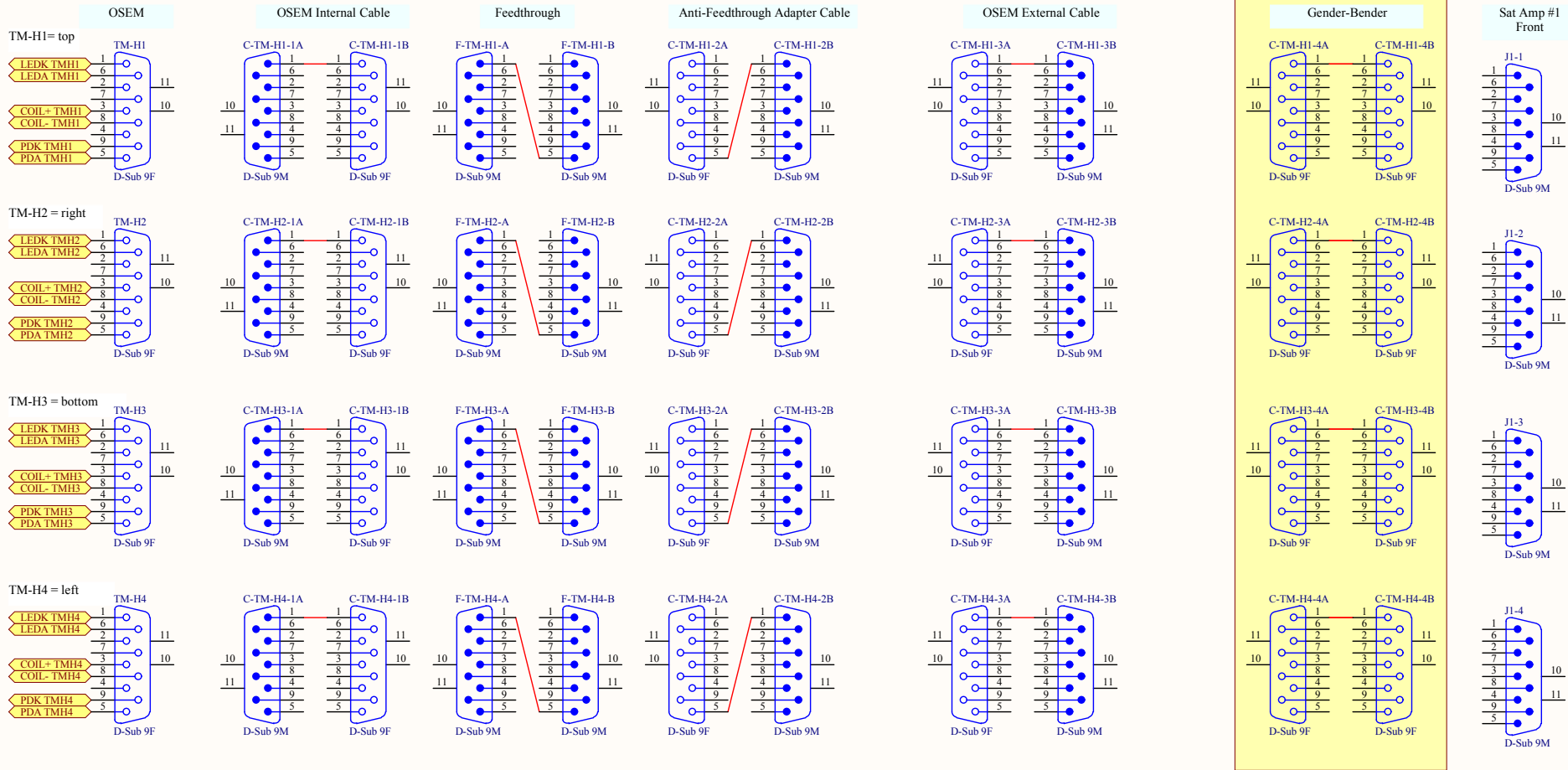


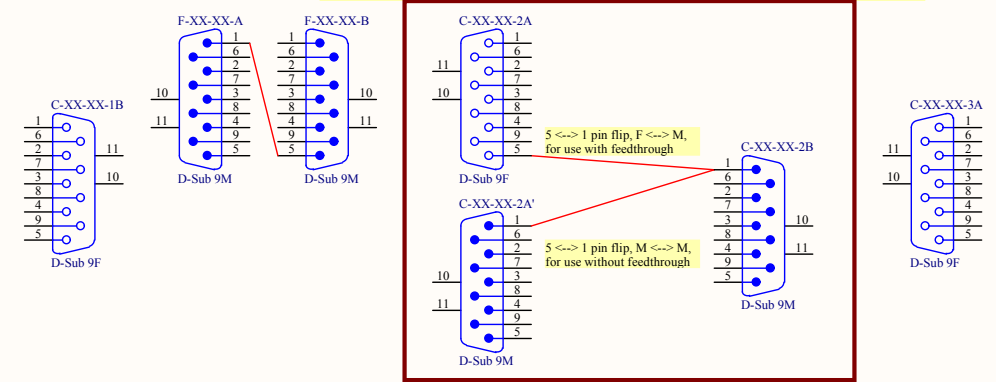
4 Feedthroughs

TM OSEMs

By mistake the cabling was planned for KAGRA sat amps which will have female connectors. In fact the old TAMA ones used for the prototype test have male connectors. Therefore female-female gender-benders will have to be used.



If possible, all Anti-Feedthrough Cables should actually look like this, with twin connectors on the "A" end, one for use with the feedthrough and one for use without.



| | | | | | |
|-------|-------------------------|-----------|--|----------|--|
| Title | | | Type B Prototype Test - Test Mass OSEM Cabling | | |
| Size | Number | | | Revision | |
| A3 | JGW-D1503382 | | | -v2 | |
| Date: | 2015/05/31 | Sheet of | | | |
| File: | Z:\Work\TM OSEMs.SchDoc | Drawn By: | | | |

6 Feedthroughs

IM OSEMs

By mistake the cabling was planned for KAGRA sat amps which will have female connectors. In fact the old TAMA ones used for the prototype test have male connectors. Therefore female-female gender-benders will have to be used.

