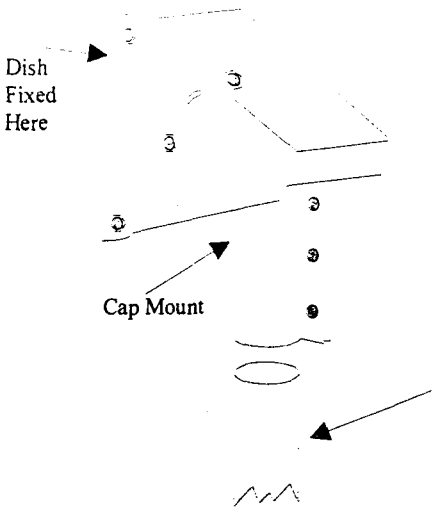
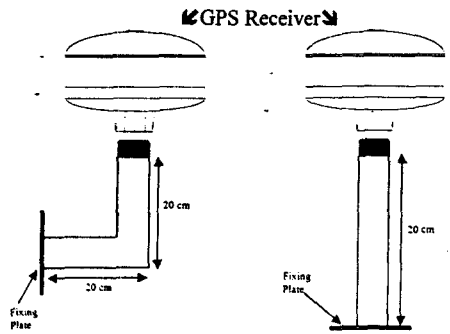
NOTE:- If any other type of fixing is needed i.e. for a lattice mast only the Mounting Cap can be supplied. Therefore the mast fixing, pipe and brackets would have to be supplied by the antenna riggers. (See below for drawing of Mounting Cap)



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- **GPS Receiver Fixing**

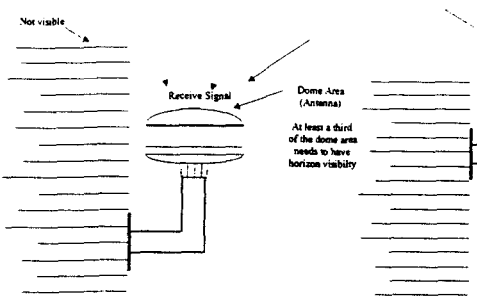
The GPS receiver needs to be mounted horizontally and can be supplied with either a right angled or straight bracket. See options below:-



Both types of Brackets can be either flush mount i.e screwed to a wall or mast mounted which would require the use of 51mm U brackets for fixing.

- **GPS Receiver Positioning**

In general the GPS antenna should be positioned such that as large an area of sky as possible is visible to the antenna however, due to the GPS receiver being used for timing rather than positioning information it is not essential to have complete horizon visibility. Also owing to the fact that the GPS receive antenna is omni-directional it can be sited with a minimum of a 1/3 of the surface having horizon visibility.



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Also when considering the position of the GPS antenna it must not be placed closer than 3 metres to any VHF/UHF transmit antenna or no closer than 6 metres to a Microwave or Satellite transmit antenna.

- **Length of cable run for Satellite Dish**

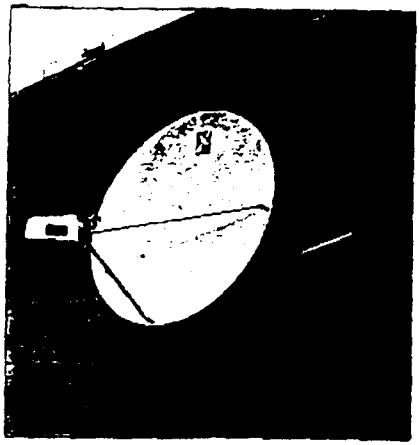
Consideration should be given as to the cable route, ensuring that the cable takes the shortest practical route but also taking into consideration the minimum bending radius of the cable (see below)

There are two types of cable recommneded for use. The choice will depend on the length of cable run. For recommendations see below:-

Cable Type	Max Length Without AMP	Max Length With 20db AMP	Min Bending Radius
CT125PE	75 Metres	150 Metres	45 mm
CT167PE	100 Metres	200 Metres	50 mm

If required the 20db line amplifier should be installed at the receiver end of the cable but positioned at least 2 metres before the receiver unit.

