

Video Cable

Precision Video Cables for Analog and Digital Applications

RG-6/U and RG-59/U Types

Description	Part No.	UL NEC/C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Core OD	Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation	
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.

RG-6/U Type • 18 AWG Solid .040" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*																			
SDI/HDTV	1694A	NEC:	500 [▲]	152.4	20.5	9.3	18 AWG	.180	4.57	Duofoil	.274	6.96	75	82%	16.2	53.2	1	.2	.8
Digital Video		CMR	1000	304.8	45.0	20.5	(solid)			+ 95%							3.6	.5	1.5
75°C		CEC:	4500	1371.6	202.5	91.9	.040"			TC Braid							10	.7	2.4
		CMG FT4					BC			2.8Ω/M'							71.5	1.6	5.2
							6.4Ω/M'			9.2Ω/km							135	2.1	6.9
							21.0Ω/km										270	3.0	9.7
																	360	3.4	11.3
																	540	4.3	13.9
																	720	4.9	16.1
																	750	5.0	16.4
																	1000	5.9	19.3
																	1500	7.3	24.0
																	2250	9.1	30.0
																	3000	10.7	35.0
																	4500	13.3	43.6

[▲]500 ft. put-up available in Black only.

*Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

Black jacket suitable for Outdoor and Aerial applications.

Plenum • Foam FEP Teflon® Insulation • Flamarrest® Jacket (Available in 10 colors)**																			
SDI/HDTV	1695A	NEC:	500 [†]	152.4	20.5	9.3	18 AWG	.170	4.32	Duofoil	.234	5.94	75	82%	16.2	53.2	1	.2	.8
Digital Video		CMP	1000 [†]	304.8	45.0	20.5	(solid)			+ 95%							3.6	.5	1.5
75°C		CEC:					.040"			TC Braid							10	.8	2.5
		CMP FT6					BC			2.8Ω/M'							71.5	1.8	5.8
							6.4Ω/M'			9.2Ω/km							135	2.4	7.9
							21.0Ω/km										270	3.4	11.2
																	360	4.0	13.1
																	540	5.2	17.1
																	720	6.1	20.0
																	750	6.2	20.3
																	1000	7.3	24.0
																	1500	9.2	30.2
																	2250	11.6	38.0
																	3000	13.7	44.9

*500 ft. put-up available in Black or Natural only.

** Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or Natural.

Black jacket suitable for Outdoor and Aerial applications.

Gas-injected Foam HDPE Insulation • Overall Matte Black PVC Jacket (Color Code: See chart below)																			
SDI/HDTV	7713A	NEC:	500	152.4	463.0	210.0	18 AWG	.180	4.57	Duofoil	1.386	35.20	75	82%	16.2	53.2	1	.2	.8
Digital Video		CMR	1000	304.8	904.0	410.4	(solid)			Coax OD: + 95%							3.6	.5	1.5
75°C		CEC:					.040"			TC Braid							10	.7	2.4
(1694A Bundled)		CMG FT4					BC			3.0Ω/M'							71.5	1.6	5.2
							6.4Ω/M'			9.8Ω/km							135	2.1	6.9
							21.0Ω/km										270	3.0	9.7
																	360	3.4	11.3
																	540	4.3	13.9
																	720	4.9	16.1
																	750	5.0	16.4
																	1000	5.9	19.3
																	1500	7.3	24.0
																	2250	9.1	31.8
																	3000	10.7	35.0

RG-59/U Type • 20 AWG Solid .032" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)																			
SDI/HDTV	1505A	NEC:	500 [†]	152.4	15.5	7.0	20 AWG	.145	3.68	Duofoil	.233	5.92	75	83%	16.3	53.5	1	.3	1.0
Digital Video		CMR	1000 [†]	304.8	35.0	15.9	(solid)			+ 95%							3.6	.6	1.8
75°C		CEC:	5000 [†]	1524.0	165.0	74.9	.032"			TC Braid							10	.9	2.9
		CMG FT4					BC			3.8Ω/M'							71.5	2.1	6.9
							10.0Ω/M'			12.5Ω/km							135	2.7	8.9
							32.8Ω/km										270	3.8	12.5
																	360	4.4	14.4
																	540	5.5	18.0
																	720	6.4	21.0
																	750	6.5	21.3
																	1000	7.6	24.9
																	1500	9.3	30.5
																	2250	11.6	38.0
																	3000	13.4	44.0
																	4500	16.4	53.8

*500 ft. put-up available in Black, Red or Blue only.

