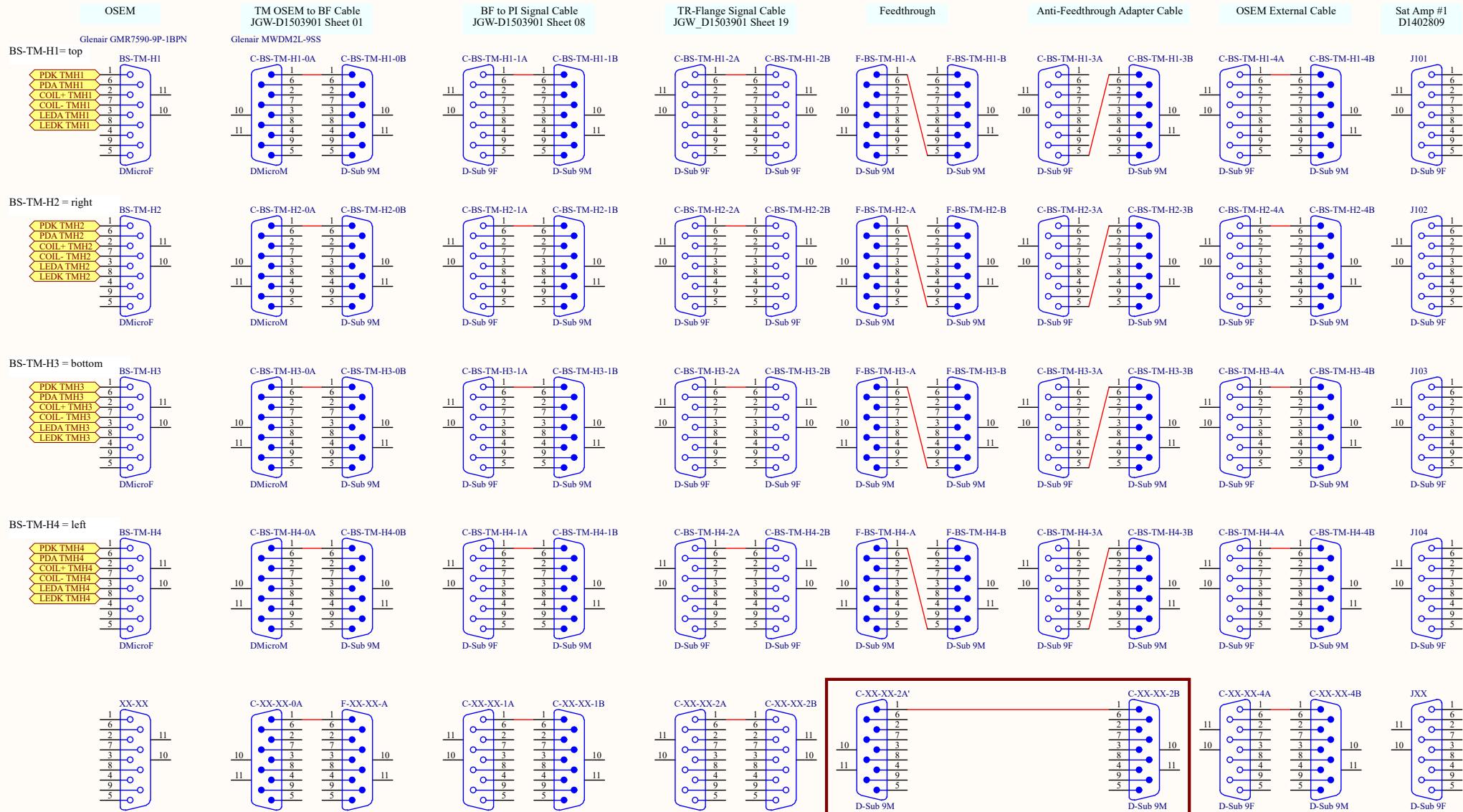


4 Feedthroughs

TM OSEM



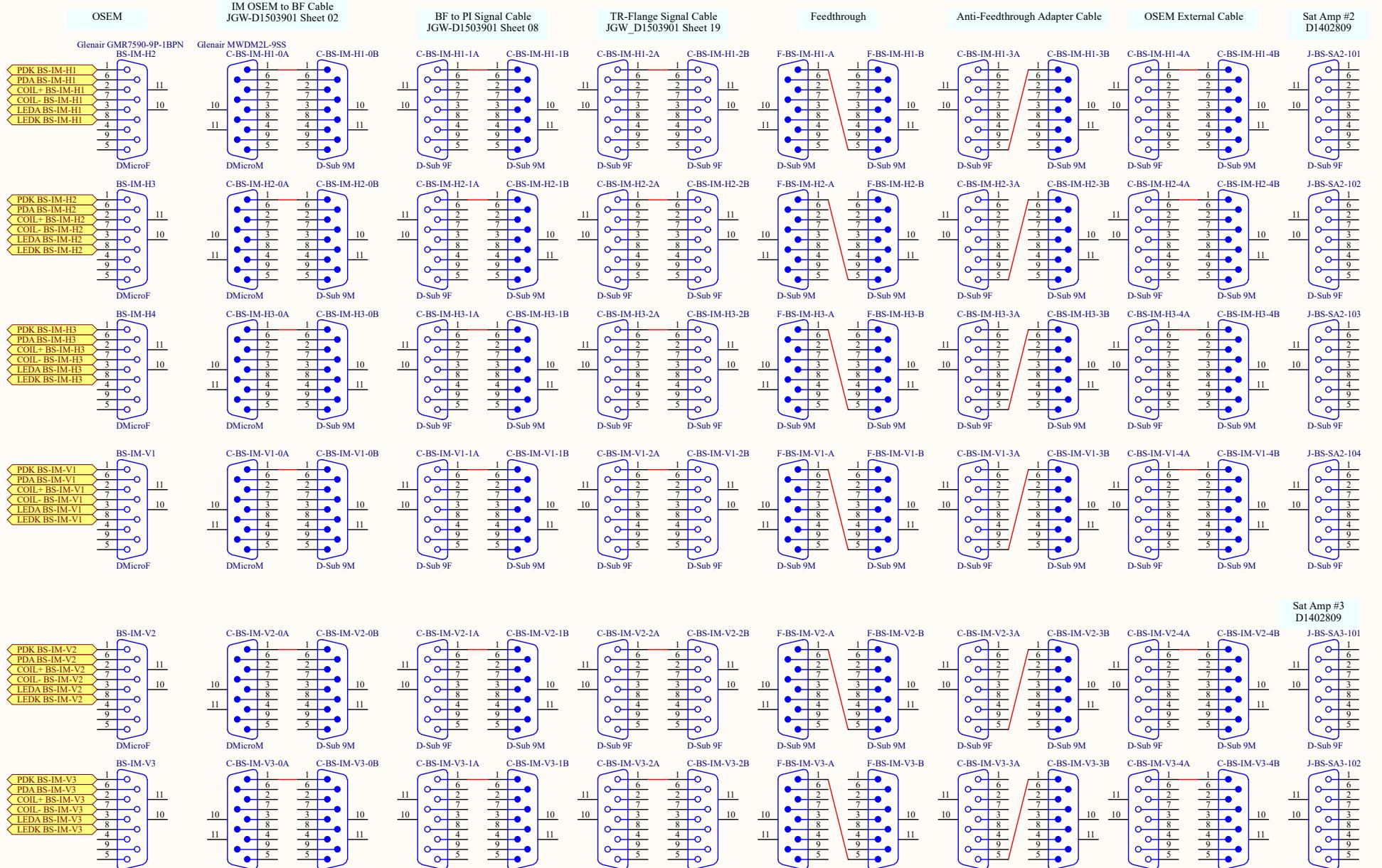
no pin flip, M <=> M,
for use without feedthrough