A

B

C

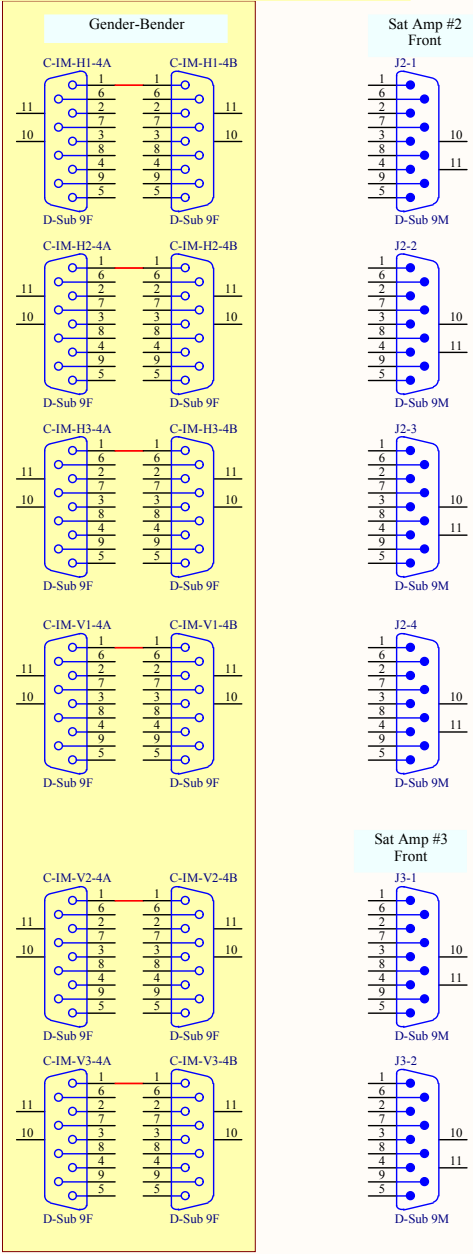
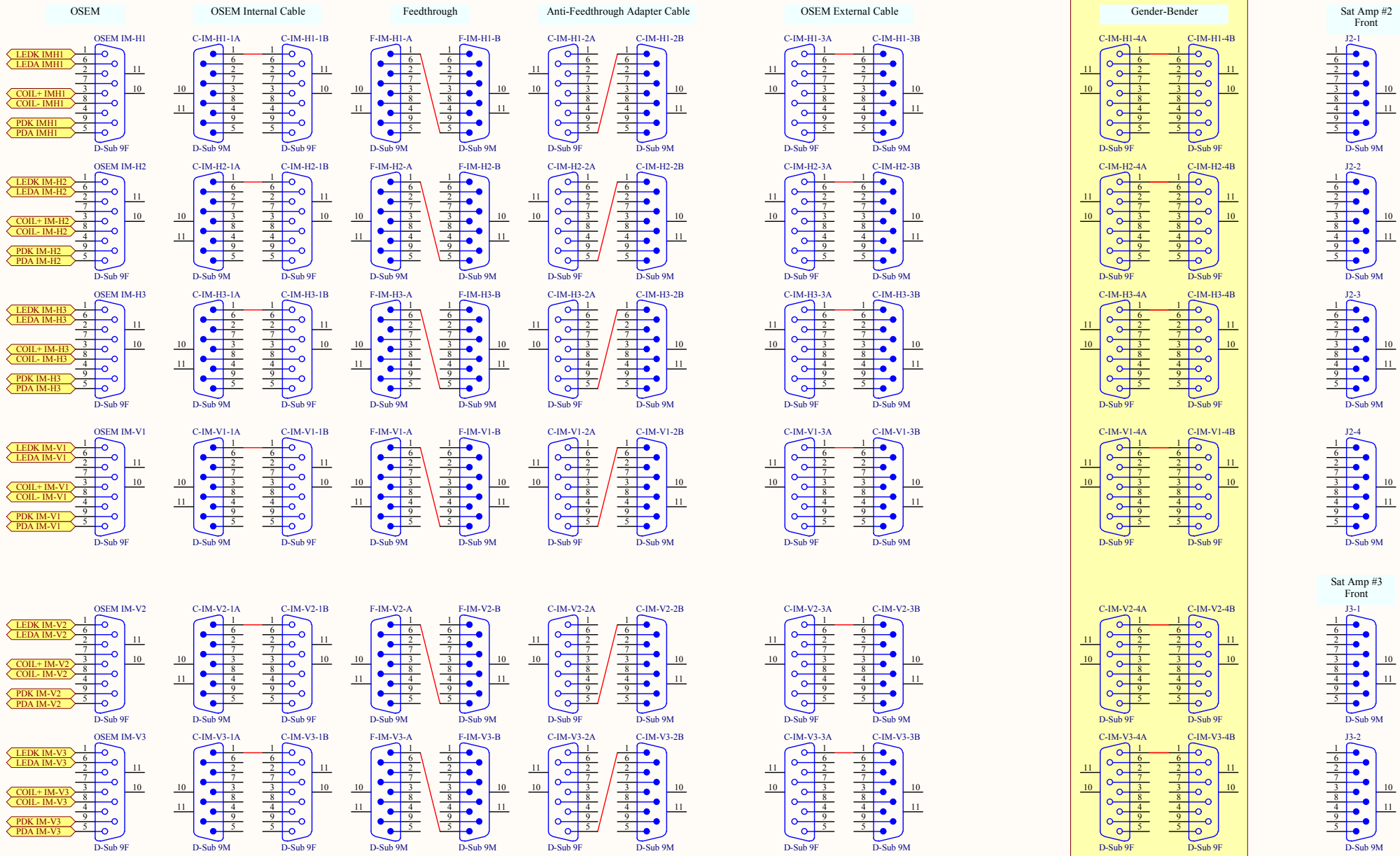
D

A

B

C

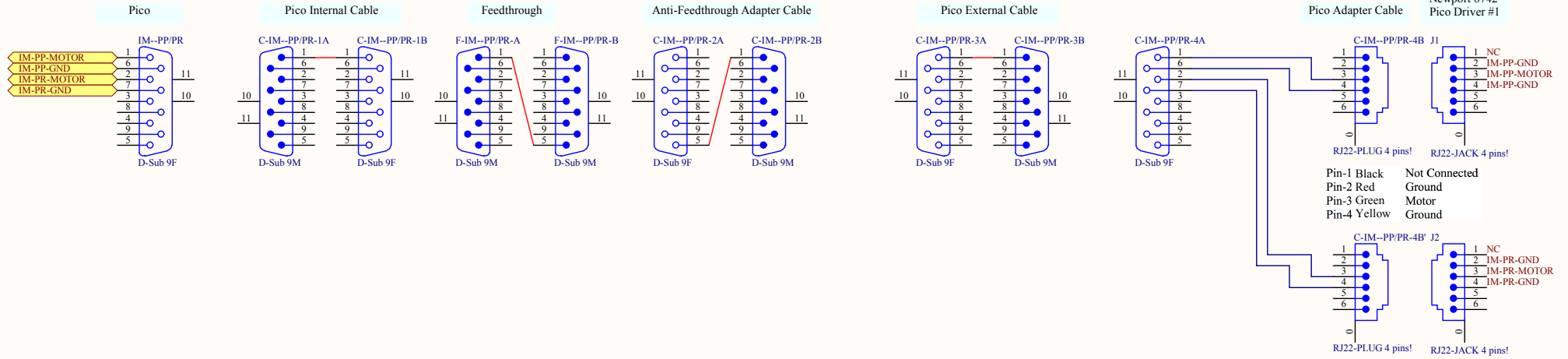
D



| | | |
|---|------------------------|-----------------|
| Title Type B Prototype Test - Intermediate Mass OSEM Cabling | | |
| Size A3 | Number JGW-D1503382 | Revision -v2 |
| Date: 2015/05/31 | Sheet of | |
| File: Z:\Work\IM OSEMs.SchDoc | Drawn By: | |

