

Rev:D LINEAR AND LOG VARIANTS

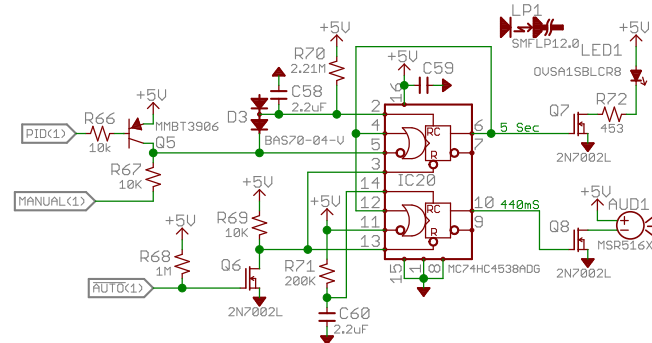
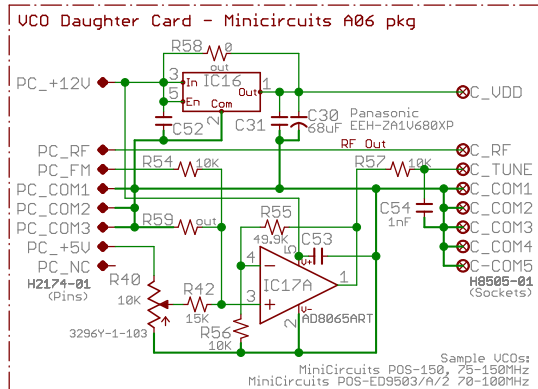
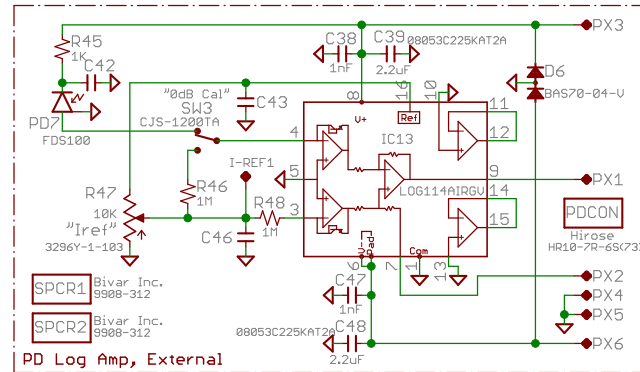
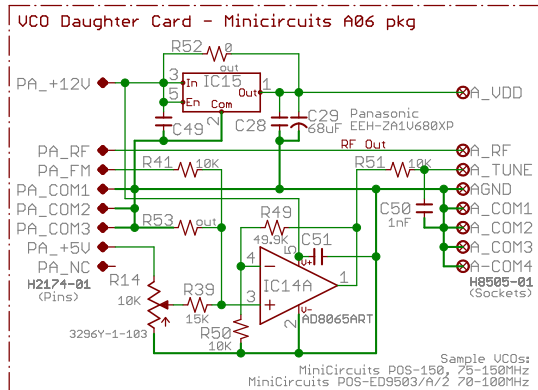
LOG CONTROL:
 The control input corresponds logarithmically to optical power.
 Use UCA821DGS RF amp and the log PD amplifier. The PD BNC is a monitor.
 Use 10K for R12 (voltage gain scaling), R19 = 29.4K.