For testing the suspension outside the vacuum tank,
there should be a supply of plain M-M gender changers
to replace the combination of Feedthrough+Anti-Feedthrough adapter cable.

Title		
BS Suspension Cabling - Test Mass OSEMs		
Size	Number	Revision
A3	JGW-D1503600	v8
Date:	2016/04/12	Sheet 1 of 14
File:	__01 OSEM.SchDoc	Drawn By:

6 Feedthroughs

IM OSEMs

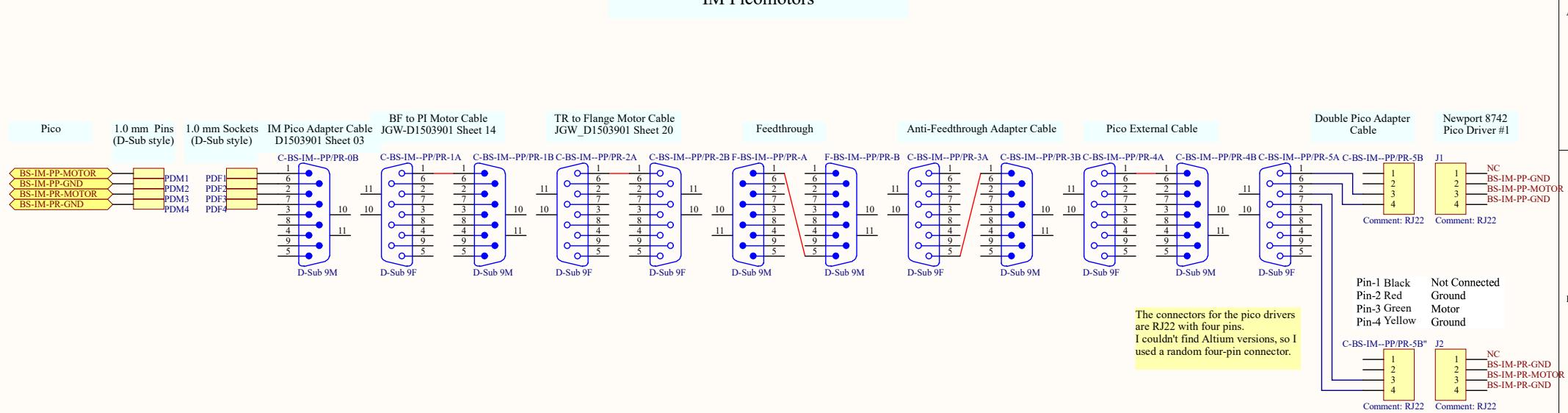


J-BS-SA3-103 and J-BS-SA3-104 not used

Title BS Suspension Cabling - Intermediate Mass OSEMs		
Size A3	Number JGW-D1503600	Revision -v8
Date: 2016/04/12	Sheet 2 of 14	
File: _02\02 IM OSEMs.SchDoc	Drawn By:	

1 Feedthrough

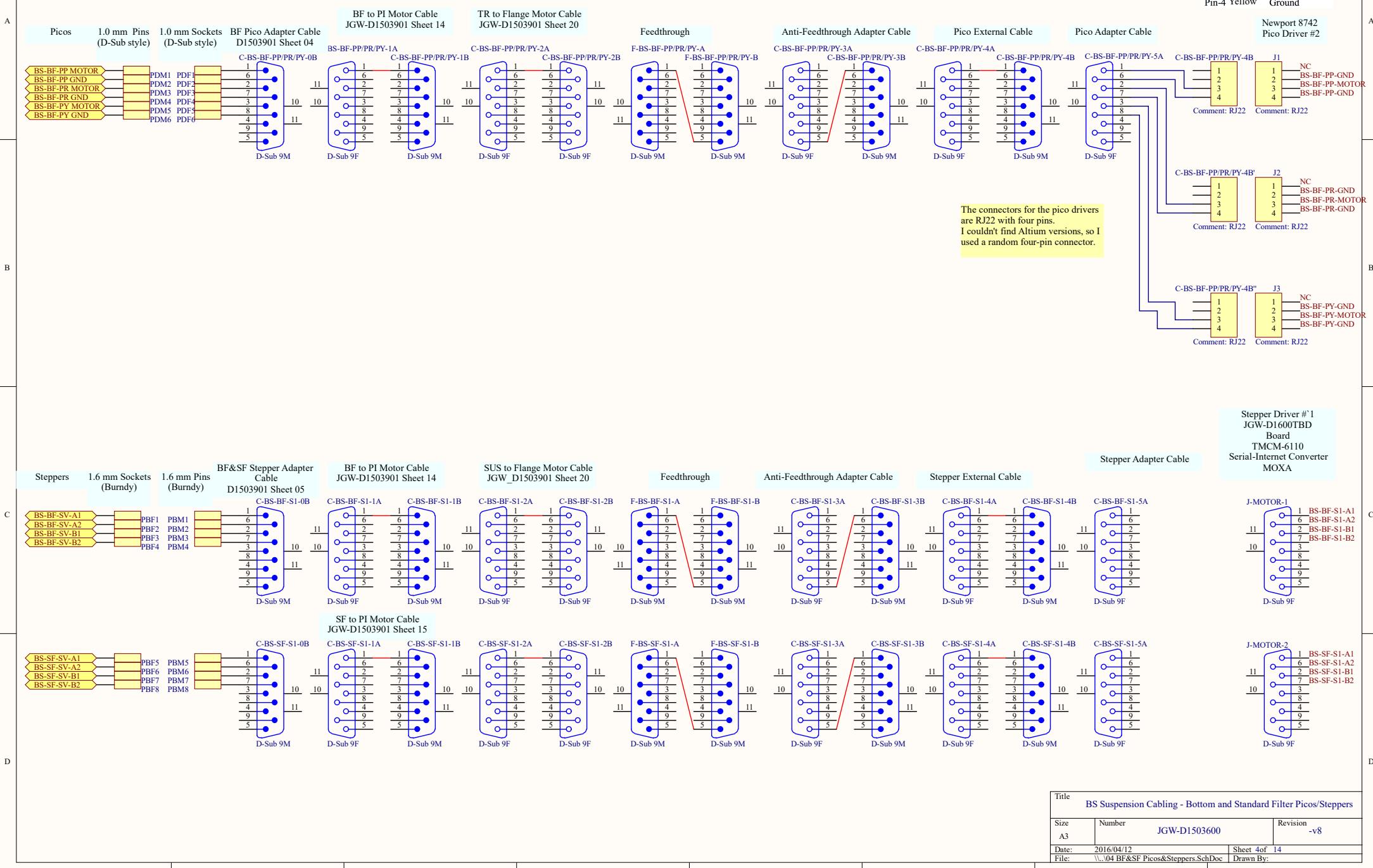
IM Picomotors



Title: BS Suspension Cabling - Intermediate Mass Picos		
Size	Number	Revision
A3	JGW-D1503600	-v8
Date:	2016/04/12	Sheet 3 of 14
File:	\..\03 IM Picos.SchDoc	Drawn By:

