The year 2005 represents a significant milestone for LENCO Racing Transmissions. We celebrate thirty-five years of engineering and manufacturing of the most successful drag racing transmissions ever built. Naturally we could not have achieved this accomplishment without our loyal and dedicated customers. We are indebted to all of the racers and teams who not only have chosen to rely on our transmissions, but who have also contributed ideas and suggestions to make our products even better. So, our hat is off to you for helping make LENCO the all-time champion and undisputed leader in the drag racing arena.

Leonard Abbott started the company in 1970 with his introduction of the Sure-Shift two-speed. Subsequent years have seen the evolution to three-, four-, five-, and six-speed LENCO Racing Transmissions. We have added the ST1200 Street-Strip model as well as the LENCODRIVE torque converter driven transmission.

We offer a transmission for almost everyone with more than fifty combinations plus reverse units, gear reducers, boat clutches and boat transmissions.

Our design and engineering team has always listened to our customers and been quick to respond to their changing needs. We constantly have new projects and applications on the drawing board and invite you to call and find out how you can keep ahead of the curve on your way to the winner's circle.
The Lenco transmission family

Seven different designs engineered to harness up to 3500 HP

We offer an extensive variety of transmissions. The following two pages present a brief description of each of our designs. For more specific information on any of these transmissions please refer to the pages devoted to the style you are interested in or call our toll free tech line at 1-800-854-2944 (619/287-2500 in California) lencoracing@lencomail.com

In general, all Lenco transmissions are a planetary design. Planetary transmissions rely on a central sun gear to provide a 1:1 direct drive ratio once shifted from the launch ratio.

In order to achieve an underdrive first gear ratio the Lenco transmission relies on planet gears which rotate around the previously mentioned sun gear. Each sun and planet gearset represents two speeds. Those two speeds are (1) the lower underdrive ratio and (2) the direct 1:1 final lock-up drive ratio.

Each Lenco transmission is thus a two-speed and is housed in its single dedicated case.

We achieve more than two speeds by assembly of multiple cases. For example, a three-speed requires two cases, a four-speed requires three cases, a five-speed requires four cases and a six-speed requires five cases.

Since each case contains one gearset and provides both underdrive and direct drive, multiple cases provide multiple underdrive ratios.

You must multiply each case's underdrive ratio in order to determine the first gear ratio. In the example of a four-speed, the case nearest the engine would contain a 1.37 ratio planet gear set. The middle case would also contain a 1.37 planet gear set. The rear case a 1.31 ratio gearset.

By multiplying these three ratios you come up with a 2.46 first gear ratio. Second gear ratio is 1.80 and third gear is a 1.31 ratio. Final drive ratio is 1:1.

The internal action of a Lenco is such that when the transmission is in first gear the chosen planet gear assembly provides the launch ratio. The planet gears are driven by an encompassing ring gear. When the transmission is shifted a clutch pack compresses the rotating sun gear assembly to the direct drive central sun gear. Thus a 1:1 ratio is achieved.

Each case in succession, with its dedicated underdrive ratio, determines the immediate drive ratio. Once all cases have been shifted the entire transmission assembly is locked in the final 1:1 direct drive ratio.

With the extensive number of ratios we offer it is possible to choose from over 7,000 first gear combinations in the case of a four-speed for example.

It is not necessary for the driver to disengage the clutch when shifting from ratio to ratio. All shifting is done with the engine's clutch engaged.

The 4-speed above shows how to determine drive ratios. Multiply all three gearset ratios to determine the first gear ratio of 2.47:1. Multiply the two rear case gearset ratios to determine the second gear ratio of 1.80:1. The gearset in the third case alone.

Call our technical department at 1-800-854-2944 (1-619/287-2500 in California) lencomail@lencomail.com with any questions you may have concerning function.
**CS1 Standard Design**

Introduced in 1972 as a 2-speed the Standard Design Lenco is our largest and strongest transmission. Most often seen in supercharged alcohol and mega HP nitrous cars the CS1 Standard Design Lenco is also commonly used by Pro Mod machines and blown nitro and alcohol drag boats.

The CS1 Standard Design Lenco is recommended for the most severe applications and is capable of repeatable consistency with a minimum of maintenance. Engineered to handle 3500+ HP the Standard Design Lenco is available with up to 5 speeds and comes in a cast magnesium case. Lever or CO2 shift.

*See page 4 for complete description*

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**CS2 - CS3 New Generation**

The CS2 and CS3 New Generation Lenco racing transmission is a smaller, lighter and more compact version of our CS1 Standard Design. Smaller diameter and shorter length make this transmission a practical choice for use in restricted confines and instances when you have limited distance from the engine to the rear end.

The CS2 handles up to 3000 HP and CS3 1800 HP. Both transmissions are available in 2, 3, 4 or 5 speeds. Magnesium cases are used for both the CS2 and CS3.

