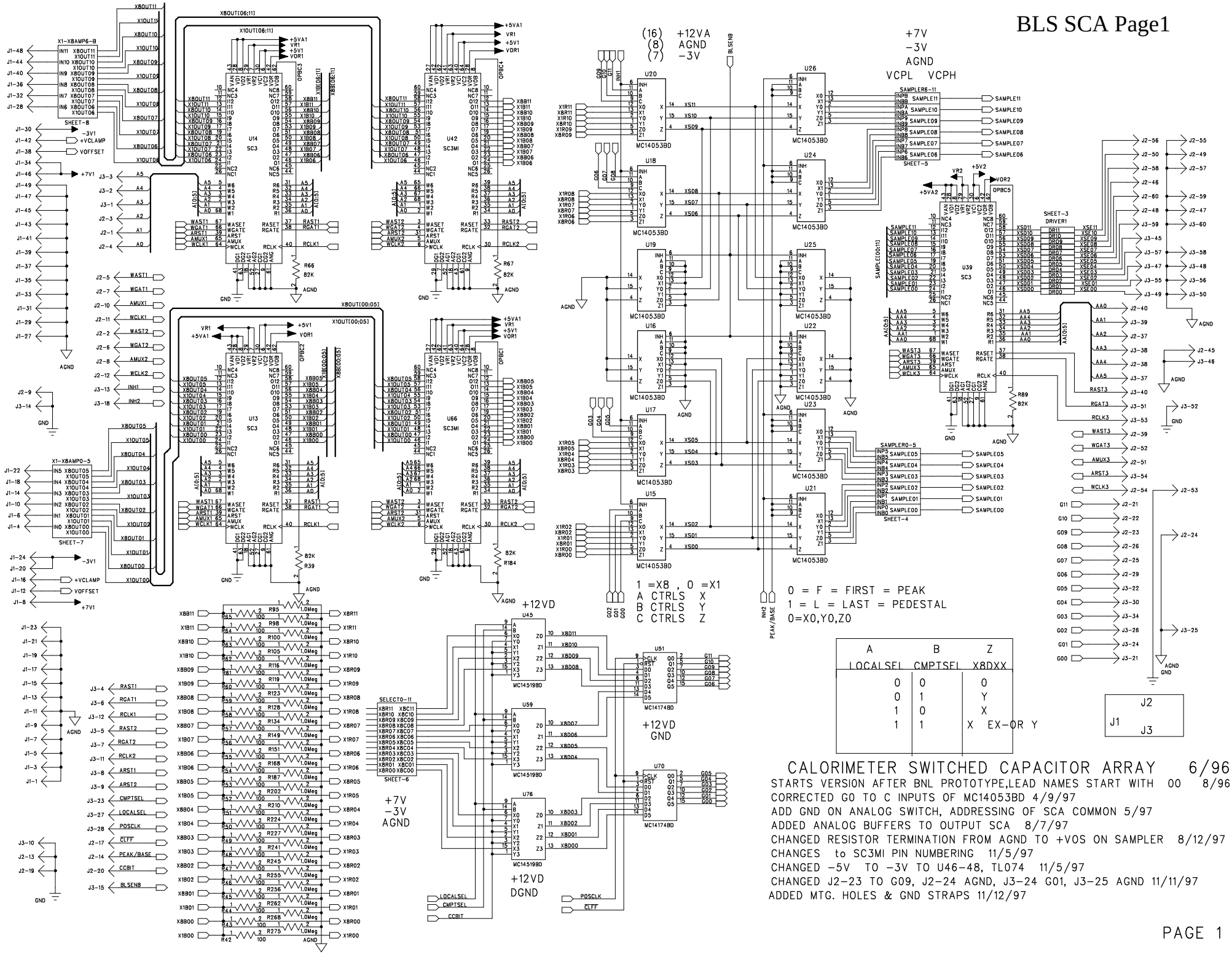
BLS SCA Page1

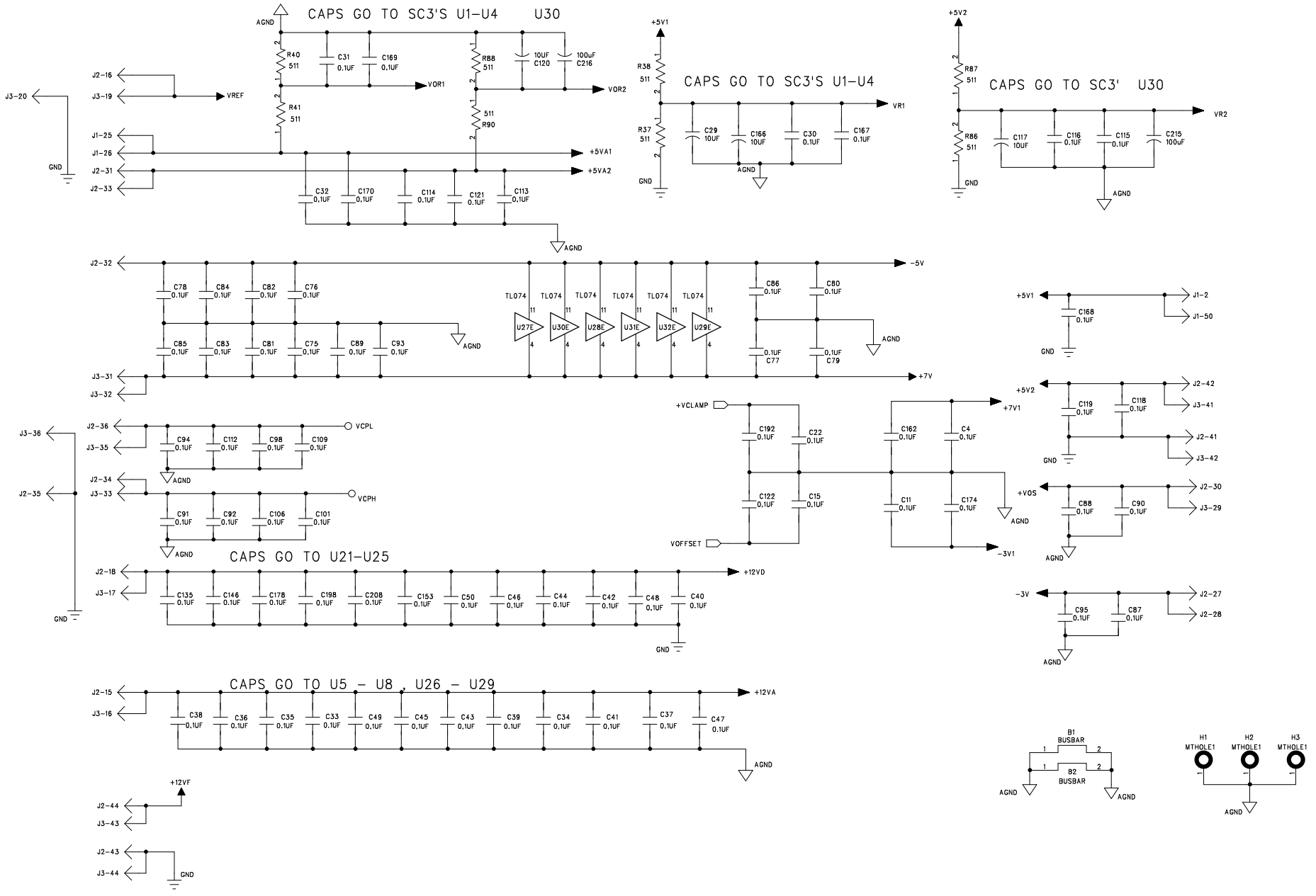


A	B	Z
LOCALSEL	CMPTSEL	X8DXX
0	0	0
0	1	Y
1	0	X
1	1	X EX-OR Y

CALORIMETER SWITCHED CAPACITOR ARRAY 6/96

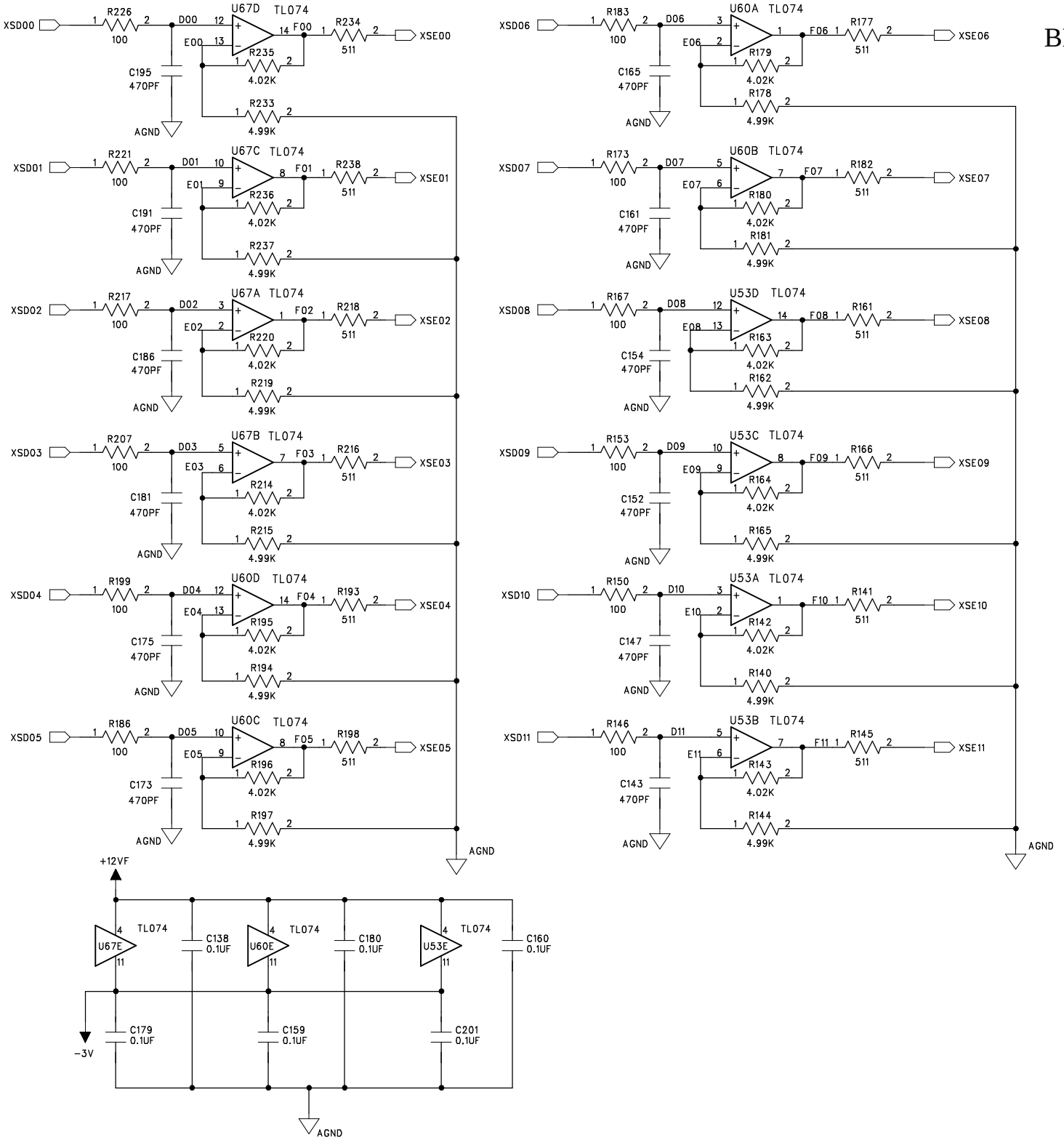
STARTS VERSION AFTER BNL PROTOTYPE,LEAD NAMES START WITH 00 8/96
CORRECTED G0 TO C INPUTS OF MC14053BD 4/9/97
ADD GND ON ANALOG SWITCH, ADDRESSING OF SCA COMMON 5/97
ADDED ANALOG BUFFERS TO OUTPUT SCA 8/7/97
CHANGED RESISTOR TERMINATION FROM AGND TO +VOS ON SAMPLER 8/12/97
CHANGES to SC3MI PIN NUMBERING 11/5/97
CHANGED -5V TO -3V TO U46-48, TL074 11/5/97
CHANGED J2-23 TO G09, J2-24 AGND, J3-24 G01, J3-25 AGND 11/11/97
ADDED MTG. HOLES & GND STRAPS 11/12/97

