

TranX 2000™

Introduction

Brief Explanation of Manual
and Training Video

Overview

Power and Connections
Control Panel Detail

Operation

Solenoid Test
Shift Test
Monitor Computer

Chrysler

Chrysler/Jeep Test Sheets

Ford

Ford Test Sheets

GM

General Motors Test Sheets

Asian

Asian Vehicle Test Sheets

European

European Vehicle Test Sheets

Test Index

American Vehicles
Asian Vehicles
European Vehicles

Warranty/Support

Warranty information
Toll Free Support Line

Introduction

The TranX 2000™ is an effective and flexible tool for servicing automatic transmissions. The unit is portable and can be used both in the vehicle or on the bench. The TranX has been designed with a microprocessor, which gives it the capability to hold information to drive and analyze all transmission types. As new transmissions come onto the market the TranX design allows simple periodic upgrades with a single plug in device. This device is accessible at the back of the TranX 2000™ controller and can be replaced quickly. Please take a moment to register your TranX 2000™ so we can notify you as updates become available.

Like your TranX 2000™, this manual has been designed to be flexible. We used a three ring binder so you can add test sheets for new transmission types as they are introduced. The manual is divided into 10 sections. The overview section details the TranX 2000™ control panel, and shows you where each section of the control panel is located. The operation section will walk you through a testing procedure for a sample transmission. The test sheet sections follow and are broken down Chrysler, Ford, GM, Asian, and European transmission types. A test index for all transmission types covered by the TranX 2000™ is provided to help you quickly locate test sheets. Warranty and support information are at the back of the manual.

Included in your TranX 2000™ kit is a training video prepared for us by Bill Schultz of Hot Dog Productions. Bill is an experienced transmission specialist and does a thorough job explaining the TranX 2000™. We recommend you invest an hour or two to review this manual and watch the video. You will also find it useful to familiarize yourself with the unit on the bench using a know good transmission / solenoid assembly such as the E40D solenoid pack. Use a spare battery as a power source.

The information contained in this manual has been carefully compiled from sources available. Zoom Technology, Inc., however, can accept no responsibility for any errors, omissions, or consequential damage. The TranX 2000™ has been designed to be used by qualified automatic transmission technicians. No liability can be accepted for improper use of the equipment.

