

## Section 1 - Frequency Accuracy Test

System Name: Durham DURHAM CHANNEL PLAN Highest Band Pass: 750 MHz  
 Test Point Location: 924 Ellis Rd Durham NC Test Point Number: 0.2  
 Date of Test: 1-23-04 Time: 16:00 Temperature: 78°F  
 Tech(s) Performing Test: Celus FORBES

Equipment Used	Make/Model	Serial Number	Last Calibration Date
Spectrum Analyzer	<u>HP 8591C</u>	<u>4115A04957</u>	<u>7-28-03</u>
Frequency Counter	_____	_____	_____
Variable Attenuator	_____	_____	_____
Band Pass Filter 1	_____	_____	<u>N/A</u>
Band Pass Filter 2	_____	_____	<u>N/A</u>

**Test Setup Used:** A drop from the test point is feed to the Frequency Counter Equipment. If needed, a band pass filter is used in addition to any built in band pass filter for selection of the carrier. Measure and record the video carrier frequency then measure the difference between the Audio and Video Carrier frequency and record the results.

All channel carriers should be +/- 5 kHz of the assigned frequency unless the carrier is operating outside the 108 to 137 and 225 to 400 MHz bands AND the input or "off-air" signal is offset +/- 10 kHz. Indicate any "off-set" signals in the results with the "\*" sign.

The Audio Carrier Frequency is to be maintained at 4.5 MHz +/- 5 kHz above the video carrier.

This test must be performed on a minimum of four channels plus one additional channel for every 100 MHz, or fraction thereof, of forward bandwidth. As a good engineering practice we will perform this test on each NTSC channel on the forward system at the Headend. Additionally, all I-Net NTSC video channels or other carriers operating in the 108 to 137 and 225 to 400 MHz bands must be tested to ensure their operating frequency maintains a tolerance of +/- 5 kHz from the assigned frequency.

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.505 MHz-4.495 MHz)
2	55.2500	<u>55.24997</u>	55.2550	55.2450	<u>4.49994</u>
3	61.2500	<u>61.24997</u>	61.2550	61.2450	<u>4.49995</u>
4	67.2500	<u>67.25000</u>	67.2550	67.2450	<u>4.50003</u>
	73.0000		N/A	N/A	N/A
5	77.2500	<u>77.24999</u>	77.2550	77.2450	<u>4.50002</u>
6	83.2500	<u>83.25002</u>	83.2550	83.2450	<u>4.49991</u>
6+1	89.2500	<u>NA</u>	89.2550	89.2450	<u>NA</u>
6+2	95.2500	<u>NA</u>	95.2550	95.2450	<u>NA</u>
6+3	101.2500	<u>NA</u>	101.2550	101.2450	<u>NA</u>
A-5	91.2500	<u>NA</u>	91.2550	91.2450	<u>NA</u>
A-4	97.2500	<u>NA</u>	97.2550	97.2450	<u>NA</u>
A-3	103.2500	<u>NA</u>	103.2550	103.2450	<u>NA</u>
A-2	109.2750	<u>109.27492</u>	109.2800	109.2700	<u>4.50012</u>
A-1	115.2750	<u>NA</u>	115.2800	115.2700	<u>NA</u>

