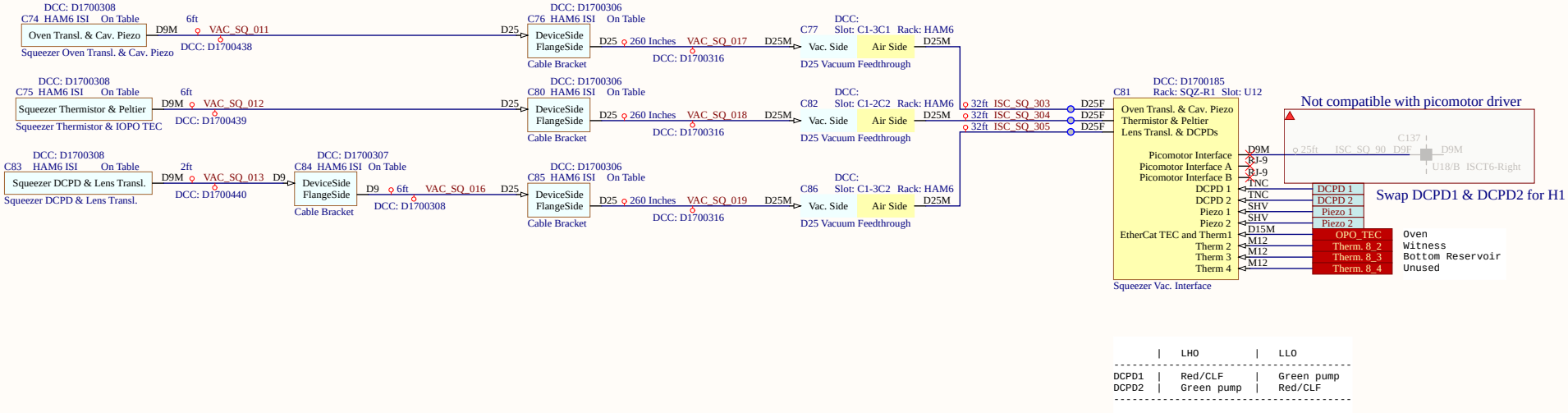


Key

- Ties to Beckhoff
- Ties to RF 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

Last Edited: *8/19/2019*

Title: ***Squeezer In-Vacuum Controls***

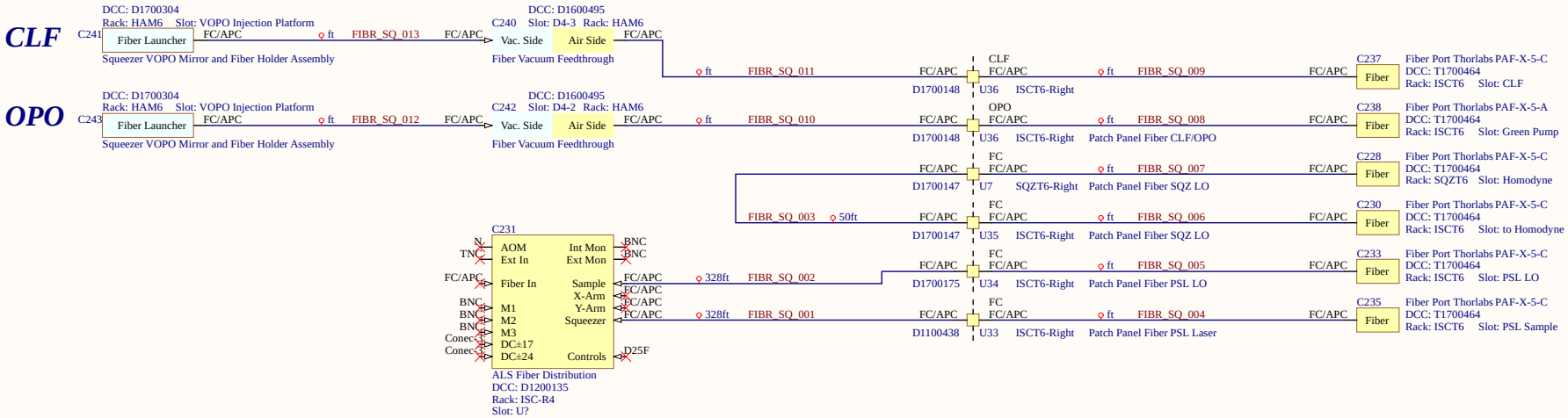
LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology

LIGO

Size: B	DCC Number: D1700384	Revision: V9	Engineer: *R. Abbott*

Date: 8/19/2019
Time: 11:01:23 AM
Sheet 1 of 11

File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerInVacControls.SchDoc



Last Edited: *8/19/2019*

Title: ***Squeezer Fiber Connetctions***

LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology

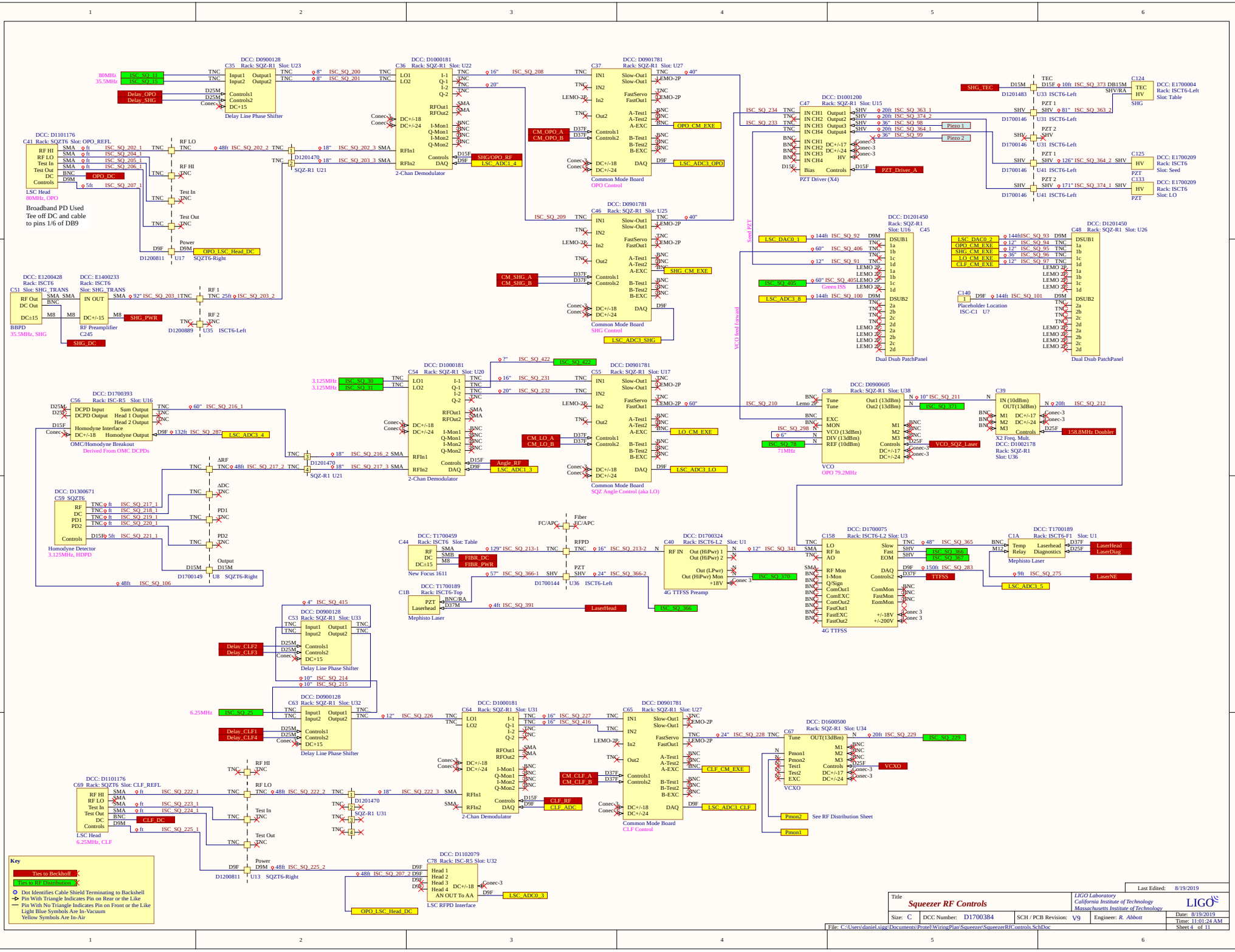
LIGO

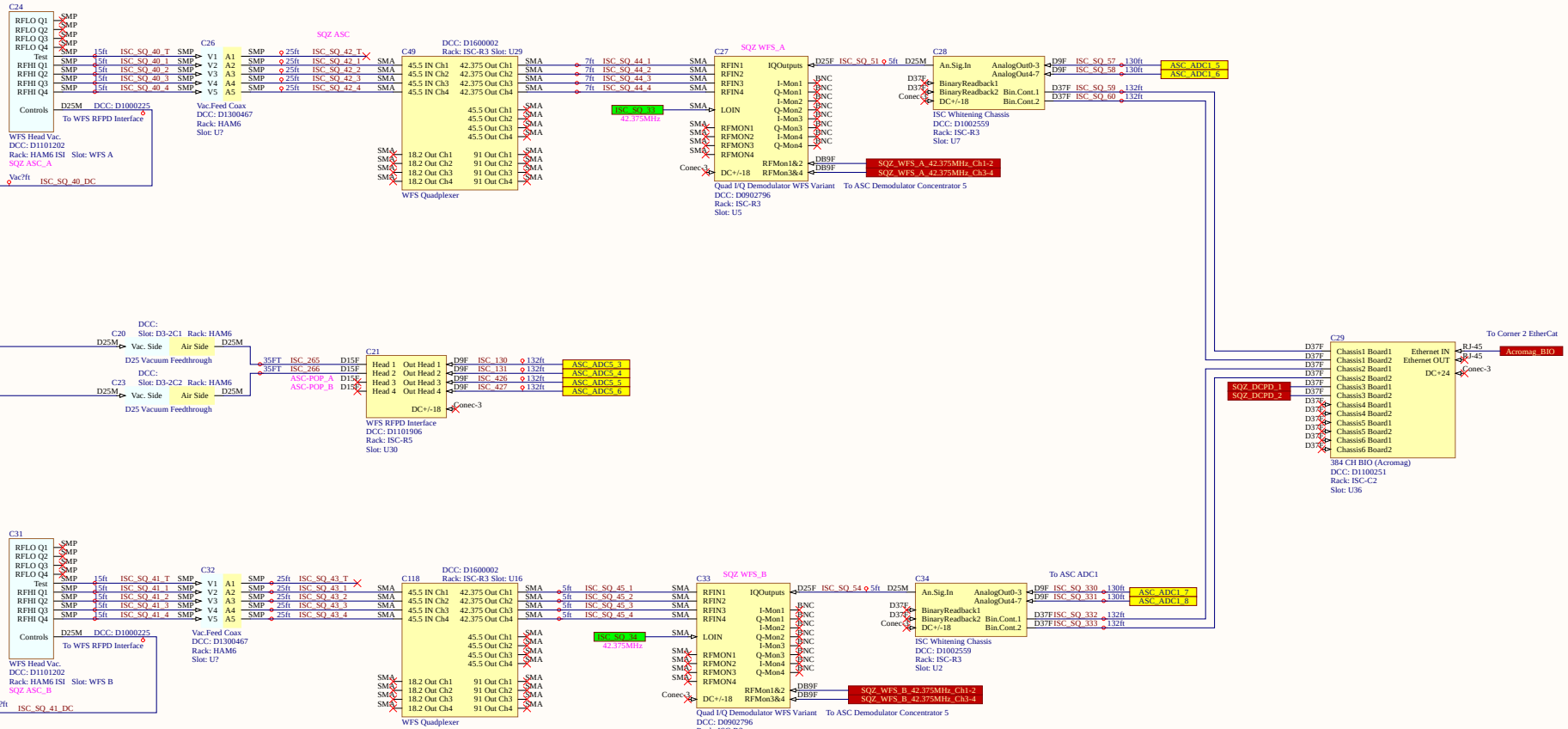
Size: B | DCC Number: D1700384 | Revision: V9 | Engineer: *R. Abbott*

Date: 8/19/2019
Time: 11:01:23 AM
Sheet 2 of 11

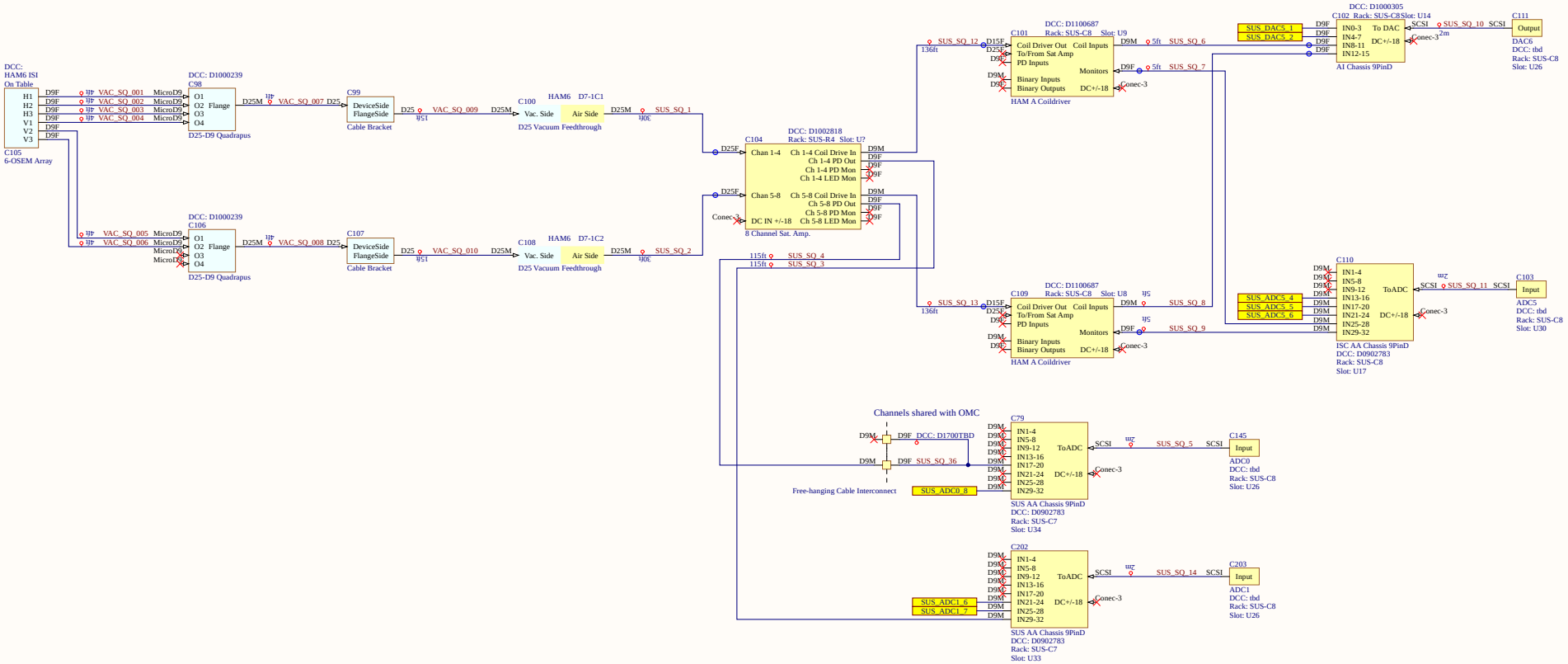
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerFiber.SchDoc


