

MIT INC  
2008

# MOGAMI

PATCH CORDS

MICROPHONE CABLES

SNAKE CABLES (MULTICORE MIC. CABLES)

CONSOLE INTERNAL/EXTERNAL WIRING CABLES

SPEAKER CABLES

VIDEO CABLES & HIGH FREQUENCY COAX. CABLES

DIGITAL INTERFACE CABLES

GUITAR CABLES

MULTI-CORE CABLES WITH & WITHOUT SHIELD

ULTRAFLEXIBLE MINIATURE CABLES



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**M**OGAMI cable products listed in this brochure are mostly comprised of major products designed by current President of Mogami Wire & Cable Corp., Koichi Hirabayashi, as a result of his own inventions, compromises and rediscoveries of past great works done by many predecessors step by step for 43 years of his career while being tossed about with economic strife, who could achieve deeper understanding of science and practical production technologies being affected by many attractive and emotionally impressive scientists such as Richard P. Feynman in a country called Japan where manufacturing industries have rapidly developed, depending heavily on the huge and flourishing American market and technologies introduced after World War II when the industrial world was greatly developed in so-called Western Countries, being supported by rapidly developing technology in electronics and petroleum chemical industries.

These products not found in standardized goods may certainly embody a side of the present condition of Japanese manufacturing industries, because there are now few items from Japan which are still competitive in the world market in the 2000s.

Most of the products listed in this brochure are centered around the professional audio, video and digital interface market such as recording studios, broadcast stations, theatres, halls etc. The basic design idea puts importance on sound quality for audio applications and on economy for other applications. There are some items which are available only from MOGAMI, and a common design idea through the whole line lies in the flexibility of the cable, considering handiness and efficiency for wiring and installation.

2008

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# PATCH CORDS



**BANTAM TT PATCH CORDS**

**LONGFRAME PATCH CORDS**



**HIGH DEFINITION 75  $\Omega$  AUDIO  
VIDEO PATCH CABLES AND  
BALANCED 1/4 " PLUG PATCH  
CORDS**



**MOGAMI BANTAM AND LONGFRAME PATCH CORDS** are the first high definition audio cables specifically designed for recording studio engineers and broadcast professionals, and offer the following outstanding features:

Super-flexible Quad-Balanced NEGLEX OFC wiring and Overall Served (Spiral) Shield provide maximum definition, detail and signal transparency in addition to giving excellent protection from electro-magnetic noise.

Both analog audio and digital audio patch cables are available.

Maintenance free with durable nickel plated tip / ring / sleeve connector preventing from tarnishing. Degradation of the sound quality caused by secular change becomes extremely low on account of it.

Compact refined mold design permits use in high density jack fields.

BANTAM PLUG : Overall Diameter 7.8mm ( 0.307" ) LONGFRAME PLUG : Overall Diameter 10.6mm (0.417" )

Interchangeable colour rings for easy patch cord identification.

Choice of five attractive colours for Bantam Patch Cord Only : Black • Red • Yellow • Green • Blue

Available standard colour for longframe patch cord is Black only.

Adaptor cable of bantam plug or longframe plug to other connector available to special order.

Neglex OFC bulk cable also available in 50m (164Ft), 100m (328Ft) and 200m (656Ft) rolls :

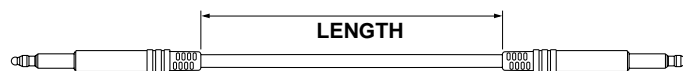
Analog cable : Part No.2893

Digital cable : Part No.3228

#### OTHER VARIATION OF AUDIO AND VIDEO PATCH CABLES

Supplemented to TT Patch Cables, many other variation of audio and video patch cables are available in standard lengths. Available combination is RCA Plug, 2P and 3P 1/4" Phone Plug with original mold cover and one touch push-pull BNC connector. Used unbalanced audio cable Part No. 2964 is designed to be 75  $\Omega$  coaxial cable comprised of OFC conductor so that it can be used for video signal as well as audio signal application with its low capacitance value of 65pF/m (19.8pF/Ft). Stereo cable Part No. 2965 is basically dual version of 2964 so that it can be also used for video signal.

## Bantam Patch Cord



Analog

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

Cable : Part No. 2893 standard Colour : Black • Red • Yellow • Green • Blue

Digital

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. 3228 standard Colour : Black only

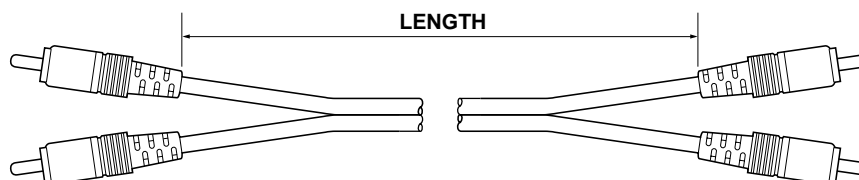
## Longframe Patch Cord



Part No.	LF-18	LF-24	LF-36	LF-48	LF-72
Length	18" 45cm	24" 60cm	36" 90cm	48" 120cm	72" 180cm

Cable : Part No. 2893 Standard Colour : Black

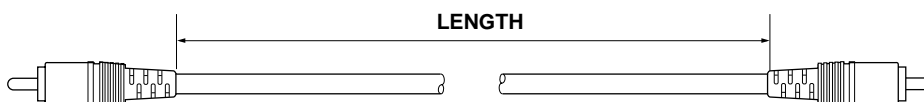
## Stereo RCA Phono Cables



Part No.	WR-01	WR-03	WR-06	WR-10	WR-15	WR-20
Length	1 Ft 30cm	3 Ft 90cm	6 Ft 1.8m	10 Ft 3m	15 Ft 4.5m	20 Ft 6.1m

Cable : Part No. 2965 Colour : Black only

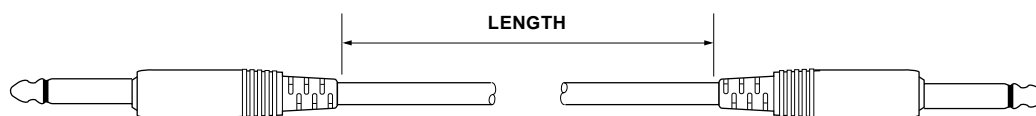
## RCA Plug to RCA Plug



Part No.	RR-01	RR-03	RR-06	RR-10	RR-15	RR-20
Length	1 Ft 30cm	3 Ft 90cm	6 Ft 1.8m	10 Ft 3m	15 Ft 4.5m	20 Ft 6.1m

Cable : Part No. 2964 Standard colour : Black

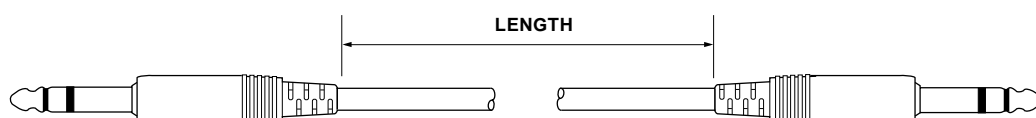
## 1/4" Plug to 1/4" Plug (2P/Mono)



Part No.	PP-01	PP-03	PP-06	PP-10	PP-15	PP-20
Length	1 Ft 30cm	3 Ft 90cm	6 Ft 1.8m	10 Ft 3m	15 Ft 4.5m	20 Ft 6.1m

Cable : Part No .2964 Standard colour : Black

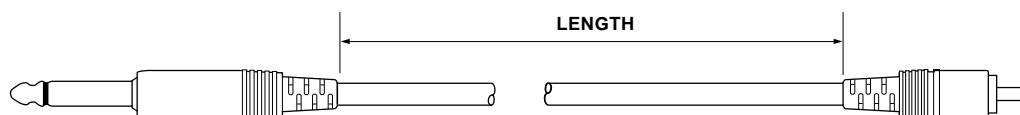
## 1/4" Plug to 1/4" Plug (3P/Stereo/TRS)



Part No.	SS-01	SS-03	SS-06	SS-10	SS-15	SS-20
Length	1 Ft 30cm	3 Ft 90cm	6 Ft 1.8m	10 Ft 3m	15 Ft 4.5m	20 Ft 6.1m

Cable : Part No .2893 Standard colour : Black

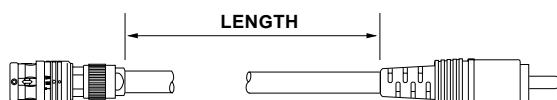
## 1/4" Plug to RCA Plug



Part No.	PR-01	PR-03	PR-06	PR-10	PR-15	PR-20
Length	1 Ft 30cm	3 Ft 90cm	6 Ft 1.8m	10 Ft 3m	15 Ft 4.5m	20 Ft 6.1m

Cable : Part No .2964 Standard colour : Black

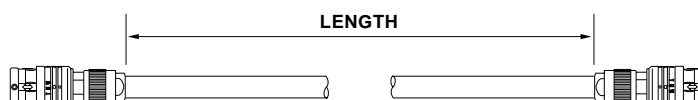
## BNC to RCA



Part No.	BR-03	BR-06	BR-10	BR-16
Length	3Ft 0.9m	6Ft 1.8m	10Ft 3.0m	16Ft 4.8m

Cable : Part No. 2964 Standard Colour : Black

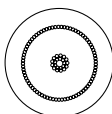
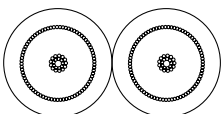
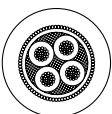
## BNC to BNC



Part No.	BB-01	BB-02	BB-03	BB-06	BB-10	BB-16	BB-25	BB-33	BB-50	BB-66	BB-100
Length	1Ft 0.3m	2Ft 0.6m	3Ft 0.9m	6Ft 1.8m	10Ft 3.0m	16Ft 4.8m	25Ft 7.6m	33Ft 10.0m	50Ft 15.2m	66Ft 20.1m	100Ft 30.5m

Cable : Part No. 2964 Standard Colour : Black • Red • Yellow • Green • Blue

## CABLE SPECIFICATIONS

Configuration				
Part No.		2964	2965	2893
No. of Conductor		1(Mono)	2 × 1(Dual)	4(Quad)
Conductor	Details	20/0.12 OFC		30/0.08 OFC
	Size(mm <sup>2</sup> )	0.226mm <sup>2</sup> (#24 AWG)		0.15mm <sup>2</sup> (#26 AWG)
Insulation	Ov. Dia.(mm)	2.6 (0.102")		1.0 (0.039")
	Material	XLPE (Cross-Linked Cellular PE)		XLPE
	Colours	Clear		Black/Red/Blue/Clear
Served Shield		Double Served Shield Approx.66/0.12 OFC, Approx.72/0.12 OFC	Approx.66/0.12 OFC	Approx.72/ 0.12A
Jacket	Ov. Dia.(mm)	4.8 (0.189")		
	Material	Flexible PVC		
	Colours	Black/Red/Yellow/Green/Blue	Black	Black/Red/Yellow/Green/Blue
Roll Sizes		50m/100m/200m (164Ft/328Ft/656Ft)	77m /153m (250 Ft /500 Ft )	50m/100m/200m (164Ft/328Ft/656 Ft)
Weight		3.4kg/100m(328Ft)	8.9kg/153m(500Ft)	7.5kg/200m(656Ft)

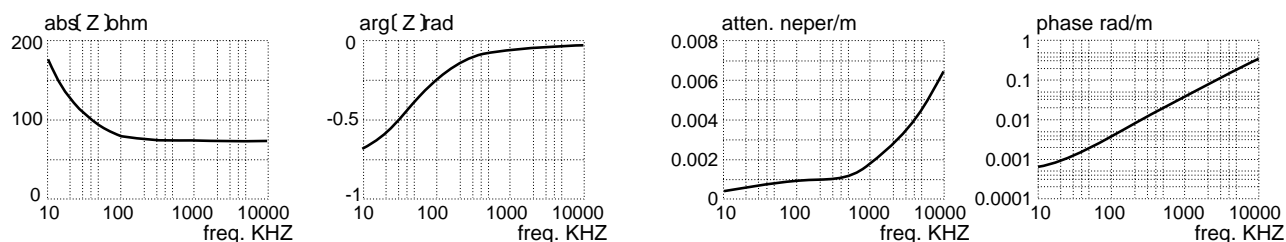
## ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		2964	2965	2893
DC Resistance at 20	Inner Cond.	0.083 /m(0.025 /Ft)		0.13 /m(0.040 /Ft)
	Shield	0.012 /m(0.0037 /Ft)	0.025 /m(0.0076 /Ft)	0.023 /m(0.0070 /Ft)
Capacitance at 1kHz,20		57pF/m(17.4pF/Ft)		Ref. Page 10.
Inductance between conductors at 1kHz. 20		0.4 μ H/m(0.12 μ H/Ft)		0.5 μ H/m(0.15 μ H/Ft)
Characteristic Impedance(10MHz)		75		-
Attenuation(10MHz) <sup>*(1)</sup>		0.0608 dB/m		-
Phase Constant(10MHz)		0.3 rad/m		-
Electrostatic Noise <sup>*(2)</sup>		50m V Max.		50m V Max.
Microphonics at 50K Load <sup>*(2)</sup>		40m V Max.		30m V Max.
Voltage Breakdown		Must withstand at DC 500V/15sec.		
Insulation Resistance		10 <sup>5</sup> M · m Min. at DC 125V, 20		
Flex Life <sup>*(2)</sup>		16,000cycles	16,500cycles	26,000cycles
Tensile Strength		274N	539N	500N
Emigration		non-emigrant to ABS resin		
Applicable Temperature		-20 ~ +70 (-4 F~ +158 F)		
Standard		-	UL2552 AWM 30V 60 VW-1	-

\* (1)Attenuation : 1 dB=0.1151 neper ( 1 neper=8.686 dB )

\* (2)Using standard testing methods of Mogami Wire & Cable Corp.

Note : For digital audio cable Part No.3228 cable, see page46

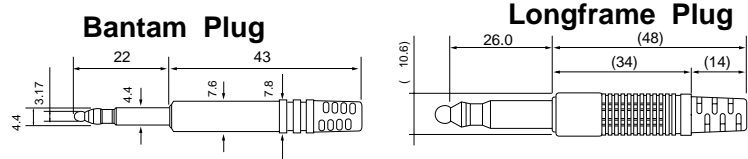


High frequency characteristics of Part No.2964 and #2965.



## 600Ω AUDIO TERMINATION /600Ω

600Ω Bantam Plug Termination and  
600Ω Longframe Plug Termination.



(Dimensions in mm)

Part No.	Bantam	Longframe
	PJM-TNT	LF-TNT

Plug Mold	Material	PVC
	Colour	Ivory
Metal Film Resistor	Power Rating	1/4W
	Resistance	602Ω ± 1%

## PART NUMBERING SYSTEM FOR CUSTOM ASSEMBLIES

### Ordering Information

#### Example

One end : XLR Male  
Another end : XLR Female  
Length : 5m  
Colour : Blue  
Desirable Cable : 2534

MF - 50 - 06 - 2534

Connectors at both ends  
M=XLR Male  
F=XLR Female  
J=Bantam Plug  
L=Long Frame Plug  
P=1/4" 2p Phone Plug  
S=1/4" 3p Phone Plug  
R=RCA Phono Plug  
B=75Ω BNC (male)

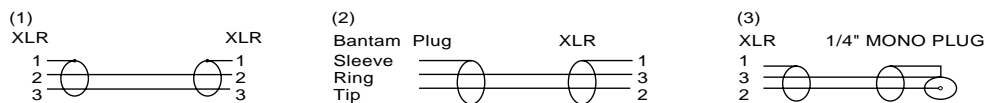
Cable Length  
(specify units)  
Example  
1.0m=10  
2.5m=25  
5.0m=50  
7.5m=75  
10.0m=100

Cable Colour  
00=Black  
01=Brown  
02=Red  
03=Orange  
04=Yellow  
05=Green  
06=Blue  
07=Purple  
08=Gray  
09=White

Cable Part No.  
Example  
2534  
2893  
2791  
2552  
2964  
2965  
etc.

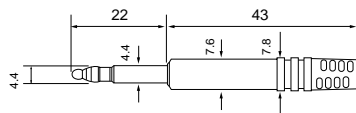
In case of XLR audio connector, please specify the hot pin number # 2 or # 3.  
Also, for any special wiring, wiring diagram is necessary.  
Followings are representative wiring diagrams for your reference.

### Standard Connection

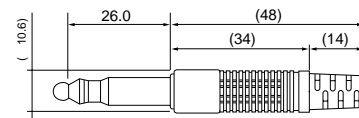


### Connector Specifications (Dimensions in mm)

#### Bantam Plug



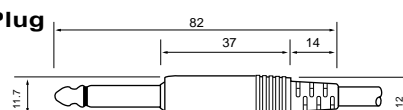
#### Longframe Plug



#### RCA Plug



#### 1/4" (6.35 ) Plug



Construction	RCA Phono Plug	1/4" Phone Plug	Bantam Plug	Longframe Plug
Contacts	Brass, Gold plate	Brass, Nickel plate	Brass, Nickel plate	Brass, Nickel plate
Shield	Phosphor Bronze, Gold plate	Brass, Nickel plate	Brass, Nickel plate	Brass, Nickel plate
Insulation	ABS Resin	Polystyrene	polyacetal	polyacetal
Molding	Flexible PVC	Flexible PVC(Double Mold)	Flexible PVC	Flexible PVC(Double Mold)

NOTE: For BNC connector, please refer to Page 40~42.

# MICROPHONE CABLES

## NEGLEX QUAD MIC. CABLES

NEGLEX type Quad Cables have been developed for the highest quality recording applications where maximum definition of recorded sound is of critical importance. Special proprietary materials & construction methods make those state-of-the-art mic. cables a must for direct to DISC and digital recording. Basic matters of flexibility, microphonics and shielding effect have been designed to meet international professional requirements. A Balanced quad structure is effective for high definition sound transmission as well as in canceling electromagnetic induction caused by nearby equipment such as floodlight projection, and therefore is well adapted to motion picture and TV studios.

Conductor insulation is XLPE (Cross-Linked Polyethylene) which has excellent electrical characteristics and prevents shrink-back during soldering.

Served (spiral) Bare Copper Shield is better for sound quality and simplifies termination.

Part No.2534



**Part No.2534**

**Reference Standard NEGLEX Quad High Definition Mic. Cable**

NEGLEX No.2534 has become popular around the world as the standard for high quality digital and analog recording. The cable has also become popular for use with unbalanced equipment, such as high quality pre-amp, amp inputs and tape decks.

Part No.2893



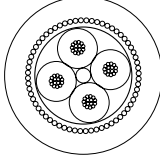
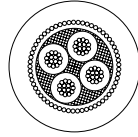
**Part No.2893**

**Miniature Quad Superflexible Mic. Cable**

Originally designed for BANTAM patch-cords, this cable has become popular where a small diameter Quad mic cable is required.

## NEGLEX QUAD MIC. CABLES

## SPECIFICATIONS

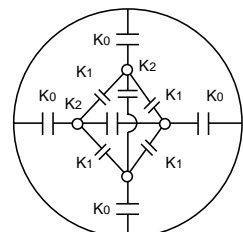
Configuration			
Part No.		2534	2893
No. of Conductor		4	
Conductor	Details	20/0.12 OFC	30/0.08 OFC
	Size(mm <sup>2</sup> )	0.226mm <sup>2</sup> (#24AWG)	0.15mm <sup>2</sup> (#26AWG)
Insulation	Ov. Dia.(mm)	1.6 (0.063")	1.0 (0.039")
	Material	XLPE( Cross-Linked Polyethylene )	
	Colours	Blue/Clear(Quad)	Black/Red/Blue/Clear
Served Shield		Approx. 62/0.18A	Approx. 72/0.12A
Jacket	Ov. Dia.(mm)	6.0 (0.236")	4.8 (0.189")
	Material	Flexible PVC	Flexible PVC
	Colours	10 colours available	5 colours available
Roll Sizes		50 m (164Ft) 100m (328Ft) 200m (656Ft)	50 m (164Ft) 100m (328Ft) 200m (656Ft)
Weight per 200m Roll		11 kg	7.5kg

## ELECTRICAL &amp; MECHANICAL CHARACTERISTICS

Part No.			2534	2893
DC Resistance at 20	Inner Cond.		0.083 /m(0.025 /Ft)	0.13 /m(0.040 /Ft)
	Shield		0.012 /m(0.0037 /Ft)	0.023 /m(0.0070 /Ft)
Capacitance at 1kHz, 20 ( Partial C. Value ) See below figure <sup>*(1)</sup>		K0	65pF/m(20 pF/Ft)	74pF/m(23 pF/Ft)
		K1	13pF/m(4 pF/Ft)	11pF/m(3.4 pF/Ft)
		K2	4pF/m(1.2 pF/Ft)	3pF/m(0.9 pF/Ft)
1kHz,20	Balanced Quad Connection	Cond.-Cond.	97pF/m(29.6 pF/Ft)	131pF/m(40 pF/Ft)
		Cond.-Shield.	110pF/m(33.6 pF/Ft)	178pF/m(54 pF/Ft)
Inductance betweenn conductors at 1kHz, 20			0.4 μ H/m (0.12 μ H/Ft)	0.5 μ H/m(0.15 μ H/Ft)
Electrostatic Noise <sup>*(2)</sup>			50 mV Max.	50 mV Max.
Electromagnetic Noise <sup>*(2)</sup>			0.15 mV Max.	0.15 mV Max.
Microphonics at 50k Load <sup>*(2)</sup>			30 mV Max.	30 mV Max.
Voltage Breakdown			Must withstand at DC 500V/15 sec.	
Insulation Resistance			10 <sup>5</sup> M · m Min. at DC 125 V, 20	
Flex Life <sup>*(2)</sup>			11,000 cycles	26,000 cycles
Tensile Strength			686 N	500 N
Emigration			Non-Emigrant to ABS	Non-Emigrant to ABS
Applicable Temperature			-20 ~ + 70 (-4°F ~ + 158°F)	

\* (2) Using standard testing methods of Mogami Wire &amp; Cable Corp.

\* (1) Patial Capacitance



### HIGH QUALITY BALANCED MIC. CABLES

#### NEGLEX TYPE #22AWG BALANCED MIC. CABLE

2549 has been designed using our famous Neglex OFC to provide the highest quality of audio reproduction in any recording application. It features #22AWG conductors and lower capacitance than our quad cables. The served shield and twisted pair construction is excellent at preventing noise caused by electromagnetic interference. This cable is recommended when high frequencies are important and where long cable runs are needed, and, it is cheaper and easier to terminate than quad cables.

Part No.2549



#### 105 STRAND BROADCAST MIC. CABLE

Excellent for rugged remote and on stage use in Sound Reinforcement, TV, Radio broadcasting etc. Its compact size together with a heavy duty binder and filler system and a braided shield make it ideal for all continuous handling applications. Exhibits very low microphonic pick up and can operate at very cold temperatures down to -20 °C (-4 °F) without losing its flexibility. 105 strands of 0.05 mm O.D. annealed bare copper (#44AWG) features ultra flexibility with long flex life, maintaining excellent strength characteristics.

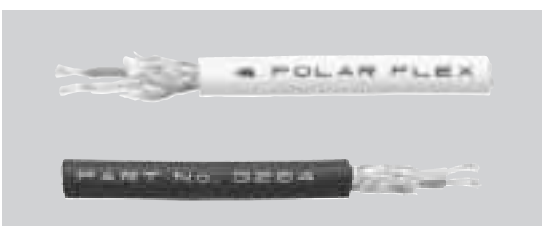
Part No.2791



#### POLAR FLEX - EXTREME TEMPERATURE BALANCED MICROPHONE CABLE

Polar Flex™ microphone cable is designed to maintain flexibility down to -40 °C (-40 °F). This is achieved by utilizing a TPE jacket instead of the more common PVC. This extremely rugged, durable cable uses the same unique, high strand-count internal construction as the 2791 Stage/Broadcast cable. Available in black and white.

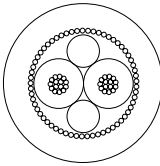
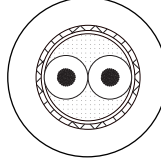
Part No.3284





## HIGH QUALITY BALANCED MIC. CABLES

### SPECIFICATIONS

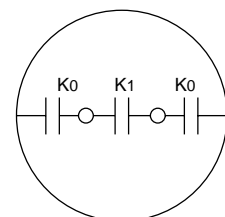
Configuration				
Part No.		2549	2791	3284
No. of Conductor		2		
Conductor	Details	30/0.12 OFC	105/0.05 A	
	Size(mm <sup>2</sup> )	0.339mm <sup>2</sup> (#22AWG)	0.206mm <sup>2</sup> (# 24AWG)	
Insulation	Ov. Dia. (mm)	1.9 (0.075")	1.5 (0.059")	
	Material	XLPE( Cross-Linked Polyethylene )		
	Colours	Blue/Clear	Red/Clear	
Shield		Served    Approx. 62/0.18A	Braid    24/6/0.10A	
Jacket	Ov. Dia. (mm)	6.0 (0.236")	5.5 (0.217")	
	Material	Flexible PVC		Flexible TPE
	Colours	Black/Red/Yellow/Green/Blue	Black	Black/White
Roll Sizes		50 m (164Ft) 100m (328Ft) 200m(656Ft)	100m (328Ft)	
Weight per 100m Roll		4.8 kg	4.2kg	3.4kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.			2549	2791	3284
DC Resistance at 20	Inner Cond.		0.058 /m(0.018 /Ft)	0.09 /m(0.027 /Ft)	
	Shield		0.012 /m(0.004 /Ft)	0.02 /m(0.006 /Ft)	
Capacitance at 1kHz, 20 (Partial C. Value) See below figure <sup>*(1)</sup>			K0	76pF/m(23 pF/Ft)	
			K1	11pF/m(3.4 pF/Ft)	
Inductance between conductors at 1kHz, 20			0.8 μ H/m (0.24 μ H/Ft)	0.8 μ H/m (0.24 μ H/Ft)	
Electrostatic Noise <sup>*(2)</sup>			50 mV Max.	250 mV Max.	
Electromagnetic Noise <sup>*(2)</sup>			0.15 mV Max.	0.15 mV Max.	
Microphonics at 50k Load <sup>*(2)</sup>			30 mV Max.	30 mV Max.	
Voltage Breakdown			Must withstand at DC 500V/15 sec.		
Insulation Resistance			10 <sup>5</sup> M · m Min. at DC 125 V, 20		
Flex Life <sup>*(2)</sup>			14,500 cycles	131,000 cycles	53,000 cycles
Tensile Strength			657 N	578 N	
Emigration			Non-Emigrant to ABS	Non-Emigrant to ABS	
Applicable Temperature			-20 ~ + 70 (-4°F ~ + 158°F )		-40 ~ + 60 (-40°F ~ + 140°F )

<sup>\*(2)</sup> Using standard testing methods of Mogami Wire & Cable Corp.

