

Redundant Playback System

Thank you for choosing to use the redundant playback system I started to compile during my university years and finally 'finished' in 2010! Here are just a few pointers that are specific to this system and will hopefully help get your project underway!

QUICK INFORMATION

MAC MINI NETWORK NAMES:-

Mac A: '**Playback Rack A**'

Mac B: '**Playback Rack B**'

USER NAMES/PASSWORDS:-

Both computers have one user area each and use the same password: '**password**'. The computers' user areas can be accessed over a network on the computer names above with the user names:-

Mac A: '**Playback Rack A**' (**pbrackA**)

Mac B: '**Playback Rack B**' (**pbrackB**)



The F8 has been set to output **Midi Program Change Messages 1-8 on Ch16** to both Motu 828s via the 1x2 Midi Thru. **Midi Echo on the F8 is switched ON** by default, allowing any messages on its input to be passed through to the Motu 828s, should this be required for external control. The F8's power is supplied by an adapted PSU with a Midi connector on the F8's Midi input. If an external Midi signal is to be used to control the system, replace this power supply with your Midi signal, which will power the F8 in its place.

USEFUL NOTES

DO NOT APPLY PHANTOM POWER TO THE OUTPUTS OF THE SWITCHOVER UNIT/MOTU 828s!

Apart from causing the switchover unit to produce a nasty BANG as the audio switches over, I'm not sure the Motu 828s would appreciate Phantom Power being applied to their outputs!

A useful feature included with OSX Leopard is 'Screen Sharing'. If Screen Sharing is enabled in the System Preferences under 'Sharing' on the Macs and you have another laptop running a version of Leopard or later, you can view the Mac Minis' displays over a network in a 'VNC' fashion. Just open a Finder window once a network connection is established and look for 'Playback Rack A/B' in the left hand column. Click on this and at the top of the next window there should be an option to 'Share Screen'. *Please be aware that Screen Sharing appears to use a fair chunk of the system resources, so may impede Qlab's performance on demanding projects.*

SOFTWARE

Useful software pre-installed on the rack computers includes:-

Qlab v2

Logic 8

Logic Mainstage

Midi Monitor

The rack is designed primarily for use with Qlab, but Logic 8 has been installed for your convenience for last minute edits and recordings with the Motu 828s. Midi Monitor provides a useful tool when tracking Midi issues. It can be used to monitor either the Midi inputs or outputs from the Motu 828 attached.

Please can you try to maintain neat file management during your project. The folder labelled 'PRODUCTION FILES' on the Desktop should be used for all your show files, including any audio or video etc. The 'Documents' folder has all the install files for the main programs on the system and other useful items, including the install files for Yamaha Studio Manager and most of its editors. Please feel free to use these.

It is very **strongly advised to use uncompressed .AIFF audio files** in your Qlab projects. Many more .AIFF audio tracks can be played simultaneously/stably than other compressed file types such as Mp3 etc, because Qlab doesn't have to perform any transcoding duties for uncompressed audio files. .WAV files are also more efficient. For very useful support and advice to optimise Qlab's performance, visit www.figure53.com/support

HARDWARE OUTLINE

The system revolves around 2 Intel Mac Minis with a Motu 828mkIII attached to each computer over Firewire 400. The 8 analogue audio outputs and Midi outputs from each Motu are connected to the switchover unit. This is custom made to switch over 8 balanced audio signals and 1 Midi signal. It uses basic relays to do this. The relays are energised when it is switched to the 'B' system (Switch depressed/lit). It's probably preferable not to leave the unit in this state unnecessarily to save on wear and tear of the relay circuitry. The Midi output from the Switchover unit connects to a 1x4 Midi Thru at the top left of the rack's rear to allow you to control other units you may have in the rest of your Midi system.

The two instances of Qlab can be controlled by the remote buttons provided. These are connected via the panel on the rear of the rack. One 'Main Remote' can be connected by a Cat5 cable, and 3 'Auxiliary Remotes' can be connected by standard XLR cables (with 3 conductors). These are patched to the Midi Solutions F8 Footswitch Controller, which converts the remotes' button presses to Midi Messages to control Qlab as you define in Qlab's preferences. 8 individual buttons are available on the 8 footswitch inputs on the F8. The patch panel has four inputs for 2 button 'Auxiliary Remotes' (totalling 8 buttons), and one input for the 6 button 'Main Remote'. The Main Remote's button inputs are duplicated on the first three Auxiliary Remote inputs to allow flexibility.

To achieve full system redundancy, the remote buttons or an external midi signal must be used to control Qlab during a show. The two machines effectively 'track' when both instances of Qlab receive the same control commands at the same time. This is achieved by sending the same midi signal to both units.



For your convenience, the USB, Firewire and Ethernet ports of each computer are replicated on the front of the rack to use with USB Flash Memory Sticks and External HDs for example. The Firewire connections on the panel are actually the link-outs from the Motu 828s in each case. It is useful to network the two computers to transfer files etc or to set them up on a Wireless Network for Screen Sharing purposes. It may also be useful to run Logic on the B machine to do last minute edits in rehearsals while running the show's Qlab session on the A machine, or to run Yamaha Studio Manager on the B machine to access over Screen Sharing whilst running the show off the A machine.



The Motu 828s have more than just the 8 analogue outputs that are patched to the switchover unit, should you require them. They have a further 16 digital outputs over 2 optical ADAT connections, as well as other 2ch analogue and digital outputs. All of these outputs can be accessed in Qlab under the Audio Preferences, and 'soft-patched' accordingly. The headphone output on the fronts of the units can monitor the channels selected within the Motu software or via the front panel's controls.