

TRW-RL, TRW-WL, TRW-CRL and TRW-CWL Wireless AV Base

For use with L-series AV devices: See Table 1 for complete list.



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SPECIFICATIONS

RF Operating Voltage Range:	3.3 VDC	Battery Type:	8 Panasonic CR123A or 8 Duracell DL123A
RF Maximum Current Draw:	5 mA (LED On)	Battery Life:	<i>RF batteries:</i> 2 year minimum. <i>AV batteries:</i> See Tables 2 and 3 for AV battery life.
AV Operating Voltage Range:	12 VDC	Battery Replacement:	Replace during annual maintenance or when TROUBLE BATTERY LOW displays.
AV Maximum Standby Current:	6.5 mA	Dimensions (Wall):	Height 6" (15 cm); Width 5.1" (13 cm); Depth 1.6" (4 cm)
AV Maximum Alarm Current:	550 mA	Dimensions (Ceiling):	Diameter 7.4" (19 cm); Depth 1.6" (4 cm)
Standby Current:	210 µA @ 3.3 VDC (LED blink enabled)	Weight: (Wall)	17.6 oz (499 g) installed with 8 batteries
Maximum Transmit RF Power:	17 dBm	Weight (Ceiling):	20.0 oz (567 g) installed with 8 batteries
Radio Frequency Range:	902-928 MHz		
Operating Humidity Range:	10% to 93% Relative Humidity, Non-condensing		
Operating Temperature Range:	32°F to 120°F (0°C to 49°C)		

This audio visual (AV) wireless base must be installed in compliance with the control panel system installation manual, the AV notification appliance manual and the SWIFT® Wireless Gateway Manual. The installation must meet the requirements of the Authority Having Jurisdiction (AHJ). Notification appliances offer maximum performance when installed in compliance with the National Fire Protection Association (NFPA); see NFPA 72.

GENERAL DESCRIPTION

Models **TRW-RL**, **TRW-WL**, **TRW-CRL** and **TRW-CWL** provide a wireless base for use with compatible AV notification appliances (listed in Table 1). The AV notification appliance is attached directly to the wireless AV base. (See Figure 1.) The wireless AV base communicates through a wireless mesh to a gateway. The gateway sends information to/from the Fire Alarm Control Panel (FACP).

The wireless AV base provides power through 2 sets of 4 batteries – one set provides power for the RF communication and the other set provides power to the audible and/or visible output on the notification appliance. (See Figure 2.) The life of the AV set of batteries depends upon the activation time of the audible and/or visible output as indicated in Table 3. The AV base includes 2 optional battery cartridges to ease battery replacement. (See Figure 2.) Batteries can be inserted directly into the AV base or pre-loaded into the battery cartridge and inserted as two groups of 4 batteries. The battery compartment and cartridge indicate the correct orientation of the batteries. Carefully align the batteries with these markings and do not force them into place.

Rotary dial switches are provided on the wireless base to set the device address. (See Figure 2.) Notification appliance settings are adjusted through the notification appliance directly. Temporal 3 and continuous tone patterns are available and set directly on the notification appliance. Refer to the specific notification appliance manual for available setting options.

Panels offer different feature sets across the various models. As a result, certain features may be available on some control panels, but not on others. The possible feature sets available with Models TRW-RL, TRW-WL, TRW-CRL and TRW-CWL include:

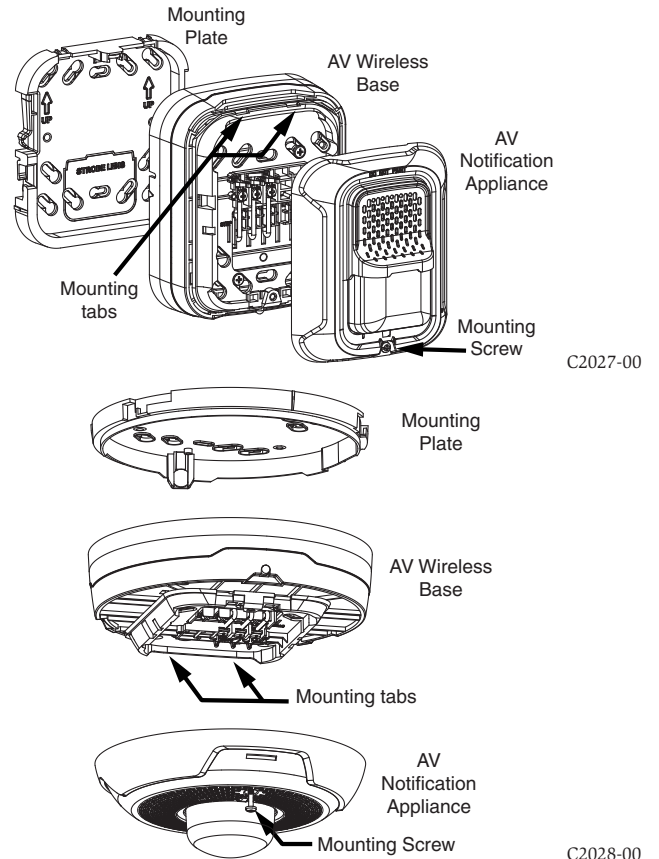
- An LED on the wireless base is controlled by the panel to indicate device status. Operational modes include red, green and amber colors in various solid or blink patterns.
- A magnet test feature allows the individual AV appliance to be turned on/off for testing purposes reducing the activation time needed during testing of the horn and/or strobe in support of longer battery life (refer to the SWIFT Wireless Gateway Manual for complete instructions).
- Custom and Temporal 4 patterns generated through the FACP.

The Models TRW-RL, TRW-WL, TRW-CRL and TRW-CWL require compatible addressable communications to function properly. Connect these devices to

listed compatible control panels only. Please refer to the operation manual for the UL listed control panel for specific operation.

The wireless AV base and notification appliance will synchronize both audio and visual indications between devices located within the same mesh network. Synchronization of a wireless AV device with a wired notification appliance requires a synchronization module (TRW-SYNC) available from Triga. Synchronization is only available through notification appliances that use the System Sensor synchronization protocol.

FIGURE 1. AV MOUNTING ASSEMBLY (WALL, CEILING)



SPACING

Triga recommends spacing AV notification appliances in compliance with NFPA 72. For specific information regarding notification appliance placement and special applications, refer to NFPA 72 or the Audible Visible Appliance Reference Guide, available from SystemSensor.com.

Wireless technologies can exhibit communication disruption if devices are spaced too close together. To avoid this form of disruption, SWIFT devices should not be placed closer than 2 feet (60 cm) apart without an intervening structure.

MOUNTING

To mount the wireless AV notification appliance, secure the wireless AV base mounting plate to a permanent structure. An optional tamper resistance feature can be activated (refer to TAMPER RESISTANCE section for details). The mounting plate can be surface mounted. To avoid interference with the wireless network metal electrical boxes are NOT recommended. To install models

TRW-CRL and TRW-CWL, align the arrow on the mounting plate with the light pipe on the AV base, and rotate the AV base clockwise onto the mounting plate. To install models TRW-RL and TRW-WL, align the arrow on the right side of the mounting base to the arrow on the side of the AV base, and slide the AV base down onto the mounting plate. (See Figure 3.) To attach the Triga notification appliance to the wireless AV base, hook the tabs on the top of the product housing into the grooves on the wireless AV base. Then, hinge the product into position to engage the pins on the product with the terminals on the wireless AV base. Make sure that the tabs on the back of the product housing fully engage with the wireless AV base. Secure the notification appliance by tightening the single mounting screw in the front of the product housing. (See Figure 1.)

NOTE: Attach the wireless AV base in a way that it cannot be moved after placement. If attaching to temporary structures such as removable ceiling tiles, permanently secure the structure, or mount the detector across a ceiling panel support.

