



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

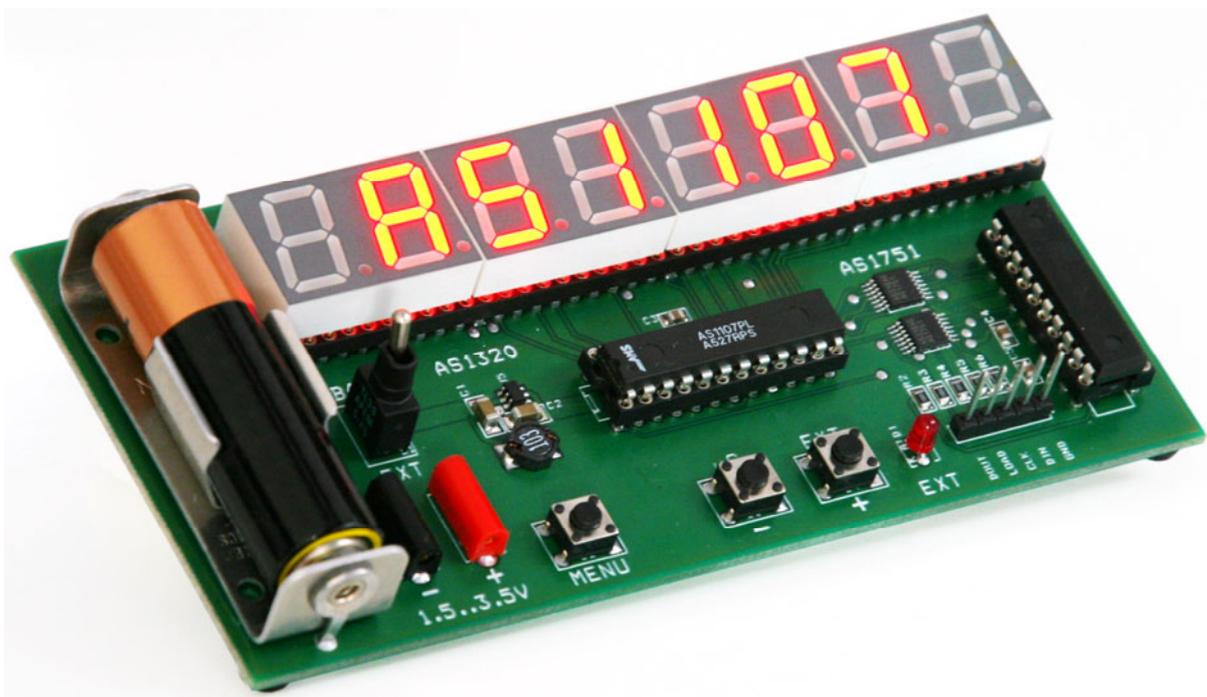
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# AS1100, AS1106, AS1107

