



FDF ARM CYCLE E650 Adjustable Fluid Resistance Machines User Guide

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ARM CYCLE E650



CYCLE UBE E750



UBE E850



MEDICAL UBE E950



* FDF reserves the right to modify any product design, manufacture or aesthetic without notice or consultation. Product specifications and warranties may vary from country to country.

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CONSOLE OVERVIEW

- First Degree Fitness Fluid Exercise Models
- Bluetooth® FTMS Rower Data Compatibility
- Bluetooth® Heart Rate Monitor Compatibility – Including Polar Bluetooth® Monitors
- Automatic Resistance Level Detection
- Numeric Display of Workout Data and Heart Rate
- Real-Time Speed and Watts History Scrolling Charts
- WORK/REST Interval Workouts
- Simple 3 Button User Interface
- Auto power down after 5 minutes of no activity (ONLY if Bluetooth® is not connected)
- 2 x D Cells for Extended Battery Life

WORKOUT OPERATION

A user will exercise during active **WORK** Intervals and is expected to rest the during active **REST** Intervals.

START UP SCREEN

Press any button or begin exercising to power on the console. The startup screen displays firmware version information, selected equipment model, and battery level.



Firmware Version:

August 11, 2020 @ 7:40pm

Model: 3000 (UBE E650 Arm Cycle)

Battery Level: 93%

USING THE CONSOLE

WORKOUT DISPLAY



DISPLAY READINGS

WATT: Current input power while exercise is ongoing, average power when at rest.

TIME: Workout elapsed time in minutes and seconds.

CALS: While exercising this shows kCals/hr burned, when a workout is paused or stopped this shows total kCals burned.

WORK: Shows active Work Time remaining.

REST/DIST: Shows active Rest Time remaining or Accumulated Distance while Work is ongoing.

PULSE: Heart Rate from a Bluetooth® connected heart rate monitor.

LEVEL: Current resistance level which automatically updates when adjusted on the equipment.

RPM: Current cadence at crank in Revolutions per Minute.

CHART: Shows real-time on-road Speed or Watts history.

WORK BUTTON: Cycle Work interval through 0:15, 0:30, 1:00, 1:30, 2:00, 2:30, 3:00, 3:30, 4:00, 0:15, etc.

REST BUTTON: Cycle Rest interval through 0:15, 0:30, 1:00, 1:30, 2:00, 2:30, 3:00, 3:30, 4:00, 0:15, etc.

BATTERY WARNING

Remove Batteries from the console when the equipment will not be used for 30 days or more.

USING CONSOLE BUTTONS

CONSOLE BUTTONS

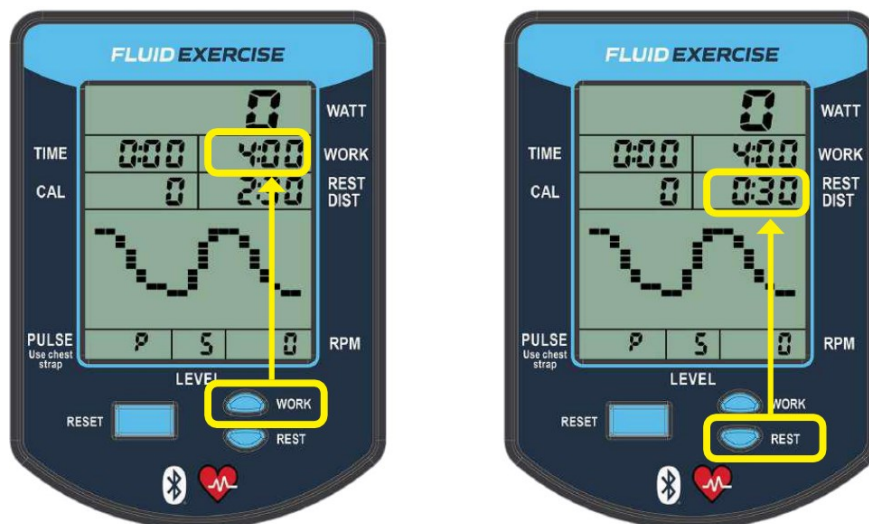
PRESS ANY BUTTON TO TURN ON CONSOLE

RESET BUTTON: Press and hold RESET to reset console readings to zero.

WORK BUTTON: Press WORK button to set Work Interval.

REST BUTTON: Press REST button to set Rest Interval.

