

Re: GPSmap60C – External Antenna Jack Voltage Output?

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"w a y p o i n t" <waypoint@ARMY.com> wrote in message
news:cimo3m\$tbh\$1@nobel.pacific.net.sg...

>

> *Hi All,*

>

> *I've tried emailing Garmin, looked through my manual and even read Joe and*

> *Jack's review. But for the life of me still cannot find the voltage output*

> *from the external antenna jack. Anyone here know? I'm thinking of getting*

> *either the MM-II or one of the other many generic low-mA OEM antennas but*
do

> *not know if they will work right; the minimum voltage required for the*

> *internal antenna to shutdown and switchover to the external one. I*

currently

> *have an old LOWE and was thinking of replacing it due to the 60C's use of*

> *only 2-AAs.*

>

> *Can anyone here enlighten me?*

Not so easy to answer, since the voltage drops with load. On my Garmin iQue, unloaded output is 2.66 volts. With a Gilsson antenna, voltage drops to 1.99. The Gilsson is still a low consumer, drawing about 10 mA if I remember correctly. If I insert a bias tee to feed it more, I will gain a few dB on the signal bars. Best way to know is obviously to hook up a cable with mcx connectors and insert instruments to measure. That's what I did. I didn't have the opportunity to try the 60 C though.

There are many antennas that work well on the new range of low voltage GPS receivers, among them the Gilsson, Garmin 27 C and Wi-sys 3910. The Gilsson has by far the best performance/price ratio. If voltage goes below 1.7 volts, I believe the Garmin 27 C is to be preferred but it has less amplification than the others when fed more than 2.5 volts. It might only contain one amplifier stage, whereas others contain two.

This said, all these antennas work at the very lower end of their power range as voltage drops. I believe the amplifier circuits in these antennas

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are 3 volt circuits (or 3.3). The internal working voltage of the Gilsson when fed 9 volts to the voltage regulator is 2.93 volts.

Antenna makers are aware that there is room for antennas optimized to work at around 2 volts and I believe some are working on it. This conclusion is drawn from the fact that they were initially inclined to discuss the problem and to gather information, but then turned silent.

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