

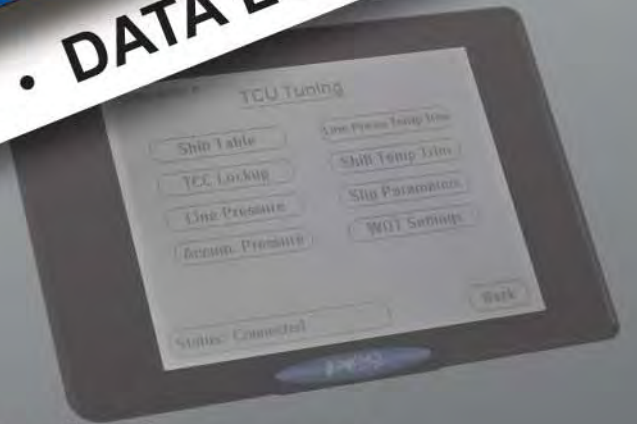


POWERTRAIN CONTROL SOLUTIONS



Performance Parts Catalog

TRANSMISSION CONTROL • DATA LOGGING



www.powertraincontrolsolutions.com

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Take complete control of electronic overdrive transmissions without a laptop or an expensive, specially trained technician.



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Easy to use software interface and fully programmable functionality makes this our most versatile transmission controller to meet the needs of nearly any project.



Paddle Shifter.....Page 7

Positive engagement is what you'll feel when pulling our billet aluminum paddle-type shifter for quick, decisive shifts when it's all on the line.



T200 TCU Calibration Tool.....Page 8

Innovative touchscreen hand-held tuning and data logging device that works with all PCS transmission controllers for quick tuning or troubleshooting.



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Available in standard gauge sizes, this digital gear indicator communicates using CAN for quick and easy installation.



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An LCD gauge display with touch screen interface and built in data logging makes it easy to monitor and record real-time data.



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We've taken our proven D200 Touch Screen Dash Logger and made it into the plug and play drag race data acquisition system you asked for.



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PCS offers a full line of sensors needed for logging and monitoring various aspects of engine and vehicle performance.



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This technical reference section is provided to help you through any transmission identification issues you may have.

About Us

Powertrain Control Solutions, LLC. was founded in April, 2003 to design and manufacture electronic control systems for automotive powertrain applications. Our knowledgeable staff combines over 50 years of electronic design and manufacturing experience. Since our inception, our product line has grown to include complete vehicle data acquisition systems, automatic transmission controllers and accessory products, engine monitoring devices, and vehicle harness manufacturing.

We believe that long term growth and profitability comes from a strong foundation of reliable, well supported products rather than marketing flash. We focus on engineering the highest quality products at the lowest possible cost without sacrificing quality. Our unique approach combines hard work and years of experience to deliver excellent products. At PCS, we test every electronic part we manufacture rigorously and we'll proudly stand behind our products.

Why do we do what we do? That's easy: we do it because we're gearheads and we enjoy what we do. One of our best qualities is the ability to take a phrase as simple as "why couldn't we do something like" and developing that idea into the next new PCS product. We look forward to proving to you, our newest customer, our commitment to excellence each time you purchase a PCS product.

SIMPLE SHIFT Transmission

Control Electronic Overdrive Transmissions Without a Laptop !

You already know that adding an electronic overdrive transmission to your hot rod will allow you to drive it more. You already know it will increase your fuel economy, raise your highway speed, and lower your engine's cruise RPM. You also know that learning how to use a laptop, or paying someone else that can, was the only way to get it done ***until now!***



***No Laptop
Required!!!***



Compatible with T200 TCU
Calibration Tool... See page 8



Compatible with Paddle Shifter...
See page 7

Simple Shift is the latest breakthrough in electronic overdrive transmission control. No laptops or expensive technicians are required to completely control shift points, shift firmness, and torque converter lockup. All parameters are simply adjusted with easy-to-use dials on the end of the Simple Shift unit. Want a little firmer shift? Dial it up a notch! Do you want it to shift at a lower RPM? Dial it down! Complete control of how and when your transmission shifts is at your fingertips. Also included are complete diagnostic capabilities communicated via simple flashing LED's that can also tell you what gear you're in, and whether or not your torque converter is locked up for better fuel-economy. The one thing you need to be able to control an electronic overdrive transmission with confidence is simple... **SIMPLE SHIFT.**

SIMPLE SHIFT gives you complete control at your fingertips

Shift Points

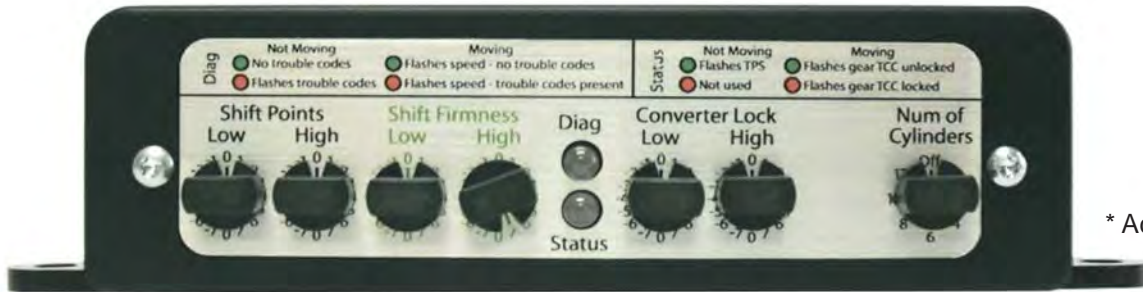
- Raise or lower the vehicle speed that your transmission shifts

Shift Firmness

- Change from soft to hard to suit your driving style

Torque Converter Lockup

- Control torque converter lockup for better fuel economy



* Actual Size



SIMPLE SHIFT Kits

All Simple Shift kits come with a complete wiring harness tailored to your specific transmission, not a universal harness that fits most transmissions with yards of extra wires that leave you confused and frustrated. Each connector on the harness is clearly labeled to make the installation very easy to accomplish in your garage or workshop. Simple Shift is available for most domestic four and five speed automatic transmissions.