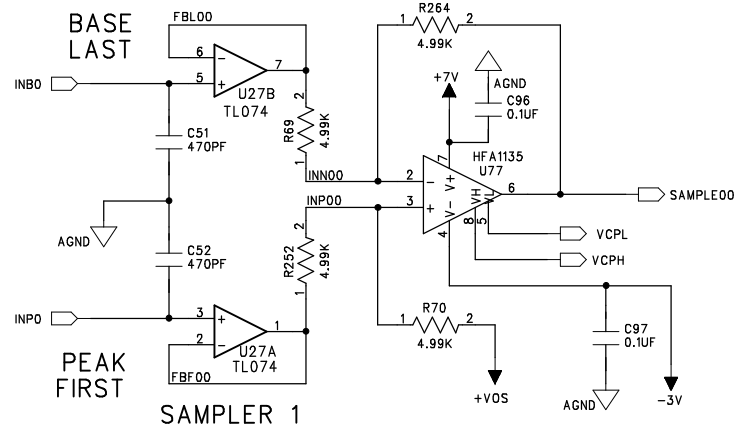
BLS SCA Page2



CALORIMETER SWITCHED CAPACITOR ARRAY 6/96
PAGE 2

SELECT CKT USES C1 THRU C36 0.1UF
SAMPLER CKT. USES C37, C38, C64 THRU C109 0.1UF, 470PF

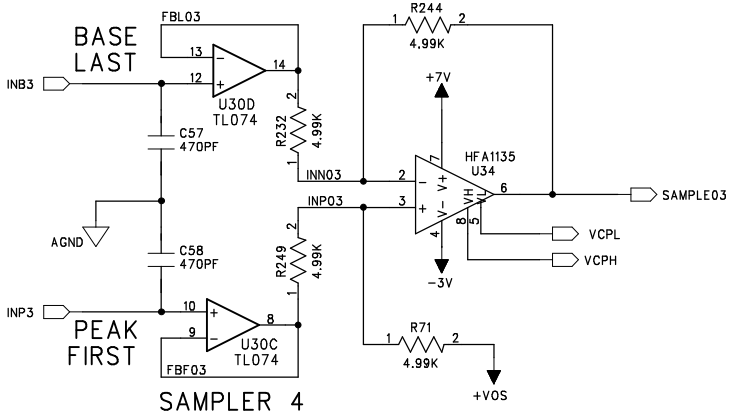

XSD00
R226
100
U67D TL074
D00
E00
F00
R234
511
XSE00
R235
4.02K
C195
470PF
AGND
R233
4.99K
XSD01
R221
100
U67C TL074
D01
E01
F01
R238
511
XSE01
R236
4.02K
C191
470PF
AGND
R237
4.99K
XSD02
R217
100
U67A TL074
D02
E02
F02
R218
511
XSE02
R220
4.02K
C186
470PF
AGND
R219
4.99K
XSD03
R207
100
U67B TL074
D03
E03
F03
R216
511
XSE03
R214
4.02K
C181
470PF
AGND
R215
4.99K
XSD04
R199
100
U60D TL074
D04
E04
F04
R193
511
XSE04
R195
4.02K
C175
470PF
AGND
R194
4.99K
XSD05
R186
100
U60C TL074
D05
E05
F05
R198
511
XSE05
R196
4.02K
C173
470PF
AGND
R197
4.99K
AGND
XSD06
R183
100
U60A TL074
D06
E06
F06
R177
511
XSE06
R179
4.02K
C165
470PF
AGND
R178
4.99K
XSD07
R173
100
U60B TL074
D07
E07
F07
R182
511
XSE07
R180
4.02K
C161
470PF
AGND
R181
4.99K
XSD08
R167
100
U53D TL074
D08
E08
F08
R161
511
XSE08
R163
4.02K
C154
470PF
AGND
R162
4.99K
XSD09
R153
100
U53C TL074
D09
E09
F09
R166
511
XSE09
R164
4.02K
C152
470PF
AGND
R165
4.99K
XSD10
R150
100
U53A TL074
D10
E10
F10
R141
511
XSE10
R142
4.02K
C147
470PF
AGND
R140
4.99K
XSD11
R146
100
U53B TL074
D11
E11
F11
R145
511
XSE11
R143
4.02K
C143
470PF
AGND
R144
4.99K
AGND
+12VF
U67E TL074
C138
0.1UF
U60E TL074
C180
0.1UF
U53E TL074
C160
0.1UF
-3V
C179
0.1UF
C159
0.1UF
C201
0.1UF
AGND



