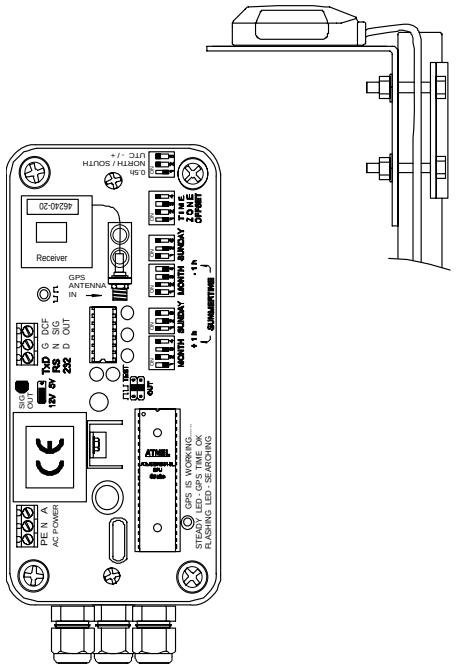
Installation Notes

K-GPS/DCF240 Mark II

DCF Receiver



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K-GPS/DCF GPS Receiver
Installation Notes

A. Commissioning:

Check if the GPS receiver is suitable for the local 240 voltage. Then set the DIP-switches to the correct setting for your area in respect to time difference from UTC (GMT) and daylight saving change over dates. Refer to the table of DIP switch settings in the receiver lid. During DIP switch setting the GPS receiver must be disconnected from mains.

Antenna General

1. The antenna is supplied with 2.5m of coax cable. Because of the very fragile GPS signals the cable is part of the antenna calibration and must therefore be handled with utmost care. Do not shorten or extend the antenna cable. Do not squeeze the cable, nor drive nails through it. Do not strain or force the cable. If the cable is damaged in any way, the receiver might get a distorted signal and as a result might not function.

Antenna Position

2. The antenna must be installed facing straight up into the sky with an omni-directional vision of approx. 75% of the sky. A mounting bracket has been included suitable for 20-30mm diameter rods. The antenna system is designed to see up to six satellites and has to be able to see a minimum of three satellites. If the antenna is not obstructed initialization will require only approx. 3 min. If the vision of the antenna is restricted, the initialization period might take much longer (up to several hours). If the antenna can not see more than two satellites the receiver will not be able to initialize at all.

Antenna Cable

The antenna cable is part of the overall calibration of the antenna system and must therefore be treated with respect. The cable must not be shortened, lengthened, squeezed or deformed in any way. Because the satellites are so far away, the signal (in the GHz range) is so faint, that any damage to the cable will interrupt the signal flow resulting in non-functioning of the receiver.

Antenna Plug

The antenna plug is very delicate and needs to be handled with care. Ensure that the plug does not get dirty, as that will prevent good, solid contact with the receiver and in due course interrupt the signal.
If the antenna plug has to be fed through a wall, drill a large enough hole for the plug to get easily through and protect the contact pins by rapping some tape around the plug.

Receiver Case

4. The receiver case is suitable for external installation. However for long term reliability we recommend to mount the receiver into another weather proof enclosure for extra mechanical and thermal protection.
In any case the cable glands have to face downwards to prevent any water (condense water) to enter the receiver.
Please also ensure good ventilation of the enclosure to prevent heat built-up.

Receiver Operation

5. After connection of the Antenna and 240VAC 50Hz mains the receiver starts the initialization routine. For monitoring purpose two red LEDs have been provided:

LED - GPS Synchronisation (right hand side, near processor chip)

