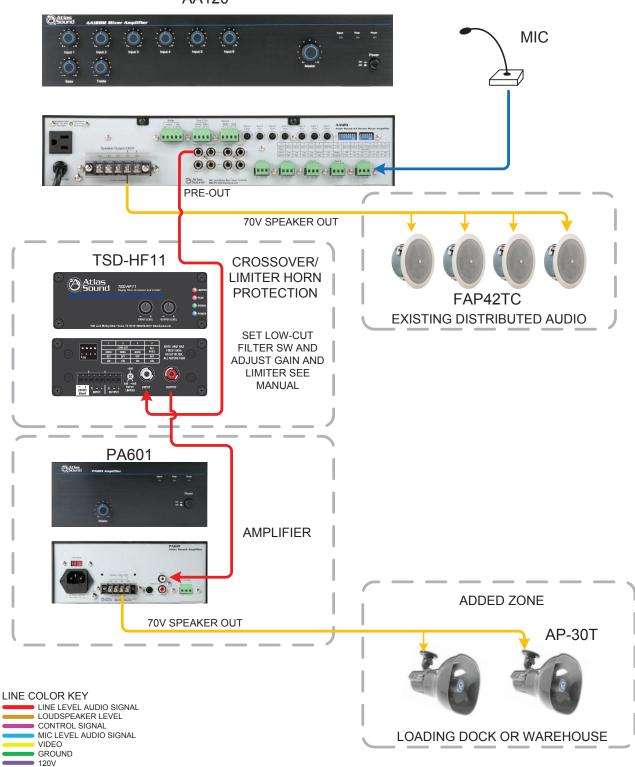


Example of Horn Protection in a Zone 2 from an AA Mixer Amp

AA120





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Overview:

This example illustrates how to use the TSD-HF11 Crossover/Limiter for speaker protection in a secondary (Zone 2) horn paging system.

Application Example Description:

When using paging horns in any application, damage can easily occur to the horn driver if the audio signal is not properly crossed over using a high pass filter (low cut filter) or if the power from the amplifier is too great for the driver to handle. The TSD-HF11 is the ideal solution to protect a horn from these two common failures because it incorporates a crossover and limiter. In this example the TSD-HF11 is being used in a secondary or zone 2 paging system in conjunction with an existing BGM system using the Pre Out of a mixer amplifier to feed a separate amplifier powering the paging horns.

Benefits:

- Cost Effective Solution
- Excellent Horn Protection
- Easy to Install and Configure

Application Example Notes:

- Set the high pass filter at a frequency just above the lower operating range of the horn-driver combination. This will remove
 unnecessary low frequency energy that can cause distortion and damage to the driver. Set the limiter to a position that limits the signal
 to the amplifier therefore limiting the output voltage from the amplifier to an acceptable level for your application and a safe level for
 the horn driver.
- 2. This illustration uses the Atlas Sound AA120 but any amplifier with an audio Pre Out can be used in this application.
- 3. Any amplifier can be used as long as the total power of the amplifier does not exceed the maximum power of the attached speakers/horns needed to complete the design. A good rule of thumb is to allow 30% amplifier head room in the amplifier power.
- 4. The AA120 has several features to consider during setup. Always read the manual to have a complete understanding of the unique benefits of the AA120.
 - Pre-out is POST-low cut filter (if applied) and EQ. The level will change with the 70V out and pre-out when using the level controls.
 - When using a PRE-low cut filter and EQ signal, consider using Tape Out or Line Out where the level control is fixed.
- 5. Before installing the TSD-HF11 know the following:
 - Operational frequency response of the speaker(s) being used. Select the appropriate corresponding low cut filter on the TSD-HF11.
 - Set the maximum input level to the amplifier via the TSD-HF11 output limiter in order not to damage the speakers by overpowering them.
- 6. The TSD-HF11 can be inserted anywhere in an existing 70V speaker level circuit by using a TSD-TXHL (speaker level to line level converter). See other application drawings.

