Cable Catalog for NOAH*link*

List of cables for use with the NOAH Programming interface

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Revision History

Date	Revision	Description	Authors
08.10.1999	1.0	Draft version	Christian V. Holmelund
15.10.2000	1.1	First Proposal of the Catalog. This version is revised according to the decisions taken on NewPRO Cable meeting in Nurnburg, August 14, 1999.	Christian V. Holmelund Niels Munksgaard
07.03.2001	1.2	Change layout and introduction of this catalog.	Michael Porotnikoff
17.05.2001	1.3	NewPRO name changed to NOAHlink More adaptors added	Michael Porotnikoff
05.12.2001	1.4	NOAHlink Cable #4 added NOAHlink Adaptor #3 added NOAHlink Adaptor #4 added Starkey BTE adaptor #1 added New drawings and photos	Michael Porotnikoff
24.01.2002	1.4.1	Correction of NOAHlink Cable numbers on page 20	Michael Porotnikoff
19.08.2002	1.5	NOAHlink Cable #5 added Widex CIC adaptor removed Instrument list updated.	Michael Porotnikoff
11.11.2002	1.6	NOAHlink Cable #6 added	Michael Porotnikoff
19.05.2003	1.7	NOAHlink Cable #7 added	Michael Porotnikoff
19.06.2003	1.8	NOAHlink Cable #8 added	Michael Porotnikoff
19.11.2003	1.9	NOAHlink cables and adaptors named without CSxx. Buyers list added.	Michael Porotnikoff
02.01.2004	1.9	Buyers list updated.	Michael Porotnikoff
06.09.2004	1.10	NOAHlink Cable #9 added	Michael Porotnikoff
18.01.2005	1.11	Starkey pendant adaptor added	Michael Porotnikoff

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1. INTRODUCTION

It is the intention that the catalog contains a list of cables and adaptors that will be sufficient to fit all hearing instruments that can be programmed with NOAHlink. HIMSA, therefore, encourages all hearing instrument manufacturers to review the currently listed cables and adaptor systems, and to inform HIMSA if they need other cable or adaptor systems than those already listed. The catalog will be updated regularly and distributed among interested parties.

The catalog is divided into the following subsections:

Chapter 1. Introduction – outlines the background for the cable catalog, and a guideline for use by the hearing instrument manufacturers.

Chapter 2. Currently proposed cables – provides specifications for cables that are currently specified for use with NOAHlink.

Chapter 3. Currently proposed adaptors – provides specifications for adaptors that can be connected to one of the cables listed in chapter 2.

Chapter 4. Hearing Instrument Manufacturer Support – Provides a list of all manufactures supporting the NOAHlink cable catalog. These manufacturers agree that only those cables and adaptors specified in the NOAHlink catalog are needed for programming their hearing instruments via NOAHlink.

Background

On behalf of hearing instrument manufacturers, HIMSA has taken the initiative of establishing a cable catalog containing a specification of NOAHlink programming cables. The objective of this initiative is to make a recommendation that would lead to a minimization of the number of cables the dispensers need to have available in their shops/clinics.

Instead of a recommendation, it was agreed at the Nurnberg meeting that HIMSA should prepare a catalog of cables where each cable was supported by at least one HIM. The catalog could, hopefully, be kept to a limited number of cables in order to obtain the all over goal – to reduce the current problems of handling several different cables in the dispenser shops.

HIMSA will maintain the cable catalog listing and make it publicly available to HIMSA Licensees via the HIMSA Licensee homepage. When NOAHlink becomes available for sale it could also, if accepted by the HIMs, be made available to end-users on HIMSA's public homepage.

HIMSA suggests inclusion of a section in the catalog in which HIMSA would report which of the HIMs supports the cables listed in the current version of the catalog. We should, therefore, encourage the HIMs to report to HIMSA if this is the case. We will also encourage HIMs to supply information to HIMSA on any other cable configuration needed to ensure support for the catalog.

Implementation

The basic idea is to establish a set of standard cables that could be used with several different hearing instruments. This means that the cables are not branded with a hearing instrument brand, but rather with a NOAHlink brand. Each cable type should be labeled with a unique

identification or number (e.g. NOAHlink Cable #1, NOAHlink Cable #2, HIMname Adaptor #1 etc.), where the name and number will be given by HIMSA.

If a HIM is not able to use one of the proposed cables, HIMSA recommends that he attach an adaptor to one of the cables listed in this catalog instead of specifying a new cable. In this way, the dispenser only needs to have the listed cables, together with a limited number of manufacturer-specific adaptors, thus minimizing the number of cables. It is considered much easier to handle many adaptors than to handle many cables.

To help dispensers choose the correct cable for a fitting, it is recommended that HIMs, in their fitting modules, indicate which programming cable (and adaptor) should be used when selecting a specific hearing instrument model for fitting with NOAHlink.

Guidelines

1.1.1 Cables

To address the above issues, HIMSA is proposing a small set of NOAHlink cables to be used with NOAHlink.

If a manufacturer wants to suggest another configuration, please forward a technical specification (drawing) of the cable similar to that presented in this specification for NOAHlink Cable #1 (format: JPG). The new cable will then be included in the next version of this document.

1.1.2 Adaptors

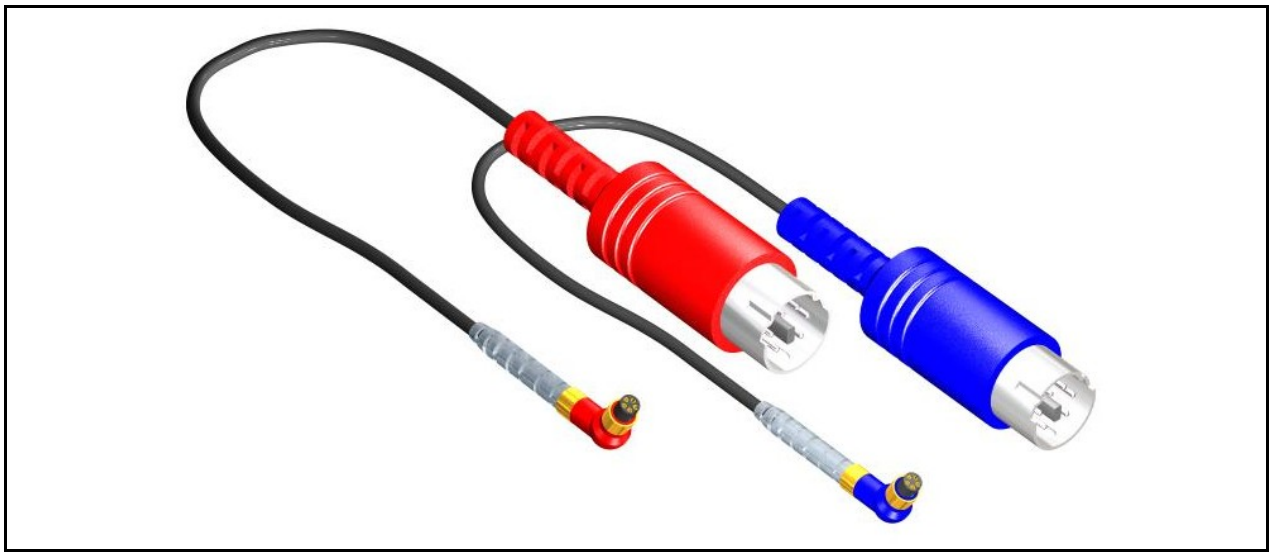
HIMSA will propose a small set of adaptors to be used together with the NOAHlink cables

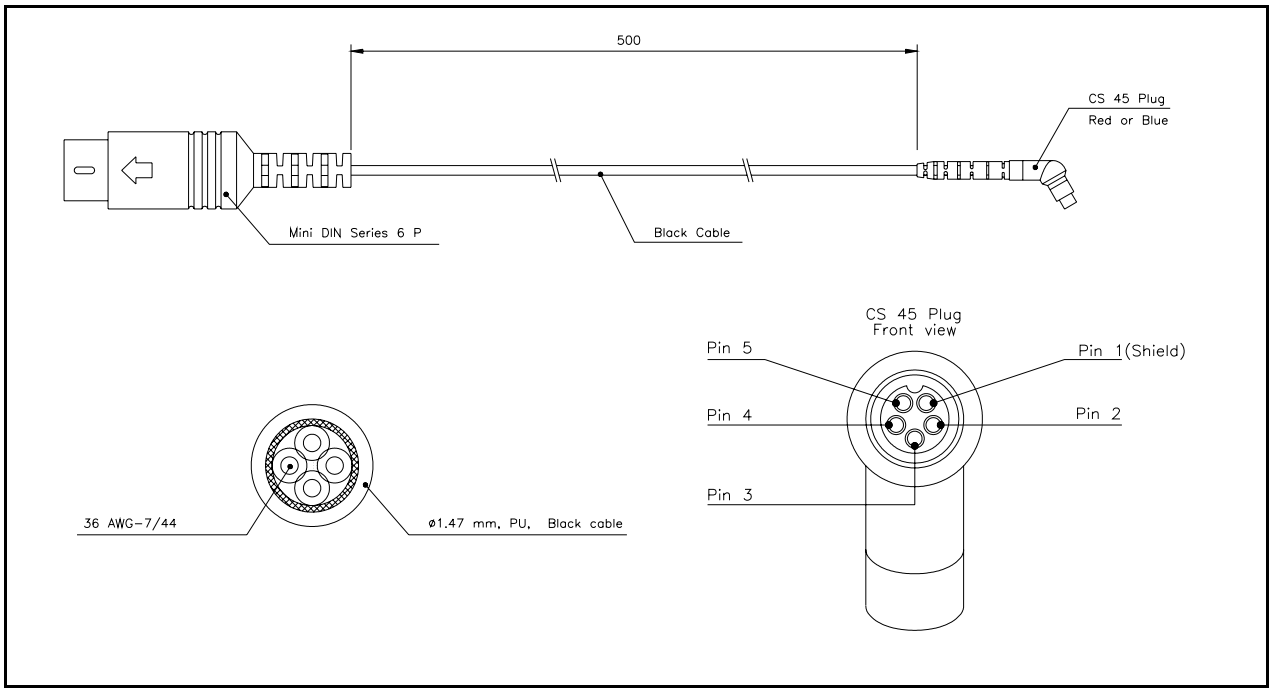
Other companies, if they wished, could adapt their company specific adaptors.

If a manufacturer wants to suggest another adaptor, please forward a technical specification (drawing) of the adaptor similar to that presented in this specification for NOAHlink Adaptor #1 (format: JPG). The new adaptor will then be included in the next version of this document.