C5
OUT(13dBm)
Lock
DC+12
DC+/-24
RF Osc. Source
DCC: D080702
Rack: ISC-C3Slot: U28
Frequency: 35.5MHz
ISC_SQ_13
35.5MHz
C6
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3Slot: U27
ISC_SQ_15_1
35.5MHz
P32
U35 ISC-C3
DCC: E1100591
P34
U41 SQZ-R1
ISC_SQ_15_2
ISC_SQ_15
ISC_SQ_14_1
35.5MHz
P6
U31 ISC-C4
P16
U39 ISC-R3
ISC_SQ_14_2
TNC
D1200907
MOD
U34 ISC6-Left
ISC_SQ_14_3
SMA
C112
RF IN
OUT
LF IN
RF Summing Box
DCC: D040469
Rack: ISC6
Slot: Table
ISC_SQ_14_4
C7
Input
EOM1
DCC: C1700792
Rack: ISC6
Slot: Table
ISC_SQ_367
ISC_SQ_367_1
SHV
D1700144
EOM
U36 ISC6-Left
ISC_SQ_367_2
C2
OUT(13dBm)
Lock
DC+12
DC+/-24
RF Osc. Source
DCC: D080702
Rack: ISC-C3Slot: U24
Frequency: 80MHz
ISC_SQ_10
80MHz
C3
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3Slot: U23
ISC_SQ_11_1
80MHz
P32
U35 ISC-C3
P34
U41 SQZ-R1
ISC_SQ_11_2
ISC_SQ_11
ISC_SQ_12_1
80MHz
P6
U31 ISC-C4
P16
U39 ISC-R3
ISC_SQ_12_2
D1200907
MOD
U39 ISC6-Left
ISC_SQ_12_3
C4
Input
EOM2
DCC: C1700792
Rack: ISC6
Slot: Table
ISC_SQ_09
80MHz
C8
IN (10dBm)
OUT(13dBm)
M1 Controls
M2 DC+/-17
M3 DC+/-24
Divide By 2
DCC: D1002182
Rack: ISC-C3Slot: U22
ISC_SQ_19
40MHz
D25F ISC_208
C115
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3Slot: U21
ISC_138
ISC_SQ_352
ISC_SQ_352
20ft
C9
Input (10dBm)
Output (13dBm)
M1 DC+/-17
M2 DC+/-24
M3 Controls
X5 Freq. Mult.
DCC: D1600498
Rack: ISC-C3
Slot: U9
200MHz Mult.
Amp 200MHz
ISC_SQ_20
200MHz
C10
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3 Slot: U8
ISC_SQ_401
200MHz
ISC_SQ_21_1
200MHz
P6
U31 ISC-C4
P16
U39 ISC-R3
ISC_SQ_21_2
C11
Input (10dBm)
Output (2W Max)
DC +24
2W RF Amp.
DCC: D1700006
Rack: ISC6-L1 Slot: U5
ISC_SQ_32
200MHz
C116
IN
OUT
CPL
RF Amp Monitor
DCC: D1700020
Rack: ISC6-L1 Slot: U4
ISC_SQ_421
ISC_SQ_368_1
D1700145
RF 1
U40 ISC6-Left
ISC_SQ_368_2
106"
200MHz
C12
Input
AOM1
DCC: E1600368
Rack: ISC6
Slot: Table
ISC_SQ_353
Pmon1
ISC_SQ_22
200MHz
C13
IN (200MHz/10dBm)
OUT(6.25 MHz/13dBm)
M1 Controls
M2 DC+/-17
M3 DC+/-24
Divide By 32
DCC: D1700008
Rack: ISC-C3Slot: U7
Div 6.25MHz
Amp 6.25MHz
ISC_SQ_23
6.25MHz
C18
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3Slot: U6
ISC_SQ_25_1
6.25MHz
P32
U35 ISC-C3
P34
U41 SQZ-R1
ISC_SQ_25_2
ISC_SQ_25
ISC_SQ_229
C66
Input (10dBm)
Output (2W Max)
DC +24
2W RF Amp.
DCC: D1700006
Rack: ISC6-L1 Slot: U2
ISC_SQ_230
203.125MHz
C117
IN
OUT
CPL
RF Amp Monitor
DCC: D1700020
Rack: ISC6-L1 Slot: U1
ISC_SQ_369_1
D1700145
RF 2
U40 ISC6-Left
ISC_SQ_369_2
124"
203.125MHz
C68
Input
AOM2
DCC: E1600368
Rack: ISC6
Slot: Table
ISC_SQ_372
ISC_SQ_24
6.25MHz
C14
IN (10dBm)
OUT(13dBm)
M1 Controls
M2 DC+/-17
M3 DC+/-24
Divide By 2
DCC: D1002182
Rack: ISC-C3Slot: U5
Div 3.125MHz
Amp 3.125MHz
ISC_SQ_26
3.125MHz
C15
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3 Slot: U4
ISC_SQ_30_1
3.125MHz
P32
U35 ISC-C3
P34
U41 SQZ-R1
ISC_SQ_30_2
ISC_SQ_30
ISC_SQ_31_1
3.125MHz
ISC_SQ_31_2
ISC_SQ_31
ISC_SQ_27
3.125MHz
C16
IN (3.125MHz/10dBm)
REF
O1 (42.375MHz/13dBm)
O2 (42.375MHz/13dBm)
M1 Controls
M2 DC+/-17
M3 DC+/-24
Freq. Diff. Mixer
DCC: D1600499
Rack: ISC-C3 Slot: U2
Diff Mix
Amp 42.375MHz
ISC_SQ_28
42.375MHz
C17
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C3Slot: U1
ISC_SQ_33_1
42.375MHz
P6
U31 ISC-C4
P16
U39 ISC-R3
ISC_SQ_33_3
C244
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-R3 Slot: U38
ISC_SQ_33_2
ISC_SQ_34_2
42.375MHz
ISC_SQ_33
ISC_SQ_34
ISC_SQ_422
Lemo 2P
C254
In (10dBm)
Mod
Mod
Out1
EXC
Out2
Ramp
Out (32dBm)
M1
DAQ
Controls
DC+/-17
DC+/-24
AM modulated AOM Amplifier (IR)
DCC: D1900045
Rack: SQZ-R1 Slot: U33
ISC_SQ_421
DCC: D1700TBD
ISC_SQ_420
D9F
D37F
AOM Driver IR
D9M
D9F
LSC_ADC2_7
Free-hanging Cable Interconnect
54"
ISC_SQ_29
45.5MHz
C19
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C4 Slot: U19
C119
IN(10dBm)
M1
M2
M3
Controls
DC+/-17
DC+/-24
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
RF Dist. Amp.
DCC: D1000124
Rack: ISC-C4Slot: U9
ISC_SQ_424
200MHz
ISC_SQ_401
ISC_SQ_402
200MHz
ISC_SQ_78_1
71MHz
ISC_SQ_78_2
71MHz
ISC_SQ_28
ISC_SQ_370
ISC_SQ_370_1
158.8MHz
ISC_SQ_370_2
158.8MHz
ISC_SQ_371
ISC_SQ_371_1
79.4MHz
ISC_SQ_371_2
79.4MHz
ISC_SQ_372_1
203.125MHz
ISC_SQ_372_2
203.125MHz
ISC_SQ_423
ISC_SQ_406
C247
In (10dBm)
Mod
Mod
Out1
EXC
Out2
Ramp
Out (32dBm)
M1
DAQ
Controls
DC+/-17
DC+/-24
AM modulated AOM Amplifier (GR)
DCC: D1900045
Rack: SQZ-R1 Slot: U35
ISC_SQ_403
D1800261
MOD
U22 ISC6-Left
ISC_SQ_404
200MHz
C248
Input
SHG AOM
DCC: E1600368
Rack: ISC6
Slot: Table
ISC_SQ_427
AOM Driver GR
C43
PPS IN1
PPS IN2
PPS IN3
PPS IN4
Fiber
DC+12V
PPS OUT 8
PPS OUT 9
PPS OUT 10
PPS OUT 11
FREQ 5
FREQ 6
FREQ 7
FREQ 12
FREQ 13
FREQ 14
FREQ 15
FREQ 16
FREQ 17
Timing Comparator
DCC: D1001370
Rack: ISC-C3 Slot: U12
C159 RF Splitter
OUT
OUT
DCC: E1200894
Rack: SQZ-R1 Slot: U39
ISC_SQ_355
Pmon2
See RF Controls Sheet
Pmon input to VCXO
RF cables carrying the AOM signals need to be 1/4" superflexible helical corrugated coax.
Key
Ties to Beckhoff
Ties to RF Controls or WFS Wiring
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
Last Edited: 8/19/2019
Title
Squeezer RF Distribution
LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology
LIGO
Size: C
DCC Number: D1700384
SCH / PCB Revision: V9
Engineer: R. Abbott
Date: 8/19/2019
Time: 11:01:24 AM
Sheet 3 of 11
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerRfDistribution.SchDoc