BF and SF Picomotors and Steppers

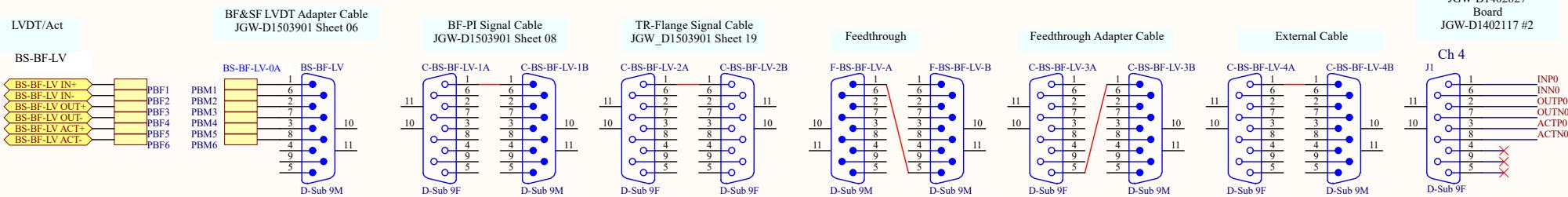
3 Feedthroughs



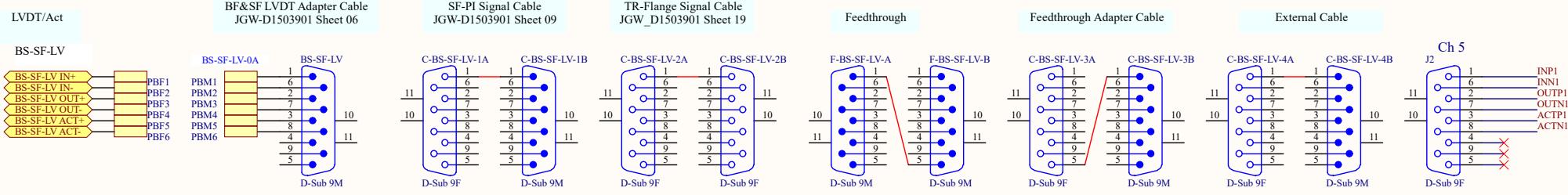
BF and SF LVDT/ACTs

2 Feedthroughs

A



B

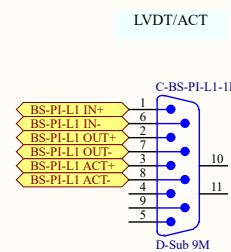


C



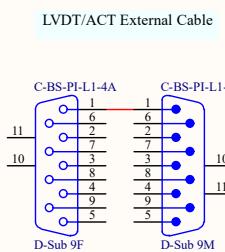
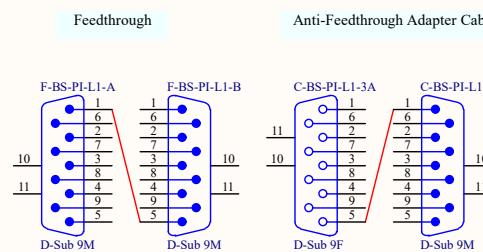
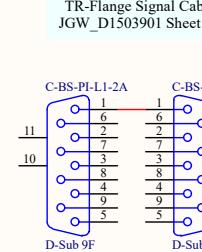
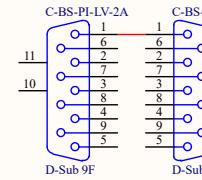
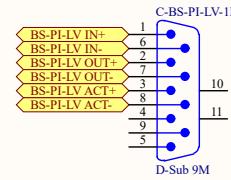
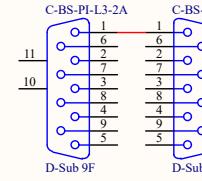
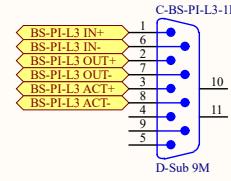
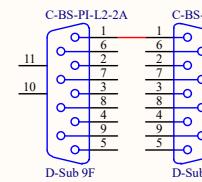
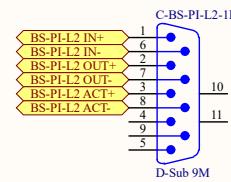
4 Feedthroughs

Preisolator LVDT/ACTs

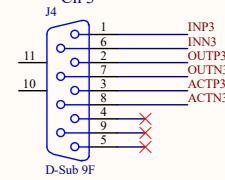
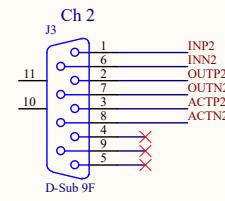
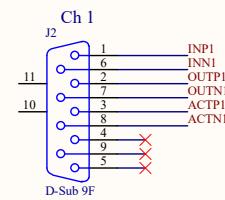
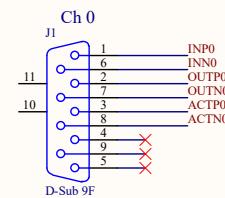


OPTIONAL
Signal Cable Extension
JGW_D1503901 Sheet 10

TR-Flange Signal Cable
JGW_D1503901 Sheet 19



LVDT/ACT Distributor
JGW-D1402124,
Front Panel
JGW-D1402827
Board
JGW-D1402117 #1



LVDT-COIL

Pin	Function
1	LVDT IN P
2	LVDT OUT P
3	COIL P
4	
5	
6	LVDT IN N
7	LVDT OUT N
8	COIL N
9	

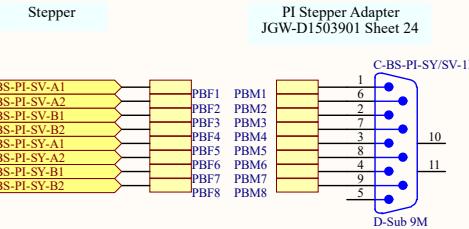
Title: BS Suspension Cabling - Preisolator LVDT/Actuators

