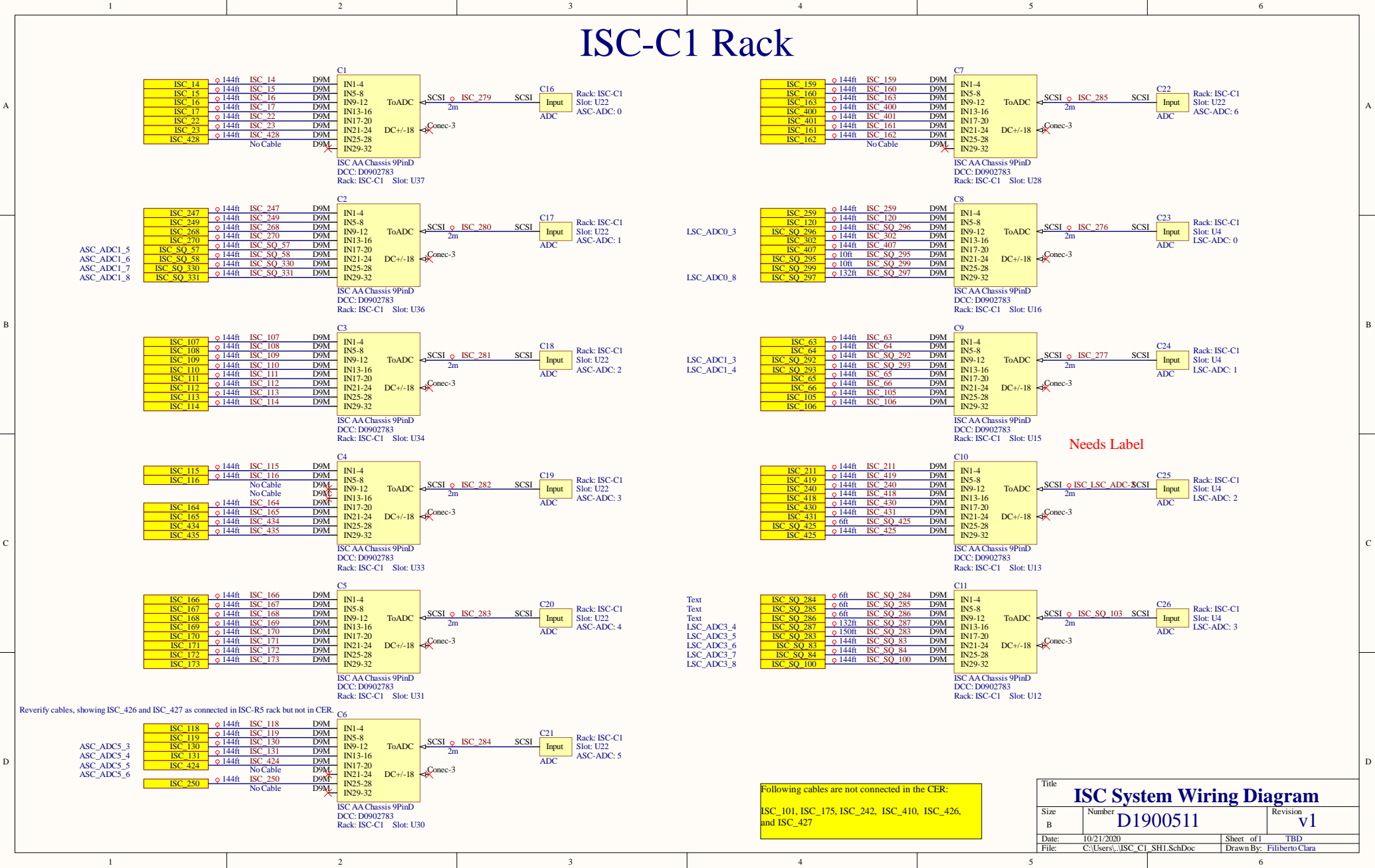


# ISC-C1 Rack

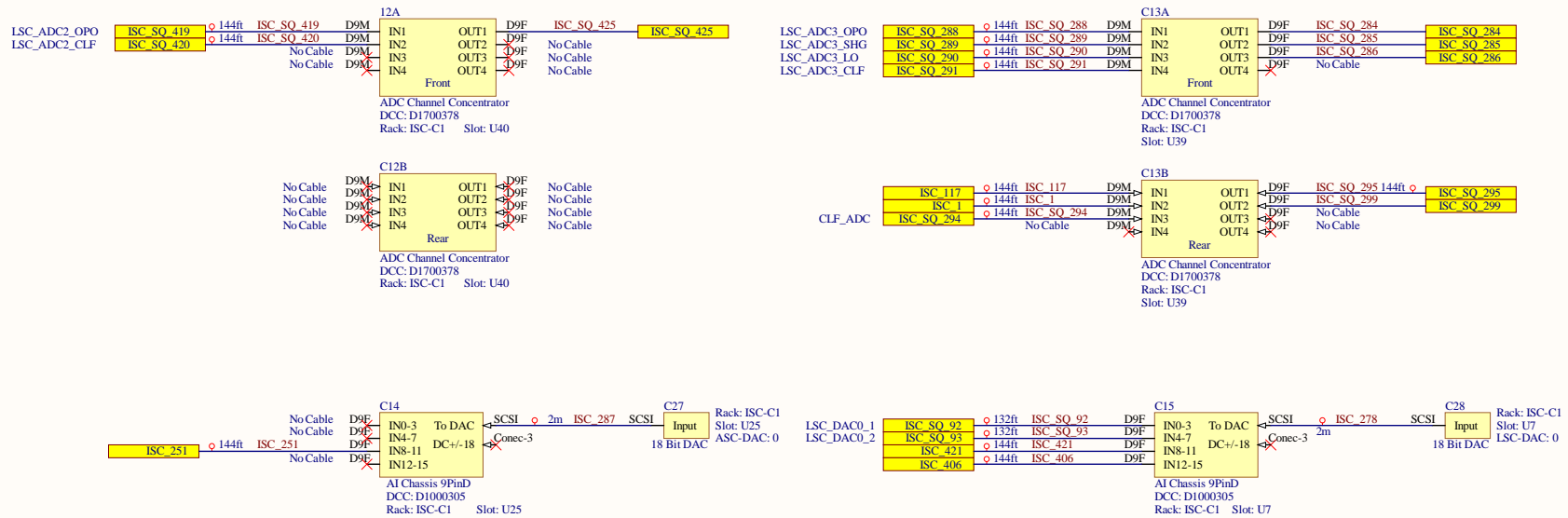


Needs Label

Following cables are not connected in the CER:  
 ISC\_101, ISC\_175, ISC\_242, ISC\_410, ISC\_426,  
 and ISC\_427

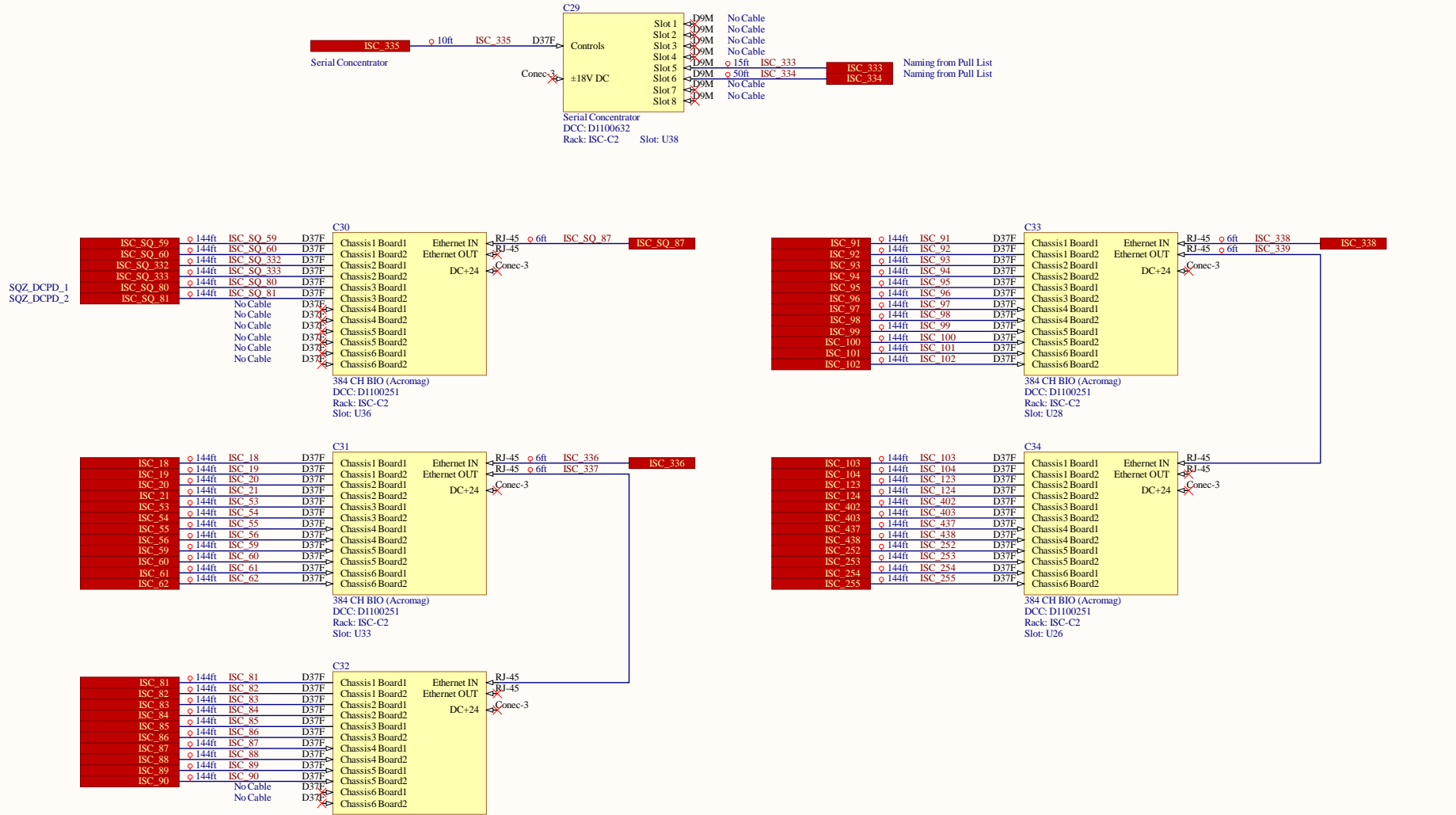
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Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of 1 TBD	
File: C:\Users\...ISC_C1_SHL.SchDoc	Drawn By: Filiberio Clara	

# ISC-C1 Rack



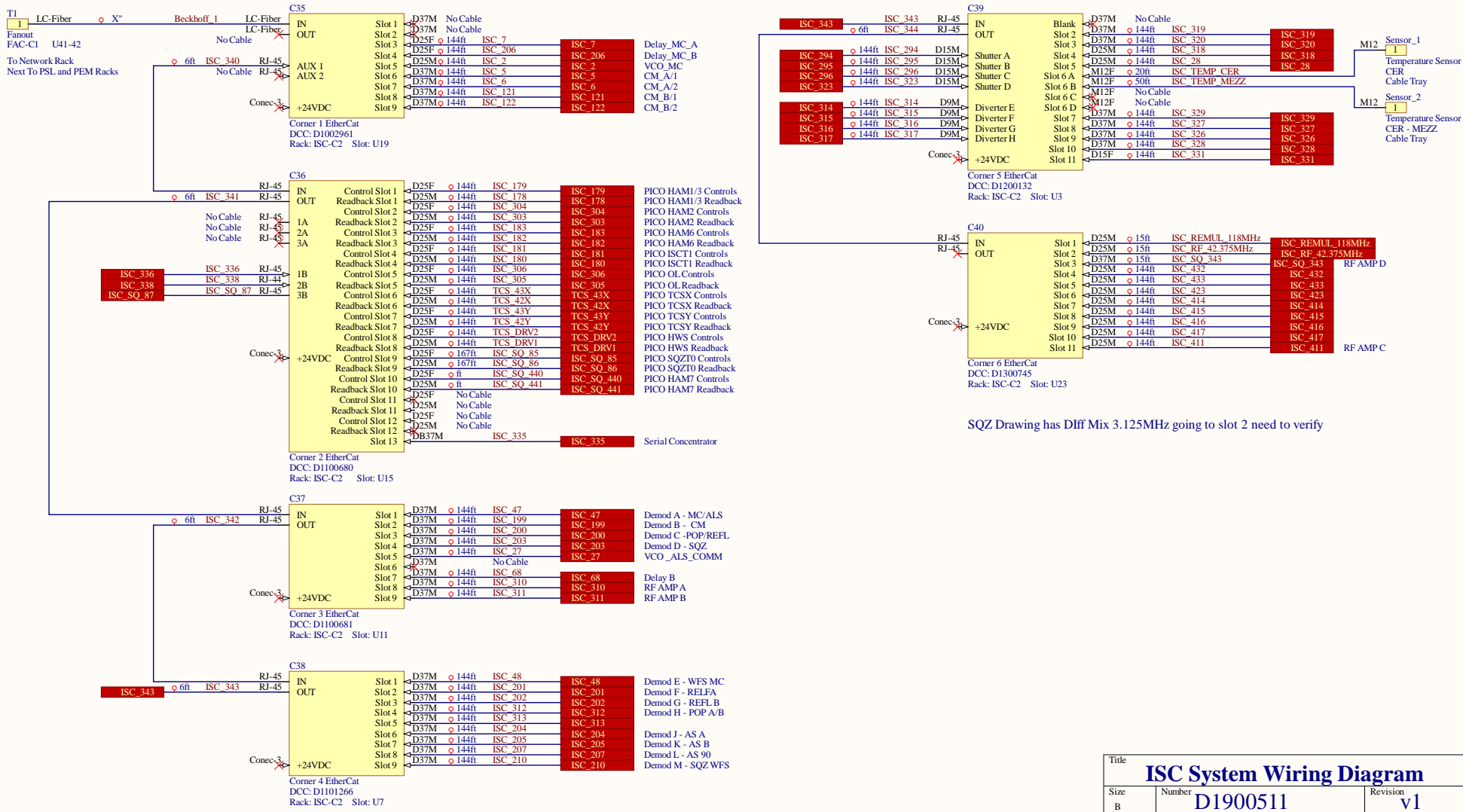
Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	<b>D1900511</b>	<b>v1</b>
Date:	10/21/2020	Sheet of 2 TBD
File:	C:\Users\...ISC_C1_SH2.SchDoc	Drawn By: Filiberto Clara

# ISC-C2 Rack



Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 3
File:	C:\Users\ISC_C2_S\1.SchDoc	TBD
		Drawn By: Filiberto Clara

# ISC-C2 Rack

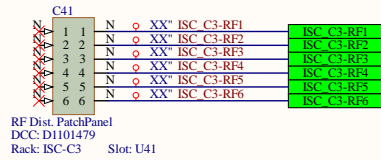


SQZ Drawing has Diff Mix 3.125MHz going to slot 2 need to verify

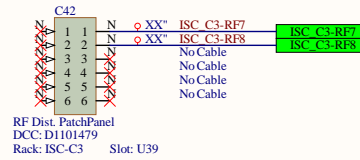
Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 4: TBD
File:	C:\Users\...ISC_C2_SH2.SchDoc	Drawn By: Filiberto Clara

# ISC-C3 Rack

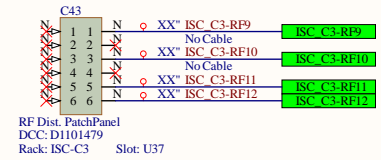
RF Patch Panel 7



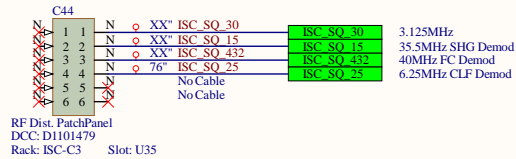
RF Patch Panel 8



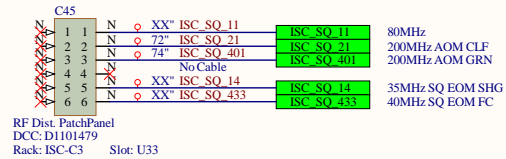
RF Patch Panel 9 (TCS)



RF Patch Panel 32 (SQZ)



RF Patch Panel 33 (SQZ)



Cables that are removed  
ISC\_SQ\_31  
ISC\_SQ\_12  
ISC\_SQ\_78

Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of 5	TBD
File: C:\Users\...ISC_C3_SH1.SchDoc	Drawn By: Filiberto Clara	