Part Number	Description	Part Number	Description
TCM-5310	GM 4L60E/4L65E 1993+ Simple Shift EFI Kit including TCU and Harness	TCM-5340	GM 5L50E/5L50E 1999+ Simple Shift EFI Kit including TCU and Harness
TCM-5311	GM 4L60E/4L65E 1993+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit	TCM-5341	GM 5L50E/5L50E 1999+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit
TCM-5320	GM 4L70E 2006-2008 Simple Shift EFI Kit including TCU and Harness	TCM-5350	Ford 4R70 1998-2007 Simple Shift EFI Kit including TCU and Harness
TCM-5321	GM 4L70E 2006-2008 Simple Shift Carb Kit including TCU, Harness, and TPS Kit	TCM-5351	Ford 4R70 1998-2007 Simple Shift Carb Kit including TCU, Harness, and TPS Kit
TCM-5325	GM 4L70E 2009+ Simple Shift EFI Kit including TCU and Harness	TCM-5355	Ford 4R70/4R75 2008+ Simple Shift EFI Kit including TCU and Harness
TCM-5326	GM 4L70E 2009+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit	TCM-5356	Ford 4R70/4R75 2008+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit
TCM-5330	GM 4L80E/4L85E 1991-1992 Simple Shift EFI Kit including TCU and Harness	TCM-5360	Ford AODE 1993-1997 Simple Shift EFI Kit including TCU and Harness
TCM-5331	GM 4L80E/4L85E 1991-1992 Simple Shift Carb Kit including TCU, Harness, and TPS Kit	TCM-5361	Ford AODE 1993-1997 Simple Shift Carb Kit including TCU, Harness, and TPS Kit
TCM-5335	GM 4L80E/4L85E 1993+ Simple Shift EFI Kit including TCU and Harness	TCM-5370	Ford 4R100 1998+ Simple Shift EFI Kit including TCU and Harness
TCM-5336	GM 4L80E/4L85E 1993+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit	TCM-5371	Ford 4R100 1998+ Simple Shift Carb Kit including TCU, Harness, and TPS Kit

* Add "PS" suffix to Simple Shift kit part number to include Paddle Shifter with Display part number PS-2001

TCM-2000 Transmission

The Most Powerful Transmission Controller on the Market!

The TCM-2000 is our most capable automatic transmission controller. It's flexible programmability is unrivaled, so much so that several original equipment manufacturers use it as a development tool. This powerful unit allows users to control most types of electronic automatic transmissions from GM, Ford, Chrysler, Nissan, Toyota, and others.



Features

- Dual Calibrations (real time switchable)
- Multiple shift modes (paddle, button, or tap)
- Powerful Data Logging
- Easy to use Software
- Real Time Dash Monitor
- Auxiliary Inputs/Outputs
- Complete Diagnostics
- Durable Sealed Case

Electronic Control of:

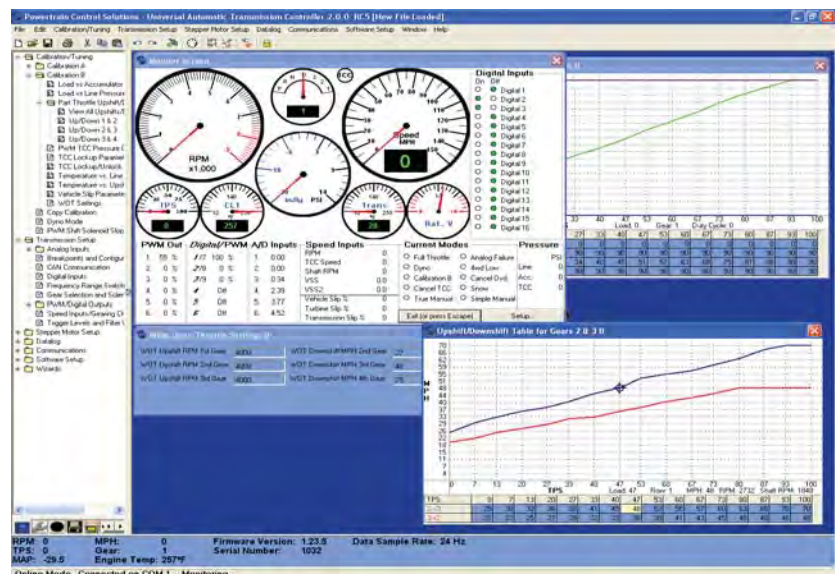
- Shift Points Per Gear
- Shift Firmness Per Gear
- TCC Lockup Per Gear

Fully programmable based on:

- Vehicle Speed
- Engine Load
- Engine RPM

Universal Architecture

Our user-friendly PC Windows Software allows complete control of all transmission parameters via our completely customizable input and output setup tables, whether it is a pulse-width modulated solenoid type or clutch to clutch type. This universal architecture also gives the user the ability to change connector pin locations and even whether the input/output is activated by power or ground, simplifying installation and virtually eliminating wiring mistakes.