90cm SMC DTH Antenna





MODEL 6019 * THIS ONE FOR WAP

High performance

When looking for great satellite TV reception, capture the best with a Channel Master® 90cm SMC direct-to-home satellite antenna.

This 90cm offset antenna offers high performance reception capabilities due to its nearly flawless SMC (sheet molded compound) reflector surface. A sturdy tri-leg feed support system holds the feed assembly securely in position while a molded feed cover protects the electronics from the elements. The choice of feed options include Polarizer, Single Polarity, Orthomode Transducer or LNBF*.

If your contemplating where you can install the 90cm antenna, Channel Master offers several mounting options: on walls, flat or sloped roofs, or ground mounting using a 76mm mast. You also have a choice of fixed heavy-duty AZ/EL mount designs or an actuated polar mount for more programming selection.

Designed to withstand harsh weather, all mounting hardware is cadmium dichromate plated and the steel mount parts are either powder coat painted or galvanized for corrosion resistance. In addition, this durable antenna system is performance proven in 96km/h winds and temperatures down to -40C.

So when you expect the very best in quality, performance and value—reach for the name that says it all—Channel Master.

SPECIFICATIONS

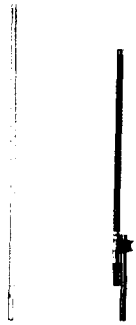
Effective Aperture:	90cm
Dish Height:	97cm
Dish Width:	90cm
Frequency Range:	10.95 - 12.75 GHz
Gain at Mid Band:	10.95 - 12.75 GHz: 39.5dB
Temperatures:	-40°C to +50°C (Survival -58°C to +70°C)
F/D:	.6
Offset Angle:	22.6°
Polarization:	Linear, Circular
Optics:	Prime Focus with Offset Feed
Feed Options:	Polarizer, Single Polarity Orthomode, Transducer, or LNBF
Mounts:	Polar or AZ/EL
Mount Assemblies:	(3.0" [76mm] Dia.), Ground, Roof, Wall. (Refer to Channel Master Mount Literature.)
Windloading:	96km (Survival 193km)
Hardware:	500 hour salt spray tested

*LNBF is hermetically sealed and does not require a feed cover.

Channel Master®

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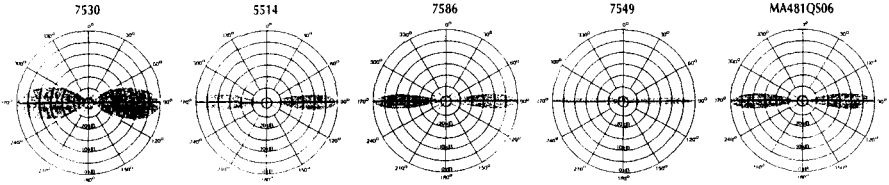
VHF & UHF COLINEARS

Type	7530* - VHF Colinear †	5514* - VHF Colinear †	7586* - UHF Colinear †	7549* - UHF Colinear †	MA481QS06
Frequency (MHz)	118...250	145...224	380...500	380...470	408...470
Bandwidth	6 MHz	± 3.5 % (Typically)	± 3.5 %	30 MHz	± 4 MHz at Tuning Frequency
VSWR	≤1.5 : 1	≤1.5 : 1	≤1.5 : 1	≤1.5 : 1	≤1.5 at Tuning Frequency
Gain (dBd)	2.8	5.8	5	9	6
Impedance (Ω)	50	50	50	50	50
Polarisation	*Vertical*	*Vertical*	*Vertical*	*Vertical*	–
Vertical Plane Beamwidth (-3 dB Points)	35°	18°	17°	8°	16°
Maximum Power (Watts)	300	250	300	300	50
Mounting Section	68 cm Long @ 150 MHz 48.3 mm Dia.	53 cm Long @ 150 MHz 70 mm Dia.	30 cm Long 48.3 mm Dia.	30 cm Long 69 mm Dia.	
Termination	"N" Type Female Inside Mounting Tube (7/16 DIN optional)	"N" Type Female Fixed At Base	"N" Type Female Inside Mounting Tube (7/16 DIN optional)	"N" Type Female Inside Mounting Tube	"N" Type Female
Mounting	Hot Dipped Galvanised Steel Parallel Clamps	2 x 90024800 Clamps to fit poles 50-75 mm dia. (Not supplied as standard)	Hot Dipped Galvanised Steel Parallel Clamps	Hot Dipped Galvanised Steel Parallel Clamps	With Clamp MA621AZ30 (supplied) to fit on Ø 25 to 50 mm mast
Construction					Glass Fibre
Length (cm)	380 @ 150 MHz	608 @ 150 MHz	279 @ 460 MHz	540 @ 450 MHz	240
Weight (kg)	6.5 @ 150 MHz	12 @ 150 MHz	4.5 @ 460 MHz	12 @ 450 MHz	2.7
Wind Loading N @ 45 m/s	270 @ 150 MHz	450 @ 150 MHz	175 @ 460 MHz	380 @ 450 MHz	80

