





Part #:	<b>MAX25600/10A/B</b>	  
Description:	<b>High-Voltage Buck-Boost LED Driver</b> Maxim's Compact LED Drivers Provide Industry's Most Complete Solutions with High Efficiency and Low EMI	 <a href="#">Download Datasheet</a>




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Topic: **Maynuo m9812 usb to serial isolated interface** (Read 4430 times)

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**shaynet**

Newbie

Posts: 1



 **Maynuo m9812 usb to serial isolated interface**

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« on: August 09, 2014, 12:37:54 pm »

hey there

I've just got a brand new Maynuo m9812 dc load and i'm too cheap to buy the isolated interface cable so i decided to make my own but the thing is that there's something unclear in the manual - in the serial interface, the RX and TX signals are on different pins on a single page in the manual (see attachment)

i went according to what Synapsis did: [https://www.eevblog.com/forum/testgear/maynuo-m9812-usb-question-\(and-mainboard-photo\)/](https://www.eevblog.com/forum/testgear/maynuo-m9812-usb-question-(and-mainboard-photo)/) but can anyone confirm that?

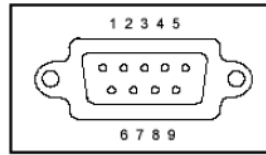
also can anyone please tell me if i haven't missed anything in my schematic? (attached)

p.s.

can anyone recommend me an enclosure for the thing (i remember that I've seen an enclosure once that is just perfect - narrow one side with a cutout for a usb B socket and wide on the other side to accommodate a 9 pin D-sub connector)

thanks

2. DB9 Serial Interface



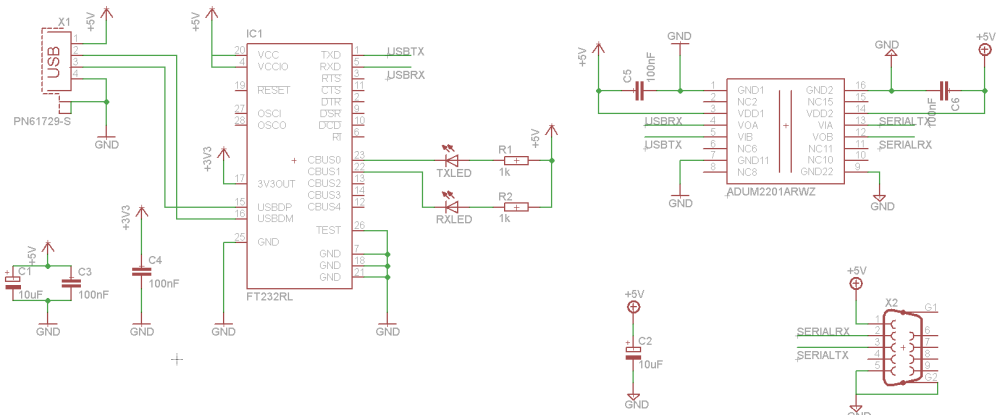
DB9 Serial Interface

- 1 +5V
- 2 TXD
- 3 RXD
- 4 NC
- 5 GND
- 6 NC
- 7 NC
- 8 NC
- 9 NC

The output of DB9 interface on the rear-panel of the power supplier is TTL voltage level, so the voltage level shift cable ( M-131 or M133 ) must be applied before connecting the DB9 interface with the serial interface on PC.

M-131	Voltage Level Shift Cable	PC
VCC	1	VCC
RXD	2	RXD
TXD	3	TXD
NC	4	DTR
GND	5	GND
NC	6	NC
NC	7	RTS
NC	8	NC
NC	9	NC

m9812 manual.PNG (44.03 kB, 795x856 - viewed 562 times.)



usb - serial isolator.PNG (43.56 kB, 1619x708 - viewed 879 times.)

