

TO TURN Receiver ON/OFF
 Press the ① button for 3-4 seconds
 when it's on, the requirement of 4 lights
 flashes.

THALES NAVIGATION
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 SEP 04

GSM PROCEDURE

Procedure to configure the GSM modem in transmitter.

- Attach external power cable to top port on back of receiver
- Insert Sim Card Test in the Com module *Done*
- Power on Zmax with Com module
- Select baud rate port A at 19200 bauds (menu: setting/baud rate) - *already done*
- Connect a RS232 cable between Port A and a PC which is equipped of a communication soft (ex: hyperterminal) *Port A is middle port on back of receiver*
- Configure the PC baud rate at 19200 baud / 8 data bits / none parity / one stop bits / no control flow
- Send the following commands to Zmax:
 - \$PASHQ,RID (validation of the RS232 link)
 - \$PASHQ,GETVER
 - \$PASHQ,VERSION (information about the presence of the Com module answer :
radio: GSM)
 - \$PASHS,MDM,ON (select and power on GSM modem)
 - \$PASHS,DSY,D,A (data from port D modem are sent to port A)
 - \$PASHS,DSY,A,D (data from port A are sent to port D)
 - AT+CBAND? The command questions about the selected band:
 - n=3 for PCS 1900 MHz
 - n=4 for GSM/1800 MHz

Typing in "AT+CBAND?"
 should return a message
 AT+CBAND=3. If so,
 proceed to
 else type in

- if n= 4, which corresponds GSM/DCS band, then send:
 - AT+CBAND=3 : select 1900 MHz band
 - \$PASHS,DSY,OFF (disable daisy chain between the com module and port A)
 - \$PASHS,MDM,OFF (turn off the GSM modem)
 - \$PASHS,MDM,ON (select and power on GSM modem, cycle on/off to store band)
 - \$PASHS,DSY,D,A (data from port D modem are sent to port A)
 - \$PASHS,DSY,A,D (data from port A are sent to port D)
 - AT+CBAND? Verification of the selected band :n=3
 - AT+CMER=0,0,1,0,0 (to receive display's messages)
 - AT+CKPD="#",50 (to insert test mode)
 - AT+CKPD="110512#" (select channel number 512: see below)
 - AT+CKPD="1205#" (select the power level 05)
 - AT+CKPD="314#" (generating RF)
 - Verify with a spectrum analyser the emitted frequency
 - Make measurement for approval FCC
 - AT+CKPD="01#" (Exit Test mode)

1. There are two ^{66mm} modules to test. When new, and they are, you have to press down ^{hard} on the module to snap it in.
2. You use Evaluate PC sw (see enclosed CD) to select Baud rate and send "PASH" commands ("Proprietary ASCII commands")
 To run Evaluate, double click on Eval32.exe.
 - Click on OK button to connect to GPS receiver
 - Select the com port the receiver/PC cable is using (com1, usually)
 - Set Baud to 19,000, 8, none, 1, "use RTS/CTS"
 - click on "OK"
 - click on "connect"
 - click on GPS > Terminal and type in the above sequence of commands in the command line. First command is \$PASHQ,RID (all caps, no spaces).
 - when done with test, click on GPS > Disconnect
 - Turn receiver off

Notes:

Selection channels xxxx valid values: For GSM: 0001-01124
For DCS: 0512-0885
For EGSM: 0975-1023
For PCs: 0512-0810

GSM:

$$F=890+(N*0.2)$$

N - channel (1 – 124)

F – Frequency : CH1 890.2MHz

CH2 890.4MHz

CH3 890.6MHz

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CH124 914.8MHz

DCS:

$$F=1710+(N*0.2)$$

N - channel (512 – 885)

F – Frequency : CH512 1710.2 MHz

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CH885 1784.8MHz

PCS:

$$F=1850+(N*0.2)$$

N - channel (512 – 810)

F – Frequency : CH512 1850 MHz

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CH810 1909MHz