110Ω AES/EBU digital audio cables

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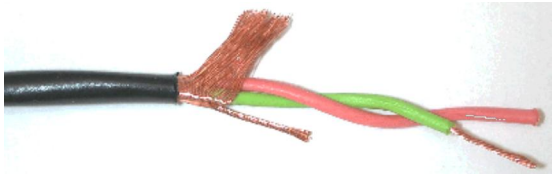
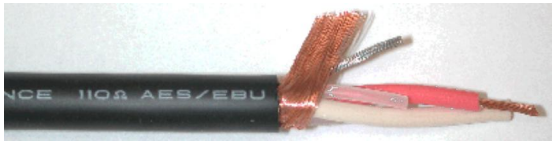
W3159



W3173



W3080

W3080-FC
FERRITE CORE

W3080-TB
FITTING TUBING FOR ITT CANNON XLR CONNECTOR

All of MOGAMI 110W AES/EBU digital audio cables are designed with flexibility and handy configuration. Many variations are available from regular application type up to long distance application types, from single core up to 12-core types, internal wiring type, and interconnect application types. Strict tolerance control of impedance within ±5% up to ±10% at the maximum.

Part No.	W3159	W3228	W3080	W3135	W3173	W3160 ~ W3163
Suggested Maximum applicable length	150m 492Ft				300m 1000Ft	150m 492Ft

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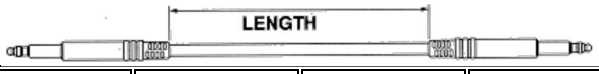
Part No. W3159 is for internal wiring material, Part No.3160 ~ 3163 are multicore cables and other cables are for regular interconnect application. Part No. W3228 is compact size, flexible and durable cofiguration to meet tiny telephone plug cable clamp, therefore it is recommended for use with rough applications. And, Part No. W3173 is specially designed for long distance application assured over 300m.

However, above suggested maximum applicable length is based on use with any device that meets AES standard requirement without equalizer. In the case of use with an equalizer, the maximum applicable length can be expanded up to 1.5 times longer than assured length above. We have also prepared CAD program to see the changes of eye-diagram and transmitted wave form at the receiving end for various working conditions. Since AES/EBU digital audio cable is low capacitance characteristics, it can result in high quality analog audio transmission in general especially for high frequency range.

Bantam Patch Cord



Part No.	PJD-12	PJD-18	PJD-24	PJD-36	PJD-48	PJD-60	PJD-72
Length	12" 30cm	18" 45cm	24" 60cm	36" 90cm	48" 120cm	60" 150cm	72" 180cm

Cable: Part No. W3228; Standard Color: Black only

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SPECIFICATIONS

Configuration						
Part No.		W3159	W3228	W3080	W3135	W3173
No. of Conductor		2	2	2	2	2
Conductor	Details	7/0.20A (7×#32AWG)	36/0.08OFC (36×#40AWG)	7/0.18A (7×#33AWG)	7/0.18A (7×#33AWG)	19/0.25A (19×#31AWG)
	Size	0.22mm² (#24AWG)	0.18mm² (#25AWG)	0.178mm² (#25AWG)	0.178mm² (#25AWG)	0.932mm² (#18AWG)
Insulation	Ov. Dia. (mm)	1.35Ø (0.053")	1.35Ø (0.053")	1.36Ø (0.054")	1.36Ø (0.054")	2.8Ø (0.110")
	Material	CPP	XLPE	XLPE	XLPE	CPP
	Colors	Red/Light green	Red/Clear	Red/Clear	Red/Clear	Red/White
Mono-	Ov. Dia.		-	-		1.87Ø (0.0736")

