

# HOT SHEET

FEBRUARY • 2006

## SymNet | Network Audio Solutions

### Tech Tip

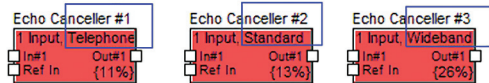
#### A Quick Echo Cancelling Overview

The new Acoustic Echo Cancelling modules bring a new and exciting technology to SymNet. These modules are used for the tele-conferencing installations and integrate with Hybrid technologies from other manufacturers. We will discuss Hybrid integration in next month's SymNet Tech Tip.

#### Module Resolutions

These modules offer 3 resolutions to help manage the DSP resources in a SymNet design:

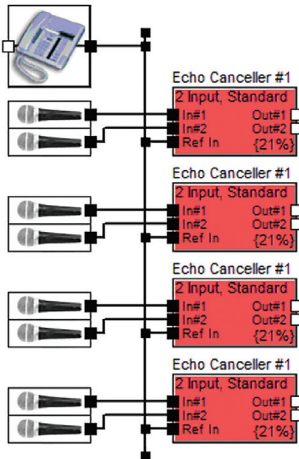
1. Telephone: Operates from 20 Hz - 3.6kHz
2. Standard: Operates from 20 Hz - 6.2 kHz
3. Wideband: Operates from 20 Hz - 20 kHz



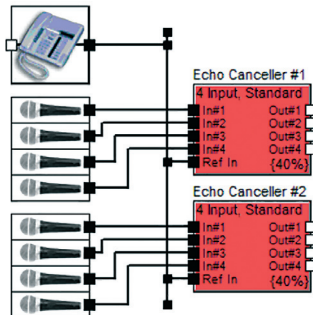
#### Original SymNet versus Express AEC modules

Our goal was to allow for 8 channels of 'Standard' echo cancelling for a DSP unit. The implementation for the 8x8 DSP (Original SymNet) is different than for the Express line of products. The 8x8 DSP will require four 2 channel modules of Standard echo cancelling in the design while the Express requires two 4 channel modules to achieve the same end.

8x8 DSP (Original SymNet)



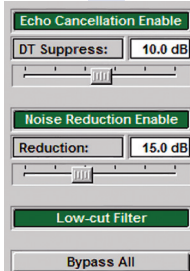
Express DSP (stand-alone and Cobra)



#### A few details about the SymNet Acoustic Echo Cancelling Module

The first thing to note is that 'Single Talk Suppression' is automatically set to its maximum value of 60 dB of suppression. The suppression adjustment in the module is DT Suppress or 'Double-Talk' suppression. This parameter adjusts the suppression when parties on both ends of the line are speaking at the same time.

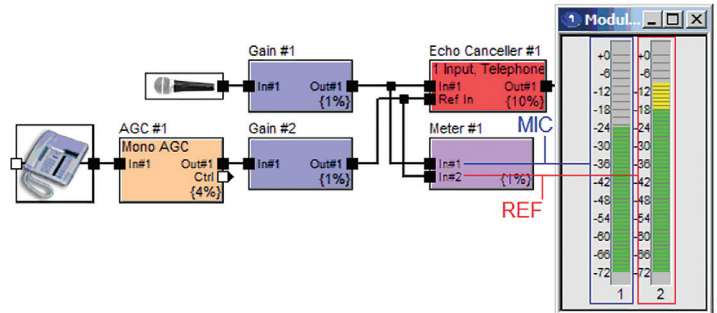
The Noise reduction algorithm provides up to 40 dB of background noise reduction, with minimal speech distortion at up to 20 dB.



The Low-cut filter engages a 100 Hz filter across the Inputs (but not REF Inputs).

#### Input Level Recommendations

The reference signal input level should be higher than the microphone input level when the reference signal is present for optimal system performance. Below is a diagram illustrating this:



More details concerning the SymNet AEC technology can be accessed through the SymNet Help file in the SymNet Designer software.

## Featured Install

### SymNet Delivers Zone-to-Zone Coverage in Oregon State University's Reser Stadium

Of all the project types that AV systems integrators face, sports stadiums are clearly one of the most daunting. The sheer physical size can test the design and installation skills of the most seasoned integrator. (PDF document readers with an internet connection may click on the photo.)



Please call us or contact your local Rep for details!

**Symetrix, Inc.**

6408 216th St. SW

Mountlake Terrace, WA 98043 USA

Tel: +1 (425) 778-7728

Fax: +1 (425) 778-7727

sales@symetrixaudio.com

# SymNetAudio.com