DCC: D0900128
C35 Rack: SQZ-R1 Slot: U23
Input1 Output1
Input2 Output2
Controls1
Controls2
DC+15
Delay Line Phase Shifter
80MHz
35.5MHz
ISC_SQ_11
ISC_SQ_12
Delay_OPO
Delay_SHG
ISC_SQ_200
ISC_SQ_201
DCC: D1000181
C36 Rack: SQZ-R1 Slot: U22
LO1
LO2
I-1
Q-1
I-2
Q-2
RFOut1
RFOut2
I-Mon1
Q-Mon1
I-Mon2
Q-Mon2
RFIn1
RFIn2
Controls
DAQ
DC+/-18
DC+/-24
2-Chan Demodulator
ISC_SQ_208
SHG/OPO_RF
LSC_ADC1_4
DCC: D0901781
C37 Rack: SQZ-R1 Slot: U27
IN1
IN2
In2
Out2
Controls1
Controls2
B-Test1
B-Test2
A-EXC
B-EXC
Slow-Out1
FastServo
FastOut1
A-Test1
A-Test2
Common Mode Board
OPO Control
CM_OPO_A
CM_OPO_B
OPO_CM_EXE
LSC_ADC3_OPO
DCC: D1001200
C47 Rack: SQZ-R1 Slot: U15
IN CH1 Output1
IN CH2 Output2
IN CH3 Output3
IN CH4 Output4
Bias Controls
PZT Driver (X4)
ISC_SQ_234
ISC_SQ_233
ISC_SQ_363_1
ISC_SQ_374_2
ISC_SQ_364_1
ISC_SQ_99
Piezo 1
Piezo 2
PZT_Driver_A
SHG_TEC
D1201483
TEC
U33 ISCT6-Left
TEC
HV
SHG
DCC: E1700004
Rack: ISCT6-Left
Slot: Table
PZT 1
PZT 2
U31 ISCT6-Left
U41 ISCT6-Left
ISC_SQ_363_2
ISC_SQ_364_2
ISC_SQ_374_1
C124
C125
C133
DCC: E1700209
Rack: ISCT6
Slot: Seed
Slot: LO
DCC: D1101176
C41 Rack: SQZT6 Slot: OPO_REFL
RF HI
RF LO
Test In
Test Out
DC
Controls
LSC Head
80MHz, OPO
OPO_DC
ISC_SQ_202_1
ISC_SQ_204_1
ISC_SQ_205_1
ISC_SQ_206_1
ISC_SQ_207_1
ISC_SQ_202_2
ISC_SQ_202_3
ISC_SQ_203_3
D1201470
SQZ-R1 U21
D1200811
U17 SQZT6-Right
OPO_LSC_Head_DC
Broadband PD Used
Tee off DC and cable
to pins 1/6 of DB9
DCC: D0901781
C46 Rack: SQZ-R1 Slot: U25
CM_SHG_A
CM_SHG_B
SHG_CM_EXE
LSC_ADC3_SHG
ISC_SQ_209
Seed PZT
VCO head (unused)
DCC: D1201450
Rack: SQZ-R1
Slot: U16
C45
Dual Dsub PatchPanel
LSC_DAC0_1
LSC_ADC3_8
ISC_SQ_92
ISC_SQ_406
ISC_SQ_91
ISC_SQ_405
ISC_SQ_100
Green ISS
C48 Rack: SQZ-R1 Slot: U26
LSC_DAC0_2
OPO_CM_EXE
SHG_CM_EXE
LO_CM_EXE
CLF_CM_EXE
ISC_SQ_93
ISC_SQ_94
ISC_SQ_95
ISC_SQ_96
ISC_SQ_97
C140
Placeholder Location
ISC-C1 U?
ISC_SQ_101
DCC: E1200428
Rack: ISCT6
C51 Slot: SHG_TRANS
RF Out
DC Out
DC±15
BBPD
35.5MHz, SHG
SHG_DC
DCC: E1400233
Rack: ISCT6
Slot: SHG_TRANS
IN OUT
DC+/-15
RF Preamplifier
C245
SHG_PWR
ISC_SQ_203_1
ISC_SQ_203_2
RF 1
RF 2
D1200889
U35 ISCT6-Left
DCC: D1000181
C54 Rack: SQZ-R1 Slot: U20
C55 Rack: SQZ-R1 Slot: U17
3.125MHz
ISC_SQ_30
ISC_SQ_31
ISC_SQ_422
ISC_SQ_231
ISC_SQ_232
CM_LO_A
CM_LO_B
LO_CM_EXE
LSC_ADC3_LO
Angle_RF
LSC_ADC1_3
D1201470
SQZ-R1 U21
2-Chan Demodulator
Common Mode Board
SQZ Angle Control (aka LO)
DCC: D1700393
C56 Rack: ISC-R5 Slot: U16
DCPD Input
DCPD Output
Homodyne Interface
DC+/-18
Sum Output
Head 1 Output
Head 2 Output
Homodyne Output
OMC/Homodyne Breakout
Derived From OMC DCPDs
LSC_ADC3_4
ISC_SQ_216_1
ISC_SQ_287
ISC_SQ_216_2
ISC_SQ_217_3
DCC: D0900605
Rack: SQZ-R1 Slot: U38
Tune
MON
VCO (13dBm)
DIV (13dBm)
REF (10dBm)
Out1 (13dBm)
Out2 (13dBm)
M1
M2
M3
VCO
OPO 79.2MHz
ISC_SQ_210
ISC_SQ_211
ISC_SQ_371
ISC_SQ_298
ISC_SQ_78
71MHz
VCO_SQZ_Laser
C39
IN (10dBm)
OUT(13dBm)
X2 Freq. Mult.
DCC: D1002178
Rack: SQZ-R1
Slot: U36
ISC_SQ_212
158.8MHz Doubler
DCC: D1300671
C59 SQZT6
RF
DC
PD1
PD2
Controls
Homodyne Detector
3.125MHz, HDPD
ISC_SQ_217_1
ISC_SQ_218_1
ISC_SQ_219_1
ISC_SQ_220_1
ISC_SQ_221_1
ISC_SQ_106
ΔRF
ΔDC
PD1
PD2
Output
D1700149
U8 SQZT6-Right
DCC: T1700459
C44 Rack: ISCT6 Slot: Table
New Focus 1611
FIBR_DC
FIBR_PWR
ISC_SQ_213_1
ISC_SQ_366_1
Fiber
FC/APC
RFPD
PZT
D1700144
U36 ISCT6-Left
ISC_SQ_213_2
ISC_SQ_366_2
DCC: T1700189
Rack: ISCT6-Top
C1B
Mephisto Laser
LaserHead
ISC_SQ_391
ISC_SQ_368
DCC: D1700324
C40 Rack: ISCT6-L2 Slot: U1
RF IN
Out (HiPwr) 1
Out (HiPwr) 2
Out (LPwr)
Out (HiPwr) Mon
+18V
4G TTFSS Preamp
ISC_SQ_341
ISC_SQ_370
DCC: D1700075
Rack: ISCT6-L2 Slot: U3
C158
LO
RF In
AO
RF Mon
I-Mon
Q/Sign
ComOut1
ComEXC
ComOut2
FastOut1
FastEXC
FastOut2
Slow
Fast
EOM
DAQ
Controls2
ComMon
FastMon
EomMon
+/-18V
+/-200V
4G TTFSS
ISC_SQ_365
ISC_SQ_367
ISC_SQ_283
TTFSS
LSC_ADC3_5
DCC: T1700189
Rack: ISCT6-F1 Slot: U1
C1A
Temp
Relay
Laserhead
Diagnostics
Mephisto Laser
LaserHead
LaserDiag
LaserNE
ISC_SQ_275
DCC: D0900128
C53 Rack: SQZ-R1 Slot: U33
Delay Line Phase Shifter
Delay_CLF2
Delay_CLF3
ISC_SQ_414
ISC_SQ_415
DCC: D0900128
C63 Rack: SQZ-R1 Slot: U32
Delay Line Phase Shifter
Delay_CLF1
Delay_CLF4
6.25MHz
ISC_SQ_25
ISC_SQ_222_1
ISC_SQ_222_2
ISC_SQ_222_3
ISC_SQ_223_1
ISC_SQ_224_1
ISC_SQ_225_1
ISC_SQ_226
DCC: D1000181
C64 Rack: SQZ-R1 Slot: U31
2-Chan Demodulator
CLF_RF
CLF_ADC
ISC_SQ_227
ISC_SQ_416
DCC: D0901781
C65 Rack: SQZ-R1 Slot: U27
Common Mode Board
CLF Control
CM_CLF_A
CM_CLF_B
CLF_CM_EXE
LSC_ADC3_CLF
ISC_SQ_228
DCC: D1600500
Rack: SQZ-R1 Slot: U34
C67
Tune
OUT(13dBm)
Pmon1
Pmon2
Test1
Test2
EXC
M1
M2
M3
VCXO
ISC_SQ_229
DCC: D1101176
C69 Rack: SQZT6 Slot: CLF_REFL
LSC Head
6.25MHz, CLF
CLF_DC
RF HI
RF LO
Test In
Test Out
DC
Controls
Power
D1200811
U13 SQZT6-Right
ISC_SQ_207_2
DCC: D1102079
C78 Rack: ISC-R5 Slot: U32
Head 1
Head 2
Head 3
Head 4
AN OUT To AA
LSC RFPD Interface
LSC_ADC0_3
OPO_LSC_Head_DC
Key
Ties to Beckhoff
Ties to RF 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
See RF Distribution Sheet
Last Edited: 8/19/2019
Title
Squeezer RF Controls
LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology
LIGO
Size: C
DCC Number: D1700384
SCH / PCB Revision: V9
Engineer: R. Abbott
Date: 8/19/2019
Time: 11:01:24 AM
Sheet 4 of 11
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerRFControls.SchDoc


