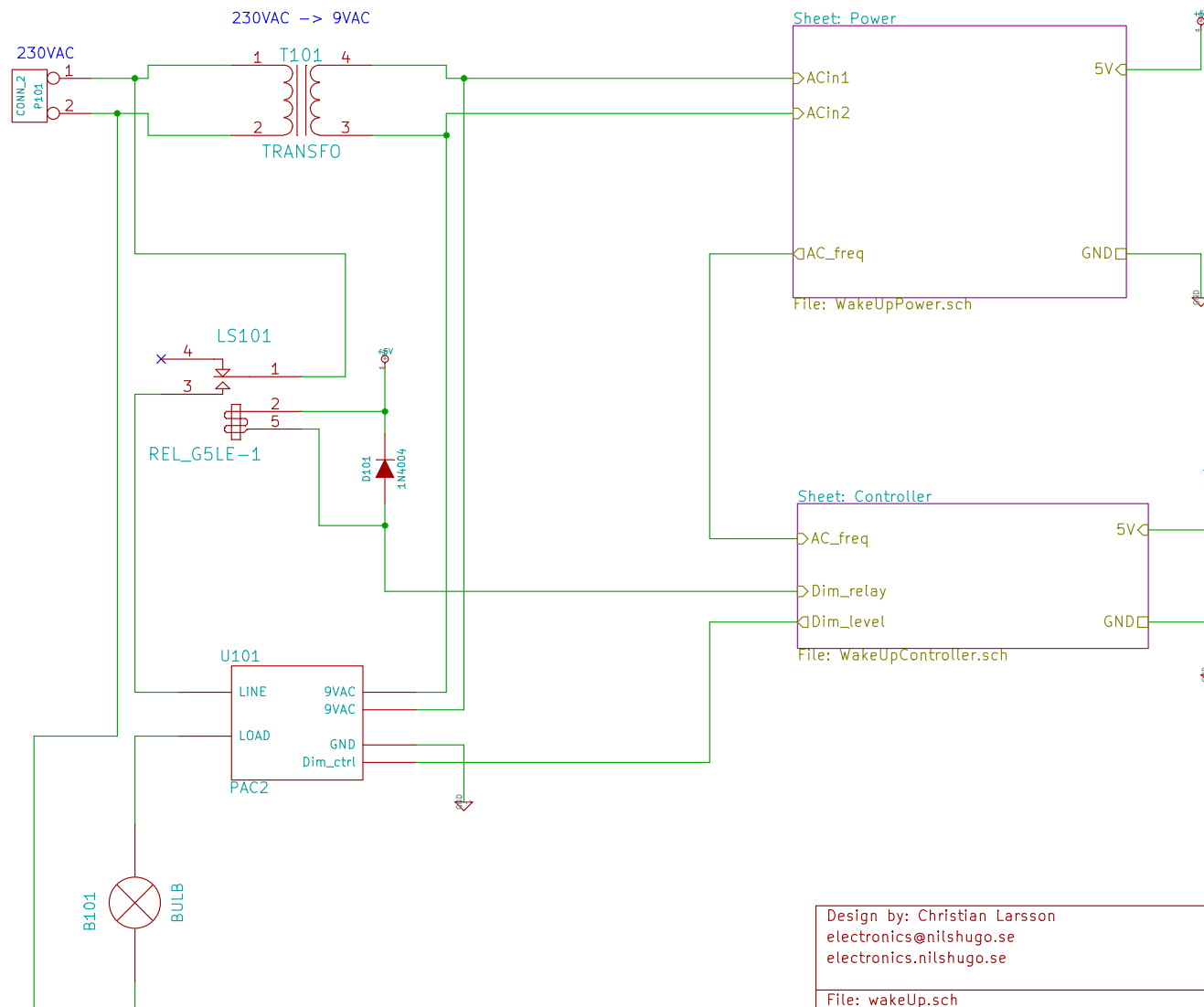


DIY Prime Wake Up Light



Design by: Christian Larsson
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File: wakeUp.sch
Sheet: /

