

Mechanicals

Exhibit No.

Date	4 Sep 2018
Call Letters	WJMN-D48 STA
Channel	48
Antenna Type	TFU-16WB
Location	Escanaba, MI
Customer	Nexstar

Preliminary Specifications

Side Mounted

Mechanical Specification without ice TIA-222-G

Basic Wind Speed	90 mph
------------------	--------

Structure Class	II
Exposure Category	C
Topography Category	1

Mechanical Specifications

Height less Lightning Protector	(H2)	28.9 ft (8.8 m)
Center of Radiation	(H3)	14.5 ft (4.4 m)
Effective Projected Area	(EPA)s	36.4 ft ² (11.1 m ²)
Weight	W	1254.0 lbs

System Summary

Exhibit No.	
Date	4 Sep 2018
Call Letters	WJMN-D48 STA
Channel	48
Antenna Type	TFU-16WB
Location	Escanaba, MI
Customer	Nexstar

Antenna

ERP:	121.0 kW (20.83 dBk)
Peak Gain*:	30.6 (14.85 dB)

Antenna Input Power:	4.0 kW
----------------------	--------

Transmission Line

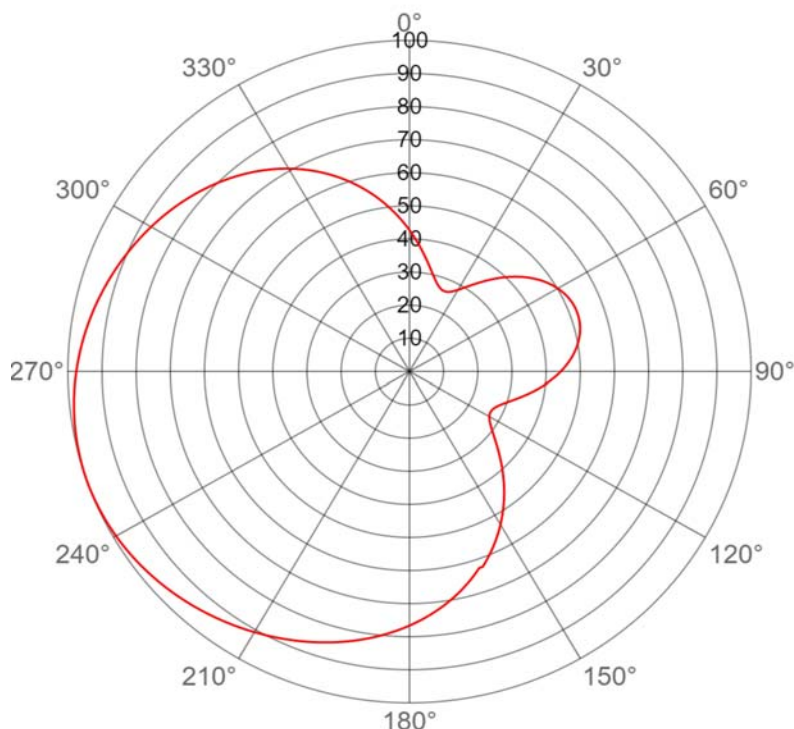
Type:	Flexline Air		
Size:	3"		
Impedance:	50 ohm		
Length:	1100 ft (335.3 m)	Attenuation:	4.8 dB
		Efficiency:	32.92 %

Transmitter Output

12.0 kW (10.80 dBk)

* Gain is with respect to half wave dipole.

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.



Horizontal Polarization AZIMUTH PATTERN

Exhibit No.
Date **4 Sep 2018**
Call Letters **WJMN-D48 STA**
Channel **48**
Antenna Type **TFU-16WB**
Location **Escanaba, MI**
Customer **Nexstar**

