



Dickey Rural Networks

Summer 2015

Warm Weather Proof of Performance

July 21-22, 2015

Prepared by:





Dickey Rural Networks CATV System FCC Proof of Performance Testing

System Description:

The Dickey Rural Networks CATV network is a fiber to the home (FTTH) system with an RF overlay. There are no architectural components that would be frequency altering after the headend.

Bandwidth:

The total system bandwidth is 750 MHz. This bandwidth is populated with both analog and digital traffic. Per FCC rules, plant testing will be performed on the analog bandwidth using 12 test channels.

Set Tops:

Digital tier customers are supplied with set tops by the operator. The RF performance of these units is a matter of the manufacturer's specifications. All are well known units in common usage throughout the industry.

Test Equipment:

These system performance measurements were made by using the following test instruments: Tektronix 2715 spectrum analyzer, Tektronix TSG-120 test signal generator, Scientific Atlanta model 6270 Demodulator, Tektronix VM700A, JDSU SDA-4040D, CLI-1750, & CLI-1450 signal level meters, 100 Ft. length of RG-6 coaxial cable standard to the system.

Headend Equipment:



The headend hardware was all left in the normal operating condition, supplying the normal programming content. An FCC multiburst video test pattern was substituted for normal video in order to perform the in channel frequency response tests.





















































































































































System Test Points:

The quantity of test points selected reflect FCC rules. Time intervals between signal level tests were performed in accordance with FCC rules.

ENGINEERING FOR TELECOMMUNICATIONS

Location Report: RF Modulating Site (Headend)

Test Location:	Dickey Rural Headend Oakes, ND		
Date:	7/21/2015		
Video Standard:	NTSC		
	Pass		Fail 

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)		Visual Carrier Frequency (MHz)		Aural Carrier Δ (dBc)		Aural Carrier Frequency Offset (MHz)	
2	55.2500	GUIDE	18.8		55.249932		-14.5		4.500018	
4	67.2500	CBS	18.8		67.249917		-14.9		4.500003	
5	77.2500	CSPN	18.4		77.249942		-15.6		4.499975	
6	83.2500	ABC	18.3		83.249897		-14.4		4.499996	
95 A5	91.2500	BEKcen	18.2		91.249991		-14.8		4.499999	
99 A1+	115.2750	TRNADO	17.4		115.274856		-16.0		4.499975	
14 A-+	121.2375	HSN	20.2		121.237169		-15.5		4.499987	
15 B++	127.2625	WEATHR	19.3		127.262152		-16.1		4.499986	
16 C-+	133.2375	DRNCOM	20.7		133.236886		-15.5		4.499980	
17 D	139.2500	QVC	19.6		139.249358		-15.7		4.499977	
7	175.2500	BEK	19.3		175.249973		-13.9		4.499998	
8	181.2500	CW	19.6		181.249502		-15.2		4.500033	
9	187.2500	DRNWE	19.3		187.249484		-13.2		4.499978	
10	193.2500	FOX	18.1		193.249756		-16.4		4.500036	
11	199.2500	NBC	18.6		199.249752		-15.5		4.499994	
12	205.2500	CSPAN2	18.5		205.249853		-15.3		4.500009	
13	211.2500	PBS	20.2		211.249034		-15.3		4.499985	
24 K+	223.2500	ESPN	19.8		223.248988		-14.7		4.499978	
25 L++	229.2625	ESPN2	19.9		229.261135		-14.4		4.499972	
26 M-+	235.2375	ESPNcl	20.0		235.236104		-14.3		4.499969	
27 N-+	241.2375	ESPNNew	19.8		241.236079		-15.1		4.499972	
28 O-+	247.2375	TBS	19.7		247.236048		-16.0		4.499976	
29 P-+	253.2375	LIFETM	20.0		253.236013		-15.7		4.499975	
30 Q-+	259.2375	DISNEY	20.0		259.235976		-15.3		4.499974	
31 R-+	265.2375	USA	19.6		265.235939		-15.0		4.499974	
32 S-+	271.2375	ABCfam	19.6		271.236020		-15.2		4.499971	
37 AA-+	301.2375	TNT	20.2		301.235846		-14.4		4.499973	
38 BB-+	307.2375	DISCVR	19.8		307.235813		-15.1		4.499983	
40 DD-+	319.2375	HEADLN	19.5		319.237119		-15.2		4.499998	
41 EE-+	325.2375	FOXsn	19.4		325.237109		-15.4		4.499998	
42 FF++	331.2750	ANIMAL	19.6		331.274115		-15.3		4.500027	
43 GG-+	337.2375	AMC	19.3		337.236599		-14.7		4.499981	
44 HH-+	343.2375	HISTRY	19.7		343.235958		-14.7		4.499974	
45 II-+	349.2375	TLC	20.1		349.235927		-16.3		4.499976	
46 JJ-+	355.2375	TOON	19.4		355.235080		-15.7		4.499968	
47 KK++	361.2625	HGTV	19.0		361.261522		-15.0		4.499984	
48 LL-+	367.2375	A&E	20.2		367.237784		-15.4		4.500002	

Location Report: RF Modulating Site (Headend)

Test Location:	Dickey Rural Headend Oakes, ND		
Date:	7/21/2015		
Video Standard:	NTSC		
	Pass		Fail

