



# INSTALLATION INSTRUCTIONS

## MSD Blaster FI for Yamaha YFZ450 PN 4247

**Note:** The MSD Blaster Enhancer is designed for the Yamaha YFZ450 with electronic fuel injection.

### Parts Included:

1 - Blaster FI Controller 1 - MSDView CD 1 - Micro-USB Cable 1 - Mounting Bracket

**WARNING:** When installing the Blaster FI, disconnect the battery cables. When disconnecting, always remove the negative cable first and re-install it last.

**WARNING:** The Blaster FI Controller is a performance device that allows the vehicle or engine to operate at increased power and speed. Follow all OEM safety recommendations and use extra care when operating at increased power and speed.

**CAUTION:** The Blaster FI Controller will raise the maximum rev/speed limit of the engine. Note that factory components may not be designed for the increase in rpm and may require modifications to achieve the best performance and durability.

**Note:** Do not plug the MSD into PC until the MSDView Software has been installed first.

### INSTALLATION

1. Remove seat by pulling seat lock lever upward and pull the seat up at the rear.
2. Remove the air box case cover. Note: Do not remove the air filter. Never operate the engine without the air filter. Engine damage can occur.
3. Remove the rear fender by unbolting the four bolts and clips on the fender.

### BRACKET INSTALLATION

1. Pull tail/brake light cover down and unhook it from the back end (Figure 1).
2. Locate the OEM ECU at the rear of the ATV and disconnect the 34-pin connector.
3. Separate ECU connector pigtail from the rest of the bundle so it can be pulled approximately 4-5 inches back. Route it into the ATV frame to reach inside the air box.
4. Slide bracket wings under the fender tabs. Adhere the supplied Velcro to the grooves on the bracket. (Figure 2).



Figure 1 Bracket Install.



Figure 2 Hook Bracket and Velcro Install.

## MSD INSTALLATION

1. Mount the MSD PN 4247 onto the bracket.
2. Connect the OEM 34-pin connector to the MSD. Route the MSD harness to the OEM ECU (Figure 3).
3. Reinstall the tail/brake light cover and the rear fender. Note: The air box cover will no longer fit with the install of the MSD.

## MSDVIEW SOFTWARE INSTALLATION

Minimum requirements to install and run the MSDView software:

- Microsoft Windows XP/Vista/7
- Keyboard and Mouse or some other compatible pointing device.
- Available USB port.
- .NET 2.0 or wide band internet access for the .NET 2.0 installation.

**Important:** Exit all programs before installing the MSDView software.

**Note:** Install the MSDView software before connecting the MSD product.

1. Insert the MSD CD into your PC. The software will automatically begin the installation feature. If the “autorun” feature is disabled on your PC, go to: Start and select Run, Select your CD Drive, and click on the Setup .exe file. The MSDView wizard will walk you through the setup.

If the .NET Framework is not installed on your PC, the MSDView software will prompt the download and setup. Click “Accept” to begin the update and follow the steps. (This requires an internet connection).

Depending on Internet speed, it may take awhile to download and install .NET.

## FIRST TIME CONNECTION

1. Connect the MSD to the PC with the supplied USB cable.

**Note:** The first time the MSD is connected to your PC it will perform a new hardware installation (Figure 5).

2. The Wizard will detect the Com Port and install the required files. This may take a few minutes.
3. The Hardware installation window will stop the setup to alert you about the installation. Click “Continue Anyway” and the “Finish” to complete the installation .



Figure 3 Connect MSD Inline.

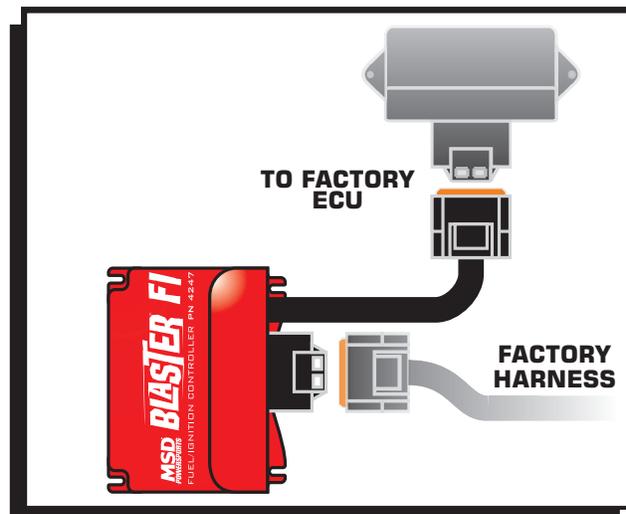


Figure 4 MSD ECU Wiring.



