Directional Coupler and RF Detector for DIY SWR Meter

Printable View

Mictronics 23rd January 2012 06:53 PM

Directional Coupler and RF Detector for DIY SWR Meter

1 Attachment(s)

What you can order:
Attachment 6303

- 433MHz/10dB Directional Coupler
- 1.3GHz/10dB Directional coupler (suitable also for 900MHz)
- 2.4GHz/10dB Directional coupler
- 5.8GHz/10dB Directional coupler
- RF Detector board inclusive one SMA dummy load

Prices:

- Directional coupler, built, tested, ready-to-use 10€/each
- RF Detector inclusive one SMA dummy load: 10€/each

How to order:

Order by Email only at: order ['at'] mictronics ['dot'] de

Include a valid Email address, your name and complete shipping address.
List the items and quantity you want to order.

Please note if you wish special packing or shipping options. See note below.

You will receive a confirmation that your order was received as soon as I received your mail.

If you order items which are not on stock your order will be on hold until items are available.

How to pay:

You will receive a Paypal invoice for your order when your order is ready for shipping.

Once the invoice has been paid your order will be shipped.

Shipping/Packing:

By default your order will be shipped unregistered using an Airpack envelop.

If you want special shipping options (hardbox, registered/urgent mail etc.) then please note in your order.

Shipping costs are calculated depending on destination and noted extra on the invoice.

Costs for default shipping method are around 4€ world-wide.

Additional Notes:

All equipment for sale is tested prior to shipping. If you get any problem please contact me.

The dummy load which comes with the RF detector give good results for all frequency ranges. To increase accuracy, especially in the 5.8GHz range, a high-end (rated up to 6GHz) dummy load is recommended.

Actual Stock:

433MHz Directional Coupler: **backorder**
1.3GHz Directional Coupler: **12**
2.4GHz Directional Coupler: **15**
5.8GHz Directional Coupler: **4**
RF Detector: **16**

I will temporary (at least over summer time) suspend any sales activities when the above stock is sold!

Important notes:

1st

DO NOT use a high power transmitter (more than 500-700mW) with the RF detector!