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

# Section 1 - Frequency Accuracy Test ①.

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
14	121.2625	<u>121.26255</u>	121.2675	121.2575	<u>4.49997</u>
15	127.2625	<u>127.26255</u>	127.2675	127.2575	<u>4.49990</u>
16	133.2625	<u>133.26259</u>	133.2675	133.2575	<u>4.50001</u>
17	139.2500	<u>139.25000</u>	139.2550	139.2450	<u>4.50002</u>
18	145.2500	<u>145.24959</u>	145.2550	145.2450	<u>4.49994</u>
19	151.2500	<u>151.25007</u>	151.2550	151.2450	<u>4.50002</u>
20	157.2500	<u>NA</u>	157.2550	157.2450	<u>NA</u>
21	163.2500	<u>163.24995</u>	163.2550	163.2450	<u>4.49996</u>
22	169.2500	<u>169.25008</u>	169.2550	169.2450	<u>4.49995</u>
7	175.2500	<u>175.25027</u>	175.2550	175.2450	<u>4.50015</u>
8	181.2500	<u>181.25014</u>	181.2550	181.2450	<u>4.50003</u>
9	187.2500	<u>187.24994</u>	187.2550	187.2450	<u>4.49993</u>
10	193.2500	<u>193.24994</u>	193.2550	193.2450	<u>4.49998</u>
11	199.2500	<u>199.25010</u>	199.2550	199.2450	<u>4.49998</u>
12	205.2500	<u>205.25011</u>	205.2550	204.2450	<u>4.49993</u>
13	211.2500	<u>211.24993</u>	211.2550	211.2450	<u>4.49996</u>
23	217.2500	<u>NA</u>	217.2550	217.2450	<u>NA</u>
24	223.2500	<u>223.25011</u>	223.2550	223.2450	<u>4.50004</u>
25	229.2625	<u>229.26304</u>	229.2675	229.2575	<u>4.50002</u>
26	235.2625	<u>235.26266</u>	235.2675	235.2575	<u>4.50001</u>
27	241.2625	<u>241.26357</u>	241.2675	241.2575	<u>4.50000</u>
28	247.2625	<u>247.26262</u>	247.2675	247.2575	<u>4.50009</u>
29	253.2625	<u>253.26259</u>	253.2675	253.2575	<u>4.50002</u>
30	259.2625	<u>259.26257</u>	259.2675	259.2575	<u>4.50007</u>
31	265.2625	<u>265.26257</u>	265.2675	265.2575	<u>4.49995</u>
32	271.2625	<u>271.26283</u>	271.2675	271.2575	<u>4.50022</u>
33	277.2625	<u>277.26220</u>	277.2675	277.2575	<u>4.50006</u>
34	283.2625	<u>283.26264</u>	283.2675	283.2575	<u>4.49991</u>
35	289.2625	<u>289.26280</u>	289.2675	289.2575	<u>4.50003</u>
36	295.2625	<u>295.26239</u>	295.2675	295.2575	<u>4.50006</u>
37	301.2625	<u>301.26294</u>	301.2675	301.2575	<u>4.50008</u>
38	307.2625	<u>307.26281</u>	307.2675	307.2575	<u>4.49995</u>
39	313.2625	<u>313.26256</u>	313.2675	313.2575	<u>4.50030</u>
40	319.2625	<u>319.26294</u>	319.2675	319.2575	<u>4.50001</u>
41	325.2625	<u>325.26245</u>	325.2675	325.2575	<u>4.50004</u>
42	331.2750	<u>331.27534</u>	331.2800	331.2700	<u>4.50002</u>
43	337.2625	<u>337.26242</u>	337.2675	337.2575	<u>4.50018</u>
44	343.2625	<u>343.26158</u>	343.2675	343.2575	<u>4.49994</u>
45	349.2625	<u>349.26277</u>	349.2675	349.2575	<u>4.50002</u>
46	355.2625	<u>355.26208</u>	355.2675	355.2575	<u>4.49997</u>
47	361.2625	<u>361.26254</u>	361.2675	361.2575	<u>4.50002</u>