LINEAR CONTROL:
 The control input corresponds linearly with optical power.
 Use UCA824DGS RF amp and do not use the LOG PD amplifier. Use an external linear PD amp (such as Thorlab's PDA36A) connected to the PD BNC. Use 6.65K for R12 and add R73 10K to add -ve voltage control range.
 R19 = 3.32K

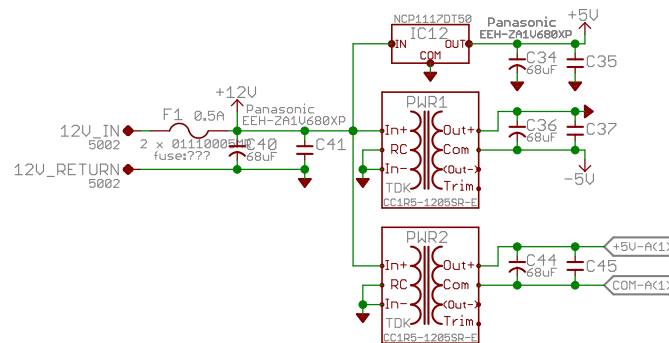
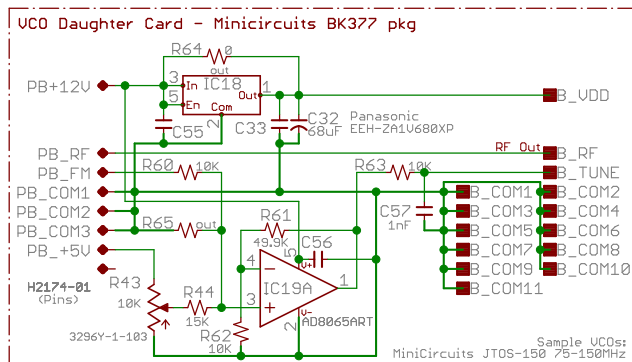
D1	A.Stummer	Apr 2016	Changed R19, R5, C6.
D	A.Stummer	Nov 2014	Add lin ver, remove PD PCB, add ext AM, fixed Q5 B-E.
C	A.Stummer	Mar 2013	Many minor mods.
B1	A.Stummer	Jan 2013	Many assorted mods.
A2	A.Stummer	Sept 2012	As assembled and tested.
A1	A.Stummer	Sept 2012	Initial layout.

Ltr	Date	By	REVISION DESCRIPTION
University of Toronto, Quantum Optics Group			
Design: Alan Stummer		ALPS3 - AQM Laser Power Stabilization J. Thywissen Labs	
Date: 2014 nov			
Edited: 2016-06-21 3:00 PM			
File: ALPS3			
		Sheet: 1 of 5	REV: D

- NOTES**
- 1) Be sure to use the nylon spacers on the UCO A06 cases.
 - 2) Do not wash the front panel switch or pot.
 - 3) Log version only, wire for connector on main unit: 22cm of 22AWG solid, PD box 5cm stranded.
 - 4) The rotary switch is shipped for 2 position. Turn knob CW. Remove two nuts and back cover. The metal plate will be touching a stop pin. Move that pin two stops. Close cover. See web page for details.
 - 5) There are intentionally two types of opamps in SOT23-5 with similar numbers, AD8605 and AD8065. Do not confuse them.

