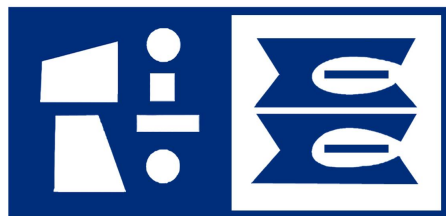


Singapore Sportshub



Vincent Tan



ELECTRONICS & ENGINEERING PTE LTD

Who We Are

We are one of the leading System Integrators, consultants and suppliers in the professional sound, AV, cinema, LED and cinema industries in Singapore, Malaysia, India, Indonesia and Brunei, representing some of the world's most prestigious and reliable professional audio brands.



Who We Are

**We also have an extensive
Distribution Sales Network
representing various Prestigious and
Industry Leading brands in Singapore,
Malaysia, India, Indonesia, Brunei and
Vietnam.**





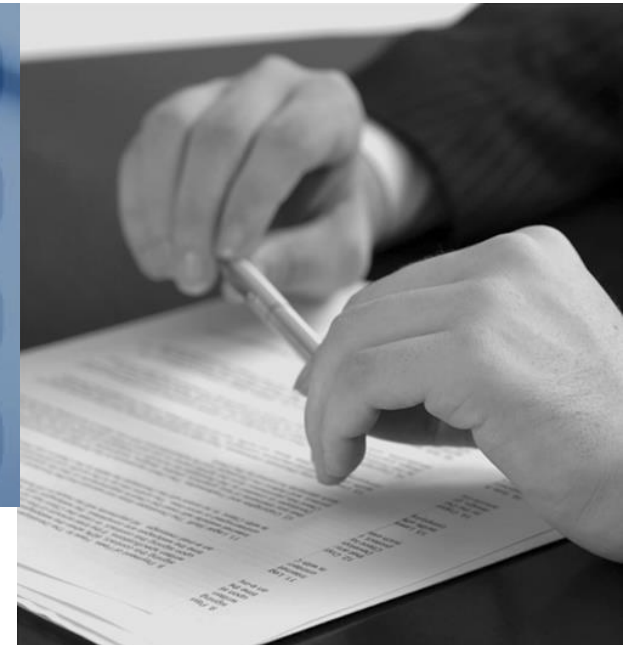
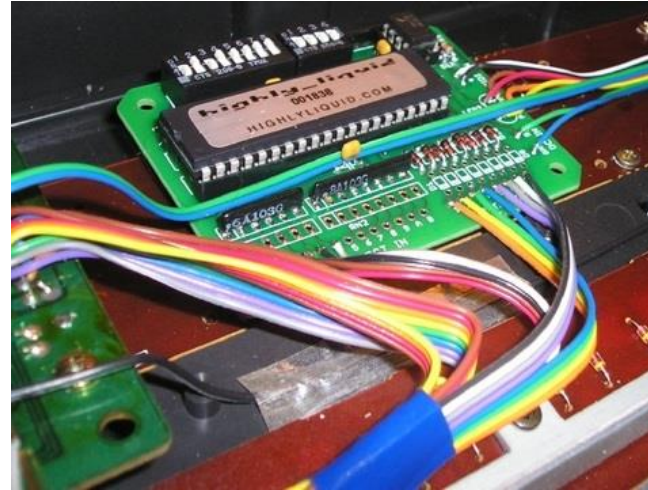
- ▶ Professional sound reinforcement systems
- ▶ 3D Digital Projection Systems
- ▶ Cinematographic projection equipment and theatre supplies
- ▶ LED display and LED products
- ▶ Audiovisual, IT and technology convergent products
- ▶ Audio conference and simultaneous interpretation systems
- ▶ Studio recording / video projection systems
- ▶ Stage and ambient lighting systems
- ▶ Stage draperies, machineries and equipment



Our Services

We provide:

- ▶ Consultation
- ▶ System Design
- ▶ Installation
- ▶ Servicing of Professional Sound and Cinema Systems
- ▶ IT / AV Integration and Networking Systems
- ▶ Professional Sound System



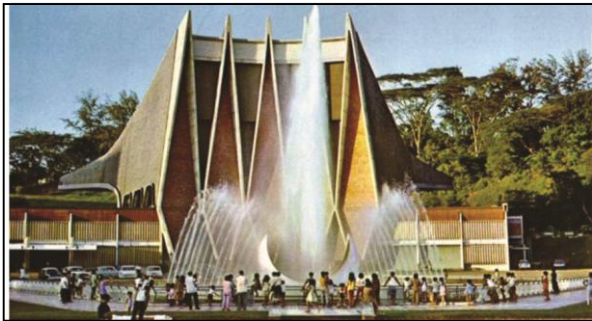
E&E and Singapore

A Shared History of Success

World Class Projects

National Theater

1963



Kallang National Stadium

1973



Singapore Indoor Stadium

1989



University Cultural Center

1993



Esplanade – Theaters By the Bay

2002-2004



Marina Bay Sands

2010-2012



E&E and Singapore

A Shared History of Success

World Class Projects

Gardens by the Bay

Star Performing Arts Centre

Victoria Concert Hall & Victoria Theatre

Singapore Sports Hub

Madame Tussaud's

Ng Teng Fong Hospital

2014-15

2014

2014

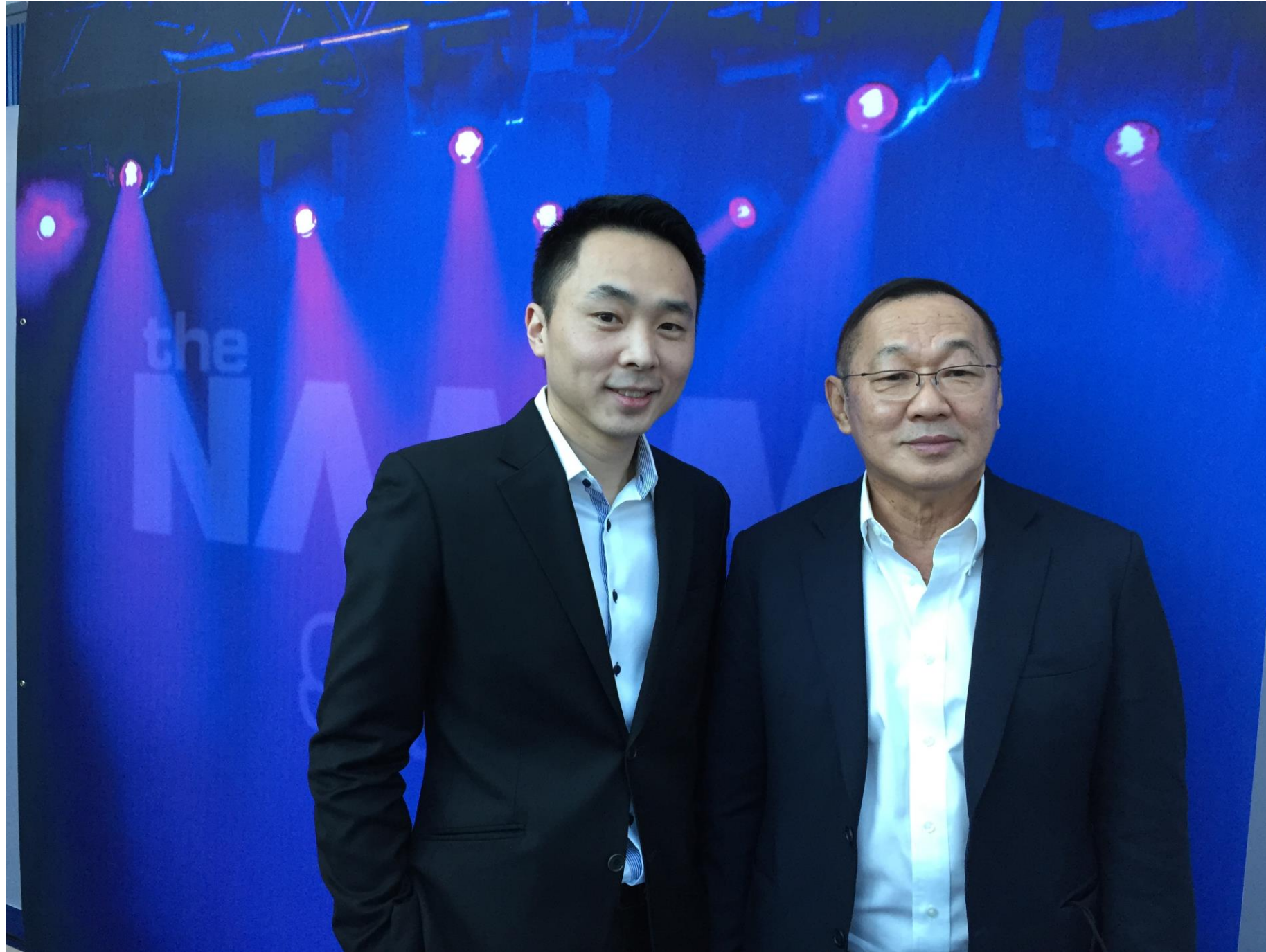
2014

2012

2012



E&E – Managing Directors



Mr Gary Goh and Mr Ronald Goh



Our Credentials

We have an overall staff strength of 125 people, with more than 80 people involved in project installations.

Most of these staff have been employed for more than a decade and have been involved in the previously mentioned installations.



E&E History



Sportshub History – Old Stadium



Design Criteria - Topology

- A network shall be dedicated to the distribution of audio to the Event Sound System using network switches connected together in a resilient optical fibre network topology.
- The audio distribution protocol is proposed as being AVB (IEEE 802.1 AS / Qat / Qav / BA) compliant network based audio distribution protocol.
- This protocol has been selected for its ability to synchronise data, guarantee data transfer latency and integrity, specifically for digital audio.



Design Criteria – Audio Performance

- The request called for nominal/peak SPL of 95 dBA/105 dBA, and this system delivers 98 dBa/108 dBa.
- Coverage at 4 kHz was requested to be +/- 6 dB and this system is +/- 3 dB at 95% of seating locations and +/- 4 dB at 100% of seating locations.
- Overall system response was requested to be +/- 6 dB and this system is +/- 3 dB from 30Hz to 15 kHz



Sportshub Overview



National Stadium (NST)

Multipurpose Indoor Arena (MPIA)

Aquatic Centre (AQC)

Water Sports Centre (WSC)



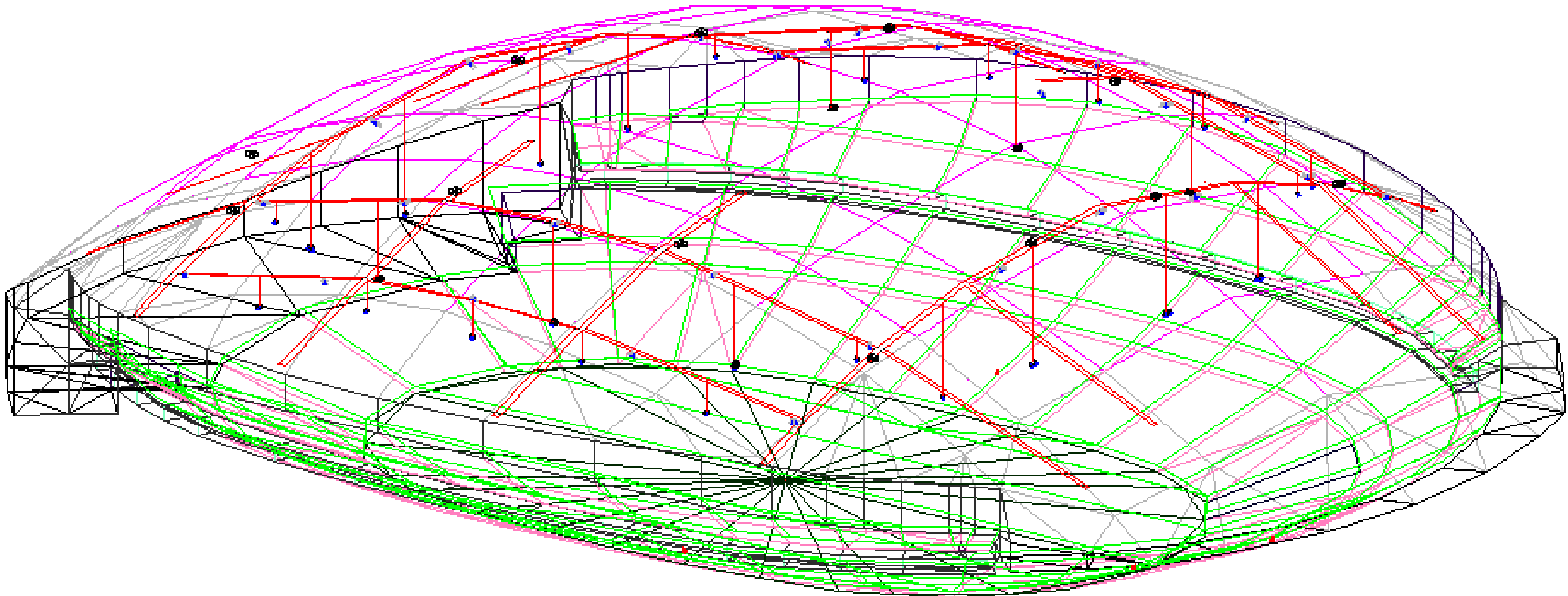
National Stadium – Inside view



National Stadium – Inside view



NST Speaker Positions

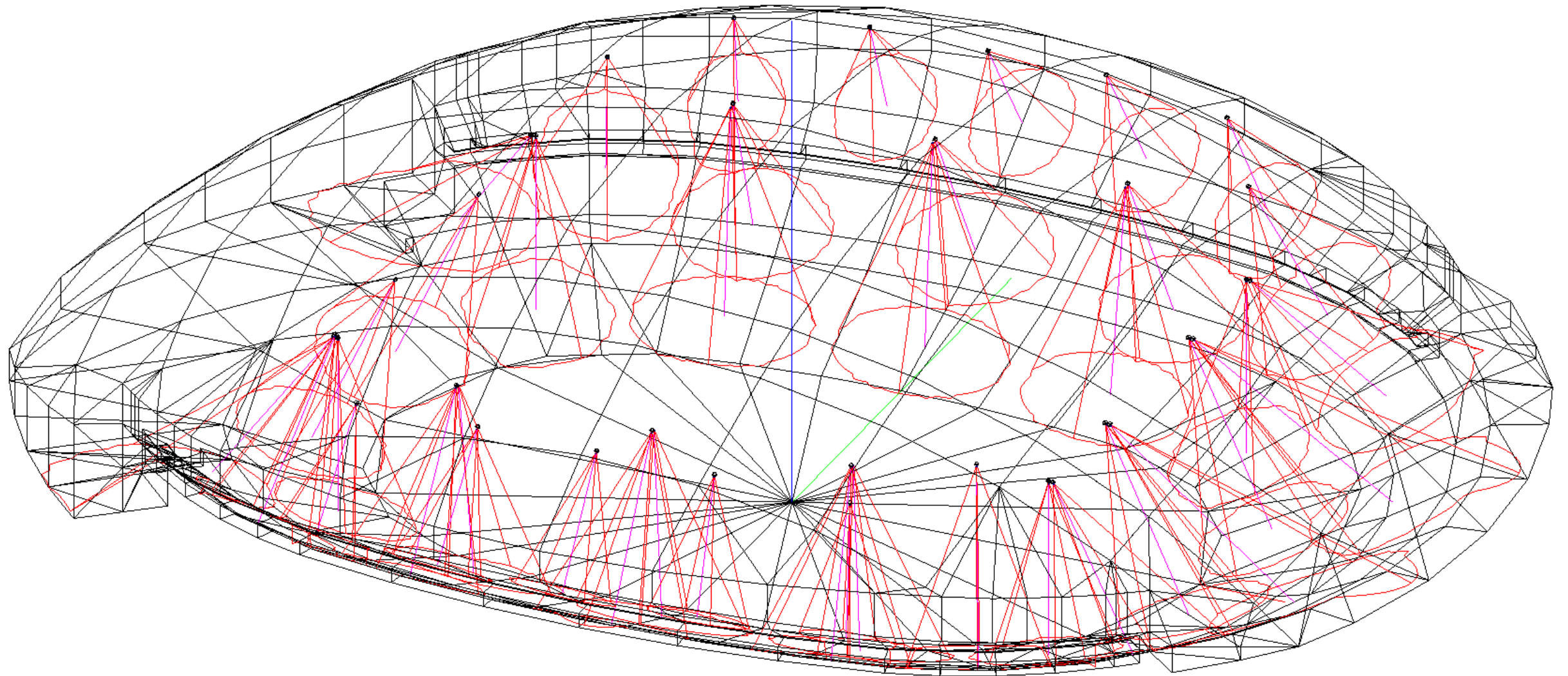


Based on distance of speakers mounting positions to audience seats to choose different type of speaker with specific dispersion angle.

Speaker type EAW MQX (6pcs), QX566, QX564, QX544 (35pcs), SB528zP(48pcs)



NST Speaker Coverage simulation



3D Perspective

(c) EASE 4.3 / SSH NST EAW QX rev 4 / 21/6/2013 6:55:22 PM / jolly Proaudio Broadcast Engineering Ltd. ZM



NST Speaker specification



QX (bi-amp power speaker) - 35pcs:

Transducer:

LF 4x 12 in. cone;

MF 1x3.5 in. compression

HF 1x1.75 in bi-amp

LF: 2000W @ 2ohms 1000W@4ohm, (2x pairs)

Passive MF/HF: 175W@ 8ohm

Operating Range (-10 dB, Hz) 55 – 20k

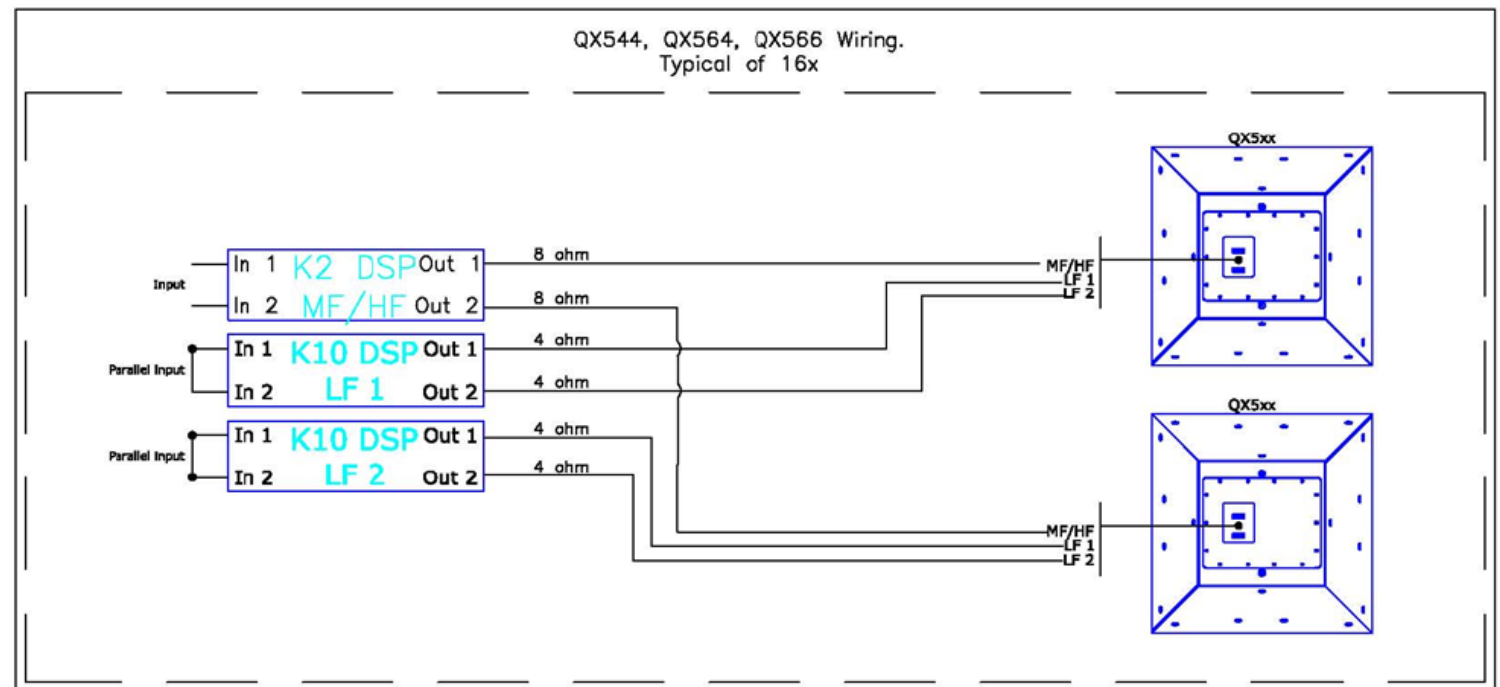
Axial Sensitivity (1W @ 1m, dB SPL)

LF: 103 MF/HF: 112

QX564 HxV 60° x 45°

QX544 HxV 45° x 45°

QX566 HxV 60° x 60°



NST Speaker specification



MQX (bi-amp power speaker) – 6 pcs:

MQX special design high power long throw

Transducer

LF 8x12 in cone;

MF2x3.5in Compression driver

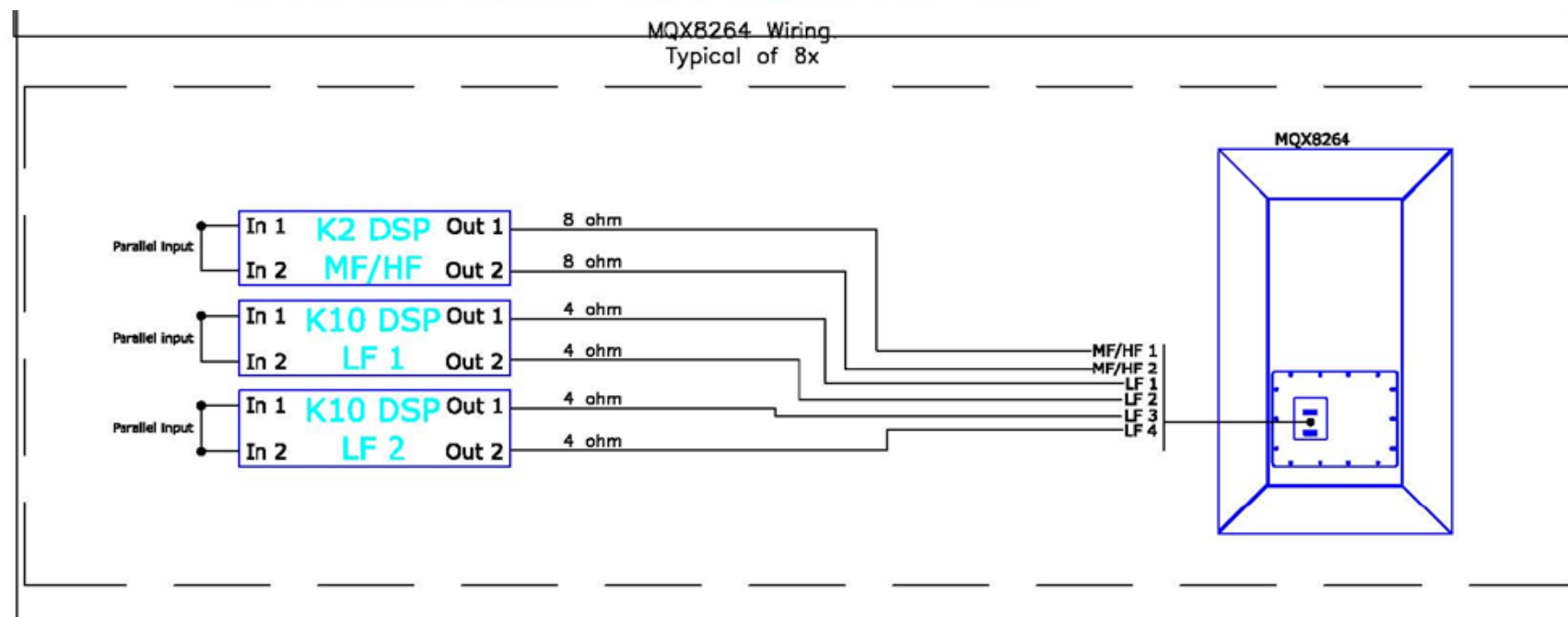
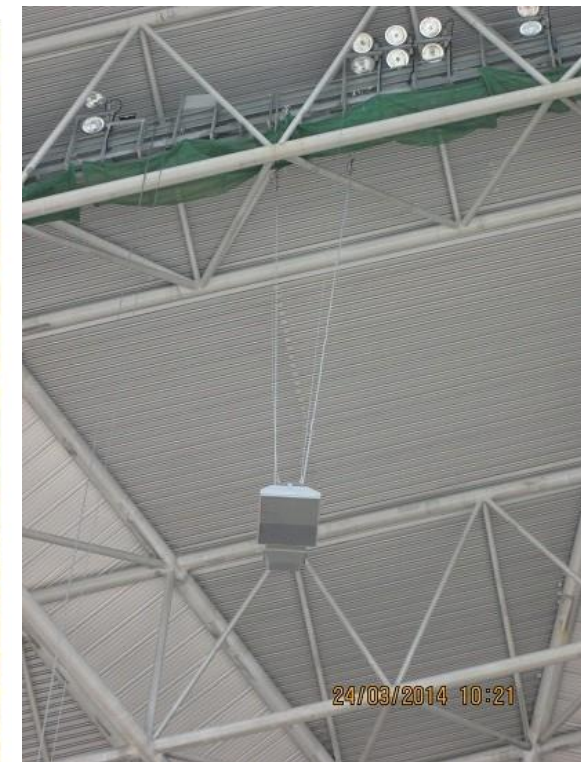
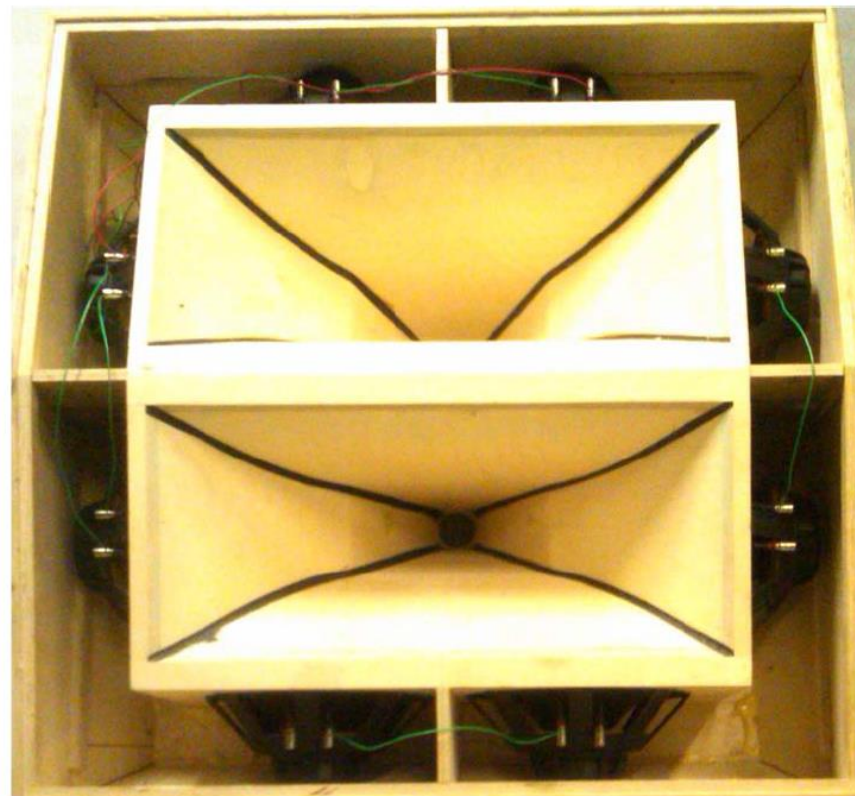
HF 2x1.75in Compression driver

Powering Mode: dual bi-amp

LF 2x2000W @2ohm, 1000W@4ohm, (4xpairs)

Passive MF/HF 2x175W@8ohm

MQX HxV 60° x 45°



NST Speaker specification



SB528zP-WP Dual Cardioid Array

SB528-WP(Subwoofer) - 48pcs:

Operating Range (-10 dB, Hz)

27 - 147

Axial Sensitivity (1W @ 1m, dB SPL)

Sub: 97 (Whole space)

Power Handling / Impedance (Watts @ Ohms)

Sub - Single Amp: 1400 @ 4

Sub - Parallel: 2x 700 @ 8

Calculated Maximum Output Peak (dB SPL)

Sub (whole space): 135

Calculated Maximum Output Long Term (dB SPL)

Sub (whole space): 129

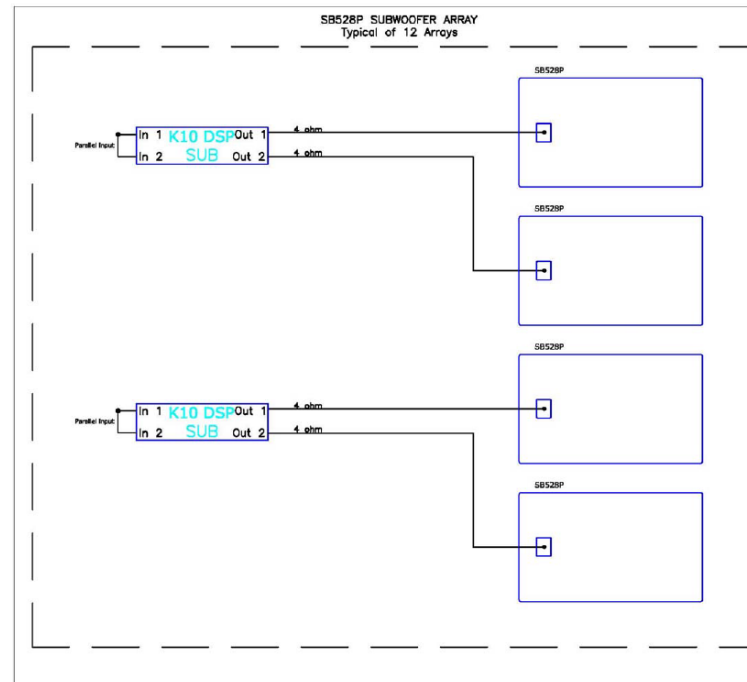
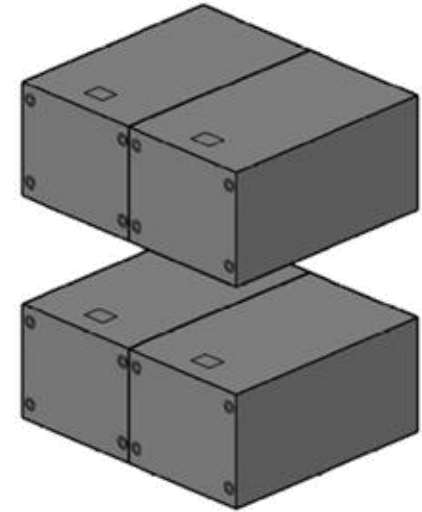
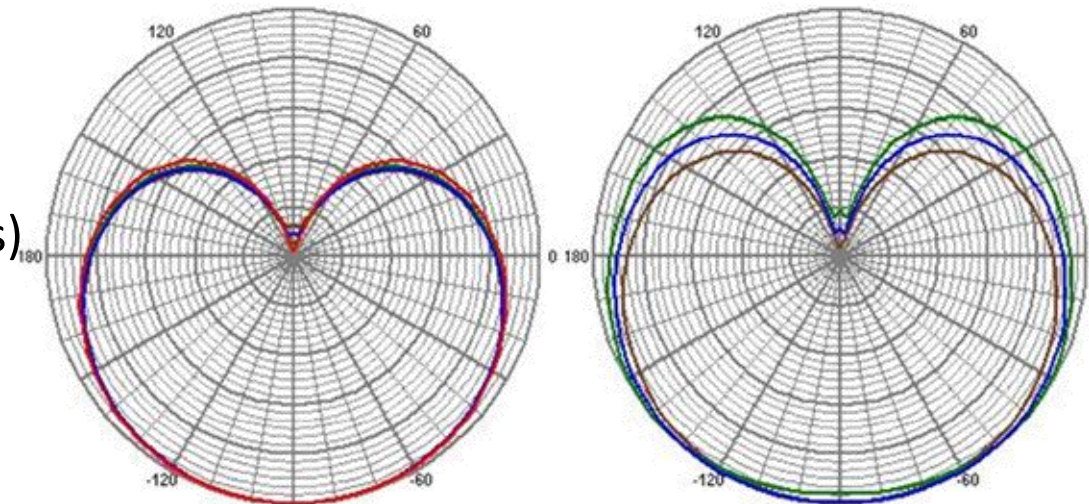
Subsystems

LF: 2x 18-in cone, vented



32 Hz
40 Hz
50 Hz
63 Hz

80 Hz
100 Hz
125 Hz



NST Power amplifier specification



K10 DSP+AESOP – 26pcs

2-Channel High Performance Power Amplifier regulated switch mode with PFC (Power Factor Correction)

2000W/8Ω 4000W/4Ω 6000W/2Ω Hi-Z 70V/100V power per ch.

Peak output voltage 200 V Peak output current 125 A with DSP + network link

K2 DSP+AESOP – 67pcs

2-Channel High Performance Power Amplifier regulated switch mode with PFC (Power Factor Correction)

1000W/8Ω 1950W/4Ω 2400W/2Ω Hi-Z 70V/100V power per ch.

Peak output voltage 140 V Peak output current 102 A with DSP + network link



All Areas Digital signal processor



Symnet Edge

Dante – a network audio bridge.

SymNet Edge connect to each other and to third-parties with Dante, a protocol that uses standard IT infrastructure.

Edge Frame:

The flexibility to accommodate multiple audio I/O cards: analog, AEC, telephone, AES-3 digital.

A universal DSP building block with an industry standard form factor.

Superior sound quality for voice and video conferencing applications.

Total: 92 units

NST – 43 units

AQC – 18 units

MPIA – 21 units

WSC – 4 units

Press – 6 units



All Areas network switch

NETGEAR®

Netgear GS728TS (80pcs)

Designed and Built for the network convergence

Optimized for integration and deployment of VoIP, IP
Surveillance and WLAN

Advanced L2 features and comprehensive IPv6



NST, AQC, MPIA Digital Mixer

ALLEN&HEATH

Allen Heath iLive-112 + iDR32

- Small footprint modular Surface
- 28 faders – 3 banks, 4 layers = 112 control strips
- Up to 32 audio sockets
- Port B loaded with Audinate-Dante card option
- Built in 3 port Ethernet switch
- MIDI and PL-Anet ports
- Word clock interface
- Socket LED indicators for 48V, Mute and PAFL
- iDR32 – 32 inputs 16 outputs



iLive Series



CD Player

TASCAM®

TEAC PROFESSIONAL
Tascam CD-500B CD player

- Slot-loading mechanism
- XLR balanced output
- XLR AES/EBU output
- All, single, random, A/B and 99-track program play
- Incremental play
- Track elapsed, track remain, disc remain time display
- Call function: return to last play start point
- Intro check
- Fade in/out (0 to 10 sec., in 0.5 sec. steps)
- Power on play
- Frame-accurate search
- Skip back play
- Relay play with multiple units through 1/8" relay in/out jack
- Index search (CD-DA discs) and directory search (MP3 discs)
- Mono output
- Resume
- Fader start / event start
- EOM (End of message)
- WAV file (up to 48kHz/16bit) and MP3 file (up to 320kbps VBR) playback
- Headphone output



Solid State Player

TASCAM[®]
TEAC PROFESSIONAL

Tascam SS-R200 Solid State Players

- Solid state recoding to any available Media (CF, SD/SDHC, USB Memory)
- One-rack-space compact design
- PS/2 or USB keyboard connection for file name edit, transport control, edit and flash start
- Multiple playback modes for situations requiring continuous, single, programmed and random playback
- Playback speed control without pitch change
- XLR balanced I/O, RCA unbalanced I/O, coaxial S/PDIF, or AES/EBU digital I/O



Wireless Microphone System

SHURE

Shure UHF-R Wireless

- UHF-R incorporates automatic frequency selection, transmitter sync and smart menu-driven system functionality for intuitive and fast setup.
- Up to 3080 selectable frequencies across a 77MHz bandwidth provide superior capability to respond to changing or unpredictable RF conditions.
- UHF-R Wireless features Shure patented Audio Reference Companding for crystal-clear sound beyond the limits of conventional wireless technology.



Wireless Microphone System

SHURE

Shure UHF-R Wireless

- UR2 with Beta58A HandHeld
 - Switchable RF power (10/50 mW country dependant)
 - Infrared transmitter sync
 - Bit-mapped backlit LCD
 - Ergonomic design
 - All-metal die-cast construction
 - Frequency and power lockout
 - 2 “AA” batteries (included) for more than 8 hours continuous use



Wireless Microphone System

Shure UHF-R Wireless

- UR1 with MX150
- Switchable RF Power (10/50mW, Region Dependent)
- Low Profile, Compact Design
- Frequency and Power Lockout
- Bit-mapped Backlit LCD Display
- 2 AA Batteries - Up to 8 hours Continuous Use
- Automatic Transmitter Setup
- Durable, Light-weight Magnesium Construction
- Removable Bodypack Antenna
- CommShield® Technology guards against interference from cellular RF devices and digital bodypack transmitters
- Matte black, sleek design for inconspicuous placement
- Multi-position tie clip allows for a variety of placement options and features an integrated cable management system for convenient cable dress with minimal handling noise
- Kevlar™ reinforced soft-flex cable design further reduces handling noise while providing superior flexibility for routing and placement
- Snap-fit, concise windscreen provides protection from plosives and wind noise with minimal visibility
- Legendary Shure quality, ruggedness, and reliability



Portable Mixer

MACKIE.

Mackie 1642-VLZ3

- 16 high-headroom line inputs (4 stereo pairs, 8 mono)
- Advanced DC pulse transformer RF rejection
- 60mm long-wearing logarithmic-taper faders
- 4 Aux sends, level, pan, -20dB/Solo and OL/Mute LEDs on each channel
- 4 stereo Aux returns, 8 Direct outs, 4 stereo Group/Bus outputs
- 3-band Active EQ with sweepable midrange on mono channels
- 4-band Active EQ on stereo channels
- 18dB/oct. 75Hz Lo-Cut filter on mic channels
- Control Room/Phones multi-input source matrix with separate level controls
- Balanced 1/4" inputs and outputs (except inserts)
- Rack-mountable design using optional rack ears
- Sealed rotary controls to resist dust and grime
- New Multi-Voltage power supply for worldwide use
- Rugged steel chassis



Portable Rack

Equipment

Mackie 1642VLZ3 16 channel Mixer

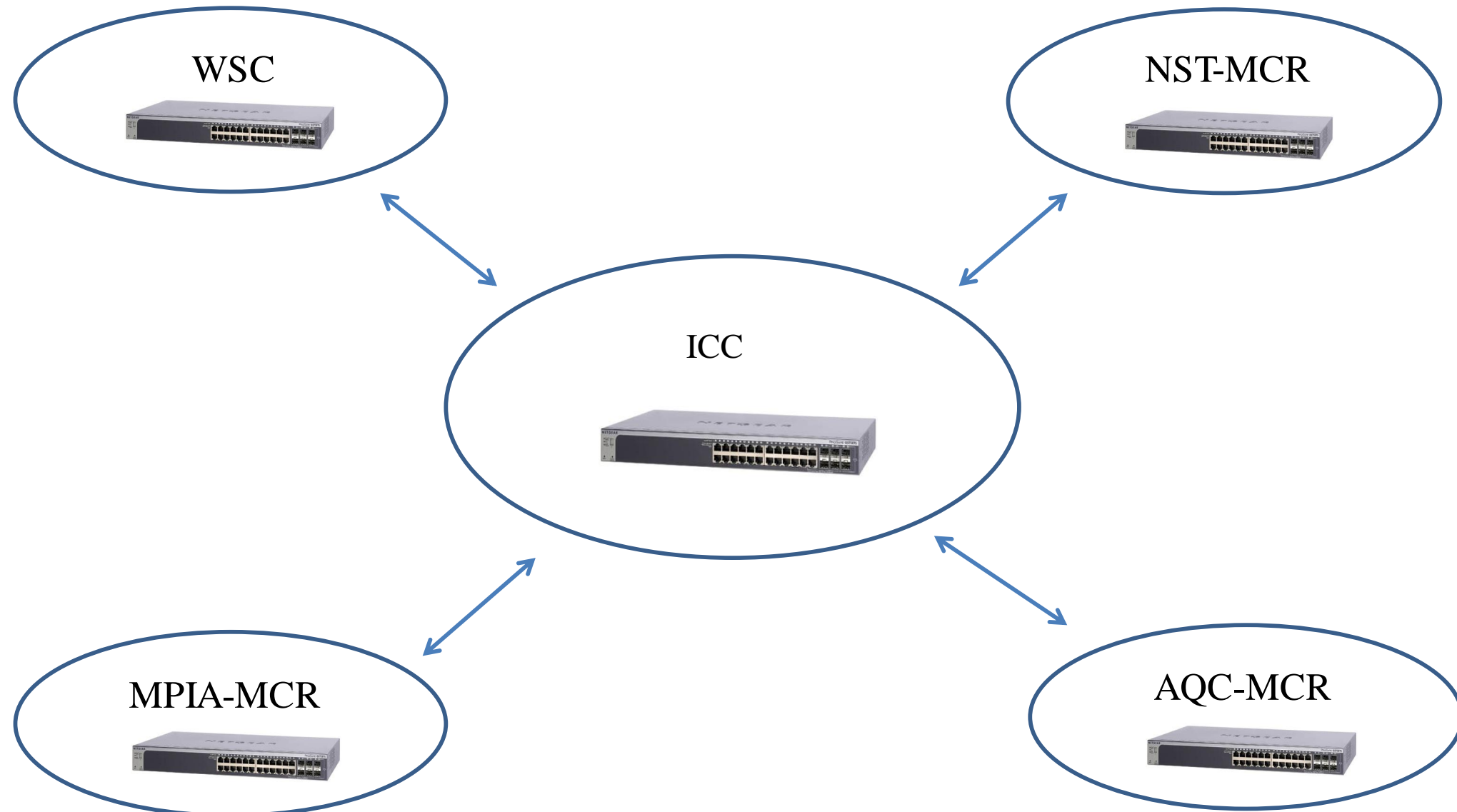
Shure UHF-R Wireless Microphone System
With 2 Handheld and 2 Beltpacks