TABLE 1. L-SERIES AV COMPATIBLE DEVICES

Model (UL listed)	Description
CHRL	Chime Red Wall
CHSCRL	Chime/Strobe Red Ceiling
CHSCWL	Chime Strobe White Ceiling
CHSRL	Chime Strobe Red Wall
CHSWL	Chime Strobe White Wall
CHWL	Chime White Wall
TR-HRL	Horn Red Wall
TR-HWL	Horn White Wall
TR-P2RL	Horn/Strobe 2-wire Red Wall
P2RL-P	Horn Strobe 2-wire Red Wall, Plain
P2RL-SP	Horn Strobe 2-wire Red Wall, Fuego
TR-P2WL	Horn Strobe 2-wire White Wall
P2WL-P	Horn Strobe 2-wire White Wall, Plain
P2WL-SP	Horn Strobe 2-wire White Wall, Fuego
TR-PC2RL	Horn Strobe 2-wire Red Ceiling
TR-PC2WL	Horn Strobe 2-wire White Ceiling
TR-SCRL	Strobe Red Ceiling
TR-SCWL	Strobe White Ceiling
SCWL-CLR-ALERT	Strobe White Ceiling Clear Lens Alert
TR-SRL	Strobe Red Wall
SRL-P	Strobe Red Wall, Plain
SRL-SP	Strobe Red Wall, Fuego
TR-SWL	Strobe White Wall
SWL-ALERT	Strobe White Wall, Amber Lens
SWL-CLR-ALERT	Strobe White Wall, Clear Lens
SWL-P	Strobe White Wall, Plain

TABLE 2. BATTERY LIFE AT TEMPORAL 3, AMBIENT CONDITIONS

Model	Model Type	Battery Life (Hours, Minutes), per Candela Setting									
		15 cd	30 cd	75 cd	95 cd	110 cd	115 cd	135 cd	150 cd	177 cd	185 cd
Chime-only	Wall	127 h 23m	—	—	—	—	—	—	—	—	—
	Ceiling	—	—	—	—	—	—	—	—	—	—
Horn-only	Wall	31 h 51m	—	—	—	—	—	—	—	—	—
	Ceiling	—	—	—	—	—	—	—	—	—	—
Strobe-only	Wall	20 h 44m	14 h 09m	8 h 20m	7 h 22m	6 h 02m	—	5 h 11m	—	—	4 h 01m
	Ceiling	21 h 45m	14 h 09m	8 h 02m	6 h 39m	—	5 h 39m	—	4 h 43m	3 h 57m	—
Chime-Strobe	Wall	18 h 12m	12 h 55m	7 h 58m	6 h 31m	5 h 18m	—	4 h 26m	—	—	3 h 37m
	Ceiling	18 h 35m	12 h 44m	7 h 41m	6 h 28m	—	5 h 24m	—	4 h 29m	3 h 45m	—
Horn-Strobe	Wall	16 h 31m	12 h 03m	7 h 22m	6 h 17m	5 h 30m	—	4 h 33m	—	—	3 h 38m
	Ceiling	12 h 34m	9 h 54m	6 h 14m	5 h 24m	—	4 h 46m	—	4 h 07m	3 h 31m	—

NOTE: Battery life will decrease using continuous tone or other coded patterns and under non-ambient environmental conditions.

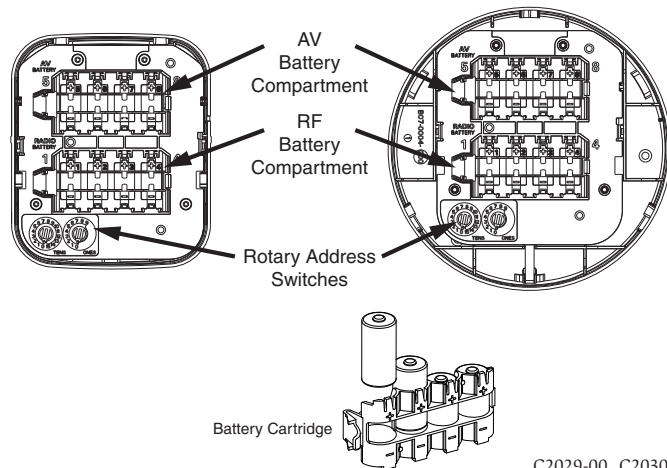
BATTERY REPLACEMENT

When a low battery trouble is indicated in the system, replace the batteries in the device. This message is an indication that approximately one week of RF battery life remains or one week of AV battery life plus the alarm time referenced in Table 3. Separate indications are provided for the AV battery and Radio battery groups. Each battery group can be replaced independently.

