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converting AIS to mic audio jack

My DCRTRV18 finally died. I'm pissed that many of the upgrades (mine is a DCR - HC42) do not have a MIC input! Is anyone making an (Active Interface Shoe(AIS) with a mini-pin input - specifically for the WCS-999 wireless mics?

[Q. Brown](#)

Thu, 29 Sep 2005 19:38:51 -0700

62 Users Online

I couldn't find an aftermarket jack so I hacked an ECM-HW1 ("shotgun" microphone) and put an audio jack in that. It works fine.

[Michael Dallas](#)

Fri, 10 Mar 2006 08:09:49 -0800

Sorry. It was an ECM-HGZ1 microphone.

[Michael Dallas](#)

Fri, 10 Mar 2006 08:12:05 -0800

That's great, Michael. Do you have a picture to show us how it's done? Or which pin on the AIS goes to what signal? Your help would be appreciated.

[Chieh Cheng](#)

Fri, 10 Mar 2006 11:23:38 -0800

Yes, Michael!

PLEASE tell us how you did this! VERY interested!

[ResDog](#)

Wed, 29 Mar 2006 16:31:12 -0800

Dear Michael I am also looking for a mic input for my HC-90 handycam. Can you give the pin details of active shoe interface? Thank you

[Paul Daniel V](#)

Mon, 3 Apr 2006 18:58:57 -0700

Was it Mono or stereo you managed to hack?

[Avi](#)

Tue, 11 Apr 2006 04:45:01 -0700



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Sony Active Interface Shoe. Shame on Sony for not providing an external mic input. I've found that the easiest mic to sacrifice to mount a jack is the ECM-HST1. You can pop off the front wind screen and get to the stereo elements. There is space enough on the back to mount a mini jack above the switch. There are two elements in MS configuration; front with Black-white and back with Black yellow wiring. I haven't had a chance to figure out the proper connections for a mono lav mike, but believe this should be simple. The ECM-HGZ1 case is very small and mounting a jack in this mike would be quite daunting.

[Dick](#)

Sun, 30 Apr 2006 15:33:33 -0700

I solved this problem (at the expense of a Sony ECM-HST1, which is large enough to mount a mini stereo plug. Unfortunately, I had to remove the internal mic cartridges, but you can pry off the back plate and mount the jack above the phasing switch. The front screen actually rotates to remove and gives you access to the MS circuit board. Wiring the plug (using 3 small wires twisted together to the wires attached to the two mic cartridges is a snap. There are 4 wires, two black a white and a yellow. The two blacks are tied together and go to the jack shield (ground). The white and yellow are the L & R hot leads. The position of the phasing switch makes no difference in my application. For MONO, just use a stereo to mono adapter external to the mike. You still get stereo separation if you use an external stereo mike, or feed from two separate sources.

An expensive solution, but it works fine and there's room to work in this mike.

[Dick Walters](#)

Wed, 10 May 2006 09:06:34 -0700

Michael, Can u pls explain how u put an audio jack in ECM-HW1.... pl pl pl pl...

[Jonathan](#)

Fri, 09 Jun 2006 03:29:50 -0700

I doubt it's possible. I bought one and opened it but there was not enough space for me to even consider mounting a jack. That's why used the ECM-HST1, which has internal space to mount a standard 1/8" mini-jack on the back plate.

[Dick Walters](#)

Thu, 29 Jun 2006 06:42:42 -0700

Thank you Mr. Walters, I have used a ECM-HST1 and successfully placed a 1/8" mini-jack for my HDR-HC3 sony camcorder.

[Venkata](#)

Fri, 07 Jul 2006 13:15:14 -0700

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i did this with the hst1 and haven't bought a mic yet, and i was wondering how the mic input works. Does it sound as good as it would if it was a real mic input

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[gPaul](#)
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Sun, 09 Jul 2006 23:31:29 -0700

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Hai Walter, can u pls guide me how to fix an external mic input in Sony HC-90...pl...

