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OT- Date  (/g/TekScopes/topic/7658548?p=Created,,,20,2,0,0::recentpostdate%2Fsticky,,,20,2,1100,7658548)  
Metcal RFG30 soldering power supply

 sittners

2017-06-12  (<https://groups.io/g/TekScopes/message/137787>)

This is obviously not a Tek question but I'm hoping someone in this group may be able to help me find a schematic for my Metcal unit (I love this thing). I have been unable to find any information on the web. Thanks in advance for any information you may be able to provide.

Phil, KD6RM

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Tom Jobe <tomjobe@...>

2017-06-12  (<https://groups.io/g/TekScopes/message/137790>)

There was a guy on eBay that sold a nice Metcal schematic that might be for the Metcal power supply you are looking for.

Even if it was for the slightly later MX-500 series, it would still have a close family resemblance to the family your Metcal RFG30 power supply comes from.

The guy was from southeast Asia, and the schematic was beautifully hand drawn. I have no idea how accurate it was, but I bought one from him. I have no idea where that schematic went, and I think this was before I had a large format scanner so there is probably no electronic copy of it around here.

Those power supplies are inexpensive at this point, but I would try to fix it, if it was mine. It might be simple as some bad electrolytic caps or other obvious item.

Maybe follow the AC in and see where it quits? If you happen to have two of those RFG30's around, it might get even easier to fix by comparing voltages on the way in.

I will keep looking for that schematic when I think about it.

Ask around online and see if you can find someone else that bought one of those Metcal schematics

tom jobe...

On 6/12/2017 4:53 PM, Phil Sittner [sittners@...](mailto:sittners@...) [TekScopes] wrote:

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Phil, KD6RM

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Paul Amaranth

2017-06-12  (<https://groups.io/g/TekScopes/message/137792>)

Google rfg-30 schematic and the first hit i get is a thread on eevblog on repairing one. The mx-500 schematic is close enough to be useful

There's also a very long thread on eevblog on designing and building a replacement power supply. I probably would have built one if i hadn't run across a deal on several mx500 units

Paul

[Show quoted text](#)

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Sent from my Android device with K-9 Mail. Please excuse my brevity.

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sittners

2017-06-12  (<https://groups.io/g/TekScopes/message/137793>)

Thanks Tom-I'll see what I can find on the MX-500 series and take it from there.

Phil

On 6/12/2017 6:52 PM, Tom Jobe tomjobe@... [TekScopes] wrote:



There was a guy on eBay that sold a nice Metcal schematic that might be for the Metcal power supply you are looking for.

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sittners

2017-06-12  (<https://groups.io/g/TekScopes/message/137794>)

Paul-

I did find the eevblog thread but still would like to find the real info. One way or another I'll get it fixed, and thanks for the effort.

Phil

On 6/12/2017 7:33 PM, Paul Amaranth paul@... [TekScopes] wrote:

Google rfg-30 schematic and the first hit i get is a thread on eevblog on repairing one. The mx-500 schematic is close enough to be useful

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Paul

On June 12, 2017 7:53:00 PM EDT, "Phil Sittner sittners@... [TekScopes]" <TekScopes@...> wrote:

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Phil, KD6RM

!DSPAM:593f277a238076458820468!

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froggiagremlin

2017-06-13  (<https://groups.io/g/TekScopes/message/137796>)

Hello there I was the designer of some of these back in 1988..1992. Is it the model with the curved front and DIN connector (500 kHz) or the older with coax connector (13.5 MHz)?

Normally the FET is the most likely failure.

Cheers,

Jon

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sittners

2017-06-13  (<https://groups.io/g/TekScopes/message/137797>)

Jon-

Would you have any objection to answering any questions that I may have once I dig into the unit? I know the unit differs from the schematic I have of the MX500 and some questions may arise. By chance, did you work with a Joe Curcio while at Metcal?

Phil

On 6/13/2017 1:57 AM, crypto-museum@... [TekScopes] wrote:

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Tom Jobe <tomjobe@...>

2017-06-13  (<https://groups.io/g/TekScopes/message/137810>)

Thanks Everyone... for the links to the additional information on the Metcal power supplies.

I ended up with that MX-500 -power supply schematic yesterday, and I would dare say it is the same one that was for sale on eBay 15 years ago. What makes me say that is the general look of it, and the little note near the bottom of the schematic that says "For educational purposes only". I clearly remember thinking how different that looked to me on a schematic, even though it made perfect sense on a schematic coming from an individual.

Anyway... today I looked through my Metcal stuff, and the Metcal RFG-30 in question is two generations back from the MX-500 but still uses the same exact soldering wand and tips.

In between is the Metcal PS2E-01... but my inventory might lack other small model variations.

Okay, so I test an RFG-30 to be sure it works and then take it apart, so I can set it up on the bench as loose pieces that will let you solder as if it was properly assembled.

The RFG-30 is very simple. It only uses one LED to talk to the user, and it only has a small single circuit board that is very basic.

It has four good sized electrolytic capacitors that most of us would change on sight, but these caps do look original and obviously still work well enough.

I propped the parts up on a block of wood and a small box so I could make the connections to the AC power and to the soldering wand, and I was then able to solder with it all right there on the bench as a pile of parts. I will take a photo of this setup and send it directly to anyone who wants to see how simple the Metcal RFG-30 power supply is internally.

To get an idea of how old the RFG-30 power supply might be, I looked at the date codes on the IC's. I don't know how to read the dates properly, but 89 came up everywhere and that date makes good sense for this equipment. tom jobe...

On 6/12/2017 7:58 PM, Phil Sittner sittners@... [TekScopes] wrote:



Thanks Tom-I'll see what I can find on the MX-500 series and take it from there.

Phil

On 6/12/2017 6:52 PM, Tom Jobe tomjobe@... [TekScopes] wrote:

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 sittners

2017-06-13  (<https://groups.io/g/TekScopes/message/137811>)

Tom-

I would like to see the pics--and thanks for going to the trouble.

Phil

On 6/13/2017 5:44 PM, Tom Jobe tomjobe@... [TekScopes] wrote:



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