The Almost Definitive Guide to Session Mode Linking
David Britten – 2/9/2004

Introduction
It's obvious that there is staggeringly little English language documentation for linking a Guitar Freaks, Drummania, and Keyboardmania. Hopefully I can remedy that. This information has been gathered from service manuals (pictures mostly,) hands on fiddling, and some consultation with others. Almost everything in here is written from experience with Guitar Freaks 6th Mix and Drummania 5th Mix. If you can confirm a non-trivial difference in other versions, be sure to tell me. My contact information is at the end of this document. Also, some things are either uncertain, or just flat out unknown. I'll try to be clear about when that's the case. Dig in.

What is Session mode?
Session mode allows linking of several Konami Bemani games. It's possible to connect Drummania, Guitar Freaks, and Keyboardmania for 5 player madness, though typically you won't see the Keyboardmania in the setup. It's much more common to just see GF and DM linked, and even that is pretty rare. Don't pass up the chance to experience this amazing multiplayer game, though. It's frighteningly surreal to have two players doing guitar, another player on drums, and incredibly loud synchronized audio booming from both cabinets.

Step 1: Hooking it up
Okay, first, you need linkable games (see the table of game version compatibility,) the Multisession Unit, which looks somewhat like a VCR, and a pile of included cables. Place the Multisession Unit on the shelf inside the Drummania cabinet. Make sure the ports are facing out. Also be sure you've got an available outlet for plugging it in. For linking each machine, you'll need a set of four RCA audio cables, and an 8 pin mini-DIN serial cable. This cable is identical to a Macintosh serial printer cable, I'm told. Once you've got all the games and cables, the next step is to wire them all up.

First, connect Drummania.
•Take the serial cable, and connect it to the serial port located on the back of the cabinet near the bottom. Plug this in to serial port 1 on the hub. Port 1 is the furthest right when looking at the ports.
•Take one pair of RCA cables and connect them to Line Out on the Drummania. These should be located near the serial port. Connect the other ends to the IN jacks in port cluster 1.
•Take another pair of RCA cables and connect them to Line In. The other ends go to the OUT jacks on the hub, which should be the only two left in the first cluster.
•Adjust the Line In and Line Out volume controls on the cabinet. They're near the line jacks. Turn them both clockwise to almost full power. Later, if the guitar sounds and background music are too loud, the Line In volume can be reduced. If the drums are coming too loudly from the Guitar Freaks, turn down the Line Out volume.
Important note: If you have a fairly new Drummania, you can possibly skip the actual wiring steps. Why? Because starting around Drummania 4th Mix (possibly 3rd), the game won't

even boot without a multisession hub connected. So if the game is working to begin with, it's probably already hooked up. Just take a quick look to verify that the cables are in place. If there isn't a hub at all, then chances are you have a Korean/Asian version.

Now connect the Guitar Freaks. The procedure is almost identical, but use port cluster 2 on the hub this time. The serial port is located near the power input on the main cabinet, and the Session In and Session Out (Line In/Line Out) jacks are on the left speaker column. Guitar Freaks has no Line In/Line Out volume dials to worry about (which makes balancing audio volume a severe pain in the butt).

I don't have any experience with setting up a KBM arcade machine, but Marc Wade gave me some useful info about hooking it all up. The back panel on Keyboardmania is quite similar to that of Guitar Freaks. Connect the serial cable to port cluster 3 on the hub, hook the audio cables up too, and you should be all set. If your KBM 3 doesn't have the multisession port panel, you'll have to get one somehow. The serial port inside the machine is actually a 9 pin mini DIN, and the panel acts as a pin converter. I'm told that Para Para Paradise has a cable inside the machine that can be removed upon installing the 2nd monitor upgrade kit, and it will serve as the cable to connect KBM 3 to the multisession hub. Good luck if you try this.

Step 2: Setting up the hub
That Multisession Unit has its own CD ROM drive in there. I haven't had a chance to pop one open, but it's probably under the left side panel that's screwed on. In any case, watch out in there. You're likely to see a pretty big power supply. This step is much safer if you unplug the thing.
    Take the proper audio CD for your game combination and put it into the hub's drive. The hub uses the CD to stream the audio to the games. Why does the hub do it? Well, Guitar Freaks has the audio with no guitars, but it has drums. Drummania has it with guitars, but the drums are left out. The audio CD in the hub has all the tracks with no guitars or drums, leaving both to be filled in by the game sound effects.
    You may be able to get marginal success even with a session disc that's not for your mixes. I have actually seen a GF6/DM5 combination that's running a GF5/DM4 disc in the hub. The games crash whenever you try to play a new song (the blue ones,) but other than that, it seems to work.