<sup>\*(1)</sup> Patial Capacitance



## LOW COST HIGH PERFORMANCE SUPERFLEXIBLE BALANCED MIC. CABLES

A specially developed high performance yet economical series of low impedance balanced microphone cables. These cables are small in size and special rubber like PVC jacket is extremely flexible and exhibits good resistance to rough handling and abrasion.

High grade insulation material is designed to minimize heat shrinkage during soldering which allows easy termination to XLR type connectors. Available in both overall and individually sheilded types.

Part No.2552



Part No. 2552 & 2582

### Superflexible Light Weight Mic. Cables With Overall Shield

Here is an extremely limp and flexible cable for all types of audio/visual and industrial audio applications. XLPE insulation and a strong rubber like outer jacket makes this cable ideal where a durable yet economical cable is needed.

Part No.	2552	2582
O.D. ( mm )	5.0 (0.197")	6.0 (0.236")
Flex Life	11,000 cycles	13,800 cycles
Tensile Strength	421N	441N
Colours	Black	Black/Red/Yellow/ Green/Blue/Gray

Part No.2447



Part No. 2447 & 2435

### Superflexible Light Weight Mic. Cables With Individual Shield

A durable and mechanically strong cable similar to 2552 but with two separately served shields. This produces capacitance level a little higher than that of 2552.

Part No.	2447	2435
O.D. ( mm )	5.0 (0.197")	6.0 (0.236")
Flex Life	14,000 cycles	24,000cycles
Tensile Strength	451 N	451 N
Colour	Black	Black

Part No.2792



Part No. 2792

### LOW MICROPHONICS MIC. CABLE WITH CONDUCTIVE PVC

Conductive material is coated on top of the XLPE insulation which reduces microphonic handling noise to negligible level even in high impedance applications. Before soldering the black coating shall be stripped back.

Part No.	2792
O.D. ( mm )	6.0 (0.236")
Flex Life	22,000cycles
Tensile Strength	490 N
Colours	Black/Red/Yellow/Green/Blue/Gray

# LOW COST HIGH PERFORMANCE SUPERFLEXIBLE BALANCED MIC. CABLES

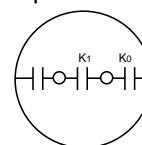
## SPECIFICATIONS

Configuration						
Part No.		2552	2582	2447	2435	2792
No. of Conductor		2				
Conductor	Details	12/0.12 A T250D * 3				
	Size(mm <sup>2</sup> )	0.135mm <sup>2</sup> (#26AWG)				
Insulation	Ov. Dia. (mm)	1.5 (0.059")				
	Material	LNLPE( Low Noise Cross-Linked Polyethylene )				
	Colours	Red/Clear				
Conductive PVC(mm)		_____	_____	_____	_____	1.75 (0.069")
Served Shield		Approx. 70/0.12A		Approx. 40/0.12A		Approx. 95/0.12A
Jacket	Ov. Dia. (mm)	5.0 (0.197")	6.0 (0.236")	5.0 (0.197")	6.0 (0.236")	6.0 (0.236")
	Material	Flexible PVC				
	Colours	Black	Black/Red/Yellow/ Green/Blue/Gray	Black	Black	Black/Red/Yellow/ Green/Blue/Gray
Roll Sizes		50 m (164Ft) 100m (328Ft) 200m(656Ft)	50 m (164Ft) 100m (328Ft) 200m(656Ft)	100m (328Ft) 200m(656Ft)	100m (328Ft) 200m(656Ft)	50 m (164Ft) 100m (328Ft) 200m(656Ft)
Weight per 200m Roll		7.5 kg	9 kg	7.7kg	9kg	8.8kg

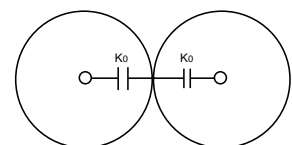
## ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.			2552	2582	2447	2435	2792
DC Resistance at 20	Inner Cond.		0.14 /m(0.043 /Ft)				
	Shield		0.024 /m(0.007 /Ft)		0.021 /m(0.006 /Ft)		0.018 /m(0.005 /Ft)
Capacitance at 1kHz, 20 (Partial C. Value) See below figure <sup>*(1)</sup>		K0	90pF/m(27 pF/Ft)		123pF/m(37.5 pF/Ft)		127pF/m(38.7 pF/Ft)
		K1	10pF/m(3pF/Ft)		_____		
Inductance between conductors at 1kHz, 20			0.8 μ H/m (0.24 μ H/Ft)				
Electrostatic Noise <sup>*(2)</sup>			50 mV Max.		50 mV Max.		0.5 mV Max.
Electromagnetic Noise <sup>*(2)</sup>			0.15 mV Max.				
Microphonics at 50k Load <sup>*(2)</sup>			30 mV Max.	30 mV Max.	30 mV Max.	30 mV Max.	1 mV Max.
Voltage Breakdown			Must withstand at DC 500V/15 sec.				
Insulation Resistance			10 <sup>5</sup> M · m Min. at DC 125 V, 20				
Flex Life <sup>*(2)</sup>			11,000 cycles	13,800 cycles	14,000 cycles	24,000 cycles	22,000 cycles
Tensile Strength			421 N	441 N	451 N	451 N	490 N
Emigration			Non-Emigrant to ABS				
Applicable Temperature			-20 ~ + 70 (-4°F ~ + 158°F)				

\* (2) Using standard testing methods of Mogami Wire & Cable Corp. \* (1) Patial Capacitance

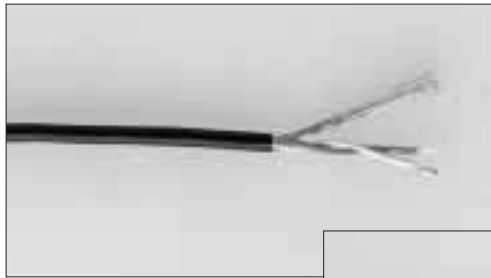


2552/2582

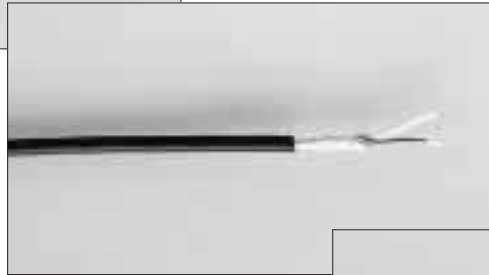


2447/2435/2792

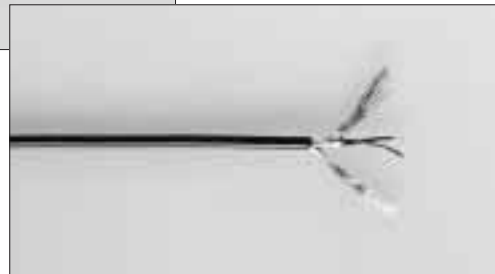
### MINIATURE BALANCED MIC. CABLES / LAVALIER MIC. CABLES



2697



3031



2901

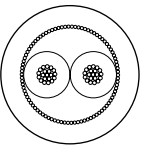
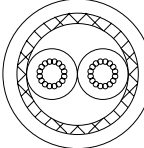
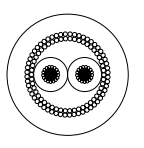
These miniature microphone cables feature necessary mechanical strength (tensile strength and long flex life) and flexibility for lavalier microphones and other applications. All balanced configuration. Part No. 3031 cable is exactly same construction as Part No. 2697 cable except for shield structure. Part No. 2697 cable is constructed with served (spiral) shield, while Part No. 3031 cable is constructed with braided shield. Part No. 2901 is specially designed with better tensile strength and longer flex life, sacrificing some sound quality, and creating a slightly more difficult soldering job because of used copper-tin alloy conductor, this cable is mechanically very strong and durable. Of couse, its cost is higher.

Note : Any specific countermeasure against microphonics ( noise ) for high impedance microphones is not taken for these three lavalier microphone cables.



## MINIATURE BALANCED MIC. CABLES / LAVALIER MIC. CABLES

### SPECIFICATIONS

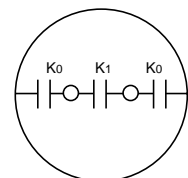
Configuration				
Part No.		2697	3031	2901
No. of Conductor		2		
Conductor	Details	16/0.08 A T1000D * 1		43/0.04 Cu-Sn
	Size(mm <sup>2</sup> )	0.08mm <sup>2</sup> (#29AWG)		0.054mm <sup>2</sup> (#30AWG)
Insulation	Ov. Dia. (mm)	0.85 (0.033")		0.6 (0.0236")
	Material	PVC		Polyester
	Colours	Red/White		Black/Red
Filler Thread		—		Polypropylene
Shield		Served Shield Approx.60/0.08A	Braided Shield 8/12/0.08A	Double Served Shield Approx.36/0.08A, Approx.40/0.08A
Jacket	Ov. Dia. (mm)	2.5 (0.098")	2.8 (0.110")	2.16 (0.085")
	Material	Flexible PVC		
	Colours	Black	Black/White	Black
Roll Sizes		50 m (164Ft) 100m (328Ft) 200m (656Ft)	200m (656Ft)(on spool)	305 m (1000Ft)
Weight		1.8kg/200m	2.5kg/200m	2.6kg/305m

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.			2697	3031	2901
DC Resistance at 20	Inner Cond.		0.23 /m(0.070 /Ft)		0.41 /m(0.125 /Ft)
	Shield		0.063 /m(0.019 /Ft)	0.038 /m(0.0116 /Ft)	0.07 /m(0.0214 /Ft)
Capacitance at 1kHz, 20 ( Partial C. Value ) See below figure <sup>*(1)</sup>		K <sub>0</sub>	300pF/m(92pF/Ft)	290pF/m(88 pF/Ft)	176pF/m(54 pF/Ft)
		K <sub>1</sub>	57pF/m(17pF/Ft)	70pF/m(21 pF/Ft)	32pF/m(9.8 pF/Ft)
Inductance between conductors at 1kHz, 20			0.8 μ H/m (0.24 μ H/Ft)		
Electrostatic Noise <sup>*(2)</sup>			50 mV Max.	200mV Max.	1mV Max.
Electromagnetic Noise <sup>*(2)</sup>			0.15 mV Max.		
Microphonics at 50k Load <sup>*(2)</sup>			300mV Max.	150mV Max.	40mV Max.
Voltage Breakdown			Must withstand at DC 500V/15 sec.		
Insulation Resistance			10 <sup>5</sup> M · m Min. at DC 125 V, 20		
Flex Life <sup>*(2)</sup>			34,100 cycles	26,000 cycles	177,000 cycles
Tensile Strength			294 N	313 N	176 N
Emigration			Non-Emigrant to ABS resin		
Applicable Temperature			-20 ~ + 70 (-4° F ~ + 158° F)		

<sup>\*(2)</sup> Using standard testing methods of Mogami Wire & Cable Corp.

<sup>\*(1)</sup> Patial Capacitance



## UNBALANCED MIC. CABLES

### ECONOMICAL SUPERFLEXIBLE UNBALANCED MIC. CABLES

These cables show Mogami's manufacturing and cable design expertise in creating an economical unbalanced cables which maintain necessary mechanical strength ( tensile strength and long flex life ) and flexibility for a microphone cable. Two overall diameter sizes are available with exactly the same construction.

Part No.2333



Part No.	2330	2333
O.D. ( mm )	3.0 (0.118")	4.0 (0.157")
Flex Life	15,500cycles	16,500 cycles
Tensile Strength	274 N	284 N
Colour	Black	Black

**Note :** For the very highest quality recording applications, Mogami original high-end Neglex audio cable Part No. 2803 or Part No. 2497 constructed with patented Double Cylindrical structure should be used.

## MINIATURE UNBALANCED MIC. CABLE

Part No.2368

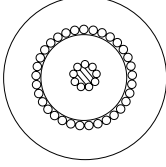
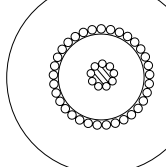
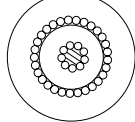


Part No. 2368 cable has the same structure as Part No. 2697 cable except for an unbalanced configuration. Therefore, although it naturally becomes weaker than Part No. 2697 cable because of its smaller overall diameter, its mechanical strength is much higher than any comparable overall diameter cable without any special contrivance, besides, it is low cost.

**Note :** Any specific countermeasure against microphonics ( noise ) for high impedance microphones is not taken for this cable.

## UNBALANCED MIC. CABLES / LAVALIER MIC. CABLE

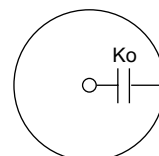
### SPECIFICATIONS

Configuration				
Part No.		2330	2333	2368
No. of Conductor		1		
Conductor	Details	16/0.08 A T1000D * 1		
	Size(mm <sup>2</sup> )	0.08mm <sup>2</sup> (#29AWG)		
Insulation	Ov. Dia.(mm)	1.5 (0.059")		1.0 (0.039")
	Material	LNXLPE(Low Noise Cross Linked polyethylene)		PVC
	Colour	Clear		White
Served Shield		Approx. 40/0.12A		Approx. 40/0.08A
Jacket	Ov. Dia.(mm)	3.0 (0.118")	4.0 (0.157")	2.0 (0.079")
	Material	Flexible PVC		
	Colour	Black		
Roll Sizes		100m (328Ft) 200m (656Ft)	200 m (656Ft) (standard)	100 m (328Ft) 200 m (656Ft)
Weight per 200m Roll		2.5 kg	4.2kg	1.5kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		2330	2333	2368
DC Resistance at 20	Inner Cond.	0.23 /m(0.07 /Ft)		
	Shield	0.042 /m(0.013 /Ft)		0.094 /m(0.029 /Ft)
Capacitance at 1kHz, 20 See below figure <sup>*(1)</sup>		Ko 115pF/m(35 pF/Ft)		350pF/m(107 pF/Ft)
Inductance between conductors at 1kHz, 20		0.3 μ H/m (0.092 μ H/Ft)		
Electrostatic Noise <sup>*(2)</sup>		50 mV Max.		
Electromagnetic Noise <sup>*(2)</sup>		0.05 mV Max.		0.05 mV Max.
Microphonics at 50k Load <sup>*(2)</sup>		30 mV Max.		1V Max.
Voltage Breakdown		Must withstand at DC 500V/15 sec.		
Insulation Resistance		10 <sup>5</sup> M · m Min. at DC 125 V, 20		
Flex Life <sup>*(2)</sup>		15,500 cycles	16,500 cycles	43,000 cycles
Tensile Strength		274 N	284 N	206 N
Emigration		Non-Emigrant to ABS resin		
Applicable Temperature		-20 ~ + 70 (-4° F ~ + 158° F)		

<sup>\*(2)</sup> Using standard testing methods of Mogami Wire & Cable Corp.      <sup>\*(1)</sup> Partial Capacitance



### #24AWG STEREO MIC. CABLE

3106



Stereo microphone cable comprised of larger and mechanically stronger cores for those who need stereo wiring at stage recording etc. to get rid of tangling problems. OD of each channel is 4.8mm (0.189") to relieve any anxiety about mechanical strength of separated cores connected to each XLR 3P audio connectors when compared with regular 2-core snake cable. This design of OFC conductor and low capacitance as regular size microphone cable assures the same reliable sound quality as MOGAMI #2549 mic cable level.

### HIGH TENSION AERIAL MIC. CABLES

3177 (MONAURAL)



3178 (STEREO)

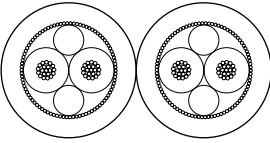
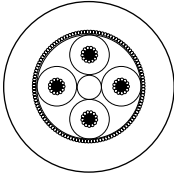
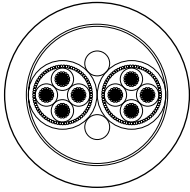


These cables are designed for suspension microphones reinforced by one stainless steel wire rope of 830 N(187 pounds) breakable weight for monaural type (Part No. 3177) and two same size ropes for stereo type (Part No. 3178). Although the sound quality is compromised a little (especially at high frequency range), they are all designed with quad (shielded four conductor) configuration for wider applications (to provide stronger electromagnetic noise cancellation).



## STEREO MIC. CABLE / AERIAL MIC. CABLES

## SPECIFICATIONS

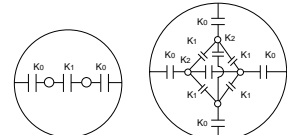
Configuration				
Part No.		3106	3177	3178
No. of Cores		2	1	2
No. of Conductor		2	4	4
Conductor	Details	20/0.12 OFC	20/0.12 OFC	30/0.08 OFC
	Size(mm <sup>2</sup> )	0.226mm <sup>2</sup> (#24AWG)	0.226mm <sup>2</sup> (#24AWG)	0.15mm <sup>2</sup> (#26AWG)
Insulation	Ov. Dia. (mm)	1.6 (0.063")	1.6 (0.063")	0.9 (0.0354")
	Material	XLPE (Cross-Linked Polyethylene)	LNXLPE (Low Noise Cross-Linked Polyethylene)	
	Colours	Blue/Clear	Blue/White (Quad)	
Reinforcement	Material	—	Stainless Steel Wire Rope	
	Details		7/7/0.11	
	Numbers of Rope		1	2
	Breakable Weight		830 N (187pound)	1,660 N (374pound)
Monofilament	Ov. Dia. (mm)	1.07 (0.042")	—	—
	Material	XLPE (Cross-Linked Polyethylene)		
Filler Thread		—	Cotton	Aramid
Binder	Thickness	—	0.025mm (0.00098")	—
	Material		Paper Tape	
Served Shield		Approx. 80/0.12A	Approx. 134/0.12A	Approx. 68/0.10A
Core Jacket	Ov. Dia. (mm)	—	—	2.8mm (0.110")
	Material			PVC
	Colours			Red/White
Filler Thread		—	—	Polypropylene
Binder	Thickness			0.025mm (0.00098")
	Material			Paper Tape
Ov. Jacket	Ov. Dia. (mm)	2 × 4.8 (2 × 0.189")	6.8 (0.268")	7.4 (0.291")
	Material	PVC	PVC+Polyurethane Compound	
	Colour	Black	Light Gray	
Roll Sizes		50 m (164Ft) 100m (328Ft) 200m (656Ft)	200m (656Ft)	200m (656Ft)
Weight		5.7Kg/100m	12.2Kg/200m	13.3Kg/200m

## ELECTRICAL &amp; MECHANICAL CHARACTERISTICS

Part No.			3106	3177	3178
DC Resistance at 20	Inner Conductor.		0.083 /m(0.0253 /Ft)	0.090 /m(0.027 /Ft)	0.13 /m(0.0397 /Ft)
	Shield		0.021 /m(0.0064 /Ft)	0.013 /m(0.0040 /Ft)	0.036 /m(0.011 /Ft)
Capacitance at 1kHz,20 (Parital Capacitance Value) See below figure *(1)	K0 (Shield-Conductor)		77pF/m(23.5 pF/Ft)	108pF/m(32.9 pF/Ft)	83pF/m(25.3pF/Ft)
	K1 (between neighbour conductors)		10pF/m(3.1 pF/Ft)	8pF/m(2.44 pF/Ft)	18pF/m(5.49 pF/Ft)
	K2		—	3pF/m(0.92 pF/Ft)	3pF/m(0.92 pF/Ft)
	Balanced Quad Connection	Cond-Cond	—	107pF/m(32.6 pF/Ft)	160pF/m(48.8 pF/Ft)
Cond-Shield		—	190pF/m(58.0pF/Ft)	222pF/m(67.7pF/Ft)	
Inductance			0.9 μ H/m (0.27 μ H/Ft)	0.5 μ H/m (0.15 μ H/Ft)	0.2 μ H/m (0.061 μ H/Ft)
Electrostatic Noise *(2)			5 mV Max.	20mV Max.	5mV Max.
Electromagnetic Noise at 10kHz			0.5 mV Max.	0.013 mV Max.	0.06 mV Max.
Microphonics *(2)			10 mV Max.	5 mV Max.	10 mV Max.
Voltage Breakdown			Must withstand at DC 500V/15sec.		
Insulation Resistance			10 <sup>5</sup> M · m Min. at DC 500V, 20		
Flex Life *(2)			100,000 cycles	36,100 cycles	59,000 cycles
Tensile Strength			382 N (per pair/1対につき)	Over 980 N 以上	
Emigration			Non-Emigrant to ABS resin		
Applicable Temperature			-20 ~+70 (-4 F ~ +158 F)		
Standard			UL 2552 AWM 30V 60 VW-1	—	—

\* (2) Using standard testing methods of Mogami Wire &amp; Cable Corp.

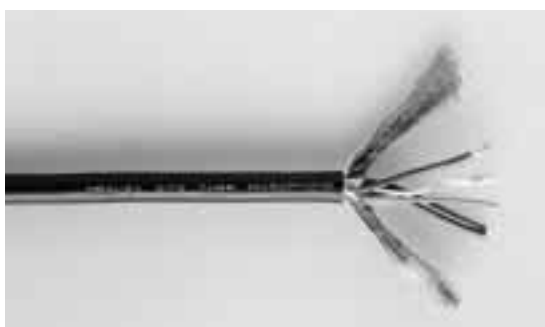
\* (1) PARTIAL CAPACITANCE



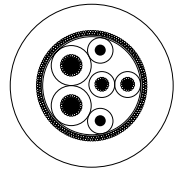
## HIGHEST DEFINITION TUBE MICROPHONE CABLE

Specifically designed highest sound quality tube microphone cable based on representative electrical circuits of today's tube microphone including its power supply. Applicable to most representative tube microphones.

**3172**



### SPECIFICATIONS

Configuration			
Part No.		3172	
No. of Conductor		6	Signal Assignment
Conductor	Details	2 x (30/0.08OFC)	MIC. OUTPUT
	Size(mm²)	0.15mm² (#26AWG)	
Insulation	Ov. Dia. (mm)	1.0 (0.039")	
	Material	XLPE	
	Colours	Orange/White	
Conductor	Details	2 x (75/0.04Cu-Sn)	BIAS
	Size(mm²)	0.094mm² (#28AWG)	
Insulation	Ov. Dia. (mm)	1.0 (0.039")	
	Material	XLPE	
	Colours	Red/Purple	
Conductor	Details	2 x (80/0.08A)	HEATER CIRCUIT
	Size(mm²)	0.40mm² (#22AWG)	
Insulation	Ov. Dia. (mm)	1.6 (0.063")	
	Material	PVC	
	Colours	Green/Blue	
Shield		Double Served Shield Approx. 120/0.10A and Approx. 120/0.10A	
Binder	Thickness	0.025mm(0.00098")	
	Material	Paper Tape	
Ov. Jacket	Ov. Dia. (mm)	6.5 (0.256")	
	Material	Flexible PVC	
	Colour	Black	
Roll Size		100 m (328Ft)	
Weight per 100m Roll		6.3kg	

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		3172	
DC Resistance at 20	Inner Conductor.	MIC SIGNAL	0.13 /m (0.040 /Ft)
		BIAS CIRCUIT	0.23 /m (0.070 /Ft)
	Shield	HEATER CIRCUIT	0.046 /m (0.014 /Ft)
Capacitance at 1kHz, 20	Shield-Conductor	230pF/m(70pF/Ft) 100pF/m(30pF/Ft) 93pF/m(28pF/Ft)	
	between neighbour conductors	"TWISTED PAIR" 56pF/m( 17pF/Ft )	46pF/m( 14pF/Ft ) 137pF/m( 42pF/Ft )
Inductance		"TWISTED PAIR" 0.4 μ H/m (0.12 μ H/Ft)	
Electrostatic Noise *		"TWISTED PAIR" 1 mV Max.	
Electromagnetic Noise at 10kHz *		"TWISTED PAIR" 0.1mV Max.	
Microphonics *		"TWISTED PAIR" 10 mV Max.	
Voltage Breakdown		Must withstand at DC 500V/15sec.	
Insulation Resistance		10 <sup>5</sup> M · m Min. at DC 500V, 20	
Flex Life *		13,000 cycles	
Tensile Strength		588 N	
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~+70 ( -4 F ~ +158 F)	

\*Using standard testing methods of Mogami Wire & Cable Corp.



## INTERCOM HEADSET EXTENSION CABLE

Specifically designed for INTERCOM HEADSET EXTENSION CABLE. Not sticking to quality of sound, this cable is designed to be compact, flexible, light weight and durable handy structure for practical applications.

Independent two coaxial core construction for better isolation between microphone signal and earphone signal.

Many strands of copper-tin alloy conductor material makes it durable cable without losing flexibility.

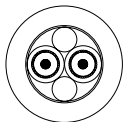
Compact round shape with smooth slippery surface makes it really handy for practical applications.

Both bulk roll cable and standard length cable assemblies are available from stock.

