CWSI Tyco
Quick Start Guide

Field Reference Manual
Version 4.2



This document is intended for use as an installation and service guide by **Factory Certified** CWSI trained personnel *only* and is subject to change at any time as new products are introduced. Consult all CWSI UL listed product manuals for proper programming and compliance listings.

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How to use this guide

Summary

This guide is provided to CWSI Factory Certified individuals and is designed to be a go-to source of information when working in the field. This guide covers a wide range of topics, including Hardware, Software, and Programming. However, this is still just a "Quick" reference guide; please refer to the Installation and Operation documentation provided with the equipment for detailed information.

Technical Support

Technical Support is a courtesy extended to those dealers and technicians that have been factory trained. Limited support is available to individuals who have not been factory trained. Should you have a question not answered in this guide, or would like to speak to someone regarding a possible RMA, please contact our Technical Support team. Our Technical Product Support Specialists can be reached Monday – Friday, 7:30AM – 5:00PM ET (closed on most US Holidays) in the following ways:

- By Phone: (954) 318-6005 Please listen to the prompts
    - For after hours support, please listen to the message for contact information
- By email: support@cwsifire.com

When contacting Technical Support, please be ready to provide the following information:

- Your Name
- Company Name
- Job Site Name
- Call back number
- Panel Type (CP-3000(D)/A/DA, 3500D, 3600(+))
- Brief description of the issue
- Description of troubleshooting you have already performed

Depending on the issue, you may also be asked to provide the following:

- Panel Event Logs
- Current Network Layout
- Previous Network Layout (if needed)
- Site-map noting repeater locations
- Program Backup
- Types of Antenna used

Technical Support – Continued

In certain circumstances Technical Support may have limitations on assistance that may be provided based on the following:

- Company/Office is NOT CWSI Tyco Factory Trained or Authorized
- Individual Calling is not Factory Trained or is unfamiliar with the products
    - If the Technical Support representative feels this individual may not be able to properly or safely interface with the equipment, the individual may only be offered limited assistance until a factory trained technician is available.
- If the Technician is NOT currently on the jobsite. Depending upon the reason for calling into Technical Support this may have an effect.
- If the Technician does not have the proper tools/equipment/parts to troubleshoot with.
- If necessary data such as event logs, network configurations, maps are not able to be provided to Technical Support for assistance in troubleshooting.

Sales

Please direct any sales related questions to your Area Sales Manager

East	Midwest	South	West
Jason Barton JasonBarton@tyco.com (954) 224-7911	David Sepe DavidSepe@tyco.com (954) 562-3724	Chuck Caudill ChuckCaudill@tyco.com (863) 455-6520	Bob Budnieski RobertBudnieski@tyco.com (602) 327-2239

General Terms and Definitions

Tree/Layout - This refers to your Network Layout which you can download, save, and view at any time with your CWSI Suite software tool using the Network Layout option.

Log - Refers to any Log (Alarm, Supervisory, Trouble, or Event) retrieved with CWSI Suite using the Panel Logs option.

Program Fail – This means your links between repeaters are borderline or not good. Please re-survey the repeater in question with the FAST tool and verify with the survey beep method as well. NOTE: You do NOT need to place your installed repeaters in survey mode; simply hit the survey button and listen for your quick double beep response time. Any double beeps that return after a period of 3 seconds indicates a weak link. Do ten good surveys, wait 3 minutes, do another ten, wait 3 more minutes, and then do a final set of 10.

Hardware Fault - Indicates a fault with the repeater's memory or internal circuitry, you have enrolled an AR3(A) to a CP-3500D, or dipswitch 5 on an AR-5 enrolled to a CP-35000D is not set correctly. Verify that your dipswitch settings, if any switches are set incorrectly, change the switches and power cycle the repeater. If the dipswitches are set correctly, then the repeater will require factory service. Please contact CWSI for an RMA.

Unknown Unit - An Unknown Unit message on your panel indicates that a device or repeater was deleted from the device list BEFORE removing power to it OR there is a device installed in the field that matches the panel base code and is not enrolled into the system. If this device/repeater is still powered it will continue to transmit to your panel as an Unknown Unit until you either power it down or wipe its base code.
To remove this Unknown Unit you need to go into the Unknown Unit list in your programming menu. Go to Unknown Unit List and select "Ignore" for the device. If you need to re-enroll that device into the network, then back out and enter the Ignored List to remove the device and re-enter Enrollment mode. If you want to continue ignoring the device then leave it in the ignored list.

CWSI Suite – The software used to program information into a panel, retrieve log information, and retrieve Network Layout information. This software is also used to update Annunciator files, perform backup and restore operations, as well as update motherboard/CPU firmware [CP-3600(+) ONLY].

CWSite – This is the name of our graphical annunciator software package. This software will allow the computer that it is loaded onto the ability to obtain panel status information as well as display customizable action messages and information about devices and events.

Software terminology note:
DOWNLOAD = Panel → PC (Transfer of Info FROM Panel)
UPLOAD = PC → Panel (Transfer of Info TO Panel)

Hardware Basics

Dipswitch Settings

CP-3000(D)/CP-3000A(DA) Receiver Card:
All 6 dipswitches on your **Panel** should be to the left (ON position).

CP-3500D Receiver Card:
Dipswitches 1,2,4,5, & 6 should be ON (to the Left), and 3 should be OFF (to the Right)

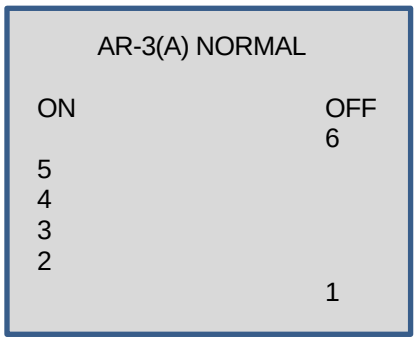
CP-3600(+) Receiver Card:
Dipswitches 1,2,5, & 6 should be ON (to the Left), and 3 & 4 should be OFF (to the Right)

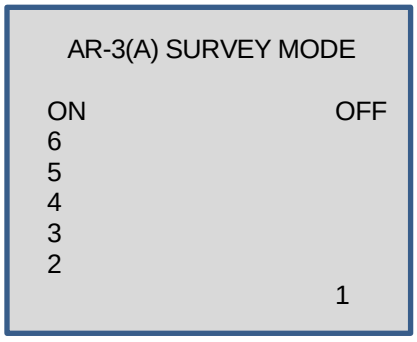
Repeater:
For doing the initial *Pre-Installation Site Survey Procedure* and setting a Repeater into survey mode dipswitches are: 1 (OFF) 2-6 (ON). For AR-5 Repeater the same applies including 3(OFF).

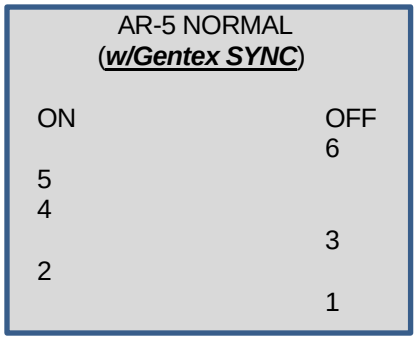
Note: Repeater's Master side (receiving antenna) is on the left. The Remote side (transmitting antenna) is on the right.

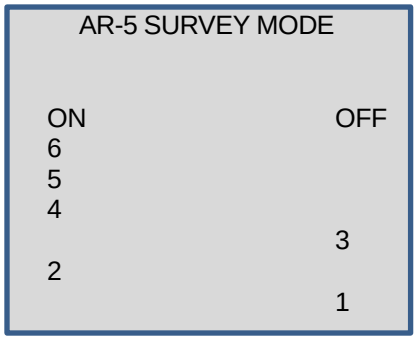
Dipswitch Positions

Dipswitch 6- Survey mode
Dipswitch 5- Legacy Mode (AR-5 only)
Dipswitch 4 – Used only w/CP-3600(+)
Dipswitch 3 – Not used (OFF on AR-5)
Dipswitch 2 – Gentex Sync
Dipswitch 1 – Receiver/Repeater setting









AR-5 NORMAL
(w/o Gentex SYNC)

ON	OFF
	6
5	
4	
	3
	2
	1

AR-5 LEGACY MODE

ON	OFF
	6
	5
4	
	3
	2
	1

AR-5 [for CP-3600(+)]*
(***w/Gentex SYNC***)

ON	OFF
	6
5	
	4
	3
2	
	1

CP-3000(A)/(DA) NORMAL

ON	OFF
6	
5	
4	
3	
2	
1	

CP-3500D LEGACY MODE
(***Makes it a 3000A/DA)***

ON	OFF
6	
	5
4	
	3
	2
1	

CP-3500D NORMAL
(***w/GentexSYNC***)

ON	OFF
6	
5	
4	
	3
2	
1	

CP-3500D NORMAL
(w/o Gentex SYNC)

ON	OFF
	6
5	
4	
3	
	2
1	

CP-3600(+) NORMAL*
(***w/GentexSYNC***)

ON	OFF
6	
5	
	4
	3
2	
1	

*This configuration is only available with AR-5 & Receiver cards that contain a "SW2 Compatibility Settings" label on the Remote/Slave side shield cover. If there is not a label in this location, this device is *NOT* compatible with a CP-3600(+) system.

Device and Battery Compatability

Device	Battery
301 & 302 Smoke Detector	Duracell 3 VDC Lithium (DL123A / Ultra123)
310 Pull Station	Duracell 3 VDC Lithium (DL123A / Ultra123)
345/345TS Transmitter	Duracell 3 VDC Lithium (DL123A) *OR* Panasonic 3 VDC Lithium (CR123A)
320 Heat Detector	(3) Duracell Procell AAA (PC2400) or (3) Energizer AAA (E92)
350 CO Detector	Panasonic 3 VDC Lithium (CR123A)
520 & Mini Horn Audible Device	RF - 3.6 VDC Lithium (ER34615)** Sounder – (2) 3.6 VDC Lithium (ER34615M)**
SR-5 Wireless Relay	3.7 VDC 2.8aH (BA-3.7V-2.8AH) lithium ion battery
WRA-3 Annunciator	3.7 VDC 2.8aH (BA-3.7V-2.8AH) lithium ion battery
FAST Survey Tool	3.7 VDC 2.8aH (BA-3.7V-2.8AH) lithium ion battery
AR-5 Repeater	Yuasa 4aH 12 VDC (NP4-12) battery
CP-3600(+) Panel	Yuasa 4aH 12 VDC(NP4-12) or 7aH 12 VDC (NP7-12) battery

Note:

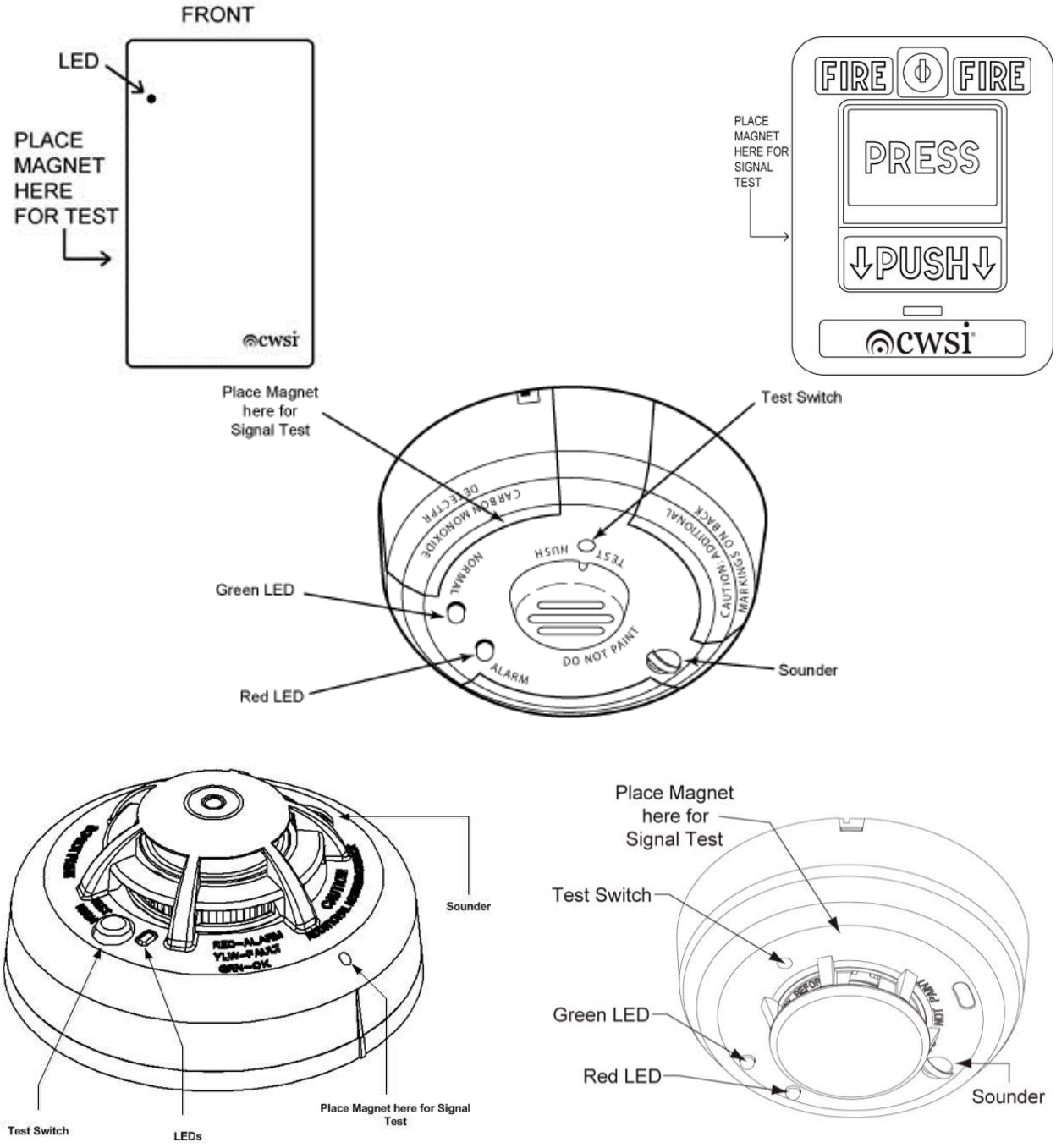
CWSI *strongly recommends* using the batteries for the devices listed above. Deviation from the batteries listed in the above table may cause unpredictable field behavior or potential damage to the equipment.