Step 3: Game configuration
    Fire up the hub, and power on the games. You're going to want to configure the volume levels first. For both DM and GF, go to the service menu, and select Sound Options. Set Guitar Freaks to a reasonable volume first. Volume control 1 adjusts the sound effects, and volume control 2 does the BGM. Now go to Drummania, and set the same numbers. Inside the Drummania coin doors are some volume dials. One controls the subwoofer, and the other controls the normal speakers. Turn those until both machines seem to be at roughly the same volume levels.
    Now configure Session mode. Choose the Network Options menu in the service menu. You should be able to select Session Options. In there, make sure both games have identical settings for difficulty, number of songs, join time, and all other options. There's also a volume adjustment. The Session volume level is only used when playing a linked

game. You'll just have to run a few test games to get a feel for where it should be set.

Once you've taken care of all that, make sure to save the settings on the games, and return to game mode. Coin up the games, hit start on one of them, and cross your fingers.

Step 4: Making sure it's working

If at least the serial cables are connected properly, you'll now see the Session join screen. This will vary from version to version. Make sure both games are started now, and you'll be taken to the Session song list. Choose a song to play, and it should load momentarily. Play through, make a mental checklist of problems you notice, and consult the troubleshooting section.

Troubleshooting

No Session join screen appears when starting one game	Make sure each game is connected to the Multisession Unit via serial cable, and that the hub is powered on. Status LEDs should be visible (though I have no clue what they mean).
The game starts, a song is selected, and the games freeze with the initial notes on screen – Drummania times out with a "Multisession Drive Error" message	This is most likely a problem with the Multisession Unit's CD. This occurs when the unit can't find the song that Drummania has told it to load, either because of a damaged drive, damaged CD, or an incorrect version of the CD.
Guitar Freaks/Drummania plays only its sound effects, and no other audio	Check the Line In/Session In ports on the cabinet and make sure they are connected to OUT on the hub. The hub is responsible for mixing and streaming the background music, and the sound effects from the other games.
Guitar Freaks/Drummania plays its sound effects and the background music, but sounds (guitars/drums) are not played from the other machine.	Make sure the Line Out ports are connected to the IN jacks on the hub for the machine that is not getting sound effects over to the other machine. All audio is carried through the RCA cables, so if the Line Out ports aren't connected, the game won't be able to send its music to the other games

If any other unspecified weirdness occurs, make absolutely sure that every last setting in the Network Options for both games matches exactly. That even includes the Session Volume control.

Compatibility Table

Drummania	Guitar Freaks 2nd Mix Link Ver.	
Drummania 2nd Mix	Guitar Freaks 3rd Mix	
Drummania 3rd Mix	Guitar Freaks 4th Mix	
Drummania 4th Mix	Guitar Freaks 5th Mix	Keyboardmania 3rd Mix
Drummania 5th Mix	Guitar Freaks 6th Mix	Keyboardmania 3rd Mix
Drummania 6th Mix	Guitar Freaks 7th Mix	
Drummania 7th Mix	Guitar Freaks 8th Mix	
Drummania 8th Mix	Guitar Freaks 9th Mix	
Drummania 9th Mix	Guitar Freaks 10th Mix	

Songs Playable With KBM Included
Vitalize
Labyrinth
Monkey Magic
Dear My Friend
The Least 100 Seconds
Classic Party 3
Cassandra
Three Worms
Mr. Moon

Depend on Me
Cosmic Cowgirl
Shiritori (maybe – it's not listed on the KQJ site, but Marc says it's playable)

Various tidbits/unknown things
•Guitar Freaks and Keyboard Mania can be linked without a Drummania present. It's been done successfully at Family Fun Center, Omaha.
•By that same token, it may be entirely possible to link Drummania with Keyboardmania without a Guitar Freaks. This would be an extremely bizarre setup, however.
•Can technically incompatible versions of GF and DM be linked with any degree of success? Could one link a GF3/DM1 or GF6/DM4?

Contact me
If you know *anything* that could go in this document, don't hesitate to email me at brittedg@student.gvsu.edu. I would prefer information obtained from firsthand experience, but if you have fairly reliable sources, go ahead and bounce it off of me anyway.