


Slide 1


Tech Works
MC-IP Series
Training Part-2 Parts & Pieces
Mark Dundas



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About MC-IP-Series Technical Training


- Who is the Audience for this training?
 - Anyone that will be designing or installing the Tech Works MC—IP Series systems.
 - Basic understanding of modern communication products is assumed.
- What is the Structure of the training?
 - There are 4 slide shows, narrated by Mark Dundas of Tech Works
 - Part 1 Product / System Overview
 - Part 2 Parts and Pieces
 - Part 3 System Wiring
 - Part 4 System Programming
- Presentation Guide Handout to follow along and take notes
- Certification Test for installers that want to be Tech Works Authorized



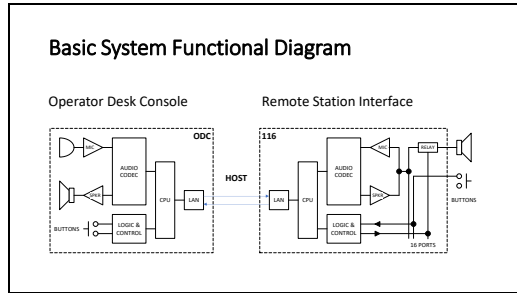
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Where is MC-IP used and Why?

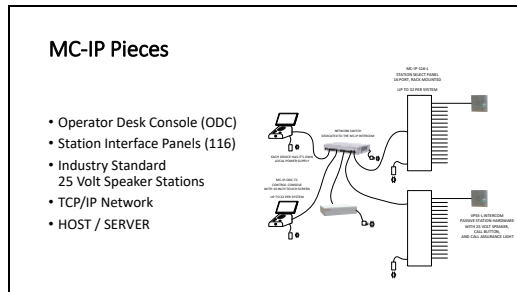
- Public Safety – Reliable Performance with Integration
 - Detention Cell to Guard Communication
 - Police Stations
 - Court Houses
 - Security Desks
 - Interrogation
 - Isolation Cells
- Healthcare – Hands Free Audio
 - Prison Infirmaries
 - Isolation Rooms
 - Operating Rooms
 - Observation Rooms
 - Sleep Labs
 - Behavioral Health
 - Child Development
 - Chemo Therapy Sterile Compounding Labs



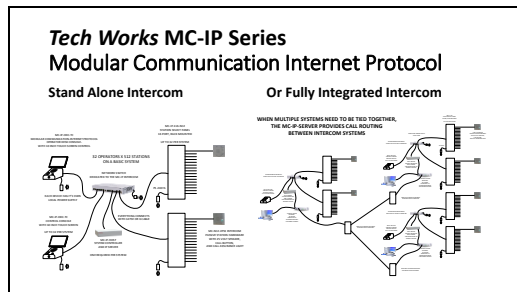
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2 versions of the MC-IP-ODC

- **Operator Desk Console**
 - **MC-IP-ODC-TS** – Touch Screen included for applications like prison infirmary and security intercom that might be a stand-alone independent intercom
 - **MC-IP-ODC-POE** - POE for those that don't want a power supply at the console location and are using their own touch screen for PLC control systems and camera control



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MC-IP-ODC-TS Touch Screen Operator Desk Console

- Complete system control console
- 10 Inch Touch Screen monitor built in
- Push To Talk Button
- Remote Gain "Reach" Up and Down
- Lighted Buttons give operational feed back when calls are active
- Liquid proof and vandal resistant Speaker
- Concealed Microphone
- Requires a local Power Supply



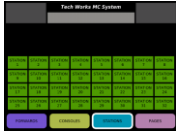
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Where is MC-IP used?

- Guard Locations
 - Prisons
 - Police Stations
 - Court Houses
 - Security Desks
- Nurse Stations
 - Prison Infirmaries
 - Behavioral Health
 - Assisted living

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Why?



- Easy to Use
 - No Training Required
- Flexible Screen Labeling
 - Change "Tech Works MC System" to the name of this Operator Location
 - Change "Station #1" to any easily identifiable text for your project
- All system functions on your screen
- All Stations including other Operators at your finger tips
- Easy Paging

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**MC-IP-ODC-POE
Operator Desk Console with
Power Over Ethernet**



- Same Features as the ODC-TS
 - Push To Talk Button
 - Remote Gain "Reach" Up and Down
 - Lighted Buttons give operational feed back when calls are active
 - Liquid proof and vandal resistant Speaker
 - Concealed Microphone
- Without the Touch Screen
 - Designed specifically to work with Control System
 - Touch Screens provided by Systems Integrators
- POE or Local Power Option

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Where is it used and Why?


- Custom systems where PLC control touch screens are controlling
 - Door Control
 - Lighting
 - Cameras
 - Any other integrated controls
- Tech Works API is easy to implement
 - Just plug a single CAT6 cable from the Intercom to the Control System
 - API commands are embedded in the Control Icons
 - Example: lcal 02 47\1\1
 - Operator ODC #2 tries to connect to Station #47

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2 versions of the MC-IP-116

1 Audio Channel X 16 Station Control Module


- **MC-IP-116** – Intercom station select panel for 16 audio stations with call switch, no light
- **MC-IP-116-NC2** – 2 call points and 2 indicator outputs associated with each voice port



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What are the Field Hardware Options?