Figure 5 Hardware Wizard.

**MSDVIEW SCREEN**

When the MSDView software is run, a “Connect” screen will show all MSD products the software will work with. Select PN 4247 and click connect (Figure 6). If there is a communication issue with the MSD, refer to the “Communication Troubleshooting” Guide.

**TUNING TABS**

The 10-position rotary dial allows you to select from 10 preset tunes (Figure 7).

Select the desired TUNE tab to view or modify the corresponding TUNE.

**Note:** The rotary dial will select the TUNE that controls the engine. The heading of the selected TUNE tab is green.



Figure 6 MSDView Connect Screen.

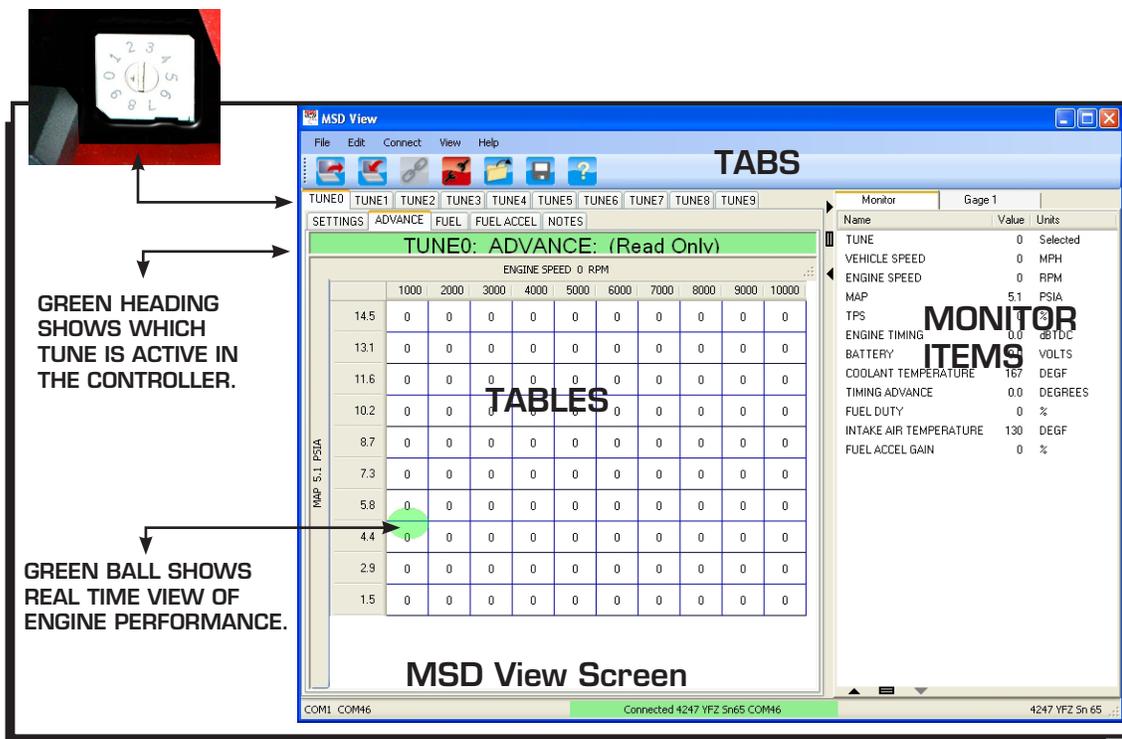


Figure 7 MSDView Window.

**SETTINGS TAB**

**Engine Speed Limit:** Allows the user to set the maximum engine speed. Adjustable from 2,000 RPM to 13,000 RPM.

**Vehicle Speed Limit:** Allows the user to set the maximum vehicle speed. Adjustable from 12 mph to 124 mph.

**Decel Fuel Cutoff:** Allows the user to program an rpm at which fuel will be cut off only during closed throttle. Set Decel Fuel cutoff from 4,000 to 13,000 rpm.

