

WiMAX Installer Course Day 2

Presented by
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Mounting Antennas



- Line of sight
- Obstructions
- Client preference
- Cable length
- Other antennas and CPE's



Mounting Pole and Bracket



- Up to 75cm
 - 38mm aluminium pole
 - Small three legged bracket (15cm offset)
- Up to 2m
 - 50mm aluminium pole
 - Medium three legged bracket (25cm offset)
- More
 - Call for help!

Rawl bolts



- Used to fix buckets to the wall
- Use M8 10L rawl bolts
 - Hole size : 12mm
 - Depth : 55mm
 - Torque : 7.5Nm



Drilling holes



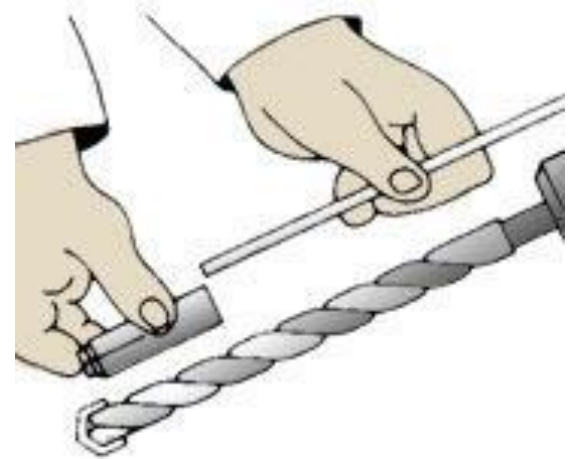
- No undo button!
 - Measure twice, drill once
- Mark holes using the bracket as template
 - Check top holes are level
 - Do not push against bracket!
- Check hole positions again before drilling



Drilling holes



- Use depth setting on drill
- Use SDS drill
- When drilling through wall, check plaster on other side



Waterproofing



- Connectors
 - At connection to antenna
 - Where two cables join
 - Where cable enters building

Waterproofing – Connectors



- Use self-amalgamating tape
 - AKA 'snot-tape'



Waterproofing - Building



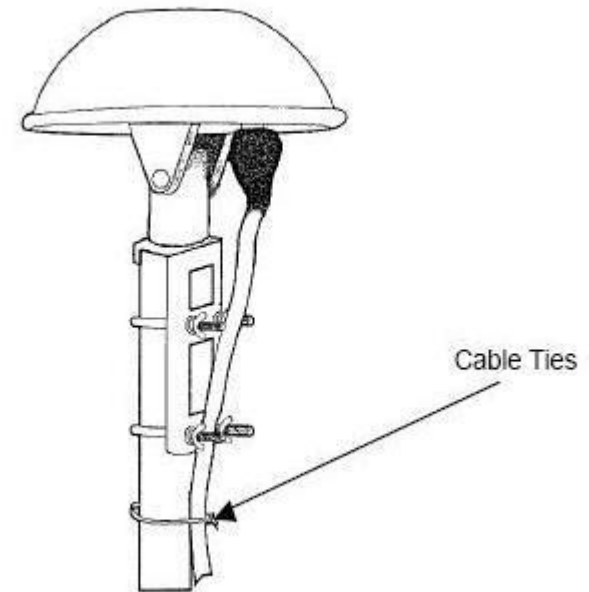
- Use drip loops
- Use xxx



Strain relief



- Any cable **MUST** be strain relieved after leaving antenna
- Only use high quality cable ties
 - UV protection
- Also helps cable run look neat



HellermannTyton

Running the cable



- Client will judge your work on neatness, NOT signal quality!
- NEVER use heatgun/glue gun
- Use the CORRECT size cable saddles