Competition Eliminator, Super classes, Top Dragster and Pro Stock cars are typical classes where you will find the New Generation Lenco. As with the CS1 Standard Design, the New Generation CS2 and CS3 can be shifted by lever or our CO2 system.

*See pages 6 through 9 for complete description*

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**LENCODRIVE Automatic**

The LENCODRIVE is the automatic answer for people who prefer torque converter/automatic transmission applications. A perfect replacement for expensive breakage prone Powergloves, Turbos, C4, C6 style and Torquemite transmissions the LENCODRIVE is 100% Lenco and will handle 2500 HP with ease. With a selection of 16 first-gear ratios for the two-speed and hundreds more for three-speeds the LENCODRIVE presents you with the opportunity to dial-in your exact combination. You can add additional cases and gearsets that will result in 3 or 4 speeds. As with all Lenco transmissions a separate reverse unit is employed. Air or lever shift.

*See page 12 for complete description*

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**ST1200 Street Strip**

The Lenco ST1200 is the answer for Pro Street and street/strip applications. This transmission can be used to drive your hot rod to work Monday through Friday and then to the dragstrip and the winner's circle on weekends. The ST1200 is the same engineering design as the all-out-race New Generation CS2 but with a couple of minor differences. One variation is that the ST1200 uses budget-friendly 8620 alloy for the gears instead of the more expensive 9310 material. The ST1200 also utilizes aircraft quality bearings where the pure-race CS2 uses aerospace spec components. The result is Lenco quality and durability at a reasonable "Street Machine" price. Recommended for cars making up to 1200 HP the ST1200 is pure Lenco through and through. Air or lever shift.

*See page 10 for complete description*

---

**Boat Transmissions and Boat clutches**

Purpose designed and produced for drag, ski and river boat requirements. Shown with our boat bellhousing. The CS1, CS2 and CS3 transmissions provide the perfect solution for harnessing the unique HP and torque output of boat engines. The boat clutch provides gentle engagement and disengagement. This unique clutch is a very popular replacement for clunky V-drive dog style in-out boxes.

*See page 14 for complete description*

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**Gear Ratio Reducer**

The Lenco Gear Reducer is used as a stand-alone unit or in conjunction with our CS1 Standard Design and CS2 and CS3 New Generation transmissions in order to employ tall rear gears with the advantage of a short launch ratio. Since the taller ring and pinion have more tooth area contact they are more reliable and less prone to breakage. The Lenco gear reduction unit — with a range of 31% to 56%—helps get you off the starting line. Most popular with Sand Dragsters, Mud racers and Modified pullers.

*See page 15 for complete description*
The CS1 Standard Design LENCO is the largest and strongest transmission we build. All Standard Design LENCO transmissions are referred to as the CS1 style. Likewise, New Generation LENCOs (pages 6 and 8) are referred to as CS2 and CS3 styles.

Our CS1 Standard Design transmissions are available with up to four forward speeds plus reverse and can be either CO2 or manually shifted. We use 9310 steel 1" planet gears which can control up to 3500 HP. As with all of our transmission designs we offer a variety of lightening procedures for the rotating components. A cast magnesium case is standard.

As with all LENCO transmissions the CS1 is based on individual 2-speed planetary units with multiple speeds being achieved through utilization of multiple 2-speed units.

CS1 2-speed
1 Magnesium case.
Handles up to 3500 HP.
Designed for use in supercharged boats, pullers, mud buggers and other severe duty applications. Shown with air shift servo. Available with lever shift system.
See facing page for ratios

CS1 3-speed
2 Magnesium cases
Handles 3500+ HP.
Recommended for supercharged alcohol or nitro cars and boats, Top Sportsman and Pro Mod applications as well as very high torque pullers. Air or lever shift.
See facing page for ratios

CS1 4-speed
3 Magnesium cases
Handles up to 3500 HP.
Ideal for heavier cars where the advantage of a wide gear ratio selection is desired. Commonly used in supercharged or nitrous oxide assisted Pro Mod and Super class types of cars. Air or lever shift.
See facing page for ratios
I harness Engineered to apply tral shaft.

All shafts available in Marage

---

CS1 Standard Features

Severe Use Applications
Air or lever shift
Higher geared ratios
32 or 35 spline output shaft
2" low gear with 1" third and fourth gear

Extensive factory support
Reverse lockout
Low shift pressure for smooth ratio to ratio transition

2" Low Gear Ultra-Severe Duty Brute Torque CS1N

The biggest and baddest of all LENC0 transmissions. Specifically engineered for the rigors and demands of ultra-severe applications. Uses special cut 2" gear sets in forward low gear case. Second gear set case, in the event of 3- or 4-speed applications it is possible to utilize standard 1" gear. CS1N is slightly larger than standard CS1 at 9" diameter and 9 1/4" length.

