


Saving an Alignment on the Smart Aligner Tool

NOTE: It is assumed that the user is already familiar with how the Smart Aligner System (Smart Aligner Tool, Universal Mounting Bracket and App) operates and mounts to standard antennas. If not please follow instructions for operation of the Smart Aligner System by watching our videos and reading the User Guide and other information at:
<http://www.mutiwavesensors.com/antenna-alignment/>

There may be times when communication to the Tool through WiFi may not be operating properly. The Smart Aligner Tool allows you to save an alignment (STORE SURVEY) to internal storage on the Tool. You can then recall the data from the Tool and create a Report. It is recommended that you get familiar with this procedure before you go to the site .

STEP 1: Set local time on Tool



Press the Menu/Enter button  on the Tool and then scroll down using the up or down arrows to **TIMEZONE ADJUST** and select

If you do not have an Azimuth solution (either the Tool is indoors or the arms are not extended) then GO TO **STEP 2**

If you do have an Azimuth solution the GO TO **STEP 3**

STEP 2: Set the TIMEZONE ADJUST (no Azimuth solution)



Use the up or down arrow to adjust the UTC for your area. Press the Menu/Enter button.

NOTE: To determine the correct UTC offset google “UTC time”. You will see a time listed. For example if it displays 10:47 PM and your local time is 6:47 PM then you are 4 hours behind the UTC time. So you would enter -4 as shown above. If you are not able to get access to the internet then go to STEP 3, get an Azimuth on the Tool, and set your local time

STEP 3: Set the TIMEZONE ADJUST (Azimuth solution)

NOTE: Date and UTC time is transmitted from the GPS satellites



Use the up or down arrows to set your local time. Press the Menu/Enter button.

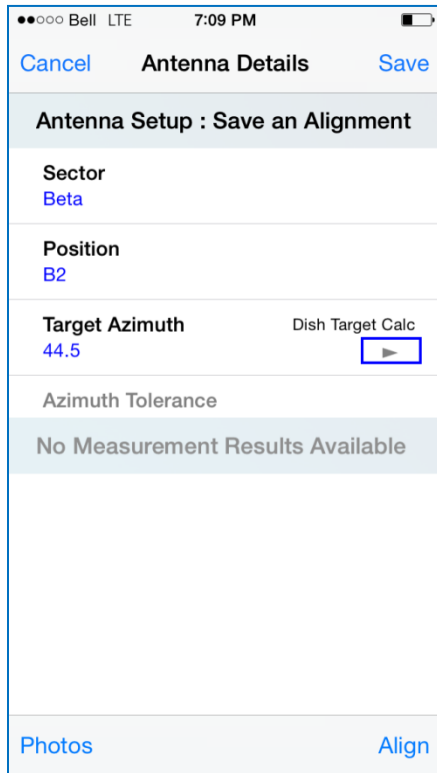
Next step is to Store the Survey (or alignment) data on the Tool

STEP 4: Saving Alignment Data to the Tool

When “Storing the Survey” all the alignment data for the specific antenna will be stored on the Tool. This data can then be transmitted to the App at a later time for Report generation.

Even though you are not connected to the Tool use the App and go to the Site/ Antenna that you are aligning so that you can enter the saved alignment identifier as described in the procedure.

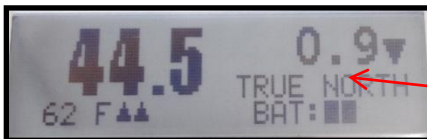
STEP 4a: Run the App and go to the Antenna Details screen of the antenna to be aligned



Enter the appropriate parameters for the antenna to be aligned.

NOTE: Since you are not connected to the Tool with WiFi you will not be using “Align” in the App at this point in time.

STEP 4b: Align the Antenna to the correct Azimuth and Tilt



User screen on Smart Aligner.
Example: Aligned the antenna to 44.5° Azimuth and a Downtilt of 0.9°.

