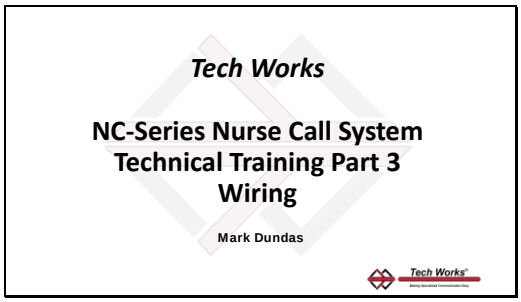
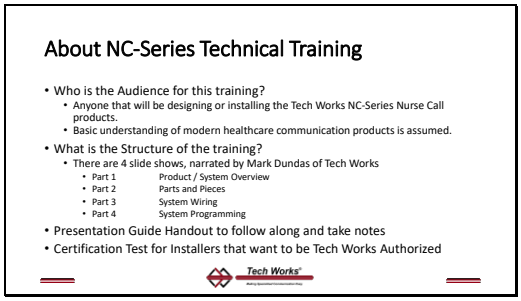
Slide 1



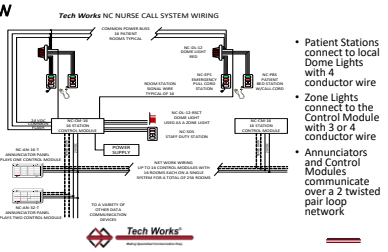
Slide 2



Slide 3

Slide 4

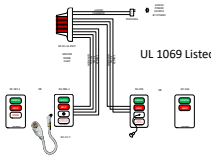
Overview



- Dome Lights provide signaling to Control Module over a single wire
- Power and Flash Clock are common to all Dome Lights
- Power is 24 VDC at the Control Module
- Patient Stations connect to local Dome Lights with 4 conductor wire
- Zone Lights connect to the Control Module with 3 or 4 conductor wire
- Annunciators and Control Modules communicate over a 2 twisted pair loop network

Slide 5

Stand Alone Room



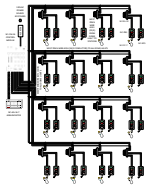
UL 1069 Listed

- Built In Flash Clock allows the NC-DL-12-RSCT to stand alone without a Control Module
- Local Power Supply can power up to 4 Dome Lights with stations
- No one other than Tech Works can deliver a UL1069 listed system as small as One Dome Light with One Station

How small can we go?

Slide 6

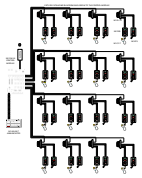
16 Rooms – Old Wiring Option



- Loop Power & Flash wiring option for repurposed wiring
- Single Home Run Conductor from old dome light to lamp annunciator
- Rauland wire
- Dukane wire
- Executone wire

Slide 7

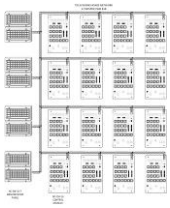
16 Rooms – New Installation Wiring Option



- All CAT 5/6 home runs from Dome Light to Control Module
- CAT 5/6 works for station wire
- CAT 5/6 works for annunciator wire
  - Double up spare pairs for power
- New Construction
  - Day surgery
  - Skilled Nursing
  - Rehab
  - Assisted Living

Slide 8

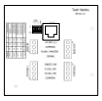
Up to 256 Rooms on 1 System



- The power of the Tech Works Network allows tying multiple Control Modules together on a single system
- Expand the system as required
  - 16 Control Modules X 16 Stations = 256
  - 256 Stations on one system
- Repurposed old Wire
- New CAT5/6 home run Wire
- Segmented network Annunciators
  - 1 Control Module per NC-AN-16-CT
  - 2 Control Modules per NC-AN-32-CT
- Local Zone Lights
- Duty Stations

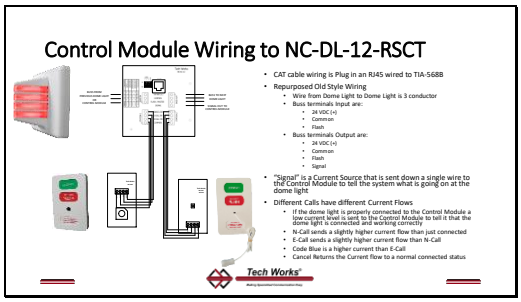
Slide 9

Input Devices – NC-DL-12 Dome Light

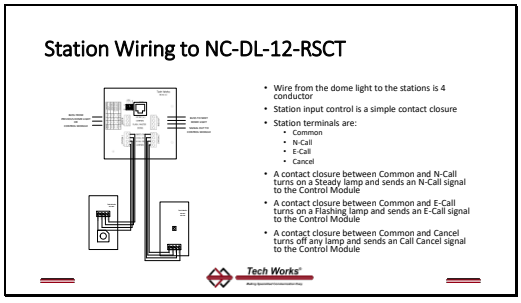


- Room Controller
- 1 Color
- 2 Station Inputs
- Wiring Options
  - Cat 5 or 6 cable
  - Old Style Light System Wire
- Stand Alone or System
- Master or Slave
- Tone or No Tone
- Dip Switch Selectable