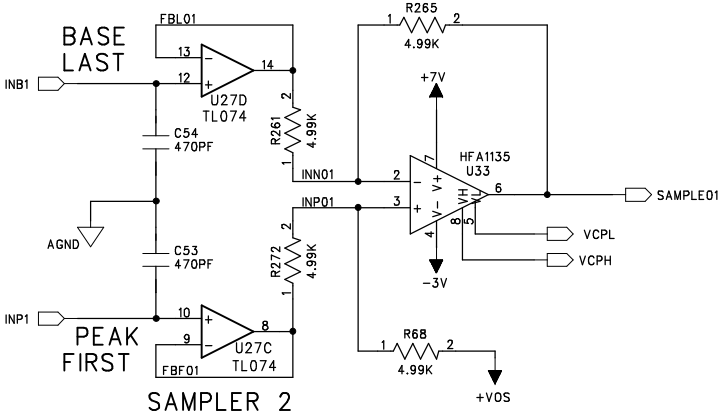
SAMPLER 1

TL074 uses +7v and −3v which is marginal negate this comment

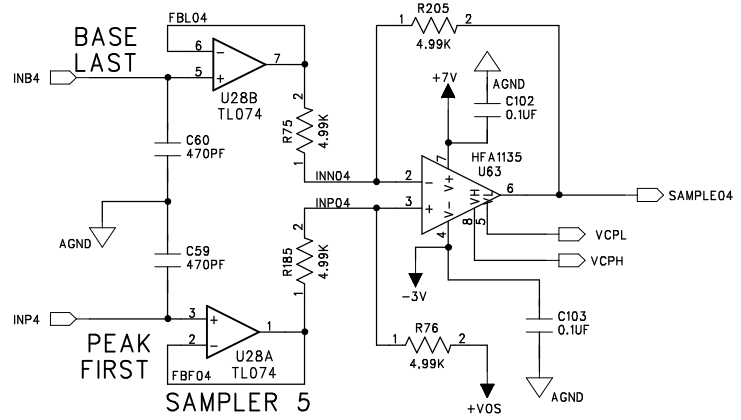
Changed −3v to −5v on all tl074 8/13/97



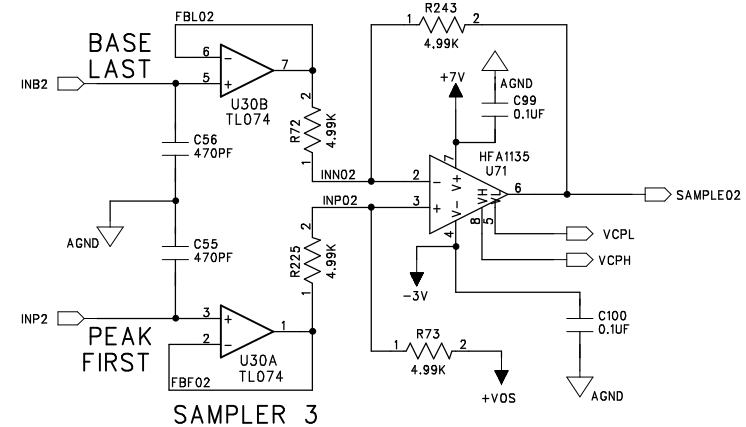
SAMPLER 4



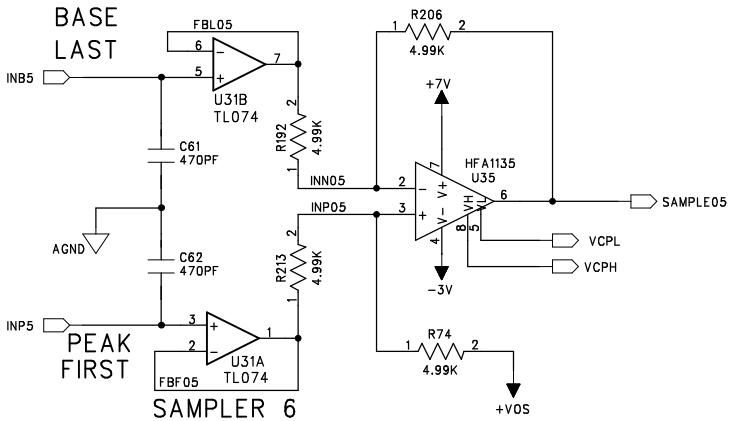
SAMPLER 2



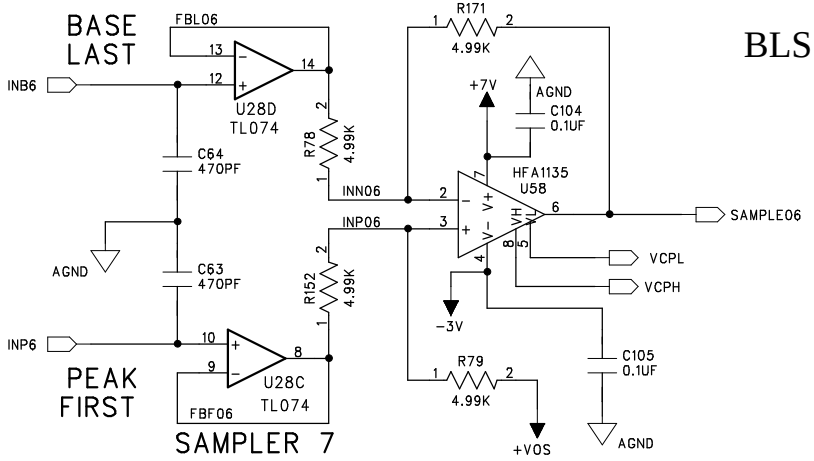
SAMPLER 5

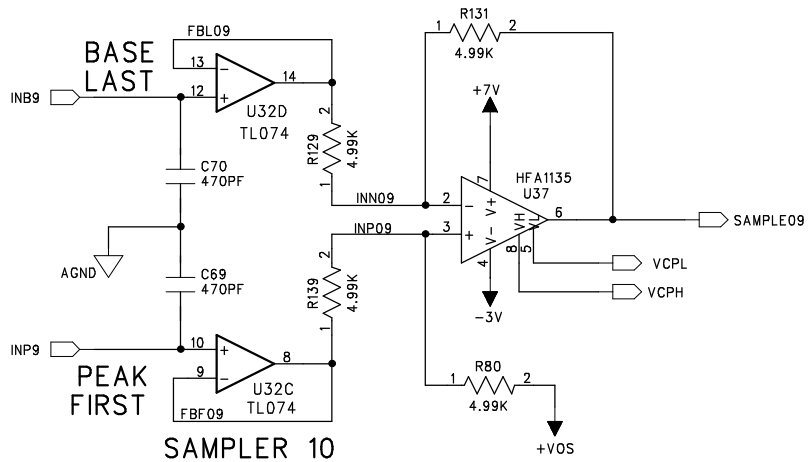


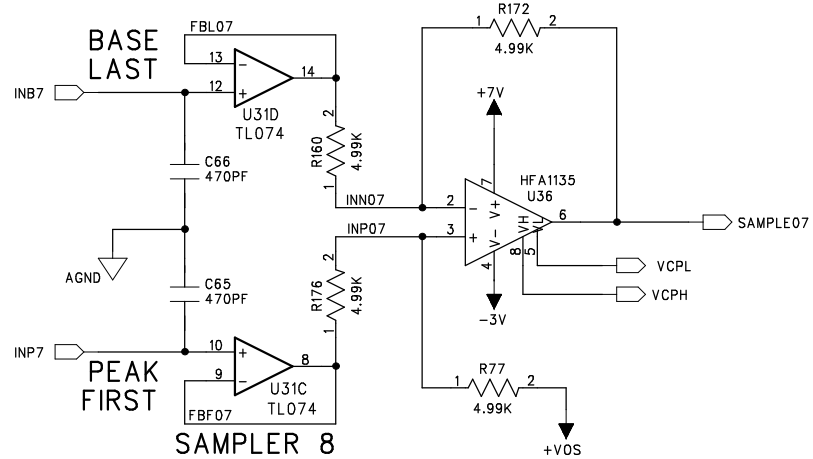
SAMPLER 3

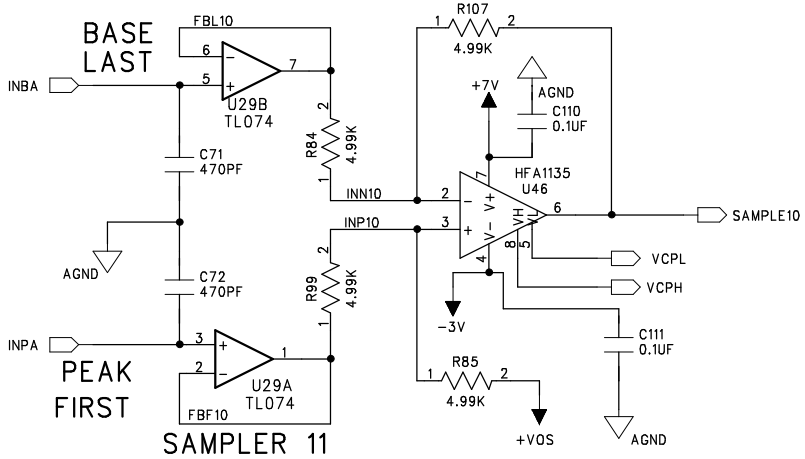


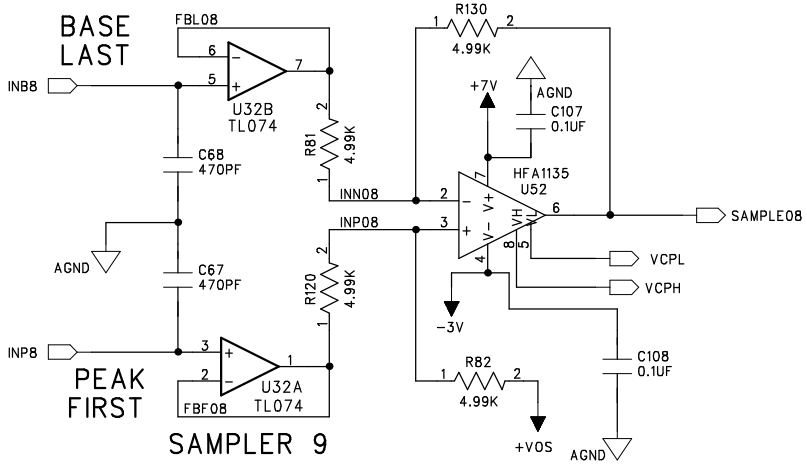
