

DC-I50/100 Interconnects / Signal Cables

Dual Connect DC-I50 and DC-I100 Signal Cables are precious metal conductor stereo signal cable pairs that combine solid gold wires in a dual configuration ("Dual Connect") within a thin tubing of PTFE (Teflon®) insulation to optimize linearity for audio frequency signals.

This design provides superior sonic performance and preserves the valuable quality unchanged for years due to very high resistance to moisture, heat, UV-light, air pollution and aggressive chemicals.

The capacitance between adjacent wires is very low.

These unique features make Dual Connect DC-I50 and DC-I100 Signal Cables an excellent choice for the most demanding applications for domestic and professional balanced and unbalanced audio signal distribution.

Dual Connect Signal Cables are supplied in lengths of 0.5 meters (DC-I50) and 1 meter (DC-I100) fitted with gold plated Swiss made precision connectors.

DC-I50/RCA (length 0.5m) and DC-I100/RCA (length 1.0m) are fitted with RCA plugs for unbalanced signals while DC-I50/XLR (length 0.5m) and DC-I100/XLR (length 1.0m) use XLR connectors for balanced signals.

Dual Connect Signal Cables are also available in DIY versions without connectors as DC-DIYsig2x50 (2-way, 0.5m), DC-DIYsig2x100 (2-way, 1.0m), DC-DIYsig3x50 (3-way, 0.5m) and DC-DIYsig3x100 (3-way, 1.0m).

Features

- ★ "Dual-Connect" design with solid gold conductors in dual configuration
- ★ Flexible and transparent 2-way/3-way signal cable
- ★ Very low wire capacitance with only 15pF/meter
- ★ Materials selected to ensure very high durability
- ★ All non-magnetic materials with very linear performance
- ★ Swiss made precision RCA/XLR plugs
- ★ PTFE insulation with low dissipation factor of 0.0002
- ★ Gold plated contacts avoid performance degradation over time

Typical applications

- ★ Superior-sonic-performance balanced/unbalanced signal cable
- ★ Very low capacitance signal cable
- ★ Very high quality professional sound systems
- ★ Demanding automotive and marine applications
- ★ Cables resistant to heat, UV-light and chemicals
- ★ Reference signal cable with very high durability

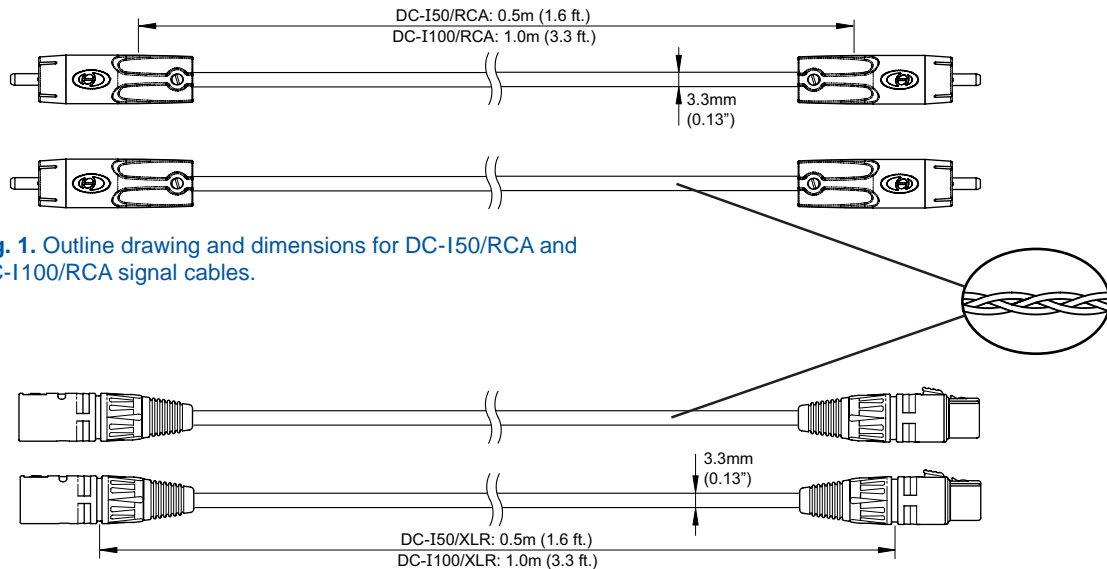


Fig. 1. Outline drawing and dimensions for DC-I50/RCA and DC-I100/RCA signal cables.

