

573 Mech Lab Devices

1. TL084CN Amplifier

Description: JFET-input operational amplifier

Application: DIY Audio hardware

Schematic: http://www.maaki.com/thomas/sas/jupiter4/jp4_cv/TL084_connection.gif

Sample project: http://www.maaki.com/thomas/sas/jupiter4/jp4_cv/

2. 412CP Amplifier

Description: JFET-input operational amplifier

Application: DIY Audio hardware

Schematic: <http://www.promelec.ru/pdf/lf412.pdf>

3. LT1057CN8 Amplifier

Description: JFET-input operational amplifier

Application: DIY Audio hardware

Schematic: <http://www.digchip.com/datasheets/parts/datasheet/262/LT1057CN8.php>

4. UA741CP Amplifier

Description: General purpose operational amplifier

Application: DIY Audio hardware

Schematic: <http://focus.ti.com/docs/prod/folders/print/ua741.html>

Sample project: <http://www.vupac.vanderbilt.edu/~webster/classes/p225lab/opamp.pdf>

5. 8PIN 4250CN Amplifier

Description: Programmable operational amplifier

Application: DIY Audio hardware

Schematic: <http://itc-electronics.com/CD/national%20semiconductor%2010053/htm/nsc03361.htm>

6. AD713JN Amplifier

Description: Quad Hi-Speed BiFET Op Amp

Application: DIY Audio hardware

Schematic: <http://www.futurlec.com/AnalogDevices/AD713JN.shtml>

7. LT1078CN8 Amplifier

Description: Quad Hi-Speed BiFET Op Amp

Application: DIY Audio hardware

Schematic: <http://linear-tech.com.cn/pc/downloadDocument.do?navId=H0,C1,C1154,C1009,C1021,P1276,D1716>

8. ULN2004A

Description: High-Voltage, High-Current Darlington Transistor Array

Application: Unipolar stepper motor driver

Schematic:

<http://www.chipcatalog.com/Datasheet/BF9F0B98CCAD47B5A194F50D062D8A3F.htm>

Sample project: <http://www.jasonbabcock.com/computing/breadboard/pantable1/>

9. Tilt Switch

Description: Tilt switches contain a conductive liquid and when tilted this bridges the contacts inside, closing the switch. They can be used as a sensor to detect the position of an object. Some tilt switches contain mercury which is poisonous.

10. Vibrating Motor

11. 1N4148 diode

Description: High Conductance Fast Diode

Schematic: <http://pdf1.alldatasheet.com/datasheet-pdf/view/57418/CDI-DIODE/1N4148-1.html>

Sample project: <http://www.physics.unc.edu/~sean/Phys101/Lab04.pdf>

12. LM386N audio amplifier

Description: Low voltage audio amplifier

Schematic: <http://www.oselectronics.com/downloads/LM386.pdf>

Sample project: <http://www.mikroelektronika.co.yu/english/product/books/rrbook/chapter3/chapter3d.htm>

13. TP5098N audio amplifier (Unknown)

14. Diode

Description: a component that restricts the direction of movement of charge carriers

Introduction: <http://www.americanmicrosemi.com/tutorials/diode.htm>

15. Misc ICs

16. SN7404N

Description: hex inverter ICs

Schematic: <http://208.55.110.223/ftp/Data%20Sheets/7404.pdf>

17. UCN5804B

Description: Unipolar Stepper motor controller

Schematic: <http://pdf1.alldatasheet.co.kr/datasheet-pdf/view/55138/ALLEGRO/UCN5804B.html>

Sample project: <http://www.phanderson.com/bx24/s5804.html>

18. DM7404N Gate

Description: hex inverting logic gate

Schematic: http://www.jaycar.com.au/images_uploaded/DM7404.PDF

19. 1N914 Diode

Description: high speed diode

Schematic: http://wiki.gb.nrao.edu/pub/Projects/CcbDataSheets/1N914_914A_914B_4.pdf

Sample project: http://www.atariarchives.org/ecp/chapter_8.php

20. 1N5226B Diode

Description: Generic diode

Schematic: <http://www.ortodoxism.ro/datasheets/lrc/1N5247B.pdf>

21. 1N4004 Diode

Description: Generic diode

Schematic: <http://www.ortodoxism.ro/datasheets/fuji/1N4003.pdf>

22. 1N5817 Diode

Description: Generic diode

Schematic: <http://www.onsemi.com/pub/Collateral/1N5817-D.PDF>

23. 15k resistor

24. 10k resistor

25. 2.2k resistor

26. 470k resistor

27. 5.1k resistor

28. SP232ACP

29. Flex sensor

Sample project: <http://www.tigoe.net/pcomp/labs/lab-analog-variables.shtml>

30. AD820AN

Description: low power FET input operational amplifier that can operate from a single supply of +5.0 V to 36 V, or dual supplies of ± 2.5 V to ± 18 V

Schematic: <http://www.futurlec.com/AnalogDevices/AD820AN.shtml>

31. Radial 0.1uf capacitor

32. Voltage regulator

Sample project: <http://tigoe.net/pcomp/bx/bx24.shtml>

33. Misc resistor

34. TIP120NPN

Description: Darlington Transistor

Schematic: <http://www.chipcatalog.com/Datasheet/1E3D59F1776B15881B281983C98B2FC0.htm>

Sample project: <http://skeptictank.net/nyu/ipc/week6.html>

35. 22pf ceramic disc

36. MSIUSA flex sensor

37. Condenser microphone

38. 0.1uf Capacitor

39. Yellow Leds

40. Red Leds

41. Green Leds

42. TIP31C NPN

Description: Transistor

Schematic: <http://www.fairchildsemi.com/pf/TI/TIP31C.html>

43. 2N2222A

Description: Transistor

Schematic: <http://www.semicoa.com/pdf/transistor/2n2222a.pdf>

44. 22k resistor

45. 10k resistor

46. 6.8k resistor

47. 2.2k resistor

48. 1k resistor

49. 1k resistor

50. 220 resistor

51. 7805 voltage regulator

52. 0.01uf capacitor

53. 1uf capacitor

54. Cds photocell

55. 4.7uf capacitor

56. 10uf capacitor

57. 4.0 Mhz Xtal

58. Thermistor 100k

Description: temperature sensor

59. 555 timer

Description: for timing circuits

Schematic: <http://info.hobbyengineering.com/specs/TI-NE555Series.pdf>

Sample project: <http://www.uoguelph.ca/~antoon/gadgets/555/555.html>