C24
RFLO Q1
RFLO Q2
RFLO Q3
RFLO Q4
Test
RFHI Q1
RFHI Q2
RFHI Q3
RFHI Q4
Controls
D25M DCC: D1000225
To WFS RFPD Interface
WFS Head Vac.
DCC: D1101202
Rack: HAM6 ISI Slot: WFS A
SQZ ASC_A
Vac?ft ISC_SQ_40_DC
C26
Vac.Feed Coax
DCC: D1300467
Rack: HAM6
Slot: U7
SQZ ASC
C49
DCC: D1600002
Rack: ISC-R3 Slot: U29
45.5 IN Ch1
45.5 IN Ch2
45.5 IN Ch3
45.5 IN Ch4
18.2 Out Ch1
18.2 Out Ch2
18.2 Out Ch3
18.2 Out Ch4
42.375 Out Ch1
42.375 Out Ch2
42.375 Out Ch3
42.375 Out Ch4
91 Out Ch1
91 Out Ch2
91 Out Ch3
91 Out Ch4
WFS Quadplexer
ISC_SQ_35
42.375MHz
C27
SQZ WFS_A
RFIN1
RFIN2
RFIN3
RFIN4
LOIN
RFMON1
RFMON2
RFMON3
RFMON4
IQOutputs
I-Mon1
Q-Mon1
I-Mon2
Q-Mon2
I-Mon3
Q-Mon3
I-Mon4
Q-Mon4
RFMon1&2
RFMon3&4
DC+/-18
Conec-3
Quad I/Q Demodulator WFS Variant
DCC: D0902796
Rack: ISC-R3
Slot: U5
To ASC Demodulator Concentrator 5
SQZ_WFS_A_42.375MHz_Ch1-2
SQZ_WFS_A_42.375MHz_Ch3-4
C28
An.Sig.In
BinaryReadback1
BinaryReadback2
DC+/-18
AnalogOut0-3
AnalogOut4-7
Bin.Cont.1
Bin.Cont.2
ISC Whitening Chassis
DCC: D1002559
Rack: ISC-R3
Slot: U7
ASC_ADC1_5
ASC_ADC1_6
C20
C23
DCC:
Slot: D3-2C1 Rack: HAM6
Slot: D3-2C2 Rack: HAM6
Vac. Side
Air Side
D25 Vacuum Feedthrough
ASC-POP_A
ASC-POP_B
C21
Head 1
Head 2
Head 3
Head 4
Out Head 1
Out Head 2
Out Head 3
Out Head 4
WFS RFPD Interface
DCC: D1101906
Rack: ISC-R5
Slot: U30
ASC_ADC5_3
ASC_ADC5_4
ASC_ADC5_5
ASC_ADC5_6
C29
Chassis1 Board1
Chassis1 Board2
Chassis2 Board1
Chassis2 Board2
Chassis3 Board1
Chassis3 Board2
Chassis4 Board1
Chassis4 Board2
Chassis5 Board1
Chassis5 Board2
Chassis6 Board1
Chassis6 Board2
Ethernet IN
Ethernet OUT
DC+24
384 CH BIO (Acromag)
DCC: D1100251
Rack: ISC-C2
Slot: U36
To Corner 2 EtherCat
Acromag_BIO
SQZ_DCPD_1
SQZ_DCPD_2
C31
WFS Head Vac.
DCC: D1101202
Rack: HAM6 ISI Slot: WFS B
SQZ ASC_B
Vac?ft ISC_SQ_41_DC
C32
Vac.Feed Coax
DCC: D1300467
Rack: HAM6
Slot: U?
C118
DCC: D1600002
Rack: ISC-R3 Slot: U16
WFS Quadplexer
ISC_SQ_34
42.375MHz
C33
SQZ WFS_B
Quad I/Q Demodulator WFS Variant
DCC: D0902796
Rack: ISC-R3
Slot: U4
To ASC Demodulator Concentrator 5
SQZ_WFS_B_42.375MHz_Ch1-2
SQZ_WFS_B_42.375MHz_Ch3-4
C34
To ASC ADC1
ISC Whitening Chassis
DCC: D1002559
Rack: ISC-R3
Slot: U2
ASC_ADC1_7
ASC_ADC1_8
Key
Ties to Beckhoff
Ties to RF 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
Last Edited: 8/19/2019
Title
Squeezer Wavefront Sensing
LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology
LIGO
Size: C
DCC Number: D1700384
SCH / PCB Revision: V9
Engineer: R. Abbott
Date: 8/19/2019
Time: 11:01:24 AM
Sheet 5 of 11
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerWfsWiring.SchDoc