Gain **2.1 (3.24 dB)**
Calculated
Drawing # **WB-S230H**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.427	36	0.327	72	0.521	108	0.299	144	0.471	180	0.767	216	0.930	252	1.000	288	0.920	324	0.749
1	0.416	37	0.335	73	0.520	109	0.293	145	0.481	181	0.773	217	0.933	253	1.000	289	0.917	325	0.742
2	0.406	38	0.343	74	0.519	110	0.287	146	0.492	182	0.778	218	0.937	254	0.999	290	0.913	326	0.735
3	0.395	39	0.351	75	0.517	111	0.282	147	0.502	183	0.784	219	0.940	255	0.999	291	0.909	327	0.729
4	0.385	40	0.360	76	0.515	112	0.278	148	0.512	184	0.790	220	0.943	256	0.998	292	0.905	328	0.722
5	0.375	41	0.369	77	0.512	113	0.274	149	0.523	185	0.795	221	0.946	257	0.997	293	0.901	329	0.715
6	0.365	42	0.377	78	0.509	114	0.271	150	0.533	186	0.801	222	0.950	258	0.996	294	0.898	330	0.707
7	0.355	43	0.386	79	0.505	115	0.268	151	0.543	187	0.806	223	0.953	259	0.995	295	0.894	331	0.700
8	0.345	44	0.394	80	0.501	116	0.267	152	0.553	188	0.812	224	0.956	260	0.994	296	0.890	332	0.692
9	0.336	45	0.403	81	0.497	117	0.267	153	0.562	189	0.817	225	0.959	261	0.992	297	0.886	333	0.685
10	0.327	46	0.411	82	0.492	118	0.267	154	0.572	190	0.822	226	0.961	262	0.991	298	0.882	334	0.677
11	0.318	47	0.419	83	0.487	119	0.268	155	0.581	191	0.827	227	0.964	263	0.989	299	0.877	335	0.669
12	0.310	48	0.427	84	0.482	120	0.270	156	0.591	192	0.832	228	0.967	264	0.988	300	0.873	336	0.661
13	0.302	49	0.435	85	0.476	121	0.273	157	0.600	193	0.836	229	0.969	265	0.986	301	0.869	337	0.652
14	0.295	50	0.443	86	0.470	122	0.277	158	0.609	194	0.841	230	0.972	266	0.984	302	0.865	338	0.644
15	0.288	51	0.450	87	0.464	123	0.281	159	0.618	195	0.846	231	0.974	267	0.982	303	0.860	339	0.635
16	0.282	52	0.457	88	0.457	124	0.286	160	0.627	196	0.850	232	0.977	268	0.980	304	0.856	340	0.627
17	0.277	53	0.464	89	0.450	125	0.292	161	0.627	197	0.855	233	0.979	269	0.978	305	0.851	341	0.618
18	0.273	54	0.470	90	0.443	126	0.299	162	0.635	198	0.859	234	0.981	270	0.975	306	0.847	342	0.609
19	0.269	55	0.476	91	0.436	127	0.306	163	0.644	199	0.864	235	0.983	271	0.973	307	0.842	343	0.600
20	0.266	56	0.482	92	0.428	128	0.314	164	0.652	200	0.868	236	0.985	272	0.970	308	0.837	344	0.590
21	0.264	57	0.487	93	0.420	129	0.322	165	0.661	201	0.872	237	0.987	273	0.968	309	0.833	345	0.581
22	0.263	58	0.492	94	0.412	130	0.330	166	0.669	202	0.876	238	0.989	274	0.965	310	0.828	346	0.571
23	0.263	59	0.497	95	0.404	131	0.339	167	0.677	203	0.880	239	0.990	275	0.962	311	0.823	347	0.561
24	0.263	60	0.501	96	0.396	132	0.348	168	0.684	204	0.885	240	0.992	276	0.960	312	0.818	348	0.552
25	0.265	61	0.505	97	0.387	133	0.358	169	0.692	205	0.889	241	0.993	277	0.957	313	0.813	349	0.542
26	0.267	62	0.509	98	0.379	134	0.368	170	0.699	206	0.893	242	0.994	278	0.954	314	0.807	350	0.532
27	0.270	63	0.512	99	0.370	135	0.378	171	0.707	207	0.896	243	0.996	279	0.951	315	0.802	351	0.521
28	0.274	64	0.515	100	0.361	136	0.388	172	0.714	208	0.900	244	0.997	280	0.947	316	0.797	352	0.511
29	0.279	65	0.517	101	0.353	137	0.398	173	0.721	209	0.904	245	0.998	281	0.944	317	0.791	353	0.501
30	0.284	66	0.519	102	0.345	138	0.408	174	0.728	210	0.908	246	0.998	282	0.941	318	0.785	354	0.490
31	0.290	67	0.520	103	0.336	139	0.419	175	0.735	211	0.912	247	0.999	283	0.938	319	0.779	355	0.480
32	0.297	68	0.521	104	0.328	140	0.429	176	0.741	212	0.915	248	0.999	284	0.934	320	0.773	356	0.469
33	0.304	69	0.522	105	0.321	141	0.440	177	0.748	213	0.919	249	1.000	285	0.931	321	0.767	357	0.459
34	0.311	70	0.522	106	0.313	142	0.450	178	0.754	214	0.923	250	1.000	286	0.927	322	0.761	358	0.448
35	0.319	71	0.522	107	0.306	143	0.461	179	0.760	215	0.926	251	1.000	287	0.924	323	0.755	359	0.437

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

ELEVATION PATTERN

Exhibit No.