## Demoboard Application Note



## General Description

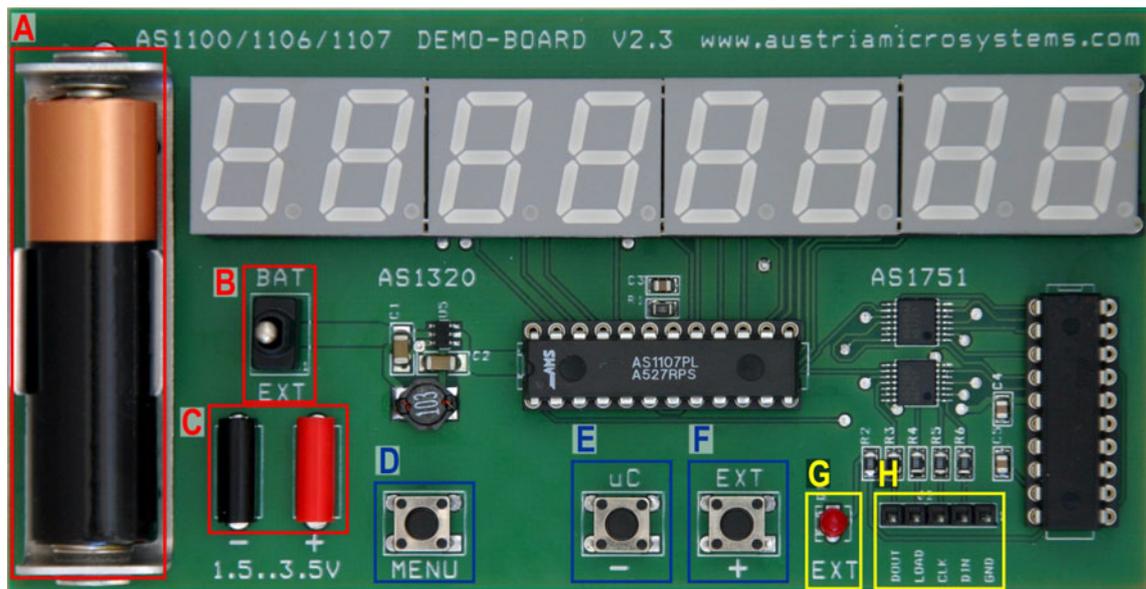


Figure 1: Board Description

## Power Supply Description

Table 1: Power Supply Description

Mark	Info	Description
A		Place a 1.5V AA cell here.
B	<b>BAT / EXT</b>	<input type="checkbox"/> The demoboard is powered via the AA cell. <input checked="" type="checkbox"/> The demoboard is switched off. <input type="checkbox"/> The demoboard is powered via the external connectors "C"
C	<b>- / +</b>	Power Supply Connectors for VCC and GND. 1.5 to 3.5V DC.

## Button Description

Table 2: Button Description

Mark	Info	Description
D	<b>MENU</b>	Hitting this button during microcontroller ( $\mu$ C) operation will show up the menu. If the menu is already shown this button will cycle through the menu options. If the demoboard is controlled externally this button has no function.
E	<b><math>\mu</math>C / -</b>	Menu mode: This button will cycle reverse through the possible values of a menu option. Normal mode: A button press will activate the onboard $\mu$ C.
F	<b>EXT / +</b>	Menu mode: This button will cycle forward through the possible values of a menu option. Normal mode: A button press will activate the interface "H" to control the demoboard externally.

## External Interface Description

Table 3: External Interface Description

Mark	Pin	Description
G	<b>EXT</b>	This LED is on if the demoboard is controlled externally.
H	<b>External interface pins</b>	
	<b>DOUT</b>	This pin will clock out data from the LED driver on the demoboard.
	<b>LOAD</b>	On this pin the load pulse can be applied.
	<b>CLK</b>	Clock from external source.
	<b>DIN</b>	Data input from external source.
	<b>GND</b>	Ground pin for the data cable.

