

Abstract of Research and Development Project

Purpose and Scope

Terabeam Corporation with its RF research and development facility at 1755 Osgood Street, North Andover, MA 01845 plans to field test a new product to enable unlicensed, wireless transport of the standard AML (Analog) CATV broadcast waveform. Terabeam proposes a simple block up-converter/block down-converter system to accomplish this goal. The final system will be a one-way (half duplex) repeater system consisting of a single transmitter and receiver pair. A simplified block diagram is shown in Figure 1, attached.

Terabeam Corporation plans to deploy a prototype system in conjunction with Cabelcom Corporation of 3825 North Elston Avenue, Chicago, IL 60618. The planned deployments will be conducted in the greater Chicago, Illinois Area between the following selected transmitter and receiver sites shown with NAD 27 coordinates.

Transmit Site #1
1212 North LaSalle
Lat: 41:54:14.425N
Long: 87: 37:58.764W

Receive Site #1
100 West Chestnut
Lat: 41: 53:52.771N
Long: 87: 37: 52.986W

Transmit Site #2
501 North Clinton (Kinzie Park)
Lat: 41:53:23.093N
Long: 87: 38:27.812W

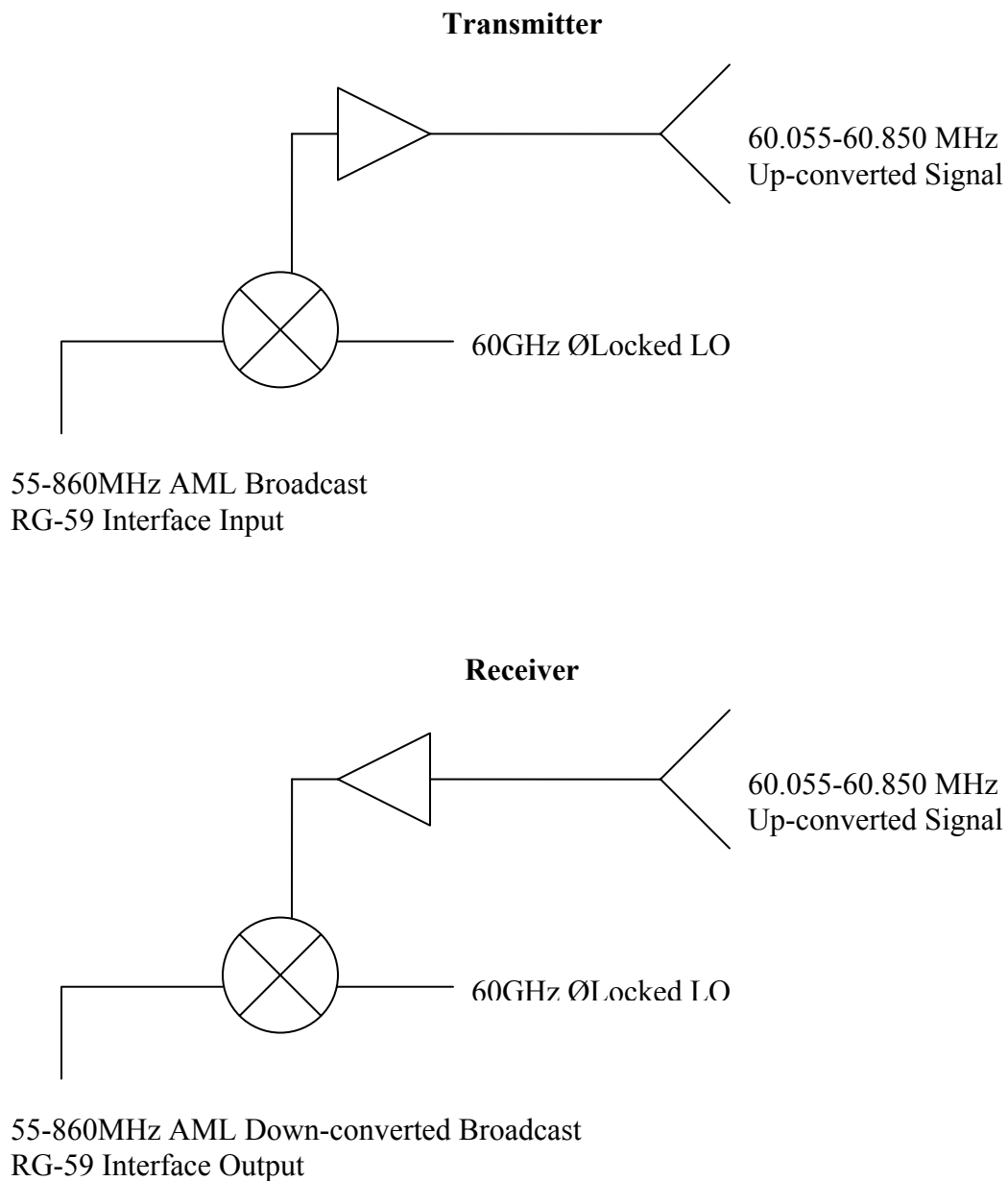
Receive Site #2
401 North LaSalle
Lat: 41: 53: 20.92N
Long: 87: 37: 56.240W

Transmit Site #3
401 North LaSalle
Lat: 41: 53: 20.92N
Long: 87: 37: 56.240W

Receive Site #3
201 North Wells
Lat: 41: 53: 08.650N
Long: 87: 38: 01.604W

The planned deployments will be used to test and debug equipment toward the goal of finalizing a design for subsequent Part 15.255 Equipment Type approval application. The equipment deployed will comply with all parameters of the current FCC Part 15.255 allocation for the 57.05 – 64.0GHz frequency band. Terabeam technicians will install and control these deployments directly remaining in a position to terminate the testing immediately upon FCC notification.

Figure 1, Simplified block diagram.





Operating Parameters of proposed CATV Repeater system

Transmit Frequency	60.054 – 60.860GHz
Transmitter EIRP	< 20W
Transmitter Antenna	Integral 13” Parabolic (not removable)
Antenna Gain and Beam-width	40dBi max, 1.0 deg.

Summary:

Terabeam Corporation believes that the development of this equipment will maximize the efficient use of the FCC Part 15.255 allocation by enabling CATV providers to use this spectrum. Terabeam Corporation also believes that a short range, point to point product with minimal likelihood of interference will reduce reliance on the limited CARS spectrum allocation and provide a simple low cost system without the need to digitize the analog broadcast. We feel the technique described above will enable smaller CATV providers to compete more effectively and provide additional service choices for the general consumer.

Upon receipt of experimental authorization, Terabeam Corporation plans to deploy the first experimental system by the end of March 2003.