
Solo Guitar & Solo Guitar Absolute Feedback Digital Servo Drive Cable Kits



CBL-HDR002



CBL-HDRFB-001



CBL-HDRPD-001



CBL-HDR001



CBL-HDRAUX-001

CBL-SOLGUIKIT01 & CBL-SOLGUIKIT02

December 2008 (Ver. 1.0)



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Revision History:

Version	Release Date	Status	Changes/Remarks
Ver. 1.0	December 2008	Initial Release	

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1. Introduction

This document provides the wiring details for the cables used to connect Elmo SOLO-GUITAR and SOLO-GUITAR ABSOLUTE FEEDBACK digital servo drives with the end-user application. The servo drive-side pinouts are provided in Chapter 3 of the drive’s installation guide.

The cables come in one length: 2 meters (6 ½ feet).

1.1 Solo Guitar Connectors

The table below presents the connector panel of the Solo Guitar drive and specifies the cable connectors.

Pins	Type	Connector Manufacturer and Part Number	Port
9	5.08 mm Pitch/14-16AWG Wires	Wires	Power connector
4	2.54 mm Pitch	Molex 90156-0144	J4
20	2.54 mm Pitch	Molex 90142-0020	J5
12	2.54 mm Pitch	Molex 90142-0012	J1
12	2.54 mm Pitch	Molex 90142-0012	J14
8	2.54 mm Pitch	Molex 90142-0008	J17
16	2.54 mm Pitch	Molex 90142-0016	J3

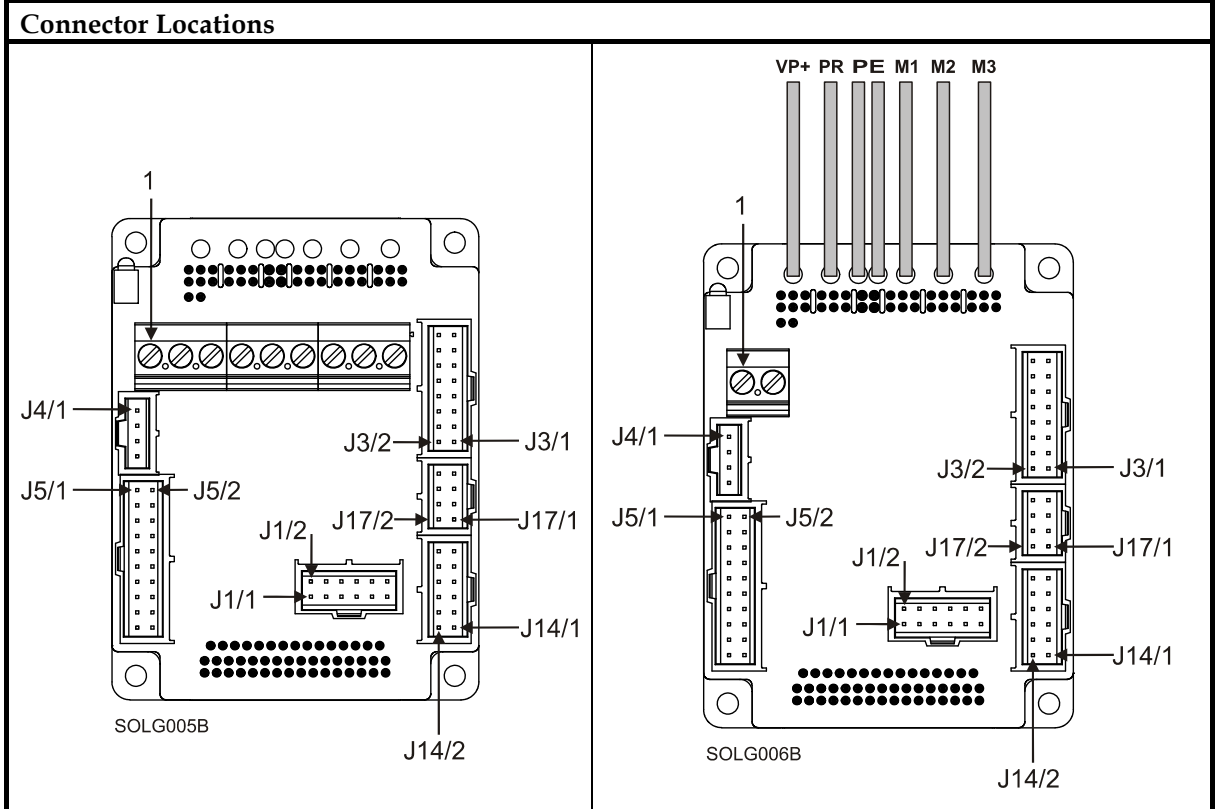


Table 1-1: Connectors on the Solo Guitar Drive

1.2 Solo Guitar Absolute Feedback Connectors

The table below presents the connector panel of the Solo Guitar Absolute Feedback drive and specifies the cable connectors.