†1000 ft. and 5000 ft. put-ups available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELEN-1**.

Request quotations of RG/U cables not listed. For additional selection of Belden® Video Cables, refer to the Coaxial and Broadcast Cables sections of this catalog.

†Spools are one piece, but length may vary ±10% from length shown.

Teflon is a DuPont trademark.

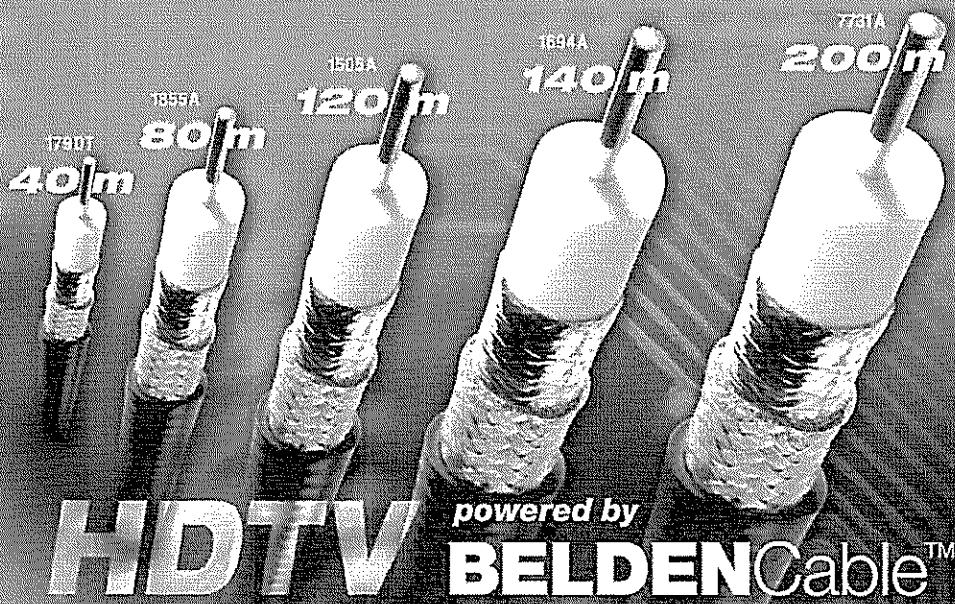
Color Code Chart

Cond.	Color	Cond.	Color
1	Red	6	Brown
2	Green	7	Orange
3	Blue	8	Gray
4	White	9	Purple
5	Yellow	10	Black



For more information, contact Belden Technical Support: **1-800-BELEN-1** • www.belden.com

BeldenCable™ exceeds the standards by delivering installable Performance* and extending sweep testing of Brilliance™. Precision video cables to 4.5 GHz, paving the way for 1080P HDTV/SDI format.



BeldenCable™ exceeds the standards

Brilliance™ broadcast video coaxes are designed for maximum bandwidth, minimum return loss and minimum attenuation loss. These cables already meet the very tight specifications for electrical properties and are ideally suited for both analog and digital video in broadcast, post-production and other critical video applications.

BeldenCable™ extends sweep testing to 4.5 GHz

Now Brilliance™ broadcast video coaxes' performance specifications are extended from

3 GHz to 4.5 GHz. Every reel is sweep tested for return loss and certified to the new, higher frequency. This extension is designed to (re)assure broadcasters, leading edge broadcast equipment manufacturers and the standards bodies that BeldenCable™ delivers performance and reliability, as they begin to migrate from the existing 1080i (interlaced) HD format to the emerging 1080p (progressive) format, protocols and equipment, which require twice the bandwidth of 1080i.