Tascam CD500B CD Player

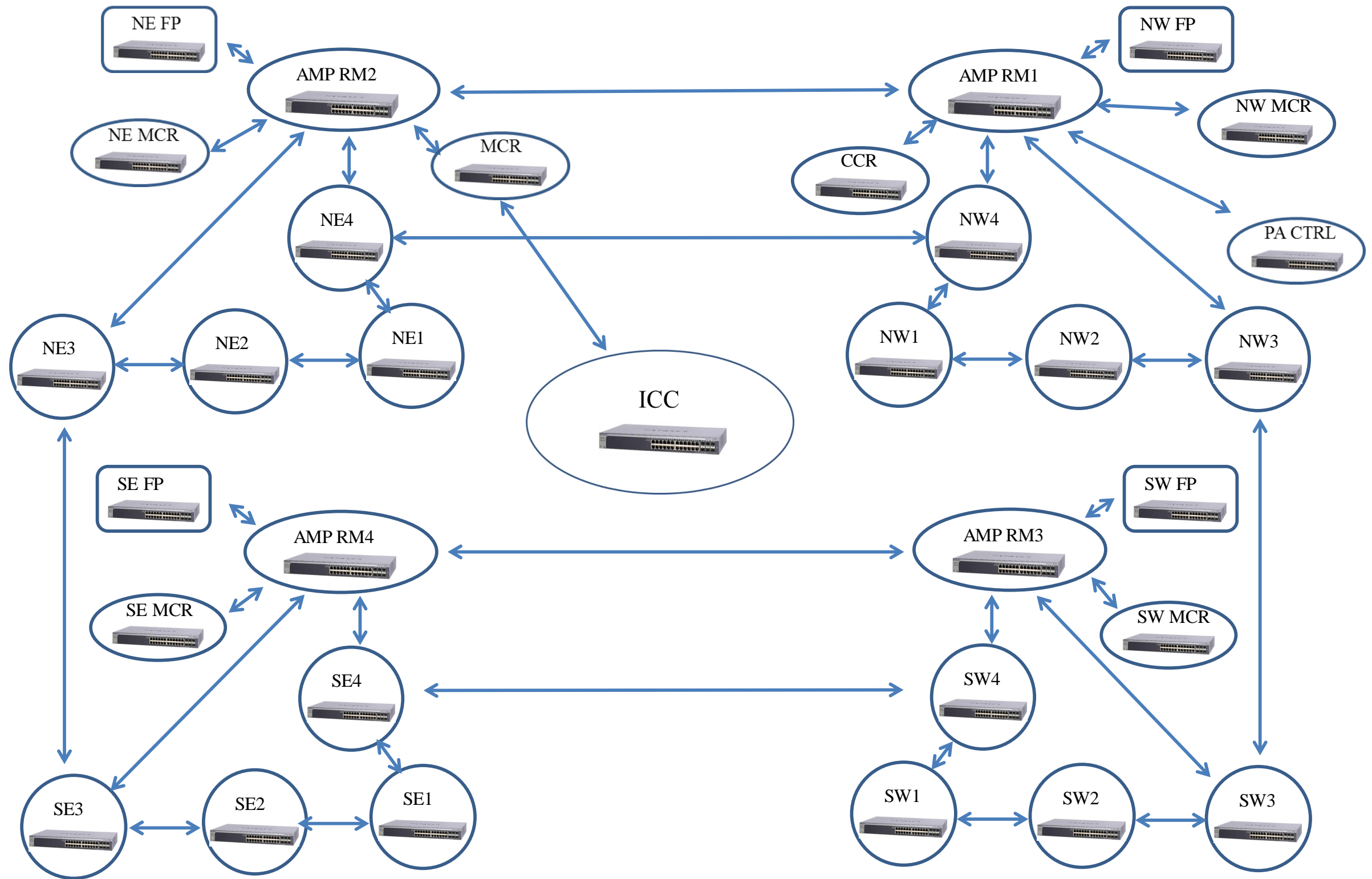
Tascam SS-R200 Solid State Player



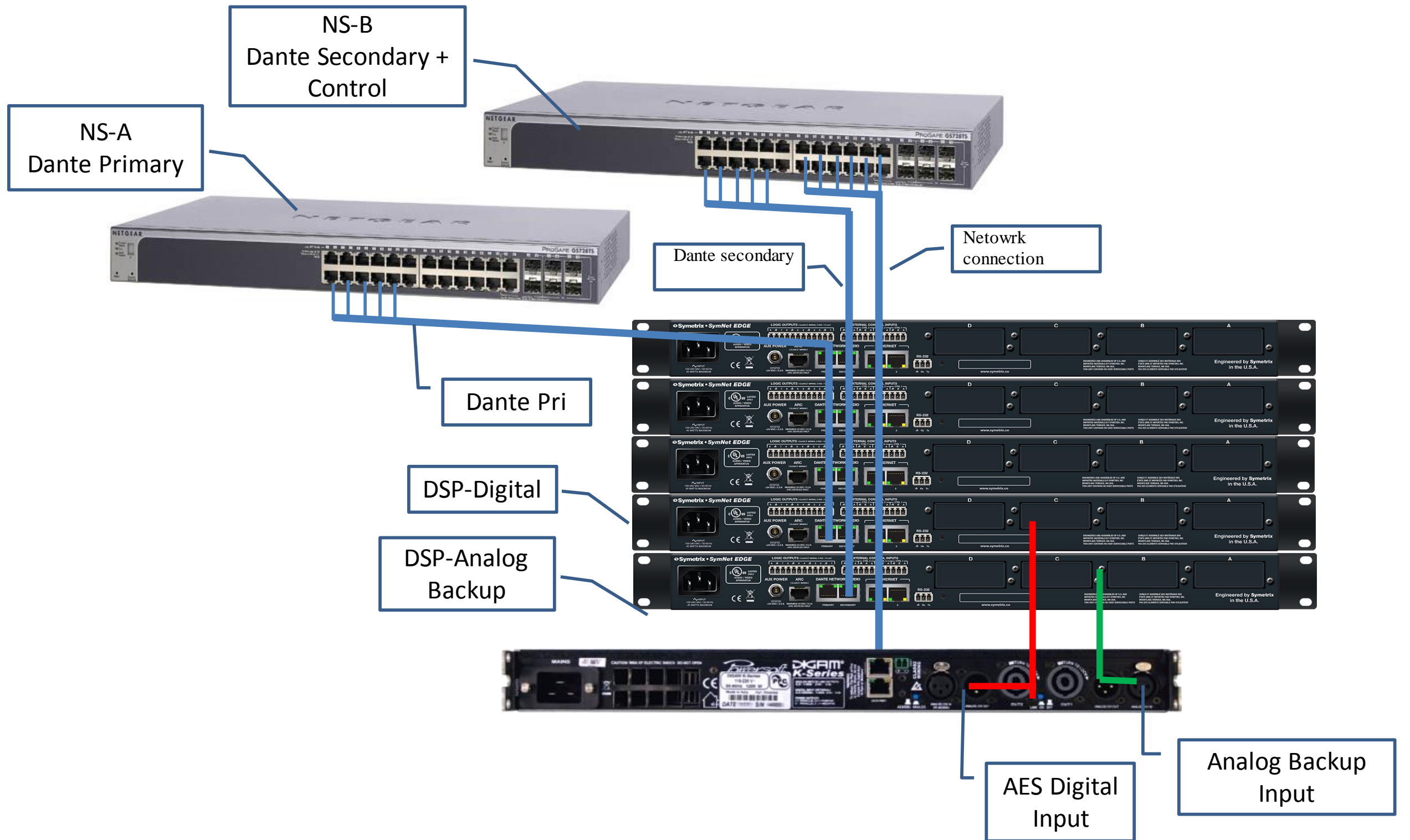
Site-wide fiber network links



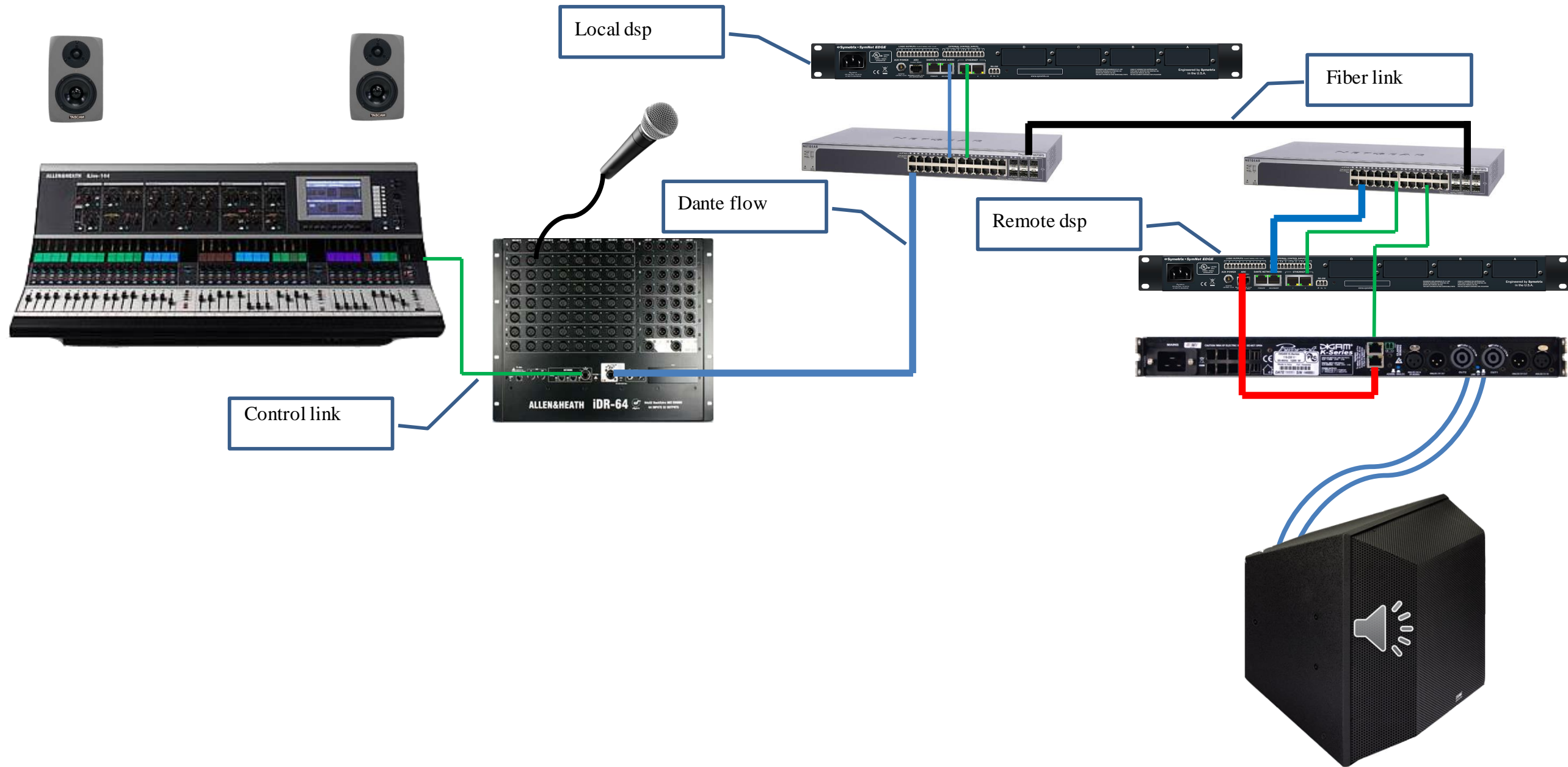
NST Fiber network topology



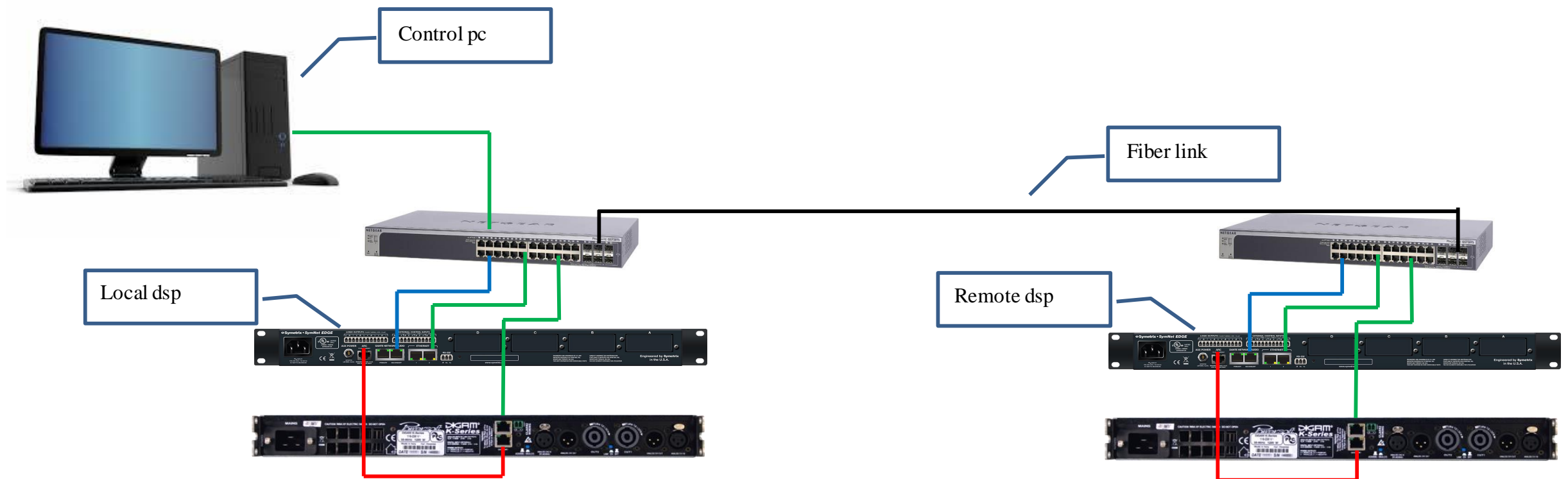
Dante & Control network



Audio Signal Flow



Control Signal Flow



Control software

- Symetrix symnet composer: program symetrix edge DSP, troubleshooting
- Symetrix symvue: user control interface, signal patch, system monitoring
- Powersoft Amonia: amplifier setting & troubleshooting
- Audinate Dante Controller: advanced monitoring & troubleshooting

System control & setting software

The screenshot displays a comprehensive control interface for a system, organized into a grid of control panels. Each panel represents a specific system unit and includes the following elements:

- Panel Headers:** Labels such as NST NW1, NST NW2, NST NW3, NST NW4, NST NE1, NST NE2, NST NE3, NST NE4, NST SW1, NST SW2, NST SW3, NST SW4, NST SE1, NST SE2, NST SE3, NST SE4, NST AMP-RMS (L6), NST FPS (L1), and NST CTRL-RMS.
- Input/Output Indicators:** Analog and Digital In/Out sections with status LEDs and numerical readouts.
- Control Elements:** Analog and Digital output sections with status LEDs and numerical readouts.
- Link To Buttons:** Blue buttons at the bottom of each panel, such as "Link To [SW2] [SW4]", "Link To [NE2] [NE4]", "Link To [SE2] [SE4]", "Link To [SW2] [SW4] [AMP RMS]", "Link To [SW1] [SW2]", "Link To [SW2] [SW3] [AMP RMS]", "Link To [SW1] [AMP RMS]", "Link To [SE2] [SE4]", "Link To [SE1] [SE2]", "Link To [SE2] [SE3] [AMP RMS]", "Link To [SE3] [AMP RMS]", "Link To [SW1] [SW2] [SW3] [SW4] [AMP RMS]", "Link To [FPS-001] [FPS-002] [FPS-003] [FPS-004]", and "Link To [CTRL-RMS]".

©Symetrix SymNet Composer

Company Name
 Street Address
 City, State Zip
 Country

Document Title
Document Number
Author
 Today's Date: February 06, 2018



System control & setting software

OFF-LINE

Unit: 'AQC RM1 DS-1'
Approx. 30% Used
Mute All Outputs F2

Selected Wire Audio (2) Diagnostics (1)

Speaker control dsp

- Dante audio signal receiving & distribution
- Signal split to AES digital & analog backup
- Individual speaker eq
- Individual & group volume control

Symetrix SymNet Composer



System control & setting software

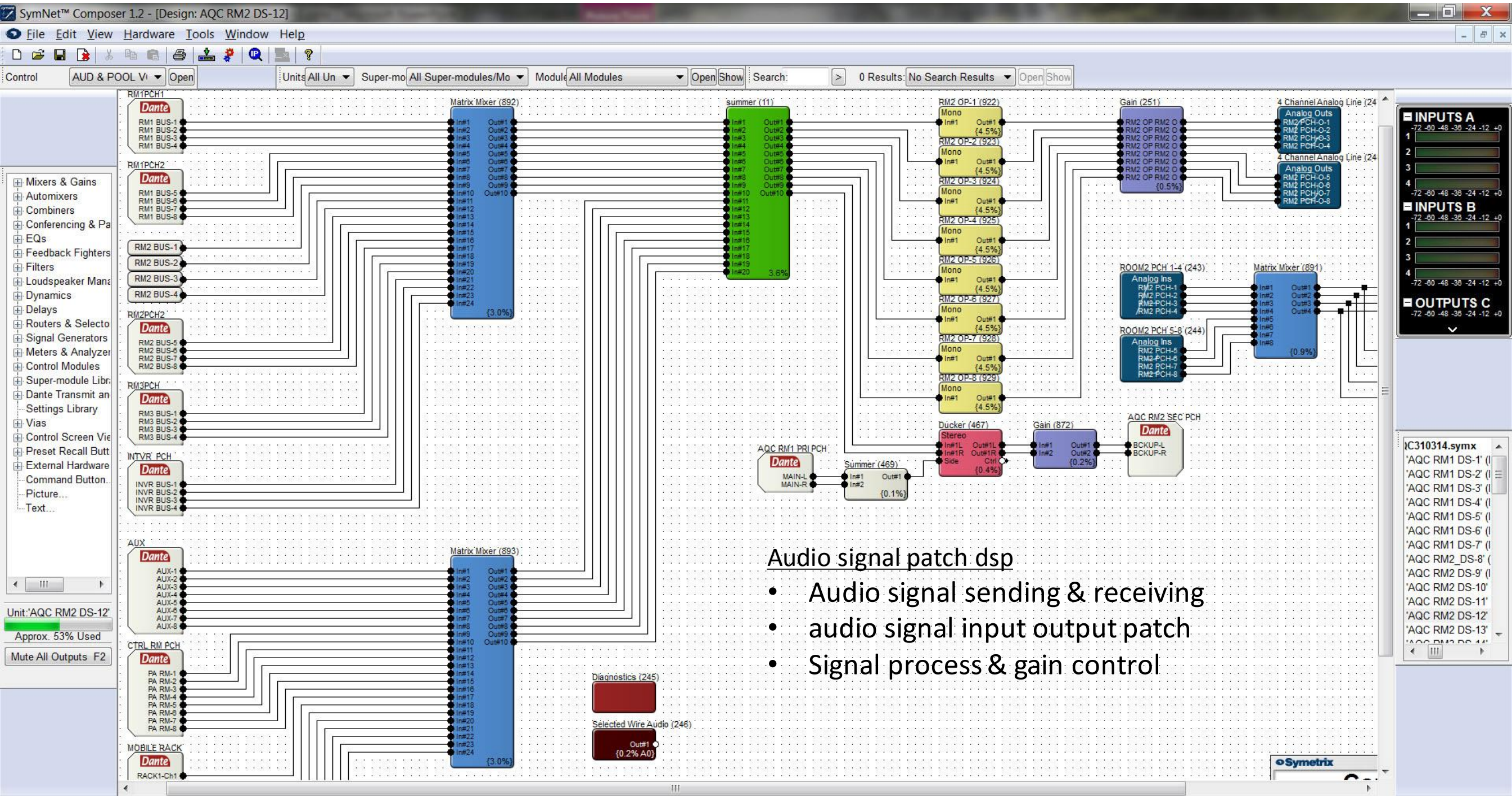
The screenshot displays the SymNet™ Composer 1.2 software interface. The main window is titled "Diagnostics" and is divided into four sections: Network, Power Supply, Thermal, and Control. The Network section shows fields for Name, IP, Mask, Gateway, DHCP (checked), Leased, and Server, with a "Connected" status indicator. The Power Supply section lists various voltage outputs (Main DC, Aux DC In, P.S. 1.0V to 17.0V) and a "Failed" status. The Thermal section includes Fan Speed, Temperature, Max Temp, Min Temp, and Avg Temp, with "Clear" buttons and a "Failed" status. The Control section shows RS-485, RS-232, and ControlNet, all with "Active" status. On the right, there are three "OUTPUTS" panels (A, B, C) with level meters. A file list on the far right shows "10314.symx" and various audio files. The bottom status bar indicates "Approx. 35% Used (Avg 18 units)", "Off-line", and "LAN IP Control". The Windows taskbar at the bottom shows icons for WSC, SSH, AQC, and SymNet.