Size: A3 Number: JGW-D1503600 Revision: -v8

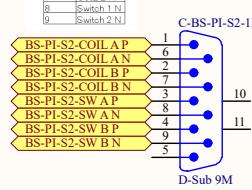
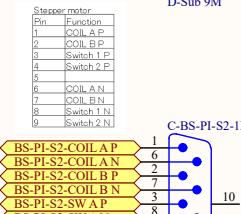
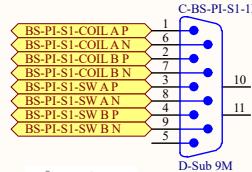
Date: 2016/04/12 Sheet: 6 of 14

File: \\\06 PI LVDTs.SchDoc Drawn By:

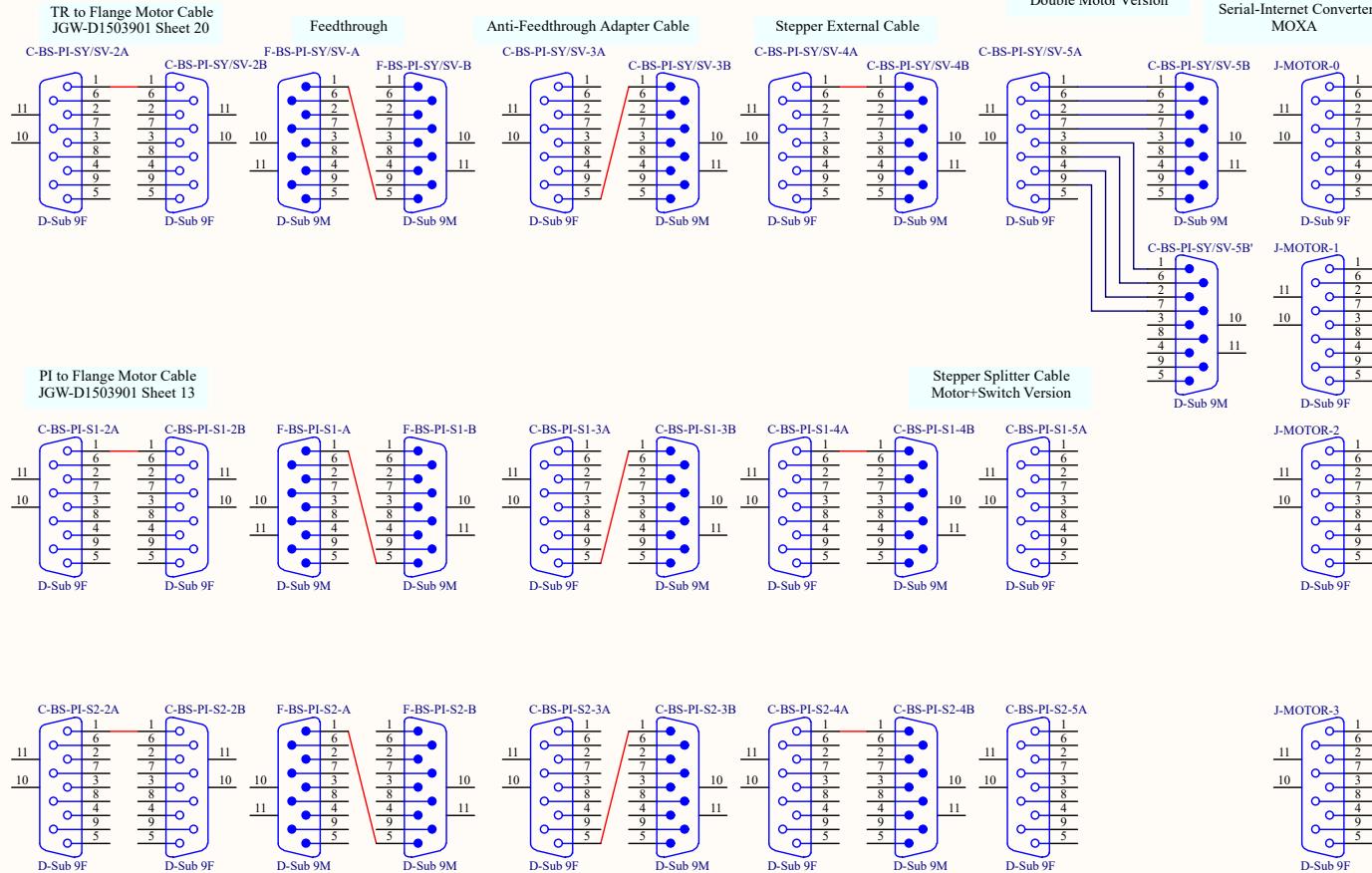
4 Feedthroughs



The horizontal steppers have limit switches and will be wired as indicated by the IP manufacturer.



Preislator Steppers



Title BS Suspension Cabling - Preislator Steppers

Size	Number	Revision
A3	JGW-D1503600	-v8
Date:	2016/04/12	Sheet 7 of 14
File:	\..\07 PI Steppers.SchDoc	Drawn By:

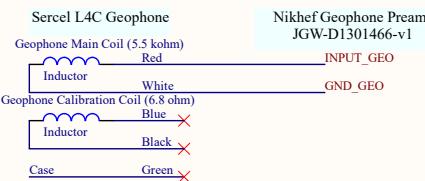
3 Feedthroughs

Preislator Geophones

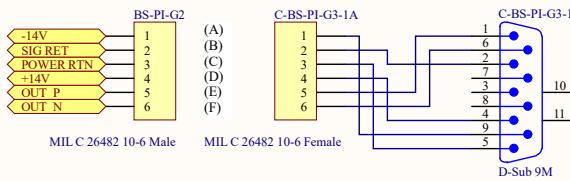
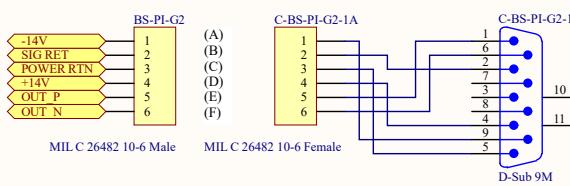
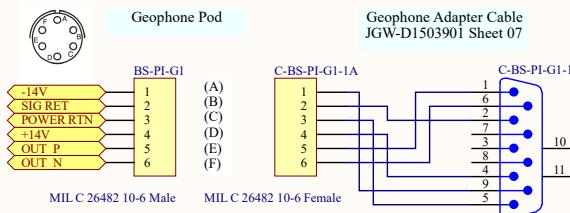
A

Geophone Pod Internal Cabling
(same for all three pods):

Pod #1: geophone L400002322, preamp 15
Pod #2: geophone L400002321, preamp 12
Pod #3: geophone L400002323, preamp 14