1 Feedthrough

IM Picomotors

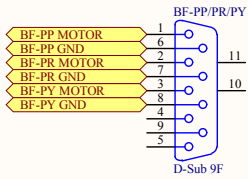


| | | | |
|---|-------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Intermediate Mass Picomotor Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\IM Picos.SchDoc | Drawn By: | |

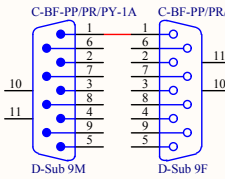
BF and SF Picomotors and Steppers

3 Feedthroughs

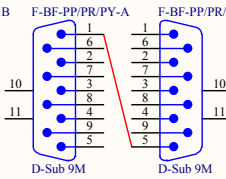
Pico



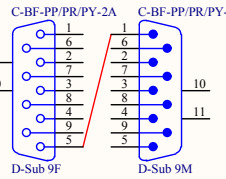
Pico Internal Cable



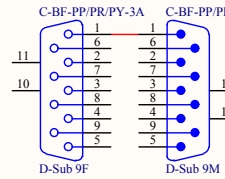
Feedthrough



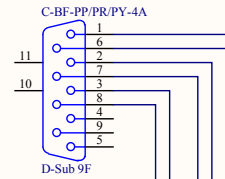
Anti-Feedthrough Adapter Cable



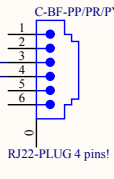
Pico External Cable



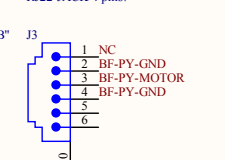
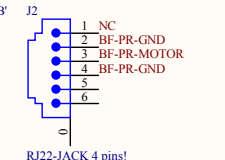
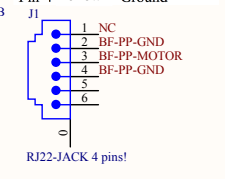
Pico Adapter Cable



Newport 8742 Pico Driver #2



Pin-1 Black
Pin-2 Red
Pin-3 Green
Pin-4 Yellow

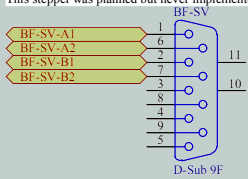


The connectors for the pico drivers are RJ22 with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

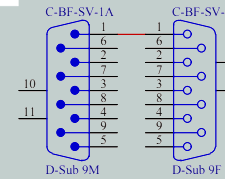
The connectors for the stepper motor drivers are CVIlux: C101045000-A (plug, female), C10104P1VK0-LF (jack, male) pairs with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

| Pin | Label | Direction | Description |
|-----|-------|-----------|-----------------------|
| 1 | A1 | Output | Pin 1 of motor coil A |
| 2 | A2 | Output | Pin 2 of motor coil A |
| 3 | B1 | Output | Pin 1 of motor coil B |
| 4 | B2 | Output | Pin 2 of motor coil B |

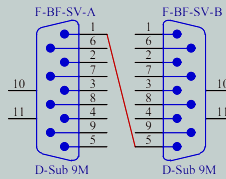
Stepper



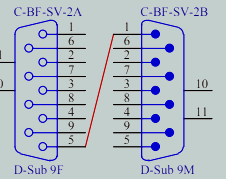
Stepper Internal Cable



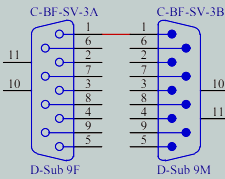
Feedthrough



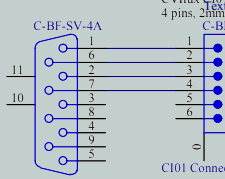
Anti-Feedthrough Adapter Cable



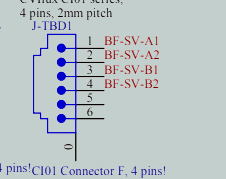
Stepper External Cable



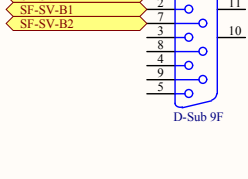
Stepper Adapter Cable



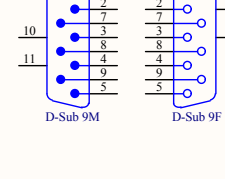
Stepper Driver TCM-6110



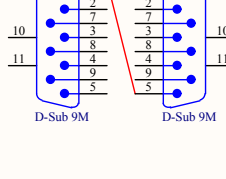
Stepper



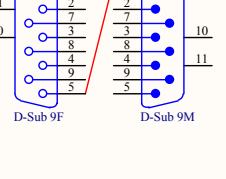
Stepper Internal Cable



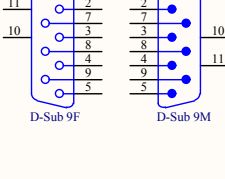
Feedthrough



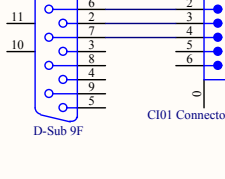
Anti-Feedthrough Adapter Cable



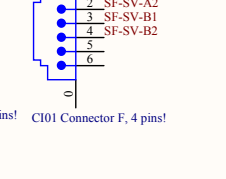
Stepper External Cable



Stepper Adapter Cable



Stepper Driver TCM-6110

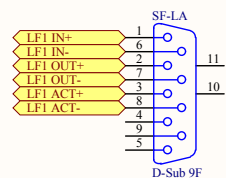


| | | | |
|--|-------------------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Bottom and Standard Filter Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\BF&SF Picos&Steppers.SchDoc | Drawn By: | |

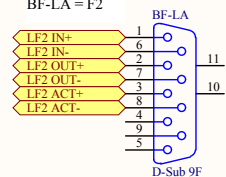
BF and SF LVDT/ACTs

2 Feedthroughs

SF-LA = F1

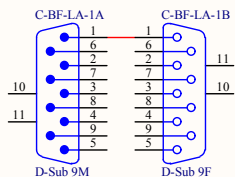
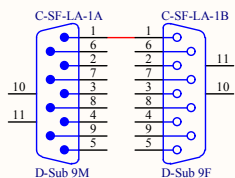


BF-LA = F2

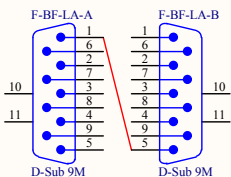
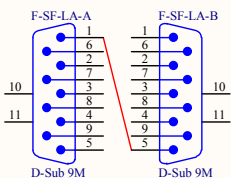


