





## Overview:

Power Management by sequencing the turn-on and turn-off of the AC power is essential and convenient in any sound system where separate mixers, processors, and amplifiers are deployed. The most common cause of system damage to speakers and drivers is not sequencing the power when turning components Off and On. Sequencing in this example involves automatically turning on the AC power to the speaker amplifiers after the mixer and processors have been powered on and settled into stable operating mode. In reverse, turning Off the AC power to the speaker amplifiers first, so the preamps and processors won't thump or pop through the speakers as they shut down. In addition sequencing the power will avoid tripping the main breaker by eliminating sudden current draw by turning the largest current drawing pieces of equipment On or Off one at a time.

## Application Example Description:

This example demonstrates the flexibility of using the ECM-RACEWY6 chassis with various ECM modules integrated with an ECS-6RM sequencer. This example uses an equipment rack with six assorted signal processors (low current draw) and eight power amplifiers (higher current draw). Two remote ECM modules are also integrated with the control sequencing and monitoring. An ECS-KSW6 key switch with LED status indicators activates the system remotely.

In this example, four 20-amp circuits feed the ECM-RACEWY6. Four ECM-20M (monitoring) modules and two ECM-20 (non-monitoring) modules are installed in the RACEWY. Two remote electrical control modules, the ECM-15SH and ECM-20SH, can be included in the system and are capable of being independently monitored by the ECS-6RM. A total of eight modules (six in the raceway and two remote) are integrated in our example. The ECS-6RM includes six control-AC line monitor ports. The first three modules in the ECM-RACEWY6 feed low current draw signal processors therefore one 20-amp circuit is adequate to power the first three modules together. Connecting Channel-1 output of the ECS-6RM in parallel to the first three ECM-RACEWY6 modules will switch all three sections On/Off at once. Monitoring the AC line will be the same for all three modules. Modules four, five, and six in the RACEWY6 are individually connected to ECM-6RM channels 2, 3, and 4. These modules have individual 20-amp feeds to accommodate the power amplifier current needs (activated in pairs). Each of these modules (ECM-20M) can be AC line monitored showing both the voltage and current status of each pair of power amplifiers tied to the channel. The ECM-20SH remote module is controlled and monitored using Channel-5 on the ECS-6RM, sequencing the last pair of amplifiers. The ECM-15SH module is controlled and monitored over Channel-6 on the ECS-6RM and sequences the pair of powered speakers.

## Application Example Notes:

1. Before designing a managed power system consult with a licensed electrician or the project electrical consultant.
2. Proper grounding and phase is essential for performance and safety in this or any audio/video system where multiple rack locations are deployed and connected together with signal cables.
3. Before installing read the manuals for a complete understanding of the features and details of use.



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