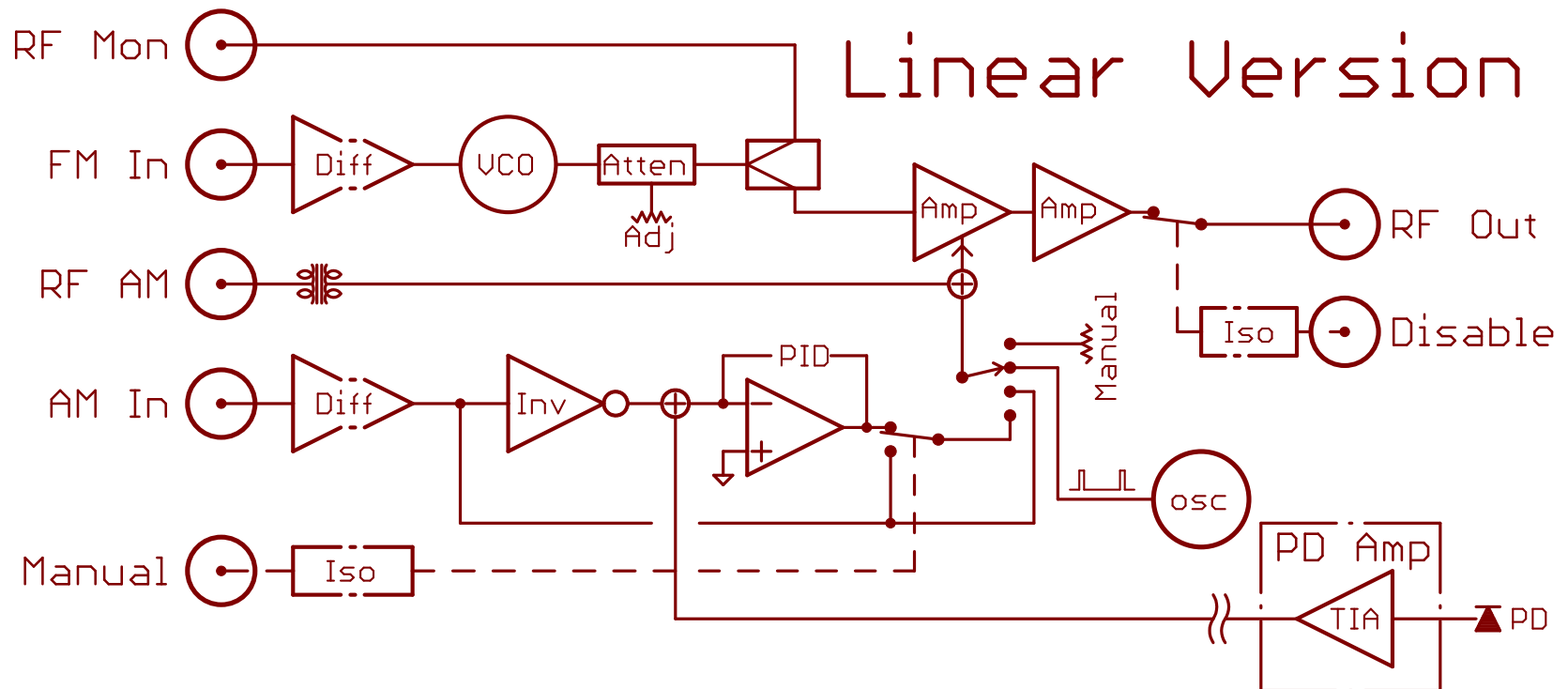
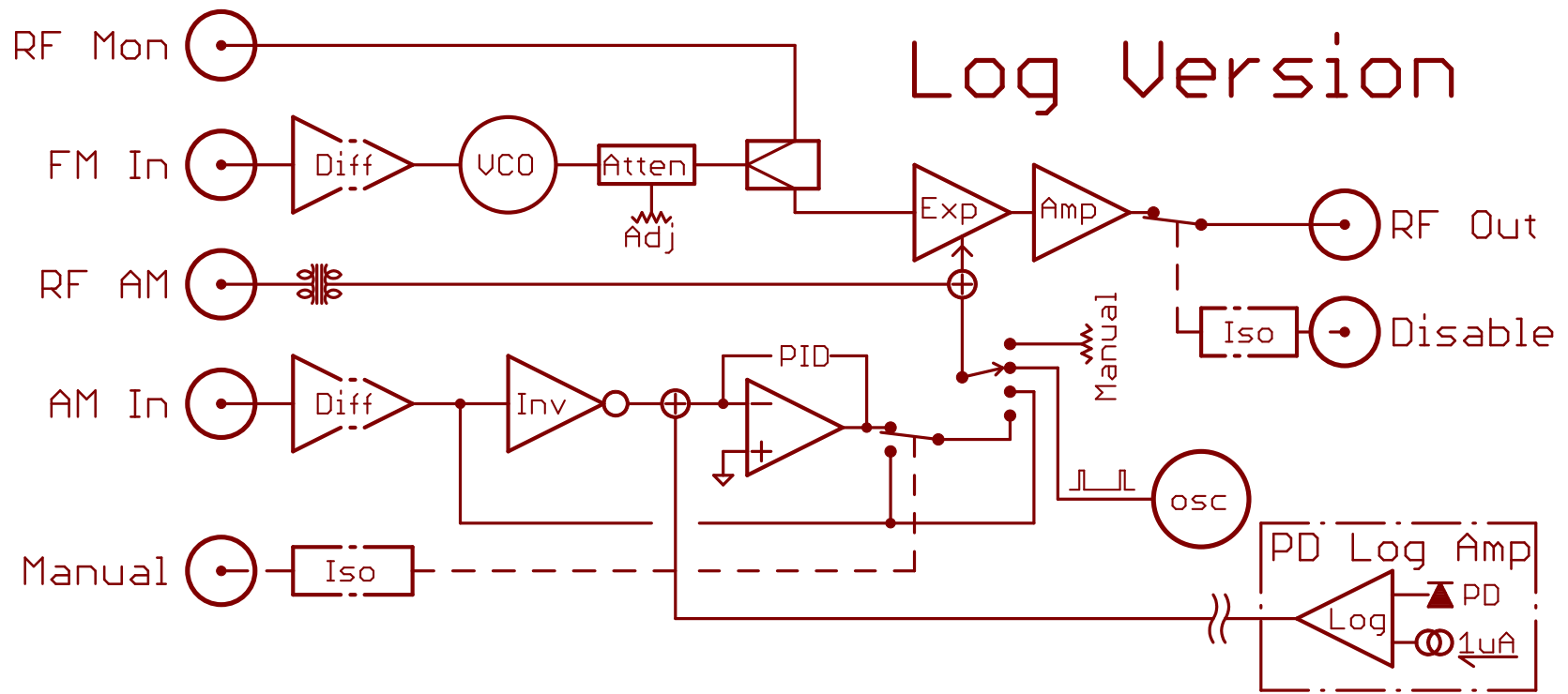


