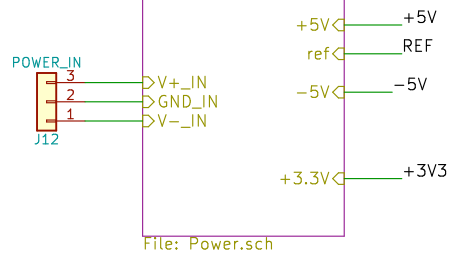
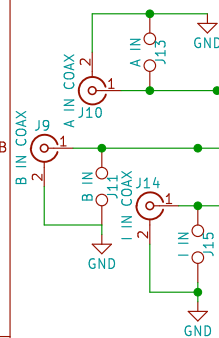


CREATE AN OFFICIAL NOISE BUDGET
END TO END NOISE AND GAIN SIM

Sheet: power + ref voltage

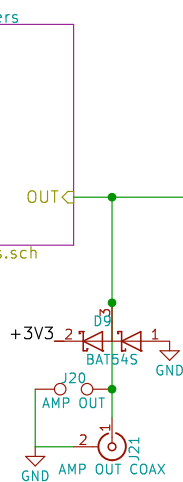


Sheet: LNA

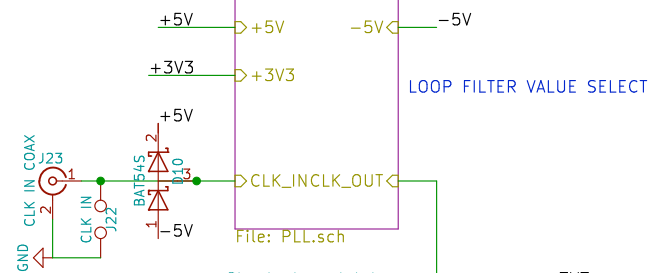


layout notes:
guard traces around A IN, BIN AND I IN
locate near to input connectors
put 100mil headers under can outline

