

CLEARSTREAM2™

OUTDOOR LONG-RANGE
DIGITAL TV ANTENNA



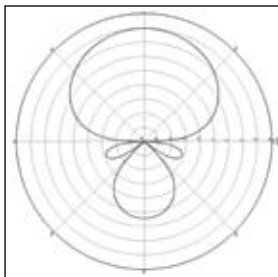
The First In A Series of Compact Highly Efficient Antennas Designed and Optimized for 2009 Digital TV Frequencies



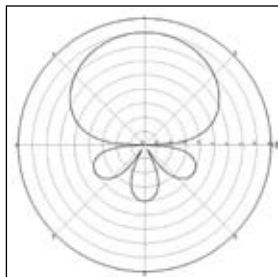
ClearStream antennas represent a new breakthrough in size and unmatched ultra efficient design and directionality. Advanced design software allows these 10" x 20" antennas to be smaller and powerful across the entire DTV spectrum offering consistent high gain. This advancement in antenna efficiency allows up to 98% of the available broadcast signal to actually reach the incoming antenna cable rather than being lost to impedance mismatches. The ClearStream2 Dual Loop design receives all UHF channels available and higher level VHF frequencies with a range of about 55 miles. They are engineered for extra strength and durability, using anodized aluminum for corrosion resistance and are easy

to assemble.

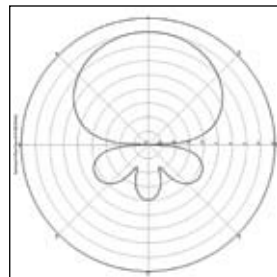
The ClearStream2 delivers TV signals from widely located (spaced) broadcast towers. Normally, when TV towers are spaced more than 30 degrees apart, from a viewer's home, an antenna rotor is recommended. This new antenna has an extremely wide 70 degree beamwidth pattern. Working with the newest generation 4 and 5 ATSC chip sets incorporated in newer digital and HDTV tuners, that mitigate multi-path, the ClearStream2 delivers digitally perfect multiple station signals.



Channel 14 (471.25 MHz)

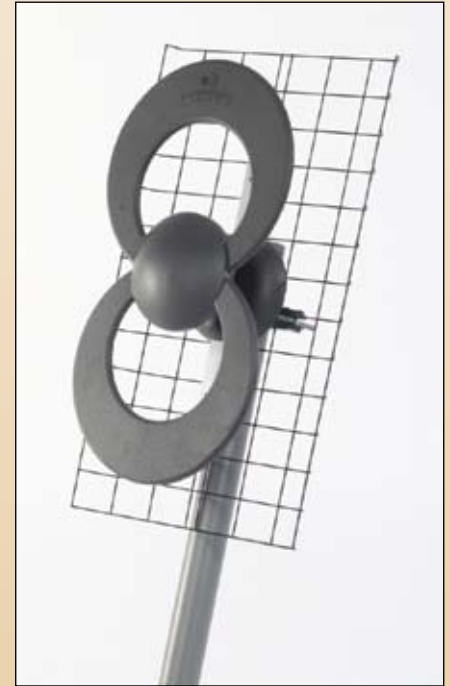


Channel 33 (579.25 MHz)



Channel 51 (699.25 MHz)

CLEARSTREAM2™



- Range: up to 50 miles
- Beamwidth (Horizontal Plane)
470 - 700 MHz: 70 degrees
- VSWR: Typical 2:1 or better, Max 3:1, typical less than 2:1 from 470 MHz to 700 MHz
- Front to Back Ratio: Max 22 dBi @ CH51, Typical 20 dBi
- Directivity: Min 9.7 dBi @ CH14, Max 10.2 dBi @ Ch 51, Typical 10dBi
- Size Assembled: 20"H x 10"W x 5"D

