

How To Troubleshoot a Digital Display Timer



by Morris Hoole, Dixmor Enterprises

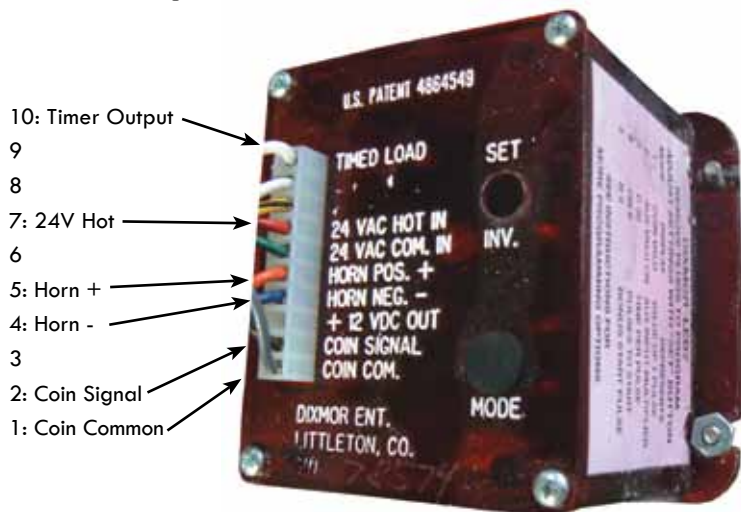
Most Common Problems

When troubleshooting, never assume anything, always check it out totally, or you will probably miss something. A lot of problems are the most obvious things we overlook

1. Display not lit up—first verify with a voltmeter that 22 to 28 volts is present to the timer. If connected with a push-in type harness, remove and reinsert harness as it may be corroded and not making good connection. Clean connectors if needed. Disconnect power for 30 seconds and reapply. Sometimes a power surge can lock up the electronics and this will reset it.

If you have an older timer with an internal back up battery in it the battery could be weak or dead. If you are trying to use a timer that has been in storage for some time follow these hints. Some timers have self charging batteries and if you leave it plugged in for 30 minutes, it may start working once you disconnect and reapply power. You will need to reprogram if this happens.

2. Time shows on display and counting down but nothing turns on—take a small piece of wire stripped on both ends and touch between 24 volt hot and timer output. Timer is now out of system and if nothing still turns on you have a problem elsewhere, possibly rotary switch or touch pad.



Note: Pictures apply to Dixmor LED7 timer. Wiring may vary for different makes & models.

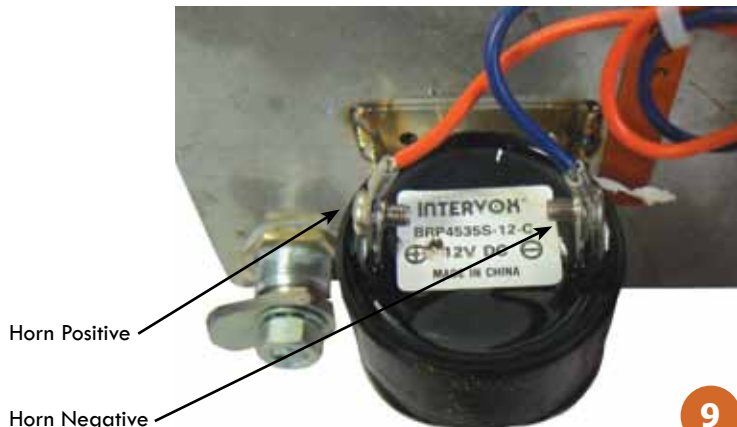
3. Low pressure functions work but high pressure pump does not run—first verify drive belt for pump is not broken. Second check breaker in high voltage distribution panel, turn it off and back on as

one leg only might be tripped. --- WARNING--- IF YOU ARE NOT EXPERIENCED WITH HIGH VOLTAGE STOP HERE. OBTAIN QUALIFIED HELP. Next verify that motor starter has high voltage coming to it and passing all legs through it. Do not discount the possibility that there may be a fuse somewhere in the system that is blown.

4. Timer shows time expired but system continues to run. Disconnect timer output wire; if system shuts off, timer is probably defective. If system stills runs you probably have a bad relay, or motor starter contacts stuck in the closed position. Even though it is rare, occasionally a power surge can lock up a timer. Remove power for a few minutes to allow reset.

5. Inserted coins are accepted but do not add up time.—Make sure timer is programmed correctly. If new installation you probably have the polarity reversed. Double check the instructions and make sure you are wired according to the timer instructions, not the coin acceptor instructions. If unit has been working and now isn't, take a short piece of small wire and momentarily touch between coin common and coin signal. Each touch should add one pulse. Some timers use 24v hot for coin signal and some may use 24v common. If you don't know which you use, touch between 24v hot and coin signal. If this doesn't work, touch between 24v common and coin signal. If you still get no pulse you probably have a defective timer and it should be returned for service.

6. Horn does not sound or continuous horn.—Verifies proper polarity according to timer instructions. Replace with known working horn. Sometimes we find a horn which is labeled for the wrong voltage. Double check programming to verify that horn has not been turned off. Timer may have shortened horn driver and need to be returned for service. *continued on page 11...*



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7. Display reads “closed” or “fail” or “error” or “coin” (Dixmor timers only)

“Closed” or “coin” indicated a continuous coin pulse coming to timer from coin acceptor or a shorted coin signal wire. Disconnect coin signal wire at timer to verify this problem.

“Error” indicates programming has been lost. This can happen due to a severe power spike or possibly a bad battery if timer has one. Reprogram timer.

“Fail” can mean continuous coin signal or program lost depending on timer. Follow above hints to determine problem.

8. Numbers on display missing segments—bad display or driver internally. No user serviceable solution. Return timer for service.

9. Display reads proper amount of time but does not count down or start equipment. ---Double-check programming---this situation usually occurs after a price change and a small error was made in your calculation of time per coin and coins to start.

10. Even though this is written for digital display timers, most of the problems associated with car wash timers and coin acceptors are exactly the same as what is outlined here. A good method of troubleshooting is to interchange a known working component between bays and see if the problem goes with the part or stays in the same bay. All operators should include a spare coin acceptors and timer in their parts inventory. As you know most problems arise on Friday or Saturday when you can't get parts or advice.

If you are working with a Dixmor timer and can still not figure out call Nick, John, or Morris at Dixmor—phone 303-794-1387 or 303-794-0597. We will do our best to help you solve your problem

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