LVDT/Act

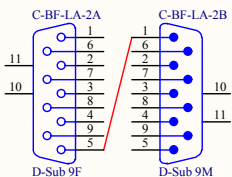
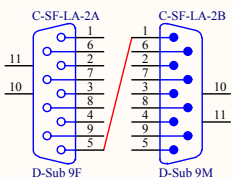
Internal Cable



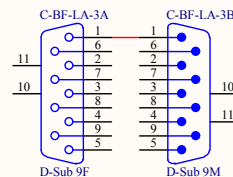
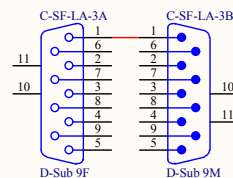
Feedthrough



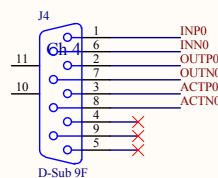
Feedthrough Adapter Cable



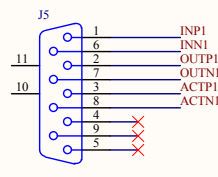
External Cable



LVDT/ACT Distributor
JGW D1402124

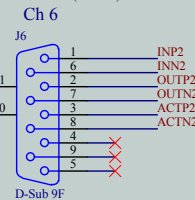


Ch 5

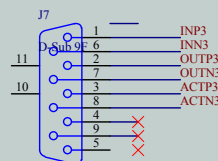


D-Sub 9F

(Unused)



Ch 7



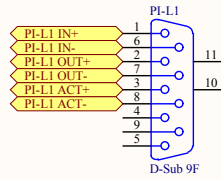
D-Sub 9F

| | | | |
|---|----------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Bottom and Standard Filter LVDT Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\BF&SF LVDTs.SchDoc | Drawn By: | |

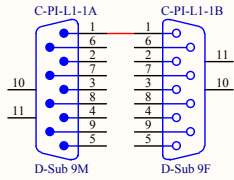
4 Feedthroughs

Preisolator LVDT/ACTs

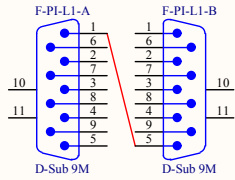
LVDT/ACT



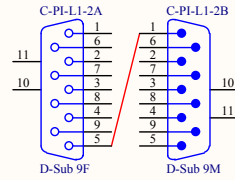
LVDT/ACT Internal Cable



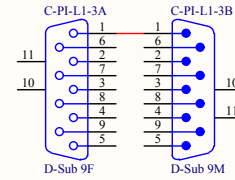
Feedthrough



Anti-Feedthrough Adapter Cable

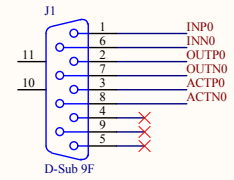


LVDT/ACT External Cable

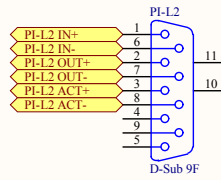


LVDT/ACT Distributor JGW D1402124

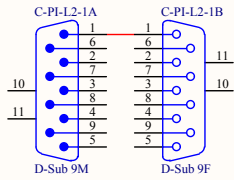
Ch 0



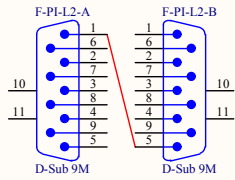
LVDT/ACT



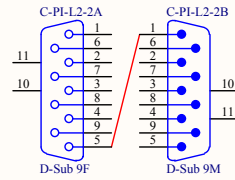
LVDT/ACT Internal Cable



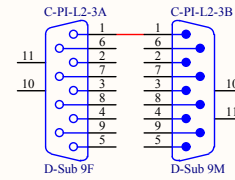
Feedthrough



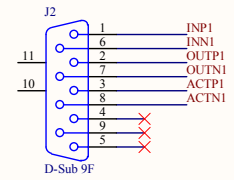
Anti-Feedthrough Adapter Cable



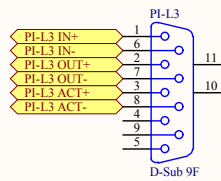
LVDT/ACT External Cable



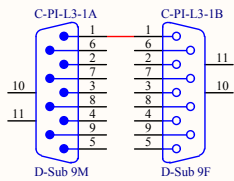
Ch 1



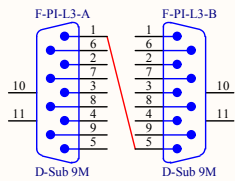
LVDT/ACT



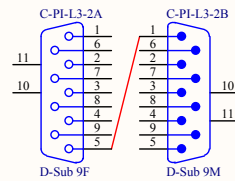
LVDT/ACT Internal Cable



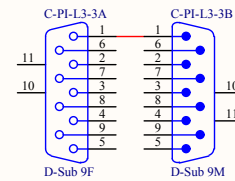
Feedthrough



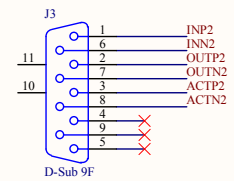
Anti-Feedthrough Adapter Cable



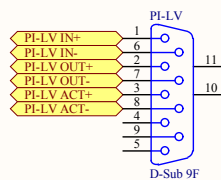
LVDT/ACT External Cable



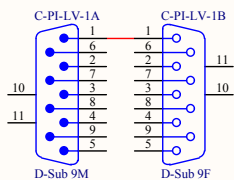
Ch 2



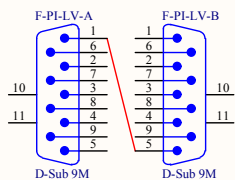
LVDT/ACT



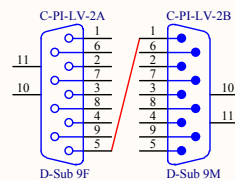
LVDT/ACT Internal Cable



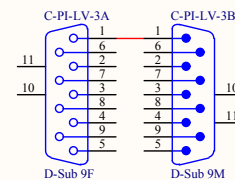
Feedthrough



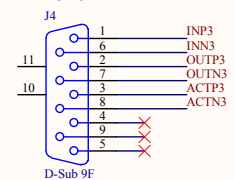
Anti-Feedthrough Adapter Cable



LVDT/ACT External Cable



Ch 3



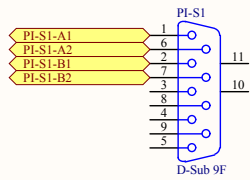
| | | | |
|---|-------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Preisolator LVDT/Actuator Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\PI LVDTs.SchDoc | Drawn By: | |