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**mij59**  
Frequent Contributor

**Re: Maynuo m9812 usb to serial isolated interface**

« Reply #1 on: August 09, 2014, 01:12:29 pm »

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Hi,

I have build a similar interface using the ADUM1201 for my REK RK8511, it should be the same as the Maynuo.

Pin 2 on the RK8511 is RXD



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Country:

Pin 3 on the RK8511 is TXD  
I had to add a pull up resistor on TXD, it's an open collector output.

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**TurboTom**  
Frequent Contributor

**Re: Maynuo m9812 usb to serial isolated interface**

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« Reply #2 on: August 14, 2016, 12:17:38 pm »

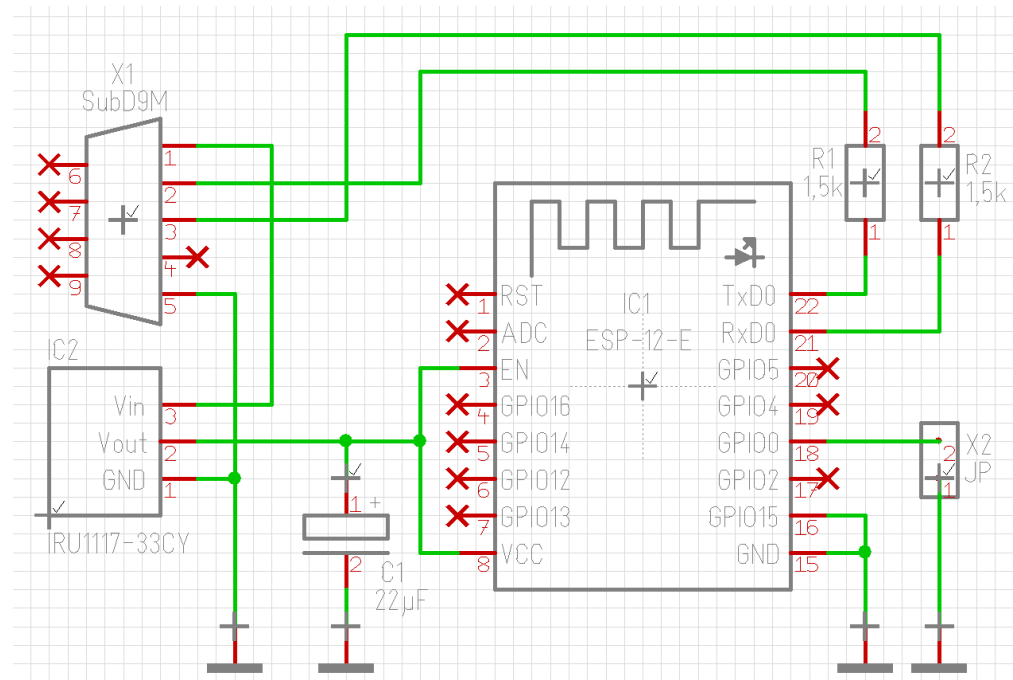
Posts: 622  
Country:

I recently bought an M9712 as well (by the way, I'm pretty impressed by the performance, especially considering the price I payed) that came without the isolated USB adapter. I thought about modifying an "el-cheapo" USB/serial adapter with a digital isolator, similar to the setup shown above. But then I reconsidered since I'm anyway always short of USB ports. I thought to myself that there must be a different, more elegant way to get the load attached to the PC. While surfing the web I stumbled across these really inexpensive "WiFi-stamps" that talk to the attached microcontroller via an UART-like interface. Since I'm not really good at programming, I searched further for a "virtual serial port" via such a WiFi stamp and found the "esp-link" page: <http://hackaday.com/2015/09/18/transparent-esp8266-wifi-to-serial-bridge/>

