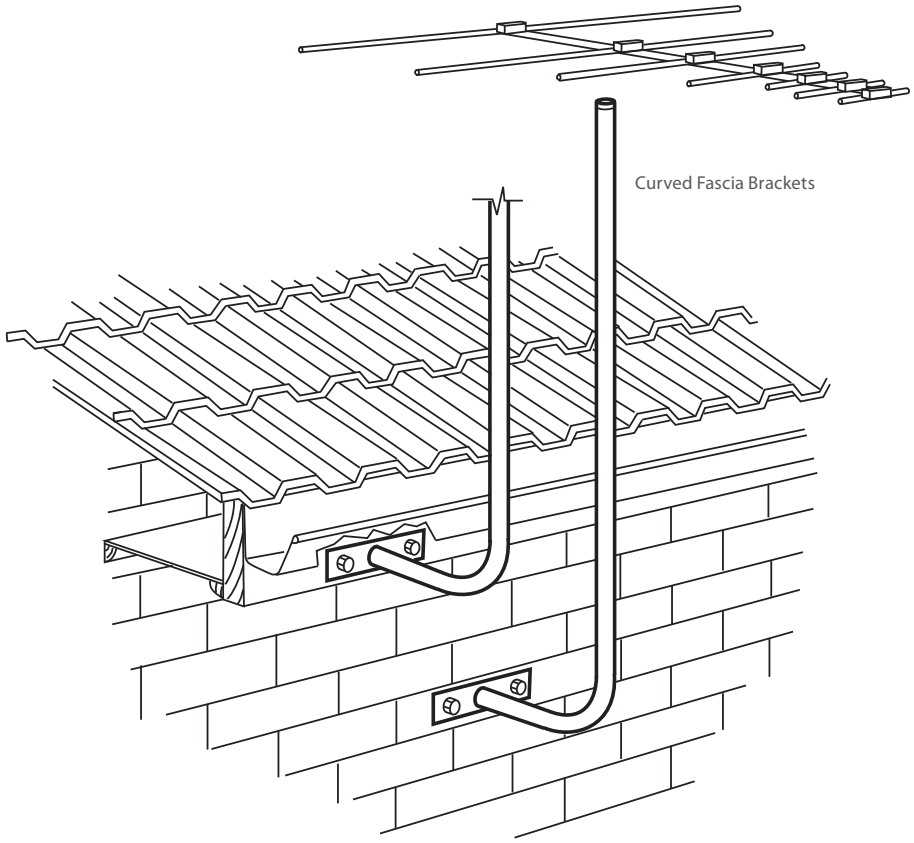
3 Element FM — 2ANFM3

	VHF
Channels	88-108Mhz
Forward Gain	5dB
F/B Ratio	>15dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	None
U bolt	Assembled
Reception Area	Prime

8 Element FM — 2ANFM8

	VHF
Channels	88-108Mhz
Forward Gain	10dB
F/B Ratio	>17dB
Connection	F-Type
Balun	High Perform. PCB
Reflectors	None
U bolt	Assembled
Reception Area	Fringe/Outer Fringe

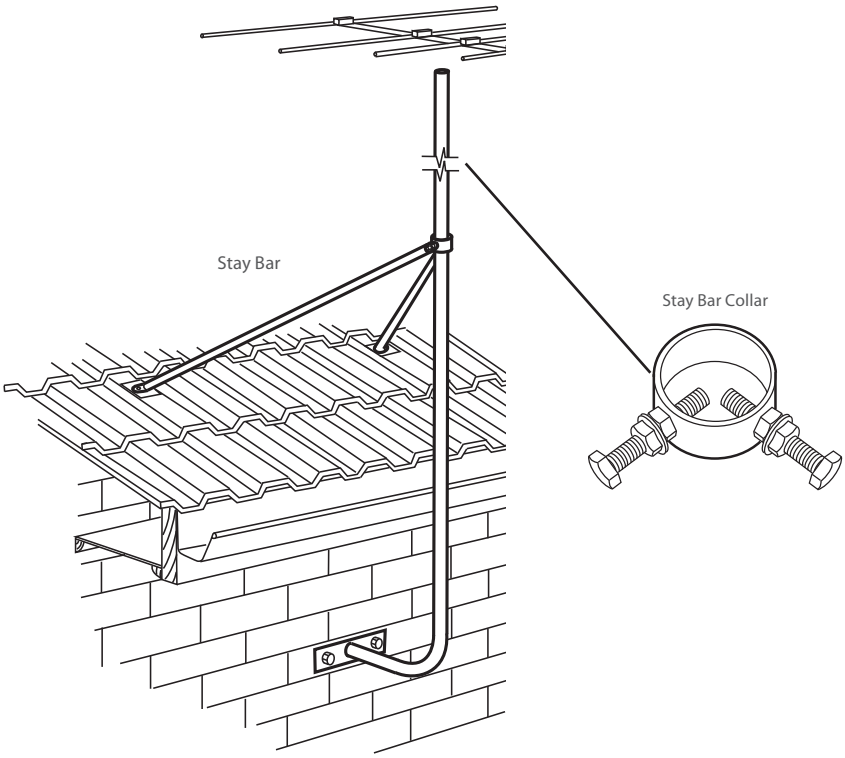
Curved Fascia Brackets



1.2m used for smaller antennas - **2ANCFB12**
1.5m used for small to medium antennas - **2ANCFB15**
1.8m used for small to medium antennas - **2ANCFB18**
1.5m used for larger antennas - **2ANCFBHD**

- Mounted to the fascia or wall
- Generally used when height of the antenna is not a issue
- Used for small to medium sized antennas
- Stay bars can be used to support the antenna if required.

Stay Bars

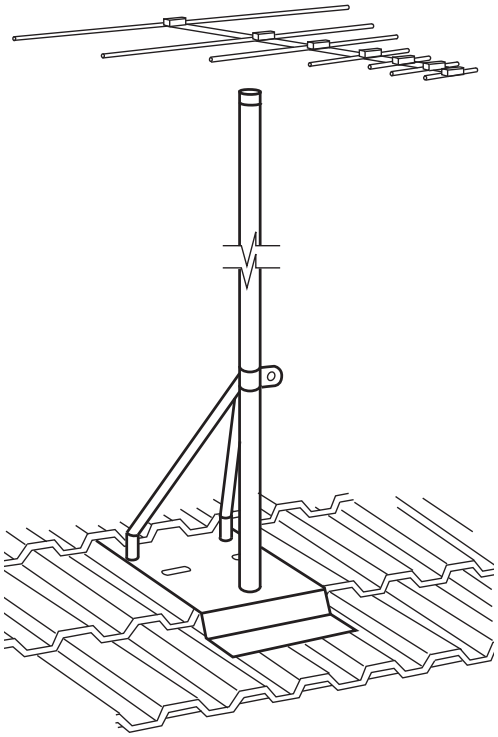


Stay bar set of 2 x 1200mm (4 foot) - **2ANSB4**
Stay bar set of 2 x 1800mm (6 foot) - **2ANSB6**
Stay bar set of 2 x 2400mm (8 foot) - **2ANSB8**
Stay bar collar - **2ANSBC**

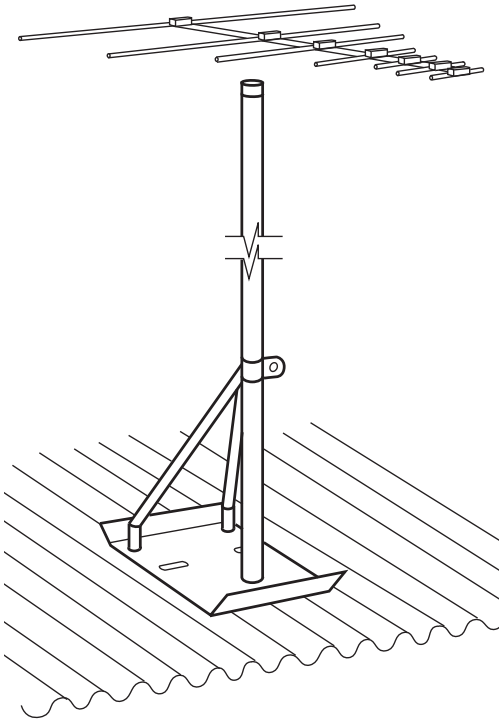
All stay bars require a stay bar collar for mounting.
One end of the stay bar is fixed to the stay bar collar.
The other end of the stay bar is fixed to the roof.
(Drill through tile to screw to baton for tiled roof)

Used to support
- Antenna mounts
- Curved fascia brackets
- Tripod roof mounts
- Rafter mounts
- Masts.

Tripod Roof Mounts



Tripod Roof Mount - TILE - **2ANTRPT**



Tripod Roof Mount - METAL - **2ANTRPM**

The easiest way to mount an antenna

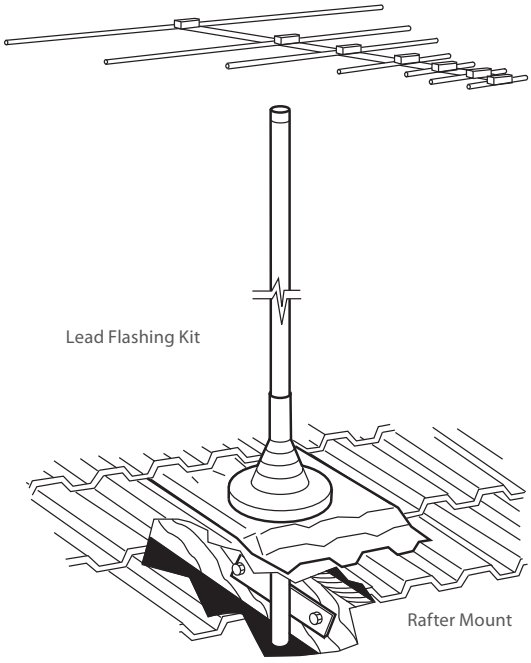
2ANTRPT

- Drill through tile to baton for fixing with appropriate anchors
- Bend the supports to adjust for any roof angle

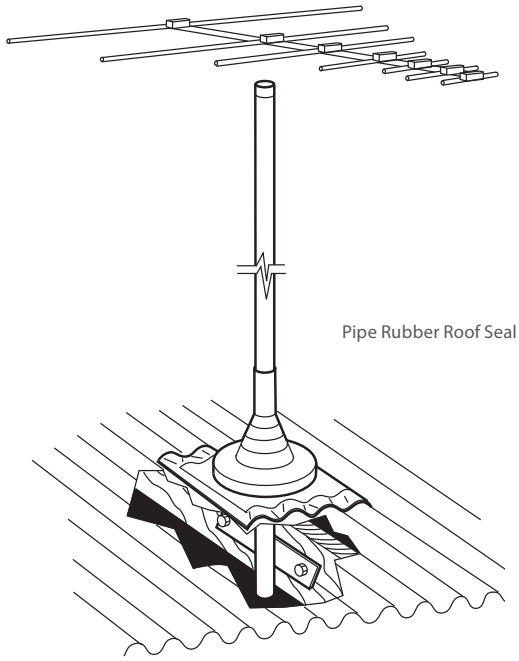
2ANTRPM

- Use existing roof screws to fix mount in place
- Bend the supports to adjust for any roof angle

