AIMCO

AUET & AUET/MTM Desktop Torque Testers

Quick Start Guide
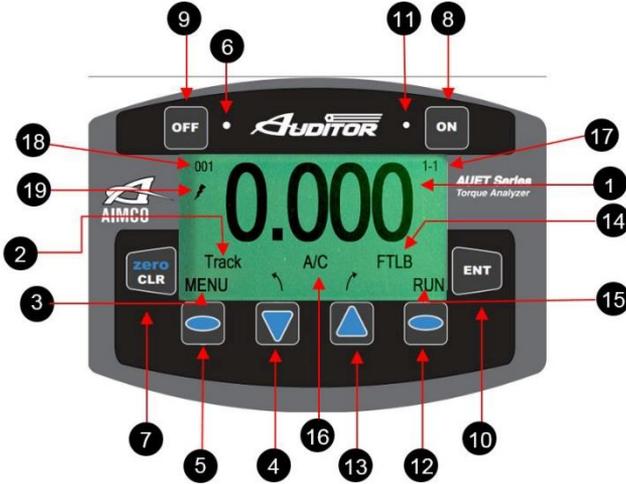
- Safety Requirements
- Step By Step Functionality
- Detailed Operating Procedure

SCREEN AND BUTTON DIAGRAM
Figure 1

1. **Data Display**
2. **Operating Mode**
3. **Menu Mode Status**
4. **Selection Arrow – Down**
   - ➢ Change Operating Mode
   - ➢ Scroll Down through Menu screens
5. **Left Selection Button**
   - ➢ Menu Mode
   - ➢ Reduce Parameter Value
   - ➢ Select Parameter
6. **NOK Value Indicator LED (RED)**
7. **Clear Data Display Value / Manually ZERO Display**
8. **Power On**
9. **Power Off / Charging Mode**
10. **Enter**
    - ➢ Set Values
    - ➢ Back up one Menu Screen

11. **OK Rundown / Charging Mode Indicator LED (GREEN)**
12. **Right Selection Button**
    - ➢ Data Storage Mode
    - ➢ Increase Parameter Value
13. **Selection Arrow – Up**
    - ➢ Change Engineering Units
    - ➢ Scroll Up through Parameter Screens
14. **Data Storage Mode Status**
15. **Engineering Unit Status**
16. **All Clear Status Indicator (Absent when A/C turned OFF)**
17. **Menu Screen Indicator / Stored Rundown Number**
18. **Angle / Pulse Value Display**
19. **External Power Supply Indicator**

Turning On / Off

To turn the **AUET** & **AUET/MTM** on, press the **"ON"** button *(Figure 1).* The AIMCO logo will be displayed for approximately 4 seconds, then the unit will start at the **RUN** or sequential **MEM** mode of the tester.

To turn the **AUET** & **AUET/MTM** off, simply press the **"OFF"** button.

Set Torque Reading Mode

OPERATING MODE Descriptions

By selecting the proper **Operating Mode,** the user can properly take torque readings from a variety of manual and powered tools.

- **PEAK**

This mode will provide a display of the maximum torque value achieved by the tool during operation. This mode is used for all continuous drive tools impact or impulse tools, dial wrenches and to identify highest torque delivered with click type wrenches.

- **1st PEAK**

This mode will detect and display the "first peak" achieved by click wrenches and cam-over screwdrivers.

- **PULSE**

This mode counts the number of events (pulses or impact blows) in a cycle. This mode does not change the manner in which peak torque is identified.

- **TRACK**

This mode will display torque in real-time as it is applied to the connected transducer. Track mode is used primarily for calibration of the unit or identifying the condition of the transducer. In Track Mode with no torque on the transducer, the display should show zero.

While in the Main Display screen, press the **Selection Arrow-Down** button to cycle through the available Operating Mode choices. The choices will be displayed in the following order:

Peak ⟶ 1st Peak ⟶ Pulse ⟶ Track

Setting ENGINEERING UNITS

The **AUET** & **AUET/MTM** must be in **RUN MODE** in order to change the **Engineering Units.** If torque values have been stored in the **AUET** & **AUET/MTM** while in **MEMORY MODE**, then the memory must be cleared in order to change the Engineering Units.