**The batteries for these devices are a proprietary battery and are *NOT* available through any third-party vendor.

Wiping the Base Code

All Repeaters and devices can have their base code wiped. For Repeaters, while powered up, hold down the SURVEY BUTTON for 15 seconds, after which you will see the trouble led light and stay solid along with an accompanying long tone from the piezo. Remove power from the repeater once you hear the tone.

For Smokes, Pull Stations, Transmitters, etc. you will need a magnet and a battery. Remove battery, place magnet on designated survey spot (see below) and insert battery. You should hear a long tone followed by a short beep. If not, try again.



Serial Number assignments

Each type of device starts with a unique serial number. You can tell what type of device is reporting to the panel by looking at the first one or two digits in the number.

Serial Number List:

000XXX – CP-3000A	003XXX – CP-3000DA	003XXX – CP-3500D
03XXXX – AR-3(A) Repeater	5XXXXX - RB-XX	03XXXX – AR-5 Repeater
100XXX- 300 Smoke	20XXXX – 301 Smoke	119XXX – 302 Smoke
30XXXX – 340/345 Transmitter	38XXXX – 340TS/345TS Transmitter	
400XXX – 310 Pull station	600XXX – 350 CO Detector	
68XXXX – Annunciator/FAST	690XXX– SR-5 Wireless Relay	
6CXXXX – 320 Heat Detector	6EXXXX- 325 Smoke/Heat Detector	
72XXXX- 520 Low Freq. Sounder	70XXXX – Mini Horn	

Compatibility

The CP-3600(+) is compatible only with AR-5 & Receiver cards that contain a "SW2 Compatibility Settings" label on the Remote/Slave side shield cover. If there is not a label in this location, this device is ***NOT*** compatible with a CP-3600(+) system.

AR-5 & Receiver cards that contain a "SW2 Compatibility Settings" label on the Remote/Slave side shield cover ***ARE*** compatible with previous generation panels [CP-3500D & CP-3000(D)(A)(DA)]. Refer to documentation for the correct compatibility settings.

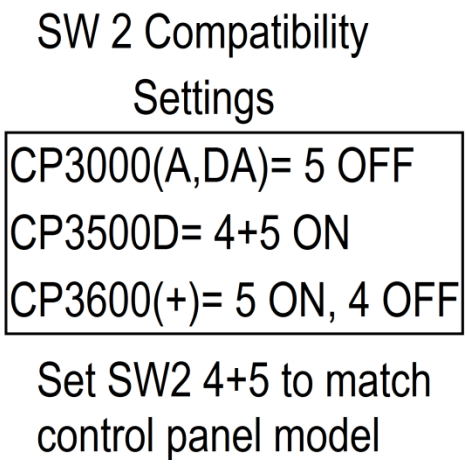
WRA-3 Annunciators and SR-5 Wireless relays manufactured prior to the release of the CP-3600(+) panel are ***NOT*** compatible with the CP-3600(+). WRA-3 Annunciators and SR-5 Wireless Relays manufactured after the release of the CP-3600(+) panel ***ARE*** compatible with the CP-3600(+) AND CP-3500D/CP-3000(A/DA) panels. These newer devices will be marked with "Tyco" branded labels, which will help you identify it as the latest model.

The CP-3500D and CP-3600(+) are compatible with all initiating devices and 520/MH Sounders. These panels are ***NOT*** compatible with AR-3(A) Repeaters. You cannot directly connect Relay Boxes (RB-10) or an RM-5 to a CP-3500D or CP-3600(+).

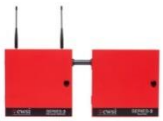
The CP-3000A(DA) is ***NO***T compatible with the following: 520/MH Sounders, 320,325, AR-5 (in Non-Legacy Mode), AR-3, SR-5, RM-5. You cannot directly connect Relay Boxes (RB-10) to a CP-3000A(DA).

The CP-3000(D) is ***NOT*** compatible with the following: 520/MH Sounders, 320,325, AR-5 (in Non-Legacy Mode), WRA-3, SR-5, RM-5. You cannot directly connect Relay Boxes to a CP-3000(D).

Compatibility Label – The image below shows the "SW2 Compatibility Settings" Label found on the Remote/Slave side shield cover. The presence of this label indicates that it is compatible with the CP-3600(+) Control Panel as well as CP-3500D and CP-3000(A/DA) Control Panels



3000A(DA) Product Load Specifications

	**CP-3000A/DA CONTROL PANEL** Standby AC power 175 mA Alarm AC power 190 mA Standby DC power 91 mA Alarm DC power 200 mA
	**WRA-3 REMOTE ANNUNCIATOR** Standby AC power 57mA Alarm AC power 57 mA Standby DC power 77 mA Alarm DC power 175mA
	**AR-3A REPEATER** Standby AC power 120 mA Alarm AC power 125 mA Standby DC power 26 mA Alarm DC power 48 mA
	**RB-10 to 40 relay box** Standby AC power use AR-3A values as change is negligible Alarm AC power add 10 mA to AR-3A values per relay board Standby DC power add 2 mA to AR-3A values per relay board Alarm DC power add 110 mA to AR-3A values per relay board

PLEASE NOTE:

If NACs are not used there is no external load on the panel or repeaters. The numbers presented above are for control panel and repeater and repeater/relay combination loads only. Use separate load calculation sheets for NACs loads.

CP-3500D and CP-3600(+) Product Load Specifications

	**CP-3500D/3600(+) CONTROL PANEL** Standby AC power Alarm AC power Standby DC power Alarm DC power	120VAC 138 mA 149 mA 89 mA 280 mA	240VAC 36 mA 55 mA
	**WRA-3 REMOTE ANNUNCIATOR** Standby AC power Alarm AC power Standby DC power Alarm DC power	 57 mA 57 mA 77 mA 175 mA	
	**AR-5 REPEATER** Standby AC power Alarm AC power Standby DC power Alarm DC power	120VAC 156 mA 186 mA 26 mA 290 mA (Includes RM-5)	240VAC 24 mA 52 mA
	**RB-10 to 40 relay box** Standby AC power Alarm AC power Standby DC power Alarm DC power	 Use AR-5 values as change is negligible Add 10 mA to AR-5 values per relay board Add 2 mA to AR-5 values per relay board Add 110 mA to AR-5 values per relay board	
	**SR-5 Wireless Relay** Standby AC power Alarm AC power Standby DC power Alarm DC power Standby 24Vdc power Alarm 24Vdc power	 37 mA 47 mA 49 mA 392 mA 17 mA 84 mA	

PLEASE NOTE:

If NACs are not used there is no external load on the panel or repeaters. The numbers presented above are for control panel and repeater and repeater/relay combination loads only. Use separate load calculation sheets for NACs loads.

CWSI Field Analysis Survey Tool Survey Procedures & Guide

FAST – Terms and Definitions

Checksum Bad **-** Caused by a mismatch of programming information between the CP-3000A(DA)/CP-3500D/CP-3600(+) and the FAST. This will also be displayed while an SD card remains in the SD card slot.

New Survey - Using a Repeater (with the dipswitches in Survey Mode) and a FAST to perform a site survey for a new CP-3000A(DA)/CP-3500D/CP-3600(+) system.

Existing Survey- Using a FAST to check signal strength on an installed Network by enrolling the device into the panel. No dipswitches on the receiver need to be changed.

Test Failure **-** *On initial power up,* if the unit is not able to connect to a Network it will display a Test Failure trouble. To clear this trouble press and hold ACK/Step & Signal Silence keys for five (5) seconds to advance to the FAST main Screen. You can also power cycle the unit when you are within range of an available Network.

New Survey – Building your Repeater Network

To perform a new site survey, at a minimum you should have the following:

- FAST Unit
- AR-3A or AR-5 Repeater (Survey with the repeater model you will be installing)
- (1) OM-3 Adaptor for the FAST
- (2) OM-1 Antenna
- (2) OM-3 Antenna

Change the dipswitch on the repeater to place it into survey mode and enroll the FAST to the repeater. You will see the last two digits of the repeater ID on the signal survey screen. Place the repeater where the Panel would be installed and take the FAST to the first estimated repeater location. Press “Signal Silence” to perform a survey set at your beginning location. Perform a minimum of 3 survey sets with good results before proceeding to the next location. A good result would be an average of 75% or higher, 68% is the lowest acceptable percentage. It is recommended that a repeater not be installed ay any location resulting in percentages lower than 75%.

Existing Survey – CP-3000A(DA)/CP-3500D/CP-3600(+)

Location based survey:

To perform a signal survey on an installed network you will first need to enroll the FAST to the Panel. This will create a Checksum Bad trouble on the panel and on any WRA-3 Annunciators installed. You can ignore this trouble for the purposes of solely doing signal surveys. Power the FAST down.

Next, travel to the repeater location from which you want to check signal strength, power that repeater down, power the FAST up and allow it to connect to the network. This may take up to a minute. Place the FAST as close to the repeater as you can, from there perform signal survey sets. Receiving signal survey results of Not Ready indicate the unit is not able to find a repeater or panel to link to.

When you have finished performing all signal surveys, delete the FAST from the panel, this will clear the Checksum Bad troubles from the panel and any other annunciators.

Existing Survey – Continued

***Direct link survey*:**

This method allows you to check strength from one specific repeater to another (ex: Repeater A to Repeater B). Travel to the repeater location from which you want to check signal strength TO (Repeater A), power the FAST up and allow it to connect to it. This may take up to a minute. Travel to Repeater B's location. Place the FAST as close to the repeater as you can, from there perform signal survey sets. Receiving a signal survey message of "Not Ready" indicates the unit is not able to find a repeater or panel to link to.

Test Mode

To perform a functional walk test on any installed network, you will first need to enroll the FAST to the **CP-3000A(DA)/CP-3500D/CP-3600(+)**. This will create a "Checksum Bad" trouble on the panel and on any WRA-3 Annunciators installed. You will need the CWSI Suite software to update the FAST. To Program the Unit you will need the CWSI Suite Software and the SD card/USB Adapter. Connect to the Panel and select 'Export to Annunciator'. You will save the export file to the SD card; then insert the SD card into the FAST tool. Once the unit has been updated, place the panel into Panel Test Mode. The FAST will display "Panel in Test Mode" on-screen. You can now perform device functionality tests and see Alarm and Supervisory conditions on the FAST. The unit will display event type, number of total events, and device ID with the newest event raising the quantity. To view the newest event you will need to press Ack-Step to advance the displayed event. When you are finished you can delete the FAST from the Panel the remaining WRA-3 Annunciators will clear the "Checksum Bad" troubles. **Note:** Only the FAST 3.0 (or greater) is compatible with CP-3600(+) Test Mode.

Low Battery

The Voltage screen will display the unit's current voltage in millivolts (mV).You will see the battery's voltage and charger voltage (if the unit has A/C applied to it). When the unit's battery has run low it will display a (!) next to the battery voltage. Plug A/C into the unit and allow it to recharge, then press the Reset key to clear the (!).

Initiating Device To Repeater Procedure

After determining where each repeater is to be installed on a jobsite, you must perform a signal test between each wireless initiating device and the closest repeater. You do this exactly as you did using a FAST and repeater in the beginning, except this time you will be placing the survey repeater at each repeater mounting location and testing to that repeater with an initiating device. You *must* use the device that is going to be installed and test from the mounting location. That means if you are installing a transmitter, test with a transmitter; if installing a smoke detector, test with a smoke detector.

- Enroll a smoke detector or transmitter to the repeater. If you have to clear the base code of the device, refer to the "Wiping the Base Code" section of this manual.
- Swipe a magnet across the smoke to verify communications with the repeater.
- Test the device to repeater link by going to each final installation location and testing the link. Hold or place the device where it will be installed and use your magnet to send a test to the repeater to verify the installation location. You will hear a single beep followed by a double beep. The time delay between the beep codes determines whether or not the location is acceptable for the device. The delay between the beep codes should not be greater than 3-4 seconds. You must test the link 30 times. If the test is good, proceed to the next location and test the next location. Do this for every device location on the job.

Installation Procedures

Panel & Repeater Installation

Install your panel and all repeaters using the information provided in the appropriate Installation Guide but DO NOT apply power to the devices. Starting with the Control Panel, apply power to the unit and wait for the completion of its Initialization Routine. A new panel out of the box with no installed devices will take about 4 minutes to go through the initialization routine. After the initialization is complete, go into the Setup menu and set both the Time/Date and Supervisory Options. Assuming the repeaters are already installed, power up each repeater, starting with the repeater closest to the panel and working your way out until all the repeaters are powered up and communicating with the panel. If your repeaters have not yet been enrolled to the panel, make sure you are in "Enrollment Mode" prior to power up. Upon power up you will hear a quick beep. A repeater will take up to a minute to link to the system. Once a link is established you will then hear a double beep. You will know that you can move on to the next one when you have the LED pattern described above under "Normal Operation." Then do a signal survey at each repeater using the FAST, to verify signal and to ensure a solid repeater link.