16 Digital Inputs

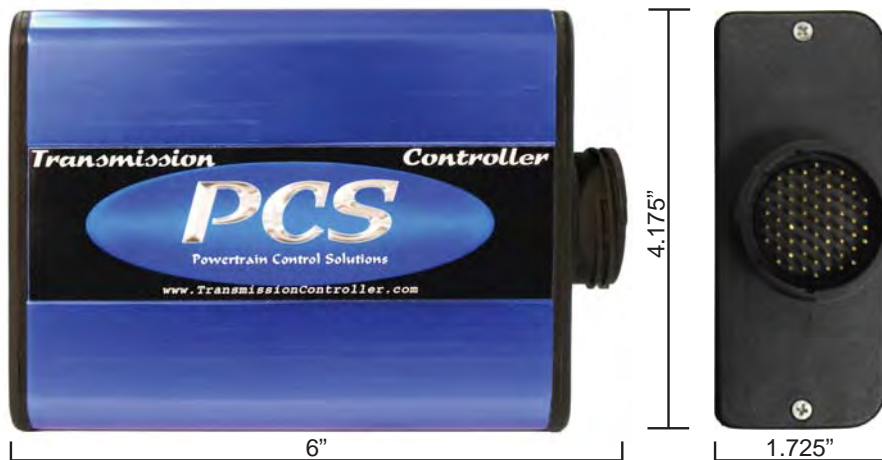
- Active High or Low
- Range switch
- Brake light
- Mode switch
- Other digital inputs

4 Speed Inputs

- Hall effect
- Magnetic retractor
- Turbine speed
- Engine RPM
- Driveshaft speed

6 Analog Inputs

- Throttle position
- Manifold pressure
- Two temperature inputs
- Other analog inputs



Communications

- RS-232
- CAN - 2.0b
- J1939

3 Digital Outputs

- Active High or Low
- Solenoid output
- TCC lockup
- Mode indicator
- Other digital outputs

1 Speed Output

- Speedometer output
- Link to definable speed input
- Definable pulse count

9 PWM/Digital Outputs

- Active High or Low
- TCC pressure
- Line pressure
- Accumulator pressure
- Other PWM outputs

Part Number	Description	Application	Year
TCM-2000	Universal Transmission Controller	All	All
TCM-4108	FORD 4R100 Harness	4R100	1998-Current
TCM-4133	FORD 5R55E Harness	5R55E	All
TCM-4116	FORD AODE/4R70 Harness (Early Model)	AODE, 4R70	1992-1997
TCM-4115	FORD AODE/4R70 Harness (Late Model)	AODE, 4R70	1998-2007
TCM-4112	FORD E4OD Harness (Early Model)	E4OD	1989-1994
TCM-4109	FORD E4OD Harness (Late Model)	E4OD	1995-1997
TCM-4100	GM 4LXX Harness	4L60/65/70/80/85E	1991-Current*
TCM-4118	GM 4L80E Adapter for TCM-4100	4L80E	1991-1992
TCM-4134	GM 4T4X Harness	4T40E, 4T45E	1997-2007
TCM-4101	GM 4T60E Harness	4T60E	All
TCM-4120	GM 4T65E Harness	4T65E	All
TCM-4104	GM 4T80E Harness (Late Model)	4T80E	2000-Current
TCM-4102	GM 4T80E Harness (Early Model)	4T80E	1996-1999
TCM-4000	Universal Transmission Harness 5'	All	All

Note: Custom wiring harnesses available for most common applications

*TCM-4118 is required for 1991-1992 GM 4L80E

Paddle Shifter

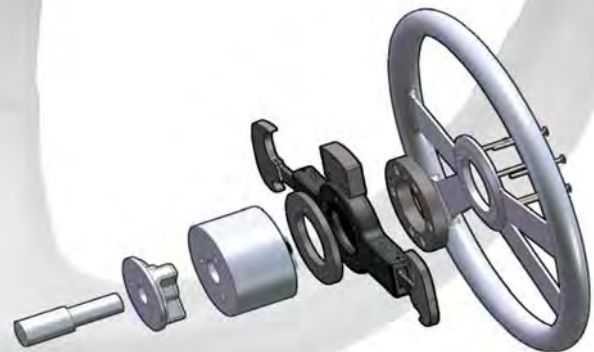
The PCS Paddle Shifter is designed to provide paddle shifting capability to your hot rod with the look and feel of an OEM system*. Easily installing behind any aftermarket 5, 6, or 9 bolt steering wheel, the Paddle Shifter does not require any external wiring or messy splicing into your vehicle's wiring system. The paddle unit is powered by simply attaching to the horn button wire, eliminating any external wiring on the column. The Paddle Shifter communicates with the transmission control unit wirelessly via a receiver module. This receiver module plugs into your PCS transmission control unit harness with one simple, pre-installed plug. There are no power, ground, or signal wires to run here, there, and everywhere. It's just that simple.



The paddle shifter optional display allows the driver to view all of the items listed below.

- *Current Gear*
- *Vehicle Speed*
- *Coolant Temp*
- *TCC Lockup %*
- *Engine RPM*
- *Transmission Slip*
- *Turbine RPM*
- *Throttle Position*
- *Manifold Pressure*
- *Transmission Temp*
- *Line Pressure*
- *TCC Slip %*
- *Driveshaft RPM*
- *Lever Position*

One item is visible at a time. The small button on the back of the display cycles through all the viewable items. The display shows the current gear when a shift is commanded.



