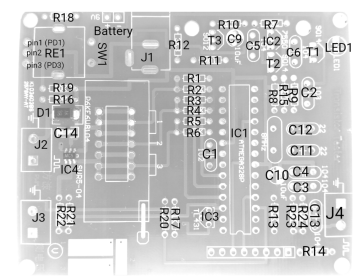
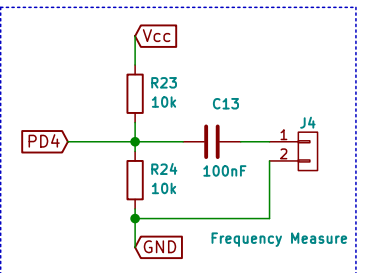
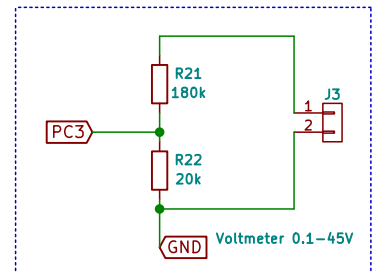
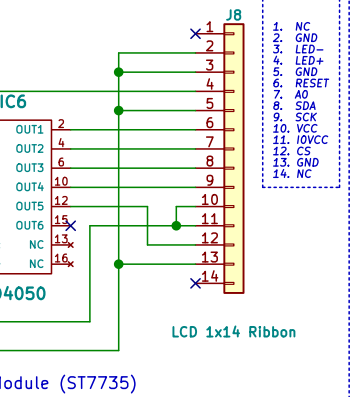
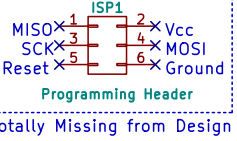
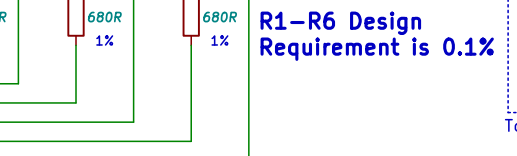
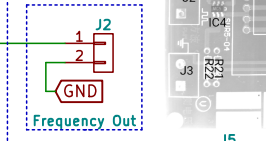
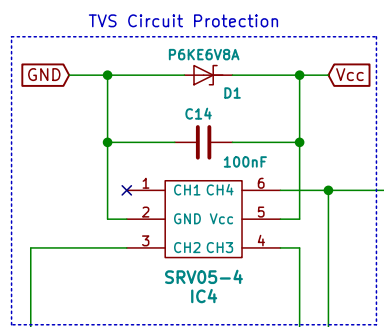
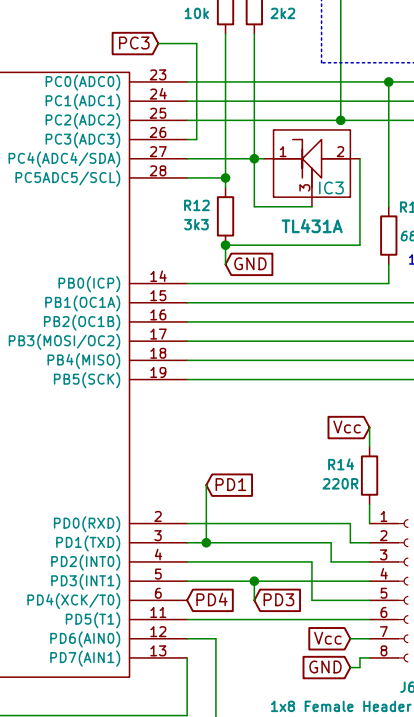
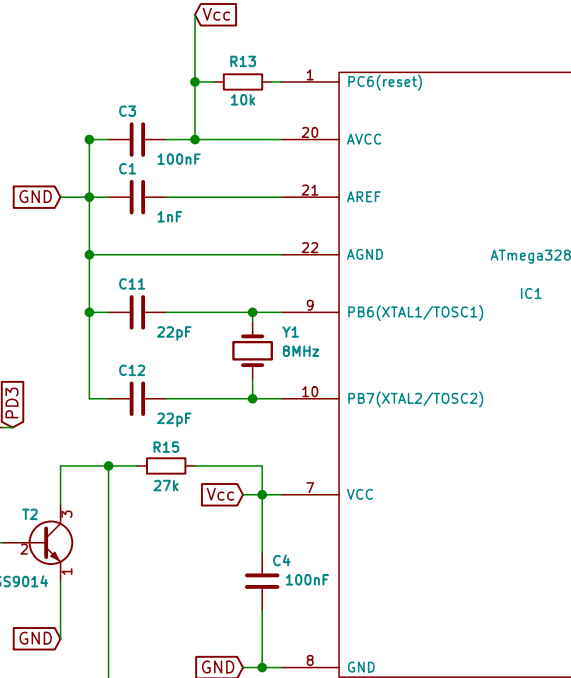
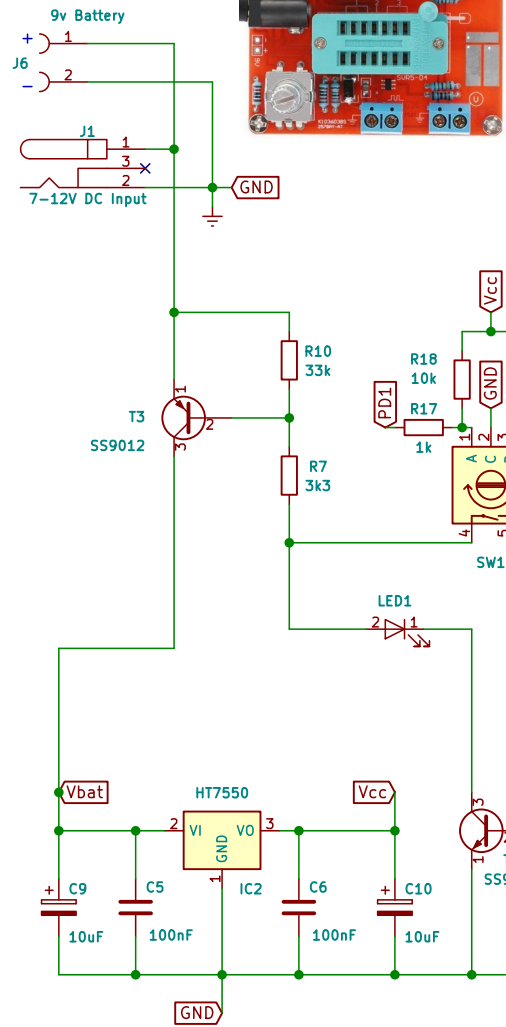
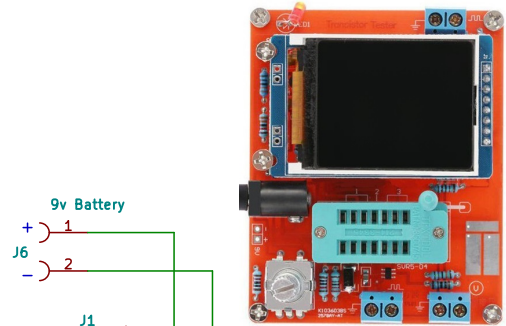


