#### CLEARSTREAM<sup>™</sup> ANTENNAS



# CLEARSTREAM 1

The Second in a Series of Compact, Highly Efficient Antennas Designed and Optimized for Post 2009 Digital TV Frequencies.



ClearStream<sup>™</sup> antennas represent a new breakthrough in size, unmatched ultra-efficient design and directionality. Advanced design software allows these 12" X 12" antennas to be smaller and powerful across the entire DTV spectrum offering consistently high gain. This advancement in antenna efficiency allows up to 98% of the availlable broadcast signal to actually reach the incoming antenna cable rather than being lost to impedance mismatches. The ClearStream 1<sup>™</sup> Tapered-Loop design receives all UHF channels

available and higher level VHF frequencies with a range up to 30 miles. They are engineered for strength and durability using anodized aluminum for corrosion resistance and are easy to assemble.

The ClearStream 1<sup>™</sup> delivers DTV signals from widely located (spaced) broadcast towers. Normally, when TV towers are spaced more than 30 degrees apart from a viewer's home, an antenna rotor is recommended. This new antenna has a wider, 70 degree beam-width, pattern on lower UHF stations. Working with the newest generation 4 and 5 ATSC chip sets incorporated in newer digital and HDTV tuners, which mitigate multi-path, the ClearStream 1<sup>™</sup> delivers digitally perfect signals from multiple stations.

## CLEARSTREAM1<sup>™</sup>



Range: Up to 30 miles

- Beamwidth (Horizontal Plane): 470 to 700 MHz: 70 degrees
- VSWR: Typical 2:1 or better; Max 3:1; < 2:1 from 470 to 700 MHz
- Front to Back Ratio: 15 dBi
- Directivity: Typical 8.1 dBi; Max 8 dBi @ Channel 35
- Size assembled: 12"L x 12"W x 4.5"D

SKI	J # Master C	arton Item Description	on Dealer Cost	Retail
C	1 10	ClearSteam 1 Medium Range DTV		\$49.99

## Performance ClearStream 1<sup>™</sup> Gain and VSWR vs. Frequency

Gain is a measure of an antenna's ability to concentrate radiated power from a particular direction. Unlike other antennas that claim high peak values, the gain of the C1 is not only extremely high but it is nearly uniform across the UHF DTV spectrum.

VSWR (Voltage Standing Wave Ratio)

This method is used to compute losses from impedance mismatches. The lower the number, the better. If the VSWR = 1 then there is no loss.

The efficiency value of an antenna defines how much signal received by the antenna actually makes it to the cable. The C1 is an extremely efficient antenna. At it's optimum frequency, the mismatch loss for the C1 is very low (less than .1dB).

## ClearStream 1<sup>™</sup> Horizontal Plane Reception Patterns

The ClearStream 1<sup>™</sup> has very forgiving aiming characteristics with more than 70 degrees of beamwidth across the primary lobe, as well as a powerful secondary rear lobe. This allows the C1 to receive signals from mutiple directions with a single, fixed installation.

### Helpful Tips:

- If your cable run is greater than 75' a pre-amplifier may be required.
- UHF signals are line-of-sight. Get as much elevation as practical.
- Attic installations will cut 40% 50% of your signal strength.
- KEEP ANTENNA AWAY FROM POWER LINES.