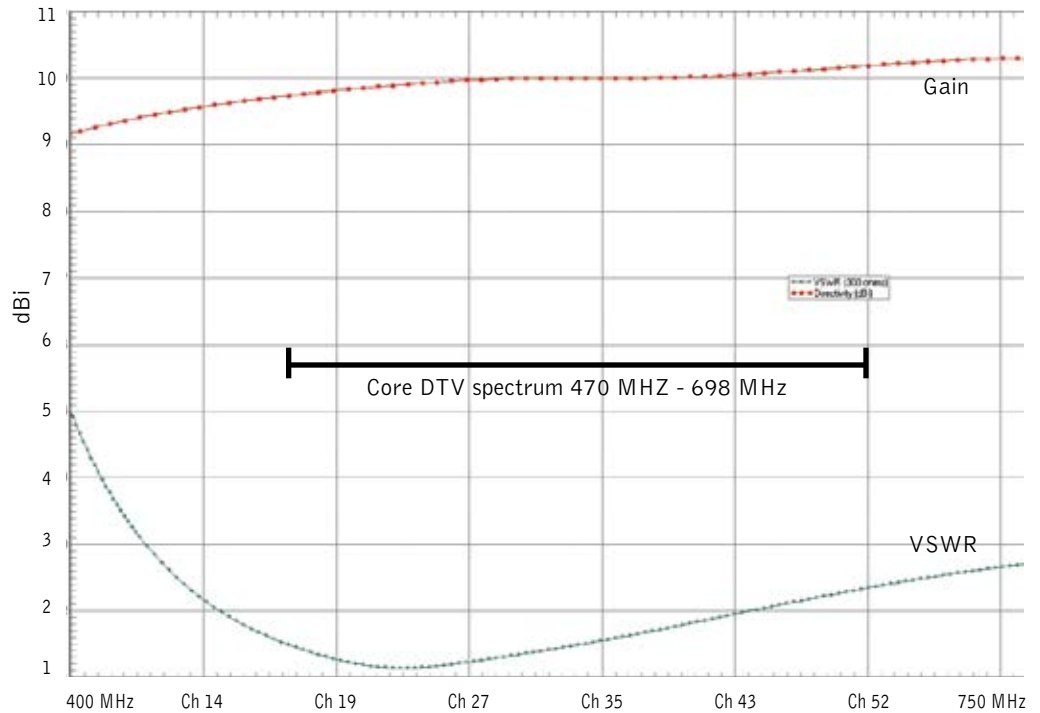
Performance

ClearStream2 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 C2 is not only extremely high but nearly uniform across the DTV spectrum

VSWR (Voltage Standing Wave Ratio) The method used to compute losses from impedance mismatches. The lower the number, the better. If the VSWR = 1 then there is no loss.

The efficiency of an antenna is how much signal received by the antenna actually makes it to the cable. The C2 is an extremely efficient antenna. At its optimum frequency, the mismatch loss for the C2 is very low - less than .1 dB.

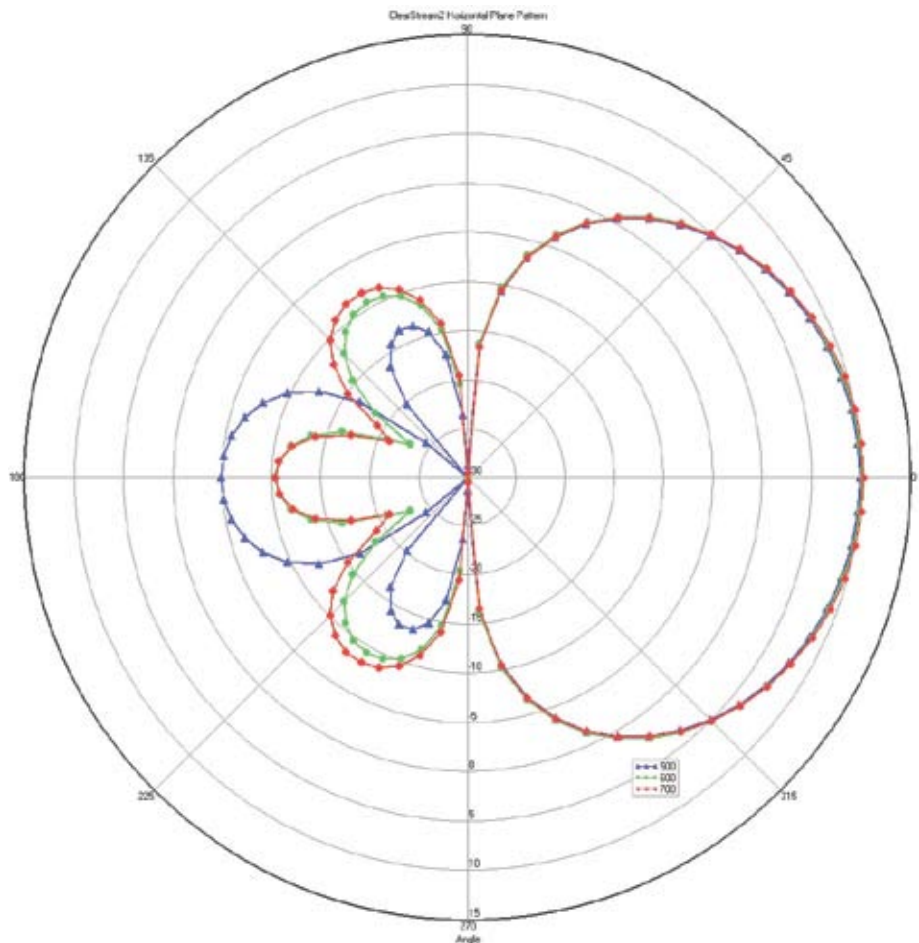


ClearStream2 Horizontal Plane Reception Patterns

The ClearStream2 has very forgiving aiming characteristics with more than 70 degrees of beamwidth across the main lobe as well as a powerful secondary rear lobe. This allows the C2 to receive signals from multiple 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**