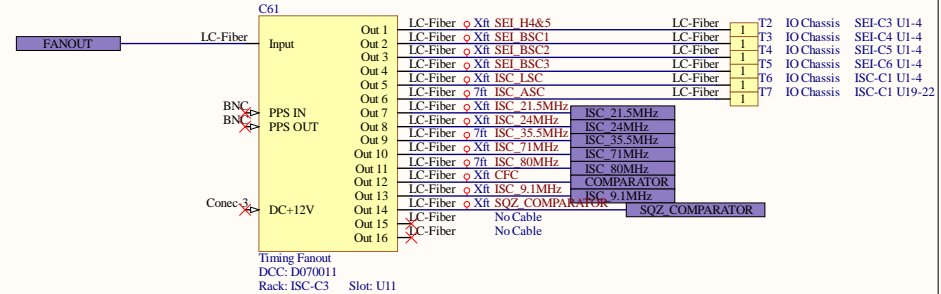
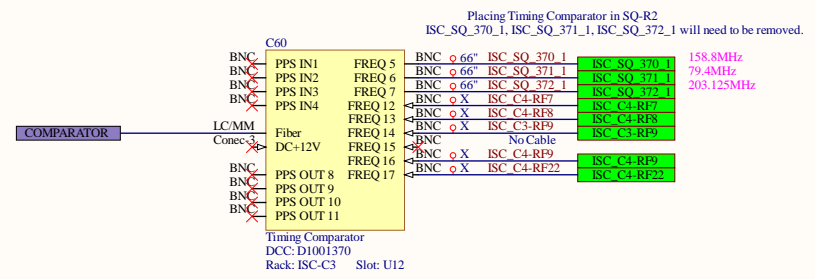
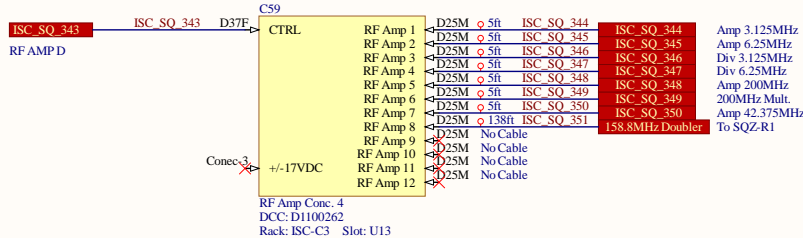
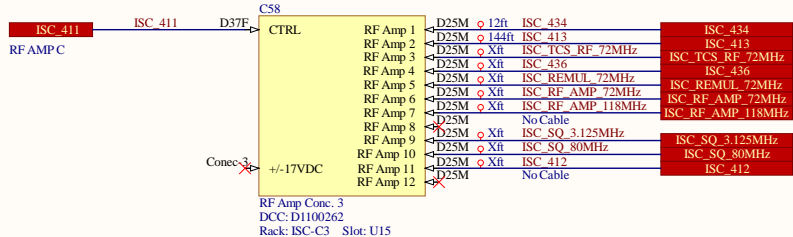
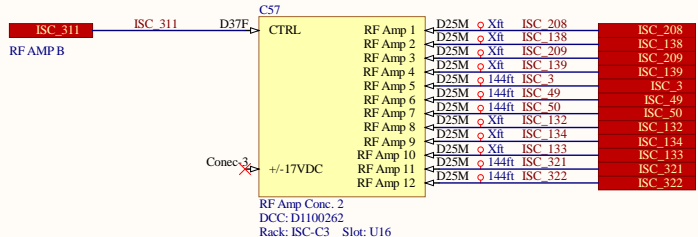
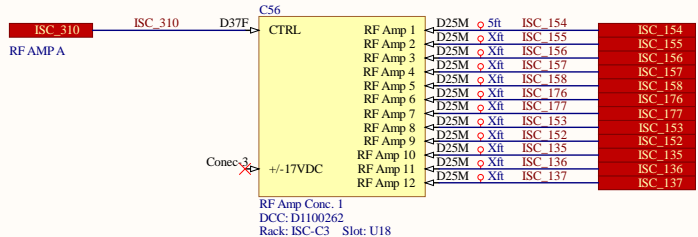
# ISC-C3 Rack



Need to label IFR cable with RF22

Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	<b>D1900511</b>	<b>v1</b>
Date:	10/21/2020	Sheet of 6 TBD
File:	C:\Users\...ISC_C3_SH2.SchDoc	Drawn By: Filiberto Clara

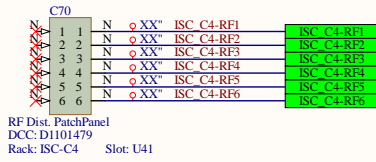
# ISC-C3 Rack



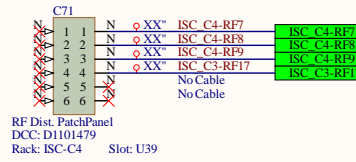
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Size	Number	Revision			
B	D1900511	v1			
Date:	10/21/2020	Sheet of 7	TBD		
File:	C:\Users\...ISC_C3_SH3.SchDoc	Drawn By:	Filiberto Clara		

# ISC-C4 Rack

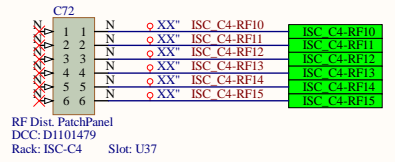
RF Patch Panel 1



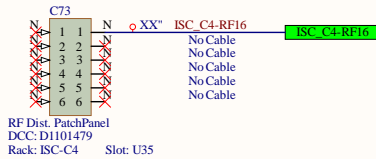
RF Patch Panel 2



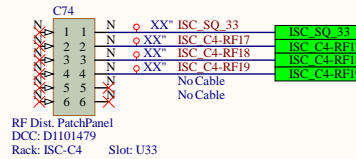
RF Patch Panel 3



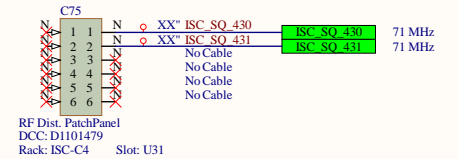
RF Patch Panel 4



RF Patch Panel 5

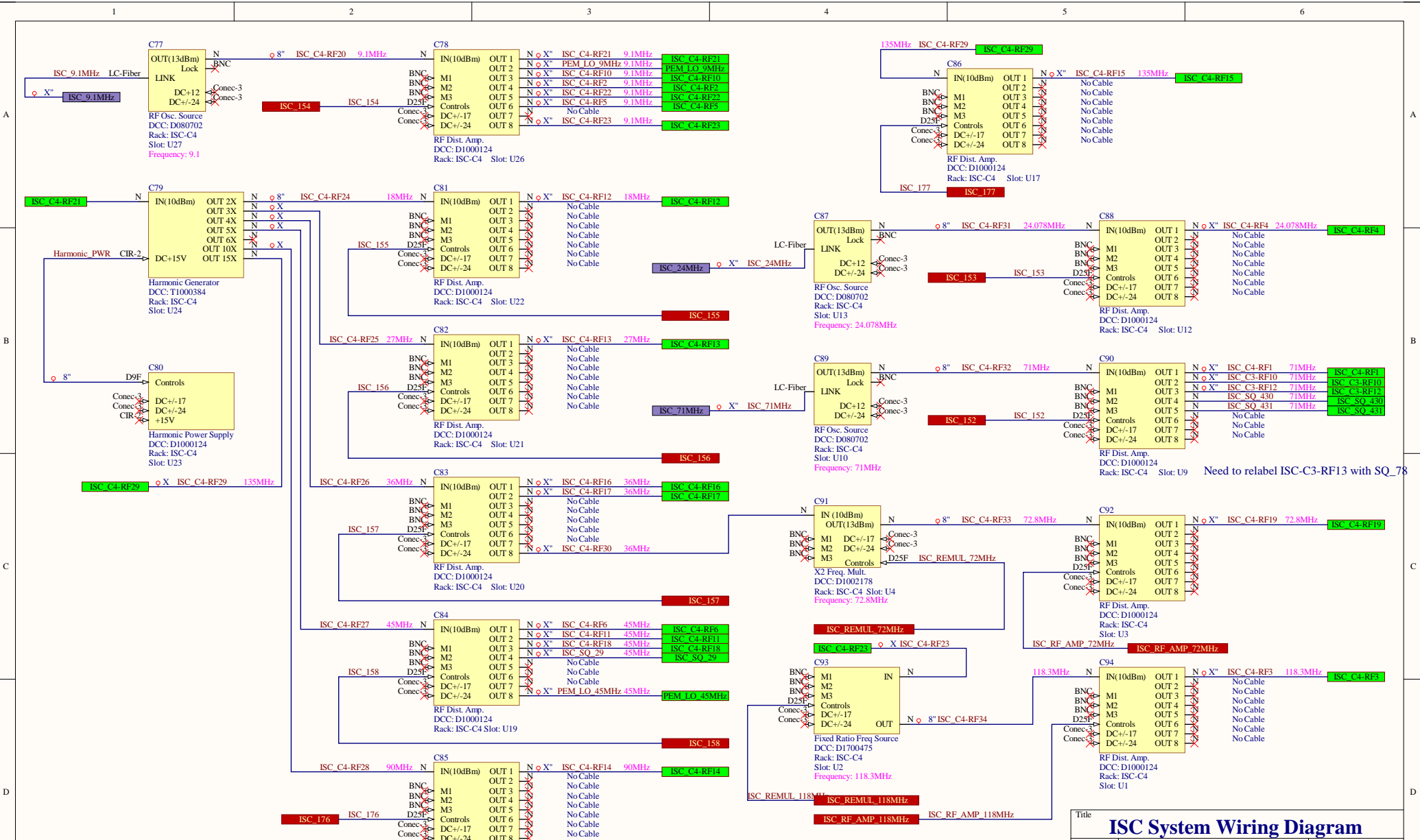


RF Patch Panel 6



Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of 8	TBD
File: C:\Users\...ISC C4_SHL.SchDoc	Drawn By:	Filiberto Clara

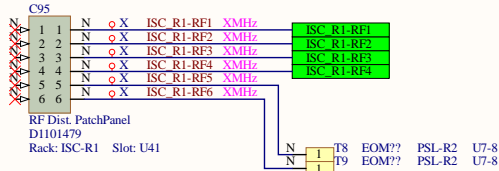




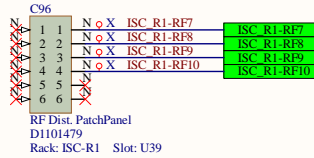
# ISC-C4 Rack

Title		
Size B	Number	Revision
	D1900511	v1
Date:	10/21/2020	Sheet of 9 TBD
File:	C:\Users\ISC_C4_SH2\SchDoc	Drawn By: Filiberto Clara

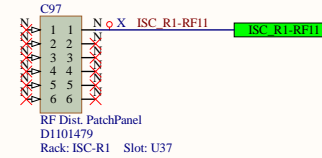
**RF Patch Panel 10**



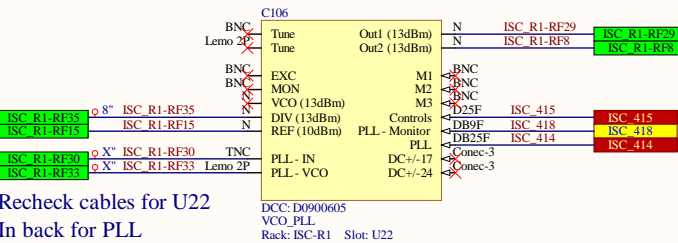
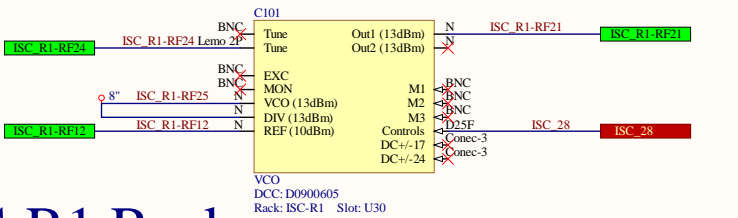
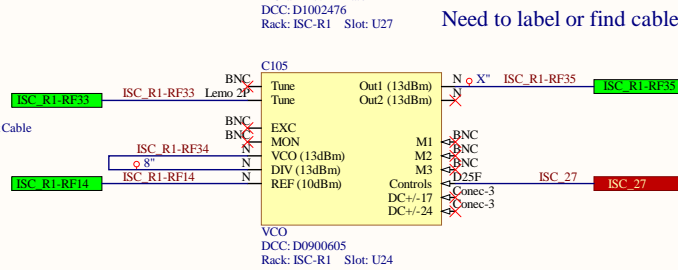
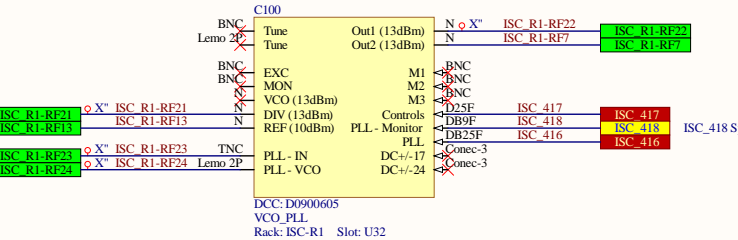
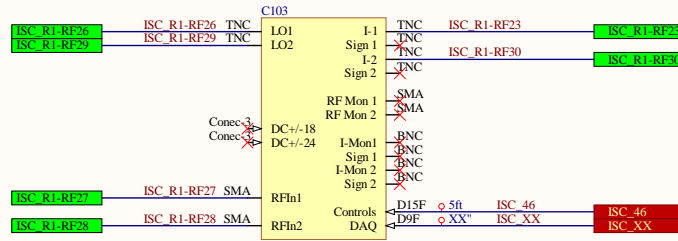
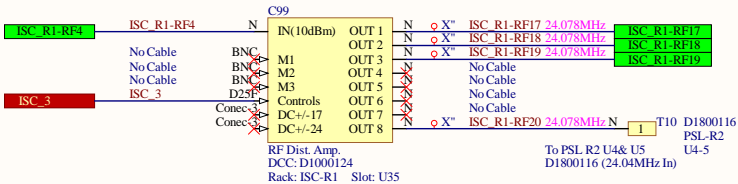
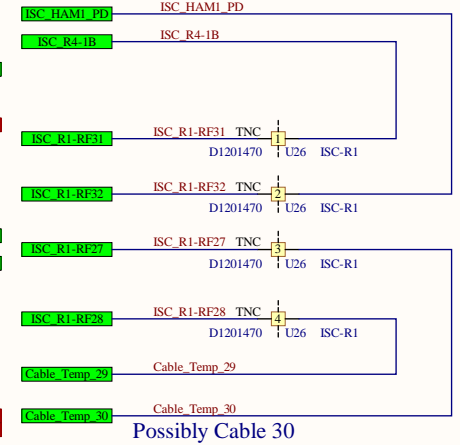
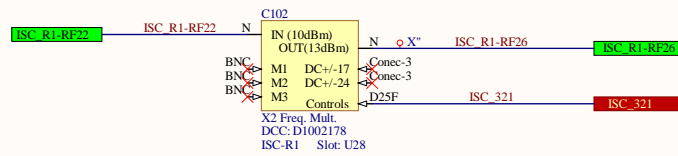
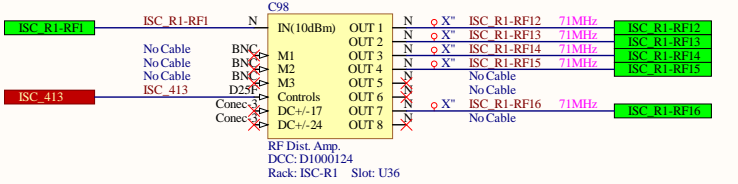
**RF Patch Panel 11**