5 Feedthroughs

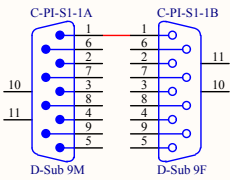
Preisolator Steppers/Pico

The connectors for the stepper motor drivers are CVIlux: CI01045000-A (plug, female), CI0104P1VK0-LF (jack, male) pairs with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

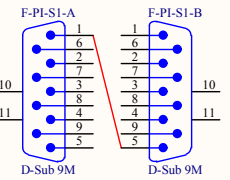
Stepper



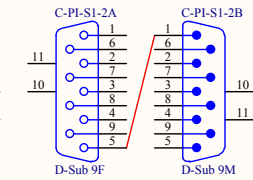
Stepper Internal Cable



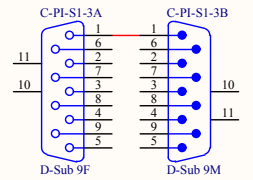
Feedthrough



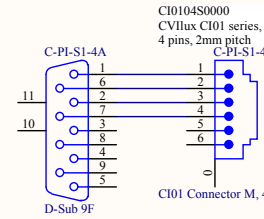
Anti-Feedthrough Adapter Cable



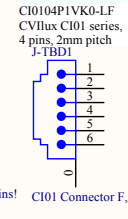
Stepper External Cable



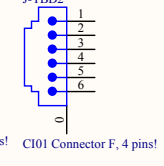
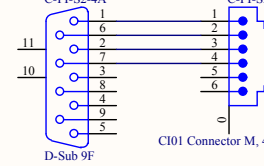
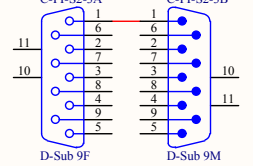
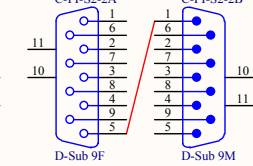
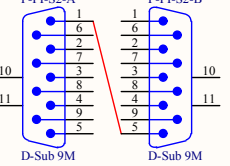
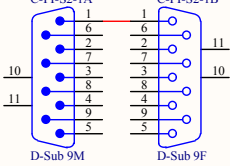
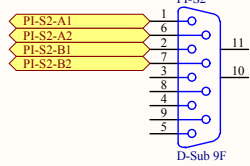
Stepper Adapter Cable



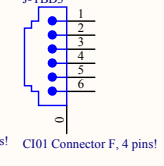
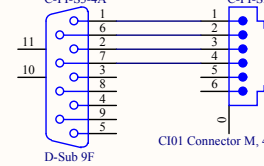
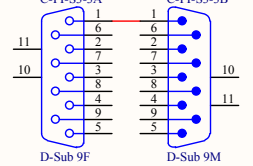
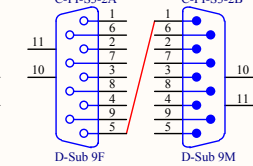
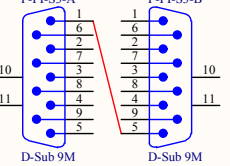
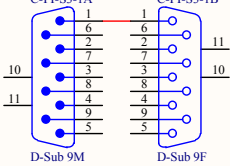
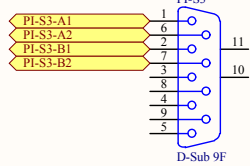
Stepper Driver TMCM-6110



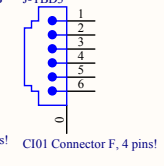
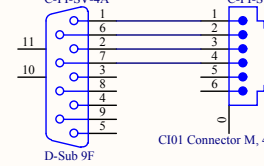
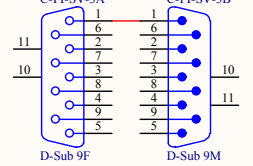
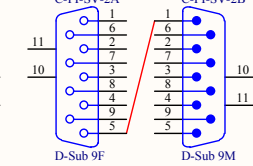
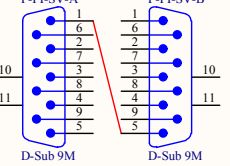
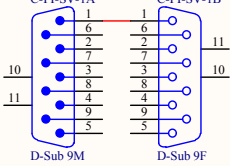
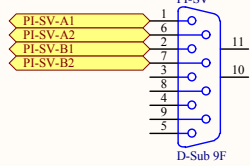
CI0104S0000 CVIlux CI01 series, 4 pins, 2mm pitch
CI01 Connector M, 4 pins!
CI0104P1VK0-LF CVIlux CI01 series, 4 pins, 2mm pitch
CI01 Connector F, 4 pins!



CI01 Connector M, 4 pins!
CI01 Connector F, 4 pins!

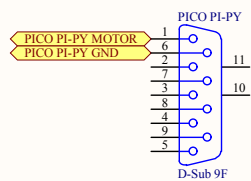


CI01 Connector M, 4 pins!
CI01 Connector F, 4 pins!

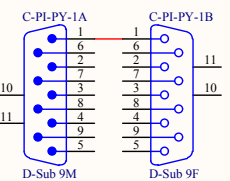


CI01 Connector M, 4 pins!
CI01 Connector F, 4 pins!

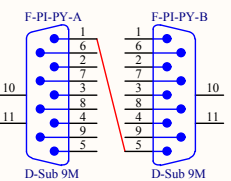
Pico



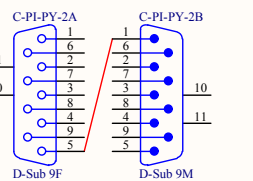
Pico Internal Cable



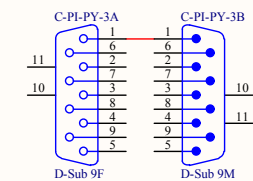
Feedthrough



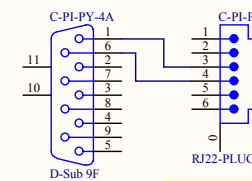
Anti-Feedthrough Adapter Cable



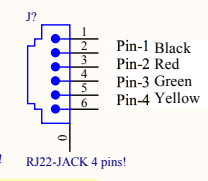
Pico External Cable



Pico Adapter Cable



Newport 8742 Pico Driver #1



Pin-1 Black Not Connected
Pin-2 Red Motor Ground
Pin-3 Green Motor Ground
Pin-4 Yellow

The connectors for the pico drivers are RJ22 with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

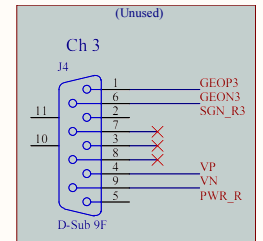
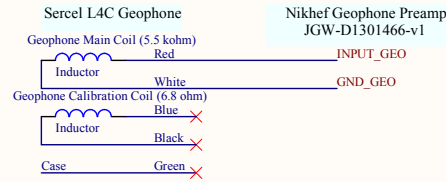
| | | | |
|---|----------------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Preisolator Stepper and Picomotor Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\PI Picos&Steppers.SchDoc | Drawn By: | |

3 Feedthroughs

Preisolator Geophones

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



| | | | |
|--|-----------------------------|-----------|--|
| Title | | | |
| Type B Prototype Test - Preisolator Geophone Cabling | | | |
| Size | Number | Revision | |
| A3 | JGW-D1503382 | -v2 | |
| Date: | 2015/05/31 | Sheet of | |
| File: | Z:\Work\PI Geophones.SchDoc | Drawn By: | |

Anti-Aliasing (AA) Chassis Inputs

Sat Amp Monitors, LVDT Signals, Geophone Signals

No attempt was made to give sensible names to the cables and connectors on this page.

