InfoComm Asia 2010 Summit

2-day SynAudCon Workshop –

Professional Sound System Design: A Practical Approach

The InfoComm Asia 2010 Summit will feature a 2-full-day workshop by SynAudCon (www.synaudcon.com), an audio training resource organization dedicated to providing practical, in-depth training on the principles of audio and acoustics. This first-in-Asia workshop titled *Professional Sound System Design: A Practical Approach* will help participants to gain more confidence in the systems they designed by learning the most critical elements of the design process. Loudspeaker sensitivity, headroom considerations, device selection and placement, arrays, acoustic interference, the room impulse response (RIR) are some of the topics which will be covered in this SynAudCon workshop.

Date:	16-17 November 2010 (Tue-Wed)
Time:	10:00-17:30 daily
Venue:	Room N101B, Hong Kong Convention & Exhibition Centre
Presenters:	Pat and Brenda Brown, SynAudCon
Fee:	HK$4,700 per delegate for 2-day workshop

Early bird discount:

Pay only HK$3,900 per delegate if you complete registration and payment by **25 Oct 2010**.

Group discount:

Pay only HK$3,200 per delegate if you register and pay for three or more delegates.

Course Outline:

1. Loudspeaker Selection and Placement
   - What criteria are considered when selecting a loudspeaker?
   - How do I determine what loudspeaker is right for my situation?
   - Understanding loudspeaker specifications and how they will affect your project
   a. Setting a Realistic Target SPL
      - How do I determine how loud is loud enough?
      - Does SPL affect intelligibility?
   b. Loudspeaker Sensitivity
      - What's the difference between sensitivity and efficiency? Why do I need to know?
      - How do I compare sensitivity ratings from various manufacturers?
   c. Loudspeaker Power Handling
      - What is a power rating? How is it determined, and what does it tell me?
      - How do I know if I am staying within the rating?
      - How do I size a power amp for a loudspeaker, given its sensitivity and power handling?
   d. Listener Distance
      - What is the inverse-square law? When does it apply? What is a free-field?
   e. Peakroom/Headroom Considerations
      - What's the difference between peakroom and headroom?
      - How much peakroom does a component need?
      - How do I reduce the needed peakroom?

2. Loudspeaker Coverage
   a. Using Loudspeaker Polar Data
      - What does a polar tell me? How are coverage angles determined from a polar?
      - What is a balloon plot, and why is that better than a polar?
   b. Mapping Coverage using a Computer
      - Can computer design software be trusted? How can I use a sound system modeling program to speed up the design process?
   c. Device Selection and Placement
      - Where is the best place to put the loudspeaker?
      - How do I know the loudspeaker type to use?
      - Are horns/drivers better than cones?

3. Loudspeaker Interaction
   a. Acoustic Interference
      - What is phase interference? Can I do anything about it? Can interference be good?
   b. Beneficial vs. Detrimental Interference
      - How can interference work for me?
   c. Loudspeaker Arrays
      - What are the criteria for an "arrayable" loudspeaker?
      - How do I fix a poorly functioning array?

4. Reflected Sound
   a. The Energy-Time Curve
      - How do I measure room acoustics? What can this data tell me?
   b. Very Early Reflection Control
      - What are some guidelines for placing loudspeakers in rooms?
      - How can horn-loading reduce the need for room treatment?
   c. Echo Control
      - I have an echo. What now?

5. Masking
   a. Reverberation
      - How is reverberation different from echoes?
      - Does it help to lower the reverb time with treatment?
      - What is the direct-to-reverberant ratio?
   b. Noise
      - How is noise measured? What is an acceptable noise level?
      - What is the minimum recommended signal-to-noise ratio for an auditorium?