

Instructions for Using NEW 1900W-UNV Universal Clock Winders

READ FULL INSTRUCTIONS BEFORE ATTEMPTING TO INSTALL! The 1900W-UNV is designed to drive all vintage non-reversing drive master and slave clocks with minute (and half minute) wind sequences such as Standard Electric, Self Winding Clock Company slaves, Stromberg, ITR, IBM, Pulsynetic, and others. When used to power master clocks, it eliminates the need for the minute contactor! The 1900W-UNV outputs the required pulse once per minute needed to wind or advance the clock. This eliminates contact failures and provides long battery life. No changes to the clock are required. You simply need to connect the 1900W-UNV directly to the coil, bypassing the contacts.

NOTE: This product is NOT intended to power DC motor-based movements such as the rotary Self Winding Clock Co. Style A, B, C, or vibrating wind Style F.

CAUTION: ONCE THE 1900W-UNV IS CONNECTED, KEEP FINGERS AWAY FROM MOVING PARTS OF THE CLOCK! Once the 1900W-UNV is connected to the clock, the winding mechanism will receive a minute impulse to wind the clock, whether the clock is running or not.

CAUTION: When using included battery holder, DO NOT install batteries until all connections are secure!

This innovative UNIVERSAL driver adapts itself to the required voltage for the clock being driven. With its quasi-constant power feedback circuit, it will provide the proper non-reversing drive to any individual master or slave clock up to 25 volts. This eliminates the need to know what voltage the clock requires. The 1900W-UNV will detect it and drive the clock properly. The Model 1900W-UNV can be set to drive half-minute mode slave clocks.

The NEW Model 1900W-UNV is designed with a new enclosure to make it more convenient to install and use. Mounting tabs are included on the enclosure, connections labeled directly, and a brighter, more legible label is provided.

Using the 1900W-UNV Universal Clock Winder

The 1900W-UNV is designed to operate from a 6-volt power source. It is convenient to power the 1900W-UNV from four alkaline D batteries using the supplied D cell holder. **For use with slave clocks, use the included D cell holder and see Section C below.** Another candidate is the Energizer 528 alkaline lantern battery, which has screw terminals. An Energizer 529 will work but you would need to fit screws and washers to the spring terminals in order to assure reliable contact. **Use ONLY alkaline batteries. Heavy Duty or Super Heavy Duty batteries are inferior and will leak.**

A. Using an ALKALINE Lantern Battery or included battery holder (and alkaline D batteries):

CAUTION: Once the battery is connected, take great care to avoid shorting the large terminals or the battery leads. If they are shorted, the battery will leak and be destroyed. If the batteries leak, the holder will be destroyed. KEEP IN MIND THAT SHORTING BATTERIES WILL ALWAYS CREATE A RISK OF FIRE OR CORROSION!

1. Place 1900W-UNV and battery in a convenient place. The top of the clock is often preferred. Should you desire to mount device inside clock, included screws can be used to secure the device to the back or sidewall of the clock. The NEW Model 1900W-UNV has mounting tabs on the package to accommodate this.
2. Connect the SMALL terminals of the 1900W DIRECTLY to the clock coil. **NOTE: On master clocks, do not connect the 1900W-UNV through the minute contactor.** Disconnect any other external wires from the coil; only the 1900W-UNV should be connected. Polarity is not important for the CLOCK COIL connection.
3. Connect the Lantern battery and the 1900W-UNV as shown in Figure 1. **NOTE: A red wire should be connected to the + terminal of the battery and then to the +BAT terminal of the 1900W-UNV. A black or green wire should be connected to the – terminal of the battery and then to the –BAT terminal of the 1900W-UNV. NOTE: The included battery holder for 4 D alkaline batteries can also be used with Master Clock installations.** The included battery holder has wires and lugs installed for ease of installation. The **RED** terminal should be connected to **+BAT**. The **BLACK** terminal should be connected to **–BAT**.

CAUTION: Install batteries ONLY after all other connections are secure!

4. Once the 1900W-UNV is connected, use the “ADVANCE” button to manually wind the clock (or advance the slave clock time); 10-20 actuations are normally sufficient for masters. Remember the 1900W-UNV will wind the clock whether the clock is running or not, so **keep fingers away from movement while the 1900W is connected to it.**

With the included holder and 4-D alkaline batteries (or Energizer 528 or 529 lantern battery), the run time is about 1 year with most master clocks.

B. Using EnergyStar Power Adapter Option

Simply plug the EnergyStar adapter into an outlet and then into the AUX POWER jack on the bottom of the unit. Power requirement is 6 volts DC at 1 Amp, center pin positive. Recommended unit is KCC Scientific Part Number ES-6V (manufacturer is CUI; their part number is EPS060100-P5RP).

The EnergyStar Power Adapter can be used in conjunction with the batteries, which puts the batteries in the role of backup power source in case the power fails.

