

59th Minute Analog Master Clock Operation

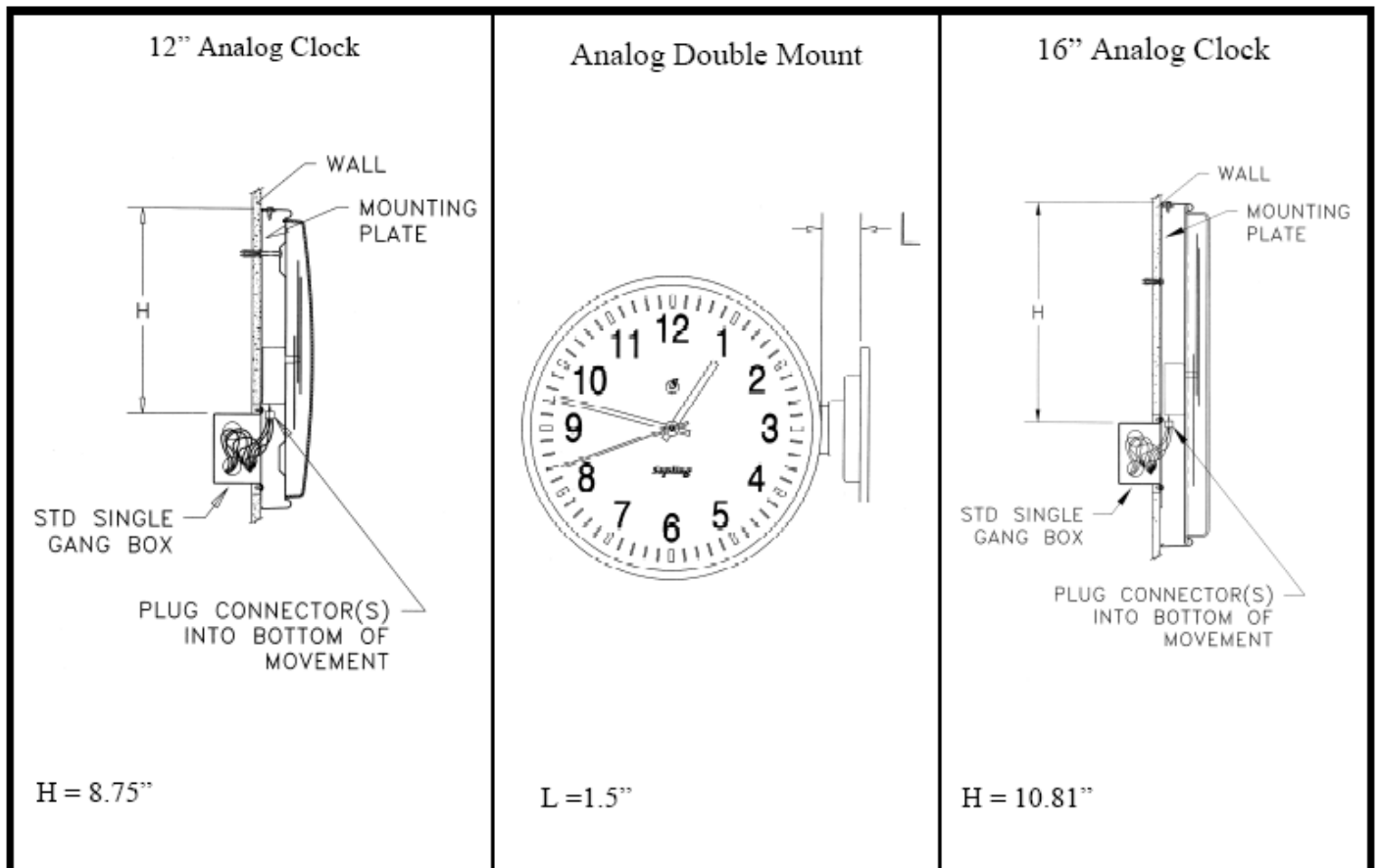
Description

A single BRG digital clock may control 500 or more 59th minute analog slave clocks. 59th minute analog clocks are used for their increased reliability over older analog clock systems. The 59th minute analog clock contains a microprocessor that greatly reduces the power required compared to older clock designs. No relays, ratchets or pawls are used. All power and sync pulses to the analog clocks are provided over a simple three-wire circuit. The master clock sends minute and second correction impulses hourly. Additionally, at 5am and 5pm, the hour is corrected. In the event of a power outage, the master clock will continue to keep time up to ten years. When the power returns, the master clock will correct the analog clocks at the next regular sync interval. If continuous time display is required during a power outage, a simple off-the-shelf uninterruptible power supply (UPS) will provide many hours, if not days of operation for the entire system.

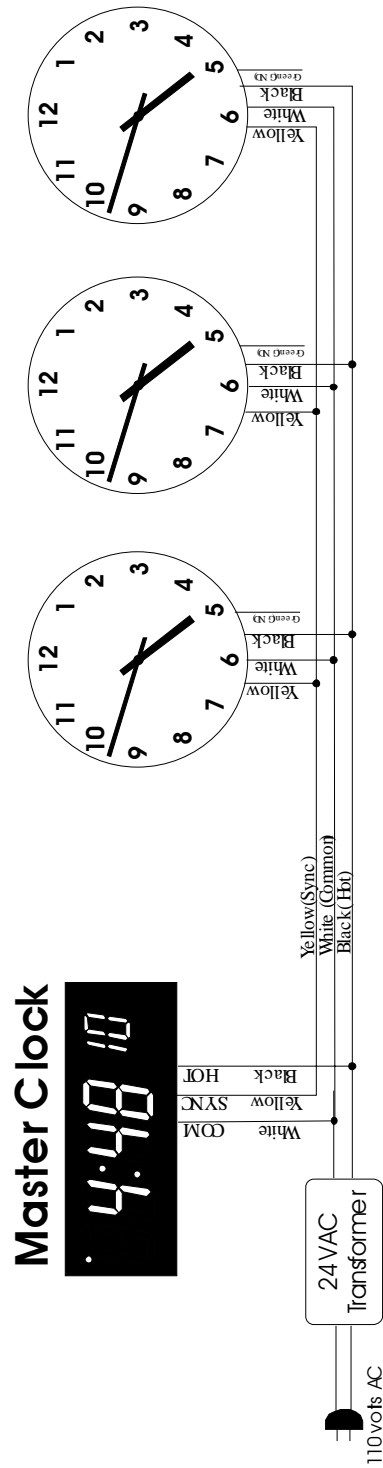
Installation

It is recommended to use 14 ga. to 16 ga. wire between the master clock and analog clocks. Any wiring layout may be used including star, "T", and buss configurations. More wiring "legs" will reduce overall wiring resistance. All wiring should be in parallel. If the master clock needs to be removed for any reason, the slave clocks will continue to operate normally, although they will no longer receive correction pulses from the master clock.

If a single clock needs to be removed for any reason, unplug the connector plug from the analog clock's pins. The master clock may remain powered. To return an analog clock to operation, plug the connector back onto the analog clock's pins. The clock will be corrected at the next regular sync interval.



Digital Master Clock with 59th Minute Analog Secondary Clocks



Operation

Once the master clock is displaying the correct time, changing the analog clocks to the correct time is fully automatic.