Title: DIY Prime Wake Up Light

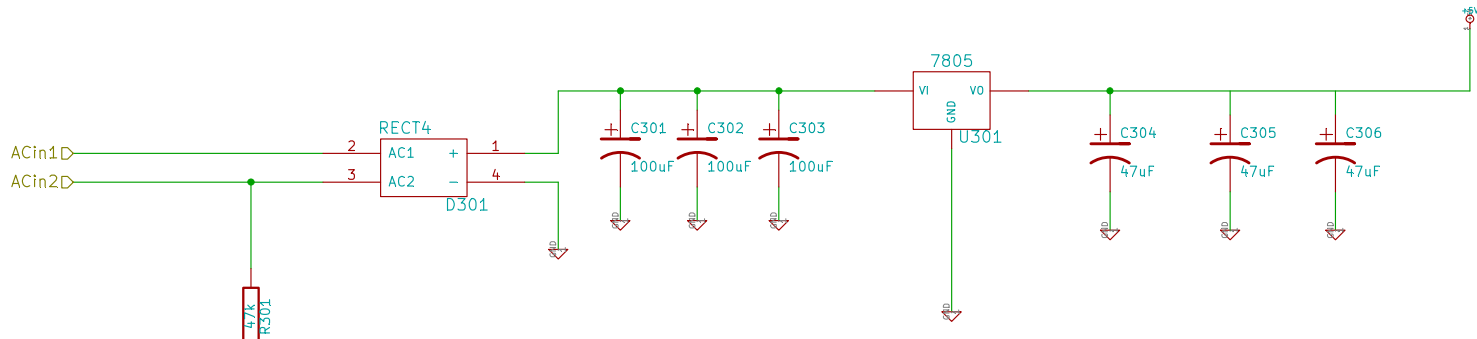
Size: A4 Date: 3 mar 2012

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Rev: 01

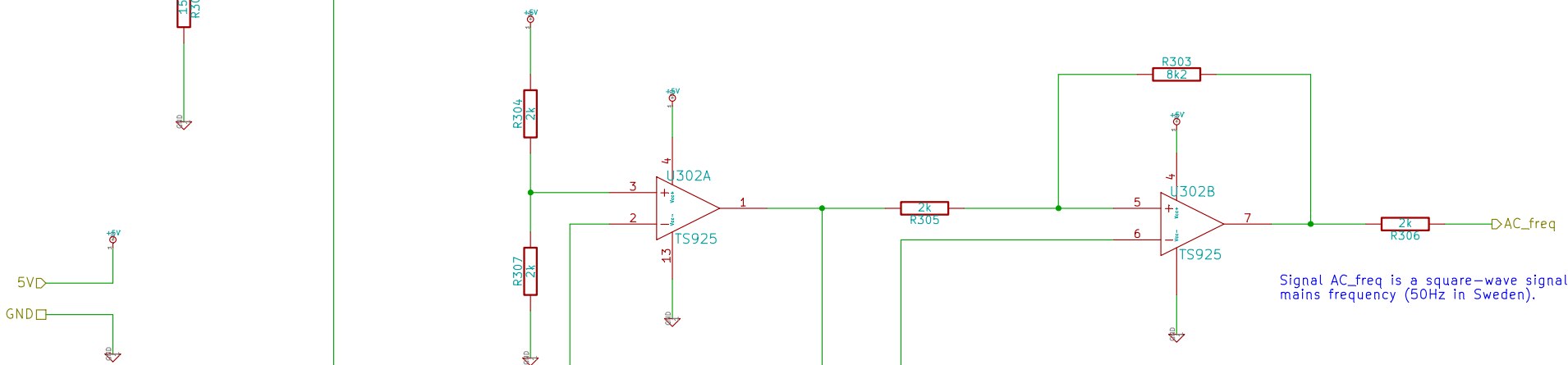
Id: 1/3

Linear +5V regulator U301 is preferably replaced by a switched DC/DC converter for higher efficiency.



U302A gives a buffered reference voltage of 2.5V.

