

LIMITED WARRANTY

COMPUDRIVER™

COMPUTORQ™ are warranted against defects in material and workmanship for a period of 90 days from the date of purchase shown on the warranty card. The warranty card must be completed and returned to the factory. We, or one of our authorized representatives will, at our option, repair or replace any tool or part of the defective tool or part that is returned postage prepaid. This warranty shall not apply to tools or parts which have been altered, damaged, misused or abused.

The forgoing obligation is the sole liability under this warranty. There are no other warranties, expressed or implied including those of merchantability or fitness for purpose. Under no circumstances shall the manufacturer be liable for any special incidental or consequential damages.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

COMPUDRIVER™ COMPUTORQ™

Computerized
Torque Wrenches
with Memory



INSTRUCTIONS

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Please read entire instruction manual before attempting to use **COMPUTORQ™** .
COMPUDRIVER™

DESCRIPTION

COMPUDRIVER™

COMPUTORQ™ are compact, hand held, highly accurate digital torque wrenches with a built-in computer. In operation, torque is measured by means of an electrical signal generated by two pairs of strain gauges in a Wheatstone Bridge circuit.

The computer program permits a target torque value along with percentage tolerances to be preset into memory. The tolerances are entered and displayed separately and need not be the same value.

Accuracy is better than plus or minus one percent ($\pm 1\%$) of actual torque or five scale increments, whichever is greater. (See specifications, page nine, for values of increments). This accuracy applies to the range 20% to 100% of full scale. Accuracy of $\pm 1\%$ of applied torque, 20% to 100% of full scale, is available on special order. Torque may be applied and measured in the clockwise or in the counter-clockwise directions with equal accuracy. Compudriver clockwise direction only.

COMPUDRIVER™

COMPUTORQ™ is designed so that all torque readings are sensor controlled and therefore totally independent of the position of the operator's hand on the handle. For convenience, torques may be instantly converted from English to appropriate Metric units, except Compudriver and 502CI Computorq.

COMPUDRIVER-ET SX

COMPUTORQ-XT models may be connected to TorqPac extended memory systems for on line transmission to printers or computers and for use in Statistical Process control.

The computer is powered by a standard nine-volt battery with enough power for over hundred hours of normal operation.

COMPUDRIVER™

COMPUTORQ™ are precision measuring instruments designed for production, quality control and/or laboratory service. A rugged, plastic carrying case is standard.

FEATURES

- Accuracy is better than plus or minus one percent ($\pm 1\%$) of actual torque or five scale increments, whichever is greater. (See specifications, page nine, for values of increments). This accuracy applies to the range 20% to 100% of full scale. Accuracy of $\pm 1\%$ of applied torque, 20% to 100% of scale is available on special order.
- Resolution: 1400 divisions in scale.
- Repeatability: $\pm 0.5\%$
- Torque clockwise or counter-clockwise with equal accuracy except COMPUDRIVER™ clockwise direction only.
- Remembers up to fifteen torques.
- Signals preset limits of torque by light and tone.
- Easy-to-read digital torque display.
- Dependable rugged construction.
- Cushioned plastic storage case.
- Temperature range 20 to 120 degrees Fahrenheit.

MODES OF OPERATION

A. Digital Torque Mode

In this mode, **COMPUTORQ™** COMPUDRIVER™ serves as a torque wrench. Torque is continually displayed in appropriate units. Maximum applied torque may be recalled after each application for convenience of recording.

B. Production Mode

Desired torque or units may be preset along with percentage tolerances. Torque and upper and lower limits of tolerance may be adjusted independently. After torque and tolerance have been preset, the wrench will signal a properly torqued fastener with an audible tone and a green light, and will signal a torque above the preset range with a red light.

C. Production Memory Mode

After torque and tolerance have been preset **COMPUTORQ™** COMPUDRIVER™ will average up to fifteen torques from fasteners tightened to within the preset limits, and will read out the following information:

- Last applied torque
- Number of properly torqued fasteners
- Average applied torque
- Maximum applied torque
- Minimum applied torque

D. Conversion Mode

COMPUTORQ™ may be used to convert from one set of measuring units to another. As an example from foot pounds to Newton meters and to meter kilograms. The model 501CI and COMPUDRIVER™ may not be used for units conversion since it has only one scale.

OPERATING INSTRUCTIONS

See page 7 for illustration

Switch the wrench on and a tone will sound and both max and min lights will flash. See FFFF displayed. If the liquid crystal display is blank, or if the tone and light do not operate as described above, change the battery. PRESS [1] or [Z], zeros are displayed. The wrench is ready to use.

A. To Indicate Applied Torque:

Apply torque. Torque reading appears on the liquid crystal display. To recall the last applied torque PRESS [3] or [R] PRESS [4] or [S] to reset the wrench to zero.

B. To Preset Torque, Tolerance and Scale* PRESS [4] or [S] two times.

The first digit blinks.

(a) If no change in setting is desired, PRESS [2] or [M] one or more times until the desired digit appears. For example, PRESS [2] or [M] two times. The display shows

PRESS [4] or [S] to go on next digit or unit. High and low tolerances and units of measure are changed in exactly the same way.