Part Number	Description
PS-2001	Paddle Shifter With Display for 5 and 6 bolt wheel
PS-2000	Paddle Shifter Without Display for 5 and 6 bolt wheel
PS-2006	Paddle Shifter With Display for 9 bolt wheel
PS-2005	Paddle Shifter Without Display for 9 bolt wheel

* Paddle Shifter is not designed to be installed on airbag-equipped steering columns.

Note: A universal Paddle Shifter kit is available to use with other non-PCS transmission control units.

T200 TCU Calibration Tool

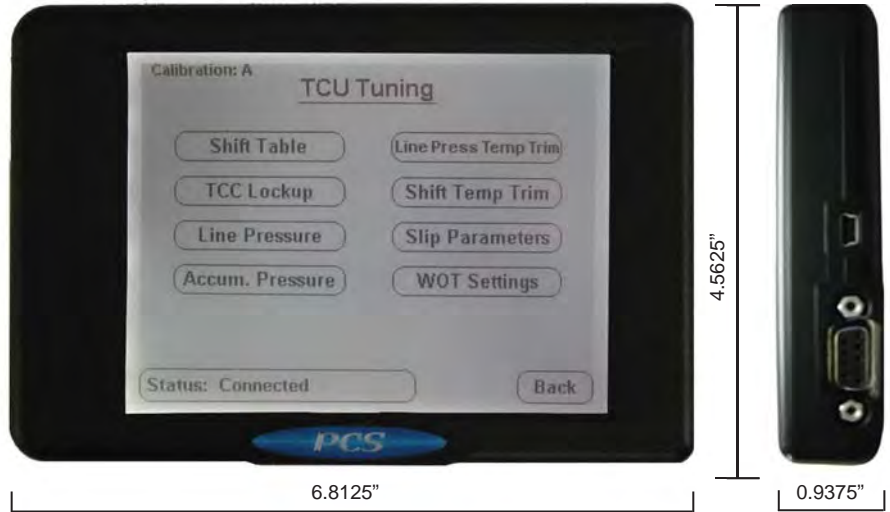
Now available for all PCS transmission controllers is the new T200 TCU Calibration Tool and Gauge Display. There is absolutely no reason to use a laptop anymore as this device allows the user to modify calibrations, datalog all transmission parameters, and monitor all transmission functions in real-time as a gauge display. There is simply no other competitive device that can do as much as the T200 TCU Calibration Tool and Gauge Display.

Modify:

- Final drive ratio
- Tire size
- Shift tables
- TCC lockup
- Line Pressure
- Shift table temp trim
- Slip Parameters
- WOT settings

Display All Transmission Parameters Including:

- Speedometer
- Throttle position
- TCC lockup
- Line Pressure Duty Cycle
- Fault Codes
- Choose from multiple gauge designs



Datalog:

- All transmission parameters including fault codes
- Playback on screen or download to a computer

Part Number	Description
TCM-3500	T200 TCU Calibration Tool

Gear Display

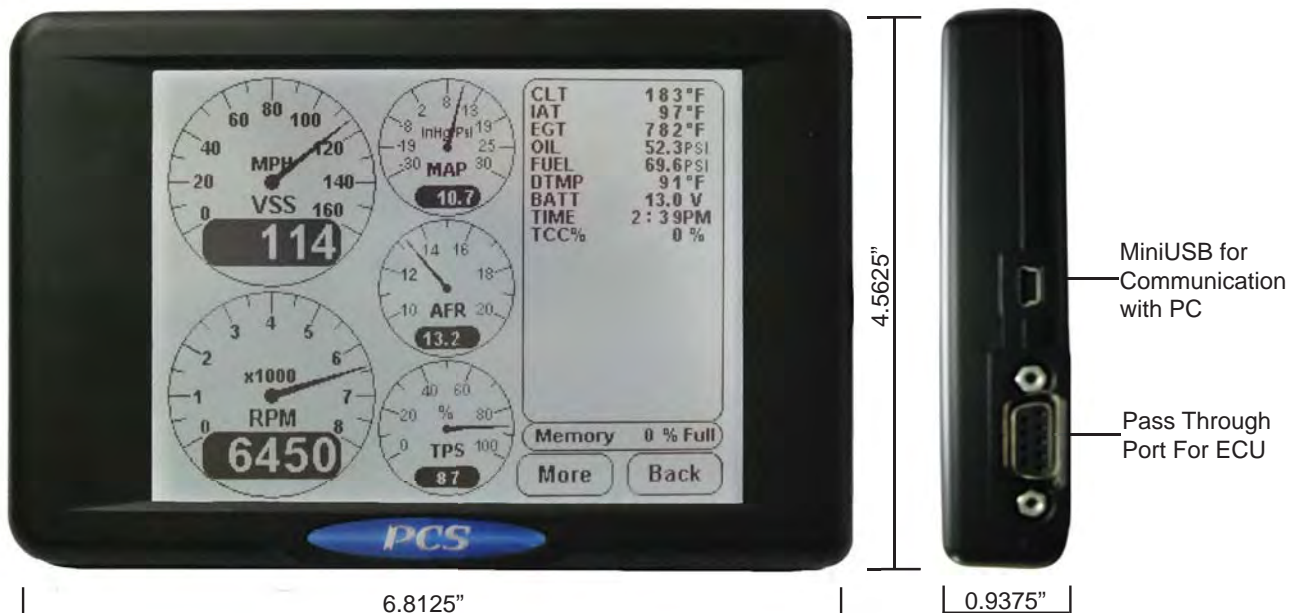


Our billet aluminum gear display uses a digital 16-segment alphanumeric display to show P, R, N, D, and gear positions 1 through 9. It comes in two sizes for ease of integration into your hot rods dash and is available in either polished or black anodized finishes. This display also has automatic night-time dimming and easily connects to any of our transmission controllers via CAN so there's no messy wiring.