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

# Section 1 - Frequency Accuracy Test ①

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
48	367.2625	<u>367.26320</u>	367.2675	367.2575	<u>4.49994</u>
49	373.2625	<u>373.26285</u>	373.2675	373.2575	<u>4.50004</u>
50	379.2625	<u>379.26279</u>	379.2675	379.2575	<u>4.50008</u>
51	385.2625	<u>385.26302</u>	385.2675	385.2575	<u>4.50003</u>
52	391.2625	<u>391.26290</u>	391.2675	391.2575	<u>4.50003</u>
53	397.2625	<u>397.26236</u>	397.2675	397.2575	<u>4.49994</u>
54	403.2500	<u>403.25095</u>	403.2550	403.2450	<u>4.49999</u>
55	409.2500	<u>409.25043</u>	409.2550	409.2450	<u>4.50003</u>
56	415.2500	<u>415.25068</u>	415.2550	415.2450	<u>4.50004</u>
57	421.2500	<u>421.25099</u>	421.2550	421.2450	<u>4.49996</u>
58	427.2500	<u>427.25014</u>	427.2550	427.2450	<u>4.50007</u>
59	433.2500	<u>NA</u>	433.2550	433.2450	<u>NA</u>
60	439.2500	<u>439.24881</u>	439.2550	439.2450	<u>4.49997</u>
61	445.2500	<u>445.24893</u>	445.2550	445.2450	<u>4.49991</u>
62	451.2500	<u>451.24993</u>	451.2550	451.2450	<u>4.50002</u>
63	457.2500	<u>457.25057</u>	457.2550	457.2450	<u>4.50005</u>
64	463.2500	<u>463.25024</u>	463.2550	463.2450	<u>4.49996</u>
65	469.2500	<u>469.24952</u>	469.2550	469.2450	<u>4.49998</u>
66	475.2500	<u>475.24952</u>	475.2550	475.2450	<u>4.49997</u>
67	481.2500	<u>481.25049</u>	481.2550	481.2450	<u>4.49996</u>
68	487.2500	<u>487.25056</u>	487.2550	487.2450	<u>4.50001</u>
69	493.2500	<u>493.24990</u>	493.2550	493.2450	<u>4.50008</u>
70	499.2500	<u>499.24942</u>	499.2550	499.2450	<u>4.50001</u>
71	505.2500	<u>505.25000</u>	505.2550	499.2450	<u>4.50007</u>
72	511.2500	<u>511.24997</u>	511.2550	499.2450	<u>4.50003</u>
73	517.2500	<u>517.25121</u>	517.2550	499.2450	<u>4.49996</u>
74	523.2500	<u>523.25010</u>	523.2550	499.2450	<u>4.50011</u>
75	529.2500	<u>529.24986</u>	529.2550	499.2450	<u>4.50041</u>
76	535.2500	<u>535.25022</u>	535.2550	499.2450	<u>4.50002</u>
77	541.2500	<u>541.25040</u>	541.2550	499.2450	<u>4.50002</u>
78	547.2500	<u>547.25042</u>	547.2550	499.2450	<u>4.50002</u>
79	553.2500	<u>NA</u>	553.2550	499.2450	<u>NA</u>
80	559.2500	<u>NA</u>	559.2550	499.2450	<u>NA</u>
81	565.2500	<u>NA</u>	565.2550	499.2450	<u>NA</u>
82	571.2500	<u>NA</u>	571.2550	499.2450	<u>NA</u>
83	577.2500	<u>NA</u>	577.2550	499.2450	<u>NA</u>
84	583.2500	<u>NA</u>	583.2550	499.2450	<u>NA</u>
85	589.2500	<u>NA</u>	589.2550	499.2450	<u>NA</u>
86	595.2500	<u>NA</u>	595.2550	499.2450	<u>NA</u>
87	601.2500	<u>NA</u>	601.2550	499.2450	<u>NA</u>
116	745.2500	<u>745.25046</u>	745.2550	745.2450	<u>4.50004</u>

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

## Section 1 - Frequency Accuracy Test

System Name: Caryboro CHANNEL PLAN VARIANT Highest Band Pass: 750 MHz  
 Test Point Location: 924 Ellis Rd Durham NC Test Point Number: Ch 2  
 Date of Test: 1-22-04 Time: 14:40 Temperature: 76°F  
 Tech(s) Performing Test: Celus FORBES

Equipment Used	Make/Model	Serial Number	Last Calibration Date
Spectrum Analyzer	<u>HP 8591C</u>	<u>415A04957</u>	<u>7-28-03</u>
Frequency Counter	_____	_____	_____
Variable Attenuator	_____	_____	_____
Band Pass Filter 1	_____	_____	<u>N/A</u>
Band Pass Filter 2	_____	_____	<u>N/A</u>

**Test Setup Used:** A drop from the test point is feed to the Frequency Counter Equipment. If needed, a band pass filter is used in addition to any built in band pass filter for selection of the carrier. Measure and record the video carrier frequency then measure the difference between the Audio and Video Carrier frequency and record the results.

All channel carriers should be +/- 5 kHz of the assigned frequency unless the carrier is operating outside the 108 to 137 and 225 to 400 MHz bands AND the input or "off-air" signal is offset +/- 10 kHz. Indicate any "off-set" signals in the results with the "\*" sign.