Rafter Mounts



Rafter Mount - **2ANRM25 - 2ANRM32**
Roof Seal - Metal - **2ANPFK**

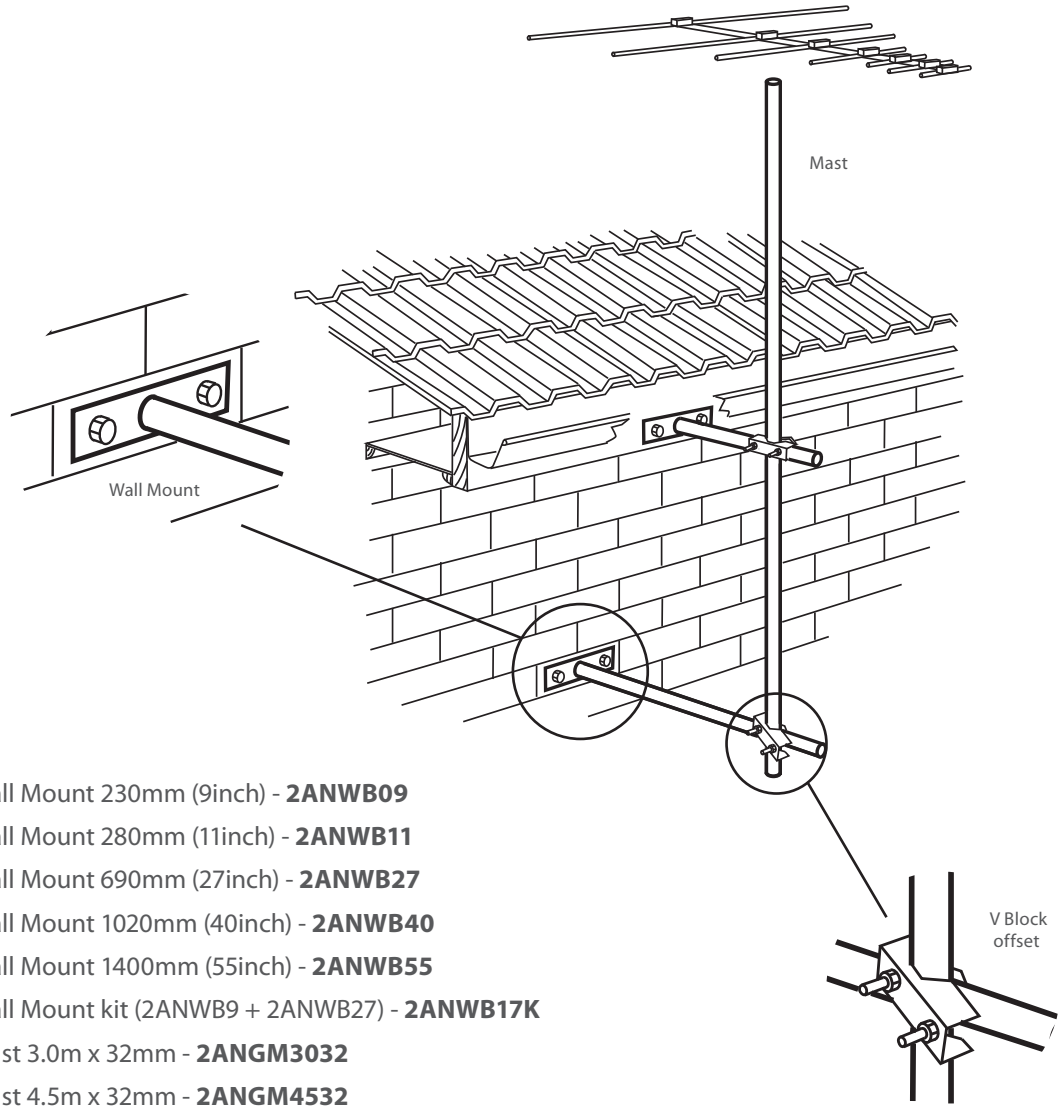


Lead Flashing Kit - **2ANLFK**

Rafter Mount 1.8m x 25mm - **2ANRM25**
Rafter Mount 1.8m x 32mm - **2ANRM32**
Lead Flashing Kit (tiled roofs) - **2ANLFK**
Pipe Rubber Roof Seal (metal Roofs) - **2ANPFK**

Smaller antennas use the **2ANRM25**
Medium to larger antennas use the **2ANRM32**
Tiled roof must use a **2ANLFK**
Metal roof use the **2ANPFK**

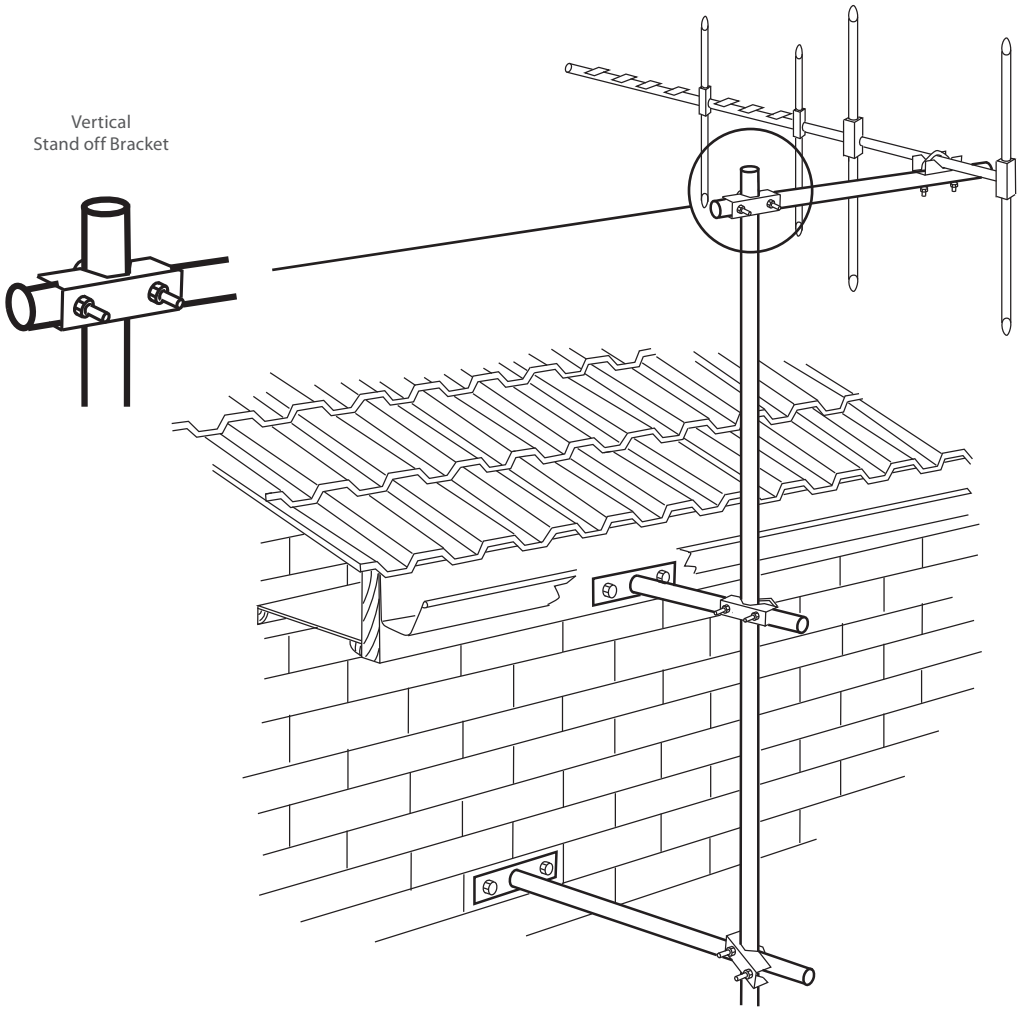
Wall Mounts/Masts



Wall Mount 230mm (9inch) - **2ANWB09**
Wall Mount 280mm (11inch) - **2ANWB11**
Wall Mount 690mm (27inch) - **2ANWB27**
Wall Mount 1020mm (40inch) - **2ANWB40**
Wall Mount 1400mm (55inch) - **2ANWB55**
Wall Mount kit (2ANWB9 + 2ANWB27) - **2ANWB17K**
Mast 3.0m x 32mm - **2ANGM3032**
Mast 4.5m x 32mm - **2ANGM4532**
Mast 4.5m x 38mm - **2ANGM4538**
V Block offset (used to mount horizontal and vertical poles together) **2ANVBO**
Bolt for V Block - **2ANVB**

Used to gain extra height required for better TV reception
Mast extensions available for extra height if required.

Vertical Stand Off Bracket



Vertical Stand off Bracket 375mm (15 inch) - **2ANVB15**

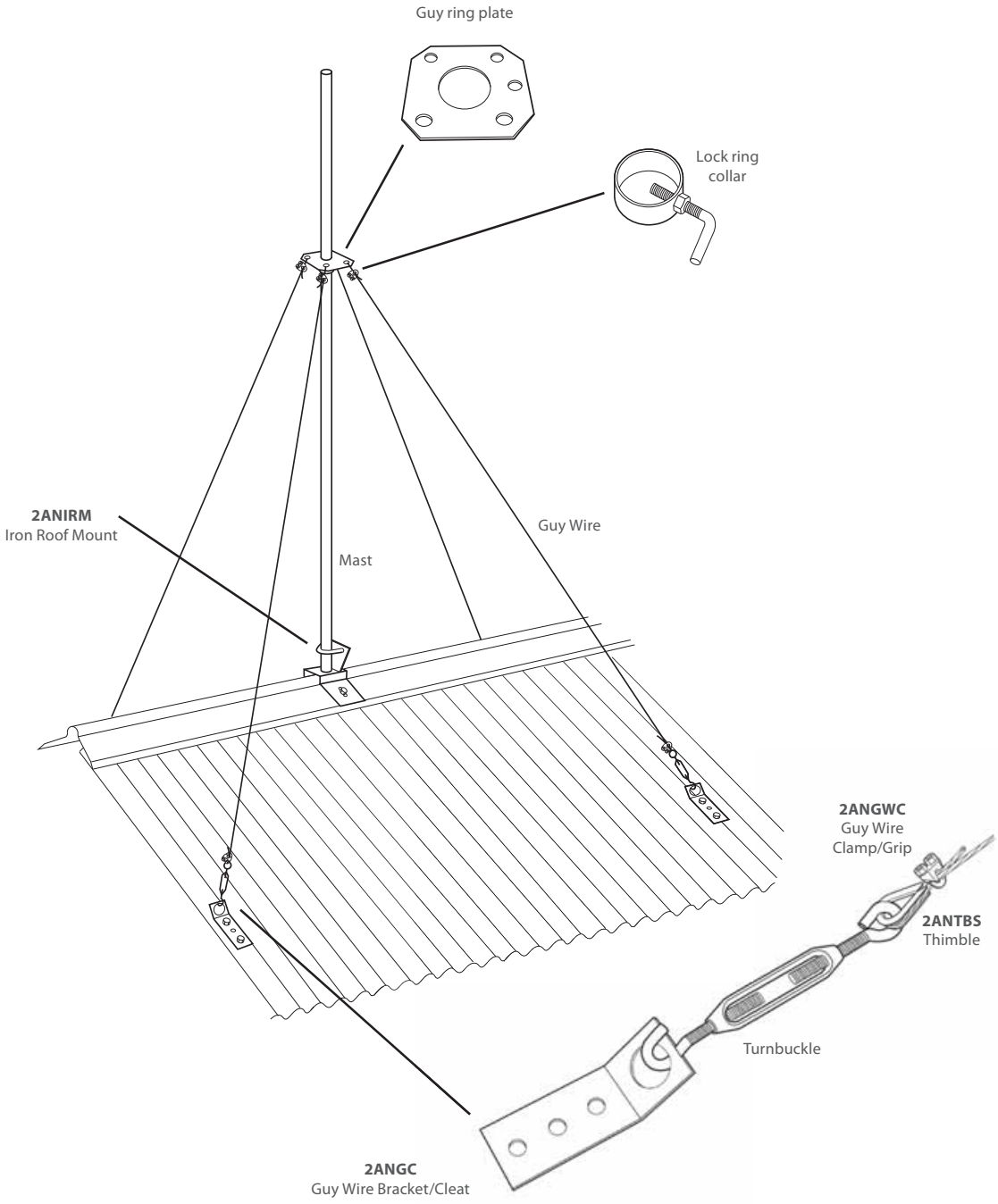
Used to mount an antenna vertically

All antennas mounted vertically need a stand off bracket

If a stand off bracket is not used signal problems may be encountered.