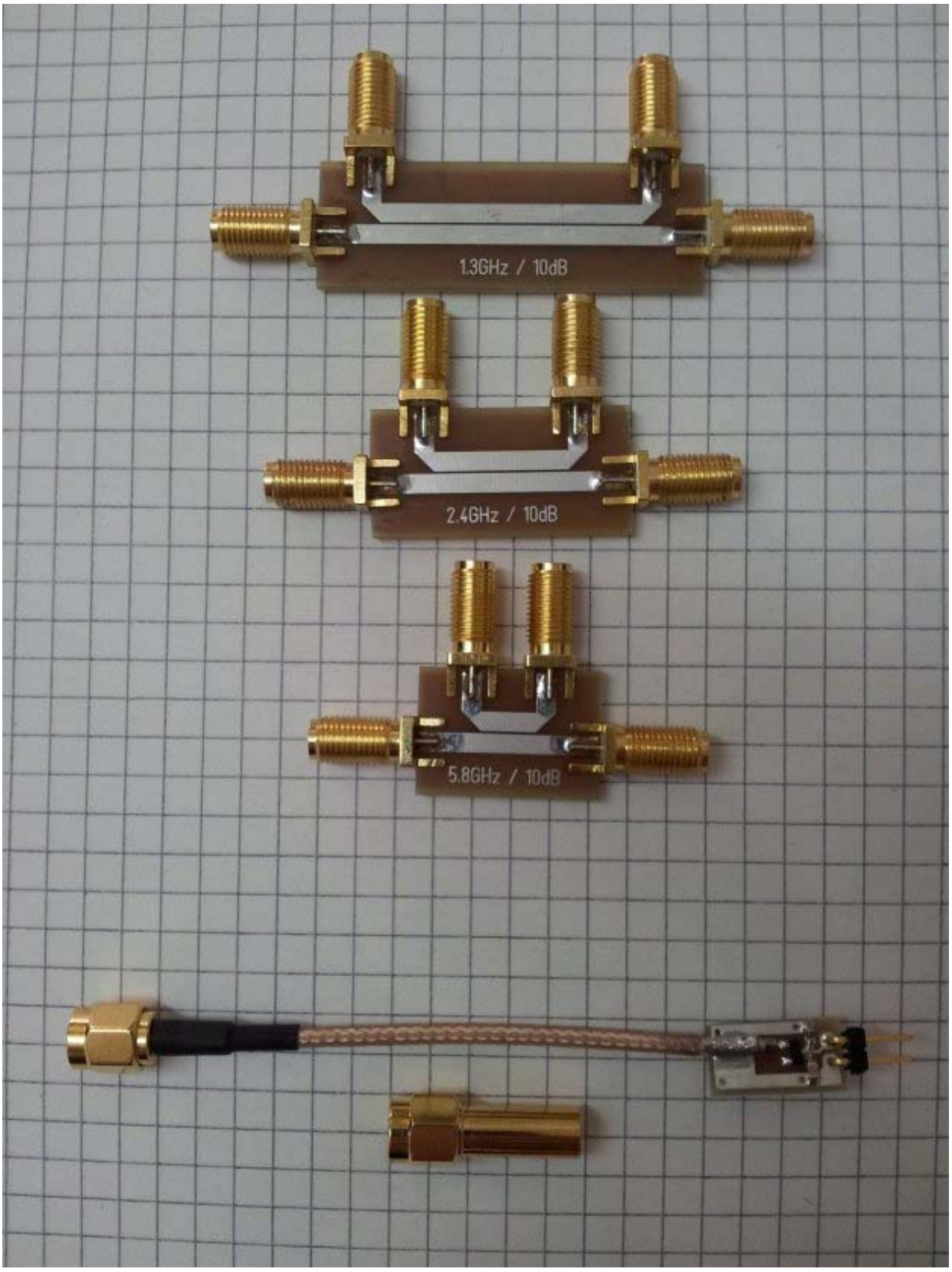
The diode on the detector is sensitive to high reverse voltages which can occur while using high RF power.
If you want to use a high power transmitter anyway then you need a attenuator of at least 6dB between transmitter and coupler.

2nd

Out of a discussion I have want to be clear what you can expect from my parts:

The above parts are DIY, hobby equipment. It's a compromise between accurate measurement results and a reasonable low price. A direct comparison between my couplers and industrial grade onces might give you different results. You can expect that a industrial grade coupler will give you always a better result than mine.

If you require highly accurate measurement results then you have to invest into industrial grade couplers made for the frequency range you are interested in.


1.3GHz / 10dB
2.4GHz / 10dB
5.8GHz / 10dB

The same rules for the dummy load.

Danub

23rd January 2012 07:05 PM

Very Cool!! Now I gotta just stop in the DIY thread and learn how to use this :):)
It will be AWESOME to be able to tune my own antennas.

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totonor

23rd January 2012 08:29 PM

Hello ,

It will be ok for 1010mhz ?

So i can tune my antenna's with this kit ? Do you sell a ready to use swr meter ?

Sorry , but i didn't follow the swr thread...

Regards

Mictronics

23rd January 2012 08:39 PM

Yes, the 1.3GHz coupler will cover 900MHz - 1300MHz.

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totonor

23rd January 2012 08:40 PM

it's a ready to use kit ? How does it work ?

I need anything else ?

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roberto

23rd January 2012 08:48 PM

email sent. thx.

Martinba77

23rd January 2012 09:13 PM

I place my order, beatifull job you done Michael.

Thanks

Cheers

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whakahere

23rd January 2012 09:18 PM

going to place an order now. :)

MileHunter

23rd January 2012 11:18 PM

Order Sent, this is great and they are reasonably priced and look professionally built,
Thanks Michael.

Badlands

23rd January 2012 11:45 PM

order sent

:-)

terry

24th January 2012 10:43 AM

great job Michael :)

I see that PCB lines are solder cover,will it affect compare to stock cooper lines?
(thickness and metal type)

I mean you already done measurement with your prototyp PCB(cooper lines) and the final realise(solder cover),what did analyser say between both?