See right column for ratios

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High Gear Reverser for Direct Drive use

We supply your choice of 32 or 40 spline reverse units for direct drive applications. Mates to bellhousing or clutch management system. In some cases we can supply a neutral position configuration. We also manufacture an aluminum bellhousing adapter plate. Additionally, we produce a gearset eliminator kit that allows you to apply power directly through your existing LENC0 case. The gearset is replaced by a coupler that connects the existing input and intermediate shaft.

---

CS1 ratios with 1" gears

1.25 uses 34 tooth planet gears, a 23 tooth sun gear and a 91 tooth ring gear.
1.28 uses 32 tooth planet gears, a 25 tooth sun gear and an 89 tooth ring gear.
1.31 uses 27 tooth planet gears, a 25 tooth sun gear and an 80 tooth ring gear.
1.34 uses 24 tooth planet gears, a 25 tooth sun gear and a 74 tooth ring gear.
1.37 uses 27 tooth planet gears, a 31 tooth sun gear and an 83 tooth ring gear.
1.41 uses 24 tooth planet gears, a 34 tooth sun gear and an 83 tooth ring gear.
1.44 uses 20 tooth planet gears, a 32 tooth sun gear and a 73 tooth ring gear.
1.44 uses 22 tooth planet gears, a 35 tooth sun gear and a 79 tooth ring gear.
1.46 uses 22 tooth planet gears, a 37 tooth sun gear and an 80 tooth ring gear.
1.48 uses 22 tooth planet gears, a 40 tooth sun gear and an 83 tooth ring gear.
1.50 uses 17 tooth planet gears, a 34 tooth sun gear and a 68 tooth ring gear.
1.56 uses 16 tooth planet gears, a 41 tooth sun gear and a 73 tooth ring gear.
1.68 uses 15 tooth planet gears, a 62 tooth sun gear and a 91 tooth ring gear.

CS1N ratios with 2" gears

1.17 (1.165) uses 22/38 tooth planet gears, a 24 tooth sun gear and an 84 tooth ring gear.
1.19 (1.191) uses 28/38 tooth planet gears, a 23 tooth sun gear and a 91 tooth ring gear.
1.22 (1.219) uses 30/35 tooth planet gears, a 23 tooth sun gear and a 90 tooth ring gear.
1.25 (1.252) uses 24/28 tooth planet gears, a 23 tooth sun gear and a 78 tooth ring gear.

---

Air and Lever Shifters

See page 16 for complete selection.
New Generation

The New Generation Lenco transmission is a smaller, lighter version that has evolved from our Standard CS1 Design. The CS2 is essentially identical to the CS1 with the exception of utilizing 3/4” gears as opposed to the CS1’s 1” gear design. The more compact CS2 provides ease of fit in tight spaces with no compromise to traditional Lenco strength and reliability. There are two styles of the New Generation Lenco — the CS2 and CS3. These two facing pages show the mid-sized CS2. Pages 8 and 9 show the even smaller CS3.

The CS2 Lenco is available with up to 5 forward speeds plus reverse. We offer a variety of lightening procedures for internal rotating mass and suggest you call and discuss your exact application and requirements. All of our transmissions are purpose built and there is no “Off the shelf, one size fits all” Lenco. As with all Lenco transmissions the CS2 may be shifted with CO2 or manually. Cast magnesium case is standard.

CS2 2-speed
1 magnesium case. Handles up to 3000 HP. Suggested for supercharged cars, boats, pullers, mud buggers and nitrous oxide assisted machines where available space is at a minimum and a tight fit is a necessity. Air or lever shift. See facing page for ratios

CS2 3-speed
2 magnesium cases. Handles up to 3000 HP. Widely used in Top Dragster, supercharged alcohol and supercharged gasoline cars and boats. Small size helps solve fit constraints while still giving reliable Lenco strength and repeatability. Air or lever shift. See facing page for ratios

CS2 4-speed
3 magnesium cases. Handles up to 3000 HP. Recommended for heavier nitrous oxide or supercharged machines when space is at a premium. Popular with Pro Mod racers. Air or lever shift. See facing page for ratios

CS2 5-speed
4 magnesium cases. Handles up to 3000 HP. Recommended for Pro Stock, Comp eliminator, 10.5 tire cars and similar classes. With five forward speeds you can tailor the five ratios to fit your unique power band needs. Especially well suited for narrow rpm range and close tolerance engine/clutch tuning. Air or lever shift. See facing page for ratios

The original “Shifter” T/F shop car testing the first Lenco Sure-Shift at Carlsbad circa 1970

David Wells Blue Bunny TAD - CS2 equipped
**CS2 Standard Features**

- Air or lever shift
- Reverse lockout
- Extensive factory support
- Simple at-track ratio change
- Severe duty clutch packs
- Engineered to harness 3000 HP
- All shafts available in Marage

**Couplers, input shafts, axles, spools**
See pages 15 through 17 for these and other associated LENCO driveline components.