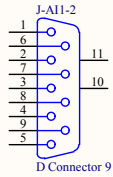
AA Chassis 1
D1100650-x0

AA Chassis 2
D1100650-x0

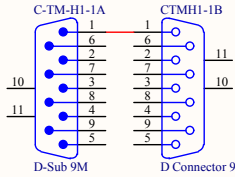
LVDT Main Module

Cable

LVDTM Out 1



D Connector 9

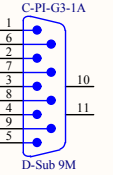


D-Sub 9M

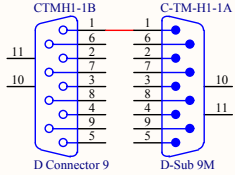
D Connector 9

Sat Amp
Monitor Outputs
(Rear)

SatAmp #1 Mon



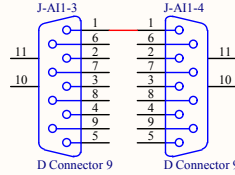
D-Sub 9M



D Connector 9

D-Sub 9M

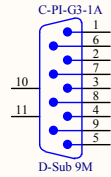
Gender Bender F-F



D Connector 9

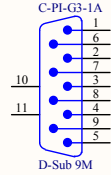
D Connector 9

AA1 In 1-4



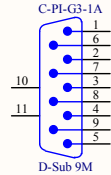
D-Sub 9M

AA1 In 5-8



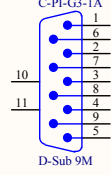
D-Sub 9M

AA1 In 9-12



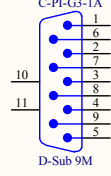
D-Sub 9M

AA1 In 13-16



D-Sub 9M

AA1 In 17-20



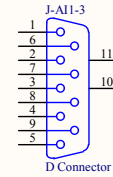
D-Sub 9M

AA1 In 21-24,
25-28, 29-32
Not Used

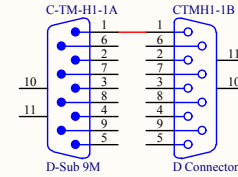
LVDT Main Module

Cable

LVDTM Out 2



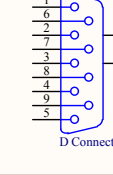
D Connector 9



D-Sub 9M

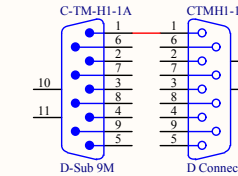
D Connector 9

J-A11-2



D Connector 9

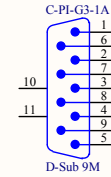
Geophone Distributor
Rear



D-Sub 9M

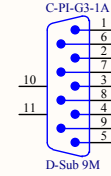
D Connector 9

AA2 In 1-4



D-Sub 9M

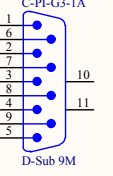
AA2 In 5-8



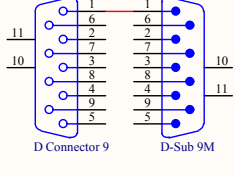
D-Sub 9M

AA2 In 9-12,
17-20, 21-24,
25-28, 29-32
Not Used

SatAmp #2 Mon

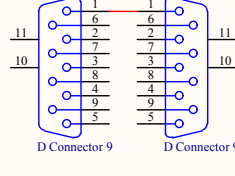


D-Sub 9M



D Connector 9

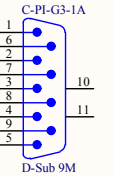
D-Sub 9M



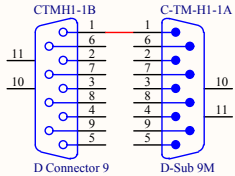
D Connector 9

D Connector 9

SatAmp #3 Mon

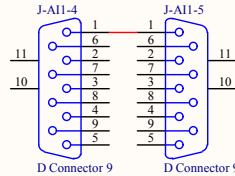


D-Sub 9M



D Connector 9

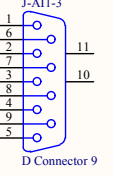
D-Sub 9M



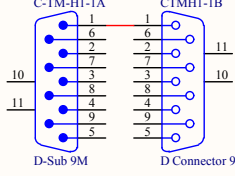
D Connector 9

D Connector 9

OPD



D Connector 9



D-Sub 9M

D Connector 9

| | | | | | |
|-------|-------------------|-----------|--|--|--|
| Title | | | Type B Prototype Test - Anti-Aliasing Chassis Inputs | | |
| Size | Number | Revision | | | |
| A3 | JGW-D1503382 | -v2 | | | |
| Date: | 2015/05/31 | Sheet of | | | |
| File: | Z:\Work\AA.SchDoc | Drawn By: | | | |

Anti-Imaging (AI) Chassis Outputs, D1200883 Distributor Rear Connections, Marwan Coil Drivers #4, #5, #6 and #7 and Sat Amp Coil Inputs

No attempt was made to give sensible names to the cables and connectors on this page.

AI Chassis 1
D1100650-x0

Gender Bender M-M

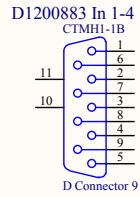
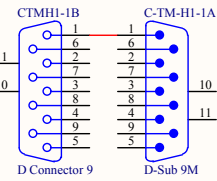
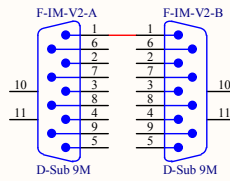
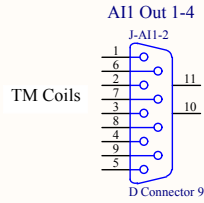
Cable