All vertically mounted antennas
will require a 2ANVB15 bracket.

Guy Wire Fixing



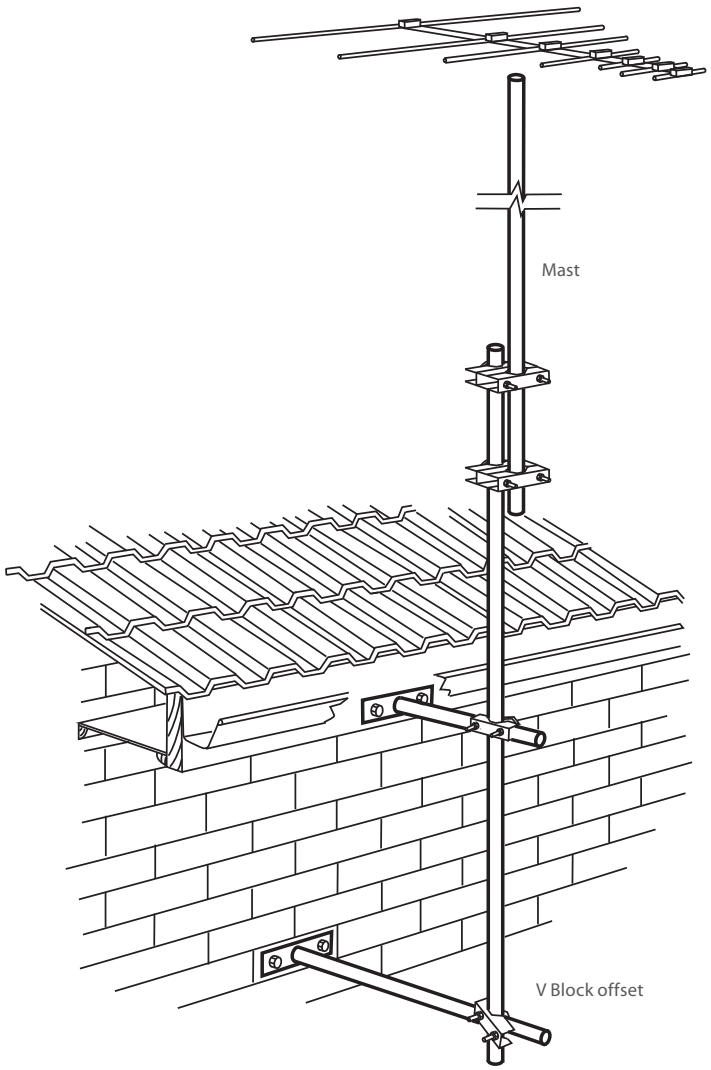
Guy Wire Fixing

Guy Wire 180m reel -**2ANGWR**
Guy Wire Spool (Coiled) - **2ANGW**
Guy ring plate x 32mm (suites 32mm mast) - **2ANGR32**
Guy ring plate x 38mm (suites 38mm mast) - **2ANGR38**
Lock ring collar x 32mm (suites 32mm mast) - **2ANLR32**
Lock ring collar x 38mm (suites 38mm mast) - **2ANLR38**
Guy Wire Cleat - **2ANGC**
Guy Wire Clamp - **2ANGWC**
Turnbuckle x 6mm (1/4 inch) - **2ANTBK6**
Turnbuckle x 8mm (5/16 inch) - **2ANTBK8**
Thimble - **2ANTBS**

Mast Extension

Mount fixing points on roof 3m from base of mast
Mount guy ring 3m above the base of the mast for 4.5m masts
Mount guy ring 2.5m above the base of the mast for 3m masts
Use thimbles to stop the guy wire rubbing against the mount
Use turnbuckles to tighten the guy wire.

Mast Extensions



Mast Extension - **2ANME**

Mast Extension Kit - **2ANMEK**

Mast 3.0m x 32mm - **2ANGM3032**

Mast 4.5m x 32mm - **2ANGM4532**

Mast 4.5m x 38mm - **2ANGM4538**

V Block offset (used to mount horizontal and vertical poles together) - **2ANVBO**

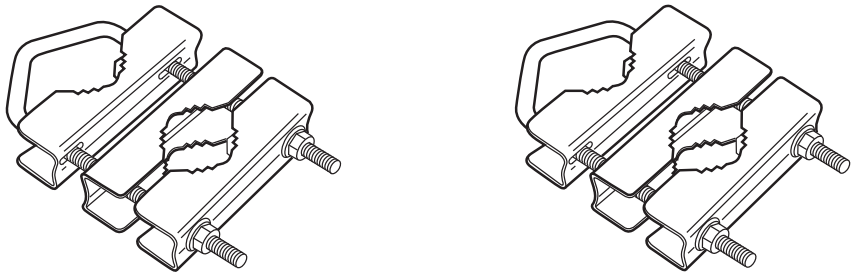
Wall Mounts/Masts

Used to get extra height required for better TV reception

May require some form of support

- Guy wire support
- Stay bar support

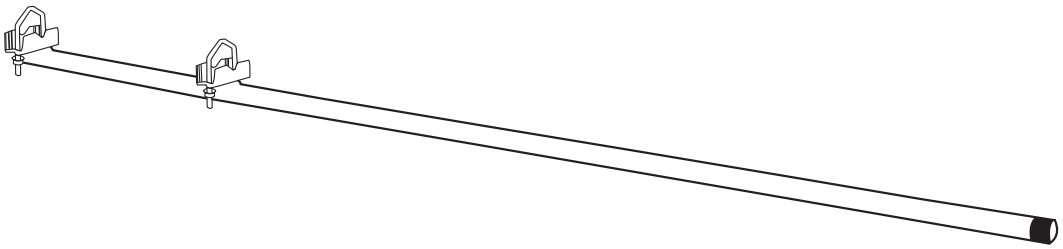
Mast Extension Kit



V Block clamps two poles together such as a mast to a wall/eave bracket.

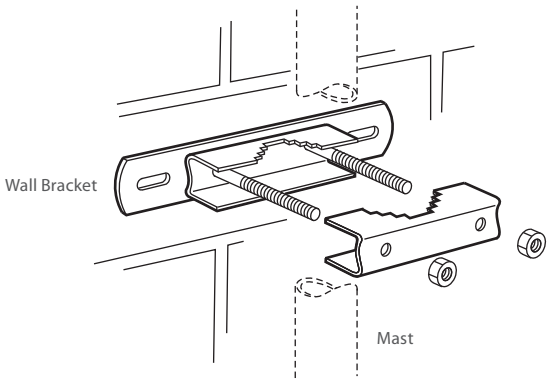
Mast Extension Kit - **2ANMEK**

Mast Extension



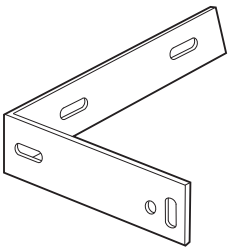
Mast Extension- **2ANME**

Flat Wall Mount



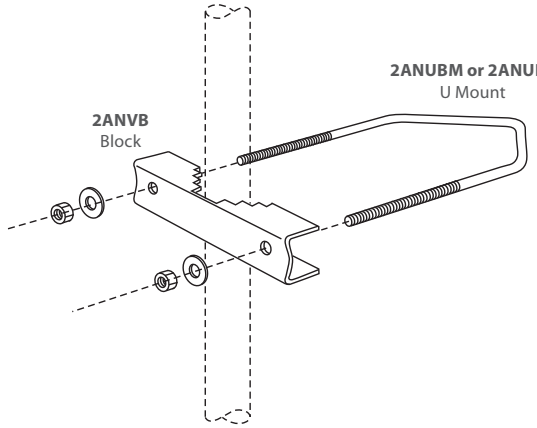
Flat Wall Mount Bracket - **2ANFWM**

Metal Fascia



Metal Fascia - **2ANMFB**

V Block



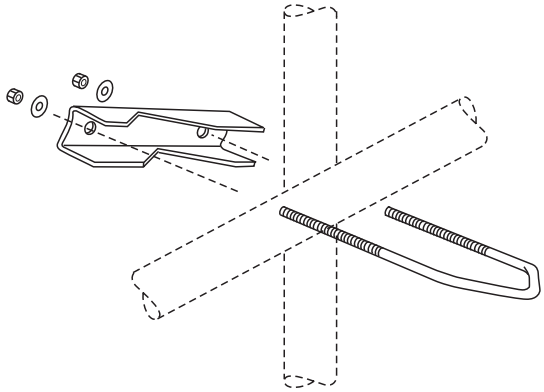
V Block clamps at 90 degrees to the mast. This is ideal for horizontal mounting of antennas.

V Block - **2ANVB**

U Bolt 5 inches - **2ANUBM**

U Bolt 7 inches - **2ANUBL**

V Offset Block



V Offset Block - **2ANVBO**

U Bolt 5 inches - **2ANUBM**

U Bolt 7 inches - **2ANUBL**

2 Way Terrestrial Splitter 5-1000MHz — 3105SPF2

Not suitable for Satellite Television Transmission

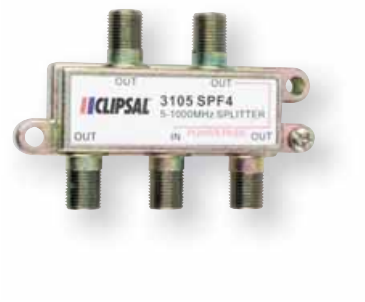
Losses VHF 46-470MHz	<3.5dB
Losses UHF 471-860MHz	<4.4dB
Power Pass	1 port
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1

3 Way Terrestrial Splitter 5-1000MHz — 3105SPF3

Not suitable for Satellite Television Transmission

Losses VHF 46-470MHz	<6.1dB
Losses UHF 471-860MHz	<6.3dB
Power Pass	1 port
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1

4 Way Terrestrial Splitter 5-1000MHz — 3105SPF4



Not suitable for Satellite Television Transmission

Losses VHF 46-470MHz	<7.5dB
Losses UHF 471-860MHz	<7.8dB
Power Pass	1 port
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1

6 Way Terrestrial Splitter 5-1000MHz — 3105SPF6

Power Pass

Not suitable for Satellite Television Transmission

Losses VHF 46-470MHz	<10.2dB
Losses UHF 471-860MHz	<10.7dB
Power Pass	1 port
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1

8 Way Terrestrial Splitter 5-1000MHz — 3105SPF8

Power Pass

Not suitable for Satellite Television Transmission

Losses VHF 46-470MHz	<11.2dB
Losses UHF 471-860MHz	<11.8dB
Power Pass	1 port
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1