SAMPLER 6

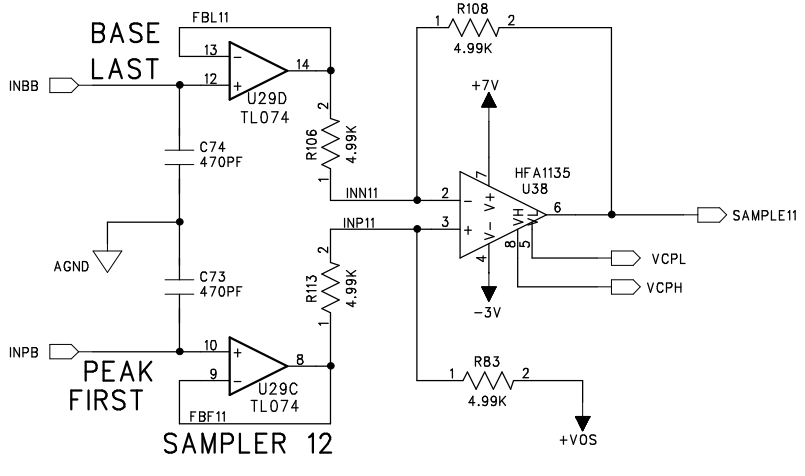

BASE
LAST
FBL06
INB6
U28D
TL074
C64
470PF
R78
4.99K
INN06
AGND
C63
470PF
INP6
PEAK
FIRST
U28C
TL074
FBF06
R152
4.99K
INP06
R171
4.99K
+7V
AGND
C104
0.1UF
HFA1135
U58
SAMPLE06
VCPL
VCPH
-3V
R79
4.99K
+VOS
C105
0.1UF
AGND
SAMPLER 7

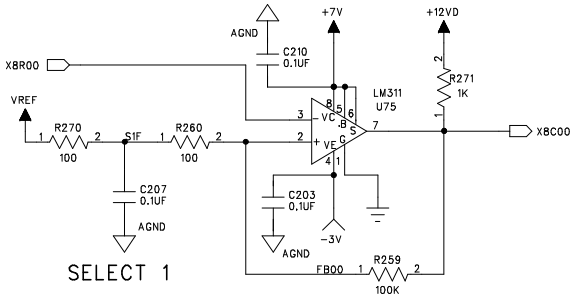

BASE
LAST
FBL09
INB9
U32D
TL074
C70
470PF
R129
4.99K
INN09
AGND
C69
470PF
INP9
PEAK
FIRST
U32C
TL074
FBF09
R139
4.99K
INP09
R131
4.99K
+7V
HFA1135
U37
SAMPLE09
VCPL
VCPH
-3V
R80
4.99K
+VOS
SAMPLER 10

