



Orchard Central's main entrance, now served by McCauley IL4 speakers

ORCHARD FINDS QUICK GROWTH

SINGAPORE: Located in the heart of Singapore's shopping district, Orchard Central has undergone a significant sound reinforcement upgrade since it first appeared in *Pro Audio Asia* (see January-February 2010 issue). While the TOA VX-2000 system and the other racked equipment and ceiling speakers continue to be used for voice evacuation and fire alarm purposes, developers Far East Organisation has placed a new system into the lower two storeys of the mall and main entrances in an attempt to attract shoppers with powerful background music.

ProAktiv Systems was appointed through the consultant appointed by the developer to provide a networked audio system with specified brands and models, and, in turn, requested the assistance of McCauley distributor Miguel Corporate Services.

In addition to its announcement and BGM functions, this new installation serves stage areas for performers and sponsors on the ground floor, routing sound through the main PA system without the need for extra equipment. The main entrance is served by two McCauley



A capable McCauley speaker system greets customers into retail store 'Med'

Sound iDesign IL4 speaker cabinets hung above, while two side entrances have slightly smaller IL2 cabinets. Once inside, shoppers can shimmy while they shop, courtesy of McCauley ID1.108 (27), ID1.208-ML (22) and ID2.208 (20) speaker systems. As the integration of a powerful speaker system into the mall came after the original system had been designed and installed, new equipment racks have been located in recessed rooms and cabinets where the amplification and DSP processors are installed, minimising the cable runs.

At the heart of the system are 11 SymNet Express CobraNet 8x8 DSP processors, linked in a CobraNet ring via a low latency, 64-channel SymLink Bus. The individual 8x8 DSP processors, which are also only 1U high, route the audio signals to the various zones in which they're located, but are controlled by SymNet Designer software, which runs a rack-mounted PC in the main control room. The processors are configured via RS232 ports on the rear panel, after which they can be addressed and controlled over Ethernet.

The main control room also contains BreakIn12 input and BreakOut12 output channel expanders, allowing the system channel count to be increased while reducing the system cost-per-channel. A CobraLink unit functions as a translator between SymLink and CobraNet, allowing the sharing of digital audio between SymLink rings, Express units and amplifiers.

A combination of Powersoft 1U-high L-series LD1404 (1), LQ2804 (9) and LD3004 (2) four-channel



McCauley IL1 and IL2 speakers provide powerful BGM to shoppers entering the mall's side entrances

amplifiers power the speaker system, providing 350W and 700W power into 4Ω.

Ten Fostex UR-2 stereo recorder memory racks were selected as individual BGM sources for the individual zones. Each 1U-high recorder provides pre-programmed music from two SD cards, which is routed, controlled and monitored via the SymNet Designer. In the absence of ambient microphones, the UR-2s have been programmed to play at increased levels in the evening hours.

Two Furman PL-Plus CE power conditioners ensure that no voltage surges or spikes trouble the signal chain.

Systems integrator Lee Bee Huat installed this extensive system in just four weeks in the run up to Christmas 2009 during the night hours when the mall was closed to the public. Canare speaker cabling was initially run between the amplifier racks and the individual loudspeaker positions, while the TOA VX-2000 system overrides the BGM system.

www.orchardcentral.com.sg
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Racked Fostex UR2 stereo memory recorders, Symnet Express processors and Furman power conditioners



One of the zoned equipment racks with Powersoft amplifiers and Symnet Express DSP processors