Speaker control dsp

- Amplifier diagnostic supervision



System control & setting software



Audio signal patch dsp

- Audio signal sending & receiving
- audio signal input output patch
- Signal process & gain control



User control software

RM1, FP1 INPUTS CONTROL & BUS PATCH

RM1 Input Controls (Inputs 1-8):

- Level: +4 dBu
- 10 dBV
- 20 dBu
- 40 dBu
- 50 dBu
- Mute
- Phantom
- Invert
- +0.0 dB

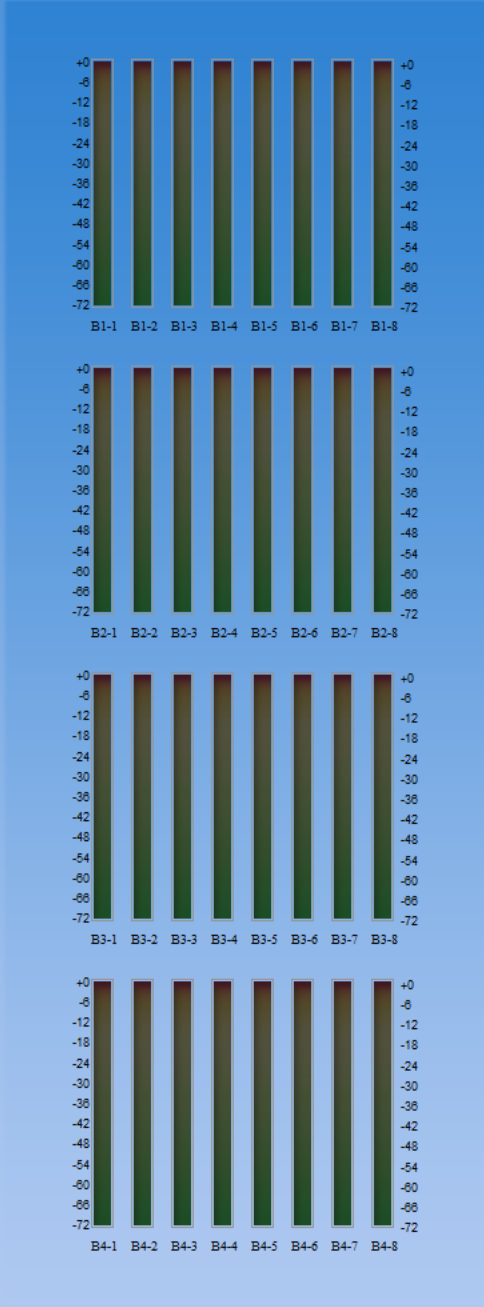
RM1 IP-1 to RM1 IP-8

NWFP1 Input Controls (Inputs 1-8):

- Level: +4 dBu
- 10 dBV
- 20 dBu
- 40 dBu
- 50 dBu
- Mute
- Phantom
- Invert
- +0.0 dB

NWFP1 IP-1 to NWFP1 IP-8

	RM1 BUS-1	RM1 BUS-2	RM1 BUS-3	RM1 BUS-4	RM1 BUS-5	RM1 BUS-6	RM1 BUS-7	RM1 BUS-8
MUTE								
RM1 IP-1								
RM1 IP-2								
RM1 IP-3								
RM1 IP-4								
RM1 IP-5								
RM1 IP-6								
RM1 IP-7								
RM1 IP-8								
FP1 IP-1								
FP1 IP-2								
FP1 IP-3								
FP1 IP-4								
FP1 IP-5								
FP1 IP-6								
FP1 IP-7								
FP1 IP-8								



Control Panel:

- Fire Mute
- NW - NE VOL CTRL
- SW - SE VOL CTRL
- RM1 OP & SPK PRI PCI
- RM2 OP PCH
- RM3 OP & SPK SEC PCI
- RM4 OP PCH
- NW FP1 OP PCH
- NE FP2 OP PCH
- SW FP3 OP PCH
- SE FP4 OP PCH
- PA CTRL OP PCH
- MCR OP PCH
- CCR OP PCH
- RM1, FP1 IP PCH
- RM2, FP2 IP PCH
- RM3, FP3 IP PCH
- RM4, FP4 IP PCH
- PA CTRL, MCR, CCR IP CTRL



User control software

RM1 DSP OUTPUTS & SPEAKERS PRIMARY PATCH

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8	1 L	1 R	1 C
MUTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 BUS-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM2 BUS-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM3 BUS-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM4 BUS-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8	1 L	1 R	1 C
MUTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACTRL IP-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCR IP-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCR IP-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUX-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fire Mute

NW - NE VOL CTRL

SW - SE VOL CTRL

RM1 OP & SPK PRI PCI

RM2 OP PCH

RM3 OP & SPK SEC PCI

RM4 OP PCH

NW FP1 OP PCH

NE FP2 OP PCH

SW FP3 OP PCH

SE FP4 OP PCH

PA CTRL OP PCH

MCR OP PCH

CCR OP PCH

RM1, FP1 IP PCH

RM2, FP2 IP PCH

RM3, FP3 IP PCH

RM4, FP4 IP PCH

PA CTRL, MCR, CCR IP CTRL



User control software

SW- SE SPEAKERS VOLUME CONTROL

The interface displays a semi-circular speaker layout with the following speaker types and positions:

- SE (South-East):** SE1, SE2, SE3, SE4 (UP, DN)
- SW (South-West):** SW1, SW2, SW3, SW4 (UP, DN)
- S (South):** S UP, S DN
- QX (Quadrant):** QX544, QX564, QX594, QX596
- SB (Subwoofer):** SB528
- MQX (Monitor):** MQX

Control panels for each speaker include:

- Mute button
- Volume slider (range: +0 dB to -72 dB)
- Invert checkbox
- Gain offset (+0 dB, +2.0 dB, +3.0 dB, +6.0 dB)

Right-hand sidebar functions:

- Fire Mute
- NW - NE VOL CTRL
- SW - SE VOL CTRL
- RM1 OP & SPK PRI PCI
- RM2 OP PCH
- RM3 OP & SPK SEC PCI
- RM4 OP PCH
- NW FP1 OP PCH
- NE FP2 OP PCH
- SW FP3 OP PCH
- SE FP4 OP PCH
- PA CTRL OP PCH
- MCR OP PCH
- CCR OP PCH
- RM1, FP1 IP PCH
- RM2, FP2 IP PCH
- RM3, FP3 IP PCH
- RM4, FP4 IP PCH
- PA CTRL, MCR, CCR IP CTRL

Bottom control buttons:

- Mute All Speakers
- Mute Delays
- Unmute Delays
- Unmute All Speakers



User control software

NW- NE SPEAKERS VOLUME CONTROL

The interface is titled "NW- NE SPEAKERS VOLUME CONTROL". It displays a central speaker layout diagram with various speaker types and orientations. Surrounding the diagram are numerous volume control sliders for each speaker, each with a "Mute" button and a dB scale from +0.0 to -72.0. The sliders are organized into groups for different speaker types: NE1, NE2, NE3, NE4, NW1, NW2, NW3, NW4, N, SB, and MQX. Each slider also has an "Invert" button. Below the sliders are three main control buttons: "Mute All Speakers", "Mute Delays", and "Unmute All Speakers".

On the right side, there is a vertical stack of control buttons:

- Fire Mute
- NW - NE VOL CTRL
- SW - SE VOL CTRL
- RM1 OP & SPK PRI PCI
- RM2 OP PCH
- RM3 OP & SPK SEC PCI
- RM4 OP PCH
- NW FP1 OP PCH
- NE FP2 OP PCH
- SW FP3 OP PCH
- SE FP4 OP PCH
- PA CTRL OP PCH
- MCR OP PCH
- CCR OP PCH
- RM1, FP1 IP PCH
- RM2, FP2 IP PCH
- RM3, FP3 IP PCH
- RM4, FP4 IP PCH
- PA CTRL, MCR, CCR IP CTRL



Aquatic Centre



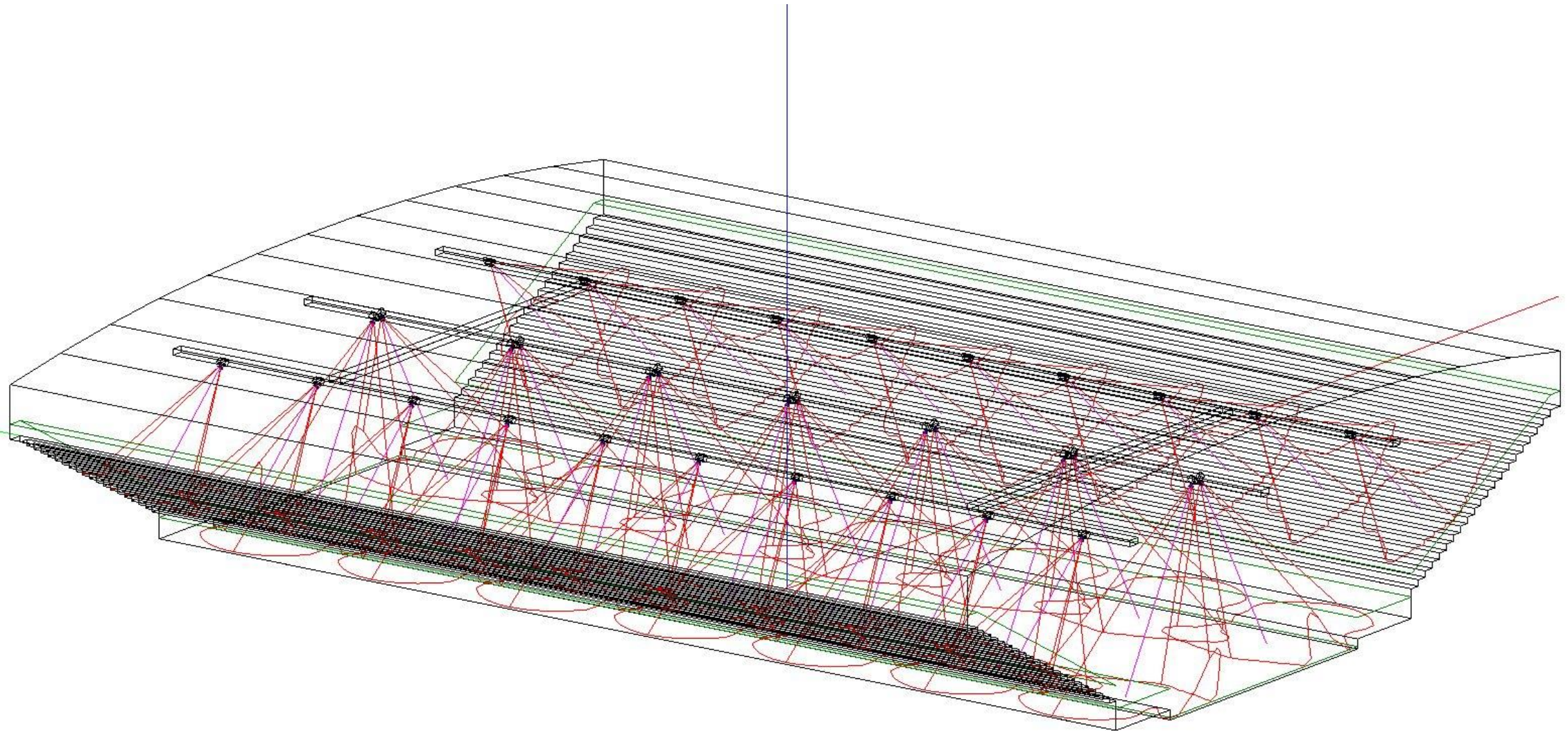
Aquatic Centre



Aquatic Centre



EASE speaker coverage prediction



3D Perspective

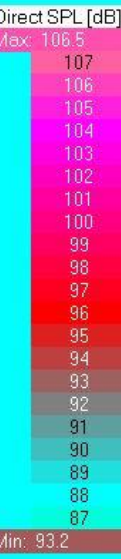
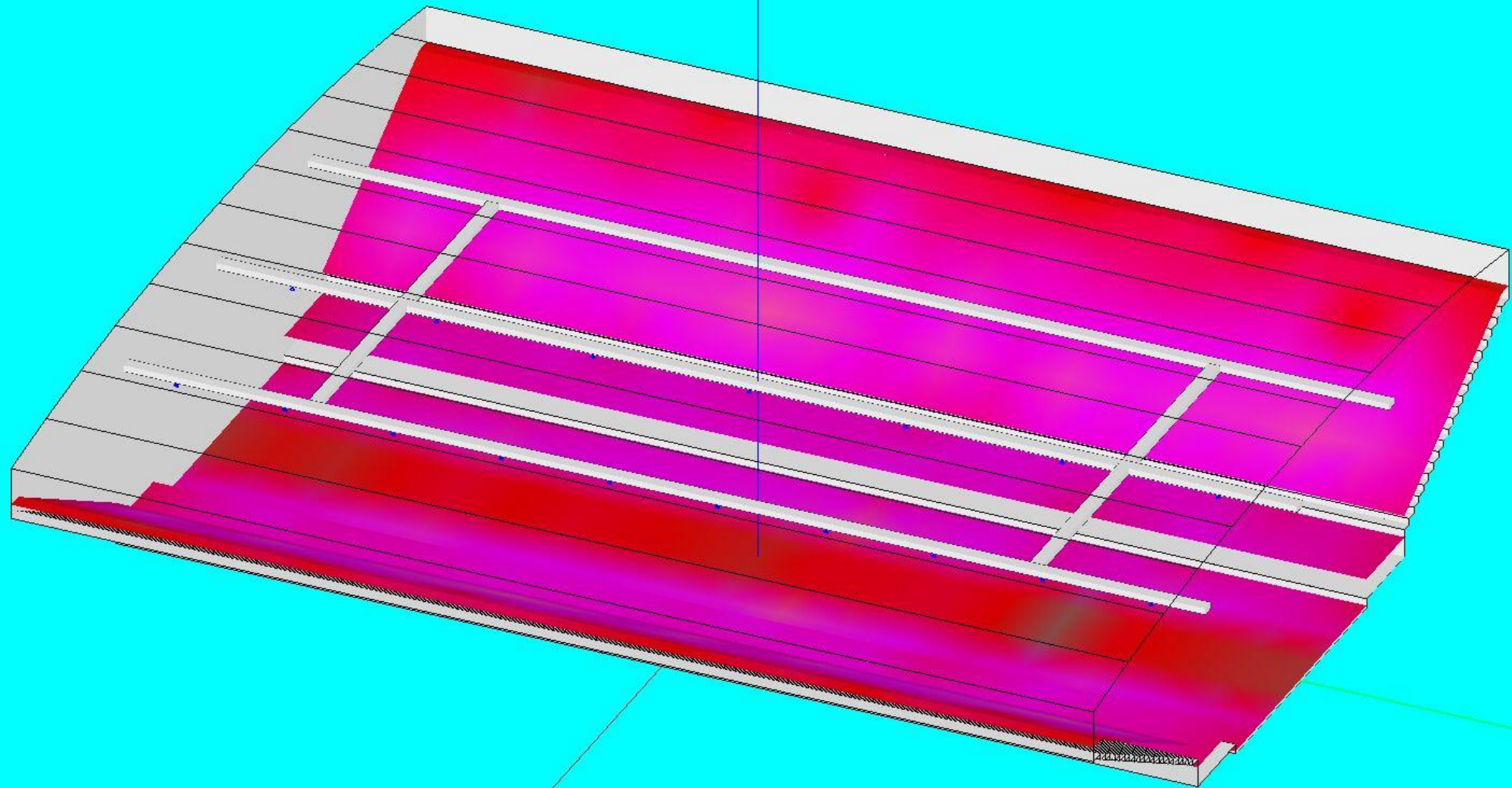
(c) EASE 4.3 / EASE Hall / 17/4/2014 10:31:45 AM / jolly Proaudio Broadcast Engineering Ltd. ZM

Speaker type EAW MK5399



EASE simulation result

Ver: 30° Hor: 66°
Lspk: S5, S5*, S3, S3*, S4, S4*, S6, S6*, S7, S7*, S9, S9*, S10, S10*, S17, S17*, S18, S18*, S19, S19*, S20, S20*, S21, S21*, S22, S22*, S23, S23*, S24, S24*, S25, S25*, S8, S8*
- Speaker Data Not Authorized -
Project: AQC-3d
Map: Direct SPL (Z)
Freq: 1000 Hz
(1/3 Octave Average)
Energy: 2 * Epot
(1/3rd Octave)
Shadow Cast: No
Resolution = 5.00 m



(c) EASE 4.3 / EASE Hall / 17/4/2014 10:37:53 AM / jolly Proaudio Broadcast Engineering Ltd. ZM



AQC Speaker specification



EAW MK5396 – 34pcs:

- Subsystem:

Transducer: LF – 1x 15 in. cone;
HF - 1x 1.4 in. exit,
3 in. voice coil compression driver

Loading: LF – Vented; HF – Horn-loaded

- Operating Range (-10 dB, Hz)

48Hz – 19KHz

- Axial Sensitivity (1W @ 1m, dB SPL)

Full Range: 98

- Power Handling/Impedance (Watts @ Ohms)

Full Range: 800 @ 8

- Calculated Maximum Output Peak (dB SPL)

Full Range: 133

- Calculated Maximum Output Long Term (dB SPL)

Full Range: 127

- Nominal Coverage (degrees)

Horizontal: 90 x Vertical: 60

- Powering

Switchable: bi-amplified or passive



AQC Speaker specification



EAW LS432 – 22pcs:

- Subsystem:
Transducer: LF – 4x 4 in. cone; HF - 3x. 1in soft dome tweeter
- Operating Range (-10 dB, Hz)
100 – 20k
- Axial Sensitivity (1W @ 1m, dB SPL)
Full Range: 95
- Power Handling/Impedance (Watts @ Ohms)
Full Range: 150 @ 8
- Calculated Maximum Output Peak (dB SPL)
Full Range: 123
- Calculated Maximum Output Long Term (dB SPL)
Full Range: 117
- Nominal Coverage (degrees)
Horizontal: 140
Vertical: 20



AQC, MPIA , WSC Power amplifier specification



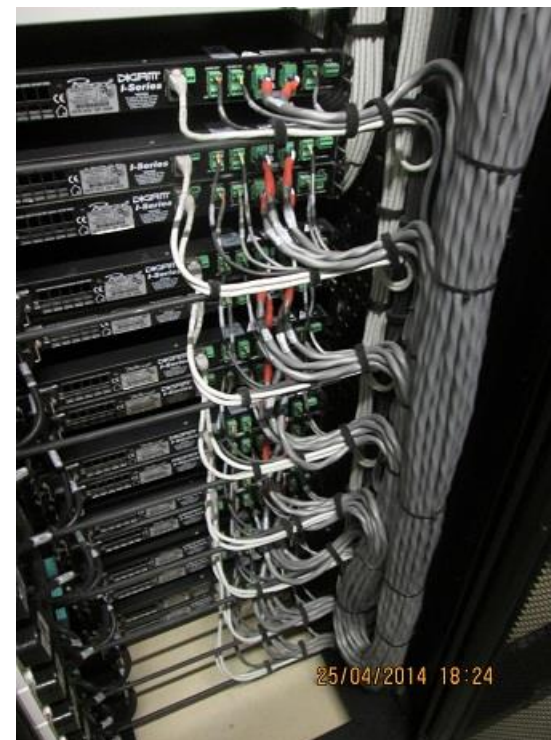
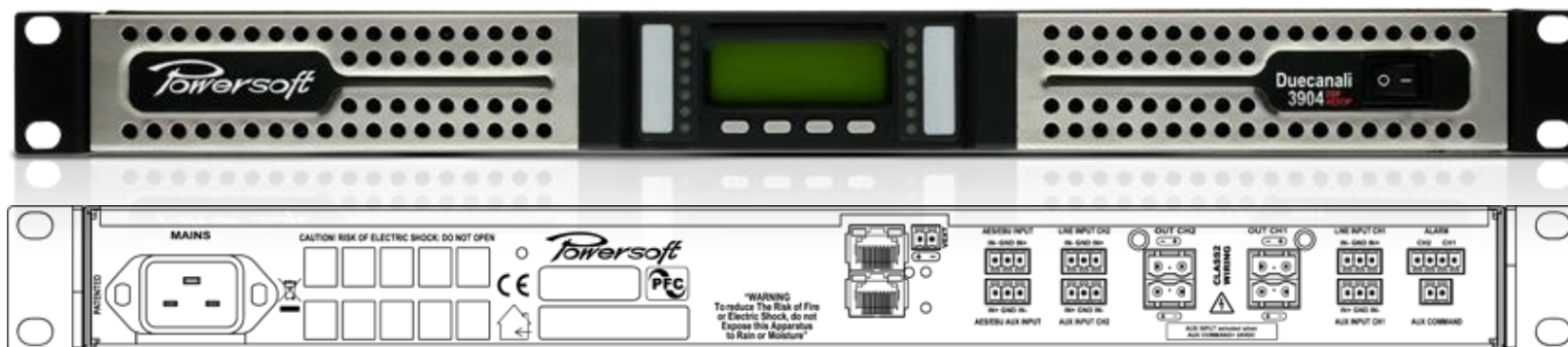
Powersoft Duecanali 3904 DSP+AESOP – 77 pcs