**RF Patch Panel 12**



R1-RF5 and R1-RF6 go to PSL Rack R2  
U Slot U7 & U8, 9 MHz and 45 MHz



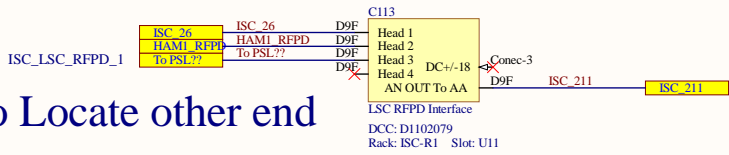
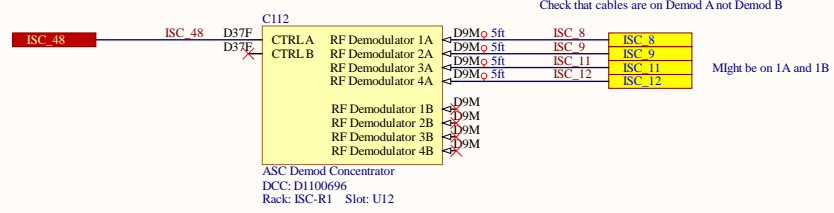
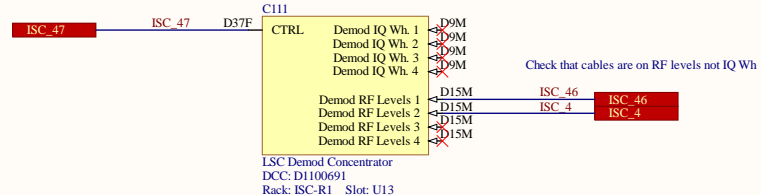
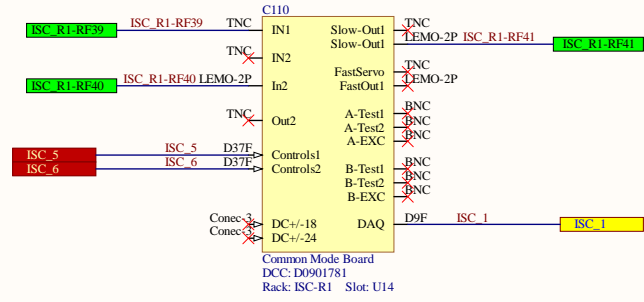
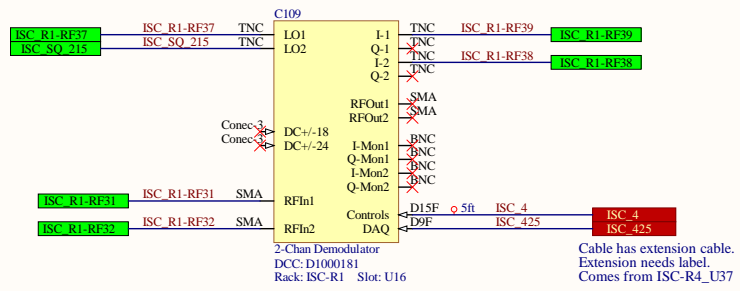
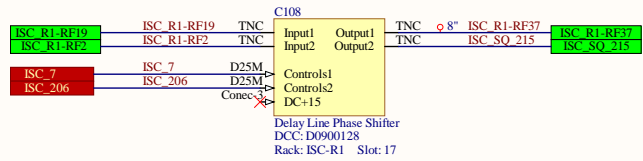
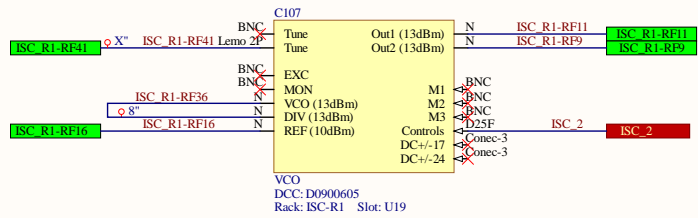
Need to label or find cable number

Recheck cables for U22  
In back for PLL

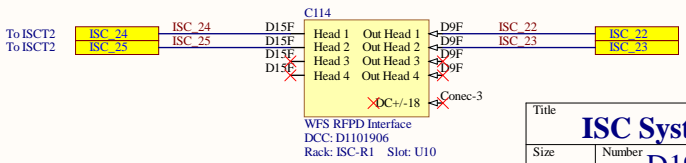
Title		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 0
File:	C:\Users\...ISC R1_SHL.SchDoc	TBD
Drawn By:		Filiberto Clara

**ISC-R1 Rack**

# ISC-R1 Rack

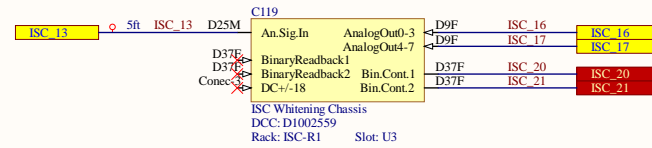
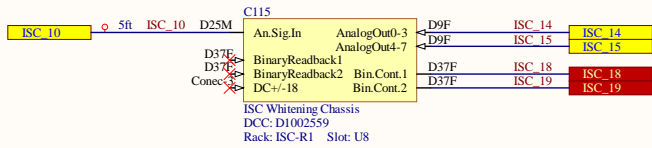


Need to Locate other end

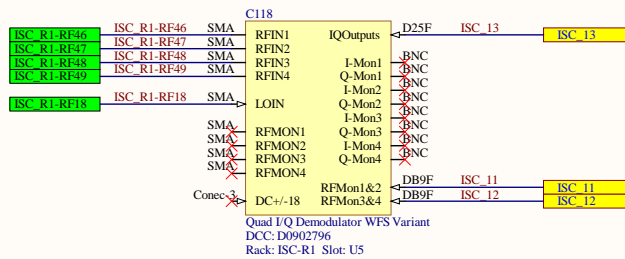
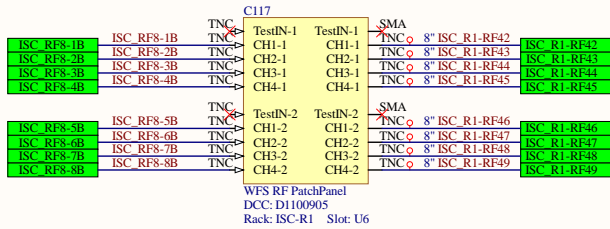
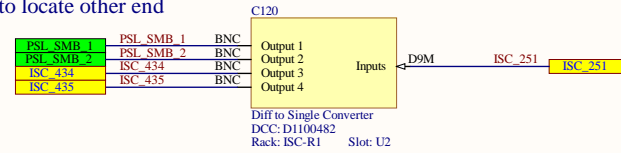
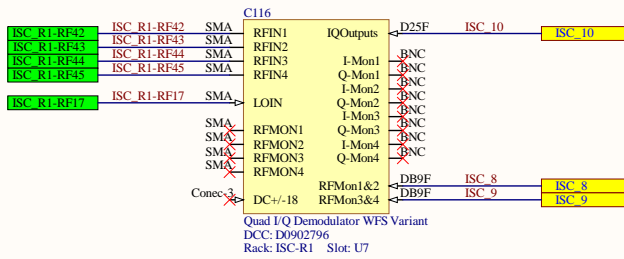


Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	<b>D1900511</b>	<b>v1</b>
Date:	10/21/2020	Sheet of: TBD
File:	C:\Users\...ISC_R1_SH2.SchDoc	Drawn By: Filiberto Clara

# ISC-R1 Rack



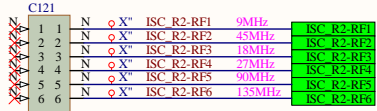
Need to locate other end



Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of: 2	TBD
File: C:\Users\...ISC_R1_SH3.SchDoc	Drawn By: Filiberto Clara	

# ISC-R2 Rack

## RF Patch Panel 13



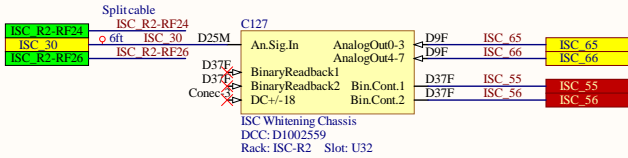
RF Dist. PatchPanel  
D1101479  
Rack: ISC-R2 Slot: U41

## RF Patch Panel 14



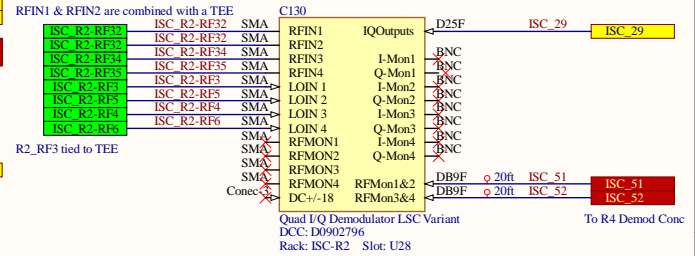
RF Dist. PatchPanel  
D1101479  
Rack: ISC-R2 Slot: U39

## LSC POPAIR A 9&45, LSC REFLAIR A 45

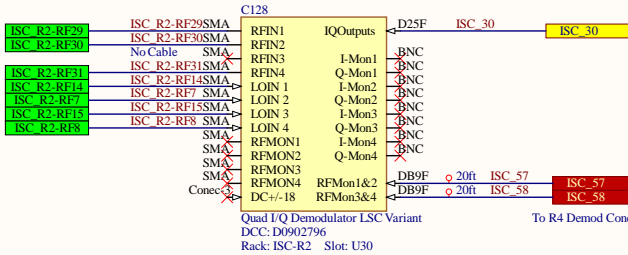


ISC-R2 Slot: U32

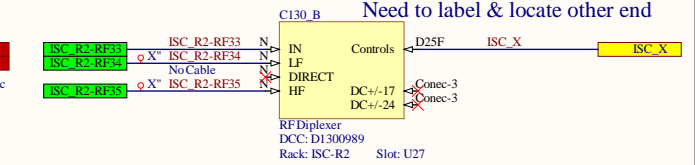
## LSC POPAIR B 18&90, LSC REFLAIR B 27&135



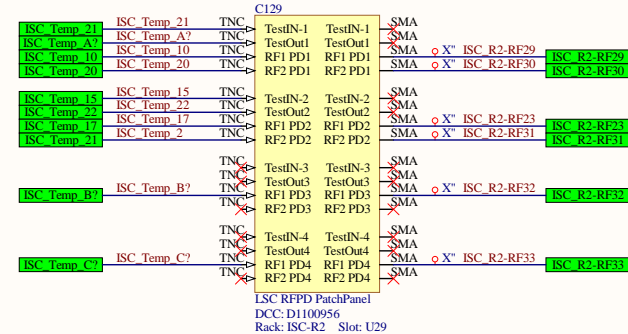
ISC-R2 Slot: U28



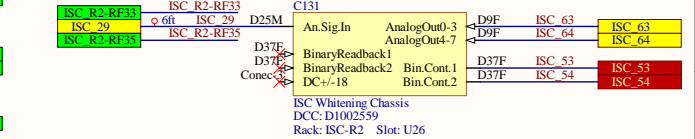
ISC-R2 Slot: U30



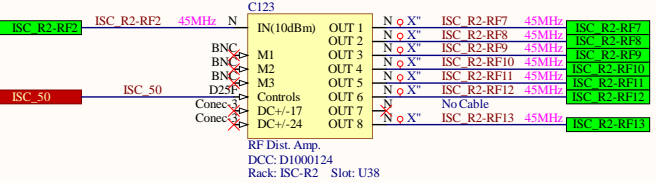
ISC-R2 Slot: U27



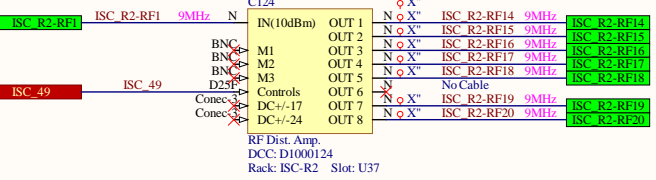
ISC-R2 Slot: U29



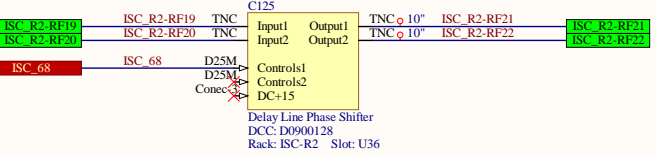
ISC-R2 Slot: U26



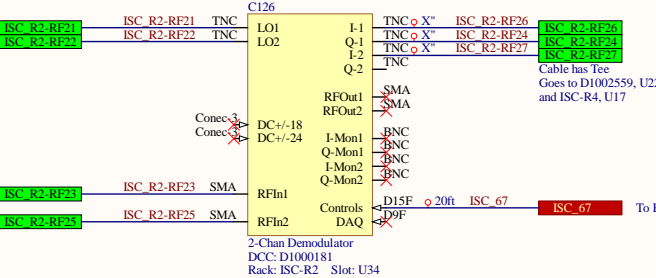
ISC-R2 Slot: U38



ISC-R2 Slot: U37



ISC-R2 Slot: U36

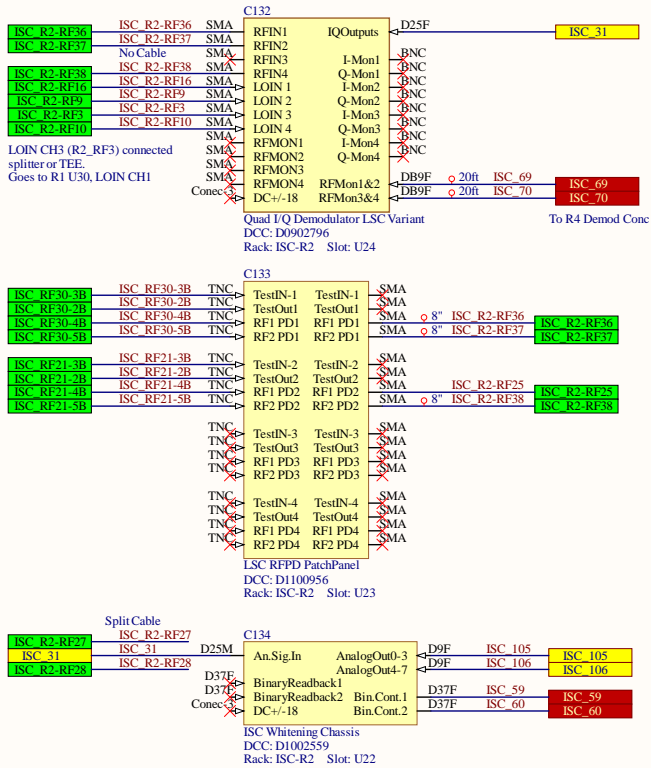


ISC-R2 Slot: U34

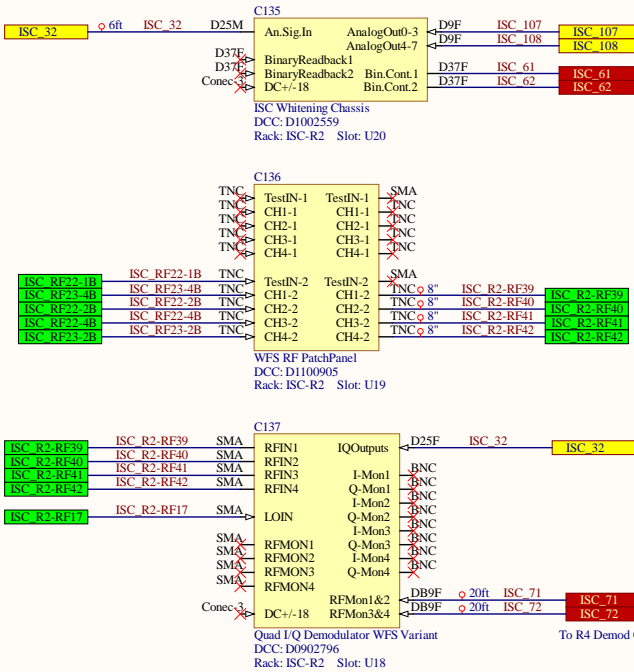
Title		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 3
File:	C:\Users\...ISC_R2_SHL.SchDoc	TBD
		Drawn By: Filiberto Clara