70dB

Only UHF losses are shown for illustration purposes

11.8dB Splitter Loss

4.2dB 20m Cable Loss

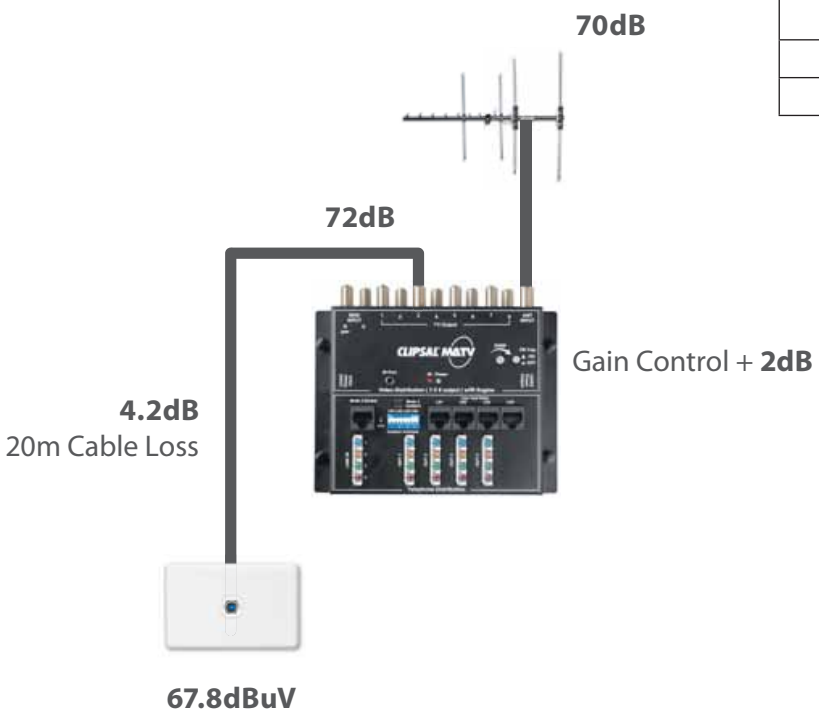
54dBuV

Powered Splitter 37-860MHz — 3105VDU24T

Frequency Range	37-860Mhz All Free to Air Channels
Output Ports	4
Input Ports	1x Antenna Input 1x Modulated Input
Power Supply	12VDC
3 Power Options	·Local ·Remote via Modulator ·Remote via Power Injector
Variable Gain Control	Antenna Input only +3dB Gain -15dB Attenuation
IR Pass Back	No
IR Expansion Port	No

Powered Splitter 37-860MHz — 3105VDU38IRT

Frequency Range	37-860Mhz All Free to Air Channels
Output Ports	8
Input Ports	1x Antenna Input 2x Modulated Inputs
Power Supply	12VDC
3 Power Options	·Local ·Remote via Modulator ·Remote via Power Injector
Variable Gain Control	Antenna Input only +3dB Gain -15dB Attenuation
IR Pass Back	Yes
IR Expansion Port	Yes

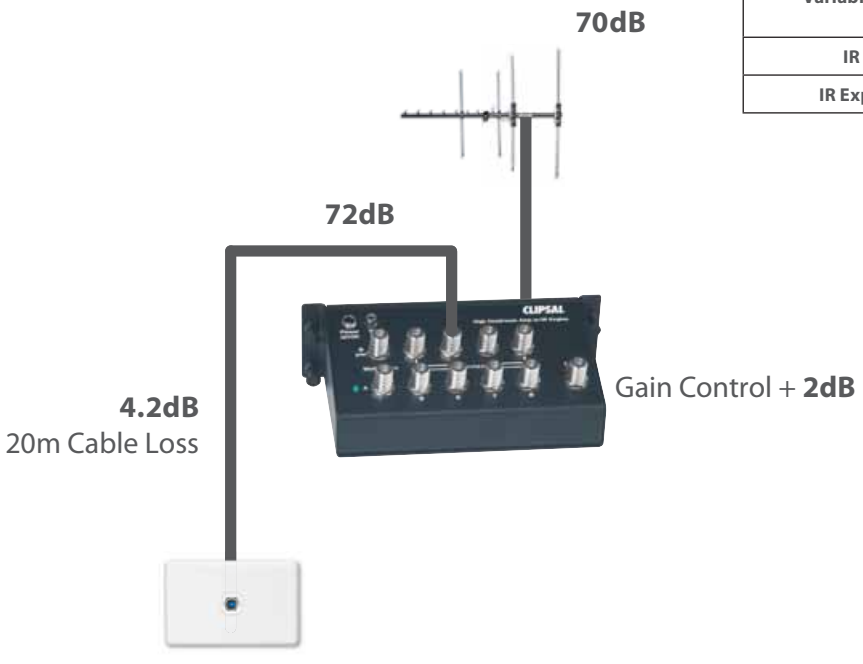


6 Way Powered Splitter 37-860MHz — 8072/6VHP

Frequency Range	37-860Mhz All Free to Air Channels
Output Ports	6
Input Ports	1x Antenna Input 1x Modulated Input
Power Supply	12VDC
3 Power Options	·Local ·Remote via Modulator ·Remote via Power Injector
Variable Gain Control	Antenna Input only +3dB Gain -15dB Attenuation
IR Pass Back	No
IR Expansion Port	No

8 Way Powered Splitter 37-860MHz — 8073/8VHPIR

Frequency Range	37-860Mhz All Free to Air Channels
Output Ports	8
Input Ports	1x Antenna Input 2x Modulated Inputs
Power Supply	12VDC
3 Power Options	·Local ·Remote via Modulator ·Remote via Power Injector
Variable Gain Control	Antenna Input only +3dB Gain -15dB Attenuation
IR Pass Back	Yes
IR Expansion Port	Yes



2 Way Satellite Splitter 5-2400MHz — 3105SPFP2

Losses 40-1000MHz	<4.6dB
Losses 1000-1750MHz	<5.3dB
Losses 1751-2050MHz	<6.3dB
Power Pass	All ports
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1
Approval Number	
Foxtel	F10082/C
Austar	A01564
Select TV	N/A

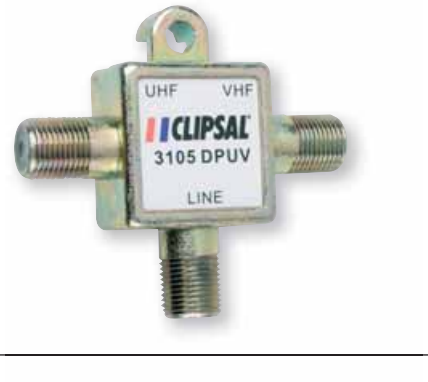
3 Way Satellite Splitter 5-2400MHz — 3105SPFP3

Losses 40-1000MHz	<7.5dB
Losses 1000-1750MHz	<9dB
Losses 1751-2050MHz	<11.5dB
Power Pass	All ports
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1
Approval Number	
Foxtel	F10082/C
Austar	N/A
Select TV	N/A

4 Way Satellite Splitter 5-2400MHz — 3105SPFP4

Losses 40-1000MHz	<8.5dB
Losses 1000-1750MHz	<10.5dB
Losses 1751-2050MHz	<11.5dB
Power Pass	All ports
Connection Type	F-Type
Mounting Holes	2
Earthing Connection	1
Approval Number	
Foxtel	F10082/C
Austar	A01592
Select TV	N/A

Indoor Diplexer	3105DPUV



Outdoor Diplexer	3105DPOUV

Diplexers combine TV signals from 2 antennas through 1 coax cable.

1 Way Drop Tap 5-2400MHz — 3105T1/XX

	3105T1/10	3105T1/12	3105T1/15	3105T1/20
Tap Loss	10dB	12dB	15dB	20dB
Through Loss 5-950MHz	<2dB	<1.9dB	<1.3dB	<0.9dB
Through Loss 951-2400MHz	<3dB	<2.7dB	<2.2dB	<1.7dB
Power Pass	1 Port	1 Port	1 Port	1 Port
Connection Type	F-Type	F-Type	F-Type	F-Type
Mounting Holes	2	2	2	2
Earthing Connection	1	1	1	1
Approval Number				
Foxtel	F10082-85/C	F10082-85/C	F10082-85/C	F10082-85/C
Austar	A01536	A01537	A01538	A01539
Select TV	Yes	Yes	Yes	Yes

2 Way Drop Tap 5-2400MHz — 3105T2/XX

	3105T2/10	3105T2/12	3105T2/15	3105T2/20
Tap Loss	10dB	12dB	15dB	20dB
Through Loss 5-950MHz	<2dB	<1.9dB	<1.5dB	<1dB
Through Loss 951-2400MHz	<3dB	<2.7dB	<2.3dB	<1.9dB
Power Pass	1 Port	1 Port	1 Port	1 Port
Connection Type	F-Type	F-Type	F-Type	F-Type
Mounting Holes	2	2	2	2
Earthing Connection	1	1	1	1
Approval Number				
Foxtel	F10082-85/C	F10082-85/C	F10082-85/C	F10082-85/C
Austar	N/A	A01541	A01542	A01543
Select TV	Yes	Yes	Yes	Yes

4 Way Drop Tap 5-2400MHz — 3105T4/XX

	3105T4/10	3105T4/12	3105T4/15	3105T4/20
Tap Loss	10dB	12dB	15dB	20dB
Through Loss 5-950MHz	<6.5dB	<4dB	<3dB	<1.8dB
Through Loss 951-2400MHz	<9dB	<4.5dB	<4.1dB	<1.1dB
Power Pass	1 Port	1 Port	1 Port	1 Port
Connection Type	F-Type	F-Type	F-Type	F-Type
Mounting Holes	2	2	2	2
Earthing Connection	1	1	1	1
Approval Number				
Foxtel	F10082-85/C	F10082-85/C	F10082-85/C	F10082-85/C
Austar	A01544	N/A	A01545	A01546
Select TV	Yes	Yes	Yes	Yes

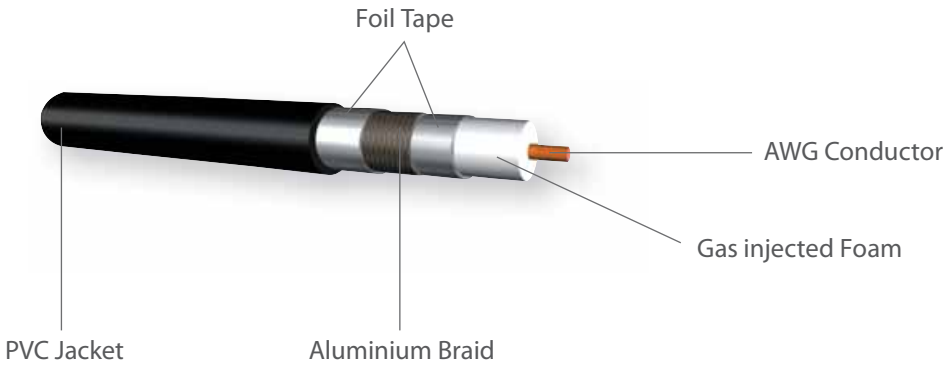
75 Ohm Terminator	**3105FTER**

All unused ports of a Drop Tap or Splitter should be terminated with a 75 Ohm Terminator to stop electrical reflections interfering with TVs connected to the system.

Pack of 10.