To replace the batteries in a wireless device use the following steps:

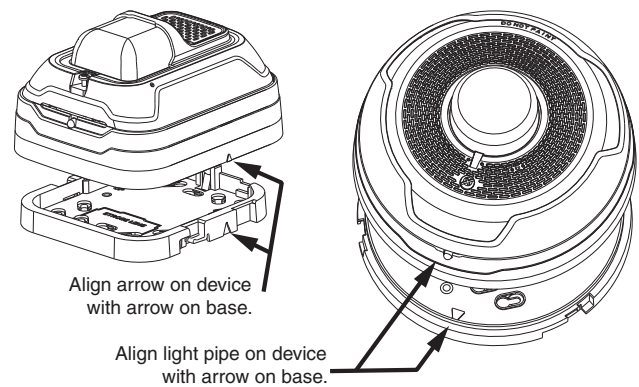
1. Have 4 CR123A (or DL123A) batteries available for each battery group (AV and/or RF) being replaced.
2. Remove the AV device and AV base as one unit from the mounting plate to access the battery compartment. An optional tamper-resist feature may be engaged see TAMPER RESISTANCE section for operational instructions.
3. Batteries can be inserted directly into the AV base or pre-loaded into the battery cartridge and inserted as two groups of 4 batteries. Remove the used batteries and replace with new batteries. The battery compartment and cartridge indicate the correct orientation of the batteries. Carefully align the batteries with these markings and do not force them into place. Inserting batteries in the wrong orientation could physically damage the battery contacts.
4. Return the device to its original location.

FIGURE 2. BATTERY COMPARTMENT AND ROTARY DIAL SWITCHES



C2029-00, C2030-00

FIGURE 3. ALIGNMENT ARROWS



C2031-00

TABLE 3. BATTERY LIFE AT TEMP 3, HIGH SETTING AFTER 2 YEARS NORMAL OPERATION*

NOTE: Normal operation over 2 years defined as standby with 30 second alarm once per month.

	Battery Life (hours, minutes), per Candela Setting				
Device Type	15 cd	95 cd	110 cd	177 cd	185 cd
Ceiling	10h15m	4h04m	—	2h31m	—
Wall	11h32m	—	3h33m	—	2h25m

TAMPER RESISTANCE

The wireless AV bases include a tamper-resistant capability that prevents their removal from the mounting plate without the use of a screwdriver or similar tool. To activate this feature, use diagonal wire cutters to break the tab on the wireless AV mounting plate as shown in Figure 4. Then install the AV base. To remove the device from the mounting plate once the tamper-resist feature has been activated, insert a screwdriver into the notch, as indicated in Figure 4 to press the plastic lever. For models TRW-CRL and TRW-CWL rotate the AV base counter clockwise while pushing the tamper-resistance lever. For models TRW-RL and TRW-WL slide the AV base up while pushing the tamper-resist lever.

The tamper-resist feature can be defeated by cutting and removing the plastic lever from the base. However, this prevents the feature from being used again.

The base also includes a magnet for tamper resistance. The magnet activates a supervisory tamper fault at the panel if the wireless AV base is removed from the mounting plate.