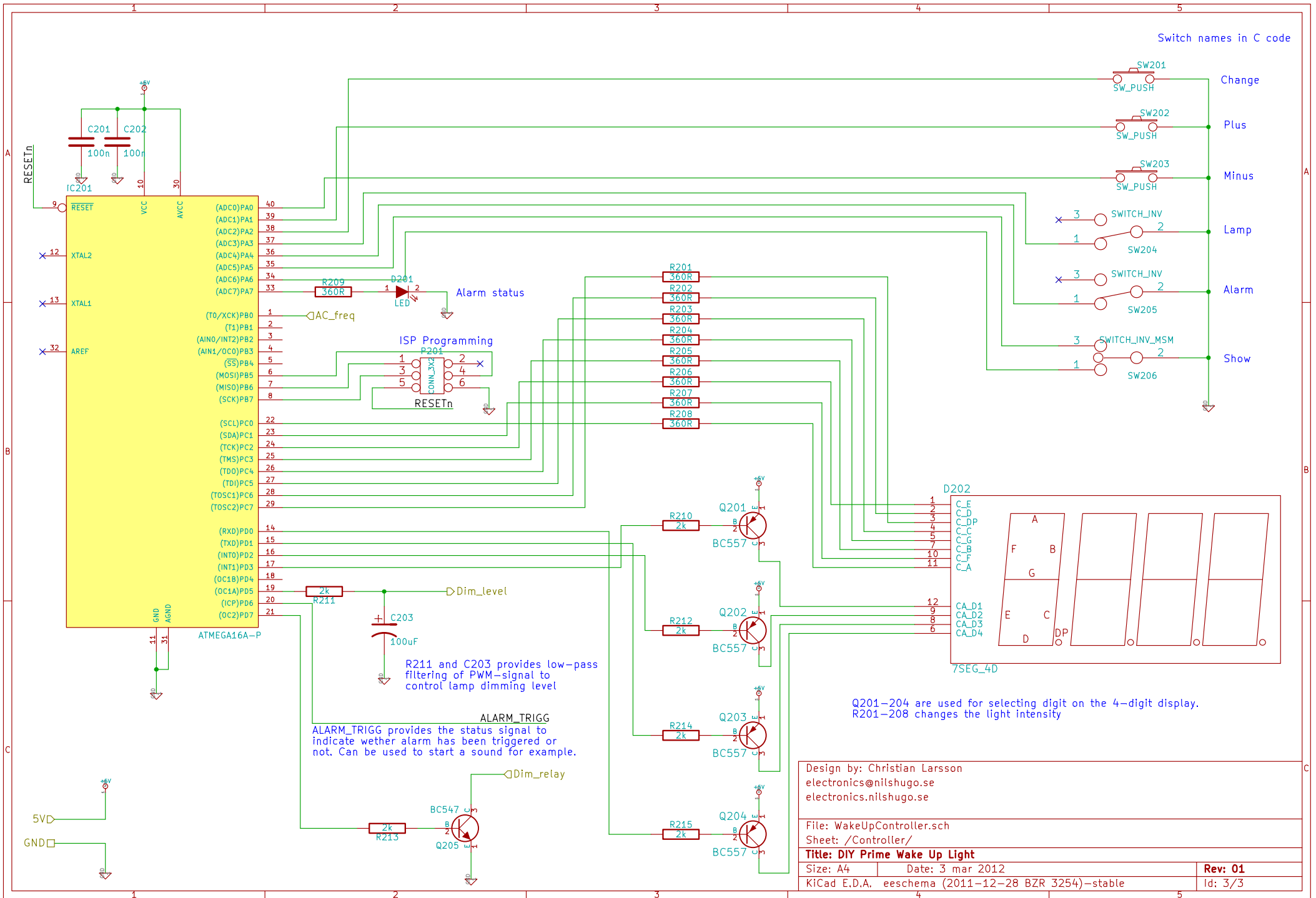
R305 and R302 provides hysteresis to operational amplifier U302B used as comparator.



Signal AC_freq is a square-wave signal with mains frequency (50Hz in Sweden).

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File: WakeUpPower.sch		Rev: 01	
Sheet: /Power/		Id: 2/3	
Title: DIY Prime Wake Up Light			
Size: A4	Date: 3 mar 2012		
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Switch names in C code

- Change
- Plus
- Minus
- Lamp
- Alarm
- Show

Alarm status

ISP Programming

R211 and C203 provides low-pass filtering of PWM-signal to control lamp dimming level

ALARM_TRIGG provides the status signal to indicate whether alarm has been triggered or not. Can be used to start a sound for example.

Q201-204 are used for selecting digit on the 4-digit display. R201-208 changes the light intensity

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File: WakeUpController.sch
 Sheet: /Controller/

Title: DIY Prime Wake Up Light

Size: A4 Date: 3 mar 2012

Rev: 01

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Id: 3/3