

HAMILTON

TECHNICAL BULLETIN

Support Number: 513-874-3733

Fax: 513-874-6232

Web Site: www.hamiltonsafe.com

Email: support@hamiltonsafe.com

Author:
Bob Morosic

Bulletin #
SB-1012

Verification:
Greg Hoop / Brian Miller

Date Issued:
2/29/2012

Product:
5000 Series Audio Systems
with 5501 Series Consoles

Date Revised:

Subject: **5000 Series Audio System Cable E0680**

All Hamilton Dealers,

The following guidelines are being provided to assist dealers in purchasing audio cable that meets current requirements. It is **HIGHLY RECOMMENDED** to use Hamilton cable (part #E0680) from the audio matrix to the lane. This special cable contains a 16AWG twisted pair for the speaker, a 20AWG twisted pair for the call button and a 20AWG twisted, shielded pair for the microphone.

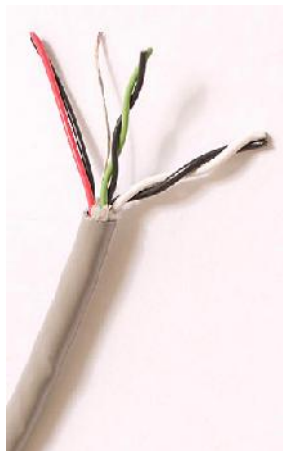
Audio cable requirements for 5000 series audio systems are:

- The MIC wires must be a SEPARATE shielded pair with it's own drain wire and should not be connected in any way to the wire pairs used for the speaker and call button.
- The MIC shield (drain wire) must be connected ONLY at the audio matrix lane connector (terminal 7) and nowhere else. The shield must be cut off and taped at the remote end to avoid touching any metal surface.
- If the cable has multiple shielded pairs (each with it's own drain wire) only connect the drain wire for the mic pair to the matrix. The other drain wires must be cut off and isolated.
- Do not use cable with multiple shielded pairs that only has a single drain wire for all pairs.
- Do not use cable with an overall shield.
- The speaker pair must be 16 AWG for cable runs up to approximately 180 feet. 18 AWG is acceptable up to approximately 110 feet. Using smaller wire gauge for the speaker will require the speaker pot on the matrix to be set too high which can cause undesirable artifacts in the audio.
- Another option for audio cable is to use Category 5 cable (5E & 6 are also acceptable) for distances up to 1000 feet. Using this type of cable requires the CAT5 Lane Speaker Driver Kit (E0958-KIT). Power (120VAC) must be available at the lane for this option. This kit can also be used to extend the length of standard E0680 audio cable to a maximum of 1000 feet.

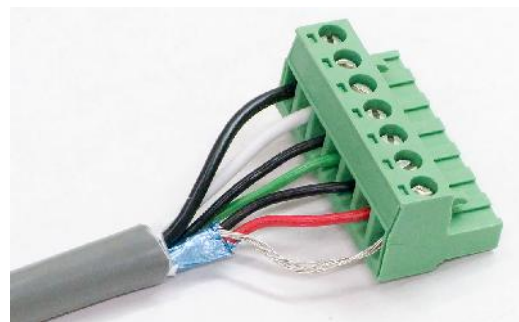
List of the common wiring mistakes that may contribute to poor or erratic performance of the audio are:

- Using less than 6 conductors and combining the grounds for the speaker, MIC, and/or call-tone.
- Using cable that does not have a separate shielded pair for the MIC signal.
- Using cable that does not have a shield on the MIC signal and/or not connecting the MIC shield ONLY at the audio matrix (the shield cannot be connected at both ends).
- Using cable with just an overall shield.
- Using cable that has 3 individually shielded pairs and tying all the shields together.
- Replacing an older (or competitive) audio system and just assuming the existing cable will be adequate for the new equipment. (See the requirements above.)

Tech Support - Please call 1-877-236-0245 for technical support on Hamilton Air / Greyfield drive-up audio/video products.



E0680 Audio Cable



E0680 with Matrix Lane Connector