VOPO Suspension Chain



Key

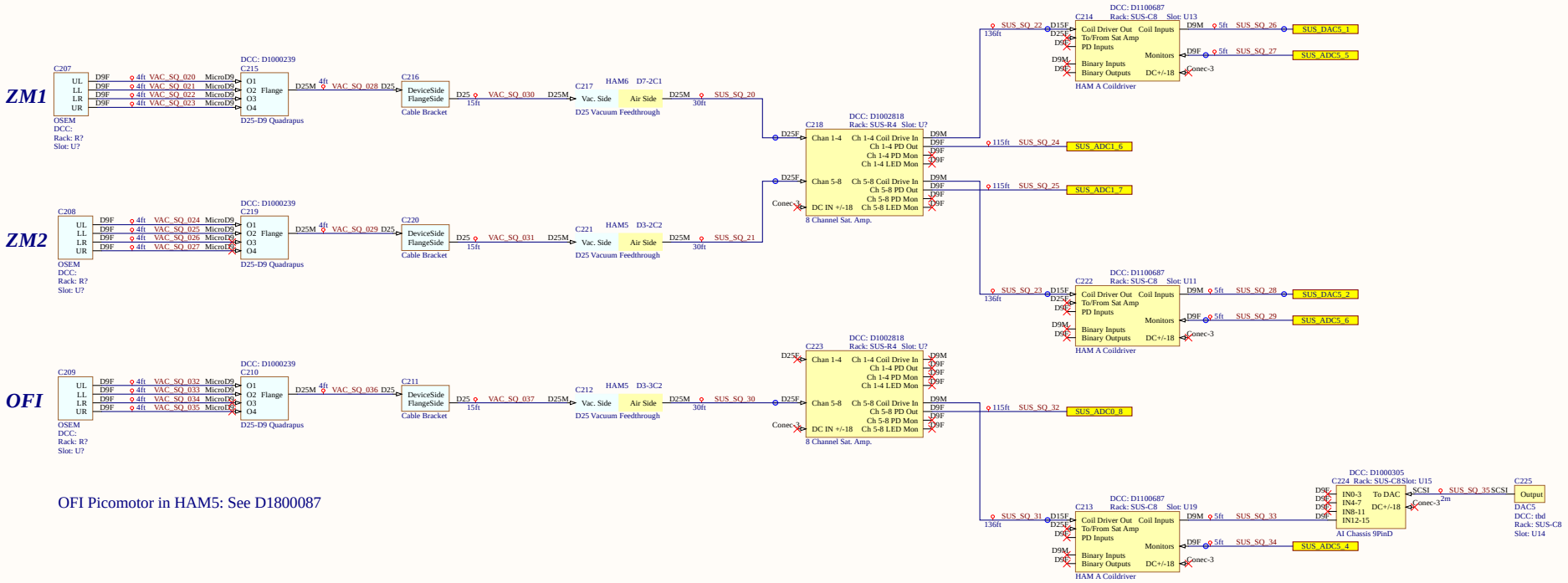
- Dot Identifies Cable Shield Terminating to Backshell
- Pin With Triangle Indicates Pin on Rear or the Like
- Pin With No Triangle Indicates Pin on Front or the Like
- Light Blue Symbols Are In-Vacuum
- Yellow Symbols Are In-Air

Last Edited: 8/19/2019

Title: *Squeezer Suspensions*			*LIGO Laboratory* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: C	DCC Number: D1700384	SCH / PCB Revision: V9	Engineer: *R. Abbott*	Date: 8/19/2019 Time: 11:01:24 AM Sheet 6 of 11

File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerSus.SchDoc

ZM/OFI Suspension Chains



OFI Picomotor in HAM5: See D1800087

Key

- 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

Last Edited: 8/19/2019

Title: *Squeezer Tip-Tilt/OFI*			*LIGO Laboratory* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: C	DCC Number: D1700384	SCH / PCB Revision: V9	Engineer: *R. Abbott*	Date: 8/19/2019 Time: 11:01:24 AM Sheet 7 of 11

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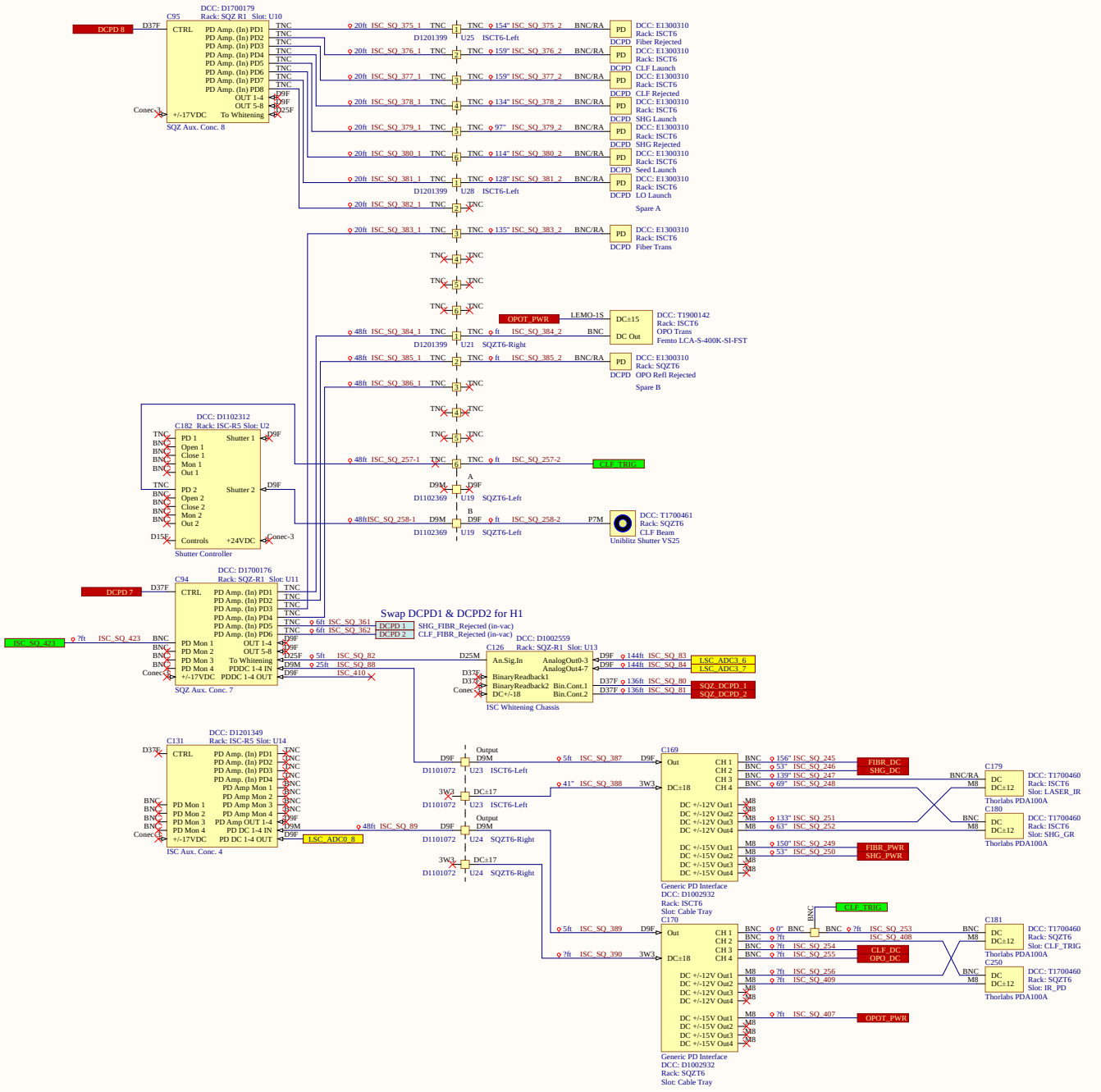