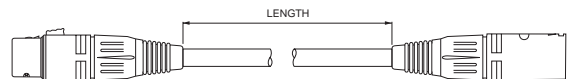
Cable : Part No. 3242-00

Assembly

Configuration



Part No.	IHE-03	IHE-05	IHE-10
Length	3m 9.8 Ft	5m 16.4 Ft	10m 32.8 Ft



### SPECIFICATIONS

Part No.		3242-00
Conductor	Details	75/0.04 Cu-Sn
	Size(mm²)	(0.094mm²)(#28AWG)
Insulation	Ov. Dia. (mm)	1.05 (0.041")
	Material	XLPE
	Colours	Clear
Served Shield		Approx. 36/0.08A
Jacket	Ov. Dia. (mm)	1.6 (0.063")
	Material	PVC
	Colours	Yellow/Blue
Nos. of Core		2
Monofilament	Ov. Dia. (mm)	1.07 (0.042")
	Material	PVC
	Colour	White
	Nos.	2
Filler Thread		PP
Binder	Thickness	0.025mm(0.00098")
	Material	Paper Tape
Sheath	Ov. Dia. (mm)	5.0 (0.197")
	Material	PVC
	Colour	Black
Roll Size		50m(164Ft)/100m(328Ft)/200m(656Ft)
Weight per 100m Roll		3.9 Kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20	Inner Conductor.	0.22 /m(0.067 /Ft)
	Shield	0.12 /m(0.040 /Ft)
Capacitance at 1kHz, 20		135pF/m(41.2pF/Ft)
Inductance		0.3 μH/m(0.09 μH/Ft)
Characteristic Impedance at 10MHz		46 ± 5%
Attenuation at 10MHz		0.25dB/m(0.076dB/Ft)
Phase Constant at 10MH		0.43rad/m
Electrostatic Noise*		50mV Max.
Electromagnetic Noise at 10kHz*		0.02mV Max.
Microphonics*		40mV Max.
Voltage Breakdown		Must withstand at DC 500V/15Sec.
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 250V, 20
Flex Life*		50,000 cycles
Tensile Strength		294 N
Emigration		Non-Emigrant to ABS resin ABS
Applicable Temperature		-10 ~+60 ( 10 F ~ +140 F )

\*Using standard testing methods of Mogami Wire & Cable Corp.

# SNAKE CABLES (MULTICORE MIC.CABLES)



**Mogami multicore cables are designed for the highest level of audio performance and feature superb electrical and mechanical characteristics while remaining compact, superflexible and easy to use.**

CL2 rated version available. Conductor size of CL2 rated version is thicker #25AWG so that it is also recommended for rugged application and firm and easier crimp terminal connector wiring as well as NEC fire regulation requirement.

Individually twisted shielded pairs, available in 2 to 48 channels.

Rugged and flexible construction that is easy to handle, even at temperatures down to -20 °C(-4 °F).

Easy cable identification system:

Channel numbers are printed and underlined on each core jacket to ensure correct identification, regardless of which end is stripped.

Outer jackets of each pair are colour coded by standard resistor colour code, allowing quick identification of conductor pairs.

Inner conductors are also colour coded based on the international standard resistor colour code. Each pair is colour coded by jacket and conductor colour combination.

Each channel has a drain wire and served ( spiral ) bare copper shield. The drain wire simplify termination and can be crimped by the same size contact as the inner conductor pair.

XLPE (Cross Linked Polyethylene) insulation provides superb electrical characteristics and will not melt or shrink back during soldering.

**STANDARD VERSION**

Part No.	No. Of Channels	Ov. Dia. (Approx. mm)	Jacket Thickness (Approx. mm)	Weight (kg/100m)(kg/328Ft)	Maximum Length available
2930	2-ch	7.5(0.295")	1.0(0.039")	7	506m (1.659Ft)
2931	4-ch	8.6(0.339")	1.0(0.039")	9	
2932	8-ch	11.5(0.453")	1.2(0.047")	18	
2933	12-ch	14.3(0.563")	1.5(0.059")	28	
2934	16-ch	15.8(0.622")	1.5(0.059")	32	305m (1.000Ft)
2935	19-ch	17.0(0.669")	1.7(0.067")	40	
2936	24-ch	20.0(0.787")	2.0(0.079")	46	
2937	27-ch	20.5(0.807")	2.0(0.079")	58	
2938	32-ch	21.7(0.854")	2.0(0.079")	63	
2939	48-ch	26.0(1.02")	2.0(0.079")	97	200m (656Ft)

( Figures in parenthesis are in inches )

**CABLE CORE SPECS**

Conductor	30/0.08A (0.15mm <sup>2</sup> ) #26AWG	(30 × #40AWG)
Insulation	1.0 XLPE (Cross Linked Polyethylene )	(0.039" )
Drain Wire	7/0.18TA (0.18mm <sup>2</sup> ) #25AWG	(7 × #33AWG)
Shield	Approx. 60/0.10A Served (spiral ) Shield	
Jacket(Covering)	2.8 Flexible PVC	(0.110" )
Identification	See core number identification table	

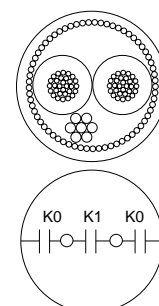


Figure ( 1 )

**ELECTRICAL & MECHANICAL CHARACTERISTICS**

DC Resistance at 20	Inner Pair Conductor	0.13 /m ( 0.040 /Ft )
	Shield	0.030 /m ( 0.0092 /Ft )
Capacitance at 1 kHz, 20 (Partial Capacitance Value ) See Figure (1)	Ko	130pF/m ( 40pF/Ft )
	K1	12pF/m ( 3.7pF/Ft )
Inductance		0.6 μ H/m ( 0.18 μ H/Ft )
Electrostatic Noise (Hum Pick-up )*		2.5mV Max.
Electromagnetic Noise at 10kHz * ( Inductance of the toroidal core: 595 μ H)		0.1mV Max.
Microphonics * Method: Stepping on cable		50mV at 50k Load
Voltage Breakdown		Must withstand at DC 500V/15sec.
Insulation Resistance at DC 125V, 20		10 <sup>5</sup> M · m Minimum
Tensile Strength of one pair ( 26 ,65% RH)		274 N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~+70 (-4°F~+158°F)
Standard		UL13 CL2X 60

\* Using standard testing methods of Mogami Wire & Cable Corp.

REMARKS : Standard EZID models with 19 channels or more are designed for studio applications only. For PA and/or non-statistical applications, use the CL2 rated version.

## CL 2 RATED VERSION

Part No.	No. Of Channels	Ov. Dia. (Approx. mm)	Jacket Thickness (Approx. mm)	Weight (kg/100m) (kg/328Ft)	Maximum Lengths available
3040	2-ch	7.8(0.307")	1.0(0.039")	7.2	305m (1.000Ft)
3041	4-ch	9.0(0.354")	1.0(0.039")	10	
3042	8-ch	12.0(0.472")	1.2(0.047")	19	
3043	12-ch	14.6(0.575")	1.3(0.051")	29	
3044	16-ch	16.3(0.642")	1.4(0.055")	36	
3045	19-ch	17.5(0.689")	1.7(0.067")	44	
3046	24-ch	20.5(0.807")	2.0(0.079")	57	
3047	27-ch	21.0(0.827")	2.0(0.079")	63	
3048	32-ch	22.4(0.882")	2.0(0.079")	73	
3049	48-ch	27.5(1.063")	2.0(0.079")	104	200m (656Ft)

( Figures in parenthesis are in inches )

## CABLE CORE SPECS

Conductor	7/0.18A (0.178mm <sup>2</sup> ) #25AWG	(7 × #33AWG)
Insulation	1.05 XLPE (Cross Linked Polyethylene )	(0.0413" )
Drain Wire	7/0.18A ( Exactly same as conductor )	
Shield	Approx. 65/0.10A Served (spiral ) Shield	
Jacket(Covering)	2.9 Flexible PVC	(0.114" )
Identification	See core number identification table	

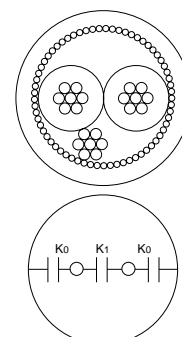


Figure ( 1 )

## ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20	Inner Pair Conductor		0.11 /m ( 0.0336 /Ft )
	Shield		0.028 /m ( 0.0085 /Ft )
Capacitance at 1 kHz, 20 (Partial Capacitance Value ) See Figure (1)	Ko	140pF/m ( 42.7pF/Ft )	
	K1	12pF/m ( 3.7pF/Ft )	
Inductance			0.6 μ H/m ( 0.18 μ H/Ft )
Electrostatic Noise (Hum Pick-up ) *			2.5mV Max.
Electromagnectc Noise at 10kHz * ( Inductance of the toroidal core: 595 μ H)			0.1mV Max.
Microphonics * Method: Stepping on cable			50mV at 50k Load
Voltage Breakdown			Must withstand at DC 500V/15sec.
Insulation Resistance at DC 125V, 20			10 <sup>5</sup> M · m Minimum
Tensile Strength of one pair ( 26 ,65%RH )			274 N
Emigration			Non-Emigrant to ABS resin
Applicable Temperature			-20 ~+70 (-4°F ~+158°F)
Standard			UL13 CL2 60

\*Using standard testing methods of Mogami Wire & Cable Corp.



## CORE NUMBER IDENTIFICATION TABLE

CORE NO.	COLOUR OF ONE OF THE PAIR	CORE JACKET COLOUR	CORE NO.	COLOUR OF ONE OF THE PAIR	CORE JACKET COLOUR	CORE NO.	COLOUR OF ONE OF THE PAIR	CORE JACKET COLOUR
1	BROWN	BLACK (WHITE)	17	PURPLE	BROWN (WHITE)	33	ORANGE	ORANGE (BLACK)
2	RED		18	GRAY		34	YELLOW	
3	ORANGE		19	WHITE		35	GREEN	
4	YELLOW		20	BLACK		36	BLUE	
5	GREEN		21	BROWN		37	PURPLE	
6	BLUE		22	RED	RED (WHITE)	38	GRAY	YELLOW (BLACK)
7	PURPLE		23	ORANGE		39	WHITE	
8	GRAY		24	YELLOW		40	BLACK	
9	WHITE		25	GREEN		41	BROWN	
10	BLACK		26	BLUE		42	RED	
11	BROWN	BROWN (WHITE)	27	PURPLE		43	ORANGE	
12	RED		28	GRAY		44	YELLOW	
13	ORANGE		29	WHITE		45	GREEN	
14	YELLOW		30	BLACK	ORANGE (BLACK)	46	BLUE	
15	GREEN		31	BROWN		47	PURPLE	
16	BLUE		32	RED		48	GRAY	

Colour identification is based on the resistor colour code.

Colours indicated in parenthesis indicate the number print colour on the core jacket.

Insulation colour of other wire in all pairs is clear.

Colour of outer cable jacket is black.

How to read core jacket channel numbers

Each number printed on the core jacket is underlined ( as shown below ) in order to prevent mis-reading of cable numbers.

EXAMPLE      1)  $\overline{9}$  means SIX      2)  $\overline{6}$  means NINE      3)  $\overline{18}$  means EIGHTEEN, not EIGHTY-ONE

## ASSEMBLY OF SNAKE CABLE

Customised connections and cable assemblies are available to special order.

Connection diagram and detailed specification sheet are necessary for all order.

Delivery : 4 weeks excluding shipping time.

For details, consult your Mogami dealer.



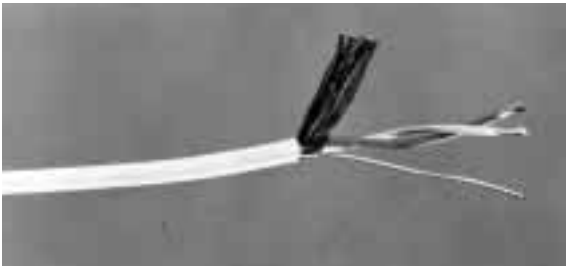
# CONSOLE INTERNAL / EXTERNAL WIRING CABLES

The copper conductors of all these console cables are made of famous **NEGLEX OFC**, hence we can recommend any of these with confidence for the highest quality wiring of mixing consoles, rack panels, and studio equipment.

All cables feature XLPE ( Cross-Linked Polyethylene ) which has excellent electrical characteristics and prevents shrink-back during soldering.

Served (spiral) shield provides easier cable termination and better sound quality than braided shield.

**Part No.2944**



## STANDARD CONSOLE CABLE

Small size for space saving.

Very flexible and easy to use.

Ten colours available for easy identification.

Same configuration as the core of our standard multi mic. snake cable series (EZID models).

Additional drain wire makes wiring efficient, as it can be crimped by the same size crimp terminal.

**Part No.2806**



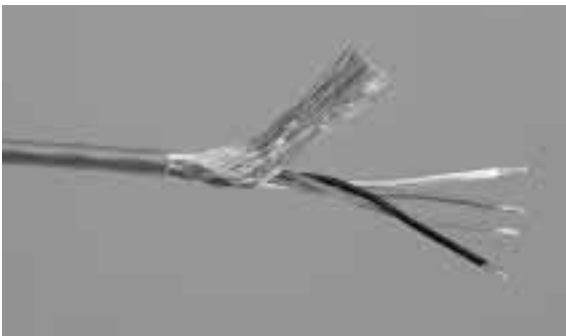
## LARGE CONDUCTOR SIZE CONSOLE CABLE

# 22AWG conductor version technically similar to # 2549 NEGLEX balanced Mic. Cable except for smaller outer jacket.

This item is designed for permanent installation and where larger conductor size is required such as long runs.

Jacket Colour: Only Gray is available.

**Part No.2799**



## MINI-QUAD CONSOLE CABLE

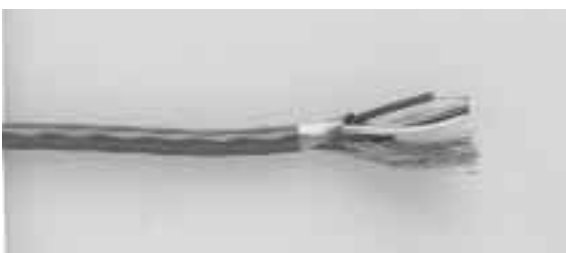
Quad configuration reduces electromagnetic noise.

Four different colours of insulation makes it possible to use as a four conductor overall shield cable.

Conductor size: same as # 2944

Jacket Colour: Only Gray is available.

**Part No.2820**

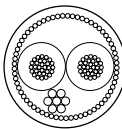
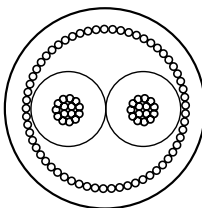
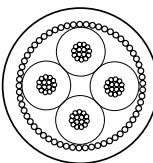
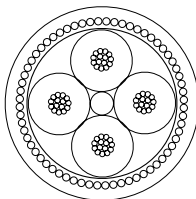


## LARGE SIZE QUAD CABLE

# 24AWG conductor version technically similar to # 2534 NEGLEX quad Mic. Cable except for smaller and slippery outer jacket.

This item is designed for permanent installation and where larger conductor size is required such as long runs.

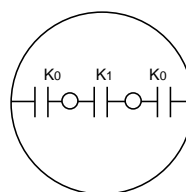
## SPECIFICATIONS AND CHARACTERISTICS

Configuration							
Part No.			2944	2806	2799	2820	
No. of Conductor			2	2	4	4	
Conductor	Details		30/0.08 OFC	30/0.12 OFC	30/0.08 OFC	20/0.12 OFC	
	Size		0.15mm <sup>2</sup> (#26AWG)	0.34mm <sup>2</sup> (#22AWG)	0.15mm <sup>2</sup> (#26AWG)	0.226mm <sup>2</sup> (#24AWG)	
Insulation	Ov. Dia. (mm)		1.0 (0.039")	1.9 (0.075")	1.0 (0.039")	1.6 (0.063")	
	Material		XLPE( Cross-Linked Polyethylene )				
	Core Colours		Red/Clear	Blue/Clear	Black/Red/Blue/Clear	Blue/Clear(Quad)	
Drain Wire	Details		7/0.18A	—————	—————	—————	
	Size		0.18mm <sup>2</sup> (#25AWG)	—————	—————	—————	
Served Shield			Approx. 60/0.10A	Approx. 58/0.18A	Approx. 60/0.12A	Approx. 60/0.18A	
Jacket	Ov. Dia. (mm)		2.5 (0.098")	5.2 (0.205")	3.2 (0.126")	5.0 (0.197")	
	Material		PVC				
	Core Colours		Black/Brown/Red/ Orange/Yellow/Green/ Blue/Purple/Gray/White	Gray	Gray	Gray	
Roll Sizes			50 m (164Ft) 100m (328Ft) 200m(656Ft)	200 m (656Ft) (standard)	50 m (164Ft) 100m (328Ft) 200m(656Ft)	200 m (656Ft) (standard)	
Weight per 200m Roll			2.5 kg	8 kg	3.8 kg	8 kg	
DC Resistance at 20	Inner Cond.		0.13 /m(0.040 /Ft)	0.058 /m(0.018 /Ft)	0.13 /m(0.040 /Ft)	0.083 /m(0.025 /Ft)	
	Shield		0.029 /m(0.009 /Ft)	0.013 /m(0.004 /Ft)	0.028 /m(0.009 /Ft)	0.012 /m(0.0037 /Ft)	
Capacitance at 1kHz, 20 ( Partial C. Value ) See below figure <sup>*(1)</sup>			K <sub>0</sub>	130pF/m(40 pF/Ft)	87pF/m(27 pF/Ft)	69pF/m(21 pF/Ft)	65pF/m(20 pF/Ft)
			K <sub>1</sub>	12pF/m(3.7 pF/Ft)	11pF/m(3.4 pF/Ft)	15pF/m(4.6 pF/Ft)	13pF/m(4 pF/Ft)
			K <sub>2</sub>	—————	—————	2pF/m(0.6 pF/Ft)	4pF/m(1.2 pF/Ft)
			Quad-Connection		Cond-Cond.	131pF/m(40 pF/Ft)	97pF/m(29.6 pF/Ft)
			Cond-Shield.		192pF/m(59 pF/Ft)	110pF/m(33.6 pF/Ft)	
Inductance between conductors at 1kHz, 20			0.6 μ H/m (0.18 μ H/Ft)	0.8 μ H/m (0.24 μ H/Ft)	0.5 μ H/m (0.15 μ H/Ft)	0.4 μ H/m (0.12 μ H/Ft)	
Electrostatic Noise <sup>*(2)</sup>			20 mV Max.	5 mV Max.	1.5 mV Max.	50 mV Max.	
Electromagnetic Noise			0.1 mV Max.	0.2 mV Max.	0.02 mV Max.	0.15 mV Max.	

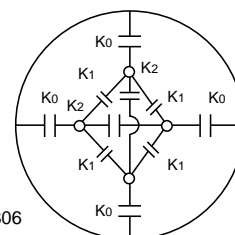
## COMMON SPECS.

Voltage Breakdown	Must withstand at DC 500V/15 sec.
Insulation Resistance	10 <sup>5</sup> M • m Minimum at DC 125 V, 20

<sup>\*(1)</sup> Patial Capacitance



Part No.  
2944 & 2806



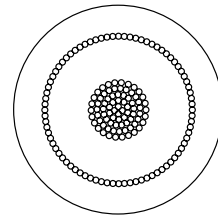
Part No.  
2799 & 2820

<sup>\*(2)</sup> Using standard testing methods of Mogami Wire & Cable Corp.

# SPEAKER CABLES

## SUPERFLEXIBLE STUDIO SPEAKER CABLES

2.0mm<sup>2</sup> (APPROX.#14AWG) SPEAKER CABLE TO MEET XLR CONNECTOR CABLE CLAMP



This standard speaker cable is designed to meet XLR audio connector cable clamp. Coaxial Design is used to provide as large a conductor size as possible, which results in the following features:

- Large conductor size of 2.0mm (close to #14AWG) despite small OD of 6.5mm (0.256" ). (Same conductor size for both internal and external (shield) conductors. )
- Extremely low induction from outside and affection to outside.
- Suitable impedance as speaker cable.
- Better sound quality than quad nor regular parallel configuration.
- Now, specify MOGAMI #3082 as world standard of economy and popular professional speaker cable.

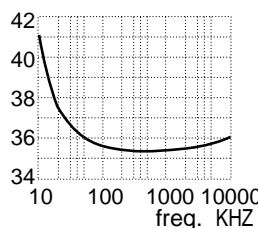
### SPECIFICATIONS

Part No.	3082	
Conductor	Details	80/0.18 OFC (80 x #33AWG)
	Size	2.03mm <sup>2</sup> (#15 AWG)
Insulation	Ov. Dia.(mm)	4.7 (0.185")
	Material	PVC
	Colour	White
Served Shield	Details	80/0.18 OFC (80 x #33AWG)
	Size	2.03mm <sup>2</sup> (Approx.#14 AWG)
Jacket	Ov. Dia.(mm)	6.5 <sup>+0.5</sup> (0.256 ± 0.0197" )
	Material	Flexible PVC
	Colour	Black
Roll Sizes		100m(328Ft)/200m(656Ft)/153m(500Ft)
Weight per 100m (328Ft) roll		7.5kg

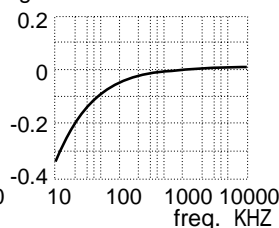
### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	3082	
DC Resistance at 20	Inner Conductor Shield Conductor	0.009 /m (0.0027 /Ft ) Same value for both internal and outenal/ shield conductor )
Capacitance at 1kHz, 20		253pF/m (77pF /Ft )
Inductance		0.4 μ H/m ( 0.12 μ H/Ft)
Electrostatic Noise		0.2mV Max.
Electromagnetic Noise at 10kHz		0.2mV Max.
Voltage Breakdown		Must withstand at DC 500V/15sec.
Insulation Resistance		10 <sup>5</sup> M ·m Min. at DC 500V, 20
Flex Life		15,000 cycles
Tensile Strength		More than 980 N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~+70 ( -4 F ~+158 F )
Standard		UL13 CL2X 75

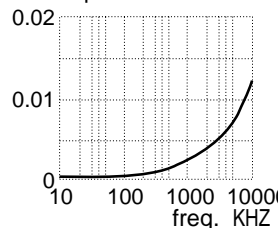
abs[ Z ] ohm



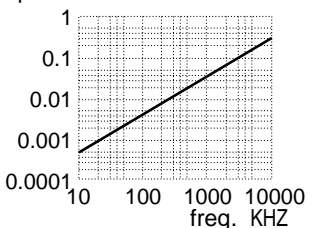
arg[ Z ] rad



atten. neper/m



phase rad/m



## SUPERFLEXIBLE STUDIO SPEAKER CABLES

### HIGH DEFINITION MULTI SERIES PROFESSIONAL SPEAKER CABLES

These unique professional speaker cables are originally designed to deliver maximum performance from state-of-the-art Tri-Amp Systems.

They offer true audiophile performance for accurate sound transmission with clear transparent response yet possess a rugged superflexibility for the most demanding professional applications.

Each conductor features many strands in rope-lay of famous MOGAMI 'NEGLEX' Oxygen-Free-Copper within colour-coded PVC insulation. A tough, low profile matte black superflexible PVC jacket protects the cables.

Available in series of 2mm<sup>2</sup> (close to #14AWG), 2.5mm<sup>2</sup> (close to #13AWG) and 4mm<sup>2</sup> (close to #11AWG) conductor sizes.

**2972**

**3103**

**2919**

**2921**

**3104**

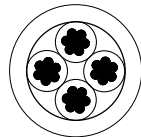
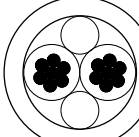
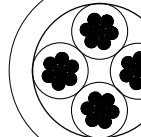



**2941**


Part No.	3103	2972	2921	3104	2919	2941
No. of Conductor	2	4			6	8
Conductor Size	4mm <sup>2</sup> (#12AWG)	2mm <sup>2</sup> (#15AWG)	2.5mm <sup>2</sup> (#14AWG)	4mm <sup>2</sup> (#12AWG)	2.5mm <sup>2</sup> (#14AWG)	
Overall Diameter(mm) (inch)	12 (0.472")	10.5 (0.413")	11.3 (0.445")	14.5 (0.571")	12.5 (0.492")	15.7 (0.618")
Core Colours	Black/Red	Brown/Red/Orange/Yellow			Black/Brown/Red Orange/Yellow/Green	Black/Brown/Red Orange/Yellow/Green Blue/Purple

4-conductor type is also applicable for standard 2-conductor speaker cable by quad-connection. 2972 is designed to be 2mm<sup>2</sup> which is ideal conductor size where it is necessary to combine two conductors (quad-connection) to fit a 3.5mm<sup>2</sup> crimp terminal.

# SUPERFLEXIBLE STUDIO SPEAKER CABLES

## SPECIFICATIONS AND CHARACTERISTICS

Configuration						
Part No.		2972	3103	3104		
No. of Conductor		4	2	4		
Conductor	Details	7/26/0.12 OFC (bare)	7/50/0.12 OFC (bare)			
	Size	2.05mm <sup>2</sup> ( #15AWG )	3.96mm <sup>2</sup> ( #12AWG )			
Insulation Ov. Dia. (mm)		3.2 (0.126" ) PVC	4.5 (0.177" ) PVC			
Jacket	Ov.Dia. (mm)	10.5 (0.413" )	12.0 (0.472" )	14.5 (0.571" )		
	Material	Flexible PVC, Matte Black				
Weight per 100m (328Ft) roll		17kg	20kg	31kg		
DC Resistance (20 °C)		0.0088 Ω/m (0.0027 Ω/Ft)		0.005 Ω/m (0.0015 Ω/Ft)		
Inductance (20 °C, 1kHz) (Refer to the figures shown in the capacitance data.)	1-2	0.7 μ H/m (0.21 μ H/Ft)	0.6 μ H/m (0.18 μ H/Ft)	0.6 μ H/m (0.18 μ H/Ft)		
	1-3	0.7 μ H/m (0.21 μ H/Ft)	—	0.6 μ H/m (0.18 μ H/Ft)		
Capacitance (20 °C)	Frequency	100Hz	1kHz	10kHz	50kHz	100kHz
2972 	1-2	130pF/m (39.7pF/Ft)	100pF/m (30.5pF/Ft)	81pF/m (24.7pF/Ft)	74pF/m (22.6pF/Ft)	71pF/m (21.7pF/Ft)
	1-3	110pF/m (33.6pF/Ft)	79pF/m (24.1pF/Ft)	63pF/m (19.2pF/Ft)	57pF/m (17.4pF/Ft)	56pF/m (17.1pF/Ft)
3103 	1-2	106pF/m (32.3pF/Ft)	93pF/m (28.4pF/Ft)	83pF/m (25.3pF/Ft)	76pF/m (23.2pF/Ft)	74pF/m (22.6pF/Ft)
3104 	1-2	110pF/m (33.6pF/Ft)	99pF/m (30.2pF/Ft)	86pF/m (26.2pF/Ft)	78pF/m (23.8pF/Ft)	76pF/m (23.2pF/Ft)
	1-3	90pF/m (27.5pF/Ft)	78pF/m (23.8pF/Ft)	67pF/m (20.4pF/Ft)	61pF/m (18.6pF/Ft)	59pF/m (18.0pF/Ft)

## COMMON SPECS.

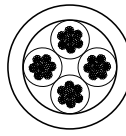
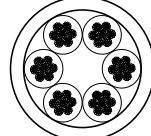
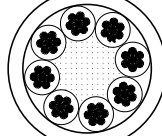

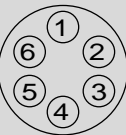
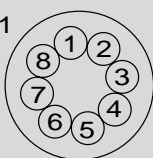
Voltage Breakdown	Must withstand at DC 500V/ 15sec.	
Insulation Resistance	10 <sup>4</sup> MΩ · m Minimum at DC 125 V, 20 °C	
Emigration of Jacket Material	Non-Emigrant to ABS resin ABS	
Applicable Temperature	-20 ~+70 ( -4 °F ~ +158 °F )	
Roll Sizes	2972	100m ( 328Ft )/300m ( 984Ft )
	3103/3104	100m ( 328Ft )/250m ( 820 Ft )
Standard	UL13 CL2X 75	

Remarks : Connecting the conductors as diagonal pairs greatly reduces mutual inductance, even though cross-talk interference is negligible.