CLEARSTREAM 1™

OUTDOOR LONG-RANGE
DIGITAL TV ANTENNA

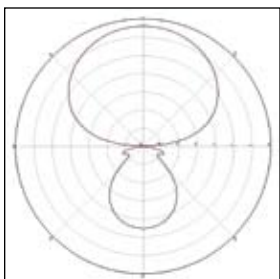


The Second in a Series of Compact Highly Efficient Antennas Designed and Optimized for 2009 Digital TV Frequencies

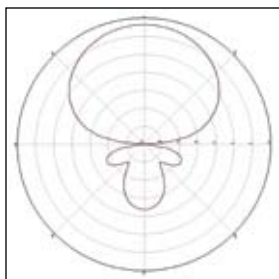


ClearStream antennas represent a new breakthrough in size and unmatched ultra efficient design and directionality. Advanced design software allows these 12" x 12" antennas to be smaller and powerful across the entire DTV spectrum offering consistent high gain. This advancement in antenna efficiency allows up to 98% of the available broadcast signal to actually reach the incoming antenna cable rather than being lost to impedance mismatches. The ClearStream1 Tapered-Loop design receives all UHF channels available and higher level VHF frequencies with a range up to 30 miles. They are engineered for extra strength and durability, using anodized aluminum for corrosion resistance and are easy to assemble.

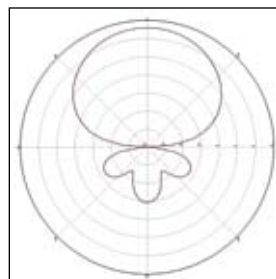
The ClearStream1 delivers TV signals from widely located (spaced) broadcast towers. Normally, when TV towers are spaced more than 30 degrees apart from a viewer's home, an antenna rotor is recommended. This new antenna has a wider 70 degree beam width pattern on lower UHF stations. Working with the newest generation 4 and 5 ATSC chip sets incorporated in newer digital and HDTV tuners, that mitigate multi-path, the ClearStream1 delivers digitally perfect multiple station signals.



Channel 14 (471.25 MHz)



Channel 33 (579.25 MHz)



Channel 51 (699.25 MHz)

CLEARSTREAM 1™



- Range: up to 30 miles
- Beamwidth (Horizontal Plane):
470 to 700 MHz: 70 degrees
- VSWR: Typical 2:1 or better,
Max 3:1, typical less than 2:1 from
470 MHz to 700 MHz
- Front to Back Ratio: typical 15 dBi
- Directivity: typical 8.1 dBi Max
8 dBi @ Channel 35
- Size Assembled: 12"H x 12"W
x 4.5"D

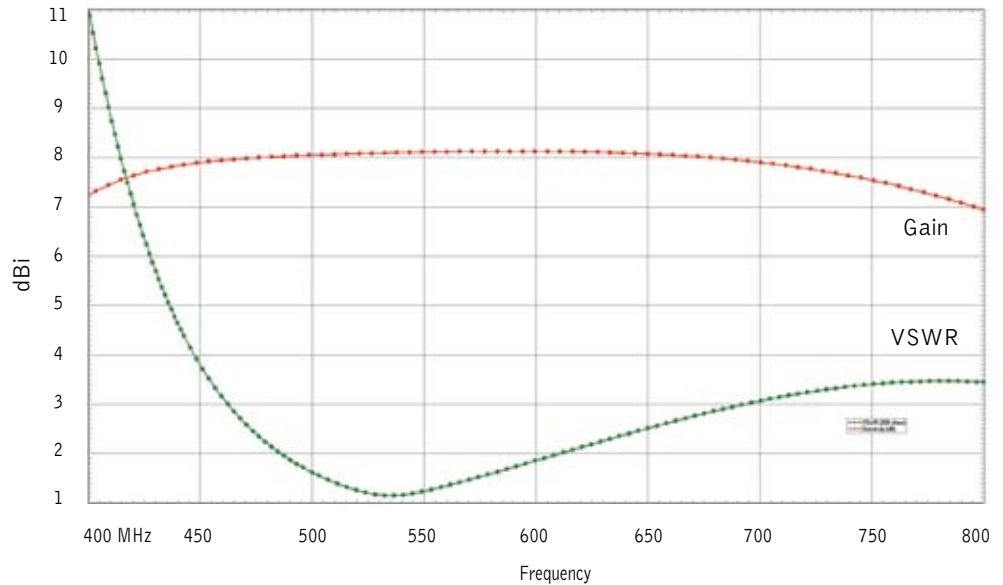
Performance

ClearStream1 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 nearly uniform across the DTV spectrum