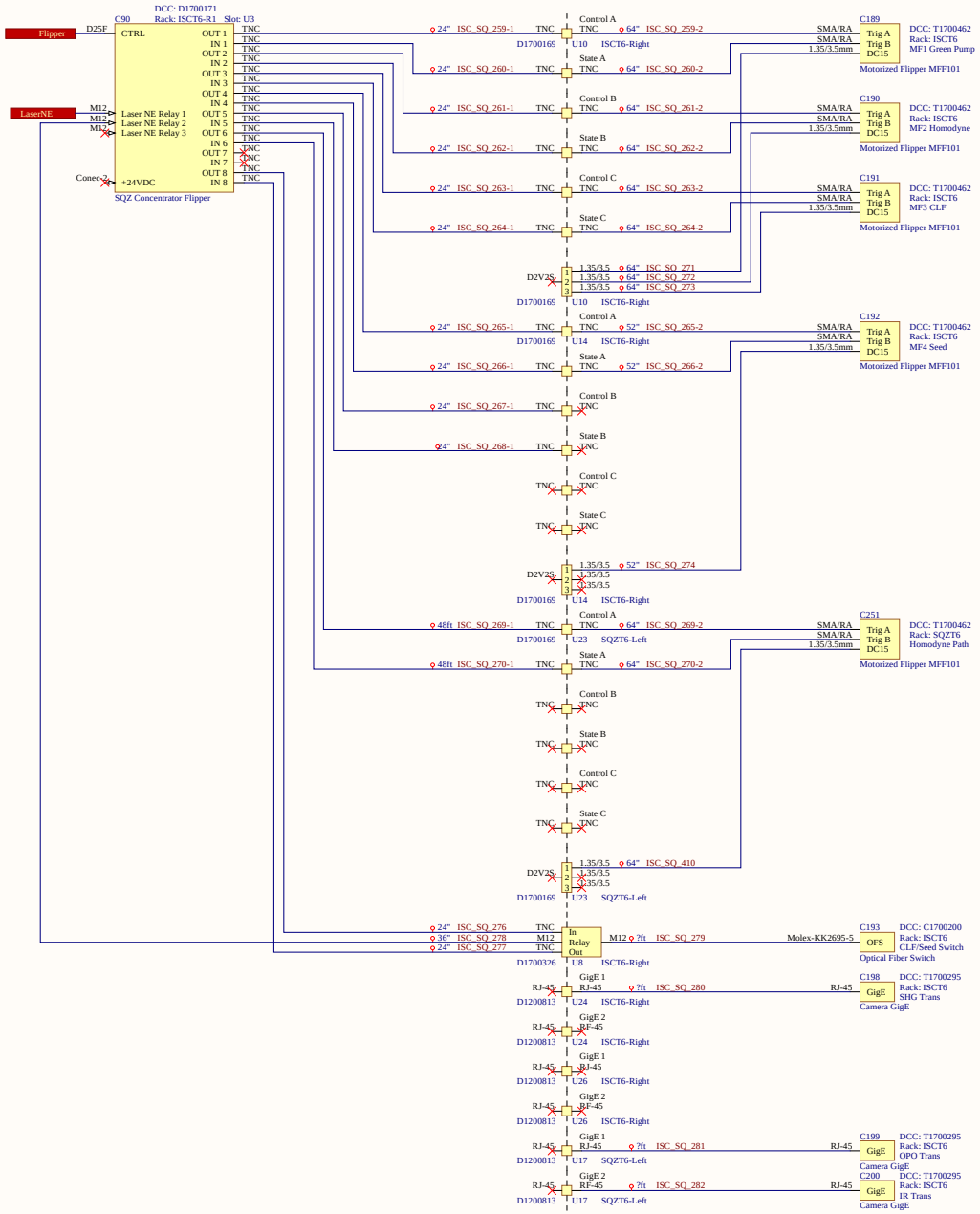
Key

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

Last Edited: 8/19/2019

Title: *Squeezer Concentrators*		*LIGO Laboratory* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: C	DCC Number: D1700384	SCH / PCB Revision: V9	Engineer: *R. Abbott*
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerConcentrators.SchDoc			Date: 8/19/2019 Time: 11:01:25 AM Sheet 8 of 11



