TCI DigitalPLUS
A Dielectric Company

MODEL

881

UHF Wideband Slot Antenna

- **Wideband: 470 MHz to 806 MHz (channels 14-69)**
- **Transmit two or more channels —including adjacent channels— simultaneously**
- **DTV compliant**
- **No differential group delay**
- **Ideal for temporary, standby or permanent installations**
- **Low wind area provides minimum load on tower**
- **Low VSWR**
- **Horizontal polarization**

TCI's Model 881 is a low-power, directional, wideband UHF TV antenna capable of transmitting any channel in the UHF band. The technology used to develop the 881 derives from TCI's work on its flagship Model 888. The 880 Series of DTV antennas employs an advanced cavity-backed waveguide/ slot design (patent applied for) that provides true wideband performance in a compact, cylindrical structure.

The Model 881 is particularly suitable for DTV applications since it consists of an array of elements that are fed with no group delay. VSWR is a maximum of 1.1:1 at any frequency in the UHF band. Response across the band is uniform, providing equal amplitudes to all sub-carriers in the channel.

The wideband capability of the Model 881 offers the TV broadcaster new and important features: it allows him to transmit two or more channels—even adjacent channels—simultaneously, up to the antenna's maximum input power rating. A wideband antenna also offers the possibility of changing channel assignments, for example, back to the original NTSC channel after the DTV conversion period, or for other broadcasters seeking to share antenna capacity.

Light weight and low wind profile make the Model 881 ideal as a backup or temporary antenna, particularly where tower capacity is lacking. For the broadcaster with a tower problem, a multi-channel problem, or the need for flexibility in the future, TCI's Model 881 is the solution.

Specifications

Frequency Range ..... broadband, 470-806 MHz

Polarization ..... horizontal

Power Rating (ave input, kW) .....
881-8: 9
881-16: 18
881-24: 26
881-32: 35

Impedance ..... 50Ω standard, 75Ω optional

Input Connectors .....
881-8: 1-5/8" 50Ω
881-16: 3-1/8" 50Ω
881-24: 6-1/8" 50Ω
881-32: 6-1/8" 50Ω

Pattern ..... directional, cardioid

Beam Tilt ..... up to 1.5° available, 0.75° standard

Null Fill ..... available, 10% first null fill standard

Gain ..... up to 75X (18.8 dBd)

VSWR ..... <1.1:1 maximum

Mounting ..... side-mount standard, top-mount optional*

Environmental Protection ..... The Model 881 is essentially a cylindrical tube made of aluminum, forming a strong, pressurizable environmental enclosure. Radome covers protect the radiating slots from the elements.

Mechanical Data - *Side Mount Version Only*

	881-8	881-16	881-24	881-32
Height	11.0 ft	22.0 ft	32.4 ft	42.9 ft
Diameter	12 in	12 in	12 in	12 in
Weight	300 lb	600 lb	900 lb	1200 lb
Wind Area	11.0 sq ft	22.0 sq ft	32.4 sq ft	42.9 sq ft.

*Consult factory for top mount options.

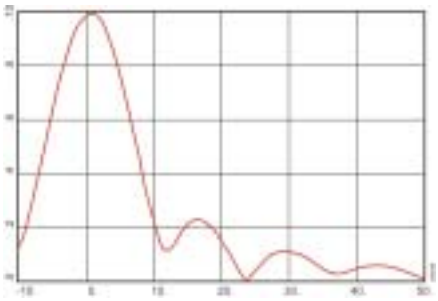
Horizontal Radiation Patterns, All Models

Channel 14

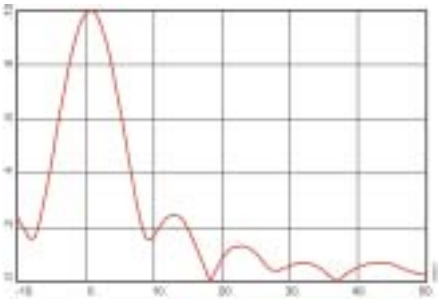
Channel 37

Channel 60

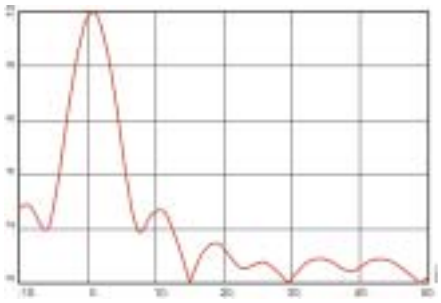
Vertical Radiation Patterns, .75° Beam Tilt, Typical Null Fill



