



Transmission Control Module



Smarter by Design



The MAE-TCM allows you to wirelessly control all of the world's **largest OEM transmissions - Smarter by Design.**



User Manual















The MAE-TCM Transmission Control Module is a wireless transmission shifter that allows you to program and store control setups for every type of electronic automatic transmission including Ford, Nissan, GM, Toyota, Chrysler, and many other manufacturers. Electronic automatic transmissions have been mass produced for many years without a satisfactory aftermarket control solution.

MAE's unique approach to engineering allows our Transmission Control Module to control all types of electronic automatic transmission by the use of the proper frequency and duty cycle and is fully programmable via a user-friendly PC-based Shift Table Editor. Diagnosing transmission problems is made easy with the MAE-TCM.



The MAE-TCM gives you the ability to test a transmission using the correct frequency and duty cycle, which ensures that the transmissions are being tested exactly as they



Shift Table Editor													
Press Sw Pol Pos Transmission			n Ford 5R55E					# of Gears 🔀 9					
	PWM 1	PWM 2	PWM 5	PWM 6	PWM 3	PWM 4	PWM 7	PWM 8	PWM 9	DO 4	DO 5	DO 6	
Name	Shift SS1	Shift SS2	Lockup	Coast Clutch	Shift SS3		EPC						
Default Pol	NEG	NEG	HEG	NEG	NEG	NEG	HEG	NEG	NEG	NEG	HEG	NEG	
Sol Test DC Min Ohms	50	50	50	50	50	50	50	50	50				
Max Ohms	22	22	8.9	22	22	0	3.1	0	0	0	0	0	
Max Onms	48	48	16	48	48	-	5.7	-	0	0	0	0	
Park	100 NEG	100 OFF 0.0	0 OFF	100 OFF 0.0	100 OFF 0.0	0 OFF	35 NEG	0 OFF	0 OFF	OFF 0.0	OFF 0.0	OFF 0.0	Ť
2 Reverse	100 NEG	100 OFF 0.0	65 OFF	100 OFF	100 OFF	0 OFF	35 HEG 0.0	0 OFF	0 OFF	OFF 0.0	OFF	OFF 0.0	
Neutral	100 NEG	100 OFF 0.0	0 OFF 0.0	100 OFF	100 OFF	0 OFF	35 NEG	0 OFF 0.0	0 OFF 0.0	OFF 0.0	0FF 0.0	OFF 0.0	
First	100 HEG	100 OFF 0.0	0 OFF 0.0	100 OFF 0.0	100 OFF	0 OFF	35 NEG	0 OFF	0 OFF	0.0	OFF 0.0	OFF 0.0	
Second 5	100 HEG	100 OFF 0.0		100 OFF	100 NEG	0 OFF	35 NEG	0 OFF	0 OFF	0.0	0.0	OFF 0.0	
Third	100 HEG	100 NEG		100 OFF 0.0	100 OFF	0 OFF	35 NEG	0 OFF	0 OFF 0.0	0FF 0.0	OFF 0.0	OFF 0.0	
Fourth 7	100 OFF 0.0	100 OFF 0.0	65 OFF 0.0	0.0 OFF	100 OFF 0.0	0 OFF 0.0	35 NEG	0 OFF	0 OFF	OFF 0.0	OFF 0.0	OFF 0.0	
Fouth Lockup	100 OFF 0.0	100 OFF 0.0	65 NEG	100 NEG	100 OFF	0 OFF	35 NEG	0 OFF	0 OFF	0.0	OFF 0.0	OFF 0.0	
	100 OFF 0.0	100 OFF 0.0		100 OFF	100 MEG	0 OFF	35 NEG	0 OFF 0.0	0 OFF 0.0	OFF 0.0	OFF 0.0	OFF 0.0	-
Frequency		65			Ц.		490	0	0				
Save				Delete					Exit				



The MAE-TCM Transmission **Control Module is operated** from the driver's seatusing a laptop PC or handheld PDA for wireless or USB control of transmission shifting.



Specifications

- Upshift / downshift button capability (paddle shifting & button shifting simulation)
- Durable 37-pin weather sealed, circular connector built into case
- Operating voltage 8 vdc to 24 vdc (battery voltage 13.85 vdc)
- Reverse battery protection
- Short circuit protection on each output
- Over voltage protection on each input
- 10 bit resolution
- Current, resistance, and voltage tests
- Frequency range of 15hz to 50.5 Khz
- The duty cycle can be set in 1% increments
- 9 PWM solenoid outputs (drive solenoid voltage or ground output up to 3.5 amps)
- 3 digital solenoid outputs (drive solenoid voltage or ground output up to 3.5 amps)
- 8 digital inputs (for pressure sensors, PRNDL switch & more)
- 3 frequency inputs (programmability for all VSS pickups; magnetic or TTL)
- 2 analog inputs (for transmission temperature sensor, 46/47RE pressure transducer, etc.)
- Complete wiring harnesses available for many common applications
- Custom wiring harnesses available for any application
- Easy to use Windows software interface

Smarter By Design

your existing wire harnesses

via our universal adaptor.

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About MAE

Mustang Advanced Engineering is a leading provider of comprehensive testing solutions for the development and testing of engines, powertrain systems and complete vehicles. Founded in 1975, Mustang has long been a trusted source of expertise in measurement and testing technologies for the global industrial market. World-class product offerings, custom design support and technical assistance, backed by a dedicated factory service team, has positioned MAE among the global leaders in providing advanced testing solutions.

As a full service supplier/partner, MAE offers a wide array of services to customers all over the world. Working with your staff, our experienced team of engineers uses the latest solid modeling CAD and CAE software and offers a comprehensive resource for your testing design and development needs. Our engineers specialize in finding the most practical and economical solutions for new or unusual testing applications. Whether your application is fully conceived or you need a design partner, the engineers at Mustang Advanced Engineering invite you to tap into their decades of experience in testing and measurement systems development.

Our mission is to achieve the highest possible level of customer satisfaction by providing innovative technical solutions and product designs and by striving to achieve perfection in product quality, delivery and service. At MAE, our customers are our highest priority - we do everything in our power to satisfy our customers. Our entire organization understands that the customer comes first and nothing else is more important.