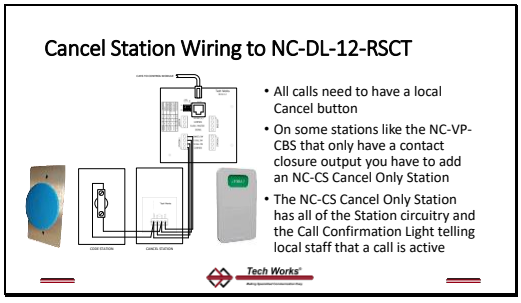
Slide 10



Slide 11

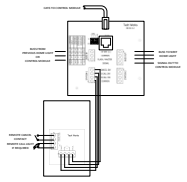


Slide 12



Slide 13

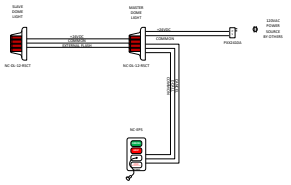
Remote Cancel Station Wiring



- Stations like the NC-VP-SAS-RC are designed to allow "Remote Cancel"
- Remote Cancel is used in areas like Mental Health where the provider wants to clear a call without entering the room
- Stations with Remote Cancel can be reset with a key switch or a push button contact

Slide 14

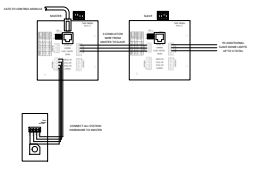
Stand Alone Restroom with Slave



- Stand alone Rest Rooms and other stand alone room sometimes need a remote annunciator dome light
- Just 3 conductors from one light to the next
- Set the unit with the Station hardware as a "Master" and the remote as a "Slave"

Slide 15

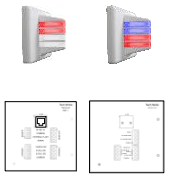
Master & Slave Wiring of NC-DL-12-RSCT



- Whether the dome light is connected to the Control Module via CAT cable or Old Style wire
  - The Station hardware always connects to the "Master" Dome Light connected to the Control Module
  - Secondary Dome Lights can be hooked to emulate the "Master"
    - by connecting them with just 3 conductor cable
    - and setting them as a "Slave"

Slide 16

Input Devices – NC-DL-22 Dome Light



- Room Controller
- 2 Color
- 2 Station Inputs
- Wiring Options
  - NC-DL-22-RW
    - Cat 5 or 6 cable
    - Old Style Light System Wire
  - NC-DL-22C
    - Cat 5 or 6 cable ONLY
    - Optional Zone input or Parallel light

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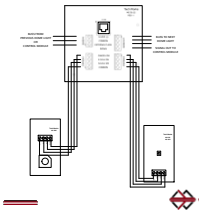
Slide 17

Wiring to NC-DL-22-RW



- Wiring and signaling is the same as the NC-DL-12
- CAT cable wiring is Plug in an RJ45 wired to TIA-568B
- Repurposed Old Style Wiring
  - Wire from Dome Light to Dome Light is 3 conductor
  - Buss terminals Input are:
    - 24 VDC (+)
    - Common
    - Flash
  - Buss terminals Output are:
    - 24 VDC (+)
    - Common
    - Flash
    - Signal
- "Signal" is a Current Source that is sent down a single wire to the Control Module to tell the system what is going on at the dome light
- Wire from the dome light to the stations is 4 conductor
- Station terminals are:
  - Common
  - N-Call
  - E-Call
  - Cancel

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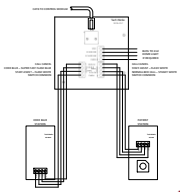
Slide 18

Station Wiring to NC-DL-22C-BR and BW



- NC-DL-22C wiring is slightly different
- CAT cable wiring is Plug in an RJ45 wired to TIA-568B
- NO Repurposed Old Style Wiring
- Zone Light and Parallel Dome Light connections are 4 conductor
  - Power 24 VDC
  - Top Light Control
  - Bottom Light Control
  - Common
- Wire from the dome light to the stations is 4 conductor
- Station terminals are:
  - Common
  - N-Call
  - E-Call
  - Cancel

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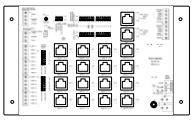
Slide 19

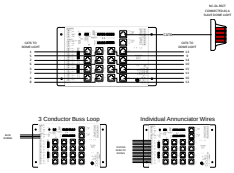
Control Module NC-CM-16



- 16 RJ45 Connectors for CAT cable Connecting Dome Lights from Rooms
- Screw Terminals for Old Style Wiring
- Tech Works Network Wiring
- Tech Works Network Addressing
- Station Out of Service Switches
- Supervision and Configuration Switches
- Zone 1 Output Connections
- Zone 2 Output Connections
- Zone 1 Output Assignment Dip Switches
- Zone 2 Output Assignment Dip Switches
- 24 Volt Power Connections

