

## PROGRAMMING INSTRUCTIONS

# Programming the Trimble Acutime 360 GPS Antenna with the STR modules

**Summary:** Unlike the older models of the Trimble antennas, the Acutime 360 smart antenna is no longer compatible out of the box. This Tech note outlines the required steps to ensure the latest Acutime 360 antenna works properly with the Cyber Sciences STR-100.

Note: The 360 antenna is available in two part numbers, Standard (106406-00) and GPS Only (106406-05). Cyber-Sciences can pre-program the GPS-Only model (106406-05). It is also field programmable by an installer using these instructions. The Standard Model (106406-00) will not work with the STR-100.

Note: Setup is not required for Acutime 360 Smart Antennas purchased directly from Cyber Sciences. We have performed this step before shipping it out of our factory.

### Introduction

The Cyber Sciences STR modules (STR100 and STR-100/IRIG-B) have been tested with the Trimble Acutime GG GPS antenna as well as its predecessors, Acutime Gold and Acutime 2000. Since then, Trimble has discontinued these models and replaced them with the Acutime 360 antenna. Changes in the design of this antenna has also changed its compatibility with the STR modules. This document describes how to eliminate these issues for the application to work reliably.

### Wiring:

All wiring for the three models of Trimble smart antennas (Gold/GG/360 GPS-Only) is the same and should be wired per the Instruction Bulletin (IB-STR-01R4) which may be found at the following link:

[https://www.cyber-sciences.com/documents/IB-STR-01\\_STR-100\\_Users\\_Guide.pdf](https://www.cyber-sciences.com/documents/IB-STR-01_STR-100_Users_Guide.pdf).

### Required Software and Hardware:

Trimble Acutime 360 Starter Kit with cable (106222-00) comes with an Interface Module that is required for programming an Acutime antenna. Trimble VTS software is also required and may be found on Trimble's website at the following link:

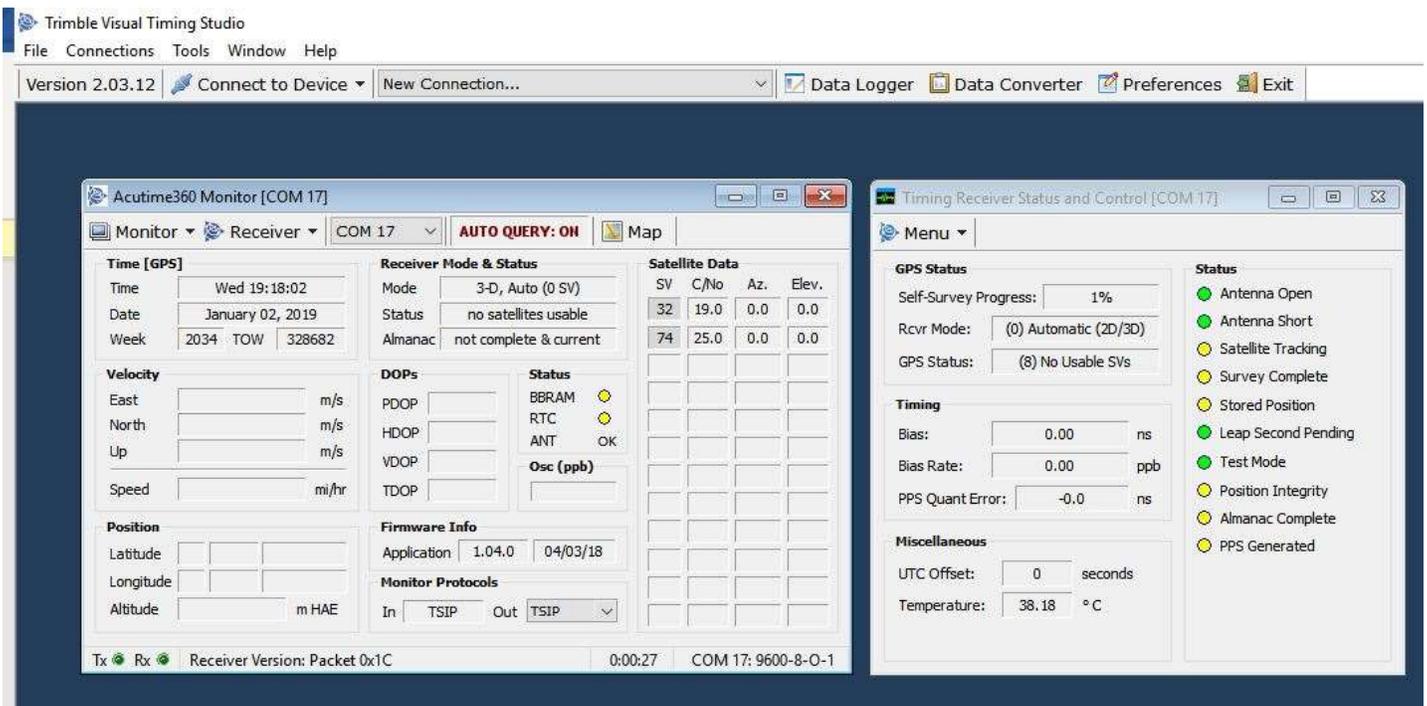
<https://www.trimble.com/timing/lab-kit.aspx>

### Setup

1. Use the Serial Interface box Trimble includes with the Acutime 360 Starter kit. Follow the starter kit instructions to connect the antenna to a PC and open the Trimble VTS software. The Interface box will appear as two serial ports in the VTS software as seen below.