Part Number	Description
TCM-3700	Gear Display Black 2.125"
TCM-3701	Gear Display Polished 2.125"
TCM-3702	Gear Display Black 1.75"
TCM-3703	Gear Display Polished 1.75"

D200 Touchscreen

The innovative trends at Powertrain Control Solutions continue with our D200. This fully programmable monitoring, data logging, and analysis system can bring together the information on a vehicle from several input sources. Drag race, circle track, road race, and even street cars benefit from the D200 which can combine any set of inputs into one unit. Want to bring together the information from your Lambda meter, aftermarket ECU, and transmission controller, or do you need a stand-alone data acquisition system? Either way, the D200 is your answer. These powerful attributes coupled with a large and easily viewable, even in direct sunlight, LCD touchscreen break new ground.



LCD & Touchscreen Features

Thorough research, prototyping and customer feedback have led the D200 along an evolutionary path. Development started with a small screen and navigation buttons but customers wanted something bigger and easier to use with a greater set of features. The D200 has evolved into a high resolution (320x240), high contrast, large (6 inch), transfective screen that is easily seen day or night, with programmable contrast and backlighting. Our durable, high sensitivity, resistive touchscreen is used in rigorous commercial applications worldwide and can be easily activated with a stylus or finger.

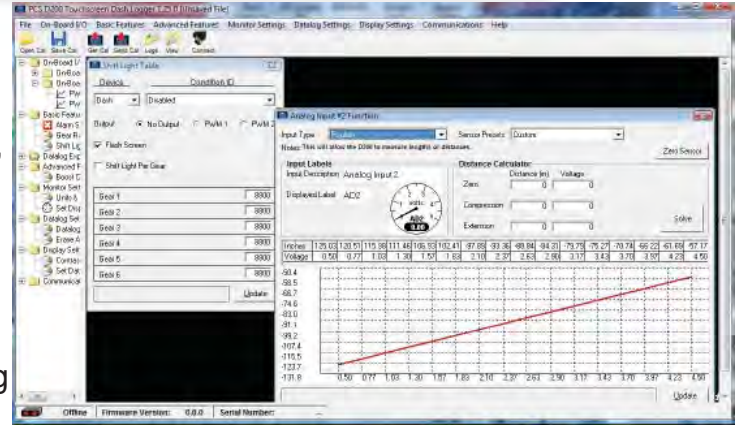
Monitor Screens

The D200 offers several fully programmable monitor screens capable of displaying any combination of inputs. This allows the user to select the most appropriate view for the situation, such as a large tachometer for the track, or a screen with over 20 items for diagnosing a problem. Configuration of individual gauges is as simple as touching the gauge on the screen and selecting the input you wish to associate with it. The D200 also allows the user to select the scale and units for the displayed data. Programmable alarms allow the user to set high and low points for a particular input. If the input exceeds the specifications, the D200 will alert the driver by flashing the gauge or item. Shift light functionality can be accomplished by having the D200 flash the screen at a desired RPM.

Dash Logger

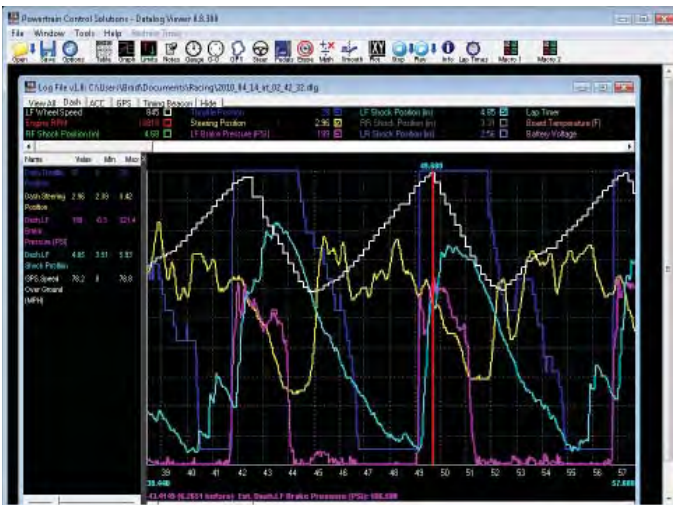
Inputs and Outputs

The D200 has 8 analog inputs, 2 speed inputs, and 2 PWM outputs. The analog inputs can be used for engine sensors, a data log start switch, or any other voltage you wish to monitor and log. All D200 inputs can also be labeled by the user for a customized display. The versatile PWM outputs can perform a variety of tasks from an external shift light to boost control. The D200 communicates with external devices using RS-232 or CAN 2.0b. RS-232 is typically used for communicating with most aftermarket ECU's. The Controller Area Network, or CAN, interface is a communication protocol used for high speed communication in a vehicle environment that utilizes a two-wire harness connecting each device in tandem. CAN is used to communicate with all other PCS devices keeping wiring harness requirements to a bare minimum.