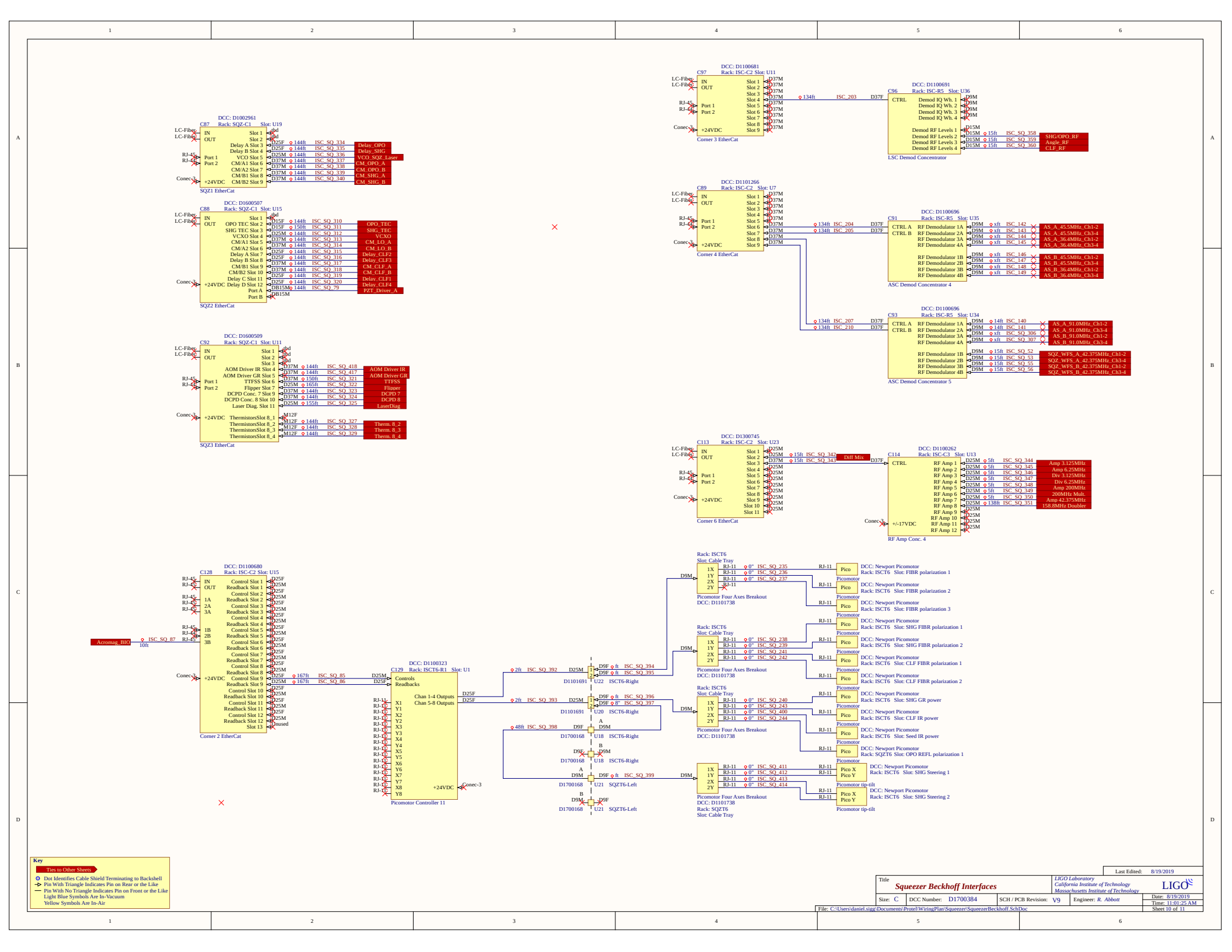
Key

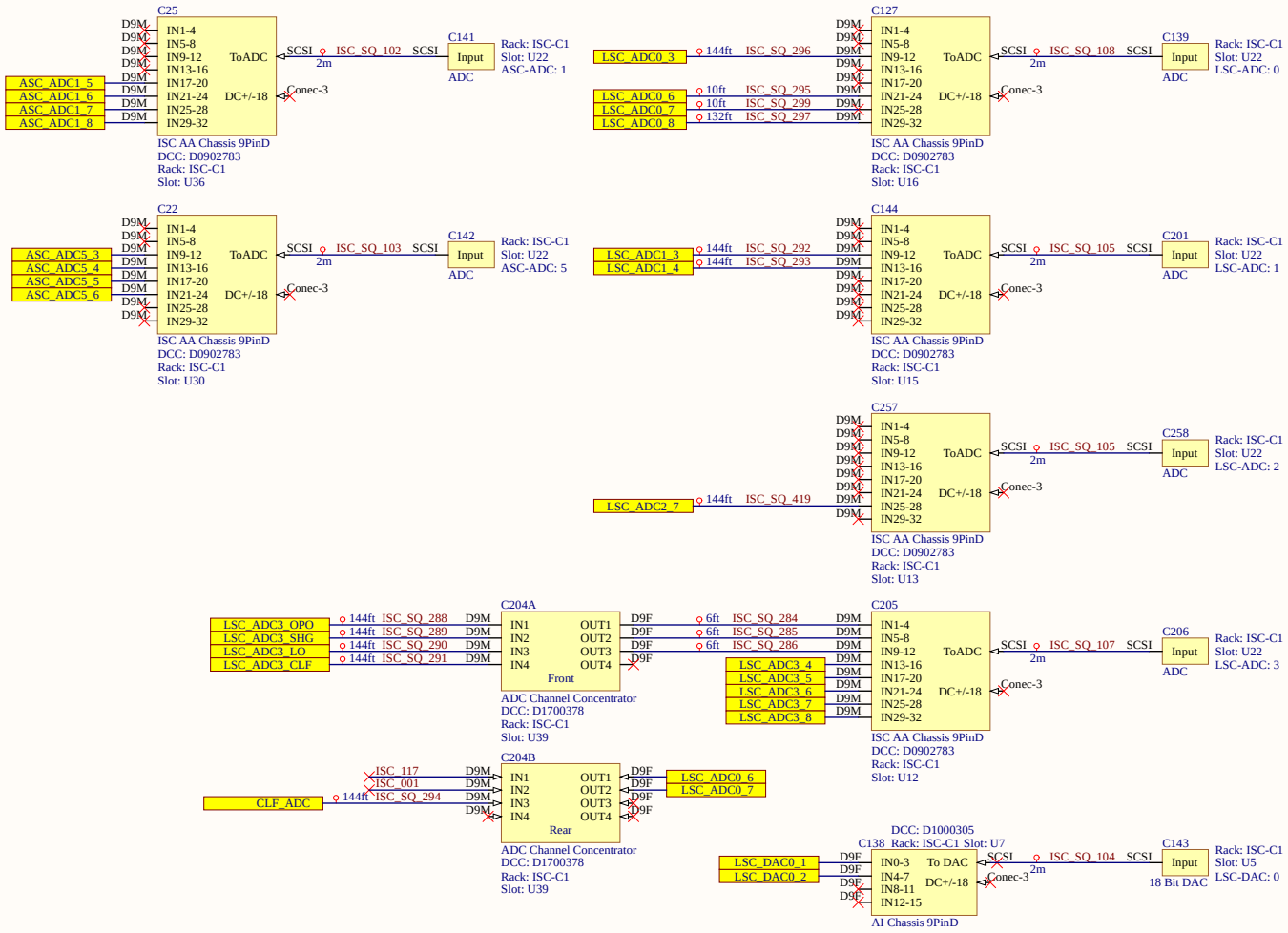
Ties to Other Sheets

- 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

Last Edited: 8/19/2019

Title: *Squeezer Miscellaneous*			*LIGO Laboratory* *California Institute of Technology* *Massachusetts Institute of Technology* LIGO
Size: C	DCC Number: D1700384	SCH / PCB Revision: V9	Engineer: *R. Abbott*
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerMiscellaneous.SchDoc			Date: 8/19/2019 Time: 11:01:25 AM Sheet 9 of 11


DCC: D1002961
C87 Rack: SQZ-C1 Slot: U19
SQZ1 EtherCat
DCC: D1600507
C88 Rack: SQZ-C1 Slot: U15
SQZ2 EtherCat
DCC: D1600509
C92 Rack: SQZ-C1 Slot: U11
SQZ3 EtherCat
DCC: D1100681
C97 Rack: ISC-C2 Slot: U11
Corner 3 EtherCat
DCC: D1100691
C96 Rack: ISC-R5 Slot: U36
LSC Demod Concentrator
DCC: D1101266
C89 Rack: ISC-C2 Slot: U7
Corner 4 EtherCat
DCC: D1100696
C91 Rack: ISC-R5 Slot: U35
ASC Demod Concentrator 4
DCC: D1100696
C93 Rack: ISC-R5 Slot: U34
ASC Demod Concentrator 5
DCC: D1300745
C113 Rack: ISC-C2 Slot: U23
Corner 6 EtherCat
DCC: D1100262
C114 Rack: ISC-C3 Slot: U13
RF Amp Conc. 4
Acromag_BIO
DCC: D1100680
C128 Rack: ISC-C2 Slot: U15
Corner 2 EtherCat
DCC: D1100323
C129 Rack: ISCT6-R1 Slot: U1
Picomotor Controller 11
Rack: ISCT6
Slot: Cable Tray
Picomotor Four Axes Breakout
DCC: D1101738
Picomotor tip-tilt
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
Last Edited: 8/19/2019
Title
Squeezer Beckhoff Interfaces
LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology
LIGO
Size: C
DCC Number: D1700384
SCH / PCB Revision: vg
Engineer: R. Abbott
Date: 8/19/2019
Time: 11:01:25 AM
Sheet 10 of 11
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerBeckhoff.SchDoc



Last Edited: 8/19/2019				
Title: **Squeezer ADC/DAC**			*LIGO Laboratory* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: B	DCC Number: D1700384	Revision: V9	Engineer: *R. Abbott*	Date: 8/19/2019 Time: 11:01:25 AM
File: C:\Users\daniel.sigg\Documents\Protel\WiringPlan\Squeezer\SqueezerADC_DAC.SchDoc				Sheet 11 of 11