2-Channel High Performance Power Amplifier regulated switch mode with PFC (Power Factor Correction)

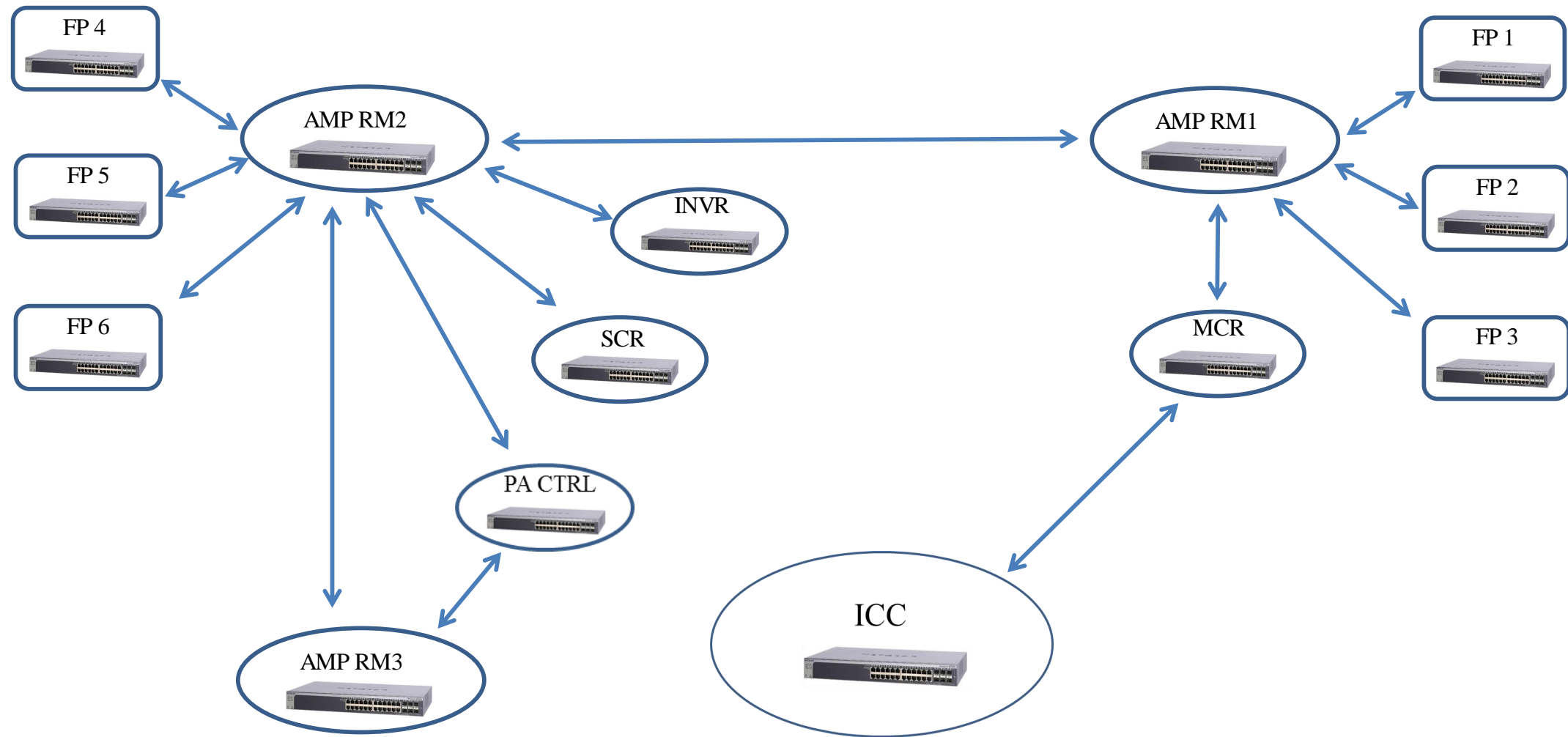
1000W/8Ω 1950W/4Ω 2400W/2Ω Hi-Z 70V/100V power per ch.

Peak output voltage 140 V Peak output current 102 A with DSP + network link

AQC: 28pcs MPIA:46pcs WSC: 3pcs



AQC Fiber network topology



System control & setting software

The screenshot displays the SymNet Composer 1.2 software interface, titled "SymNet™ Composer 1.2 - [AQC310314.symx]". The main workspace is divided into several colored panels representing different rooms:

- AQC AMPLIFIER ROOM 1 (Green):** Contains seven Dante units (AQC RM1 DS-1 to DS-7) connected to a Giga Network. Each unit shows various input and output ports (Analog, Digital, PCH).
- AQC AMPLIFIER ROOM 3 (Green):** Contains three Dante units (AQC RM3 DS-14 to DS-16) connected to a Giga Network.
- AQC AMPLIFIER ROOM 2 (Green):** Contains six Dante units (AQC RM2 DS-8 to DS-13) connected to a Giga Network.
- INTERVIEW RM (Green):** Contains one Dante unit (AQC Intrv RM-17) connected to a Giga Network.
- PA CONTROL RM (Green):** Contains one Dante unit (Ctrl RM-18) connected to a Giga Network, with a Yamaha CL5 mixer icon nearby.

On the left side, there is a sidebar with a large "OFF-LINE" indicator and a list of components: Edge, Radius 12x8, Radius AEC, xln 12, xOut 12, xControl, Settings Library, Vias, External Hardware, Control Screen View, Preset Recall Butt, Command Button, Picture, and Text. Below this is a status bar for the selected unit "AQC RM1 DS-1", showing "Approx. 30% Used" and a "Mute All Outputs F2" button.

On the right side, there are three "OUTPUTS" sections (A, B, and C) with level meters and numerical values. Below these is a list of units in the project, including 'AQC RM1 DS-' and 'AQC RM2 DS-' units.

At the bottom of the software window, the text "Symmetrix SymNet Composer" and "Company Name" are visible.

Approx. 35% Used (Avg 18 units) Off-line LAN IP Control

The Windows taskbar at the bottom shows several open applications: WSC, SSH, AQC, Presentation..., and SymNet™ Co... The system tray on the right includes icons for network, volume, and the date/time (11:59 PM, 17/4/2014).



User control software

AQC AMPLIFIER ROOM1 & 2 INPUTS GAIN CONTROL

Fire Alarm

RM1 PCH-1, RM1 PCH-2, RM1 PCH-3, RM1 PCH-4, RM1 PCH-5, RM1 PCH-6, RM1 PCH-7, RM1 PCH-8, RM1 PCH-9, RM1 PCH-10, RM1 PCH-11, RM1 PCH-12, RM1 PCH-13, RM1 PCH-14, RM1 PCH-15, RM1 PCH-16, RM1 PCH-17, RM2 PCH-1, RM2 PCH-2, RM2 PCH-3, RM2 PCH-4, RM2 PCH-5, RM2 PCH-6, RM2 PCH-7, RM2 PCH-8, RM2 PCH-9, RM2 PCH-10, RM2 PCH-11, RM2 PCH-12, RM2 PCH-13, RM2 PCH-14, RM2 PCH-15, RM2 PCH-16

- RM1 & 2 IP PCH GAIN CTRL
- RM3, INVR, PA CTRL IP PCH GAIN CTRL
- RM1 OP PCH 1-8 & SPK PRI PCH
- RM1 OP PCH 9-18
- RM2 OP PCH 1-8 & SPK SEC PCH
- RM2 OP PCH 9-16
- RM3 OP PCH 1-8
- INVR RM OP PCH 1-8
- PA CTRL RM OP PCH 1-8
- RM1 & 2 OP PCH GAIN CTRL
- RM3, INVR, PA CTRL OP GAIN CTRL
- AUDIENCE & POOL VOL CTRL
- SURRD SPK VOL CTRL



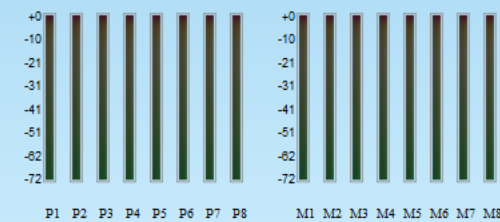
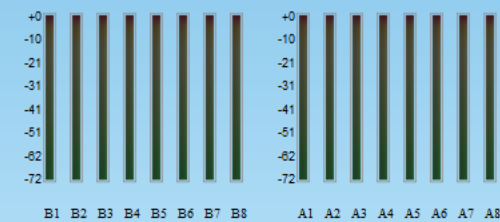
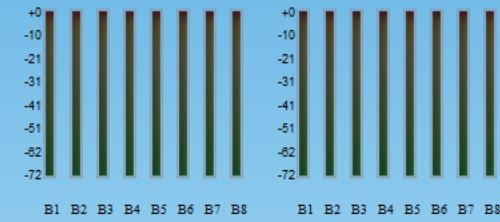
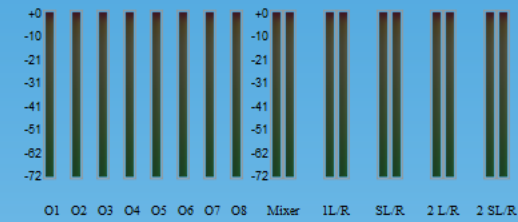
User control software

AQC AMPLIFIER ROOM1 OUTPUT 1-8 & SPK PATCH

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8	1-L	1-R	Smd-L	Smd-R
MUTE												
RM1BS-1												
RM1BS-2												
RM1BS-3												
RM1BS-4												
RM1BS-5												
RM1BS-6												
RM1BS-7												
RM1BS-8												
RM2BS-1												
RM2BS-2												
RM2BS-3												
RM2BS-4												
RM2BS-5												
RM2BS-6												
RM2BS-7												
RM2BS-8												
RM3BS-1												
RM3BS-2												
RM3BS-3												
RM3BS-4												
RM3BS-5												
RM3BS-6												
RM3BS-7												
RM3BS-8												

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8	1-L	1-R	Smd-L	Smd-R
MUTE												
AUX-1												
AUX-2												
AUX-3												
AUX-4												
AUX-5												
AUX-6												
AUX-7												
AUX-8												
PABS-1												
PABS-2												
PABS-3												
PABS-4												
PABS-5												
PABS-6												
PABS-7												
PABS-8												
MOBS-1												
MOBS-2												
MOBS-3												
MOBS-4												
MOBS-5												
MOBS-6												
MOBS-7												
MOBS-8												

AMP RM1 OP & IP BUS



Fire Alarm

RM1 & 2 IP PCH GAIN CTRL

RM3, INVR, PA CTRL IP PCH GAIN CTRL

RM1 OP PCH 1-8 & SPK PRI PCH

RM1 OP PCH 9-18

RM2 OP PCH 1-8 & SPK SEC PCH

RM2 OP PCH 9-16

RM3 OP PCH 1-8

INVR RM OP PCH 1-8

PA CTRL RM OP PCH 1-8

RM1 & 2 OP PCH GAIN CTRL

RM3,INVR,PA CTRL OP GAIN CTRL

AUDIENCE & POOL VOL CTRL

SURRD SPK VOL CTRL

ROOM 1 IP PATCH

	BUS-1	BUS-2	BUS-3	BUS-4	BUS-5	BUS-6	BUS-7	BUS-8
RM1IP-1								
RM1IP-2								
RM1IP-3								
RM1IP-4								
RM1IP-5								
RM1IP-6								
RM1IP-7								
RM1IP-8								
RM1IP-9								
RM1IP-10								
RM1IP-11								
RM1IP-12								
RM1IP-13								
RM1IP-14								
RM1IP-15								
RM1IP-16								
RM1IP-17								

ROOM 2 IP PATCH

	BUS-1	BUS-2	BUS-3	BUS-4	BUS-5	BUS-6	BUS-7	BUS-8
RM2IP-1								
RM2IP-2								
RM2IP-3								
RM2IP-4								
RM2IP-5								
RM2IP-6								
RM2IP-7								
RM2IP-8								
RM2IP-9								
RM2IP-10								
RM2IP-11								
RM2IP-12								
RM2IP-13								
RM2IP-14								
RM2IP-15								
RM2IP-16								

ROOM 3 INVR IP PATCH

	BUS-1	BUS-2	BUS-3	BUS-4	BUS-5	BUS-6	BUS-7	BUS-8
RM3IP-1								
RM3IP-2								
RM3IP-3								
RM3IP-4								
RM3IP-5								
RM3IP-6								
RM3IP-7								
RM3IP-8								
INVRIP-1								
INVRIP-2								
INVRIP-3								
INVRIP-4								
INVRIP-5								
INVRIP-6								
INVRIP-7								
INVRIP-8								



User control software

AQC AMPLIFIER ROOM1 & 2 OUTPUTS GAIN CONTROL

The interface displays 36 individual control panels for various outputs, arranged in three rows and twelve columns. Each panel includes a vertical gain slider with a scale from +0 dB to -72 dB, an 'Invert' button, and a 'Mute' button. The first two rows are labeled 'RM1 OP-1' through 'RM1 OP-18', and the third row is labeled 'RM2 OP-5' through 'RM2 OP-16'.

Fire Alarm

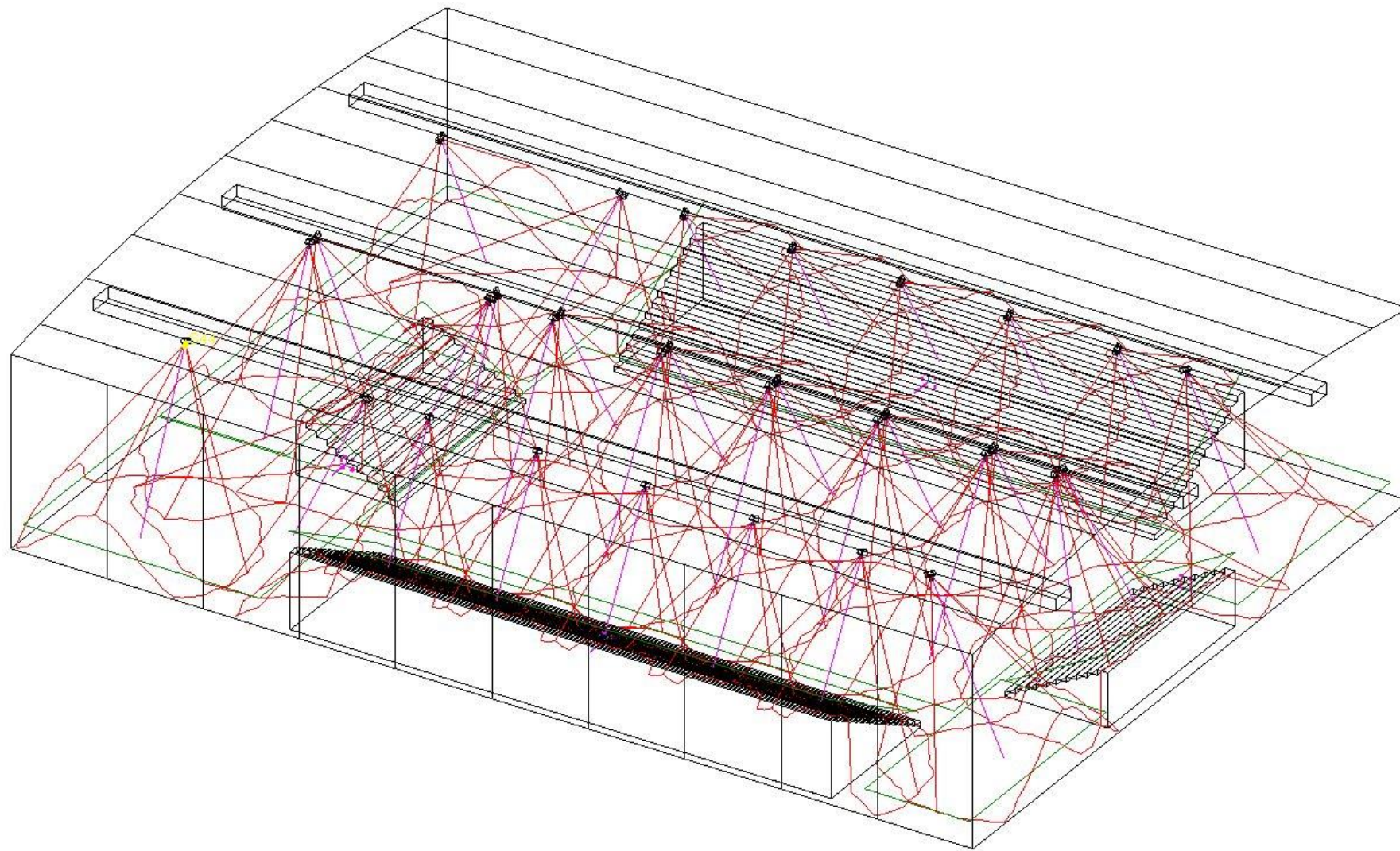
- RM1 & 2 IP PCH GAIN CTRL
- RM3, INVR, PA CTRL IP PCH GAIN CTRL
- RM1 OP PCH 1-8 & SPK PRI PCI
- RM1 OP PCH 9-18
- RM2 OP PCH 1-8 & SPK SEC PCH
- RM2 OP PCH 9-16
- RM3 OP PCH 1-8
- INVR RM OP PCH 1-8
- PA CTRL RM OP PCH 1-8
- RM1 & 2 OP GAIN CTRL
- RM3, INVR, PA CTRL OP GAIN CTRL
- AUDIENCE & POOL VOL CTRL
- SURRD SPK VOL CTRL



MPIA – Inside View



EASE speaker coverage prediction



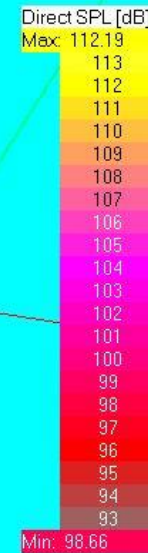
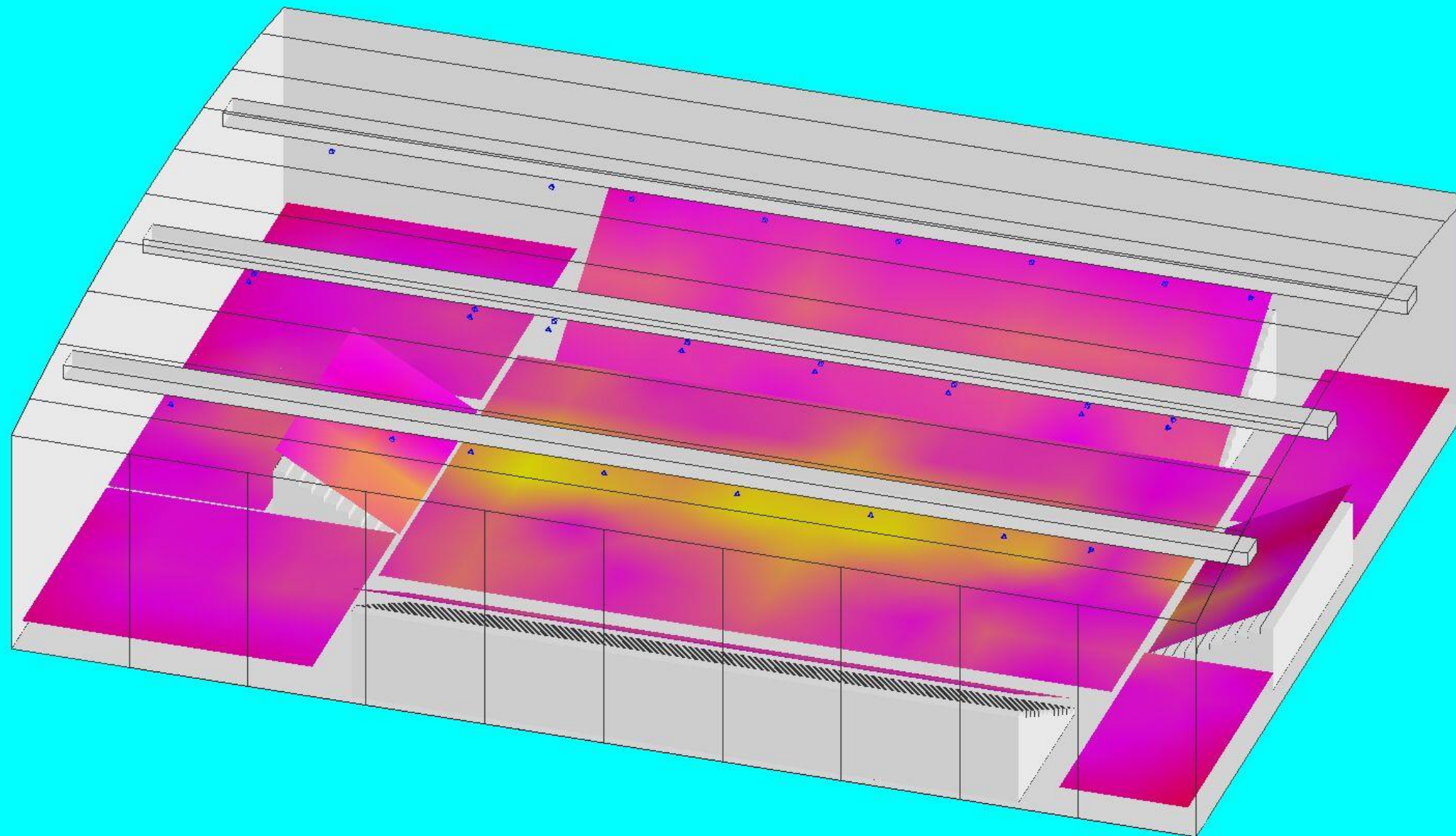
3D Perspective