filament Filler	(mm)	-				
	Material		Cotton			LDPE (Clear)
Drain Wire	Details	7/0.20A (7×#32AWG)	-	7/0.18A (7×#33AWG)	7/0.18A (7×#33AWG)	20/0.18TA (20×#33AWG)
	Size	0.22mm² (#24AWG)	-	0.178mm² (#25AWG)	0.178mm² (#25AWG)	0.509mm² (#21AWG)
Served Shield		Approx. 79/0.10A (Approx. 79/#39AWG)	Approx. 98/0.10A (Approx. 98/#39AWG)	Approx. 60/0.12A (Approx. 60/#37AWG)	Approx. 60/0.12A (Approx. 60/#37AWG)	Approx. 100/0.18A (Approx. 100/#33AWG)
Ov. Jacket	Ov. Dia. (mm)	3.2Ø (0.126"Ø)	4.8Ø (0.189"Ø)	5.0±0.3Ø (0.197± 0.0118"Ø)	5.0±0.3Ø (0.197± 0.0118"Ø)	7.8±0.5Ø (0.307± 0.0197"Ø)
	Material	PVC	PVC	Flexible PVC	Flexible PVC	PVC
	Color	Black/Gray	Black	Black / Blue	Black	Black
Roll Sizes		50m (164 Ft) / 100m (328Ft) / 200m (656Ft)			77m (250 Ft) / 305m (1,000Ft)	300m (983Ft)
Weight		2kg/100m Roll	3kg/100m Roll	3.3kg/100m Roll	2.6kg/250m Roll	27kg/300m

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ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		W3159	W3228	W3080
DC Resistance at 20°C	Inner Cond.	0.081Ω/m(0.0247Ω/Ft)	0.1Ω/m(0.031Ω/Ft)	0.11Ω/m(0.034Ω/Ft)
	Shield Cond.	0.024Ω/m(0.0073Ω/Ft)	0.025Ω/m(0.0076Ω/Ft)	0.028Ω/m(0.0085Ω/Ft)
Capacitance at 1kHz, 20°C (effective capacitance value between inner twin)		46pF/m (14pF/Ft)	53pF/m (16pF/Ft)	46pF/m (14pF/Ft)
Inductance		0.8μH/m (0.24μH/Ft)	0.8μH/m (0.24μH/Ft)	1.0μH/m (0.31μH/Ft)
Characteristic Imperdance		110Ω±10%	110Ω±5%	110Ω±5%
Attenuation (6MHz)		0.065dB/m (0.020db/Ft)	0.069dB/m (0.021db/Ft)	0.069dB/m (0.021db/Ft)
Phase Constant (6MHz)		0.17rad/m	0.20rad/m	0.20rad/m
Electrostatic Noise*		50mV Max.		
Electromagnetic Noise at 10kHz*		2.0mV Max.		
Microphonics**		60mV	40mV Max.	40mV Max.
Voltage Breakdown		Must withstand at DC 500V/15sec, 20°C		
Insulation Resistance		10000 MΩ × m Min. at DC 250V, 20°C		
Flex Life*		2,900 cycles	33,000 cycles	10,000 cycles
Tensile Strength		303N	441N	343N
Emigration		Non-Emigrant to ABS resin		
Applicable Temperature		-20°C~+60°C(-4°F~+140°F)		
Standard		AES3-100X (ANSI S. 4. 40-199-X) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647	AES3-100X (ANSI S. 4. 40-199-X) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647 UL AWM 2623, 30V, 80°C, VW-1	AES3-100X (ANSI S. 4. 40-199-X) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647

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ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		W3135	W3173
DC Resistance at 20°C	Inner Cond.	0.11Ω/m(0.034Ω/Ft)	0.02Ω/m(0.006Ω/Ft)
	Shield Cond.	0.028Ω/m(0.0085Ω/Ft)	0.007Ω/m(0.0021Ω/Ft)
Capacitance at 1kHz, 20°C (effective capacitance value between inner twin)		46pF/m (14pF/Ft)	50pF/m (15.3pF/Ft)
Inductance		1.0μH/m (0.31μH/Ft)	0.7μH/m (0.21μH/Ft)
Characteristic Imperdance		110Ω±5%	110Ω±10%
Attenuation (6MHz)		0.069dB/m (0.021db/Ft)	0.0347dB/m (0.0106db/Ft)
Phase Constant (6MHz)		0.20rad/m	0.17rad/m
Electrostatic Noise*		50mV Max.	
Electromagnetic Noise at 10kHz*		2.0mV Max.	
Microphonics**		40mV Max.	
Voltage Breakdown		Must withstand at DC 500V/15sec, 20°C	
Insulation Resistance		10000 MΩ × m Min. at DC 250V, 20°C	
Flex Life*		10,000 cycles	16,000 cycles
Tensile Strength		362N	Over 980N
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20°C~+60°C(-4°F~+140°F)	
Standard		AES3-100X (ANSI S. 4. 40-199-X) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647 UL444, CM, 300V, 60°C, #25AWG	AES3-100X (ANSI S. 4. 40-199-X) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647 UL AWM 2552, 30V, 60#176;C, VW-1, #18AWG

* Using standard testing method of Mogami Wire & Cable Corp.

