




Product:	Texas Instruments OPx863 Low-Power High-Speed Operational Amplifiers		
Description:	Unity-gain stable, rail-to-rail input/output, voltage-feedback operational amplifiers that operates over a power supply range of 2.7–12.6V.	 Download Datasheet	

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Author Topic: **Good Will GPS-3030 Schematic - Repaired and Working (see my explanation).** (Read

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vk2zrm

Newbie

Posts: 3



Good Will GPS-3030 Schematic - Repaired and Working (see my explanation).

« on: June 25, 2015, 01:41:24 am »

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Hi All -, I am new to eevblog. I am an electronics hobbyist, homebrewer (electronics, not grog) and Ham radio operator. I recently acquired a faulty Good Will GPS-3030 bench power supply for next to nothing. I would like to get it going. I have the user manual with block diagram but do not have a schematic. I've searched eevblog and the internet extensively, including the clones of this device but have come up with zilch!

I'm hoping that someone can point me in the direction of a schematic.

Thanks Bob VK2ZRM

« Last Edit: June 26, 2015, 03:53:47 am by vk2zrm »

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Deathwish

Supporter



Posts: 1424

Country:



Re: Good Will GPS-3030 Schematic

« Reply #1 on: June 25, 2015, 01:56:15 am »

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not the manual but another thread about the same. Lots of them on here.

<https://www.eevblog.com/forum/reviews/beware-yihua-yh-305d-bench-psu/>

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Electrons are typically male, always looking for any hole to get into.

trying to strangle someone who talks out of their rectal cavity will fail, they can still breath.

God hates North Wales, he has put my home address on the blacklist of all couriers with instructions to divert all parcels.

vk2zrm

Newbie

Posts: 3

Re: Good Will GPS-3030 Schematic

« Reply #2 on: June 25, 2015, 02:08:28 am »

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vk2zrm

Newbie

Posts: 3



Thanks for your reply. The GPS-3030 is similar but different from the 305. Different PCB's and layout. But I'll keep hoping that someone will come up with a schematic for the GPS-3030. I believe the instek 3030 and the Tenma 72-6610 are similar. Thanks - Bob VK2ZRM

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Re: Good Will GPS-3030 Schematic
« Reply #3 on: June 26, 2015, 02:52:04 am »

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Well, the GPS-3030 is repaired and working well, so I thought I'd write a few words about the repair. In its day, this must have been quite a nice, professional bench power supply. It's very nicely made. The original symptom was that it appeared to be working till any sort of load was put on the output. Then it would die. I searched the internet and blogs (including EEVBlog) for a schematic. No joy. I downloaded the manual which has a block diagram, but no schematic. I removed the main PCB and gave it a thorough eyeball for obvious issues. The +15V and -15V references had been replaced previously and curiously, a 4.7K 3W resistor that goes across the input smoothing capacitor had been removed and placed in a plastic bag, inside the cabinet. I then checked every resistor, diode, zener and transistor with a multimeter. Also checked and cleaned connectors. No joy!, Next I powered the supply up and checked that input voltages, the +/- 15V and 2.5V references were working. Everything checked out, but still not working and without a schematic that was about as far as I could get. So, what did I have to lose? I removed the 4 IC's and fitted high quality IC sockets, then replaced the IC's with new devices. Joy oh joy!! The GPS-3030 was now working like a beauty! The four IC's are U103A/B Im1458 Voltage/Current reference amplifier. U104 LM301 Voltage Comparitor. U105 LM301 Current Comparitor and U106 LM741 Current Amplifier. I haven't tested which one is faulty, but who cares now that the supply is working? The manual has the adjustment procedure which I carried out, so it's working like a bought one. Bob VK2ZRM

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sbrisebois

Newbie

Posts: 1

Country:



Re: Good Will GPS-3030 Schematic - Repaired and Working (see my explanation).

« Reply #4 on: June 29, 2019, 03:21:07 am »

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Hi !

I just found the issue with my GPS-3030, the +/- 15VDC cap before the regulator was causing problem. They are not short either open, but when the voltage raise up to 5v on them , they began to draw a lot of current. This cause the two 315ma fuses to blown and the supply to not work at all. I just replace the two 470uf 35vdc capacitor by brand new ones (and the two fuse of course 😊), and I have now a fully operational supply.

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RomDump

Regular Contributor



Posts: 85

Country:



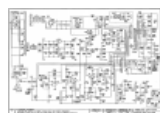
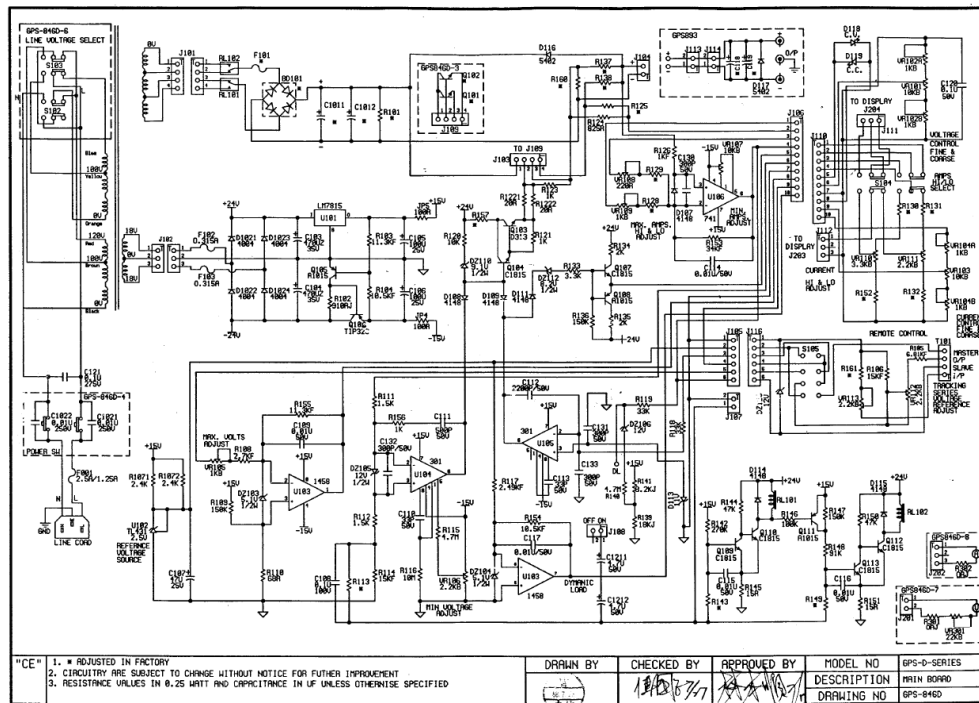
Re: Good Will GPS-3030 Schematic - Repaired and Working (see my explanation).

« Reply #5 on: July 08, 2019, 12:28:05 am »

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Quote from: vk2zrm on June 25, 2015, 01:41:24 am

I'm hoping that someone can point me in the direction of a schematic.



GPS-3030.png (173.59 kB, 1261x897 - viewed 3866 times.)

« Last Edit: July 08, 2019, 12:35:12 am by RomDump »

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RomDump

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