# SUPERFLEXIBLE STUDIO SPEAKER CABLES

## SPECIFICATIONS AND CHARACTERISTICS

Configuration							
Part No.		2921	2919	2941			
No. of Conductor		4	6	8			
Conductor	Details	7/32/0.12 NEGLEX OFC (bare)					
	Size	2.53mm² ( #14AWG)					
Insulation Ov. Dia. (mm)		3.4 (0.134" ) PVC					
Jacket	Ov.Dia. (mm)	11.3 (0.445" )	12.5 (0.492" )	15.7 (0.618" )			
	Material	Flexible PVC, Matte Black					
Weight per 100m (328Ft) roll		18kg	26kg	38kg			
DC Resistance (20 )		0.008 /m Typ. (0.0024 /Ft)					
Inductance (20 , 1kHz)  (Refer to the figures shown in the capaci tance data.)	1-2	0.5 μ H/m (0.15 μ H/Ft)	0.5 μ H/m (0.15 μ H/Ft)	0.5 μ H/m (0.15 μ H/Ft)			
	1-3	0.6 μ H/m (0.18 μ H/Ft)	0.6 μ H/m (0.18 μ H/Ft)	0.6 μ H/m (0.18 μ H/Ft)			
	1-4	_____	0.7 μ H/m (0.21 μ H/Ft)	0.7 μ H/m (0.21 μ H/Ft)			
	1-8	_____	_____	0.8 μ H/m (0.24 μ H/Ft)			
Capacitance(effective value) (20 )		Frequency	100Hz	1kHz	10kHz	50kHz	100kHz
2921 	1-2	127pF/m (38.7pF/Ft)	110pF/m (33.6pF/Ft)	101pF/m (30.8pF/Ft)	92pF/m (28.1pF/Ft)	90pF/m (27.5pF/Ft)	
	1-3	102pF/m (31.1pF/Ft)	89pF/m (27.1pF/Ft)	89pF/m (27.1pF/Ft)	74pF/m (22.6pF/Ft)	71pF/m (21.7pF/Ft)	
2919 	1-2	126pF/m (38.4pF/Ft)	102pF/m (31.1pF/Ft)	87pF/m (26.5pF/Ft)	80pF/m (24.4pF/Ft)	78pF/m (23.8pF/Ft)	
	1-3	94pF/m (28.7pF/Ft)	72pF/m (22.0pF/Ft)	61pF/m (18.6pF/Ft)	56pF/m (17.1pF/Ft)	55pF/m (16.8pF/Ft)	
	1-4	82pF/m (25.0pF/Ft)	62pF/m (18.9pF/Ft)	52pF/m (15.9pF/Ft)	48pF/m (14.6pF/Ft)	46pF/m (14.0pF/Ft)	
2941 	1-2	113pF/m (34.5pF/Ft)	100pF/m (30.5pF/Ft)	90pF/m (27.5pF/Ft)	84pF/m (25.6pF/Ft)	80pF/m (24.4pF/Ft)	
	1-3	77pF/m (23.5pF/Ft)	67pF/m (20.4pF/Ft)	61pF/m (18.6pF/Ft)	56pF/m (17.1pF/Ft)	55pF/m (16.8pF/Ft)	
	1-4	68pF/m (20.7pF/Ft)	60pF/m (18.3pF/Ft)	54pF/m (16.5pF/Ft)	50pF/m (15.3pF/Ft)	49pF/m (14.9pF/Ft)	
	1-5	93pF/m (28.4pF/Ft)	81pF/m (24.7pF/Ft)	74pF/m (22.6pF/Ft)	69pF/m (21.0pF/Ft)	67pF/m (20.4pF/Ft)	

## COMMON SPECS.

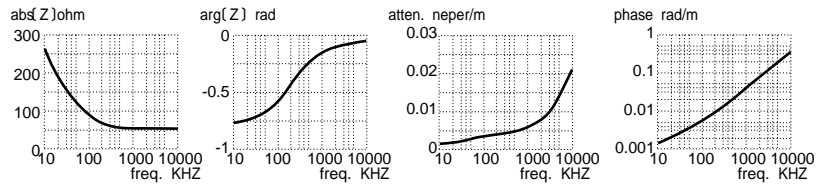
Voltage Breakdown	Must withstand at DC 500V/ 15sec.
Insulation Resistance	10 <sup>4</sup> M · m Minimum at DC 125 V, 20 °C
Emigration of Jacket Material	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +70 ( -4 F ~ + 158 F )
Roll Sizes	100m ( 328Ft )/153m ( 500 Ft )/300m ( 984Ft )
Standard	UL13 CL2X 75

Remarks: Connecting the conductors as diagonal pairs greatly reduces mutual inductance, even though cross-talk interference is negligible. For 8-cond. version P/N 2941 , connect it as close as to diagonal combination.

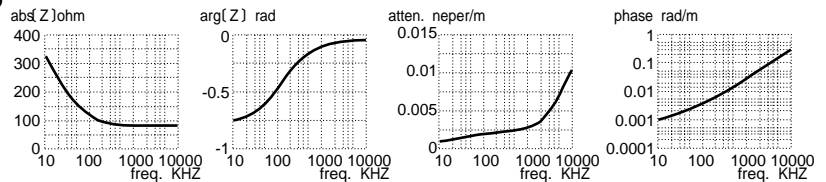
# VIDEO CABLES & HIGH FREQUENCY COAXIAL CABLES

## SUBMINIATURE & MINIATURE COAXIAL CABLES

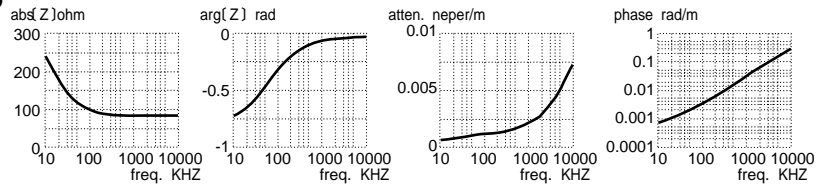
2381



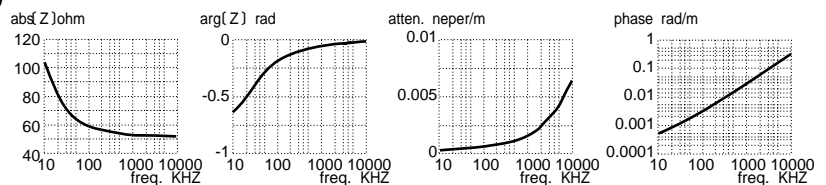
2895



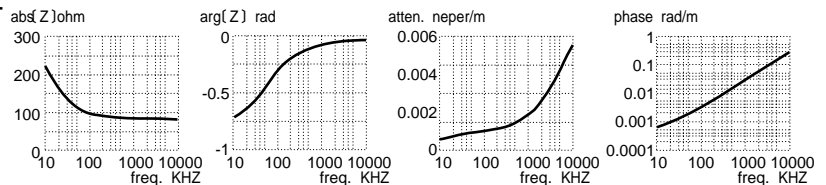
2546



3200

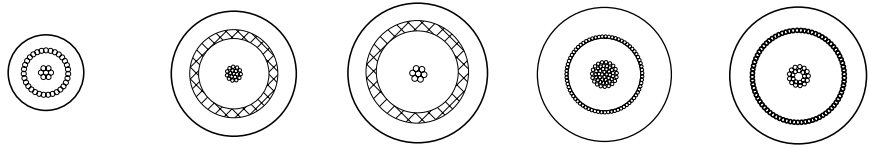


2964



Superflexible subminiature coaxial cables which cannot be found out in MIL, JIS and other worldwide popular standards. Standardized coaxial cables are available from any cable manufacturer so that your choice is determined by competitive price, which means there is no chance for a Japanese cable manufacturer in the world market. However, there are lots of cases where those standard cables will not do the job. MOGAMI superflexible subminiature coaxial cables may have a chance in such case. All these coaxial cables were also originally made for custom applications and remained long thereafter finding unfixed multiple users all over the world.

## SUBMINIATURE & MINIATURE COAXIAL CABLES



### CABLE SPECIFICATIONS

Part No.		2381	2895	2546	3200	2964
Characteristic Impedance		50	75	75	50	75
Conductor	Details	1/0.10 Piano Wire 6/0.10A Served Cond.	17/0.08A	7/0.14A	50/0.12 OFC	20/0.12 OFC
	Size	0.047mm <sup>2</sup> ( #32AWG )	0.085mm <sup>2</sup> ( #28AWG )	0.107mm <sup>2</sup> ( #27AWG )	0.565mm <sup>2</sup> ( #20AWG )	0.226mm <sup>2</sup> ( #24AWG )
Insulation	Ov. Dia . (mm)	0.9 (0.035")	1.7 (0.067")	1.95 (0.077")	2.6 (0.102")	2.65 (0.104")
	Material	XLPE	XLPE	CPE	XLPE	XLPE
Shield	Type	SERVED	BRAIDED		Double Served Shield Approx. 66/0.12 OFC, Approx. 72/0.12 OFC	
	Details	Approx. 30/0.10A	16/5/0.10A	16/4/0.12A	Approx. 70/0.12OFC	
Jacket	Ov. Dia . (mm)	1.6 (0.063")	3.0 (0.118")	3.3 (0.130")	4.8 (0.189")	
	Material	PVC				
	Colour	Black	Black	Gray	Black	Black/Red/Yellow/Green/Blue
Roll Sizes		305m (1,000Ft )			50m (164Ft )/100m(328Ft)/200m(656Ft)	
Weight Per 305m (1,000Ft ) Roll		1.5kg	4.2kg	5.0kg	3.0kg/100m(328Ft)	3.4kg/100m(328Ft)

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		2381	2895	2546	3200	2964
DC Resistance at 20	Inner Cond.	0.4 /m (0.12 /Ft)	0.22 /m (0.067 /Ft)	0.18 /m (0.055 /Ft)	0.035 /m (0.011 /Ft)	0.090 /m (0.027 /Ft)
	Shield	0.079 /m (0.024 /Ft)	0.035 /m (0.011 /Ft)	0.03 /m (0.009 /Ft)	0.012 /m (0.0037 /Ft)	0.012 /m (0.0037 /Ft)
Capacitance at 1kHz, 20		110pF/m (33.6pF/ Ft)	58pF/m (17.7pF/ Ft)	62pF/m (18.9pF/ Ft)	95pF/m (29.0pF/ Ft)	65pF/m (19.8pF/ Ft)
Characteristic Impedance at 10MHz		50 ±10%	75 ±10%	75 ±10%	50 ±10%	75 ±10%
Attenuation (10MHz )		0.15 dB /m (0.046 dB /Ft )	0.069 dB /m (0.021 dB /Ft )	0.061 dB /m (0.019 dB /Ft )	0.061 dB /m (0.019 dB /Ft )	0.061 dB /m (0.019 dB /Ft )
Phase Constant (10MHz )		0.38rad / m	0.28rad / m	0.30rad / m	0.31rad / m	0.3rad / m
Electromagnetic Noise*		0.1mV Max.				
Voltage Breakdown		Must withstand at DC 500V/15sec.				
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 250V , 20				
Flex Life*		21,000 cycles	8,400 cycles	8,600 cycles	12,000 cycles	16,000 cycles
Tensile Strength		68 N	196 N	205 N	343 N	274 N
Emigration		Non-Emigrant to PSR resin	Non-Emigrant to ABS resin			
Applicable Temperature		-20 ~ +60 (-4°F~+140°F)				
Standard		—	UL 1354 AWM VW-1 30V 60°C		—	—

Attenuation : 1 dB = 0.1151 neper (1 neper = 8.686 dB )

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

## 75 COAX. PARALLEL MULTICORE CABLES

### 2947 CABLE



### 3243 CABLE

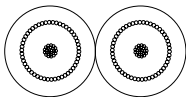
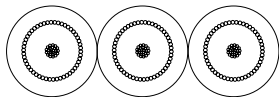


The dual 75 ohm parallel "zip style" 2947 was originally developed to maintain maximum video performance while fitting the very compact 4 pin mini-Din ( S-video) connector. Success in this challenging project required Mogami's highly experienced design and extremely precise manufacturing technique.

Because this small cable is excellent for audio and video, two (2947)three (3243) and four (3294) conductor versions of this cable are now available to meet market demands in home and industrial audio-video, law enforcement, medical imaging, and security environments.

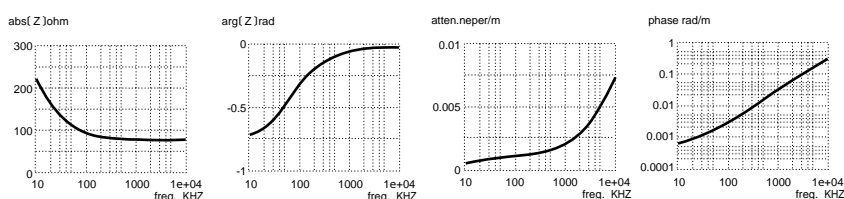
### CABLE SPECIFICATIONS

#### ELECTRICAL & MECHANICAL CHARACTERISTICS

Configuration			
Part No.		2947	3243
Core Configuration		2 x 75 Coax.	3 x 75 Coax.
Conductor Size		0.126mm <sup>2</sup> ( #27AWG )	
Shield Structure		Served Shield	
Jacket	Material	Flexible PVC	
	Ov. Dia . (mm)	2 x 3.0 (0.118")	3 x 3.0 (0.118")
	Colour	Black	
Roll Sizes		153m/305m (500Ft /1,000Ft )	153m (500Ft )
Weight Per 153m ( 500Ft ) Roll		4kg	6.1kg
DC Resistance at 20	Inner Cond.	0.15 /m (0.046 / Ft )	
	Shield	0.035 /m (0.011 / Ft )	
Capacitance at 1kHz, 20		59pF/ m (18.0 pF/ Ft )	
Characteristic Impedance at 10MHz		75 ± 5%	
Attenuation (10MHz )		0.061dB / m (0.019 dB / Ft )	
Phase Constant (10MHz )		0.28 rad / m	
Electromagnetic Noise*		0.1mV Max .	
Voltage Breakdown		Must withstand at DC 500V/15sec .	
Insulation Resistance		10 <sup>4</sup> M · m Min . at DC 500V , 20	
Flex Life*		24 ,000 cycles	28 ,000 cycles
Tensile Strength		392 N	530 N
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~ +70 (-4°F ~ +158°F)	

Attenuation : 1 dB = 0.1151 neper (1 neper = 8.686 dB )

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



## MOLDED Y/C CABLE ASSEMBLY WITH 4-PIN MINI DIN CONNECTORS



**5139  
ASSEMBLY**

Part No.	5139-03	5139-06	5139-12	5139-20	5139-30	5139-50	5139-75	5139-100
Length ( m )	0.9m ( 3 Ft )	1.8m ( 6 Ft )	3.6m ( 12 Ft )	6.1m ( 20 Ft )	9.1m ( 30 Ft )	15.2m ( 50 Ft )	22.8m ( 75 Ft )	30.5m ( 100 Ft )

## MONITOR CABLE

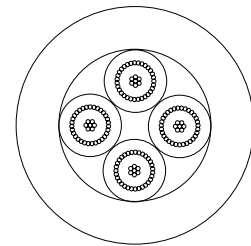


**2326**

Specifically designed as a miniature video monitor cable, it can be easily connected to a rectangular 8 - pin connector.

### CABLE SPECIFICATIONS

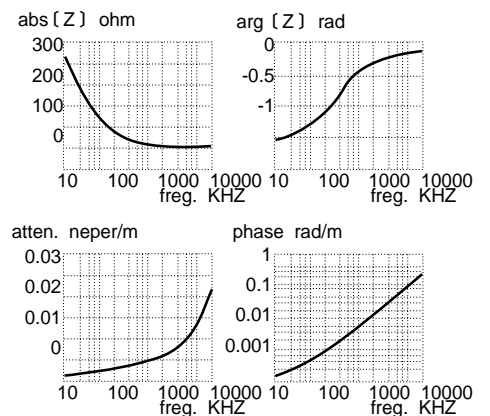
Part No.		2326
Core Configuration		4 × 50 Coax.
Conductor Size		0.047mm <sup>2</sup> (#32AWG )
Ov. Jacket	Material	Flexible PVC
	Ov. Dia . (mm)	6.0 (0.236 ")
	Colour	Dark Gray
Roll Size		200m (656Ft )
Weight per 200m (656Ft ) Roll		8.3kg



### ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20	Inner Cond.	0.4 /m (0.122 /Ft )
	Shield	0.079 /m (0.024 /Ft )
Capacitance at 1kHz, 20		102pF/m (31.1pF/ Ft )
Characteristic Impedance at 10MHz		50 ±5%
Attenuation at 10MHz		0.2dB/m ( 0.061 dB /Ft )
Velocity Ratio		0.63
Electromagnetic Noise*		0.1mV Max.
Voltage Breakdown		Must withstand at DC 500V/15sec .
Insulation Resistance		10 <sup>4</sup> M · m Min . at DC 500V , 20
Flex Life*		6,500 cycles
Tensile Strength		294 N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~ +70 ( -4°F ~ +158°F )

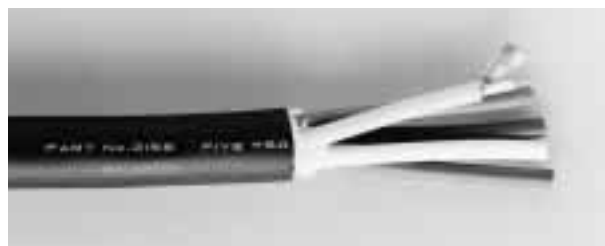
\* Using standard testing method of Mogami Wire & Cable Corp .



## MULTICORE 75Ω COAXIAL CABLES



3145



3158


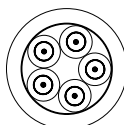
**Multicore 75Ω coaxial cables used for HD TV RGB signal, VGA and CRT drive etc. are available in three versions. One small overall diameter version to meet shrink Dsub 15P connector and two large overall diameter version with less attenuation for longer runs offer the following outstanding features.**

Because of used XLCPE (Cross-Linked Cellular polyethylene) insulation, despite its compact overall diameter, lower attenuation value is realized. To reach the same attenuation level by regular solid PE insulated coax. cable, its overall diameter has to become more than 50% larger. Also, cross-linking makes this insulation more durable against soldering heat.

All versions have featured MOGAMI flexibility so that they are convenient for handling, and its unique served (spiral) shielding construction and stranded center conductor helps easier wiring and installation.

Medium overall diameter version is comprised of MOGAMI standard #2964 (75 audio video cable), and one touch Push-Pull BNC male connector specifically designed for #2964 cable is available so that your own original cable assembly and instant procurement from standard cable assemblies are both available. One touch Push-Pull BNC for large size version is also available.

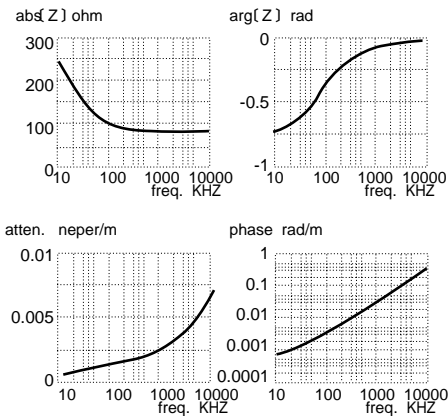
NOTE : Two items in Miniature type ( Part No.3146 ~ 3147 ) is available only on order made production because of small demand.

MINIATURE MULTI 75Ω COAX. CABLE					MEDIUM SIZE MULTI 75Ω COAX. CABLE				
									
Part No.	Nos. of Cores	Ov.Dia. (Approx. mm)	Weight (Kg/153m) (Kg/500Ft)	Roll Sizes	Part No.	Nos. of Cores	Ov.Dia. (Approx. mm)	Weight (Kg/100m) (Kg/328Ft)	Roll Sizes
3147	3	8.0 (0.315")	?	77m/153m	3156	3	14.0 (0.551")	18	10m/20m/30m/
3146	4	8.9 (0.350")	?	(250Ft/500Ft)	3157	4	15.5 (0.610")	25	40m/50m/
3145	5	9.8 (0.386")	14.8		3158	5	17.5 (0.689")	33	100m/300m

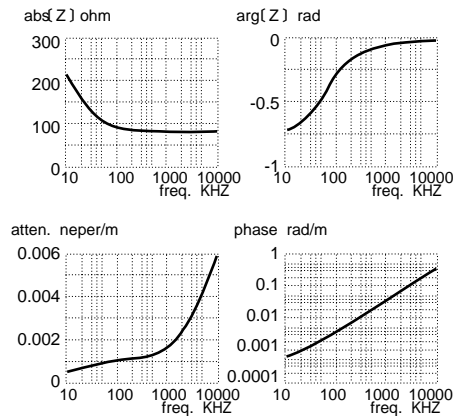


## MULTICORE 75Ω COAXIAL CABLES

3145



3158



### CABLE CORE SPECS (COMMON SPECS)

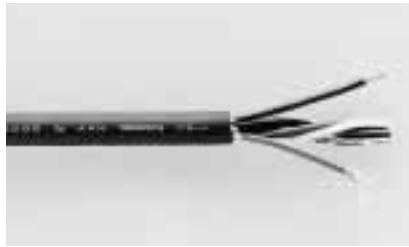
Type		MINIATURE MULTI 75 COAX. CABLE	MEDIUM SIZE MULTI 75 COAX. CABLE
Conductor	Details	7/0.18A(7 × #33AWG)	20/0.12 OFC
	Size	0.178mm <sup>2</sup> (#25AWG)	0.226mm <sup>2</sup> (#24AWG)
Insulation	Ov. Dia. (mm)	2.3 (0.091")	2.6 (0.102")
	Material	XLCPE (Cross-Linked Cellular Polyethylene)	
Overall Shield	Type	SERVED	
	Details	Approx.70/0.10A	Approx.70/0.12OFC
Jacket	Ov. Dia. (mm)	2.9 (0.114")	4.8 (0.189 ")
	Material	PVC	

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Type		MINIATURE MULTI 75 COAX. CABLE	MEDIUM SIZE MULTI 75 COAX. CABLE
DC Resistance at 20	Inner Cond.	0.104 /m(0.032 /Ft)	0.090 /m(0.027 /Ft)
	Shield	0.035 /m(0.011 /Ft)	0.025 /m(0.0076 /Ft)
Capacitance at 1kHz, 20		60pF/m(18.3 pF/Ft)	60pF/m(18.3 pF/Ft)
Characteristic Impedance at 10MHz		75 ± 10%	
Attenuation (10MHz)		0.058dB/m (0.018dB/Ft)	0.050dB/m (0.015dB/Ft)
Phase Constant (10MHz)		0.30rad/m	0.29rad/m
Electromagnetic Noise *		0.1mV Max	
Voltage Breakdown		Must withstand at DC 500V/15sec.	
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 250V , 20	
Flex Life of Inside Core*		4,100 cycles	16,000 cycles
Tensile Strength per Core		186 N	274 N
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~ +70 (-4° F ~ +158° F )	
Standard		60	
		UL 20002 AWM 30V VW-1	

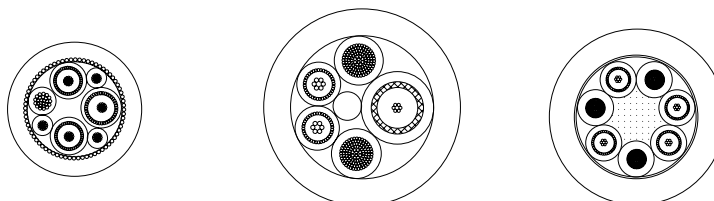
Attenuation : 1dB = 0.1151 neper (1 neper=8.686 dB)

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

**COMPLEXED COAX. (VIDEO CAMERA) CABLES****2 6 7 3****2 5 4 3****3 0 2 7****2 5 3 7****2 8 5 9**

Many variations of video camera cables which were originally developed for respective customers' requirements (as each camera needed a different specification) when the camera and the recorder were separated, these cables remained as a kind of standard stock item with some demand for maintenance and new and different applications in the international world wide market. Some video camera cables are of course applicable to professional cameras, and feature the same flexibility and compact size as other MOGAMI cables. Most of these cables are often comprised of 50 coaxial cable cores to make them as miniature as possible (of course it naturally becomes flexible), because the wave length of video signal is rather long (20m / 66Ft) the reflection (impedance mismatch) problem does not become critical as long as it is used within this length (within one whole wave length) so that compactness and flexibility can be a benefit without any anxiety. However, for interconnection longer than 20m (66Ft) or when attenuation is of importance, strictly adjusted 75 coaxial cable with larger conductor size must be used. Finally, video camera cables are destined to be discontinued as their demand decreases, therefore, please ask our distributor for its availability before you make a decision on its application.

