

# Re: countdown 555 timer values?

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.basics/2005-07/msg00607.html>

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- *From:* John Fields <jfields@xxxxxxxxxxxxxxxxxxxxxx>
  - *Date:* Tue, 26 Jul 2005 08:54:09 -0500
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On Sun, 24 Jul 2005 13:39:29 -0400, John Popelish <jpopelish@xxxxxxx> wrote:

>John Fields wrote:

>> On 22 Jul 2005 14:01:01 -0700, "aman" <aman.bindra@xxxxxxx> wrote:

>>

>>

>>>You might want to consider a simple 8 bit microcontroller like PIC. All  
>>>micro-controllers have timer interrupts. If not using a CD4017 as a  
>>>counter and using 555 to generate a 30 sec pulse seems like a good idea.

>>

>>

>> ---

>> It may seem like it is, but in reality it isn't.

>

>He would have to add some logic, like some SR flip flops and a bit  
>more. I just get worried about the stability of more than a minute  
>versions of 555s.

>

>> Note that the OP wanted six timeout periods all starting at once, but  
>> as they timed out, each one lasting 30 seconds longer than the one  
>> which timed out before it. Like this:

>>

>> \_\_\_\_\_

>> T1\_| |\_\_\_\_\_

>>

>> \_\_\_\_\_

>> T2\_| |\_\_\_\_\_

>>

>> \_\_\_\_\_

>> T3\_| |\_\_\_\_\_

>>

>> \_\_\_\_\_

>> T4\_| |\_\_\_\_\_

>>

>> \_\_\_\_\_

>> T5\_| |\_\_\_\_\_

>>

>> \_\_\_\_\_

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```
>> T6____| |_____
>>
>>
>> You can't do that with a 4017.
>
>I'll bet you could come up with something neat based on the 4015 shift
>register.
```

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:-)

The tricky part is shortening up that first 555 pulse in astable mode (which is longer than the rest because of the need to get the timing cap up to  $2/3V_{cc}$  from 0V (instead of  $1/3V_{cc}$ ) on startup) and getting all the shift register outputs to go high on startup.

Using something like three HC74's would solve the "start high" problem by using the Qbars as outputs, using their SET inputs for POR, and using their RESET inputs to start the timing sequence. Getting rid of the extended first pulse problem could be done by using a couple of 555 as monostables in a ring counter.

Schematic on abse as "555 countdown timer (from seb), or:

[news:poece11tgcals43avpikokbd73ubinh5kj@xxxxxxx](mailto:news:poece11tgcals43avpikokbd73ubinh5kj@xxxxxxx)

Then, of course, there's always:

```
VCC>-----+-----+
|| V+
|[RT] |
|[10K]
[R7] +-----|-\\ |
||| >---+--->180s
+-----|-----|+/
|| V+
|||
[R6] |[10K]
|+-----|-\\ |
||| >---+--->150s
+-----|-----|+/
|| V+
|||
[R5] |[10K]
|+-----|-\\ |
||| >---+--->120s
+-----|-----|+/
|| V+
|||
[R4] |[10K]
```

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◇ From: ehsjr
  - ◆ **Re: countdown 555 timer values?**  
◇ From: John Popelish
  
- **References:**
  - ◆ **countdown 555 timer values?**  
◇ From: Tristar500
  - ◆ **Re: countdown 555 timer values?**  
◇ From: John Fields
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◇ From: aman
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