Sheet: amplifiers

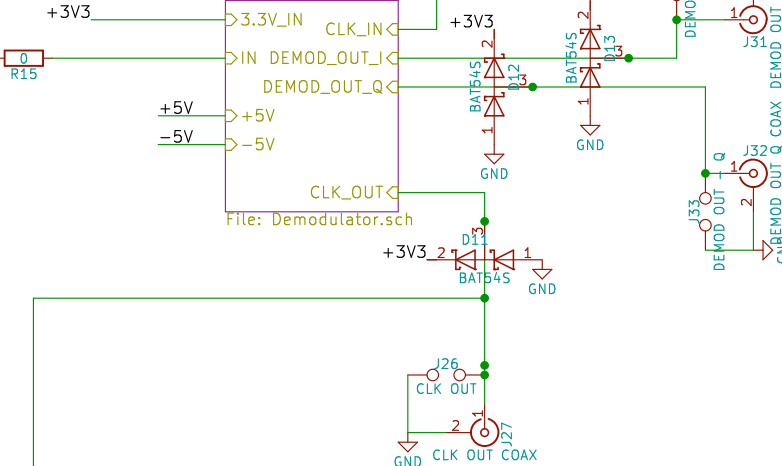


Sheet: PLL

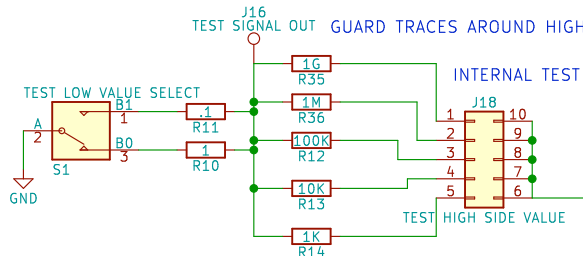


LOOP FILTER VALUE SELECT

Sheet: demodulator



TEST SIGNAL OUT GUARD TRACES AROUND HIGH IMPEDANCE PATHS



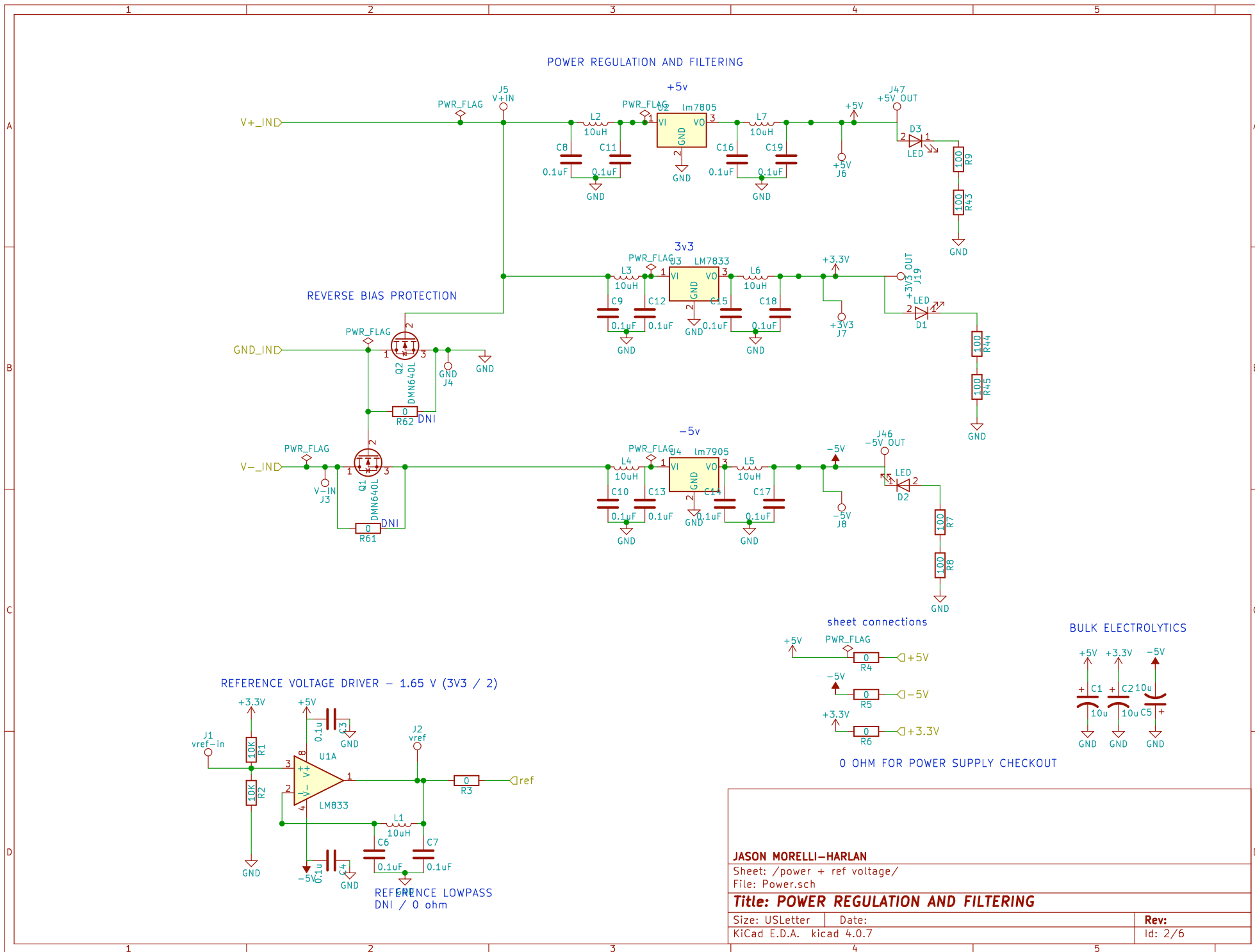
JASON MORELLI-HARLAN

Sheet: /
File: LIA.sch

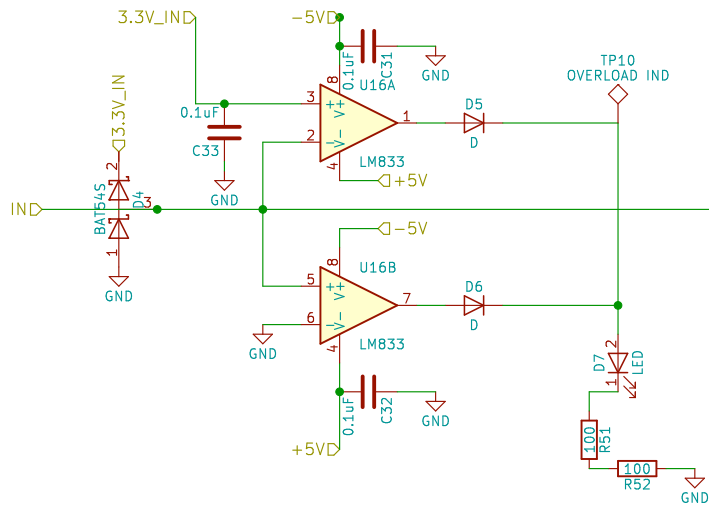
Title: LOCK IN AMPLIFIER

Size: USLetter Date:
KiCad E.D.A. kicad 4.0.7

