

Quick Understanding of Digital Test Patterns




Flat Field Black

A solid black rectangular area with a thin yellow border.

PLL
Pathological

A solid light gray rectangular area with a thin yellow border.

BARS

A horizontal bar composed of eight vertical stripes of equal width, colored from left to right: white, yellow, cyan, magenta, red, blue, and black.

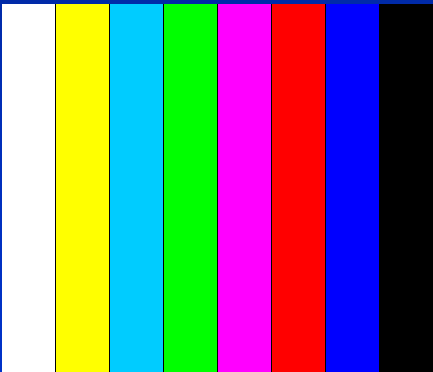
Equalizer
Pathological

A solid magenta rectangular area with a thin yellow border.

75 % Color Bars

Color bars is the most widely used test pattern. Color bars is termed a **non-stressing** test pattern; it is used for testing jitter and cable transmission distance.

These bars differ from other digital test bars, they do not have transition codes between the bars. This does not cause problems in the digital world but it is a problem for some D to A converters.



Receiver PLL Stress Test

The pattern is:

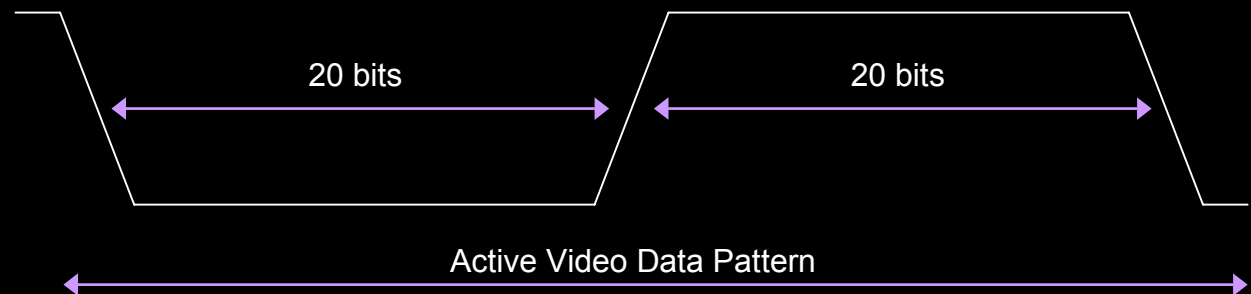
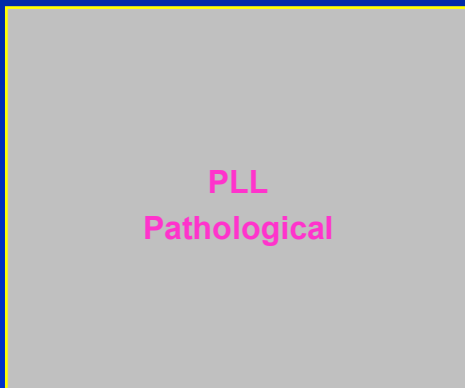
Alternating sequence of 20 bits of 1 and 0.

The pattern:

Lasts for the active video line period.

Reduces the data transition rate to a minimum.

Test the ability of the receiver PLL to remain locked for the line period. (video line)



Cable Equalizer Stress Test

The pattern is:

19 bit-times of one polarity followed by a single bit of the opposite.

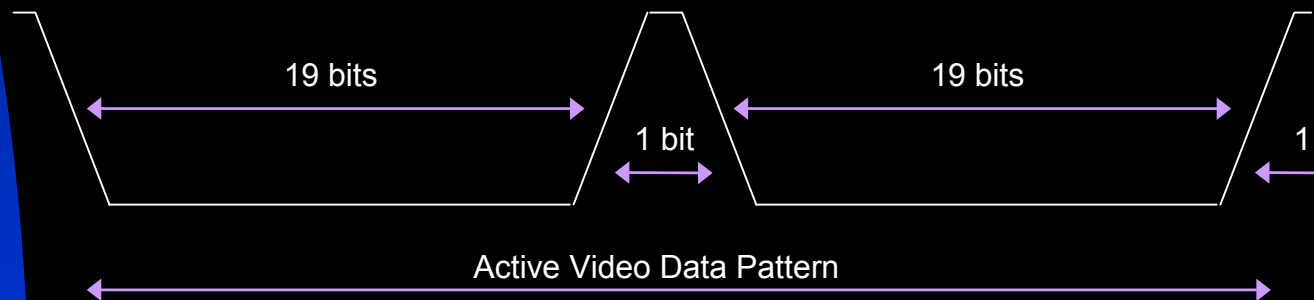
The pattern:

Lasts for the active video line period

Causes DC shift at the receiver input.

Tests the DC restoration capability and operation of the input equalizer.

Equalizer
Pathological



Flat Field Black Test

Here are some things black can be used for.

Set a video monitor brightness level. Monitors tend to have their contrast and other levels turned up. This is a good starting point. Black should show black on a monitor!!

Black is the foundation on which most test patterns are constructed.



Flat Field Black