BeldenCable™ is the first cable manufacturer to perform sweep testing and certification to meet this emerging format.

Requirements for 1080i vs. 1080p line formatting and transmission protocols:

Line Format	Image Resolution	Frames per second	HDTV/SDI Video operating frequency	Test frequency
1080i	1920x1080 pixels	60 interlaced	0.743 GHz	2.25 GHz
1080p	1920x1080 pixels	60 complete	1.485 GHz	4.5 GHz

2006 sports events will bring HD to Europe

This year is the busiest ever in the international sports arena. Major events include:

- Winter Olympics, Turin
- Commonwealth Games, Melbourne
- Football World Cup, Germany
- Athletics European Cup, Sweden
- Basketball Worldcup, Japan
- Asian Games, Doha

Most of these events will be filmed in High Definition (HD). The upgraded technology will stimulate a growing interest from TV viewers around the world. Once they have seen the clear HD picture – they will not want to go back to lower quality. The 2006 Football World Cup in Germany will bring High Definition to viewers around the world. With every major broadcaster looking to transmit at least one HD feed, this football tournament is set to become the springboard for HD broadcasting worldwide.

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BRILLIANCE™

HDTV**Installable Performance®****Positive test for Brilliance™ broadcast video coaxes**

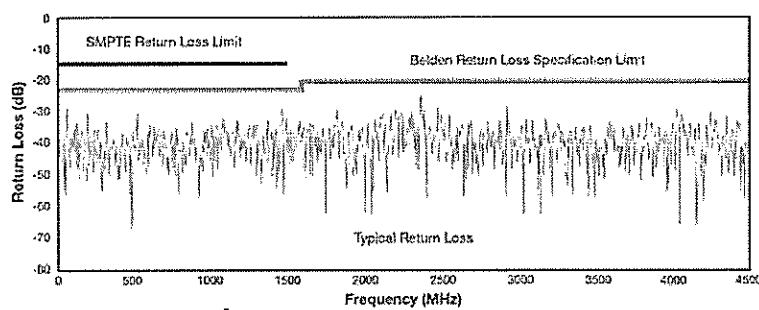
An independent test laboratory took an in-depth look at the HD performance of the video coaxes used in TV studios. Cables were tested for return loss, attenuation and maximum cable run on HD (1080i and 720p).

Maximum Transmission Distance at Serial Digital Data Rates

Data Rate	148 Mb/s	177 Mb/s	270 Mb/s	360 Mb/s	540 Mb/s	1.5 Gb/s	1.5 Gb/s	3.0 Gb/s
Spec	SMPTE 259M	ITU-R BT.601	SMPTE 259M	SMPTE 259M	SMPTE 344M	SMPTE 292M	Independent test	SMPTE 292M
Application	Composite NTSC	Composite PAL	Component Video	Component Widescreen	Component Widescreen	HDTV	HDTV	Prog. Scan HDTV
Part No.	ft	m	ft	m	ft	m	ft	m
179DT	500	152	450	137	380	116	340	104
1855A	980	299	950	290	790	241	680	207
1855ENH	—	—	—	—	—	—	—	—
1505A	1430	436	1360	415	1110	338	970	296
1505F	1200	366	1071	327	857	261	732	223
1694A	1880	573	1710	521	1430	436	1240	378
7731A	2750	838	2480	756	2040	622	1780	536

*more details available

The most popular precision video coaxial cables for HDTV/SDI, Belden Brilliance™ 179DT, 1855A, 1855ENH, 1505A, 1505F, 1694A and 7731A were subjected to extended testing. In the end results all BeldenCable™ products delivered performance values that exceeded those listed in Belden's own catalogues:

Return Loss Headroom (1694A)**New Test Results**

The verdict:
BELDEN Cable™ exceeds
the listed values (SMPTE 292M).

132	40	+6
263	80	+1
394	120	—
394	120	+26
328	100	+31
459	140	+18
656	200	+32

The key advantage:
Higher performance – Longer distances

There is no Equal!**For More Information:**

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