

QUICK START GUIDE UADTT6X48W 01.03.2016	PRODUCT: ULTIMATE ACTUATOR DRIVEBOX TEST TOWER 6 X 48W TYPE: QUICK START GUIDE SERIAL NUMBERS: all serial numbers
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Dear customer, please be careful the principles specified in the document Quick Start Guide, to prevent damage to the product. If the product is damaged by use in conflict with the Quick Start Guide or Application notes, manufacturer reserves the right to reject warranty service and repair product to the customer's account.

Manual for TT - Test Tower 6x48W

- TT comprise of 6 independent UAD units that share the same power supply, isolated USB hub, case and some control elements.
- Please see Appendix for TT requested functionality.
- Please see specifications and manuals of UAD48W for more details of separate units.

Highlights:

- There are added LED diode indicators to show DC motor activity of each UAD utilizing LED light intensity.
- There are added current sensing analog outputs from each UAD unit.
- TT does not have any display, setup, control and monitoring is supposed from a user PC.
- TT needs external 12VDC power supply
- There is one 12VDC bypass power out connector for added add-ons (SENT convertors etc.). Used connector: barrel 5.5x2.1mm
- Same USB connector type is used as for UAD48W
- Equipped with I/O System Connector. Type EDAC 516-038-000-401 & 516-230-538.
- Standalone function of configured TT can run without PC.
- Unit is equipped by two transportation handles - one on each side. Please used it.

1) Turning ON sequence:

- First connect power supply to the TT (rear power in connector, no main switch).
- Second turn on the UAD units you need to use (panel switches).
- Last connect USB to PC.

Never connect USB without TT turned on.

2) Turning OFF sequence is in reverse order:

- Disconnect USB
- Turn off the UAD units
- Disconnect TT power supply

4) Power Consumption:

- Stand by power consumption of TT: max. 3W (250mA@12VDC - cooling system, USB power)
- Working power consumption of TT: max. 290W (18A@16VDC - 6 UAD units, 3A each)

5) Power Supply:

TT doesn't include internal power supply.

External power supply shall be used. For proper function the supply shall fulfill following specifications:

- Voltage range : 10.8 - 16 VDC

- Current rating:

min. 18A (each UAD unit 3A).

recommended: 30A

- Used power cord Connector: two terminal WEIPU SP1310/S2I

Automotive Pb battery can also be used as power supply. Use 30A fuse inline of power cord as safety precaution!

6) External input demand:

- Ext.In. expect 0 - 5 VDC as position demand in closed loop mode.
- Ext.In. over voltage protected up to 20 VDC.
- Ext.In. input impedance: 70 kOhm