The Audio Carrier Frequency is to be maintained at 4.5 MHz +/- 5 kHz above the video carrier.

This test must be performed on a minimum of four channels plus one additional channel for every 100 MHz, or fraction thereof, of forward bandwidth. As a good engineering practice we will perform this test on each NTSC channel on the forward system at the Headend. Additionally, all I-Net NTSC video channels or other carriers operating in the 108 to 137 and 225 to 400 MHz bands must be tested to ensure their operating frequency maintains a tolerance of +/- 5 kHz from the assigned frequency.

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.505 MHz-4.495 MHz)
2	55.2500	_____	55.2550	55.2450	_____
3	61.2500	_____	61.2550	61.2450	_____
4	67.2500	<u>NA</u>	67.2550	67.2450	<u>NA</u>
	73.0000	_____	N/A	N/A	<u>N/A</u>
5	77.2500	<u>77.25018</u>	77.2550	77.2450	<u>4.50003</u>
6	83.2500	<u>83.25002</u>	83.2550	83.2450	<u>4.49993</u>
6+1	89.2500	_____	89.2550	89.2450	_____
6+2	95.2500	_____	95.2550	95.2450	_____
6+3	101.2500	_____	101.2550	101.2450	_____
A-5	91.2500	_____	91.2550	91.2450	_____
A-4	97.2500	_____	97.2550	97.2450	_____
A-3	103.2500	_____	103.2550	103.2450	_____
A-2	109.2750	<u>109.27504</u>	109.2800	109.2700	<u>4.50007</u>
A-1	115.2750	_____	115.2800	115.2700	_____

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

**Section 1 - Frequency Accuracy Test**

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
14	121.2625		121.2675	121.2575	
15	127.2625		127.2675	127.2575	
16	133.2625		133.2675	133.2575	
17	139.2500	NA	139.2550	139.2450	NA
18	145.2500	145.25002	145.2550	145.2450	4.50002
19	151.2500	151.24042	151.2550	151.2450	4.49996
20	157.2500	NA	157.2550	157.2450	NA
21	163.2500		163.2550	163.2450	
22	169.2500	169.25003	169.2550	169.2450	4.50003
7	175.2500	175.24987	175.2550	175.2450	4.49995
8	181.2500	181.24995	181.2550	181.2450	4.49997
9	187.2500	187.25005	187.2550	187.2450	4.49992
10	193.2500	193.24997	193.2550	193.2450	4.49993
11	199.2500	199.25042	199.2550	199.2450	4.49995
12	205.2500	205.24995	205.2550	204.2450	4.49996
13	211.2500	211.25012	211.2550	211.2450	4.49997
23	217.2500	NA	217.2550	217.2450	NA
24	223.2500		223.2550	223.2450	
25	229.2625		229.2675	229.2575	
26	235.2625		235.2675	235.2575	
27	241.2625		241.2675	241.2575	
28	247.2625		247.2675	247.2575	
29	253.2625		253.2675	253.2575	
30	259.2625		259.2675	259.2575	
31	265.2625		265.2675	265.2575	
32	271.2625		271.2675	271.2575	
33	277.2625		277.2675	277.2575	
34	283.2625		283.2675	283.2575	
35	289.2625		289.2675	289.2575	
36	295.2625		295.2675	295.2575	
37	301.2625		301.2675	301.2575	
38	307.2625		307.2675	307.2575	
39	313.2625		313.2675	313.2575	
40	319.2625		319.2675	319.2575	
41	325.2625		325.2675	325.2575	
42	331.2750	331.27537	331.2800	331.2700	4.50002
43	337.2625		337.2675	337.2575	
44	343.2625		343.2675	343.2575	
45	349.2625		349.2675	349.2575	
46	355.2625		355.2675	355.2575	
47	361.2625		361.2675	361.2575	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