[Jonathan](#)

Tue, 01 Aug 2006 05:50:02 -0700

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Thanks guys. I did the Sony ECM-HST1 mod too. However, I didn't sacrifice the mic to do it.

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My original plan was to put two panel mount 1/8 jacks on the back of the mic, one to the board and one to the mics and then jumper the two together when I wanted to use the HST1 mics. However, here is only enough room on the back cover for one panel mount 1/8 stereo plug.

Plan B, which is what I ended up doing, was to connect a male stereo jack to the mic cables and then plug it into the panel jack when I wanted to use the HST1 mics. There is enough room on the back cover for holes for both the panel mount jack and for a cable.

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to start, I snipped the white, yellow, and black wires about 1/2 to 3/4 of an inch away from the board. I then cut a 1 foot shielded stereo male to stereo male cable (got it at radioshack) with about 6 inches of cable (i.e in half).

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I drilled holes in the back of the HST1 cover. One for the panel mount jack in the center, just above the phasing switch text, but low enough that the hole touches the 0 in 90 and the 1 in 120. And one for the stereo cable to go through, just to the right of the 120.

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I removed the mics, ran the cut end of the stereo cable through the back cover (male jack on the outside), then soldered the stereo cable ends to the mic wires (white to white, red to yellow, ground to black) and covered the solder connections using a glue gun (works well as insulation). I placed the mics back into the casing.

I then cut off another piece of wire from the remaining stereo patch cable to reach from the front to the back for the panel mount jack. I ended up pulling the wires from the wire jacket as it was too thick. I also cut a black wire from some wiring I had on hand, since the ground wire (shielding) didn't have insulation around it.

I then soldered the panel mount jack connections to the wires (black to ground, red to middle, white to tip), mounted the jack on the rear cover, and ran the wires to the front. I reassembled the mic, with the exception of the

front cover.

I then soldered the wires going back to the panel mount jack to the wire ends on the board. I hot glued the solder joints (again to insulate them) and the replaced the front cover.

If I want to use the mic, I now connect the male stereo end into the new stereo jack. If I want to use an external mic, I plug it into the jack instead.

One final mod was to cut a slit in the back of the wind protector for the male stereo end and for access to the stereo jack. My mouse now has a tail... ;-)

David

David

Sat, 19 Aug 2006 12:09:20 -0700

And there was me thinking I was the only person thinking along these lines...

I am planning to do exactly the same thing with an HST1 as I need to make recordings of rugby matches with the voice of the referee via a radio mic routed to the camera. For my requirements I have no qualms about sacrificing the internal elements however, there is a far neater solution if you want the internal/external option. You can buy 3.5mm stereo jack sockets with a set of break contacts, Farnell Components do these and I believe that they have branches worldwide. These contacts act like a switch that is closed until you plug the jack in. By routing the wires from the elements through these contacts, the internal elements will still work until you plug in a jack for your external mic. The sockets are marginally larger than a standard socket but should still fit into the position at the back of the mic above the angle switch.

[Nigel M](#)

Fri, 25 Aug 2006 03:47:36 -0700

who knows where can i upload some images of disassembled ECM-HQP1 microphone? and integrated stereo line jack, with 3.5mm stereo jack sockets with a set of break contacts.wich you can use it for stereo line input. Yes it is possible to mount 3,5mm stero jack, it has some weeknes but i'hope that i'll soon will solve them.

Attached Image:

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Sat, 26 Aug 2006 00:06:36 -0700

Lamb, I suggest you upload them to this thread: [Hacking the Sony ECM-HQPI Surround Sound Microphone](#)

You may also upload the images to the Wiki [here](#). And then format and update the Wiki [here](#).

By the way, I like what you've done.

Chieh Cheng

Sat, 26 Aug 2006 01:12:30 -0700

WARNING: This hack isn't perfect. After getting an HST1 and performing the hack, i was disappointed to find that it isn't a pure LEFT and RIGHT channel input. Let me explain.