**ADVANCE TAB**

**Note:** The 0 setting in the programming tables is equal to factory settings.

The Advance table controls the amount of ignition timing advance to be added to OEM timing.

The custom tune is made by editing the cells in the MAP vs Engine Speed table.

Cell values range from -30° to 30° over factory settings.

The green ball provides a real time view of the engine speed vs MAP (Figure 9).

**FUEL TAB**

**Note:** The 0 setting in the programming tables is equal to factory settings.

The Fuel table controls the injector pulse width by editing the cells in the TPS % vs. Engine Speed table. Cell values range from -50% to 80% (Figure 10).

**FUEL ACCEL TAB**

Allows the user to plot fuel gains from 0 to 100% vs engine speed. (This function is similar to adjusting the acceleration pump on a carbureted engine.) It allows for additional fuel to be added during rapid throttle position changes to help throttle response reaction and performance.

Function	Value	Units
Engine Speed Limit	10500	RPM
Vehicle Speed Limit	99	MPH
Decel Fuel Cutoff	13000	RPM

Figure 8 Settings Tab.

		ENGINE SPEED 0 RPM									
		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
MAP 1.6 PSIA	14.5	0	0	0	0	0	0	0	0	0	0
	13.1	0	0	0	0	0	0	0	0	0	0
	11.6	0	0	0	0	0	0	0	0	0	0
	10.2	0	0	0	0	0	0	0	0	0	0
	8.7	0	0	0	0	0	0	0	0	0	0
	7.3	0	0	0	0	0	0	0	0	0	0
	5.8	0	0	0	0	0	0	0	0	0	0
	4.4	0	0	0	0	0	0	0	0	0	0
	2.9	0	0	0	0	0	0	0	0	0	0
	▶ 1.5	0	0	0	0	0	0	0	0	0	0

GREEN BALL INDICATES THE REAL TIME ENGINE PARAMETERS.

Figure 9 Advance Table.

		ENGINE SPEED 0 RPM									
		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
TPS 0 %	90	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0
	70	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0
	▶ 40	0	0	0	0	0	0	0	0	0	0
	30	0	0	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

Figure 10 Fuel Table.

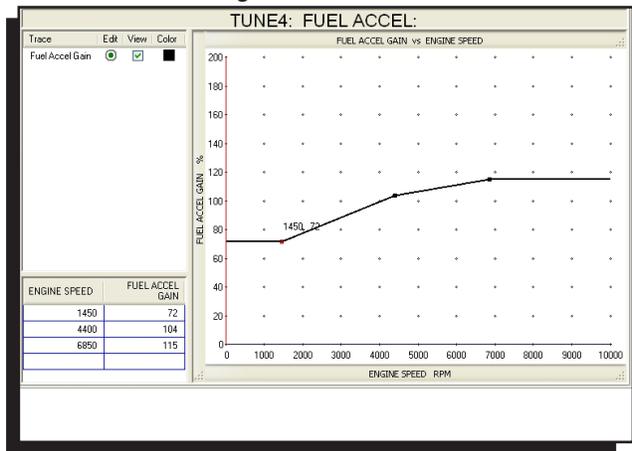


Figure 11 Fuel Accel Table.

**NOTE TAB**

Notes can be entered for each Tune under the Notes Tab.

**MONITOR**

The Monitor Tab displays item readings in real time (Figure 11).

**Tune:** Rotary dial position and active TUNE.

**Vehicle Speed** in MPH or KPH.

**Engine Speed** in RPM.

**MAP:** Manifold Absolute Pressure in PSIA or KPA.

**TPS:** Throttle position displayed in percentage.

**Engine Timing** in degrees BTDC

**Battery Voltage** in volts.

**Coolant Temperature** in °C or °F.

**Timing Advance:** Change to OE ignition timing in degrees.

**Barometric Pressure** in PSI.

**Coil On:** Measurement of coil on time in milliseconds.

**Intake Air Temperature** in °C or °F.

**Fuel Accel Gain** in percentage.

Name	Value	Units
TUNE	0	Selected
VEHICLE SPEED	0	MPH
ENGINE SPEED	0	RPM
MAP	5.1	PSIA
TPS	0	%
ENGINE TIMING	0.0	dBTD
BATTERY	0.0	VOLTS
COOLANT TEMPERAT...	1...	DEGF
TIMING ADVANCE	0.0	DEGREES
FUEL DUTY	0	%
INTAKE AIR TEMPERA...	1...	DEGF
FUEL ACCEL GAIN	0	%

Figure 12 Monitor Items.