2. CURRENTLY SUPPORTED CABLES

NOAHlink Cable #1

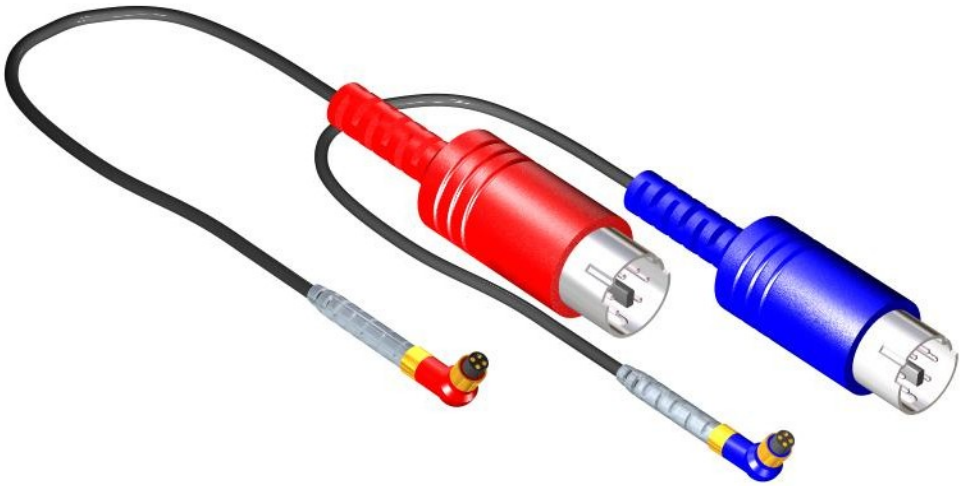


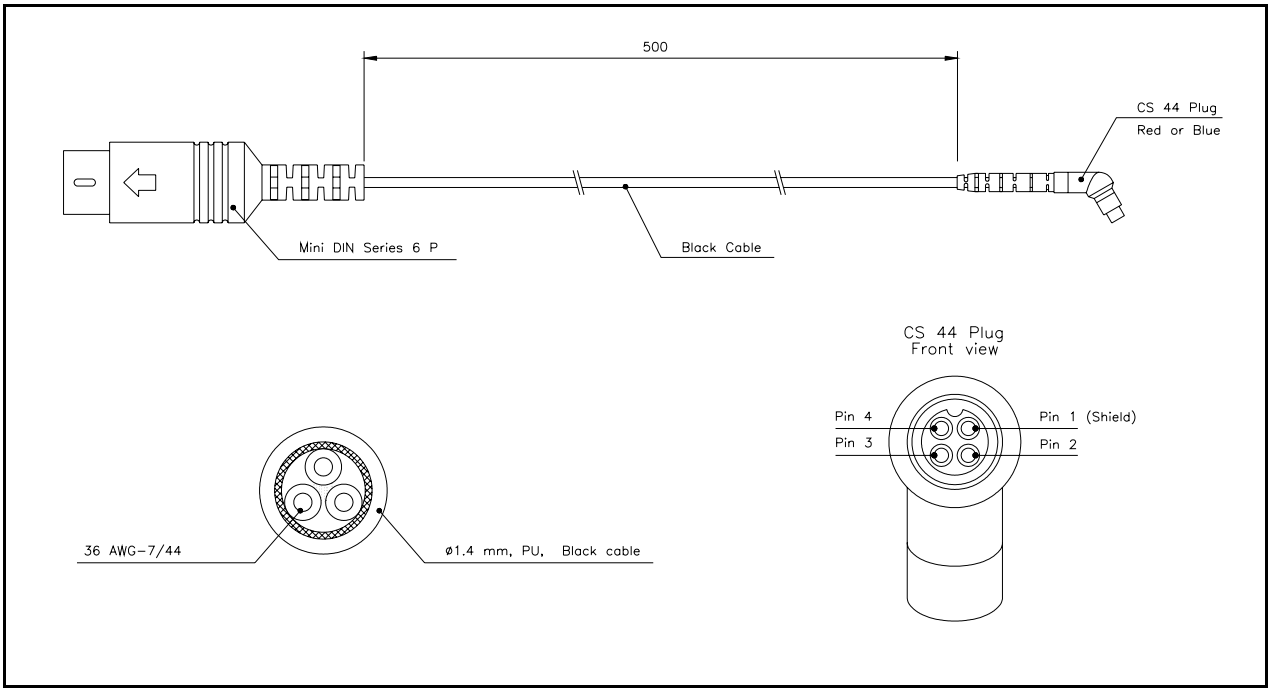


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	2
2	Common ground	1
3	Digital I/O, Analogue audio	3
4	Digital I/O, Programming voltage	4
5	Analogue Audio Output	5
6	Analogue Ground	

NOAHlink Cable #2

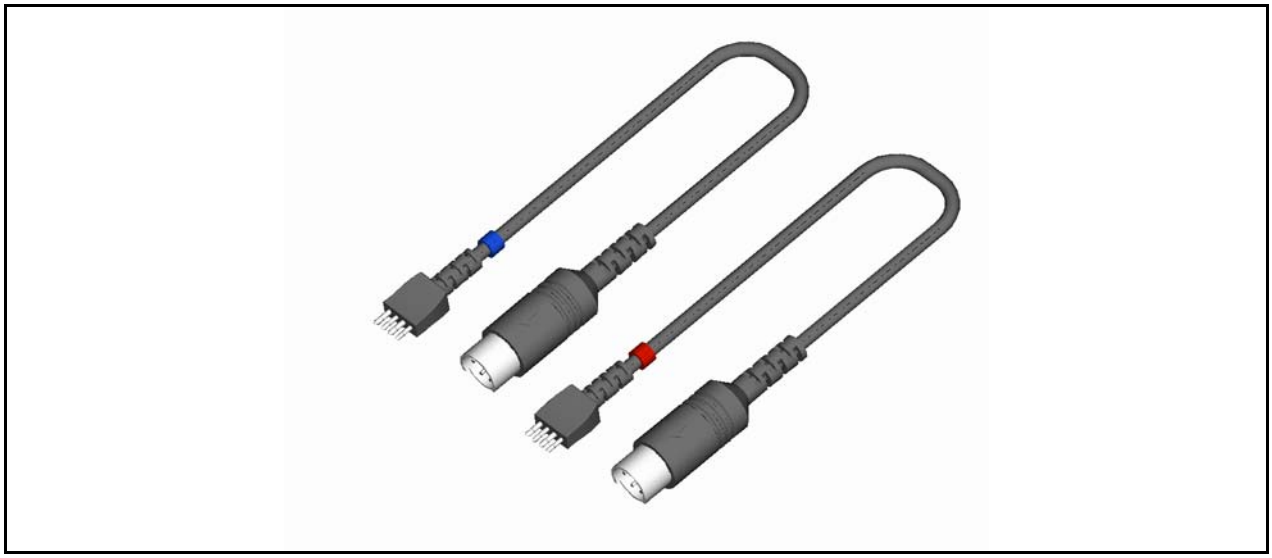
(Marked and wired differently than NOAHlink Cable #4 and #9)

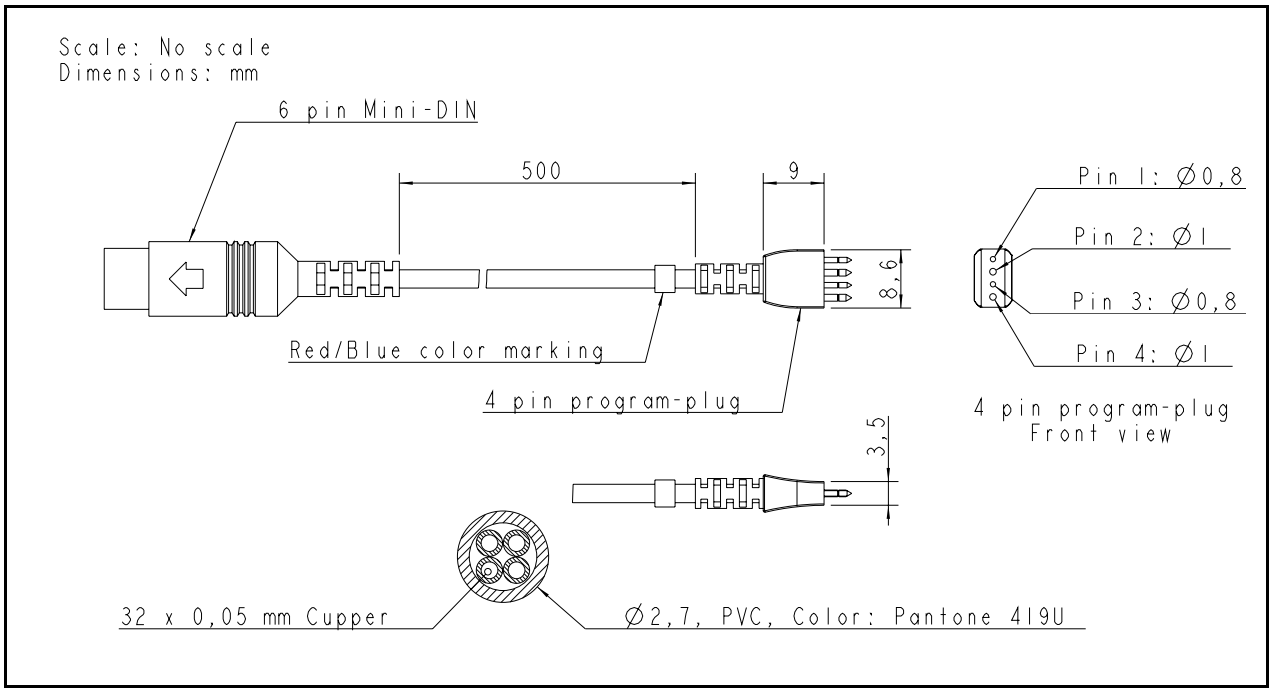




NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	2
2	Common ground	1
3	Digital I/O, Analogue audio	3
4	Digital I/O, Programming voltage	4
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #3