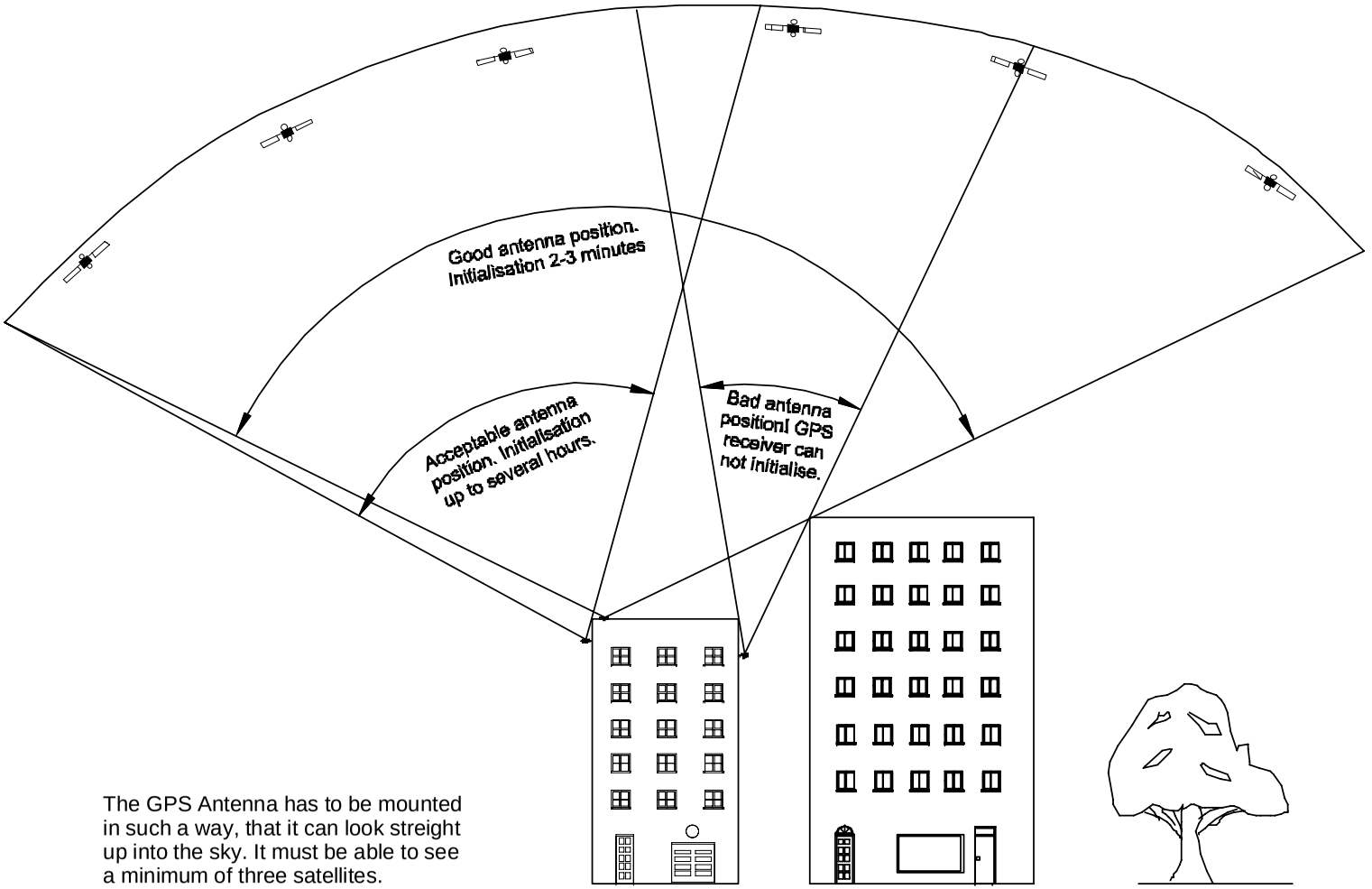
LED off:	No power (check fuse or mains)
LED on:	5V supply and GPS circuit working
LED brightly lid:	GPS in synchronisation
LED flashing:	GPS searching - no synchronisation

LED - OUTPUT (left hand side, near output terminal strip)

LED off:	No power (check fuse or mains)
LED on:	Output inactive
LED flashing:	Output active

Receiver Fuse

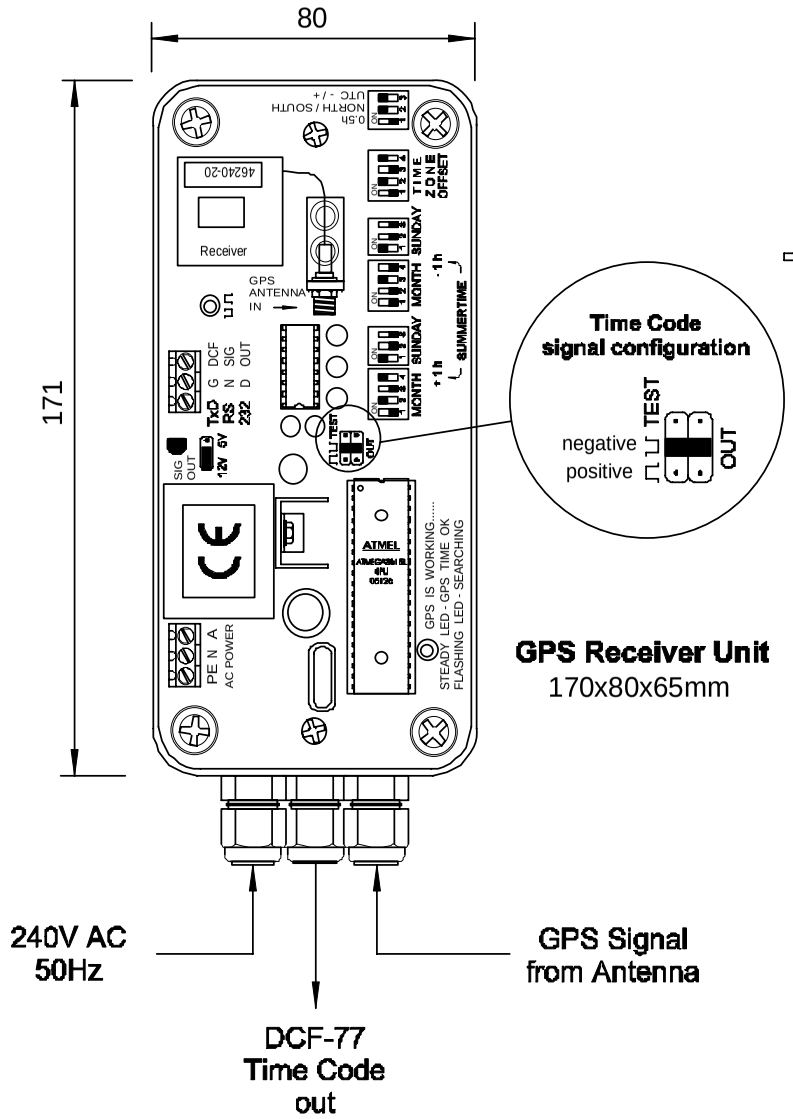
6. The GPS Receiver Mark II has no replaceable fuse. Mains protection is provided by means of a self-healing fuse built in to the mains transformer.



