

Recommendations on the GSM & AMPS outdoor cellular antennas usage with Globalstar subscriber equipment

Globalstar mobile user terminals offer an advantage of useful property – the combination of satellite and cellular modes in one unit. This property retains when GSP1600 (Qualcomm) and SAT550 (Telit) UT's have operating jointly with car-kits like GCK1400/1410, SAT551 and marine kit SAT550X. In this case it's necessary to make right choice of outdoor cellular antenna and to arrange the corresponding cable connection.

Below we'll give GlobalTel subscriber some advice to help in solving of the shown problem.

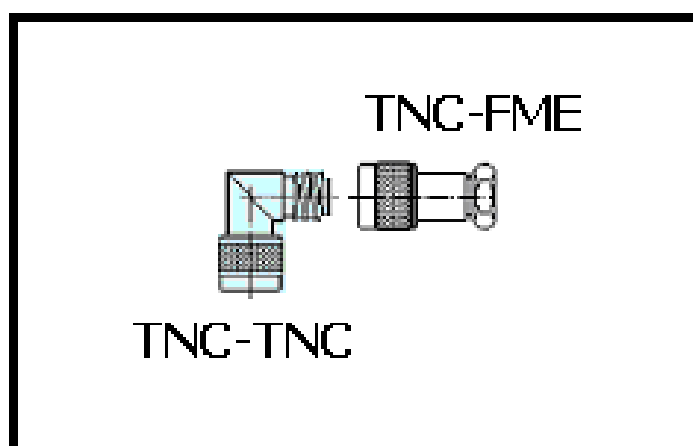
1. Case of SAT 551, SAT550X.

Considered devices have cellular antenna **cable connector** on the bottom of car-kit base unit (cradle). It is TNC-male connector and it's marked by black square sign. The cradle bottom plate configuration does not allow to use the standard antenna cable connector. The special 90° angle adapter is needed. One port of the adapter should always be the TNC type (male).

Depending of the antenna cable connector another port of 90° angle adapter should be one of the following types:

##	Antenna cable connector	Adapter input	Adapter output
1	TNC (male)	TNC (male)	TNC (female)
2	FME (female)	TNC (male)	FME (male)
3	FME (male)	TNC (male)	FME (female)

In case 2 or 3 the combination of two adapters is possible: (1) 90° angle adapter TNC (male)-TNC (female) and (2) direct adapter TNC (male)-TNC (male). An example of such combination is shown on the Picture below.



Recommended antennas:

For cellular communication with SAT551 car-kit in 890-960 MHz band we recommend any of the outdoor car antennas available on the market with the cable connectors agreed to the upper table requirements.

For SAT550X the vendor company (ICN Electronics) recommends to purchase from local sellers the Maritime/ River boats antennas with following parameters:

Frequency band	- 890-960 MHz
Mounting type	- fixed mast fastening
Gain	- greater than 3 db (collinear antennas)
Cable	- minimum losses
Output cable connector	- TNC (male), (90°); other connector possible with right choice of the corresponding angle adapter.

2. GCK1400/ 1410 car-kits

GCK1400/1410 car-kits also equipped with cellular AMPS antenna output. In this case connector is positioned (by the design) not on the cradle back panel but at the end of special cable. The other end of cable is rigidly fixed inside epycradle for GSP1600 UT. The connector type is MiniUHF (female). Any outdoor car Antenna for AMPS cellular network can be adapted for GCK1400/1410. Antenna with MiniUHF (male) connector is preferable. In case of TNC antenna cable connector, you need adapter TNC (female) to MiniUHF (male).