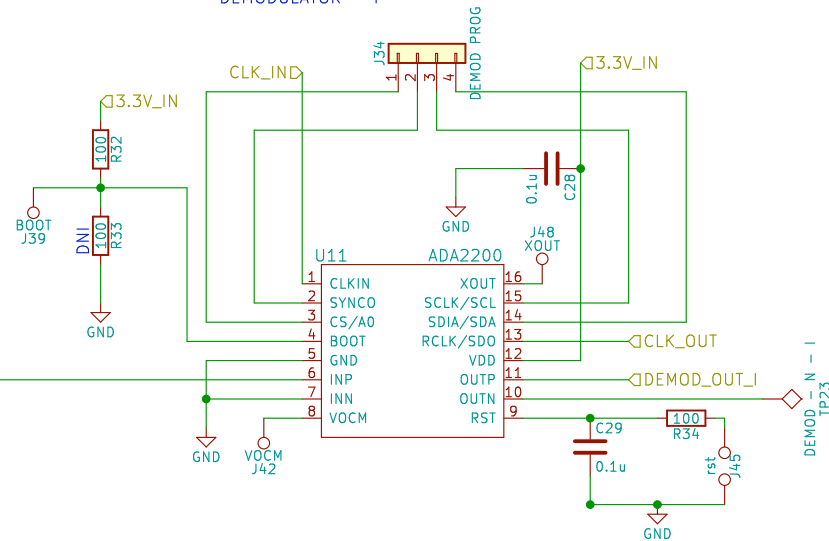
Rev:
Id: 1/6



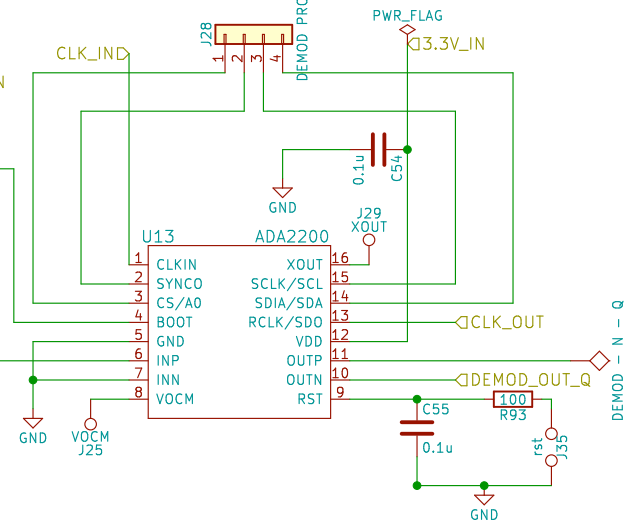
OVERVOLTAGE PROTECTION AND INDICATION



DOUBLE CHECK PINOUT / APPLICATION CIRCUIT DEMOMULATOR - I



DEMOMULATOR - Q



JASON MORELLI-HARLAN

Sheet: /demodulator/
File: Demodulator.sch

Title: DEMOMULATOR

Size: USLetter Date:
KiCad E.D.A. kicad 4.0.7

Rev:
Id: 3/6

GAIN SELECTION BLOCK. COMP. CT. MIN. W/ PARALLEL AND SERRIES COMPONENTS.