Slide 20

2 Ways to Wire a System



- CAT 5 or CAT 6 – Home run
  OR
- Repurposed Old Style Wiring
  - Wire from Dome Light to Dome Light is 3 conductor
    - Wire should be 16-18 gauge Minimum
  - Buss terminals Input are:
    - 24 VDC (+)
    - Common
    - Flash
- "Signal" is a single wire to the Control Module from each Dome Light to tell the system what is going on at the Dome Light
  - These were the "Annunciate" lamp wires on the old style system
  - Intercept them and connect them to the terminals on the left side of the Control Module
- Or you can do a combination of both wire topologies

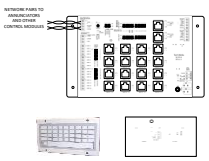
Slide 21

Output Devices

- Tech Works Network
  - NC-AN-16-CT
    - 16 Point Light Annunciator
    - Built In Tone
    - Easy Labeling
  - NC-AN-32-CT
    - 32 Point Light Annunciator
    - Built In Tone
    - Easy Labeling
- Zone Output
  - NC-SDS
    - Staff Duty Tone Station
    - Lighted Silence Button
  - NC-DL-12-RSCT
    - Slave
  - NC-DL-22C

Slide 22

Annunciator Wiring



- Network wire must be 2 **Twisted Pair** cable
- Small Networks with only a single annunciator, CAT type cable will work fine
- Large systems with multiple annunciators and other Network powered devices, use 18 gauge wire
- Tech Works Network Screw Terminals
  - "T" - Transmit
  - "R" – Receive
  - 24 VDC Power
  - Common
- This is how you connect multiple Control Modules together
- Also this is how you connect Annunciators
- Parallel connects at each devise

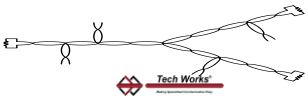
Slide 23

Network Termination

Two major factors contribute to the proper operation of the Tech Works Digital Network.

1. Twisted wire
2. Termination

Often times a Tech Works Network does not work out as a perfect loop and looks more like a modified star wiring plan. In that case, do not terminate all network ends. Only turn on the Terminator on the longest wire runs of similar length.



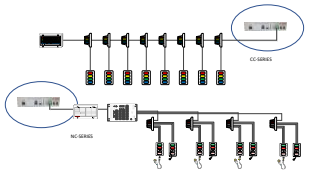
Slide 24

Add an IMR and Share Relevant Information

- Pocket Page
- Tablets
- Text Messaging
  - Custom text from each point (button)
  - Any phone, Any carrier
- Digital Signage
- Anything IP
  - PCs become system display
  - PCs become admin terminals
  - All connections are password controlled

Slide 25

IMR Hooks to CC or NC Tech Works Network

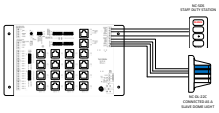


- Connects directly to the Annunciator Loop
- CC2 System
- NC System
- Or Both at the same time
- 24 Volts DC Power

Just Plug It In

Slide 26

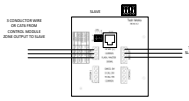
Zone Output Wiring



- 2 Discrete Zone Outputs
  - Zone 1
  - Zone 2
- Station Zone assignments are individually dip switch assignable
- Zone Outputs can be CAT or 4 conductor wire
- Screw Terminals - 4 Conductor
  - +24 VDC Power
  - Code Blue & E-Call (Top Light of 2 element Dome Light)
  - E-Call & N-Call (Bottom Light of 2 element Dome Light)
  - Common
- Up to 4 devices can hook in parallel to each Zone output

Slide 27

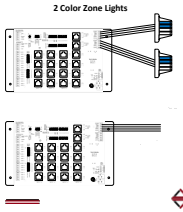
Zone Light Wiring of NC-DL-12-RSCT



- Screw Terminals - 3 Conductor
  - +24 VDC Power
  - Code Blue & E-Call
    OR
  - E-Call & N-Call
  - Common
- Set Dip Switch as a "Slave"
- Up to 4 devices can hook in parallel to each Zone output
- Connect to the next Dome Light with just 3 conductor cable

Slide 28

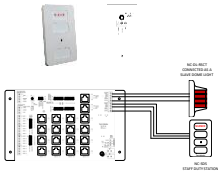
2-Color Zone Light Wiring of NC-DL-22C



- Zone Outputs can be CAT or 4 conductor wire
- Screw Terminals - 4 Conductor
  - +24 VDC Power
  - Code Blue & E-Call (Top Light of 2 element Dome Light)
  - E-Call & N-Call (Bottom Light of 2 element Dome Light)
  - Common
- Connect Screw to Screw
- Up to 4 devices can hook in parallel to each Zone output

Slide 29

Zone Duty Station Wiring of NC-SDS



- Sounds a Tone
  - when a call is active on the system
- Visual Call Indication Light
- Distinctive Silence Button
  - Turns off the tone, the light stays on while a call is active
- Moisture Resistant
- Easy to Clean
- Just 3 Conductor wire for Full Functionality

Slide 30

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

Slide 32


Making Specialized Communications Easy
Up Next Part 4
System Programming
Tech Works