**MONSTER TRUCK REVERSER**
For CS1 and CS2 2, 3 or 4 speeds. Gives you the ability to back-up as fast as you go forward. Extreme duty. Magnesium case.

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**CS2 ratios with 3/4" gears**

<table>
<thead>
<tr>
<th>Gear Ratio</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.16</td>
<td>21/36 tooth planet gears, 22 tooth sun gear and a 79 tooth ring gear.</td>
</tr>
<tr>
<td>1.19</td>
<td>21/33 tooth planet gears, 22 tooth sun gear and a 76 tooth ring gear.</td>
</tr>
<tr>
<td>1.20</td>
<td>22/32 tooth planet gears, 22 tooth sun gear and a 76 tooth ring gear.</td>
</tr>
<tr>
<td>1.21</td>
<td>21/31 tooth planet gears, 24 tooth sun gear and a 76 tooth ring gear.</td>
</tr>
<tr>
<td>1.22</td>
<td>21/30 tooth planet gears, 24 tooth sun gear and a 75 tooth ring gear.</td>
</tr>
<tr>
<td>1.23</td>
<td>21/30 tooth planet gears, 25 tooth sun gear and a 76 tooth ring gear.</td>
</tr>
<tr>
<td>1.24</td>
<td>26/31 tooth planet gears, 23 tooth sun gear and an 80 tooth ring gear.</td>
</tr>
<tr>
<td>1.25</td>
<td>40 tooth planet gears, a 21 tooth sun gear and a 102 tooth ring gear.</td>
</tr>
<tr>
<td>1.27</td>
<td>38 tooth planet gears, a 22 tooth sun gear and a 98 tooth ring gear.</td>
</tr>
<tr>
<td>1.28</td>
<td>Small Shaft gearset uses 32 tooth planet gears, a 22 tooth sun gear and an 86 tooth ring gear.</td>
</tr>
<tr>
<td>1.29</td>
<td>Large Shaft gearset uses 36 tooth planet gears, a 25 tooth sun gear and a 98 tooth ring gear.</td>
</tr>
<tr>
<td>1.31</td>
<td>32 tooth planet gears, a 25 tooth sun gear and an 89 tooth ring gear.</td>
</tr>
<tr>
<td>1.32</td>
<td>27 tooth planet gears, a 25 tooth sun gear and an 80 tooth ring gear.</td>
</tr>
<tr>
<td>1.35</td>
<td>26 tooth planet gears, a 28 tooth sun gear and an 80 tooth ring gear.</td>
</tr>
<tr>
<td>1.38</td>
<td>23 tooth planet gears, a 28 tooth sun gear and a 74 tooth ring gear.</td>
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<td>22 tooth planet gears, a 35 tooth sun gear and a 79 tooth ring gear.</td>
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<td>1.48</td>
<td>22 tooth planet gears, a 40 tooth sun gear and an 83 tooth ring gear.</td>
</tr>
<tr>
<td>1.50</td>
<td>22 tooth planet gears, a 44 tooth sun gear and an 88 tooth ring gear.</td>
</tr>
<tr>
<td>1.56</td>
<td>22 tooth planet gears, a 55 tooth sun gear and a 98 tooth ring gear.</td>
</tr>
<tr>
<td>1.68</td>
<td>15 tooth planet gears, a 62 tooth sun gear and a 91 tooth ring gear.</td>
</tr>
<tr>
<td>1.73</td>
<td>14 tooth planet gears, a 76 tooth sun gear and a 104 tooth ring gear.</td>
</tr>
</tbody>
</table>

**Questions?**

CALL TOLL FREE
1-800-854-2944
(In California 619/287-2500)
The LENCO CS3 is the smallest and lightest version of our two New Generation designs. The very compact CS3 is engineered for cars producing up to 1800 HP and weighing up to 2700 pounds. The CS3 is ideal for IHRA Pro Stock and NHRA Competition Eliminator machines.

The New Generation CS3 LENCO is available with up to 5 forward speeds plus reverse. We offer a variety of procedures for lightening rotating mass — such as optional titanium planet cases — and suggest you call to discuss your specific application and objectives. These lightening operations are available as special order. A Low-Drag reverse is also an option to the standard reverse unit.

As with all LENCO transmissions the CS3 may be shifted with CO2 or manually. Lightweight magnesium case is standard.