At this point using CWSI Suite Software, download and save a Network Layout. Compare the layout to your site map from your initial survey to ensure that the paths are correct. The sequence is below:

Connect to the panel, if not already connected, and click on the Network Layout icon [] and choose "Network Layout". Expand and view the file and save it to the CWSI folder on your desktop. We recommend creating a folder with the job name and saving the file with the name, tree#, time and date. Example: *Craven High School first AR3tree 2pm 0902512.txt*

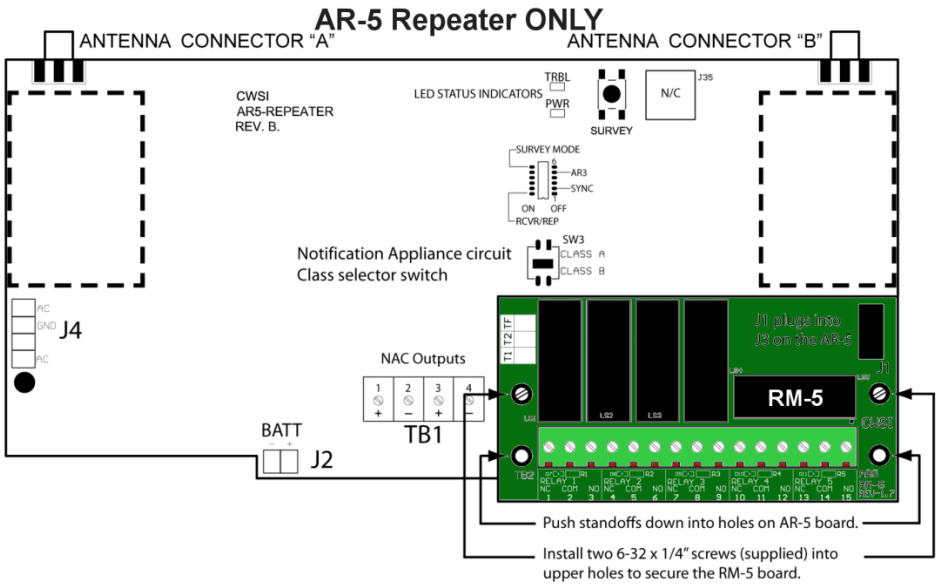
Initiating Device Installation

Starting at the control panel, begin installing your wireless devices. If your devices have not yet been enrolled to the panel, make sure you are in "Enrollment Mode" prior to power up. After the device has checked into the panel, perform a signal survey for each one before permanently installing it. After installing your devices, again download another Network Layout. Compare the layout to your site map from your initial survey to verify devices are communicating with the assigned repeater. They may not be at the closest repeater when you downloaded this Network Layout, but they may realign later. After all devices are installed and the system is clear, download another Network Layout as above. Example: *Craven High School alldevicetree 430pm 092512.txt*

Using your CWSI Suite Software; download another Network Layout 24 hours later. Compare it to the layout from the day before to see if any devices or repeaters have realigned. You can open and compare more than one layout on your desktop. You can open a previously saved layout using the following sequence:

In the CWSI Suite software, click on the Network Layout icon [] and choose "Network Layout from Backup". Navigate to the saved file and open it. It will appear on your desktop. Compare the two layouts looking for any movement of devices or realignment of repeaters.

RM-5 Plug–in Relay Module

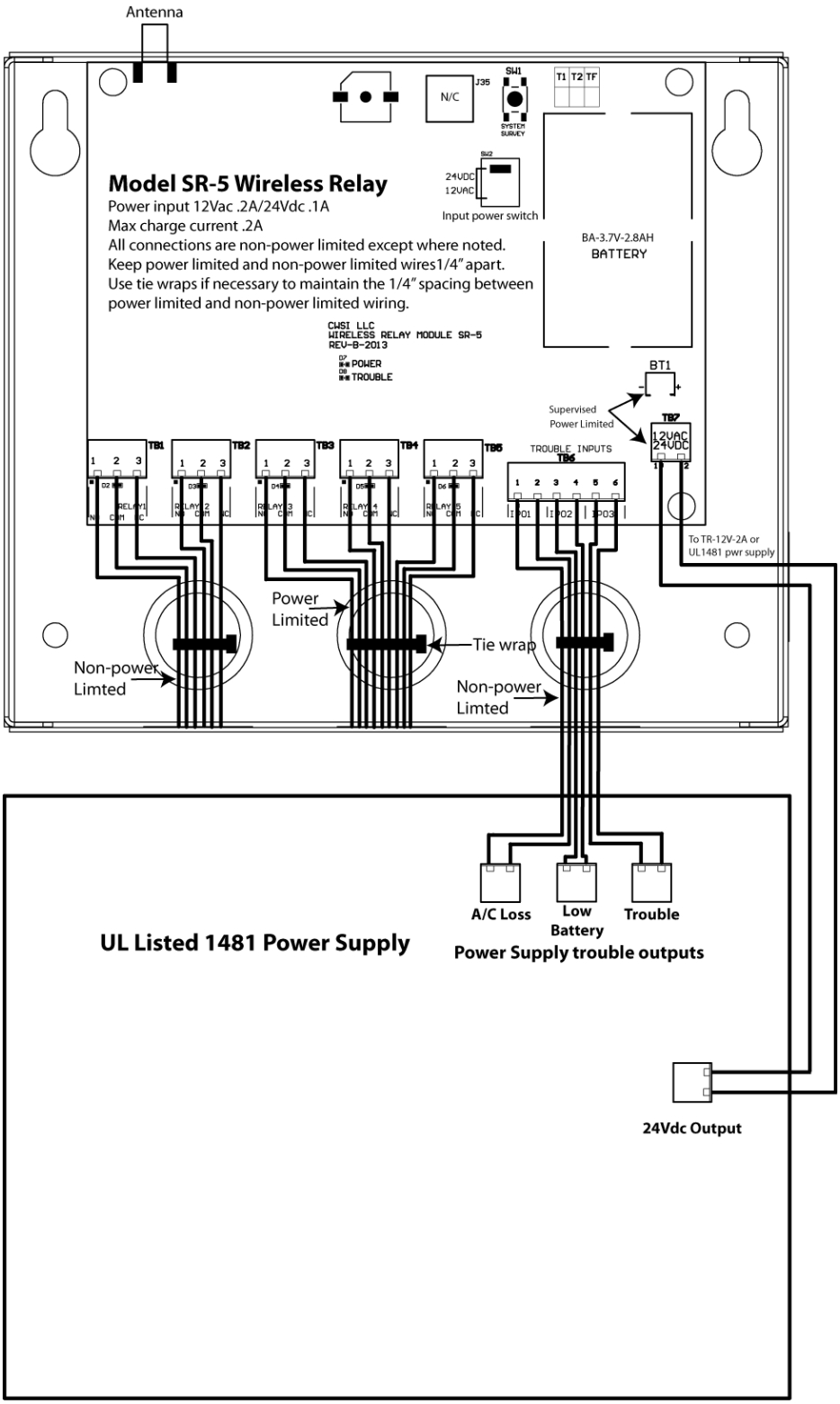


The RM-5 adds (5) Form C (N.O & N.C) Relays to the AR-5. These Relays are rated at 5 Amps, 30VDC. The RM-5 will only work on AR-5 PCBs, they ***DO NOT*** fit on AR-3/AR-3A boards and ***DO NOT*** connect to any Panels.

DO NOT connect an RM-5 while the AR-5 is powered on. ***ALWAYS*** remove power before attaching an RM-5.

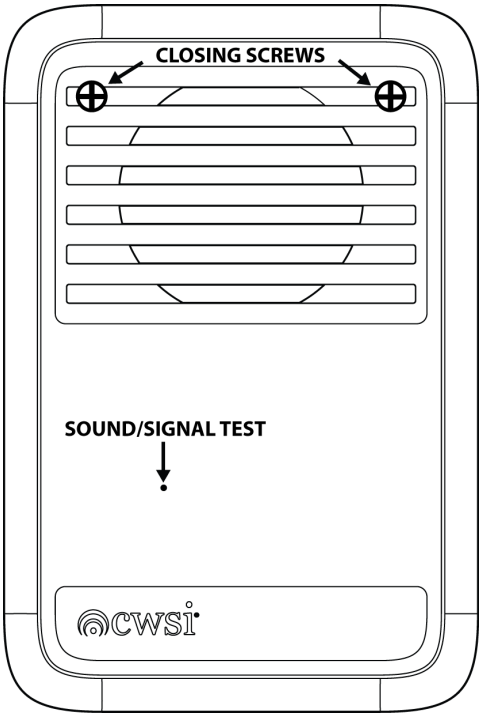
SR-5 Wireless Relay

The SR-5 adds 5 Form C (N.O & N.C) Relays to the AR-5. These Relays are rated at 5 Amps, 30VDC. The SR-5 also has 3 Trouble inputs. It can be powered by a 12 VAC Wall Transformer or a UL 1481 Listed 24 VDC power supply (shown here).



520 Sounder & Mini Horn

Signal survey/ Sound Check on 520/Mini Horn



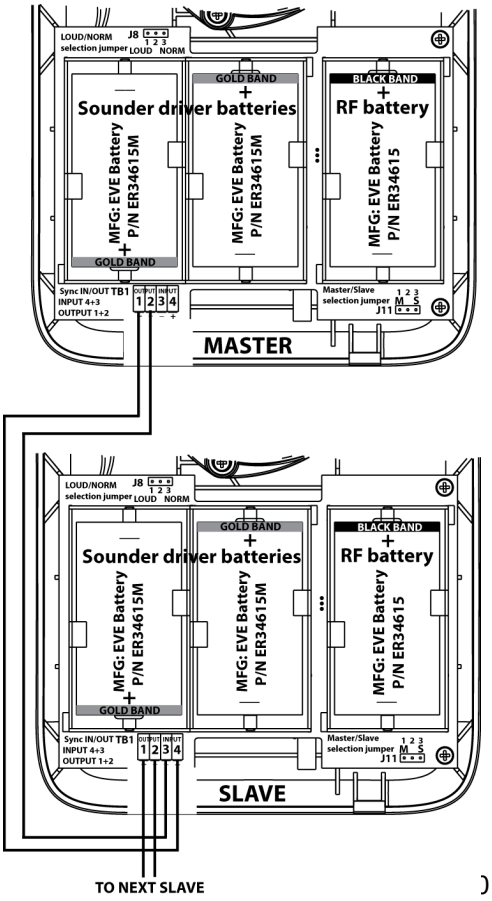
To perform a signal survey on a 520/MH you will need to momentarily place a magnet on the dimple shown in the diagram, a delay of up to 15 seconds will occur with either a successful double beep response or a failing single beep response. Perform at least 15 successful surveys before designating the install location.

To perform a sound dB level test you will need to place a magnet on the dimple for 5 seconds, the unit will then perform a 5 second temporal 3 pattern. The unit does not need to be enrolled into a network to perform a sound level check.

SYNC and MASTER/SLAVE

The 520s (or Mini-Horns) can be synchronized by wiring them to other 520s (or Mini Horns) together in series. Do not wire 520s to Mini Horns for synchronization. Synchronization will require designating one sounder to be a Master and the remaining sounders in the circuit to be Slaves. This is done through jumper J11. Before installing the RF battery, place the jumper on the Master position (M) for the first sounder in the series and in the Slave position (S) for the remaining (if any). You will need to power cycle the RF battery if you decide to change the jumper while the unit is powered.

Incorrect jumper settings will cause an EOL/Config trouble on the panel. This can prevent proper synchronization.



Installation Tips

General Tips

DO NOT POWER DOWN THE PANEL AFTER ESTABLISHING THE REPEATER NETWORK AND/OR INSTALLING WIRELESS DEVICES!!

- Restarting the panel may cause the Repeater network to re-form differently than the way you powered it up. This may not be the optimal signal path and may cause sporadic test failures. In addition, after wireless devices are installed and talking to the network, powering down the panel will cause the devices to go to sleep and wake up hourly looking for the panel. This full power broadcast will cause premature low battery signals and may require replacement before the full year. **Power up on large systems can take up to an hour or more while the system looks for all of its devices. Perform a panel restart only as a last resort and only after speaking with Tech Support first!**

Software

- The network layout and a site map are the best diagnostic tools to view the performance of your system. Frequent "hopping" of repeaters and/or devices are clear indications of marginal repeater links. Run your surveys again and relocate devices and relocate/add repeaters as needed.
- By having "Show Repeaters Only" selected in your Network Layout, you can quickly view your repeater network alignment
- Putting the last three digits of each repeater into the repeater description will help to facilitate easier tracking of your repeater network when viewing a Network Layout/Tree.

Panel Test

- Panel Test prevents any outputs from occurring during testing. This includes NAC circuits, 301 smoke sounders, and dialer outputs. Panel Test will clear after 4 hours of inactivity after the last button press. If any devices are in alarm they will report as normal. To clear panel test simply reset the system.

Enrolling

- When enrolling a device or repeater into a CP-3000(D)(DA)/CP-3500D/CP-3600(+) the very first unit enrolled will be assigned Point ID 0008. Any devices enrolled after will be assigned sequential Point ID numbers. If you delete a device its corresponding Point ID will become unavailable. So if you are replacing a device, that new device will be assigned a new Point ID, please make sure to update your Keltron Dialer list provided to Central Station.

Repeater Installation notes

- **"Height is Might"-** The higher repeaters can be installed the better they will perform. This is especially true in garden style apartment complexes. Repeaters must be installed at least 14 feet above ground. If a moving van were to block an area for a few hours and your repeaters are too low you may experience test failures. When dealing with elevation changes and multiple buildings, try to install repeaters so that they are on an even plane with one another.

- **AC Power Must Enter the Repeater Enclosure from the Lower Left Side-** This is clearly marked on the label on the door. This is a UL requirement that power limited and non-power limited wiring must be separated by at least .25 inches within the enclosure. This is also a good guideline to follow when installing AC power into the main panel enclosure.

- **High Rise/Multi-Floor Applications-** Do not stack repeaters directly above or below each other when building out your network. Repeaters should be staggered between floors, alternating from one in the center of a floor to possibly two repeaters on either end of the building on the floor below and above.