# Section 1 - Frequency Accuracy Test

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
48	367.2625		367.2675	367.2575	
49	373.2625		373.2675	373.2575	
50	379.2625		379.2675	379.2575	
51	385.2625		385.2675	385.2575	
52	391.2625	NA	391.2675	391.2575	NA
53	397.2625		397.2675	397.2575	
54	403.2500		403.2550	403.2450	
55	409.2500		409.2550	409.2450	
56	415.2500		415.2550	415.2450	
57	421.2500		421.2550	421.2450	
58	427.2500		427.2550	427.2450	
59	433.2500	433.25099	433.2550	433.2450	4.49994
60	439.2500		439.2550	439.2450	
61	445.2500		445.2550	445.2450	
62	451.2500		451.2550	451.2450	
63	457.2500		457.2550	457.2450	
64	463.2500		463.2550	463.2450	
65	469.2500		469.2550	469.2450	
66	475.2500		475.2550	475.2450	
67	481.2500		481.2550	481.2450	
68	487.2500		487.2550	487.2450	
69	493.2500		493.2550	493.2450	
70	499.2500		499.2550	499.2450	
71	505.2500		505.2550	499.2450	
72	511.2500	511.25038	511.2550	499.2450	4.49997
73	517.2500		517.2550	499.2450	
74	523.2500		523.2550	499.2450	
75	529.2500		529.2550	499.2450	
76	535.2500		535.2550	499.2450	
77	541.2500		541.2550	499.2450	
78	547.2500		547.2550	499.2450	
79	553.2500		553.2550	499.2450	
80	559.2500		559.2550	499.2450	
81	565.2500		565.2550	499.2450	
82	571.2500		571.2550	499.2450	
83	577.2500		577.2550	499.2450	
84	583.2500		583.2550	499.2450	
85	589.2500		589.2550	499.2450	
86	595.2500		595.2550	499.2450	
87	601.2500		601.2550	499.2450	
116	745.2500		745.2550	745.2450	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

## Section 1 - Frequency Accuracy Test

System Name: Henderson CHANNEL VARIANT Highest Band Pass: 750 MHz  
 Test Point Location: 924 Ellis Rd Durham NC Test Point Number: 0.2  
 Date of Test: 1-27-04 Time: 15:07 Temperature: 76°F  
 Tech(s) Performing Test: Celus FORBES

Equipment Used	Make/Model	Serial Number	Last Calibration Date
Spectrum Analyzer	<u>HP 8591C</u>	<u>4115A04957</u>	<u>7-28-03</u>
Frequency Counter	_____	_____	_____
Variable Attenuator	_____	_____	_____
Band Pass Filter 1	_____	_____	<u>N/A</u>
Band Pass Filter 2	_____	_____	<u>N/A</u>

**Test Setup Used:** A drop from the test point is feed to the Frequency Counter Equipment. If needed, a band pass filter is used in addition to any built in band pass filter for selection of the carrier. Measure and record the video carrier frequency then measure the difference between the Audio and Video Carrier frequency and record the results.

All channel carriers should be +/- 5 kHz of the assigned frequency unless the carrier is operating outside the 108 to 137 and 225 to 400 MHz bands AND the input or "off-air" signal is offset +/- 10 kHz. Indicate any "off-set" signals in the results with the "\*" sign.

The Audio Carrier Frequency is to be maintained at 4.5 MHz +/- 5 kHz above the video carrier.

This test must be performed on a minimum of four channels plus one additional channel for every 100 MHz, or fraction thereof, of forward bandwidth. As a good engineering practice we will perform this test on each NTSC channel on the forward system at the Headend. Additionally, all I-NTSC NTSC video channels or other carriers operating in the 108 to 137 and 225 to 400 MHz bands must be tested to ensure their operating frequency maintains a tolerance of +/- 5 kHz from the assigned frequency.

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.505 MHz-4.495 MHz)
2	55.2500	<u>55.24997</u>	55.2550	55.2450	<u>4.49995</u>
3	61.2500	<u>61.24985</u>	61.2550	61.2450	<u>4.49993</u>
4	67.2500	<u>67.25002</u>	67.2550	67.2450	<u>4.49993</u>
	73.0000		N/A	N/A	N/A
5	77.2500	<u>77.25015</u>	77.2550	77.2450	<u>4.49993</u>
6	83.2500	<u>NA</u>	83.2550	83.2450	<u>NA</u>
6+1	89.2500	_____	89.2550	89.2450	_____
6+2	95.2500	_____	95.2550	95.2450	_____
6+3	101.2500	_____	101.2550	101.2450	_____
A-5	91.2500	_____	91.2550	91.2450	_____
A-4	97.2500	_____	97.2550	97.2450	_____
A-3	103.2500	_____	103.2550	103.2450	_____
A-2	109.2750	<u>115.27504</u>	109.2800	109.2700	<u>4.50002</u>
A-1	115.2750	_____	115.2800	115.2700	_____