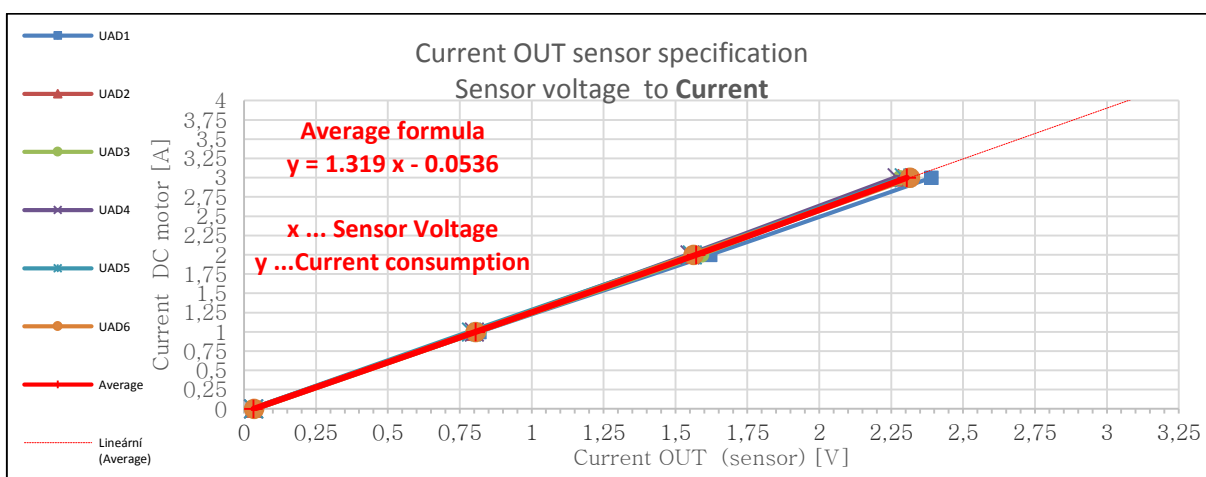
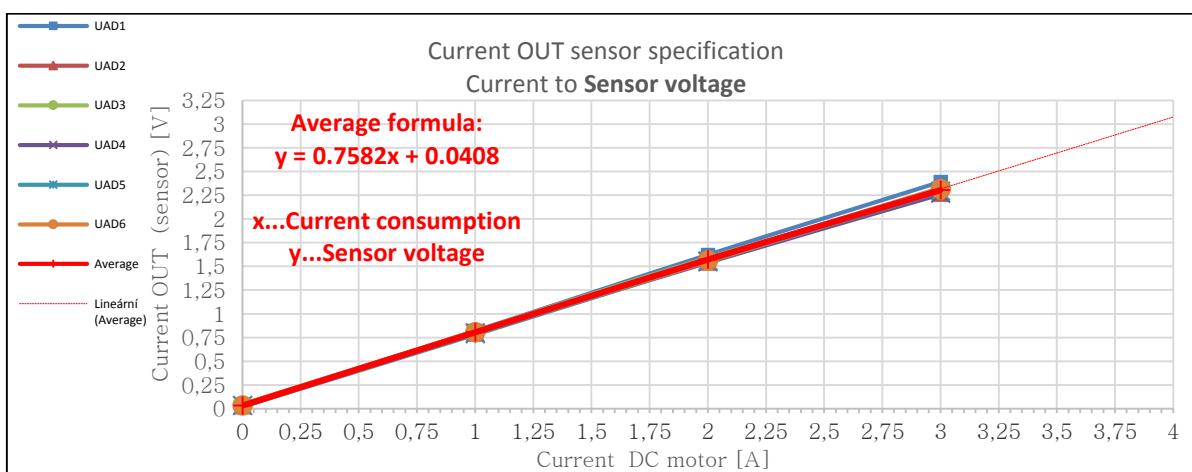
7) PC connection over USB:

- USB is galvanically isolated from TT GND. No precautions are required. Connect normally to any PC.
- UAD units need FTDI drivers to be installed, same as UAD48W.
- After connection of TT will install and appear in operating system:
 - two separate USB Hub devices
 - UAD units 1 to 6 if unit turned ON
- After connection of TT, there may be system notice: "This device can perform faster if you connect it to a usb 2.0 port". This is normal behavior and does not decrease TT performance.
- Please see the Turning ON sequence

8) DC motors current sensor feedback:

- Each UAD unit provides DC motor current sensor feedback
- Do not load current sensor feedback output more than 1mA
- Sensors are calibrated to provide following analog output:

	Current sensor [V]						
Mesured [A]	UAD1	UAD2	UAD3	UAD4	UAD5	UAD6	Average
0	0,03	0,033	0,031	0,032	0,033	0,034	0,032
1	0,818	0,8	0,816	0,8	0,79	0,805	0,805
2	1,62	1,55	1,59	1,55	1,558	1,562	1,572
3	2,389	2,275	2,28	2,27	2,295	2,315	2,304



9) Caution:

- TT contain active cooling system. Make sure the intake and outtake grille are not blocked outside the case.
- Respect the Turning ON sequence.
- Connect cables only when TT is turned OFF.
- Avoid miswiring of actuators especially mixing up DC motor and Sensor connections!