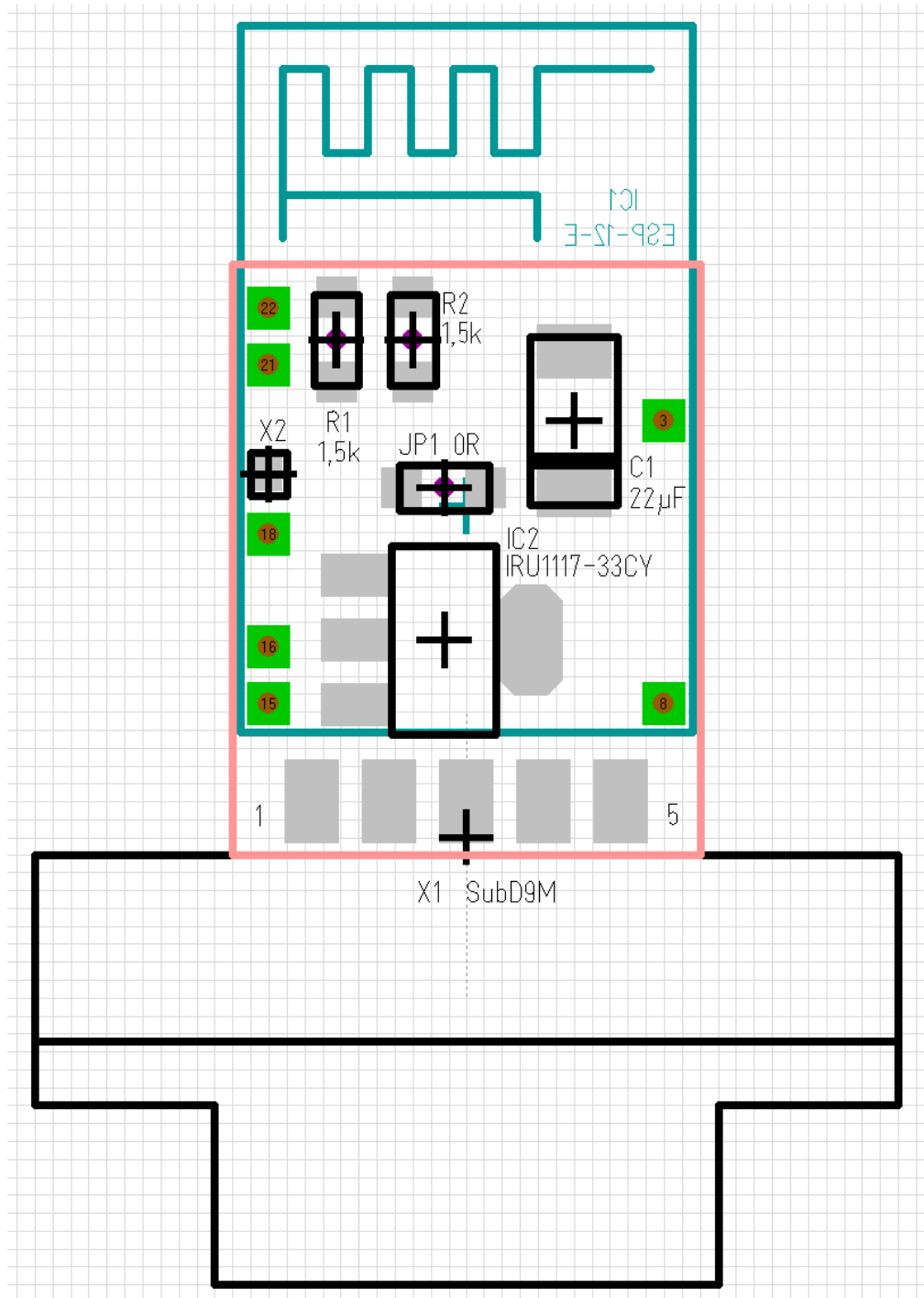
This was finally the "go" for me to try my idea - and guess what: The whole thing was really a no-brainer. I had to find a few tools that ease the uploading procedure of the program into the ESP-12-E WiFi stamp that I used, had to dig out a USB to TTL-UART adapter for programming and that was basically all that's necessary to get going. If you like, have a look at the attached pictures/photos of the whole thing. With the "HW Virtual Serial Port 3.1.1" driver to emulate the COM port on the PC, the Maynuo "M9700" application had no difficulty communicating with and controlling the DC load. And of course, using a wireless link provides as good electrical isolation as can be. The only drawback I found so far is that the "WiFi Dongle" as I call it draws quite some power from the M9712, the consumption is round about one watt and it also gets pretty warm. Future will have to tell if supplying this amount of power is a problem for the DC load, so far it appears to be working perfectly well.