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

### Section 1 - Frequency Accuracy Test

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
14	121.2625		121.2675	121.2575	
15	127.2625		127.2675	127.2575	
16	133.2625		133.2675	133.2575	
17	139.2500	<u>139.2498</u>	139.2550	139.2450	<u>4.5001</u>
18	145.2500	NA	145.2550	145.2450	NA
19	151.2500	<u>151.24976</u>	151.2550	151.2450	<u>4.50006</u>
20	157.2500	NA	157.2550	157.2450	NA
21	163.2500	<u>163.25015</u>	163.2550	163.2450	<u>4.50008</u>
22	169.2500	<u>169.2503</u>	169.2550	169.2450	<u>4.5000</u>
7	175.2500	<u>175.2502</u>	175.2550	175.2450	<u>4.5000</u>
8	181.2500	<u>181.25004</u>	181.2550	181.2450	<u>4.49992</u>
9	187.2500	<u>187.24028</u>	187.2550	187.2450	<u>4.50003</u>
10	193.2500	<u>193.25017</u>	193.2550	193.2450	<u>4.49996</u>
11	199.2500	<u>199.25022</u>	199.2550	199.2450	<u>4.49994</u>
12	205.2500	<u>205.24985</u>	205.2550	204.2450	<u>4.49997</u>
13	211.2500	<u>211.25013</u>	211.2550	211.2450	<u>4.49995</u>
23	217.2500		217.2550	217.2450	
24	223.2500		223.2550	223.2450	
25	229.2625		229.2675	229.2575	
26	235.2625		235.2675	235.2575	
27	241.2625		241.2675	241.2575	
28	247.2625		247.2675	247.2575	
29	253.2625		253.2675	253.2575	
30	259.2625		259.2675	259.2575	
31	265.2625		265.2675	265.2575	
32	271.2625		271.2675	271.2575	
33	277.2625		277.2675	277.2575	
34	283.2625		283.2675	283.2575	
35	289.2625		289.2675	289.2575	
36	295.2625		295.2675	295.2575	
37	301.2625		301.2675	301.2575	
38	307.2625		307.2675	307.2575	
39	313.2625		313.2675	313.2575	
40	319.2625		319.2675	319.2575	
41	325.2625		325.2675	325.2575	
42	331.2750	<u>331.27565</u>	331.2800	331.2700	<u>4.50001</u>
43	337.2625		337.2675	337.2575	
44	343.2625		343.2675	343.2575	
45	349.2625		349.2675	349.2575	
46	355.2625		355.2675	355.2575	
47	361.2625		361.2675	361.2575	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)



# Section 1 - Frequency Accuracy Test

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
48	367.2625		367.2675	367.2575	
49	373.2625		373.2675	373.2575	
50	379.2625		379.2675	379.2575	
51	385.2625		385.2675	385.2575	
52	391.2625		391.2675	391.2575	
53	397.2625		397.2675	397.2575	
54	403.2500		403.2550	403.2450	
55	409.2500		409.2550	409.2450	
56	415.2500		415.2550	415.2450	
57	421.2500		421.2550	421.2450	
58	427.2500		427.2550	427.2450	
59	433.2500	<u>433.25047</u>	433.2550	433.2450	<u>4.49994</u>
60	439.2500	<u>439.25021</u>	439.2550	439.2450	<u>4.50003</u>
61	445.2500		445.2550	445.2450	
62	451.2500		451.2550	451.2450	
63	457.2500		457.2550	457.2450	
64	463.2500	<u>463.25034</u>	463.2550	463.2450	<u>4.50001</u>
65	469.2500		469.2550	469.2450	
66	475.2500		475.2550	475.2450	
67	481.2500		481.2550	481.2450	
68	487.2500	<u>487.25014</u>	487.2550	487.2450	<u>4.50002</u>
69	493.2500		493.2550	493.2450	
70	499.2500		499.2550	499.2450	
71	505.2500		505.2550	499.2450	
72	511.2500	<u>511.25117</u>	511.2550	499.2450	<u>4.49997</u>
73	517.2500		517.2550	499.2450	
74	523.2500		523.2550	499.2450	
75	529.2500		529.2550	499.2450	
76	535.2500		535.2550	499.2450	
77	541.2500		541.2550	499.2450	
78	547.2500		547.2550	499.2450	
79	553.2500		553.2550	499.2450	
80	559.2500		559.2550	499.2450	
81	565.2500		565.2550	499.2450	
82	571.2500		571.2550	499.2450	
83	577.2500		577.2550	499.2450	
84	583.2500		583.2550	499.2450	
85	589.2500		589.2550	499.2450	
86	595.2500		595.2550	499.2450	
87	601.2500		601.2550	499.2450	
116	745.2500		745.2550	745.2450	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

