

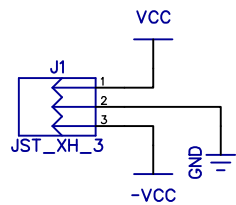
2

1

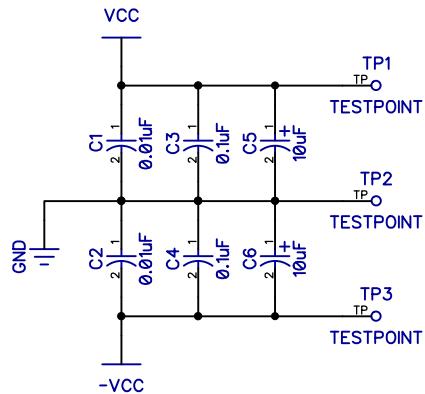
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
0	A	Initial Revision	10/28/19	R. Sun
0	B	Replace 10uF and add TP	11/18/19	R. Sun
0	C	Replace R1 with 910 in production	12/05/19	R. Sun

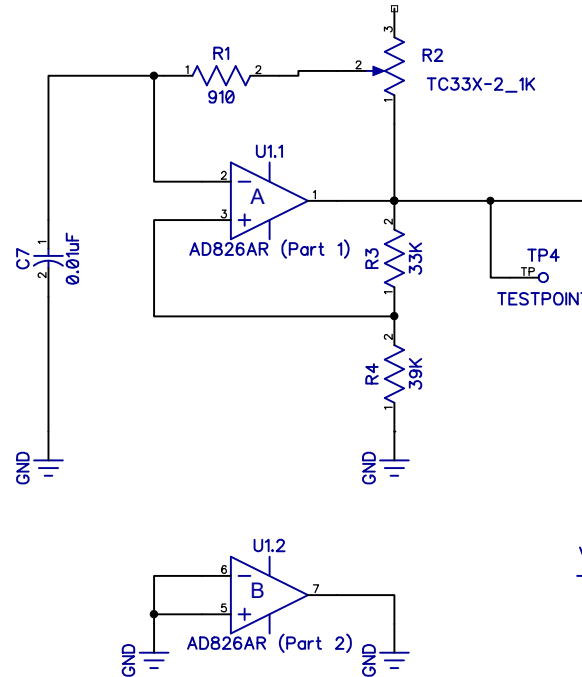
POWER INPUT



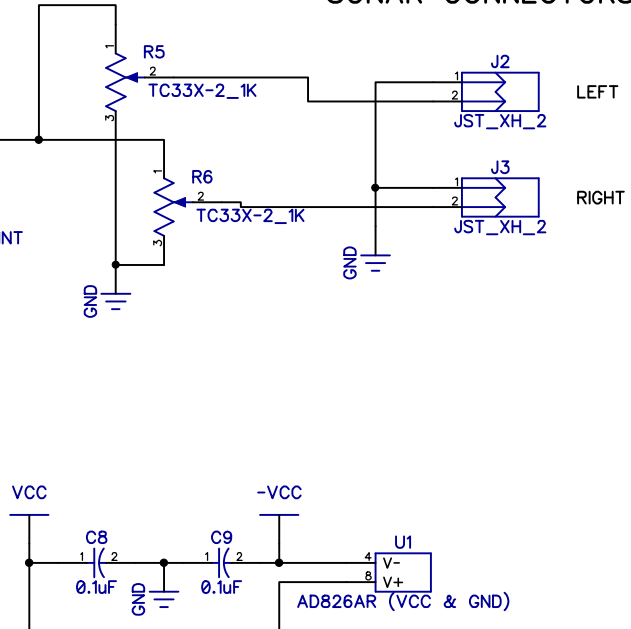
POWER FILTERING



40 KHZ SQUARE OSCILLATOR



SONAR CONNECTORS



Analog Autonomous Car

Transmitter Board

Ray Sun

SIZE
AFSCM NO.
N/ADWG NO.
1REV
C

EE 91a Fall 2019

SCALE 1:1

12/05/2019

Sheet 1

2

1

2

1

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
0	A	Initial Revision	10/28/19	E. Yeh