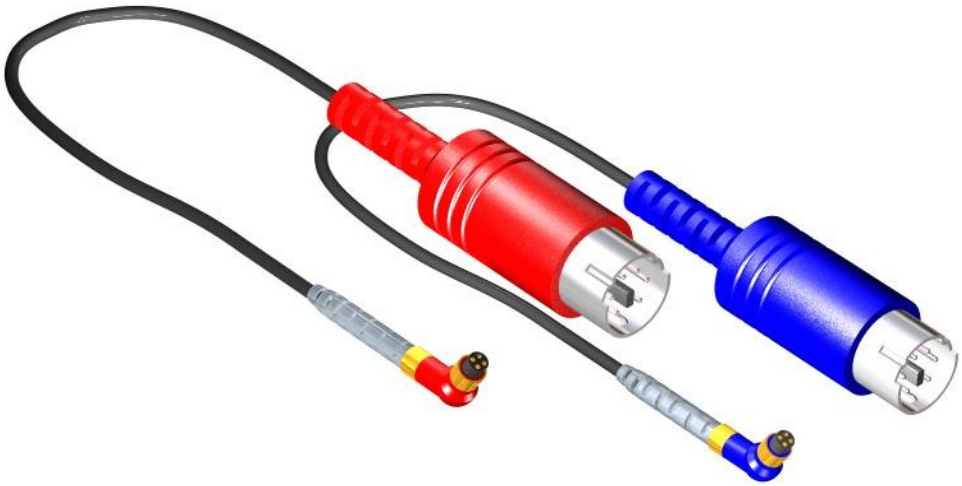


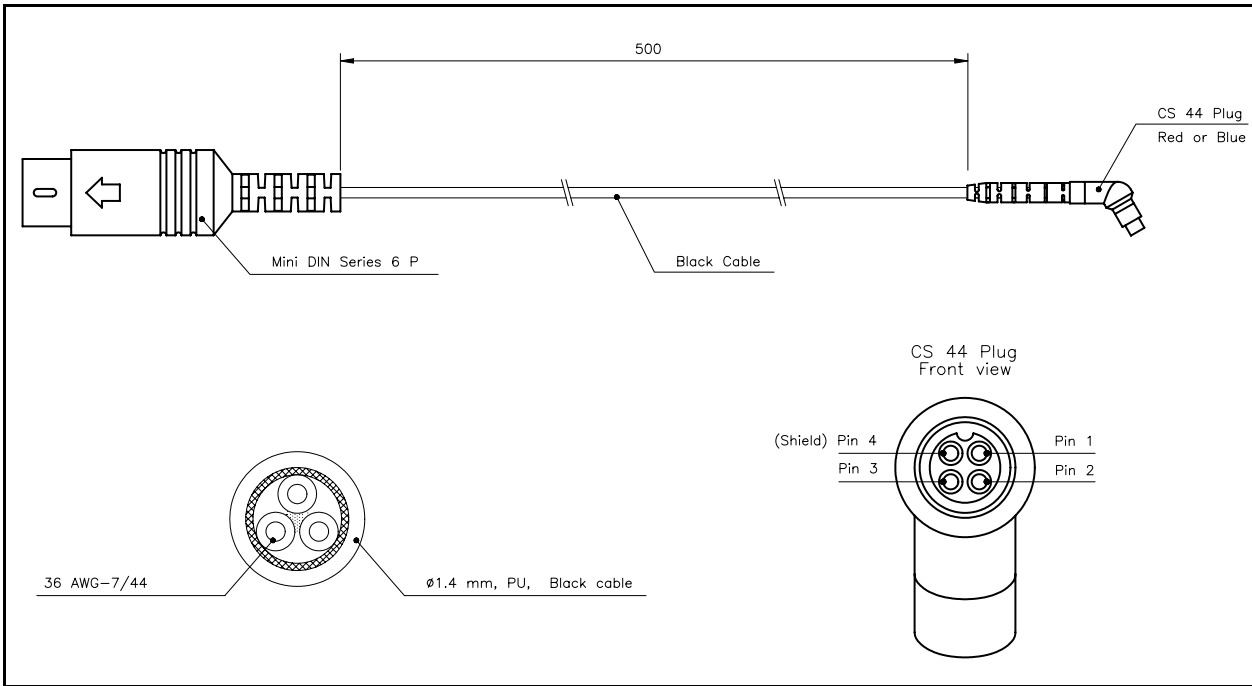


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	1
2	Common ground	4
3	Digital I/O, Analogue audio	2
4	Digital I/O, Programming voltage	3
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #4

(Marked and wired differently than NOAHlink Cable #2 and #9)

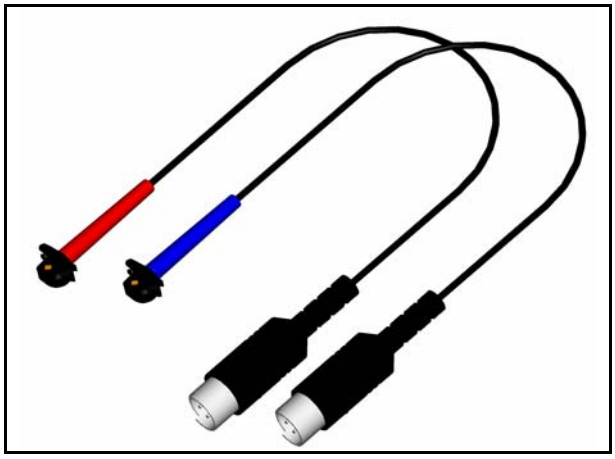


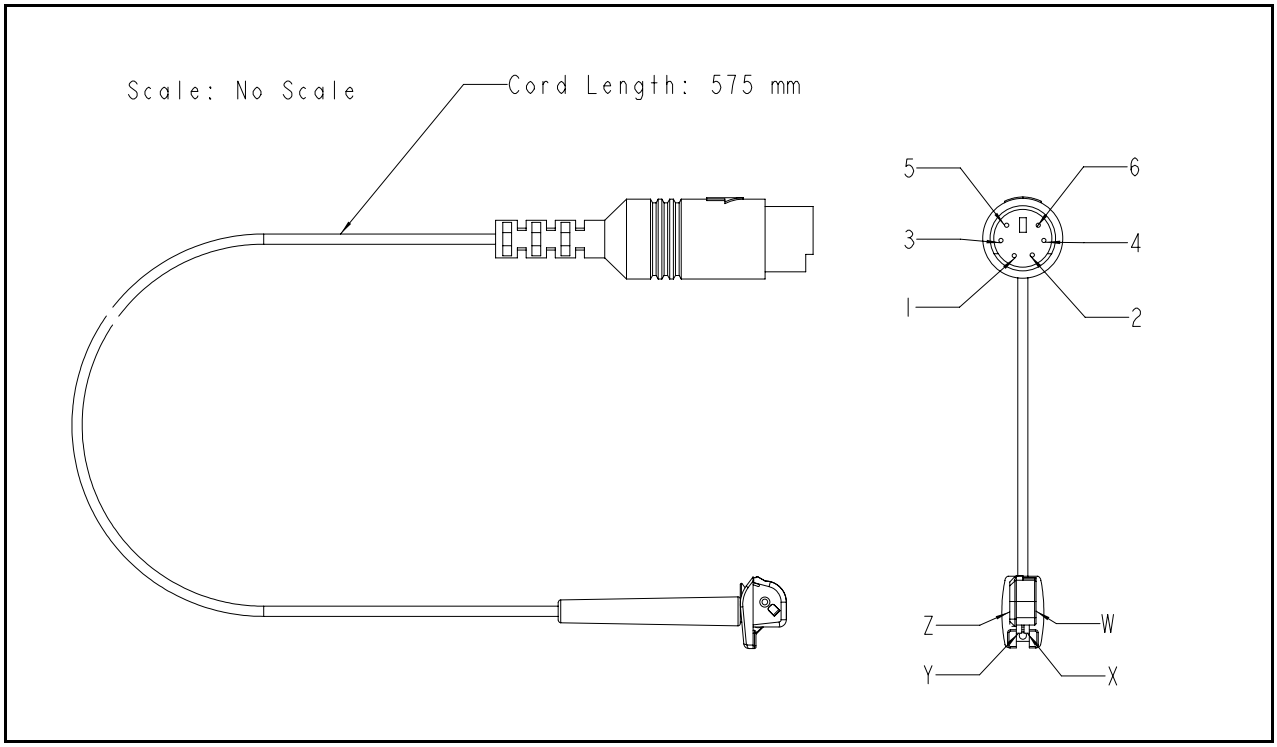


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	2
2	Common ground	4
3	Digital I/O, Analogue audio	1
4	Digital I/O, Programming voltage	3
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #5