# ISC-R2 Rack

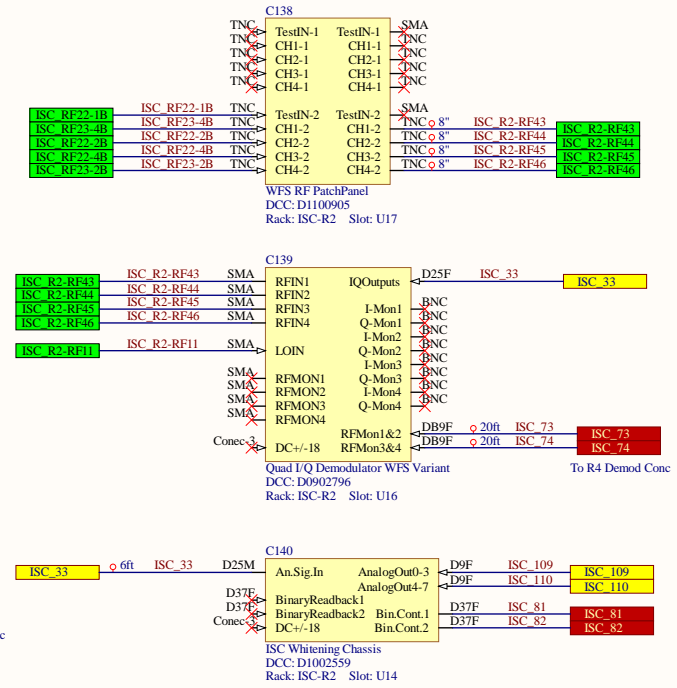
## LSC POP, LSC REFL



## ASC REFLAIR A 9MHz



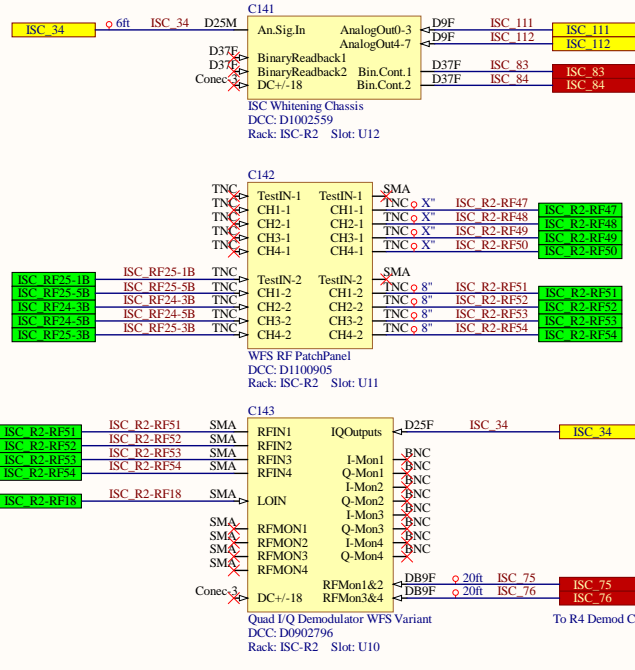
## ASC REFLAIR A 45MHz



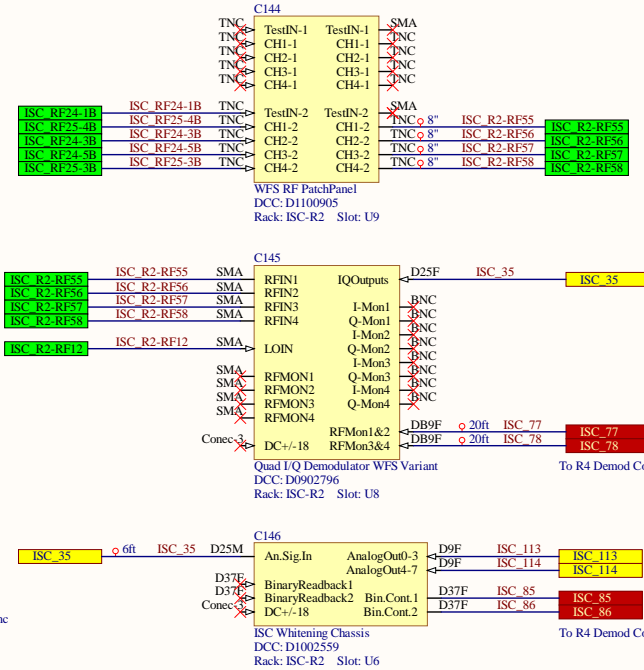
Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of 4 TBD	Drawn By: Filiberto Clara
File: C:\Users\...ISC_R2_SH2.SchDoc		

# ISC-R2 Rack

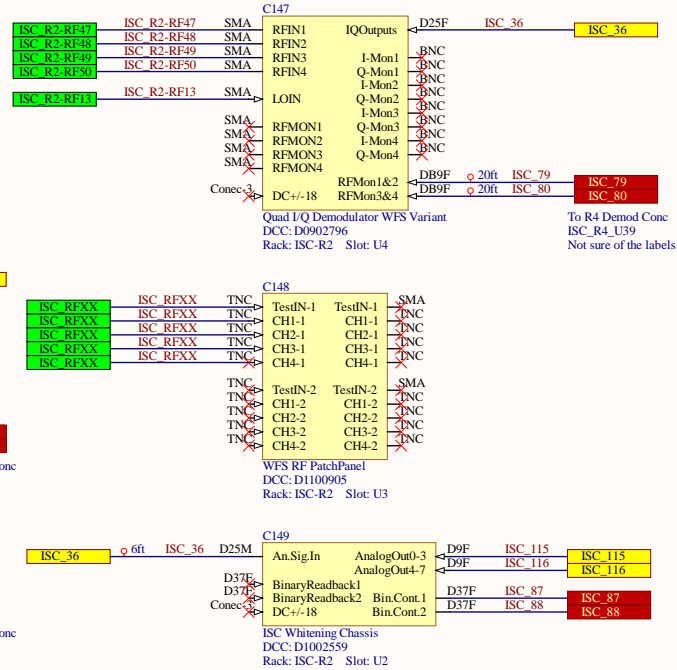
## ASC REFLAIR B 9MHz



## ASC REFLAIR B 45MHz

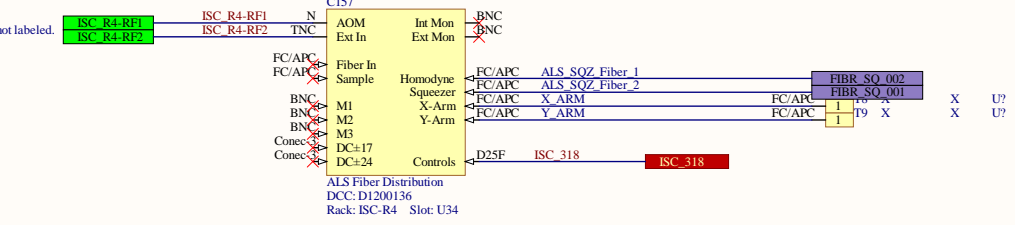
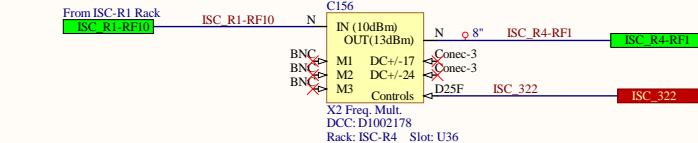
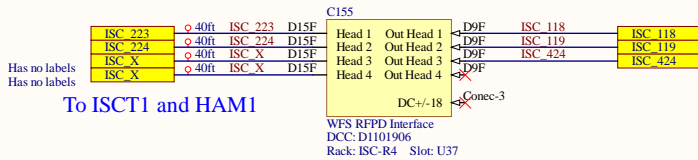
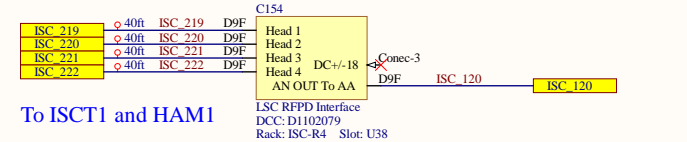
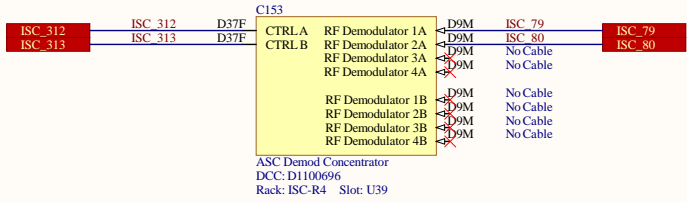
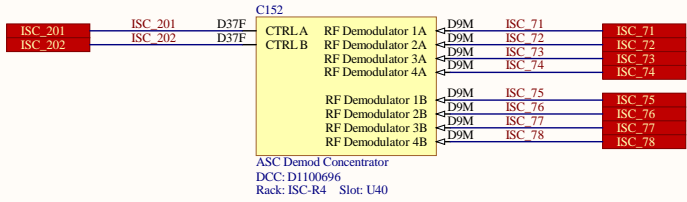
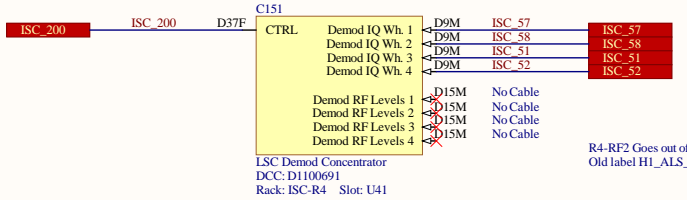
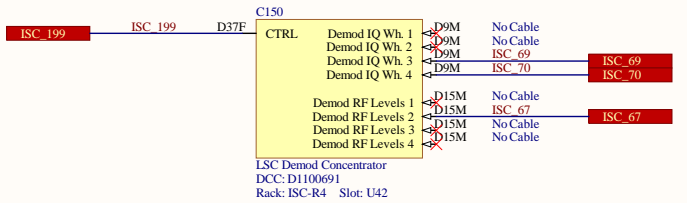


## ASC POP A 45MHz



Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 5 TBD
File:	C:\Users\...ISC_R2_SH3.SchDoc	Drawn By: Filiberto Clara

# ISC-R4 Rack



R4-RF2 Goes out of rack, other side not labeled.  
 Old label H1\_ALS\_PSL\_PD1

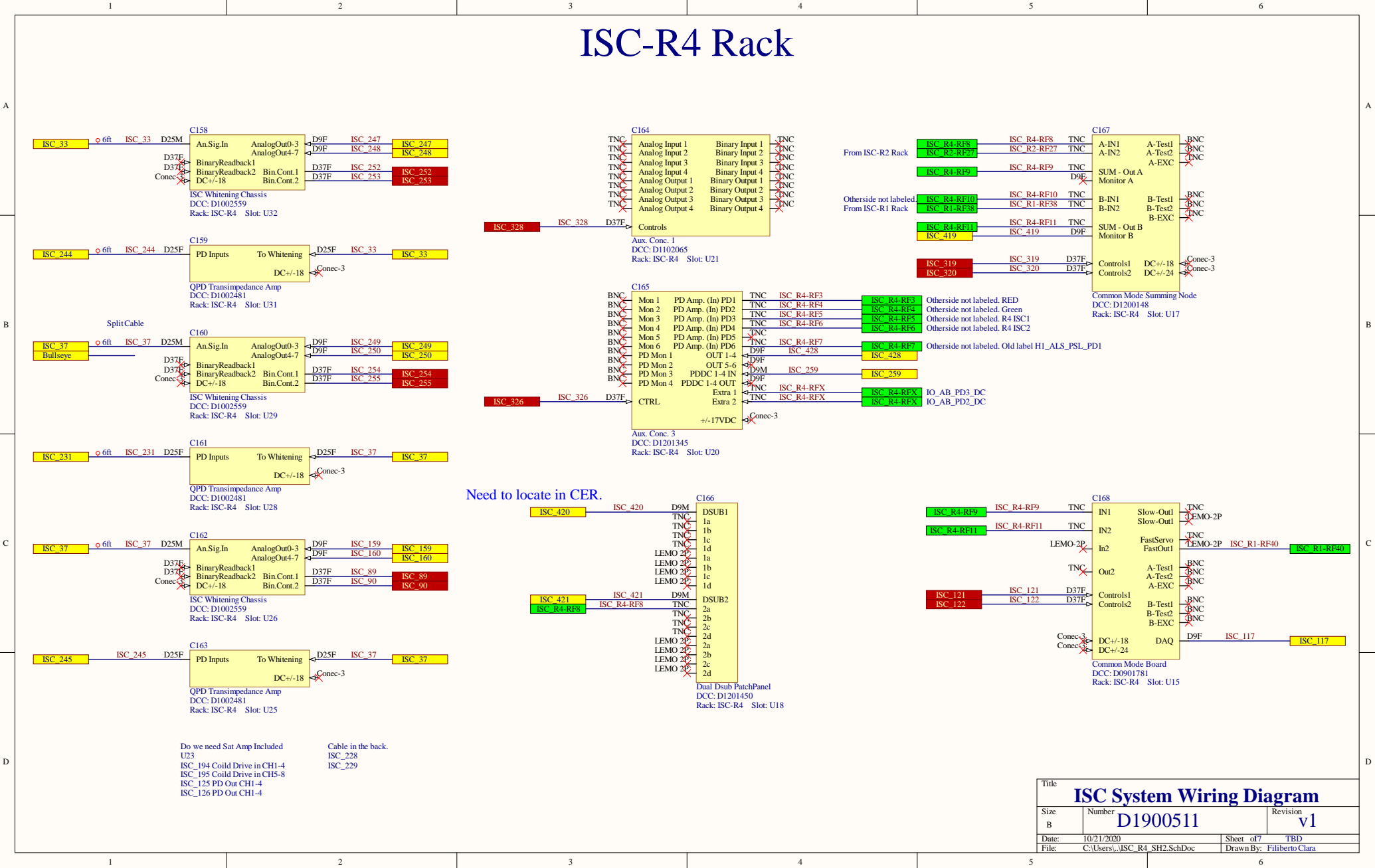
Both cable have no labels  
 Both go to R2\_U27

To ISCT1 and HAM1

Title		
<b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date:	10/21/2020	Sheet of 6 TBD
File:	C:\Users\...ISC_R4_SHL.SchDoc	Drawn By: Filiberto Clara



# ISC-R4 Rack



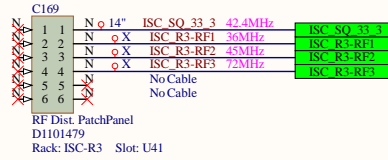
Need to locate in CER.

Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 7
File:	C:\Users\...ISC_R4_SH2.SchDoc	TBD
		Drawn By: Filiberto Clara

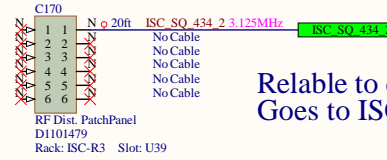
# ISC-R3 Rack

Need to Relabel ISC\_R3-RF4

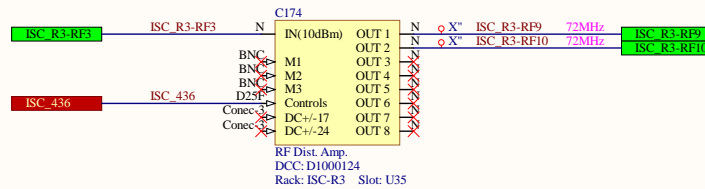
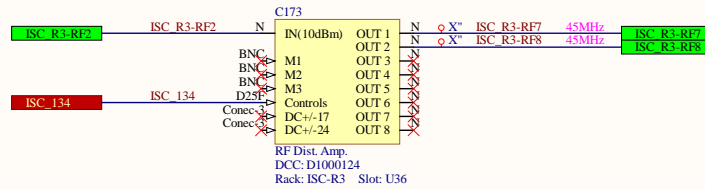
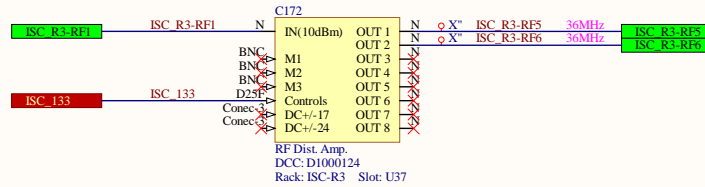
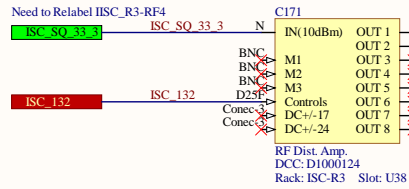
RF Patch Panel 15