Running the cable



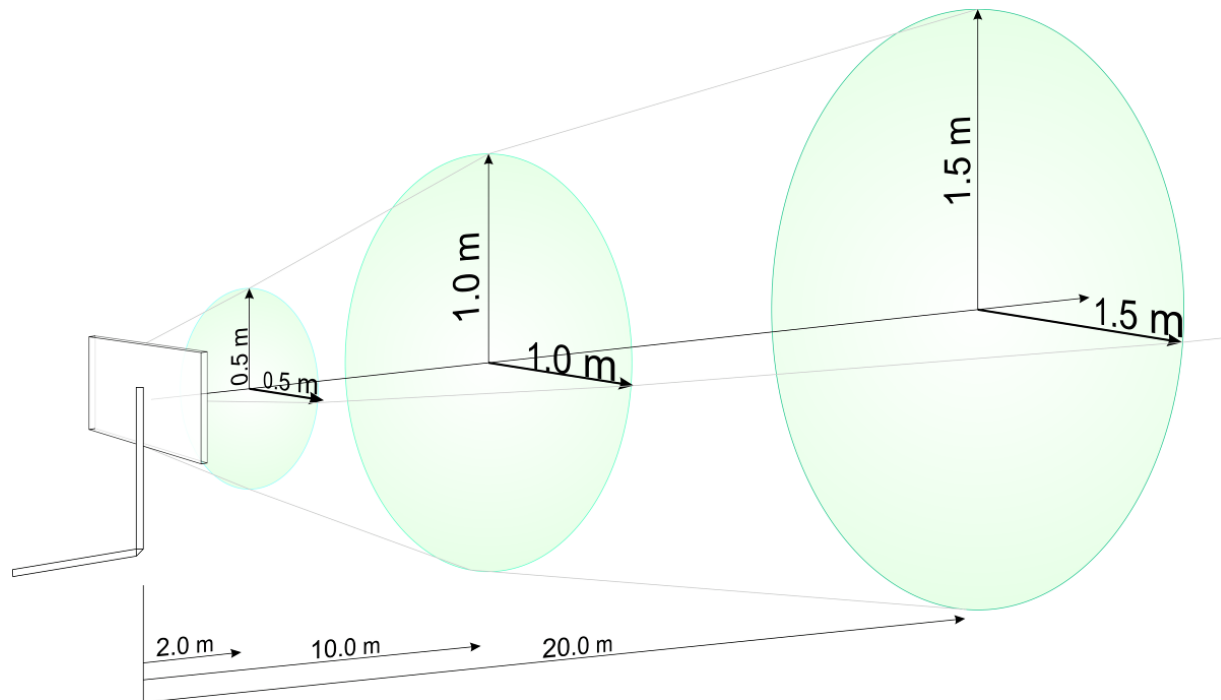
Cable			
	Outer diameter	Minimum bend radius	Preferred bending radius
RG174	3 mm	18 mm	30 mm
RG58	5.00 mm	30 mm	50 mm
RG213	10.3 mm	60 mm	100 mm
LMR195	4.95 mm	30 mm	50 mm
LMR400	10.3 mm	60 mm	100 mm



Obstructions



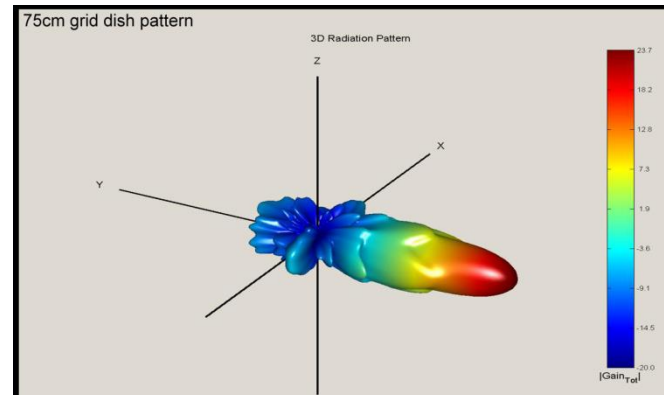
- Be aware of objects close too, but not directly in front of the antenna



Aligning Antennas



- Revisiting beamwidth
 - 3dB vs 1dB beamwidth
 - Looking down a pipe
 - Need to aim within 4 degrees when using grid antenna!
- Align both elevation and azimuth



Paper work



- After finishing the installation, take photos
 - Screenshot of status screen
 - Antenna on pole
 - Antenna towards base station, LOS
 - Mounting bracket
 - Cabling outside
 - Cabling inside
- Paste into pre-survey form



Etiquette



- First impressions
 - 15 seconds
- Calling the client
- Arriving at the gate
 - Dress neatly (not necessarily formal)
- During the installation
 - Be friendly
 - Speak to the client, often they don't bite
- Before leaving