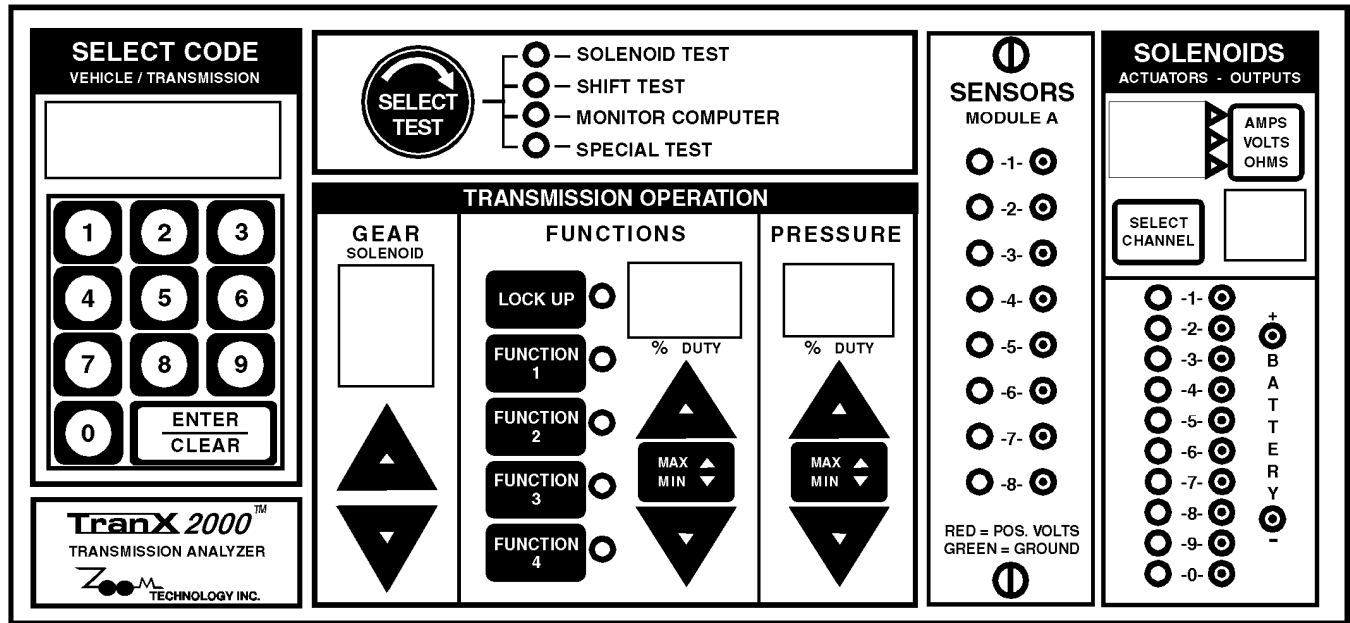
Overview

The TranX 2000™ has two main components, the controller and the interface box. All the electronic switches, solenoid drivers, and measurement electronics are located in the interface box. This was done so that all of the electronic components of the TranX 2000™ would be closer to the electronic solenoids they are controlling. You can plug your power cord into either the Controller or the Interface box to provide power to the TranX 2000™. Whenever possible, we recommend using the Interface box, along with the battery adapter cable provided in your kit, to power up the TranX 2000™. Be sure to run the Black clip to battery ground and the Red clip to battery 12 volts.

Each TranX 2000™ dedicated harness sets consists of two cables. One connects to the vehicle transmission and the other to the vehicle's ECU harness. Both of these adapters attach to the interface box. You only need to use the transmission side adapter if you are working on the bench. To prevent user error, all ECU (Harness) side cables have male pins at the DB 25-way connector, while all Transmission side cables have female pins at the DB 25-way connector.

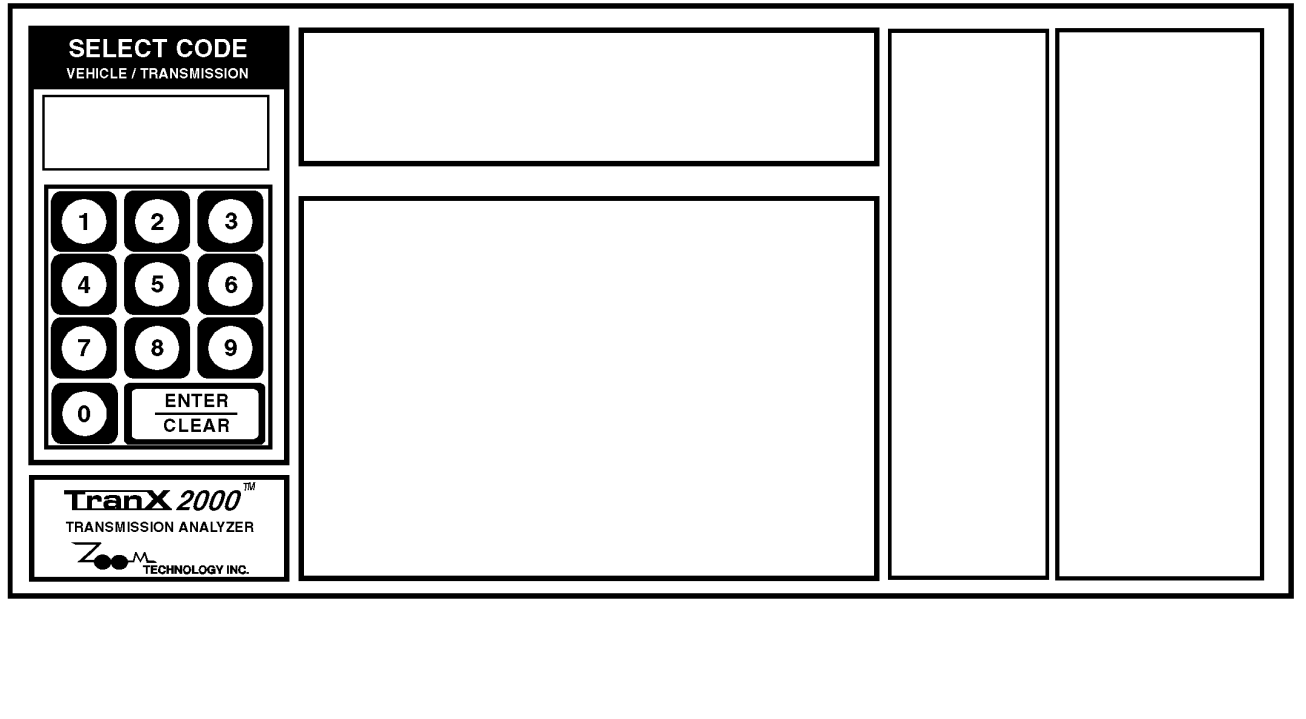
Dedicated harness sets are listed on the transmission test sheets, along with connector drawings and wire charts. Original equipment connectors are used whenever possible and new harness sets are constantly being offered. If you need an adapter set that we do not currently offer, we will be happy to wire a set for you for a small fee assuming you can provide us with the connectors. Please call in advance for more information.