RG6

RG6 Coaxial Tri Shield Cable **3105RG6T3B**



Catalogue Number	Description	Pack Size	Foxtel Approval No.	Austar Approval No.
3105RG6T3B	RG6 Coax Tri Shield Box	305m Box	F10176	N/A

Conductor Size (mm)	AWG	Cond. Type	Shield Type	Nom. O.D (mm)	Insl. & Core O.D (mm)
1.02 ± 0.03	18	Solid	60% Aluminium Braids	7.06 ± 0.02	4.78 ± 0.13

5MHz	55MHz	211MHz	250MHz	270MHz	300MHz	330MHz	350MHz	400MHz	450MHz	500MHz	550MHz	600MHz	750MHz	870MHz	1000MHz	1450MHz	1750MHz	2050MHz
1.90	5.25	10.00	10.82	11.04	11.64	12.26	12.63	13.61	14.43	15.29	16.08	16.73	18.54	20.04	21.49	26.25	28.67	31.04

Attenuation @ 20˚C (dB/100m)

RG6 Coaxial Quad Shield Cable — 3105RG6Qxxx

Siamese Quad Shield

Catalogue Number	Description	Pack Size	Foxtel Approval No.	Austar Approval No.
3105RG6Q3R	RG6 Coax Quad Shield	305m Reel	F10129	P07982
3105RG6Q3B	RG6 Coax Quad Shield	305m Box	F10129	P07982
3105RG6Q1R	RG6 Coax Quad Shield Box	100m Reel	F10129	P07982
3105RG6Q3RF	RG6 Coax Quad Shield Flooded	305m Reel	F30059	P07985
3105RG6QS15R	RG6 Coax Quad Shield Siamese	152.5m Reel	F30432	P07984

Conductor Size (mm)	AWG	Cond. Type	Shield Type	Nom. O.D (mm)	Insl. & Core O.D (mm)
1.02 ± 0.03	18	Solid BCCS	60% & 40% Aluminium Braids	7.54 ±0.02	4.78 ± 0.13

5MHz	55MHz	211MHz	250MHz	270MHz	300MHz	330MHz	350MHz	400MHz	450MHz	500MHz	550MHz	600MHz	750MHz	870MHz	1000MHz	1450MHz	1750MHz	2050MHz
1.90	5.25	10.00	10.82	11.04	11.64	12.26	12.63	13.61	14.43	15.29	16.08	16.73	18.54	20.04	21.49	26.25	28.67	31.04

Attenuation @ 20˚C (dB/100m)

RG11

RG11 Coaxial Quad Shield Cable **3105RG11Q3R, 3105RG11Q3RF**

Catalogue Number	Description	Pack Size	Foxtel Approval No.	Austar Approval No.
3105RG11Q3R	RG11 Coax Quad Shield Reel	305m Reel	F10175	A02629
3105RG11Q3RF	RG11 Coax Quad Shield Flooded Reel	305m Reel	F30060	P07986

Conductor Size (mm)	AWG	Cond. Type	Shield Type	Reel Length (m)	Nom. O.D (mm)	Insl. & Core O.D (mm)
1.63 ± 0.03	14	Solid BCCS	60% & 40% Aluminium Braids	305	10.34 ± 0.25	7.32 ± 0.15

5MHz	55MHz	211MHz	250MHz	270MHz	300MHz	330MHz	350MHz	400MHz	450MHz	500MHz	550MHz	600MHz	750MHz	870MHz	1000MHz	1300MHz	1550MHz	1770MHz	2150MHz
1.25	3.15	6.23	6.72	7.00	7.38	7.71	7.94	8.53	9.02	9.51	9.97	10.43	11.97	13.31	14.27	16.00	17.42	19.58	21.61

Attenuation @ 20˚C (dB/100m)

RG59 Coaxial Dual Shield Cable **3105RG59D1R, 3105RG59D3B**

Catalogue Number	Description	Pack Size	Foxtel Approval No.	Austar Approval No.
3105RG59D1R	RG59 Coax Dual Shield	100m Reel	N/A	N/A
3105RG59D3B	RG59 Coax Dual Shield Box	305m Box	N/A	N/A

Conductor Size (mm)	AWG	Cond. Type	Shield Type	Nom. O.D (mm)	Insl. & Core O.D (mm)
0.81 1	20	Solid BCCS	60% Aluminium Braids	6.10 0.2	3.86 0.13

5MHz	55MHz	211MHz	250MHz	270MHz	300MHz	330MHz	350MHz	400MHz	450MHz	500MHz	550MHz	600MHz	750MHz	870MHz	1000MHz
2.82	6.73	12.47	13.45	13.85	14.6	15.29	15.75	16.73	17.72	18.70	19.52	20.34	22.87	24.85	26.64

Attenuation @ 20˚C (dB/100m)

RG6 COMPRESSION

RG6 Compression Tool — 3105CT611C

Easy to use
Swivel Head for RG6 and RG11
For use with the following connectors:
3105RG6FC50 - RG6 (Packet of 50)
3105RG11FC2 - RG11 (Packet of 2)

RG6 Compression Connector — 3105RG6FC50

3105RG6FC50 (Packet of 50)	
Approval Number	
Foxtel	F30029
Austar	A06948
Select TV	Not Required

RG6 & RG59 Cable Stripper — 3105CS6

Easy to use - Termination techniques on pages 54-55
Suits RG6 and RG59 cables

RG11 Compression Tool — 3105CT611C

Easy to use
Swivel Head for RG6 and RG11
For use with the following connectors:
3105RG6FC50 - RG6
3105RG11FC2 - RG11

RG11 Compression Connector — 3105RG11FC2

3105RG11FC2 (Packet of 2)	
Approval Number	
Foxtel	F30360
Austar	A06949
Select TV	Not Required

RG11 Cable Stripper — 3105CS11

Easy to use
Suits RG11 Coax Cables

RG6 RADIAL CRIMP

RG6 Radial Crimp Tool — 3105CT611

Easy to use
For use with the following connectors:
3105RG59F, 3105BNC6, 3105BNC59
3105RG6F, 3105RG6PM, 3105RG6PF

RG6 Crimp Connector — 3105RG6F

3105RG6F (Packet of 10)	
For use with Radial Crimp Tool	
Approval Number	
Foxtel	F10179/C
Austar	A01509
Select TV	Not Required

RG6 Cable Stripper — 3105CS6

Easy to use
Suits RG6 and RG59 Cables

RG59 Radial Crimp Tool — 3105CT611

Easy to use
For use with the following connectors:
3105RG59F, 3105BNC6, 3105BNC59
3105RG6F, 3105RG6PM, 3105RG6PF

RG59 Compression Connector — 3105RG59F

3105RG59F
Packet of 10
For use with radial Crimp Tool

RG59 Cable Stripper — 3105CS6

Easy to use
Suits RG6 and RG59 Cables

Do's and Don'ts

Insert coax cable into the stripping tool with the end of the coax level with the lip on the right hand side. Hold the cable close to the tool and spin around a few times. Not enough spins of the stripping tool will leave the coax jacket on and too many spins will cut away the shielding. Hold the stripping tool by the jaws and pull away from cable without opening the jaws of the stripping tool. The stripped cable will look like the following diagram.

Fold back the first braid then fold back the first foil. Fold back the second braid but DO NOT remove the last foil as this is bonded to the Dielectric. Fold back braid and foil evenly in each direction to ensure the connector slides on easily. A good preparation should look like the following diagram.

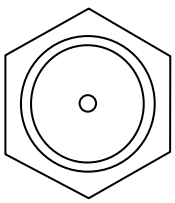
Do's and Don'ts

Slide the connector on straight. DO NOT slide connector at an angle because it will damage the cable. Look at the front of the connector. If the cable is damaged then remove the connector and start again. DO NOT terminate connector.

A connector slid on at an angle will result in the cable looking like the following diagram.

Slide the cable up to the base of the connector. A good termination should be level with the base of the connector.

When the cable is inside the connector it will look like the following diagram.



Once the connector has been installed correctly only then should you use the tool to terminate.

Digital Terrestrial Meter **2ANDTM**

Features and Benefits

Displays RF level and post BER together with S/N on large display in real time. Run time in excess of five hours on a full charge. Built-in charger with rechargeable NiMH battery.

Specifications

VHF 6-12 UHF 21-69

VHF Band 3 and UHF e.g. 167-862 MHz 7 M Bandwidth

Automatic Constellation and transmitter offset

C/N up to 32dB in 0.5dB steps accuracy +-1dB

RF level 25dBuV to 75dBuV accuracy +-1dB over all bandwidth and under indication

Input range -72dBm-20dBm

Charger 100-240V Ac or 12V Dc

Battery 2.4 Ah NiMH 7.2V 6 cell

BCN - PAL + BCN F-Type adaptors included

2x 10dB attenuators included

This meter is a Digital Field Strength Meter and will not measure any channel below VHF 6.

Digital Field Strength Meter

RF Screen
Allows you to scroll through VHF and UHF channels and measure the signal strength.

Step Through
Use the arrow buttons to scroll through VHF and UHF channels.

RF Level
Shows the level of signal strength numerically.

IIIIIIIIIIIIIII
Bar reading of signal strength.

DVB-T
This will appear if the signal is a digital video broadcast terrestrial. If this appears then press the ON button to change to the BER page. If this does not appear the signal is an analogue signal.

BER Screen
Measures the Bit Error Ratio.

Step Through
Use the arrow buttons to scroll through the VHF and UHF channels.

BER
Shows the number of errors within the signal. Use to measure the quality of the digital signal only.

PASS
PASS or FAIL will appear dependant on the number of errors.

IIIIIIIIIIIIIII
Bar reading of signal strength.

SN 29dB
Signal to Noise Ratio. Measures the amount of signal versus electrical noise within the cable.
The higher the number the better.

MATV Tool Box — 3105TOOLBOX

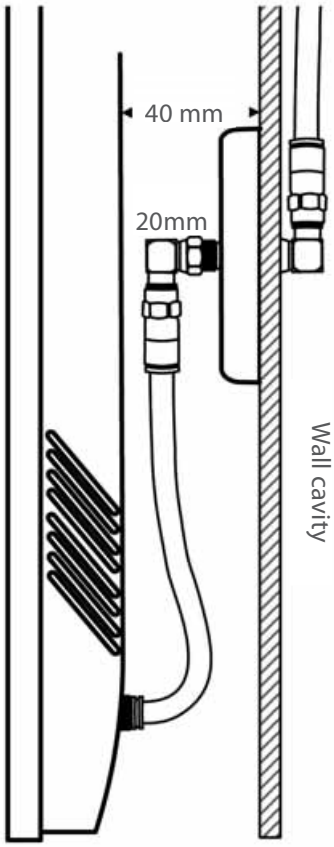
Clipsal Australia have provided a MATV tool box that has the essentials required to carry out MATV installations. Refer to chart below for the great range of products included.

Product	Cat No.	Qty.
Compression Tool	3105CT611C	1
Hex Crimp Tool	3105CT611C	1
Coax Cable Stripper	3105CS6	1
Hex Nut Spanner	-	1
Coax Cable Cutters	-	1
UTP Cable Stripper	-	1
2 Way Splitter Terrestrial	3105SPF2	4
3 Way Splitter Terrestrial	3105SPF3	4
4 Way Splitter Terrestrial	3105SPF4	4
2 Way Splitter Satellite	3105SPFP2	4
3 Way Splitter Satellite	3105SPFP3	4
4 Way Splitter Satellite	3105SPFP4	4
F-Type Compression Connectors	3105RG6FC50	50 Connectors
F-Type Radial Crimp Connectors	3105RG6F	50 Connectors
PAL Crimp Connectors	3105RG6PM	50 Connectors
F-Type to F-Type Adaptors	-	20 Adaptors

Right Angle Adaptor	**3105FF-FMRA**

Rated to 3GHz
Pack of 10
Foxtel approval number: F30356

Wall mounted Plasma/LCD scenario
with right angle adaptor.