CHANGING WORK/REST INTERVALS



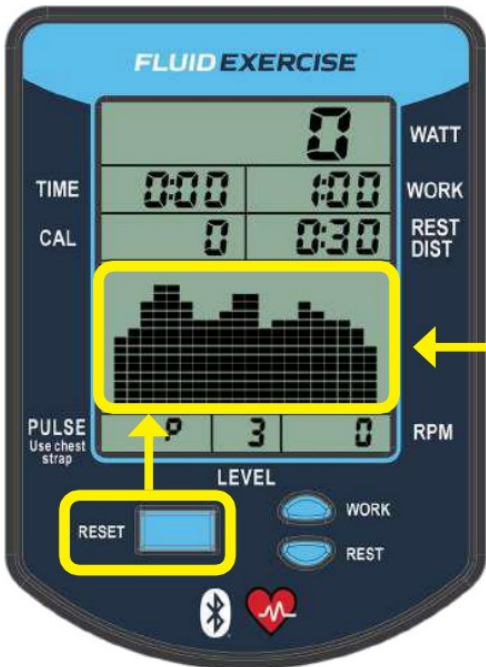
- Press any button to turn on console.
- Press and hold RESET to clear console data.
- Use the WORK buttons to set Work Interval.
- Use the REST buttons to set Rest Interval.
- When exercise begins the Work Interval will start counting down and REST/DIST will display accumulated distance.
- When the Work Interval reaches 0, the console will beep, and the Rest Interval will start to count down and will

be shown in REST/DIST. When this reaches 0 the console will beep and will wait for exercise to resume before starting the Work Interval count down.

USING THE CONSOLE

CHANGING CHART TYPE

WATTS HISTORY

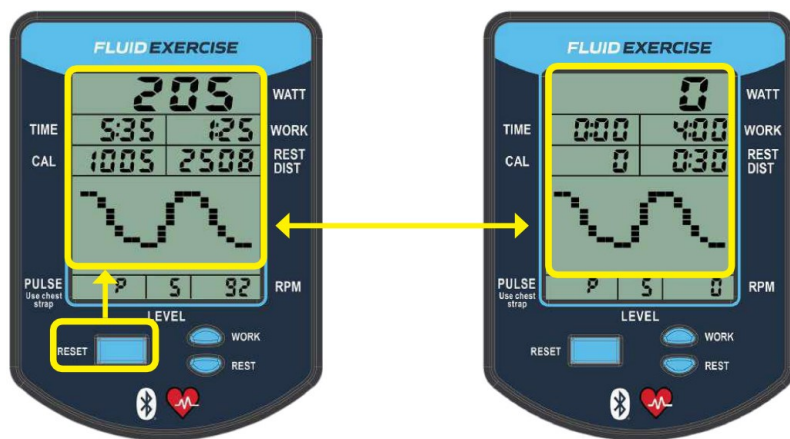


REAL-TIME SPEED



Click RESET to toggle between chart types

CONSOLE RESET



To clear workout data press and hold RESET for 3+ seconds.

Note – Bluetooth® will be disconnected.

SPECIAL FUNCTIONS

EQUIPMENT SELECTION

The correct equipment type is set at the factory as part of the manufacturing process so this procedure should not be required by an end user under normal circumstances.

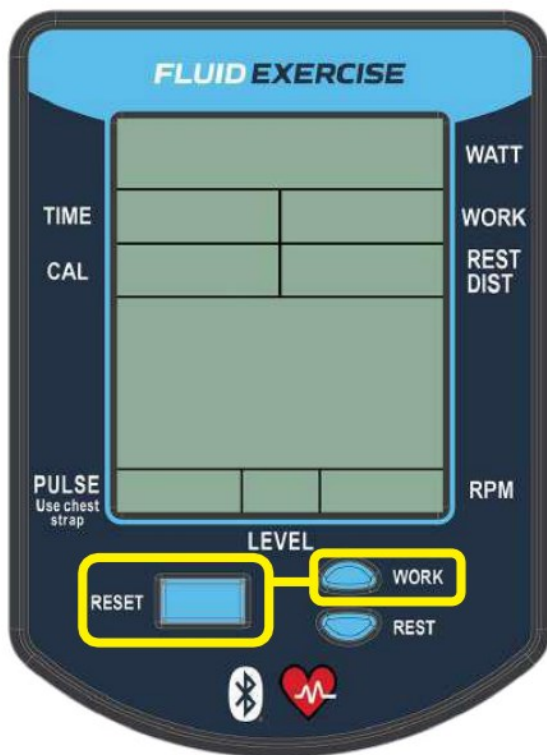
If required, follow these steps

1. Remove the batteries from the console.
2. While reinserting the batteries **press and hold the RESET and UP buttons for 3+ seconds.**
3. The console will beep twice and the select equipment screen will be displayed.
4. The **CAL field shows the currently selected equipment.**

EQUIPMENT ID IN CAL WINDOW	EQUIPMENT ID
3000	Fluid Exercise – E650 ARM CYCLE
3001	Fluid Exercise – E750 CYCLE UBE
3002	Fluid Exercise – E850 UBE
3003	Fluid Exercise – E950 MEDICAL UBE

5. Use the UP and DOWN buttons to select the required equipment.
6. Press RESET to confirm selection and the console will reboot with the selected configuration.