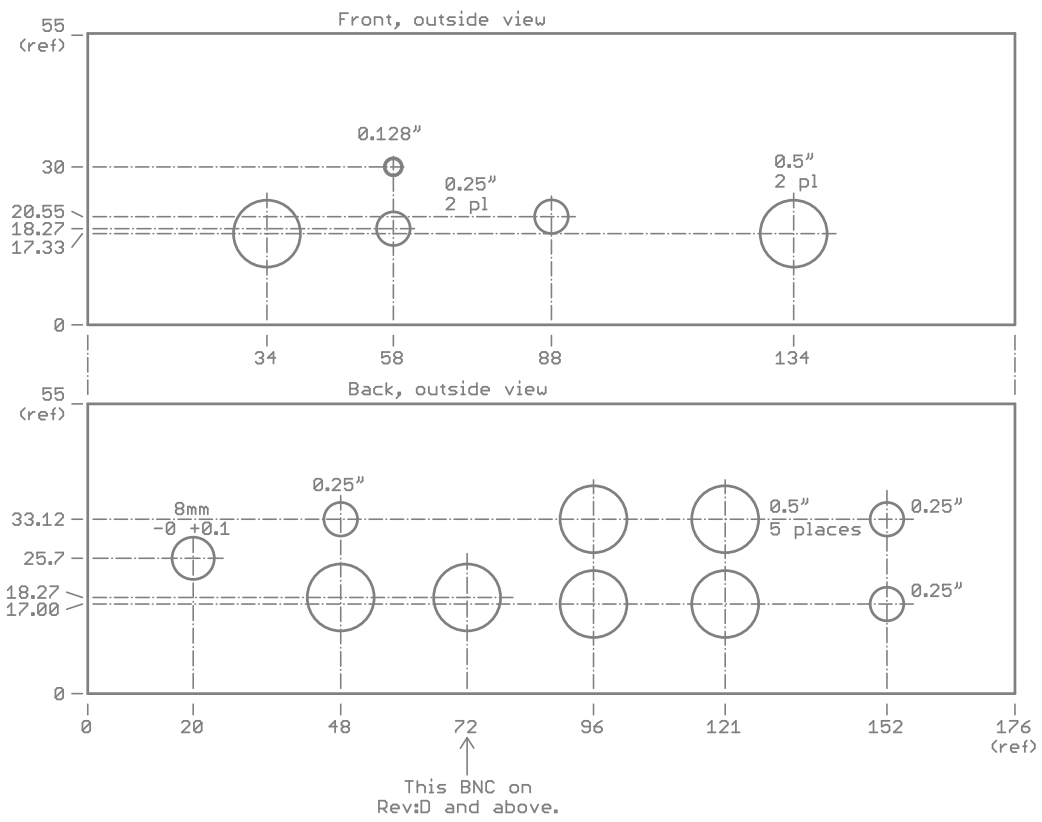
See NOTES on UCO A06 case isolation.