Please state exact frequencies required when ordering

** Can be supplied with electrical beam tilt, please specify requirement when ordering.*

† *7530, 7549, 5514 and 7586 Antennas are supplied with lightning protection and remain intact after a strike of 250,000 amp/sq. second.*



SITE INSTALLATION SURVEY

- **Site Name**

- **Site Position**

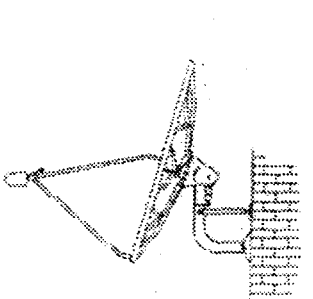
  Determine the exact position of the site in latitude and longitude either from a map or using a hand held GPS Receiver. The latitude /longitude should be accurate to 10 seconds of Arc

- **Satellite Dish Fixing**

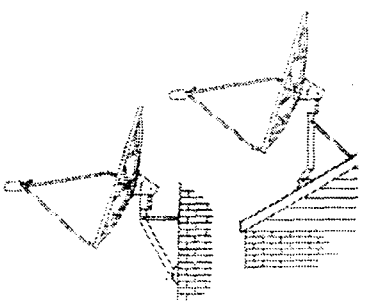
  There are only two fixings available for the type of dish to be used:-

Wall Roof Mount:-	Model No. 6041
Wall Mount (See below)	Model No. 6038

(For other types of fixing see Note)



6038
WALL MOUNT



6041
WALL/ROOF MOUNT

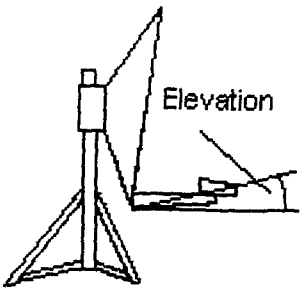
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- **Line of site for Dish**

When considering the position of the dish antenna you will need to take in consideration any obstruction that may affect the receive signal and also any future obstructions i.e construction work, tree's growing. parking of vehicle's , infact anything that could affect a line of sight.

See below for position of antenna:-



Approx position:-
Azimith:- **170°**
Elevation:- **22 - 24°**

- **Ease of Maintenance**

The mounting of the dish antenna if possible should be in such a position as to allow easy access for maintenance.

- **Security**

As well as the above requirement it should be considered that if access is too easy it may render the dish or LNB liable to theft. If possible mount the dish at a height where access is still available i.e.via a step ladder. Obviously these considerations may not be needed in a secure area.