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)		Visual Carrier Frequency (MHz)		Aural Carrier Δ (dBc)		Aural Carrier Frequency Offset (MHz)	
49 MM-+	373.2375	CNBC	19.6		373.237787		-15.0		4.500008	
50 NN-+	379.2375	OWN	19.5		379.237797		-15.0		4.500007	
51 OO-+	385.2375	TCM	19.1		385.237797		-15.3		4.499996	
52 PP-+	391.2375	OUTDR	19.0		391.237805		-15.4		4.500008	
53 QQ-+	397.2375	TRAVEL	19.0		397.237806		-15.0		4.500008	
54 RR	403.2500	CNN	18.7		403.250318		-15.3		4.500012	
55 SS	409.2500	DIY	18.1		409.250319		-13.1		4.500007	
56 TT	415.2500	NATGEO	18.8		415.247162		-14.9		4.499959	
57 UU	421.2500	FOXnew	18.9		421.247124		-13.8		4.499966	
59 WW	433.2500	MSNBC	18.5		433.247041		-15.5		4.499963	
60 XX	439.2500	BRAVO	19.1		439.247000		-13.1		4.499946	
61 YY	445.2500	DSNYxd	18.7		445.247983		-15.4		4.499977	
62 ZZ	451.2500	GOLF	18.6		451.246923		-15.7		4.499971	
64 BBB	463.2500	FOOD	18.7		463.246845		-13.4		4.499970	
65 CCC	469.2500	GSN	17.7		469.249340		-14.8		4.499991	
67 EEE	481.2500	FX	17.8		481.249328		-15.7		4.499999	
68 FFF	487.2500	FOXspt	18.2		487.249323		-15.1		4.499985	
69 GGG	493.2500	YouToo	18.1		493.249313		-15.6		4.500009	
70 HHH	499.2500	GAC	18.7		499.249308		-15.6		4.500013	
71 III	505.2500	truTV	18.0		505.249298		-15.4		4.499999	
72 JJJ	511.2500	HLMARK	17.7		511.249289		-14.6		4.499984	
73 KKK	517.2500	OXYGEN	18.2		517.249643		-14.4		4.500011	
74 LLL	523.2500	NBCspt	17.4		523.249639		-14.7		4.499992	
75 MMM	529.2500	ION	17.4		529.249630		-14.4		4.500007	
76 NNN	535.2500	RFD TV	18.2		535.248573		-15.0		4.499985	
77 OOO	541.2500	SyFy	18.1		541.249623		-14.8		4.499988	
78 PPP	547.2500	SPTMEN	17.9		547.249615		-14.5		4.499997	

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Forbes, ND	
Date:	7/21/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	18.0	55.249936	-14.8	4.499990
7	175.2500	BEK	18.5	175.249987	-15.7	4.499970
26 M	235.2375	ESPNcl	19.6	235.236077	-15.0	4.499976
28 O-+	247.2375	TBS	18.6	247.236010	-15.6	4.499973
32 S-+	271.2375	ABCfam	18.5	271.236006	-15.4	4.499970
46 JJ-+	355.2375	TOON	18.5	355.235088	-15.9	4.499970
55 SS	409.2500	DIY	18.1	409.250374	-13.4	4.500004
59 WW	433.2500	MSNBC	17.6	433.247073	-15.5	4.499972
61 YY	445.2500	DSNYxd	17.3	445.248067	-15.6	4.499990
69 GGG	493.2500	YouToo	17.0	493.249332	-15.4	4.499994
71 III	505.2500	truTV	17.3	505.249315	-15.5	4.499990
78 PPP	547.2500	Sptman	17.1	547.249626	-14.5	4.500003

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	49.5	-67.30	-62.7	0.5
7	175.2500	BEK	52.1	-66.30	-59.5	0.6
26 M	235.2375	ESPNcl	52.5	-68.40	-59.9	0.4
28 O-+	247.2375	TBS	51.0	-68.50	-59.2	0.6
32 S-+	271.2375	ABCfam	51.1	-65.10	-59.2	0.5
46 JJ-+	355.2375	TOON	51.8	-68.00	-60.3	0.9
55 SS	409.2500	DIY	50.7	-64.00	-59.5	0.2
59 WW	433.2500	MSNBC	50.7	-65.80	-59.6	0.8
61 YY	445.2500	DSNYxd	50.0	-64.40	-58.6	0.6
69 GGG	493.2500	YouToo	49.6	-64.60	-59.9	0.5
71 III	505.2500	truTV	50.0	-63.60	-60.3	0.6
78 PPP	547.2500	Sptman	50.4	-63.30	-61.6	0.6

Hum & Low Frequency Disturbance	1.0%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Forbes, ND

Model: 4040D
 Operator: TECH_PLAN_
 Date: 07/21/15 Time: 17:14:11
 Description:

Serial #: 5443192
 File: FORBES

Cal Date: 01/11/14
 DOS File: FORBES

Location: FORBES
 Location Type: FieldTest
 Area: SJ
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/22/15	07/22/15	
Time:	17:14:11	23:13:58	05:13:58	11:13:58	
Temp:	79.6 F	78.8 F	78.8 F	78.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	17.0	17.1	17.2	16.7	0.5
4	17.3	17.2	17.8	17.2	0.6
5	17.0	17.5	17.5	17.4	0.5
6	16.9	17.2	17.3	17.0	0.4
7	15.9	16.2	16.3	16.2	0.4
8	16.3	16.5	17.0	16.3	0.7
9	16.3	16.6	16.6	16.4	0.3
10	16.9	16.8	17.2	16.7	0.5
11	16.5	16.7	16.7	16.5	0.2
12	16.5	16.6	16.6	16.5	0.1
13	16.5	16.3	16.2	16.1	0.4
14	16.5	17.0	17.2	16.9	0.7
16	17.6	17.9	18.0	17.4	0.6
17	16.7	17.3	17.5	17.0	0.8
23	16.4	16.3	16.7	16.1	0.6
24	16.1	15.9	16.0	15.8	0.3
25	16.7	16.5	16.6	16.6	0.2
26	16.2	16.2	16.4	16.3	0.2
27	16.0	16.2	16.2	16.0	0.2
28	16.8	16.9	17.1	16.9	0.3
29	16.3	15.8	16.3	16.1	0.5
30	16.8	16.9	17.0	16.8	0.2
31	16.8	16.7	16.9	16.9	0.2
32	16.7	17.0	17.0	16.7	0.3
37	16.8	16.8	16.9	16.8	0.1
38	17.3	16.8	16.6	16.9	0.7
40	16.5	16.8	16.8	16.7	0.3
41	17.0	17.0	17.1	17.1	0.1
42	16.3	16.5	16.5	16.4	0.2
43	16.8	16.7	16.8	16.7	0.1
44	17.0	16.9	17.2	17.0	0.3
45	17.3	17.7	18.0	17.5	0.7
46	16.8	16.9	17.2	16.8	0.4
47	17.3	17.4	17.7	17.0	0.7
48	17.3	17.0	17.3	17.2	0.3
49	17.3	17.5	17.8	17.5	0.5
50	17.5	17.4	17.5	17.5	0.1
51	17.3	17.5	17.6	17.4	0.3
52	17.4	17.6	17.8	17.5	0.4
53	17.7	17.5	17.7	17.5	0.2
54	17.7	17.7	17.8	17.7	0.1
55	16.9	16.8	16.8	16.4	0.5
56	17.0	17.0	17.3	16.9	0.4