Your kit also contains a small bag with 1 Red test point lead, 1 Black test point lead, and a spare 10 amp fuse. To make sure your TranX 2000™ will last a long time, use the test point leads whenever you use a multi-meter (or other shop equipment) with your TranX 2000™. They are designed to easily fit into the test point sockets on your TranX 2000™. The 10 amp fuse is provided in the event the one in your power cord blows. Simply unscrew the end of the lighter plug and replace the fuse. **ALWAYS** replace the fuse with 3AG10 Fast Blow 10 Amp fuse.



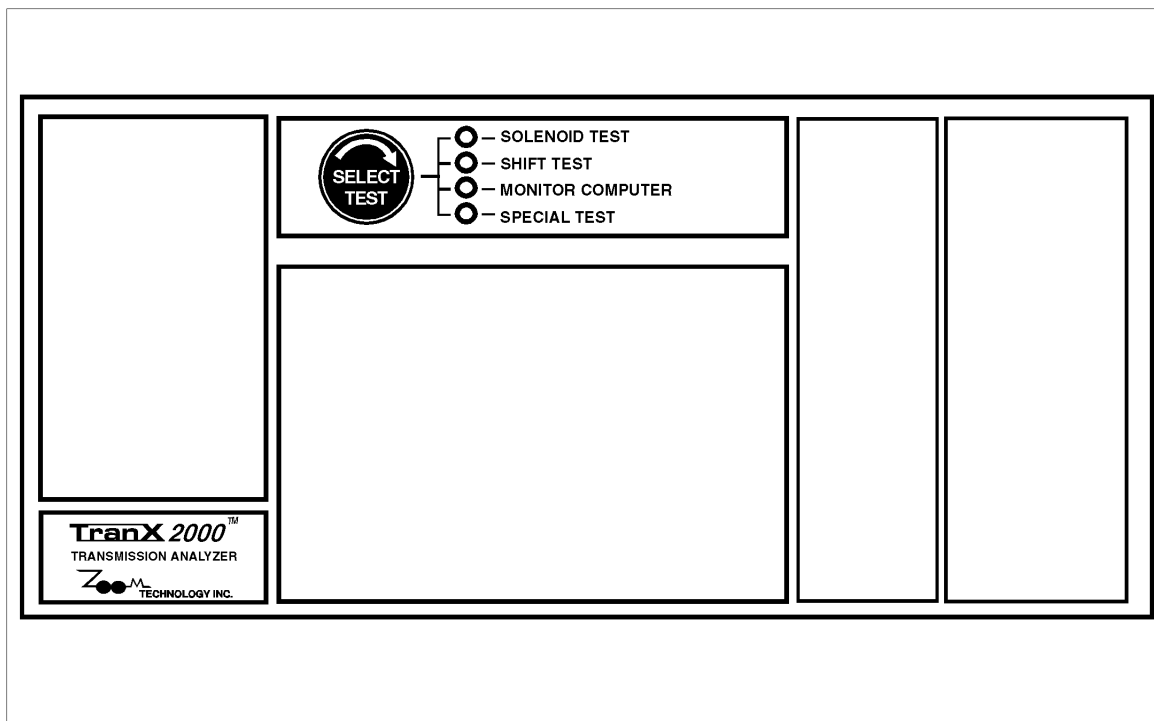
TranX 2000™ Control Panel

The TranX 2000™ control panel contains 5 sections. These sections are explained in detail on the following pages. Each page shows a diagram of the sections and where it is located in the TranX 2000™.