## COMPLEXED COAX. (VIDEO CAMERA) CABLES

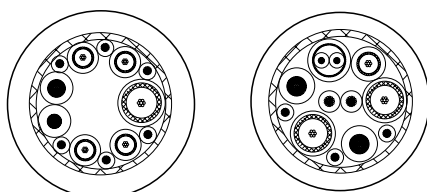


### CABLE SPECIFICATIONS

Part No.		2673	2537	2543
Core Configuration		1 × 50 COAX. ( # 28AWG) 2 × 40 COAX. ( # 28AWG) 1 × Power ( # 22AWG) 1 × Signal ( # 26AWG) 2 × Signal ( # 28AWG)	1 × 75 COAX. ( # 28AWG) 2 × Unbalanced ( # 24AWG) 2 × Power ( # 16AWG)	4 × 50 COAX. ( # 32AWG) 3 × Power( # 22AWG)
Overall Shield		Served (#18AWG)	Unshielded	
Ov. Jacket	Material	Flexible PVC		
	Ov. Dia.(mm)	6.3 (0.248")	9.0 (0.354")	7.6 (0.299")
	Colour	Black	Dark Gray	
Standard		UL 20125 AWM VW-1 30V 80	UL 20002 AWM VW-1 30V 60	
Emigration		Non-Emigrant to ABS resin ABS		
Applicable Temperature		-20 ~+70 (-4°F~+158°F )		
Roll Size		153m ( 500Ft )		
Weight Per 153m(500Ft) roll		8.7kg	16kg	9.7kg

Served shield (#18AWG) of #2673 is originally designed for one of power conductor and to meet with applied crimp terminal in order to design this cable within limited overall diameter, so there is no guarantee as a perfect shielding.

Please ascertain its screening effect before your application if you use it as a shield conductor.



### CABLE SPECIFICATIONS

Part No.		3027	2859
Core Configuration		1 × 75 COAX. ( # 26AWG) 4 × 40 COAX. ( # 26AWG) 1 × Power ( # 18AWG) 1 × Power ( # 20AWG) 6 × Signal ( # 26AWG)	2 × 75 COAX. ( # 28AWG) 1 × 50 COAX. ( # 28AWG) 1 × Balanced ( # 28AWG) 2 × Power ( # 18AWG) 2 × Signal ( # 24AWG) 3 × Signal ( # 26AWG)
Overall Shield		Braided	
Ov. Jacket	Material	Flexible PVC	
	Ov. Dia.(mm)	11.6 (0.457")	11.0 (0.433")
	Colour	Dark Gray	Black
Standard		UL 20124 AWM VW-1 30V 60	
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~+70 (-4°F~+158°F )	
Roll Size		153m ( 500Ft )	
Weight Per 153m(500Ft) roll		33kg	27kg

More detailed specification or characteristics of the used inside cores are not included in this catalogue as it is not economical compared with the size of the market for these items. In case of necessity, please ask our distributor for extended detailed core specifications.

# BNC-2964

NO TWIST REQUIRED!

Click

Align the arrow to the guide pin and just push-on. BNC will lock in place.

PUSH-PULL

**LIGHT WEIGHT CABLE!**  
**FLEXIBLE! ONE TOUCH!**



While holding the plastic shell, just pull to release.



## PUSH-PULL BNC CABLE ASSEMBLIES

Only available combination of Mogami & Tajimi. Both have supplied high quality products, and for the first time ever, have now introduced cable assemblies that are perfect for field engineers. This cable is a dream come true for those with professional analog and digital video applications. Available in both 50 & 75 .

One Touch "Push-Pull" locking mechanism is markedly effective in high density patch panels, considerably reduces installation time, and perfect for applications requiring frequent connection and disconnection.

## 50 / 75 BNC CONNECTOR SPECIFICALLY DESIGNED FOR P/N 3200/2964 COAXIAL CABLE

It is our pleasure to be able to provide our customers with REAL "ONE TOUCH PUSH-PULL BNC Connector" by TAJIMI specifically designed for MOGAMI P/N 3200 & 2964 cables. This very innovative and handy BNC's can be combined with varied cables from single 50 & 75 coaxial cables in five colours up to complexed five core RGB cables. Not only available in raw cables and connectors independently as well as standard length cable assemblies, but also custom length with various connector combinations are made to order.



Quick and reliable ONE TOUCH LOCK "PUSH-PULL" connection suitable for dense panel, fast installation and frequent connection and removal.

Equivalent connection strength to conventional BNC, realized by innovative rotary mechanism.

Durable 75 BNC against gouge strength, reinforced by newly developed open part of the shield contact structure and the fixed structure of the center pin terminal.

Reliable high frequency characteristics with MOGAMI standard superflexible light weight cable assured for 1.2 V.S.W.R. up to 1GHz and acceptable to be bent up to 10mm (0.4") as the minimum radius of curvature.

Both solder type and crimp type are available. However, we basically recommend solder type for field use because strength of cable clamp becomes too weak in case of crimp type resulted by the very feature of flexibility of MOGAMI cable. We can assure the cable retention strength only up to 98 N in case of crimp type, while up to 147 N can be assured in case of solder type. Therefore, all of our standard cable assemblies are made of solder type.

Available in colours :

50 BNC CONNECTOR : BLACK ONLY

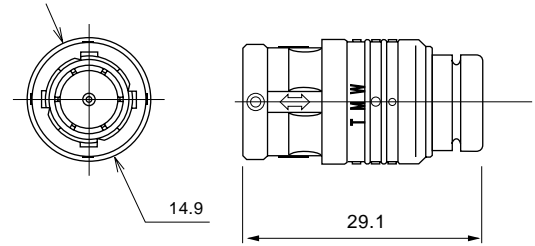
75 BNC CONNECTOR : 6 colours (BLACK • RED • YELLOW • GREEN • BLUE • WHITE)

Characteristic Impedance	50		75	
Type	SOLDER TYPE	CRIMP TYPE	SOLDER TYPE	CRIMP TYPE
Part No.	BNC-3200	BNC-3200C	BNC-2964-	BNC-2964C-

Add register colour code in  
Example : P/N BNC-2964-6 means BLUE

Colour	BLACK	RED	YELLOW	GREEN	BLUE	WHITE
Code No.	0	2	4	5	6	9

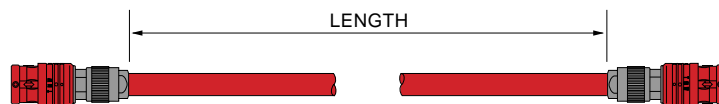
## TERMINATIONS



Part No.	Impedance	Colour	Frequency Range V.S.W.R. under 1.2	Option	Rating
BNC-TNT-50	50	White	DC ~ 2GHz	W/Out String	1 / 4W
BNC-TNT-50S				With String	
BNC-TNT-75	75	Yellow		W/Out String	
BNC-TNT-75S				With String	

## STANDARD CABLE ASSEMBLIES AVAILABLE FROM STOCK

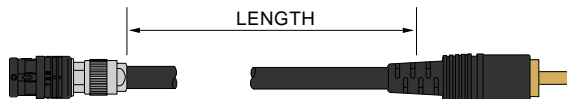
BNC to BNC



Part No.	BB-01	BB-02	BB-03	BB-06	BB-10	BB-16	BB-25	BB-33	BB-50	BB-66	BB-100
Length	1Ft 0.3m	2Ft 0.6m	3Ft 0.9m	6Ft 1.8m	10Ft 3.0m	16Ft 4.8m	25Ft 7.6m	33Ft 10.0m	50Ft 15.2m	66Ft 20.1m	100Ft 30.5m

BNC to RCA

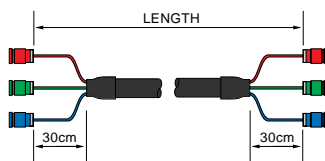
Cable : Part No. 2964 Standard Colour : Black · Red · Yellow · Green · Blue



Part No.	BR-03	BR-06	BR-10	BR-16
Length	3Ft 0.9m	6Ft 1.8m	10Ft 3.0m	16Ft 4.8m

Cable : Part No. 2964 Standard Colour : Black

3 × BNC to 3 × BNC

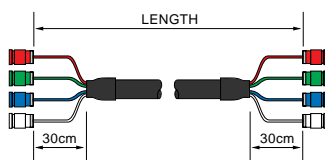


(Remarks : 3 and 4 core types are available on only order made, not standard stock item.)

Part No.	3B3B-02	3B3B-03	3B3B-05	3B3B-08	3B3B-10	3B3B-15	3B3B-20	3B3B-30
Length	6.55Ft 2m	9.83Ft 3m	16.3Ft 5m	26.2Ft 8m	32.7Ft 10m	49.1Ft 15m	65.5Ft 20m	98.3Ft 30m

Cable : Part No. 3156

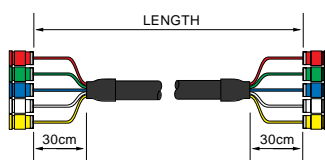
4 × BNC to 4 × BNC



Part No.	4B4B-02	4B4B-03	4B4B-05	4B4B-08	4B4B-10	4B4B-15	4B4B-20	4B4B-30
Length	6.55Ft 2m	9.83Ft 3m	16.3Ft 5m	26.2Ft 8m	32.7Ft 10m	49.1Ft 15m	65.5Ft 20m	98.3Ft 30m

Cable : Part No. 3157

5 × BNC to 5 × BNC



Part No.	5B5B-02	5B5B-03	5B5B-05	5B5B-08	5B5B-10	5B5B-15	5B5B-20	5B5B-30
Length	6.55Ft 2m	9.83Ft 3m	16.3Ft 5m	26.2Ft 8m	32.7Ft 10m	49.1Ft 15m	65.5Ft 20m	98.3Ft 30m

Cable : Part No. 3158

NOTE : Customised cable Assembly is available to special order. Please refer to Page 8 and Page 26 in our general catalogue and or consult your MOGAMI distributor.

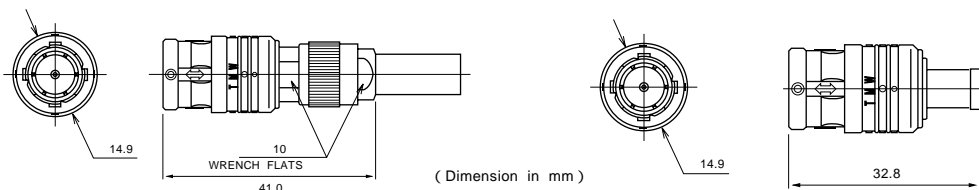


## CONNECTOR SPECIFICATIONS

### SOLDER TYPE



### CRIMP TYPE



### CONSTRUCTION

Part No.	BNC-3200	BNC-3200C	BNC-2964-	BNC-2964C-
Type	SOLDER TYPE	CRIMP TYPE	SOLDER TYPE	CRIMP TYPE
Coupling Ring	Nylon W/Glass Fiber		Nylon W/Glass Fiber	
Rotary Shell	Nickel Plated Phosphor Bronze		Nickel Plated Phosphor Bronze	
Shell	Nickel Plated Brass		Nickel Plated Brass	
Clamp Shell	Silver Plated Brass	_____	Silver Plated Brass	_____
Center Terminal	Gold Plated Brass		Gold Plated Brass	
Insulation	PTFE		PTFE	
Ferule	_____	Tin Plated Copper	_____	Tin Plated Copper
Spacer	_____		Silver Plated Brass	_____
Nut	Nickel Plated Brass	_____	Nickel Plated Brass	_____
Sleeve	_____		Chloroprene	_____

### CHARACTERISTICS

Part No.	BNC-3200	BNC-3200C	BNC-2964-	BNC-2964C-
Type	SOLDER TYPE	CRIMP TYPE	SOLDER TYPE	CRIMP TYPE
Voltage Rating	AC 500Vrms		AC 500Vrms	
Dielectric Withstanding Voltage	AC 1,500Vrms at sea level		AC 1,500Vrms at sea level	
Insulation Resistance	1,000 M Min. at DC 500V		1,000 M Min. at DC 500V	
Contact Resistance	5m Max. at DC 1A		5m Max. at DC 1A	
Characteristic Impedance	50		75	
V.S.W.R.	1.2 Max. DC ~1GHz		1.2 Max. DC ~1GHz	
Minimum Acceptable Radius of Curvature of Used Cable	10mm (0.4")		10mm (0.4")	
Cable Retention	196 N (44 lbf) Min.	117 N (26 lbf) Min.	147 N (33 lbf) Min.	98 N (22 lbf) Min.
Withstanding Vibration	98m/S <sup>2</sup> (10G), 10 ~ 500Hz (JIS C5402 6.1)		98m/S <sup>2</sup> (10G), 10 ~ 500Hz (JIS C5402 6.1)	
Connector Durability	1,000 times Min.		1,000 times Min.	
Applicable Temperature	-40 ~ +85 (85%RH Max.)		-40 ~ +85 (85%RH Max.)	
Standard	IEC 169-8/MIL-C-39012		IEC 169-8/MIL-C-39012	

## TOOLS

### Crimp Tool

CWB-T0276/T0277



### Attach and Detach Connecting Tool

T90-28



# DIGITAL INTERFACE CABLES

## MIDI SYNCHRO CABLE ASSEMBLIES



**MOGAMI MIDI SYNCHRO CABLE ASSEMBLIES** are specially designed for use with the Musical Instrument Digital Interface (MIDI) communication system.

Applications include the latest MIDI patchbays, and interconnection between MIDI equipment and MIDI served musical instruments. These outstanding professional cables offer the following features:

SINGLE and DUAL MIDI CABLES are both available from standard stock. NEW DUAL MIDI CABLES are designed for compact wiring and prevent connection errors when using both Midi-Out and Midi-In ports simultaneously.

One piece molded 5pin Din connectors.

Elegant design two stage molding for easy handling, reliability and long life.

0.76  $\mu$  gold plated pin version available to order.

Specially designed, superflexible cable with four #25AWG copper conductors and served (spiral) shield.

Attractive, durable, satin black rubber like PVC jacket.

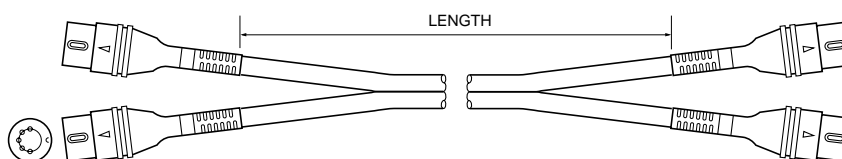
Fast, accurate transmission of MIDI signal via a twisted pair for better electromagnetic noise rejection.

Additional two pins wired for tape synchro signal.

Interchangeable colour rings for easy patch cord identification.

Bulk cable also available in 50m (164Ft) , 100m (328Ft) rolls and 200m (656Ft) spools .

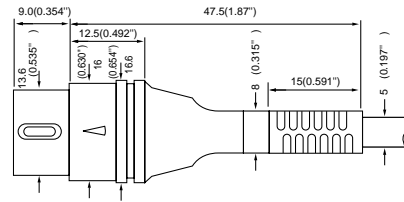
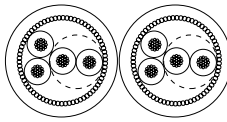
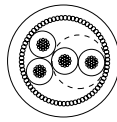
Single Cable	Part No. 2948
Dual Cable	Part No. 3033



Part No.	Single	MIDI-015	MIDI-03	MIDI-05	MIDI-10	MIDI-15	MIDI-20	MIDI-30
	Dual	MIDI-015D	MIDI-03D	MIDI-05D	MIDI-10D	MIDI-15D	MIDI-20D	MIDI-30D
Length		18"(1.5' ) 45cm	3Ft 90cm	5Ft 1.5m	10Ft 3m	15Ft 4.5m	20Ft 6.1m	30Ft 9.1m

## MIDI SYNCHRO CABLE ASSEMBLIES

### SPECIFICATIONS



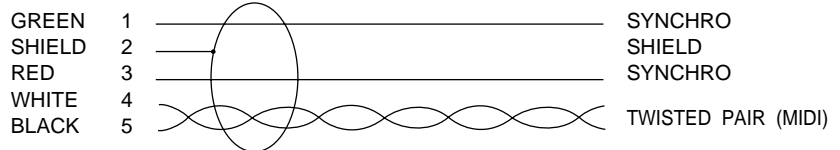
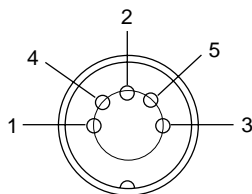
Cable Part No.	2948	3033	PLUG	
Conductor	30/0.08A (30 x #40)	0.15mm <sup>2</sup> (#26AWG)	Pins	0.76 μ gold or silver plated brass
Insulation	1.2 (0.047") PVC (BLACK/WHITE/RED/GREEN)		Shield	Nickel Plated Brass
Shield	100/0.12A(100 x #37)Served Shield		Insulation	Polyacetal Resin
Jacket	5.0 (0.197") Flexible PVC (BLACK)		Molding	Flexible PVC ( Two Stage Molding ) ( BLACK)
Weight	8.6kg/200m	15kg/200m		

### ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance (20 °C)	Inner Conductor : 0.12 /m (0.037 / Ft) Shield : 0.017 /m (0.005 / Ft)
Capacitance (1kHz, 20 °C)	Between Twisted Pair : 99 pF/m (30 pF/Ft) Between Shield and one of Twisted Pair : 182 pF/m (56 pF/Ft) Between Shield and Synchro Conductor : 180 pF/m (55 pF/Ft) Between One of Twisted Pair and Synchro Conductor : 91 pF/m (28 pF/Ft)
Pitch of Twisted Pair	Approx. 30mm ( 1.18")
Electromagnetic Noise <sup>*</sup> (10kHz)	0.02~0.06mV
Voltage Breakdown	Must withstand at DC 500V/15sec.
Insulation Resistance (DC 125V, 20 °C)	10 <sup>4</sup> M · m Min.
Tensile Strength ( At Cable-Connector Joint )	480 N Min.
Flex Life <sup>*</sup> : At the connector strain relief : Cable itself (200gr, Bend radius of the cable stopper : 12.7mm)	45,000 Cycles 6,700 Cycles
Emigration	Non-Emigrant to ABS resin

<sup>\*</sup> Using standard testing methods of Mogami Wire & Cable Corp.

WIRING DIAGRAM : The MIDI signal is transmitted via a twisted pair ( black and white ) and wired to pins 4 & 5.



NOTE : Transmission lag in MIDI systems is mainly caused by the speed of the photocoupler and the rise time of the driver rather than the transmission characteristics of the cable.

## 110Ω AES/EBU DIGITAL AUDIO CABLES



3159



3173



3080



**3080-FC**  
FERRITE CORE



**3080-TB**  
FITTING TUBING FOR ITT  
CANNON XLR CONNECTOR

All of MOGAMI 110Ω 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  $\pm 5\%$  up to  $\pm 10\%$  at the maximum.

Part No.	3159	3228	3080	3135	3173	3160 ~ 3163
Suggested Maximum applicable length		150m 492Ft			300m 1,000Ft	150m 492Ft

Part No.3159 is for internal wiring material, Part No.3160 ~ 3163 are multicore cables and other cables are for regular interconnect application. Part No.3228 is compact size, flexible and durable configuration to meet tiny telephone plug cable clamp, therefore it is recommended for use with rough applications. And, Part No.3173 is specially designed for long distance application assured over 300 m.

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, so you can check it yourself at <http://www.mogami-wire.co.jp/> before purchasing cables. 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

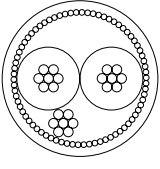
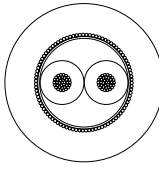
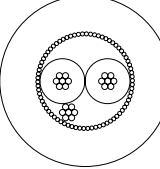
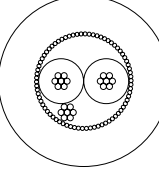
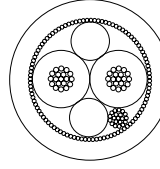


Part No.	PJD-12	PJD-18	PJD-24	PJD-36	PJD-48	PJD-60	PJD-72
Length	12" 30cm	18" 45cm	24" 60cm	36" 90cm	48" 120cm	60" 150cm	72" 180cm

Cable : Part No .3228 standard Colour : Black only

## 110Ω AES/EBU DIGITAL AUDIO CABLES

## SPECIFICATIONS

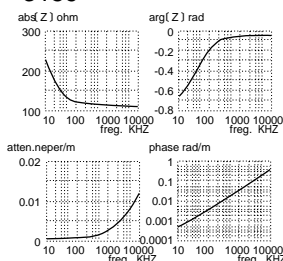
Configuration						
Part No.		3159	3228	3080	3135	3173
No. of Conductor		2	2	2	2	2
Conductor	Details	7/0.20A( 7 × #32AWG )	36/0.08OFQ 36 × #40AWG )	7/0.18A( 7 × #33AWG )	7/0.18A( 7 × #33AWG )	19/0.25A( 19 × #31AWG )
	Size( mm <sup>2</sup> )	0.22mm <sup>2</sup> ( #24AWG )	0.18mm <sup>2</sup> ( #25AWG )	0.178mm <sup>2</sup> ( #25AWG )	0.178mm <sup>2</sup> ( #25AWG )	0.932mm <sup>2</sup> ( #18AWG )
Insulation	Ov. Dia.( mm )	1.4 ( 0.055" )	1.35 ( 0.053" )	1.5 ( 0.059" )	1.5 ( 0.059" )	2.8 ( 0.110" )
	Material	CPP	XLPE	XLPE	XLPE	CPP
	Colours	Red/Light green	Red/Clear	Red/Clear	Red/Clear	Red/White
Monofilament	Ov. Dia.( mm )	—	—	—	—	1.87 ( 0.0736" )
	Material	—	Cotton	—	—	LDPE( Clear )
Drain Wire	Details	7/0.20A( 7 × #32AWG )	—	7/0.18TA( 7 × #33AWG )	7/0.18TA( 7 × #33AWG )	20/0.18TA( 20 × #33AWG )
	Size( mm <sup>2</sup> )	0.22mm <sup>2</sup> ( #24AWG )	—	0.178mm <sup>2</sup> ( #25AWG )	0.178mm <sup>2</sup> ( #25AWG )	0.509mm <sup>2</sup> ( #21AWG )
Served Shield		Approx. 90/0.10A ( Approx.90/#39AWG )	Approx. 97/0.10A ( Approx.97/#39AWG )	Approx. 60/0.12A ( Approx.60/#37AWG )	Approx. 70/0.12A ( Approx.70/#37AWG )	Approx. 95/0.18A ( Approx.95/#33AWG )
Ov. Jacket	Ov. Dia.( mm )	3.3 ( 0.130 )	4.8 ( 0.189 )	5.0 ± 0.3 ( 0.197 ± 0.0118" )	5.0 ± 0.3 ( 0.197 ± 0.0118" )	7.8 ± 0.5 ( 0.307 ± 0.0197" )
	Material	PVC	PVC	Flexible PVC	Flexible PVC	PVC
	Colour	Black/Gray	Black	Black/Blue	Black	Black
Roll Sizes		50 m ( 164Ft ) 100m ( 328Ft ) 200m ( 656Ft )			77m ( 250Ft ) 305m ( 1,000Ft )	300m ( 983Ft )
Weight		2Kg/100m Roll	3.0Kg/100m Roll	3.3Kg/100m Roll	2.6Kg/250 Ft Roll	27Kg/300m

## ELECTRICAL &amp; MECHANICAL CHARACTERISTICS

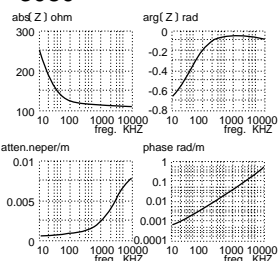
Part No.		3159	3228	3080	3135	3173
DC Resistance at 20	Inner Conductor	0.081 /m( 0.0247 /Ft )	0.1 /m( 0.031 /Ft )	0.11 /m( 0.034 /Ft )	0.11 /m( 0.034 /Ft )	0.02 /m( 0.006 /Ft )
	Shield Conductor	0.021 /m( 0.0064 /Ft )	0.025 /m( 0.0076 /Ft )	0.02 /m( 0.0061 /Ft )	0.02 /m( 0.0061 /Ft )	0.007 /m( 0.0021 /Ft )
Capacitance at 1kHz, 20 ( effective capacitance value between inner twin )		46pF/m( 14 pF/Ft )	53pF/m( 16 pF/Ft )	46pF/m( 14 pF/Ft )	46pF/m( 14 pF/Ft )	50pF/m( 15.3pF/Ft )
Inductance		0.8μH/m( 0.24μH/Ft )	0.8μH/m( 0.24μH/Ft )	1.0μH/m( 0.31μH/Ft )	1.0μH/m( 0.31μH/Ft )	0.7μH/m( 0.21μH/Ft )
Characteristic Impedance		110 ± 10%	110 ± 5%	110 ± 5%	110 ± 5%	110 ± 10%
Attenuation ( 6MHz )		0.065dB/m ( 0.020dB/Ft )	0.069dB/m ( 0.021dB/Ft )	0.069dB/m ( 0.021dB/Ft )	0.069dB/m ( 0.021dB/Ft )	0.0347dB/m ( 0.0106dB/Ft )
Phase Constant ( 6MHz )		0.17rad/m	0.20rad/m	0.20rad/m	0.20rad/m	0.17rad/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				
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 250V, 20				
Flex Life		2,900 cycles	33,000 cycles	10,000 cycles	10,000 cycles	16,000 cycles
Tensile Strength		303 N	441 N	343 N	362 N	Over 980 N
Emigration		Non-Emigrant to ABS resin ABS				
Applicable Temperature		-20 ~ +60 ( -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 2552, 30V, 60 , VW-1	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 UL444, CM, 300V, 60 , 25AWG	AES3-100X ( ANSI S. 4. 40-199-X ) EBU Rech, 3250-E CEI / IEC 958 / CCIR Rec. 647 UL13 CL2X, 30V, 60

\* Using standard testing methods of Mogami Wire &amp; Cable Corp.

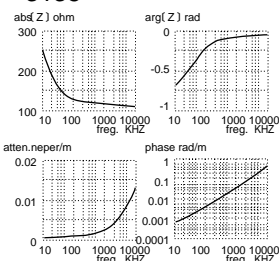
## 3159



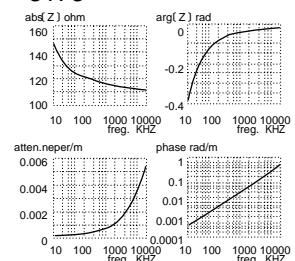
## 3080



## 3135



## 3173



Option : FERRITE CORE is available for Part No.3080 and No.3135 to eliminate EMI noise. FITTING TUBING for ITT CANNON XLR connector is available for Part No.3080 and No.3135 cable.