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Forbes, ND

Model: 4040D
 Operator: TECH_PLAN_
 Date: 07/21/15 Time: 17:14:11
 Description:

Serial #: 5443192
 File: FORBES

Cal Date: 01/11/14
 DOS File: FORBES

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/22/15	07/22/15	
Time:	17:14:11	23:13:58	05:13:58	11:13:58	
Temp:	79.6 F	78.8 F	78.8 F	78.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	17.3	17.1	17.4	17.0	0.4
59	16.9	16.5	16.9	16.6	0.4
60	17.5	17.4	17.6	17.5	0.2
61	17.1	17.2	17.5	17.1	0.4
62	16.9	17.0	17.0	16.8	0.2
64	16.3	16.6	16.6	16.4	0.3
65	16.9	17.2	17.4	16.8	0.6
67	17.5	17.8	17.9	17.3	0.6
68	18.0	18.0	18.2	17.8	0.4
69	17.0	17.2	17.5	16.8	0.7
70	17.2	17.3	17.3	17.4	0.2
71	17.0	17.1	17.1	16.9	0.2
72	16.3	16.5	16.4	16.3	0.2
73	16.6	16.7	17.0	16.5	0.5
74	17.0	16.9	17.1	16.7	0.4
75	17.3	17.4	17.6	16.9	0.7
76	17.7	17.9	17.9	17.5	0.4
77	17.1	17.2	17.5	16.9	0.6
78	17.0	17.0	17.1	16.8	0.3

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Jud, ND	
Date:	7/21/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	16.9	55.249934	-14.7	4.499990
7	175.2500	BEK	19.5	175.250024	-15.9	4.500002
26 M	235.2375	ESPNcl	20.3	235.236136	-14.7	4.499975
28 O-+	247.2375	TBS	20.1	247.236044	-16.1	4.499975
32 S-+	271.2375	ABCfam	19.8	271.236016	-15.4	4.499975
46 JJ-+	355.2375	TOON	19.6	355.235093	-15.6	4.499968
55 SS	409.2500	DIY	19.5	409.250330	-14.5	4.500003
59 WW	433.2500	MSNBC	19.0	433.247050	-15.4	4.499971
61 YY	445.2500	DSNYxd	18.9	445.247959	-15.7	4.499975
69 GGG	493.2500	YouToo	18.4	493.249289	-15.3	4.499982
71 III	505.2500	truTV	18.8	505.249271	-15.6	4.499990
78 PPP	547.2500	Sptman	18.8	547.249605	-14.7	4.499994

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	53.7	-68.90	-69.6	0.6
7	175.2500	BEK	52.1	-65.40	-66.6	0.5
26 M	235.2375	ESPNcl	54.6	-69.10	-68.9	0.5
28 O-+	247.2375	TBS	54.3	-69.80	-67.5	0.6
32 S-+	271.2375	ABCfam	54.0	-69.80	-68.5	0.6
46 JJ-+	355.2375	TOON	54.3	-68.10	-67.8	0.6
55 SS	409.2500	DIY	53.6	-67.70	-64.2	0.9
59 WW	433.2500	MSNBC	53.6	-68.20	-63.3	0.4
61 YY	445.2500	DSNYxd	50.7	-68.90	-63.0	0.4
69 GGG	493.2500	YouToo	52.2	-68.10	-62.8	0.3
71 III	505.2500	truTV	53.3	-68.10	-63.1	0.6
78 PPP	547.2500	Sptman	53.3	-67.50	-66.1	0.6

Hum & Low Frequency Disturbance	0.8%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Jud, ND

Model: 1450
 Operator: J_HARRIS
 Date: 07/21/15 Time: 07:09:49
 Description:

Serial #: 7183480
 File: JUD

Cal Date: 4/09/14
 DOS File: JUD

Location: JUD
 Location Type: FieldTest
 Area: _
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	07:09:49	13:09:42	19:09:42	01:09:42	
Temp:	80.0 F	76.7 F	77.8 F	75.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	19.0	19.0	19.1	18.7	0.4
4	19.1	19.0	19.4	19.0	0.4
5	19.0	18.9	19.3	18.9	0.4
6	18.8	18.8	18.9	18.5	0.4
7	18.2	18.2	18.3	18.2	0.1
8	18.6	18.5	18.5	18.2	0.4
9	18.5	18.5	18.6	18.4	0.2
10	18.8	18.8	19.1	18.7	0.4
11	18.7	18.6	18.7	18.6	0.1
12	18.6	18.6	18.8	18.6	0.2
13	18.6	18.6	18.3	18.1	0.5
14	19.0	18.9	19.0	18.7	0.3
16	19.9	19.8	19.9	19.6	0.3
17	19.0	19.0	19.3	18.8	0.5
24	18.0	18.1	18.0	18.0	0.1
25	18.1	18.1	18.2	18.1	0.1
26	18.5	18.4	18.6	18.5	0.2
27	18.4	18.3	18.4	18.4	0.1
28	19.1	19.1	19.3	19.1	0.2
29	18.5	18.2	18.4	18.4	0.3
30	19.0	19.0	19.1	19.1	0.1
31	19.0	18.9	19.1	19.0	0.2
32	19.1	19.0	19.1	19.0	0.1
37	19.0	18.9	19.0	18.9	0.1
38	18.9	18.8	19.0	18.9	0.2
40	19.0	18.9	19.1	18.9	0.2
41	19.3	19.2	19.3	19.3	0.1
42	18.5	18.4	18.5	18.4	0.1
43	19.2	19.1	19.3	19.1	0.2
44	19.4	19.3	19.5	19.4	0.2
45	20.0	19.9	20.0	19.9	0.1
46	19.2	19.1	19.2	19.1	0.1
47	18.8	18.7	18.8	18.7	0.1
48	19.2	19.2	19.2	19.2	0.0
49	19.5	19.4	19.6	19.6	0.2
50	19.6	19.5	19.7	19.5	0.2
51	19.5	19.6	19.7	19.6	0.2
52	19.7	19.8	19.9	19.7	0.2
53	19.9	19.9	19.9	19.7	0.2
54	19.9	19.9	20.1	19.8	0.3
55	19.2	19.2	19.1	19.0	0.2
56	19.4	19.4	19.5	19.2	0.3