D1200883
Rear

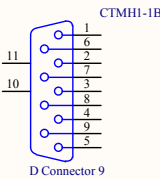
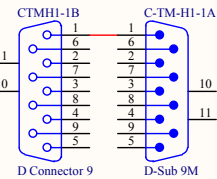
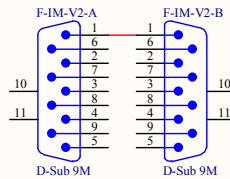
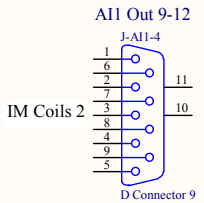
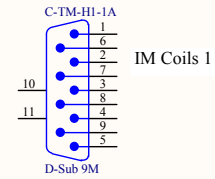
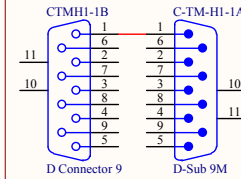
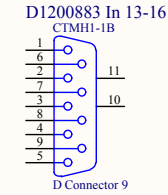
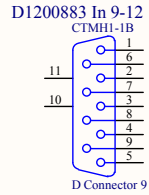
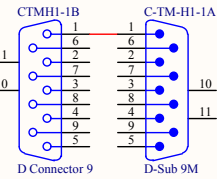
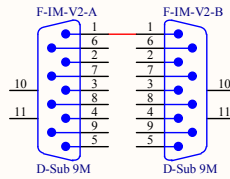
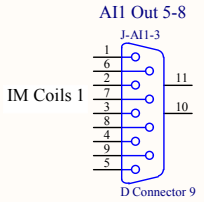
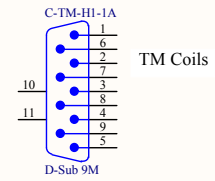
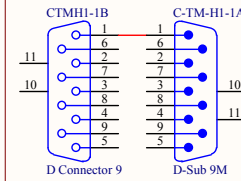
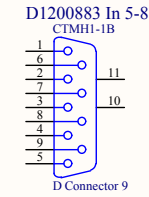
D1200883
Rear

Cable

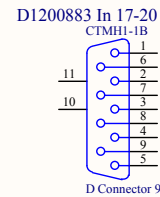
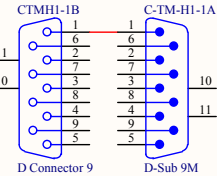
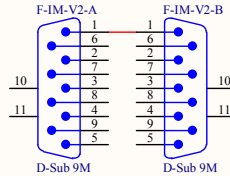
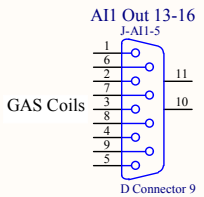
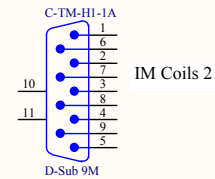
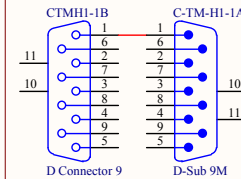
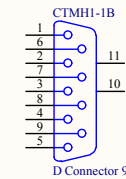
Sat Amp
Coil Inputs (Rear)



See LEMO sheet for details of how these signals are routed through Marwan Coil Drivers #8, #1



Marwan Coil Drivers #4 & #5 Inputs and Outputs Hotwired

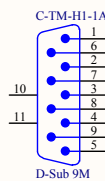
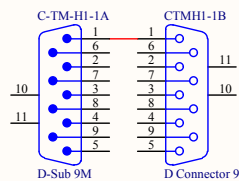
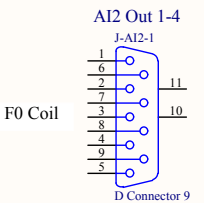


D1200883
Rear

See LEMO sheet for details of how these signals are routed through Marwan Coil Drivers #6, #7.

Then see LVDT-ACT sheet for details of connections to

AI Chassis 2
D1100650-x0



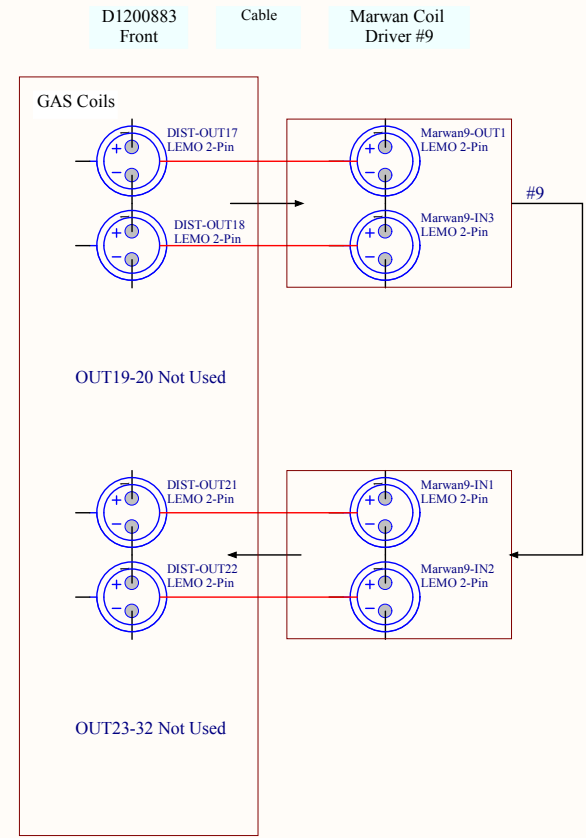
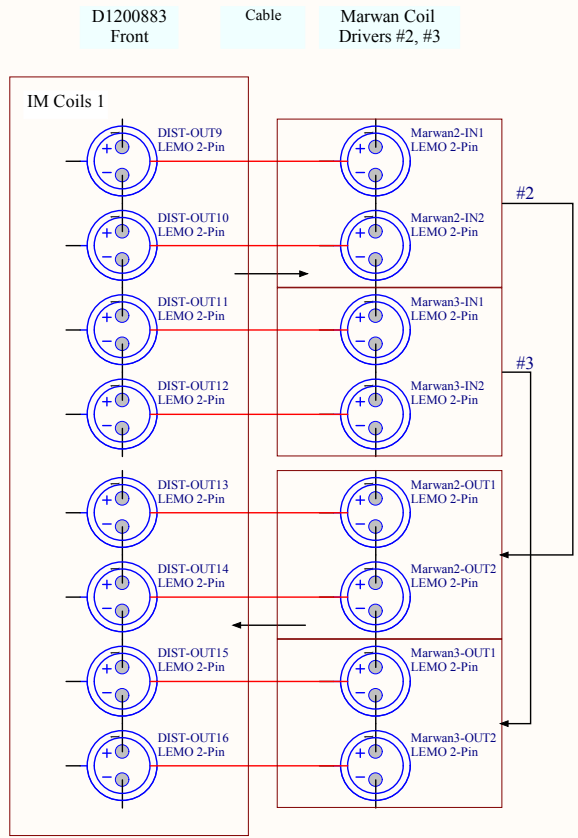
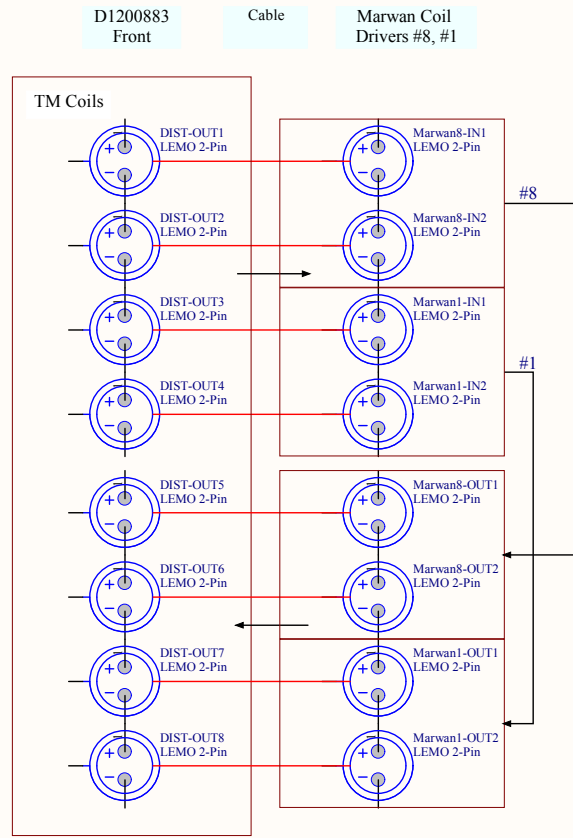
Marwan Coil Drivers #6 & #7 Inputs (Hotwired)
See LVDT-ACT sheet for outputs.