Section 1: SELECT CODE

Every transmission has a 3 digit code, which is clearly marked on the upper right hand corner of the test sheets. An index of all the test codes is at the back of the manual. Press code into the keypad (the number pressed will be displayed) and push the **ENTER/CLEAR** button. If you make a mistake entering the code, continue entering the code until the correct number is displayed, then push enter. The TranX 2000™ is now programmed to correctly drive the solenoids for the transmission you are testing.



Section 2: SELECT TEST

The TranX 2000™ can perform 3 tests at this time (Special Test is reserved for future transmissions). Press the **SELECT TEST** button to choose the test you want to perform. The Operations section of this manual further details how to run these test.

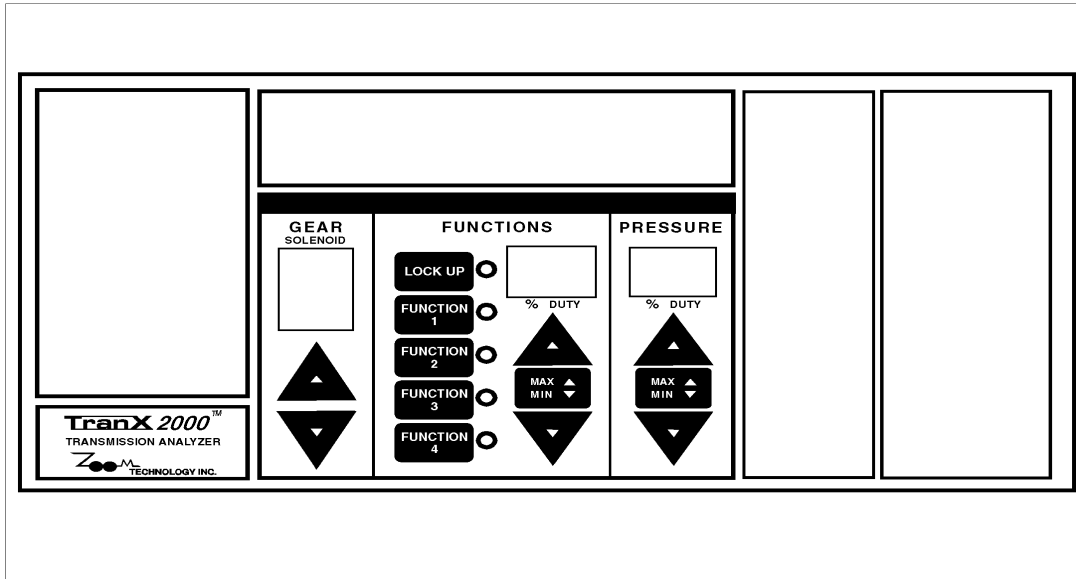
SOLENOID TEST allows you to isolate each solenoid and quickly check for open and shorts. **Always run this test with engine off.** You can run this test on the bench or in the vehicle.

SHIFT TEST provides the ability to drive the vehicle bypassing the vehicles computer (ECU). All shifting information was programed when you entered the transmission code. By separating the transmission from the ECU, you will quickly determine whether the problem is in the transmission or in the ECU. You can also run this test on the bench.

During the **MONITOR COMPUTER** test, the TranX passively monitors signals sent by the ECU to the transmission. These signal are decoded and the gear the vehicle is in is displayed, along with any special function (lock-up, coast clutch, etc.).

CAUTION:

Always come to a **COMPLETE STOP & TURN ENGINE OFF** before changing test modes



Section 3: TRANSMISSION OPERATION

This section is divided into 3 areas: **GEAR (Solenoid)** Selection, special **FUNCTIONS**, and **PRESSURE** control.

