

Retrofitting an Old Sync-Wire Clock with a New Clock

Many facilities may still have an old synchronized clock system. There are different Time Protocols to provide a time correction signal to the clock system. Some Time Protocols are obsolete or no longer supported by their original manufacturer.

In the past, a very popular way to synchronize a Wired Clock System was the 3-Wire Sync, also known as a Sync-Wired System. This method of synchronizing the wired clock system includes various Time Protocols. Sapling provides direct replacement clocks for the most common Sync-Wired Protocols (3-Wire Sync). Our team will be more than happy to help determine if we can provide a direct replacement for your project's needs. In some scenarios, we can also offer a hybrid solution utilizing newer technology to synchronize the clocks, allowing greater flexibility and reliability.

Among many of the old 3-Wire Sync Systems, one common practice was to have a back box installed in the wall and a power connector for the clock (as shown in the below image). To make retrofitting very easy and quick, Sapling has designed and manufactured a retrofitting power kit as well as a clock mounting bracket.

This brochure will explain the options available to utilize the Sapling Retrofitting Kit for this specific application. If your application is different than the one explained in this brochure, please contact us and we will be happy to help you with other available options.

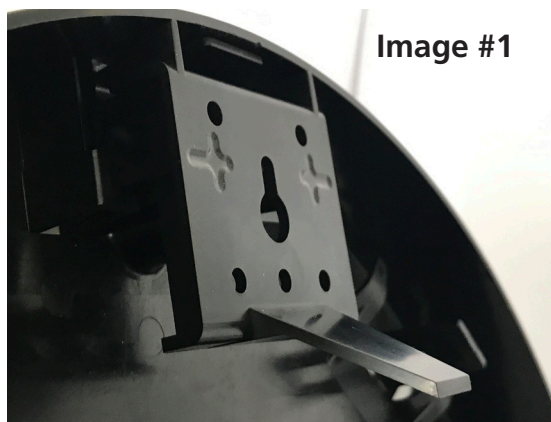


Image #1

Example of how the Sapling Mounting Bracket clips onto the Sapling SlimLine Round Clock, then slides into the existing mounting bracket in the back box.

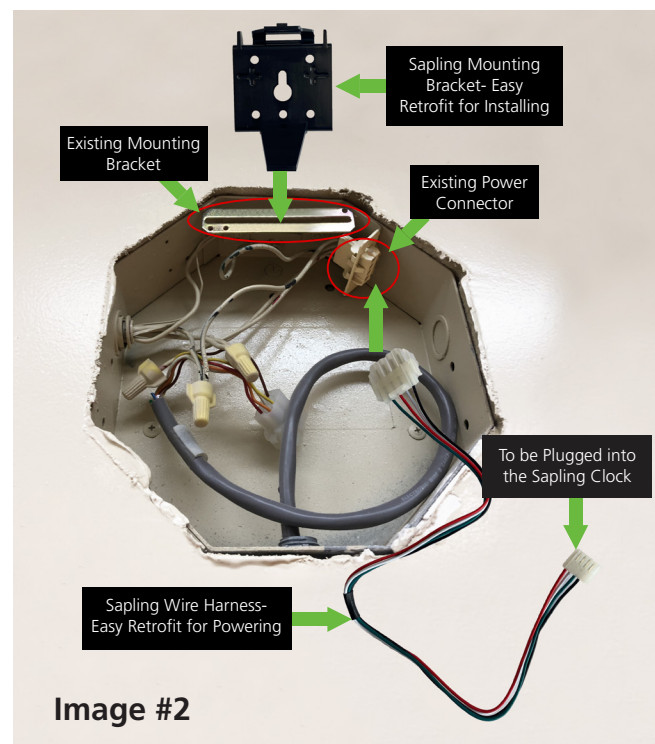


Image #2

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Option One – A Direct Replacement for Sync-Wired (3-Wire Sync) Clocks

The Sapling SAM Clock, along with the Sapling Retrofitting Kit, is the perfect solution for replacing old Sync-Wired Clocks since they will interface with the **Existing Power Source, Existing Time Protocol** and the **Existing Clock Mounting Bracket**.

