

# HOW TO RE-AIM YOUR SATELLITE ANTENNA

- 1) Obtain your local elevation and azimuth specifications from your favorite source. Below are a few reliable options based on compatibility with “Google” and “Internet Explorer” web-browsers. These web versions are detailed on the following pages.
  - a. [www.dishpointer.com](http://www.dishpointer.com) – Page 3
  - b. [www.satpointer.com](http://www.satpointer.com) – Page 7
  - c. [www.satlex.de](http://www.satlex.de) – Page 10
  - d. Phone app options: Apple – Theodolite or Android – Dioptra
  
- 2) Before you move your dish, it is strongly advised that you obtain your current location figures (from the website of your choice) and mark your current elevation and azimuth positions on the mounting pole.
  
- 3) Using a spectrum analyzer or other peaking device, adjust the elevation, azimuth and LNB polarization to the local specifications retrieved from the website of your choice. Important note: the satellite receiver equipment cannot be used by itself to locate the new signal because it won't lock up fast enough as you move your dish. Once you've located the new satellite and your receiver locks to it, it can be used to help fine tune the signal quality.
  
- 4) Verify equipment lock to the new carrier position.

# HOW TO RE-AIM YOUR SATELLITE ANTENNA IN 4 EASY STEPS

1

Mark your current elevation and azimuth with a heavy line.

4

Adjust polarization last



2

Adjust your elevation first.

3

Adjust azimuth second

[www.dishpointer.com](http://www.dishpointer.com)

1. Open the browser to [www.dishpointer.com](http://www.dishpointer.com).
2. In the location box enter your street, city and state or zip code. If it does not recognize your city substitute a larger city within the state. It will be close enough.

### Satellite Finder / Dish Alignment Calculator with Google Maps

Your location: e.g. streetname, zip code, (lat, lon):

akron st, 80112

Go!

3. Drop down the satellite selection and select "139W AMC-8 (GE-8)".

All Satellites | Motorized Systems | Multi-LNB Setups:

139W AMC-8 (GE-8)



4. Navigate up to the right side of the “your location” box and press GO.

### Satellite Finder / Dish Alignment Calculator with Google Maps

Your location: e.g. streetname, zip code, (lat, lon):

akron st, 80112

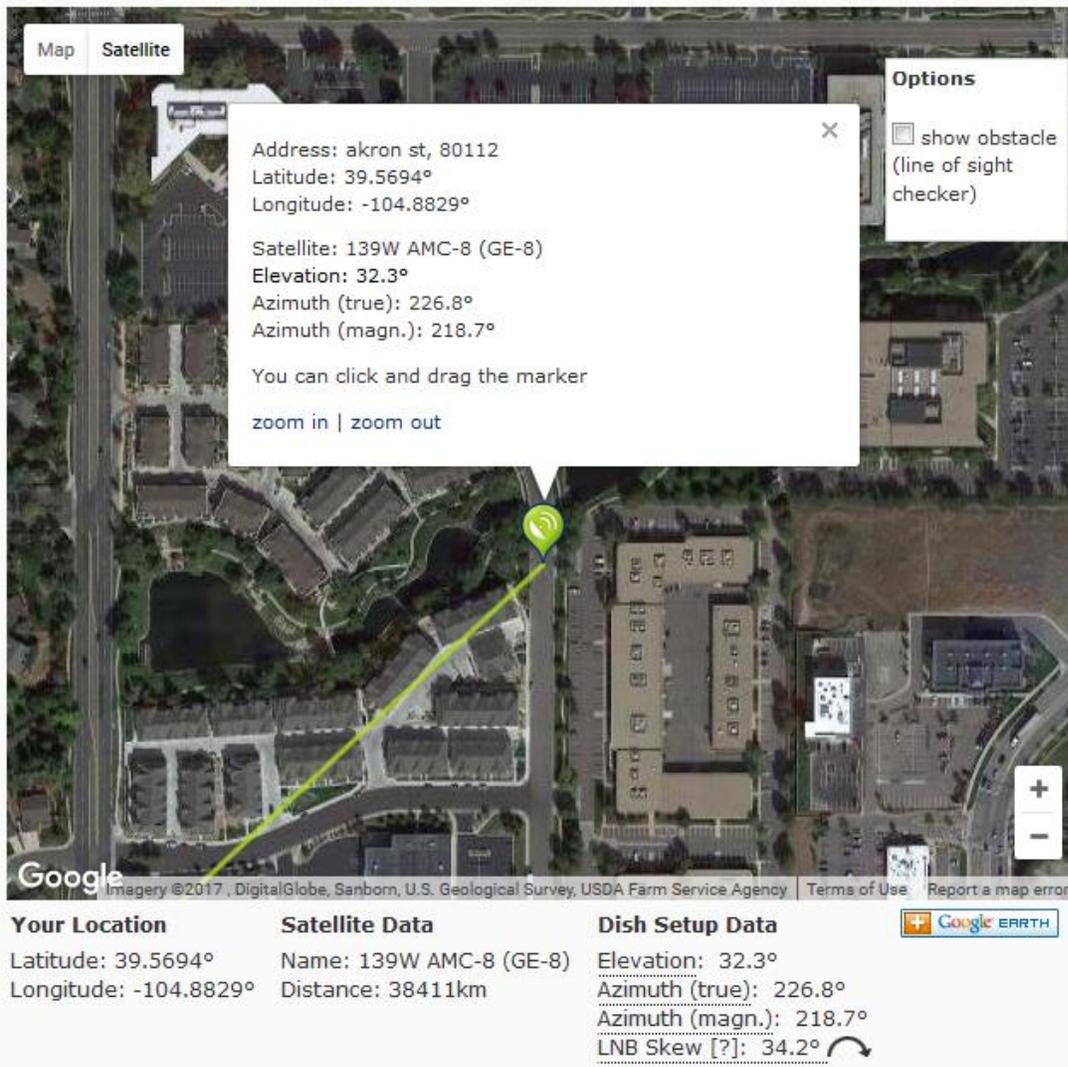
Go!