If someone's interested in duplicating this small project, please let me know - then I will provide some more in-depth information and maybe prepare a package with the necessary files and tools. The PCB I made is single-sided and can easily be "cooked" at home.

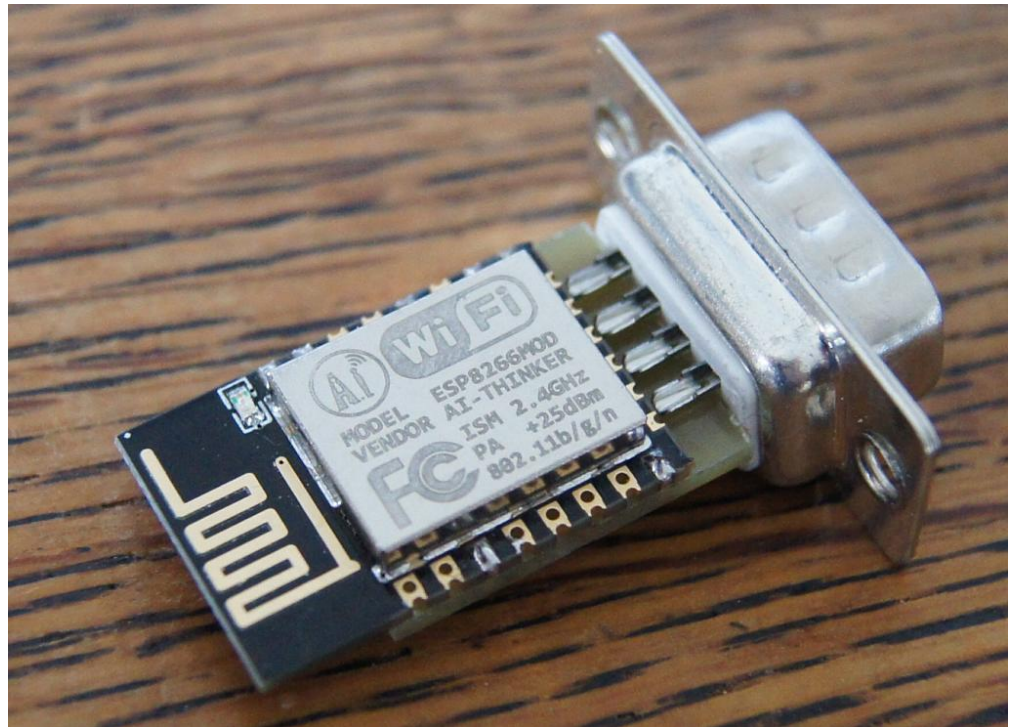
