

## DTV Reception and Choosing an Antenna

Before you go out into the field to test the Digital Reading Service Receiver (RRS1100) and antennas, you may want to obtain a DTV area map from your broadcaster (generally available on broadcaster website). In addition, the following websites will assist in determining the broadcaster's signal power and type of antenna for a specific area/address.

### 1. Determine signal strength and location of towers for all broadcasters

DTV. Gov: <http://www.fcc.gov/mb/engineering/maps/>

- Enter the address, zip code, city, etc into the text box in the left hand corner, click Go!
- Local broadcasters, color coded by signal strength, will be on the left and a map of your location will be shown on the right.
- Click on a broadcaster's hyperlinked call sign, and the broadcaster's tower will show up on the map. An example is shown below.

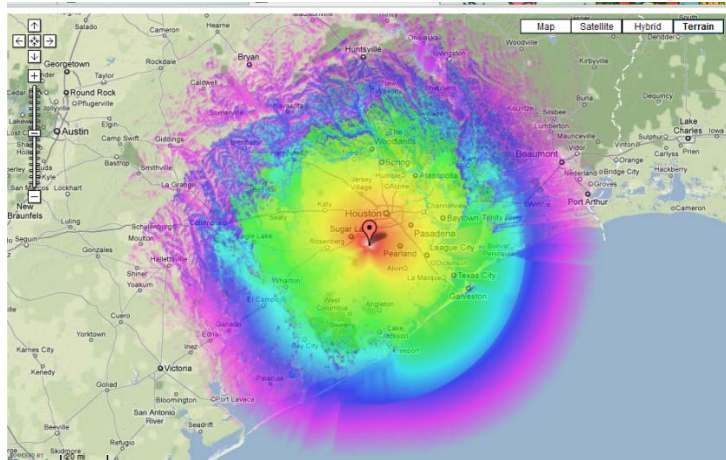
The screenshot displays the 'DTV Reception Maps' interface. On the left, there is a search bar with '77027' entered and a 'Go!' button. Below the search bar, a table lists 'Post-Transition Digital Coverage' with columns for 'Callsign', 'Network', 'Virtual Channel', and 'Band'. The table shows several channels with their respective signal strength indicators (represented by bars) and details like 'Channel: 20 (RF 19)', 'Receive Power: -23 dBm', and 'Compass Direction to Tower: S (194)'. A 'Gain/Loss Map' section is also visible. On the right, a map of Houston is shown with a red pin indicating the user's location. A yellow star on the map represents a broadcaster's tower. The map includes various landmarks and highways. A 'Please note:' section at the bottom of the map area states: 'Signal strength calculations are based on the traditional TV reception model assuming an outdoor antenna 30 feet above ground level. Indoor reception may vary significantly.'

- You can use this information to determine which stations have the strongest signal strength, and which would be the best to broadcast your RRS signal. You can also see how far the tower is located from you or your listener's specific location (typically, the closer the better).
- How to orient your antenna
  - Pull-up antenna: Point towards the direction of the tower near a window if possible.
  - If your antenna has a loop, orient the loop so that the signal from the tower is going through the middle of the loop perpendicularly.

2. Determine the broadcast area and strength for a single broadcaster

TV Fool: [http://www.tvfool.com/?option=com\\_wrapper&Itemid=80](http://www.tvfool.com/?option=com_wrapper&Itemid=80)

- a. Enter a broadcaster’s callsign into the text box, select “Digital” signal type, click the Search button. An example map is shown below.



- b. You can use this information to determine the overall broadcast area of a specific station, and to better understand the varying signal strength across a geographical area.

3. Choose an appropriate antenna

- a. After identifying a broadcaster to carry the Reading Service, use the signal strength information gathered in section 1 of this document for that callsign and choose an appropriate antenna with the chart below.

<b>Signal Strength</b>	Strong	Pull-Up Antenna
	Moderate	Non-Amplified (GE 24734)
	Weak	Amplified (GE 24727 or 24775)
		<b>Antenna Type</b>