CS3 2-speed
1 magnesium case. Handles up to 1800 HP. Made for lightweight sand drag cars, boats, pullers, mud buggers and nitrous oxide assisted machines. Engineered for application in restricted space. Shown with air shift pod. Available with lever shift mechanism. See facing page for ratios

CS3 3-speed
2 magnesium cases. Handles up to 1800 HP. Designed for lighter weight Top Sportsman cars and similar powered boats. Smallest sized LENCO fits the most cramped quarters. Air or lever shift. See facing page for ratios

CS3 4-speed
3 magnesium cases. Handles up to 1800 HP. Recommended for lighter weight nitrous oxide or supercharged machines where four speeds are necessary. Perfect for Top Sportsman and Compact/Import classes. Air or lever shift. See facing page for ratios

CS3 5-speed
4 magnesium cases. Handles up to 1800 HP. Recommended for lighter weight Pro Stock, Comp eliminator and Compact/Import classes. Five forward speeds. Wide variety of gear ratios allows the opportunity to employ narrow rpm range. Air or lever shift. See facing page for ratios

Questions?
CALL TOLL FREE
1-800-854-2944
(In California 619/287-2500)

John Montecalvo's CS3 equipped IHRA Pro Stock

Steve Papadakis
The document contains technical information about transmissions and gears. It discusses features such as air and lever shifters, the availability of shafts, and various ratios for different gears. Specific ratios are mentioned for different applications, along with details about the number of teeth for sun and ring gears. The page also includes images and icons representing transmission parts and features.
The LENCO ST1200 transmission has been specifically designed and engineered for severe duty street/strip applications.

The ST1200 gives you the advantage of LENCO brute strength at a lesser price than our full race units. The ST1200 is pure LENCO through and through and is ideally suited for nitrous, blown, injected and carbureted engines producing up to 1200 HP and 900 lb. ft. of torque.

As with all LENCO transmissions the ST1200 is a planetary design and comes with up to 6 forward speeds. Shift with either our patented multi lever system or with the optional, more compact CO2 setup.

Multiple speeds are achieved through utilization of multiple cases. See page 2 for an overview explanation of how a LENCO transmission works.

The ST1200 is available with all popular bellhousing patterns — Ford, GM, MoPar and our own five-bolt design. You choose any conventional input shaft spline.

We are able to offer the ST1200 StreetStrip at lower cost than our pure race CS1, CS2 and CS3 designs since we use 8620 steel instead of 9310 material for the ST1200 gears. 8620 is a premium quality material that will provide excellent service for 1200 HP hot rods. 9310 steel would be used in Pro Stock, Pro Mod and other similar applications where substantially more HP, torque and tire plant is generated. We supply premium grade bearings in the ST1200 instead of the much more expensive aerospace-spec bearings as used in our race transmissions. The ST1200 comes with aluminum cases instead of the magnesium style race units.

**The ST1200 Street/Strip Comes Complete With:**
- Input shaft
- Throwout bearing collar
- Pilot bearing
- Choice of ratio
- Choice of either Flat handle or Hex handle shifter
- Reverse with Neutral and choice of 16 or 32 spline output shaft, and matching driveshaft yoke.

Jim Bryant
Chevrolet, Ford or MoPar flange pattern

Long distance tour ready
Adjustable shift pressure for smooth ratio to ratio transition

Engineered to harness 1200 HP
Durable aluminum cases

2, 3, 4, 5 or 6 speeds
Air or lever shift
Reverse lockout
Severe duty clutch packs
Billet yoke optional - supplied with forged yoke

ST1200 Standard Features

Multiply all four gearset ratios (first case has a 1.38, second case has a 1.31, third case has 1.31 gear set and fourth case has a 1.25) to determine the first gear (launch) ratio of 2.96:1. Multiply the gearsets of the last three cases to determine the second gear ratio of 2.15. The ratio of the third case is 1.64:1 and the fourth alone is 1.31:1.

ST1200 Ratio Determination

Air and Lever Shifters
All LENCO transmissions may be shifted with air or lever shifters. See page 16 for our complete selection as well as options.

Questions?
CALL TOLL FREE
1-800-854-2944
(In California 619/287-2500)

ST1200 ratios with 3/4" gears

1.25 uses 32 tooth planet gears, a 22 tooth sun gear and an 86 tooth ring gear.

1.31 uses 27 tooth planet gears, a 25 tooth sun gear and an 80 tooth ring gear.

1.38 uses 23 tooth planet gears, a 28 tooth sun gear and a 74 tooth ring gear.

1.44 uses 22 tooth planet gears, a 35 tooth sun gear and a 79 tooth ring gear.

1.48 uses 22 tooth planet gears, a 40 tooth sun gear and an 83 tooth ring gear.

Drive your hot rod to the track, the Winner's Circle and then home with your ST 1200 Street/Strip Lenco...
The LENCODRIVE transmission represents our response to people who have asked for a safe and affordable torque converter driven transmission.