F-TYPE ADAPTORS

F-Type to RCA Adaptor	**3105FF-RCA**
Pack of 1	

F-Type to RCA Adaptor	**3105FF-BNC**
Pack of 1	

F-Type Female to Female Coax Joiner	**3105FF-FF**
Pack of 10	

F-TYPE TO PAL ADAPTORS

F-Type Female to PAL Male Adaptor	**3105PM-FF**

Pack of 10

F-Type Female to PAL Female Adaptor	**3105PF-FF**

Pack of 10

F-Type Male to PAL Female Adaptor	**3105PF-FM**

Pack of 10

PAL ADAPTORS

PAL Male to PAL Male	**3105PM-PM**
Pack of 10	

PAL Female to PAL Female Adaptor	**3105PF-PF**
Pack of 10	

F-type to PAL Male Fly Lead - RG6 Quad Shield White 1.8m	**3105FL318MWQ**

F-type to PAL Male Fly Lead - RG6 Quad Shield Black 1.8m	**3105FL318MBQ**

PAL Male to PAL Male - RG59 white 1.8m	**3105FL118MW**

PAL Male to PAL Male - RG59 white 5m	**3105FL150MW**

PAL Male to PAL Female - RG59 white 1.8m	**3105FL118FW**

3RCA to 3RCA Lead 1.8m	**3105AVL318**

3RCA to 3RCA High Quality Lead 1.8m	**3105AVL318HQ**

Scart - 6 RCA Lead 1.8m	**3105SC-6RCA**

Scart - Scart Lead 1.8m	**3105SC-SC**

F-Type to F-Type TV Outlet — 30PFM

Pay TV approved outlet rated to 3GHz.
Foxtel approval number: G135

F-Type to PAL TV Outlet Straight — 30FFPFMS

To be released late 2007.
Not suitable for satellite TV applications

F-Type to PAL TV Outlet Angled — 30TV75MF

Not suitable for satellite TV applications

F-Type to PAL TV Outlet AC Isolation — 30TV75MACF

Not suitable for satellite TV applications

Screw Termination to PAL — 30TV75MS

Not suitable for satellite TV applications

Single Gang Wall Plate	C2000 Series **C2031/1F** 2000 Series **2031/1F**

This wall plate contains the Clipsal 30PFM TV Mech

C2031/1F

Single Gang Wall Plate	C2000 Series **C2031VTV75F** 2000 Series **2031VTV75F**

This wall plate contains the Clipsal 30TV75MF TV Mech
Screw style

2031VTV75F

Single Gang Wall Plate	C2000 Series **C2031VTV75** 2000 Series **2031VTV75**

This wall plate contains the Clipsal 30TV75MS TV Mech

2031VTV75

StarServe Wall Plate

C2033/3F
2033/3F

This wall plate is the minimum requirement for Star Serve main entertainment areas.

This wall plate can be made up of the following Clipsal products:

3x	30PFM	F-Type TV Mech
1x	C2033VH	3 Gang Wall Plate

C2033/3F

StarServe Wall Plate

C2034RJA5/3F
2034RJA5/3F

This wall plate can be made up of the following Clipsal products:

3x	30PFM	F-Type TV Mech
1x	30RJ88SMA5	Cat 5e data outlets
1x	C2034VH	4 Gang Wall Plate

C2034RJA5/3F

StarServe Wall Plate

C2034RJA5/2F
2034RJA5/2F

This smart wired wall plate can be made up of the following Clipsal products:

2x	30PFM	F-Type TV Mech
2x	30RJ88SMA5	Cat 5e data outlets
1x	C2034VH	4 Gang Wall Plate

C2034RJA5/2F

StarServe Wall Plate

C032RJA5/1F
2032RJA5/1F

Suggested minimum cabling to all bedrooms.
This wall plate can be made up of the following Clipsal products:

1x	30PFM	F-Type TV Mech
1x	30RJ88SMA5	Cat 5e data outlets
1x	C2032VH	2 Gang Wall Plate

C032RJA5/1F

StarServe Wall Plate

C033RJA5/1F
2033RJA5/1F

Suggested minimum cabling to all bedrooms.
This wall plate can be made up of the following Clipsal products:

1x	30PFM	F-Type TV Mech
2x	30RJ88SMA5	Cat 5e data outlets
1x	C2033VH	3 Gang Wall Plate

C033RJA5/1F

StarServe Wall Plate

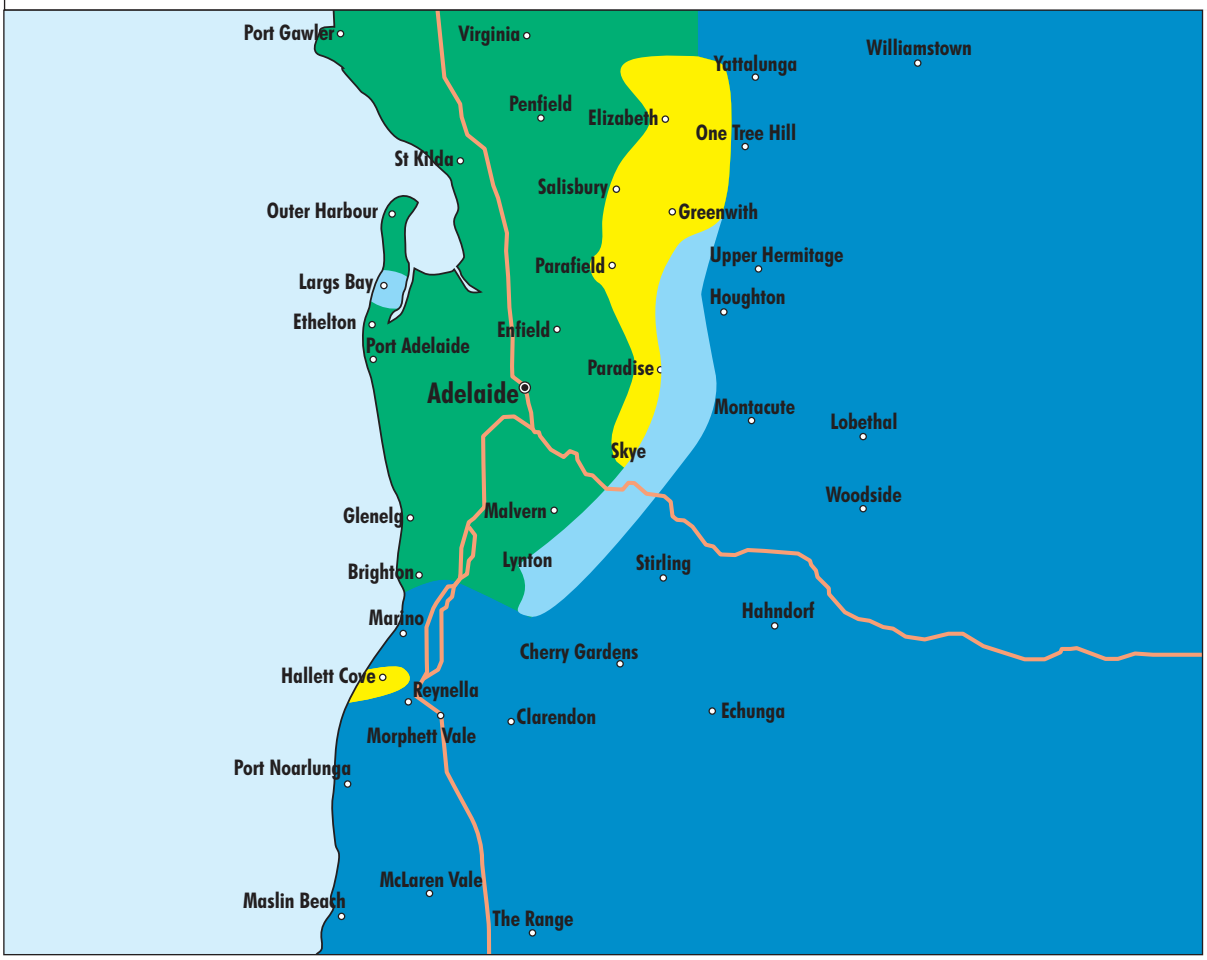
C034RJA5/1F
2034RJA5/1F

This wall plate is ideal for the study.
This wall plate can be made up of the following Clipsal products:

1x	30PFM	F-Type TV Mech
3x	30RJ88SMA5	Cat 5e data outlets
1x	C2034VH	4 Gang Wall Plate

C034RJA5/1F

ADELAIDE

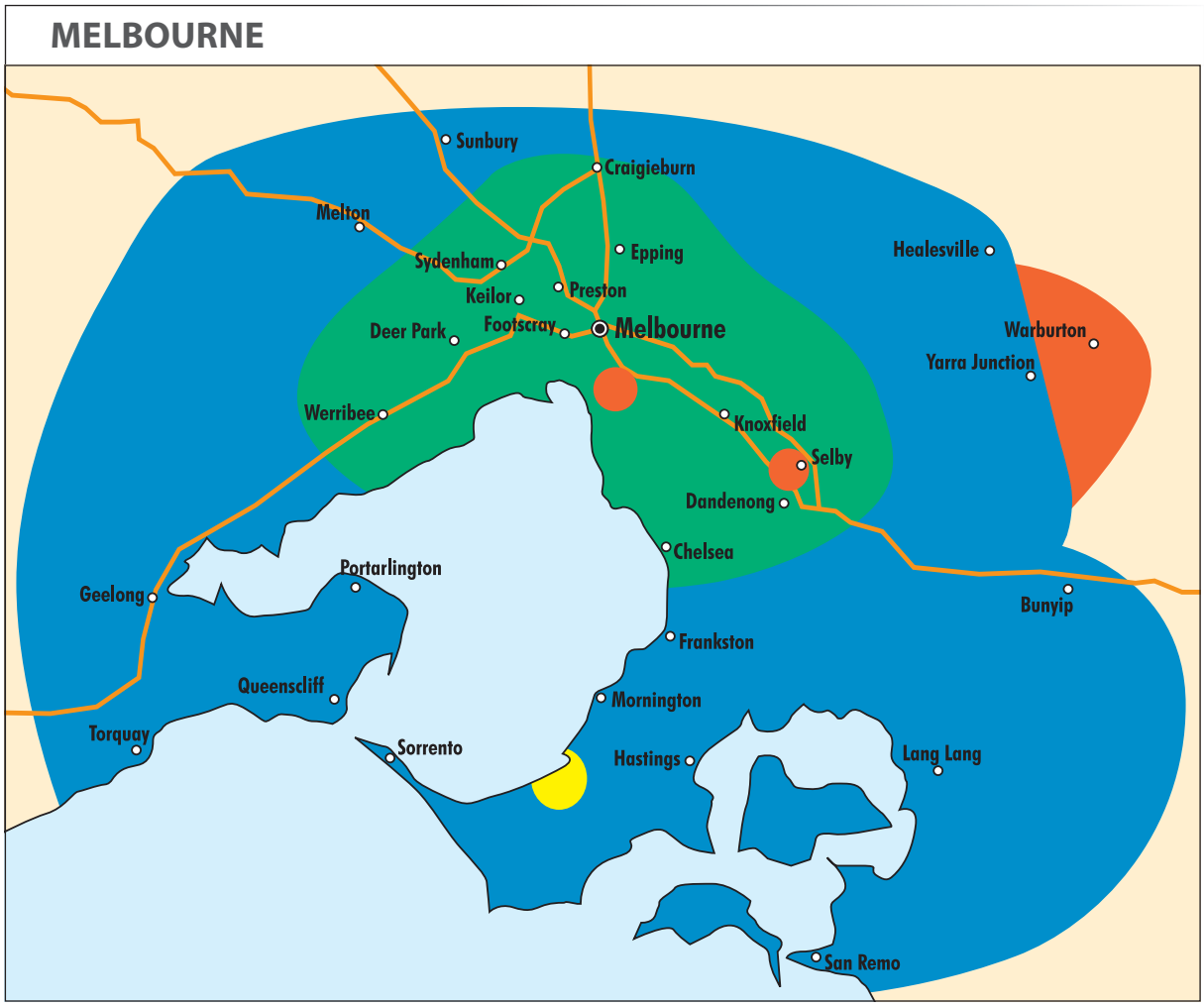


2ANCOM3

2ANCOM4 or
2ANCOM6

2AN 2ANUY12WB or
2ANUY20WB
(Multiple Outlets)

