

<b>THALES</b> NAVIGATION		Marketing & Technical Tips	
ZMax	N° 2003/01	Oct. 23th	By : Denis BERNARD
<b>How to connect an external GPS antenna</b>			

**A . Connection on the ZMax side :**



You have to use a “ Max –RF adapter “  
( the same as delivered with Backpack kit )

P/N 800978

GPS output is the top TNC female connector.

The other one is UHF

**B . Connection on the antenna side :**

a – if you use your Max-Trac GPS Antenna :

You have to use the “ Range Pole RF Adaptor “

( the same as delivered with Backpack kit )

P/N 800979

b – if you use another antenna ( see § C )

You can have a direct TNC connection .



## **C - Usable antennas**

a - the Max-Trac original ZMax antenna.

b – former Thales Navigation L1/L2 antennas :

- NAP002 ( P/N P0 101 158 )
- Geodetic IV antenna ( P/N 701975 )
- Aeroantenna AT 2775-42 ( P/N C0 000 792 ) ...

c – more generally any GPS antennas having a preamplifier powered by 5VDC and with a GPS gain between 30 and 40db can be tested.

## **D – Usable cables**

a – for fully guaranteed operation

The maximum length of coaxial cable has to be :

With small ( Ø 5 mm ) single ( KX15 ) or double shield ( RG223U ) coaxial cable or equivalent : 12 meters maximum.

*T.N. reference : 10m KX15 TNCm / TNCm P/N C505 0196*

With medium ( Ø 10 mm ) double shielded coaxial cable ( RG214U, KX13 or equivalent ) : 30 meters maximum.

For an easier setting up ( those cables are quite rigid ) two 1 metre cables are generally used at each end .

*Our reference : one x 30m KX13 Nm / Nm P/N C505 0168  
two x 1m KX15 TNCm / TNCm P/N C505 0156  
two x coaxial adaptor TNCf / TNCf P/N C505 0216*

With large low loss cables : depending on the cable specs, assuming the loss will not be greater than 10db.

B – for reception test only

For test purpose only, and accepting a lower sensitivity, that is the risk of loosing the low elevation SVs , a 30m small coaxial cable can be used ( total loss around 25db ) .

*T.N. reference : 30m RG223U TNCm / TNCm P/N C505 0188*