

MPC-20-R2 Setup for a Mechanical Engine

In order to setup the controller to work on a mechanical engine you will need an engine oil pressure sensor, engine coolant or oil temperature sensor, and a magnetic pickup or engine alternator capable of meeting the minimum requirements for frequency input on the controller to provide engine speed.

1. Access High Level Security Menu/Engine Settings/Engine Type and select Mechanical then press [Enter].
2. Press down arrow to Engine Manufacturer, select which engine manufacturer the controller is/will be used then press [Enter].
3. Press down arrow to Speed Source and select either Alternator or Magnetic Pickup then press [Enter].
4. Press down arrow to Speed Calibration then press [Enter].
5. Utilize the Up and Down arrows to establish the appropriate number of flywheel ring gear teeth or engine alternator pulses then press [Enter].
6. Press the [Back] key and down arrow to Throttle then press [Enter].
7. Press down arrow to Engine Throttle Type, select Pulse Inc/Dec, or None then press [Enter].

NOTE: *If Throttle Type is set to None due to hand throttle setup or fixed speed setup skip to #14.*

8. Press down arrow to Target RPM Step Size, select appropriate step size for each button press then press [Enter].
9. Press down arrow to Throttle Deadband RPM, select appropriate deadband then press [Enter].

NOTE: *If your engine begins to hunt for RPM you should increase this value to create a wider throttle deadband range.*

10. Press down arrow to Throttle Inc/Dec Pulse, select appropriate pulse time then press [Enter].
11. Press down arrow to Throttle Inc/Dec Pulse Delay, select appropriate pulse delay then press [Enter].
12. Press down arrow to Throttle Inc Rate, select appropriate throttle increment rate then press [Enter].
13. Press down arrow to Throttle Dec Rate, select appropriate throttle decrement rate then press [Enter].
14. Press the [Back] key, and down arrow to Input/Output, and press [Enter].
15. Access Analog Inputs and assign one Analog input for Oil Pressure and one for Engine Temperature. Press [Enter] to save the settings.
16. Press [Back] and access Relay and Digital Outputs.
17. Press down arrow to Relay1-6 or DO1-6, and assign desired outputs for Crank, Fuel, and Inc/Dec outputs if throttle type selected was Inc/Dec.

NOTE: *DO5 and DO6 are factory set to Throttle Decrease and Throttle Increase to be used with the Murphy AT03069 Throttle Actuator.*

18. Press the [Back] key and up arrow to Advanced Engine Settings, and press [Enter].
19. Press down arrow to Warnings and Shutdowns, press [Enter].
20. Ensure all warnings and shutdowns are set to the appropriate settings for the engine for engine faults such as oil pressure and coolant temperature.
21. Press the [Back] key twice and up arrow to System, and press [Enter].
22. Press down arrow to Set Machine Hours, select desired machine/internal hours then press [Enter].
23. Press the [Menu] key to exit the menu setup screens.