## Section 1 - Frequency Accuracy Test

System Name: Chapel Hill Channel Plan VARIANT Highest Band Pass: 750 MHz  
 Test Point Location: 424 Ellis Rd Durham NC Test Point Number: 0.2  
 Date of Test: 1-27-04 Time: 14:14 Temperature: 76°F  
 Tech(s) Performing Test: Celus FORBES

Equipment Used	Make/Model	Serial Number	Last Calibration Date
Spectrum Analyzer	<u>HP 8591C</u>	<u>4115A04957</u>	<u>7-28-03</u>
Frequency Counter	_____	_____	_____
Variable Attenuator	_____	_____	_____
Band Pass Filter 1	_____	_____	<u>N/A</u>
Band Pass Filter 2	_____	_____	<u>N/A</u>

**Test Setup Used:** A drop from the test point is feed to the Frequency Counter Equipment. If needed, a band pass filter is used in addition to any built in band pass filter for selection of the carrier. Measure and record the video carrier frequency then measure the difference between the Audio and Video Carrier frequency and record the results.

All channel carriers should be +/- 5 kHz of the assigned frequency unless the carrier is operating outside the 108 to 137 and 225 to 400 MHz bands AND the input or "off-air" signal is offset +/- 10 kHz. Indicate any "off-set" signals in the results with the "\*" sign.

The Audio Carrier Frequency is to be maintained at 4.5 MHz +/- 5 kHz above the video carrier.

This test must be performed on a minimum of four channels plus one additional channel for every 100 MHz, or fraction thereof, of forward bandwidth. As a good engineering practice we will perform this test on each NTSC channel on the forward system at the Headend. Additionally, all I-Nct NTSC video channels or other carriers operating in the 108 to 137 and 225 to 400 MHz bands must be tested to ensure their operating frequency maintains a tolerance of +/- 5 kHz from the assigned frequency.

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.505 MHz-4.495 MHz)
2	55.2500	<u>55.24997</u>	55.2550	55.2450	<u>4.49996</u>
3	61.2500	_____	61.2550	61.2450	_____
4	67.2500	<u>67.24998</u>	67.2550	67.2450	<u>4.50002</u>
	73.0000	_____	N/A	N/A	<u>N/A</u>
5	77.2500	<u>77.24036</u>	77.2550	77.2450	<u>4.50003</u>
6	83.2500	_____	83.2550	83.2450	_____
6+1	89.2500	_____	89.2550	89.2450	_____
6+2	95.2500	_____	95.2550	95.2450	_____
6+3	101.2500	_____	101.2550	101.2450	_____
A-5	91.2500	_____	91.2550	91.2450	_____
A-4	97.2500	_____	97.2550	97.2450	_____
A-3	103.2500	_____	103.2550	103.2450	_____
A-2	109.2750	<u>109.27500</u>	109.2800	109.2700	<u>4.50000</u>
A-1	115.2750	_____	115.2800	115.2700	_____