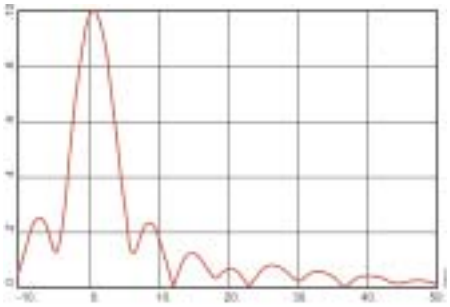
881-8, Channel 14



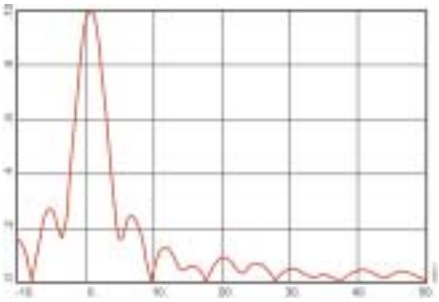
881-8, Channel 37



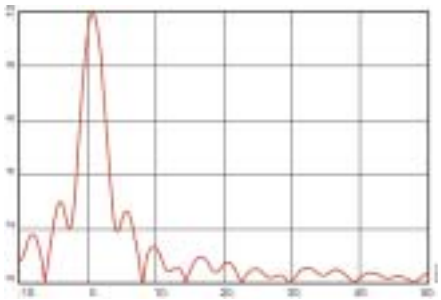
881-8, Channel 60



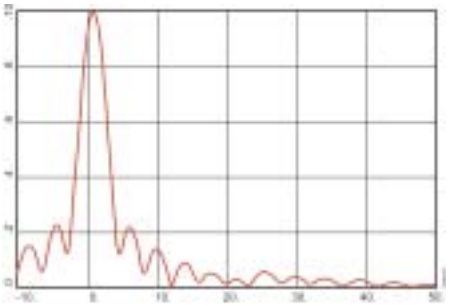
881-16, Channel 14



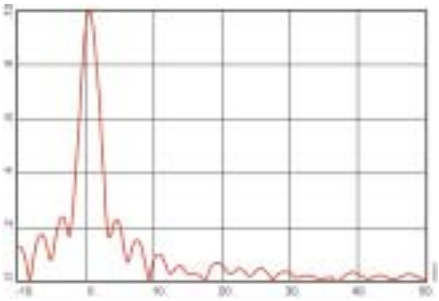
881-16, Channel 37



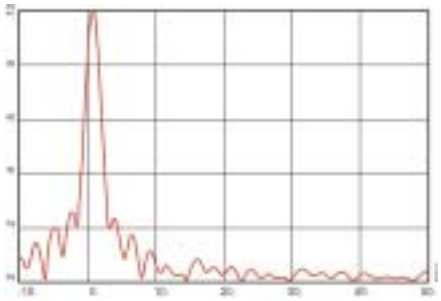
881-16, Channel 60



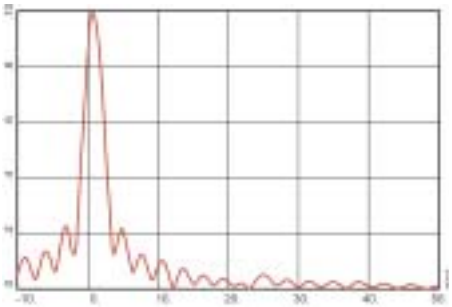
881-24, Channel 14



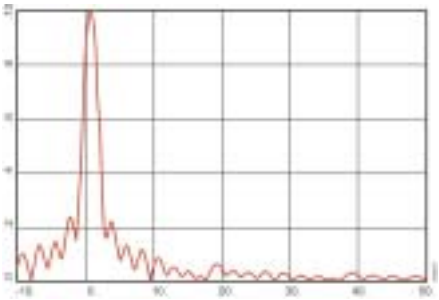
881-24, Channel 37



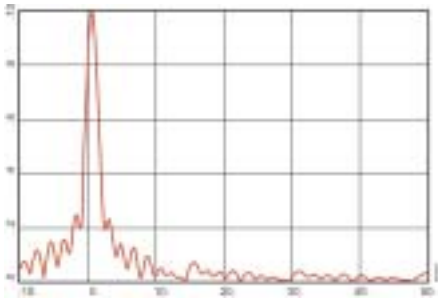
881-24, Channel 60



881-32, Channel 14



881-32, Channel 37

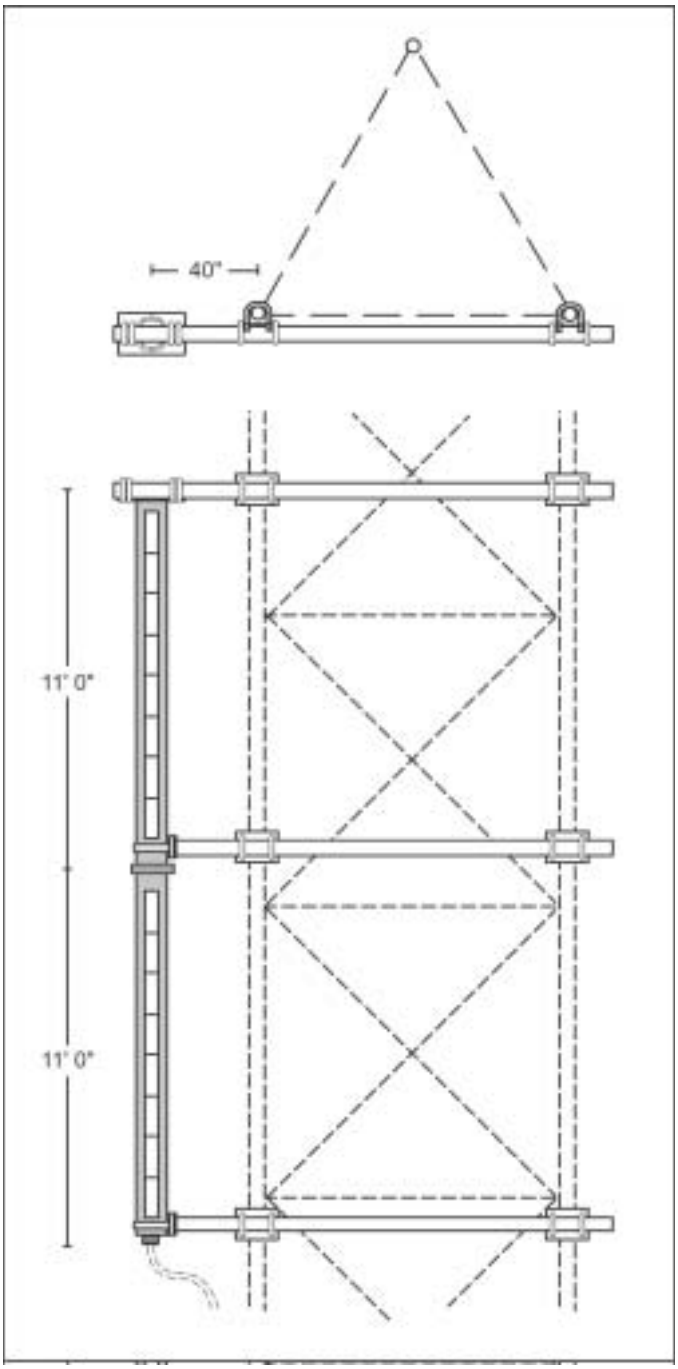


881-32, Channel 60

TCI has designed, manufactured and installed broadcast antennas and turnkey systems for over 30 years, for projects at any frequency, at any power level, and under any conditions (even war zones) anywhere in the world. TCI can solve your TV antenna problems, whether they are electromagnetic (special patterns, radiation hazard) or mechanical (inadequate towers, lack of space). The Model 881 wideband slot antenna is the newest addition to our established line of broadcast products

Ch	881-8	881-16	881-24	881-32
14	16.1	32.1	47.9	63.7
15	16.3	32.4	48.3	64.3
16	16.4	32.7	48.8	64.9