Fig. 2. Outline drawing and dimensions for DC-I50/XLR and DC-I100/XLR signal cables.

Legal notice: Teflon® is a registered trade mark of DuPont Dow Elastomers

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<http://www.Dual-Connect.com>

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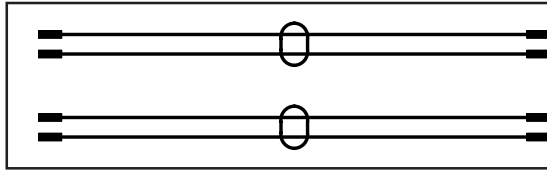


Fig. 3.
Electrical circuit diagram for a stereo cable set with RCA plugs (part no. DC-I50/RCA and DC-I100/RCA).

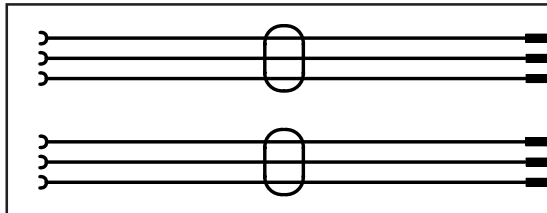


Fig. 4.
Electrical circuit diagram for a stereo cable set with XLR connectors (part no. DC-I50/XLR and DC-I100/XLR).

MAXIMUM RATINGS

Notes	Symbol	Parameter	Comment	Value	Unit
1, 2	V	Voltage	AC peak voltage or DC	150	V
1, 2	I	Current	AC RMS or DC	0.35	A
1, 2	P_L	Power transfer capacity	$R_L = 400$ ohms	50	W
1	T_A	Ambient temperature range		-30 to +80	Deg. C
				-22 to +176	F

ELECTRICAL DATA

Notes	Symbol	Parameter	Comment	Value	Unit
	R	Resistance	Conductor, DC	1.5	ohm/m
3	C_w	Capacitance	Between adjacent wires	15	pF/m
	C_c	Capacitance	Between two contacts	4	pF
4	A	Attenuation	$R_L = 1$ kohm, DC to 100kHz	0.03	dB/m
	tan(d)	Dissipation factor	Insulation, $f = 1$ MHz	0.0002	-
	E	Dielectric constant	Insulation, DC to 1MHz	2.1	-
	E_d	Dielectric strength	Insulation, $f = 50$ Hz	Min. 20	kV/mm

MECHANICAL DATA

Notes	Symbol	Parameter	Comment	Value	Unit
	m	Weight	DC-I50/RCA, DC-I100/RCA, both cables	96, 102	g
			DC-I50/XLR, DC-I100/XLR, both cables	138, 144	g
5	r_a	Bending radius	$> 5 \times D$	Min. 17 Min. 2/3	mm inch.
6	F_c	Insertion/withdrawal force	DC-I50/RCA, DC-I100/RCA, each plug	Max. 30	N
			DC-I50/XLR, DC-I100/XLR, male or female connector	Max. 20	N

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Notes (for previous page)

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| 1 Operating ratings indicate conditions for which other specifications may not apply | 2 Values for AC must be derated in order to compensate for cable power loss as a function of frequency, temperature, etc. |
| 3 Measuring instrument: Capacitance meter Model 938, Data Precision | 4 Measuring instrument: Audio Analyzer VP-7722P, Panasonic |
| 5 Avoid sharp bending as this may affect cable reliability | 6 This force can only be applied to connector housing |