Compatible instruments
CIC, CIC+ P-CIC SD-CIC

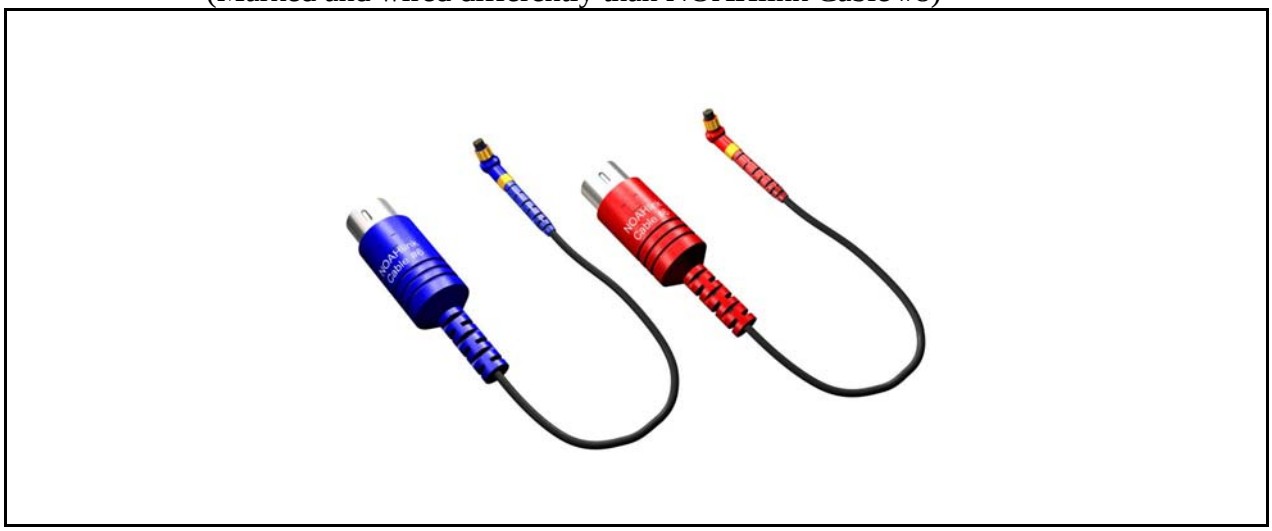


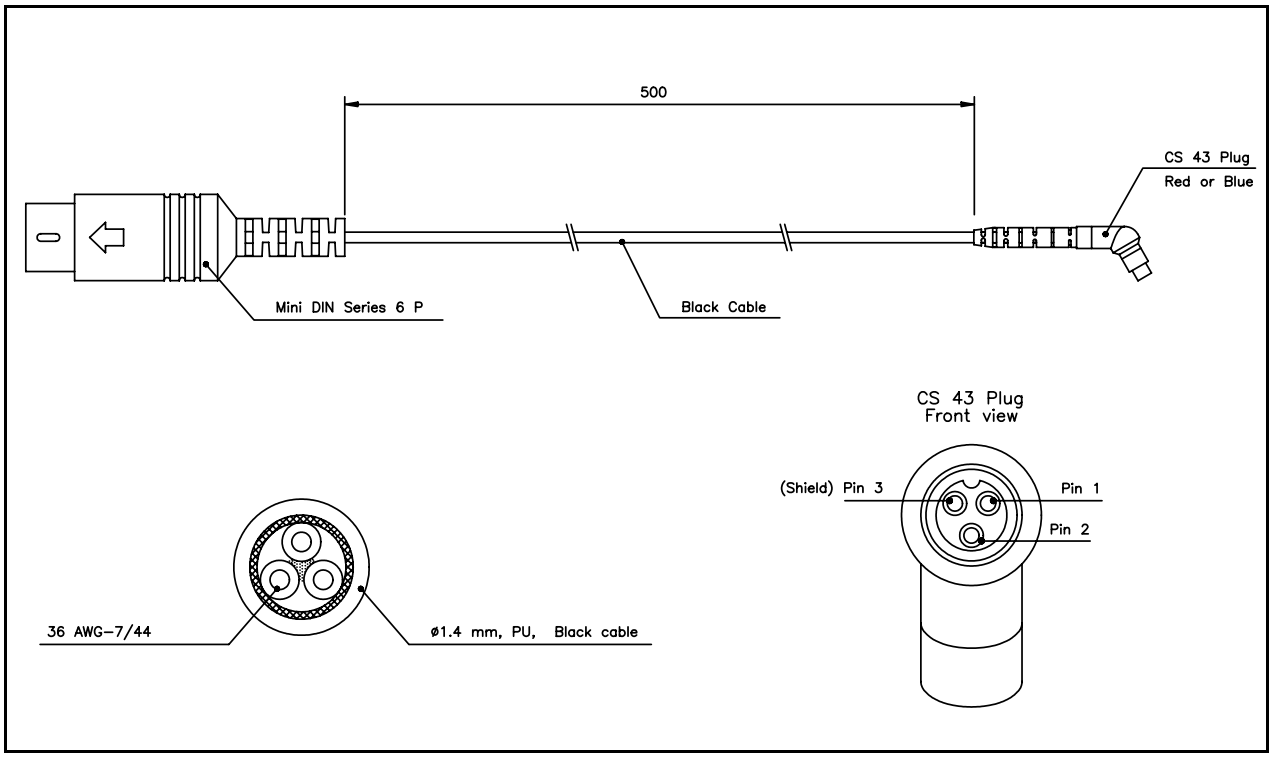


NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable # 5 Pin	Adaptor terminal
1	Supply voltage	1	W
2	Common ground	2	Z
3	Digital I/O Analogue audio	3	X
4	Digital I/O Programming voltage	4	Y
5	Analogue Audio Output		
6	Analogue Ground		

NOAHlink Cable #6

(Marked and wired differently than NOAHlink Cable #8)

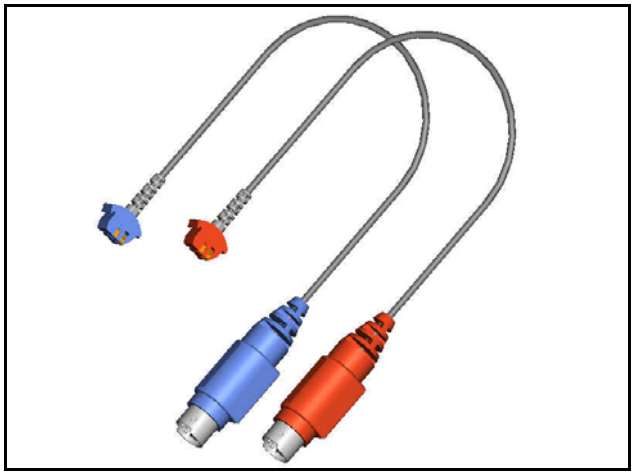


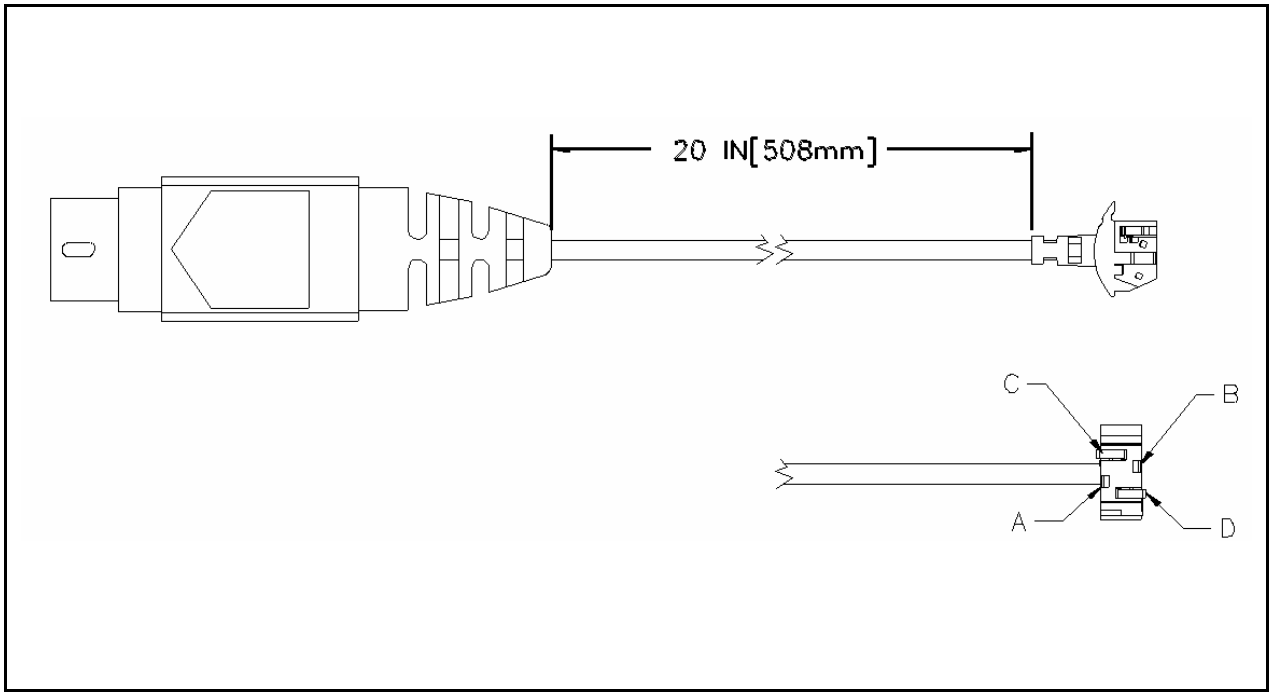


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	1
2	Common ground	3
3	Digital I/O, Analogue audio	
4	Digital I/O, Programming voltage	2
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #7