Pins	Type	Connector Manufacturer and Part Number	Port
9	5.08 mm Pitch/14-16AWG wire	Wires	Power connector
4	2.54 mm Pitch	Molex 90156-0144	J6
20	2.54 mm Pitch	Molex 90142-0020	J7
12	2.54 mm Pitch	Molex 90142-0012	J3
16	2.54 mm Pitch	Molex 90142-0016	J11
16	2.54 mm Pitch	Molex 90142-0016	J5

Connector Locations	
<p>SOLG001B</p>	<p>SOLG002B</p>

Table 1-2: Connectors on the Solo Guitar-Absolute Feedback Drive

1.3 Cable Cross Reference

1.3.1 Solo Guitar

Cable Application	Cable Part. No.	Pins	Pin Location	Page
Main Feedback	CBL-HDRFB-001	12	J14	3-1
Main Feedback Buffered Output	CBL-HDRPD-001	8	J17	3-3
Communication	CBL-HDR001	12	J1	5-1
Auxiliary Feedback	CBL-HDRAUX-001	16	J3	4-1
I/O	CBL-HDR002	20	J5	6-1

Table 1-3: Cable and Pin Cross-Reference for the Solo Guitar Drive

1.3.2 Solo Guitar Absolute Feedback

Cable Application	Cable Part. No.	Pins	Pin Location	Page
Main Feedback	CBL-HDRAUX-001	16	J11	3-2
Communication	CBL-HDR001	12	J3	5-1
Auxiliary Feedback	CBL-HDRAUX-001	16	J5	4-1
I/O	CBL-HDR002	20	J7	6-1

Table 1-4: Cable and Pin Cross-Reference for the Solo Guitar Absolute Feedback Drive

2. Cable Kits

Two cable kits can be purchased from Elmo. The kits contain five cables in CBL-SOLGUIKIT01 (for the Solo Guitar) and four cables in CBL-SOLGUIKIT02 (for the Solo Guitar Absolute Feedback), respectively. All the cables are 2 m long. The contents of each kit are listed below:

Cable Application	CBL-SOLGUIKIT01 for the Solo Guitar	CBL-SOLGUIKIT02 for the Solo Guitar Absolute Feedback
Main Feedback	CBL-HDRFB-001	CBL-HDRAUX-001
Main Feedback Buffered Output	CBL-HDRPD-001	-
Communication	CBL-HDR001	CBL-HDR001
Auxiliary Feedback	CBL-HDRAUX-001	CBL-HDRAUX-001
I/O Cable	CBL-HDR002	CBL-HDR002

Table 2-1: Cable Kits for the Solo Guitar and Solo Guitar Absolute Feedback Drives

3. Main Feedback Cable

3.1 Solo Guitar Main Feedback Cable (CBL-HDRFB-001)

The main feedback cables are made from 24-AWG, six twisted-pair shielded cable. There is one type of feedback cable, which uses a 12-pin C-Grid III (Molex) 2.54 mm pitch plug on the *SimpliQ* side.

The General-Purpose Main Feedback Cable (CBL-HDRFB-001) is open on the motor side so that it can be connected to customer-specific connectors.