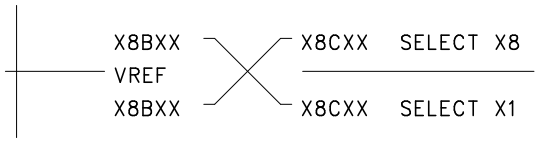

BASE
LAST
FBL07
INB7
U31D
TL074
C66
470PF
R160
4.99K
INN07
AGND
C65
470PF
INP7
PEAK
FIRST
U31C
TL074
FBF07
R176
4.99K
INP07
R172
4.99K
+7V
HFA1135
U36
SAMPLE07
VCPL
VCPH
-3V
R77
4.99K
+VOS
SAMPLER 8

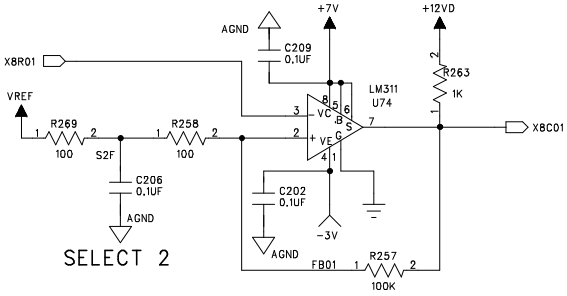

BASE
LAST
FBL10
INBA
U29B
TL074
C71
470PF
R84
4.99K
INN10
AGND
C72
470PF
INPA
PEAK
FIRST
U29A
TL074
FBF10
R99
4.99K
INP10
R107
4.99K
+7V
AGND
C110
0.1UF
HFA1135
U46
SAMPLE10
VCPL
VCPH
-3V
C111
0.1UF
R85
4.99K
+VOS
AGND
SAMPLER 11

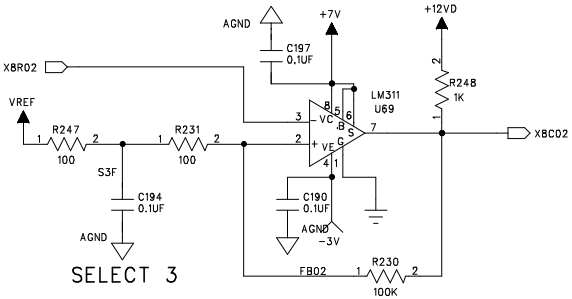

BASE
LAST
FBL08
INB8
U32B
TL074
C68
470PF
R81
4.99K
INN08
AGND
C67
470PF
INP8
PEAK
FIRST
U32A
TL074
FBF08
R120
4.99K
INP08
R130
4.99K
+7V
AGND
C107
0.1UF
HFA1135
U52
SAMPLE08
VCPL
VCPH
-3V
R82
4.99K
+VOS
C108
0.1UF
AGND
SAMPLER 9

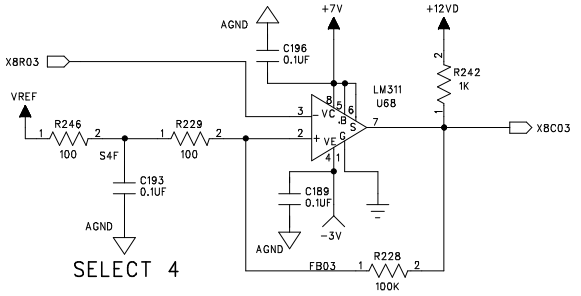

BASE
LAST
FBL11
INBB
U29D
TL074
C74
470PF
R106
4.99K
INN11
AGND
C73
470PF
INPB
PEAK
FIRST
U29C
TL074
FBF11
R113
4.99K
INP11
R108
4.99K
+7V
HFA1135
U38
SAMPLE11
VCPL
VCPH
-3V
R83
4.99K
+VOS
SAMPLER 12

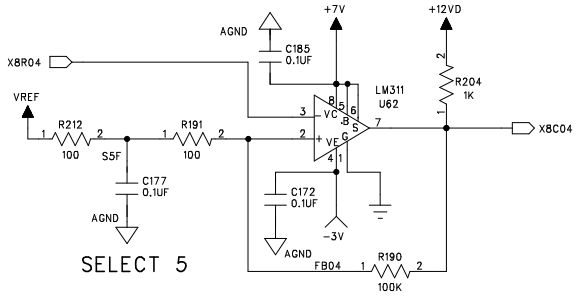

X8R00
AGND
C210 0.1UF
+7V
+12VD
R271 1K
LM311 U75
VREF
R270 100
S1F
R260 100
X8C00
C207 0.1UF
AGND
C203 0.1UF
AGND
-3V
FB00
R259 100K
SELECT 1

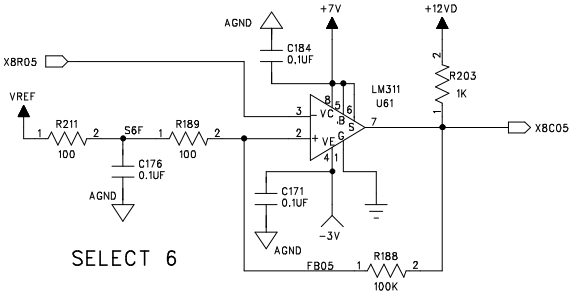

X8BXX
VREF
X8BXX
X8CXX
SELECT X8
X8CXX
SELECT X1

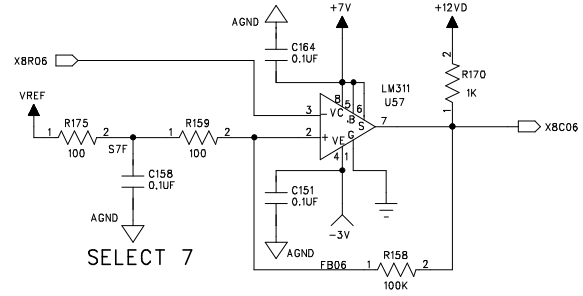

X8R01
AGND
C209 0.1UF
+7V
+12VD
R263 1K
LM311 U74
VREF
R269 100
S2F
R258 100
X8C01
C206 0.1UF
AGND
C202 0.1UF
AGND
-3V
FB01
R257 100K
SELECT 2

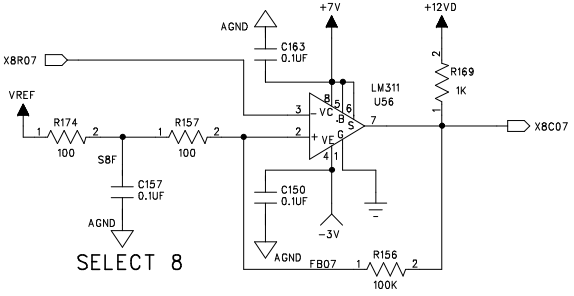

X8R02
AGND
C197 0.1UF
+7V
+12VD
R248 1K
LM311 U69
VREF
R247 100
S3F
R231 100
X8C02
C194 0.1UF
AGND
C190 0.1UF
AGND
-3V
FB02
R230 100K
SELECT 3

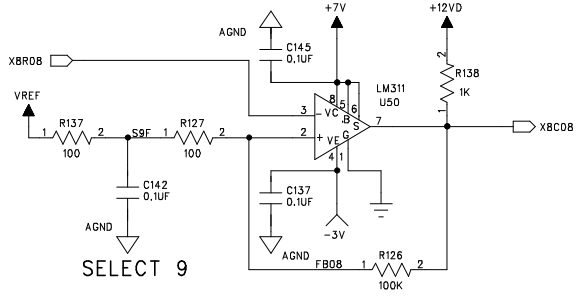

X8R03
AGND
C196 0.1UF
+7V
+12VD
R242 1K
LM311 U68
VREF
R246 100
S4F
R229 100
X8C03
C193 0.1UF
AGND
C189 0.1UF
AGND
-3V
FB03
R228 100K
SELECT 4

