

BASIC HOLLEY EFI INSTRUCTIONS

We strongly recommend having a professional with experience install and fine tune your EFI system.

If you have purchased an engine from Prestige Motorsports there will already be a basic tune installed in the ECU from dyno testing your engine. If you have a Terminator X, Terminator Stealth or Sniper EFI system, there is no need to go through the set-up wizard on the handheld. The handheld is used for monitoring or small tuning changes if necessary. If you have all wiring hooked up correctly it will be as easy as turning the key and starting your engine. Once started Always double check the timing! See below for more info on checking timing.

Below we have listed common “do’s and don’ts” and basic wiring information. For complete wiring diagrams, instructions and tuning info, you will need to download the Holley EFI software from Holley. See below in remote tuning help for more info and a link.

IMPORTANT “Do’s and Don’ts”

DO’S

- Install the main power and ground directly to the battery.
- Proper Engine ground connection to the battery and chassis.
- Properly solder and heat shrink any wire connections.
- Make sure O2 sensor is correctly placed and exhaust system is sealed properly.

DON'T'S

- DO NOT start engine with open headers
- DO NOT run high voltage or “noisy/dirty” wires in parallel (bundle/loom together) with any EFI sensor wiring. If wires need to cross, try to do so at an angle
- DO NOT use things like “T taps”, wire nuts or other “quick fix” type connections.

BASIC WIRING – Loose wires in Holley harness

12V Switched – Color = **Red/White** – Should be connected to a clean +12-volt power source. Power source should only be active when the ignition is on. Make sure source has power when engine is cranking as well. Not all sources apply power when the ignition switch is in “cranking” position.

12V Battery – Color = **Red** – Should be connected directly to the battery. There is a fuse holder attached that should contain a 20A rated fuse. This powers the fuel pump and fuel injectors.

12V Fuel Pump – Color = **Green** - Used to directly power a fuel pump (+12 volt). Fully terminated harnesses utilize a relay to supply this power. 14-gauge wire is used. Due to this, it is not recommended for pumps that draw over 10-12 Amps to use this wire. For high current pumps, use this wire to trigger a separate relay and use larger gauge wire to feed the pump - 10 gauge is recommended.

Ignition/DIS Chassis Ground – Color = **Black** – Connect to a ground point that has excellent connectivity with both the engine and the battery.

The 2 most common Distributor type ignition systems we provide with our engines are a standard MSD pro billet distributor OR a Holley dual sync. MSD units are mechanical advance in which the ecu is not usually controlling timing. The Holley dual sync distributor allows the ecu to control timing. Both systems require the use of an MSD box, but you will only use the white points out wire when using the dual sync and/or the ECU is controlling timing. This loose white wire will hook to the white wire from the MSD box.

Points Output – Color = **White** – Used to trigger a CD ignition box. ONLY use when ECU is controlling timing

“Coil –” – Color = **Yellow** – Used for an RPM input signal when NOT controlling timing and NOT running a Capacitive Discharge (MSD) ignition system. **NOTE**-This wire is never used with our engine combinations.

DISTRIBUTOR WIRING

MSD Distributor and CD Box (No timing control) – Refer to MSD instructions provided to wire the box, coil, and distributor. NOTE -Prestige Rarely ever uses this

You will use the ignition adapter provided from Holley with one single Yellow/black wire that plugs into the main harness. You will hook the Yellow/Black wire to the Tach out wire from the MSD Box to provide the ECU with an RPM Signal.

Holley Dual Sync Distributor (ECU controlling timing) WITH MSD BOX

The plug from the distributor is a direct plug in to the main Holley ignition harness.

Loose white points output wire from Holley hooks to white points input wire on MSD Box. Wire MSD Box the following

- 1- Heavy Red and Black directly to Batt.
- 2 – Loose white to loose white on Holley
- 3- Grey – tach signal out to gauge or other acc needing tach signal
- 4 – Orange and Black – direct to coil
- 5 – Violet and orange – Normally to distributor – Do not Use

CHECKING TIMING

All engines from Prestige Motorsports have been dyno tested and the timing has been set. This does not mean you do not have to check timing. Sometimes the distributor may be bumped during the installation into the vehicle. The settings in the ECU for inductive delay and reference angle have already been set and should not need to be adjusted.