Date

4 Sep 2018

Call Letters

WJMN-D48 STA

Channel

48

Antenna Type

TFU-16WB

Location

Escanaba, MI

Customer

Nexstar

RMS Gain at Main Lobe

14.5 (11.61 dB)

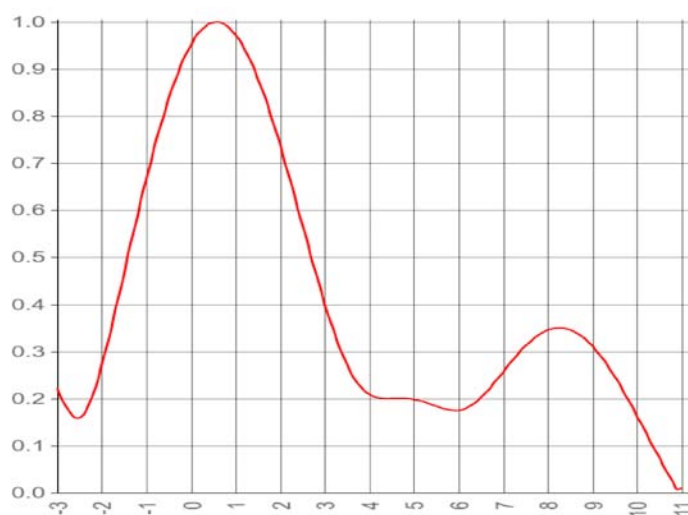
Beam Tilt

0.55 Degrees

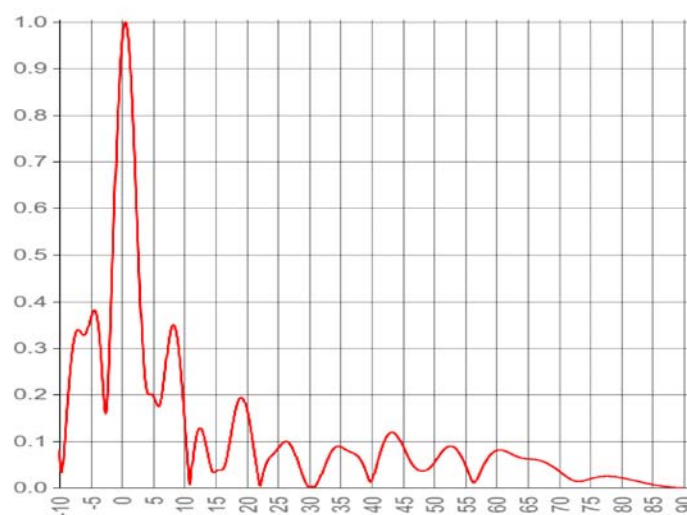
RMS Gain at Horizontal

13.1 (11.18 dB)

Drawing #

TFU-WB-16
Calculated


Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.082	10	0.163	30	0.000	50	0.053	70	0.036
-9	0.126	11	0.010	31	0.003	51	0.072	71	0.026
-8	0.286	12	0.115	32	0.029	52	0.086	72	0.018
-7	0.340	13	0.118	33	0.062	53	0.088	73	0.014
-6	0.328	14	0.060	34	0.085	54	0.075	74	0.015
-5	0.363	15	0.034	35	0.088	55	0.050	75	0.019
-4	0.370	16	0.038	36	0.081	56	0.018	76	0.022
-3	0.222	17	0.076	37	0.075	57	0.022	77	0.024
-2	0.269	18	0.151	38	0.065	58	0.050	78	0.025
-1	0.666	19	0.193	39	0.040	59	0.070	79	0.024
0	0.952	20	0.171	40	0.014	60	0.080	80	0.022
1	0.973	21	0.097	41	0.058	61	0.081	81	0.019
2	0.738	22	0.013	42	0.098	62	0.075	82	0.016
3	0.401	23	0.045	43	0.118	63	0.069	83	0.013
4	0.209	24	0.069	44	0.113	64	0.064	84	0.010
5	0.198	25	0.084	45	0.090	65	0.062	85	0.007
6	0.175	26	0.098	46	0.062	66	0.061	86	0.005
7	0.257	27	0.093	47	0.043	67	0.058	87	0.003
8	0.346	28	0.064	48	0.036	68	0.053	88	0.001
9	0.312	29	0.025	49	0.040	69	0.046	89	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.