

Sony MiniDiscŽ RM-MZR30MP Remote Control Hacked

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Introduction

The RM-MZR30MP remote control is a cable remote control for Sony MiniDisc portables. It connects to the portable unit, such as the MZ-R30, using a plug that both connects with the mini-jack stereo connector, as well as Sony's proprietary 4-pin remote control connector. The remote control has a coaxial output for Sony proprietary coaxial headphone plugs.

There are several reasons why you would want to make changes to this remote control thing, but mostly just because Sony has made a very clumsy design:

- You cannot plug a normal mini-jack into the remote.
- You cannot plug a normal mini-jack into the MZ-R30, when you are using the remote.
- You cannot clip the remote on your belt, or shorts, because the accompanying headphone cable with coaxial plug is too short to reach. The remote seems to be designed to be clipped on your blouse pocket. What if I'm wearing a pocketless T-shirt??
- You would like to use headphones other than the Sony ones, and those usually don't come with that coaxial plug. I still have to find a miniature mini-jack that I can replace the coaxial connector with. Note that there's a short cable available, that converts coaxial to mini-jack. Sony's model number is [PC-MPIHG](#).
- You would like to enhance the remote control to add extra features, such as a record button.
- You would like to design your own remote control.

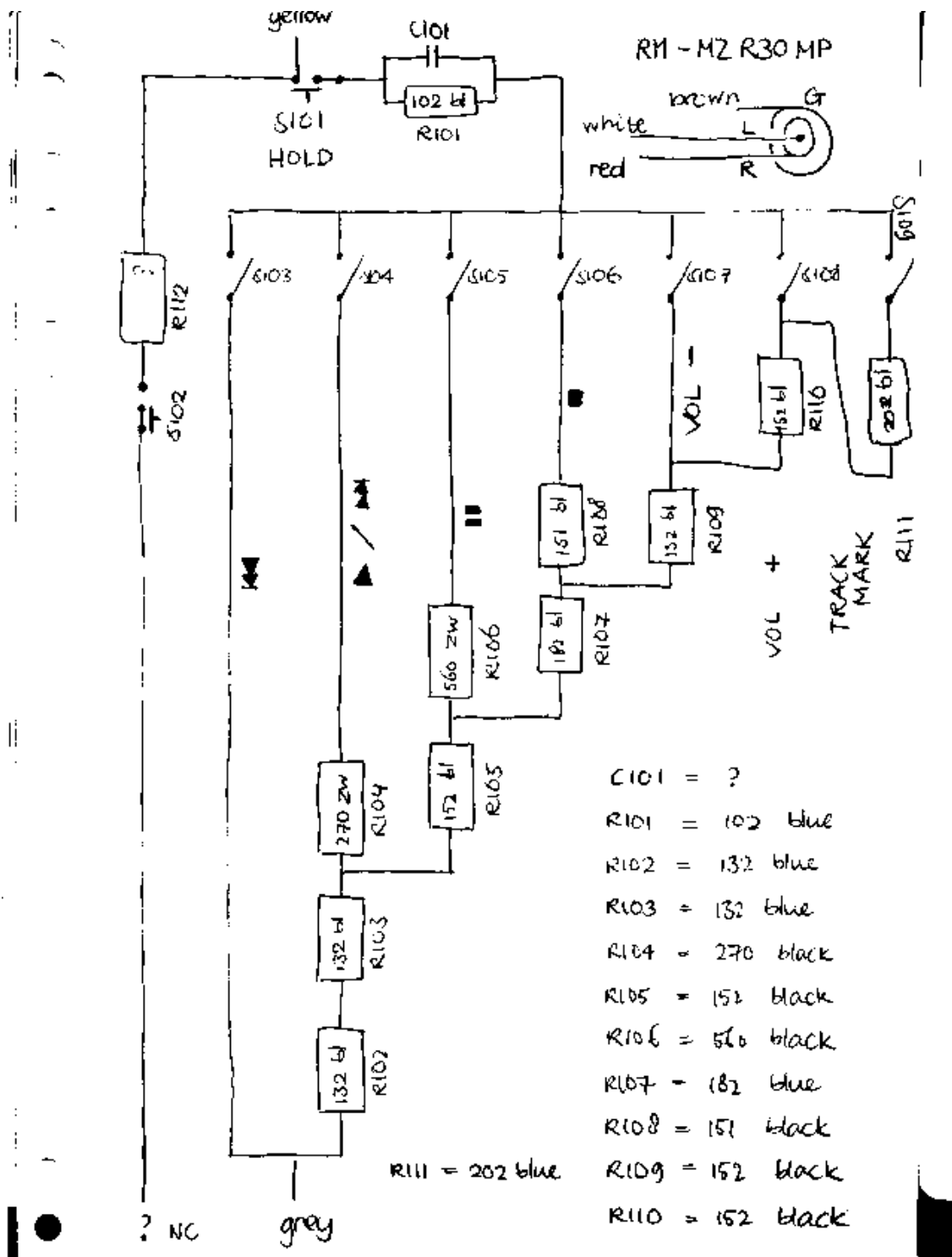
Schematics

Remote control commands are issued by switching a resistance between two of the remote control pins (pin 2 and 4). The value of the resistance determines what function is issued.

When no button is pressed, the resistance is unlimited (i.e. open switch). The hold button is merely an extra switch (S101) that ensures the other switches have no effect.

The rest of the remote controls buttons is connected in a resistor network (R101-R111), providing a relatively large number of functions with a relatively low number of resistors.

Here are some quick schematics I drew. Hope my scribbling is somewhat readable; I will eventually draw it with some decent software.



Resistor Table

This table shows each of the resistor values, which resistors are used by which functions, and the resulting total resistance for each function.

function	R total	R101	R102	R103	R104	R105	R106	R107	R108	R109	R110	R111
	[Ohms]	1000	1300	1300	27	1500	56	1800	150	1500	1500	2000
Prev/Back	1000	1000										
Next/Forward	3627	1000	1300	1300	27							
Pause	5156	1000	1300	1300		1500	56					
Stop	7050	1000	1300	1300		1500		1800	150			
Volume -	8400	1000	1300	1300		1500		1800		1500		
Volume +	9900	1000	1300	1300		1500		1800		1500	1500	
Track Mark	11900	1000	1300	1300		1500		1800		1500	1500	2000

Other resistor values, as found by Andy James <andy.james@virgin.net>. These are **not** present in the RM-MZR30MP remote control, but which **are** understood by the MZ-R30. **WARNING: Use on your own risk!**

function	R total
	[Ohms]
Mode	14000
Display	17000
Record	19500
Test Mode	24000

Details to come later. Please see the [MiniDisc Community Page](#) for more info on remotes.

Questions

If you have any further questions or suggestions, ask [me](#). I'll also be following the MiniDisc Mailing List.

Regards,
Leon Woestenberg <leon@stack.nl>.

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