RF Patch Panel 16

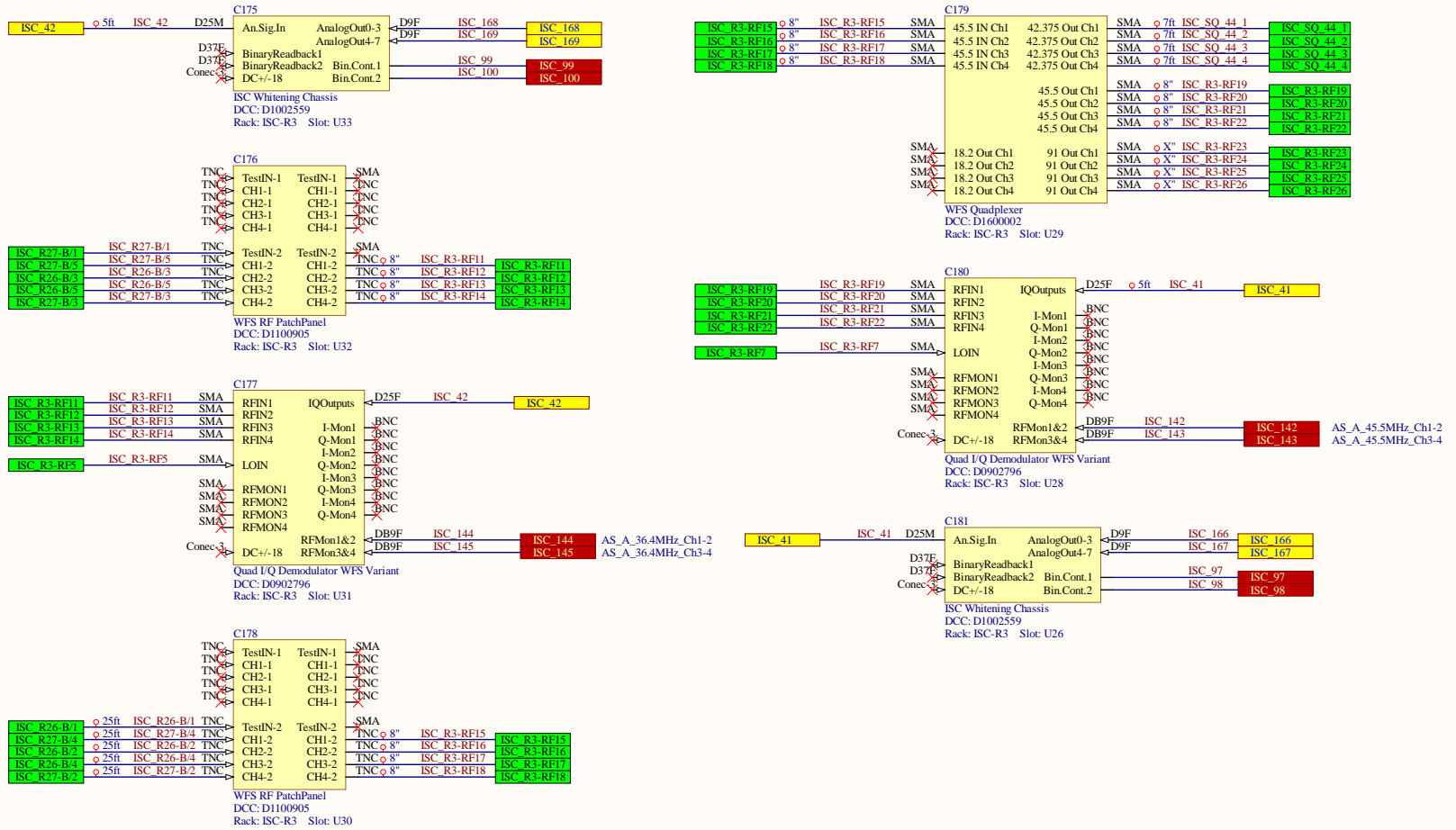


Relable to cable ISC\_SQ\_216\_1  
Goes to ISC-R5 Rack



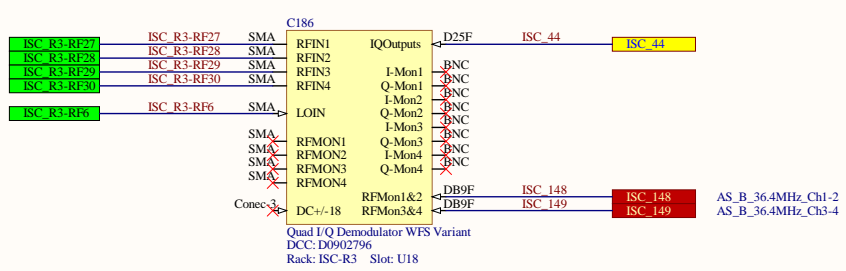
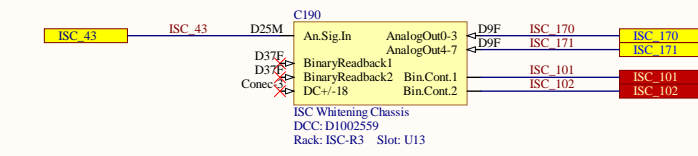
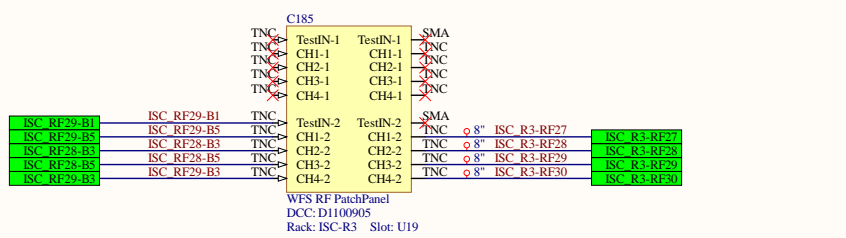
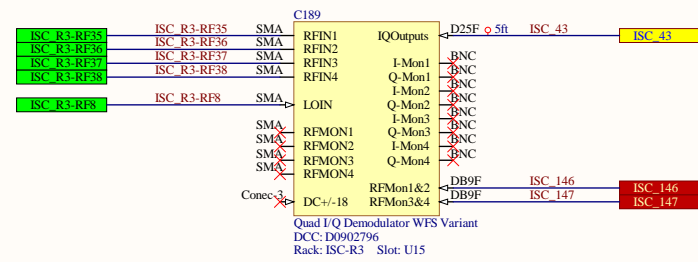
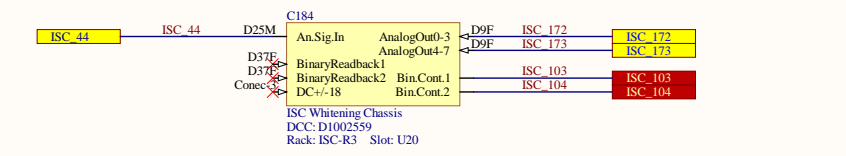
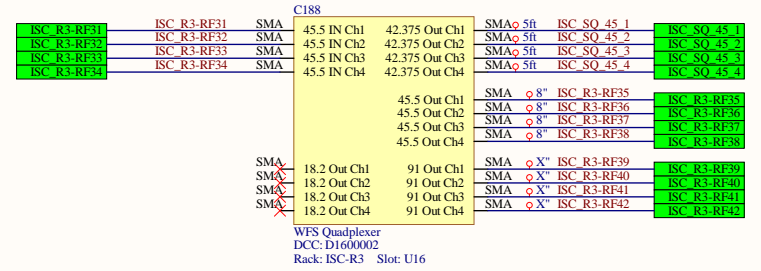
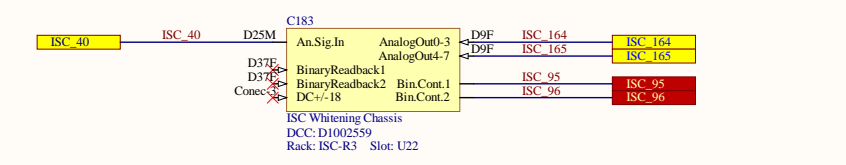
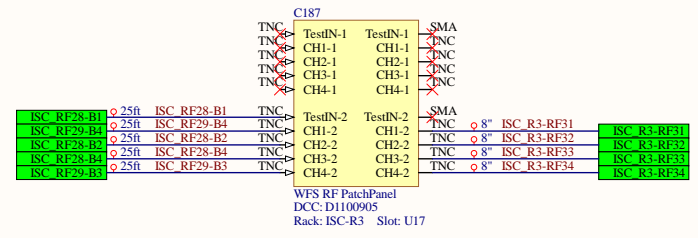
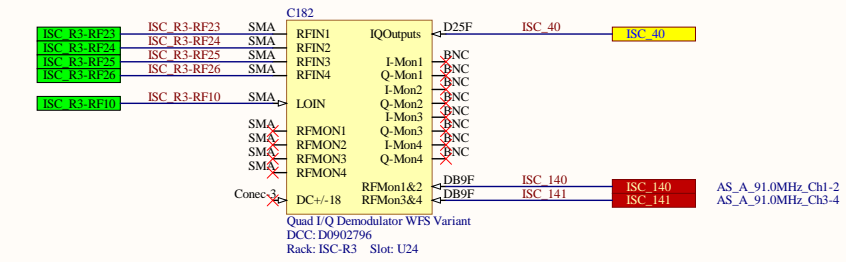
Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet of 8 C:\Users\...ISC_R3_SHL\SchDoc	TBD
File:	Drawn By: Filiberto Clara	

# ISC-R3 Rack



Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of9 TBD
File:	C:\Users\...ISC_R3_SH2.SchDoc	Drawn By: Filiberto Clara

# ISC-R3 Rack

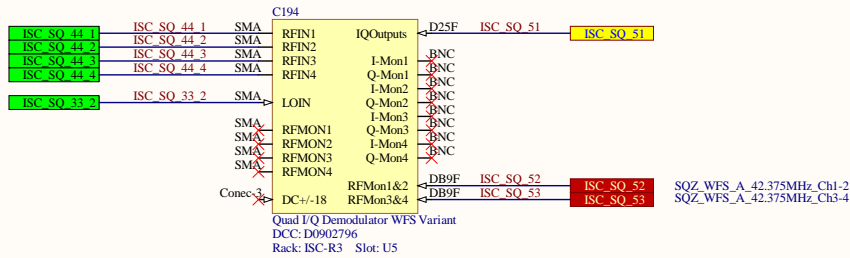
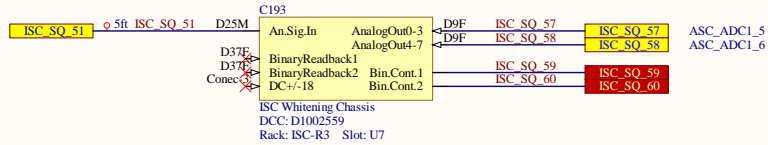
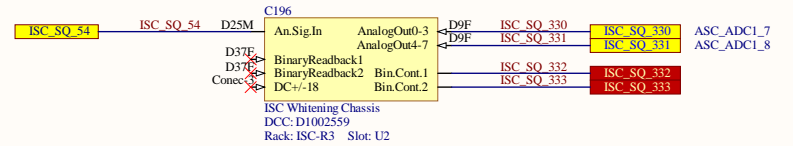
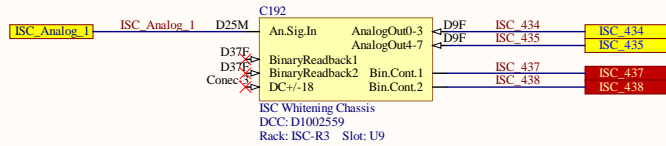
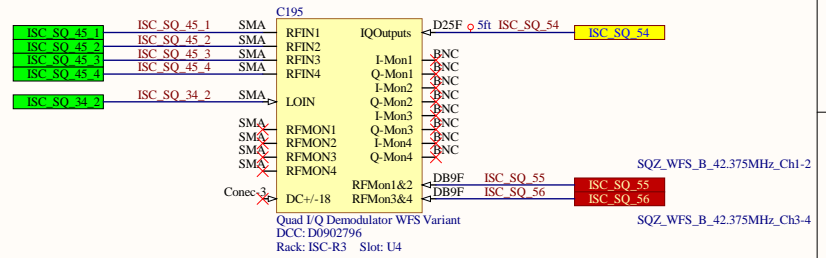
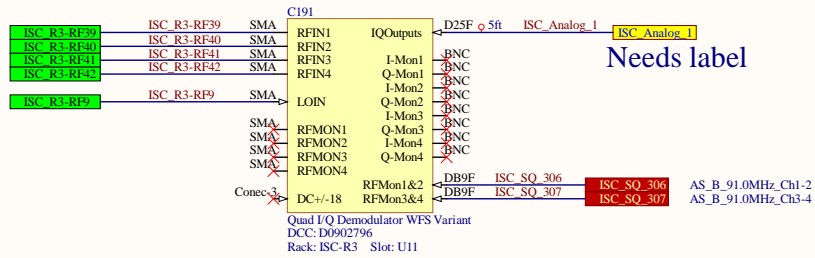


Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet #00 TBD
File:	C:\Users\...ISC_R3_SH3.SchDoc	Drawn By: Filiberto Clara

# ISC-R3 Rack

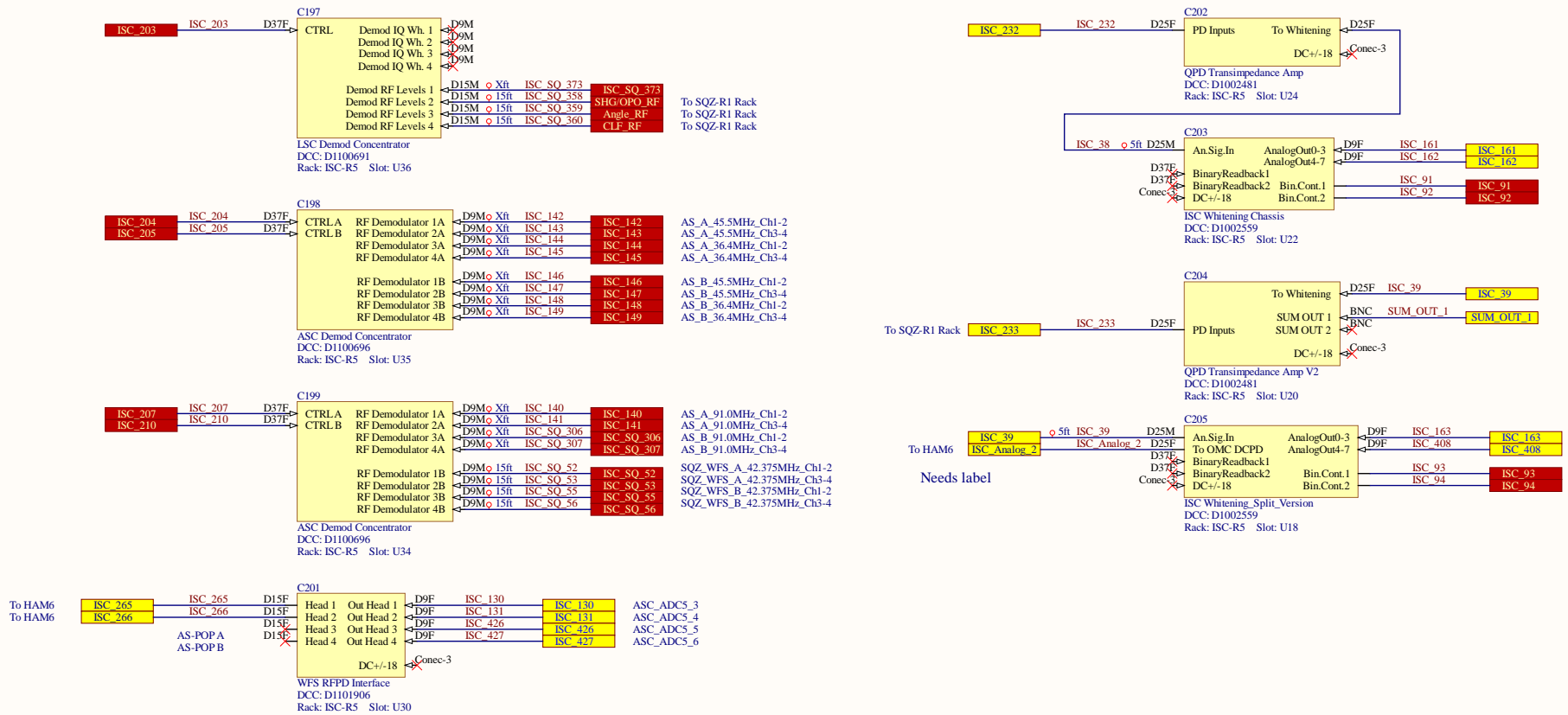
Needs labels

Needs label



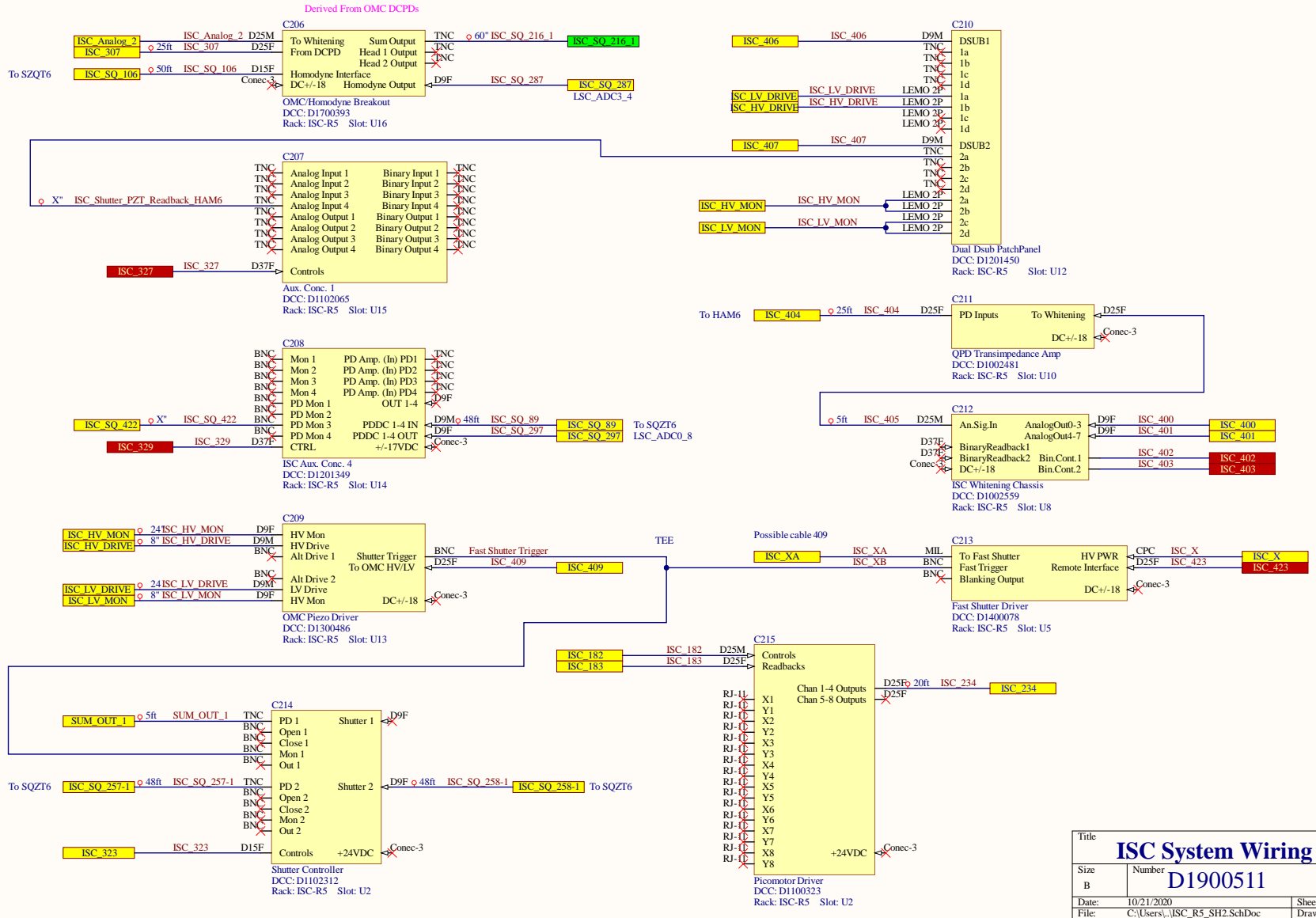
Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 1 TBD
File:	C:\Users\...ISC_R3_SH4.SchDoc	Drawn By: Filiberto Clara

