

**CBL100 SERIES     ANALOG CONNECTION CABLES**

The CBL100 Series analog connection cables are used to connect the stand-alone equipment to the MP System. Analog outputs (from chart recorders, force plates, pre-amplifiers, oscilloscopes, etc.) can be connected to the AMI100D, HLT100C, UIM100C module or other MP System modules. It's also possible to use these cables to connect amplifier outputs or D/A outputs to external equipment inputs.

**When signal isolation is required, use the INISOA or OUTISOA adapter with the cable.** The other end of the isolation adapter connects to the appropriate MP unit channel via the AMI100D/HLT100C module. Select the cable number with the plug corresponding to the equipment's input or output jack. Use one cable per recording channel.

**CBL100**     2 meter; 3.5 mm mono phone plug to 3.5 mm mono phone plug



**CBL101**     2 meter; 3.5 mm mono phone plug to male RCA



**CBL102**     2 meter; 3.5 mm mono phone plug to male BNC



**CBL105**     2 meter; 3.5 mm mono phone plug to 6.35 mm (1/4") mono phone plug



**CBL106**     10 cm; 2 mm pin plugs to female BNC



The CBL106 is a multi-purpose adapter that can be used to:  
Connect BNC terminated equipment to the DA100C  
Connect a BNC cable to the digital I/O lines on the UIM100C  
Connect the STM100C to nerve conduction chambers (via the CBL102)

**CBL107**     10 meter, 3.5 mm mono plug to 3.5 mm mono phone plug



**CBL108**

60 meter, 3.5 mm mono plug to 3.5 mm mono phone plug

**CBL110A**

DB37 F/F Ribbon Cable. Use this 3-meter ribbon cable to interface a SuperLab presentation system with the STP100C Isolated Digital Interface for an MP1xx System. Pins 19 and 21 are GND; pin 20 is +5 V.

**CBL110C**

DB25 M/F Ribbon Cable. Use this 3-meter ribbon cable to send digital I/O info to the STP100C Isolated Digital Interface to interface visual presentation systems that use a computer's parallel printer port (E-Prime, DirectRT, MediaLab, Inquisit, etc.) with an MP1xx System. Pins 18 and 25 are GND.

**CBL110C-Y**

This Y-adapter for the CBL110C parallel port cable allows users to interface the output from a parallel port with two devices, the STP100C and another piece of hardware. DB25 parallel male/dual female Y-splitter; 20 cm (8").



**CBL117** 10 meter lightweight coaxial cable with RCA male plug to RCA male R/A plug is included with the following systems; TEL100C, VR100PHYS-W, VR100INTRO-W, VR100ADV-W, VR100ULT.



**CBL118** 60 meter lightweight coaxial cable with RCA male plug to RCA male R/A plug for TEL100C.



**CBL121** This cable will connect Biodex System 4 or System 3 rev2 and above devices to a BIOPAC MP160/150 System to report Torque, Velocity, Position, and Sync values. One end of the 3 meter cable terminates with a dSUB15 male connector to interface the Biodex device, and the other end terminates with four 3.5 mm phone inputs to connect to the MP150 via UIM100C (assuming no MP150 isolation needed) or INISOA to MP160/150 via AMI100D/HLT100C (assuming MP160/150 isolation is required). Isolation is recommended if the MP160/150 system is also connected to subject-connected biopotential modules, such as EMG100C, ECG100C, etc.



Additional details for use with Biodex devices available in [BIODEX EMG/ANALOG SIGNAL ACCESS CONFIGURATION UTILITY SOFTWARE](#) – Addendum for System 3 Revision 2 and System 4 Dynamometers.

**Important Safety Note:** Biodex devices are mains powered equipment. If any other wired (non-BioNomadix) connections from the MP160/150 to the subject exist, this cable must be used with INISOA Input Signal Isolation Adapter with AMI100D/HLT100 High-level Transducer Amp to maintain proper isolation.

**CBL122** **Unisolated** RJ11 to 3.5 mm Jack, allows a mono 3.5 mm cable to be interfaced with the HLT100C so connections previously made through the UIM100C can function with the MP160+AMI100D/HLT100C. This **cable is unisolated** and must not be used with external equipment when a human subject is connected to the MP system unless the external equipment has its own built in isolation. The short (~3 cm) adapter is designed to be connected to another cable.



**CBL123** **Unisolated** RJ11 to BNC Male, 1.8 m cable allows equipment with BNC outputs to a connect directly to an AMI100D/HLT100C when no isolation is required (e.g., animal) without any additional adapters. This **cable is unisolated** and must not be used with external equipment when a human subject is connected to the MP system unless the external equipment has its own built in isolation.