While in the Main Display screen, press the **Selection Arrow-Up** button to cycle through the available Engineering Unit choices. The choices will be displayed in the following order:

FtLb → InLb → InOz → KgFM → KgFCm → GFCm → CNm → NM

3
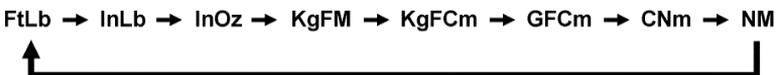
Sign Lock

The **SIGN LOCK** feature allows the user to select the rotation direction in which a torque peak will be captured. With **SIGN LOCK** set to **ON**, the initial first rundown direction is set as the default direction.

If the initial rundown was performed in a clockwise direction a positive reading indicates a reading taken in the clockwise direction while a negative torque value indicates a reading taken in the counter-clockwise direction. If the initial rundown is taken in a counter clockwise manner, then the opposite will hold true. Any readings taken in the non-selected direction will be measured, but not captured / displayed as a peak value.

The direction of the first rundown taken after tester is powered ON will be the direction measured. If initial rundown direction is NOT the direction to be measured, turn tester OFF, restart and run in desired direction.

With **SIGN LOCK** turned **OFF**, peak values in both the clockwise and counter-clockwise directions will be captured and displayed.

Since most torque rundowns are conducted and readings are taken in the clockwise direction, the user may find it beneficial to turn this feature **ON**.

Turning Sign Lock ON / OFF

1. From the main display press **MENU.**
2. Press the **Right Selection** button to select **PEAK OPTIONS MENU.**
3. Use the **Selection Arrow** buttons to select **SIGN LOCK.**
4. Use the **Left Selection button** to toggle **SIGN LOCK** on or off.
5. When the desired value is selected, press **ENTER** to save and progress to the next **MENU** level.

*At any **Menu** level, pressing **ENT** twice will return to the Main Display Screen at the previously set **Operating Mode.***

Charging the Auditor AUET & AUET/MTM Desktop Torque Tester

1. Plug the 100 – 240 VAC Charger into DC Power Supply port *(Figure 3).*
2. Plug the Charger into a 100–240 VAC power outlet using the appropriate plug end.
3. Press the "Off" button on the front panel *(Figure 1).*
4. The Charging Mode Indicator LED (Green, next to "ON" button) should begin to flash green.

   ⚡ symbol will be displayed on the Main Display screen if the unit is turned on.

5. When the AUET & AUET/MTM is fully charged the LED will stop flashing.
6. The AUET & AUET/MTM can be used as normal in AC mode with the charger connected.
7. When used in DC mode (Battery) and the battery charge is low, the ⊡ symbol (low battery) will show on the Main Display screen, see *Figure 1*, (19). The 100–240VAC Charger should be plugged into the unit immediately to continue uninterrupted operation.

RUN MODE can be used to quickly and easily take torque readings using a variety of tools in situations where storage of data and statistical feedback is not necessary.

With the **AUET** & **AUET/MTM** turned **ON**, observe the Data Storage Mode Status field *(Figure 1)*. If **RUN** is displayed, the **AUET** & **AUET/MTM** is in **RUN MODE** and can then be configured accordingly. If the status reads **MEM**, then the **AUET** & **AUET/MTM** is in **MEMORY MODE**.

Install the supplied driving bit into the Torque applying device to be tested. Engage the driving bit into the Hex screw in the supplied joint kit and run the torque applying device per its instructions. The Main Display Screen will show the Torque value received by the built in transducer.

Clearing a Torque Value / RUN MODE
When in RUN MODE, if **Auto Clear** is turned on by selecting a time value, the display screen will automatically convert back to a zero value after the set amount of seconds. **Auto Clear** clears the display and sends the value out to the serial port automatically.

When in RUN MODE, if **Auto Clear** is turned OFF, the operator must manually clear a torque value from the display:

1. Set the **Auto Clear** function to OFF.

2. While in the Main Display screen, conduct a rundown.
3. After observing the torque value for the rundown, press **CLEAR.**
4. The Main Display will convert back to a zero value and the torque value is sent out to the serial port automatically

SETUP OF EXTERNAL TRANSDUCER – AUET/MTM ONLY

The **AUET/MTM** can be used with a variety of external transducers, whether supplied by AIMCO or another manufacturer. Because manufacturers use a wide range of transducer technologies and connector types, verify that the transducer you plan to use is capable of being connected to and communicating with the **AUET/MTM**. For assistance with this, please contact your AIMCO Distributor or authorized AIMCO Sales Representative.