## MULTICORE 110Ω AES/EBU DIGITAL AUDIO SNAKE CABLES



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.

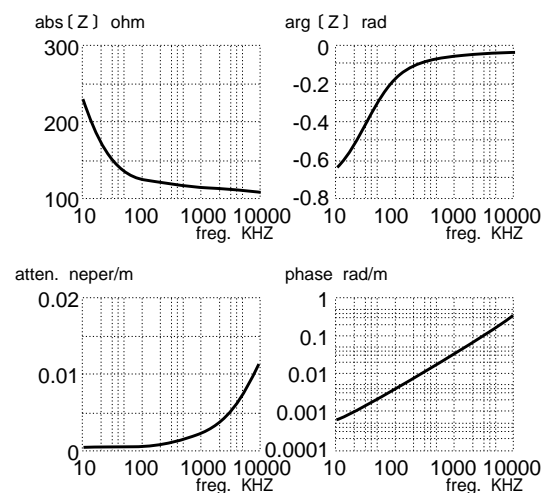
Because of employed cellular PP (polypropylene) insulation material, regardless of its compact overall diameter, larger conductor size is used, which naturally results in lower attenuation.

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

3160.

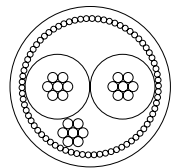
freq kHz	abs(z)ohm	arg(z)rad	atten npr/m	phase rad/m
10	253.053778	-0.666284	0.000485	0.000617
20	186.122587	-0.559186	0.000611	0.000978
50	140.097832	-0.348423	0.00074	0.002038
100	127.900865	-0.206205	0.000811	0.003876
200	123.592395	-0.124331	0.000951	0.007596
500	120.029543	-0.080112	0.001498	0.018508
1000	117.020927	-0.0671	0.002361	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



Part No.	Nos. of Cores.	O.D. (Approx. mm)	Jacket Thickness (Approx. mm)	Weight (Kg/100m)(Kg/328Ft)	Maximum Length available
3160	2-CR	9.0(0.354")	1.0 (0.039")	8	305m (1,000Ft)
3161	4-CR	10.5(0.413")	1.2 (0.047")	14	
3162	8-CR	13.8(0.543")	1.4 (0.055")	23	
3163	12-CR	17.0(0.669")	1.6 (0.063")	30	

## CABLE CORE SPECS

Conductor	7/0.20A (0.22mm <sup>2</sup> )#24 AWG	(7 × #32AWG)
Insulation	1.4 CPP (Cellular polypropylene)	(0.551")
Drain Wire	7/0.20A (Exactly same as conductor)	
Shield	Approx. 90/0.10A Served (Spiral) Shield	
Jacket(covering)	3.3 Flexible PVC	(0.130")
Identification	Similar to analog snake cable (Ref. Page #26)	



## ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance	Inner Pair Conductor	0.081 /m(0.0247 /Ft)
	Shield	0.021 /m (0.0064 /Ft)
Capacitance at 1kHz 20 (effective capacitance value between inner twin)		46pF/m (14pF/Ft)
Inductance		0.8μH/m (0.24μH/Ft)
Characteristic Impedance		110 ± 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 MAX.
Voltage Breakdown		Must Withstand at DC 500V/15sec.
Insulation Resistance at DC 125V. 20		10 <sup>4</sup> M ·m MIN.
Tensile Strength of one Core		303 N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~ +70 (-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

\* Using standard testing methods of Mogami Wire & Cable Corp.



## VESA VGA CABLE FOR PLUG & PLAY



MOGAMI Part No. 3206-08 is a specially designed cable to meet VESA standard for plug and play. Applicable up to 30 m (100 Ft) long, and possible to solder to a very small and troublesome Shrink Dsub 15P connector.

### Shrink Dsub 15P Pin Assignment

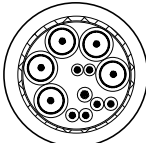
Pin No.	Standard VGA	DDC1 Host	DDC2B Host	DDC2B+or DDC2AB Host	DDC1/2 Display
1	Red video				
2	Green video				
3	Blue video				
4	Monitor ID bit 2				Optional
5	Test(ground)	Return			
6	Red video return				
7	Green video return				
8	Blue video return				
9	No connection (mechanical key)	+5volt supply (mandatory supply)			+5volt load (optional use)
10	Sync. return				
11	Monitor ID bit 0				Optional
12	Monitor ID bit 1	Data from display	Bi-directional data (SDA)		
13	Horizontal sync.				
14	Vertical sync.				
15	Monitor ID bit 3	Open	Data clock ( SCL )		

### Wiring Instruction When all 15 Pins're Wired

Pin No.	Assigned Core
1	Centre Conductor of Red Coax.
2	Centre Conductor of Green Coax.
3	Centre Conductor of Blue Coax.
4	Brown Lead Wire, #28 AWG, PVC
5	Orange + Green Lead Wire, #28 AWG, XLCPE
6	Shield Conductor of Red Coax.
7	Shield Conductor of Green Coax.
8	Shield Conductor of Blue Coax.
9	Black Lead Wire, #26AWG , PVC
10	Shield Conductor of White + Yellow Coax.
11	Red Lead Wire, #28 AWG , PVC
12	Yellow Lead Wire, #28 AWG , XLCPE
13	Centre Conductor of White Coax.
14	Centre Conductor of Yellow Coax.
15	Blue Lead Wire, #28 AWG , XLCPE

## VESA VGA CABLE

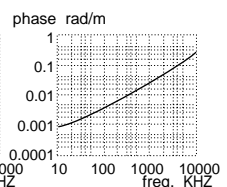
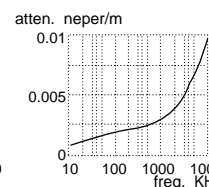
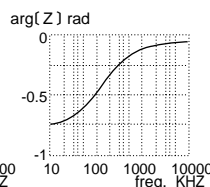
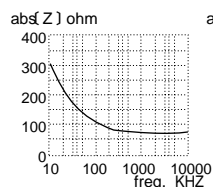
## SPECIFICATIONS

Configuration			
Part No.			3206
Core Configuration			5 × 75 Coax. (#28AWG) 3 × Twisted-Pair (#28AWG) 1 × Power (#26AWG)
Coax.	Conductor	Details	17/0.08A
		Size(mm²)	0.0854mm² (#28AWG)
	Insulation	Ov. Dia. (mm)	1.7 (0.0669")
		Material	XLPE
		Colour	Natural
	Served Shield		Approx. 54/0.10A
	Jacket	Ov. Dia. (mm)	2.4 (0.0945")
Material		PVC	
Colours		Red/Green/Blue/White/Yellow	
Lead Wire	Conductor	Details	4 × (17/0.08A)
		Size (mm²)	0.0854mm² (#28AWG)
	Insulation	Ov. Dia. (mm)	1.1 (0.0433")
		Material	XLPE
		Colours	Orange/Yellow/Green/Blue
Lead Wire	Conductor	Details	2 × (17/0.08A)
		Size (mm²)	0.0854mm² (#28AWG)
	Insulation	Ov. Dia. (mm)	0.85 (0.0335")
		Material	PVC
		Colours	Brown/Red
Power Lead Wire	Conductor	Details	1 × (30/0.08A)
		Size (mm²)	0.15mm² (#26AWG)
	Insulation	Ov. Dia. (mm)	1.0 (0.0394")
		Material	PVC
		Colour	Black
Filler			Polypropylene
Binder	Thickness	0.025mm (0.001")	
	Material	Paper Tape	
Ov. Shield			Braid Shield
			24/10/0.12TA
Ov. Jacket	Ov. Dia. (mm)		9.8 (0.386")
	Material		PVC
	Colour		Dark Gray
Roll Sizes			77/153m (250Ft/500Ft)
Weight per 77m (250Ft) Roll			9.0kg

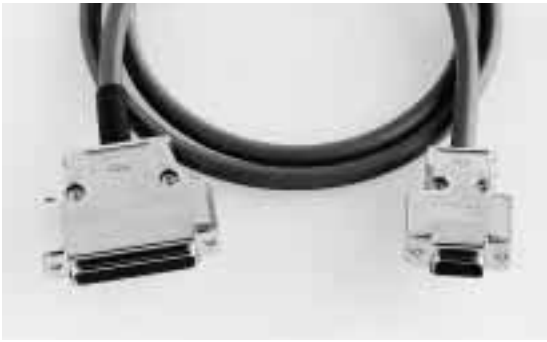
## ELECTRICAL &amp; MECHANICAL CHARACTERISTICS

DC Resistance at 20	Inner Conductor	Coax.	0.22 /m (0.0671 /Ft)
		lead Wire	0.22 /m (0.0671 /Ft)
		Power lead	0.12 /m (0.0366 /Ft)
	Shield Conductor	Coax.	0.044 /m (0.0134 /Ft)
		Ov.Shield	0.0076 /m (0.0023 /Ft)
Capacitance (1kHz,20 )		58pF/m (17.7pF/Ft)	
Characteristic Impedance(10MHz )		75 ±10%	
Attenuation (10MHz )		0.085dB/m (0.0259dB/Ft)	
Phase Constant (10MHz )		0.30rad/m	
Electromagnetic Noise at 10kHz		0.2mV max.	
Voltage Breakdown		Must Withstand at DC 500V/15sec.	
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 250V,20	
Tensile Strength ( 22 ,60%RH )		Over 980 N	
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~ +60 (-4°F ~ +140°F)	
Stanndard		VESA, UL20124 AWM 60 30V VW-1	

freq khz	abs(z) ohm	arg(z) rad	atten npr/m	phase rad/m
10	303.478132	-0.750064	0.000824	0.000885
20	215.268557	-0.714327	0.001123	0.001293
50	139.510971	-0.615286	0.001603	0.002265
100	106.083113	-0.479051	0.001945	0.00374
200	89.114101	-0.314782	0.002197	0.006734
500	81.545187	-0.154867	0.002515	0.016007
1000	79.55112	-0.09565	0.003033	0.031444
2000	78.029826	-0.0649	0.004074	0.061829
5000	76.504807	-0.04325	0.006485	0.152336
10000	76.266668	-0.0294	0.009814	0.307579



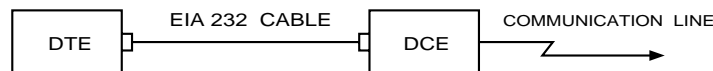
## ANSI/EIA 232 CABLE



**EIA 232** was originally developed as an interface between DTE ( data terminal equipment ) such as computers and DCE (data circuit-terminating equipment ) such as MODEM to transmit 20 kbit/sec. serial data within 15m ( 50 Ft ). Today it is widely used as a standard interface for a computer system as well as GP-IB interface. However, different from GP-IB, it has directional rule for data path, and further the definition of the control signals and the pin assignment differs between each device, therefore, special care for necessary numbers of conductors and wiring diagram is needed in choosing a cable.

## EIA 232 CABLE

**EIA 232 CABLE** is an interface cable to connect DTE ( data terminal equipment ) and DCE (data circuit-terminating equipment ) to transmit 20kbit / sec. serial data within 15m (50 Ft ) distance based on EIA 232 standard.



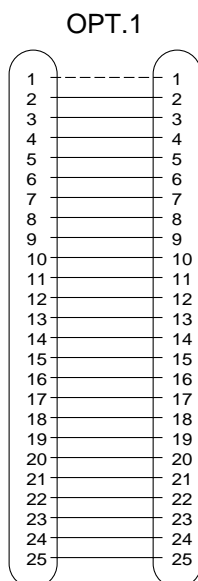
**For ordering, specify the following informations:**

**PART NO :** EIA 232 CABLE

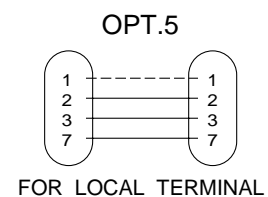
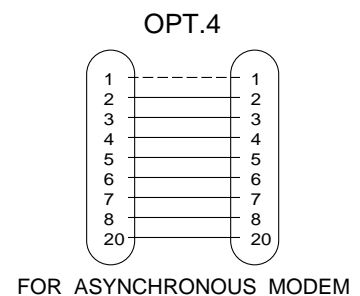
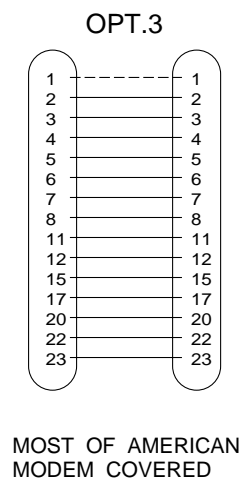
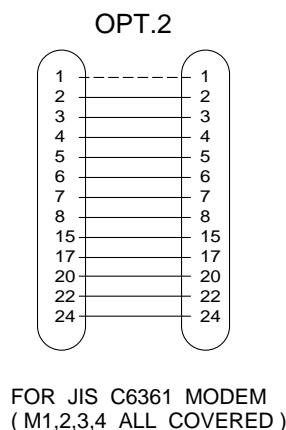
**CABLE LENGTH :**

**COMBINATION OF CONNECTORS AT BOTH ENDS :** Generally male to male

**WIRING DIAGRAM :** Select correct wiring from the following five options.



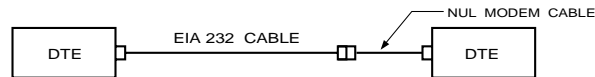
ALL WIRED



Remarks : ANSI/EIA 232 standard is almost same contents as CCITT V.24 and JIS C6361.

## SERVICE INFORMATION NUL MODEM CABLE

**NUL MODEM CABLE** is a tool to solve a contradiction or collision generated when the same type of equipment, DTE and DTE or DCE and DCE, are connected. Because it looks like modem from DTE side without substance, it is called so "NUL MODEM"

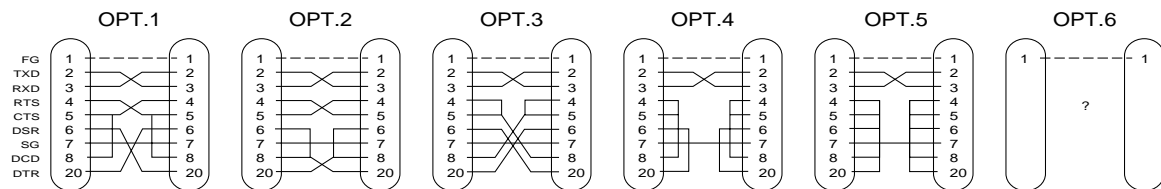


For ordering, specify the following informations:

PART NO : NUL MODEM CABLE

WIRING DIAGRAM : Select correct wiring from the following six options.

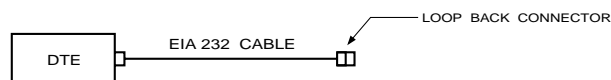
Also, in case of special requirement, specify necessary cable length (generally 1m/3.28Ft) and combination of connectors at both ends (generally male to female).



OPT.6 All the wiring except for Pin No.1 can be designated at your free choice.

## LOOP BACK CONNECTOR

In case the system wired by EIA 232 interface does not work or there is any anxiety in operation of DTE (data terminal equipment), the easiest and important test is the loop back test. It works as a mirror against DTE when it is connected in place of DTE or DCE. In other words, it looks like corresponding from a reproduction of the DTE itself by returning the output data or control signals from itself, so it can test its own transmitter-receiver and control function.

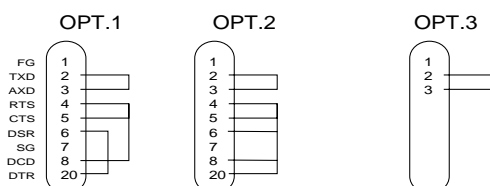


For ordering, specify the following informations:

PART NO : LOOP BACK CONNECTOR

WIRING DIAGRAM : Select correct wiring from the following three options.

Also, in case of special requirement, specify sex distinction of the connector (generally female).

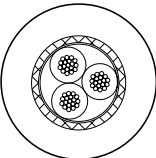
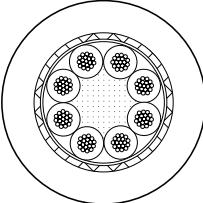
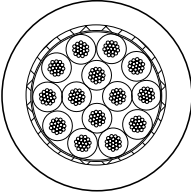
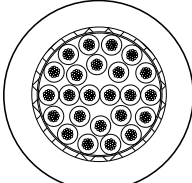


All the wiring except for Pin No. 2 & 3 can be designated at your free choice.

## ANSI/EIA232 CABLE

There are some variations in EIA 232 interface as explained in the beginning, therefore, the following four types of raw cables are prepared to match respective cost and those raw cables are also available from stock. All those cables are approved as UL SUBJECT 758 AWM 2626 VW-1SC.

### CABLE SPECIFICATIONS

Configuration					
Part No.		2691	2690	2689	2579
No. of Conductor		3	8	14	24
Conductor	Details	17/0.16TA ( 17 x #34AWG)			7/0.16TA ( 7 x #34AWG)
	Size	0.34mm <sup>2</sup> (#22AWG)			0.14mm <sup>2</sup> (#26AWG)
Insulation	Ov. Dia. (mm)	1.4 (0.055")			1.0 (0.0394")
	Material	PVC			
Drain Wire	Details	17/0.16TA (17 x #34AWG)			20/0.18TA (20 x #33AWG)
	Size	0.34mm <sup>2</sup> (#22AWG)			0.51mm <sup>2</sup> (#21AWG)
Braided Shield		16/ 6/ 0.12TA	24/ 6/ 0.12TA	24/ 8/ 0.12TA	24/ 7/ 0.12TA
Jacket	Ov. Dia. (mm)	6.0 ( 0.236" )	8.1 ( 0.319" )	9.2 ( 0.362" )	9.3 ( 0.366" )
	Material	Flexible PVC			
	Colour	Gray			
Roll Size		153 m (500Ft)			
Weight per 153m ( 500Ft) Roll		8.0Kg	13.5Kg	20Kg	21Kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	2691	2690	2689	2579
DC Resistance at 20	0.06 /m(0.018 /Ft)			0.14 /m(0.043 /Ft)
Voltage Breakdown	Must withstand at DC 500V/15sec.			
Insulation Resistance	10 <sup>4</sup> M · m Min. at DC 500V , 20			
Emigration	Non-Emigrant to ABS resin			
Applicable Temperature	-20 ~+70 ( -4 F~ +158 F )			
Standard	UL Subject 758 AWM 2626 VW-1 30V 80			

Option : FERRITE CORE is available as a countermeasure against EMI noise.

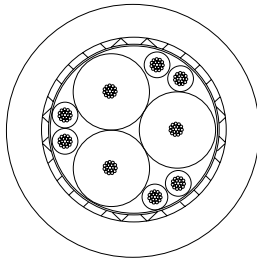
## PART NO. 3227 HIGH SPEED SERIAL TRANSMISSION CABLE

High speed serial transmission cable is a specifically designed cable for higher speed and or longer cable transmission is required such as for 115.2 kbps ISDN-TA. This cable enables for use at five times higher rate transmission or five times longer cabling, comparing with regular cable. Feature of this cable can be described as shown below. For detailed information such as transmitted wave form etc., please ask for technical data.

Higher speed transmission and or longer cabling becomes possible.

Compact overall diameter to meet Dsub 9P connector used for IBM-PC.

This very flexible cable is available in both raw cable and cable assembly.



### OVERALL SPECIFICATION

Ov. Dia.(mm)	7.3 (0.287" )
Conductor Size	17/0.08A (#28AWG)
Shield	Overall Braided Shield
Capacitance	37pF/m (Signal Line-All other conductors) 87pF/m (Control Line-All other conductors)
Mutual Capacitance	3pF/m (Between Signal Lines) 6pF/m (Signal Line-Control Line) 32pF/m (Between Control Lines)
Standard	UL758 STYLE 20124 60 30V VW-1 28AWG

Remarks : Capacitance value determines distortion of transmitted wave.

Mutual capacitance value is the largest factor to determine cross-talk level.

### Typical Pin Assignment

Dsub 25P	Dsub 9P	Circuit	Function Name
1		FG	Protective Ground
2	3	TXD	Transmitted Data
3	2	RXD	Receive Data
4	7	RTS	Request to Send
5	8	CTS	Clear to Send
6	6	DSR	Data Set Ready
7	5	SG	Signal Ground
8	1	DCD	Received Line Signal Detector
20	4	DTR	Data Terminal Ready
22	9	RI	Ring Indicator

Please assign inside core conductor Red, White and Black to TxD, RxD and SG respectively for your own original cable assembly, otherwise expected characteristics cannot be realized. Other inside core conductors can be wired to any signal line.

Cable assembly is available to order in 10cm(0.394")interval. Specify required length at XX part of the cable assembly part number of 5016-XX.

Example: In case of 6m, it is 5016-60, while in case of 8.5m, it is 5016-85. In addition, we need to know used connector and wiring diagram variations as well as type of screw of the connector case you actually need.

### RS-422 BALANCED VOLTAGE DIGITAL INTERFACE CABLE

MOGAMI #2997 is designed to meet EIA Standard RS-422 general applications, with 2 balanced cores and 4 signal conductors. Overall diameter of 7mm (0.276") enables it to fit into most of the D-sub 9-pin connectors available. All the conductors are designed same the size (#25AWG) including the drain wire which can be crimped by the same size contact. Numbering print system on the balanced cores is the same as Mogami snake cables and serves as an efficient identification system together with colour coded remaining four signal conductors.

2997

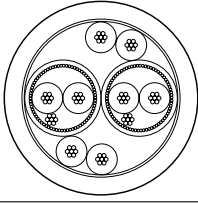


2997-FC FERRITE CORE





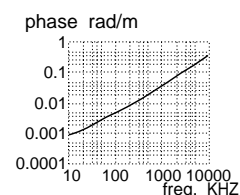
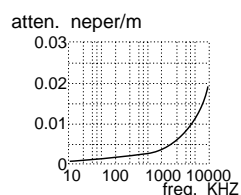
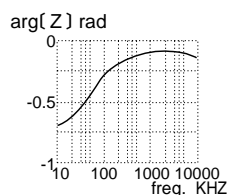
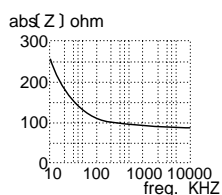
## SPECIFICATIONS

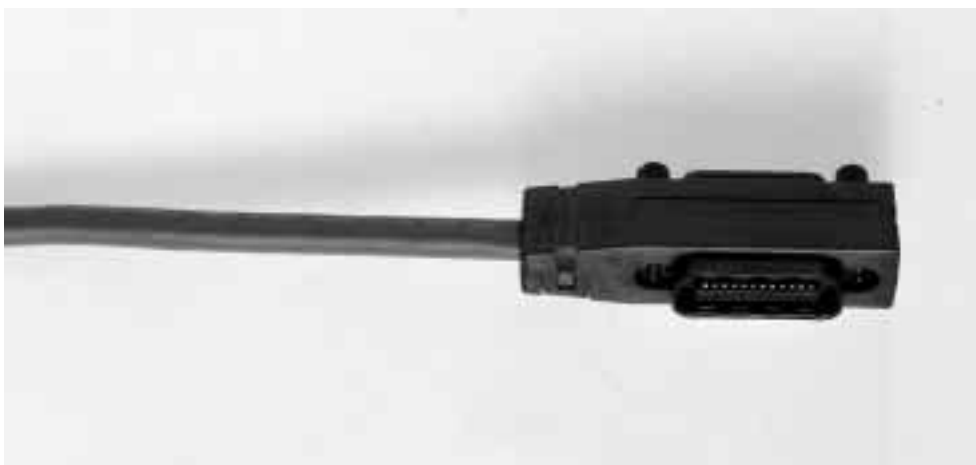
Configuration			
Part No.		2997	
No. of Conductor		2 × BALANCED CORE 4 × SIGNAL CONDUCTOR	
Conductor	Details	7/0.18A(7 × #33AWG)	
	Size(mm <sup>2</sup> )	0.178mm <sup>2</sup> (#25AWG) (The same size in all conductor)	
Insulation	Ov. Dia. (mm)	1.05 (0.0413")	1.2 (0.0472")
	Material	XLPE	PVC
	Colours	Brown/Clear Red/Clear	Brown/Red Orange/Yellow
Drain Wire	Details	7/0.18TA(7 × #33AWG)	
	Size(mm <sup>2</sup> )	0.178mm <sup>2</sup> (#25AWG)	
Served Shield		Approx.65/0.10A (Approx.65 × #38AWG)	
Core Jacket	Ov. Dia. (mm)	2.7 (0.106")	
	Material	PVC	
	Colours	Black ( with number print )	
Binder	Thickness	0.025mm (0.001")	
	Material	Paper Tape	
Ov. Jacket	Ov. Dia. (mm )	7.0 Max. (0.276" Max.)	
	Material	Flexible PVC	
	Colour	Black	
Roll Sizes		153 m (500Ft) 305m (1.000Ft)	
Weight		9.6Kg/153m (500Ft) Roll	

## ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		2997
DC Resistance at 20	Inner Conductor	0.105 /m(0.032 /Ft)
	Shield Conductor	0.028 /m(0.0085 /Ft)
Capacitance at 1kHz, 20 ( effective capacitance value between inner twin )		65pF/m(19.8 pF/Ft)
Characteristic Impedance		95 ± 10%
Attenuation(1MHz )		0.031dB/m (0.0095dB/Ft)
Phase Constant(1MHz )		0.043rad/m
Electromagnetic Noise At 10kHz		0.5mV Max.
Voltage Breakdown		Must withstand at DC 500V/15sec.
Insulation Resistance		10 <sup>4</sup> M · m Min. at DC 500V , 20
Tensile Strength (26 ,65%RH )		705 N
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~+70 ( -4 F~ +158 F )
Standard		EIA RS-422

Option : FERRITE CORE is available to eliminate EMI noise.