The GPS Antenna has to be mounted in such a way, that it can look streight up into the sky. It must be able to see a minimum of three satellites.

DIP-SWITCH SETTING				
TIME ZONE OFF-SET FROM UTC/GMT				
+/- HOURS	**SWITCH 1**	**SWITCH 2**	**SWITCH 3**	**SWITCH 4**
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF.
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
MONTH				
CHANGE-OVER MONTH	**SWITCH 1**	**SWITCH 2**	**SWITCH 3**	**SWITCH 4**
NO DAYLIGHT	OFF	OFF	OFF	OFF
JANUARY	ON	OFF	OFF	OFF
FEBRUARY	OFF	ON	OFF	OFF
MARCH	ON	ON	OFF	OFF
APRIL	OFF	OFF	ON	OFF
MAY	ON	OFF	ON	OFF
JUNE	OFF	ON	ON	OFF
JULY	ON	ON	ON	OFF
AUGUST	OFF	OFF	OFF	ON
SEPTEMBER	ON	OFF	OFF	ON
OCTOBER	OFF	ON	OFF	ON
NOVEMBER	ON	ON	OFF	ON
DECEMBER	OFF	OFF	ON	ON
SUNDAY				
CHANGE-OVER SUNDAY	**SWITCH 1**	**SWITCH 2**	**SWITCH 3**	
NO DAYLIGHT SAVING	OFF	OFF	OFF	
1. SUNDAY	ON	OFF	OFF	
2. SUNDAY	OFF	ON	OFF	
3. SUNDAY	ON	ON	OFF	
4. SUNDAY	OFF	OFF	ON	
LAST SUNDAY	ON	OFF	ON	
GENERAL SETTINGS				
ITEM	**SWITCH 1**	**SWITCH 2**	**SWITCH 3**	
½ HOUR OFF	OFF			
½ HOUR ON	ON			
NORTH		OFF		
SOUTH		ON		
BEHIND UTC (-)			OFF	
AHEAD UTC (+)			ON	
LED - GPS Synchronisation				
No Light: No power (check fuse or mains) **Steady Light: GPS in synch** **Flashing Light: Searching**				
LED - Output				
No Light: No power (check fuse or mains) **Steady Light: Output inactive** **Flashing Light: Output active**				

GPS Receiver Assignment



Time Code signal configuration

GPS Receiver Unit
170x80x65mm

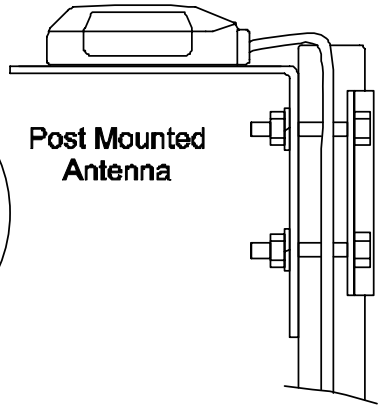
240V AC
50Hz

GPS Signal
from Antenna

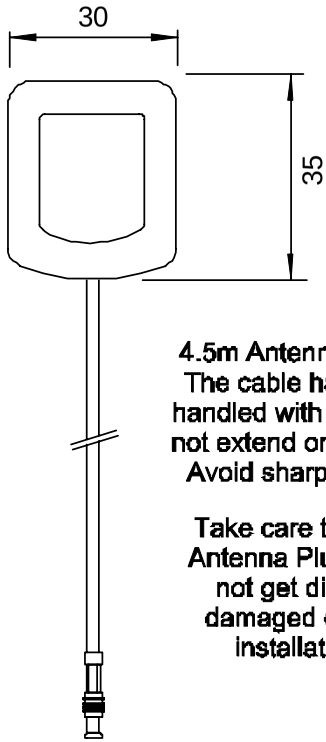
DCF-77
Time Code
out

K-AUSSOND GPS Receiver with DCF-77 Output

GPS Outdoor Antenna



Post Mounted Antenna



4.5m Antenna Cable
The cable has to be handled with care. Do not extend or shorten. Avoid sharp bends.

Take care that the Antenna Plug does not get dirty or damaged during installation.

Dip Switch Setting

NSW