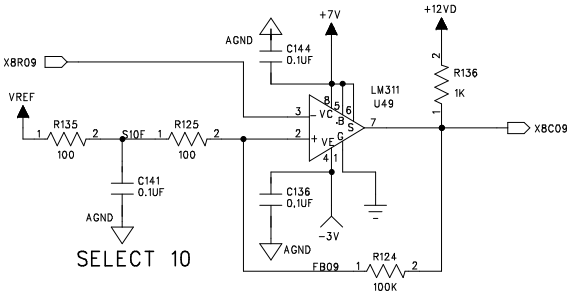

X8R04
AGND
C185 0.1UF
+7V
+12VD
R204 1K
LM311 U62
VREF
R212 100
S5F
R191 100
X8C04
C177 0.1UF
AGND
C172 0.1UF
AGND
-3V
FB04
R190 100K
SELECT 5

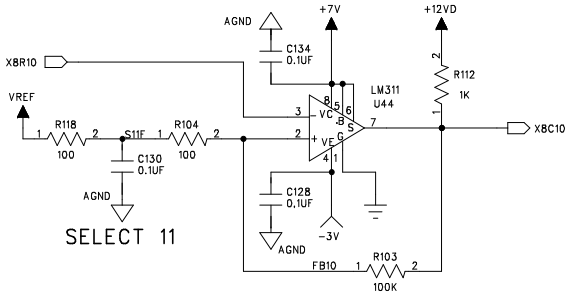

X8R05
AGND
C184 0.1UF
+7V
+12VD
R203 1K
LM311 U61
VREF
R211 100
S6F
R189 100
X8C05
C176 0.1UF
AGND
C171 0.1UF
AGND
-3V
FB05
R188 100K
SELECT 6

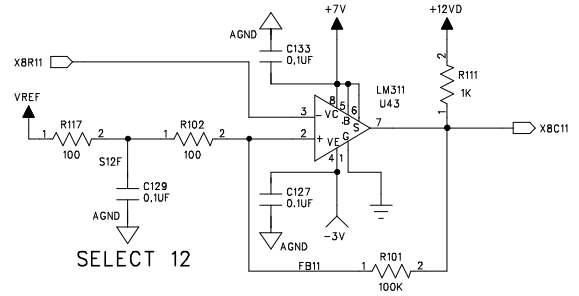

X8R06
AGND
C164 0.1UF
+7V
+12VD
R170 1K
LM311 U57
VREF
R175 100
S7F
R159 100
X8C06
C158 0.1UF
AGND
C151 0.1UF
AGND
-3V
FB06
R158 100K
SELECT 7

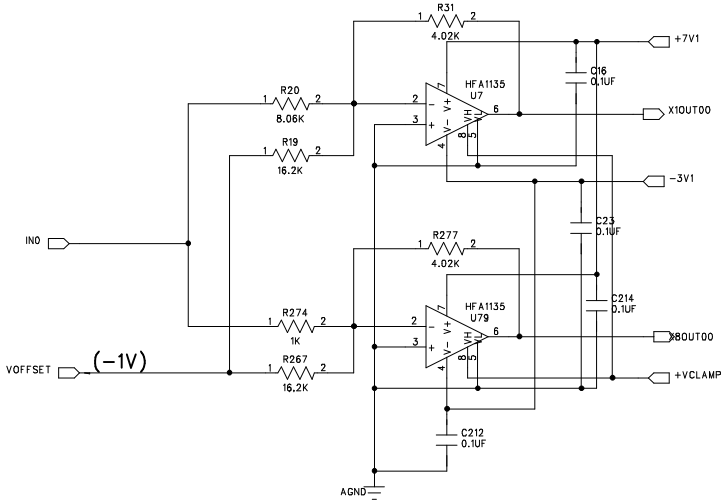

X8R07
AGND
C163 0.1UF
+7V
+12VD
R169 1K
LM311 U56
VREF
R174 100
S8F
R157 100
X8C07
C157 0.1UF
AGND
C150 0.1UF
AGND
-3V
FB07
R156 100K
SELECT 8

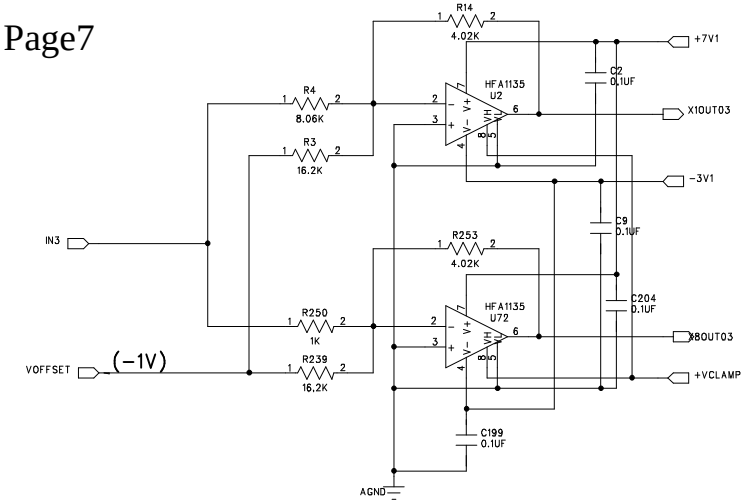

X8R08
AGND
C145 0.1UF
+7V
+12VD
R138 1K
LM311 U50
VREF
R137 100
S9F
R127 100
X8C08
C142 0.1UF
AGND
C137 0.1UF
AGND
-3V
FB08
R126 100K
SELECT 9

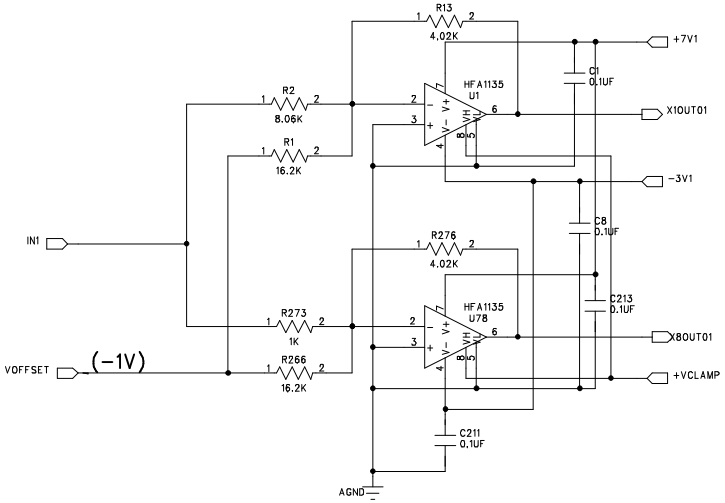

X8R09
AGND
C144 0.1UF
+7V
+12VD
R136 1K
LM311 U49
VREF
R135 100
S10F
R125 100
X8C09
C141 0.1UF
AGND
C136 0.1UF
AGND
-3V
FB09
R124 100K
SELECT 10