- **Do Not Let the Contractor or Customer Dictate Repeater Location-** When at all possible, do not to let others dictate where the Repeaters are to be located. Your site survey will determine the best locations for repeater placement. If you have to move a repeater location, you MUST re-survey the links to and from that repeater.

- **Suppression-** It is highly recommended you install electrical suppression coming in from the AC to protect your Panel and Repeaters from possible power surges.

- **Antennas-** Please note, it is possible that handling of an OM-3 antenna may build up a static charge. We advise you prior to attaching the antenna, be sure to ground yourself by touching earth ground (unpainted chassis or conduit). Failure to perform this step could damage the equipment.

- **Transformers** – Transformers in CP-3500D/AR-5s have selectable wiring for 120VAC/240VAC.
    - For 120V connect Blue to White & Brown to Black. Apply power to White and Black.
    - For 240V connect Brown to White. Apply Power to Black and Blue.

Repeater LED conditions:

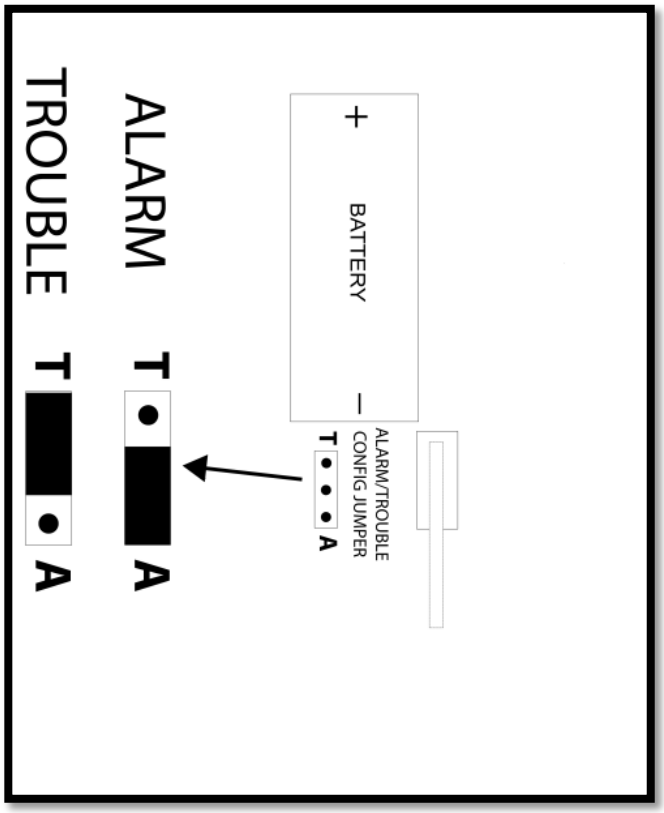
- Normal:	Green LED in center, Red LEDs alternating flash under each antenna.
- Link Issue:	Two Red LEDs flashing under Master (left) antenna; Red LED on repeater solid under Remote (right) antenna.
- Yellow flashing LED:	See Repeater manual for various conditions. Any abnormalities are reported to the Panel.
- Red LED Solid on Remote(Slave)/ No LED on Master:	Repeater contains NO Base Code information/Base Code erased.
- Master LED Solid w/ No Activity on Slave:	Check Dipswitch settings. Verify Dipswitch for Survey is set to OFF

Recommended Transmitter Installation For Outdoor Use

You can install transmitters in a NEMA 3X or NEMA 4 plastic or fiberglass enclosure . It is recommended that transmitters be installed with at least 7 inches of separation between each. Failure to install the transmitters with proper separation between them may cause intermittent test failures.

Alarm/Trouble Transmitter Jumper Settings

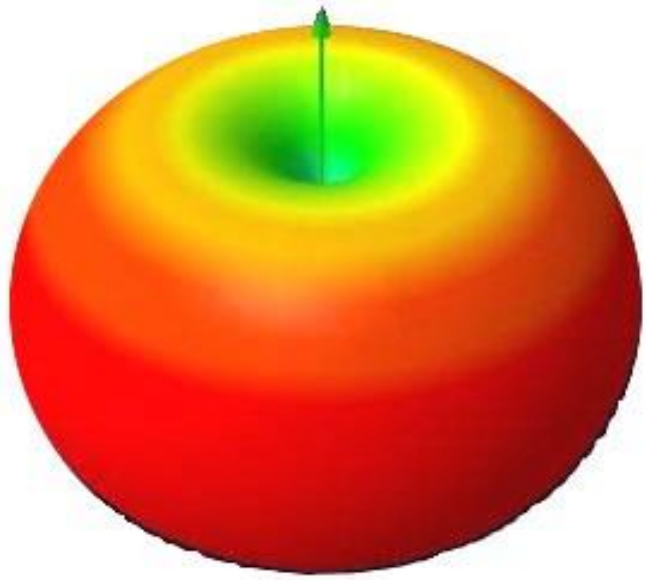
Note: This should be selected before power up of the device. If you change jumpers, you must power- cycle the device.



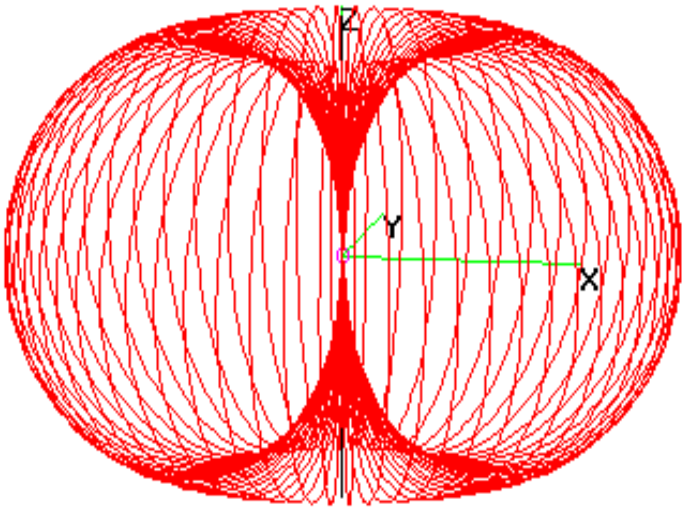
Antenna Information

CWSI OM-1 Omnidirectional Antenna

- The OM-1 is an omnidirectional antenna with a 2.5dB Gain
- The OM-1 is the most utilized antenna of the three.
- The OM-1 **CANNOT** be remote mounted!
- Below are examples of the radiation pattern of omnidirectional antennas:



Omni 3D View



Omni Side View

CWSI OM-3 High Gain Omnidirectional Antenna

The OM-3 is a higher gain omnidirectional antenna with a more potent radial wave pattern than the OM-1. This antenna is **NOT** intended to replace the OM-1. Use of the OM-3 will vary based on site specific needs. The OM-3 antenna is intended for use only on the Control Panel, Repeaters, and with the FAST Survey Tool (use on the FAST tool requires the FST-Kit).The OM-3 is a 17.5 inch 5dB Antenna with a higher penetration capability compared to the OM-1.

Do use	Do NOT use
• On the Master side of the repeater above the panel, placing one on the panel is optional. • On the Master side of repeaters that act as main pathways for other repeaters back to the panel. • On the Remote (Slave) side of repeaters having difficulty communicating to other repeaters or in locations that are not ideal for RF communication. • To overcome electrically noisy areas or materials that hinder RF such as metal or concrete.	• To remote the antenna away from the repeater. • Do not use on repeaters in highrises where repeaters are placed in a stacked pattern Placing the OM-3 on the Panel is the only acceptable option. • Do not use on all repeaters in tightly clustered sites, placing on key repeater locations is preferred. • Allow enough space above the antenna and the ceiling, **do not** install it pressed against or penetrating into the ceiling.

Tips for use on multi-family style sites:

- Place an OM-3 on the Master side of the Repeater above the Panel.
- Place an OM-3 on repeaters in Attics needing to bridge a distance between buildings too short for using Yagi Antennas or overcoming materials in the walls/siding.
- Place on Repeaters separated from the transmitters in Riser Rooms

Tips on Industrial sites:

- Place on the Control Panel.
- Place on Repeaters that need to overcome electrically noisy locations or material that can hinder RF such as metal siding.

Tips on smaller sites such as historical homes, banks, churches etc.:

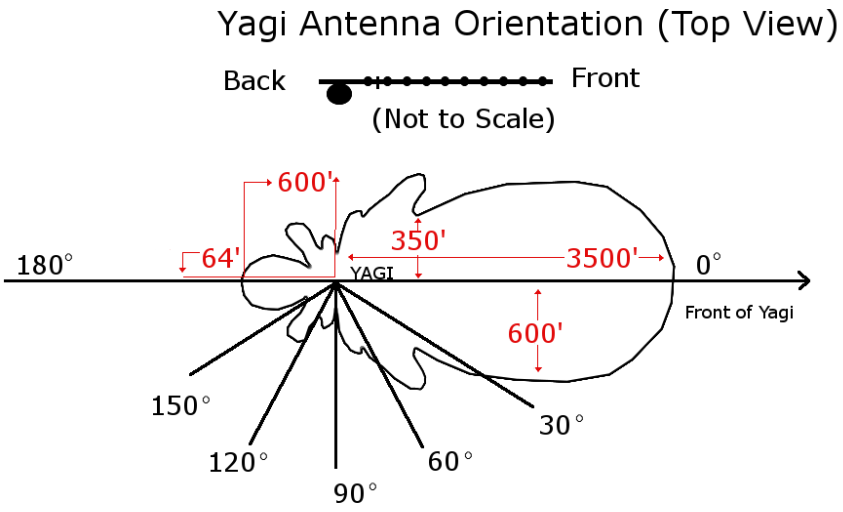
- Place on the Control Panel.
- Place on the remote (slave) side of the Repeater.

Tips on High Rise:

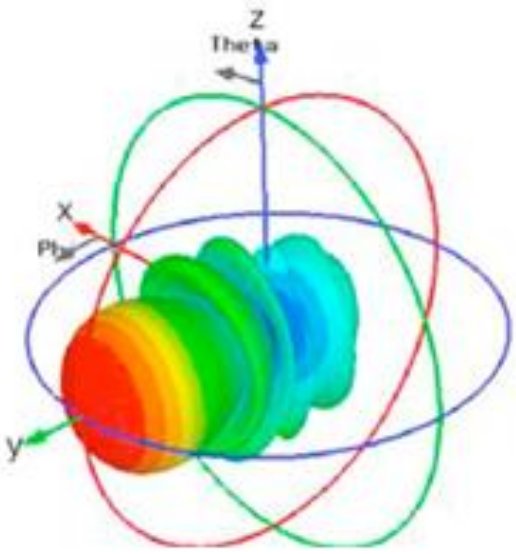
- Place on the Control Panel only.

CWSI YA-1 Yagi Directional Antenna

- The Yagi Antenna has a very narrow and highly directional radiation pattern.
- The majority of the RF energy is focused to come out the front end of the antenna e.g. where you point the antenna is where 90% of the RF signal is transmitted.
- Typical distance for properly aligned (vertical) Yagi to Yagi antennas is from 3000 to 3500 feet and sometimes farther. These distances can vary depending upon your local installation and local conditions.



Dimensions are in Feet



Yagi 3D View

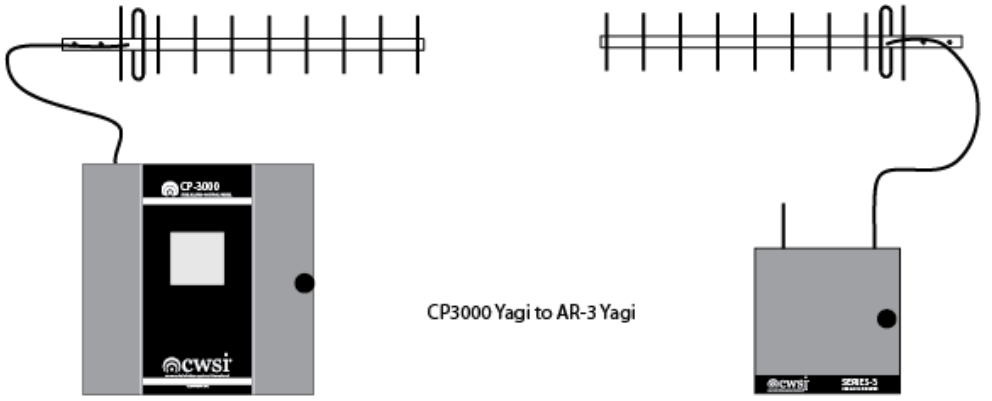
Proper Yagi Antenna Installation Example

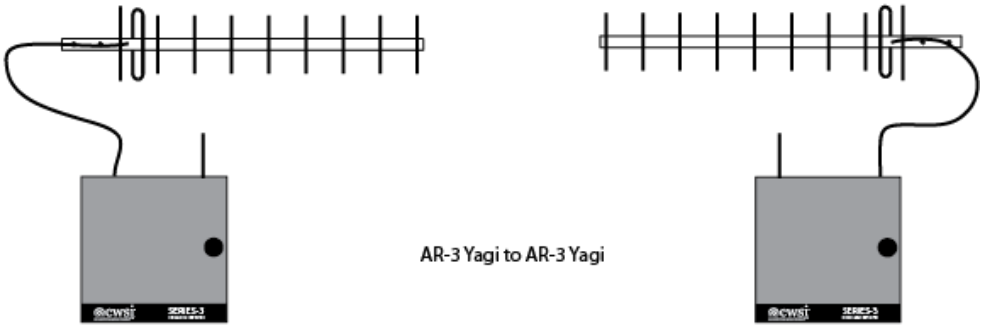
Cable available in 30’ and 70’ lengths

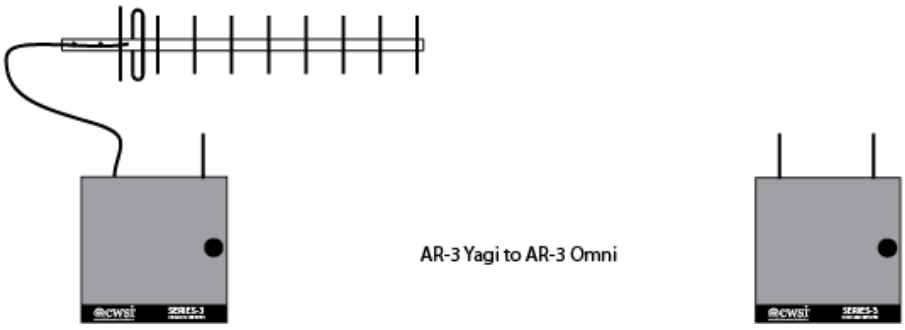
Note: Antenna orientation

Yagi on Master (Receiving) Yagi on Remote (Slave) (Transmitting)