Compatible instruments
Battery sizes: 10A, 312, 13

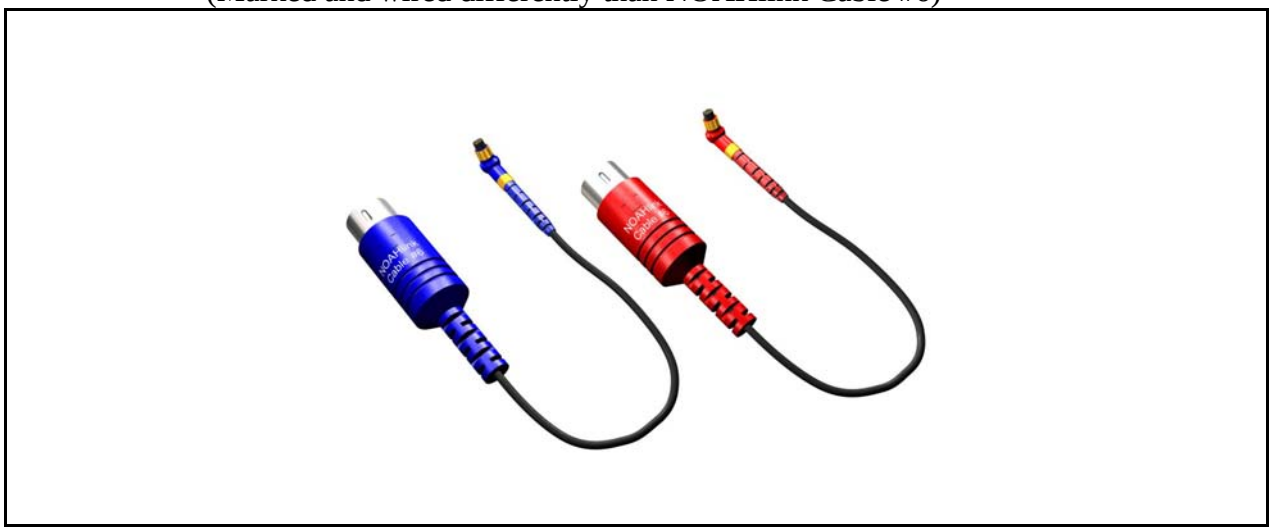


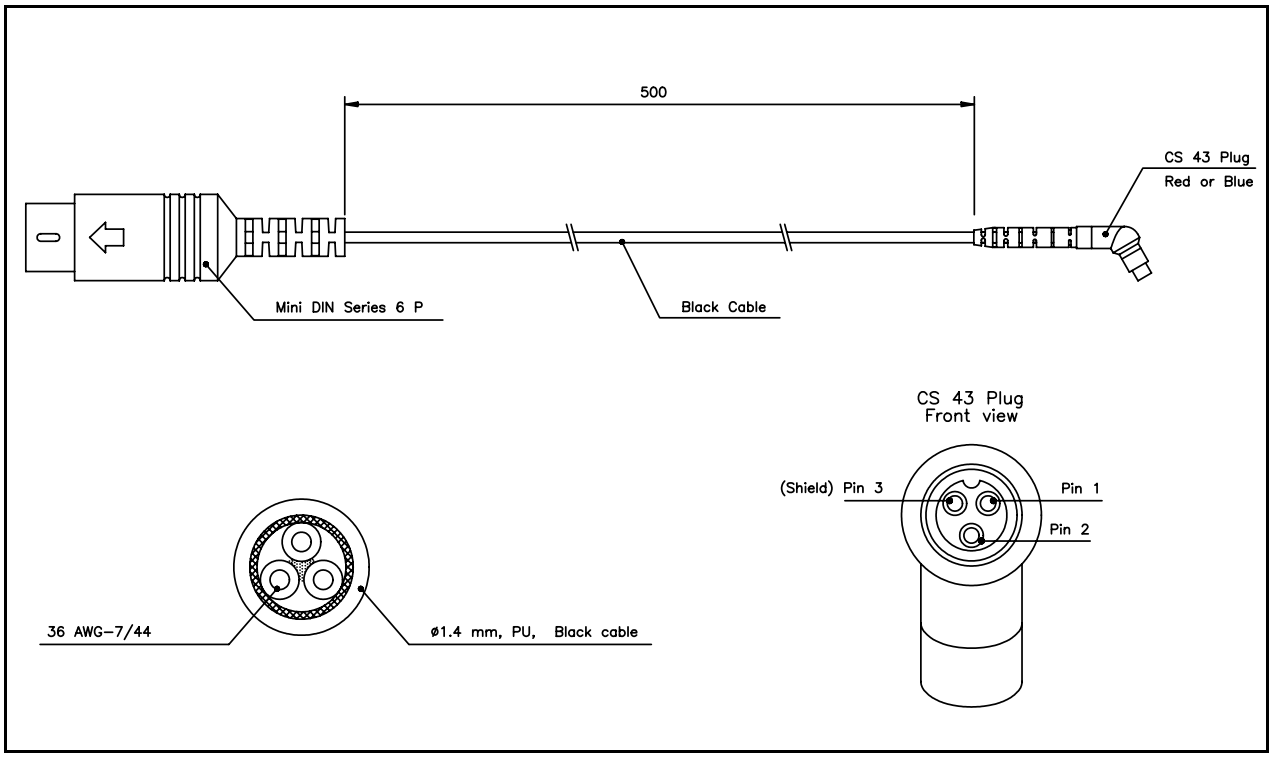


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	A
2	Common ground	B
3	Digital I/O, Analogue audio	C
4	Digital I/O, Programming voltage	D
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #8

(Marked and wired differently than NOAHlink Cable #6)

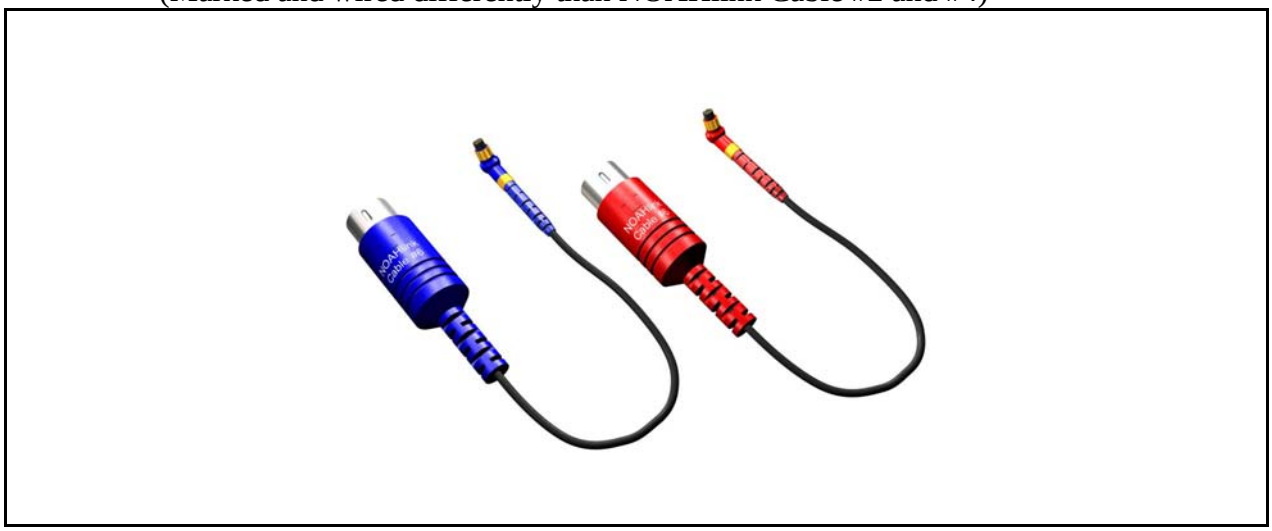


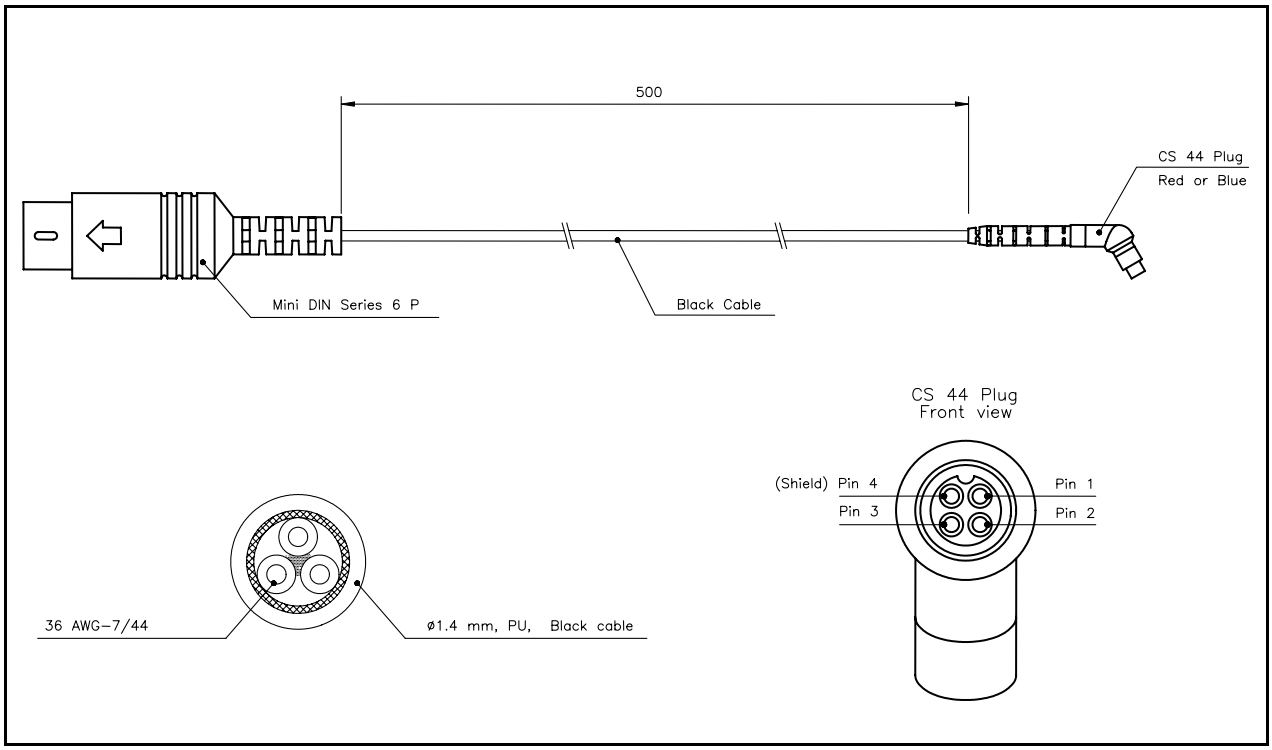


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	
2	Common ground	1
3	Digital I/O, Analogue audio	3
4	Digital I/O, Programming voltage	2
5	Analogue Audio Output	
6	Analogue Ground	

NOAHlink Cable #9

(Marked and wired differently than NOAHlink Cable #2 and #4)