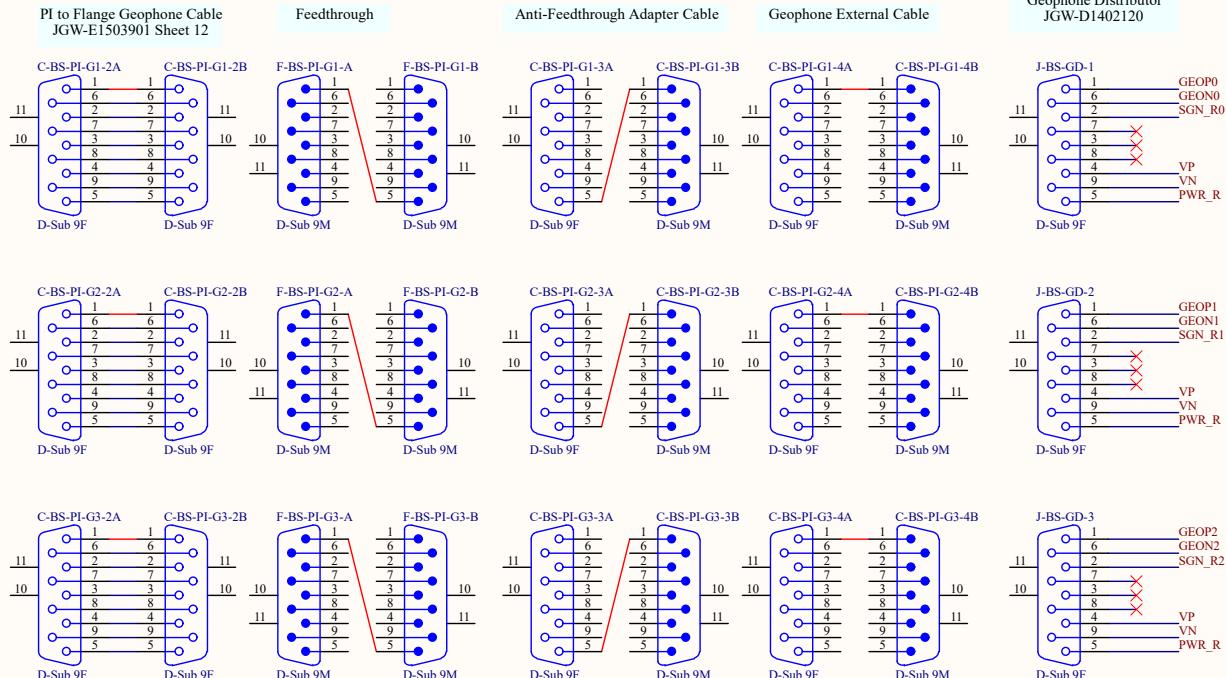


B



Note: The usual TR to Flange Signal Cable (D1503901 Sheet 19) cannot be used here because it doesn't have a conductor on Pin 3!!!

PI to Flange Geophone Cable
JGW-E1503901 Sheet 12

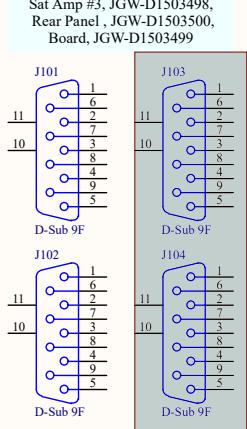
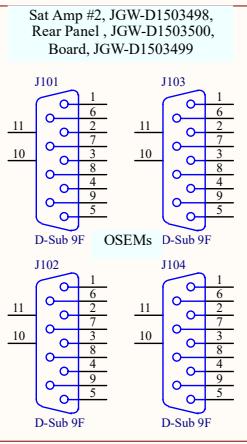
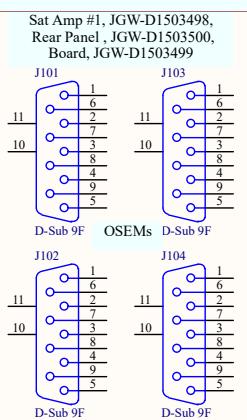


J-BS-GD-4 not used

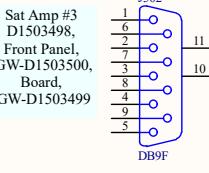
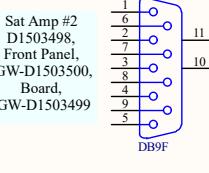
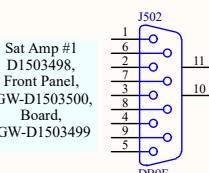
Title BS Suspension Cabling - Preislator Geophones

Size A3	Number JGW-D1503600	Revision -v8
Date: 2016/04/12	Sheet 8 of 14	
File: \\\08 PI Geophones.SchDoc	Drawn By:	

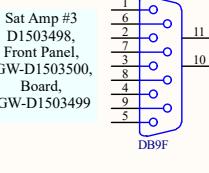
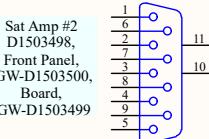
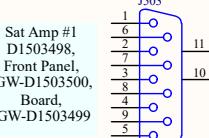
**Sat Amp Inputs from OSEMs
(see Sheets 1&2)**



Sat Amp PD Outputs

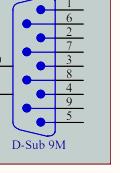
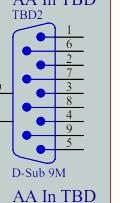
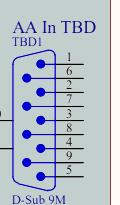
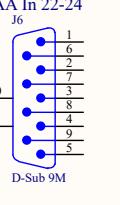
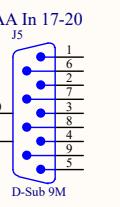
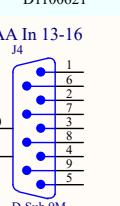


Sat Amp LED Current Monitor Outputs

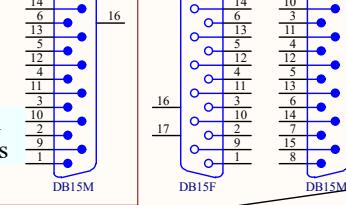
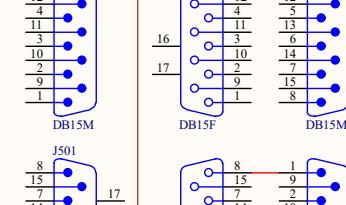
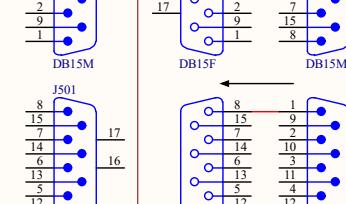
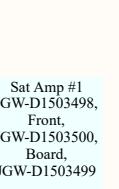