Most Popular Satellites in 

1. 119W DIRECTV 7S | ECHOSTAR 14 | ECHOSTAR 7
2. 110W DIRECTV 5 (TEMPO 1) | ECHOSTAR 10 | ECHOSTAR 11
3. 97W GALAXY 19 (G-19)
4. 61.5W ECHOSTAR 12 (RAINBOW 1) | ECHOSTAR 16 | ECHOSTAR 3
5. 91W GALAXY 17 (G-17)

All Satellites | Motorized Systems | Multi-LNB Setups:

139W AMC-8 (GE-8)



The screenshot shows the 'Satellite Finder' tool interface. At the top, there is a search bar with the text 'akron st, 80112' and a yellow 'Go!' button. Below the search bar, a list of 'Most Popular Satellites in USA' is displayed. A dropdown menu shows 'All Satellites | Motorized Systems | Multi-LNB Setups:' with '139W AMC-8 (GE-8)' selected. The main part of the interface is a Google Map showing an aerial view of a residential area. A green satellite marker is placed on the map, with a yellow line connecting it to a popup window. The popup window contains the following information: Address: akron st, 80112; Latitude: 39.5694°; Longitude: -104.8829°; Satellite: 139W AMC-8 (GE-8); Elevation: 32.3°; Azimuth (true): 226.8°; Azimuth (magn.): 218.7°; and instructions: 'You can click and drag the marker zoom in | zoom out'. To the right of the popup is an 'Options' box with a checkbox for 'show obstacle (line of sight checker)'. At the bottom of the map, there is a 'Google' logo and copyright information. Below the map, there are three columns of data: 'Your Location' (Latitude: 39.5694°, Longitude: -104.8829°), 'Satellite Data' (Name: 139W AMC-8 (GE-8), Distance: 38411km), and 'Dish Setup Data' (Elevation: 32.3°, Azimuth (true): 226.8°, Azimuth (magn.): 218.7°, LNB Skew [?]: 34.2°). A 'Google EARTH' button is also visible.

Your Location	Satellite Data	Dish Setup Data
Latitude: 39.5694°	Name: 139W AMC-8 (GE-8)	Elevation: 32.3°
Longitude: -104.8829°	Distance: 38411km	Azimuth (true): 226.8°
		Azimuth (magn.): 218.7°
		LNB Skew [?]: 34.2°

## 5. Take note of the current position data “Dish Setup Data”

All Satellites | Motorized Systems | Multi-LNB Setups:  
139W AMC-8 (GE-8)

Map Satellite  
 Labels

Options  
 show obstacle (line of sight checker)