Cheers,  
Thomas



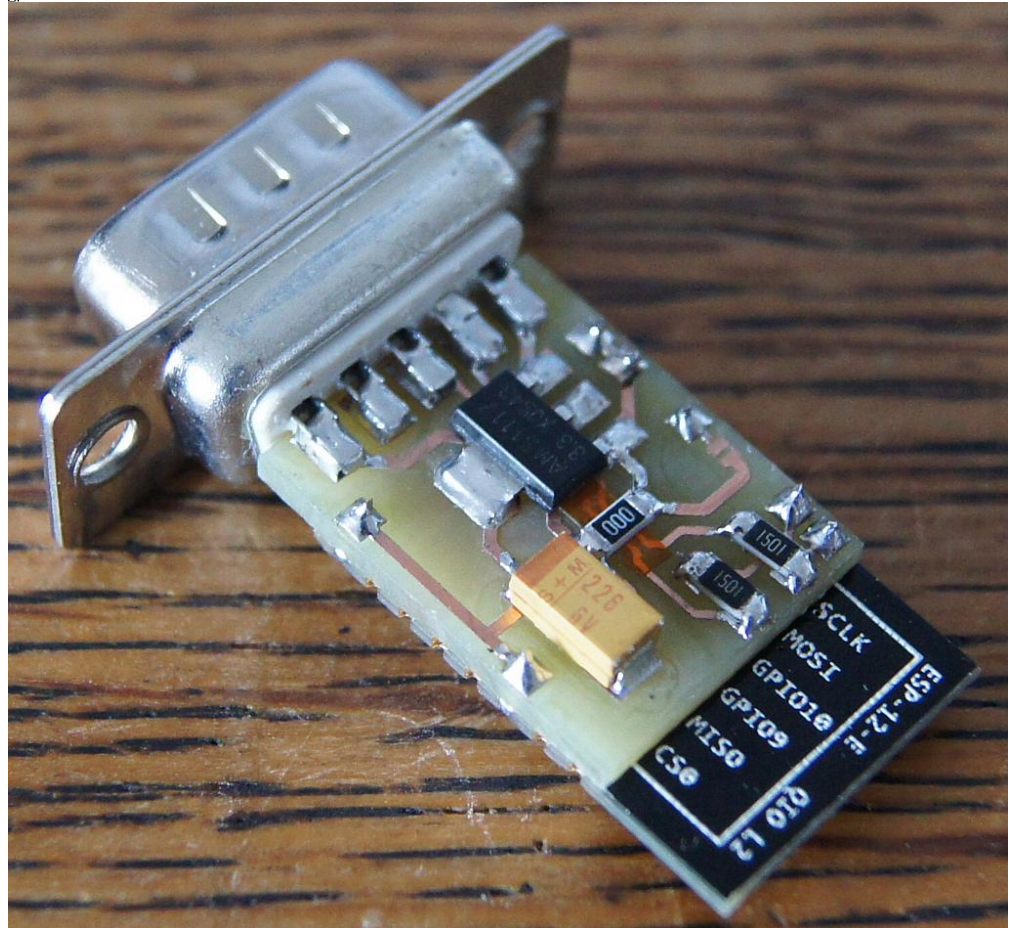
WiFi-Dongle-SCH.png (47.31 kB, 1258x871 - viewed 542 times.)



WiFi-Dongle-PP.png (33.54 kB, 807x1144 - viewed 427 times.)

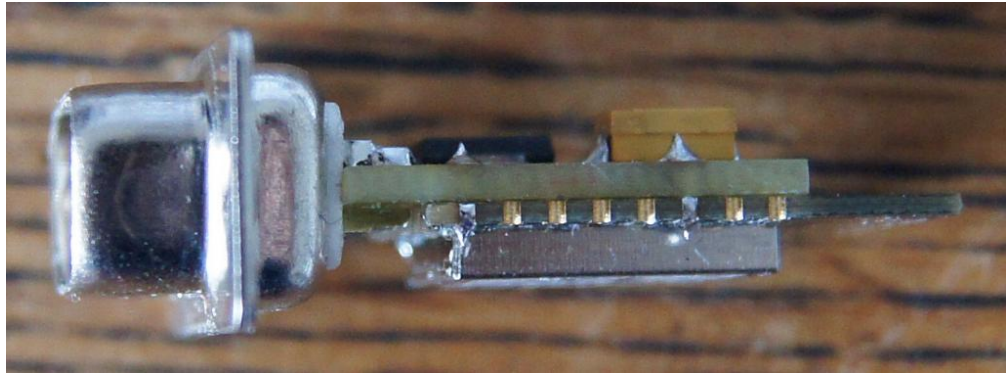


WiFi-Dongle1.jpg (96.6 kB, 1024x741 - viewed 541 times.)