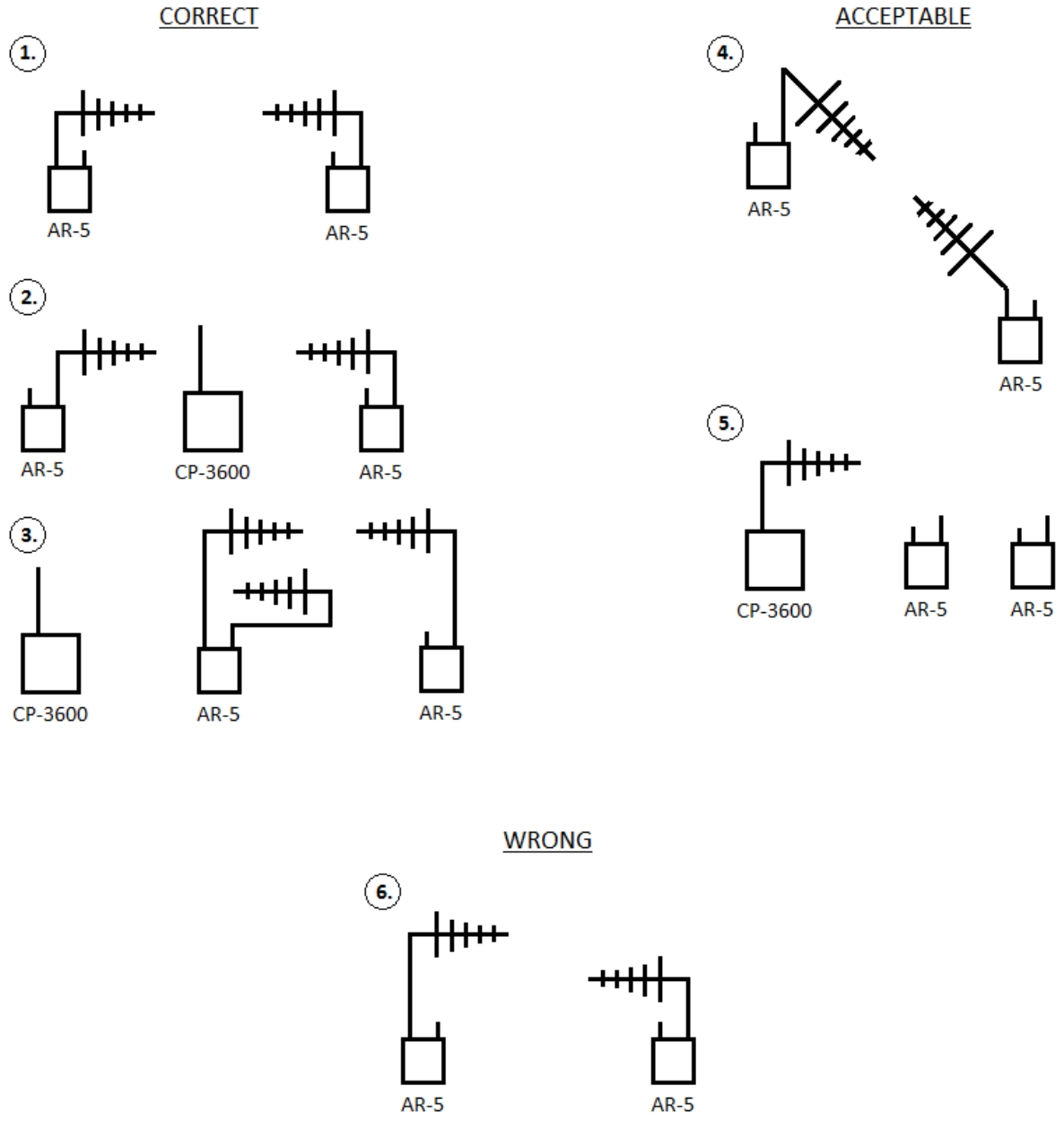
NOTE: Yagi’s can be used on both sides of a repeater







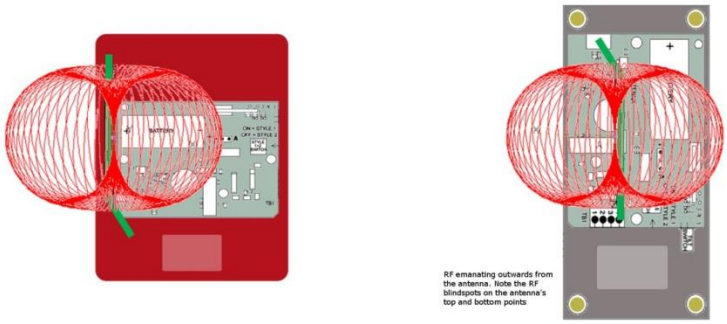
Other examples:



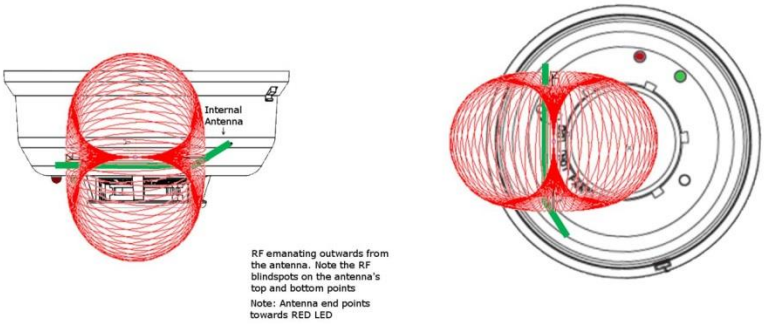
1. Repeaters – Yagi Remote(Slave) to Yagi Master
2. Panel and Repeaters – Multiple Repeater Yagi Remote(Slave) Antenna to Panel Omni Master Antenna
3. Panel and Repeaters – Repeater Yagi Remote(Slave) to Repeater Yagi Master; Repeater Yagi remote(Slave) to Panel Master Omni
4. Repeaters – Yagi to Yagi. This example shows one way to achieve communication with an elevation change.
5. Panel and Repeaters – Panel Master Yagi to Repeater Master & Remote(Slave) Omni
6. Repeaters – Yagi to Yagi. Antennas are out of alignment.

Device Antenna Orientation

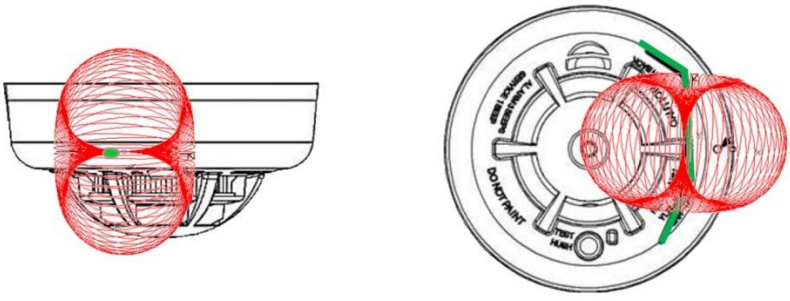
Example of antenna radiation pattern per device type (green bar simulates antenna on device)



Antenna Orientation (Pull Station, Transmitter, 520 & Mini-Horns) Back view



Antenna Orientation (Smoke & CO Detectors) Side & Front View



Antenna Orientation (Heat Detector/Smoke-Heat Combo) Side & Front View

Programming

Software Zones

Zoning or mapping is only required when any initiating device needs to activate an output such as a NAC, tandem smoke sounder, auxiliary relays, etc. This is accomplished by placing a number in any of the three or five groups of zeros allotted to each device. This programming is accomplished in the "Device Edit" menu for wireless devices and in "Repeater Relay Setup" for repeaters.

CP-3000(A)(D)(DA) Zone Number Breakdown

001-898	Alarm
899	Tandem Smoke Global Activation
900-999	Trouble Zones

CP-3500D & CP-3600(+) Zone Number Breakdown

001-799	General Alarm Zones
1000-1500	Additional Alarm Zones (CP-3600(+) ONLY)
800-889	Two Device/Zone Activation (Multi Zone/Double Knock)
890	3 Second Relay Activation on Panel Reset (CP-3600(+) ONLY)
891-895	Unassigned
896	Reserved for Future Use
897	Tandem S/D, Mini-Horn, & 520 Sounder (Global Activation Zone)
898	Mini-Horn & 520 Sounder (Global Activation Zone)
899	Tandem S/D (Global Activation Zone)
900-999	General Trouble Zones

Multi Zone (Double Knock):

- A Device programmed with a zone ranging from 800-889 will not activate a NAC or output device until a second device on the same zone in that range also activates. The panel will display the initial alarm from that device but will not activate a NAC or output device unless a second device in the same zone activates.

Global Activation Zones

When a Global Activation Zone number is entered into any of the 3 or 5 zone entry fields of an initiating device, the corresponding devices will automatically activate. The Global Activation Zone does not need to be entered into the output device (301 Smoke Detector, Mini-Horn, 520 Sounder) since it is already coded into the programming of every CP-3500D and CP-3600(+) panel.

- Zone 897 – Global Activation of all 301 Tandem Smoke Detectors, Mini-Horn, and 520 Sounder appliances
- Zone 898 – Global Activation of all Mini-Horn and 520 Sounder appliances
- Zone 899 – Global Activation of all 301 Tandem Smoke Detector appliances

Software Zones - continued

Tandem 301 - Third Zone Slot:

- The Tandem feature allows 301 devices to be programmed to activate each other based on zone programming. When two or more 301 devices share the same number in their zone programming (i.e. Zone 100) within the first two and/or last two zone entry fields they will activate each other. The tandem that originally detects smoke will activate any other tandems in Zone 100 whether they detect smoke or not. The third zone entry field on a tandem works differently than other devices; **this third zone will not activate other tandems even if they have the same zone number in that third field. It is an "input only" field. It will accept zone triggers, but will not broadcast them.**

3 Second Relay Activation on Panel Reset

- On 3600(+) Panels only; the use of Zone 890 on programmable relay zones will allow for a 3 second momentary activation of that relay when the panel is reset. This can be used to reset power to 4-wire devices (Duct Detectors, etc.)

Zoning for trouble reporting:

- Any Zone number between 900 – 999, programmed into any wireless initiating device, can activate a relay if you need troubles to be reported (i.e. a low battery, tamper, end of line violation, etc.). This feature is rarely used.

Supervisory Auto-Restore:

- The CP-3500D and CP-3600(+) has a built in Supervisory Auto-Restore feature. To enable this feature you must enter the Program menu on the CP-3500D/3600(+) main screen. Then select CP-3500D or CP-3600 Setup. Within this menu you can select Supervisory Setup and change the feature from OFF to ON. Note: This is best done upon first power-up of the panel. **If the option is changed at any time after devices are enrolled, the panel will need to reboot to take effect.**

Updating CP-3600(+) Motherboard/CPU Firmware

The CP-3600(+) is the first (and currently the only) panel to offer the ability for field personnel to update the Motherboard/CPU Firmware to install patches or bug fixes. This **DOES NOT** allow you to upgrade between panel generations [CP-3500D to CP-3600(+)]. Previous model panels required that the board be updated at the factory or that a factory representative be present on-site to manually flash upgrade the hardware. You must be using CWSI Suite Software version 2.0.11 or greater. To update the CP-3600(+):

1. Download the new Motherboard/CPU Firmware files from either a link provided by tech support or directly from the download section of the http://www.cwsifire.com/login website.
2. Save/transfer the files to the CWSI Suite program directory on your computer (C:\Program Files (x86)\CWSI\CWSI Suite\upgrades). If you do not have a folder named “upgrades”, please create one.
3. Connect USB cable to the CP-3600(+) from your laptop and Open the CWSI Suite software. Click on the **Connect Icon** [] in the upper left corner. After the panel connection is established, the software will ask for the panel password. After entering the password, click on the **Panel Update Icon** [ ].
4. A message box will appear showing you the Active (Current) Version; a drop-down selection of Available Updates; and the Original (Factory) Version. Select the Available Update you wish to install from the drop-down list and left-click the **“Update”** button.
5. Upon completion of the update, the panel will restart and begin system initialization. It is recommended that you power cycle all repeaters once the panel has reinitialized.

WRA-3 Annunciator Reference

Terms & Definitions

Checksum Bad - Caused by a mismatch of programming information between the CP-3000A(DA)/CP-3500D/CP-3600(+) and the WRA-3. Program the WRA-3 using the CWSI Suite Software, a MicroSD card and USB Adapter. It is recommended you enroll and program your Annunciators as the **LAST step** in your installation as Adding/removing devices, changing descriptions or alarm priorities will create a checksum bad trouble on the system.

Test Failure- On power up, if the unit is not able to connect to a Network it will display a "Test Failure" trouble. To clear this trouble press and hold ACK-Step & Signal Silence for five (5) seconds to advance to the WRA-3 Main Screen. You can also power cycle the unit when you are within range of an available Network.