# ISC-R5 Rack



Title			<b>ISC System Wiring Diagram</b>		
Size	Number	Revision			
B	D1900511	v1			
Date:	10/21/2020	Sheet	of 2	TBD	
File:	C:\Users\...ISC_R5_SHL.SchDoc	Drawn By:	Filiberto Clara		

# ISC-R5 Rack

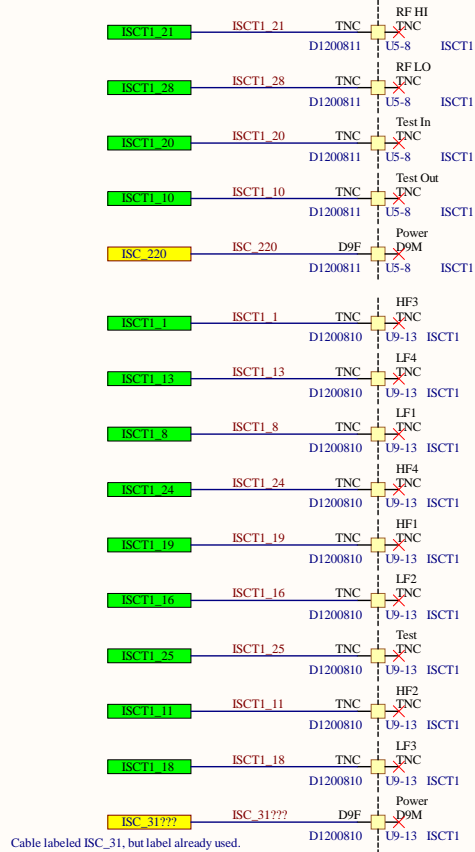


Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet: of 3 TBD
File:	C:\Users\...ISC_R5_SH2.SchDoc	Drawn By: Filiberto Clara

# ISCT1 - Right Side

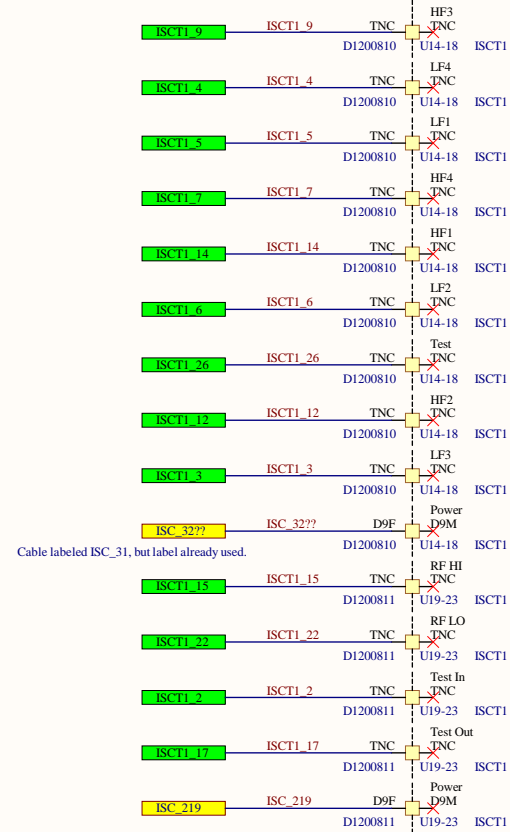
## Inside Enclosure

## Inside Enclosure



LSC RFPD REFL Air A

ASC WFS REFL Air A



ASC WFS REFL Air B

LSC RFPD POP Air A

Cable labeled ISC\_31, but label already used.

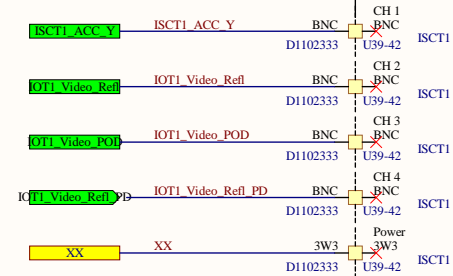
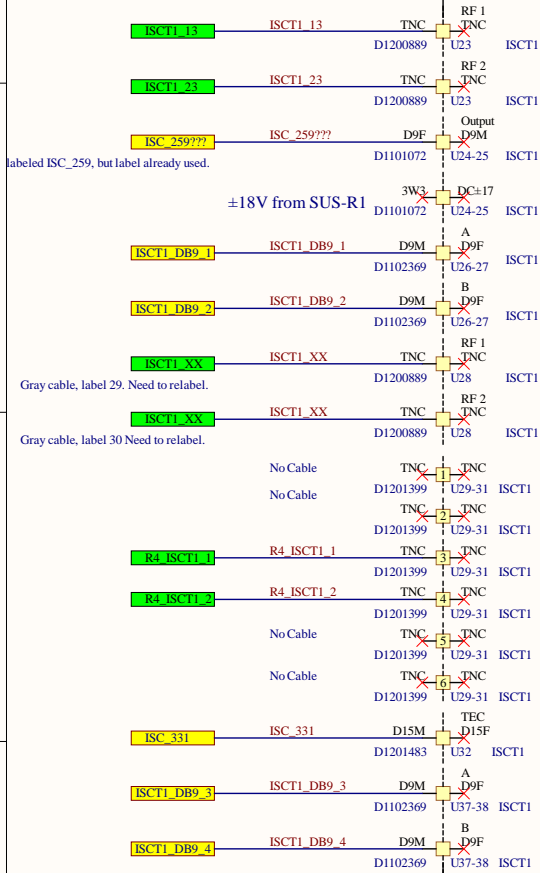
Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet #44
File:	C:\Users\... \ISCT1_SH1.SchDoc	TBD
		Drawn By: Filiberto Clara



# ISCT1 - Right Side

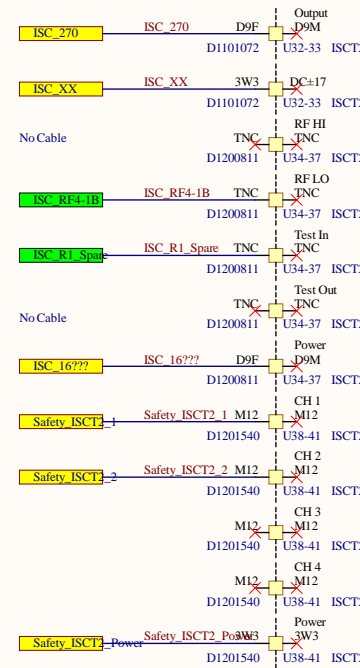
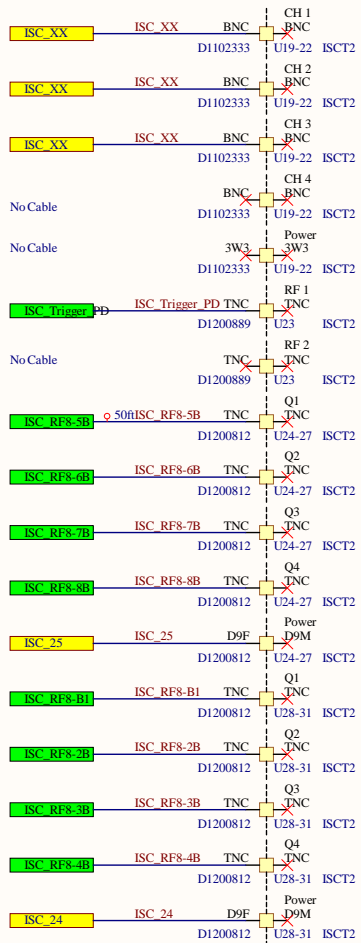
## Inside Enclosure

## Inside Enclosure



Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet of 5 TBD
File:	C:\Users\...ISCT1_SH2.SchDoc	Drawn By: Filiberto Clara

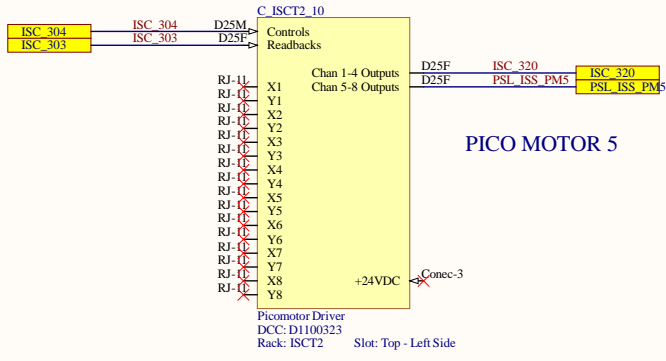
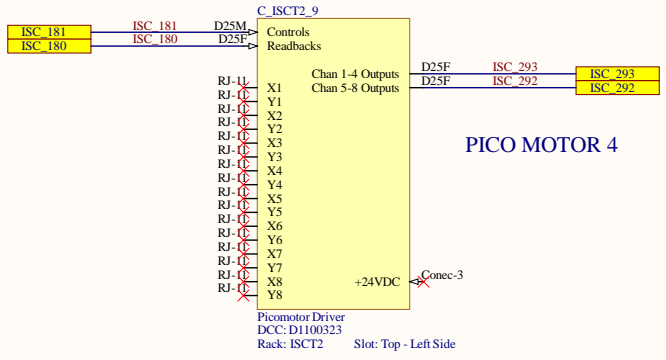
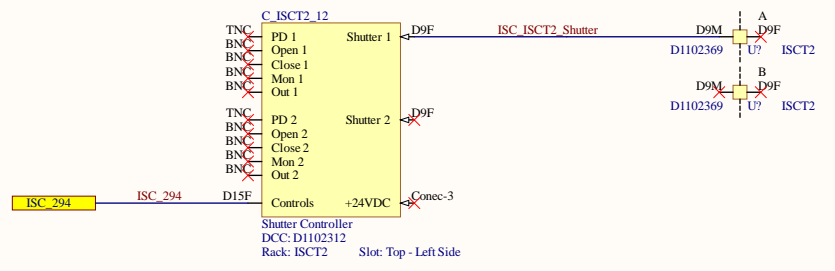
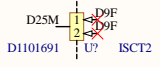
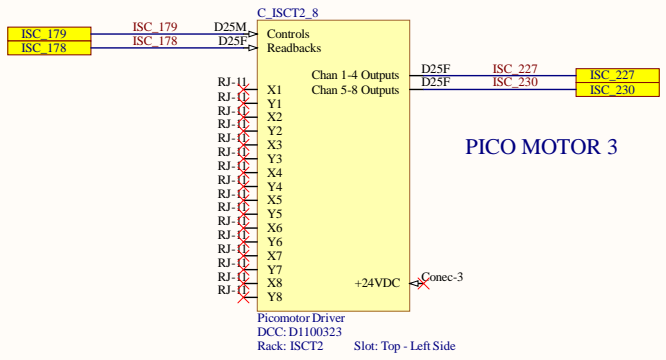
# ISCT2 - Left Side



Cable labeled ISC\_16, but label already used.



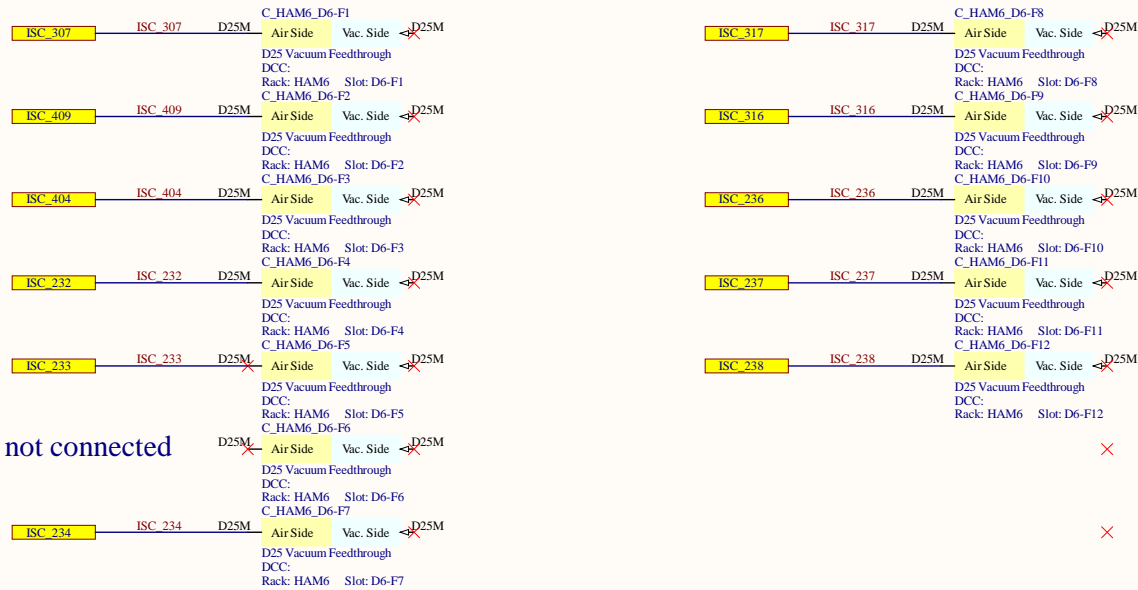
Title			<b>ISC System Wiring Diagram</b>		
Size	Number	Revision			
B	D1900511	v1			
Date:	10/21/2020	Sheet	of	TBD	
File:	C:\Users\...\ISCT2_S\H1.SchDoc	Drawn By:	Filiberto Clara		



Recheck cable number ISC\_243 or ISC\_320

Title <b>ISC System Wiring Diagram</b>		
Size B	Number <b>D1900511</b>	Revision <b>v1</b>
Date: 10/21/2020	Sheet: <b>d7</b>	TBD
File: C:\Users\... \ISCT2_SH2.SchDoc	Drawn By: <b>Filiberto Clara</b>	

# HAM6 Flange Layout



Cable ISC-235 not connected

Cables ISC\_265 & ISC\_266 on SQZ WFS Page  
Recheck flange ????