HOLD TO REST



SELECT EQUIPMENT



BLUETOOTH CONNECTIVITY

CONNECT TO MOBILE DEVICE

For connection to a recognized fitness app running on a mobile device follow these steps.

1. Power on the console.
2. Press and hold **WORK** and **REST** buttons for 3+ seconds.
3. The console will beep once and display the BT connect screen.
4. Press the **WORK** button to select Bluetooth® **FTMS** connection.
5. Follow the equipment select instructions of the app. See example below.

STEPS 2 – 4 ARE ONLY REQUIRED FOR FIRMWARE OLDER THAN JULY 2020 – SEE PAGE 4 FOR DETERMINING FIRMWARE VERSION. FOR NEWER FIRMWARE BLUETOOTH IS ALWAYS ON.

POWER ON



BLUETOOTH CONNECT SCREEN



WAITING FOR CONNECTION



CONNECTED



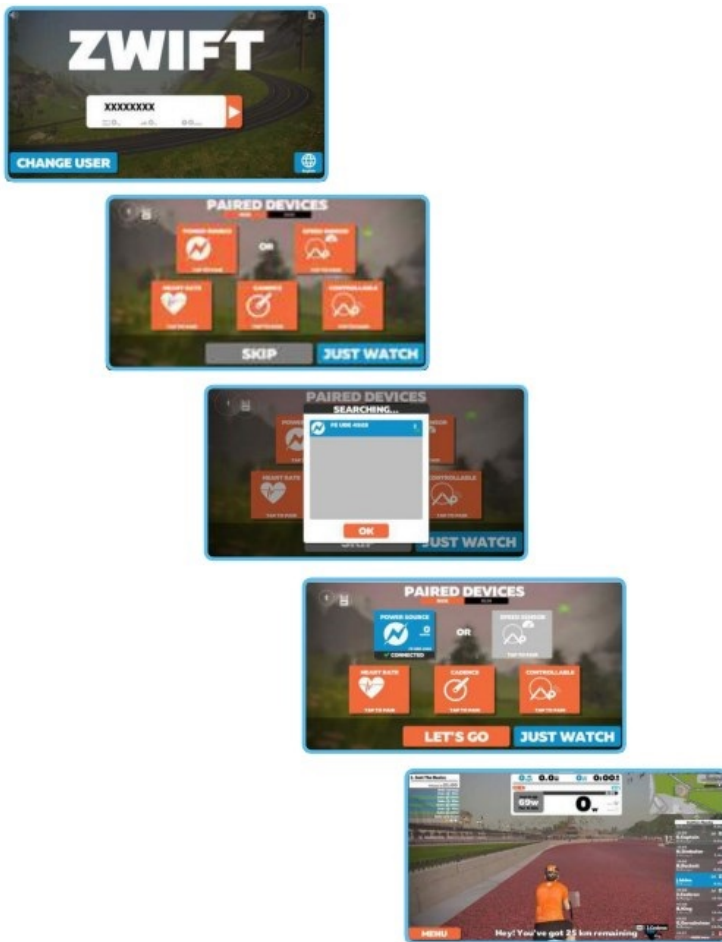
6. When a successful connection is made the console will show a simplified workout screen, charts only with no readings. It is assumed the connected app will show workout data in a suitable format.
7. If no connection is made within 60s the console will return to the standard workout screen

For the **FDF FLUID CONNECT** app, the user will be presented with the following equipment select screen. Click **CONNECT** to complete the connection.



CONNECT TO MOBILE DEVICE APP

For example, if using the Zwift app, the user will be presented with the following screens



CONNECT TO BLUETOOTH HEART RATE MONITOR

Follow these steps to connect with a Bluetooth® Hear Rate monitor.

1. Power on the console.
2. Ensure the Heart Rate monitor is in close proximity with the console
3. Press and hold WORK and REST buttons for 3+ seconds.
4. The console will beep once and display the BT connect screen.
5. Press the REST button to select Bluetooth® Heart Rate connection.
6. Follow the connect instructions of the Heart Rate Monitor.

* Compatible monitors should automatically connect if within rang

POWER ON



BLUETOOTH CONNECT SCREEN



WAITING FOR CONNECTION



CONNECTED AND HEART RATE DISPLAYED



7. When a successful connection is made the console will return to the workout screen with the heart symbol displayed in the PULSE field.
8. If no connection is made within 60s the console will return to the workout screen.

CONNECT TO BLUETOOTH CHEST STRAP

When connecting Bluetooth Console with Bluetooth Chest Strap, make sure the distance between the two is no further than 30cm.