MATERIAL DATA

Part	Material	Comment	Properties	Value	Unit
Conductor	Gold, Au	Dual solid wire	Purity Au	99.99	%
			Conductor area (wire gauge)	0.016 35	mm ² AWG
			Gold mass, 2 wires (versions with RCA plugs)	0.61	g/m
			Gold mass, 3 wires (versions with XLR connectors)	0.91	g/m
Insulation	PTFE (Teflon®)	Clear tube	Purity PFTE	100	%
			Nominal wall thickness	0.25 0.01	mm inch.
			Melting point	+327 +620	Deg. C F
Connector	Silver, Ag	Contact pins on versions with RCA plugs	Purity Ag	99.99	%
	CuSn6	Contact pins on versions with XLR connectors	Percentage Cu/Sn	94/6	%
	Gold, Au	Contact plating	Plating thickness, versions with RCA plugs	0.5	um
			Plating thickness, versions with XLR connectors	0.2	um
Aluminium, Al	Connector housing	Surface	Black anodized	-	
Solder	Tin/Silver, Sn/Ag ("Silver solder")	Lead free	Percentage Sn/Ag/Cu	95.8/3.5/0.7	%
			Melting point	+217 +423	Deg. C F
Marking	Polyolefine	Red/black tubing	Max. operating temp.	+135 +275	Deg. C F

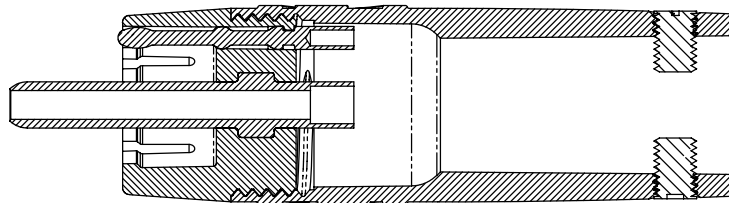


Fig. 5. Cross section of RCA plug used on DC-I50/RCA and DC-I100/RCA signal cables.

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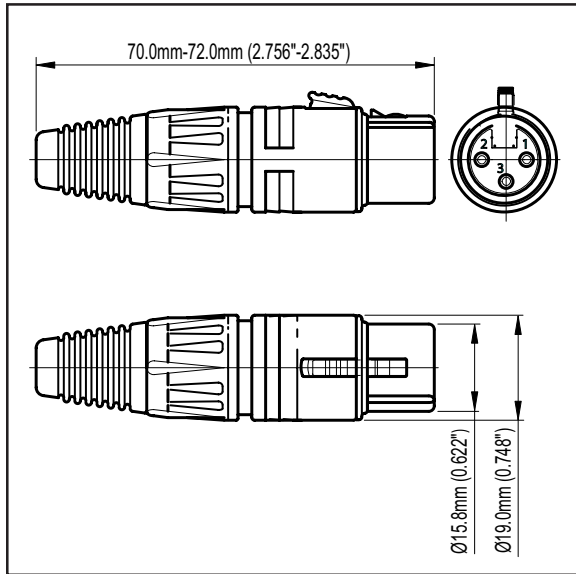


Fig. 6. Outline drawing and dimensions for female XLR connector used on DC-I50/XLR and DC-I100/XLR signal cables.

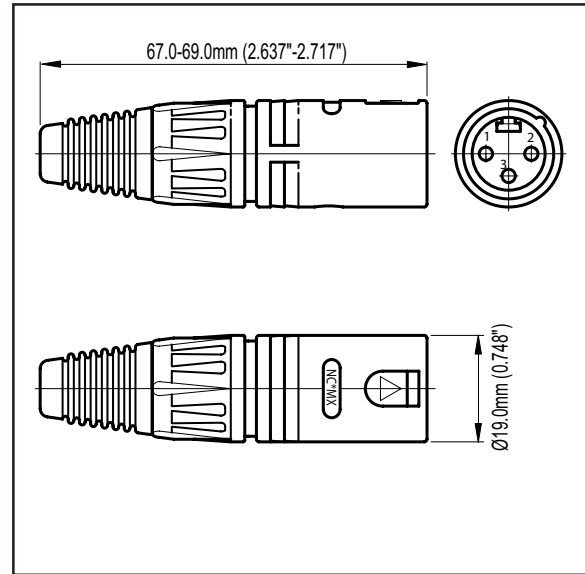


Fig. 7. Outline drawing and dimensions for male XLR connector used on DC-I50/XLR and DC-I100/XLR signal cables.

WARNING:

Do not attempt to shorten any Dual Connect interconnects or to remove the connectors as soldering the gold wire conductors requires extensive skills and experience.

CAUTION

*As a safety precaution against electrical shock, no Dual Connect cables or wires may be connected to the mains or other dangerous voltage sources.
Avoid sharp bending of Dual Connect cables and wires as this may deteriorate the reliability and performance.*

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