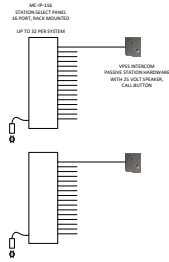
- **VPSS** – Vandal Proof Speaker Station - Non-Lighted
- **VPSS-L** – Vandal Proof Lighted Speaker Station
- **MC-NC2-VPSS-2G (-RC)** – Vandal Proof Staff Assist 2 Button with Light
- **MC-VPBL (-RC)** – Vandal Proof Button with Light
- **VPKS-1 & -2** – Vandal Proof Key Switches
- **MC-NC2-DL-22-RW** - 2 Color Dome Lights
- **MC-NC2-DL-44** - 4 Color Dome Lights
- **Standard 25 Volt Ceiling Speakers and Paging Horns**



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MC-IP-116

- 16 audio stations with call switch, no light
- Use any Industry Standard 25 Volt Speaker
- Designed to reuse existing station hardware
- Simple Call Operation
- Standard Twisted Shielded wire with Call-In Conductor



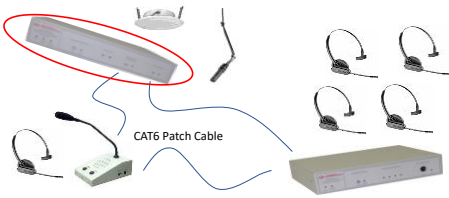
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Why use MC-IP-MSI-11?

- High Quality Audio
 - Professional Microphones
 - Equalization
- Multiple Operators
- Healthcare
 - Operating Rooms – Scrubbed Staff Touch Nothing
 - Observation Rooms – Integrate with our CI-Series for multiple options
 - Isolation Rooms – Hear everything from a whisper to a Shout
 - Chemo Therapy Sterile Compounding Labs – Hands Free in High Noise
- Public Safety
 - Interrogation – Listen and Talk to the Interrogator
 - Isolation Cells – Monitor comments and screams

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CI-BUSS Collaborative Intercom



The diagram illustrates the CI-BUSS Collaborative Intercom system. It features a central grey rectangular unit with a red oval around it. This unit is connected via blue CAT6 patch cables to several other components: a white ceiling-mounted microphone, a black handheld microphone, and a small white patch panel. On the right side, there are four black headsets with microphones, arranged in two pairs. The text 'CAT6 Patch Cable' is written near the central unit.

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Microphone Options




The slide shows two microphone options. On the left, there is a black PRO-SGM Shotgun Microphone with a silver grille and a coiled cable. Below it is a white wall-mounted hidden microphone. The text to the right describes these options.

- Articulate Listening
- PRO-SGM Shotgun Microphone
 - Wall Mount Applications
 - High Noise Environments
- Hidden Microphones
 - No one knows that they are listened to

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Clean Room Speaker Options


- Washable
- Gasket Sealed to Control Dust
- CRS-WM Surface Mount Speaker System
 - Wall Mount Applications
- CRS-RC Hard Ceiling Mount Speaker System
 - Complete with Back Box and Mounting Hardware



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What is a MC-IP-HOST?


- 544 Station System Controller
 - Up to 32 - Operator Consoles
 - Up to 32 - 116 Station Controllers for 312 Stations
- Processes call requests
 - Routes Calls to designated Operators
 - Controls Operator "Ringing"
 - Cancels Ring when a call is Answered
 - Makes the IP connection and then gets out of the way to allow streaming audio communication until the call is ended
- Stores all system Configurations
 - Each system device has a rotary Identification Switch which tells the HOST who it is
 - The rotary ID switch assigns static IP addresses to each device
 - The HOST sends each device it's unique profile when it connects to the network
 - Configurations can be Pre-Programmed in the shop



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What is a MC-IP-SERVER?


- Does everything a HOST does
 - 544 Station System Controller
 - 32 Operators
 - 312 Remote Stations
 - Processes call requests
 - Stores all system Configurations
- Plus
 - Redundant Networks for reliable independent operation of separate buildings
 - LAN / WAN router interface
 - Separate HOST IP interface for the Intercom Network
 - USB and HDMI interface for direct connection of Human Interface for programming
 - 32 Network Expansion to
 - 1024 Operators
 - 16,384 Remote Stations



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Accessories


- PS-2437B Power Supply
 - 24VDC
 - 3.75 Amps
 - Includes mounting bracket
- CAT6-* Patch Cables
 - *= Length
- PC-* Power Cords
 - *= Length
 - Allows pluggable power from module to module (Not Required)



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MC-IP-SW-16-RM
MC-IP-SW-16-POE-RM


- Gigabit Ethernet LAN
- Unmanaged Switch
- 16 LAN ports
 - 8 POE on POE model
- Rack Mountable



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Tools to help you

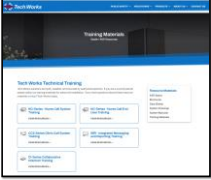
- Online 24/7 X 365 www.TechWorks-USA.com
- Product Brochures
- Specifications for Architects & Engineers
 - Available on the website (specs and data sheets)
 - Custom specs written by request
- Design/Quoting assistance
 - Questionnaires to support the process
 - Design review
 - Quote development on solutions
 - Margin
- Technical Assistance
 - Training and Installation Manuals
 - Tech Support – Engineering and Field



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Training and Certification On Line

- Thank you for taking the time to study the product
 - Your efforts will make all of our jobs easier
 - Please take the other training courses so that you are familiar with all Tech Works products
- Help us get the rest of your staff trained
 - Sales people should take parts 1 & 2 of each product group
 - Estimators/Engineers should take all parts



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Making Specialized Communications Easy

Up Next Part 3
Wiring and Networks