VSWR (Voltage Standing Wave Ratio) The method used to compute losses from impedance mismatches. The lower the number, the better. If the VSWR = 1 then there is no loss.

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

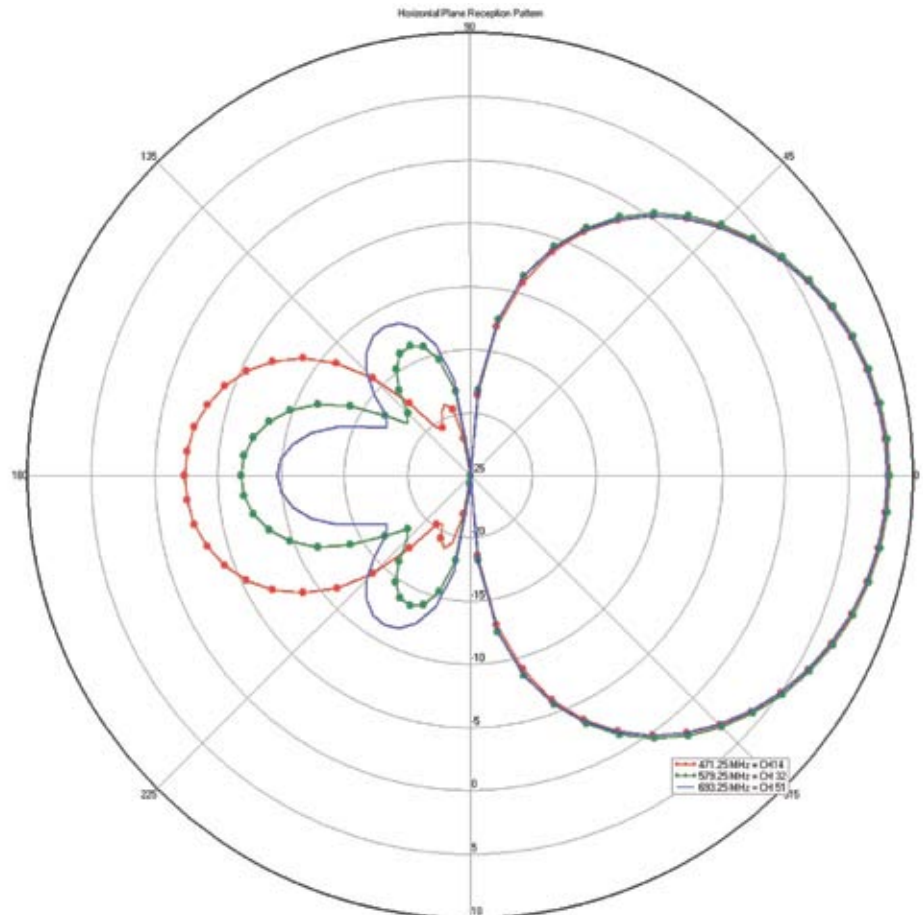


ClearStream1 Horizontal Plane Reception Patterns

The ClearStream1 has very forgiving aiming characteristics with more than 70 degrees of beamwidth across the main lobe as well as a powerful secondary rear lobe. This allows the C1 to receive signals from multiple 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**



CLEARSTREAM4™

OUTDOOR ULTRA LONG-RANGE
DIGITAL TV ANTENNA

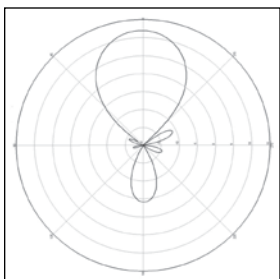


The Third in a Series of Compact Highly Efficient Antennas Designed and Optimized for 2009 Digital TV Frequencies

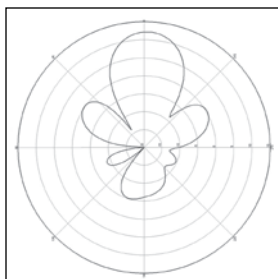


ClearStream antennas represent a new breakthrough in size and unmatched ultra efficient design and directionality. Advanced design software allows these 20" x 28" antennas to be smaller and powerful across the entire DTV spectrum offering consistent high gain. This advancement in antenna efficiency allows up to 98% of the available broadcast signal to actually reach the incoming antenna cable rather than being lost to impedance mismatches. The ClearStream4 Quad-Loop design receives all UHF channels available and higher level VHF frequencies with a range up to 65 miles. They are engineered for extra strength and durability, using anodized aluminum for corrosion resistance and are easy to assemble.