OSEM Sat Amps and Drivers

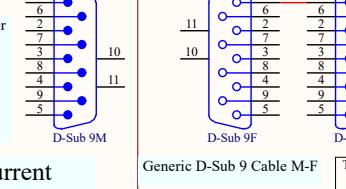
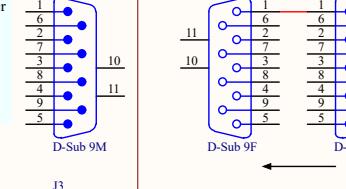
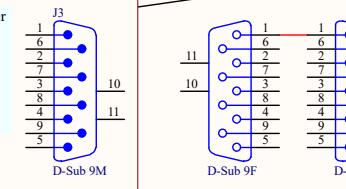
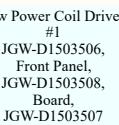
Generic D-Sub 9 Cable M-F



Generic D-Sub 15 Cable M-F



Sat Amp Coil Current Inputs



Coil Current Request Inputs

Low Power Coil Driver #1
JGW-D1503506,
Rear Panel,
JGW-D1503509,
Board,
JGW-D1503507

Low Power Coil Driver #2
JGW-D1503506,
Rear Panel,
JGW-D1503509,
Board,
JGW-D1503507

Low Power Coil Driver #3
JGW-D1503506,
Rear Panel,
JGW-D1503509,
Board,
JGW-D1503507

AI Chassis #1
D1101521

AI Out 1-4
J1
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

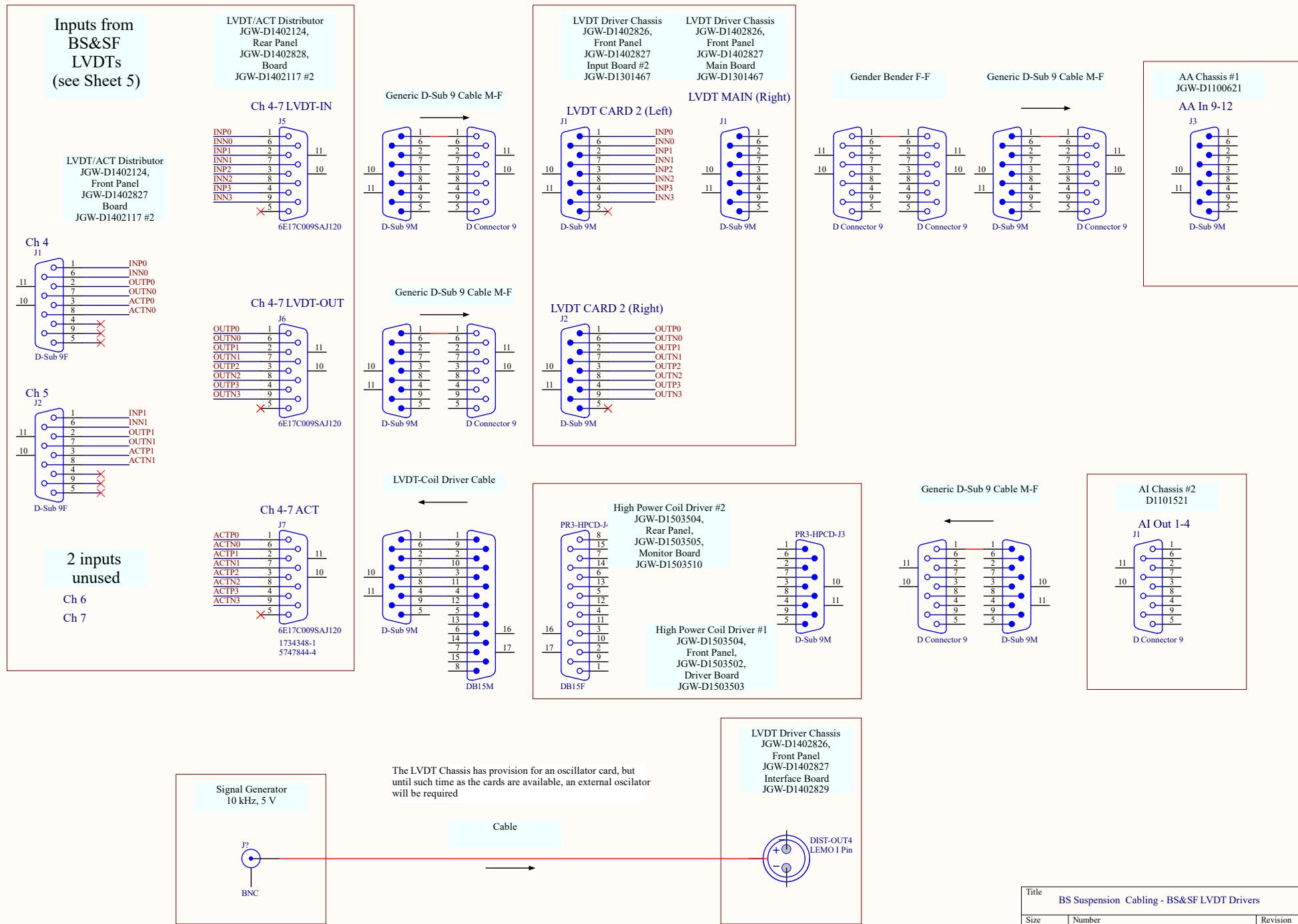
AI Out 5-8
J2
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

AI Out 9-12
J3
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Title BS Suspension Cabling - OSEM Sat Amps & Drivers
Size A3 **Number** JGW-D1503600 **Revision** -v8

Date 2016/04/12 **Sheet** 9 of 14
File \\\09 Sat Amps & Coil Drivers.SchDoc **Drawn By**

BS&SF LVDT Drivers

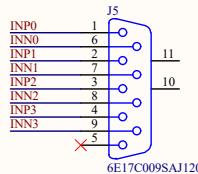


**Inputs from PI
LVDTs
(see Sheet 6)**

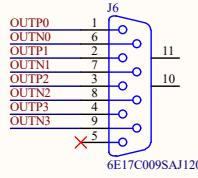
LVDT/ACT Distributor
JGW-D1402124,
Rear Panel
JGW-D1402828,
Board
JGW-D1402117 #1

LVDT/ACT Distributor
JGW-D1402124,
Front Panel
JGW-D1402827
Board
JGW-D1402117 #1

Ch 0-3 LVDT-IN



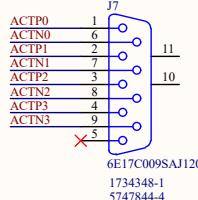
Ch 0-3 LVDT-OUT



Ch 2

J3
INP2
INN2
OUTP2
OUTN2
ACTP2
ACTN2
D-Sub 9F

Ch 0-3 ACT



Ch 3

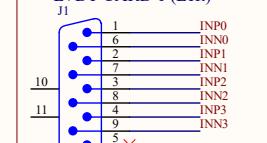
J4
INP3
INN3
OUTP3
OUTN3
ACTP3
ACTN3
D-Sub 9F

PI LVDT Drivers

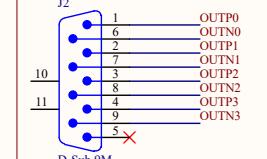
LVDT Driver Chassis
JGW-D1402826,
Front Panel
JGW-D1402827
Input Board #1
JGW-D1301467