Data Logging & Playback

The D200 is the heart of the PCS logging system. When combined with PCS data logging software, the user is able to analyze all the information including multiple videos and make the correct adjustments to win at any level of racing. The D200 is equipped with 2MB of on-board data log memory. Additional memory (up to 16MB) is available at the time of purchase. To optimize the memory usage, the user can select different logging rates for each device from 5HZ all the way up to 1000HZ. The start of the log is triggered with the touchscreen or a button wired to an input. Multiple logs can be stored on the unit, allowing an entire race weekend's logs to be downloaded on Monday instead of between runs. The logs are stored by date and time and are also viewable through a data log explorer on the D200 screen itself so any run can be played back on the D200 to gather information about the run without needing a laptop. The laptop communicates using USB, making quick work of downloading large data logs.



Part Number	Description
DIS-2022	D200 Dash Logger
DIS-3000	D200 Extreme Environment with Sealed Aluminum Case
DIS-0511	D200 Multi-stage Boost Control Kit with 0-100 PSI Stainless Pressure Sensor
DIS-0500	D200 Multi-Stage Boost Control with solenoid
DIS-0501	D200 Hi Speed Logging Option (1000Hz)
DIS-4001	D200 Desktop Programming Kit
DIS-4100	Serial ECU connection Kit for (AEM, TEC2, TEC3, Autronic, Sakura, OLD Fast, and more)
DIS-4101	FAST Dash/Datalogger Classic ECU Comm. Cable
DIS-4110	Serial/CAN Y cable for TEC GT
DIS-4120	CAN B un-terminated wire kit with TEE and resistor for Motec and CAN based ECU's
DIS-5000	D200 Suction Cup Mount

D200 Drag Race Kits

Powertrain Control Solutions has taken our highly successful D200 Touchscreen Dash Logger and made it even better for the sportsman and professional drag racer. We've taken feedback from racers and chassis builders alike to put together pre-packaged, completely pre-set kits for both door cars and dragsters. We looked at what types of data you wanted to look at, how you wanted to see it, and developed the gauge screen to reflect that. We chose the best quality sensors to give you that data and even looked at how the wiring harnesses should fit in a door car vs. a dragster. Your input was invaluable to us to put together a system that allows you to install the sensors, plug in the pre-terminated harness, and power up the D200 to start logging without any setup procedures whatsoever. The D200 Drag Race Kit will be a critical component to your success at the racetrack.

Sportsman Drag Race Kit includes:

D200 Touchscreen Dash Logger

- All sensor parameters pre-programmed
- Quick and easy installation. *No setup required*

Wiring Harness

- Choose between engineered to fit, pre-terminated Door Car or Dragster harnesses



Sensors to Measure and Datalog

- Throttle Position
- Battery Voltage
- Oil Pressure
- Fuel Pressure
- Coolant Temperature Sensor
- Engine RPM
- Driveshaft Speed
- 3-Axis Accelerometer



Professional Drag Race Kit Includes:

D200 Touchscreen Dashlogger

- All sensor parameters pre-programmed
- Quick and easy installation. *No setup required*



Sensors to Measure and Datalog

- Throttle Position Sensor Kit
- Battery Voltage
- Oil Pressure Sensor
- Fuel Pressure Sensor
- Nitrous Pressure Sensor
- Brake Pressure Sensor
- 3 Bar MAP Sensor
- Coolant Temperature Sensor
- Oil Temperature Sensor
- Engine RPM
- Driveshaft Speed Sensor
- Clutch/Converter Speed
- 3-Axis Accelerometer
- 8-Channel EGT Module



Kit part numbers are determined by the manufacturer and spline count of your rear differential yoke.

D200 Sportsman Kits

Dragster Part Number	Door Car Part Number	Description
SDR-1812	SDC-1812	Sportsman Kit for Strange 28 spline yoke (1.812" dia.)
SDR-1875	SDC-1875	Sportsman Kit for Moser/Mark Williams 28 spline yoke (1.875" dia.)
SDR-2125	SDC-2125	Sportsman Kit for Strange 35 spline yoke (2.125" dia.)
SDR-2187	SDC-2187	Sportsman Kit for Mark Williams 35 spline yoke (2.187" dia.)
SDR-2195	SDC-2195	Sportsman Kit for Moser 35 spline yoke (2.195" dia.)

D200 Pro Kits

Dragster Part Number	Door Car Part Number	Description
PDR-1812	PDC-1812	Pro Kit for Strange 28 spline yoke (1.812" dia.)
PDR-1875	PDC-1875	Pro Kit for Moser/Mark Williams 28 spline yoke (1.875" dia.)
PDR-2125	PDC-2125	Pro Kit for Strange 35 spline yoke (2.125" dia.)
PDR-2187	PDC-2187	Pro Kit for Mark Williams 35 spline yoke (2.187" dia.)
PDR-2195	PDC-2195	Pro Kit for Moser 35 spline yoke (2.195" dia.)

Data Logging Modules



Three-Axis Accelerometer Module

The PCS 3-Axis Accelerometer allows monitoring of acceleration rates for determining tire and suspension setup, track conditions, and general vehicle dynamics. The Accelerometer outputs all three axis via CAN bus to the D200 Dash Logger where it can be displayed and logged. The axis resolution is programmable so the module can be optimized for the particular application.

Part Number	Description
ACC-2000	3-Axis Accelerometer Module

Exhaust Gas Temperature Module

Exhaust Gas Temperature, or EGT, is a fundamental tool in tuning, diagnosing problems, and ensuring the proper operating range of an internal combustion engine. This simple, but effective tool can diagnose potential engine problems before failure and ensure proper cylinder equalization when tuning or running an engine at the edge of its operating capabilities.