1. Easy Retrofitting Utilizing the Existing Power Source:

As shown in Image #2, there is a connector located in the existing back box. This connector plugs directly into the back of the clock, which provides the clock with power and time correction. Sapling offers an adaptor that includes the receptacle connector (that can be directly plugged into the existing connector in the wall back box) along with another connector that will be plugged into the Sapling Round or Square Analog Clock.

The existing power source for the clocks may be either 24 volt or 110 volt. The SAM Wired Clocks are offered at either 24VAC/VDC or 110VAC power input. The same wire harness is used for the 24VAC/VDC or 110VAC power clocks. The connectors on the harness have a polarity protection tab, so that they cannot be plugged in the wrong way. As such, there is no need to hook up wires or understand which wire is going where.

2. Easy Retrofitting Utilizing the Same 3-Wire Sync Time Protocol:

Sapling may offer a direct replacement for old Sync-Wire Clocks (3-Wire Sync) that are no longer working. Our wired clock will support the most popular 3-Wire Sync time protocols and our team will be happy to help you confirm compatibility. Our SAM Wired Analog Clock will **automatically** detect all supported protocols and will adjust accordingly so there is no need to set any switches or perform any programming. The same Wire Harness Kit we provide will allow the clock to receive its power and time signal correction.

3. Easy Retrofitting Utilizing the Existing Mounting Bracket:

As shown in the following image, there is a mounting bracket in the existing back box that is meant to hold the clock on the wall. Sapling's kit includes a clock mounting bracket that will fit directly into the existing back box bracket on one side, while the other side will be clipped onto the Sapling Clock. This will allow an easy and quick clock retrofitting install. Sapling offers a different mounting bracket depending if a Round SlimLine or Square Clock is ordered.

4. Easy Add On for new locations without dedicated power wires:

If you choose to upgrade the old clock system to a wireless clock system, you can use wireless clocks powered at 24 VAC/VDC or 110 VAC instead of the old clocks, while utilizing existing power. However, there might be a need to add clocks to new locations in the building to ensure signal coverage. In this scenario, you can explore using battery operated wireless analog clocks, which will not require any wires, for maximum flexibility of the clock system expansion.

Image #3



Example of how the Sapling Mounting Bracket screws onto the Sapling Square Clock, then slides into the existing mounting bracket in the back box.