LVDT Driver Chassis
JGW-D1402826,
Front Panel
JGW-D1402827
Main Board
JGW-D1301467

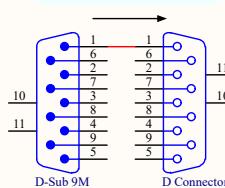
LVDT CARD 1 (Left)



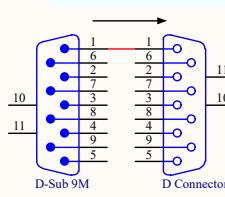
LVDT CARD 1 (Right)



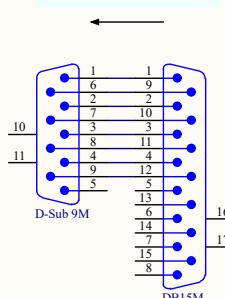
Generic D-Sub 9 Cable M-F



Generic D-Sub 9 Cable M-F



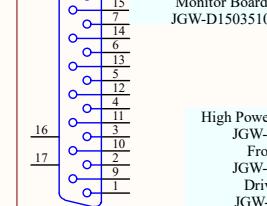
LVDT-Coil Driver Cable



High Power Coil Driver #1
JGW-D1503504,
Rear Panel,
JGW-D1503505,
Monitor Board
JGW-D1503510

High Power Coil Driver #1
JGW-D1503504,
Front Panel,
JGW-D1503502,
Driver Board
JGW-D1503503

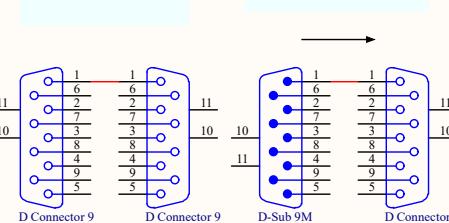
High Power Coil Driver #1



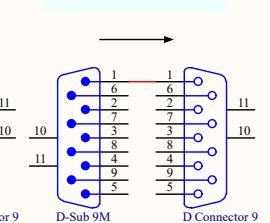
High Power Coil Driver #1



Gender Bender F-F

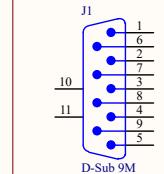


Generic D-Sub 9 Cable M-F

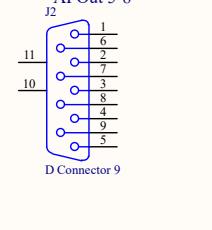


AA Chassis #1
JGW-D1100621

AA In 1-4

AI Chassis #2
DI101521

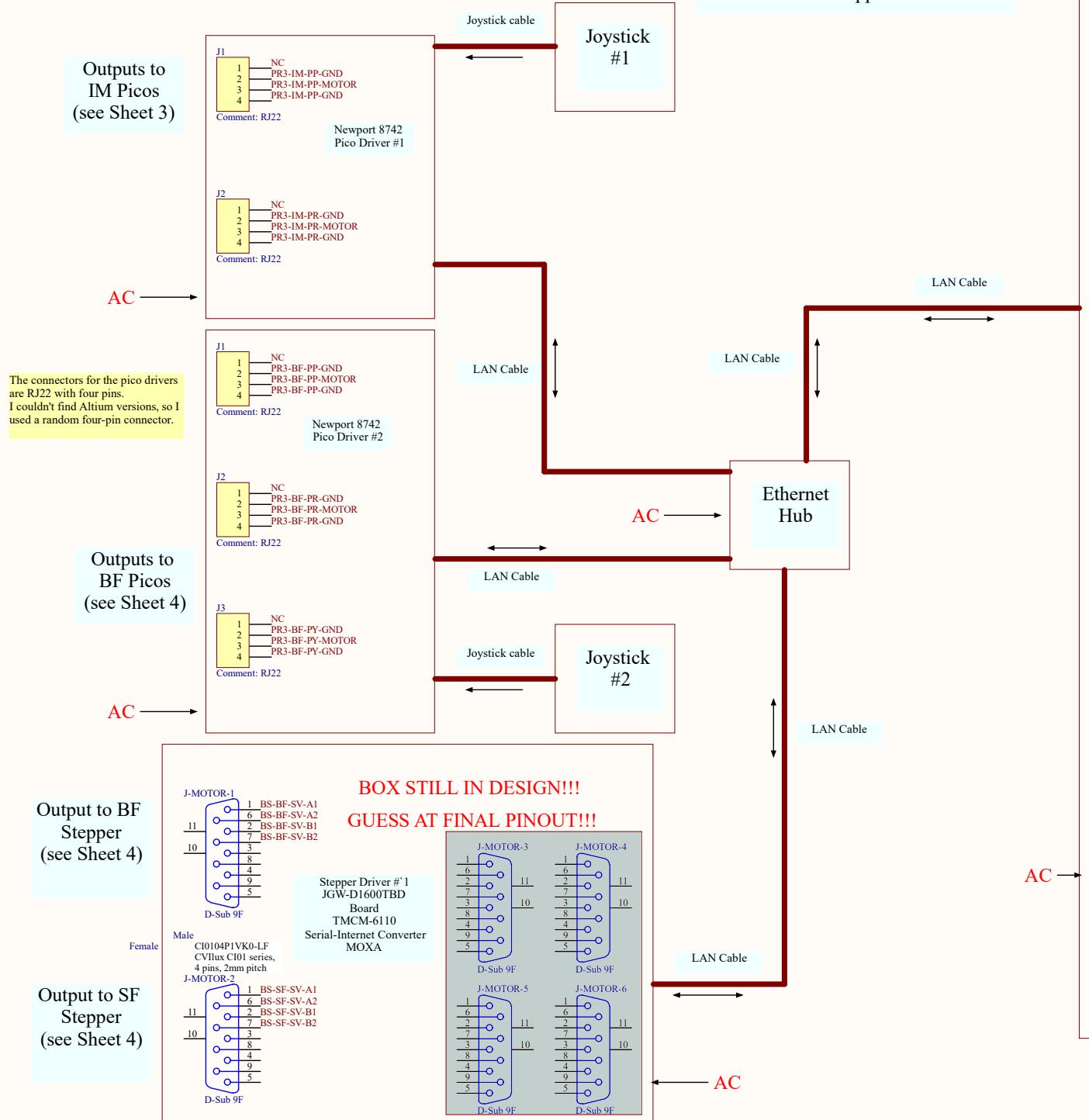
AI Out 5-8



Title: BS Suspension Cabling - PI LVDT Drivers

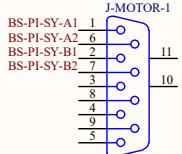
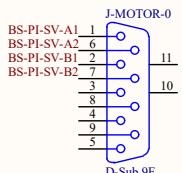
Size	Number	Revision
A3	JGW-D1503600	v8
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File:	\AA\11 PI LVDT Drive.SchDoc	Drawn By:

Pico and Stepper Drivers

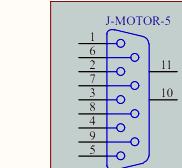
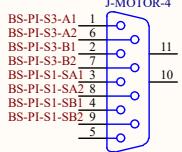
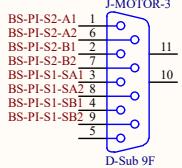
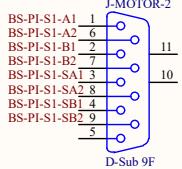


Stepper Driver #2
JGW-D1600TBD
Board
TMCM-6110
Serial-Internet Converter
MOXA

BOX STILL IN DESIGN!!!
GUESS AT FINAL PINOUT!!!



