

* Utilizing our "Sync Release" TCC mode and a stock torque converter. Actual results will vary, depending upon engine torque and the torque converter utilized (looser converters will increase post-shift RPM).

Summary of 10-Speed Transmission Benefits

- **Wide Ratio Spread:** Low 4.696:1 first gear and 3 generous overdrive ratios of 0.854, 0.689, and 0.636:1 for quiet and economical cruising.
- **Narrow Ratio Spacing:** Usually mutually exclusive with wide ratio spread, the ratio steps are closer together than previous transmissions, thanks to the larger number of ratios.
- **Enhanced Downshift Capabilities:** All downshifts from seventh gear and below can be completed in a single step to any gear below seventh gear.
- **Quick and Smooth Shifts:** Since the gear ratios are so close, engine RPM drop during each shift is minimal, enabling shifts to complete quickly AND smoothly.
- **Excellent Torque Capacity:** Stock transmissions can handle at least 600HP, with modified units supporting four-digit power levels.
- **Excellent Aftermarket Support:** Raybestos and other vendors provide upgraded clutches and other components for a growing support base.
- **Adaptability to Different Engines:** Adapters for various engines, old and new, are in development.
- **Large OEM Installed Base:** Used in a variety of GM and Ford vehicles, the OEM design is constantly being improved and used units are readily available.
- **Similar Size to Six-Speed Transmissions:** Dimensions are only slightly larger than the Ford 6R80 and GM 6L80E.

Updates for Quick 6 Controllers

As a result of the extensive development efforts of Quick 10, we have been able to utilize most of this seventh-generation technology to make Quick 6 even better. Our improved shift learning will enable even better shift quality in six-speed transmissions, and our downshift improvements will enable more responsive and smooth downshifts, rivalling our previous offerings. These benefits of the seventh-generation platform will also be available as an upgrade for existing Quick 6 Gen2 customers. This improved technology will also streamline the process of adding new transmission applications to the Quick 6 platform, enabling us to grow the base of supported transmissions. We plan to begin working on the Ford 6R140 transmission in November 2024, with a release date in Q2, 2025. Other transmissions will follow, including the GM 6L80E.

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INDUSTRY LEADING IN STAND-ALONE ELECTRONIC TRANSMISSION CONTROL

**Complete Transmission Control Packages
for Four, Six, and Ten Speed Automatics**

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New Quick 10 Controller for Ford 10R80 and GM 10L90 Transmissions

After seven years, the jointly-developed Ford 10R80 and GM 10L90 transmissions are now battle proven in the field and on the drag strip. In stock form, these transmissions are easily capable of handling over 600 horsepower, while aftermarket upgrades are readily available to support well over 1000 horsepower.

Our new Quick 10 controller supports the Ford 10R80 and GM 10L90 transmissions. This product represents the pinnacle of our transmission controller development evolution, and its development began prior to the release of our Gen2 series of controllers in 2019. We have upgraded our entire suite of clutch-to-clutch transmission control tools to enable the best performance and shift quality possible with our new seventh-generation firmware/software platform. We are also pushing most of these improvements back into the Quick 6, enabling further improvements to that product, as well. The development process has been extensive, since with ten gears, many downshift combinations are available, and with so many shifts occurring as you drive, poor shift quality is far more irritating than it would be in a four or six speed transmission. As a result, during this development process of several years, we have completely redesigned the controller hardware and have upgraded most of the controller firmware, as well as the tuning software. We have also added a microSD card socket to the controller to enable continuous data logging and other features. All Quick 10 controllers will be equipped with our attractive and functional remote display unit, for the best user experience with superior vehicle integration. The Quick 10 is currently in beta test, with full release planned for January, 2025.

Some of the benefits we have enabled in Quick 10 are improved and more extensive shift learning capability for quick, smooth, and consistent up-shifts, self-tuning downshifts with improved shift quality, and new predictive algorithms to optimize downshifts for the quickest and most responsive power-on downshifts possible. With so many speeds available, it is imperative to downshift to the desired gear as quickly as possible with minimal steps. We have optimized the downshift process to leverage the capabilities of these transmissions to their full potential. We have also worked to optimize smoothness of these downshifts for the best experience possible.

Advantages of the 10R80 and 10L90 Transmissions

One question that often comes up regarding 10-speed transmissions is whether ten gears are actually useful, or merely a marketing tactic. The gear ratios are 4.696, 2.985, 2.156, 1.779, 1.526, 1.278, 1.0, 0.854, 0.689, and 0.636:1. This provides a wide ratio spread, with an extremely low first gear and a very tall overdrive gear, allowing blistering 60-foot performance with unprecedented economy. There are also numerous benefits for off-roading, with extreme crawl ratio capabilities. For applications where the 4.696 first gear ratio is too low, it is possible to start in second gear when in automatic mode. In these cases, the first gear can be reserved as a “granny gear”, if desired.

All of the gear ratios are close together, and become even closer in the higher gears, where it is most helpful. For instance, in an application where 6000 RPM WOT shift points are utilized, the engine RPM after the 1-2 shift (post-shift RPM) is about 4410 RPM *. 2-3 post-shift RPM is about 4930 RPM *. All other shifts will yield a

post-shift engine speed of at least 5300 RPM. Older transmissions, by comparison, provide post-shift speeds ranging from 3700 RPM to 4000 RPM for the 1-2 shift, and up to 4500 RPM for the 2-3 shift. In real-world terms, this means that the engine can operate within a 500-1000 RPM range for most gears, as opposed to a 2000 RPM range for earlier transmissions. Operating within such a tight RPM range at WOT means that the engine is always near peak torque or peak power, providing nearly ideal utilization of its potential. This is especially useful for naturally aspirated engines with high-duration camshafts, smaller displacement engines in larger vehicles, etc., and allows for far better performance than normally attainable with such combinations. Any engine combination will benefit from these advantages, maximizing its performance in a given setting.

Gear Ratio Comparison, based on 6000 RPM WOT shift point									
Gear Ratio	Gear	4.696 / TH400 / C4				RPM After WOT Shift			
		RPM	Shift	RPM	Shift	4L60E / TH400R	4R70W	C6	* Uniting Sync Release
4.696	1st 10RL								10R80 / 10L90
4.17	1st 6R80								Shift
3.06	1st 4L60E / TH400R4								RPM
2.895	2nd 10RL								Shift
2.84	1st 4R70W								RPM
2.48	1st 4L60E / TH400C4								Shift
2.46	1st C6								RPM
2.34	2nd 6R80								Shift
2.156	3rd 10RL								RPM
1.779	4th 10RL								Shift
1.63	2nd 4L60E / TH400R4								RPM
1.55	2nd 4R70W								Shift
1.526	5th 10RL								RPM
1.52	3rd 6R80								Shift
1.48	2nd 4L60E / TH400C4								RPM
1.46	2nd C6								Shift
1.278	6th 10RL								RPM
1.14	4th 6R80								Shift
1	7th 10RL								RPM
0.87	5th 6R80								Shift
0.854	8th 10RL								RPM
0.75	4th 4L60E								Shift
0.7	4th 4L60E / TH400R4 / 4R70W								RPM
0.69	6th 6R80								Shift
0.689	9th 10RL								RPM
0.636	10th 10RL								Shift