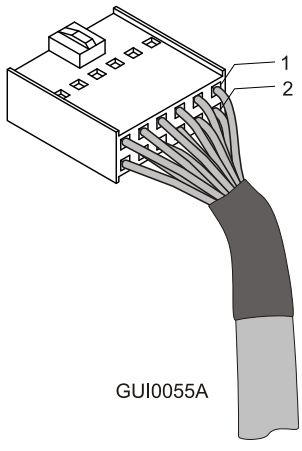
Pin No.	Color	Description	
1	Brown	See installation guide	
2	White	See installation guide	
3	Cyan	See installation guide	
4	Orange	See installation guide	
5	Purple	See installation guide	
6	Black	See installation guide	
7	Red	See installation guide	
8	Blue	See installation guide	
9	Green	See installation guide	
10	Yellow	See installation guide	
11	Pink	See installation guide	
12	Drain wire	See installation guide	

Table 3-1: Main Feedback Cable for the Solo Guitar Drive



Figure 1: Single-sided Main Feedback Cable (Part No. CBL-HDRFB-001)

3.2 Solo Guitar Absolute Feedback Main Feedback Cable (CBL-HDRAUX-001)

The absolute feedback cable is a 24-AWG eight twisted-pair shielded cable. It is connected using a 16-pin C-Grid III (Molex) plug.

Pin No.	Color	Description
1	Brown	See installation guide
2	White	See installation guide
3	Cyan	See installation guide
4	Orange	See installation guide
5	Purple	See installation guide
6	Black	See installation guide
7	Red	See installation guide
8	Blue	See installation guide
9	Pink	See installation guide
10	Grey	See installation guide
11	Yellow	See installation guide
12	Green	See installation guide
13	White-Red	See installation guide
14	White-Black	See installation guide
15	White-Green	See installation guide
16	White-Yellow	See installation guide

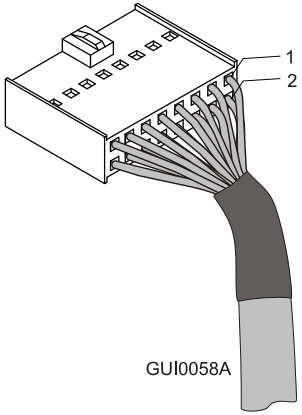


Table 3-2: Main Feedback Cable for the Solo Guitar Absolute Feedback Drive



Figure 2: Main Feedback Cable (Part No. CBL-HDRAUX-001)

3.3 Solo Guitar Main Feedback Buffered Output Cable (CBL-HDRPD-001)

The Solo Guitar main feedback buffered output cable is a 24-AWG four twisted-pair shielded cable. It is connected using an 8-pin C-Grid III (Molex) plug.

Pin No.	Color	Description
1	Green	See installation guide
2	Yellow	See installation guide
3	Pink	See installation guide
4	Grey	See installation guide
5	Red	See installation guide
6	Blue	See installation guide
7	Brown	See installation guide
8	White	See installation guide

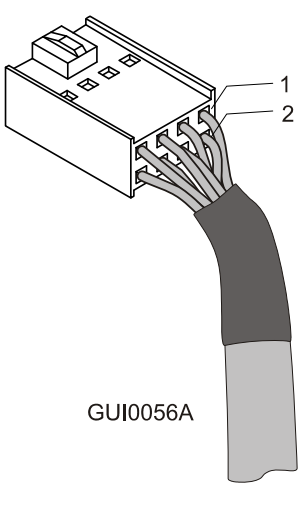


Table 3-3: Main Feedback Buffered Output Cable for the Solo Guitar Drive

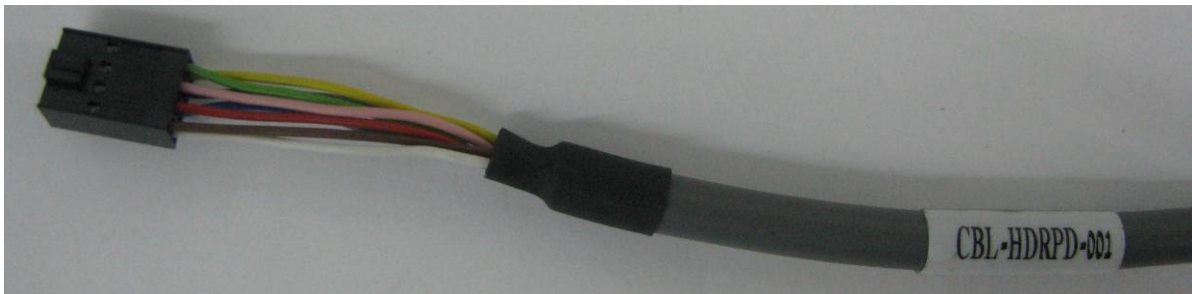


Figure 3: Main Feedback Buffered Output Cable (Part No. CBL-HDRPD-001)

4. Auxiliary Feedback Cable (CBL-HDRAUX-001)

The auxiliary feedback cable is a 24-AWG eight twisted-pair shielded cable. It is connected using a 16-pin C-Grid III (Molex) plug.