I have a mixer that lets me pan from left to right. I tried many different tests with left, center, and right. I then opened the waveforms up so that I could see them visually as well.

left - Perception is lower volume audio but you hear it in both channels. If you

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look at the waveform, the left and right channels look like inversions from each other. What I mean is, as one waveform goes down, the other goes up. Like a mirror image.

center - Perception is that the audio sounds like it is a little on the left. If you look at the waveform, it confirms this. The right channel is about 2/3 the volume of the left.

right - This almost sounds like they are equal, but very very slightly more volume on the right. The waveform confirms this. There is about 10% more amplitude on the curve than on the left.

The solution, it seems to sound best panned almost all the way to the right, but not quite all the way (like 90%). I hate this because I was hoping to have a dumb way of just plugging it up (maybe even using a mono cable) and not have to tweak it on a mixer in order to get a good sound.

Anyone else have the same results? My guess is that they are doing some funky processing to make it sound more stereo. For one thing, there are only 2 mics and one points directly forward and the other just to the side. Confusing. Also, using a voltmeter, there is about 3.x volts DC on both the left and right wires. I'd assume that I should be using a capacitor or something to filter off the DC.

Mike Spice

Tue, 05 Sep 2006 20:27:16 -0700

Hey all, thanks for the useful comments, I am thinking about connecting 2 3.5mm mono stereo jack sockets to accomplish this, however I am not sure which wires to connect to each jack. Should I be connecting the white/yellow/2black wires to the jacks or should I be connecting the wires that lead into the active shoe? Has anyone found a wiring diagram/service manual for the microphone? I asked Sony but they could only give me the e-mail to the servicing/repair place in Texas. Any help is greatly appreciated. Thanks, David.

[David Bridwell](#)

Thu, 07 Sep 2006 11:47:51 -0700

"For one thing, there are only 2 mics and one points directly forward and the other just to the side. Confusing."

You are assuming that mic is a 'traditional' L+R stereo mike.

Google M+S....Mid-Side:

"The Mid-Side technique is theoretically equivalent to XY, but the realities of mike design often make Mid-Side more stable and reliable, and easier to set up. The idea is to take one mike (usually a cardioid condenser, though any mike will work) and point it at the sound source. This is your "Mid" mike.

Then take a figure-8 mike and place it behind the mid mike, pointing 90 degrees away from the "Mid" mike. This is the "Side" mike. Now, instead of plugging one mike into your left channel and the other into your right channel, you'll need to "decode" the signal by finding the sum and difference of the signals in the two mikes. That is, the left channel on the final recoding is created by summing the signals from the two mikes and the right channel by taking the mid signal and subtracting the side signal. When combined to mono, you are left with the Mid signal, making mid-side inherently mono-compatible."

HTH,

-Shawn

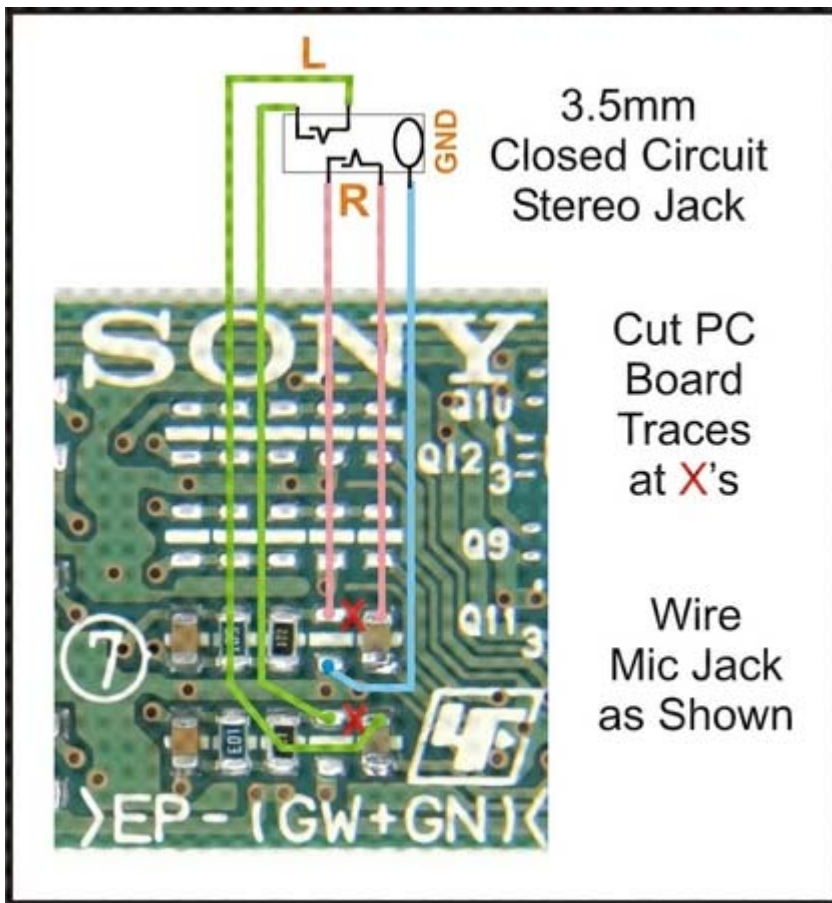
[Shawn Hughes](#)