(c) EASE 4.3 / EASE Hall / 17/4/2014 10:42:49 AM / jolly Proaudio Broadcast Engineering Ltd. ZM



EASE simulation result

Ver: 30° Hor: 162°
Lspk: S18, S19, S20, S39, S45, S36, S46, S47, S49, S48, S21, S35, S22, S40, S57, S62, S61, S60, S59, S58, S66, S65, S64, S63, S41, S37, S42, S43, S44, S38, S23, S24
- Speaker Data Not Authorized -
Project: MPIA1~1
Map: Direct SPL (Z)
Freq: 1000 Hz
(1/3 Octave Average)
Energy: 2 * Epot
(1/3rd Octave)
Shadow Cast: No
Resolution = 5.00 m



(c) EASE 4.3 / EASE Hall / 17/4/2014 10:43:44 AM / jolly Proaudio Broadcast Engineering Ltd. ZM



MPIA Speaker Specification



EAW MK2364 – 65pcs:

- Subsystem:

Transducer: LF – 1x 12 in. cone;
HF - 1x 1.4 in. exit,
3 in. voice coil compression driver

Loading: LF – Vented; HF – Horn-loaded

- Operating Range (-10 dB, Hz)

65Hz – 16KHz

- Axial Sensitivity (1W @ 1m, dB SPL)

Full Range: 95

- Power Handling/Impedance (Watts @ Ohms)

Full Range: 600 @ 8

- Calculated Maximum Output Peak (dB SPL)

Full Range: 129

- Calculated Maximum Output Long Term (dB SPL)

Full Range: 123

- Nominal Coverage (degrees)

Horizontal: 60 x Vertical: 45

- Powering

Switchable: bi-amplified or passive



MPIA Speaker Specification

CommunityPro DS-8 – 128pcs:

- Subsystem:

Transducer: LF – 1x 8 in. cone; HF - 1x. 1.25 in
exit compression driver

- Operating Range

60 – 22k

- Axial Sensitivity (1W @ 1m, dB SPL)

Full Range: 95

- Power Handling/Impedance (Watts @ Ohms)

Full Range: 375 @ 8

- Calculated Maximum Output Peak (dB SPL)

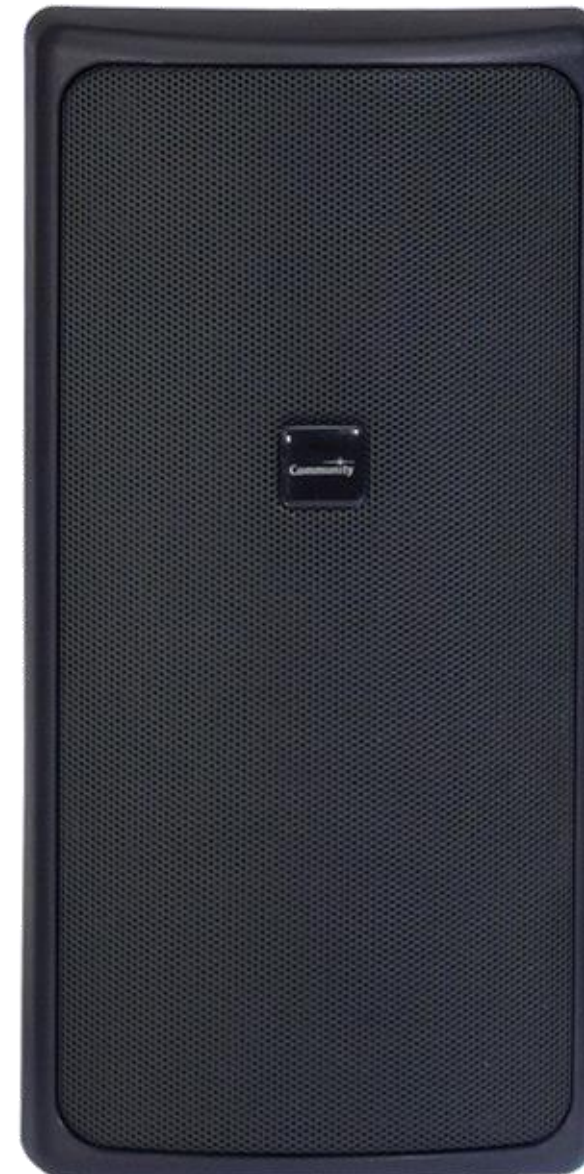
Full Range: 124

- Calculated Maximum Output Long Term (dB SPL)

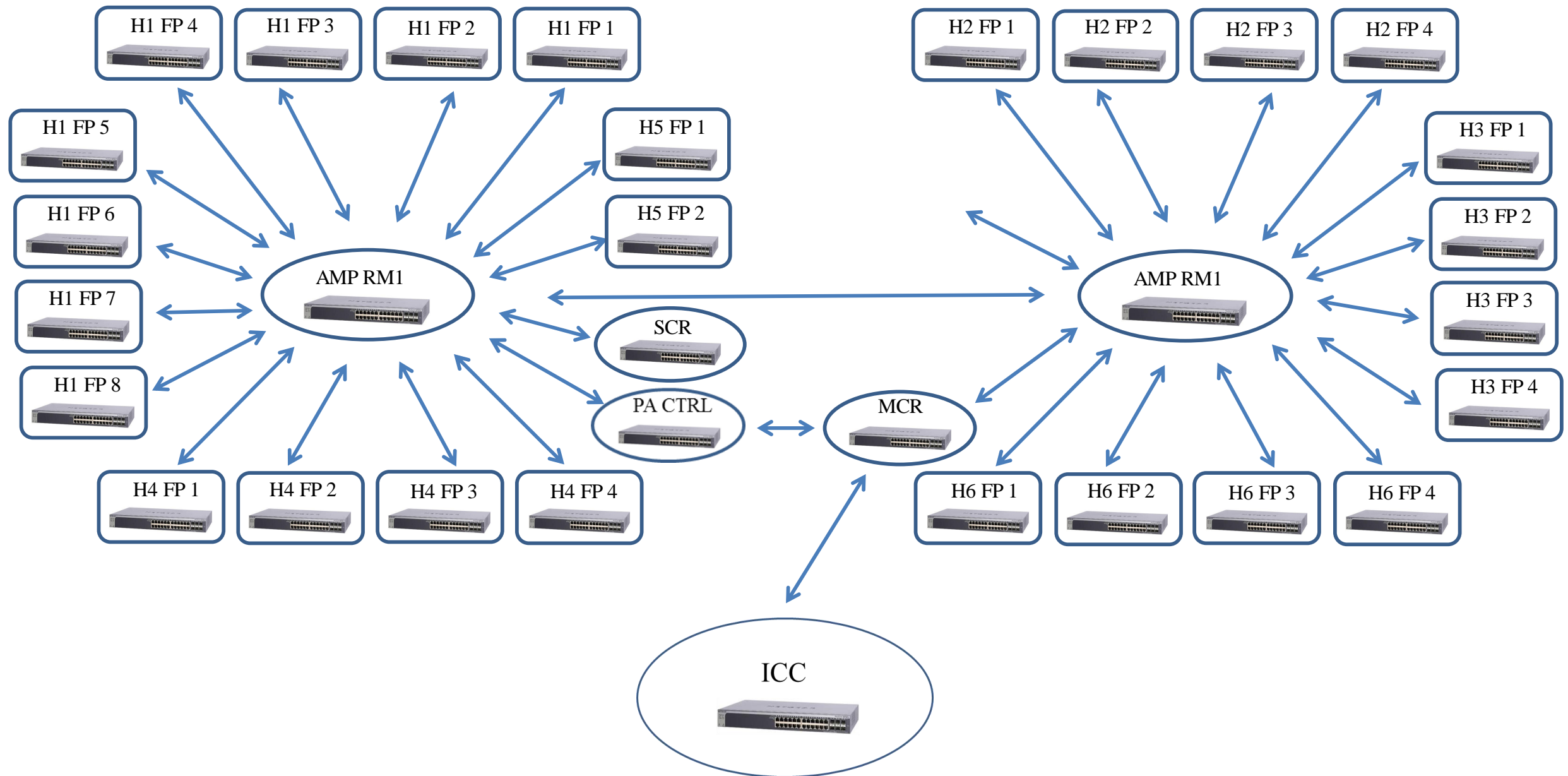
Full Range: 117

- Nominal Coverage (degrees)

115 Conical



MPIA Fiber network topology



MPIA Control Screen

SymNet™ Composer 3.0 - MPIA event sound system.symx

File Edit View Hardware Tools Window Help

MPIA event sound system.symx

MPIA AMPLIFIER ROOM1

MPIA RM1_DS-1 IP: 172.30.3.1 Analog Out H2 LS-1 H2 LS-2 H2 LS-3 H2 LS-4	MPIA RM1_DS-2 IP: 172.30.3.2 Analog Out H3 LS-1 H3 LS-2 H3 LS-3 H3 LS-4	MPIA RM1_DS-3 IP: 172.30.3.3 Analog Out H6 AZ1 H6 AZ2 H6 AZ3 H6 AZ4	MPIA RM1_DS-4 IP: 172.30.3.4 Digital Out D H2 LS-1 D H2 LS-2 D H2 LS-3 D H2 LS-4	MPIA RM1_DS-5 IP: 172.30.3.5 Digital Out D H3 LS-1 D H3 LS-2 D H3 LS-3 D H3 LS-4	MPIA RM1_DS-6 IP: 172.30.3.6 Digital Out D H6 AZ1 D H6 AZ2 D H6 AZ3 D H6 AZ4
Analog Out H2 LS-5 H2 LS-6 H2 LS-7 H2 LS-8	Analog Out H3 LS-5 H3 LS-6 H3 LS-7 H3 LS-8	Analog Out H6 Z1 H6 Z2 H6 Z3 H6 Z4	Digital Out D H2 LS-5 D H2 LS-6 D H2 LS-7 D H2 LS-8	Digital Out D H3 LS-5 D H3 LS-6 D H3 LS-7 D H3 LS-8	Digital Out D H6 Z1 D H6 Z2 D H6 Z3 D H6 Z4
Analog Out H2 LS-9 H2 LS-10 H2 LS-11 H2 LS-12	Analog Out H3 LS-9 H3 LS-10 H3 LS-11 H3 LS-12	Analog Out H6 Z5 H6 Z6 H6 Z7 H6 Z8	Digital Out D H2 LS-9 D H2 LS-10 D H2 LS-11 D H2 LS-12	Digital Out D H3 LS-9 D H3 LS-10 D H3 LS-11 D H3 LS-12	Digital Out D H6 Z5 D H6 Z6 D H6 Z7 D H6 Z8
Analog Out H2 LS-13 H2 LS-14 H2 LS-15 H2 LS-16	Analog Out H3 LS-13 H3 LS-14 H3 LS-15 H3 LS-16	Analog Out H6 Z9 H6 Z10 NIL NIL	Digital Out D H2 LS-13 D H2 LS-14 D H2 LS-15 D H2 LS-16	Digital Out D H3 LS-13 D H3 LS-14 D H3 LS-15 D H3 LS-16	Digital Out D H6 Z9 D H6 Z10 NIL NIL

Link To [Amp_RM1] [Intrw_RM] [Mixer/Ctrl_RM] [Amp_RM3] [FP21-4] [FP21-5] [FP21-6] [AQC_SCR] Giga Network

MPIA AMPLIFIER ROOM2

MPIA RM2_DS-11 IP: 172.30.3.11 Analog Out H1 LS-1 H1 LS-2 H1 LS-4	MPIA RM2_DS-12 IP: 172.30.3.12 Analog Out H1 LS-17 H1 LS-18 H1 LS-20	MPIA RM2_DS-13 IP: 172.30.3.13 Analog Out H4 AZ1 H4 AZ2 H4 AZ3 H4 AZ4	MPIA RM2_DS-14 IP: 172.30.3.14 Digital Out D H1LS-1 D H1LS-2 D H1LS-3 D H1LS-4	MPIA RM2_DS-15 IP: 172.30.3.15 Digital Out D H1LS-17 D H1LS-18 D H1LS-19 D H1LS-20	MPIA RM2_DS-16 IP: 172.30.3.16 Digital Out D H4 AZ1 D H4 AZ2 D H4 AZ3 D H4 AZ4
Analog Out H1 LS-5 H1 LS-6 H1 LS-7 H1 LS-8	Analog Out H1 LS-21 H1 LS-22 H1 LS-23 H1 LS-24	Analog Out H4 Z1 H4 Z2 H4 Z3 H4 Z4	Digital Out D H1LS-5 D H1LS-6 D H1LS-7 D H1LS-8	Digital Out D H1LS-21 D H1LS-22 D H1LS-23 D H1LS-24	Digital Out D H4 Z1 D H4 Z2 D H4 Z3 D H4 Z4
Analog Out H1 LS-9 H1 LS-10 H1 LS-11 H1 LS-12	Analog Out H1 LS-25 H1 LS-26 H1 LS-27 H1 LS-28	Analog Out H4 Z5 H4 Z6 H4 Z7 H4 Z8	Digital Out D H1LS-9 D H1LS-10 D H1LS-11 D H1LS-12	Digital Out D H1LS-25 D H1LS-26 D H1LS-27 D H1LS-28	Digital Out D H4 Z5 D H4 Z6 D H4 Z7 D H4 Z8
Analog Out H1 LS-13 H1 LS-14 H1 LS-15 H1 LS-16	Analog Out H1 LS-29 H1 LS-30 H1 LS-31 H1 LS-32	Analog Out H5 Z1 H5 Z2 NIL NIL	Digital Out D H1LS-13 D H1LS-14 D H1LS-15 D H1LS-16	Digital Out D H1LS-29 D H1LS-30 D H1LS-31 D H1LS-32	Digital Out D H5 Z1 D H5 Z2 NIL NIL

Link To [Amp_RM1] [Intrw_RM] [Mixer/Ctrl_RM] [Amp_RM3] [FP21-4] [FP21-5] [FP21-6] [AQC_SCR] Giga Network

MPIA RM1_DS-7 IP: 172.30.3.7 Analog In RM1 PCH-1 RM1 PCH-2 RM1 PCH-3 RM1 PCH-4	MPIA RM1_DS-8 IP: 172.30.3.8 Analog In RM1 PCH-5 RM1 PCH-6 RM1 PCH-7 RM1 PCH-8	MPIA RM1_DS-9 IP: 172.30.3.9 Analog In RM1 PCH-9 RM1 PCH-10 RM1 PCH-11 RM1 PCH-12	MPIA RM1_DS-10 IP: 172.30.3.10 Analog In RM1 PCH-13 RM1 PCH-14 RM1 PCH-15 RM1 PCH-16	MPIA RM1_DS-11 IP: 172.30.3.11 Analog In RM1 PCH-17 RM1 PCH-18 RM1 PCH-19 RM1 PCH-20	MPIA RM1_DS-12 IP: 172.30.3.12 Analog In RM1 PCH-21 RM1 PCH-22 RM1 PCH-23 RM1 PCH-24
Analog In RM1 PCH-25 RM1 PCH-26 RM1 PCH-27 RM1 PCH-28	Analog In RM1 PCH-29 RM1 PCH-30 RM1 PCH-31 RM1 PCH-32	Analog In RM1 PCH-33 RM1 PCH-34 RM1 PCH-35 RM1 PCH-36	Analog In RM1 PCH-37 RM1 PCH-38 RM1 PCH-39 RM1 PCH-40	Analog In RM1 PCH-41 RM1 PCH-42 RM1 PCH-43 RM1 PCH-44	Analog In RM1 PCH-45 RM1 PCH-46 RM1 PCH-47 RM1 PCH-48
Analog Out RM1 PCH-O-1 RM1 PCH-O-2 RM1 PCH-O-3 RM1 PCH-O-4	Analog Out RM1 PCH-O-5 RM1 PCH-O-6 RM1 PCH-O-7 RM1 PCH-O-8	Analog Out RM1 PCH-O-9 RM1 PCH-O-10 RM1 PCH-O-11 RM1 PCH-O-12	Analog Out RM1 PCH-O-13 RM1 PCH-O-14 RM1 PCH-O-15 RM1 PCH-O-16	Analog Out RM1 PCH-O-17 RM1 PCH-O-18 RM1 PCH-O-19 RM1 PCH-O-20	Analog Out RM1 PCH-O-21 RM1 PCH-O-22 RM1 PCH-O-23 RM1 PCH-O-24

Link To [Amp_RM1] [Intrw_RM] [Mixer/Ctrl_RM] [Amp_RM3] [FP21-4] [FP21-5] [FP21-6] [AQC_SCR]

MPIA PACTRL-21 IP: 172.30.3.21 Analog In PACON PCH-1 PACON PCH-2 PACON PCH-3 PACON PCH-4	Analog In PACON PCH-5 PACON PCH-6 PACON PCH-7 PACON PCH-8
Analog Out PACON PCH-O-1 PACON PCH-O-2 PACON PCH-O-3 PACON PCH-O-4	Analog Out PACON PCH-O-5 PACON PCH-O-6 PACON PCH-O-7 PACON PCH-O-8

Link To [Amp_RM2] [Amp_RM3]

MPIA RM2_DS-17 IP: 172.30.3.17 Analog In RM2 PCH-1 RM2 PCH-2 RM2 PCH-3 RM2 PCH-4	MPIA RM2_DS-18 IP: 172.30.3.18 Analog In RM2 PCH-5 RM2 PCH-6 RM2 PCH-7 RM2 PCH-8	MPIA RM2_DS-19 IP: 172.30.3.19 Analog In RM2 PCH-9 RM2 PCH-10 RM2 PCH-11 RM2 PCH-12	MPIA RM2_DS-20 IP: 172.30.3.20 Analog In RM2 PCH-13 RM2 PCH-14 RM2 PCH-15 RM2 PCH-16
Analog In RM2 PCH-17 RM2 PCH-18 RM2 PCH-19 RM2 PCH-20	Analog In RM2 PCH-21 RM2 PCH-22 RM2 PCH-23 RM2 PCH-24	Analog In RM2 PCH-25 RM2 PCH-26 RM2 PCH-27 RM2 PCH-28	Analog In RM2 PCH-29 RM2 PCH-30 RM2 PCH-31 RM2 PCH-32
Analog Out RM2 PCH-O-1 RM2 PCH-O-2 RM2 PCH-O-3 RM2 PCH-O-4	Analog Out RM2 PCH-O-5 RM2 PCH-O-6 RM2 PCH-O-7 RM2 PCH-O-8	Analog Out RM2 PCH-O-9 RM2 PCH-O-10 RM2 PCH-O-11 RM2 PCH-O-12	Analog Out RM2 PCH-O-13 RM2 PCH-O-14 RM2 PCH-O-15 RM2 PCH-O-16

Link To [Amp_RM1] [Intrw_RM] [Mixer/Ctrl_RM] [Amp_RM3] [FP21-4] [FP21-5] [FP21-6] [AQC_SCR] Giga Network

00:18:07

Approx. 25% Used (Avg 21 units) Off-line

LAN IP Control



MPIA Control Screen

AMP ROOM1 DSP INPUT CONTROL 1-30

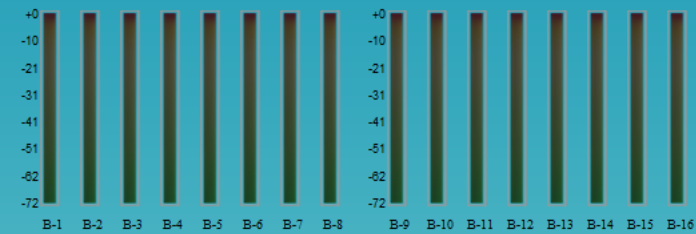
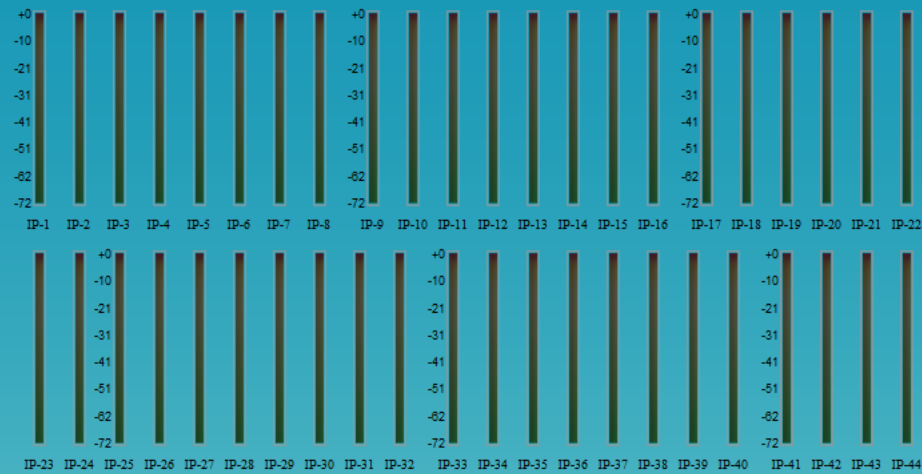
The image displays a grid of 30 DSP input control panels, arranged in three rows of ten. Each panel is labeled 'RM1 PCH-1' through 'RM1 PCH-30'. Each panel features a vertical level meter with a scale from -24 to +24 dB. Below the meter are five gain settings: +4 dBu, -10 dBV, -20 dBu, -40 dBu, and -50 dBu. At the bottom of each panel are three buttons: 'Mute', 'Phantom', and 'Invert', along with a '+0.0 dB' indicator.