You are now ready to Store the Survey (saving of alignment data to the Tool)

STEP 4c: Store Survey

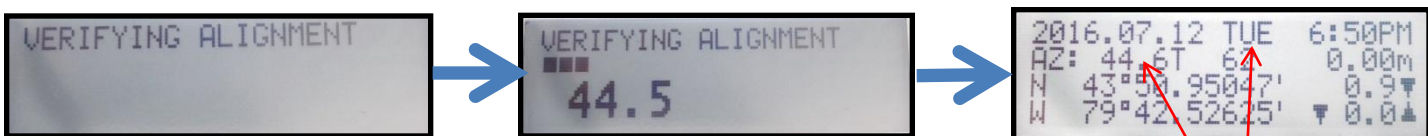


Press the Menu/Enter button.
Using the up/down arrows scroll
to **SURVEY MENU** and select it.

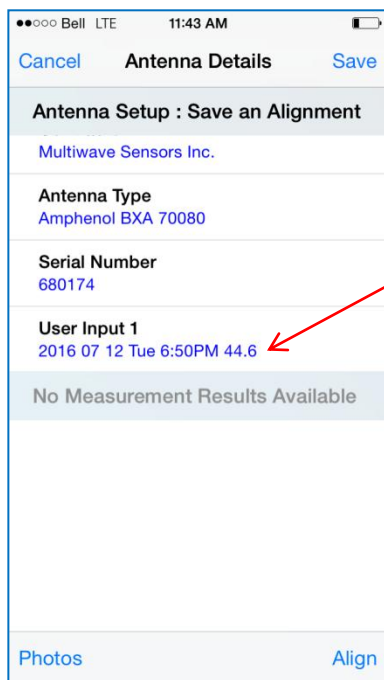


Select **STORE SURVEY**. Press the
Menu/Enter button. Verification
and storage will start

VERIFYING ALIGNMENT is progressing and will end with a summary of all the data.



STEP 4d: Enter the alignment identifier into the App for the antenna as a reference



Enter this information: DATE TIME AZIMUTH

To here

You can use the App to
take **Photos** of the
antenna/site

Now the antenna (this example is SEC: Beta and POS: B2) has an identifier to create the report

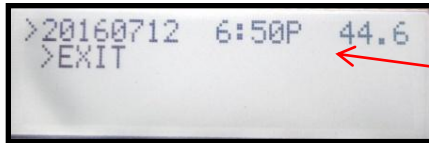
Pressing the Menu/Enter button on the Tool will return to the main Azimuth screen

Once you can communicate to the Tool with WiFi you can recall the alignment data for this Antenna

STEP 5: Recall the stored Survey (alignment data) to the App and Create a Report



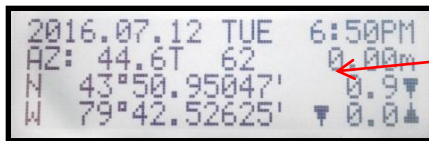
Press the Menu/Enter button. Using the up/down arrows scroll to **SURVEY MENU** and then select **SELECT SURVEY**



Select the Survey identifier

DATE – TIME – VERIFIED- AZIMUTH

The following screen will appear. At this point in time the Tool is outputting the Survey (alignment) data via WiFi. You can now connect to the Tool and create a Report