2ANV2WB +
2ANUY12WB
(Requires Diplexer
refer to page 43)



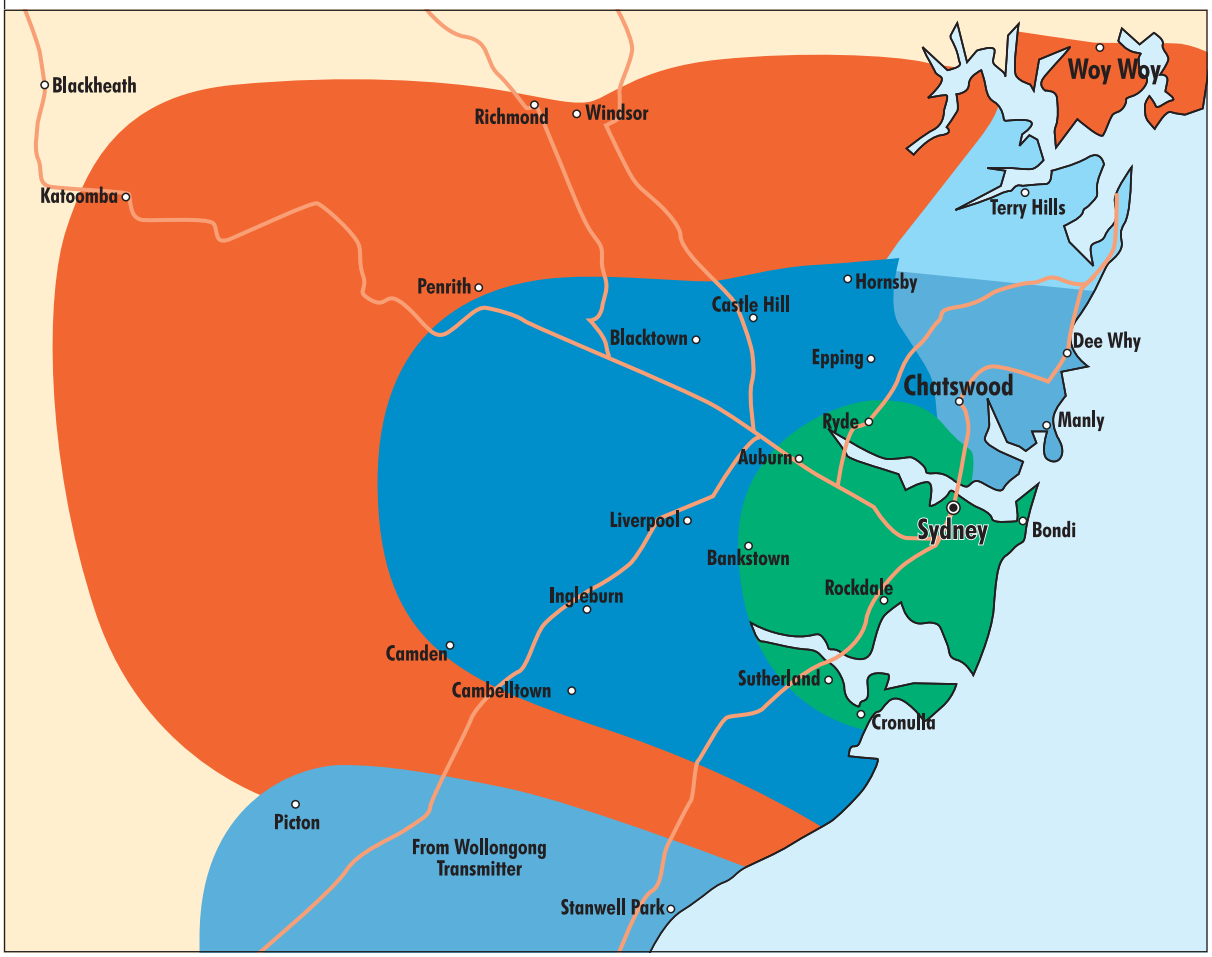
2ANCOM3

2ANCOM4

2ANUPA2

2ANUY18/5

SYDNEY



2ANCOM3

Inner city Kings Cross translator line-of-sight use **2ANUPA1** or **2ANUX43**

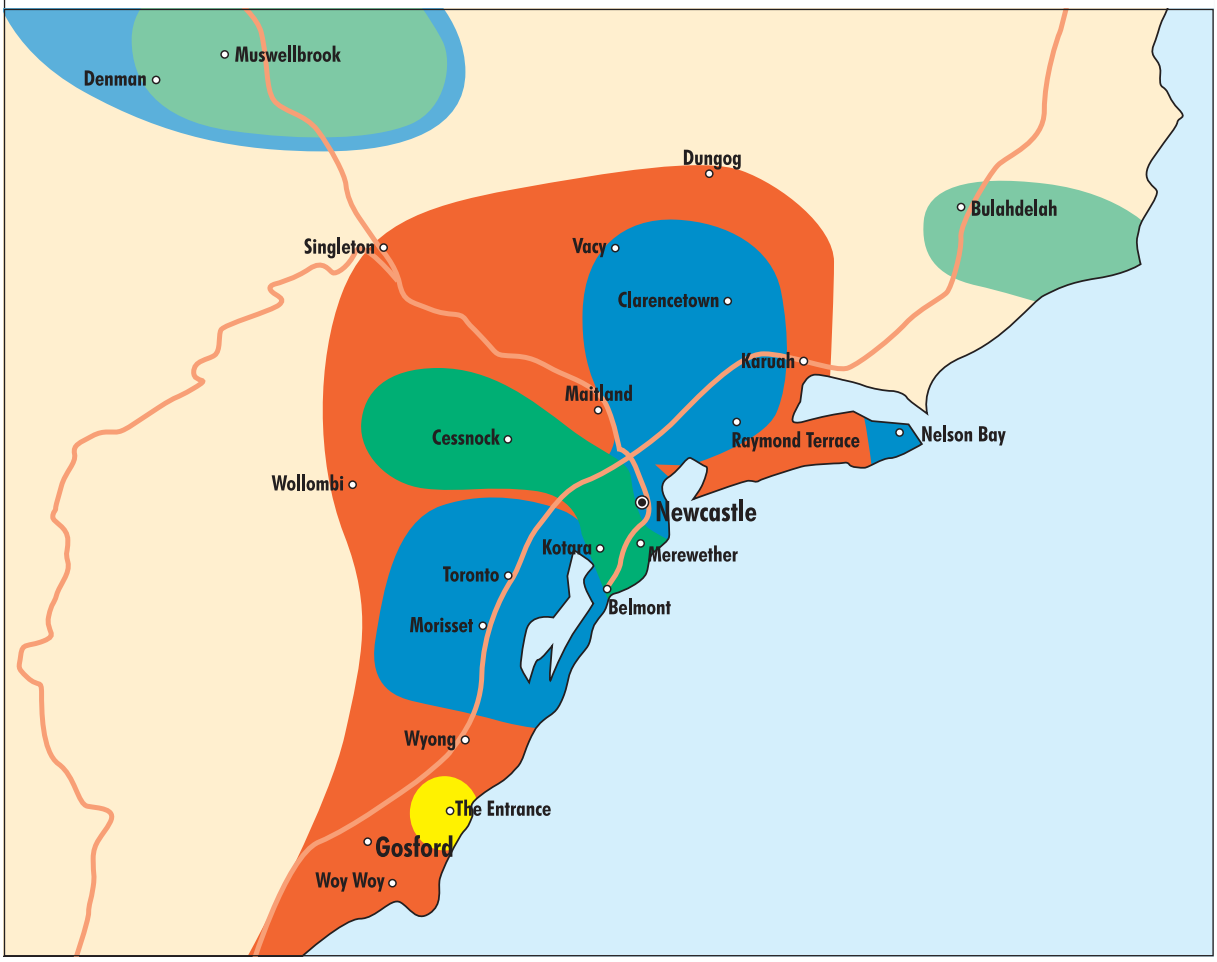
2ANCOM4 or **2ANYV10** +**2ANUY20WB** (Requires Diplexer refer to page 43)

2ANCOM6 or **2ANVY10** + **2ANUX91** (Requires Diplexer refer to page 43)