EGT-2000

Part Number	Description
EGT-2000	8-Channel EGT Module, connects via CAN bus to PCS devices
EGT-5000	Single Channel EGT Module, converts temperature to 0-5 volt analog voltage

Thermocouples

Part Number	Description
EGT-4025	Thermocouple 1/4" tube 12" with Mini Connector
EGT-4026	Thermocouple 1/4" tube 18" with Mini Connector
EGT-4027	Thermocouple 1/4" tube 24" with Mini Connector
EGT-4028	Thermocouple 1/4" tube 36" with Mini Connector
EGT-4024	Thermocouple 1/4" tube 48" with Mini Connector
EGT-4029	Thermocouple 1/4" tube 60" with Mini Connector



Note: The Accelerometer and 8 Channel EGT Modules require a CAN Kit part# CON-5500 or CON-5501 to communicate with PCS devices.

Pressure Sensors

Part Number	Description
SNS-1002	3-Bar MAP Sensor
SNS-1003	0-100 PSI Pressure Sensor
SNS-1004	0-250 PSI Pressure Sensor
SNS-1005	0-1000 PSI Pressure Sensor
SNS-1006	0-2500 PSI Pressure Sensor

Temperature Sensors

Part Number	Description
SNS-3000	Intake Air Temperature Sensor
SNS-3001	Coolant/Fluid Temperature Sensor

Throttle Position Sensors

Part Number	Description
TCM-6000	Remote Mount Throttle Position Sensor Kit
SNS-0002	External Arm Style TPS

Linear Sensors

Part Number	Description
SNS-2009	Linear Sensor 200mm Stroke

Speed Sensors/Kits

Part Number	Description
SNS-5000	3/8-24 Threaded Body Hall Effect Sensor
SNS-5005	5/16-24 Threaded Body Hall Effect Sensor
SNS-5010	Two Magnet Kit
SNS-5001	Sensor Kit for Mark Williams 35 spline yoke (2.1875" dia.)
SNS-5002	Sensor Kit for Moser/Mark Williams 28 spline yoke (1.875" dia.)
SNS-5003	Sensor Kit for Strange 28 spline yoke (1.8125" dia.)
SNS-5004	Sensor Kit for Strange 28 spline yoke (1.8125" dia.) with Ultra Case
SNS-5007	Sensor Kit for Strange 35 spline yoke (2.125" dia.)
SNS-5006	Sensor Kit for Moser 35 spline yoke (2.195" dia.)
SNS-5500	Clutch Speed Sensor Kit 3/8-24 Sensor
SNS-5501	Clutch Speed Sensor Kit 5/16-24 Sensor

GPS Sensor

Part Number	Description
SNS-3200	5Hz GPS Sensor for D200

CAN

Part Number	Description
CON-5500	CAN Master Connection Kit
CON-5501	CAN Add-on Connection Kit



SNS-5002



Technical Reference: Transmission Identification

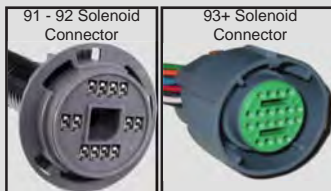
Finding the right transmission for your hot rod, muscle car, or truck can be confusing and frustrating. Some transmissions have more than one version and the differences can be substantial. For this reason we've put together these pages to help you determine exactly which transmission you have to make the installation and operation simple and seamless.

GM 5L40/50E



5L40/50E is found in 2004–2006 Cadillac CTS, SRX and STS; 2006-2009 Pontiac Solstice, 2007-2009 Saturn Sky and 2008–2009 Pontiac G8. The round black transmission connector enters passenger's side of the case near the back of the transmission.

GM 4L80E/4L85E



Used 1991 and up in GM trucks. The gray transmission connector and the 2 black speed sensor connectors enter driver side of the case. The 4L80E has removable tailhousing and can be used for 2 or 4 wheel drive.

Pan Bolts: 17

Tail Housing Bolts: 6

GM 4L60E 1993-1996



Found in 1993-1996 GM service trucks, vans, SUVs, and most RWD Cars. Does not have a T.V. cable. The gray transmission connector enters passenger's side of the case and the black speed sensor connector goes to the tailshaft. Can be used for 2 or 4 wheel drive.

Pan Bolts: 16

Tail Housing Bolts: 4

GM 4L60E/4L65/4L70 1996 to Current



Found in 1996 and up GM service trucks, vans, SUVs, and most RWD Cars. The gray transmission connector enters passenger's side of the case and the black speed sensor connector goes to the tailshaft. 1996 and up 4L60E/4L65E/4L70E transmissions are distinguished by the removable bell housing. Can be used for 2 or 4 wheel drive. 2010 and newer 4L70E can be distinguished by looking at the pin layout inside the transmission connector plug on the passenger side of the transmission. Compare the layout of the electrical pins to the pictures to the left to determine year of your 4L70E transmission.

Pan Bolts: 16

Tail Housing Bolts: 6

4L70 ONLY

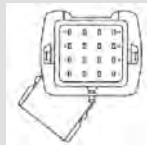
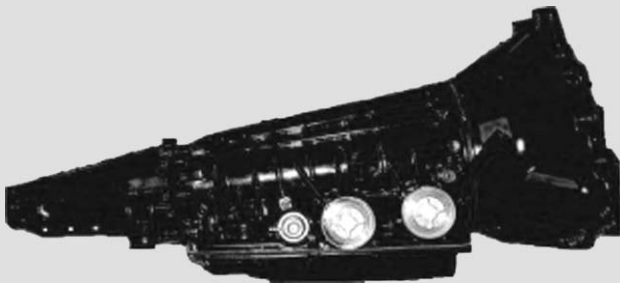


2009 and Earlier



2010 and Later

FORD 5R55E



5R44E/5R55E is found in most 1997-2002 Ford Ranger, Mazda B-Series, and Ford Explorer; and 1998 and newer Mercury Mountaineer.