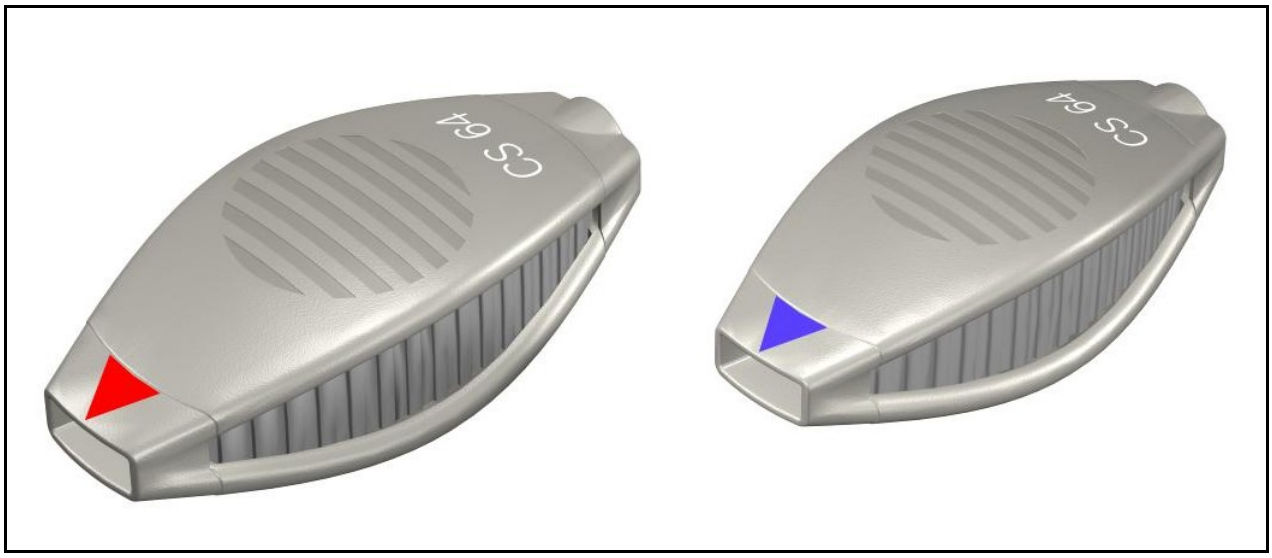


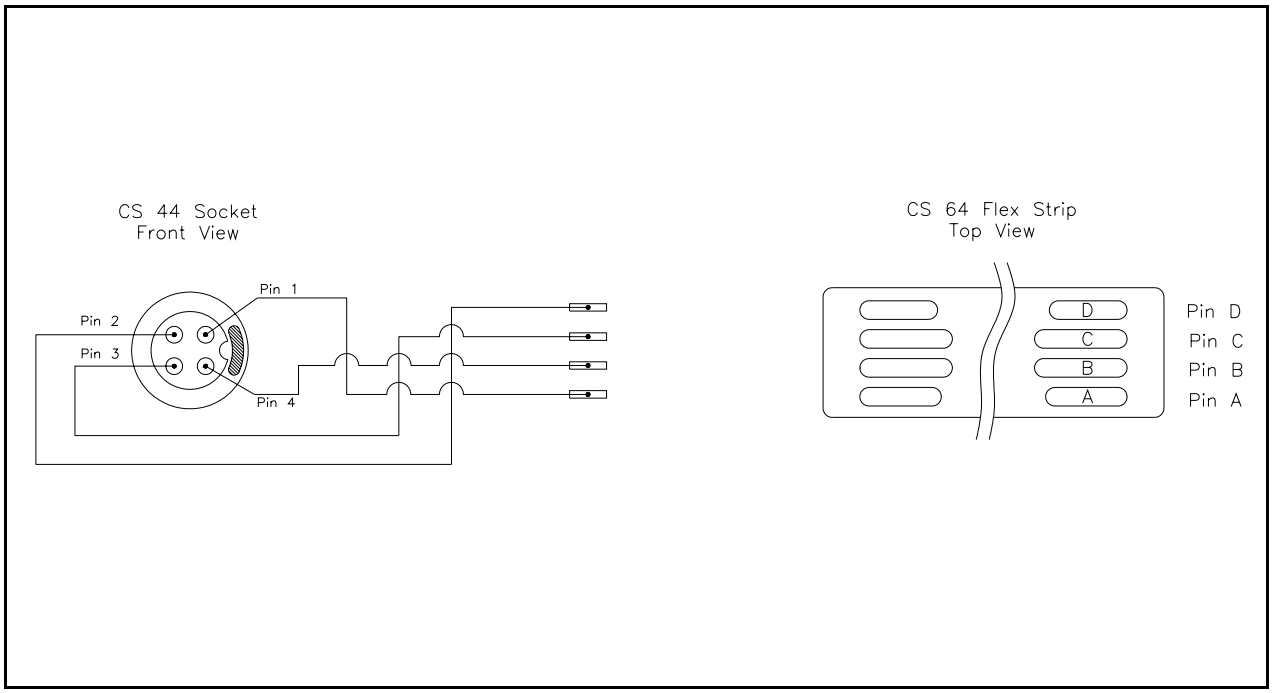


NOAHlink connections		
NOAHlink Pin	Signal	Program-plug Pin
1	Supply voltage	1
2	Common ground	3
3	Digital I/O, Analogue audio	2
4	Digital I/O, Programming voltage	4
5	Analogue Audio Output	
6	Analogue Ground	

3. CURRENTLY SUPPORTED ADAPTORS

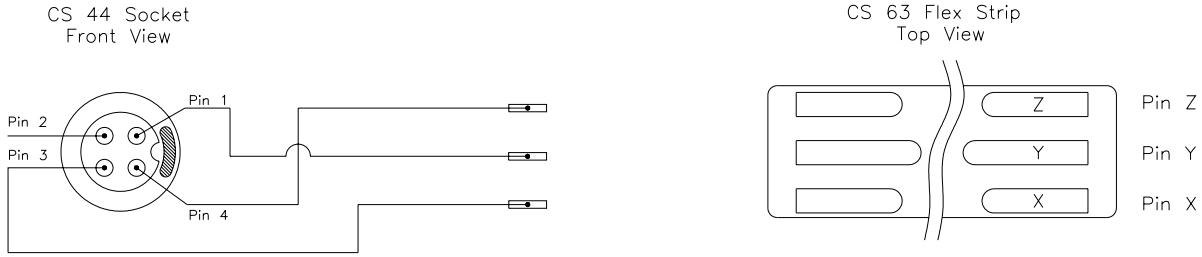
NOAHlink Adaptor #1





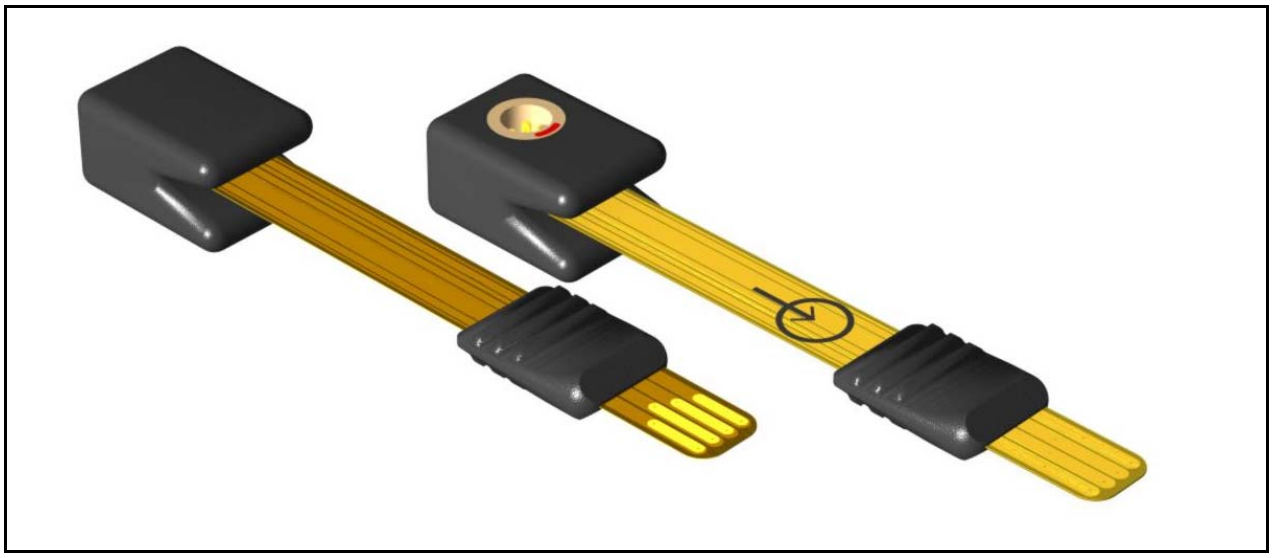
NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable #2 Pin	Flex strip Terminal
1	Supply voltage	2	D
2	Common ground	1	A
3	Digital I/O, Analogue audio	3	C
4	Digital I/O, Programming voltage	4	B
5	Analogue Audio Output		
6	Analogue Ground		

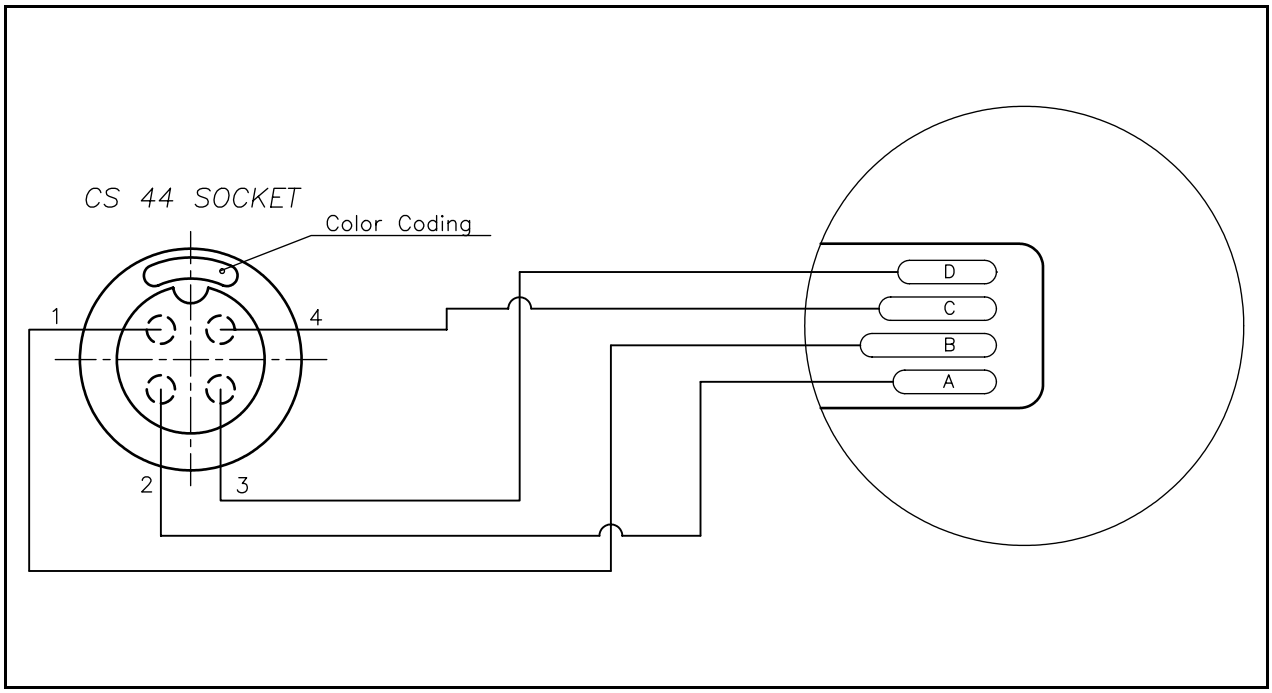
NOAHlink Adaptor #2



NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable #2 Pin	Flex strip Terminal
1	Supply voltage	2	
2	Common ground	1	Y
3	Digital I/O, Analogue audio	3	X
4	Digital I/O, Programming voltage	4	Z
5	Analogue Audio Output		
6	Analogue Ground		

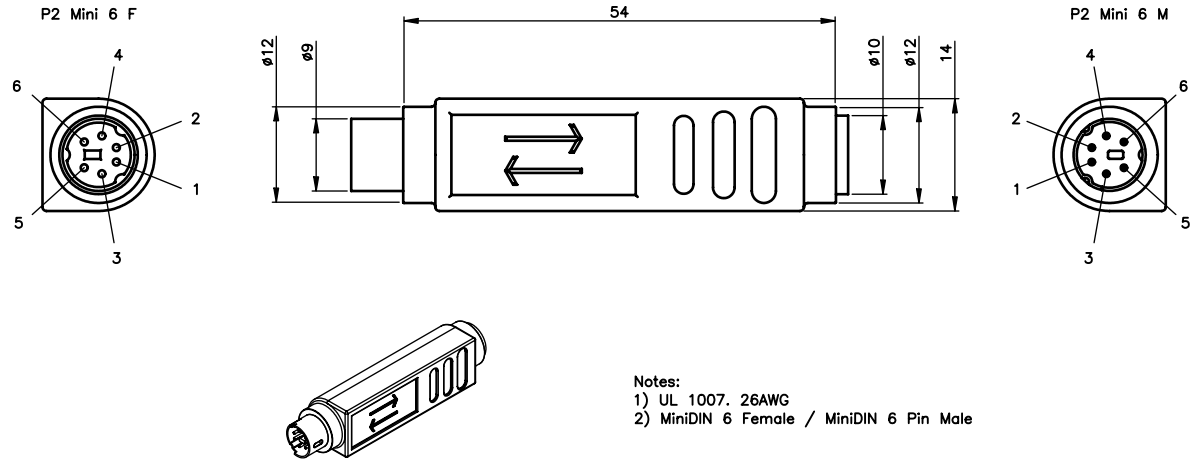
NOAHlink Adaptor #3





NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable #4 Pin	Flex strip Terminal
1	Supply voltage	2	A
2	Common ground	4	C
3	Digital I/O, Analogue audio	1	B
4	Digital I/O, Programming voltage	3	D
5	Analogue Audio Output		
6	Analogue Ground		