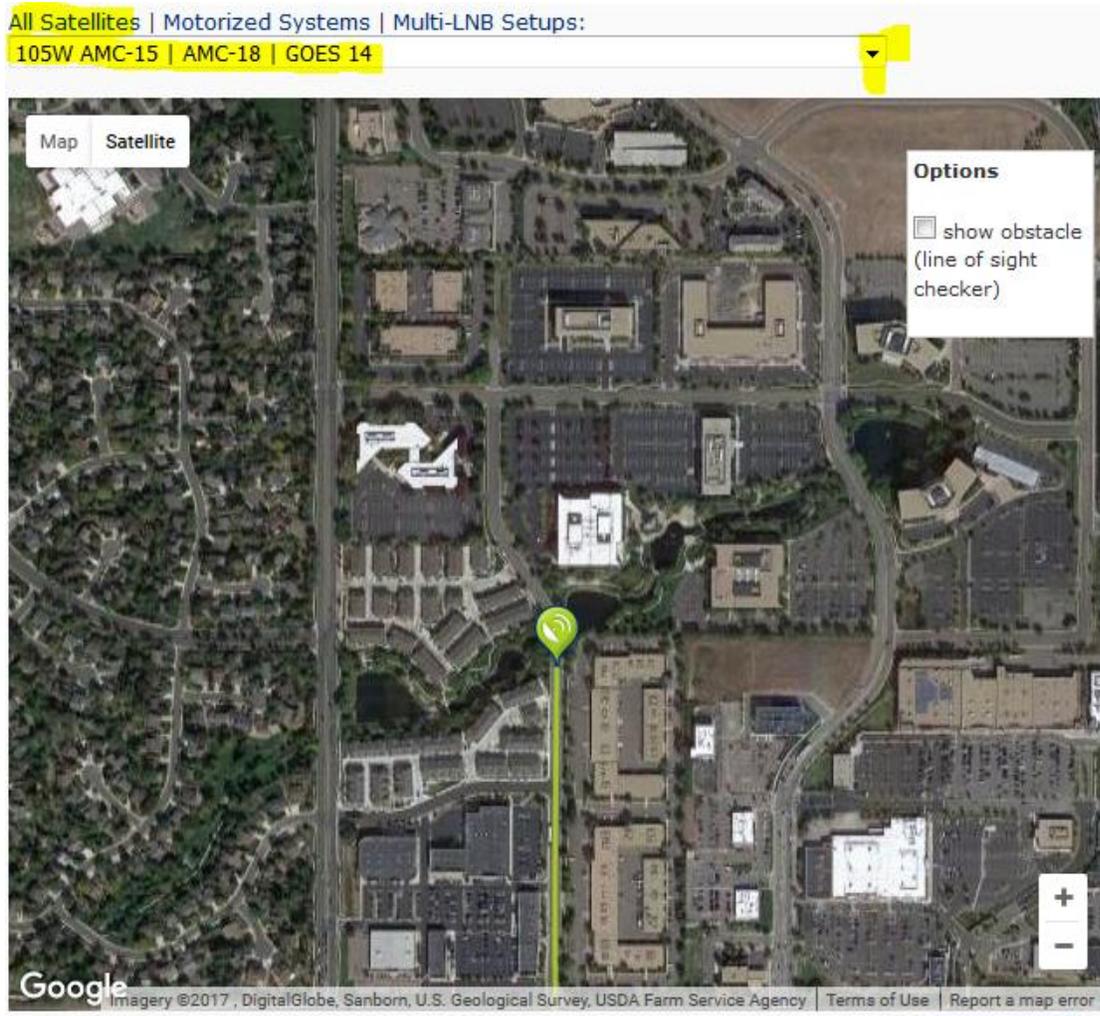
Address: akron st, 80112  
Latitude: 39.5694°  
Longitude: -104.8829°  
Satellite: 139W AMC-8 (GE-8)  
Elevation: 32.3°  
Azimuth (true): 226.8°  
Azimuth (magn.): 218.7°  
You can click and drag the marker  
zoom in | zoom out

Google  
Imagery ©2017, DigitalGlobe, Sanborn, U.S. Geological Survey, USDA Farm Service Agency | Terms of Use | Report a map error

Your Location	Satellite Data	Dish Setup Data
Latitude: 39.5694°	Name: 139W AMC-8 (GE-8)	Elevation: 32.3°
Longitude: -104.8829°	Distance: 38411km	Azimuth (true): 226.8°
		Azimuth (magn.): 218.7°
		LNB Skew [?]: 34.2°

Google EARTH

6. Now it's time for the new location information. Drop down the satellite selection in step 3 to "105W AMC-15/AMC-18/GOES14".



7. Navigate up to the right side of the "your location" box in step 4 and press GO. Then new information is updated in "Dish Setup Data".