**GP-IB CABLE**

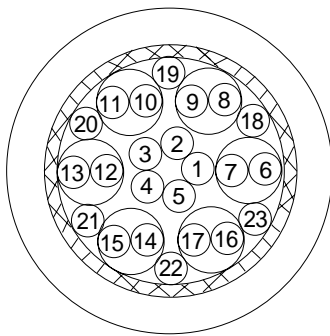
So-called "GP-IB" originally developed by HP and standardized as IEEE 488 is an excellent interface. GP-IB cable is equipped with a special piggy-back connector ( both female and male connector are put together back to back ) at both ends, which enables the easy change or installation of more peripherals. IEEE 488 standard specifies that the number of connected peripherals must be within 15, and the total length of applicable cables is limited to whichever is smaller 20 m(66Ft) or double numbers in meter of the connected equipment. So, 0.5m, 1m, 2m, 4m ( 1.6Ft, 3.2Ft, 6.5Ft, 13Ft ) are available as standard lengths. However, if the applied interface speed is slow, as any problem is not generated practically and longer cable is needed in practical application, 8m,16m (26Ft, 52Ft ) and longer or odd length cables are also available to order.

Part No.	GPIB-05	GPIB-10	GPIB-20	GPIB-40	GPIB-XX
Length	0.5m (1.6Ft)	1.0m (3.2Ft)	2.0m (6.5Ft)	4.0m (13Ft)	SPECIFY LENGTH

Available applicable connectors are MICRO RIBBON (Amphenol or Cinch 57 series ) or CHAMP (AMP).  
Option : FERRITE CORE is available as a countermeasure against EMI noise.

## GP-IB CABLE

The raw cable, Part No. 2571 is well designed bus cable based on IEEE 488-1975 (IEEE Standard Digital Interface for Programmable Instrumentation), especially low cross-talk and easiness of assembly are considered. Six signal wires for DAV, NRFD, NDAC, IFC, SRQ and ATN are all comprised of twisted pairs preventing from generation of noise to DIO 1~8 because hand-shake is taken place in these signal wires while data are effective in DIO 1~8 lines. This cable is approved as UL AWM 2626 VW-1SC.



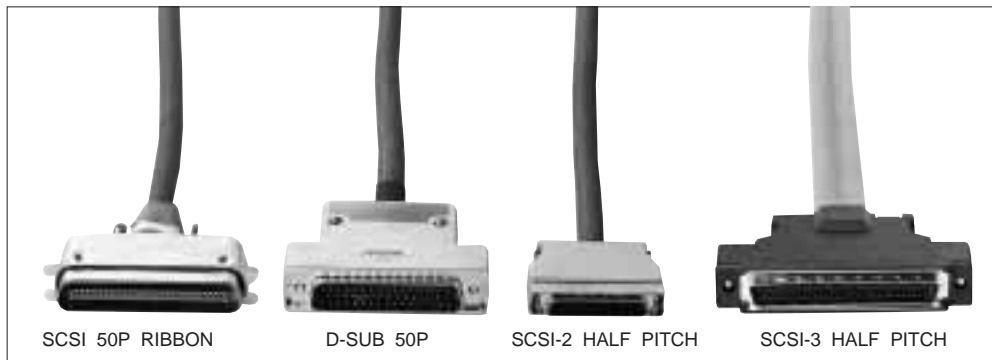
Part No.		2571
No. of Conductor		23
Braided Shield		24/8/0.12TA
Ov. Jacket	Ov.Dia. (mm)	10.0 (0.394")
	Material	Flexible PVC
	Colour	Gray
Roll Size		153m (500Ft)
Weight per 153m(500Ft) Roll		16.6kg

### IEEE 488 CABLE ( GP-IB CABLE )

CONTACT No.	SIGNAL NAME	CABLE POSITION	COLOUR
1	DIO 1	18	BROWN
2	DIO 2	19	RED
3	DIO 3	1	ORANGE
4	DIO 4	2	YELLOW
5	EOI	20	GREEN
6	DAV	6	BLUE
7	NRFD	16	PURPLE
8	NDAC	8	GRAY
9	IFC	10	WHITE
10	SRQ	14	BLACK
11	ATN	12	BROWN
12	SHIELD	DRAIN WIRE OF SHIELD	

CONTACT No.	SIGNAL NAME	CABLE POSITION	COLOUR
13	DIO 5	23	ORANGE
14	DIO 6	22	RED
15	DIO 7	4	GREEN
16	DIO 8	3	BLUE
17	REN	21	PURPLE
18	Gnd (6)	7	BROWN
19	Gnd (7)	17	RED
20	Gnd (8)	9	ORANGE
21	Gnd (9)	11	GREEN
22	Gnd (10)	15	BLUE
23	Gnd (11)	13	PURPLE
24	Gnd, LOGIC	5	GRAY

### SCSI-2 SINGLE-ENDED A CABLE & SCSI-3 (WIDE SCSI) CABLE



**MOGAMI SCSI cables are specially designed to satisfy all the requirements of "SCSI-2 Single-Ended A Cable" based on ANSI X3T9/89-042 Standard. And, SCSI-3 cable is also specially designed to meet ANSI SCSI-3 Single-Ended Bus Cable Standard. These cables offer the following features.**

Satisfy characteristic impedance requirement for "fast synchronous data transfer" .

Satisfy "minimum conductor size #28AWG requirement" and realize low attenuation.

Suitable for high speed transmission because of large velocity constant.

SCSI-2 cable is adaptable to "50-Contact Shielded High Density SCSI Device Connector". And,

SCSI-3 cable is adaptable to "68-Contact Shielded High Density SCSI Device Connector".

Mogami SCSI-2 and SCSI-3 cables are exclusively single-end use only. However, since SCSI-3 cable assembly is full wired, it may work for differential when the used length is short enough against impedance mismatching.

Ferrite Core is optionally available to strengthen countermeasure against EMI noise.

Malfunction caused by noise is not avoidable by strengthening shielding conductor.

Flexibility as regular MOGAMI standard cable.

Cable Type	SCSI-2 Cable	SCSI-3 Cable
Ov. Dia.	9.6mm (0.378")	14mm (0.551")
Conductor Size	0.088mm <sup>2</sup> (#28AWG)	
DC Resistance at 20	0.21 /m (0.064 /Ft)	

MOGAMI SCSI cable is a completely assembled cable with a real noise rejection countermeasure. When ordering, put the length after each part number. For example, 514215 means: SCSI-2 half pitch connector to Dsub 50P connector with 1.5m (4.9Ft) long cable. Standardized stock lengths are 0.5m, 1.0m, 1.5m and 2.0m. However, please note that in the Single-Ended SCSI system, total length of all the connected cable must be set within 6 m (20Ft).

SCSI-2 Half Pitch Connector is a newly standardized 50P half pitch pin type connector by SCSI-2 Standard and used by "Sparc Station". 50P means 50 poles. Dsub 50P connector is not listed in SCSI Standard, but used for "SUN3". It is an increased numbers of pins of RS-232 Standard connector, often seen around peripherals for SUN. 50P Ribbon Connector is a SCSI Standard formal connector and a version of increased numbers of pins of a printer interface connector. Besides these, Dsub 25p connector is used for MAC. by Apple and bellows type half pitch 50p connector is used for NEC 98 series.

PART NO.	COMBINATION OF CONNECTORS AT BOTH ENDS	STANDARD/TYPE
5141XX	SCSI-2 Half Pitch Connector <=> SCSI-2 Half Pitch Connector	SCSI-2 Standard
5142XX	SCSI-2 Half Pitch Connector <=> Dsub 50P Connector	Sparc Station
5143XX	SCSI-2 Half Pitch Connector <=> SCSI 50P Ribbon Connector	Sparc Station
5144XX	Dsub 50P Connector <=> Dsub 50P Connector	Sun 3/Sun 4
5145XX	SCSI 50P Ribbon Connector <=> SCSI 50P Ribbon Connector	SCSI -1/SCSI-2
5146XX	Dsub 50P Connector <=> SCSI 50P Ribbon Connector	Sun3 /Sun 4
5147XX	Dsub 25P Connector <=> SCSI 50P Ribbon Connector	MAC.
5123XX	Dsub 25P Connector <=> Bellows Half Pitch Connector	MAC.-NEC 98
5124XX	Dsub 25P Connector <=> SCSI -2 Half Pitch Connector	MAC.-SCSI-2
5125XX	Dsub 25P Connector <=> Dsub 50P Connector	MAC.-SUN
5112XX	Bellows Half Pitch Connector <=> Bellows Half Pitch Connector	NEC 98
5113XX	Bellows Half Pitch Connector <=> SCSI -2 Half Pitch Connector	NEC 98-SCSI-2
5114XX	Bellows Half Pitch Connector <=> Dsub 50P Connector	NEC 98-SUN
5115XX	Bellows Half Pitch Connector <=> SCSI 50P Ribbon Connector	NEC 98
5095XX	SCSI-3 Half Pitch Connector <=> SCSI-3 Half Pitch Connector	SCSI -3 Standard
5039XX	SCSI-3 Half Pitch Connector <=> Dsub 25P Connector	MAC.
5040XX	SCSI-3 Half Pitch Connector <=> SCSI -2 Half Pitch Connector	—————
5043XX	SCSI-3 Half Pitch Connector <=> SCSI 50P Ribbon Connector	—————
5045XX	SCSI-3 Half Pitch Connector <=> Bellows Half Pitch Connector	—————

The most important factor in a cable for the application of high speed transmission is CHARACTERISTIC IMPEDANCE. Electromagnetic wave reflects at the point where impedance is different and the larger the difference the more the reflection. Although it is specified  $100\Omega \pm 10\%$  in the SCSI-1 standard, available cable on the market is usually only about  $50\Omega$ . This means it generates nearly 50% reflection and indicates how difficult to design the cable to meet SCSI Standard (requirement). These ordinary cables are applicable for low speed transmission device at short distance. However, it becomes inapplicable for high speed synchronized transmission or for long run transmission.

MOGAMI SCSI CABLE is the first and only one "SCSI-1/SCSI-2/SCSI-3 CABLE" in the world that can satisfy SCSI Standard perfectly. Please use our cables under following cares to prevent from troublesome problem caused by cable.

- 1) Never mixed with different impedance other cable in the same system.
- 2) Set terminations (terminating resistors ) only at both ends of the system.

If there is any low impedance cable out of Standards in the system of SCSI devices, reflection is generated at the connected part with it. Also, if any additional cable is connected to the termination, unexpected reflection is generated even with several centimeters (several inches ). Please make sure if two terminations are located at the both ends of all the connected cables correctly.

## PRESENT STATE OF SCSI CABLE DIFFICULTY OF SCSI CABLE

SCSI is the most successful digital interface for computer system after IEEE488 (GP-IB). However, generally used cables on the market are far from the requirement by SCSI Standard and inapplicable for high speed transmission at a distance. Even though each twisted pair inside the cable is designed to be close to the SCSI commended value of  $110\Omega$ , the characteristic impedance of the practical transmission circuit in Single-Ended system is greatly lowered by the following two reasons:

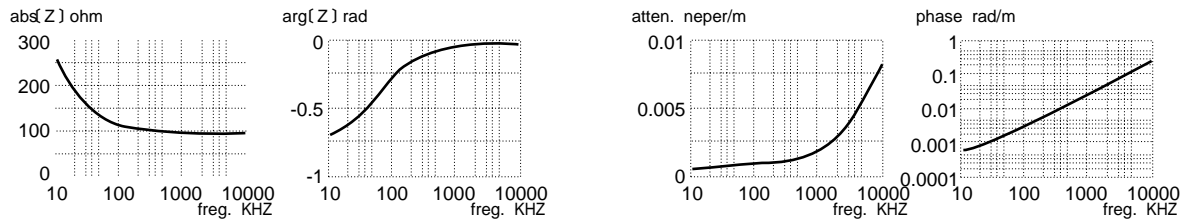
- 1) Common ground parallel circuit lowers the working impedance.
- 2) Existence of shield and multiple neighbour conductors lowers impedance of each pair.

This difficulty is known to ANSI X3.131-1986, and despite of the SCSI commended impedance value of  $110\Omega \pm 10\%$ , difficulty in getting such cable is indicated as well. In fact, it is really hard to realize it in practical application. For example, characteristic impedance of one of available cable on the market is very low impedance of  $50\Omega$ . It means 45% reflection would be generated so that the voltage at receiving end of a cable in transient state becomes only 55% of desired value. In case of satisfactory cable within tolerance of the Standard, it stays within 19% of reflection. Further, it can stay within 10% of reflection in case the satisfactory cable within tolerance of the Standard is used with active terminator standardized by ANSI X3T9/89-042 SCSI-2. In high speed transmission of SCSI-2, it became necessary condition to satisfy this requirement.

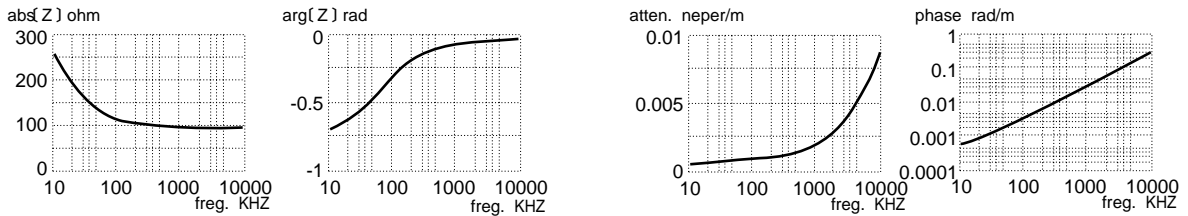
## REFRENCIAL DATA

Because impedance of each twisted pair inside of the shield becomes lower at the outernal stratum, pairs in the internal stratum shall be assigned to hand-shake and unsynchronized control lines. Representative impedance characteristics of a pair in respective stratum at the most critical condition where all GNDs of each pair and overall shield are shorted are as shown below:

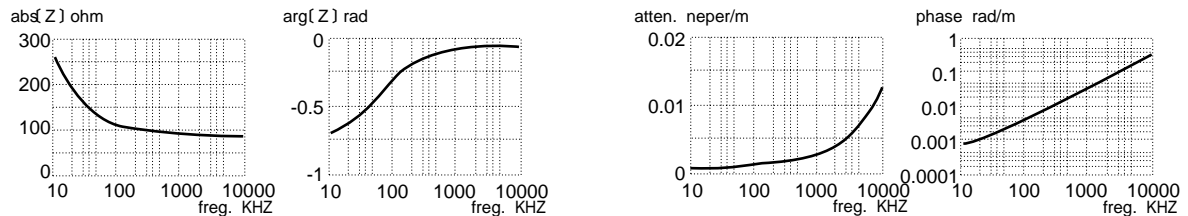
### 1.1 INNER STRATUM



### 1.2 MEDIUM STRATUM



### 1.3 OUTER STRATUM



## CHARACTERISTIC IMPEDANCE AND REFLECTION

Unless characteristic impedance of a cable matches with the load impedance, wave-form is distorted by reflected electro-magnetic wave and the largeness of reflection is as shown below. Reflection factor 1.0 means total reflection and 0.5 does 50% reflection. In case active termination is employed, as the load impedance can be lowered at the same voltage level, it can realize more suitable value for the existing state of a cable.

CHARACTERISTIC IMPEDANCE ( $\Omega$ )	40	50	60	70	80	90	100	110	120	130
PASSIVE TERMINATION	0.54	0.45	0.38	0.31	0.25	0.19	0.14	0.09	0.05	0.01
ACTIVE TERMINATION	0.46	0.38	0.29	0.22	0.16	0.10	0.05	0.00	0.04	0.08



## IEEE1394 FIRE WIRE HIGH PERFORMANCE SERIAL BUS CABLE



IEEE 1394 is a Serial BUS standard designed for use in real-time applications such as sound, video, and animation. This technology was designed by INMOS for their TRANSPUTER and then further developed by APPLE, at which point it was given the name "FIRE WIRE". The IEEE 1394 signal has an intermediate characteristic between serial and parallel transmission. It transmits serial data and clock signal in parallel, and countermeasures cable skew ( propagation velocity difference between two pairs ) by not changing the clock signal when the data signal changes. This interface requires a new type of cable and connector. It uses high speed real-time transmission with a cable that can be connected and disconnected without turning off any device. It makes it possible to connect freely between multiple terminals without having to consider termination. MOGAMI Part No. 3208-08 is specifically designed for the IEEE 1394 standard, and offers the following features.

- 1) Low attenuation
- 2) High propagation velocity
- 3) Low cable skew

Therefore, it carries data transmission with enough margin to be used for longer runs than the recommended maximum length of 4.5 m ( 14.75 Ft ) per cable in the IEEE 1394 standard. Incidentally, the maximum applicable length of all the connected cables in one Fire Wire system, excluding a bus bridge on any one bus, is limited to 4.5 m x 15 pcs for a total of 67.5 m ( 14.75 Ft x 15 pcs = 221.25 Ft ).

6p connector cable assembly is available to order in 10cm ( 0.394") interval. Specify required length at XX part of the cable assembly part number of 5086-XX.

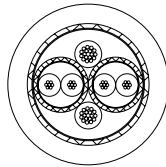
Example : In case of 1.2m, it is 5086-12, while in case of 4.5m, it is 5086-45.

Bulk cable is available in 77m ( 250 Ft ) and 153m ( 500 Ft ) roll.

### 6P CONNECTOR PIN ASSIGNMENT

Pin No.	Signal	Comment
1	Y P	Cable Power
2	V G	Cable Ground
3	TPB	Strobe on receive, Data on transmit (differential pair)
4	TPB	
5	TPA	Data on receive , Strobe on transmit (differential pair)
6	TPA	

## SPECIFICATIONS

Configuration			
Part No.			3208
Core Configuration			2 × Balanced Signal Pair 2 × Power Conductor
Balanced Signal Pair	Conductor Size (mm <sup>2</sup> )		0.0886mm <sup>2</sup> (#28AWG)
	Insulation	Ov. Dia. (mm)	1.0 (0.0394")
		Material	CPP
		Colours	Red/Green, Blue/Orange
	Shield	1st Shield	Aluminum Tape Shield
		2nd Shield	Copper Braid Shield
Power Conductor	Conductor Size (mm <sup>2</sup> )		0.341mm <sup>2</sup> (#22AWG)
	Insulation	Ov. Dia. (mm)	1.2 (0.0472")
		Material	PVC
		Colours	Black/White
Insulation Taping between two individual core braided shields and overall aluminum tape shielding			1/2 Wrap Polyester Tape
Ov. Shield	1st Shield		Aluminum Tape Shield
	2nd Shield		Copper Braid Shield
Ov. Jacket	Ov. Dia. (mm)		6.1 (0.240")
	Material		Flexible PVC
	Colour		Dark Gray
Roll Sizes			77/153m (250Ft/500Ft)
Weight per 77m (250Ft) Roll			4.5kg

## ELECTRICAL & MECHANICAL CHARACTERISTICS

Signal Pair	Impedance	Differential	110 ± 6
		Common Mode	33 ± 6
	Attenuation (at 4.5m)		100MHz : 1.3dB
			200MHz : 1.9dB
			400MHz : 3.1dB
	Propagation Velocity		4.35nS/m
Relative Propagation Skew (at 4.5m)		76ps	
Power Pair	Characteristic Impedance (Differential)		53
	DC Resistance at 20 (at 4.5m)		0.235
Crosstalk (at 1MHz~500MHz)			-52dB
Tensile Strength			882 N
Emigration			Non-Emigrant to ABS resin
Applicable Temperature			-10 ~+60 (-14°F~+140°F)
Standard			IEEE 1394, UL 13 CL2X 60

## PARALLEL DIGITAL VIDEO CABLE

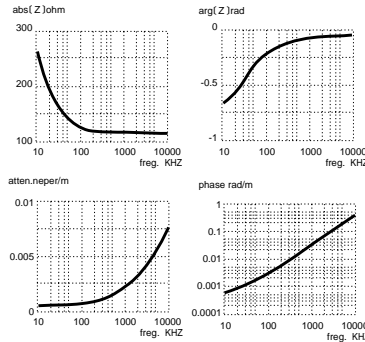
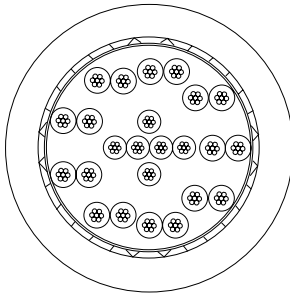
3037



PARALLEL DIGITAL VIDEO INTERFACE STANDARD CCIR 656 satisfied cable MOGAMI Part No. 3037. MOGAMI Parallel Digital Video Interface Cable is available from stock as well as the only one existing cable in the world now that meets the computer interface SCSI - II. It resembles others in execution of very high speed transmittance through twisted pair conductors in parallel, though there is a slight difference in applicable frequency and difference between balanced ( differential ) for digital video and unbalanced ( single ended ) for SCSI .

CORE IDENTIFICATION TABLE				
Core No.	Insulation Colour	Surface Print Colour	Surface Print Mark	Remarks
1.	SKY BLUE	RED	—	DATA A
2.	SKY BLUE	BLACK	—	DATA A
3.	LIGHT GREEN	RED	—	SYSTEM GROUND
4.	SKY BLUE	RED	— —	DATA B
5.	SKY BLUE	BLACK	— —	DATA B
6.	LIGHT GREEN	BLACK	—	SYSTEM GROUND
7.	YELLOW	RED	—	CLOCK SIGNAL
8.	YELLOW	BLACK	—	CLOCK SIGNAL
9.	GRAY	RED	— — —	DATA 0~7
10.	GRAY	BLACK	— — —	DATA 0~7
11.	GRAY	RED	— —	DATA 0~7
12.	GRAY	BLACK	— —	DATA 0~7
13.	GRAY	RED	—	DATA 0~7
14.	GRAY	BLACK	—	DATA 0~7
15.	WHITE	RED	DOTTED LINE	DATA 0~7
16.	WHITE	BLACK	DOTTED LINE	DATA 0~7
17.	WHITE	RED	— — — —	DATA 0~7
18.	WHITE	BLACK	— — — —	DATA 0~7
19.	WHITE	RED	— — —	DATA 0~7
20.	WHITE	BLACK	— — —	DATA 0~7
21.	WHITE	RED	— —	DATA 0~7
22.	WHITE	BLACK	— —	DATA 0~7
23.	WHITE	RED	—	DATA 0~7
24.	WHITE	BLACK	—	DATA 0~7

WIRING INSTRUCTION : Use YELLOW COLOURED INSULATION TWISTED PAIR only for CLOCK SIGNAL, as the pitch of this twisted pair is made shorter than other twisted pairs.



freq kHz	abs(z)ohm	arg(z)rad	atten npr/m	phase rad/m
10	248.988868	-0.662248	0.000442	0.000569
20	183.979031	-0.552778	0.000558	0.000907
50	139.415383	-0.343838	0.000677	0.001896
100	127.545956	-0.205028	0.000747	0.003607
200	123.046573	-0.126159	0.00089	0.00706
500	119.076685	-0.083306	0.001408	0.017149
1000	115.898775	-0.06685	0.002194	0.033423
2000	113.148393	-0.0528	0.003323	0.065361
5000	110.930495	-0.03825	0.005245	0.161097
10000	110.325506	-0.0308	0.0076	0.327579

## SPECIFICATIONS

Part No.		3037
No. of Twisted Pair		11
No. of System Ground		2
Conductor Size ( mm )		0.219mm <sup>2</sup> (#24AWG)
Insulation	Ov. Dia. (mm)	1.00~1.2 (0.0393~0.0472")
	Material	XLPE
Binder	Thickness	0.05mm ( 0.002" )
	Material	Paper Tape
Overall Braided Shield	Details	24/10/0.12TA
	Coverage	Min. 85% 以上
Jacket	Ov. Dia. (mm)	10.5 ± 1.0 ( 0.413 ± 0.0394" )
	Material	Flexible PVC
	Colour	BLACK
Roll Sizes		77 m (250Ft) 153 m (500Ft)
Weight		22Kg / 153m ( 500Ft )

## ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20	Inner Conductor	0.082 /m(0.025 /Ft)
	Shield	0.009 /m(0.0027 /Ft)
Capacitance at 1kHz, 20 ( Effective capacitance value between inner twin )		43.9pF/m (13.4pF/Ft )
Characteristic Impedance at 14MHz		110 ± 10%
Attenuation at 10MHz		0.0712dB/m (0.0217dB/Ft )
Phase Constant at 10MHz		0.34rad/m
Delay time of Electromagnetic Wave		5.1~5.6nS/m (1.55~1.71nS/Ft )
Suggested Applicable Maximum Length		50~80m at the maximum (164~262Ft at the maximum )
Voltage Breakdown		Must withstand at DC 500V/15sec.
Insulation Resistance at DC 500V, 20		10 <sup>5</sup> M · m Min.
Emigration		Non-Emigrant to ABS resin
Applicable Temperature		-20 ~+70 ( -4 F ~ +158 F )
Applicable Connector		Dsub 25P
Standard		CCIR 656

How much the difference of delay time between each pair can be made smaller is the key to how long the cable can be used , as the transmitted parallel signals must be received at the same time in the parallel digital video interface ( fast parallel transmittance ) system . Therefore, specification of #3037 parallel digital video cable is subject to change without notice, as it may be improved for longer distance application.

# GUITAR CABLES

## GUITAR CABLES/HIGH IMPEDANCE TRANSMISSION CABLES



2319

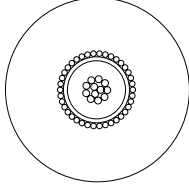
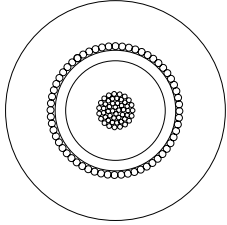


2524

Most musical instrument sound pick-ups such as those in electric guitars are comprised of high impedance circuits driven by voltage, in other words by very small electrical current flow. Therefore, so-called MICROPHONICS ( noise ) becomes a critical problem.

(Microphonics means noise that is generated when the cable is moved and or tapped when the cabling circuit is a high impedance link.) Guitar cables must be counter-measured against this, so, a conductive PVC layer is placed under the shield conductor in most cases even though it may have a bad affect on audio sound quality. Therefore, the conductive PVC (black carbon PVC) layer must be removed together with the shielding conductor when wiring, otherwise we receive a strange claim that the cable is shorting.