**CBL124** **Unisolated** RJ11 to two 2 mm sockets, this Switch Adapter allows a digital switch (i.e., TSD116A or TSD116B) to be connected to an analog input of the AMI100D/HLT100C. When the switch is open the channel will read zero volts; when the switch is pressed/closed the channel will read 5 volts. This **cable is unisolated** and should not be used to connect external mains powered equipment or other switches that make electrical contact with the subject.

**CBL125** BNC male to BNC male, Nickel Plated, 2 m RG59 Coax cable; typically used to interface the STP100C or STP100C-C to devices that use BNC (Bayonet Neill-Concelman), such as FNIR Imager trigger ports. Typically applied for frequencies below 3 GHz; Ohm Rating: 75.



**CBL126** BNC male to female right angle T-Adapter allows the connection of two BNC female connectors. Use this adapter when you want to use a trigger input and record the actual trigger on one of the digital I/O lines. Run an external trigger to the STP100C, via this coupler, to start data acquisition and then run a CBL125 + CBL106 to the STP-IO. Connector A: BNC male, Connector B: BNC female, Connector C: BNC female. 50 Ohm. Brass with nickel plating.



**CBL128** 3.5 mm Stereo to Mono Adapter—Tobii Glasses 2 Sync Adapter—allows external equipment to be connected to an MP system. Use to connect the synchronization signal of a Tobii Glasses 2 Recording Unit to an MP160+AMI/HLT using a combination of a CBL122 + CBL100, or to MP150+UIM using a CBL100. Recording the synchronization signal at the start of a Glasses 2 recording allows the eye tracking data to be tightly synchronized to other signals recorded by the MP system.



**Compatibility with MP160/150 Research Systems**

If a different interface is required, contact BIOPAC to discuss custom options. All brand or product names are the trademarks or registered trademarks of their respective holders.

Custom cables are available from BIOPAC for connectors not listed.

Company	Device	Connector Type	BIOPAC cable
<b>AMTI</b>	MSA-6: Force Plate Amp (Use AMTI cable 5405C) MCA: Force Plate Amp (Use AMTI cable 5405C)	BNC female	CBL102
<b>Axon</b>	All Amplifiers	BNC female	CBL102
<b>Buxco</b>	MAX II	3.5 mm mini-phone jack	CBL100
<b>Data Sciences International</b>	Physio Tel Receiver with ART Analog Adapter	BNC female	CBL102
<b>Gould</b>	6600 Series	BNC female	CBL102
<b>Grass</b>	Model 7 (J6)	3.5 mm mini-phone jack	CBL100
	P55, P122, and P511 Series	BNC female	CBL102
<b>Harvard</b>	HSE PLUGSYS AH 69-0026 Dissolved Oxygen Meter	BNC female	CBL102
	AH 60-2994-2999 Research Grade Isometric Transducers AH 6-03000/3001 Research Grade Isotonic Transducers	4 mm double banana jack	CBL102 with CBL106
<b>Kent</b>	TRN(001-012) Amplifiers	BNC female	CBL102
<b>Kissler</b>	Force Plates	BNC female	CBL102
<b>Millar</b>	TCB600: Transducer Control Unit	¼" phone jack	CBL105
	TC-510 (Specify Grass Cable interface #850-3028)	6-pin	TCI100 (to DA100C)
<b>Sonometrics</b>	Sonomicrometer Systems with Optional Adapter	BNC female	CBL102
<b>Transonic</b>	T106, T206, T106U, T206U: Animal Research Flowmeters T110: Lab Tubing Flowmeter BLF21D/21: Laser Doppler Meters	BNC female	CBL102
<b>Triton</b>	CBI System System 6	¼" phone jack	CBL105
<b>Tucker Davis</b>	All Digital BioAmp Systems	BNC female	CBL102
<b>WPI</b>	705: Electro 705 Electrometer 721: Cyto 721 Electrometer 767: Intra 767 Electrometer 773: Duo 773 Electrometer DAM50: Bio-amplifier DBA Series Digital Biological Amps DVC-1000: Voltage Current Clamp EVC-4000-(1-4): Voltage Clamp FD223: Dual Electrometer ISO2: Dissolved Oxygen Meter & Electrode ISODAM: Low Noise Preamplifier ISO-DAM8A-(1-8): Bio-amplifier System NOMK2: ISO-NO Mark II Nitric Oxide Meter TRN001, TRN002, TRN011, TRN012: Isometric Transducers VF-4: 4-Channel Buffer Amplifier	BNC female	CBL102
	DAM60, DAM70, DAM80: Bio-amplifiers	3.5 mm mini-phone jack	CBL100
<b>Biodex</b>	System 3 rev2 and above (with 15 pin female dSUB) System 4 (with 15 pin female dSUB)	3.5 mm mini-phone jack	CBL121