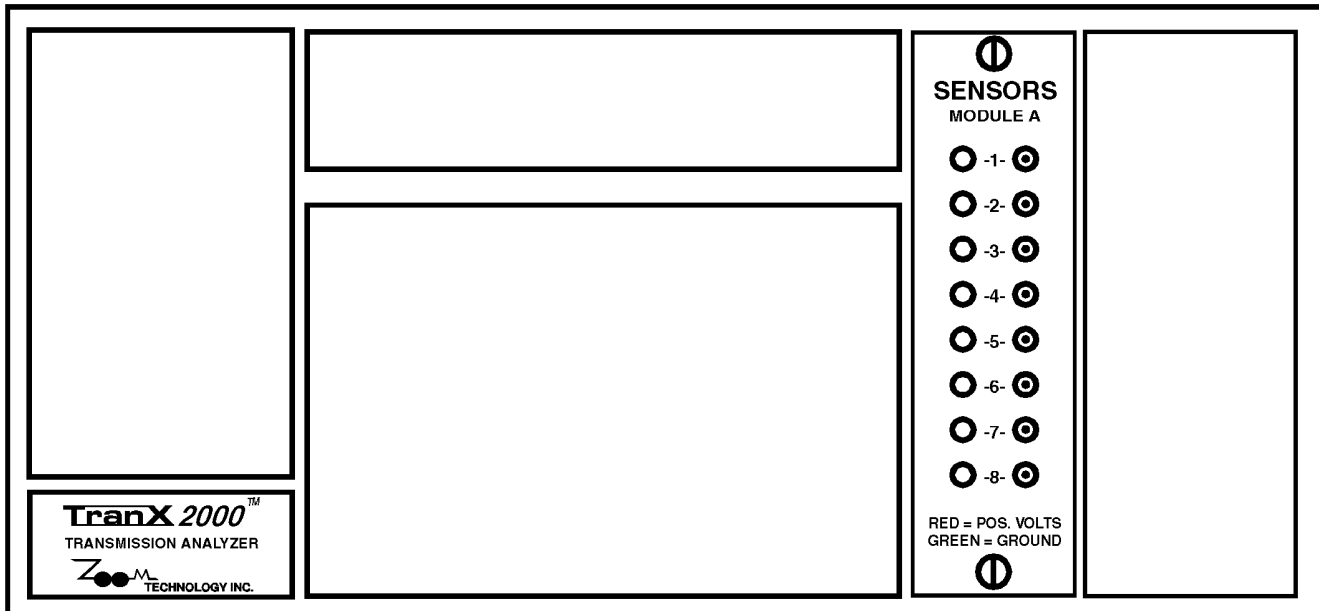
Press the GEAR up and down arrows to select the gear you want the Shift test. Use the GEAR up and down arrows to isolate the solenoid you want to test in Solenoid Test mode. The gear (or solenoid) is displayed in the gear LED window.

The functions area allows you to engage and control special solenoids such as lock up, coast clutch, etc. Simply press the function button on or off. An LED next to the button indicates when it is on. Function are marked on the transmission test sheet. Pulse width modulated functions can be controlled using the % Duty up/down arrows. You can quickly get maximum or minimum duty by pressing the MAX/MIN button before pressing the UP/DOWN arrow. During solenoid test, the Gear up/down arrows are used to test special function solenoid channels. Remember, DUTY = % time the solenoid is energized.

The pressure control area allows you to control line pressure duty in 1 % increments. Like the function % duty, use the up/down arrow to increase/decrease pulsing of the pressure solenoid. You can quickly go to maximum duty (minimum line) or minimum duty (full line pressure) by pressing the MAX/MIN button before pressing the up/down arrow. Remember, DUTY = % time the Force Motor is energized, 00% = Maximum Line, 50% usually = Minimum line.

CAUTION:

Always come to a COMPLETE STOP & TURN ENGINE OFF before changing test modes



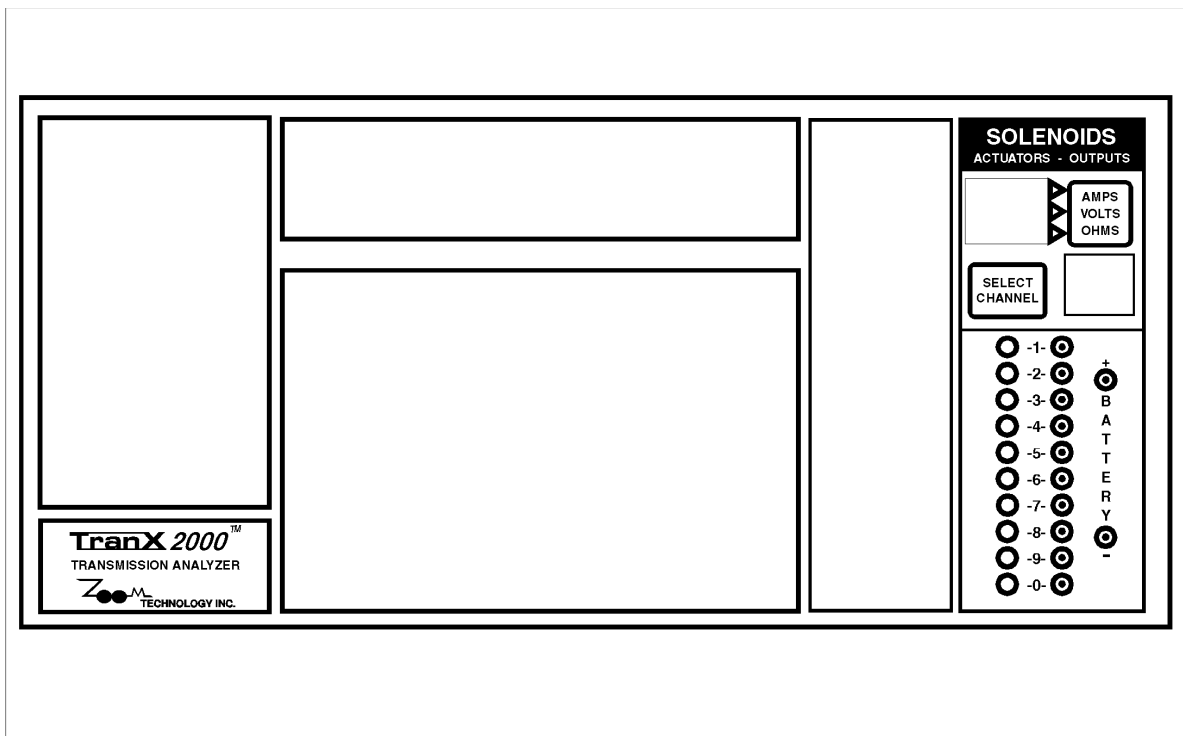
Section 4: SENSOR MODULE A

Sensor testing is simple with the TranX 2000™ . Sensor channels 1 through 4 are used to monitor pressure switches like those on the 4L60E. The LED indicators have 3 states: **Red** indicates positive voltage, **Green** indicates ground, and **Off** indicates no voltage.

Sensor channel 5-8 are used for TOT sensors, or other sensors you wish to check. Plug your ohm meter into the sockets, using the test leads included with your kit, to measure reading from the sensors. Use the sensor clip set to attach to sensors not connected through the case connector.

CAUTION:

Always come to a COMPLETE STOP & TURN ENGINE OFF before changing test modes



Section 5: OUTPUT, MULTIMETER, BREAK-OUT BOX

This section is where you measure the results of your testing. Pressing the **AMPS-VOLTS-OHMS** button to choose AMPS, VOLTS, or OHMS. The measurement for the selected CHANNEL displayed is given. During the Solenoid test, the output channel switches as you select the solenoid you are testing. By pressing the SELECT CHANNEL button, you can read measurements for any solenoid channel you wish to see during the Shift test and Monitor Computer test.

All 10 solenoid channels have test point socket and a LED indicator. During the Shift and Monitor Computer tests you can observe solenoids being engaged by watching the LED. The LED will be green if the solenoid is driven to ground, red if driven to 12 volts, and orange if it is pulsed. The transmission test sheets provide the schedule (truth table) of solenoids for each gear.

Next each solenoid channel indicator is a test point socket. You can use your multimeter (or other shop equipment) with the test leads provided to quickly take measurements from any solenoid circuit. Battery ground is provided. The Break Out Box also provides battery voltage test point socket, so you can quickly check the voltage coming from the battery.

CAUTION:
 Always come to a COMPLETE STOP &
TURN ENGINE OFF before changing test modes