AIMCO's lines of *Auditor™* industry-standard transducers are manufactured with the proper connector-style for easy use with the **AUET/MTM** and will be used as the example in all following instructions.

Two (2) optional cables are available from AIMCO to connect *Auditor™* brand transducers to the **AUET/MTM**:

• Part # **ATDBLIS** Connects the ATDA to any *Auditor™* ABRT- or ARTIS Torque/Angle series transducer

• Part # **ATDBRIS** Connects the ATDA to any *Auditor™* ARTIS Torque Only series transducer

Contact your AIMCO Distributor or AIMCO authorized Sales Representative for information on ordering these cables.

Connecting a Transducer
Align the red dot on the transducer-cable connector with the red dot on the **TRANSDUCER CABLE INPUT** port *(Figure 2)* and firmly press the connector into the port. Set rotary switch to **external port.**

Setting up the Transducer to be used
The *Auditor™* AUET/MTM must be set to recognize the transducer connected to the instrument. *Most transducers can be made to allow the Auditor™ AUET/MTM to self-recognize the transducer simply when a connection is made. For assistance with this, please contact your AIMCO Distributor or*

authorized AIMCO Sales Representative for a transducer upgrade quotation.

For the typical, Industry Standard (IS) type of transducer, the setup procedure is as follows:

1. Turn the AUET/MTM **On**.
2. Within 3 seconds of pressing the **ON** button, press the **LEFT SELECTION BUTTON** *(Figure 1)* for CAL
3. Press **ENT** to SELECT UNITS. If a transducer has been previously setup, the data for that previous setup will be shown.
4. Units of measure for use in setting up the transducer may be changed in this screen by pressing the **UP OR DOWN SELECTION ARROW** to scroll through the available units. Pressing **ENT** will select the displayed unit of measure for use in setup and then display the **SELECT FULL SCALE** screen.
5. To change the number displayed to match the transducer being setup, press the **RIGHT SELECTION BUTTON** to EDIT the number.
6. The upper right corner of the screen will display the digit number that use of the **UP or DOWN SELECTION ARROWS** will effect. The bottom left corner of the screen shows the increment of adjustment that each press of the **UP or DOWN SELECTION ARROWS** changes the digit by.
7. Once the number displayed on the screen matches the transducer to be used, press **ENT** to confirm the set value.
8. The next screen will display "(+/-) 0.000" and the A-D counts. Press and hold the **RIGHT SELECTION BUTTON**

to **EDIT** the mV/V rating of the transducer being setup. System defaults to 2.00000 which is standard for all Auditor IS transducers. To insure that the selection is correct a change should be made even if the default of 2.00000mV/v is correct. Using the **UP** and **DOWN SELECTION ARROWS** adjust the reading up and down to then display the desired value. Press **ENT** if this value is correct for the transducer being setup. *It is important to be sure that the sign (+/-) shown on the A-D matches the direction of the Cal mode. If in +Cal then the sign must be positive. If in –Cal then the sign must be -. Rotation of the transducer shaft will facilitate a change from + to – should that be necessary.*

9. Percentage of Full Scale is the next adjustment. Default is 100. To limit the readable range of the transducer to be used, use the **RIGHT SELECTION BUTTON** and the **UP or DOWN** arrows to change this value. Hit **ENT** once the desired value is displayed.
10. Press the **DOWN SELECTION ARROW** to set the **–Cal**. Confirm **–Cal** by hitting **ENT**. Repeat steps 8 & 9.
11. After mV/V and Full Scale have been entered, the display returns to the A-D count screen. Hit **ENT**
12. If the value is correct, press **ENT** and *PGM* will show on the screen.
13. Press the **LEFT SELECTION BUTTON** to Save the setting. The unit will power itself off and will hold the set value until it is changed in the future or a different Intellect transducer is attached to the unit.