



**ECM-20SH Module Remotely Activated by an ECS-204 AC Power Sequencer**

**ECS-204 – FRONT VIEW**



**System Configuration Switch Settings**

Sequence Delay SW 1,2			
00	01	10	11
SEQ 1 6 Sec	15 Sec	1 Min	2 Min
SEQ 2 3 Sec	6 Sec	9 Sec	15 Sec
SEQ 3 3 Sec	6 Sec	9 Sec	15 Sec
SEQ 4 3 Sec	6 Sec	9 Sec	15 Sec

System Link		
Master	Slave 1	Slave 2
SW 3 0	1	1
SW 4 0	0	1

EVS (Extreme Voltage Shutdown)	
SW 5 0	Auto Reset
SW 5 1	Manual Reset

IN THIS EXAMPLE  
DIP SWITCH 1 & 2  
ARE SET FOR 01

**ECS-204 – REAR VIEW**



EMERGENCY POWER DOWN  
TO FIRE ALARM SYSTEM

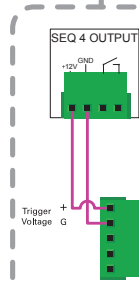
**SEQ 1**  
SEQ 1 POWERS ON WHEN  
UNIT IS TURNED ON

**SEQ 2**  
POWERS ON 15  
SECONDS AFTER  
SEQ 1

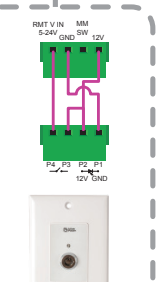
**SEQ 3**  
6 SEC  
AFTER  
SEQ 2

**ALWAYS  
ON**

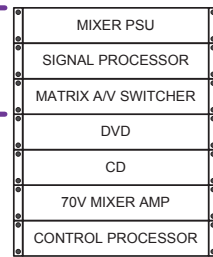
9FT 12 GAUGE CORD  
WITH NEMA 5-20P TO  
DEDICATED 20A  
CIRCUIT



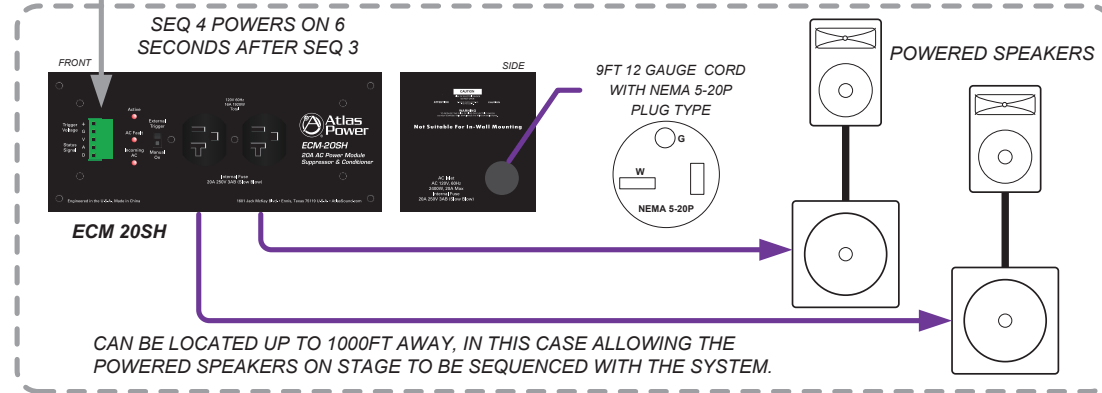
1000 FT  
MAX  
22-GAUGE



**WPD-KSWCC**



**EQUIPMENT RACK AT  
HOUSE MIX POSITION**



CAN BE LOCATED UP TO 1000FT AWAY, IN THIS CASE ALLOWING THE  
POWERED SPEAKERS ON STAGE TO BE SEQUENCED WITH THE SYSTEM.

- LINE COLOR KEY**
- LINE LEVEL AUDIO SIGNAL
  - LOUDSPEAKER LEVEL
  - CONTROL SIGNAL
  - MIC LEVEL AUDIO SIGNAL
  - VIDEO
  - GROUND
  - 120VAC



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

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### 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 illustrates a Front of House system rack containing the main mixing console, signal processors, matrix A/V switcher, media player, and 70V mixer amplifier all plugged into an ECS-204 power sequencer. Additionally, the main on-stage powered speakers are connected to a single remote ECM-20SH power module that is also plugged into the ECS-204. The ECS-204 "always-on" outlet is used to keep the system control processor powered at all times. The ECM-20SH module allows coordinated sequencing of a separate 20-amp circuit delivered to the on-stage powered speakers. In this example a WPD-KSWCC key switch is used to activate the ECS-204 and ECM-20SH. (See WPD-SWCC for push button switch version).

### Application Example Notes:

1. Both the ECS-204 and ECM-20SH include nine foot power cords with a 20A NEMA 5-20P AC plug. This requires a dedicated 20A NEMA 5-20 receptacle to be installed within nine feet of the desired location of equipment to be powered.
2. Before designing a managed power system consult with a licensed electrician or the project electrical consultant.
3. 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.



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