2ANUY20WB

2ANUPA2

NEWCASTLE



2ANCOMD14WB

2ANCOMD14WB
+ Masthead Amplifier

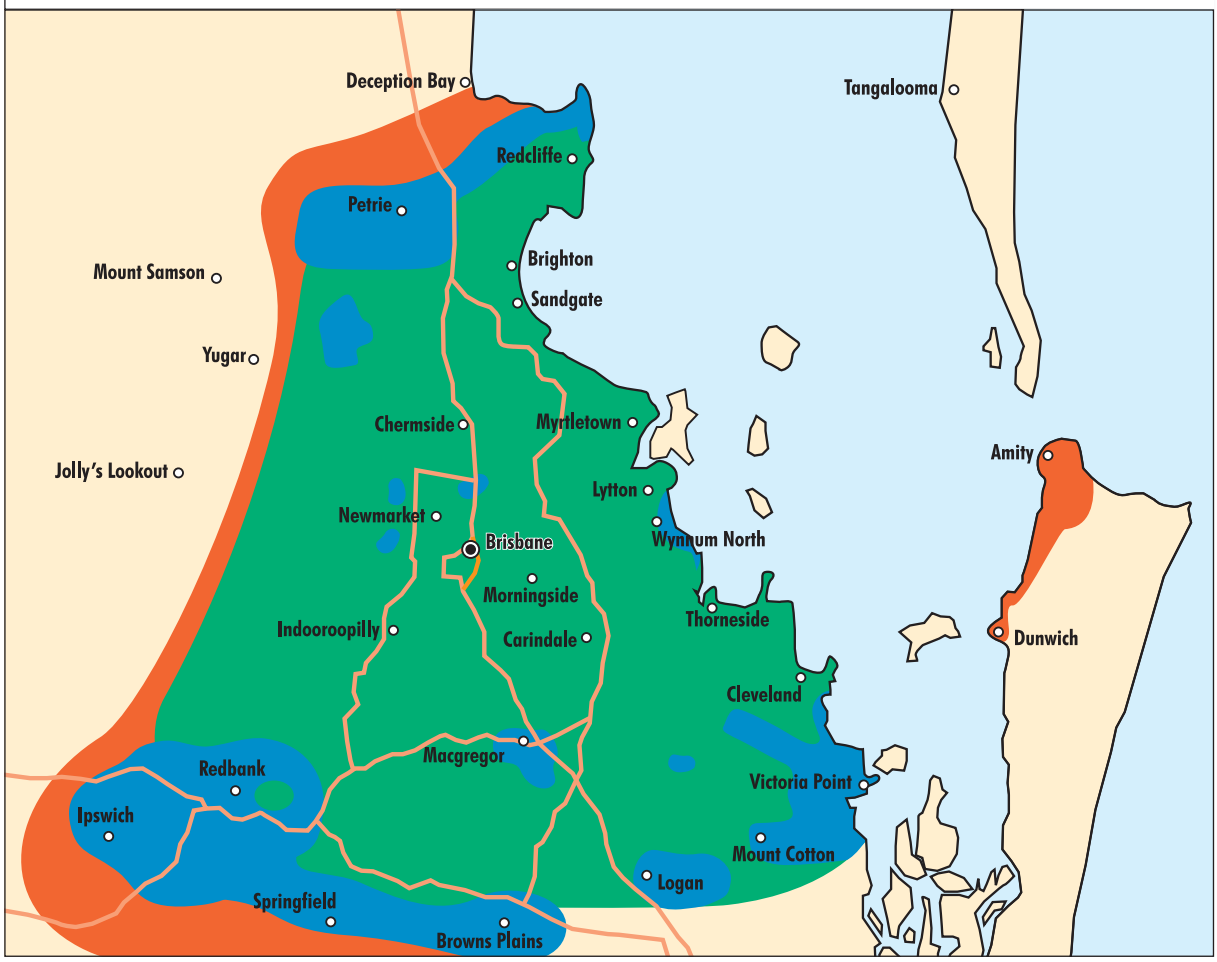
2ANCOM2NEW
For Nelson Bay,
call Clipsal for options

2ANUY12WB

2ANUY20WB

2ANUPA2

BRISBANE

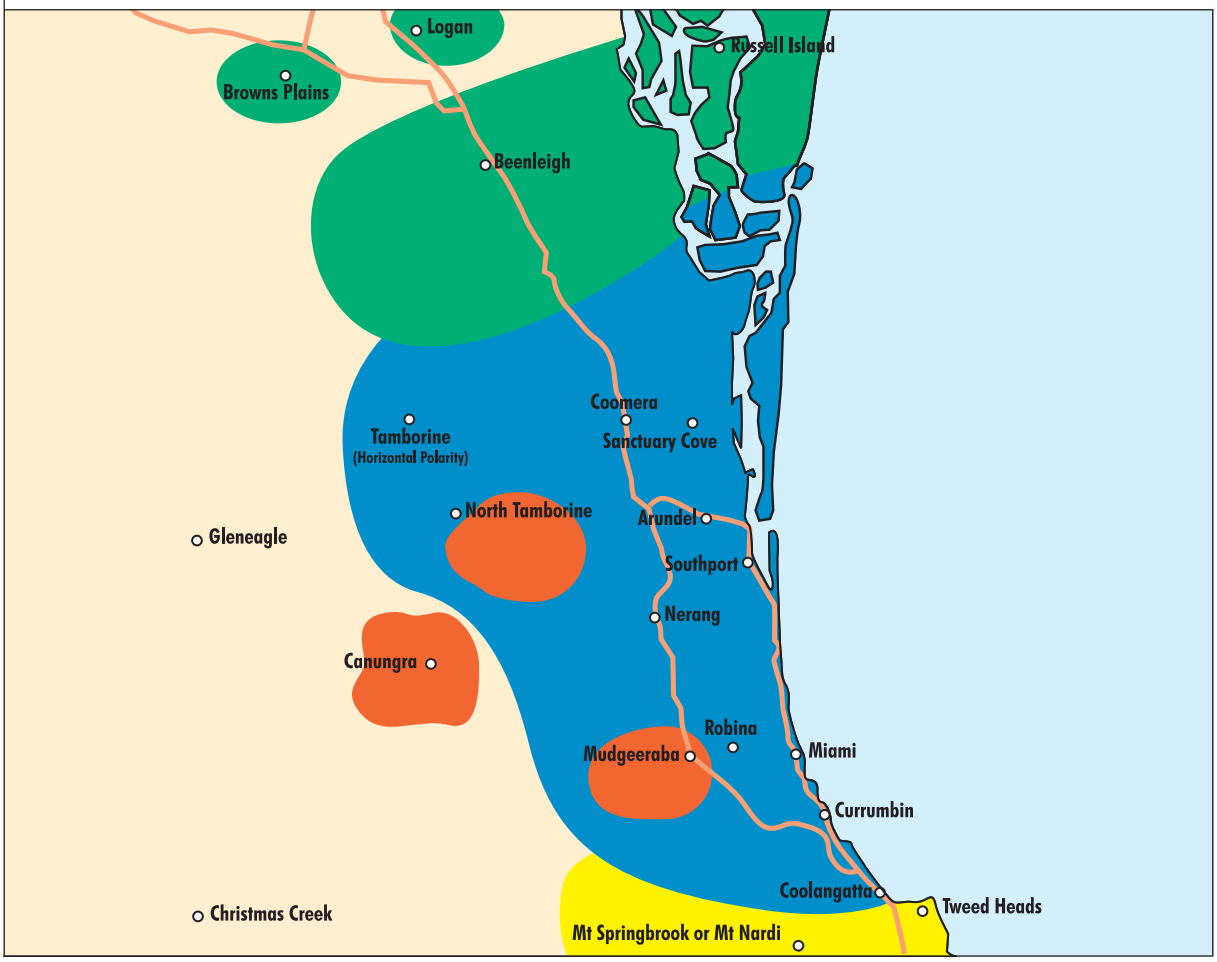


2ANCOM3

2ANCOM4

2ANCOM6

SOUTH QUEENSLAND



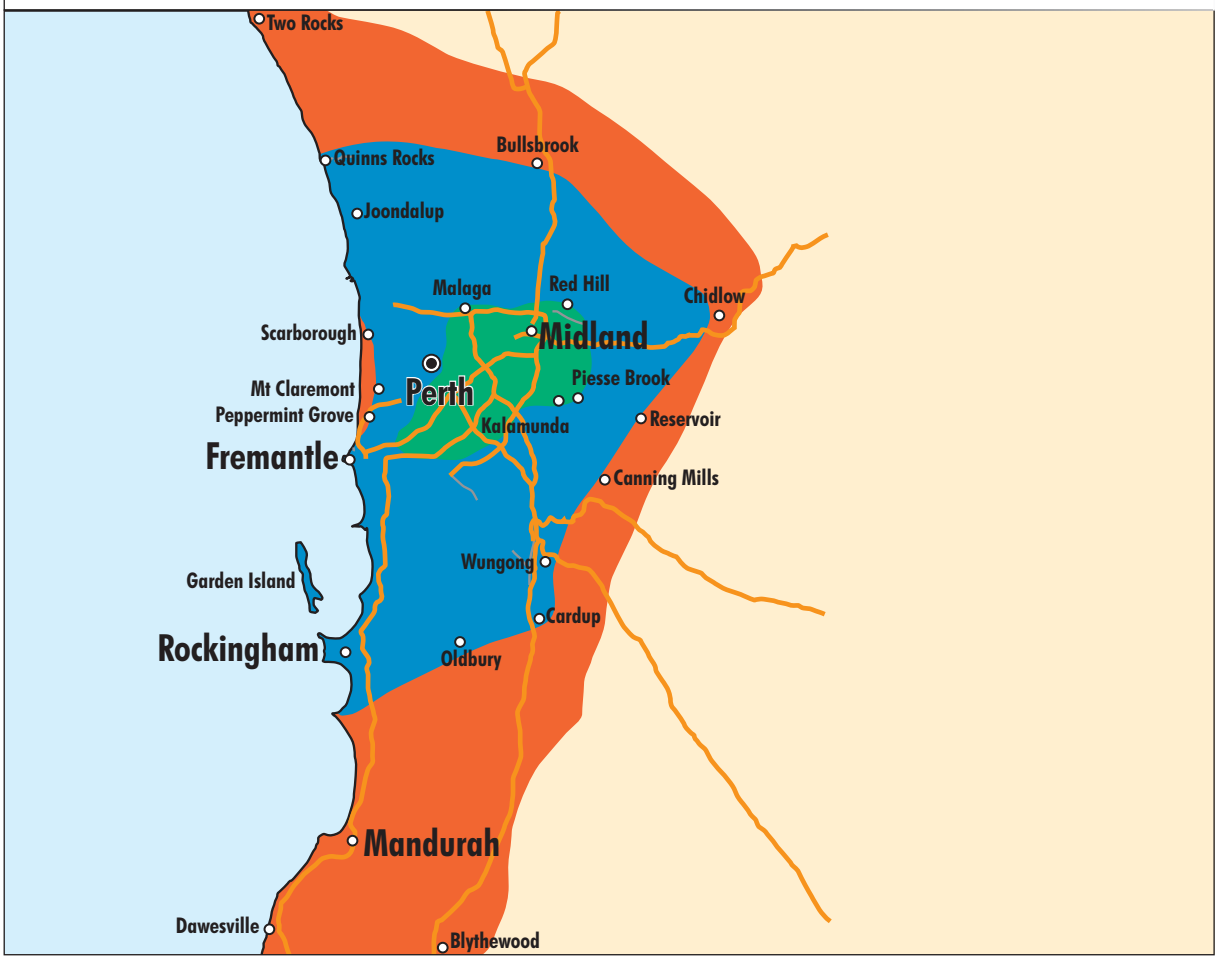
2ANCOM3 or 2ANCOM4
(Multiple Outlets)

2ANUY12WB or **2ANUY20WB**
(Multiple Outlets)

2ANUPA2

2ANCOMD14WB or **2ANVY10** + **2ANUY20WB**
(Requires Diplexer
refer to page 43)

PERTH



2ANCOM3

2ANCOM4

2ANCOM6

MATV

CLIPSAL
LIVING ELECTRICAL

When it comes to antenna installation, the choice is clear ▷

Product of Clipsal Australia Pty Ltd

A member of the Schneider Electric Group

Head Office
12 Park Terrace, Bowden
South Australia 5007
Telephone (08) 8269 0511
Facsimile (08) 8340 1724
Internet clipsal.com
E-Mail plugin@clipsal.com.au

National Customer Service Enquiries:
1300 2025 25

National Customer Service Facsimile:
1300 2025 56

International Enquiries
International Sales and Marketing
Telephone + 61 8 8269 0587
Facsimile + 61 8 8340 7350
E-Mail export@clipsal.com.au

New Zealand
Clipsal Industries (NZ) Ltd
Telephone (09) 576 3403
Facsimile (09) 576 1015
E-Mail headoffice@clipsal.co.nz

Customer Service
Free Fax (0508) 250 305
Auckland/Mobile Phone (09) 572 0014
Free Phone (0508) CLIPSAL
2547725

You can find this brochure and many others online in PDF format at: **clipsal.com**

Follow the links off the home page or access the following page directly:
clipsal.com/wat_lib_pdf.cfm

clipsal.com

D2-004

CLIPCOM 11954 Aug 2007

O/N 11954