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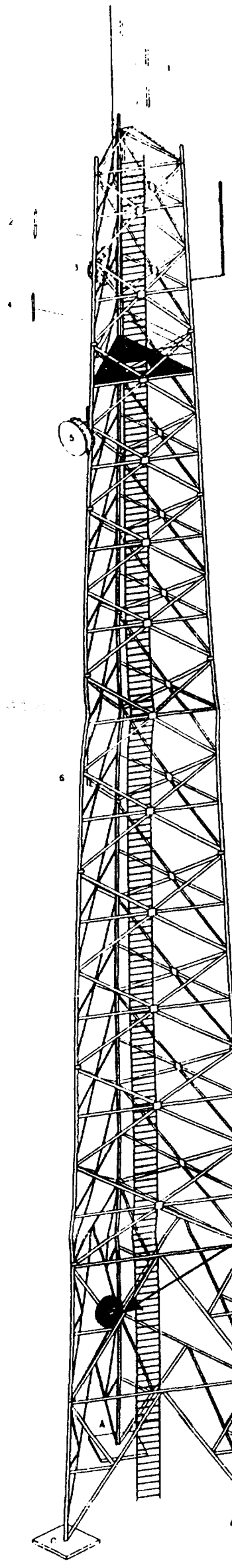
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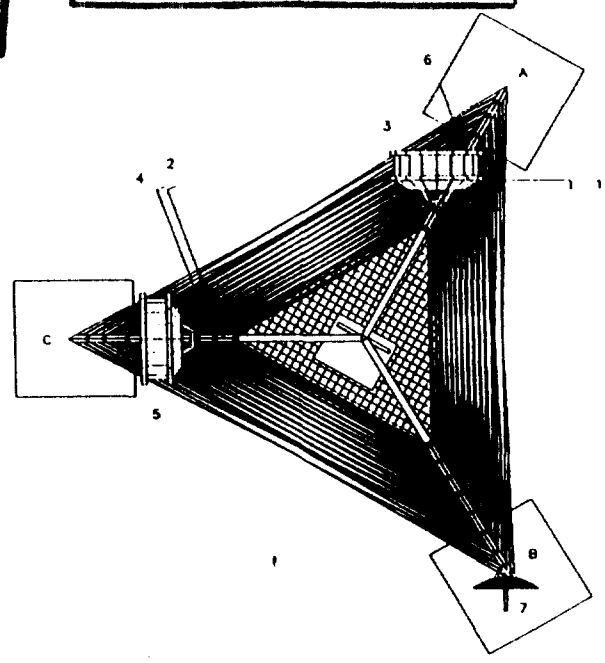
NB. THIS DRAWING IS NOT UP TODATE. FOR LATEST PLEASE REFER TO SCHEDULE BELOW.

(MERCURY COMMUNICATIONS ARE A NEW OPERATOR).

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ITEM	MOUNTING HEIGHT	LEG/ FACE	BEARING	SYSTEM	TYPE	VERTICAL WINDOW	FEDER TYPE I D	OWNER
1	48m	A	90	CELL	CARD 4 STACK	-	LDF 4 50	EME PMR
2	48m	C	340	-"	FOLDED DIPOLE	-	LDF 4 50	A.A.
3	45m	A	360	EMNET LINK 8430	1.2m DISH	MIN. 1 2m	ELIPTICAL	EME BOSTON
4	45m	C	340	-	FOLDED DIPOLE		LDF 4 50	A.A.
5	41m	A	360	EMNET LINK 8431	1.2m DISH	MIN. 1 2m	ELIPTICAL	EME BOURNE
6	25m	C	340	-	CO-LINEAR	-	LDF 4 50	HUTCHISON PAGING
7	5m	n/a	SOUTH	-	0.6m SAT DISH	n/a		HUTCHISON PAGING
8	46M	A		EMNET LINK	3 YAEI			EME
9	40M	B			1·2m DISH			MERCURY COMMS
10	35M	B			1·2m DISH			MERCURY COMMS
11	35M	A			DISH			MERCURY COMMS
12	24M	A			DISH			MERCURY COMMS
13	15M	C			DISH			MERCURY COMMS

EME EQUIPMENT SHOWN
HUTCHISON PAGING EQUIPMENT SHOWN
A.A. EQUIPMENT SHOWN

PRINTED ON 23-10-1997

East Midlands Electricity — Telecommunications

RADIO/PMR/SHARER
SPALDING S.S.
MAST DETAILS

DRAWN BY	SIMON	PROJECT: EMNET SITE
DATE	26/04/96	DRG No 4267-3 REV No 0
APPROVED BY	JOHN HIRTON	
SCALE	A3 SHOWN	
SHEET	01	

A1-V