A vertical sidebar of control buttons on the right side of the screen. The buttons are: 'Fire Alarm', 'RM1 IP CTRL 1-30', 'RM1 IP 31-44 / PACTRL', 'RM2 IP CTRL 1-30', 'RM2 IP CTRL 31-50', 'RM1 BUS PCH', 'RM2 BUS PCH', 'RM1 OP PCH 1-8', 'RM2 OP PCH 1-8', 'PACTRL OP PCH 1-8', 'HALLs PRI PCH', 'HALLs SEC PCH', 'HALL1 VOL', 'HALL 2,3 VOL', and 'HALL 4,5,6 VOL'.



MPIA Control Screen

AMP ROOM1 DSP BUS PATCH



	BUS-1	BUS-2	BUS-3	BUS-4	BUS-5	BUS-6	BUS-7	BUS-8	BUS-9	BUS-10	BUS-11	BUS-12	BUS-13	BUS-14	BUS-15	BUS-16
MUTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	BUS-1	BUS-2	BUS-3	BUS-4	BUS-5	BUS-6	BUS-7	BUS-8	BUS-9	BUS-10	BUS-11	BUS-12	BUS-13	BUS-14	BUS-15	BUS-16
MUTE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-27	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-33	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-38	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-40	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-41	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-42	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM1 IP-44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Fire Alarm
- RM1 IP CTRL 1-30
- RM1 IP 31-44 / PACTRL
- RM2 IP CTRL 1-30
- RM2 IP CTRL 31-50
- RM1 BUS PCH
- RM2 BUS PCH
- RM1 OP PCH1-8
- RM2 OP PCH1-8
- PACTRL OP PCH1-8
- HALLs PRI PCH
- HALLs SEC PCH
- HALL1 VOL
- HALL 2,3 VOL
- HALL 4,5,6 VOL

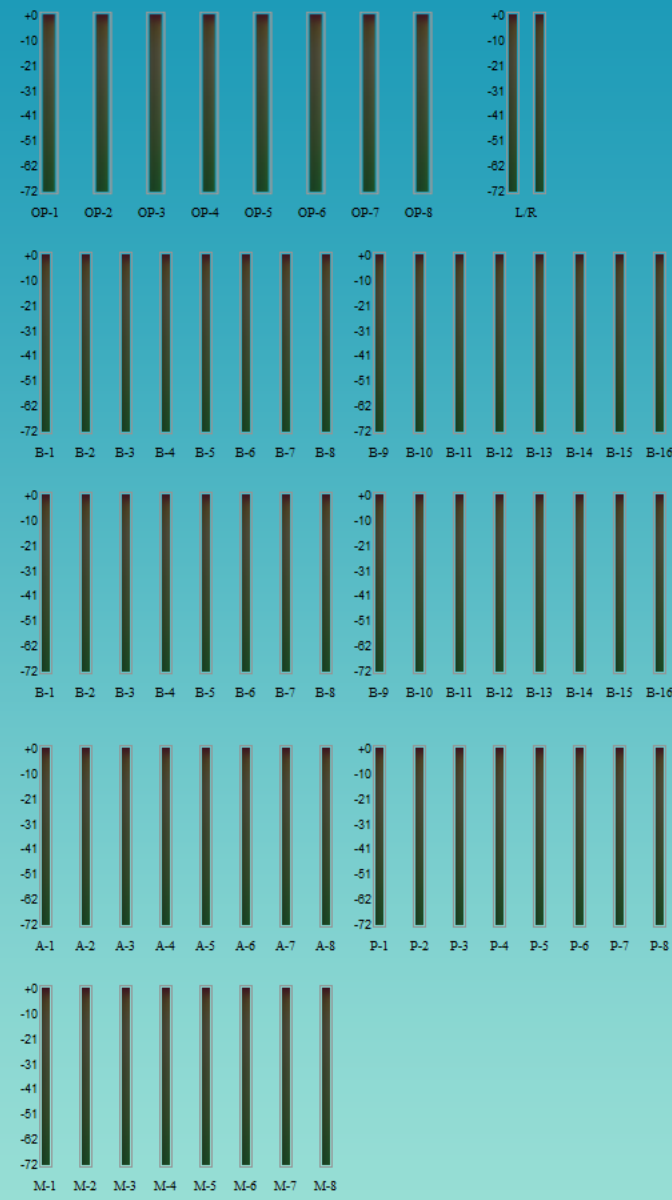


MPIA Control Screen

AMP ROOM1 DSP OUTPUT PATCH

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8
RM1 BUS-1								
RM1 BUS-2								
RM1 BUS-3								
RM1 BUS-4								
RM1 BUS-5								
RM1 BUS-6								
RM1 BUS-7								
RM1 BUS-8								
RM1 BUS-9								
RM1 BUS-10								
RM1 BUS-11								
RM1 BUS-12								
RM1 BUS-13								
RM1 BUS-14								
RM1 BUS-15								
RM1 BUS-16								
RM2 BUS-1								
RM2 BUS-2								
RM2 BUS-3								
RM2 BUS-4								
RM2 BUS-5								
RM2 BUS-6								
RM2 BUS-7								
RM2 BUS-8								
RM2 BUS-9								
RM2 BUS-10								
RM2 BUS-11								
RM2 BUS-12								
RM2 BUS-13								
RM2 BUS-14								
RM2 BUS-15								
RM2 BUS-16								

	OP-1	OP-2	OP-3	OP-4	OP-5	OP-6	OP-7	OP-8
MAIN L								
MAIN R								
AUX-1								
AUX-2								
AUX-3								
AUX-4								
AUX-5								
AUX-6								
AUX-7								
AUX-8								
PACTRL IP-1								
PACTRL IP-2								
PACTRL IP-3								
PACTRL IP-4								
PACTRL IP-5								
PACTRL IP-6								
PACTRL IP-7								
PACTRL IP-8								
MOB IP-1								
MOB IP-2								
MOB IP-3								
MOB IP-4								
MOB IP-5								
MOB IP-6								
MOB IP-7								
MOB IP-8								



RM1 OP MST	RM1 OP-1	RM1 OP-2	RM1 OP-3	RM1 OP-4	RM1 OP-5	RM1 OP-6	RM1 OP-7	RM1 OP-8
<input type="checkbox"/>	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert	<input checked="" type="checkbox"/> Invert

Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB	Gain: +0.0 dB
---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------

-
-
-
-
-
-
-
-
-
-
-
-
-
-
-

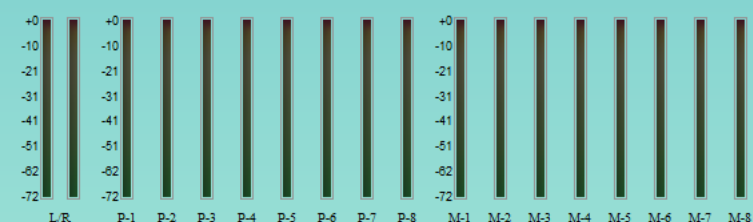
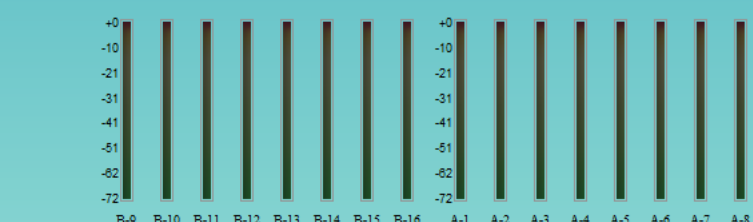
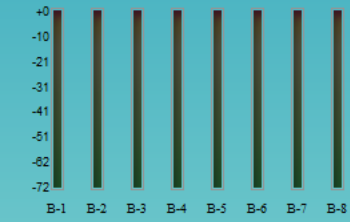
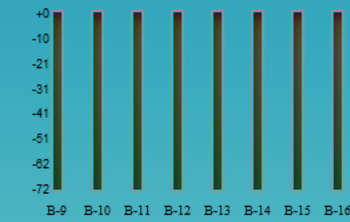
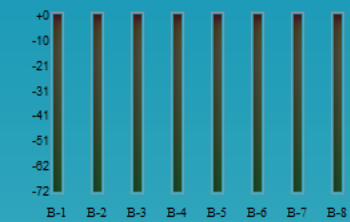


MPIA Control Screen

EVENT HALLs PRIMARY PATCH

	H1 L	H1 R	H2 L	H2 R	H3 L	H3 R	H4 L	H4 R	H5 L	H5 R	H6 L	H6 R
RM1 BUS-1												
RM1 BUS-2												
RM1 BUS-3												
RM1 BUS-4												
RM1 BUS-5												
RM1 BUS-6												
RM1 BUS-7												
RM1 BUS-8												
RM1 BUS-9												
RM1 BUS-10												
RM1 BUS-11												
RM1 BUS-12												
RM1 BUS-13												
RM1 BUS-14												
RM1 BUS-15												
RM1 BUS-16												
RM2 BUS-1												
RM2 BUS-2												
RM2 BUS-3												
RM2 BUS-4												
RM2 BUS-5												
RM2 BUS-6												
RM2 BUS-7												
RM2 BUS-8												
RM2 BUS-9												
RM2 BUS-10												
RM2 BUS-11												
RM2 BUS-12												
RM2 BUS-13												
RM2 BUS-14												
RM2 BUS-15												
RM2 BUS-16												

	H1 L	H1 R	H2 L	H2 R	H3 L	H3 R	H4 L	H4 R	H5 L	H5 R	H6 L	H6 R
MAIN L												
MAIN R												
AUX-1												
AUX-2												
AUX-3												
AUX-4												
AUX-5												
AUX-6												
AUX-7												
AUX-8												
PACTRL IP-1												
PACTRL IP-2												
PACTRL IP-3												
PACTRL IP-4												
PACTRL IP-5												
PACTRL IP-6												
PACTRL IP-7												
PACTRL IP-8												
MOB IP-1												
MOB IP-2												
MOB IP-3												
MOB IP-4												
MOB IP-5												
MOB IP-6												
MOB IP-7												
MOB IP-8												



H1 L/R

Invert

+0.0 dB

H2 L/R

Invert

+0.0 dB

H3 L/R

Invert

+0.0 dB

H4 L/R

Invert

+0.0 dB

H5 L/R

Invert

+0.0 dB

H6 L/R

Invert

+0.0 dB

- Fire Alarm
- RM1 IP CTRL 1-30
- RM1 IP 31-44 / PACTRL
- RM2 IP CTRL 1-30
- RM2 IP CTRL 31-50
- RM1 BUS PCH
- RM2 BUS PCH
- RM1 OP PCH1-8
- RM2 OP PCH1-8
- PACTRL OP PCH1-8
- HALLs PRI PCH
- HALLs SEC PCH
- HALL1 VOL
- HALL 2,3 VOL
- HALL 4,5,6 VOL



MPIA Control Screen

HALL 1 VOLUME CONTROL

Channel 1: H1 LS-1
Channel 2: H1 LS-2
Channel 3: H1 LS-3
Channel 4: H1 LS-4
Channel 5: H1 LS-5
Channel 6: H1 LS-6
Channel 7: H1 LS-7
Channel 8: H1 LS-8
Channel 9: H1 LS-9
Channel 10: H1 LS-10
Channel 11: H1 LS-11
Channel 12: H1 LS-12
Channel 13: H1 LS-13
Channel 14: H1 LS-14
Channel 15: H1 LS-15
Channel 16: H1 LS-16
Channel 17: H1 LS-17
Channel 18: H1 LS-18
Channel 19: H1 LS-19
Channel 20: H1 LS-20
Channel 21: H1 LS-21
Channel 22: H1 LS-22
Channel 23: H1 LS-23
Channel 24: H1 LS-24
Channel 25: H1 LS-25
Channel 26: H1 LS-26
Channel 27: H1 LS-27
Channel 28: H1 LS-28
Channel 29: H1 LS-29
Channel 30: H1 LS-30
Channel 31: H1 LS-31
Channel 32: H1 LS-32

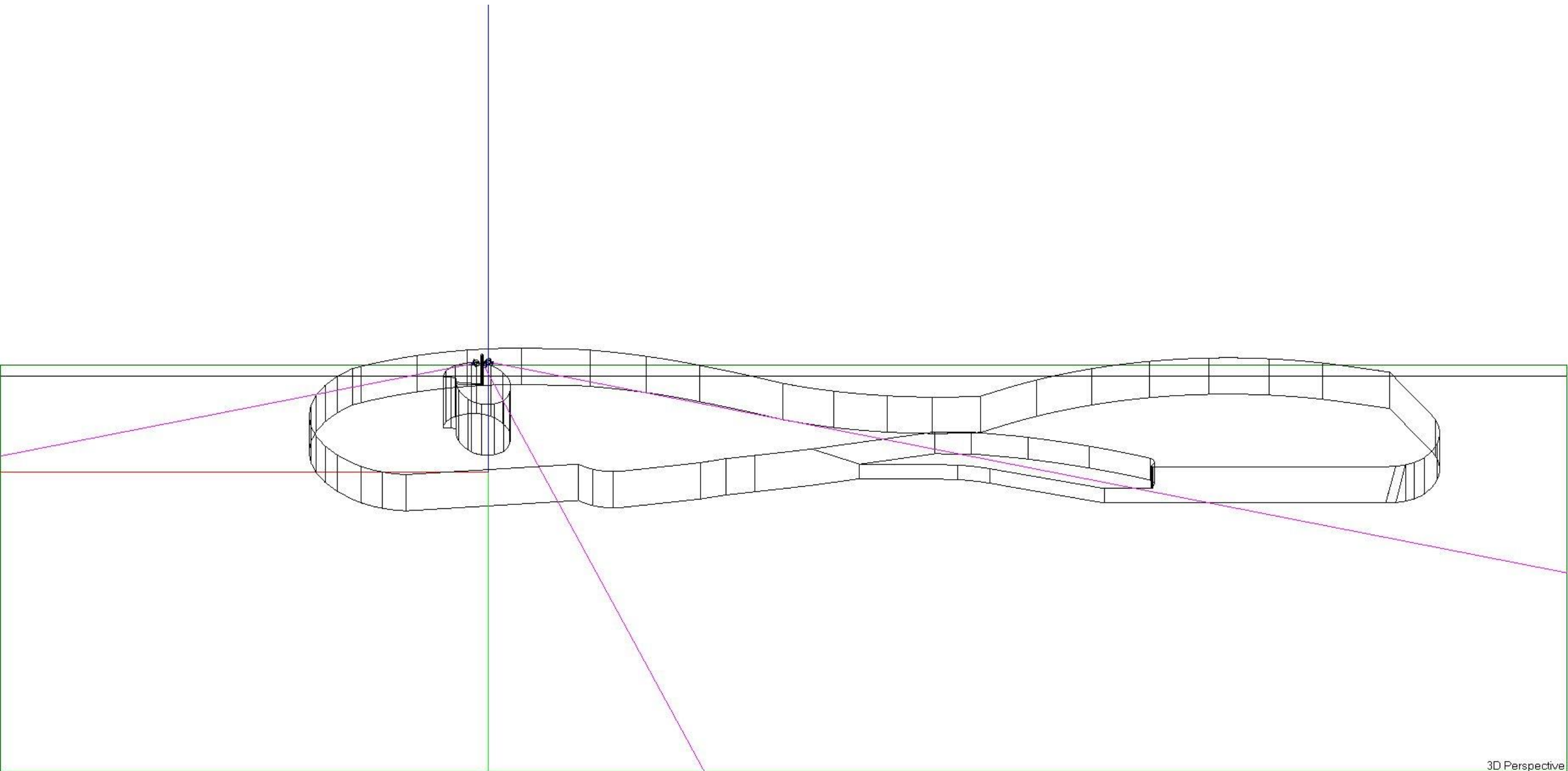
Fire Alarm
RM1 IP CTRL 1-30
RM1 IP 31-44 / PACTRL
RM2 IP CTRL 1-30
RM2 IP CTRL31-50
RM1 BUS PCH
RM2 BUS PCH
RM1 OP PCH1-8
RM2 OP PCH1-8
PACTRL OP PCH1-8
HALLs PRI PCH
HALLs SEC PCH
HALL 1 VOL
HALL 2,3 VOL
HALL 4,5,6 VOL



WSC Speaker Mount



EASE speaker coverage prediction



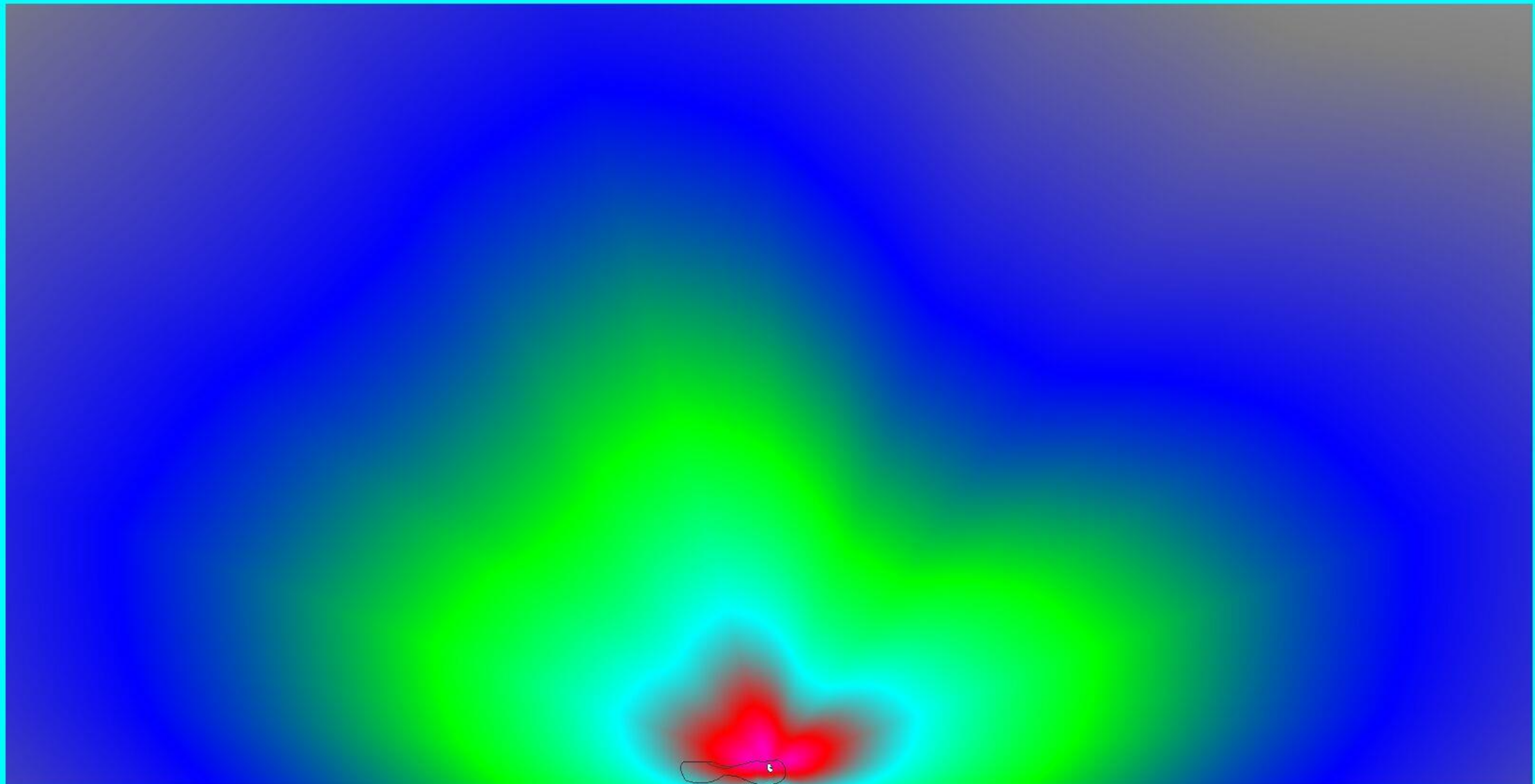
3D Perspective

(c) EASE 4.3 / EASE Hall / 2/4/2014 11:18:48 PM / jolly Proaudio Broadcast Engineering Ltd. ZM