Not Enrolled – The unit is not enrolled to a network. Press Signal Silence and Ack-Step for five (5) seconds to advance to the WRA-3 Main Screen.

Test Mode- Displayed while the Panel is in Test Mode, pressing the Reset button on the WRA-3 **WILL** reset the panel and remove it from Test Mode.

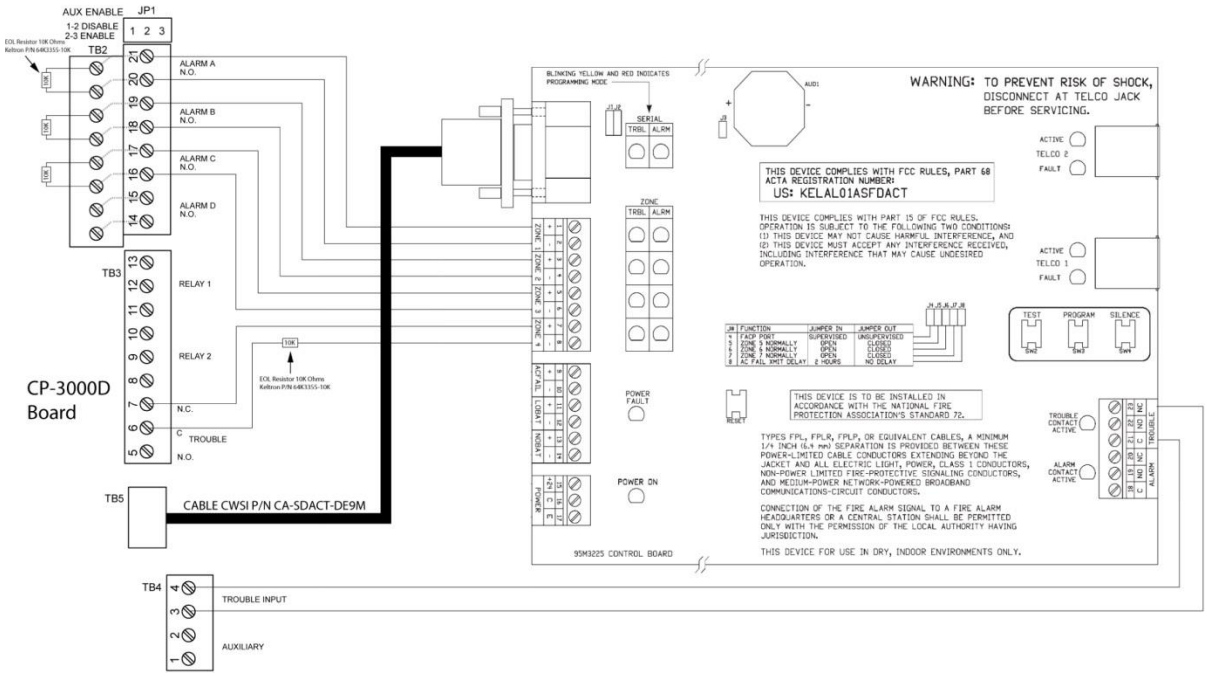
PLEASE NOTE:

The WRA-3 Annunciator is **NOT** compatible with the CP-3000(D).

Keltron Dialer Guide

Dialer Wiring and Connections

CP-3000D to Keltron SDACT Wiring



The Keltron SDACT Programmer and Manual are on your Keltron CD shipped with each unit. The Keltron ships ready to be installed, no jumpers need to be changed. The Keltron will transmit **ONLY SIA Code**, no Contact ID. ***The Keltron requires all of the wiring shown in the image above to operate correctly.***

Reference

(4) Connections from CP-3000D(DA)/CP-3500D/CP-3600(+). CWSI Panel Alarm Zones A, B, C , & Trouble Contact to Dialer Zones 1,2,3, & 4 respectively.
(4) 10K EOL Resistors. (3) on Alarm Zones A,B,C, & (1) on Trouble Contact

(1) Connection from CP-3000D(DA)/CP-3500D/CP-3600(+) Trouble Input to Keltron Trouble Output

The Dialer Power Supply should be set to 24 Volts., change the jumper to the 24 volt setting.

Jumpers J4 through J8 should be closed.

If you need to change Zone 3 on the dialer from Alarm to Supervisory, remember to go into your Keltron software and change your necessary Zone 3 Event Codes.

Open contacts on the dialer measure ~5 VDC. Shorts will be 0vdc. A restored zone with a resistor will be ~2.5vdc.

SIA Translation Table

CP-3000D to SIA translation table

CP-3000D EVENT	SIA CODE	DESCRIPTION
Alarm A	FA	Fire Alarm
Alarm A Reset	FH	Fire Alarm Restore
Alarm B	FA	Fire Alarm
Alarm B Reset	FH	Fire Alarm Restore
Alarm C	FA	Fire Alarm
Alarm C Reset	FH	Fire Alarm Restore
Alarm C Supervisory	FS	Fire Supervisory
Alarm **C** Supervisory Re**set**	FV	Fire Supervisory Restore
All Troubles except A/C loss and Supervisory Trouble	FT	Fire Trouble
All Trouble Resets except A/C loss and Supervisory	FJ	Fire Trouble Restore
Supervisory Trouble	FW	Fire Supervisory Trouble
Supervisory Trouble Reset	FQ	Fire Supervisory Trouble Restore
A/C Loss Trouble	AT	AC Trouble
A/C Loss Restore	AR	AC Restoral
Panel Test	TS	Start Test
Panel Test Reset	TE	Test End

Frequently Asked Dialer Questions

1. I'm having trouble programing my dialer

- Did you make sure to press the Program Button first and wait for the trouble/alarm LEDs to light up first?
    - The LEDs will alternately flash when you are in programming mode. Make sure you are connected directly to the dialer's serial port with your pc. Check the voltage from your power supply to assure the dialer is receiving 24V.

2. I get the message "Timed out waiting for SDACT to Respond" when I try to program my dialer

- This means your PC is trying to communicate through a COM port number different than what the Dialer is trying to use. Select a COM port number in the Keltron Software, and in your PC's device manager verify/change to the matching Port Number. For example if the Keltron is using COM port 14, make sure your PC is communicating through port 14 as well.

3. I keep getting Dialer Fault on my Panel

- If you have continuous Dialer Faults after you have installed/tested your Dialer and devices, just disable the dialer in the Control panel's Setup Menu, wait a few seconds, then re-enable.
- Remember that any trouble that comes into the panel will be accompanied by a Dialer Fault as well.
    - This is due to the EOL resistor being in Series and not Parallel for Zone 4 on the Keltron Dialer.
- Check the wiring on the TB5 5 pin connection of the Control Panel to SDACT cable.
- To eliminate the dialer as a trouble source, install a jumper across TB4 trouble input to simulate the closed circuit from the SDACT to the Panel.

System Testing Procedures

The following are CWSI's recommended and proper testing procedures. Deviation from these procedures may result in inadequate testing results.

Alarm Conditions

Initiating devices such as smoke detectors, manual pull stations, and fire transmitters can be programmed into the panel to communicate alarm conditions. When activated, the initiating devices send an **"Alarm Signal"** which is received at the Panel. The **"Alarm"** LED will illuminate and the condition and the exact device(s) will display at the Control Panel. If programmed, functions such as activation of appliance circuits, HVAC control, elevator recall and more will commence. To acknowledge the alarm and silence the internal horn, press the **"Alarm Ack"** button. At this time the alarm has been acknowledged and the condition remains displayed.

If notification appliance(s) have been programmed and are activated, they will remain activated until the **"Signal Silence"** button is pressed. At this time the Control Panel can be reset by pressing the **"Reset"** button, which will put the Panel back to System Normal condition.

Note - If the initiating device that sent the **"Alarm Signal"** is still in the **"Alarm"** state it will keep sending an **"Alarm Signal"** to the Panel which will then re-enter an Alarm mode, e.g. activating horns and any programmed notification appliance(s). This will continue until the initiating device is cleared of the cause for the alarm. This also applies to Supervisory and Trouble conditions as they will continue to transmit to the Panel until the cause has been rectified at the initiating device.

If Tandem Smoke Detectors have been programmed, they will remain activated until either the **"Detector Sounder Silence"** or **"Signal Silence"** button has been pressed, depending on how the system was programmed.

Proper Testing and Restoral Sequences:

1) Activate desired device(s). Multiple devices may be activated one at a time. Wait 10 seconds in between activation of additional devices.
2) If notification appliances or tandem smoke detectors have been activated they can be silenced however**, do not send reset commands out at the same time alarms are being initiated. Wait for ALL alarm conditions to be displayed and alarm activation to cease before sending silence commands out.**
3) Once all conditions have been silenced you can either continue testing with the alarms acknowledged, or, reset the control panel to begin anew.

Supervisory Conditions

Supervisory devices such as tamper switches, PIV's, and residential smoke detectors can be programmed into the Panel. When a **"Supervisory Signal"** is received, the **"Supervisory LED"** will illuminate and the corresponding device(s) will be displayed. To acknowledge the event, press the **"Supervisory Ack"** button. This will silence the internal horn but the condition(s) will remain displayed. Pressing the **"Reset"** button will put the Panel back to System Normal condition.

Typically supervisory signals will not activate appliance circuits however smoke detectors if required can be enrolled as a supervisory device and activate other tandem smoke detectors. If a supervisory device is programmed to perform tasks, follow the sequence above for testing.

Trouble Conditions

All initiating devices are supervised for trouble conditions to the requirements of UL864 and NFPA 72. Trouble conditions include tamper of a device, low battery, EOL violation, ac power loss, low battery, etc. When a **"Trouble Signal"** is received the **"Trouble LED"** will illuminate and the corresponding device(s) and conditions will be displayed. To acknowledge the event, press the **"Trouble Ack"** button. This will silence the internal horn but the condition(s) will remain displayed. Press the **"Reset"** button to put the Panel back to system Normal condition.

General Questions Related to Wireless Fire Alarm Systems

Do the smoke detector sounders in sleeping areas need to be synchronized?
We hear this question a lot. The excerpts from NFPA 72 are below.

DEFINITION:
3.3.227 *Residential Occupancy*. An occupancy that provides sleeping accommodations for purposes other than health care or detention and correctional.

***NF*PA 72 2010 edition:**
Excerpts from Chapter 29: Single and multiple station alarms and household fire

29.3.5 Fire-warning equipment to be installed in residential occupancies shall produce the audible emergency evacuation signal described in ANSI S3.41, *American National Standard Emergency Evacuation Signal*, whenever the intended response is to evacuate the building.

29.3.6 Audible fire alarm signals shall meet the performance requirements of 18.4.3 and 18.4.5

29.3.7 When visible appliances are provided they shall meet the requirements of Section 18.5. Since hearing deficits are often not apparent, the responsibility for advising the appropriate person(s) of the existence of this deficit shall be that of the party with the hearing loss.

29.3.8 Notification appliances provided in sleeping rooms and guest rooms for those with hearing loss shall comply with 29.3.8.1 and 29.3.8.2 as applicable.

29.3.9 Signals from notification appliances shall not be required to be synchronized.

Chapter 18.4.3 refers to Public Mode Audible Requirements and 18.4.5 refers to with Sleeping Area Requirements.

The above requirements are located in Chapter 11 of NFPA 72 **2007** edition. The excerpt below is from NFPA 72 2007

11.3.8 Signals from notification appliances shall not be required to be synchronized.

Do I have to put a smoke detector above every repeater?

The short answer is yes. See below. We recommend the model 302 no sounder smoke.

NFPA 72 2010:
10.15 Protection of Fire Alarm System. In areas that are not continuously occupied, automatic smoke detection shall be provided at the location of each fire alarm control unit(s), notification appliance circuit power extenders, and supervising station transmitting equipment to provide notification of fire at that location.

Exception: When ambient conditions prohibit installation of automatic smoke detection, automatic heat detection shall be permitted.

NFPA 72 2007:
4.4.5* Protection of Fire Alarm System. In areas that are not continuously occupied, automatic smoke detection shall be provided at the location of each fire alarm control unit(s), notification appliance circuit power extenders, and supervising station transmitting equipment to provide notification of fire at that location.

Exception No. 1: Where ambient conditions prohibit installation of automatic smoke detection, automatic heat detection shall be permitted.

Exception No. 2: Fully sprinkled buildings shall not require protection in accordance with 4.4.5

CWSite Quick Start Guide

CWSite – Terms and Definitions

CWSite is the name of our graphical annunciator software package. This software is licensed to the end user based on the total number of monitored points, panel connections, user connections, and email capability. This software allows the computer that it is loaded onto the ability to obtain panel status information as well as display customizable action messages and information about devices and events.

CWSite in DEMO MODE - This refers to the copy of CWSite provided on the USB given to trainees during class. This allows the user to demonstrate the software for 10 minutes, showing 10 devices as a sample. This copy of the software allows the user to do a jobsite layout and configure a system. Actual system monitoring and email alerts will not begin until it is activated with a License file from the Customer PC.

CWSite CBL KIT - The cable kit necessary for connecting CWSite with the CWSI Panel.

CWSite Monitored Points - Every device enrolled to the panel and any other device being monitored (ie Cameras) counts as a monitored point. When calculating the total number of points, an additional 3 Points are necessary for the Panel, PC, and Software. Each point is a separate cost.

Remote Monitoring - Each additional PC added to CWSite is considered a remote point. Each additional PC needs to be added to the customer's network to remote view activity occurring on the main CWSite PC. Each Remote Monitoring PC has a per point cost. Remote points are half the cost of regular points and must be added to the total point cost. Regular monitored points cost + remote points cost each (per remote PC). A connection to the customer's PC network is required.
For example, an installation that has one remote PC in addition to the main PC connected to the Panel:
Main PC: $10 (per point)
Remote PC #1: $5 (half per point)
Total cost per point: $20

Email Alerts - Optional feature. This allows a user to set up an email distribution list when events occur on CWSite. This is an additional cost on the license. The installing technician adds the email addresses to a distribution box. A connection to the customer's PC network is required.