ALL GAINS V/V

1000X
500X
200X
100X
50X
20X
10X
5X
2X
1X

order of magnitude selector

1000x
100x
10x

END AMP GAIN Fx

TP1

TP2

TP3

TP4

TP5

TP6

TP7

TP8

TP9

TP10

TP11

TP12

TP13

TP14

TP15

TP16

TP17

TP18

TP19

TP20

TP21

TP22

TP23

TP24

TP25

TP26

TP27

TP28

TP29

TP30

TP31

TP32

TP33

TP34

TP35

TP36

TP37

TP38

TP39

TP40

TP41

TP42

TP43

TP44

TP45

TP46

TP47

TP48

TP49

TP50

TP51

TP52

TP53

TP54

TP55

TP56

TP57

TP58

TP59

TP60

TP61

TP62

TP63

TP64

TP65

TP66

TP67

TP68

TP69

TP70

TP71

TP72

TP73

TP74

TP75

TP76

TP77

TP78

TP79

TP80

TP81

TP82

TP83

TP84

TP85

TP86

TP87

TP88

TP89

TP90

TP91

TP92

TP93

TP94

TP95

TP96

TP97

TP98

TP99

TP100

TP101

TP102

TP103

TP104

TP105

TP106

TP107

TP108

TP109

TP110

TP111

TP112

TP113

TP114

TP115

TP116

TP117

TP118

TP119

TP120

TP121

TP122

TP123

TP124

TP125

TP126

TP127

TP128

TP129

TP130

TP131

TP132

TP133

TP134

TP135

TP136

TP137

TP138

TP139

TP140

TP141

TP142

TP143

TP144

TP145

TP146

TP147

TP148

TP149

TP150

TP151

TP152

TP153

TP154

TP155

TP156

TP157

TP158

TP159

TP160

TP161

TP162

TP163

TP164

TP165

TP166

TP167

TP168

TP169

TP170

TP171

TP172

TP173

TP174

TP175

TP176

