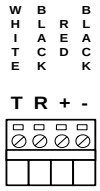
NC-AN-16C & 32C-T QUICK REFERENCE GUIDE

The Tech Works **NC-AN-16C-T** is a 16-Light Intelligent Annunciator panel and the **NC-AN-32C-T** is a 32 Light Intelligent Annunciator Panel. Made of white ABS plastic with a removable faceplate, each unit can be custom labeled to identify staff or locations. An integral tone sounds to draw attention to any change of status.

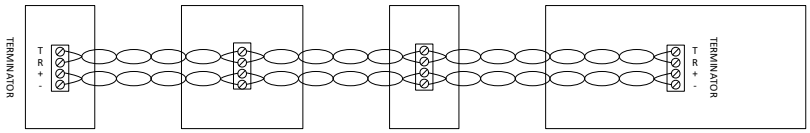


Wiring is four screw terminals to interface to the Tech Works Network. The Network is 2 twisted pair wires. One Pair of wires is Network Communication data and the other pair is power. **Wire must be connected "T" to "T", "R" to "R", "+" to +", and "-" to "-" between devices or from device to device for proper operation.**

Be sure to tighten the screw on the wire tightly. U.L. Torque Spec: 3.5 lb. / in.

The first pair is RS485 terminated bus topology, operating at 39K baud in a parallel connection plan. Because this is a distributed processor system, each intelligent device contains a micro controller, so there is "NO Central Processor". Each device is totally self-contained and can be used as a stand alone or in combination with any other intelligent device. The second pair is 12 VDC power in a parallel connection plan.

The system is designed to operate on unshielded twisted pair cable from 24 to 18 AWG.
The twist of the cable is critical to the proper communication of data on the network to avoid noise interference. Any standard voice grade twist should provide adequate noise cancellation under normal operating conditions. All wiring is NEC Class 2.

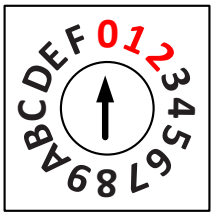


Due to the implementation of innovative data noise canceling circuits in all Tech Works RS485 microprocessor products, the data and power can now be run in any direction up to a total wire length of 3000 feet per network. The last station on each end of all wire runs must employ a terminating resistor to make the network operate correctly. The terminator is built into each station and selected by turning "ON" the "T" dipswitch. If a terminator is placed in the middle, data will not flow to all devices in the system causing irregular operation.

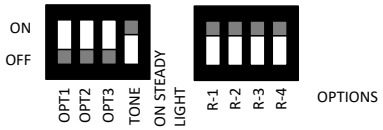
As with any RS485 communication system grounding is critical to the proper operation and life expectancy of the system. All ***Tech Works*** power supplies employ a floating ground designed to isolate the data communication from interference and destructive electro static discharges. The use of multiple power supplies on the same network will cause different floating ground references (ground loops) which may cause noise and destruction of the intelligent devices. If multiple power supplies are required, be sure to connect all "-" or common wires together between power supplies for a "common" reference.

Addressing and Functional Configuration:

The network station address is set with a Rotary Switch labeled “MASTER ADDRESS”. An NC-AN-16C-T is designed to display the status of an NC-CM-16 Control Module while the NC-AN-32C-T is designed to display 2 of the NC-CM-16 Control Modules. By setting the rotary address switch on an NC-AN-16C-T to match the rotary address switch on an NC-CM-16 they will share the same information. Setting the rotary switch on an NC-AN-32C-T selects the first or lowest Master Address to be displayed. Because each NC-CM-16 has 16 stations and the NC-AN-32C-T can display twice that many, the right hand half of an NC-AN-32C-T will display the next NC-CM-16 Control Module address in sequence from the address switch setting. Or in other words the NC-AN-32C-T will display it’s Master Address plus the next Master Address.



The Address switch is only read when the processor is rebooted. To have any change of address take effect the power must be cycled so that the address switch will be read.



Dip Switches are used to set the software Options in the NC-AN-16C & 32C-T Annunciators. The switches shown are in the Default position. All Dip Switches are OFF when down and ON when up. The switches labeled “OPT1”, “OPT2”, and “OPT3” are not active in the NC-AN-16C & 32C-T Annunciators. These are reserved for the Clinic-Call Annunciator products.

The Tone associated with a call or station alert is programmed by the remaining dip switches:

TONE	This switch turns the tone unit ON when a steady light comes on. Any steady light will sound a single 500 mS Beep and be followed by a reminder tone every 15-20 seconds until the light is turned off.
R-1	Activates the Tone associated with the Top Row of lights. If R-1 is OFF then no Tone will sound with any top row lights. If the “TONE” switch is OFF and the R-1 switch is turned ON then a Repeating Tone will sound only with a Flashing light in the Top Row. If the “TONE” switch is ON and the R-1 switch is on then there will be a Repeating Tone with any Flashing light and a single Tone with a reminder Tone on any Steady Light.
R-2	Activates the Tone associated with the Second Row of lights. All other functions are the same as described for R-1 above.
R-3	Activates the Tone associated with the Third Row of lights. All other functions are the same as described for R-1 above.
R-4	Activates the Tone associated with the Fourth Row of lights. All other functions are the same as described for R-1 above.

Each **NC-AN-16C-T** has 16 White Lights to the left of each window and 16 White Lights to the right of each window. How these lights react to incoming call is set by a three-position jumper on the main board. Disconnect power from the annunciator. Remove the plastic face cover of the unit. Unplug the top display board from the main control board. You will see 3 jumpers, near the middle of the board, P10, P11, P12.

Moving the jumper to P11 causes both lights to come on with any Code Blue, E-Call, or an N-Call but the Code Blue will mask any other call and E-Call will mask an N-Call.

Moving the jumper to P12 turns the annunciator into a three-level call system and causes the left light to become a Code Blue indicator with Super-Fast Flash and tone, while the right light indicates N-Calls and E-Calls.