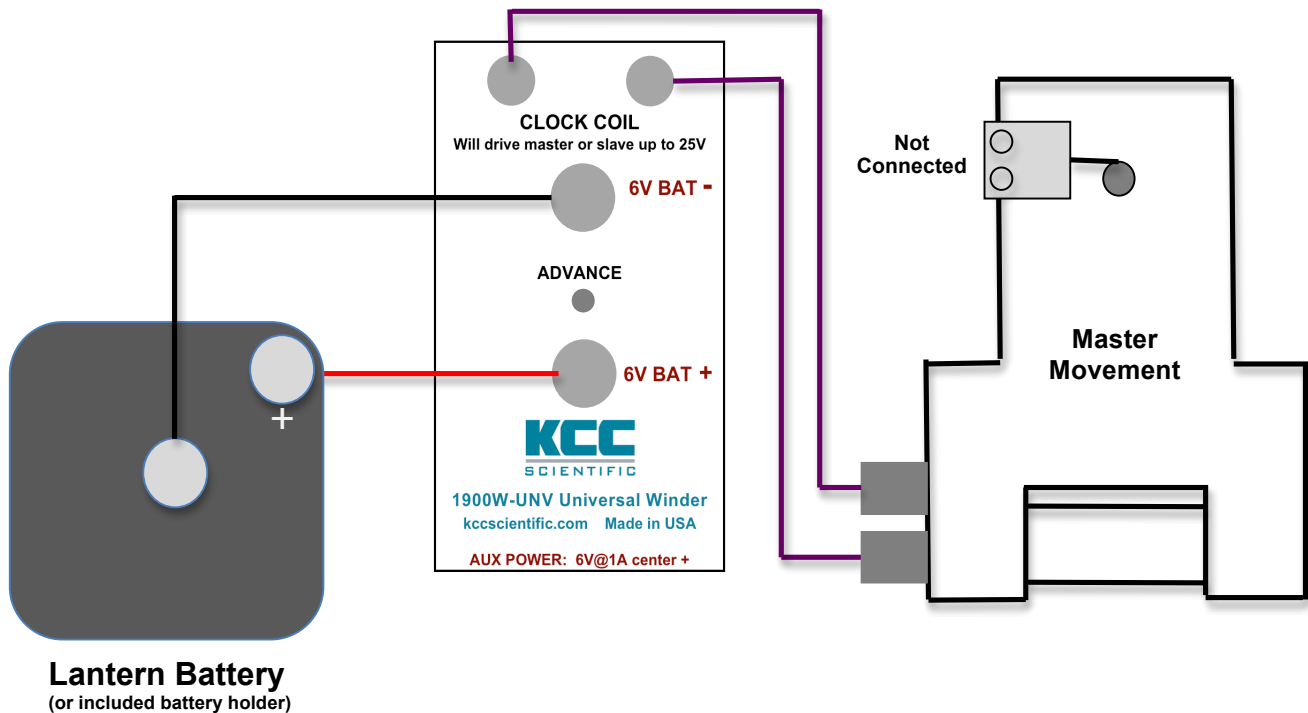


Figure 1: Connecting the 1900W-UNV. The minute contactor is not connected to the 1900W-UNV.

C. Slave Clocks

CAUTION: Once the D batteries are installed, take great care to avoid shorting the 1900W-UNV large terminals or the battery leads. If they are shorted, the D batteries will leak and be destroyed. If the batteries leak, the holder will be destroyed. Keep in mind that shorting batteries will create a risk of fire!

Mounting: If you purchase the 1900W-UNV to drive a slave clock, use the supplied battery holder. First mount the battery holder and 1900W-UNV to the slave clock. Small screws are provided. **Do not drill through the dial!** It may be necessary to first glue a 3/8” thick wood block to the back of the dial if the dial backer is not already wood. **It is best to mount the holder horizontally so that the weight of the batteries won’t pull the battery away from the contacts.**

CAUTION: Install batteries ONLY after all other connections are made!

See also Section B above if you purchased the EnergyStar Wall Adapter for use with your Model 1900W-UNV.

Connections to Slave Clock:

1. Connect the small terminals of the 1900W to the slave clock coil using the supplied brown wires. **On some clocks you will have to look at the movement to trace the wires directly from the coil. This is because some clocks terminate outside the movement for auto correction, which is not necessary with the Model 1900W-UNV.**
2. Connect the **BLACK** wire to the **-BAT** terminal of the 1900W-UNV.
3. Connect the **RED** wire to the **+BAT** terminal of the 1900W-UNV.
4. Install the batteries, with the flat side (-) terminal of the battery towards the springs.
5. Advance clock to proper time using the “ADVANCE” button. Or, disconnect power source until time “catches up” with the time on the dial. You can’t turn hands backwards on slave clocks except for some Self Winding Clock Co. units.
6. Note: You will achieve about 1 year run time with alkaline D batteries and most slave clocks.

D. Half-Minute Sequence Mode

All 1900W-UNV have a hidden mode to provide half-minute sequence for clocks requiring this format such as some Self Winding Clock Co. slaves and Pulsynetic slave models. To enter (or exit) this mode, simply depress and hold the “ADVANCE” button for 15 seconds while power is applied. It will remain in this mode until power is removed from the device thereafter, or you can hold the button down once again for 15 seconds to toggle out of Half-Minute Sequence Mode.

After you change batteries or disconnect the 1900W-UNV from a power source, you’ll have to re-enter the half-minute mode as described above, since the unit will default to the standard 1-minute sequence. If you don’t want half-minute sequence, avoid holding the “ADVANCE” button down more than momentarily. Using the Half Minute Sequence mode will reduce battery life by half.

E. Multiple Clocks

The Model 1900W-UNV can successfully drive a master and slave clock in parallel, or multiple slave clocks in parallel. Multiple clocks must all be of the same voltage rating or type. It is difficult to predict how many slave clocks can be driven simultaneously since the electrical requirements of slave clocks vary. However, we have been able to drive 2 to 3 24 volt Standard Electric, ITR or Stromberg slave clocks with a single 1900W-UNV with no trouble. There is no danger of damage to the 1900W-UNV with too many clocks. If you need to drive a master *and* multiple slave clocks, or if the clocks you are trying to drive require different voltages, then we recommend the Model 1900W-UNV Master-Slave.

Keep in mind that the more devices you drive, the shorter the battery life will be.