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Jud, ND

Model: 1450
 Operator: J_HARRIS
 Date: 07/21/15 Time: 07:09:49
 Description:

Serial #: 7183480
 File: JUD

Cal Date: 4/09/14
 DOS File: JUD

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	07:09:49	13:09:42	19:09:42	01:09:42	
Temp:	80.0 F	76.7 F	77.8 F	75.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	19.8	19.7	19.8	19.5	0.3
59	19.3	19.2	19.4	19.0	0.4
60	19.7	19.6	20.1	19.5	0.6
61	19.4	19.4	19.5	19.2	0.3
62	19.2	19.2	19.3	19.0	0.3
64	18.8	18.8	18.9	18.5	0.4
65	19.4	19.5	19.5	19.0	0.5
67	19.5	19.5	19.6	19.1	0.5
68	19.7	20.0	20.1	19.6	0.5
69	19.3	19.3	19.3	18.9	0.4
70	19.8	19.9	19.9	19.5	0.4
71	20.0	20.0	20.1	19.7	0.4
72	19.3	19.3	19.3	18.9	0.4
73	19.4	19.4	19.6	19.1	0.5
74	19.5	19.5	19.5	19.1	0.4
75	19.7	19.7	19.8	19.3	0.5
76	20.2	20.2	20.3	19.9	0.4
77	19.8	19.8	19.9	19.4	0.5
78	19.7	19.9	19.9	19.5	0.4

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Litchville, ND	
Date:	7/21/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	12.0	55.249936	-13.9	4.500000
7	175.2500	BEK	13.4	175.250020	-10.5	4.500002
26 M	235.2375	ESPNcl	14.6	235.236101	-14.7	4.499981
28 O-+	247.2375	TBS	14.2	247.236025	-16.0	4.499975
32 S-+	271.2375	ABCfam	14.1	271.235991	-15.3	4.499974
46 JJ-+	355.2375	TOON	13.2	355.235073	-14.7	4.499973
55 SS	409.2500	DIY	13.2	409.250298	-13.8	4.500013
59 WW	433.2500	MSNBC	13.1	433.247032	-16.2	4.499992
61 YY	445.2500	DSNYxd	13.0	445.247953	-16.1	4.499981
69 GGG	493.2500	YouToo	12.4	493.249277	-15.2	4.499993
71 III	505.2500	truTV	12.7	505.249262	-15.2	4.499998
78 PPP	547.2500	Sptman	13.0	547.249596	-15.4	4.499982

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	51.8	-70.80	-68.2	0.6
7	175.2500	BEK	52.3	-68.50	-69.9	0.6
26 M	235.2375	ESPNcl	53.7	-71.10	-69.9	0.5
28 O-+	247.2375	TBS	53.5	-71.30	-67.6	0.5
32 S-+	271.2375	ABCfam	53.9	-71.90	-68.8	0.8
46 JJ-+	355.2375	TOON	51.8	-69.60	-67.6	0.8
55 SS	409.2500	DIY	52.6	-66.10	-67.7	0.7
59 WW	433.2500	MSNBC	51.4	-69.30	-69.3	0.5
61 YY	445.2500	DSNYxd	52.2	-69.40	-67.6	0.4
69 GGG	493.2500	YouToo	51.1	-69.40	-68.2	0.5
71 III	505.2500	truTV	51.5	-68.50	-68.2	0.6
78 PPP	547.2500	Sptman	52.6	-69.00	-66.9	0.6

Hum & Low Frequency Disturbance	0.8%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Litchville, ND

Model: 1450
 Operator: J_HARRIS
 Date: 07/21/15 Time: 07:09:49
 Description:

Serial #: 7183480
 File: LITCHVILLE

Cal Date: 4/09/14
 DOS File: LITCHVILLE

Location: LITCHVILLE
 Location Type: FieldTest
 Area: _
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	07:09:49	13:09:42	19:09:42	01:09:42	
Temp:	80.0 F	76.7 F	77.8 F	75.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	19.0	19.0	19.1	18.7	0.4
4	19.1	19.0	19.4	19.0	0.4
5	19.0	18.9	19.3	18.9	0.4
6	18.8	18.8	18.9	18.5	0.4
7	18.2	18.2	18.3	18.2	0.1
8	18.6	18.5	18.5	18.2	0.4
9	18.5	18.5	18.6	18.4	0.2
10	18.8	18.8	19.1	18.7	0.4
11	18.7	18.6	18.7	18.6	0.1
12	18.6	18.6	18.8	18.6	0.2
13	18.6	18.6	18.3	18.1	0.5
14	19.0	18.9	19.0	18.7	0.3
16	19.9	19.8	19.9	19.6	0.3
17	19.0	19.0	19.3	18.8	0.5
24	18.0	18.1	18.0	18.0	0.1
25	18.1	18.1	18.2	18.1	0.1
26	18.5	18.4	18.6	18.5	0.2
27	18.4	18.3	18.4	18.4	0.1
28	19.1	19.1	19.3	19.1	0.2
29	18.5	18.2	18.4	18.4	0.3
30	19.0	19.0	19.1	19.1	0.1
31	19.0	18.9	19.1	19.0	0.2
32	19.1	19.0	19.1	19.0	0.1
36	19.2	19.1	19.2	19.2	0.1
37	19.0	18.9	19.0	18.9	0.1
38	18.9	18.8	19.0	18.9	0.2
40	19.0	18.9	19.1	18.9	0.2
41	19.3	19.2	19.3	19.3	0.1
42	18.5	18.4	18.5	18.4	0.1
43	19.2	19.1	19.3	19.1	0.2
44	19.4	19.3	19.5	19.4	0.2
45	20.0	19.9	20.0	19.9	0.1
46	19.2	19.1	19.2	19.1	0.1
47	18.8	18.7	18.8	18.7	0.1
48	19.2	19.2	19.2	19.2	0.0
49	19.5	19.4	19.6	19.6	0.2
50	19.6	19.5	19.7	19.5	0.2
51	19.5	19.6	19.7	19.6	0.2
52	19.7	19.8	19.9	19.7	0.2
53	19.9	19.9	19.9	19.7	0.2
54	19.9	19.9	20.1	19.8	0.3
55	19.2	19.2	19.1	19.0	0.2
56	19.4	19.4	19.5	19.2	0.3

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Litchville, ND

Model: 1450
 Operator: J_HARRIS
 Date: 07/21/15 Time: 07:09:49
 Description:

Serial #: 7183480
 File: LITCHVILLE

Cal Date: 4/09/14
 DOS File: LITCHVILLE

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	07:09:49	13:09:42	19:09:42	01:09:42	
Temp:	80.0 F	76.7 F	77.8 F	75.8 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	19.8	19.7	19.8	19.5	0.3
59	19.3	19.2	19.4	19.0	0.4
60	19.7	19.6	20.1	19.5	0.6
61	19.4	19.4	19.5	19.2	0.3
62	19.2	19.2	19.3	19.0	0.3
63	19.2	19.2	19.4	19.0	0.4
64	18.8	18.8	18.9	18.5	0.4
65	19.4	19.5	19.5	19.0	0.5
67	19.5	19.5	19.6	19.1	0.5
68	19.7	20.0	20.1	19.6	0.5
69	19.3	19.3	19.3	18.9	0.4
70	19.8	19.9	19.9	19.5	0.4
71	20.0	20.0	20.1	19.7	0.4
72	19.3	19.3	19.3	18.9	0.4
73	19.4	19.4	19.6	19.1	0.5
74	19.5	19.5	19.5	19.1	0.4
75	19.7	19.7	19.8	19.3	0.5
76	20.2	20.2	20.3	19.9	0.4
77	19.8	19.8	19.9	19.4	0.5
78	19.7	19.9	19.9	19.5	0.4

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Kathryn, ND	
Date:	7/21/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	13.1	55.249953	-13.3	4.499991
7	175.2500	BEK	13.0	175.250046	-16.0	4.499977
26 M	235.2375	ESPNcl	15.1	235.236233	-15.0	4.499977
28 O-+	247.2375	TBS	15.3	247.236195	-16.1	4.499972
32 S-+	271.2375	ABCfam	14.5	271.236200	-15.4	4.499977
46 JJ-+	355.2375	TOON	13.8	355.235184	-14.8	4.499974
55 SS	409.2500	DIY	13.8	409.250428	-13.8	4.500008
59 WW	433.2500	MSNBC	14.2	433.247182	-16.2	4.499966
61 YY	445.2500	DSNYxd	14.7	445.248245	-16.1	4.499984
69 GGG	493.2500	YouToo	14.4	493.249431	-15.4	4.499986
71 III	505.2500	truTV	14.4	505.249415	-15.4	4.499988
78 PPP	547.2500	Sptman	14.6	547.249711	-15.0	4.499998

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	48.3	-66.60	-68.5	0.6
7	175.2500	BEK	48.8	-60.70	-67.6	0.5
26 M	235.2375	ESPNcl	51.1	-69.20	-68.9	0.5
28 O-+	247.2375	TBS	51.8	-68.10	-68.2	0.6
32 S-+	271.2375	ABCfam	51.6	-69.00	-68.4	0.6
46 JJ-+	355.2375	TOON	51.0	-67.60	-67.9	0.7
55 SS	409.2500	DIY	50.2	-66.70	-67.0	0.4
59 WW	433.2500	MSNBC	50.9	-67.60	-67.9	0.8
61 YY	445.2500	DSNYxd	50.9	-67.90	-67.4	0.6
69 GGG	493.2500	YouToo	49.8	-67.70	-67.9	0.5
71 III	505.2500	truTV	49.8	-68.50	-67.9	0.7
78 PPP	547.2500	Sptman	51.9	-67.50	-68.6	0.6

Hum & Low Frequency Disturbance	1.1%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Kathryn, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 08:45:13
 Description:

Serial #: 0614953
 File: KATHRYN

Cal Date: 12/15/14
 DOS File: KATHRYN

Location: KATHRYN
 Location Type: FieldTest
 Area: _0____
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	08:45:13	14:45:05	20:45:05	02:45:02	
Temp:	74.9 F	76.6 F	75.7 F	70.6 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	12.1	12.3	12.2	11.9	0.4
4	13.4	13.6	13.7	13.6	0.3
5	13.5	13.4	13.5	13.4	0.1
6	13.2	13.4	13.3	13.2	0.2
7	13.2	13.3	13.2	13.2	0.1
8	13.6	13.7	13.6	13.7	0.1
9	13.6	13.7	13.7	13.7	0.1
10	14.0	14.1	14.0	14.1	0.1
11	14.0	14.0	14.0	14.0	0.0
12	13.9	14.1	14.1	14.1	0.2
13	13.9	14.0	14.0	14.1	0.2
14	13.6	13.7	13.6	13.5	0.2
16	14.6	14.8	14.7	14.5	0.3
17	13.8	13.9	13.8	13.5	0.4
24	13.4	13.5	13.5	13.6	0.2
25	13.3	13.5	13.4	13.4	0.2
26	13.8	13.9	13.9	14.1	0.3
27	13.7	13.9	13.8	14.0	0.3
28	14.5	14.6	14.6	14.8	0.3
29	13.9	13.8	14.0	14.0	0.2
30	14.5	14.6	14.5	14.7	0.2
31	14.5	14.6	14.5	14.7	0.2
32	14.5	14.7	14.4	14.7	0.3
37	14.1	14.2	14.2	14.2	0.1
38	14.4	14.5	14.1	14.0	0.5
40	14.1	14.3	14.2	14.1	0.2
41	14.4	14.6	14.4	14.7	0.3
42	13.6	13.7	13.6	13.8	0.2
43	14.3	14.4	14.4	14.5	0.2
44	14.4	14.6	14.5	14.6	0.2
45	15.0	15.1	15.1	14.9	0.2
46	14.3	14.4	14.3	14.2	0.2
47	13.6	13.8	13.7	13.6	0.2
48	14.3	14.4	14.4	14.2	0.2
49	14.5	14.5	14.5	14.4	0.1
50	14.3	14.4	14.5	14.4	0.2
51	14.3	14.5	14.5	14.3	0.2
52	14.6	14.7	14.6	14.6	0.1
53	14.7	14.8	14.6	14.6	0.2
54	14.8	14.8	14.9	14.7	0.2
55	14.0	14.2	14.2	13.9	0.3
56	14.4	14.6	14.5	14.3	0.3

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Kathryn, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 08:45:13
 Description:

Serial #: 0614953
 File: KATHRYN

Cal Date: 12/15/14
 DOS File: KATHRYN

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	08:45:13	14:45:05	20:45:05	02:45:02	
Temp:	74.9 F	76.6 F	75.7 F	70.6 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	14.7	14.9	14.7	14.6	0.3
59	14.2	14.4	14.2	13.9	0.5
60	14.5	14.7	14.5	14.3	0.4
61	14.3	14.4	14.4	14.1	0.3
62	14.1	14.3	14.1	14.0	0.3
63	14.1	14.3	14.3	14.0	0.3
64	13.9	14.1	13.9	13.8	0.3
65	14.5	14.7	14.5	14.3	0.4
67	14.7	14.8	14.7	14.5	0.3
68	14.9	15.4	15.2	15.0	0.5
69	14.4	14.6	14.5	14.3	0.3
70	14.9	15.0	15.1	14.8	0.3
71	15.1	15.1	15.1	15.1	0.0
72	14.4	14.5	14.5	14.4	0.1
73	14.3	14.5	14.3	14.3	0.2
74	14.1	14.3	14.5	14.1	0.4
75	14.3	14.5	14.4	14.2	0.3
76	15.0	15.2	15.2	14.9	0.3
77	14.8	15.0	14.9	14.5	0.5
78	14.8	14.9	14.9	14.3	0.6

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Lisbon, ND	
Date:	7/22/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	15.2	55.249938	-14.3	4.499973
7	175.2500	BEK	15.7	175.250001	-16.0	4.499971
26 M	235.2375	ESPNcl	16.3	235.236113	-14.8	4.499971
28 O-+	247.2375	TBS	16.1	247.236036	-16.3	4.499974
32 S-+	271.2375	ABCfam	15.4	271.236020	-15.3	4.499974
46 JJ-+	355.2375	TOON	15.3	355.235100	-15.6	4.499973
55 SS	409.2500	DIY	14.3	409.250365	-13.5	4.500001
59 WW	433.2500	MSNBC	13.9	433.247073	-16.0	4.499973
61 YY	445.2500	DSNYxd	12.8	445.248035	-15.3	4.499978
69 GGG	493.2500	YouToo	11.6	493.249308	-15.1	4.499989
71 III	505.2500	truTV	11.8	505.249289	-15.3	4.499990
78 PPP	547.2500	Sptman	11.4	547.249609	-14.9	4.499999

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	57.3	-65.80	-72.6	0.3
7	175.2500	BEK	56.4	-65.80	-70.8	0.5
26 M	235.2375	ESPNcl	58.7	-62.80	-71.6	0.6
28 O-+	247.2375	TBS	57.9	-69.50	-68.0	0.5
32 S-+	271.2375	ABCfam	58.1	-63.50	-72.3	0.7
46 JJ-+	355.2375	TOON	55.8	-63.50	-72.1	0.5
55 SS	409.2500	DIY	56.2	-65.80	-67.9	0.4
59 WW	433.2500	MSNBC	56.8	-62.10	-67.5	0.6
61 YY	445.2500	DSNYxd	54.2	-61.80	-68.4	0.5
69 GGG	493.2500	YouToo	54.8	-62.50	-67.6	0.5
71 III	505.2500	truTV	55.1	-63.80	-68.5	0.6
78 PPP	547.2500	Sptman	55.3	-59.50	-67.9	0.4

Hum & Low Frequency Disturbance	0.8%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Lisbon, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 08:45:13
 Description:

Serial #: 0614953
 File: LISBON

Cal Date: 12/15/14
 DOS File: LISBON

Location: LISBON
 Location Type: FieldTest
 Area: _0____
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	08:45:13	14:45:05	20:45:05	02:45:02	
Temp:	74.9 F	76.6 F	75.7 F	70.6 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	12.1	12.3	12.2	11.9	0.4
4	13.4	13.6	13.7	13.6	0.3
5	13.5	13.4	13.5	13.4	0.1
6	13.2	13.4	13.3	13.2	0.2
7	13.2	13.3	13.2	13.2	0.1
8	13.6	13.7	13.6	13.7	0.1
9	13.6	13.7	13.7	13.7	0.1
10	14.0	14.1	14.0	14.1	0.1
11	14.0	14.0	14.0	14.0	0.0
12	13.9	14.1	14.1	14.1	0.2
13	13.9	14.0	14.0	14.1	0.2
14	13.6	13.7	13.6	13.5	0.2
16	14.6	14.8	14.7	14.5	0.3
17	13.8	13.9	13.8	13.5	0.4
24	13.4	13.5	13.5	13.6	0.2
25	13.3	13.5	13.4	13.4	0.2
26	13.8	13.9	13.9	14.1	0.3
27	13.7	13.9	13.8	14.0	0.3
28	14.5	14.6	14.6	14.8	0.3
29	13.9	13.8	14.0	14.0	0.2
30	14.5	14.6	14.5	14.7	0.2
31	14.5	14.6	14.5	14.7	0.2
32	14.5	14.7	14.4	14.7	0.3
37	14.1	14.2	14.2	14.2	0.1
38	14.4	14.5	14.1	14.0	0.5
40	14.1	14.3	14.2	14.1	0.2
41	14.4	14.6	14.4	14.7	0.3
42	13.6	13.7	13.6	13.8	0.2
43	14.3	14.4	14.4	14.5	0.2
44	14.4	14.6	14.5	14.6	0.2
45	15.0	15.1	15.1	14.9	0.2
46	14.3	14.4	14.3	14.2	0.2
47	13.6	13.8	13.7	13.6	0.2
48	14.3	14.4	14.4	14.2	0.2
49	14.5	14.5	14.5	14.4	0.1
50	14.3	14.4	14.5	14.4	0.2
51	14.3	14.5	14.5	14.3	0.2
52	14.6	14.7	14.6	14.6	0.1
53	14.7	14.8	14.6	14.6	0.2
54	14.8	14.8	14.9	14.7	0.2
55	14.0	14.2	14.2	13.9	0.3
56	14.4	14.6	14.5	14.3	0.3

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Lisbon, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 08:45:13
 Description:

Serial #: 0614953
 File: LISBON

Cal Date: 12/15/14
 DOS File: LISBON

	#1	#2	#3	#4	
Date:	07/21/15	07/21/15	07/21/15	07/22/15	
Time:	08:45:13	14:45:05	20:45:05	02:45:02	
Temp:	74.9 F	76.6 F	75.7 F	70.6 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	14.7	14.9	14.7	14.6	0.3
59	14.2	14.4	14.2	13.9	0.5
60	14.5	14.7	14.5	14.3	0.4
61	14.3	14.4	14.4	14.1	0.3
62	14.1	14.3	14.1	14.0	0.3
63	14.1	14.3	14.3	14.0	0.3
64	13.9	14.1	13.9	13.8	0.3
65	14.5	14.7	14.5	14.3	0.4
67	14.7	14.8	14.7	14.5	0.3
68	14.9	15.4	15.2	15.0	0.5
69	14.4	14.6	14.5	14.3	0.3
70	14.9	15.0	15.1	14.8	0.3
71	15.1	15.1	15.1	15.1	0.0
72	14.4	14.5	14.5	14.4	0.1
73	14.3	14.5	14.3	14.3	0.2
74	14.1	14.3	14.5	14.1	0.4
75	14.3	14.5	14.4	14.2	0.3
76	15.0	15.2	15.2	14.9	0.3
77	14.8	15.0	14.9	14.5	0.5
78	14.8	14.9	14.9	14.3	0.6

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S

Location Report: Analog RF Subscriber NID (FTTH)

Test Location:	Rutland, ND	
Date:	7/22/2015	
Video Standard:	NTSC	
	Pass	Fail

Selected Test Channels

EIA Channel	Standard Frequency (MHz)	Program	Visual Carrier Level (dBmV)	Visual Carrier Frequency (MHz)	Aural Carrier Δ (dBc)	Aural Carrier Frequency Offset (MHz)
2	55.2500	GUIDE	13.2	55.249936	-14.1	4.499996
7	175.2500	BEK	14.7	175.250001	-10.9	4.500004
26 M	235.2375	ESPNcl	15.9	235.236111	-14.8	4.499970
28 O-+	247.2375	TBS	15.4	247.236048	-16.1	4.499975
32 S-+	271.2375	ABCfam	15.2	271.236030	-15.5	4.499982
46 JJ-+	355.2375	TOON	15.0	355.235106	-15.7	4.499976
55 SS	409.2500	DIY	14.8	409.250379	-13.6	4.499999
59 WW	433.2500	MSNBC	14.6	433.247069	-15.6	4.499971
61 YY	445.2500	DSNYxd	14.2	445.247989	-15.2	4.499981
69 GGG	493.2500	YouToo	14.2	493.249308	-15.4	4.499996
71 III	505.2500	truTV	14.4	505.249300	-15.5	4.499994
78 PPP	547.2500	Sptman	14.0	547.249626	-14.7	4.499979

RF Carrier Performance Measurements

EIA Channel	Standard Frequency (MHz)	Program	Carrier to Noise (dB)	Coherent Second Order (dBc)	Coherent Triple Beat (dBc)	In Channel Response (dB)
2	55.2500	GUIDE	50.9	-71.30	-69.2	0.5
7	175.2500	BEK	51.3	-67.70	-69.7	0.4
26 M	235.2375	ESPNcl	55.0	-72.30	-70.0	0.6
28 O-+	247.2375	TBS	53.7	-70.70	-68.2	0.7
32 S-+	271.2375	ABCfam	54.1	-73.00	-69.8	0.8
46 JJ-+	355.2375	TOON	53.5	-70.70	-70.3	0.8
55 SS	409.2500	DIY	52.7	-70.80	-69.4	0.7
59 WW	433.2500	MSNBC	52.4	-68.90	-69.4	0.5
61 YY	445.2500	DSNYxd	52.3	-68.30	-69.5	0.4
69 GGG	493.2500	YouToo	52.7	-71.20	-68.3	0.5
71 III	505.2500	truTV	53.1	-68.50	-69.5	0.6
78 PPP	547.2500	Sptman	52.7	-69.10	-69.2	0.7

