Grand Alliance *digital* HDTV System Cable Test Results

Performed - June 01 to June 09

Both 8 VSB and 16 VSB Systems Tested

CableLabs

Composite Third Order

8 VSB

Target	<25 dB
Test Result	**27 dB**

16 VSB

Target	<38 dB
Test Result	35 dB

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Carrier to Noise

8 VSB

Target	<15.6 dB
Test Result	15 dB

16 VSB

Target	Not Specified
Test Result	29 dB

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Phase Noise

8 VSB

Target	<81 dB
Test Result	78 dB

16 VSB

Target	<87 dB
Test Result	82 dB

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Residual FM

8 VSB

Target	>6.5 kHz
Test Result	9 kHz

16 VSB

Target	>4 kHz
Test Result	7 kHz

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Channel Change

8 VSB

Target	0.7 sec
Test Result	0.7 sec

16 VSB

Target	0.7 sec
Test Result	**1.1 sec**

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Local Oscillator Instability

8 VSB

Target	±89 kHz
Test Result	±100 kHz

16 VSB

Target	±89 kHz
Test Result	100 kHz

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Burst Error Correction

8 VSB

Target	>169 µsec @10 Hz
Test Result	180 µsec @ 10 Hz

16 VSB

Target	>129 µsec @ 10 Hz
Test Result	**120 µsec @ 10 Hz**

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Acknowledgments

Thanks to:

Grand Alliance Members
Advanced Television Test Center Staff
CableLabs Staff

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Grand Alliance *digital* HDTV System Cable Field Results

Performed July 28 to August 29

8 VSB Signal Received Off-air

16 VSB Signal on Cable Systems

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8 Time Warner Systems Tested

Various bandwidths and vintages

Am Fibre Links

No microwave AML's

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ATV Channel 53 Received Off-air

Signal Error Corrected

Second Data Stream Added

16 VSB Modulation for cable system

ATV Signal Added where spectrum was available

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Direct Feed to ATV Receiver

At or Above Threshold at 35 Sites

3 bad sites on System operating
3 Channels above design Frequency

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Signal Fed Through HIAB Before ATV Receiver

Signal below Threshold at 9 Locations

ATV signal above normally maintained frequencies on 2 Systems (3 test points)

ATV Signal located above system design frequency of 2 Systems (6 test Points)

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Conclusions

16 VSB ATV System operates error free if Cable System meets FCC Specifications

ATV System continued to operate if signal level was below FCC specifications until receiver threshold reached.

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Acknowledgments

Thanks To:

Grand Alliance Members
PBS and Field Test Personnel
CableLabs Staff & Consultant

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