- KNOB1 PKE60B1/4 Tyco
- KNOB2 PKG50B1/8 Tyco
- SW4 ???
- CASE Hammond 1402DU
- WART CUI EPSA120100U-P6P-EJ

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ALPS3 - AOM Laser Power Stabilization

Manual

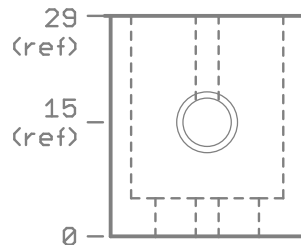
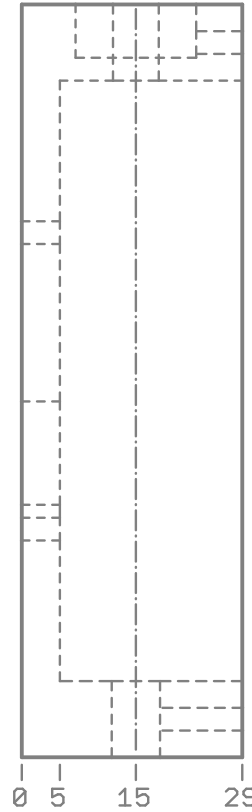
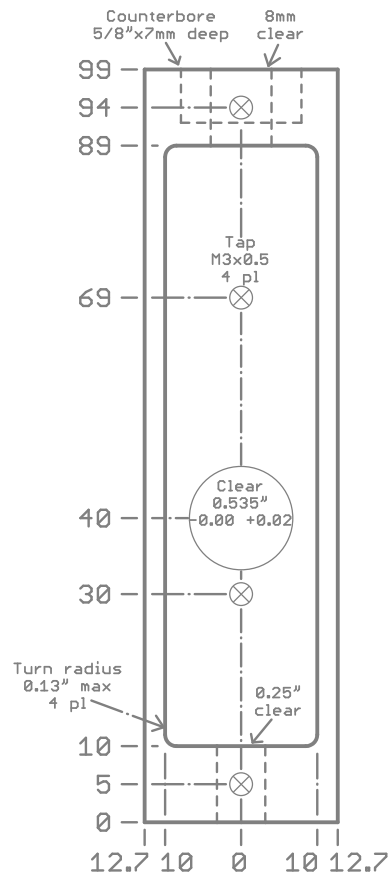
Man Ext Pulse

PD Mon RF Mon

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RF Out RF AM FM Direct (TTL)

RF In AM RF Off (TTL)



Log PD Box plus Lid

- Dimensions in mm unless otherwise mentioned, tolerances not critical
- Material: Aluminum
- Surface finish not important.
- Large hole fits Thorlabs SM05L03 or SM1A1 optical mount. Glue in place.

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ALPS3:File

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