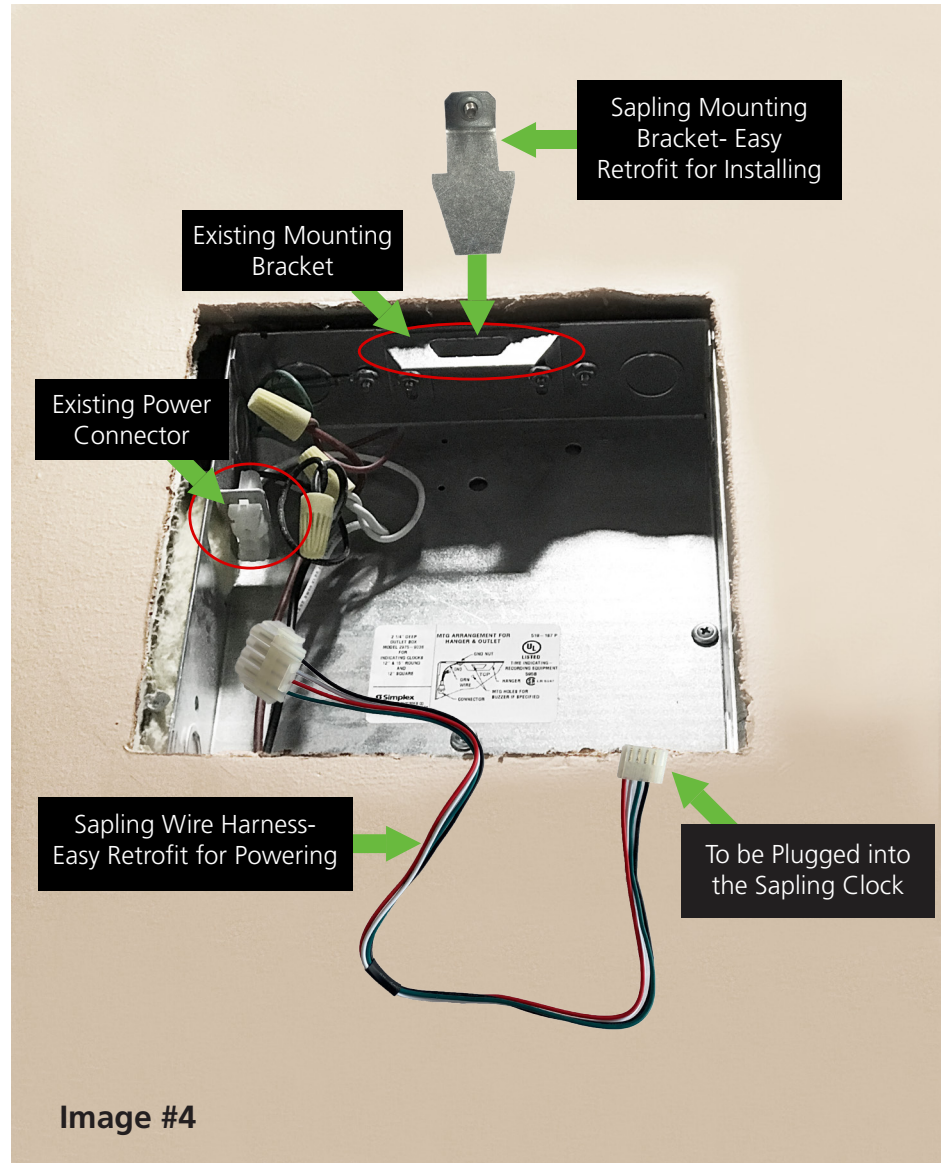


Image #4



Option Two – Upgrading Old Sync-Wired (3-Wire Sync) Clocks with New Wireless Clocks

The Sapling SAL clocks can provide an excellent solution for upgrading an old sync-wired clock system with the advanced technology of a wireless clock system. The new wireless clocks can utilize the Existing Power Source of the old Sync-Wired clocks and can also be installed in the same existing back box utilizing the Wireless Clock Retrofit Mounting Bracket.

When implementing this solution, the old master clock is to be replaced with a new Sapling Master Clock with a transmitter. The new master clock can even support both the old sync-wired clocks and the new wireless clocks if not all old clocks are to be replaced at the same time.

Upgrading the old wired clock system to a new wireless clock system will also allow for the flexibility of adding more clocks in new locations where power is not available. This is because the SAL clocks are receiving the time data transmitted by the master clock in a wireless manner. The wireless SAL clocks are also offered with a battery powered option, making it a great solution for expanding the clock system throughout the facility.

Easy Retrofitting Utilizing the Same Power Input with Advanced Wireless Technology:

For facilities that would like to upgrade their old wired clock system, Sapling may offer replacement Wireless Clocks utilizing the existing 110VAC or 24V power input and/or the option for a mounting bracket for the clock.

In this scenario, Sapling can offer a Master Clock with a transmitter that will transmit the time data to the new wireless clocks while simultaneously providing time data to the existing 3-Wire Sync clocks (depending on their time protocol). This way, there is no need to replace all of the old clocks at once, as they can be replaced with new wireless clocks when they fail. In addition, the wireless clock system synchronization rate is much more frequent than the old Sync- Wired Clocks, allowing for better accuracy and a quick time correction, especially after a power outage.



Ordering Information for Replacing Existing Clocks with Retrofit Wired Clocks

For replacing old 3-Wire Sync Clocks with the Sapling SAM Wired Round SlimLine Clocks:

SAM-PWR-BKT-KIT-14

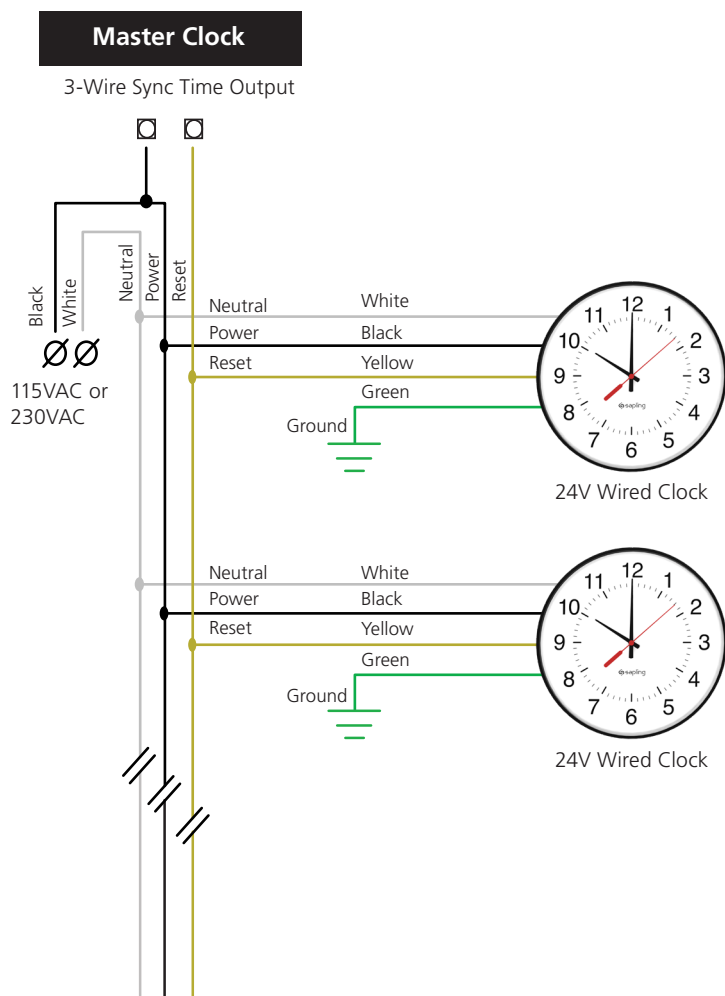
Wired 24VAC/VDC and 110VAC Retro Kit for Round SlimLine Clocks. Kit contains the wire harness and the mounting bracket.

For replacing old 3-Wire Sync Clocks with the Sapling SAM Wired Square Clocks:

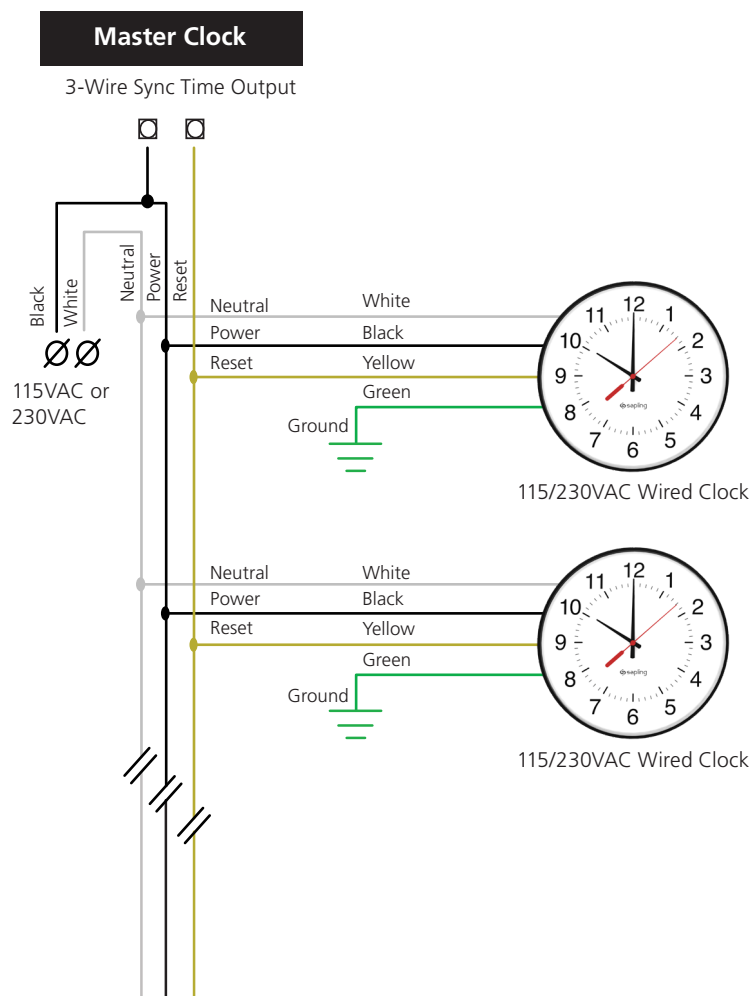
SAM-RETRO-KIT-SQ

Wired 24VAC/VDC and 110VAC Retro Kit for Square Clocks. Kit contains the wire harness and the mounting bracket.