It is not necessary to set all of the digits. If no change is required, the operator may short cut this procedure by PRESSING [1] or [Z] to return the wrench to zero. This sets torque and tolerance and scale into memory. PRESS [4] or [S] at any time to recall preset torque and tolerance limits.

*The scale is fixed on the model 501CI + 501ETS and cannot be changed.

Changing scales more than once (example changing the scale from ft. lbs. to Nm to Mkg and back to ft. lbs) may result in conversion errors due to rounding off in the computer.

C. To Store Applied Torque[s] after B:

Apply torque, PRESS [2] or [M]. Repeat for up to fifteen fasteners. Increasing applied torque to the lower limit (torque setting less negative tolerance) causes a green (MIN) light to come on and a tone sound. A further increase in torque beyond the upper limit causes the red (MAX) light to come on and the tone to stop. When an applied torque is being entered into memory by pressing to and CCCC appears as shown, the torque value will not be stored for one of the following reasons:

- (1) Applied torque is not in the limits.
- (2) The torque was already entered.
- (3) Torque was applied in a different direction than the first stored torque.
- (4) Fifteen torques were already stored.

D. To recall Stored Data:

PRESS 3 or R and repeat five times. Read:

- Last Applied Torque1
- Number of correctly torqued fasteners2
- Average Applied Torque3
- Maximum Applied Torque4
- Minimum Applied Torque5
- 0000**6

Continue to press to repeat output readings if desired.

**With this reading, PRESS [2] or [M] to clear the stored torques from memory. Torque limit settings remain in storage.

Turn off to clear all memory or to save the battery for long periods of storage. For short periods of storage, such as coffee breaks, we recommend that the switch remain in the on position. **COMPUTORQ™** **COMPUDRIVER™** enters a "sleep" or low power mode to conserve its battery approximately one hundred seconds after the last use or instruction. No information is lost. To "wake up" the wrench PRESS **1** or **Z**.

ILLUSTRATION



MAINTENANCE

COMPUDRIVER™

COMPUTORQ™ are highly accurate measuring instruments and, as all quality tools, should be treated with care and respect. If bbbb appears when the wrench is switched on the deflecting beam has been overloaded by more than twenty-five percent of the indicated maximum range. Return the wrench to the factory.

Replace the battery when a blank liquid crystal is seen or when necessary as described in the operating instructions, page 5. The battery is a standard nine-volt size, available in many supermarkets, hardware stores, home centers, camera and radio retail outlets. The battery is located under the back cover (remove the small screw). Always turn the wrench off before changing the battery to prevent damage to the electronics.

There are no user serviceable repair parts inside **COMPUTORQ™** and **COMPUDRIVER™**. For repair, pack securely and send postage prepaid to:

COMPUDRIVER™
COMPUTORQ™ REPAIR CENTER
19220 San Jose Avenue
City of Industry, CA 91748

Please include:

- (1) A description of the problem.
- (2) Your name, address and telephone.
- (3) A repair order (when appropriate).

CAUTION DO NOT:

- (1) Use the tool in any way which would be unsafe or might cause injury to anyone.
- (2) Immerse in any liquid.
- (3) Use an extension or "cheater".
- (4) Use as a pry bar or "nut buster".
- (5) Torque beyond the scale range.
- (6) Store above 130 degrees Farenheit.

COMPUTORQ™ COMPUDRIVER™ SPECIFICATIONS

MODEL	DRIVE, IN	RANGE	INCREMENTS	LENGTH, IN	WEIGHT, LB
501CI*	1/4	3-50 3-50 3-50	0.3 in lb 0.3 dNm 0.3 cmkg	10.5	1.5
2502CI*	3/8	15-250 16-280 16-280	0.3 in lb 0.3 dNm 0.3 cmkg	14.9	2.0
502CF*	3/8	3-50 36-600 40-680 40-680	0.03 ft lb 0.3 in lb 0.3 dNm 0.3 cmkg	14.9	2.0
2503CF*	1/2	15-250 20-340 2-34	0.2 ft lb 0.2 Nm 0.02 mkg	21.5	3.2
6004CF*	3/4	35-800 50-820 5-83	0.3 ft lb 0.4 Nm 0.04 mkg	46.5†	9.5
1005CF*	1	60-1000 80-1350 8-140	1.0 ft lb 1.0 Nm 0.1 mkg	74.0†	19.0
501-ETS	1/4	3-50	0.3 in lb		1.5
50D-ETS	1/4	3-50	0.3 dNm		1.5
50C-ETS	1/4	3-50	0.3 cmkg		1.5

* Standard range. Computorq-Compudriver "wakes up" in this scale.

+ Metric-Compudriver "wakes up" in this scale.

* Alternate Metric Computorq "wakes up" in this scale.

Display may be switched to other scales as shown except for the model 501C1 + 501ETS Standard and 501C1 Metric which have one scale each and therefore scales cannot be switched.

† Includes one extension handle.

* Use the suffix -XT + SX when Torque-Pac external memory systems are used. These Computorq - Compudriver wrenches include special electronics and plugs for connection to Torq-Pac storage units. Example: 2503CF-XT.