Icom 703 Plus External DVR

Hello all !
I don't operate ssb to often, but when I do activate a lighthouse or some other event, I grow tired of calling CQ. I operate qrp most of the time so I purchased a great little radio – the Icom 703 Plus. I love this radio, but it doesn't have a digital voice recorder (DVR) option. The other day while on one of my many 5-mile walks, it hit me – why not use my MP3 player to call cq with my rig!

So I wired up my SanDisk M240 MP3 Player by using the MIC IN at Pin # 6 and the Mic Ground at pin # 5 at the microphone RJ-45 plug. I wired these onto a RJ-45 cable with one end cut off. AT the other end of the same cable I wired a 3.5mm stereo plug. I then turned on the VOX in my 703 Plus and tried it out. To my surprise it worked! Yes the ALC meter was a little low so I just turned up the volume in the MP3 player and all sounded great.

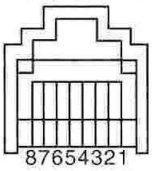
I then purchased a RJ-45 Y-cable from L-Com and then connected my microphone to it. The MP3 audio was fine, but the microphone didn't work at all. I then installed a 2.2K resistor in series with the Audio output or tip of the 3.5mm stereo plug connector and all seems to work great!

The picture to the right was taken as the MP3 player was sending out a CQ. As you can see, the ALC meter is working fine with the MP3 player. Now all I have to do is hit a button on the MP3 player and call CQ or any other recorded file that I have stored in the MP3 player –hi! Yes, I'm a happy ham these days.

TECHNICAL INFORMATION

•MICROPHONE CONNECTOR

Rear panel view



① +8 V DC output
② Frequency up/down
③ AF output
④ PTT
⑤ GND (Microphone ground) **(Mic Grd.)**
⑥ Microphone input **(Mic IN)**
⑦ GND
⑧ Squelch switch

PIN NO.	FUNCTION	DESCRIPTION
1	+8 V DC output	Max. 10 mA
2	Frequency up	Ground
	Frequency down	Ground through 470 Ω
8	Squelch open	"LOW" level
	Squelch closed	"HIGH" level

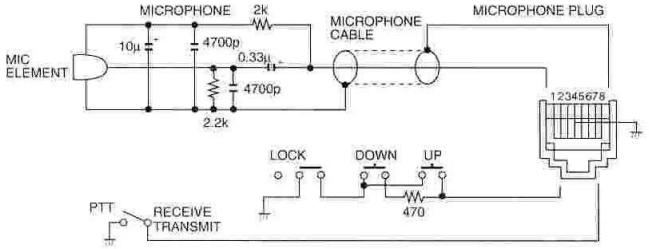
CAUTION: DO NOT short pin 1 to ground as this can damage the internal 8 V regulator.

3.5mm Stereo Plug Wiring

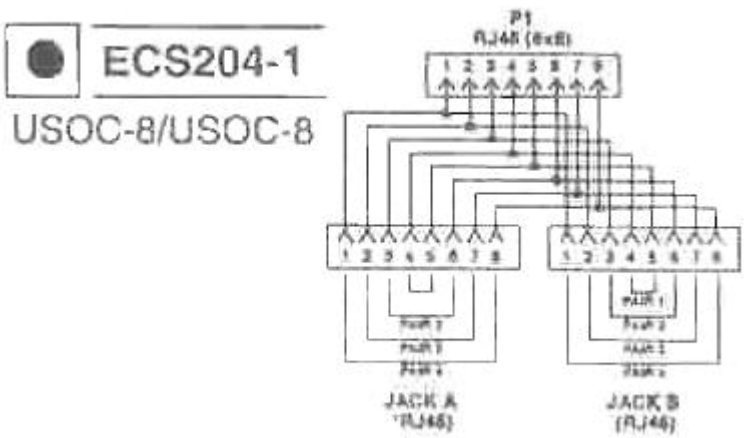
Pin # 5 = Mic Grd wired to 3.5mm grd.

Pin # 6 = Mic IN wired to 3.5mm tip

•HM-103 SCHEMATIC DIAGRAM

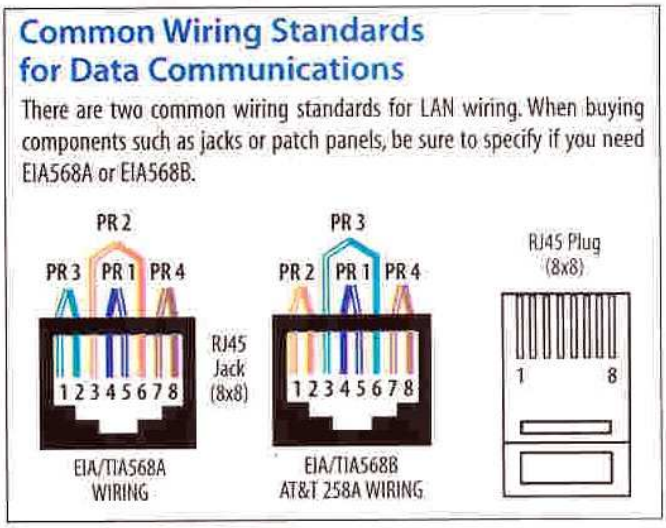


The above picture shows a pin out of the Icom 703 Plus Microphone Connector. I have inserted the red text to indicate the wires used to make the SanDisk M240 work with my 703.



The picture to the left shows the wiring diagram of the L-Com RJ-45 Y-Cable. Actually L-Com calls it a Y-Bridge Model # ECS204-1.

Data Communications Wiring Standards



The picture above shows the standards used in data communications. So depending on which standard is used on the cable you use, the color wire on the pins will be different. I used a CAT-5 Cable which used the AT&T Standard so my wire colors were Pin # 6 – green and pin # 5 wht/violet.

Icom 703 Plus and SanDisk M240 MP3 Player Operation

After wiring everything, you now can check out how it works. First make sure you have all correctly wired. That means check for shorts etc. After all is ok, plug the Y-Cable into front mic RJ-45 jack. Then plug only the microphone into the Y-cable. Now put the meter to ALC on your 703 and speak into the microphone. Your ALC should read just shy of "9." If it does, that's great.

Now record your CQ on your MP3 player. It's now time to plug in the MP3 player into the RJ-45 Y- cable. Turn your 703 VOX on and start playing your CQ file from the MP3. You should see your ALC peaking near nine. If not, increase the volume from the MP3 player until it peaks near nine. If the ALC is always on nine, decrease the MP3 player volume until it peaks near nine. That's about it so now have fun with it!

If you need a SanDisk M200 Series User Manual, please check out my Icom 703 Plus Web Page on my WA3WSJ Website. Look on my Icom 703+ Page for the manual.

Icom 703 MP3 DVR Parts and Information

Parts List:

1ea.	SanDisk M230 MP3 Player Refurbished Unit	~	$20.00
1ea.	L-Com RJ45 Y-Cable # ECS204-1	~	8.00
1ea.	3.5mm stereo plug	~	1.79
1ea.	Cat 5 Cable	~	3.00
1ea.	2.2K resistor	~	.50

So for approximately $35.00 or so, you can have a nice DVR for ssb operation!

72,

Kangaroo Ed, WA3WSJ