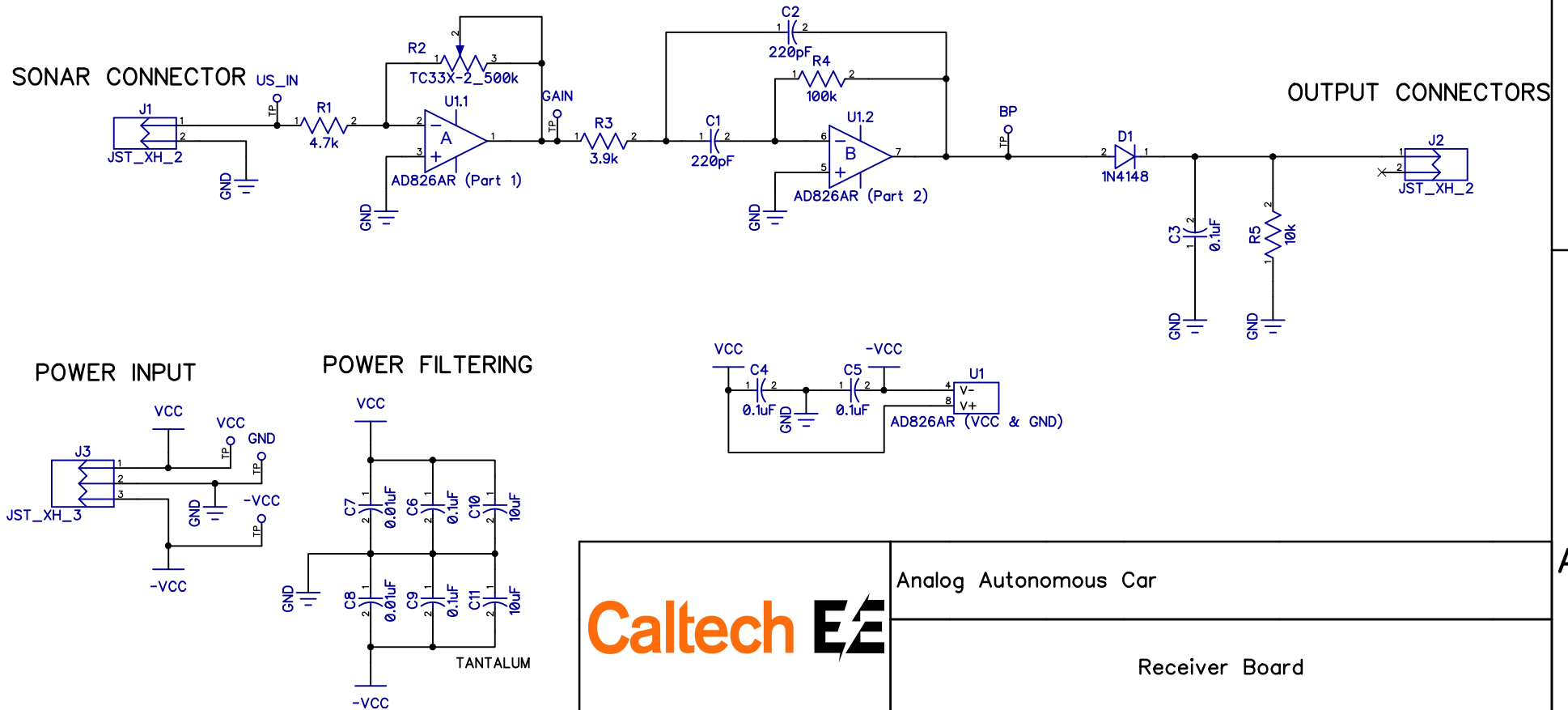
INVERTING AMP

40kHz BAND PASS FILTER (IGMF)

RECTIFY & PEAK DETECT

SONAR CONNECTOR

OUTPUT CONNECTORS



POWER INPUT

POWER FILTERING

Caltech EE

Analog Autonomous Car

Receiver Board

Evan Yeh

SIZE
AFSCM NO.
N/ADWG NO.
2REV
A

EE 91a Fall 2019

SCALE 1:1

Sheet 1

2

1

2

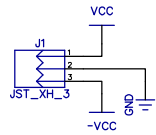
1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
0	A	Initial Revision	10/28/19	R. Sun
0	B	Redesign PWM generator	11/03/19	R. Sun
0	C	Update caps and add TP	11/18/19	R. Sun

