

# Valcom Training Class

rev July 31, 2017

This is an instructor-led class that provides familiarity with hardware, installation, setup and programming of Valcom's core analog and IP paging systems. Hands-On demonstrations and exercises and intermingled throughout the class' entirety. Upon successful completion, attendees will be capable of basic system design and installation of a Valcom analog and/or IP paging system.

9:00 – 9:30am

- I. Agenda
  
- II. History
  - a. Landline Ownership
  - b. Aftermarket Telephone Equipment
  - c. Valcom History
  - d. Paging System Architecture History
    - i. Centrally Amplified Systems
    - ii. Distributed Amplification
    - iii. I.P. Paging

9:30 – 10:30am

- III. Fundamentals of Paging
  - a. Types of Paging
    - i. One-way Paging
    - ii. Talk-back Systems
    - iii. Intercoms
  - b. Zones
    - i. Zones Defined
    - ii. Practical Application
  - c. Telephone 101
    - i. Battery Feed
    - ii. Dial Tone
    - iii. DTMF
    - iv. Ring Voltage
  - d. Telephone System Ports
    - i. FXS
    - ii. FXO
    - iii. Page Ports

**10:30 – 10:40am – Break**

10:40 – 11:30pm

Fundamentals Continued:

- e. Session Initiation Protocol
- f. Background Music
  - i. Applications
  - ii. Speaker Considerations
- g. Tones
  - i. Why Use Tones?
  - ii. Practical Applications
- h. Hands-On Exercise – Build an Analog System with Three Zones

11:30am – 12:30pm

IV. System Layout

- a. Understanding Sound Pressure Level
  - i. Effect of Distance on dB SPL
  - ii. Effect of Direction on dB SPL
  - iii. Ambient Noise
- b. Speaker Spacing and Placement
  - i. Dispersion Angle
  - ii. Phasing
- c. Horn Spacing and Placement
  - i. Dispersion Angle
  - ii. Phasing
- d. Special Considerations
  - i. Noise Sources
  - ii. Obstruction
  - iii. Phase Cancellation
- e. Written Exercise – Lay Out A 3-Zone System
- f. Site Surveys
  - i. Basics
  - ii. Resources

**12:30 – 1pm Lunch Break**

1pm – 2pm

V. System Design – Easy as 1-2-3

- a. Step 1 – Choosing A Page Control Unit/IP Gateway
  - i. Inputs
  - ii. Input Effects on System Architecture
  - iii. Scenarios
  - iv. Zones

- v. Choosing Between Analog and IP
- b. Written Exercise – Choosing Analog vs IP System Inputs
- c. Hands-On Exercise – Build a basic IP System

**2:00pm – 2:10pm Break**

2:10 – 2:30pm

System Design Continued:

- d. Step 2 – Choosing Speakers
  - i. Choosing For Your Application
  - ii. Aesthetics
  - iii. Power Requirements
- e. Step 3- Choosing A Power Supply
  - i. Valcom Power Units
  - ii. Power At The MDF
  - iii. Power At IDFs
  - iv. Distributed Power

2:30 – 3:00pm

VI. Resources

- a. Valcom Regional Managers
- b. Valcom 102b Programming Tool
  - i. Basic Functionality
  - ii. Manual, Guide and Video Tutorials
- c. Valcom Technical Support

3pm – 3:30pm Test

## Valcom Technical Training Class

### Handouts

Class Workbook

Written Exercises

Site Survey Form

Thumbdrive with Valcom 102b Programming Tool, Multi-Path Programming Tool, V-2924 Programming Tool, various product guides and literature.

Valcom Catalog