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

**Section 1 - Frequency Accuracy Test**

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
14	121.2625		121.2675	121.2575	
15	127.2625		127.2675	127.2575	
16	133.2625		133.2675	133.2575	
17	139.2500	NA	139.2550	139.2450	NA
18	145.2500	145.25009	145.2550	145.2450	4.50003
19	151.2500		151.2550	151.2450	
20	157.2500	NA	157.2550	157.2450	NA
21	163.2500		163.2550	163.2450	
22	169.2500		169.2550	169.2450	
7	175.2500		175.2550	175.2450	
8	181.2500	181.24986	181.2550	181.2450	4.50030
9	187.2500		187.2550	187.2450	
10	193.2500		193.2550	193.2450	
11	199.2500		199.2550	199.2450	
12	205.2500		205.2550	204.2450	
13	211.2500		211.2550	211.2450	
23	217.2500	NA	217.2550	217.2450	NA
24	223.2500		223.2550	223.2450	
25	229.2625		229.2675	229.2575	
26	235.2625		235.2675	235.2575	
27	241.2625		241.2675	241.2575	
28	247.2625		247.2675	247.2575	
29	253.2625		253.2675	253.2575	
30	259.2625		259.2675	259.2575	
31	265.2625		265.2675	265.2575	
32	271.2625		271.2675	271.2575	
33	277.2625		277.2675	277.2575	
34	283.2625		283.2675	283.2575	
35	289.2625		289.2675	289.2575	
36	295.2625		295.2675	295.2575	
37	301.2625		301.2675	301.2575	
38	307.2625		307.2675	307.2575	
39	313.2625		313.2675	313.2575	
40	319.2625		319.2675	319.2575	
41	325.2625		325.2675	325.2575	
42	331.2750	331.27542	331.2800	331.2700	4.50002
43	337.2625		337.2675	337.2575	
44	343.2625		343.2675	343.2575	
45	349.2625		349.2675	349.2575	
46	355.2625		355.2675	355.2575	
47	361.2625		361.2675	361.2575	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

### Section 1 - Frequency Accuracy Test

Continued

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
48	367.2625		367.2675	367.2575	
49	373.2625		373.2675	373.2575	
50	379.2625		379.2675	379.2575	
51	385.2625		385.2675	385.2575	
52	391.2625	NA	391.2675	391.2575	NA
53	397.2625		397.2675	397.2575	
54	403.2500		403.2550	403.2450	
55	409.2500		409.2550	409.2450	
56	415.2500		415.2550	415.2450	
57	421.2500		421.2550	421.2450	
58	427.2500		427.2550	427.2450	
59	433.2500	433.25073	433.2550	433.2450	4.50005
60	439.2500		439.2550	439.2450	
61	445.2500		445.2550	445.2450	
62	451.2500		451.2550	451.2450	
63	457.2500		457.2550	457.2450	
64	463.2500		463.2550	463.2450	
65	469.2500		469.2550	469.2450	
66	475.2500		475.2550	475.2450	
67	481.2500		481.2550	481.2450	
68	487.2500		487.2550	487.2450	
69	493.2500		493.2550	493.2450	
70	499.2500		499.2550	499.2450	
71	505.2500		505.2550	499.2450	
72	511.2500		511.2550	499.2450	
73	517.2500		517.2550	499.2450	
74	523.2500		523.2550	499.2450	
75	529.2500		529.2550	499.2450	
76	535.2500		535.2550	499.2450	
77	541.2500		541.2550	499.2450	
78	547.2500		547.2550	499.2450	
79	553.2500		553.2550	499.2450	
80	559.2500		559.2550	499.2450	
81	565.2500		565.2550	499.2450	
82	571.2500		571.2550	499.2450	
83	577.2500		577.2550	499.2450	
84	583.2500		583.2550	499.2450	
85	589.2500		589.2550	499.2450	
86	595.2500		595.2550	499.2450	
87	601.2500		601.2550	499.2450	
116	745.2500		745.2550	745.2450	

\* = Indicates an "off-air" channel with an offset of + or - 10 KHz. being processed on to the system by a processor having an un-compensated input IF stage. (This type of processor cannot be used in the 108 to 137 and 225 to 400 MHz band.)

# Section 1 - Frequency Accuracy Test

## Continued

### I-Net or other "Special" Signals

Ch	Assigned Frequency	Measured Frequency	Maximum Frequency Allowed	Minimum Frequency Allowed	Measured Audio Frequency (4.495 MHz-4.505 MHz)
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Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_

Location: \_\_\_\_\_  
 \_\_\_\_\_