Setting up CWSite - The customer's jobsite programmed with layouts, maps, and device icons, from an installing technician's laptop or office PC. The installing technician will need a System Summary from the panel after all devices/repeaters have been enrolled and also map(s) that will be used to place devices onto. Once the technician has a designated (and preferably dedicated PC) on the jobsite, the files can be copied to that PC. A license can be requested (must be from the PC that will be running the software itself . A license will then be provided to the technician upon receiving a matching purchase order. The license is purchased only once from CWSI. Licenses may be expanded upon, however CWSI will need to be notified and be provided a Purchase Order for additional points or features.

System Requirements - The installing technician will be responsible for acquiring the System Summary and any maps. The customer (or installing company) will need to provide a PC to run the software and IT support to network multiple PCs if remote monitoring is desired. CWSite can be installed on any Windows 7 (Pro recommended) or higher compatible PC. CWSite is NOT compatible with Mac OS.

CWSite Quick Start Installation - Step by Step

1. Copy the CWSite.msi software from either your USB drive double click it to install or download it from the web address in your email and save to your hard drive and run it to install.
2. **Create a License Activation Request File with System Monitor: Setup -> Product Activation.** (The password is 3). This is not necessary if you are only going to demo the software or are simply going to program jobs with the **Configuration Manager** tool.
3. Email the License Activation Request File to CWSI at support@cwsifire.com
4. Install the returned License Activation File with **System Monitor: Setup -> Product Activation**
5. Create/Download a System Summary file from the CP-3500D/3600(+) with the enrolled devices.
6. Create an Import File with Configuration Manager using the downloaded System Summary File. **Configuration Manager: Setup->System Devices->Import**, browse to the **File Name to Convert**, i.e. the system summary file you downloaded from the CP-3000DA and then click on **Create File**. (The password is password).
7. Delete the default devices that are in the demo install except for the panel, the com port, and the CWSite Device.
8. Once the file has been created, import it by clicking on **Import File** a preview window will pop up, click on **Proceed** and then click on **Done**.
9. If the CP-3500D/3600(+) panel you are monitoring has an external Keltron Dialer, you need to configure the Panel Type inside of the CWSite software to match. Go to **Configuration Manager: Setup -> System Panels** go to Panel ID: and Select the **CP3000DA**, (typically it is the CP3000DA because you are only monitoring one panel). On the **Manufacturer/Model** tab select **CWSI with Keltron / CP3000DA, Ver 1.0**. If you do not have an external Keltron Dialer connected to the CP-3500D/3600(+) panel, select **CWSI / CP3000DA, Ver 1.0** instead.
10. Import your images into **Configuration Manager: Maintenance->Layout Background Image**. A Popup window will appear, select **Import** and a Browsing Window will appear. When the imported image appears, click on the **Name:** field and enter a name for the image. A good naming convention would be something like **Westside Hotel - Bldg. 1, First Floor**. Click **Save & Close** to save the import.
11. Select the Default image and Bldg. 224 First Floor and delete the Com Port, the Panel and the CWSite Device so that you can map them onto your imported images.
12. The CWSI FACP Panel and the Communications link will both appear as panels as they are separately monitored device and the CWSite software will appear as a Computer Monitor, place it where the monitoring computer is located. You may wish to place the COM1: Icon with the PC or the Panel it is your choice as the cable connects the two devices.
13. Now click on the **Select** button and select the imported image, **Westside Hotel - Bldg. 1, First Floor**.
14. You can zoom into any area by left clicking and dragging your mouse to the opposite corner. Right clicking and selecting **View All** resets the zoom level to the entire image.
15. Right click on the image and select **Insert Device**, a popup window will list all of the devices you have imported from the CP-3500D/3600(+) that have not been placed. Select a device on the list and drag it onto the background image and place it at the correct physical location that matches the installation site. Repeat as necessary until you have placed all of the devices for the area depicted in the background image.
16. If you have multiple areas / floors, import an image for each area and place the devices for each area. If you enroll a whole new floor of devices into the CP-3500D/3600(+) panel, simply create a new system summary file as detailed above and import it. Your placed devices will not be moved.
17. If you accidentally place a device on the wrong floor, right click on it and select **Delete**. Select the proper floor and place it there. If you need to move a device on the floor to a new location, right click on it and select **Edit** and then drag it to the new location with the mouse.

18. Connect the serial cables as indicated in the diagrams Figure 1 and Figure 2 at the end of the document depending upon whether you do or do not have an External Dialer.
19. If your COM Port is not COM1**, change the COM port on the Configuration Manager : Setup -> System COM Ports**, Select COM1: and then change the COM **Port ID:** to match your PC, i.e. COM3.
20. If you are using a Serial to USB adapter, please note that the **System Monitor** program will have to be restarted if you pull the USB cable out of the PC as the USB COM port connection will be lost simply plugging the USB cable back in will not restore the connection inside **System Monitor**. If only the DE9 connector is disconnected the COM port stays active and merely needs to be reconnected. In both cases the System Watch program will alert the user that the COM port has been lost.
21. Now that you have connected the CP-3500D/3600(+) panel to the CWSite PC you may need to enable the serial data stream. IF an external Keltron Dialer is connected to the CP-3500D/3600(+) panel it may already be enabled. To enable the Serial Data stream on the CP-3500D/3600(+) go to **Program -> CP-3500D/3600(+) Setup -> Dialer Setup** and if the **Keltron SDACT Enabled:** is not set to **On**, select it and change to **On** and press **Save**.
22. Restart **System Monitor** and it will establish a connection with the COM port.
23. Turn on **Display Event Data**, **Display Connect Status** and **Display Incoming Data** so that you can monitor the data stream as you test your installation.
24. Start **System Watch** by double clicking on it.
25. Trigger troubles on the enrolled devices and **CWSite** will display the matching trouble on the **System Watch** device log. Double click on the message and it will take you to the device image. Click on **Zoom In** and you can see the flashing device. Double click on the flashing device and you can see the corresponding **Action Message**.
26. Your system is now running.
27. Test each device to see that it is monitored and mapped into the proper location

Remote Monitoring

Once you have installed CWSite on the main computer that is connected to the CP-3500D/3600(+) panel you can then configure the system for remote monitoring.

1. Download the SystemWatch.msi file onto each PC that will do the remote monitoring.
2. You must have opted for additional users in the License Activation Request in order to support remote monitoring. If necessary generate a new License Activation Request with more users. **Note-** The installation on the Main PC is considered only one user despite how many people may log onto that PC and use System Watch.
3. Due to the detailed nature of networking please refer to the **CWSite User's Manual** for details on how to configure remote monitoring.

Activity Reports

1. To be able to print out reports you must first download and install ActivityReports.msi
2. Once it is installed Double Click on Activity Reports to start the reporting software.
3. Click on Reports List and click on Service Report and select Make Current.
4. You can preview and print out a report or choose other report types.
5. You can create your own report types, please see the **CWSite User's Manual** for details.

E-Mail Alerts

1. Download and install MailDispatcher.msi if you have ordered the optional email alerts.
2. Please refer to the **CWSite User's Manual** for details and confer with your IT department for your email server settings as needed for each site.

Software Packages

There are four installation packages that comprise the CWSite Installation Package. Not all packages need to be installed, but CWSite.msi must be installed on the PC that is connected to the CP-3500D/3600(+) panel. Once the CWSite.msi is installed it operates in Demo Mode until the license has been activated. In the Demo Mode the software is limited to 10 devices and 10 minutes of operation.

Software Installation Packages

Software	Description
CWSite.msi	Install the following tools on the Main PC that monitors the CP-3500D/3600(+) Panel ▪ System Monitor ▪ System Watch ▪ Configuration Manager
ActivityReports.msi	Installs the tools to create activity reports ▪ Activity Reports
SystemWatch.msi	Installs on each PC that will perform the Remote Monitoring ▪ System Watch (Remote)
MailDispatcher.msi	Installs the tools on the Main PC that will send email alerts. ▪ Mail Dispatcher

Installed Software Packages

The following table details the installed software on either the Main PC or remote PCs.

Software	Executable	Description
Configuration Manager	CGCfgMgr.exe	The Fire Panel Installer adds/deletes/edits devices and system messages etc. with this software. Imports background images, configures the COM port, etc.
System Monitor	CGSysMon.exe	This software attaches the COM port on the PC to the serial port on the CP-3500D/3600(+) Main Panel. It monitors the COM port and it must be running for System Watch to see data flow from the CP-3500D/3600(+).
System Watch	CDSysWch.exe	This is the software that displays the alert messages and allows the operator to zoom in to the location of alert on a graphical system map. When installed on a remote PC allows the user to see the same alerts and zoom in to trouble spots in the same manner as the local operator.
Activity Reports	CDActRpt.exe	This software tool allows users to create a variety of reports even events that have been cleared from the screen.
Mail Dispatcher	CGMailDP.exe	Tool to configure the assorted email alerts that the system will send out depending upon configuration.

Software Activation

Software activation is required for the primary computer that will monitor the CP-3500D/3600(+). If you wish to remotely monitor the CWSite software a license key request will need to be activated for each computer that the CWSite software will run on. Each unique PC is considered one user. The user must generate a License Request file and email it to support@cwsifire.com. The user details in the license request how many points they need to monitor, how many panels (typically one panel) and how many users will be able to monitor. One user is required for the primary computer. There is no limit to the number of users on the primary computer, simply use the Activation License File to activate each user on the primary computer. For each additional PC that will remotely monitor the system you will need to add additional users.

Hardware Configuration

You will need to have ordered the CWSite-CBL-KIT from CWSI in order to connect the CWSite software to a CP-3500D/3600(+). Connections are detailed below depending upon your installation. You can monitor more than one CP-3500D/3600(+) panel at a time.

Enabling the Dialer Interface in the CP-3000DA

In order to monitor the CP-3500D/3600(+)dialer data-stream, the Dialer Interface must be enabled on the CP-3500D/3600(+) panel. First, log into the CP-3500D/3600(+)panel. Press **Program**, scroll down to **CP-3500D** or **CP-3600(+) Setup** and press **Enter**. Scroll down to **Dialer Setup** and press **Enter**. Select **Keltron SDACT Enabled: Off** and press **Enter**. Scroll to **On** and press Enter and press **Save**. When the Dialer Interface has been enabled on the CP-3500D/3600(+) panel, it will display **Keltron SDACT Enabled: On**. To disable, select **Off** and press **Save**.

COM Port to COM Port Connections

The CWSite Software can be used with a CP-3500D/3600(+) whether an External Dialer is connected to a CP-3500D/3600(+) panel or an External Dialer is not connected. When using CWSite with a direct connection to a CP-3500D/3600(+) with no external Dialer, use the **Figure 1** Hardware Configuration. When using CWSite with a CP-3500D/3600(+) that is connected to an External Dialer, use the **Figure 2** Hardware Configuration. If you are connecting more than one panel, use additional serial ports as needed for each panel and the appropriate hardware configuration. **Note**- If you do not have the external dialer connected you must place a jumper wire on the Dialer Trouble input on the CP-3500D/3600(+) Panel or the CP-3500D/3600(+) Panel will indicate a Dialer Trouble.

Helpful Hint: If you need to connect your CWSite computer to a panel that is more than 50 feet away, you can use converters that will carry the signal over twisted pair copper wire, fiber optic cable, or a wireless signal. One example of this would be a MOXA NPort 5110A Serial Device Server.