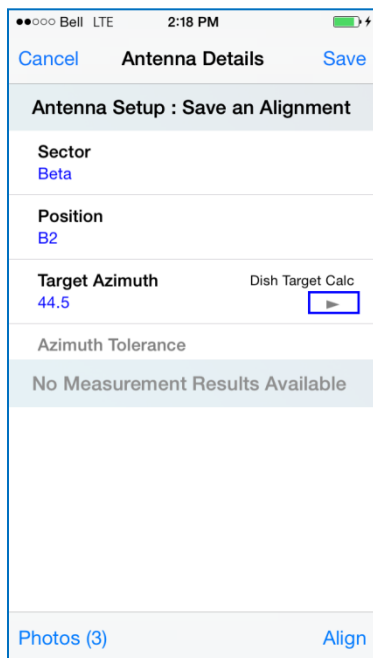


Summary screen of the Survey (alignment) data

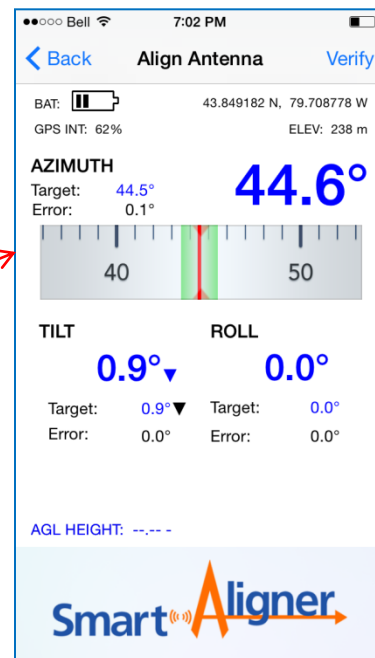
NOTE: There is a known bug where the Latitude and Longitude may display as zero's on this screen. It is only a display bug as the data is stored on the Tool and will appear on the report .

STEP 6: Start the App to create a Report

Connect your mobile device to the Tool and run the App. Go to Site Survey and select the antenna



Select **Align** and the **Align Antenna** screen will be displayed with the alignment data



You are now ready to Verify and Create a Report

STEP 7: Verify the results and create a Report

Align Antenna

Verify

BAT:

43.849182 N, 79.708778 W

GPS INT: 62%

ELEV: 238 m

AZIMUTH

Target: 44.5°

Error: 0.1°

44.6°

40

50

TILT

0.9°

ROLL

0.0°

Target: 0.9°

Error: 0.0°

Target: 0.0°

Error: 0.0°

AGL HEIGHT: --:--

SmartAligner

Select **Verify**

After Verification
the Measurement
Results are saved to
the antenna

3 **Photos** were taken
at the site/antenna

Cancel

Antenna Details

Save

Antenna Setup : Save an Alignment

Contractor

Multiwave Sensors Inc.

Antenna Type

Amphenol BXA 70080

Serial Number

680174

User Input 1

2016 07 12 Tue 6:50PM 44.6

Measurement Results

Date

2016-07-12

Time

18:50:11

Measured Azimuth

44.6° (Difference = 0.1°)

Photos (3)

Align

You can now create a Report

SmartAligner

GPS Antenna Alignment Tool

MultiWave Sensors

www.mutlwavesensors.com

Site Alignment Results

Site: Save an Alignment

Report Date: 2016-07-14 @ 14:24:22

Multiwave Sensors Inc.

110 Parr Blvd, Unit 1

Bolton, Ontario

L7E 4J4, Canada

loruce@mutlwavesensors.com

www.mutlwavesensors.com

SmartAligner SN: 1

SmartAligner FW: 2.00.02

Alignment Date: 2016-07-12 18:50:11

GPS Integrity: 62

Latitude: 43.849182 N

Longitude: 79.708778 W

Elevation: 238 m

Contractor: Multiwave Sensors Inc.

User Input

2016 07 12 Tue 6:50PM 44.6

Antenna SN: 680174

Antenna Type: Amphenol BXA 70080

Carrier: AT&T

Site: Save an Alignment

Sector: Beta


Position: B2

AGL Height:


Electrical Tilt: <not entered>

	MEASURED	TARGET	DIFFERENCE
Azimuth (True)	44.6°	44.5°	0.1°
Tilt	▼ 0.9°	▼ 0.9°	0.0°
Roll	0.0°	0.0°	0.0°


2016-07-14 14:23:29 EDT



2016-07-14 14:23:29 EDT



2016-07-14 14:25:20 EDT



No Photo Taken