## SPECIFICATIONS

Configuration			
Part No.		2319	2524
Conductor	Details	12/0.18TA	50/0.12OFC
	Size(mm <sup>2</sup> )	0.305mm <sup>2</sup> (#23AWG)	0.565mm <sup>2</sup> (#20AWG)
Insulation	Ov. Dia. (mm)	1.6 (0.063")	2.7 (0.106")
	Material	PE	
	Colour	Clear	
Sub-Shield	Ov. Dia. (mm)	1.8 (0.071")	3.4 (0.134")
	Material	Conductive PVC (Carbon PVC)	
	Colour	Black	
Main-Shield	Served-Shield	Approx.36/0.16TA	Approx.57/0.18OFC
Jacket	Ov. Dia. (mm)	5.0 (0.197")	6.0 (0.236")
	Material	PVC	
	Colour	Black	
Roll Sizes		100 m (328Ft)	100 m (328Ft) / 200m (656Ft)
Weight per 100 ( 328 Ft ) m roll		3.5Kg	5.1Kg

## ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.		2319	2524
DC Resistance at 20	Inner Conductor	0.064 /m(0.020 /Ft)	0.033 /m(0.010Ω/Ft)
	Shield Conductor	0.027 /m(0.0082 /Ft)	0.013 /m(0.0040Ω/Ft)
Capacitance at 1kHz, 20		155pF/m(47.3 pF/Ft)	130pF/m(39.7 pF/Ft)
Inductance		0.3 μ H/m(0.092 μ H/Ft)	0.2 μ H/m(0.061 μ H/Ft)
Electrostatic Noise*		0.13mV Max.	0.15mV Max.
Electromagnetic Noise At 10kHz*		0.07mV Max.	0.07mV Max.
Microphonics*		0.3mV Max	0.3mV Max
Voltage Breakdown		Must withstand at DC 500V/15sec.	
Insulation Resistance		10 <sup>5</sup> M · m Min. at DC 500V , 20	
Flex Life*		11,000 cycles	15,000 cycles
Tensile Strength (26 ,65%RH )		303 N	578 N
Emigration		Non-Emigrant to ABS resin	
Applicable Temperature		-20 ~ +60 ( -4°F~+140°F )	

\* Using standard testing methods of Mogami Wire & Cable Corp.

# MULTICORE CABLES

## MECHATRO OVERALL SHIELD CABLES



Multi purpose #28AWG superflexible overall shielded cable available in twisted pair configuration for electromagnetic noise rejection as well as in economy and easy wiring general round configuration in compact gray jacket. All these cables are approved as UL SUBJECT 758 AWM 20002 VW-1SC.

### CABLE SPECIFICATIONS

Conductor	Details	7/0.127 TA (7 × #37AWG)
	Size	0.088mm <sup>2</sup> (#28AWG)
Insulation	Ov. Dia. (mm)	0.95 (0.0374")
	Material	PVC
Overall Shield	Type	Braided shield
	Coverage	Minimum 85% 以上
Ov. Jacket	Material	Flexible PVC
	Colour	Dark Gray

### ELECTRICAL & MECHANICAL CHARACTERISTICS

DC Resistance at 20	0.21 /m( 0.064 /Ft )
Voltage Breakdown	Must withstand at DC 500V/15sec.
Insulation Resistance	10 <sup>4</sup> M · m M in. at DC 500V , 20
Characteristic Impedance*	90 ~ 115 (at 10MHz )
Cable Skew*	0.517nS/m
Delay Time*	5.5 ~ 6.1nS/m
Velocity Ratio*	0.55 ~ 0.60
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +70 (-4°F ~ +158°F)
Standard	UL 758 AWM 20002 VW-1 30V 80

\* Data for Twisted Pair Type Only.

### ROUND TYPE

Part No .	No. of Conductor	Ov. Dia. ( mm )	Roll size and weight per roll	Basical structure
2861	7	5.2 (0.205")	6kg/153m ( 500Ft )	
2862	12	6.4 (0.252")	9kg/153m ( 500Ft )	
2863	24	8.4 (0.331")	15kg/153m ( 500Ft )	
2835	30	9.0 (0.354")	17kg/153m ( 500Ft )	
2864	40	10.3 (0.406")	20kg/153m ( 500Ft )	
2865	50	11.0 (0.433")	25kg/153m ( 500Ft )	
2866	64	12.3 (0.484")	30kg/153m ( 500Ft )	

### TWISTED PAIR TYPE

Part No .	No. of Pair	Ov. Dia. ( mm )	Roll size and weight per roll	Basical structure
2840	5-PR	7.4 (0.291")	11kg/153m ( 500Ft )	
2841	7-PR	7.8 (0.307")	12kg/153m ( 500Ft )	
2842	8-PR	8.4 (0.331")	13kg/153m ( 500Ft )	
2843	10-PR	9.5 (0.374")	17kg/153m ( 500Ft )	
2845	13-PR	10.0 (0.394")	19kg/153m ( 500Ft )	
2847	18-PR	11.5 (0.453")	24kg/153m ( 500Ft )	
2848	20-PR	11.8 (0.465")	26kg/153m ( 500Ft )	
2849	25-PR	13.0 (0.512")	15kg/77m ( 250Ft )	
2851	32-PR	14.5 (0.571")	19kg/77m ( 250Ft )	

Option : FERRITE CORE is available as a countermeasure against EMI noise.



## 0.15mm<sup>2</sup>(#26AWG) CONDUCTOR OVERALL SHIELD CABLE SERIES



0.15mm<sup>2</sup> (#26AWG ) conductor overall shield cable series is comprised of about two times larger conductor size as mechatro overall shield cable series. There is no community in design policy, as they were originally custom-made cables and remained as standard items one by one, however, they are suitable where larger conductor size, flexibility and compactness are all required. Available from five up to nine conductor, not in twisted pair configuration.

### SPECIFICATIONS

Conductor	Details	30/0.08A ( 30 × #40AWG)
	Size	0.150 mm <sup>2</sup> (#26AWG)
Insulation	Ov. Dia. (mm)	1.0 (0.0394")
	Material	PVC
Overall Shield	Type	See Each Spec.
	Coverage	85% (Braid )~ 100%( Served)
Ov. Jacket	Material	Flexible PVC
	Colour	Dark Gray or Black

### ELECTRICAL & MECHANICAL CHARACTERISTICS

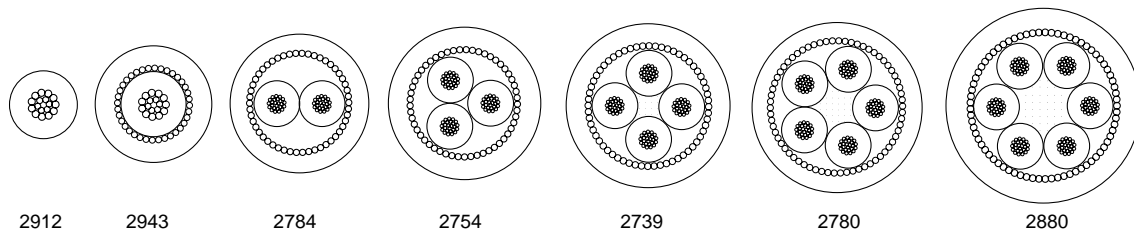
DC Resistance at 20	0.13 /m(0.040 /Ft)
Electromagnetic Noise	0.1mV Max.
Voltage Breakdown	Must withstand at DC 500V/15sec.
Insulation Resistance	10 <sup>4</sup> MΩ · m Min. at DC 500V, 20
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~+70 (-4 F ~ +158 F)
Standard	UL 758 AWM 20002 VW-1 30V 80 Except for Part No. 2642-08 / No. 2789-00

Part No .	No. of Conductor	Ov. Dia. ( mm )	Type of Shield	Colour	Roll size and weight per roll
2757-00	5	5.0 (0.197")	Braid	Black	5.5kg/153m ( 500Ft )
2814-00	6	5.4 (0.213")	Braid	Black	6.2kg/153m ( 500Ft )
2642-08	7	5.1 (0.201")	Served	Gray	8.8kg/200m ( 656Ft )
2789-00	8	5.6 (0.220")	Served	Black	9.0kg/200m ( 656Ft )
2871-00	9	6.0 (0.236")	Served	Black	8.0kg/153m ( 500Ft )

Option : FERRITE CORE is available as a countermeasure against EMI noise.

# ULTRAFLEXIBLE MINIATURE CABLES

## ULTRAFLEXIBLE MINIATURE CABLES



Most of these miniature cables were originally developed one by one as custom cable for a magnetic head lead which must be swiftly moved to specified position precisely by small energy such as a floppy disk drive. And then, some of them remained as continued items close to standard stock products, finding out unfixed varied demand in long period of time. For such application, these cables are indispensable, even thanked.

### LEAD WIRE

Part No.	Conductor Size	Ov. Dia.	Available Colour
2680-0X	#33AWG (0.0314mm <sup>2</sup> )	0.6mm (0.0236")	Standard 10 Colours
2912-0X	#28AWG (0.0854mm <sup>2</sup> )	0.85mm (0.0335")	

### SHIELDED CABLES

Nos. of Conductor	#33 AWG SERIES		#32 AWG SERIES		#28 AWG SERIES	
	Part No.	Ov. Dia.	Part No.	Ov. Dia.	Part No.	Ov. Dia.
1	—	—	2444-0X	1.0mm (0.0394")	2943-00	1.5mm (0.0591")
2	2784-0X	1.8mm (0.0709")	2490-08	1.7mm (0.0669")	2794-00	2.3mm (0.0906")
3	2754-08	1.95mm (0.0768")	2879-08	1.8mm (0.0709")	2790-00	2.45mm (0.0965")
4	2739-0X	2.1mm (0.0827")	2769-0X	2.0mm (0.0787")	2929-00	2.7mm (0.106")
5	2780-00	2.2mm (0.0866")	—	—	—	—
6	2880-00	2.5mm (0.0984")	—	—	—	—
Flexibility / Flex Life	1		3		2	
Easiness of cable end treatment	3		2		1	
Low cost	2		1		3	

ESTIMATION : 1:TOP 2:MEDIUM 3:LOW  
CAUTION : Extremely weak against Tensile Strength.

Because of drastic changes in UL standards effective from May, 2008, two versions of each cable are now available; either the new UL rated version or non-approved original specification version.

This is because the UL standard now requires a physical strength test on both the insulation and jacket materials, in addition to a fire protection property test. This physical strength test was not previously required for low voltage application cables. To pass the test the insulation and or jacket materials must be revised to more physically durable types in most cases. Since the diameter of the stronger materials is larger, they are slightly less flexible than the originals. Please carefully review the following comparison table between the original and new UL approved designs for the best match in your application.

## Mogami Part No. Assignment for new UL version Ultraflexible Miniature Cable Series

Part No.	Part No. W/UL Approval	Approved UL Style No.	Structure	Revised Part	Past	New
2680	3308	1571	# 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.68mm
2912	3309	1571	# 28AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	No change	
2444	3324	1682	1 × # 32AWG	Insulation Material.	No change	
				Insulation O.D.	0.55mm	0.75mm
				Jacket O.D.	1.0mm	1.45mm
2490	3314	2725	2 × # 32AWG	Insulation Material.	No change	
				Insulation O.D.	0.53mm	0.75mm
				Jacket O.D.	1.7mm	2.15mm
2879	3315	2725	3 × # 32AWG	Insulation Material.	No change	
				Insulation O.D.	0.53mm	0.75mm
				Jacket O.D.	1.8mm	2.25mm
2769	3316	2725	4 × # 32AWG	Insulation Material.	No change	
				Insulation O.D.	0.53mm	0.75mm
				Jacket O.D.	2.0mm	2.4mm
2943	3325	1571	1 × # 28AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.83mm	0.90mm
				Jacket O.D.	1.5mm	1.65mm
2794	3311	2725	2 × # 28AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.83mm	0.90mm
				Jacket O.D.	2.3mm	2.45mm
2790	3312	2725	3 × # 28AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.83mm	0.90mm
				Jacket O.D.	2.45mm	2.7mm
2929	3313	2725	4 × # 28AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.83mm	0.90mm
				Jacket O.D.	2.7mm	2.8mm
2784	3317	2725	2 × # 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.75mm
				Jacket O.D.	1.8mm	2.1mm
2754	3318	2725	3 × # 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.75mm
				Jacket O.D.	1.95mm	2.2mm
2739	3319	2725	4 × # 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.75mm
				Jacket O.D.	2.1mm	2.4mm
2780	3320	2725	5 × # 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.75mm
				Jacket O.D.	2.2mm	2.5mm
2880	3321	2725	6 × # 33AWG	Insulation Material.	FB201	M163A
				Insulation O.D.	0.6mm	0.75mm
				Jacket O.D.	2.5mm	2.75mm

## SPECIFICATIONS

### LEAD WIRE

#### SPECIFICATIONS

Part No.	Conductor		Insulation		Weight
	Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material	
2680	25 / 0.04A	0.0314mm <sup>2</sup> (#33AWG)	0.60 (0.0236")	Flexible PVC	0.52kg
2912	17 / 0.08A	0.0854mm <sup>2</sup> (#28AWG)	0.85 (0.0335")	Flexible PVC	1.03kg
Common Specification		Roll Size 2,000 Ft spool	Colour 10 colours	Details of Colours Black/Brown/Red/Orange/Yellow/ Green/Blue/Violet/Gray/White	

#### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20	Tensile Strength	Flex Life (cycles)
2680	0.6 / m (0.183 / Ft)	8 N	36,000
2912	0.22 / m (0.0672 / Ft)	16 N	11,800

#### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 500V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)

### SHIELDED WIRE #32AWG SERIES

#### SPECIFICATIONS

SPECIFICATIONS

		Common Construction	Conductor		Insulation	
			Details	Size (mm²)	Ov. Dia.(mm)	Material
			7/0.08TA	0.0351mm² (#32AWG)	0.53 (0.0209")	Flexible PVC

Part No	Nos. of Conductor	Shield Served Shield	Jacket		Colour	Roll Size	Weight
			Ov. Dia.(mm)	Material			
2444	1	Approx. 23/0.08A	1.0 (0.0394")	Flexible PVC	Black/Gray	305m (1,000Ft)	0.75 kg
2490	2	Approx. 30/0.10A	1.7 (0.0669")		Gray		1.55 kg
2879	3	Approx. 35/0.10A	1.8 (0.0709")		Gray		1.83 kg
2769	4	Approx. 40/0.10A	2.0 (0.0787")		Black/Gray		2.28 kg

Exception Ov. Dia. of conductor insulation of Part No.2444 is 0.55 (0.0217").Also, stranded conductor of 0.08mm dia. bare copper, not tin plated.

#### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
2444	0.53 /m(0.162 /Ft)	0.16 /m (0.0488 /Ft)	13,000
2490	0.55 /m (0.168 /Ft)	0.08 /m (0.0244 /Ft)	9,100
2879		0.07 /m (0.0214 /Ft)	22,000
2769		0.06 /m (0.0183 /Ft)	20,000

#### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength ( 26 , 65%RH )	9.8 N (Per One Core Conductor )
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)

## #28AWG SERIES

### SPECIFICATIONS

Common Construction	Conductor		Insulation	
	Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material
	17/0.08A	0.0854mm <sup>2</sup> (#28AWG)	0.83 (0.0327")	Flexible PVC

Part No	Nos. of Conductor	Filler	Shield Served Shield	Jacket		Colour	Roll Size	Weight
				Ov. Dia.(mm)	Material			
2943	1	-	Approx. 34/0.08A	1.5 (0.0591")	Flexible PVC	Black	305m (1,000Ft)	1.37kg
2794	2	-	Approx. 57/0.08A	2.3 (0.0906")		Black		2.55kg
2790	3	-	Approx. 70/0.08A	2.45 (0.0965")		Black		3.25kg
2929	4	Polypropylene	Approx. 80/0.08A	2.7 (0.1063")		Black		4.0kg

Exception: Ov. Dia. of conductor insulation of Part No.2943 is 0.85 (0.0355").

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
2943	0.22 / m (0.0671 / Ft)	0.11 / m (0.0336 / Ft)	36,000
2794		0.07 / m (0.0214 / Ft)	16,000
2790		0.054 / m (0.0165 / Ft)	28,000
2929		0.047 / m (0.0143 / Ft)	21,000

### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength (26 , 65%RH)	21 N (per one core conductor)
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)

## #33AWG SERIES

### SPECIFICATIONS

Common Construction	Conductor		Insulation	
	Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material
	25/0.04A	0.0314mm <sup>2</sup> (#33AWG)	0.60 (0.0236")	Flexible PVC

Part No.	Nos. of Conductor	Filler 介在	Shield Served Shield	Jacket		Colour	Roll Size	Weight
				Ov. Dia.(mm)	Material			
2784	2	-	Approx. 38/0.08A	1.8 (0.0709")	Flexible PVC	Black/Gray	305m (1,000Ft)	1.56kg
2754	3	-	Approx. 54/0.08A	1.95 (0.0768")		Gray		2.05kg
2739	4	Polypropylene	Approx. 59/0.08A	2.1 (0.0827")		Black/Gray		2.44kg
2780	5	Polypropylene	Approx. 70/0.08A	2.2 (0.0866")		Black		2.85kg
2880	6	Polypropylene	Approx. 79/0.08A	2.5 (0.0984")		Black		3.24kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
2784	0.6 / m (0.183 / Ft)	0.1 / m (0.0305 / Ft)	20,000
2754		0.07 / m (0.021 / Ft)	36,000
2739		0.06 / m (0.0184 / Ft)	57,000
2780		0.054 / m (0.0165 / Ft)	35,000
2880		0.048 / m (0.0146 / Ft)	50,000

### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength(26 , 65%RH)	8.3 N (per one core conductor)
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)

## STANDARD COLOUR COMBINATION OF SHIELDED CORES

Nos. of Cores	1	2	3	4	5	6
Core Colour	White	White/Red	White/Red/Black	White/Red/Black/Yellow	White/Red/Black/Yellow/Blue	White/Red/Black/Yellow/Blue/Green
Exception	Part No. 2769	White/Yellow/Blue/Green				

## SPECIFICATIONS

### LEAD WIRE

#### SPECIFICATIONS

Part No.	Conductor		Insulation		Weight
	Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material	
3308	25/0.04A	0.0314 (#33AWG)	0.68 (0.0268")	Flexible PVC	0.55kg
3309	17/0.08A	0.0854 (#28AWG)	0.85 (0.0335")	Flexible PVC	1.05kg
Common Specification		Roll Size 2,000 Ft spool	Colour 10 colours	Available Colours Black/Brown/Red/Orange/Yellow/ Green/Blue/Violet/Gray/White	

#### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20	Tensile Strength	Flex Life (cycles)
3308	0.6 / m (0.183 / Ft)	8.4N	21,000
3309	0.22 / m (0.0672 / Ft)	22 N	32,000

#### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 500V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 ( -4 F ~ +176 F )
Standard	UL758 STYLE 1571 80 30V VW-1

### SHIELDED WIRE #32AWG SERIES

#### SPECIFICATIONS

SPECIFICATIONS		Common Construction	Conductor		Insulation		
			Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material	
			7/0.08TA	0.0351 (#32AWG)	0.75 (0.0295")	Flexible PVC	

Part No	Nos. of Conductor	Shield Served Shield	Jacket		Colour	Roll Size	Weight
			Ov. Dia.(mm)	Material			
3324	1	Approx. 28/0.08A	1.45 (0.0571")	Flexible PVC	Black/Gray	305m (1,000Ft)	1.29kg
3314	2	Approx. 42/0.10A	2.15 (0.0846")		Gray		2.18kg
3315	3	Approx. 50/0.10A	2.25 (0.0886")		Gray		2.58kg
3316	4	Approx. 52/0.10A	2.4 (0.0945")		Black/Gray		2.89kg

Exception: Stranded Conductor of Part No.3324 is 0.08mm dia.bare copper,not tin plated.

#### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
3324	0.53 m (0.162 Ft)	0.13 m (0.0397 Ft)	18,700
3314	0.55 m (0.168 Ft)	0.058 m (0.0177 Ft)	3,560
3315		0.050 m (0.0153 Ft)	18,600
3316		0.048 m (0.0146 Ft)	13,900

#### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength ( 26 , 65%RH )	10 N (Per One Core Conductor)
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 ( -4 F ~ +176 F )
Standard	UL758 STYLE 2725 80 30V VW-1

Exception: UL approval of Part No.3324 is STYLE 1682 60 30V VW-1 32AWG.

## #28AWG SERIES

### SPECIFICATIONS

Common Construction	Conductor		Insulation	
	Details	Size (mm <sup>2</sup> )	Ov. Dia.(mm)	Material
	17/0.08A	0.0854 (#28AWG)	0.9 (0.0354")	Flexible PVC

Part No	Nos. of Conductor	Shield Served Shield	Jacket		Colour	Roll Size	Weight
			Ov. Dia.(mm)	Material			
3325	1	Approx. 35/0.08A	1.65 (0.0650")	Flexible PVC	Black	305m (1,000Ft)	1.41kg
3311	2	Approx. 60/0.08A	2.45 (0.0965")				2.71kg
3312	3	Approx. 72/0.08A	2.70 (0.106")				3.47kg
3313	4	Approx. 85/0.08A	2.8 (0.110")				4.15kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
3325	0.22 / m (0.0671 / Ft)	0.099 / m (0.0302 / Ft)	29,700
3311		0.059 / m (0.0180 / Ft)	15,200
3312		0.053 / m (0.0162 / Ft)	34,700
3313		0.045 / m (0.0137 / Ft)	32,400

### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength (26 , 65%RH)	21 N (per one core conductor)
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)
Standard	UL758 STYLE 2725 80 30V VW-1

Exception: UL approval of Part No.3325 is STYLE 1571 80 30V VW-1 28AWG.

## #33AWG SERIES

### SPECIFICATIONS

Common Construction	Conductor		Insulation	
	Details	Size (mm <sup>2</sup> ) サイズ	Ov. Dia.(mm)	Material
	25/0.04A	0.0314 (#33AWG)	0.75 (0.0295")	Flexible PVC

Part No.	Nos. of Conductor	Shield Served Shield	Jacket		Colour	Roll Size	Weight
			Ov. Dia.(mm)	Material			
3317	2	Approx. 42/0.08A	2.1 (0.0827")	Flexible PVC	Black/G ray	305m (1,000Ft)	1.84kg
3318	3	Approx. 56/0.08A	2.2 (0.0866")		G ray		2.30kg
3319	4	Approx. 62/0.08A	2.4 (0.0945")		Black/G ray		2.67kg
3320	5	Approx. 80/0.08A	2.5 (0.0984")		Black		3.22kg
3321	6	Approx. 82/0.08A	2.75 (0.108")		Black		3.75kg

### ELECTRICAL & MECHANICAL CHARACTERISTICS

Part No.	DC Resistance at 20		Flex Life (cycles)
	Inner Conductor	Shield Conductor	
3317	0.6 / m (0.183 / Ft)	0.085 / m (0.0259 / Ft)	16,900
3318		0.065 / m (0.0198 / Ft)	27,600
3319		0.063 / m (0.0192 / Ft)	32,200
3320		0.047 / m (0.0143 / Ft)	49,100
3321		0.046 / m (0.0140 / Ft)	54,000

### COMMON CHARACTERISTICS

Voltage Breakdown	Must Withstand at DC 250V/15sec.
Insulation Resistance	10 <sup>3</sup> M · m Min. at DC 250V, 20
Tensile Strength(26 , 65%RH)	9.5 N (per one core conductor)
Emigration	Non-Emigrant to ABS resin
Applicable Temperature	-20 ~ +80 (-4 F ~ +176 F)
Standard	UL758 STYLE 2725 80 30V VW-1 33AWG

### STANDARD COLOUR COMBINATION OF SHIELDED CORES

Nos. of Cores	1	2	3	4	5	6
Core Colour	White	White/Red	White/Red/Black	White/Red/Black/Yellow	White/Red/Black/Yellow/Blue	White/Red/Black/Yellow/Blue/Green

Exception 例外	Part No. 3316	White/Yellow/Blue/Green
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Cables are long term products, and cable failure often results in problems in which the original cause is extremely difficult to detect. Choosing a reliable, long life, and multiple application cable from the start, is the key to safety, efficiency, and getting the best value. Always select a quality product, and use it at great length to better coexist with our precious earth.

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Imported / Distributed Product in Japan

# DIGIspy

DIGITAL AUDIO TRANSMISSION ANALYZER



## ● Analyze

Protocols of digital audio transmission lines

## ● Display

Audio Levels

## ● Monitor

Audio Signals

• • • We make digital audio transmission lines transparent

### Features

Versatile

Powerful

Portable

Easy To Use

Affordable

Display the most important parameters of digital audio transmission lines with the touch of a single key, anywhere and anytime - this is the basic idea of **DIGIspy**.

**DIGIspy** combines an IEC 958 protocol analyzer, level meter, and vector oscilloscope in a single unit. A headphone monitor output is available as well.

**DIGIspy** is capable of processing signals of any standardized sampling frequency up to 96 kHz. Its inputs accept symmetrical AES/EBU signals as well as S/P-DIF data streams (coaxial and optical).

Because of its compact and light-weight design, **DIGIspy** is ideally suited for doing measurements in the field. Its big LC display is back-lighted for improved readability even at bad lighting conditions. It can run more than 250 individual measurements without recharging.

Interface	IEC 958 AES/EBU or S/P-DIF, coaxial/optical, 32 to 96 kHz
Display	LCD 60 × 80 mm, with back light
Transmission quality indicators	5-level quality indicator (influenced by error rate and eye diagram of the input signal), error counter, error protocol with time stamp
Control data display	Mode of channel status and user data, validity, emphasis, origin and destination data, multi-channel format, copy protection, category code
Level meter	Peak level meter according to IEC268-18, peak hold, clipping indicator
Vector oscilloscope	Two-dimensional display of stereo signal amplitude (Goniometer)
Monitor output	16-bit D/A converter, adjustable volume, selectable channel mapping (output of left, right, or both channels)
Power supply	NiMH AA accumulators × 2, power supply/charger, car adapter, dry cells
Dimensions and weight	83 × 152 × 34mm <sup>3</sup> , 300g
Accessories included	Power supply/charger, soft leather case, XLR/Cinch adapter

Special thanks to:

Manabu Hirabayashi, for providing specifications (technical and graphical data.)

Yasuhiro Nakano, for providing numbers and measured data.

Leonard Marshall, for a substantial business collaboration that made this possible.

John Caldwell and Phil Tennison, for assistance in the composition of the English copy.

The many colleagues at MOGAMI, our vendors of raw materials and parts, and our global distributors, working with us today and throughout our past.

All our customers around the world who have continued to support our lives.

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