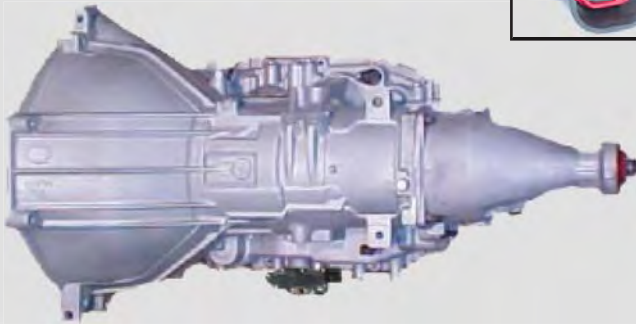
FORD 5R55S/W



5R55S/W are found in most 2002 and newer Ford Ranger and Explorer; 2002-2005 Ford Thunderbird; and 2005-Current Ford Mustang. The transmission is connected by a gray and red transmission connector, a black and yellow range connector, and 3 black and yellow 2 pin speed sensor connectors

Technical Reference: Transmission Identification

FORD AODE/4R70W



Found in most 1994–1997 Ford Thunderbird and Mercury Cougar; 1993–2004 Ford Crown Victoria and Mercury Grand Marquis; 1996–2001 Ford Explorer; 1997–2004 Ford Expedition; 1997–2001 Mercury Mountaineer; 1991 and up Ford F-Series; and 1994–2004 Ford Mustang. The transmission is connected by a white transmission connector, a black and yellow range connector. Ford changed the speed sensor connector and added a input shaft speed connector with the 4R75 on some vehicles starting in 2005. See picture above to identify the speed sensor type.

Pan Bolts: 14

FORD 4R100



Found in 1998–2002 Ford F150, F250, F350, F450, Expedition, Excursion, and other full size Ford trucks. The transmission is connected by a black and red transmission connector, a black and yellow range connector, and 2 black and red 2 pin speed sensor connectors.

Pan Bolts: 20

CHRYSLER 545RFE



Found in 2001 and newer Jeep Grand Cherokee; 2003 and newer Dodge Ram, Dakota, and Durango; and 2006 and newer Jeep Commander. The transmission is connected by a black and gray transmission connector, a black and yellow line pressure connector, and 2 black and yellow 2 pin speed sensor connectors.

Pan Bolts: 15

MILITARY AND OEM

Capabilities

Powertrain Control Solutions currently designs, manufactures, and delivers embedded control systems for both prototype and production military vehicles. With 100% of the design work done in-house, our customers appreciate our thorough understanding of the product and quick responsiveness to meet new requirements. PCS can deliver thorough documentation including FMEA and PPAP information to meet the most stringent approval processes. We can also perform EMI and environmental testing to meet requirements such as MIL-STD 461. In addition, PCS can arrange for 24-hr, 7-days a week on-site engineering support. All modules are manufactured in the United States at one of two ISO-9001 facilities.



Products

PCS is constantly designing new products and maintaining an inventory of controllers to try to anticipate the future requirements of military and OEM customers. Many of our customers use an off-the-shelf controller for the prototype or proof-of-concept phase and then work with us to produce a controller that is well matched with their production requirements. Besides our TCM-2000 transmission controller, typically used in the automotive aftermarket, we offer a full product line of transmission controllers that are well suited for military or OEM use.

Versatile Hardware, Open Communication

Our transmission controllers are over-designed for the majority of today's transmissions. With its 9 PWM outputs, 16 digital inputs, 4 frequency inputs, and 6 analog inputs our TCM-2000 is often considered more of an engineer's toolkit than a dedicated transmission controller. Customers ranging from research institutions to dyno manufacturers have implemented our controllers in unique configurations such as developing prototype transmissions or hybrid electric drivetrains. Another unique aspect of our controllers are our open-source approach to the communication structure. Our controllers receive and transmit data via RS-232 and CAN making seamless integration into most powertrains a reality. All documentation regarding the details of communicating with a controller can be found in the Developers section of our website, www.PowertrainControlSolutions.com

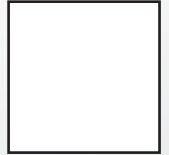


More Information

If you would like more information regarding a military or OEM project, please contact us at 804-752-6025 or info@ptcs.us



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11228 HOPSON RD
ASHLAND VA 23005



LIMITED WARRANTY STATEMENT. Powertrain Control Solutions, LLC. Warrants all merchandise against defects in factory workmanship and materials for a period of 12 months after purchase. This warranty applies to the first retail purchaser and covers only those products exposed to normal use or service. Provisions of this warranty shall not apply to a Powertrain Control Solutions, LLC. Product used for a purpose for which it is not designed, or which has been altered in any way that would be detrimental to the performance or life of the product, or misapplication, misuse, negligence or accident. On any part or product found to be defective after examination by Powertrain Control Solutions, LLC., Powertrain Control Solutions, LLC. will only repair or replace the merchandise through the original selling dealer or on a direct basis. Powertrain Control Solutions, LLC. assumes no responsibility for diagnosis, removal and/or installation labor, loss of vehicle use, loss of time, inconvenience or any other consequential expenses. The warranties herein are in lieu of any other expressed or implied warranties, including any implied warranty of merchantability or fitness, and any other obligation on the part of Powertrain Control Solutions, LLC., or selling dealer.

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