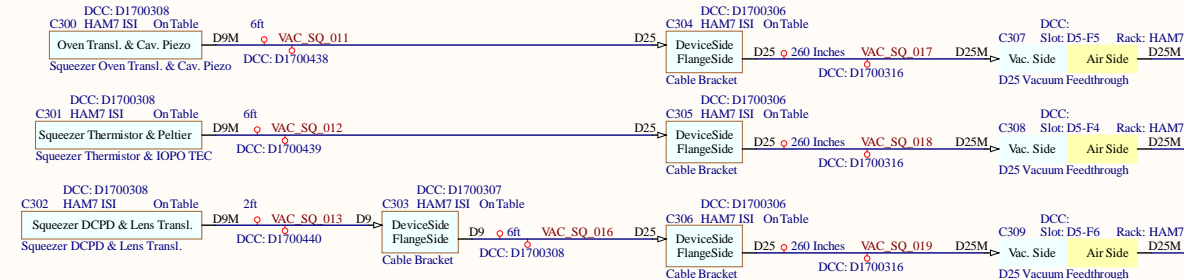
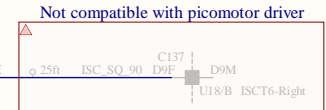
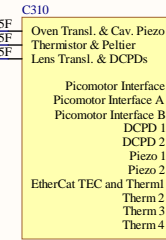
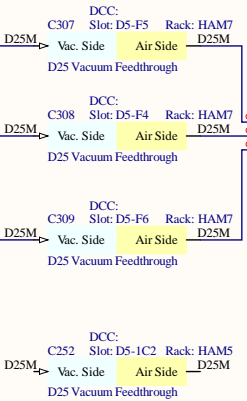
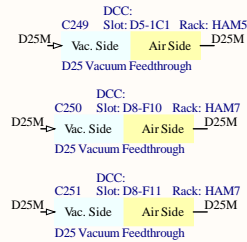
Title		
<b>ISC System Wiring Diagram</b>		
Size	Number	Revision
B	D1900511	v1
Date:	10/21/2020	Sheet #00 TBD
File:	C:\Users\...HAM6_SHI.SchDoc	Drawn By: Filiberto Clara

# D1700308 Wiring Diagram - More Cables HAM7 Flange Layout D1900116 Does Not Match

OFI 2

SFI 1

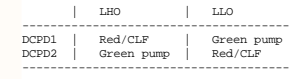
SFI 2



HAM5 DCPD

**Key**

- Ties to Beckhoff
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air
- Dot Identifies Cable Shield Terminating to Backshell
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air

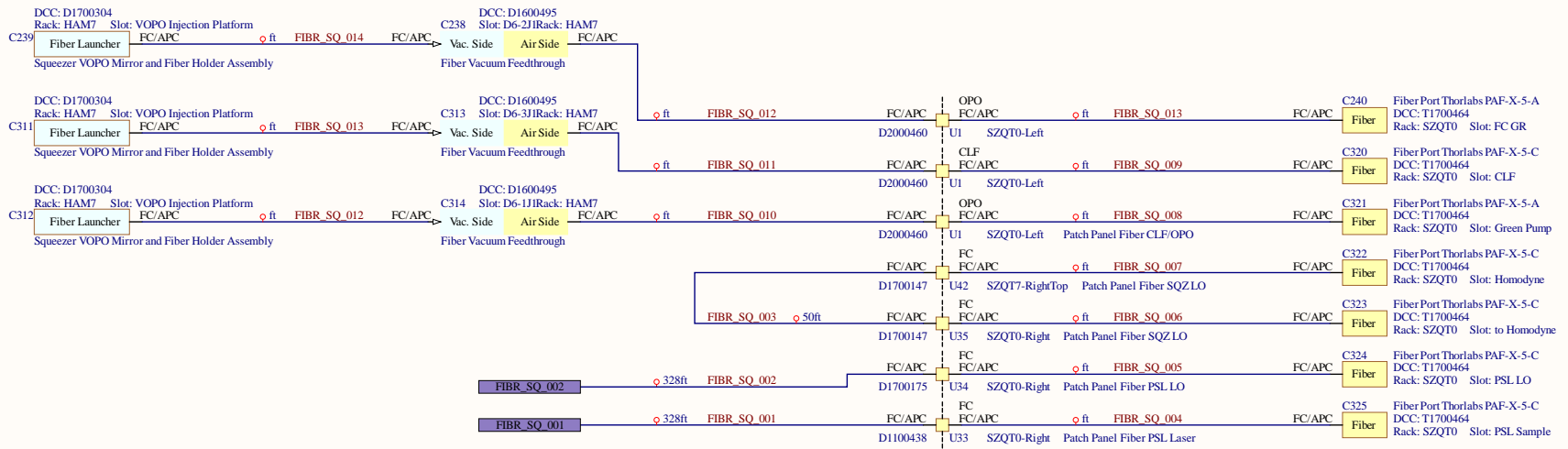


Title <b>Squeezer In-Vacuum Controls</b>		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		Last Edited: 10/21/2020	
Size: B	DCC Number: D1700384	Revision: V9	Engineer: R. Abbott	Date: 10/21/2020	Time: 2:18:29 PM
File: C:\Users\Daniel\Documents\Protel\WiringPlan\ISC\D1900511\SqueezerInVacControls.SchDoc			Sheet 31 of TBD		

**FC**

**CLF**

**OPO**

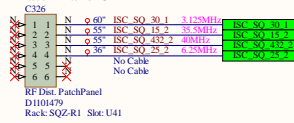


Last Edited: 10/9/2020

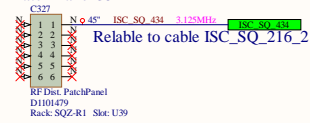
Title		Squeezer Fiber Connections		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: B	DCC Number: D1700384	Revision: V9	Engineer: R. Abbott	Date: 10/21/2020	Time: 2:18:29 PM	Sheet 32 of TBD	

File: C:\Users\Daniel\Documents\Protel\WiringPlan\ISC\D1900511\SqueezerFiber.SchDoc

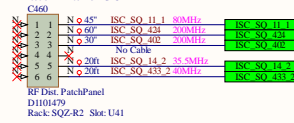
RF Patch Panel 34



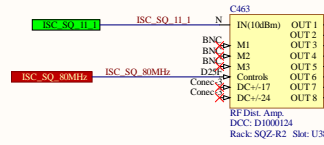
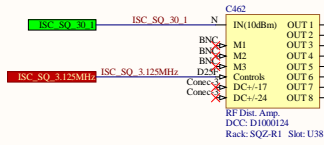
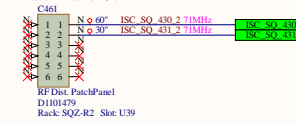
RF Patch Panel 35



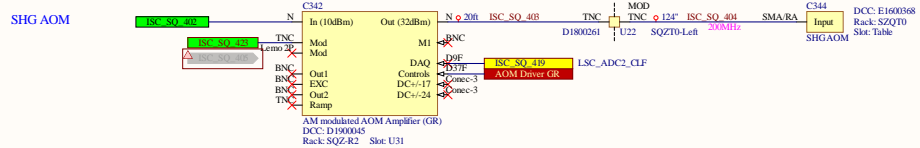
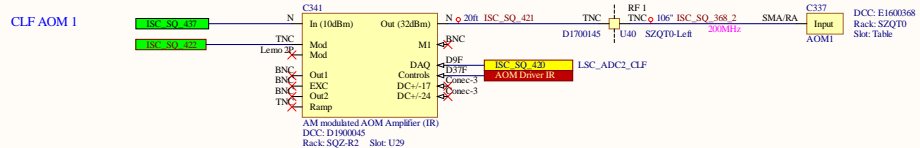
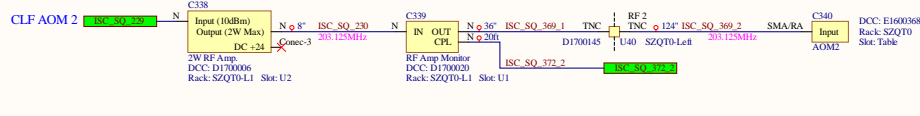
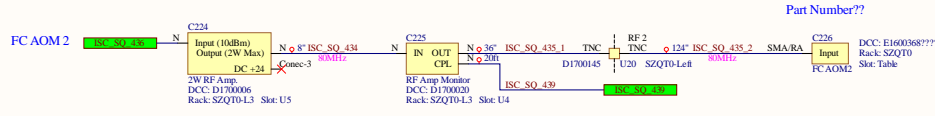
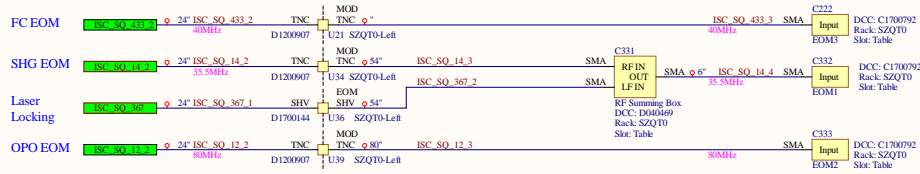
RF Patch Panel 36



RF Patch Panel 37



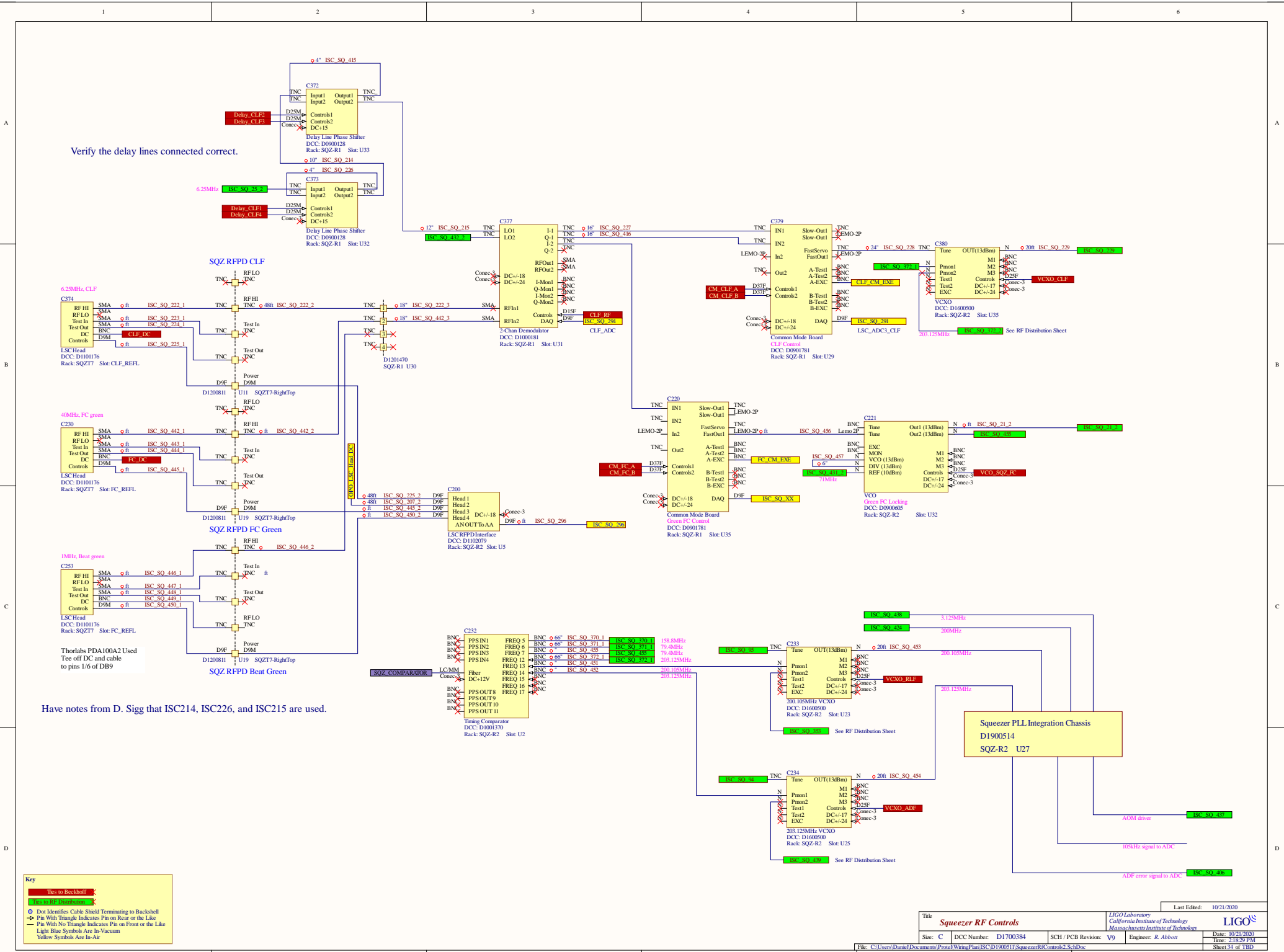
New cables for A\_ start at ISC\_SQ\_430



**Key**  
 [Red box] Dies to Backshell  
 [Green box] Cable Shield to Backshell  
 [Blue box] Pin With Triangle Indicates Pin on Rear or the Lake  
 [Pink box] Pin With No Triangle Indicates Pin on Front or the Lake  
 [Light Blue box] Light Blue Symbols Are In-Vacuum  
 [Yellow box] Yellow Symbols Are In-Air

RF cables carrying the AOM signals need to be 1/4" superflexible helical corrugated coax.

Title		
Size	Number	Revision
C		
Date:	10/21/2020	Sheet of
File:	C:\Users\j_squezer\RF\Distribution_Sch\Drawn By:	



Verify the delay lines connected correct.

6.25MHz CLF

40MHz FC green

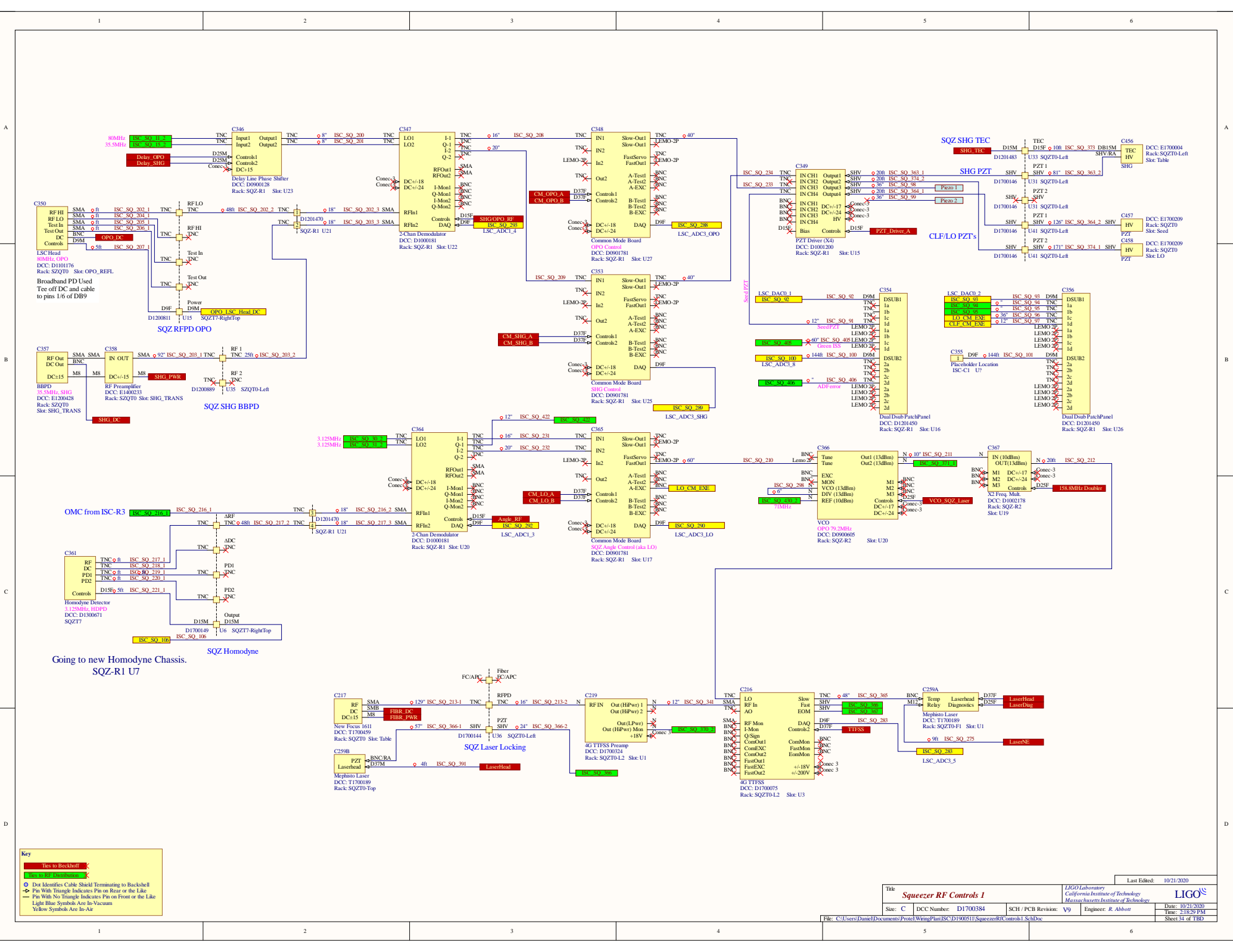
1MHz Beat green

Have notes from D. Sigg that ISC214, ISC226, and ISC215 are used.