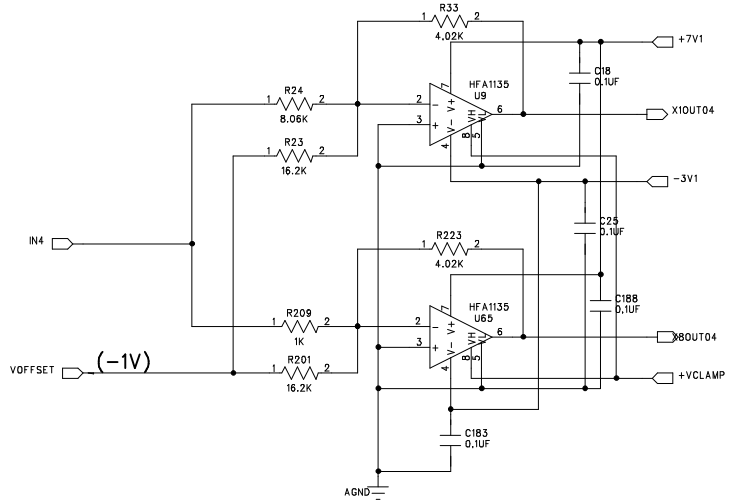

X8R10
AGND
C134 0.1UF
+7V
+12VD
R112 1K
LM311 U44
VREF
R118 100
S11F
R104 100
X8C10
C130 0.1UF
AGND
C128 0.1UF
AGND
-3V
FB10
R103 100K
SELECT 11

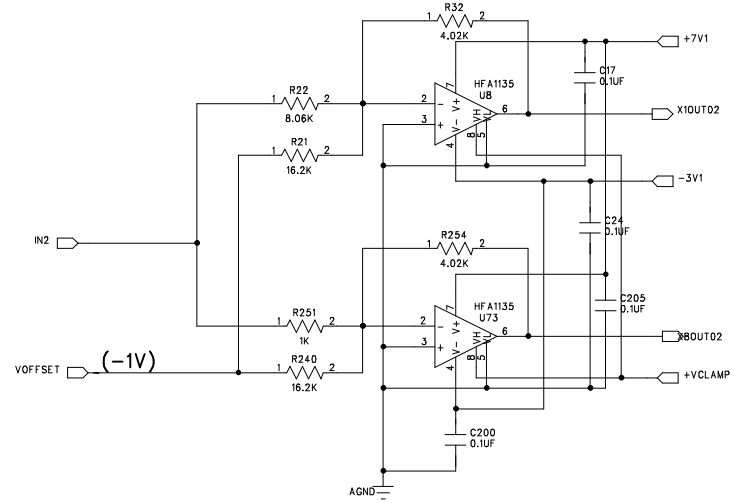

X8R11
AGND
C133 0.1UF
+7V
+12VD
R111 1K
LM311 U43
VREF
R117 100
S12F
R102 100
X8C11
C129 0.1UF
AGND
C127 0.1UF
AGND
-3V
FB11
R101 100K
SELECT 12

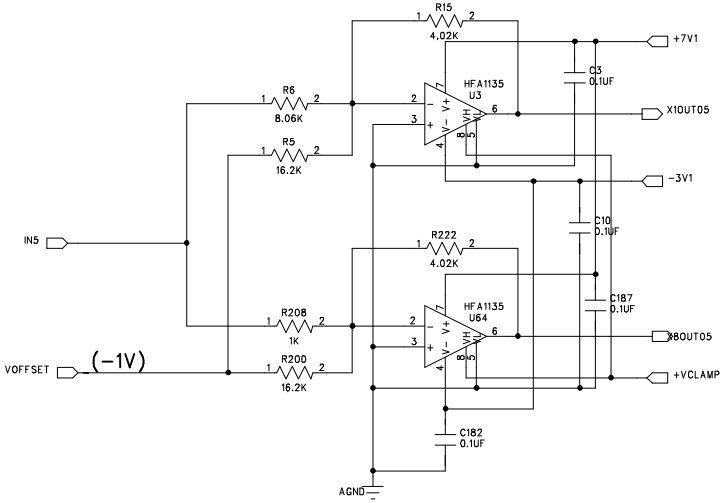

R31
4.02K
+7V1
C16
0.1UF
R20
8.06K
HFA1135
U7
X10OUT00
R19
16.2K
-3V1
C23
0.1UF
IN0
R277
4.02K
C214
0.1UF
R274
1K
X80OUT00
VOFFSET
(-1V)
R267
16.2K
+VCLAMP
C212
0.1UF
AGND

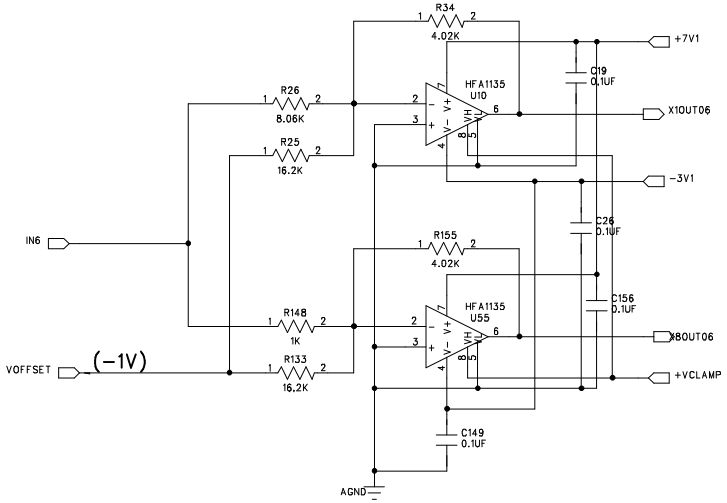

R14
4.02K
+7V1
C2
0.1UF
R4
8.06K
HFA1135
U2
X10OUT03
R3
16.2K
-3V1
C9
0.1UF
IN3
R253
4.02K
C204
0.1UF
R250
1K
X80OUT03
VOFFSET
(-1V)
R239
16.2K
+VCLAMP
C199
0.1UF
AGND

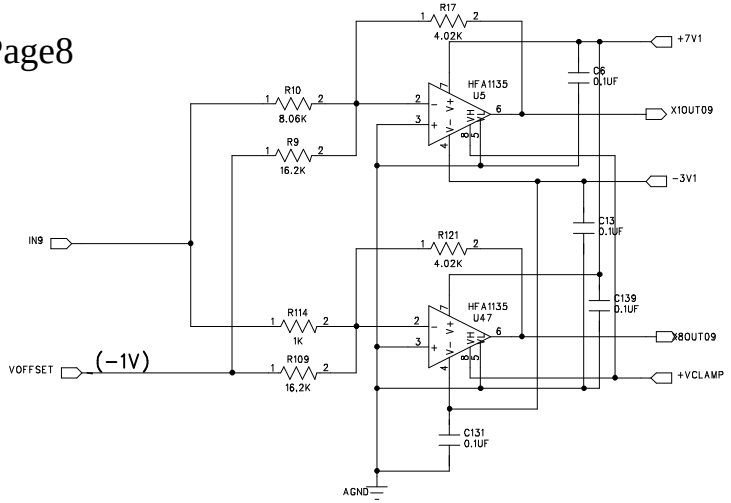

R13
4.02K
+7V1
C1
0.1UF
R2
8.06K
HFA1135
U1
X10OUT01
R1
16.2K
-3V1
C8
0.1UF
IN1
R276
4.02K
C213
0.1UF
R273
1K
X80OUT01
VOFFSET
(-1V)
R266
16.2K
+VCLAMP
C211
0.1UF
AGND