Hum & Low Frequency Disturbance	0.9%
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24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Rutland, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 22:28:35
 Description:

Serial #: 2420532
 File: RUTLAND

Cal Date: 2/11/14
 DOS File: RUTLAND

Location: RUTLAND
 Location Type: FieldTest
 Area: _
 Test Pnt Type:
 Test Pnt Comp:
 AC Voltage:

AmpID:
 Power Cfg:
 Feeder Maker Cfg:
 Trunk Term:
 Voltage Setting:
 DC Voltage (reg):

Reverse Pad:
 Forward Pad:
 Rev Equalizer:
 Fwd Equalizer:
 Temp:
 DC Voltage (unreg):

	#1	#2	#3	#4	
Date:	07/21/15	07/22/15	07/22/15	07/22/15	
Time:	22:28:35	04:27:50	10:27:50	16:27:49	
Temp:	72.0 F	73.7 F	73.9 F	75.7 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
2	13.9	13.6	13.6	13.7	0.3
4	15.3	14.7	15.0	15.0	0.6
5	15.2	14.8	14.7	14.8	0.5
6	14.9	14.6	14.6	14.6	0.3
7	14.8	14.3	14.3	14.3	0.5
8	15.0	14.8	14.8	14.8	0.2
9	14.7	14.8	14.8	14.7	0.1
10	15.2	15.0	15.0	15.0	0.2
11	15.0	15.1	15.1	15.0	0.1
12	15.2	15.2	15.2	15.1	0.1
13	14.6	14.9	14.9	14.9	0.3
14	15.4	15.1	15.2	15.1	0.3
16	16.2	15.8	15.9	15.8	0.4
17	15.5	15.0	15.0	15.3	0.5
24	14.7	14.6	14.7	14.7	0.1
25	14.7	14.4	14.4	14.5	0.3
26	15.4	15.1	15.1	15.1	0.3
27	15.4	15.3	15.3	15.3	0.1
28	16.0	15.8	15.9	15.9	0.2
29	15.0	15.2	15.2	15.3	0.3
30	16.1	15.7	15.8	15.8	0.4
31	16.2	15.8	15.9	15.9	0.4
32	15.9	15.6	15.7	15.7	0.3
37	15.6	15.4	15.5	15.4	0.2
38	15.9	16.1	15.8	15.7	0.4
40	15.4	15.3	15.4	15.3	0.1
41	16.1	15.9	16.0	15.9	0.2
42	14.5	14.7	14.7	14.6	0.2
43	15.1	15.0	15.1	15.0	0.1
44	15.7	15.2	15.3	15.1	0.6
45	16.6	16.5	16.6	16.4	0.2
46	15.5	15.4	15.4	15.4	0.1
47	14.2	14.1	14.1	14.1	0.1
48	15.7	15.7	15.6	15.5	0.2
49	16.4	16.2	16.3	16.3	0.2
50	15.9	15.8	15.7	15.7	0.2
51	15.7	15.5	15.5	15.5	0.2
52	16.4	16.3	16.3	16.2	0.2
53	16.2	16.1	16.1	16.1	0.1
54	15.2	15.1	15.1	15.1	0.1
55	14.4	14.6	14.6	14.6	0.2
56	15.5	15.6	15.3	15.3	0.3

24 Hour Test Report



Technology Planners
 244 W Pioneer Road
 Fond du Lac, WI
 54935
 920-923-1034

Test completed for:
 Dickey Rural Networks
 Testing Location:
 Rutland, ND

Model: 1750
 Operator: J_HARRIS
 Date: 07/21/15 Time: 22:28:35
 Description:

Serial #: 2420532
 File: RUTLAND

Cal Date: 2/11/14
 DOS File: RUTLAND

	#1	#2	#3	#4	
Date:	07/21/15	07/22/15	07/22/15	07/22/15	
Time:	22:28:35	04:27:50	10:27:50	16:27:49	
Temp:	72.0 F	73.7 F	73.9 F	75.7 F	
Channel	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	Video Lvl(dBmV)	24Hr Deviation(dB)
57	15.0	15.3	15.1	15.1	0.3
59	14.7	14.9	14.8	14.7	0.2
60	16.1	15.7	15.7	15.6	0.5
61	15.3	14.8	14.9	14.8	0.5
62	14.8	14.7	14.6	14.6	0.2
63	15.1	15.2	15.1	15.3	0.2
64	14.8	15.1	14.9	15.0	0.3
65	14.7	14.9	14.8	14.8	0.2
67	15.7	15.6	15.5	15.6	0.2
68	15.7	15.4	15.3	15.3	0.4
69	14.4	14.4	14.3	14.2	0.2
70	15.3	15.3	15.2	15.1	0.2
71	16.0	15.9	15.8	15.8	0.2
72	14.7	14.9	14.9	14.8	0.2
73	14.5	14.4	14.3	14.3	0.2
74	14.8	14.9	14.8	14.5	0.4
75	15.2	15.2	15.1	15.1	0.1
76	15.4	15.4	15.5	15.4	0.1
77	15.3	15.2	15.1	15.1	0.2
78	15.9	15.7	15.7	15.7	0.2

LIMIT CHECK	Limit	1	2	3	4	
Min Video Carrier Level	3.0 dBmV					Pass
Max Delta Video Level	15.0 dB					Pass
Min Delta V/A	10.0 dB					Pass
Max Delta V/A	17.0 dB					Pass
Max Delta Adjacent Chan	3.0 dB					Pass
Max 24 Hour Deviation	8.0 dB					Pass
Min Digital Level	..					Pass
Max Digital Level	..					Pass
Conclusion:						P A S S