Canford / Draka coaxial cables for extended 3G HD-SDI transmission

In addition to their trusted HD-SDI video cables, Canford / Draka have introduced a range of extended performance 3Gb/s HD video cables (X / HD PRO) allowing longer transmission distances while still complying with the SMPTE specifications.

The SMPTE 424M standard and the calculated transmission distance

SMPTE 424M defines a maximum 20dB loss at half clock frequency (1.5GHz). A longer transmission distance than defined in the standard is to be expected. While theoretical calculations may be used as a guide, practical tests give a more definitive real-world indication of the maximum transmission distance for 3Gb/s HD-SDI.

Measurement procedure to find the maximum distance at 3G HD-SDI 3Gb/s

Measurement Equipment

Tektronix TG 700 TV Generator
Wave Form Monitor Tektronix WFM 8300 and WFM 7120

Connectors used

Damar & Hagen BNC 75 Ohm
Neutrik Rear Twist BNC 75 Ohm

Measurement results of the maximum application lengths

Standard 3G HD Cables

Canford / Draka Video Cables	Calculated Max Length (m)	Max length according to SMPTE 424M (m)	3Gb/s HD 1080P Actual max. length with Tektronix TG 700 & WFM 8300 (m)	3Gb/s HD 1080P Actual max. length with Tektronix TG 700 & WFM 7120 (m)
Canford SDV / Draka 0.6/2.8 AF	47	50	80	80
Draka 0.8/3.7 AF	64	60	110	110
Canford SDV-L / Draka 1.0/4.8 AF	72	70	130	130
Canford SDV-HD / Draka 1.6/7.3 AF	119	120	230	210

Extended Performance 3G HD Cables

Canford / Draka Video Cables	Calculated Max Length (m)	Max length according to SMPTE 424M (m)	3Gb/s HD 1080P Actual max. length with Tektronix TG 700 & WFM 8300 (m)	3Gb/s HD 1080P Actual max. length with Tektronix TG 700 & WFM 7120 (m)
Canford SDV-X / Draka HD PRO 0.6/2.8	50	50	100	90
Draka HD PRO 0.8/3.7AF	66	70	120	120
Canford SDV-L-X / Draka HD PRO 1.0/4.8	80	80	150	140

Maximum transmission distances - the reality

The maximum transmission distance depends on the devices e.g. on the hardware (Equalizer). Canford / Draka HD-SDI cables exceed the requirements of SMPTE 292M and SMPTE 424M and their theoretically calculated performance. They can confidently be used for the typical run lengths indicated.

Further Information

For detailed information about the SDV cables including Low Fire-Hazard and jacket colour options please visit:

canford.co.uk/technical/PDFs/canford-draka-cables.pdf