FIGURE 4. TAMPER RESIST FEATURE

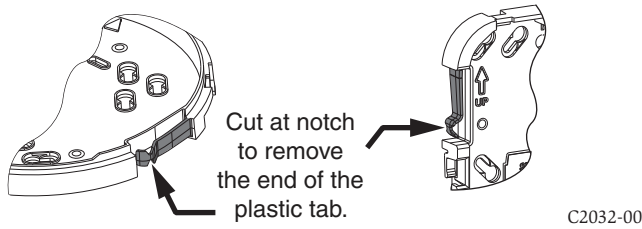
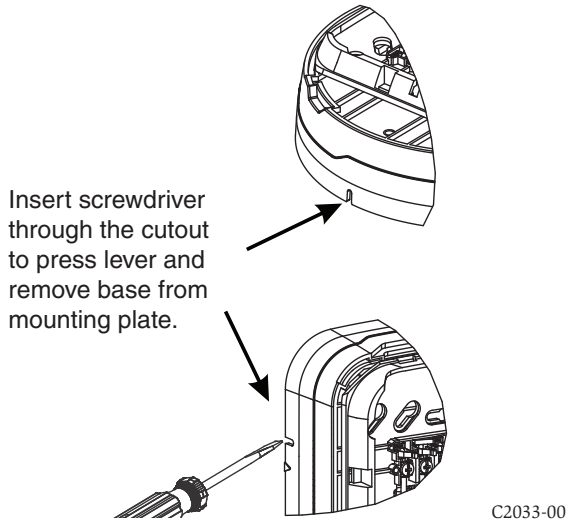


FIGURE 5. TAMPER RESIST RELEASE (WALL, CEILING)



TESTING

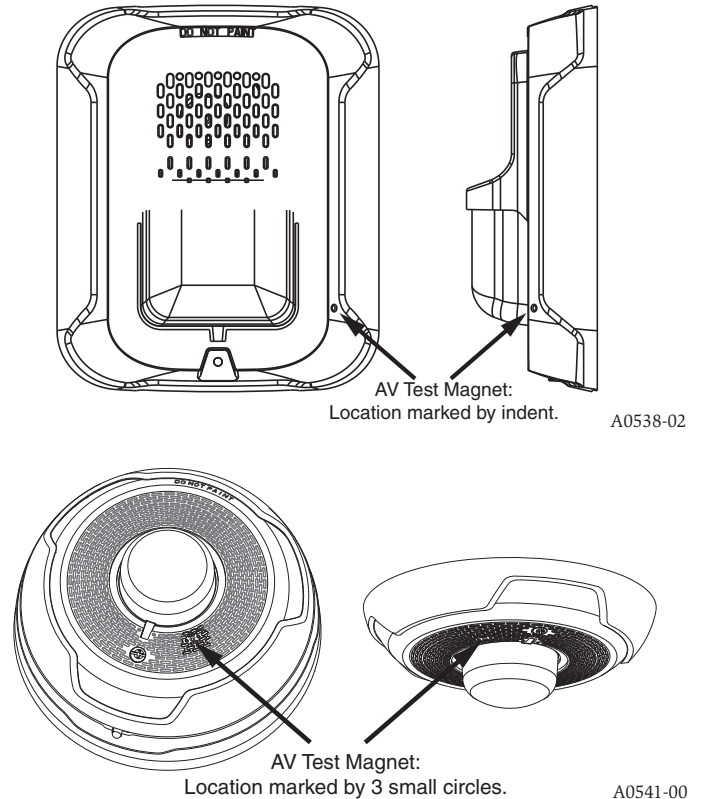
Before testing, notify the proper authorities that the system is undergoing maintenance, and will temporarily be out of service. Disable the system to prevent unwanted alarms.

All AV notification appliances must be tested after installation and periodically thereafter. Testing methods must satisfy the Authority Having Jurisdiction (AHJ). Sensors offer maximum performance when tested and maintained in compliance with NFPA 72.

Magnet testing allows the AV device to be activated at the device individually to quickly check the audible and/or visible signal. The magnet test can be initiated at the FACP and activated by placing a magnet on the AV device magnet test mark. (See Figure 6.) Refer to the SWIFT Wireless Gateway Manual for additional information.

NOTE: The magnet test mode uses more current consumption than standby mode, therefore, ensure the system is not left in magnet test mode.

FIGURE 6. AV TEST MAGNET (HORN STROBES SHOWN)



FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: 1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation. WARNING: Do not make changes to the equipment. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.