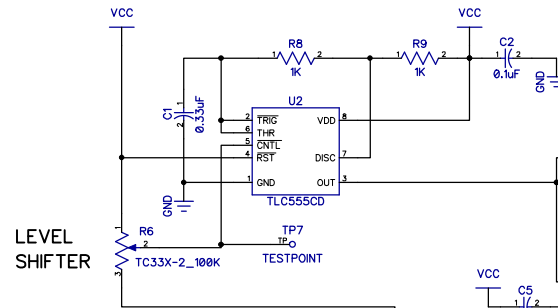
B

B

INPUT CONNECTORS

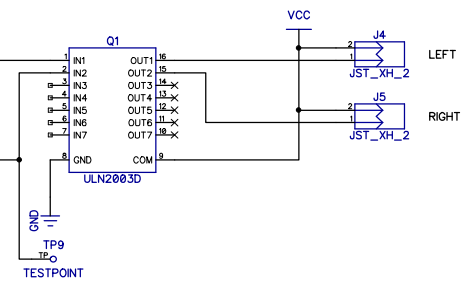


PWM GENERATOR



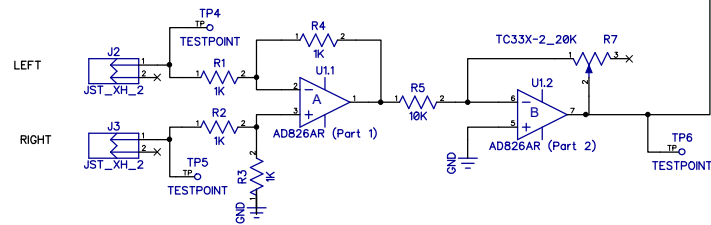
MOTOR DRIVERS

MOTOR CONNECTORS

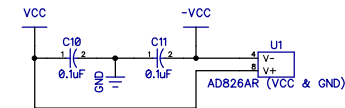
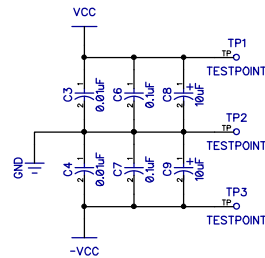


RECEIVER INPUTS

P CONTROLLER



POWER FILTERING



A

A

2

1

Caltech EE

Analog Autonomous Car

Motor Driver Board

Ray Sun

SIZE
CFSCM NO.
N/ADWG NO.
3REV
B

EE 91a Fall 2019

SCALE
1:1

Sheet 1

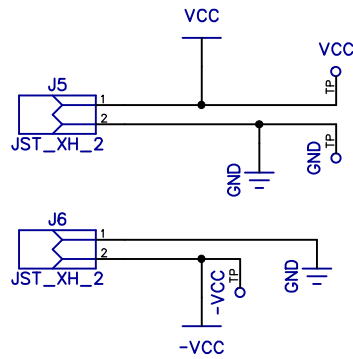
2

1

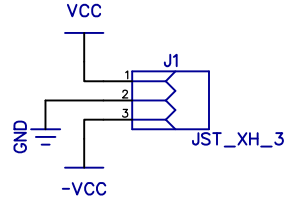
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
0	A	Initial Revision	10/28/19	E. Yeh

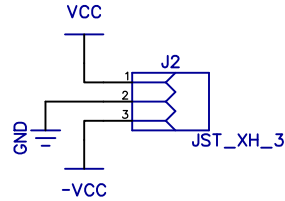
BATTERY INPUT



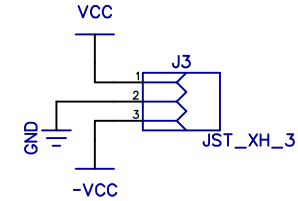
TRANSMITTER POWER OUTPUT



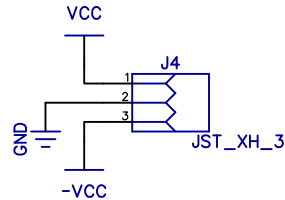
RECEIVER POWER OUTPUT (LEFT)