Figure 1: Hardware Setup without an External Dialer

Connection Diagram for CWSite when not using an External Dialer

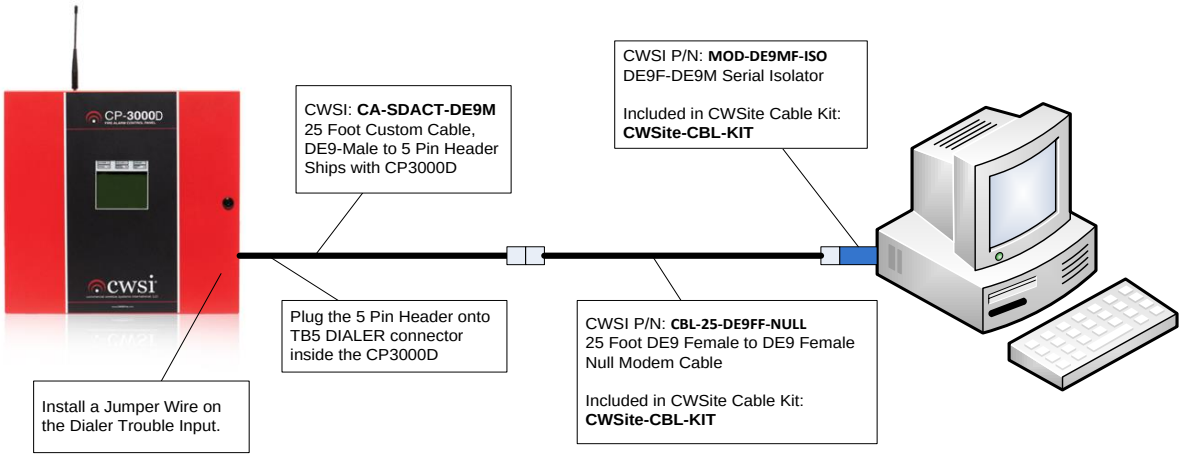
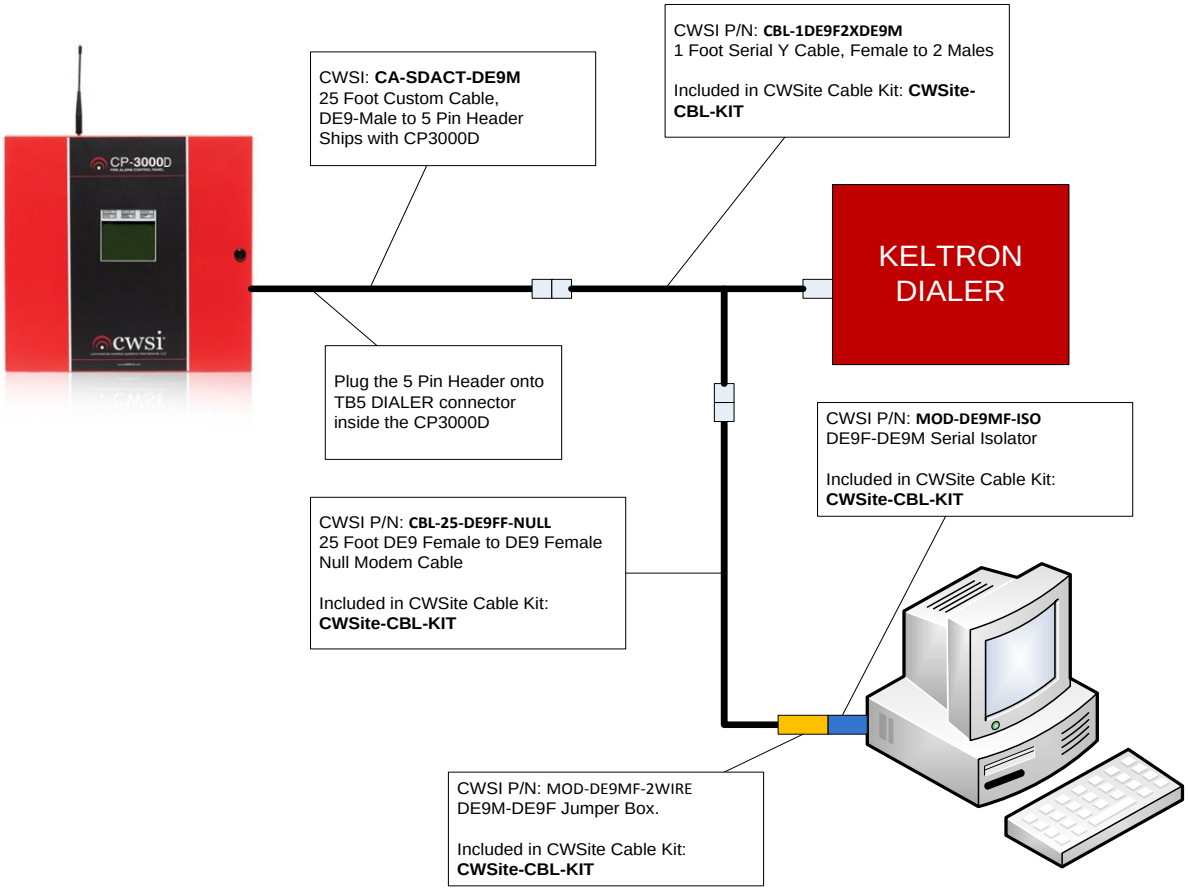


Figure 2: Hardware Setup with an External Keltron Dialer

Connection Diagram for CWSite when using an External Dialer



Multiple Job Management

As a dealer you will have multiple customers with multiple installations. Once you have a CP-3500D/3600(+) with devices enrolled for a particular installation you can create and download a system summary file from the CP-3500D/3600(+). Using that system summary file you can configure the CWSite installation in the comfort of your central office. **Note-** The use of Configuration Manager does not require a license file.

Multiple Jobs Bullet List of Steps. See additional Notes and details below

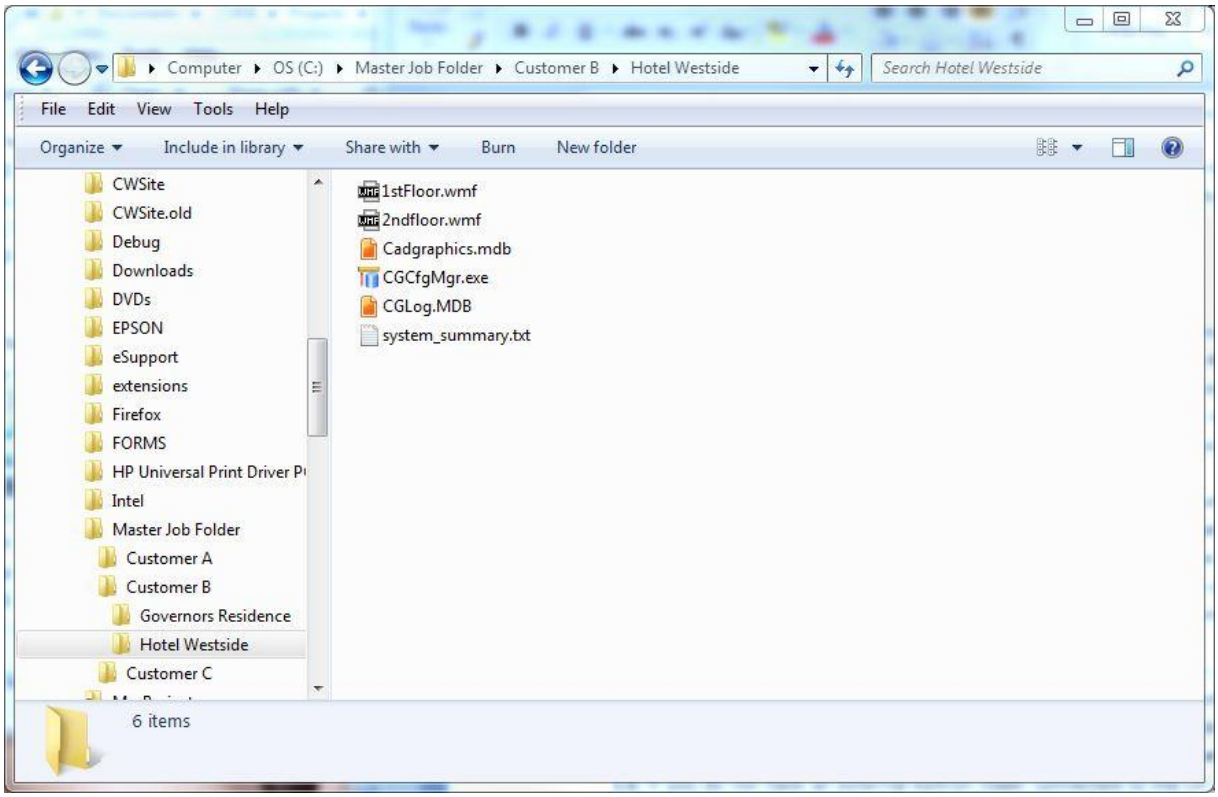
1. Create a Master Folder
2. Create a separate sub-folder for each customer and sub folders for each one of their jobs.
3. Copy the **CGCfgMgr.exe**, **Cadgraphics.mdb** and **CGLog.mdb** files into job folder.
4. Copy in the images
5. Copy in the System Summary File
6. Create an Import File
7. Import the created import file
8. Import your Images
9. Insert Your devices.
10. Copy folder contents onto jump drive.
11. Install CWSite on onto the PC that will be used at the job site
12. Generate and request a License Activation File
13. You can test the communications in Demo mode prior to receiving the license file and test some devices.
14. Configure your com port on the CWSite PC that will be used on the job site.

Multiple Jobs Detail Notes and Comments

You may wish to copy the image files that you need for that job into the folder for archiving purposes. Once they are imported into the database the images are internalized into the database. You may also wish to copy the system_summary.txt file from the CP-3500D/3600(+) that has the enrolled devices for this particular job site. This way you have all the necessary files in one folder to configure/archive the job. The typical files that you may have in this folder are shown in the image below.

Using Windows Explorer double click on the copy of **CGCfgMgr.exe** in the created job sub-folder and it will execute using the local database files.

Delete the installed devices from the default database, leaving only the following three required devices, the **COM Port**, the **CP-3000DA Panel** and the **CWSite Communications Monitor** device. Import the system devices and background images and configure the entire job using the **Configuration Manager** tool as described above. Save your changes and exit the **Configuration Manager** tool.



Once you have configured the job, simply copy the contents of the job sub-folder onto a USB thumb drive and then copy them onto the destination computer at the job site into its C:\CWSite folder. The only tweak you may have to do is to configure which COM port you are using inside the CWSite software on the job site pc if it is different than COM1.

Use the **Configuration Manager** tool to change the COM port. Enable the Dialer Serial Data Stream on the CP-3500D/3600(+) Panel.

Start the **System Monitor** program on that PC as described above verifying that it has connected to your specified COM port.

Start the **System Watch** program and you should be up and running.

Test your devices by creating troubles and alarms as necessary. Test and verify that all devices are mapped correctly and show up in the CWSite system.

Tech Support Diagnosis and Frequently Asked Questions

Please Note: The information in this section is designed to assist you in obtaining the answers to some of the most commonly asked questions that are fielded by our crack team of Technical Product Support Specialists on a regular basis.

1. ***My Repeater/Device comes in Test Failure/Program Failure:***
   - To define Test Failure and Program Failure, please refer to the "Terms and Definitions" section at the beginning of this guide.
   - Check your survey on that Repeater/Device. Use the FAST to survey your repeater links. Make sure you get 30 quick double beeps from your survey with the magnet on devices. Check your distance between transmitters, no closer than 4 inches.
   - If you have a panel installed in a clubhouse/office, do you have a repeater above to help get the signals in/out?
   - Download multiple Network Layouts/Trees at different times to see if repeaters and/or devices are changing paths. If they are, this is an indication that the link is marginal and potentially causing a test/program failure.

2. My Horns/Strobes do not activate:
   - Verify you have programmed Zones into your repeater's relay rules setup, and make sure your zones are shared as needed between devices/repeaters.

3. I have an Unknown Device trouble:
   - Did you delete a device without removing its battery first? If so remove power, send trouble to the Ignored List and remove from there as well. If you need to re-enlist that device re-enter Enrollment Mode and reapply power.

4. End of Line violation.
   - Transmitters and repeaters require E.O.L. resistors in Style 2 or Class B configuration only. Furthermore, repeater NACs only require supervision if software zones or "turn on" commands are assigned to them. If used in repeater mode only, then no supervision is required.
   - **The value of the E.O.L. resistor for transmitters and repeaters is 39K ohms.**

5. What cable do I need to connect to my Panel?
   - For CP-3000(A) you will need a USB -A to Mini- AB
   - For CP-3000D(DA)/3500D you will need a USB -A to USB- B (typical printer cable)

6. I can't retrieve my system summary. I get a red "X" where it says verifying data.
   - You must first view the completed programming on the Panel and back out before you can download the system summary.
   - Go to: Sys Info → Programming info → last page. Back out of the menu screens. You will now be able to download the system summary.

Diagnosis and Frequently Asked Questions – Continued

7. RF loss of range possible issues, where do I start?

- Is AC wiring coming in from the left side for your panel and repeaters?
- Have you checked your Omni Antennas for any damage or if they may be loose?
- Is there any conduit running behind anything?
- Are there any noisy fluorescent ballasts or other types of electrical equipment placed too close to the antennas of repeaters or panel?
    - An inductance amplifier (wand phone tracer) will often buzz noisily when activated near noisy ballasts.
- Is the equipment mounted in electrically noisy areas?
- Is there anything in the way or walls that could possibly block or significantly hamper the RF signal?
- When you download a Network Configuration Tree and you compare it to older versions do you see drastic changes? Do you see certain repeaters continually jumping around in the tree?
- What directions are the master and remote (slave) antennas in relation to each other from one repeater to another repeater? Is the remote (slave) of a sending repeater facing or pointing towards the master of the next repeater up in the chain?
- Do you have at least 7 inches separating multiple transmitters in the same enclosure?
- If multiple devices are test failing are they all reporting to the same repeater?
- If you have a repeater go offline can your remaining repeaters find another way back to the panel?

8. My Panel/Repeater is having charging issues (charge fault trouble), what should I look for?

- Are you using recommended listed batteries (Yuasa) in the Panel/Repeater?
    - 90% of charger faults are caused by the incorrect batteries being installed
- Is the incoming AC properly wired to the transformer?
    - This applies to the 120/220VAC transformers installed in CP-3500D, CP-3600(+), and AR-5 enclosures. Refer to installation documentation for the proper wiring based on the input voltage in use.
- Have you verified the presence or absence of voltage from the battery terminal connection?

9. My Panel/Annunciator are showing a "Checksum Bad" Trouble. What does this mean?

- This trouble will appear whenever the program information in the panel does not match the information loaded into the annunciator
    - Run the "Export to Annunciator" routine within the CWSI Suite software to load the annunciator file onto the micro SDcard.
    - Insert this SDcard into each annunciator and follow the prompts on the device to update.
- Any change to the program of a panel with an annunciator installed will require you to update the annunciator file.
    - Make sure you have a Micro SDcard prior to making a program change.
    - Always make all program changes prior to enrolling an annunciator.

10. Why does my transmitter not activate as an Alarm/Supervisory? Why does my transmitter not activate as a Trouble?

- Is the Jumper (J2) on the transmitter set to report the active condition that you desire?
    - Jumper (J2) should be set to "A" for Alarm/Supervisory reporting. Power down the transmitter prior to changing J2.
    - Jumper (J2) should be set to "T" for Trouble reporting. Power down the transmitter prior to changing J2.

11. Am I able to cable my OM-1 and OM-3 antennas to a remote location (remote install)?

- **NO.** You **CANNOT** remotely mount the OM-1 and OM-3 antennas.
    - These antennas are not listed for remote mounting with the equipment. Remote mounting the OM-1 and OM-3 would violate the UL listing of the device and will result in dB loss.
- **ONLY** the YA-1 Yagi directional antenna is listed for remote mounting.