The general pinout of the auxiliary feedback cable is as follows:

Pin No.	Color	Description	
1	Brown	See installation guide	
2	White	See installation guide	
3	Cyan	See installation guide	
4	Orange	See installation guide	
5	Purple	See installation guide	
6	Black	See installation guide	
7	Red	See installation guide	
8	Blue	See installation guide	
9	Pink	See installation guide	
10	Grey	See installation guide	
11	Yellow	See installation guide	
12	Green	See installation guide	
13	White-Red	See installation guide	
14	White-Black	See installation guide	
15	White-Green	See installation guide	
16	White-Yellow	See installation guide	

Table 4-1: Auxiliary Feedback Cable for the Solo Guitar and Solo Guitar Absolute Feedback Drives



Figure 4: Auxiliary Feedback Cable (Part No. CBL-HDRAUX-001)

5. Communication Cable (CBL-HDR001)

The communication cable consists of three 26-AWG two twisted-pair shielded cable. It is connected using a 12-pin C-Grid III (Molex) plug. This cable (and connector) includes RS-232 and CAN communications.

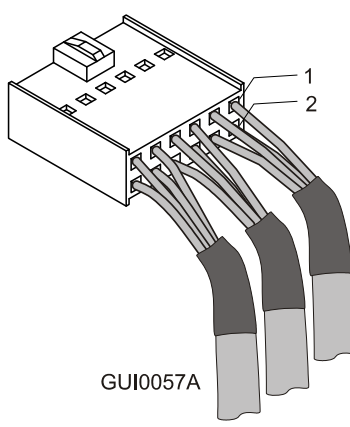
	Pin No.	Color	Description	
Cable 1	1	Yellow	See installation guide	
	2	Green	See installation guide	
	3	White	See installation guide	
	4	Drain wire	See installation guide	
Cable 2	5	Yellow	See installation guide	
	6	Green	See installation guide	
	7	White	See installation guide	
	8	Drain wire	See installation guide	
Cable 3	9	Brown	See installation guide	
	10	Green	See installation guide	
	11	White	See installation guide	
	12	Drain wire	See installation guide	

Table 5-1: Communication Cable for the Solo Guitar and Solo Guitar Absolute Feedback Drives



Figure 5: Communication Cable (Part No. CBL-HDR001)

6. I/O Cable (CBL-HDR002)

The I/O cable consists of two 24-AWG twisted-pair shielded cables. It is connected using a 20-pin C-Grid III (Molex) plug.

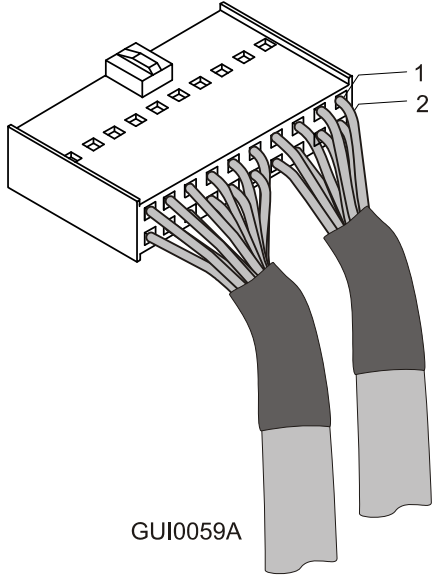
	Pin No.	Color	Description	
Cable 1	1	Brown	See installation guide	
	2	White	See installation guide	
	3	Grey	See installation guide	
	4	Pink	See installation guide	
	5	Green	See installation guide	
	6	Yellow	See installation guide	
	7	Red	See installation guide	
	8	Blue	See installation guide	
Cable 2	9	Green	See installation guide	
	10	Brown	See installation guide	
	11	Yellow	See installation guide	
	12	White	See installation guide	
	13	Cyan	See installation guide	
	14	Purple	See installation guide	
	15	Orange	See installation guide	
	16	Black	See installation guide	
	17	Pink	See installation guide	
	18	Blue	See installation guide	
	19	Drain wire	See installation guide	
	20	Red	See installation guide	

Table 6-1: I/O Pin and Cable



Figure 6: I/O Cable (Part No. CBL-HDR002)