For 24V



For 115/230V



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Ordering Information for Upgrading Old Sync-Wired (3-Wire Sync) Clocks with New Wireless Clocks

For replacing old 3-Wire Sync Clocks with the Sapling SAL Round SlimLine Wireless Clocks:

SAL-PWR-BKT-KIT-1

Wireless 110VAC Retro Kit for Round SlimLine Clocks. Kit contains the wire harness and the mounting bracket.

SAL-PWR-BKT-KIT-4

Wireless 24V Retro Kit for Slim Round Clocks. Kit contains the wires and the mounting bracket.

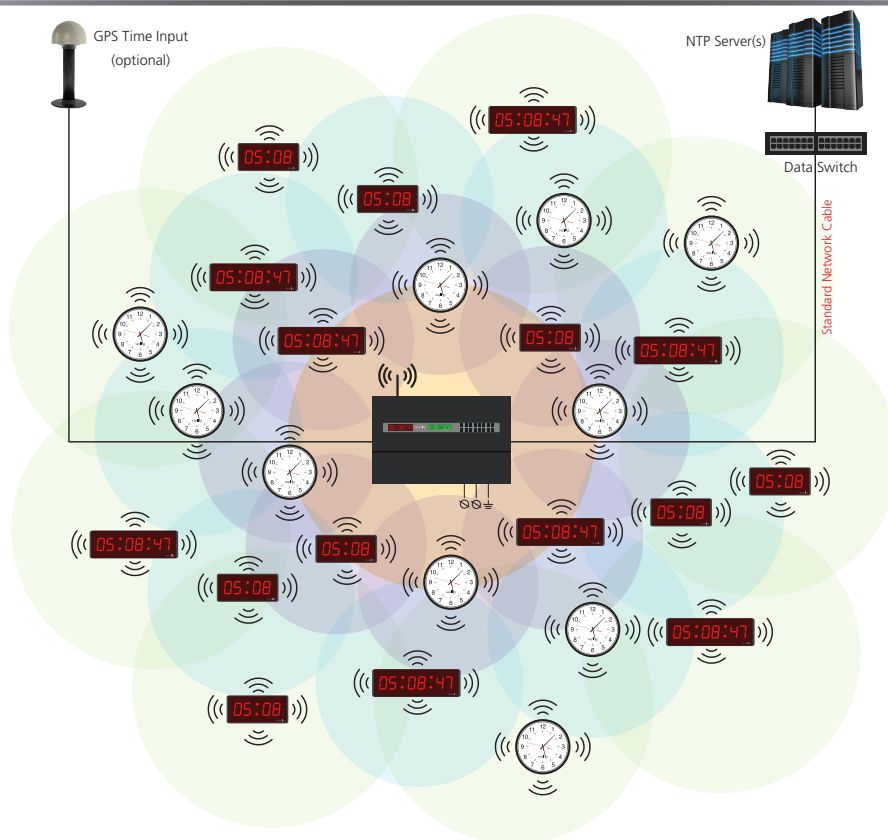
For replacing old 3-Wire Sync Clocks with the Sapling SAL Square Wireless Clocks:

SAL-PWR-BKT-KIT-SQ-1

Wireless 110VAC Retro Kit for Square Clocks. Kit contains the wire harness and the mounting bracket.

SAL-PWR-BKT-KIT-SQ-4

Wireless 24V Retro Kit for Square Clocks. Kit contains the wireless harness and the mounting bracket.



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Round Clocks are available in the following case options:

- Black
- Brushed Aluminum
- Wood

Round Clocks are available in the following size options:

- 9"
- 12"
- 16"



Square Clocks are available in the following case options:

- Black Back Case
- White Back Case

Square Clocks are available in the following size options:

- 9"
- 12"



Summary:

Sapling can provide different types of synchronized clock systems. We always strive to offer advanced, reliable and easy solutions. The adaptor is made to seamlessly allow the replacement of old 3-Wire Sync Clocks as a direct replacement or allow you to upgrade to an advanced Wireless Clock System utilizing existing infrastructure. Please don't hesitate to contact us for consulting on any of your synchronized clock systems or upgrades needed for your project.