NOAHlink Adaptor #4 – Mini-Din 6 Male - Female

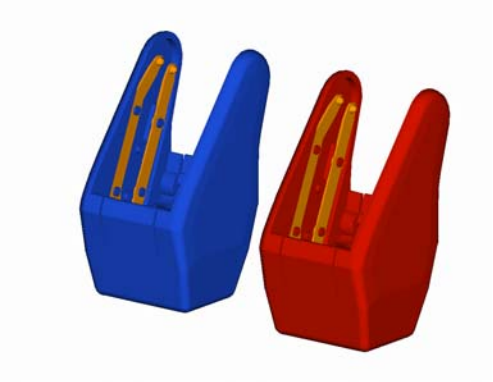


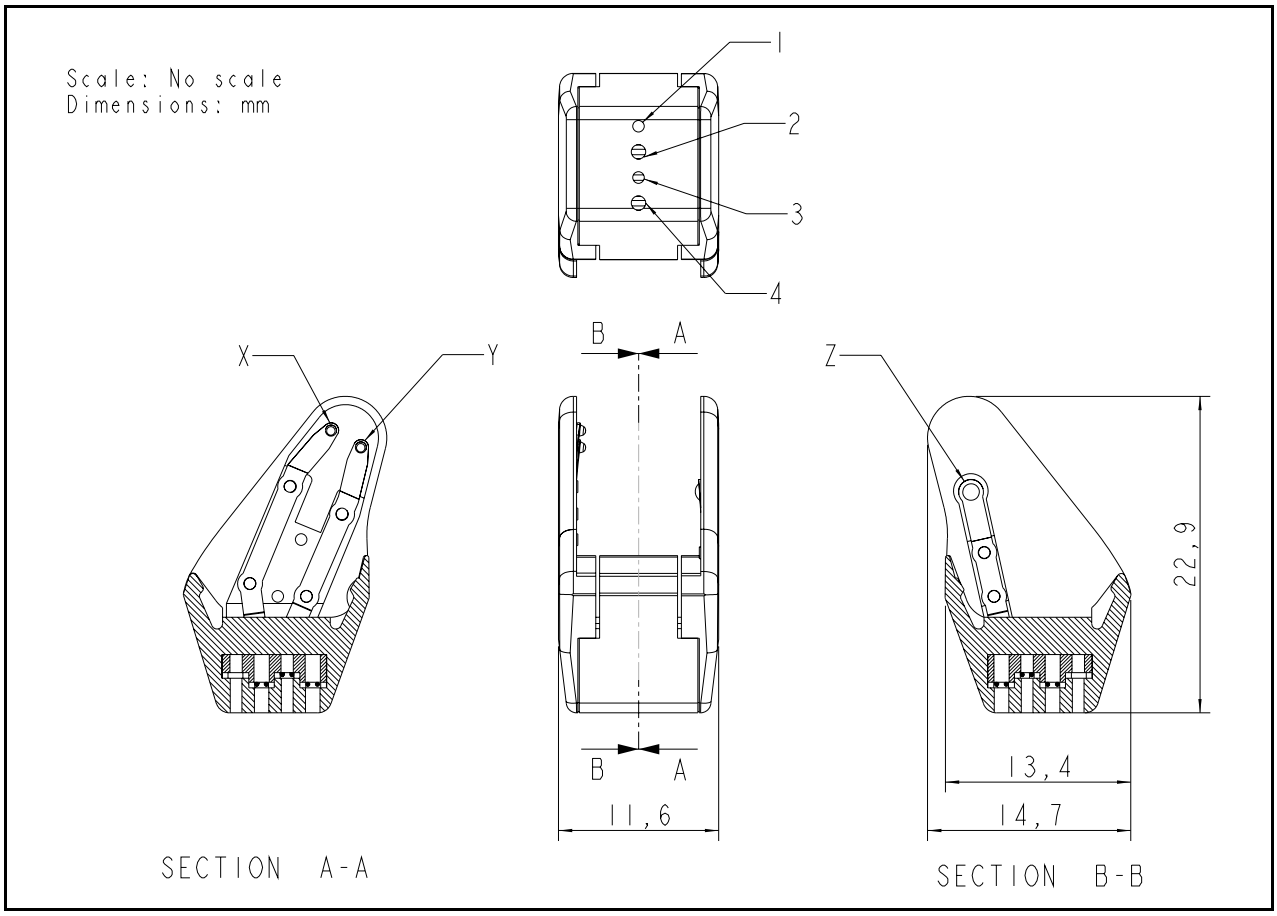
Note: Male Connector Pins 1 and 4 are open connections. Female Connector Pins 5 and 6 are open.

NOAHlink connections		
NOAHlink Pin	Signal	NOAHlink Adaptor #4 Pin
1	Supply voltage	
2	Common ground	3
3	Digital I/O, Analogue audio	2
4	Digital I/O, Programming voltage	
5	Analogue Audio Output	1
6	Analogue Ground	4

Widex BTE adaptor #1

Compatible instruments
C8, C8+
C9, C9+
C18, C18+
C19, C19+
L6, L8, L9, L12

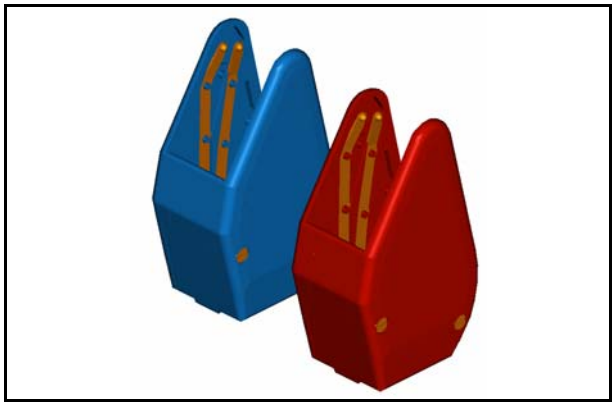


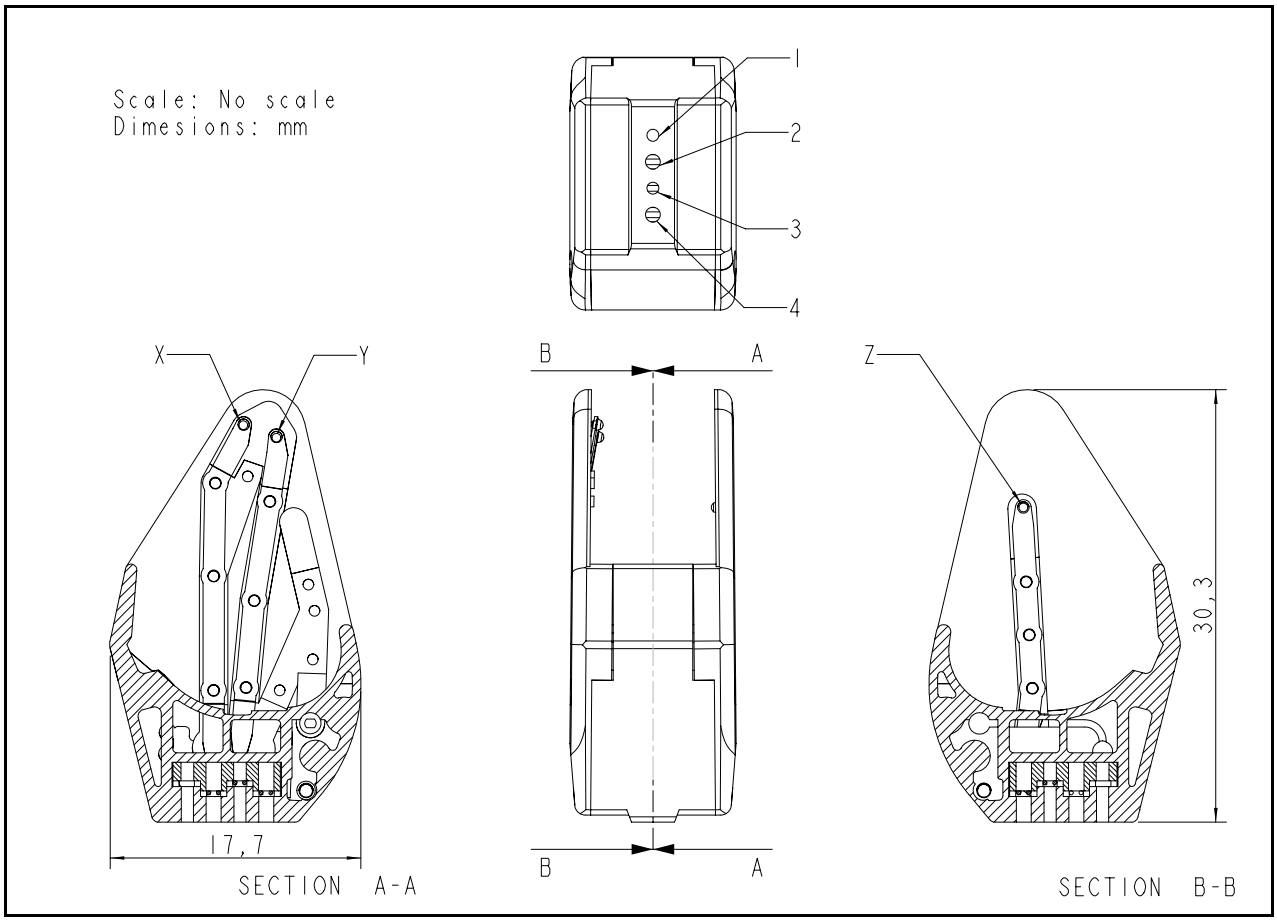


NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable #3 Pin	Adaptor terminal
1	Supply voltage	1	
2	Common ground	4	Z
3	Digital I/O Analogue audio	2	X
4	Digital I/O Programming voltage	3	Y
5	Analogue Audio Output		
6	Analogue Ground		