MSD Distributor (No timing control) Refer to engine tag for maximum recommended mechanical advance.

Start the engine. Once it reaches operating temp Rev the engine to approx. 4500 RPM while pointing timing light at balancer and make sure timing matches maximum suggested advance. You can also check initial (idle) timing as well. We suggest checking idle timing at 1000 RPM.

Holley Dual Sync (ECU Controlling timing)

Make sure the ignition power is on and USB cable connected to your laptop. Open Holley software and click “Retrieve ECU data. Once linked up “USB link” will show at top of screen. Click “USB link” to go online with ECU. Start the engine and allow it to reach operating temperature. Click the dropdown arrow on the SYNC button at top of screen and select “Static timing check”. We suggest inputting a value of 20 deg and hit set. At this time, you can now point the timing light at the balancer and verify timing. The timing viewed should be exactly what you input earlier. If not adjust the distributor as needed so the engine matches the commanded timing. Make sure the timing stays at the commanded amount while revving the engine to approx. 4500 RPM.

NOTE- If the timing advances or retards while revving the engine the inductive delay setting will need to be adjusted. Please refer to the Holley instructions or call to set an appointment for remote tuning.

Sensors

Fuel & Oil pressure – Not needed – We use these if running boost. Normally not supplied with system

Air Temp – On Borla EFI systems and certain others we don’t use this. It has little to no offset anyway.

MAP – On terminator X we Usually we use the blue hose from ECU. Internal map – HP/DOM Boosted uses External 1, 2 or 3 Bar Maps

ONLINE REMOTE TUNING HELP

We offer our engine customers a onetime assisted start up to help you understand the system and monitor your first start to avoid any possible issues. Below reviews what will be needed before setting an appointment for remote tuning.

We also offer this service to other clients at a rate of 150.00 Hourly. Call us at 704-782-7170 to schedule a time.

SOFTWARE NEEDED

[https://www.holley.com/support/resources/#Fuel Injection](https://www.holley.com/support/resources/#Fuel_Injection)

Download appropriate software.

SNIPER – Uses Sniper EFI Software

TERMINATOR X (MAX)/Stealth TBI – Uses Terminator X software

TERMINATOR STEALTH – Uses Holley HP Software

HP/DOMINATOR – Uses HP Software

Notice there are several versions (V1-V2-V3-V4-V5-V6) for various ECU's. If its our engine the tag has the version listed on the engine tag. If not, there is a window that pops up when connecting that will tell you there is a software/firmware conflict. In some cases, you can still move forward tuning. In others it will say its "READ ONLY" meaning you can't make tuning changes. If that is the case download another version and retry.

- Windows based computer with GOOD internet access to allow remote control at vehicle. XP, Vista, windows 7 and 8 are supported
- You will need a Holley EFI System USB Cable. Part # 558-409 7ft cable OR 558-438 15ft cable For HP and Dominators. Terminator X and Snipers use 558-443. With Snipers and Terminator X ECU's its handy to have the CAN Splitter 558-465 to run both the handheld screen and use the USB to a laptop. (We usually provide this cable with your engine purchase)
- Download "TeamViewer" from google. <https://www.teamviewer.com/en-us/download/windows/>

You will be provided an ID and Passcode. We will need this to access the remote-control feature.

BEFORE CALLING

We encourage you to test your connection to the ECU before calling to make sure you are able to link up properly. Connect the USB cable from ECU to your laptop. Turn ignition "ON" but do not start. Open the Appropriate Holley software. The first window that pops up click "download from ECU"

Now at the top of the screen there should be an icon that says, "USB LINK" If so click that and it should go online showing "ONLINE"

If that Icon show "OFFLINE" That means, there is no connection to the PC from the ECU. Check that connection. NOTE – It could also mean you have more than one Holley software's open. Close out all programs and reopen Holley software and retry.