WiFi-Dongle2.jpg (138.48 kB, 1024x950 - viewed 532 times.)





WiFi-Dongle3.jpg (45.45 kB, 1024x379 - viewed 437 times.)

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The following users thanked this post: Leuams, kessler, snik, kulla

### wrapper

Supporter



Posts: 10217

Country:



### Re: Maynuo m9812 usb to serial isolated interface

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« Reply #3 on: August 14, 2016, 12:27:23 pm »

Actually isolated adapter is not required, that port is earthed anyway. The part which is connected to the input terminals is floating. All is needed is level shifter, because the port has ttl voltage level. Something like MAX232 would do the job. Or just USB/UART(TTL) converter, like FT232, CH340, CP2102 and others.

« Last Edit: August 14, 2016, 12:34:45 pm by wrapper »

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### TurboTom

Frequent Contributor



Posts: 622

Country:



### Re: Maynuo m9812 usb to serial isolated interface

Say Thanks

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« Reply #4 on: August 14, 2016, 12:38:51 pm »

Sorry Wrapper - that's not correct. The enclosure (and the shell of the communication port) of the M9x1y devices is referenced to ground/earth but the internal circuitry is floating. I just checked the resistance and actually I measure between the negative DC load terminal and the ground at the communication port (pin 5) less than 200mOhms. This means if you want to use the load floating without the negative terminal referenced to ground (i.e. as a high-side load), you have to use an isolated communication method since the PC ground is usually directly connected to earth.

Cheers,  
Thomas

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### Leuams

Contributor

Posts: 21

Country:



### Re: Maynuo m9812 usb to serial isolated interface

Say Thanks

Reply

Quote

« Reply #5 on: December 28, 2016, 05:24:15 pm »

Just a word of warning to anyone thinking about buying the M133 isolated communication module from Maynuo. I bought one when I first purchased my M9812 a few months ago and it worked great. The key word is worked. The Prolific chip inside (PL2303) must be a counterfeit since it has been disabled by the windows driver. Guess I will be making a cable.

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### wrapper

Supporter



Posts: 10217

Country:



### Re: Maynuo m9812 usb to serial isolated interface

Say Thanks

Reply

Quote

« Reply #6 on: December 28, 2016, 05:32:22 pm »

Quote from: Leuams on December 28, 2016, 05:24:15 pm

Just a word of warning to anyone thinking about buying the M133 isolated communication module from Maynuo. I bought one when I first purchased my M9812 a few months ago and it worked great. The key word is worked. The Prolific chip inside (PL2303) must be a counterfeit since it has been disabled by the windows driver. Guess I will be making a cable.

What do you mean by "disabled by windows driver". Does it work with driver downgraded? I'm not aware of driver killing counterfeit Prolific ICs.

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**dav**

Regular Contributor



Posts: 133

Country:



**Re: Maynuo m9812 usb to serial isolated interface**

« **Reply #7 on:** December 30, 2016, 04:36:39 pm »

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I suppose to have the same problem.  
I own an M133 module (bought in bundle with my Maynuo M9812), but never used before.  
Just a few days ago I connected this module to my PC (Win 10 O.S.); it's recognized as "Prolific USB-to-Serial Comm Port", but there is a yellow mark and "Error Code 10" in Windows Device Manager.  
I tried to contact Maynuo and I'm waiting for his reply.

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**mij59**

Frequent Contributor



Posts: 693

Country:



**Re: Maynuo m9812 usb to serial isolated interface**

« **Reply #8 on:** December 30, 2016, 06:08:25 pm »

Say Thanks Reply Quote

My home made interface had the same problem, fixed it with this <http://www.ifamilysoftware.com/news37.html> on Windows 10 64 bit.

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The following users thanked this post: bendzo

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