Mon, 25 Sep 2006 18:55:48 -0700

Shawn is correct in that a dual op-amp is used on the small circuit board inside the HST1 to decode the left and right channels. Left is passed through, and right is created by subtracting the left signal from the combined signal of the center mic. I traced through the board layout and found a great place for adding the five connect points of a closed circuit 3.5mm mini stereo jack to get a true L & R channel feed. It requires cutting two traces on the board with an exacto knife or drimmel, then wiring the jack as shown.

Z

Attached Image:



Sony AIS Microphone.jpg

[William Zaggle](#)

Fri, 06 Oct 2006 23:06:08 -0700

Is anyone selling these?

[Greg Gley](#)

Thu, 19 Oct 2006 20:02:45 -0700

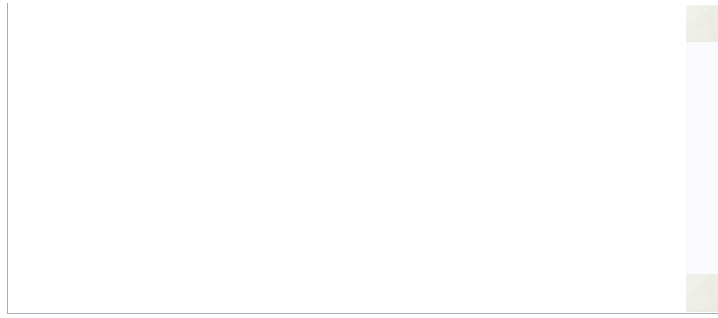
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Title: [Sony Active Interface Shoe](#)

Weblog: Camera Hacker

Tracked: Tue, 2 May 2006 16:26:04 -0700

Title: [Creating a Dead Mic for Sony video cameras](#)

Weblog: Camera Hacker

Excerpt: I need to completely disable audio on a Sony HDR-HC3. Do you have any idea how to do this. I have a ECM-HGZ1 Gun mic and can cannibalize it. Any help would be greatly appreciated. Thanks.

Tracked: Fri, 15 Sep 2006 15:43:12 -0700

Related Links

- [Sony ECMHW1 Bluetooth Wireless Microphone for DVR-DVD405, 505 & HDR-HC3 Camcorders](#) - Amazon User Reviews
- [Sony ECM-HGZ1 Shotgun Microphone for DCR-PC55, DCR-HC96, DCR-DVD 92, 203, 403, 305, 405, 505 & HDR-HC1 Camcorders](#) - Amazon User Reviews
- [Sony ECMHST1 Stereo Microphone for DCR-HC42, 90, 96, DCR-DVD 203, 403, 305, 405, 505, DCR-SR100 & HDR-HC3 Camcorders](#) - Amazon User Reviews

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