Your Location	Satellite Data	Dish Setup Data	Google EARTH
Latitude: 39.5694° Longitude: -104.8829°	Name: 105W AMC-15   AMC-18   GOES 14 Distance: 37472km	Elevation: 44.2° Azimuth (true): 180.2° Azimuth (magn.): 172.1° LNB Skew [?]: 0.1° ↻	

8. Make the adjustments as noted on page 1, step 3 and depicted on page 2.

[www.satpointer.com](http://www.satpointer.com)

1. Open the browser to [www.satpointer.com](http://www.satpointer.com)
2. In the location box enter your street, city and state or zip code. If it does not recognize your city substitute a larger city within the state. It will be close enough.

1. Enter the address below Or navigate the map to find your address:

akron st, 80112

3. Drop down the satellite selection and select “139.0W AMC-8 (GE-8)”.

2. Select Satellite from the list, then drag the dish icon to the exact location on Map:

139.0W AMC 8

4. Navigate up to the right side of the city and state box and press SEARCH.

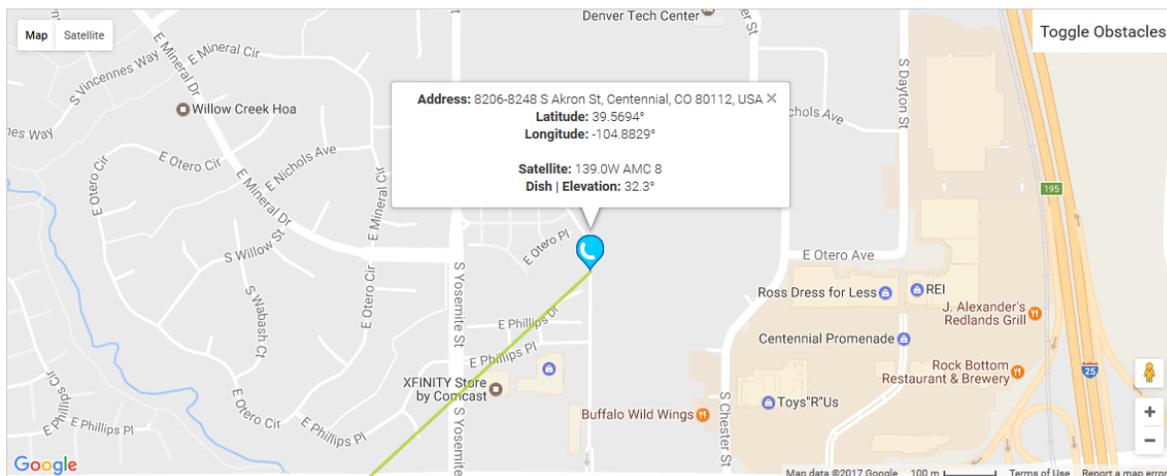
1. Enter the address below Or navigate the map to find your address:

akron st, 80112

SEARCH

2. Select Satellite from the list, then drag the dish icon to the exact location on Map:

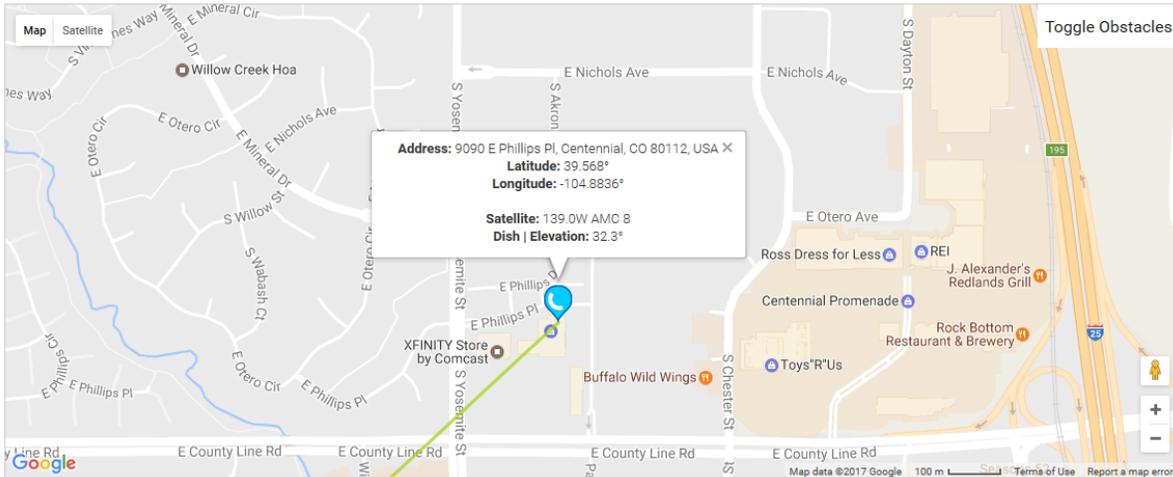
139.0W AMC 8



5. Take note of the current position data in "Satellite Dish Setup". You may drag the icon to a closer proximity to your exact location but the system generated location will likely be close enough.

