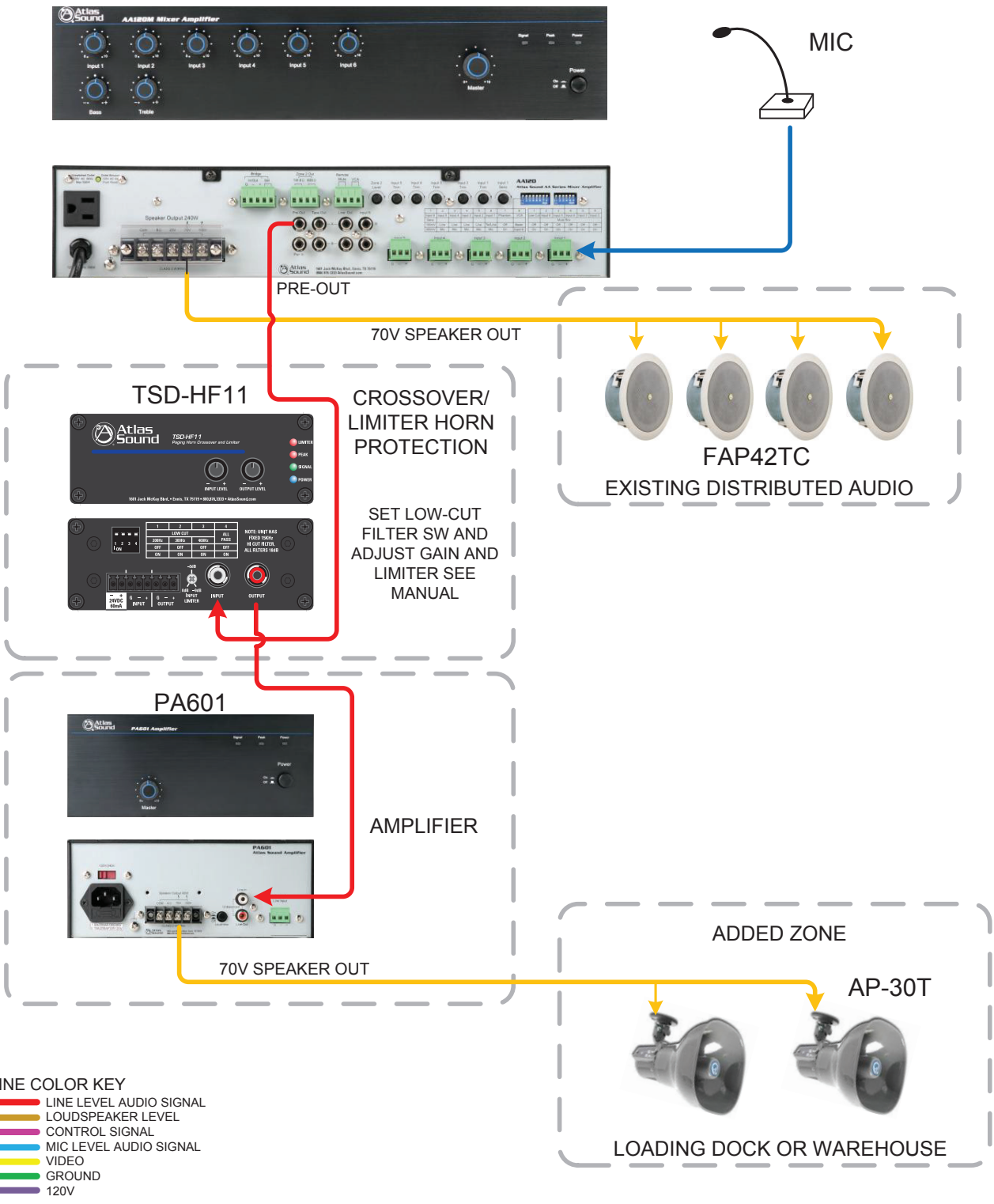




Example of Horn Protection in a Zone 2 from an AA Mixer Amp

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:

1. 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.



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