Widex BTE adaptor #2

Compatible instruments
L26, L32 P37, P38



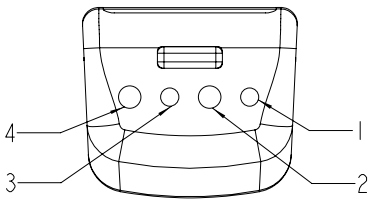


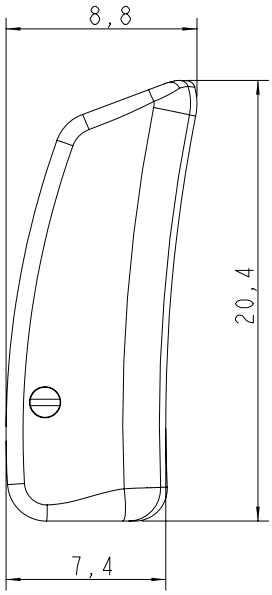
NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable # 3 Pin	Adaptor terminal
1	Supply voltage	1	
2	Common ground	4	Z
3	Digital I/O Analogue audio	2	X
4	Digital I/O Programming voltage	3	Y
5	Analogue Audio Output		
6	Analogue Ground		

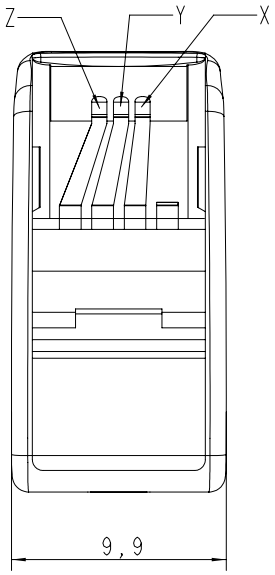
Widex BTE adaptor #3

Compatible instruments
P7, P8 SD-9, SD-9M

Scale: No scale
Dimensions: mm



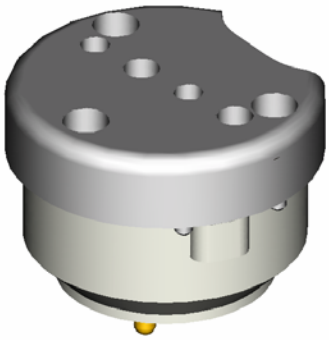




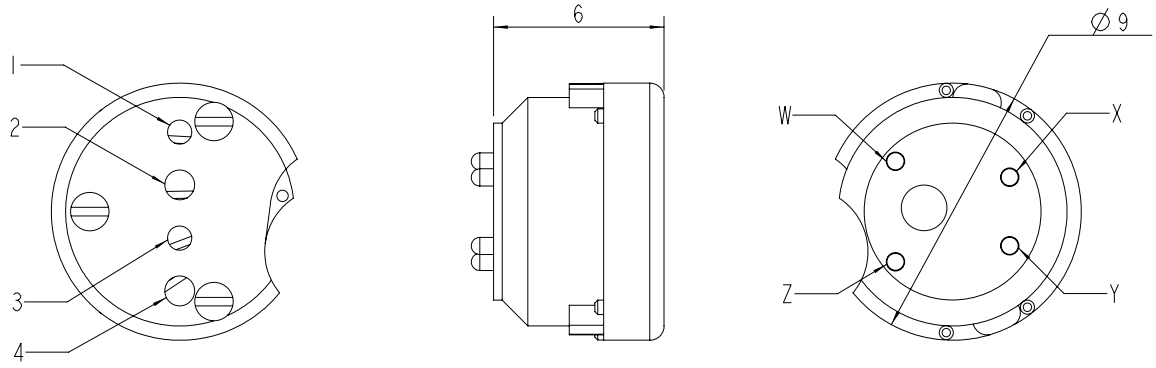
NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable # 3 Pin	Adaptor terminal
1	Supply voltage	1	
2	Common ground	4	Z
3	Digital I/O Analogue audio	2	X
4	Digital I/O Programming voltage	3	Y
5	Analogue Audio Output		
6	Analogue Ground		

Widex ITE adaptor

Compatible instruments
LX CX, CX+ P7X, P8X SD-X, SD-XM



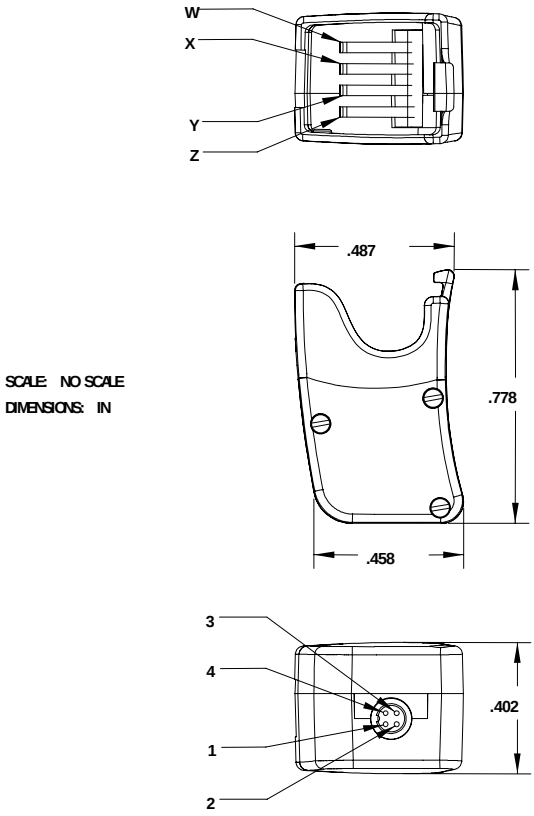
Scale: No scale
Dimensions: mm



NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable # 3 Pin	Adaptor terminal
1	Supply voltage	1	W
2	Common ground	4	Z
3	Digital I/O Analogue audio	2	X
4	Digital I/O Programming voltage	3	Y
5	Analogue Audio Output		
6	Analogue Ground		

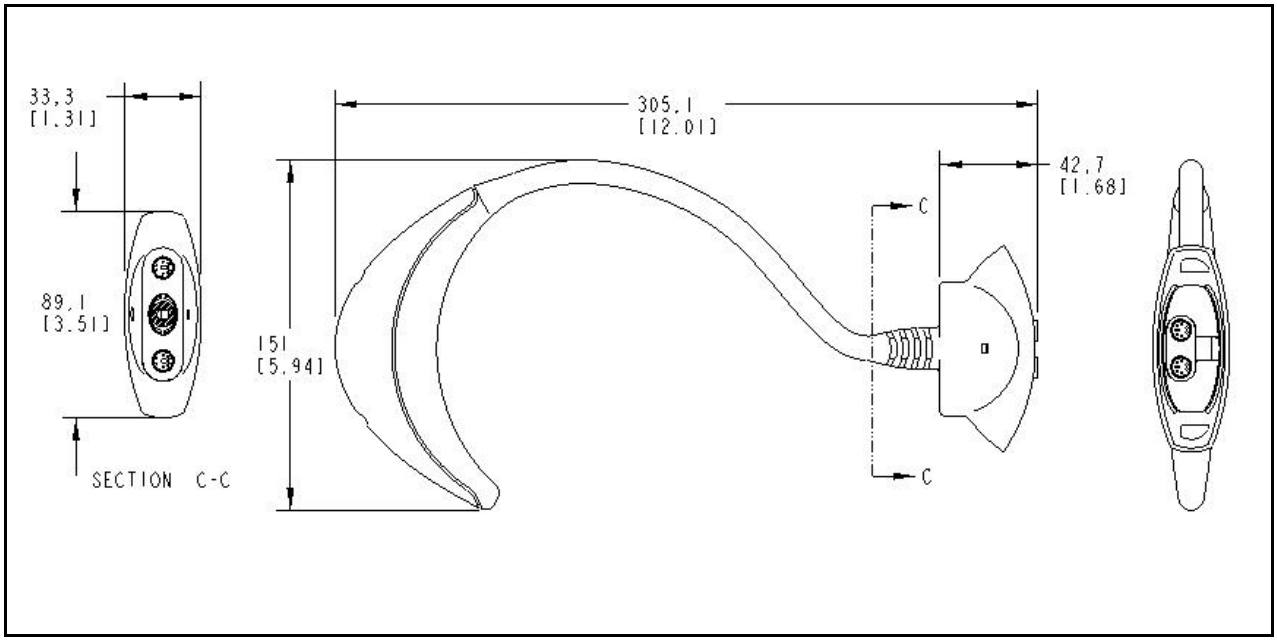
Starkey BTE adaptor

Compatible instruments
J13 Axent



NOAHlink connections			
NOAHlink Pin	Signal	NOAHlink Cable # 4 Pin	Adaptor terminal
1	Supply voltage	2	X
2	Common ground	4	W
3	Digital I/O Analogue audio	1	Z
4	Digital I/O Programming voltage	3	Y
5	Analogue Audio Output		
6	Analogue Ground		

Starkey Pendant adaptor



NOAHlink connections		
NOAHlink Pin	Signal	Starkey's Pendant Accessory Pin
1	Supply voltage	1
2	Common ground	2
3	Digital I/O Analogue audio	3
4	Digital I/O Programming voltage	4
5	Analogue Audio Output	5
6	Analogue Ground	6

4. HEARING INSTRUMENT MANUFACTURER SUPPORT

In this section we have listed the Hearing Instrument Manufacturers who support the currently listed cables and adaptors

Hearing Instrument Manufacturer
Widex
Siemens
GN ReSound
Starkey
Phonak
Bernafon

5. CABLE AND ADATOR SUPPLIERS

In this section we have listed suppliers for the different cables and adaptors mentioned in this catalog.

NOAHlink cable or adaptor #	Manufacture name and type
NOAHlink Cable #1	Deltek – 09P
NOAHlink Cable #1	Sonion – CS45
NOAHlink Cable #2	Deltek – 09P
NOAHlink Cable #2	Sonion – CS44
NOAHlink Cable #3	Widex
NOAHlink Cable #4	Deltek – 09P
NOAHlink Cable #4	Sonion – CS44
NOAHlink Cable #5	Widex – CIC
NOAHlink Cable #6	Deltek – 09P
NOAHlink Cable #6	Sonion – CS43
NOAHlink Cable #7	Phonak
NOAHlink Cable #8	Deltek – 09P
NOAHlink Cable #8	Sonion – CS43
NOAHlink Adaptor #1	Sonion – CS64
NOAHlink Adaptor #2	Sonion – CS63
NOAHlink Adaptor #3	Sonion – CS54
NOAHlink Adaptor #3	Deltek – 9201
NOAHlink Adaptor #4	Starkey
Widex BTE Adaptor #1	Widex
Widex BTE Adaptor #2	Widex
Widex BTE Adaptor #3	Widex
Widex ITE Adaptor	Widex
Starkey BTE Adaptor	Starkey
Starkey Pendant Adaptor	Starkey