| | | |
|--|-------------------|-----------|
| Title | | |
| Type B Prototype Test - Anti-Image Chassis Outputs | | |
| Size | Number | Revision |
| A3 | JGW-D1503382 | -v2 |
| Date: | 2015/05/31 | Sheet of |
| File: | Z:\Work\AI.SchDoe | Drawn By: |

LEMO Connections between Marwan Coil Drivers and D1200883 Distributor

Marwan Coil Drivers #4,#5,
#6 and #7 have been
hotwired and do not use
LEMO connectors or connect
to the Distributor.

No attempt was made to give sensible names to the cables and connectors on this page.



| | | |
|---|------------------------|-----------------|
| Title Type B Prototype Test - LEMO Connections to Coil Drivers and Distributor | | |
| Size A3 | Number JGW-D1503382 | Revision -v2 |
| Date: 2015/05/31 | Sheet of | Drawn By: |
| File: Z:\Work\LEMO.SchDoc | | |

LVDT/ACT Drive

LDVT/Act Distributor
JGW-D1402117-v1
Rear Channels 0-1

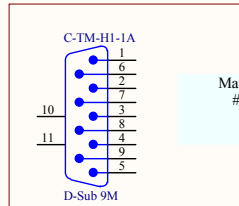
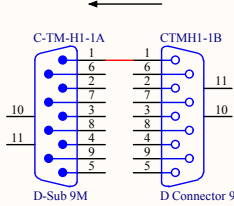
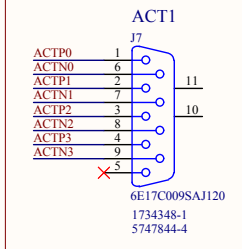
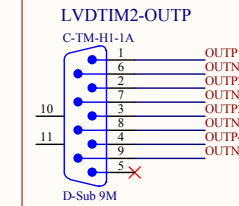
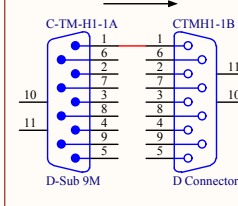
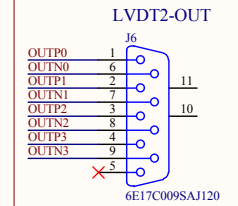
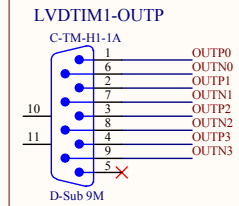
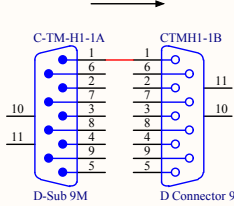
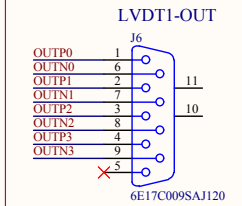
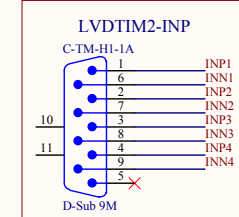
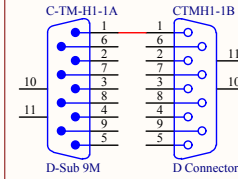
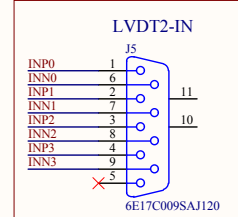
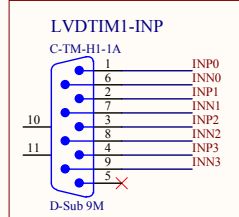
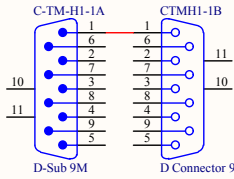
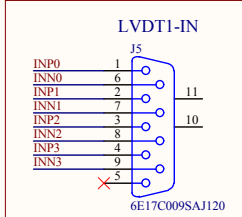
LDVT/Act Distributor
D1402117-v1
Rear Channels 4-7

Cable

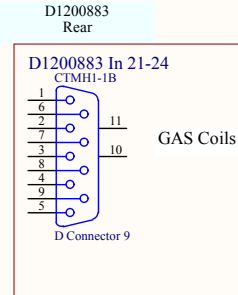
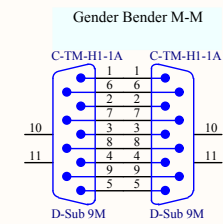
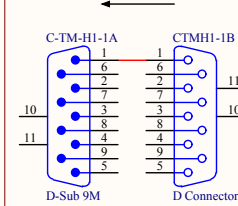
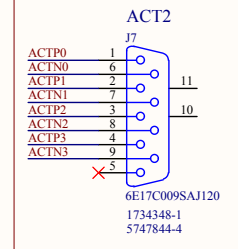
LVDT Input Module 1
JGW-D1301467-v1

Cable

LVDT Input Module 2
JGW-D1301467-v1



Marwan Coil Drivers
#6 & #7 Outputs
(Hotwired)



GAS Coils

AFG310 Signal Generator
10 kHz, 5 V



Cable

LVDT Main Module
JGW-D1301467-v1



| | | |
|---|------------------------|-----------------|
| Title Type B Prototype Test - LVDT/Act Drive | | |
| Size A3 | Number JGW-D1503382 | Revision -v2 |
| Date: 2015/05/31 | Sheet of 3 | Drawn By: |
| File: Z:\Work\LVDT-ACT.SchDoc | | |