The LENCODRIVE is pure Lenco through and through with the same gearset components as our CS2 (page 6). The LENCODRIVE is available with your choice of all popular bellhousing patterns as well as any starter pocket positioning. The LENCODRIVE will accept virtually any manufacturer’s torque converter. We offer Turbo 400, C6, Mega (1 1/4" X 29 spline) and standard Powerglide size input shafts per your requirements. The LENCODRIVE’s trans-brake is controlled by an electric solenoid which activates hydraulic compression of a dedicated clutch pack. Additionally, the LENCODRIVE’s main valve body is machined from billet components and is not the typically modified OEM Detroit component.

The LENCODRIVE is the shortest and lightest torque converter driven transmission available anywhere. The LENCODRIVE comes as a 2-speed with reverse. You can expand to 3- or 4-speeds by addition of additional cases for each speed (add 6.25" length for each added section). The 2-speed, including reverse, bellhousing and lining weighs approximately 108 lbs. The 3-speed is approximately 135 lbs. All cases are magnesium.

The LENCODRIVE does not require a containment blanket unless you use a supercharger or alternative fuels.
2, 3 or 4 Speeds
16 first gear ratios for 2 speeds and hundreds more for 3- and 4-speed configurations

Air or lever shift
Engineered for up to 2500 HP

Dedicated Lenco designed and manufactured valve body - not a modified OEM component.

Any bellhousing pattern
C6, Turbo 400 or Mega Size input shaft
300 M Mega Shafts with Marage Option

Safety sprag clutch

No external lines or pumps
Magnesium cases

Lencodrive Standard Features

Lencodrive lengths
The Lencodrive is the shortest and lightest torque converter driven transmission available.

2 Speed + reverser with Pro output: 18.500"
2 Speed + reverser with Std output: 17.500"
2 Speed with single brg and std output: 16.875"

3 Speed + reverser with Pro output: 25.000"
3 Speed + reverser with Std output: 24.000"
3 Speed with single brg and std output: 23.375"

Add these bellhousing depths to above lengths for total length
Lenco aluminum, Titanium or Browell steel: 7.200"

Lencodrive Standard Features

Lencodrive Standard Features

Lencodrive Standard Features

Lencodrive Standard Features

Mick Snyder's Lencodrive equipped NHRA Top Alcohol Funny Car

Ron Muchkes Pro Mod

LENCODRIVE gear ratios

1.20 Use compound 22 and 32 tooth planet gears, a 22 tooth sun gear and a 76 tooth ring gear.

1.22 Use compound 21 and 30 tooth planet gears, a 24 tooth sun gear and a 75 tooth ring gear.

1.25 Use compound 25 and 29 tooth planet gears, a 25 tooth sun gear and a 76 tooth ring gear.

1.28 Use 32 tooth planet gears, a 25 tooth sun gear and an 89 tooth ring gear.

1.31 Use 27 tooth planet gears, a 25 tooth sun gear and an 80 tooth ring gear.

1.35 Use 26 tooth planet gears, a 28 tooth sun gear and an 80 tooth ring gear.

1.38 Use 23 tooth planet gears, a 28 tooth sun gear and a 74 tooth ring gear.

1.41 Use 23 tooth planet gears, a 32 tooth sun gear and a 79 tooth ring gear.

1.44 Use 22 tooth planet gears, a 35 tooth sun gear and a 79 tooth ring gear.

1.48 Use 22 tooth planet gears, a 40 tooth sun gear and an 83 tooth ring gear.

1.50 Use 22 tooth planet gears, a 44 tooth sun gear and an 88 tooth ring gear.

1.56 Use 22 tooth planet gears, a 55 tooth sun gear and a 98 tooth ring gear.

1.68 Use 15 tooth planet gears, a 62 tooth sun gear and a 91 tooth ring gear.

1.73 Use 14 tooth planet gears, a 76 tooth sun gear and a 104 tooth ring gear.

Trans-brake is mounted in front of the transmission and electrically operated by solenoid to the valve body which compresses the trans-brake clutch pack.

Jack Heslink
Boat

**Boat Transmission**

- Simple and quick ratio change
- Engineered to harness 3000 HP
- Low shift pressure for smooth ratio to ratio transition
- Reverse lockout

**Boat Clutch**

- Air or lever shift
- Severe duty clutch packs
- All shafts available in Marage

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**Standard Features**

**Boat transmissions**
The LENCO transmission readily couples to V-drive propulsion systems. You pick which specific transmission design is best for your needs (Standard Design or New Generation — pps 4 through 9). Choose your ratio, or call our tech line TOLL FREE at 1-800-854-2944, 619/287-2500 in California, and enter a whole new world of power control and application. LENCO boat transmissions feature ultra durable double sprags for consistently reliable hard off-idle launches. Whether your boat is an all-out Nitro drag machine or a ski and river cruiser we have the transmission to perfectly fit your special needs.