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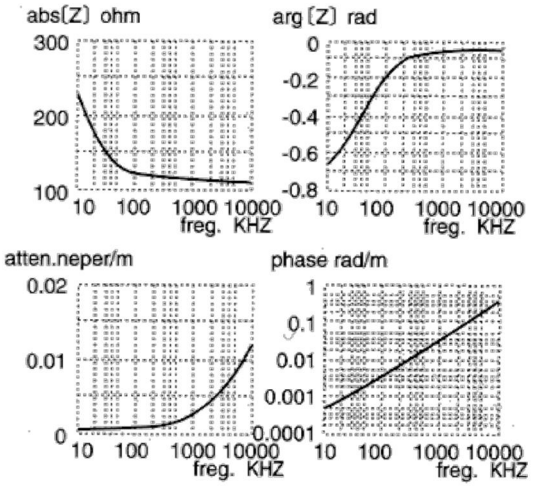
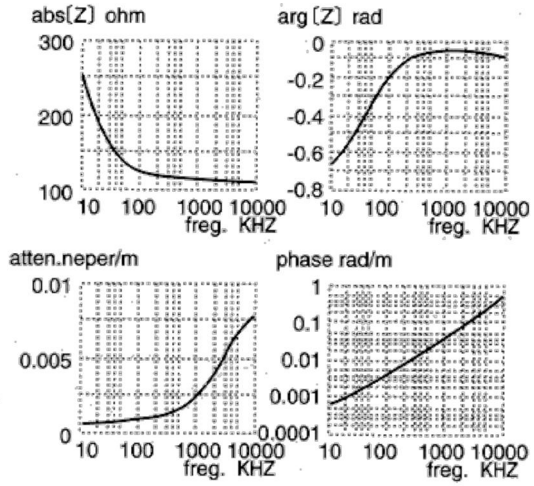


W3080



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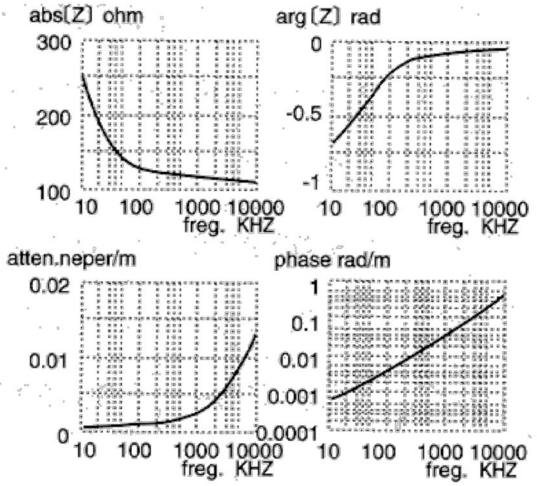
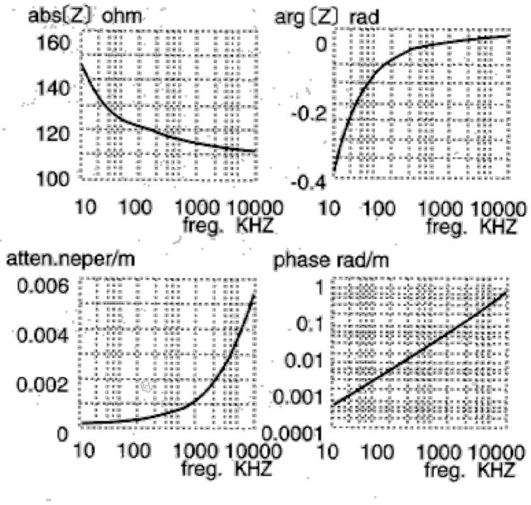
W3135



W3173



Option: **FERRITE CORE is available for Part No. W3080 and No. W3135 to eliminate EMI noise. FITTING TUBING for ITT CANNON XLR connector is available for Part No. W3080 and No. W3135 cable.**