RECEIVER POWER OUTPUT (RIGHT)



MOTOR DRIVER POWER OUTPUT



Caltech **EE**

Analog Autonomous Car

Power Distribution Board

Evan Yeh

SIZE
A

FSCM NO.
N/A

DWG NO.
4

REV
A

EE 91a Fall 20219

SCALE 1:1

Sheet 1

2

1

2

1

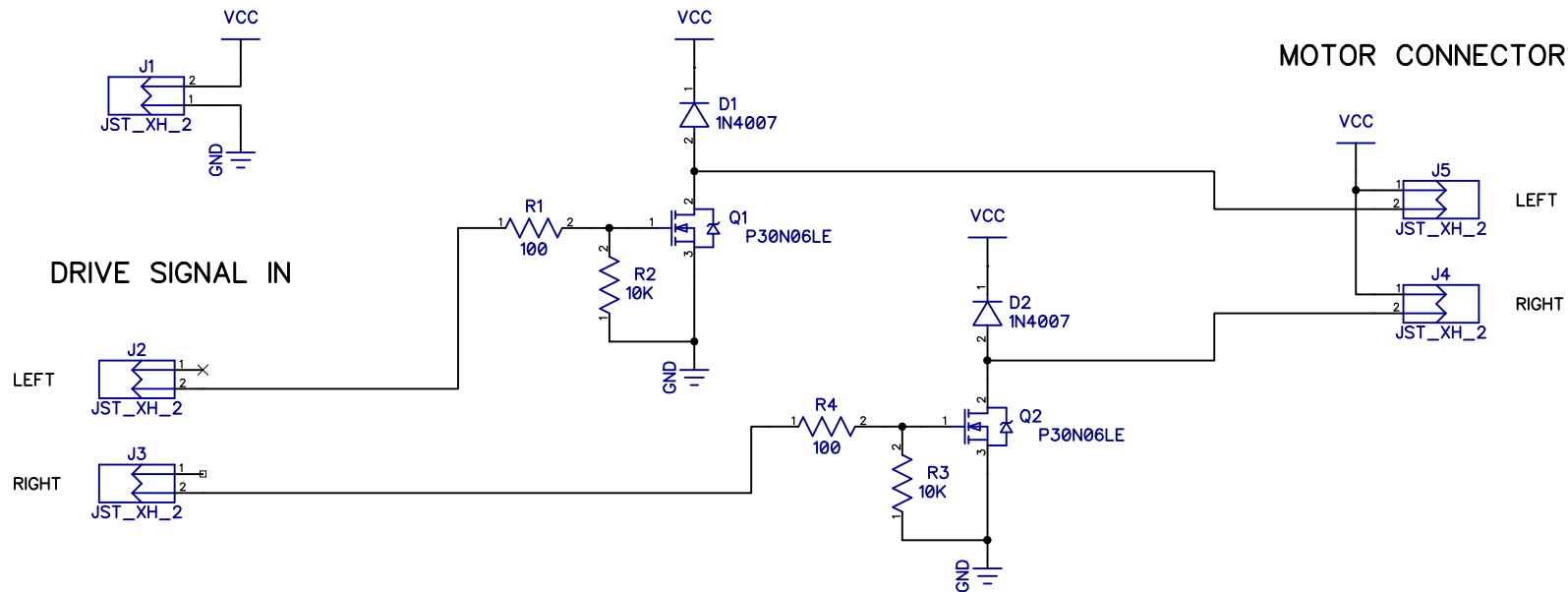
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
0	A	Initial Revision	12/13/19	R. Sun

POWER INPUT

LOW SIDE SWITCHES

MOTOR CONNECTORS



Caltech **EE**

Analog Autonomous Car

(Motor Driver) Driver

Ray Sun

SIZE
A

FSCM NO.
N/A

DWG NO.
5

REV
A

EE 91a Fall 2019

SCALE 1:1

Sheet 1

2

1