17	16.6	33.0	49.2	65.5
18	16.8	33.4	49.7	66.1
19	16.9	33.7	50.1	66.5
20	17.1	34.0	50.5	67.1
21	17.1	34.1	50.8	67.5
22	17.3	34.4	51.2	68.1
23	17.4	34.7	51.5	68.5
24	17.5	34.9	51.9	68.9
25	17.7	35.2	52.2	69.5
26	17.8	35.4	52.6	69.8
27	17.9	35.7	52.8	70.3
28	17.9	35.6	53.0	70.5
29	18.0	35.8	53.2	70.6
30	18.1	36.0	53.5	71.1
31	18.2	36.1	53.6	71.3
32	18.2	36.2	53.8	71.4
33	18.3	36.3	53.8	71.6
34	18.3	36.4	54.0	71.8
35	18.4	36.5	54.1	71.8
36	18.4	36.5	54.1	71.8
37	18.4	36.6	54.2	72.1
38	18.5	36.6	54.3	72.1
39	18.5	36.6	54.3	72.1
40	18.5	36.7	54.3	72.3
41	18.5	36.7	54.5	72.3
42	18.5	36.7	54.5	72.3
43	18.5	36.8	54.5	72.3
44	18.6	36.8	54.5	72.4
45	18.6	36.9	54.6	72.4
46	18.6	36.9	54.6	72.4
47	18.6	36.9	54.6	72.4
48	18.6	37.0	54.6	72.4
49	18.7	37.0	54.7	72.6
50	18.7	37.0	54.7	72.6
51	18.7	37.2	54.8	72.8
52	18.8	37.2	55.0	72.9
53	18.8	37.3	55.2	73.1
54	18.9	37.5	55.3	73.3
55	19.0	37.6	55.5	73.6
56	19.1	37.8	55.7	74.0
57	19.1	37.8	55.8	74.1
58	19.2	38.1	56.1	74.5
59	19.3	38.2	56.4	74.6
60	19.4	38.4	56.6	75.0

Gain Table for .75° Beam Tilt, Typical Null Fill



881-16: Typical Side-Mount Configuration

www.tcibr.com

47300 Kato Road, Fremont, California 94538, USA • 1 800 824-8074 (USA) • Tel 1 510 687-6100 • Fax 1 510 687-6101