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#1

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Junior Member



Join Date: Feb 2003

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**Trying to communicate with a DS1802**

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Hi all!

I'm building a class T-amplifier called AMP5 (kit provided by a Swedish company called 41Hz.com). On the pcb the DS1802 (digital potentiometer) can be mounted, and will then serve as kind of a pre-amp. There are some pictures of my ongoing project here <http://pairair.se/AMP5/>

As can be seen on the pictures, I've added a microcontroller to take care of the amplifier's mute control. Even got this to be controlled by an IR remote (which I would never have managed without the excellent PROTON IR!)

However, the people over at Dallas Maxim were kind enough to provide me with a sample of the DS1802, and now I'm trying to communicate with it's 3-wire serial interface.

Has anybody used this device? I've read the datasheet but can't really get it to work. As far as I understand the SHOUT and SHIN commands should work...?

"The DS1802 contains two 65-position potentiometers whose wiper positions are set by an 8-bit value. These two 8-bit values are written to the 16-bit I/O shift register which is used to store wiper position during powered conditions. Because the potentiometer has 65-positions, only seven bits of data are needed to set wiper position."

...and data should be transmitted LSB. Bits 0-5 are wiper 1 position value, bit 6 is mute (1 is mute, 0 is not), bit 7 is "don't care". Bits 8-13 are wiper 2 position value and so on...

Data transmission starts with a transition of the RST signal to a high state, so:

```
High RST
SHOUT D, CLK, LSBFIRST,[%1011010010110100]
Low RST
```

...would set the two wipers values to 45, no? Well, I dont think it does. And reading this device should be as simple as

LPOT = SHIN, D, CLK, LSBPRE, 6

...yes? Doesn't work for me.

My posts tend to get soooo messy, so I'll stop here!

The question was, has anybody done this? Could you please point me in the right direction...

Thanks,
Per

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29th March 2006, 21:22

[#2](#)

Pairair 

Junior Member



Join Date: Feb 2003

Posts: 62

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Well, this simple program seems to work..

Code:

```

*****
'* Name      : DS1802_write_read.BAS
'* Author    : [Pär Sundberg]
'* Notice    : Copyright (c) 2006
'*           : All Rights Reserved
'* Date      : 2006-03-29
'* Version   : 1.0
'* Notes     :
'*           :
*****
Include "Proton_4.inc"

Symbol CLK = PORTB.0
Symbol DTA = PORTB.1
Symbol RST = PORTB.2

Dim var1 As Byte
Dim var2 As Byte
Dim potval As Byte

ALL_DIGITAL = TRUE

DelayMS 50

Cls

Output RST
Output CLK

potval = 0

```

Per

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