NOTE: 3 channels use switches



Outputs to PI
Steppers
(see Sheet 7)

Title		
	BS Suspension Cabling - Pico and Stepper Drivers	
Size	Number	Revision
A3	JGW-D1503600	v8
Date:	2016/04/12	Sheet of 14
File:	\\\12 Pico&Stepper Drive.SchDoc	Drawn By:

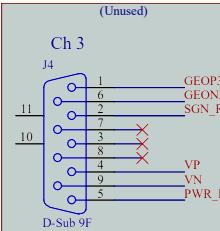
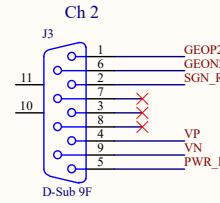
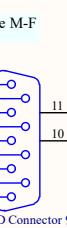
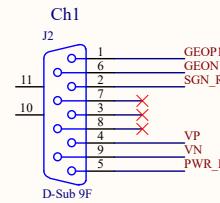
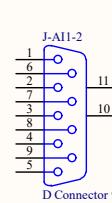
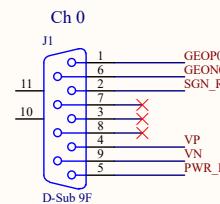
3 Feedthroughs

Geophone Readout

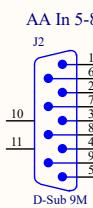
Inputs from PI
Geophones
(see Sheet 8)

Geophone Distributor
D1402120
Front Panel
D1402122
Board
D1402121

Geophone Distributor
D1402120
Rear Panel
D1402123
Board
D1402121

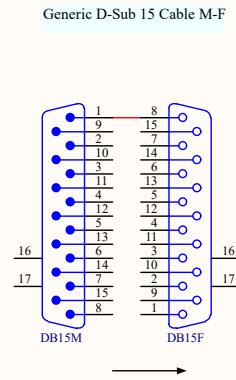
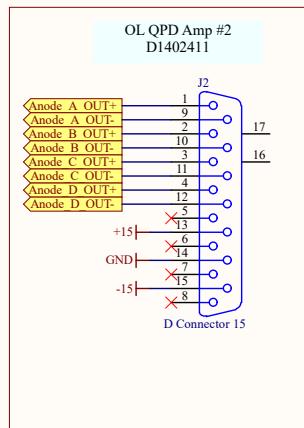
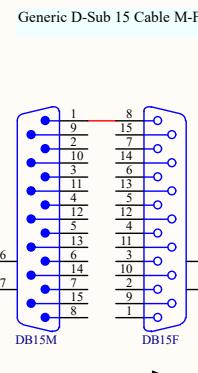
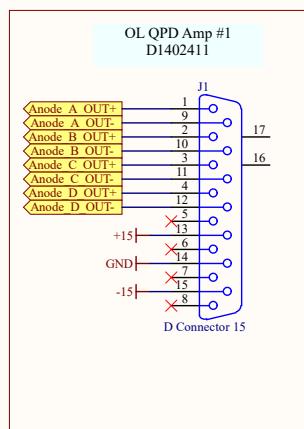


AA Chassis #1
JGW-D1100621



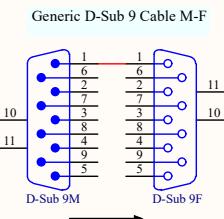
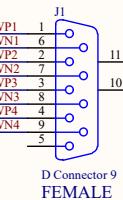
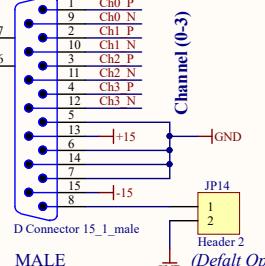
Title BS Suspension Cabling - Geophone Readout		
Size A3	Number JGW-D1503600	Revision 13 -v8
Date: 2016/04/12		Sheet of 14
File: \\13 Geophone Readout.SchDoc		Drawn By:

OpLev Etc



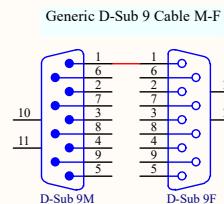
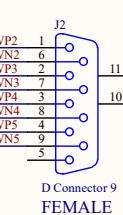
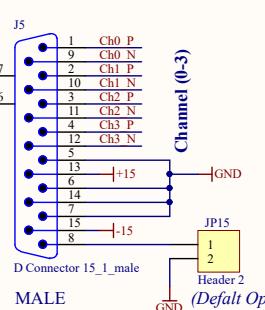
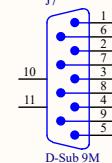
Whitening Chassis
D1302087
Front Panel
D1302088
Board
D1302081+D1402416

Whitening Chassis
D1302087
Rear Panel
D1302084
Board
D1302081+D1402416

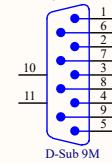


AA Chassis #1
D1100621

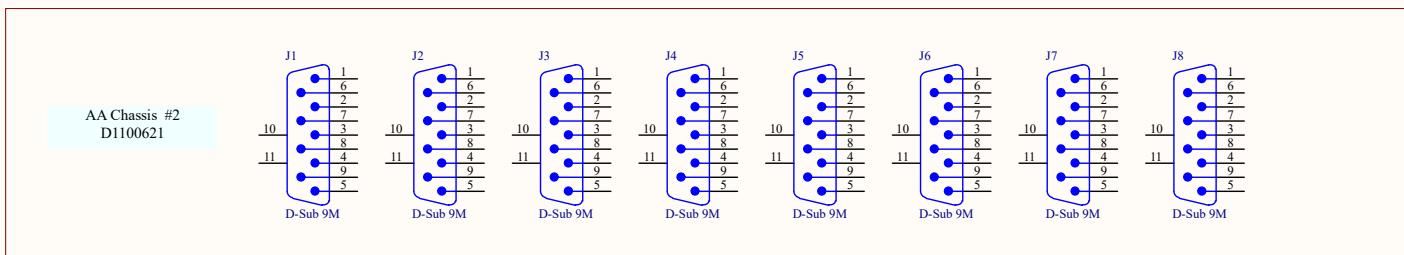
AA In 25-28



AA In 29-32



SECOND AA CHASSIS FOR TEST, SEISMOMETERS, ETC!!!



Title: BS Suspension Cabling - OpLev Etc

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A3	JGW-D1503600	v8
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