Multicore 110Ω AES/EBU Digital Audio Snake Cables

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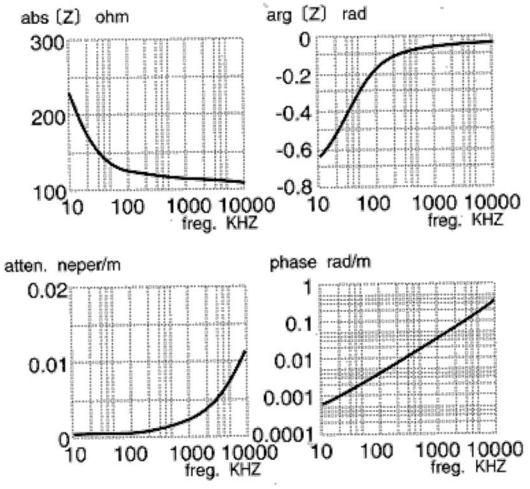
Like the world standard MOGAMI multicore microphone "Snake" cable, very flexible and compact design makes these multicore 110Ω AES/EBU DIGITAL AUDIO cables easy for wiring, installation and handling.

- Because of employed cellular PP (polypropylene) insulation material, regardless of its compact overall diameter, larger conductor size is used, which naturally results in lower attenuation.
- Besides, there are the following outstanding features similar to the standard analog multipair cables:
  - Easy cable core identification system, such as numbered cable core
  - Easy wiring assisted by the same conductor size drain wire
  - Flexible and good low temperature characteristic

W3160



freq kHz	abs(z)ohm	arg(z)rad	atten npr/m	phase rad/m
10	253.053778	-0.666284	0.000485	0.000617
20	186.122587	-0.559186	0.000611	0.000978
50	140.097832	-0.348423	0.00074	0.002038
100	127.900865	-0.206205	0.000811	0.003876
200	123.592395	-0.124331	0.000951	0.007596
500	120.029543	-0.080112	0.001498	0.018508
1000	117.020927	-0.0671	0.00236	0.036164
2000	114.290764	-0.0558	0.003866	0.070617
5000	111.573232	-0.04365	0.007263	0.173456
10000	110.521001	-0.0358	0.012238	0.351575

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Part No.	Nos. of Cores.	O.D. (Approx. mm)	Jacket Thickness (Approx. mm)	Weight (Kg/100m)(Kg/328Ft)	Maximum Length available
W3160	2-CR	9.0 (0.354")	1.0 (0.039")	8	305m (1,000Ft)
W3161	4-CR	10.5 (0.413")	1.2 (0.047")	14	
W3162	8-CR	13.8 (0.543")	1.4 (0.055")	23	
W3163	12-CR	17.0 (0.669")	1.6 (0.063")	30	

CABLE CORE SPECS

Configuration	

	
Conductor	7/0.20A (0.22mm²) #24AWG (7×#32AWG)
Insulation	1.35ØCPP (Cellular polypropylene) (0.053")
Drain Wire	7/0.20A (Exactly same as conductor)
Shield	Approx. 79/0.10A Served (Spiral) Shield
Jacket (covering)	3.2Ø Flexible PVC (0.126"Ø)
Identification	Similar to analog snake cable

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ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20°C	**Inner Pair Cond.**	0.081Ω/m(0.0247Ω/Ft)
	Shield	0.024Ω/m(0.0073Ω/Ft)
Capacitance at 1kHz, 20°C (effective capacitance value between inner twin)		46pF/m(14pF/Ft)
Inductance		0.8μH/m (0.24μH/Ft)
Characteristic Imperdance		110Ω±10%
Attenuation (6MHz)		0.065dB/m (0.020db/Ft)
Phase Constant (6MHz)		0.17rad/m
Electrostatic Noise*		5.0mV Max.
Electromagnetic Noise at 10kHz*		2.0mV Max.
Microphonics*		60mV
Voltage Breakdown		Must withstand at DC 500V/15sec
Insulation Resistance at DC 125V, 20°C		10000 MΩ × m Min.
Tensile Strength of one Core		303N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20°C~+70°C(-4°F~+158°F)
Standard		AES3-100X(ANSI S.4.40-199X) EBU Rech. 3250-E CEI/IEC 958/CCIR Rec. 647 UL13 CL2X 60°C / UL20002 AWM 30V 60°C VW-1

* Using standard testing method of Mogami Wire & Cable Corp.

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