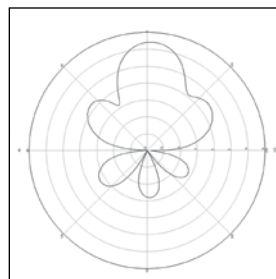
The ClearStream4 delivers TV signals from widely located (spaced) broadcast towers. Normally, when TV towers are spaced more than 30 degrees apart from a viewer's home, an antenna rotor is recommended. This new antenna has a wider 43 degree beam width pattern on lower UHF stations. Working with the newest generation 4 and 5 ATSC chip sets incorporated in newer digital and HDTV tuners, that mitigate multi-path, the ClearStream4 delivers digitally perfect multiple station signals.



Channel 14 (471.25 MHz)



Channel 33 (579.25 MHz)



Channel 51 (699.25 MHz)

CLEARSTREAM4™



- Range: up to 65 miles
- Beamwidth (Horizontal Plane):
470 to 700 MHz: 43 degrees
- VSWR: Typical 2.5:1 or better, Max 4:1, typical less than 2:1 from 470 MHz to 700 MHz: 43 degrees
- Front to Back Ratio: typical 17 dBi
- Directivity: typical 12 dBi Max
12.25 dBi @ Channel 30
- Size Assembled: 20" H x 28" W x 4.5" D

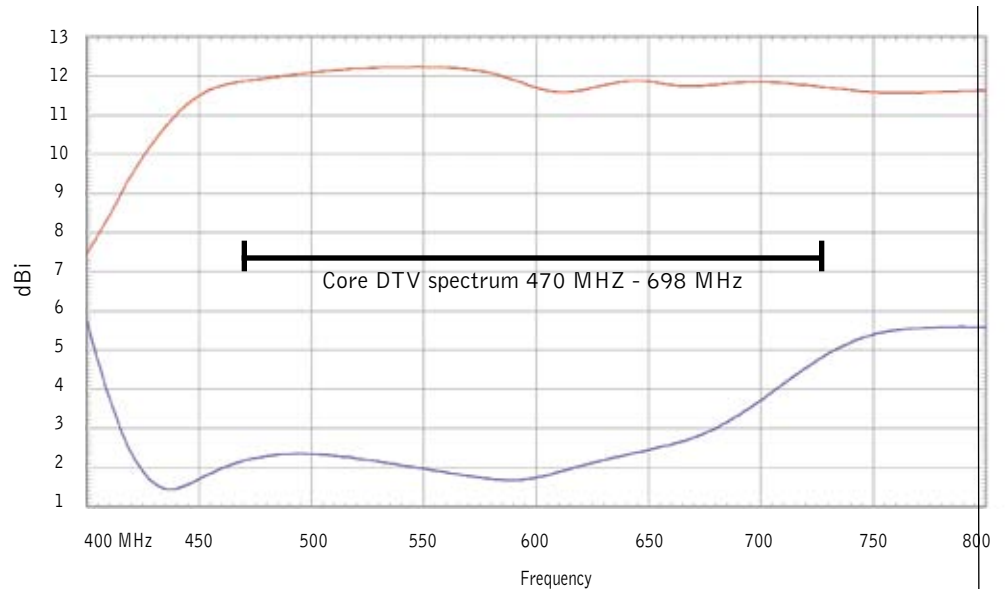
Performance

ClearStream4 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 C4 is not only extremely high but nearly uniform across the DTV spectrum

VSWR (Voltage Standing Wave Ratio) The method used to compute losses from impedance mismatches. The lower the number, the better. If the VSWR = 1 then there is no loss.

The efficiency of an antenna is how much signal received by the antenna actually makes it to the cable. The C4 is an extremely efficient antenna. At its optimum frequency, the mismatch loss for the C4 is very low - less than .1 dB.



ClearStream4 Horizontal Plane Reception Patterns

The ClearStream4 has very forgiving aiming characteristics with more than 70 degrees of beamwidth across the main lobe as well as a powerful secondary rear lobe. This allows the C4 to receive signals from multiple 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**