EASE simulation result

Ver: 90° Hor: 180°
Lspk: S1, S2, S3
Project: ease
Map: Direct SPL (Z)
Freq: 1000 Hz
(1/3 Octave Average)
Shadow Cast: No
Resolution = 5.00 m



Direct SPL [dB]
Max: 101.87
102
101
100
99
98
97
96
95
94
93
92
91
90
89
88
87
86
85
84
83
82
Min: 62.77

(c) EASE 4.3 / EASE Hall / 2/4/2014 11:07:39 PM / jolly Proaudio Broadcast Engineering Ltd. ZM



WSC Speaker specification



QX (bi-amp power speaker) – 3pcs:

Transducer:

LF 4x 12 in. cone;

MF 1x3.5 in. compression

HF 1x1.75 in bi-amp

LF: 2000W @ 2ohms 1000W@4ohm, (2x pairs)

Passive MF/HF: 175W@ 8ohm

Operating Range (-10 dB, Hz) 55 – 20k

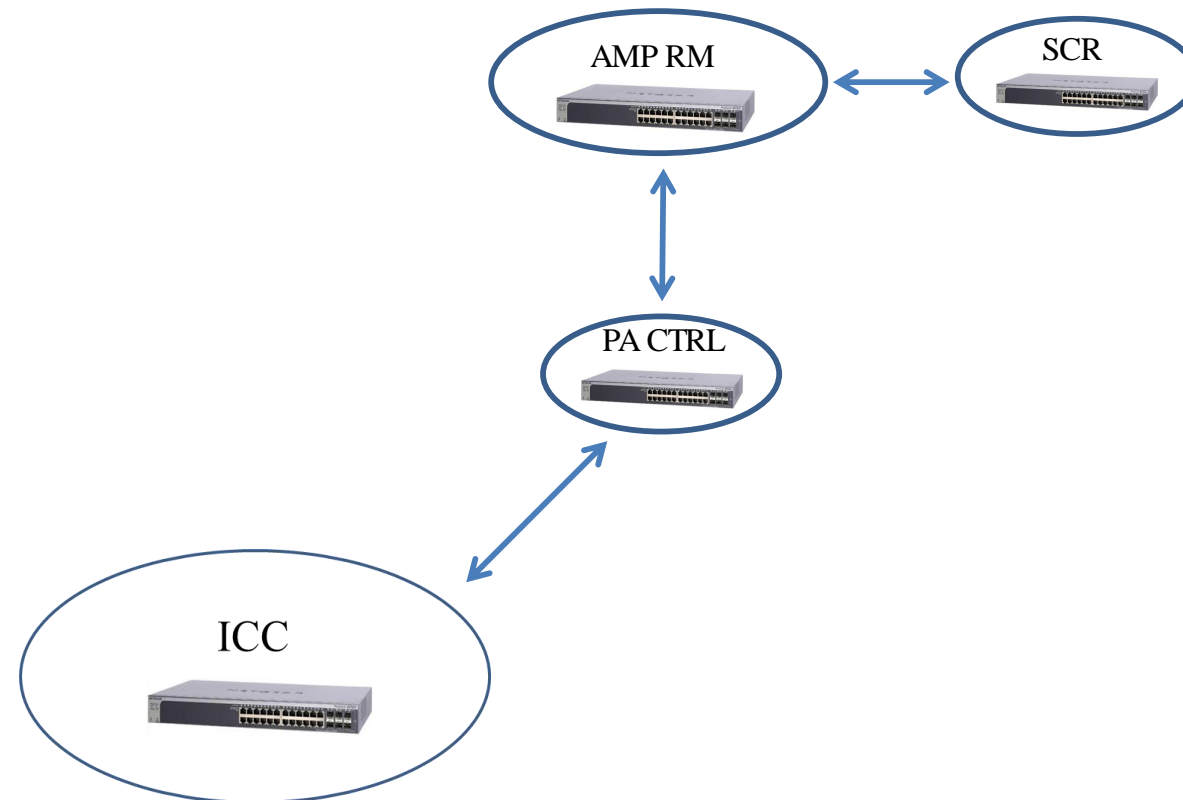
Axial Sensitivity (1W @ 1m, dB SPL)

LF: 103 MF/HF: 112

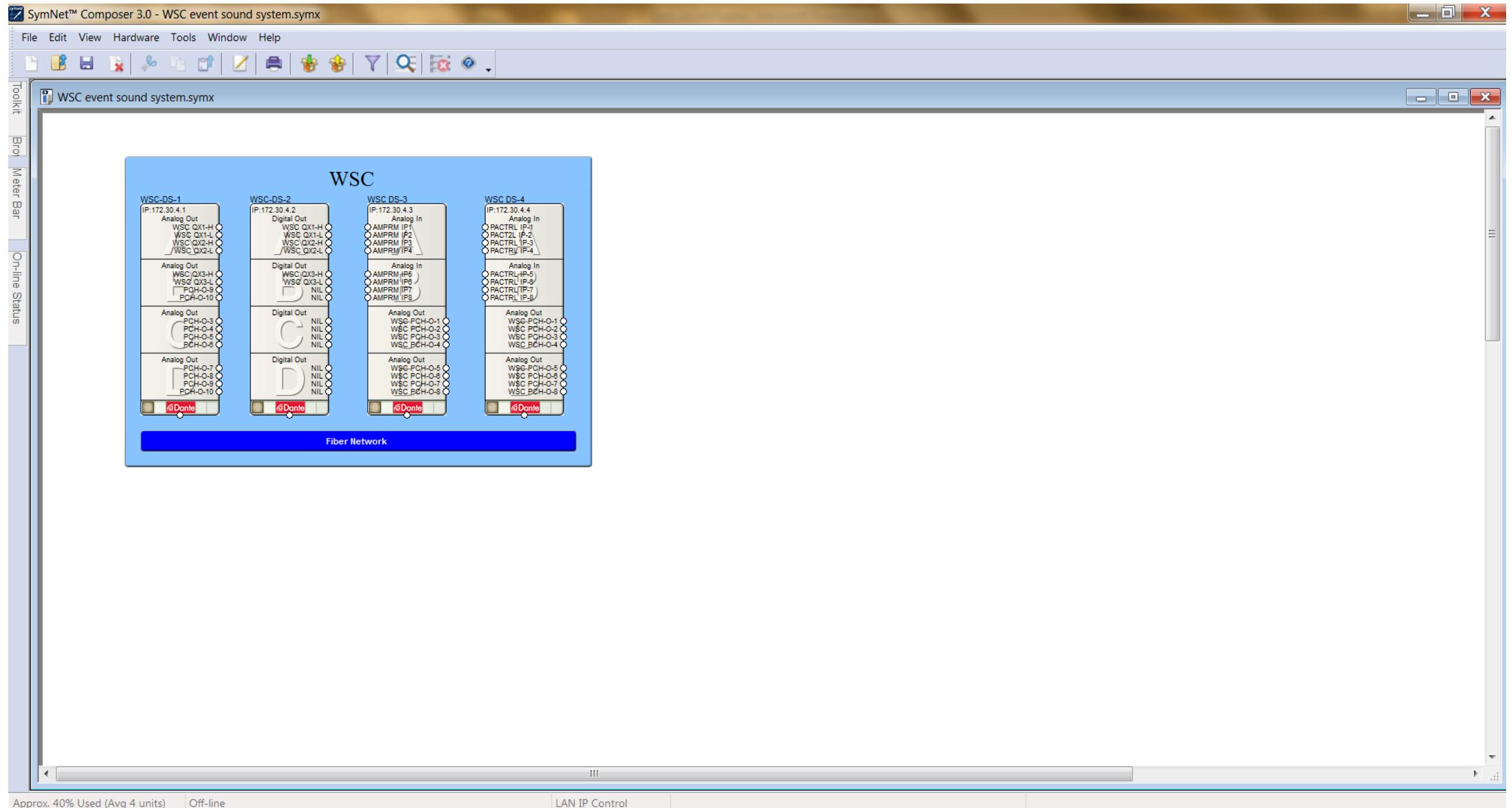
QX564 HxV 60° x 45°



WSC Fiber network topology



STRATEGIES



WSC Control Screen

PATCH OPS & SPKs VOL CTRL

The control screen is organized into three main sections:

- PA Operations (Top Row):** Includes PA OP MST, PACTRL RM (PA OP-1 to PA OP-7), and AMP OP-8. Each panel features a vertical volume slider (range: -72 to +12 dB), a Mute button, and an Invert button. The PACTRL RM panels also include a red LED indicator.
- AMP Operations (Middle Row):** Includes AMP OP MST, AMP RM (AMP OP-1 to AMP OP-14), and AMP OP-15 to AMP OP-18. Each panel features a vertical volume slider (range: -72 to +12 dB), a Mute button, and an Invert button.
- SPK Operations (Bottom Row):** Includes SPK MST and WSC (SPK 1, SPK 2, SPK 3). Each panel features a vertical volume slider (range: -72 to +12 dB), a Mute button, and an Invert button.

Additional controls include:

- 1 L/R:** A vertical volume slider (range: -72 to +12 dB) and a Mute button.
- 2 L/R:** A vertical volume slider (range: -72 to +12 dB) and a Mute button.
- Buttons:** "Fire Mute" (grey) and "INPUTS CTRL & PATCI" (green).
- Image:** Aerial view of a stadium at night.
- Logo:** A logo with a stylized 'i' and 'e' in a square.



IP Address Scheme

SSH_ipaddress.xlsx - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Clipboard Font Alignment Number Styles Cells Editing

B172 172

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Singapore Sports Hub																
2	Location:		NST														
3																	
4	Subnet Mask:	255.240.0.0															
5	Gateway:	0.0.0.0															
6	IP address:	172.30.1.1-254						<u>Hostname</u>	<u>Description</u>	<u>Level</u>	<u>Location</u>						
7		172	30	1	1			NST NW1 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NW1	xx	169.254.1.1	172.31.1.1	x		
8		172	30	1	2			NST NW1 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NW1	xx	169.254.1.2	172.31.1.2	X		
9		172	30	1	3			NST NW2 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NW2	X	169.254.1.3	172.31.1.3	X		
10		172	30	1	4			NST NW2 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NW2	X	169.254.1.4	172.31.1.4	X		
11		172	30	1	5			NST NW3 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NW3	X	169.254.1.5	172.31.1.5	X		
12		172	30	1	6			NST NW3 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NW3	X	169.254.1.6	172.31.1.6	X		
13		172	30	1	7			NST NW4 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NW4	X	169.254.1.7	172.31.1.7	X		SUB CARDIOID
14		172	30	1	8			NST NW4 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NW4	X	169.254.1.8	172.31.1.8	X		SUB CARDIOID
15		172	30	1	9			NST NE1 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NE1	X	169.254.1.9	172.31.1.9	X		
16		172	30	1	10			NST NE1 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NE1	X	169.254.1.10	172.31.1.10	X		NETWORK SOCKET UNSTABLE
17		172	30	1	11			NST NE2 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NE2	X	169.254.1.11	172.31.1.11	X		
18		172	30	1	12			NST NE2 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NE2	X	169.254.1.12	172.31.1.12	X		AMPLIFIER NOT SET YET
19		172	30	1	13			NST NE3 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NE3	X	169.254.1.13	172.31.1.13	X		
20		172	30	1	14			NST NE3 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NE3	X	169.254.1.14	172.31.1.14	X		
21		172	30	1	15			NST NE4 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK NE4	X	169.254.1.15	172.31.1.15	X		
22		172	30	1	16			NST NE4 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK NE4	X	169.254.1.16	172.31.1.16	X		
23		172	30	1	17			NST SW1 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK SW1	xx	169.254.1.17	172.31.1.17	X		
24		172	30	1	18			NST SW1 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK SW1	xx	169.254.1.18	172.31.1.18	X		RELOAD MQX GREYBOX
25		172	30	1	19			NST SW2 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK SW2	xx	169.254.1.19	172.31.1.19	X		
26		172	30	1	20			NST SW2 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK SW2	xx	169.254.1.20	172.31.1.20	X		
27		172	30	1	21			NST SW3 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK SW3		169.254.1.21	172.31.1.21			CARDIOID SUB
28		172	30	1	22			NST SW3 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK SW3		169.254.1.22	172.31.1.22			CARDIOID SUB
29		172	30	1	23			NST SW4 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK SW4	xx	169.254.1.23	172.31.1.23	X		
30		172	30	1	24			NST SW4 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK SW4	xx	169.254.1.24	172.31.1.24	X		
31		172	30	1	25			NST SE1 DSP01	SYMETRIX EDGE 0X16 ANALOG	ROOF	RACK SE1	xx	169.254.1.25	172.31.1.25	X		
32		172	30	1	26			NST SE1 DSP02	SYMETRIX EDGE 0X16 DIGITAL	ROOF	RACK SE1	xx	169.254.1.26	172.31.1.26	X		

Ready Average: 89.125 Count: 54 Sum: 2139 100%

- Class B network
- Separate Subnet for each locations (172.30.1.xxx ~ 172.30.5.xxx)



Network Switch Settings

The screenshot displays the Netgear GS728TS web management interface. The browser address bar shows the URL `http://10.8.8.128/base/netgear_login.html`. The interface includes a navigation menu with tabs for System, Switching, Routing, QoS, Security, Monitoring, Maintenance, Help, and Index. The 'Switching' tab is active, and the 'VLAN' sub-tab is selected. The main content area is titled 'VLAN Configuration' and contains a table with the following data:

	VLAN ID	VLAN Name	VLAN Type
<input type="checkbox"/>			Static
<input type="checkbox"/>	1	Default	Default
<input type="checkbox"/>	2	Voice VLAN	Default
<input type="checkbox"/>	3	Auto-Video	Default
<input type="checkbox"/>	4	Dante	Static
<input type="checkbox"/>	5	Control	Static

Below the table is a 'Reset' section with a checkbox for 'Reset Configuration'. At the bottom right of the configuration area are buttons for 'ADD', 'DELETE', 'CANCEL', and 'APPLY'. The footer of the interface shows 'Copyright © 1996-2012 NETGEAR ®'.

- VLAN & Uplinks configuration



Network Switch Settings

The screenshot shows the configuration page for a Netgear switch, specifically the STP (Spanning Tree Protocol) configuration. The browser window is titled "NETGEAR GS728TS - Windows Internet Explorer" and the URL is "http://10.8.8.128/base/netgear_login.html". The page has a navigation menu with tabs for System, Switching, Routing, QoS, Security, Monitoring, Maintenance, Help, and Index. The "Switching" tab is active, and the "STP" sub-tab is selected. The "STP Configuration" section is expanded, showing two sub-sections: "Global Settings" and "STP Status".

Global Settings

Spanning Tree State	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
STP Operation Mode	<input type="radio"/> STP <input checked="" type="radio"/> RSTP <input type="radio"/> MSTP
Configuration Name	<input type="text" value="NST"/>
Configuration Revision Level	<input type="text" value="0"/> (0 to 65535)
Configuration Digest Key	0xac36177f50283cd4b83821d8ab26de62
Forward BPDUs while STP Disabled	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

STP Status

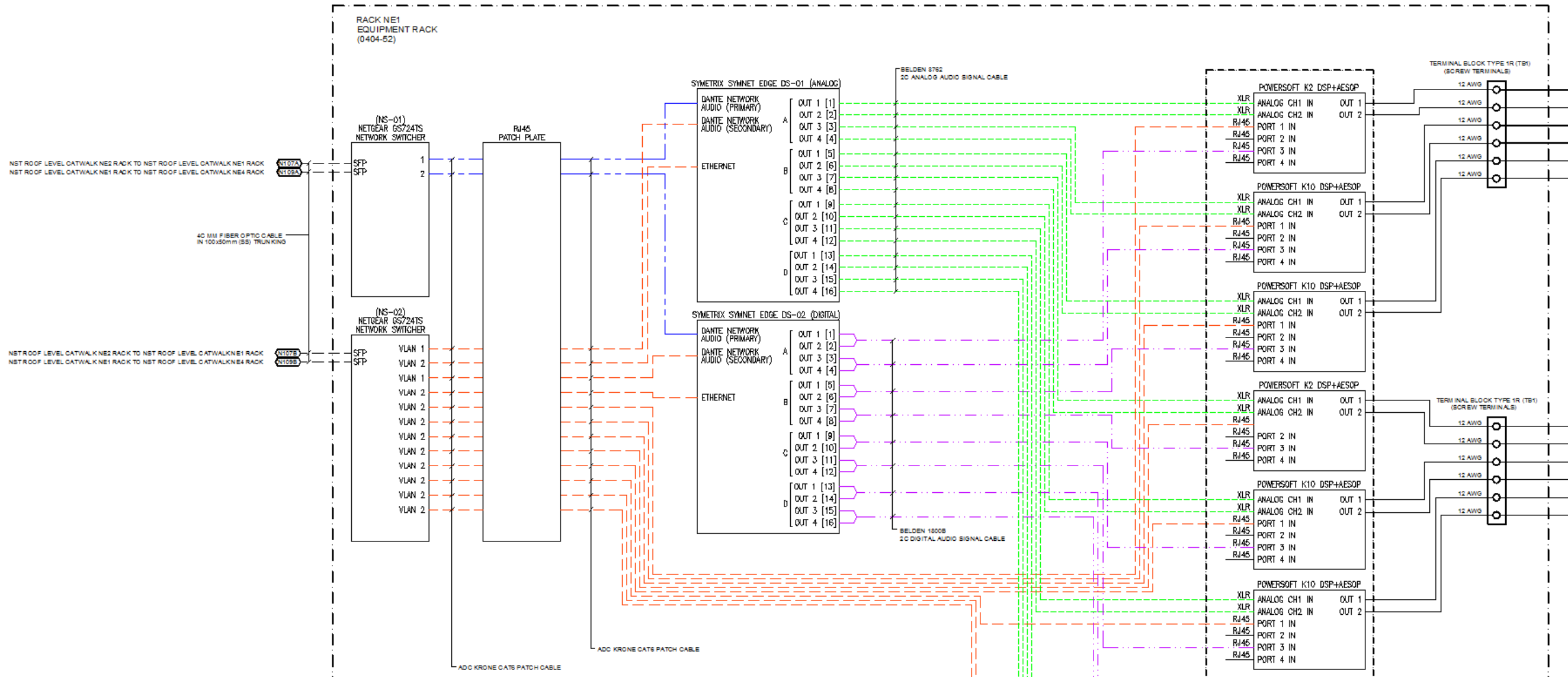
Bridge Identifier	80:00:84:1B:5E:81:F9:81
Time Since Topology Change	14 day 21 hr 39 min 14 sec
Topology Change Count	0
Topology Change	False
Designated Root	80:00:84:1B:5E:81:F9:81
Root Path Cost	0
Root Port	00:00
Max Age (secs)	20
Forward Delay (secs)	15
Hold Time (secs)	6
CST Regional Root	80:00:84:1B:5E:81:F9:81
CST Path Cost	0

At the bottom right of the configuration area, there are buttons for "REFRESH", "CANCEL", and "APPLY". The footer of the page contains the copyright notice "Copyright © 1996-2012 NETGEAR ®".

- STP/RSTP configuration

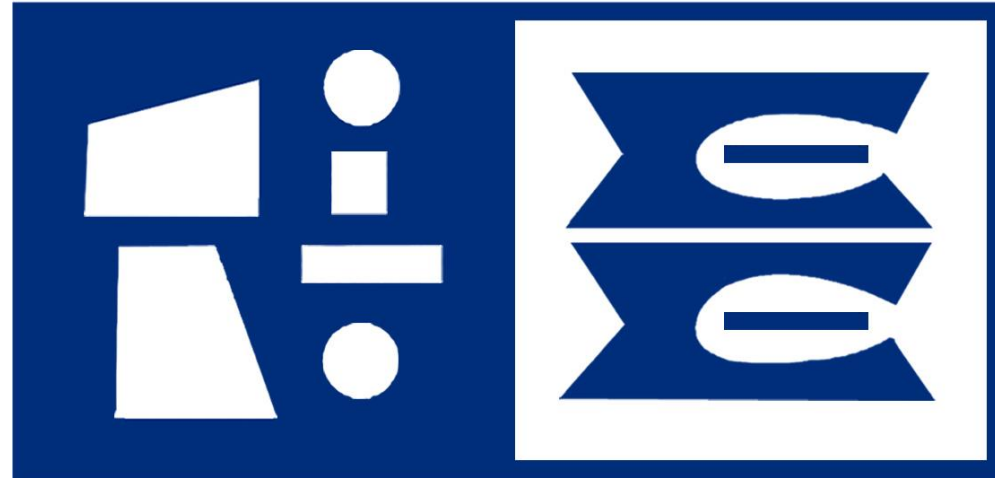


Redundant / Backup Setup



- limitations: Speaker failure / Amplifier failure
- DSP failure: Digital vs Analog Signal
- Network Switch failure: Dante Primary vs Dante Secondary/Control
- Power Failure: RSTP re-route





ELECTRONICS & ENGINEERING PTE LTD

Thank You