The AY-AT Device Fails to meet the Minimum System Design

- 1.) Incorrect Voltage Reference (IC3= 1% (0.1% Recommended))
- 2.) Incorrect Probing Resistors in Most Kits (R1-R6)

These errors are significant, and will greatly impact the usefulness of this device.



AY-AT Clone – The Proper Mods

- 1.) 0.1% Probing Resistors
- 2.) 16 or 20MHz Crystal
- 3.) Correct LDO Vreg
- 4.) Correct Vref

+Spare MCU

Manufacturers Part Number=MPN
Mouser Part Number=MoPN
Note: This is just a list for convenience. The parts brands and distributor are not important.

(3x)470k Resistors

TE Connectivity
MPN: H8470KBZA
Metal Film Resistors – Through Hole
H8 470K 0.1% 100PPM
MoPN: 279-H8470KBZA

(3x)680ohm Resistors

TE Connectivity
MPN: H8470KBZA
Metal Film Resistors – Through Hole
H8 470K 0.1% 100PPM
MoPN: 279-H8470KBZA

16MHz Crystal and/or 20MHz (M-FW)

CTS
MPN: ATS16A
Crystals 16MHz 20pF 30ppm -20C 70C
MoPN: 774-ATS16A
(20mhz Crystal (M-Firmware Only))
CTS
MPN: ATS20A
Crystals 20MHz 20pF 30ppm -20C 70C
MoPN: 774-ATS20A

2.5 Volt 0.1% Precision Reference

Texas Instruments
MPN: LM4040AIZ-2.5/NOBP
Voltage References Prec. MicroPwr Shunt Vtg Ref
MoPN: 926-LM4040AIZ25NOPB

5v LDO Voltage Regulator

Microchip
MPN: MCP1702-5002E/TO
LDO Voltage Regulators LDO w/ Low Quiescent
MoPN: 579-MCP1702-5002E/TO

Spare Atmega328

Microchip
MPN: ATMEGA328-PU
8-bit Microcontrollers – MCU AVR
32K FLSH 1K EE2K SRAM-20MHz IND
MoPN: 556-ATMEGA328-PU

Mouser Part Numbers (Cost as of 8/17 was \$15.78 shipped USPS within the USA)

279-H8470KBZA
279-H8680RBVA
774-ATS16A and/or 774-ATS20A
926-LM4040AIZ25NOPB
579-MCP1702-5002E/TO
556-ATMEGA328-PU