TP177

TP178

TP179

TP180

TP181

TP182

TP183

TP184

TP185

TP186

TP187

TP188

TP189

TP190

TP191

TP192

TP193

TP194

TP195

TP196

TP197

TP198

TP199

TP200

TP201

TP202

TP203

TP204

TP205

TP206

TP207

TP208

TP209

TP210

TP211

TP212

TP213

TP214

TP215

TP216

TP217

TP218

TP219

TP220

TP221

TP222

TP223

TP224

TP225

TP226

TP227

TP228

TP229

TP230

TP231

TP232

TP233

TP234

TP235

TP236

TP237

TP238

TP239

TP240

TP241

TP242

TP243

TP244

TP245

TP246

TP247

TP248

TP249

TP250

TP251

TP252

TP253

TP254

TP255

TP256

TP257

TP258

TP259

TP260

TP261

TP262

TP263

TP264

TP265

TP266

TP267

TP268

TP269

TP270

TP271

TP272

TP273

TP274

TP275

TP276

TP277

TP278

TP279

TP280

TP281

TP282

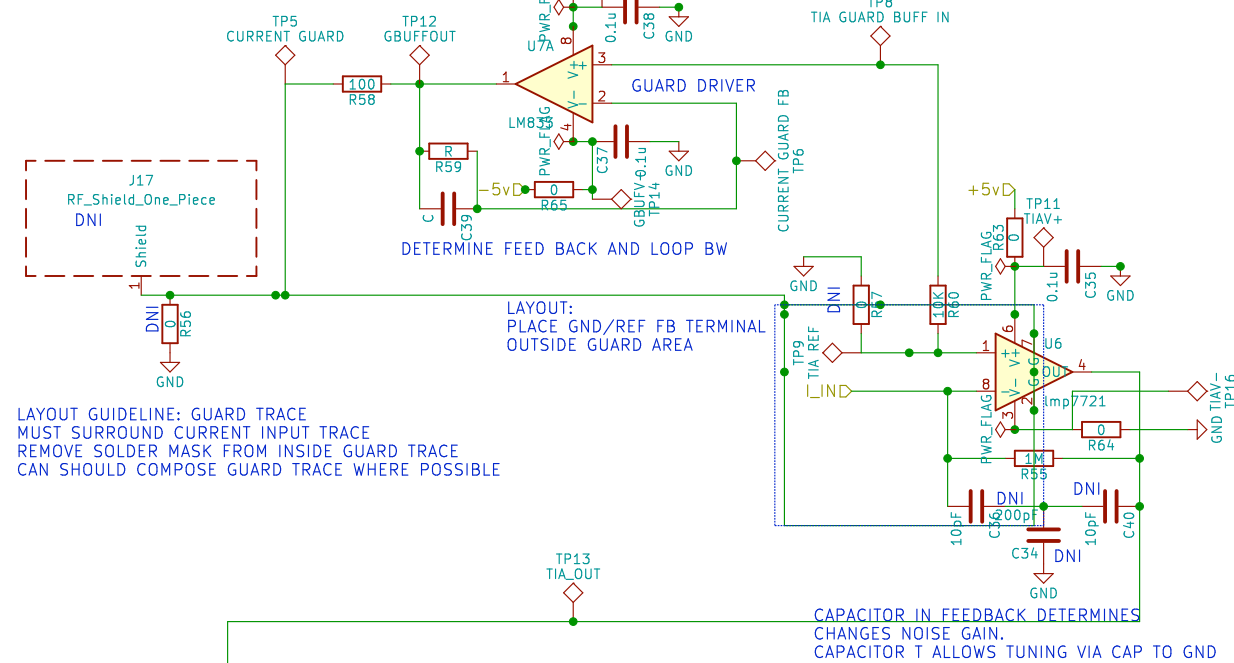
TP283

TP284

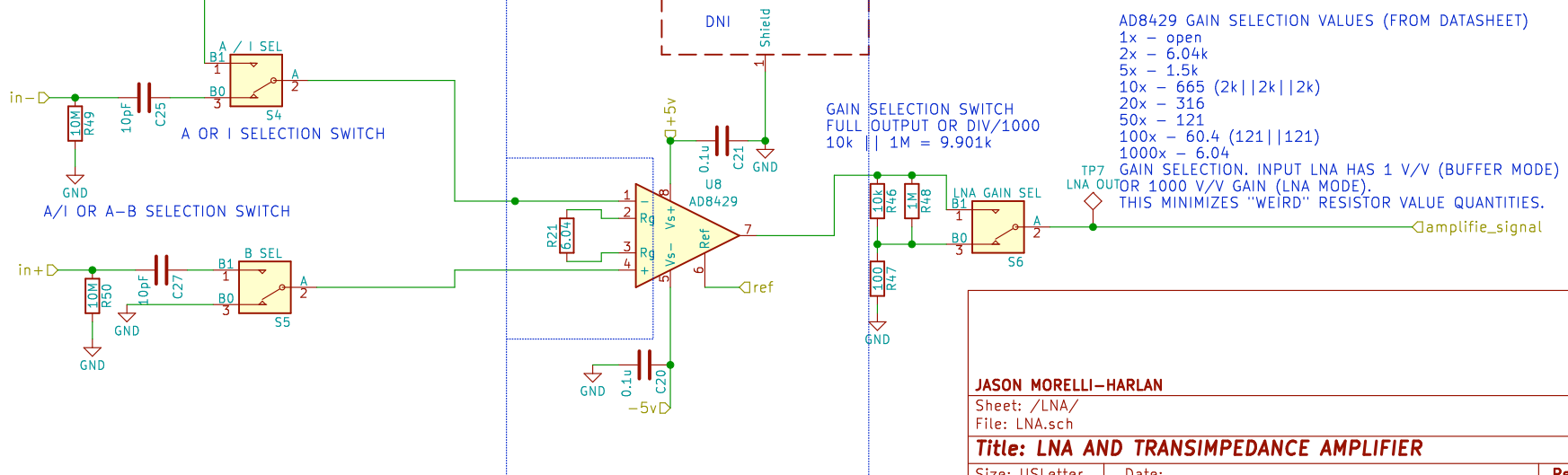
TP285

TRANSIMPEDANCE AMPLIFIER

- Transimpedance amp w/ switches for single ended, differential, and current inputs
- Nominal goal for 1 nV sensitivity with long enough time base; 1nV \rightarrow 1V
- 1e9 v/v system gain.



LNA INSTRUMENTATION AMP



JASON MORELLI-HARLAN

Sheet: /LNA/

File: LNA.sch

Title: LNA AND TRANSIMPEDANCE AMPLIFIER

Size: USLetter

Date:

KiCad E.D.A. kicad 4.0.7

Rev:

Id: 5/6