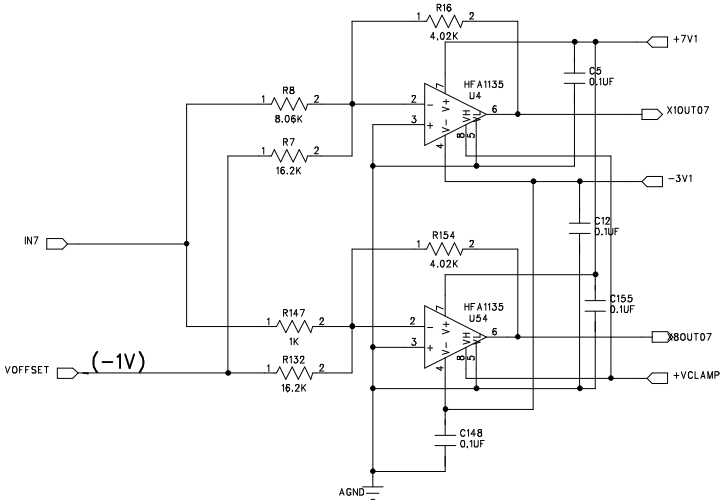

R33
4.02K
+7V1
C18
0.1UF
R24
8.06K
HFA1135
U9
X10OUT04
R23
16.2K
-3V1
C25
0.1UF
IN4
R223
4.02K
C188
0.1UF
R209
1K
X80OUT04
VOFFSET
(-1V)
R201
16.2K
+VCLAMP
C183
0.1UF
AGND

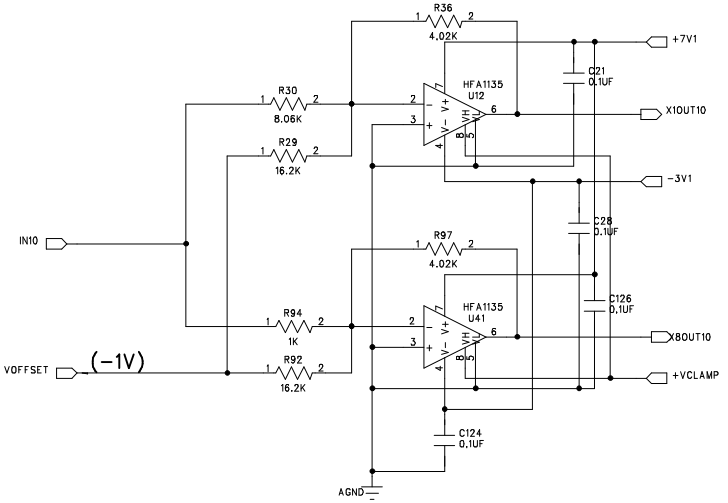

R32
4.02K
+7V1
C17
0.1UF
R22
8.06K
HFA1135
U8
X10OUT02
R21
16.2K
-3V1
C24
0.1UF
IN2
R254
4.02K
C205
0.1UF
R251
1K
X80OUT02
VOFFSET
(-1V)
R240
16.2K
+VCLAMP
C200
0.1UF
AGND

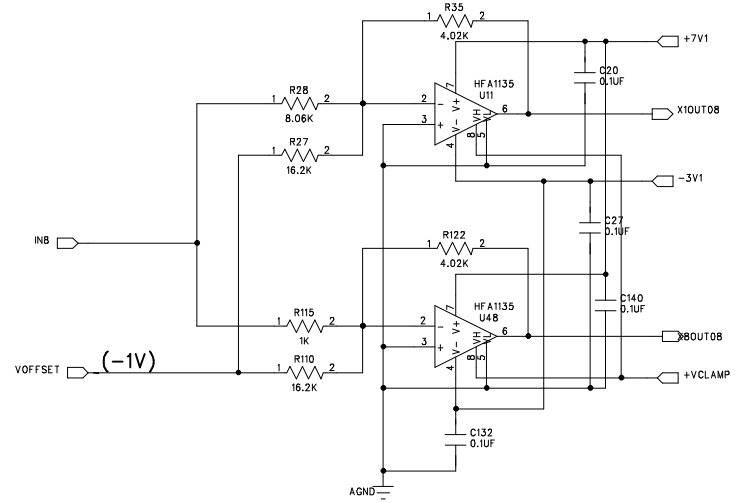

R15
4.02K
+7V1
C3
0.1UF
R6
8.06K
HFA1135
U3
X10OUT05
R5
16.2K
-3V1
C10
0.1UF
IN5
R222
4.02K
C187
0.1UF
R208
1K
X80OUT05
VOFFSET
(-1V)
R200
16.2K
+VCLAMP
C182
0.1UF
AGND

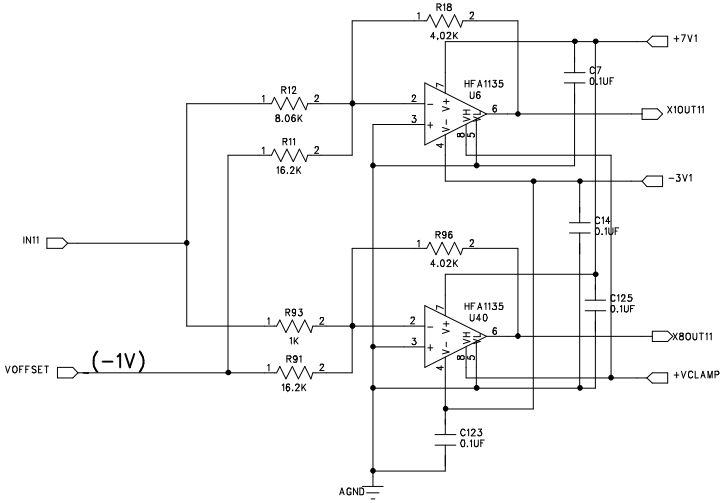

R34
4.02K
+7V1
C19
0.1UF
HFA1135
U10
R26
8.06K
X10OUT06
R25
16.2K
-3V1
IN6
C26
0.1UF
R155
4.02K
C156
0.1UF
HFA1135
U55
R148
1K
X80OUT06
VOFFSET
(-1V)
R133
16.2K
+VCLAMP
C149
0.1UF
AGND


R17
4.02K
+7V1
C6
0.1UF
HFA1135
U5
R10
8.06K
X10OUT09
R9
16.2K
-3V1
IN9
C13
0.1UF
R121
4.02K
C139
0.1UF
HFA1135
U47
R114
1K
X80OUT09
VOFFSET
(-1V)
R109
16.2K
+VCLAMP
C131
0.1UF
AGND


R16
4.02K
+7V1
C5
0.1UF
HFA1135
U4
R8
8.06K
X10OUT07
R7
16.2K
-3V1
IN7
C12
0.1UF
R154
4.02K
C155
0.1UF
HFA1135
U54
R147
1K
X80OUT07
VOFFSET
(-1V)
R132
16.2K
+VCLAMP
C148
0.1UF
AGND


R36
4.02K
+7V1
C21
0.1UF
HFA1135
U12
R30
8.06K
X10OUT10
R29
16.2K
-3V1
IN10
C28
0.1UF
R97
4.02K
C126
0.1UF
HFA1135
U41
R94
1K
X80OUT10
VOFFSET
(-1V)
R92
16.2K
+VCLAMP
C124
0.1UF
AGND


R35
4.02K
+7V1
C20
0.1UF
HFA1135
U11
R28
8.06K
X10OUT08
R27
16.2K
-3V1
IN8
C27
0.1UF
R122
4.02K
C140
0.1UF
HFA1135
U48
R115
1K
X80OUT08
VOFFSET
(-1V)
R110
16.2K
+VCLAMP
C132
0.1UF
AGND


R18
4.02K
+7V1
C7
0.1UF
HFA1135
U6
R12
8.06K
X10OUT11
R11
16.2K
-3V1
IN11
C14
0.1UF
R96
4.02K
C125
0.1UF
HFA1135
U40
R93
1K
X80OUT11
VOFFSET
(-1V)
R91
16.2K
+VCLAMP
C123
0.1UF
AGND