Demoboard Application Note

Circuit

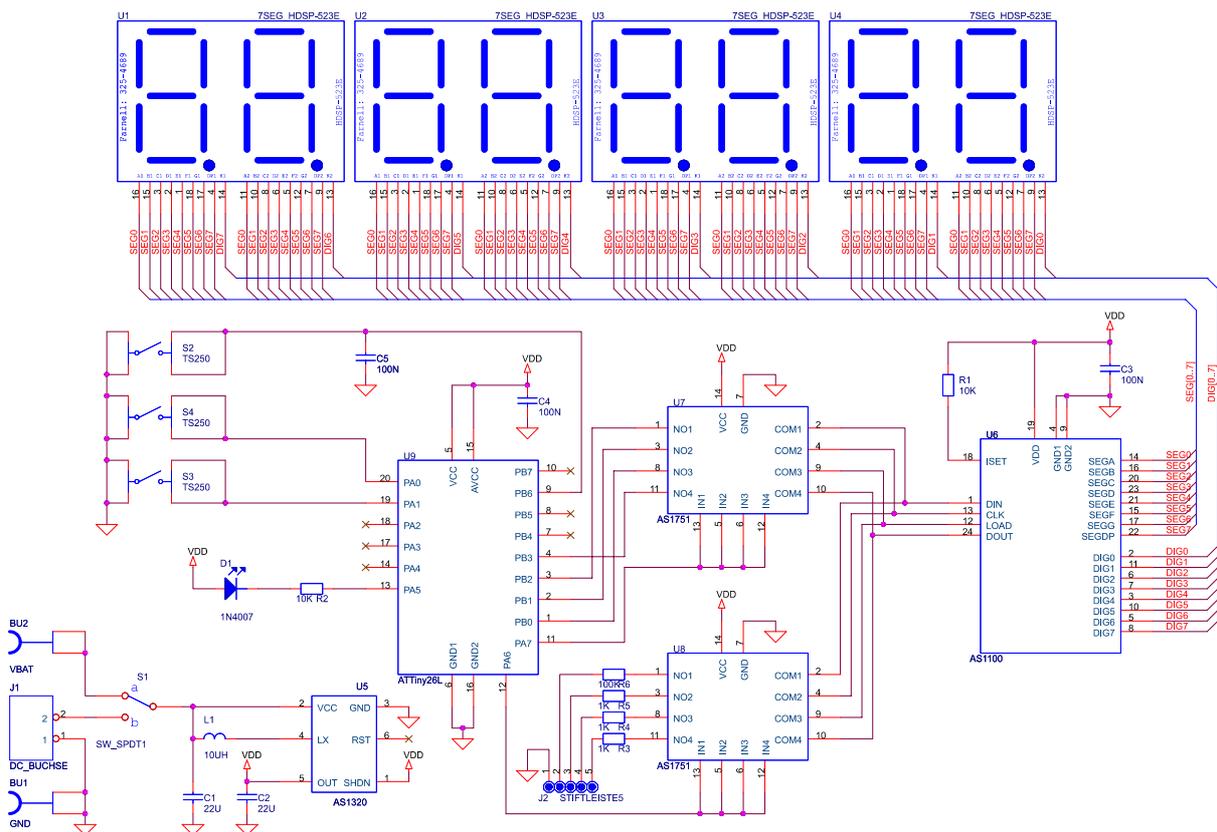


Figure 2: Circuit

Starting Up

Mounted Chip

The demo board is designed to work with the AS1100, the AS1106 and the AS1107. Per default an AS1107 is mounted on the demo board. If another IC must be tested, please remove the AA cell “A” from the board and disconnect the external power supply if connected.

The AS1107 can now be removed and exchanged with the AS1106 or AS1100.

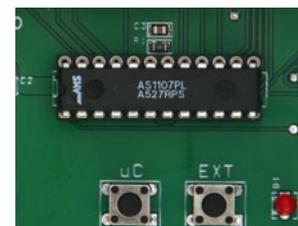


Figure 3: Mounted Chip

Power Supply

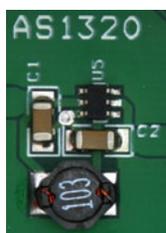


Figure 4: AS1320

The demo board is powered via a single AA cell “A” or through the external power connectors “C”. An AS1320 will boost the input voltage to the required voltage. The maximum input voltage must not exceed 3.5V DC.

If the demoboard is battery powered please make sure a fully charged rechargeable battery or a new disposable battery is in use. The AS1320 will convert even low voltages of nearly run out batteries very efficient, but if a worn-out battery is used the intensity of the LEDs might be reduced.

For a maximum of intensity the external power connection should be used.

External Interface

The demoboard can be controlled via the onboard microcontroller or through an external device. This can be done with a standard 3-wire interface. Additionally there is a pin for the readback of data as well as a ground pin, if such is required for the data line. Multiple demoboards can be cascaded if the DOUT is connected to the DIN of the next board.

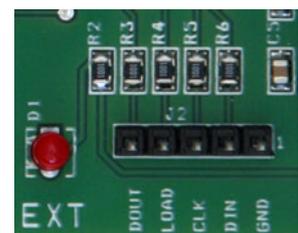


Figure 5: External interface

The two soldered AS1751 are used to switch data either from the external interface or the onboard microcontroller to the mounted AS1100, AS1106 or AS1107.

## Menu

If the demoboard is used with the onboard microcontroller a menu can be called up pressing the MENU button "D". There are three menu points available:

Option	Description
	This menu option regulates the intensity in 16 steps.
	This menu option allows setting the speed in 5 steps.
	There are 3 different programs to choose from: <i>Program 1:</i> Shows: " AS1100 AS1106 AS1107 " <i>Program 2:</i> Shows BCD characters: "0123456789-EHLP" <i>Program 3:</i> A test pattern cycling through all possible variants of characters.

## Operational sequence

1. If not present get the datasheet for the AS1100, the AS1106 or the AS1107 from [www.austriamicrosystems.com](http://www.austriamicrosystems.com). Drive the IC on the demoboard only with the recommended settings and values as described in the datasheet.
2. Place an AA cell in the battery holder or connect an external 1.5 to 3.5V power supply. The input voltage will be boosted via the soldered AS1320.
3. Activate the board using switch "B".
4. The board will power up and can be used now. For information how to interface with the chip through the external interface please see the [datasheet of AS1106](#), [AS1107](#) or the [datasheet of the AS1100](#).

Have fun using the demoboard. If there are questions do not hesitate to contact us. See contact information below.

## Copyright

Copyright © 2006 austriamicrosystems. Trademarks registered ®. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner. To the best of its knowledge, austriamicrosystems asserts that the information contained in this publication is accurate and correct.

## Contact Information

### Headquarters:

austriamicrosystems AG  
 Standard Linear  
 A 8141 Schloss Premstätten, Austria  
 T. +43 (0) 3136 500 0  
 F. +43 (0) 3136 5692

For Sales Offices, Distributors and Representatives, please visit: [www.austriamicrosystems.com/contact](http://www.austriamicrosystems.com/contact)