**Boat clutches**
The LENCO Boat Clutch has evolved through years of racing and increased horsepower ranges. We now offer three different styles for a variety of applications. The most popular unit for River Racer through Top Alcohol Hydro classes is the 15 blue-disc unit and is good for power ranges up to 3000 HP. Our large 16 green-disc unit for ranges above 3000 HP. The loads generated with the dual propeller Top Fuel Hydros require our strongest unit which utilizes 25 large green clutch discs.

**Boat bellhousing**
The LENCO boat bellhousing is the perfect flex-free connection between your engine and transmission or boat clutch. It completely shrouds the flywheel and comes with a starter pocket. Chevrolet and late model Chrysler pattern. Cast from premium aluminum and available in natural or high luster polished finish.

**The SRM-1 (Sprag replacement module)** was developed as a direct update for our single or dual sprag assembly and provides the absolute highest level of reliability under the most severe conditions. This design employs a mechanical diode that utilizes air to assist in both the locked and released position. The LENCO SRM-1 has proven tremendously popular in the Top Alcohol and in Pro Mod ranks and will control up to 3000 HP.
Gear Reducer
The LENCO gear reduction unit, when used in conjunction with our Standard Design or New Generation transmission, permits you to utilize a tall rear end gear but realize the advantage of a shorter launch ratio. Since the taller ring and pinion provides more tooth area contact it is more reliable and less prone to breakage. The LENCO gear reduction unit is available in a range of 31% through 56% and is perfect for the rigorous demands of Sand racers, Mud boggers, Modified and Mini-Rod pullers.

Couplers
LENCO couplers are machined from 8620 aircraft quality steel heat treated for severe duty service. 10 through 40 tooth configurations. Special order lengths available.

Coupler Clamps
All LENCO coupler clamps are machined from 7075 aircraft grade aluminum. Available in single or two-piece design. Choose 1.375", 1.500" or 1.750" diameter.

Billet Yokes
The LENCO 4140 billet steel pinion yoke eliminates the weakest link in your driveline. Highly recommended for severe duty race use. Available in 16 and 32 spline.

Billet Steel Spools
The LENCO 4140 billet steel spool is machined from 4140 material and is available with 35 or 40 splines. We offer both standard use and a lightened design. All grinding is done on a precision fixture that guarantees a true concentric alignment between the axle centerline and the ring gear axis. 9" Ford only.
All Lenco transmissions can be shifted with levers or a CO2 system. Since all Lenco transmissions utilize the same internal gearing design you can easily change from a manual shift set up to the CO2 configuration or vice versa. No alterations to the transmission, other than the external operating system itself, are required.

A Lenco launch ratio is determined by the sun and planet gear ratio (see page 2). In all instances the transmission is then shifted to a 1:1 direct drive ratio by depression of the adjustable shift tower plunger. This action compresses an internal clutch pack which results in a final drive ratio of 1:1. Remember that each separate case contains its own gear-set/ratio and when connected to additional cases multiple ratios are realized. The shifting process removes multiplication factors and subsequently results in all gear-sets, after the final shift, being locked to a 1:1 ratio.

Shift pressure is adjustable, whether it be for one case, all cases or an individual case in a multiple case configuration. This pressure adjustability gives you considerable control when fine tuning your available power application to specific track conditions. If the first 300 feet of track is excellent, for instance, full shift pressure and instant lock-up may be desired. If, however, the track is loose from 300' through 500' you can soften the shift pressure to maintain desired wheel speed and traction. Every track differs from day to day or hour to hour. With a simple shift pressure adjustment you can easily compensate and control slippage. This is not possible with a traditional cluster gear transmission.
Throwout Bearing Collars
All LENCO throwout bearing colors are machined from premium aircraft grade billet aluminum and then hard anodized for a long and reliable life. We offer a wide variety of lengths, diameters and bellhousing patterns. Custom lengths available as special order. Available with computer pick-up boss. See application/price list for specific sizes.

Throwout Bearings
LENCO throwout bearings feature a fork/collar contact housing machined from aircraft quality 6061-T6 aluminum which is then hard anodized. We use premium quality ball bearings in the rotating assembly and supply four standard sizes of 1-5/8", 2-1/16", 2-1/4", 2-5/8", 2.900" and Extra long (To your dimensions). A heavy-duty fork retaining spring is included.

Bellhousing Cross Shaft, Arm and Fork
Purchase the complete LENCO assembly or individual components as needed. Cross shaft is machined from 4130 heat treated material and cross drilled and tapped with 3/8" thread for fork positioning and fastening. The Fork is billet material and the cross shaft arm is made of 4130 steel, has three clutch rod positioning holes and is broached for a perfect fit to the shaft spline.

Input Shafts
We machine our input shafts from 300M and Marage material. We can supply practically any spline and length you require. All Chrysler, Chevrolet and Ford clutch hub patterns are available. Combine your input shaft with our clutch hubs for the most precision fit.