**Key**

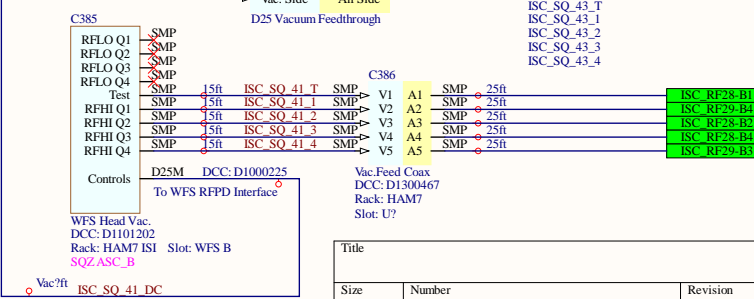
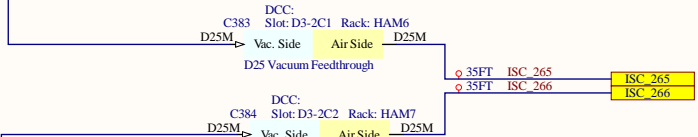
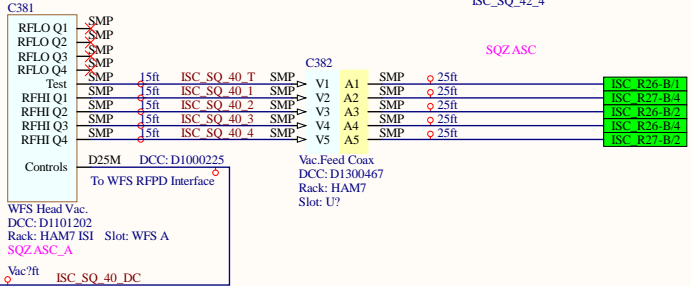
- Tie to Backshell
- Dot Identifies Cable Shield Terminating to Backshell
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air





There are no WFS in HAM7!  
So, there are 2 QPDs

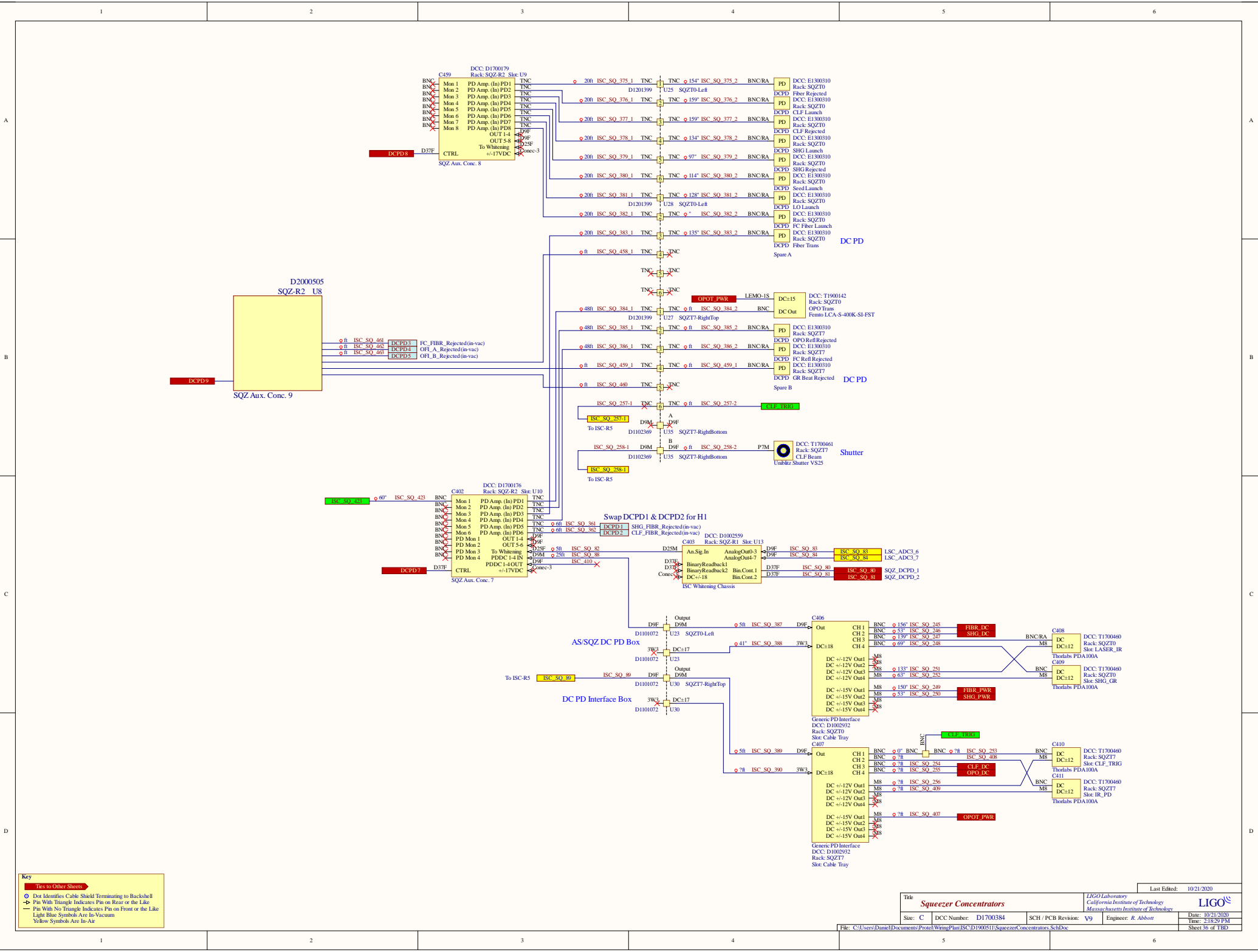
ISC\_SQ\_42\_T  
ISC\_SQ\_42\_1  
ISC\_SQ\_42\_2  
ISC\_SQ\_42\_3  
ISC\_SQ\_42\_4



**Key**

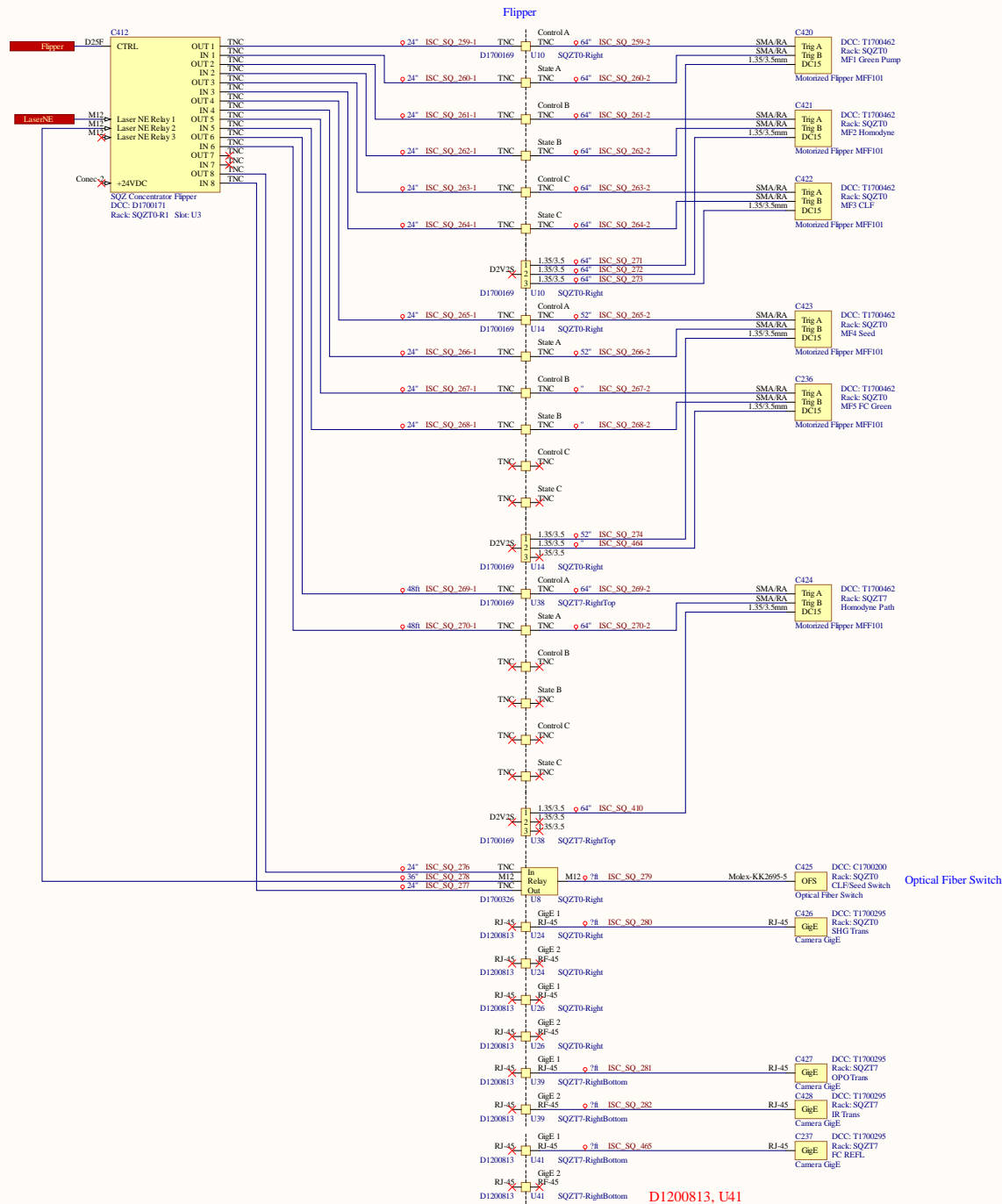
- Ties to Beckhoff <
- Ties to RP Distribution <
- Dot Identifies Cable Shield Terminating to Backshell
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air

Title		
Size	Number	Revision
B		
Date:	10/21/2020	Sheet of
File:	C:\Users\...Squeezer\WfsWiring.SchDoc	Drawn By:



**Key**

- Ties to Other Sheets
- Dcc Identifies Cable Shield Terminating to Backshell
- △ Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air



**Key**

- Ties to Other Sheets
- Dot Identifies Cable Shield Terminating to Backshell
- ◄ Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air

**New Cameras per Table Feedthrough Panel**

**D1200813, U41**

Optical Fiber Switch

Last Edited: 10/21/2020

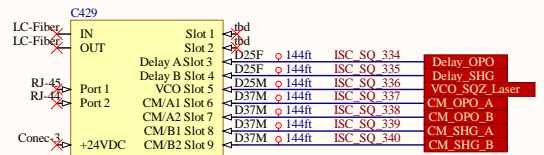
Title: <b>Squeezer Miscellaneous</b>		LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology		LIGO	
Size: C	DCC Number: D1700384	SCH / PCB Revision: V9	Engineer: R. Abbott	Date: 10/21/2020	Time: 2:15:30 PM
File: C:\Users\Danef\Documents\Protel\WiringPlan\ISC\D1900511\SqueezerMiscellaneous_SchDoc					
Sheet 57 of TBD					

A

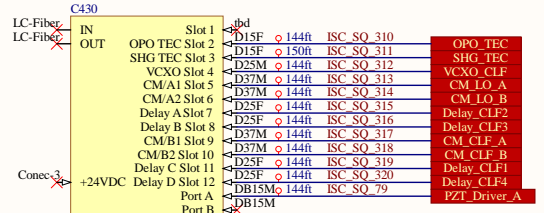
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C

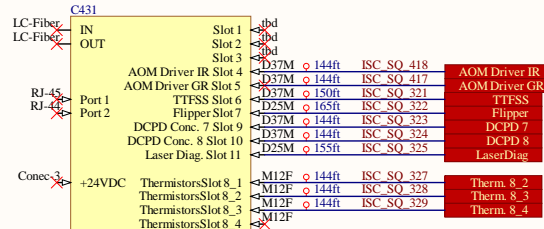
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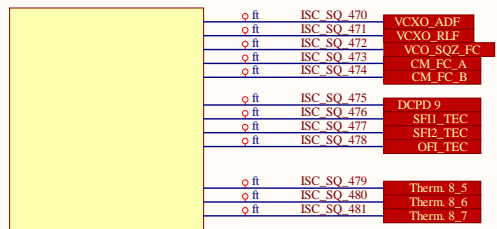
SQZ1 EtherCat  
DCC: D1002961  
Rack: SQZ-C1 Slot: U19



SQZ2 EtherCat  
DCC: D1600507  
Rack: SQZ-C1 Slot: U15



SQZ3 EtherCat  
DCC: D1600509  
Rack: SQZ-C1 Slot: U11

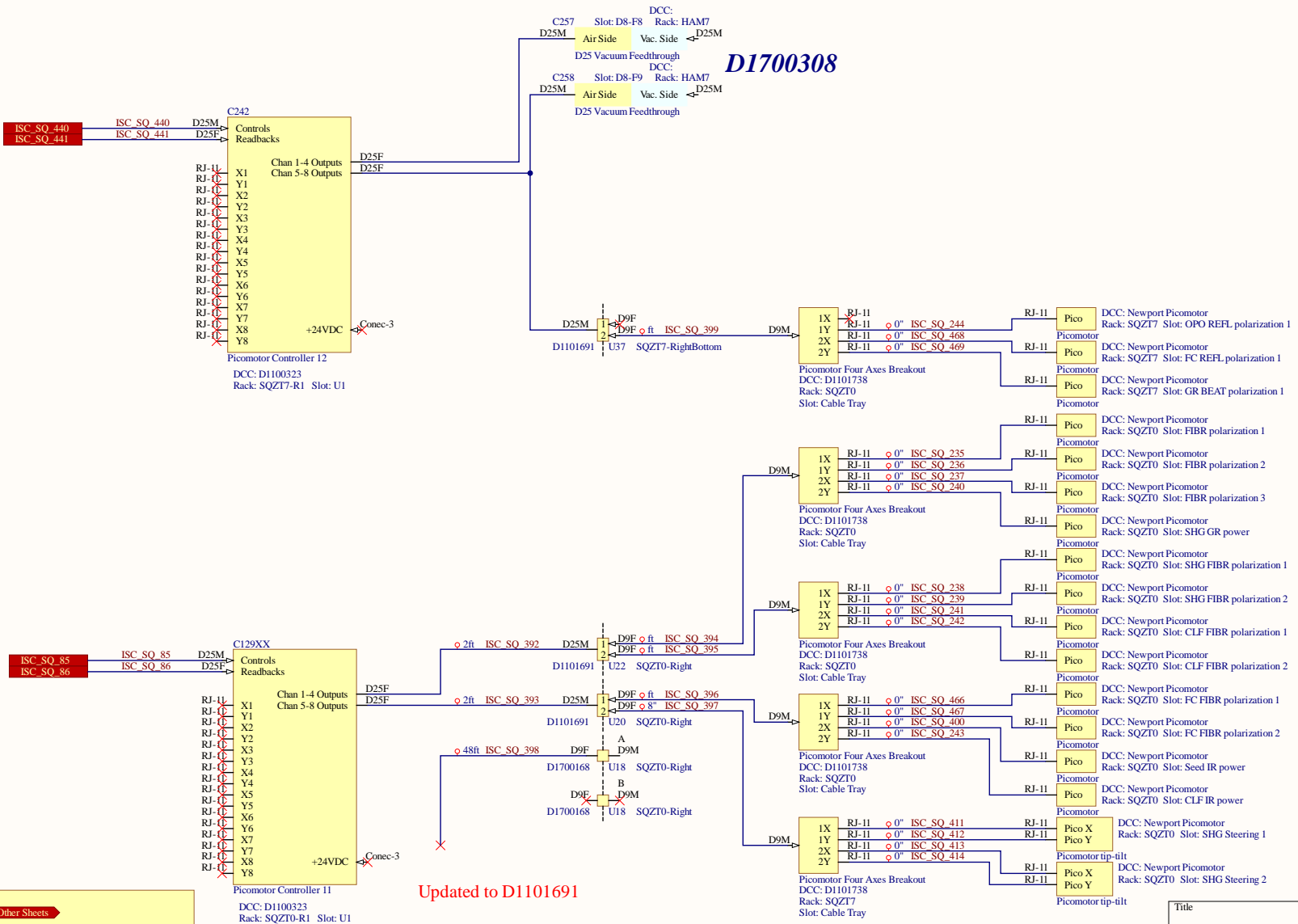


SQZ4 EtherCat  
D2000504  
SQZ-C1 U7

**Key**

- Ties to Other Sheets
- Dot Identifies Cable Shield Terminating to Backshell
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air

Title		
Size B	Number	Revision
Date: 10/21/2020	Sheet 36	TBD
File: C:\Users\...Squeezer\Beckhoff2.SchDoc	Drawn By:	



Title		
Size	Number	Revision
B		
Date:	10/21/2020	Sheet 36
File:	C:\Users\Squeezer\Beckhoff1.SchDoc	Drawn By: TBD