2. Select Satellite from the list, then drag the dish icon to the exact location on Map:

139.0W AMC 8



**Satellite Dish Setup**

Skew of LNB: 34.2°  
 Dish | Elevation: 32.3°  
 Azimuth | True: 226.76°  
 Azimuth | Magnetic: 218.74°

**Location on map**

Latitude: 39.568°  
 Longitude: -104.8836°

**Satellite Info**

Name: 139.0W AMC 8  
 Distance: 38408.78 Km

6. Now it's time for the new location information. Drop down the satellite selection in step 3 to "105W AMC-15 + 18 / Satcom C5" and press SEARCH.

**SEARCH**

2. Select Satellite from the list, then drag the dish icon to the exact location on Map:

105.0W AMC 15 + 18 / Satcom C5

Satellite Dish Setup	Location on map	Satellite Info
Skew of LNB: 0.1°	Latitude: 39.5669°	Name: 105.0W AMC 15 + 18 / Satcom C5
Dish   Elevation: 44.2°	Longitude: -104.8825°	Distance: 37468.28 Km
Azimuth   True: 180.18°		
Azimuth   Magnetic: 172.16°		

7. Make the adjustments as noted on page 1, step 3 and as depicted on page 2.

[www.satlex.de](http://www.satlex.de)

1. Open the browser to [www.satlex.de/en/azel\\_calc.html](http://www.satlex.de/en/azel_calc.html).
2. Drop down the orbital position and satellite box to select “139.0W : AMC-8”.
3. In the dish location box enter your city and state. If you can’t find your exact location, substitute the largest city near you. This should be close enough.
4. Enter antenna diameter (minimum 370 x 370cm or 3.7m recommended).

The screenshot shows a web browser window with the URL [www.satlex.de/en/azel\\_calc.html](http://www.satlex.de/en/azel_calc.html). The page title is "Technology :: Calculators :: Calculator for azimuth and elevation angle". The form is titled "Enter satellite and dish location" and contains the following fields:

- Orbital position and satellite:** A dropdown menu showing "139.0° West : AMC 8".
- User-defined orbital position:** A text input field (empty) and a dropdown menu showing "East".
- Dish location (city/country):** A dropdown menu showing "Denver/CO".
- User-defined location (latitude/longitude)\*:** Two text input fields showing "39.75" and "-104.98".
- Antenna diameter (width):** A text input field showing "370" cm.
- Antenna diameter (height):** A text input field showing "370" cm.

A "Calculate" button is located at the bottom of the form. A note at the bottom right of the form reads: "\* In order to get the exact latitude / longitude of your location, please visit: - maps.google.com".



6. Drop down the orbital position and satellite box in step 2 to select “105.0West : AMC15/18”, select “calculate” and make note of the new data.

The screenshot shows the 'Enter satellite and dish location' interface on the satlex.de website. The 'Orbital position and satellite' dropdown is set to '105.0° West : AMC 15/18'. The 'Dish location' is set to 'Denver/CO' in the 'United States of America (us)'. The antenna diameter is 370 cm for both width and height. The 'Calculate' button is highlighted in yellow.

**Your location:**  
 Latitude: 39.75° N (39° 45' 0")  
 Longitude: -104.98° E (104° 58' 48")  
 City: Denver/CO  
 Country: United States of America

**Following values have been calculated for your location:**

- Azimuth angle: 180.03° (True North)
- Elevation angle: 44.05°
- LNB tilt (Skew): 0.02°
- Offset angle: 0.00°
- Distance to satellite: 37482.91 Km
- Signal delay: 249.89 ms (Uplink + Downlink)
- Declination angle: -6.20°
- Polarmount hour angle: 180.02°
- Angle setting on motor: 0.02° West
- Satellite: AMC 15/18 (105.0° W)

The interface also includes a diagram of the dish pointing towards the satellite, showing the azimuth angle (180.03°) and elevation angle (44.05°). A small diagram shows the LNB tilt (Skew) at 0.02°.

7. Make the adjustments as noted on page 1, step 3 and as depicted on page 2.