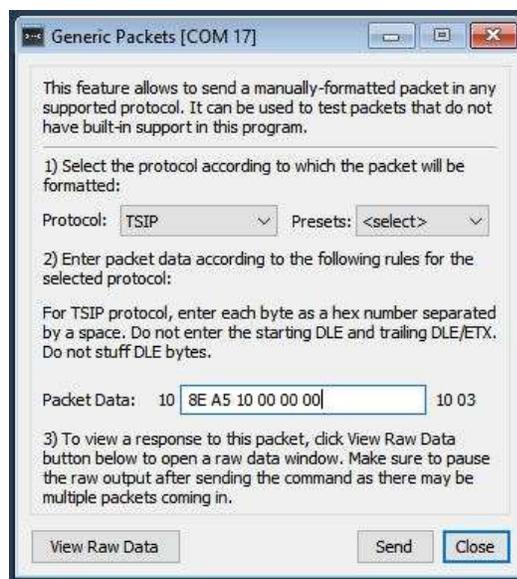
- Through the interface box , connect to Port B. Port B, is normally the second port listed in the “New Connection” drop down menu and must be used to change settings. Once connected, the following screen will appear:



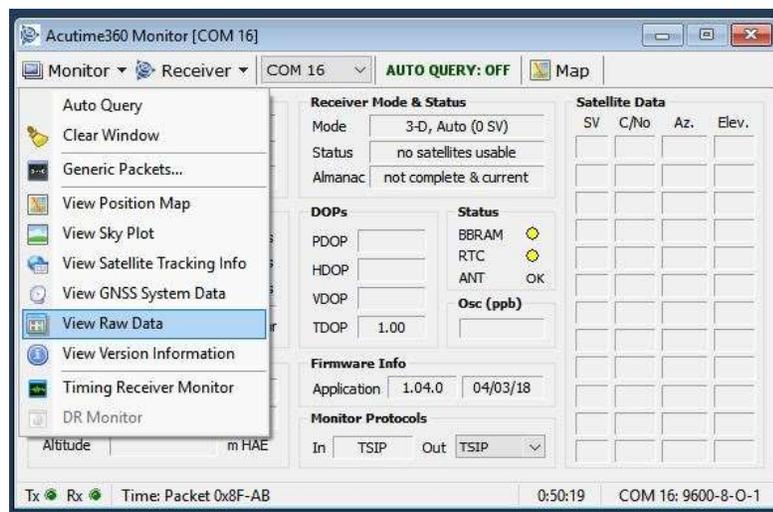




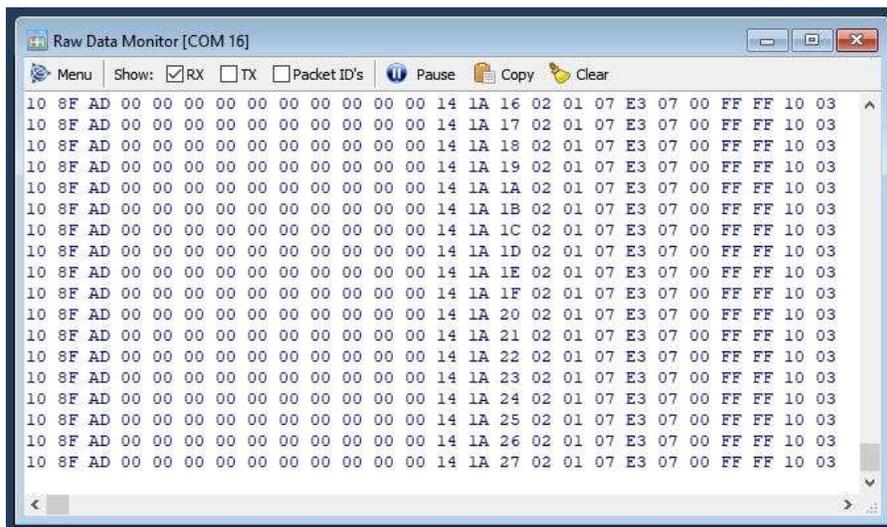
6. The generic packet window will pop up. Enter “8E A5 10 00 00 00” into the Packet Data field as shown below. This command will change the format of the TSIP packets sent from the Acutime antenna to the STR module.



7. Click “Send” and wait a few seconds, then go back to the Receiver Configuration window and click “Save Configuration” this will store the current configuration in the antenna’s non-volatile flash memory.
8. To verify the setup is correct, connect to the first serial COM port (Port A) with VTS and on the Acutime360 Monitor window go to, Monitor > View Raw Data



- The Raw Data Monitor window will pop up and you will see TSIP packets being sent from the Acutime antenna once a second, the packets should all start with “10 8F AD” as shown in the figure below.



- If your monitor is showing commands that start with “10 8F AB”, try the process one more time. Once “10 8F AD” packets are seen, the process is complete. If it continues to show “10 8F AB”, please call Cyber-Sciences technical support at 615-890-6709 for assistance.
- Now, you can disconnect from the antenna within the VTS software and install the Acutime 360 antenna as normal with a STR-100 or STR-100/IRIG. \*\*Note, performing a

Factory Reset command from the STR-100 or STR-100/IRIG will return the Acutime 360 antenna back to its default settings and it will need to be reprogrammed with this process to work correctly with the STR-100 or STR-100/IRIG.

Jan-2019

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