All Monitor items can also be viewed as a gauge by selecting the gauge tab.

**FACTORY PRESET TUNES**

The Blaster FI Controller has four locked calibrations. The remaining six positions (4-9) are for calibrations that can be modified through a PC with the MSDView software.

The following are brief descriptions of each calibration.

- 0 - Stock (Locked)
- 1 - Enhanced Stock (Locked)
- 2 - Pipe and Air Filter(Locked)
- 3 - Pipe and Air Filter plus 500 RPM - (Locked)
- 4 - Stock Enhanced
- 5 - Stock Enhanced
- 6 - Stock Enhanced
- 7 - Stock Enhanced, default (Same as Tune 2, User configurable)
- 8 - Stock Enhanced, default (Same as Tune 2, User configurable)
- 9 - By-pass (Diagnostic) - (Locked)

## TABLE EDITING

To update cells in the Advance or Fuel tables, highlight one or more cells, type the new value and hit enter (Figure 13).

**Note:** In the table, 0 is equal to the factory setting.

Right-clicking the highlighted cells will give the option to offset, scale, or to copy the highlighted cells (Figure 14).

**Offset:** Increments the selected cells value by the new value.

For example, if the value in the selected cell is 2, offsetting by 1 will change the cell to 3 ( $2+1=3$ ).

**Scale:** This option will multiply selected cells by the value entered.

**Note:** Cell values will be clamped to their minimum or maximum range default if the Offset or Scale output values exceed the cell range.

**Copy:** Values can be copied and pasted into other Tune tables.

## MSDVIEW SOFTWARE TIPS AND HINTS UNITS (Metric/English)

To toggle between English and metric units select "View > Units", then make a selection.

## SAVING AND OPENING FILES

MSDView can save files with all settings on the local drive. These files can be viewed, edited, emailed or transferred to a different controller at a later time. To save all current settings, select 'File > Save As...', type in the new file name and press 'Save'. To view, edit or transfer settings to a different controller select 'File > Open'.

## RESTORING DEFAULT VALUES

To restore all values select 'Edit>Default'. Restoring default values will overwrite all settings in the controller to their original default values.

## TEXT SIZES

A range of text sizes from 'Largest' to 'Smallest' can be chosen by selecting 'View>Text Size' from the menu bar.

	ENGINE SPEED RPM									
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000
14.5	5	5	5	5	5	5	0	0	0	0
13.1	5	5	5	5	5	5	0	0	0	0
11.6	5	5	5	5	5	5	0	0	0	0
10.2	5	5	5	5	5	5	0	0	0	0
8.7	5	5	5	5	5	5	0	0	0	0
7.3	5	5	5	5	5	5	0	0	0	0
5.8	5	5	5	5	5	5	0	0	0	0
4.4	0	0	0	0	0	0	0	0	0	0
2.9	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0

Figure 13 Select Cells.

	ENGINE SPEED RPM									
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000
14.5	0	0	0	0	0	0	0	0	0	0
13.1	0	0	0	0	0	0	0	0	0	0
11.6	0	0	0	0	0	0	0	0	0	0
10.2	0	0	0	0	0	0	0	0	0	0
8.7	0	0	0	0	0	0	0	0	0	0
7.3	0	0	0	0	0	0	0	0	0	0
5.8	0	0	0	0	0	0	0	0	0	0
4.4	0	0	0	0	0	0	0	0	0	0
2.9	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0

Figure 14 Edit Options.

**COMMUNICATION TROUBLESHOOTING**

If there is no communication between MSDView and the MSD, use the following steps to check the communication ports.

**Note:** MSDView needs to be installed and closed at this point.

1. Connect the MSD to the PC.
2. Open the Device Manager by clicking on: Start > Run > Type 'devmgmt.msc' (In Windows 7 type it into the search box).
3. In the Device Manager window: Locate the 'MSD Virtual COM Port' with a yellow alert under the 'Ports' or 'Other Devices' listing.
4. Right click and select 'Update Driver'.
5. If necessary, click 'Continue Anyway' to complete the driver installation.
6. Open MSDView and connect to the MSD.