Jay

Mictronics

24th January 2012 12:19 PM

The cover is chemical tin and has no affect on the coupler.

Joesa3rd

24th January 2012 03:44 PM

Michael,
The products look great... I just placed my order, now hoping there is still some inventory available :)

Joe

Danub

6th February 2012 03:35 PM

Do you anticipate having 2.4 directional couplers again?
If so is there an ETA?
Thanks

Mictronics

6th February 2012 03:42 PM

Still waiting for parts. I will post any stock update here.

roberto

7th February 2012 01:16 AM

Just received my order today! Very nice work Michael, thanks.

Kcleong18

9th February 2012 09:03 AM

just email my order for the 1.3Ghz coupler and detector...

Kc

FPV FLYER

9th February 2012 09:51 AM

Quote:

> *Originally Posted by* ***Mictronics***
>
> *Still waiting for parts. I will post any stock update here.*

Impatiently waiting... :D

Thermicdude

15th February 2012 08:37 AM

Order mail sent.....

swoop_g

17th February 2012 07:49 PM

I just received my components and I must say I am impressed! The quality is very high indeed. Thanks Mic! Now I am off to test my antennas and build some that I have been putting off due to lack of test equipment.

swoop_g

17th February 2012 10:28 PM

Edited: Moved to SWR thread.

Mictronics

20th February 2012 09:36 AM

Good news, finally I got my missing parts, so first all pre-orders will be handled and stock will be updated later on.

Kcleong18

20th February 2012 10:09 AM

Quote:

> *Originally Posted by* ***Mictronics***
>
> *Good news, finally I got my missing parts, so first all pre-orders will be handled and stock will be updated later on.*

That's good news ! Hopefully I am in the pre-order list...:):)

Thermicdude

20th February 2012 02:24 PM

Quote:

> *Originally Posted by* ***Kcleong18***
>
> *That's good news ! Hopefully I am in the pre-order list...:):)*

Me too!

Mictronics

23rd February 2012 06:20 PM

Stock update.

jalves

23rd February 2012 06:54 PM

Mic,

Are you working in a 433~444MHz version for the uhf rc boys out there?

Danub

23rd February 2012 07:25 PM

Thanks Mike. . . .E-mail sent :)

Mictronics

23rd February 2012 08:11 PM

Quote:

> *Originally Posted by* ***jalves***

Mic,

Are you working in a 433~444MHz version for the uhf rc boys out there?

Now all pre-orders are handled and I will look into this.

NDw

24th February 2012 03:18 PM

Got mine this morning thanks very much Michael.

Just in case I do anything wrong.

To measure forward power I connect the tx to A, rf detector to B, 50ohm load to C and antenna to D?
And to measure reflected power I just swap A and D?

Thanks.
http://i.imgur.com/bbSch.jpg

Mictronics

24th February 2012 06:35 PM

Correct.

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jalves

29th February 2012 07:31 PM

Mic,

I can see you have the 433MHz version in backorder, I want one!
Email sent

FPV FLYER

29th February 2012 11:20 PM

Michael, I got my stuff today, fantastic quality! Many thanks.

Ludo

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msev

1st March 2012 01:54 PM

May I ask are these two parts (directional coupler with detector) from you Microtronics all there is needed to build a swr meter assuming I have the antennas, transmitter and multimeter. Or are there some additional parts? Where is the procedure how to do the measurment outlined?

Mictronics

1st March 2012 03:20 PM

The procedure for measurements is more or less explained in this two threads:

http://fpvlab.com/forums/showthread....urself-project
http://www.rcgroups.com/forums/showthread.php?t=1555674

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msev

1st March 2012 03:26 PM

What about the parts? Any more needed besides the ones that I've written down?

Mictronics

1st March 2012 03:35 PM

If you have a low or medium power transmitter then you just need a multimeter. For a high power TX (>700mW) an additional attenuator is necessary, 6-10dB should be sufficient.

NDw

1st March 2012 03:58 PM

Just something small you'll need also is an sma to sma adapter (or sma to rp sma) for connecting the coupler to the transmitter.