Clutch Disc Line Up Shaft
LENCO clutch disc line up shafts are available in black anodized billet aluminum or steel. These shafts are a perfect fit with all manufacturer's disc hubs. Knurled grip end.
We offer extensive engineering development and manufacturing services for a wide range of clients — race oriented and not.

Existing LENCO equipment provides a severe duty efficient link between your power source and the end use machinery. Since our transmissions, safety clutches and gear reduction units can handle up to 3500 HP and up to 2500 lb. ft. of torque the range of applications is extensive.

Our thirty-five year history has given us the opportunity to solve power transmission problems for a great many customers. Though we have mostly concentrated on auto and boat racing as well as tractor pulling, we have also fulfilled an impressive number of industrial needs. From missile transportation platforms for NASA to dynamometer based transmissions for General Motors Corporation, we have successfully contributed the design and production expertise to resolve some very unique issues. Likewise, in the commercial agricultural arena, LENCO know-how has been called upon to expand the efficiency of farm equipment machines including a grain hopper with a unique two-speed auger application.

Also among our projects has been the design and production of a compact and lightweight reverse unit for the JAXPORTS dwarf style race car. These unique cars utilize both Harley-Davidson and various Japanese four-cylinder motorcycle engines for their powerplant. LENCO developed the dedicated reverser that gives these cars conventional reverse operation.

We enthusiastically welcome your inquiries and unique project requirements.
Machining Services

We provide an extensive array of machining services which include milling, turning, gear cutting and broaching. Our master machinists are the finest craftsmen and consistently perform to the highest level of professionalism. Our state-of-the-art equipment includes Mori Seki and Okuma CNC lathes. We can handle up to a 16" diameter workpiece.

The milling department offers a broad assortment of services and relies on a four-axis CNC machine to machine parts up to 30" diameter. We provide both vertical and horizontal procedures.

We supply CAD CAM services along with prototype development and are proficient working with magnesium, stainless, titanium and plastics as well as traditional ferrous metals.

Among the many other in-house services we provide are high volume cold saw cutting, ID and OD surface grinding, centering and facing procedures plus multiple programmed drilling routines.

Our gear and shaft cutting department offers hobbing, broaching and internal shaping services.

You can comfortably rely on LENCO experience and craftsmanship to provide the services you need at a practical price. Our long and successful track record gives us the proven background necessary to perform for you.
Sales and shipping policies

Price
All prices are subject to change without notice. You will be notified before shipment if any price changes are extreme.

Terms
All orders are shipped COD unless payment is received with order. Any orders under $20.00 carry a $3.50 processing charge. ALL DEPOSITS ARE NON-REFUNDABLE.

Special orders
All special orders (items or services other than standard LENCO products) require a 50% deposit. Special orders will be accommodated per the arrangement made with the sales representative you deal with. Special orders may take a longer time to fill than a standard order. In all cases any special order services or products will not be accepted for cancellation or return.

Shipping
F.O.B. San Diego. We will use the most economical means of transportation unless you specify otherwise — in which case additional costs may apply. We will gladly take your shipment to the airport for air freight service if you stipulate.

Claims
Claims for damage or lost shipments, open or concealed, must be made to the freight forwarder. Claims for shortage of product must be made to LENCO within five days of receipt of order.

Returns
Formal request must be made before the return of any merchandise. Any return is subject to a 15% handling charge. Special order parts are not returnable.

WARNING
LENCO drive-train components and associated parts are manufactured for the exacting demands of drag racing competition. These state-of-the-art products are directed for discriminating racers and automotive enthusiasts. LENCO products are the result of many years of research development and severe environment testing in conditions that require judicial compromise between conflicting characteristics such as weight and sturdiness or long life. LENCO products are not recommended for ordinary use or for use in conventional vehicles.

Limited warranty
LENCO Equipment Company, Inc. warrants its products to the ORIGINAL PURCHASER to be free of defects in material or workmanship for a period of thirty days from date of purchase receipt. The obligation of LENCO Equipment Company, Inc. under this warranty shall be limited to replacement or refund (our option) during these thirty days providing the product in question is used under normal conditions. This warranty shall be invalid if the product is altered or misused. This 30-day warranty is in lieu of any other expressed warranties, obligations or liabilities.

ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION OF THIS WRITTEN LIMITED WARRANTY.

IN NO EVENT SHALL LENCO EQUIPMENT COMPANY, INC. BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER.

Approved returns - ACCOMPANIED BY PROOF OF PURCHASE - must be delivered to the place-of-purchase or shipped free of port to:
LENCO Equipment Company, Inc.
6470 Federal Boulevard
Lemon Grove, California 91945
619/287-2500
Lencornail@aol.com