CONSOLE SUPPORT

FDF FLUID CONNECT APP



To update the Firmware simply follow the instructions provided by the App.

- **START**



- **TURNING CONSOLE ON**



- GETTING INTO OPTIONS



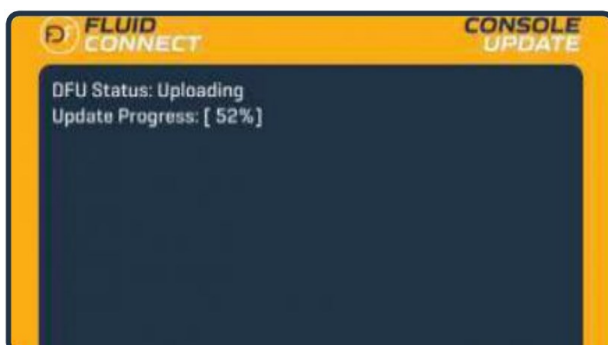
- SELECT BT OPTION



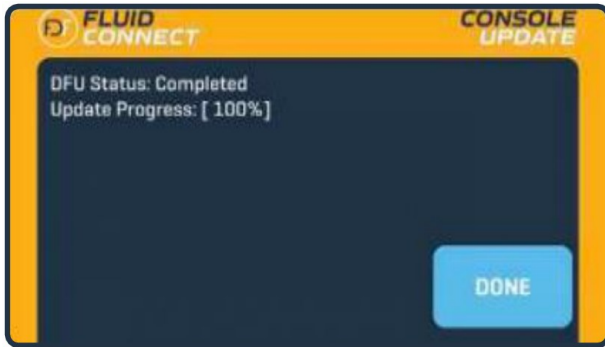
- SELECT EQUIPMENT



- DFU/FIRMWARE UPLOADING



- **DFU/FIRMWARE COMPLETE**



FLUID RESISTANCE LEVEL CALIBRATION PROCEDURE

Calibration of the resistance level sensor may need to be done periodically.

TO DO THIS FOLLOW THESE STEPS.

1. Power on the console.
2. Press and hold WORK and REST for 3+ seconds.



3. The console will beep once and display the calibration screen.

***The numbers below is a non realistic example of calibration of a 10 level tank**

2	26
---	----

3	39
---	----

4	52
---	----

10	205
----	-----

4. Set the Fluid Resistance to level 1 and wait a few seconds before clicking RESET.
5. Set the Fluid Resistance to level 2 and wait a few seconds before clicking RESET.
6. Set the Fluid Resistance to the next level and wait a few seconds before clicking RESET.
7. Repeat #6 until all 10 levels have been done.
8. When all levels are done the console will reboot.
9. Check calibration by cycling through all resistance levels.

FDF – FLUID EXERCISE – FLUID RESISTANCE TWIN TANK SYSTEM

10 LEVEL VERTICAL TANKS



HANDLING & MAINTENANCE

GENERAL

- Do not press or scratch the product with any sharp objects.
- Do not forcibly bend the product.

- When the product is stored, make sure it is packed in a packing box and stored within recommended temperature range.
- Do not use or store the product under conditions where the product will be exposed to water, organic solutions, or acid.
- Do not use the product under direct sunlight.
- Clean the product with a soft cloth and neutral detergent or alcohol.
- When contaminated with chemicals, wipe them off immediately with caution not to cause injury.

BATTERY REPLACEMENT




1. Slide up rear battery cover
2. Remove old batteries
3. Insert new batteries
4. Reinsert battery cover

SPECIFICATIONS

ITEM	RATING	
Supply Voltage	~2.5V – 3.3V	2 x D Cell Batteries
Operating Voltage	3VDC ±5%	30mV peak to peak maximum ripple and noise
Current Consumption	8mA (typical operation) 3uA (sleep mode)	Bluetooth ON, LCD all ON, Sensor ON
Operating Temperature	0°C to +80°C	Avoid condensation
Storage Temperature	0°C to +80°C	Avoid condensation
Speed Sensor	< 100KHz	
Level Sensor	100K Potentiometer	
LCD	28½ x 7 Segment Digits 8 x Annunciators 20 x 16 Dots	
Chemical Resistance	Toluene, Trichloroethylene, Acetone, Alcohol, Gasoline, Machine Oil, Ammonia, Glass Cleaner, Mayonnaise, Ketchup, Wine, Salad Oil, Vinegar, Lipstick, etc.	
This product is lead-free and compliant with RoHS		



Documents / Resources

	<p>FDF ARM CYCLE E650 Adjustable Fluid Resistance Machines [pdf] User Guide E650, E750, E850, E950, ARM CYCLE E650, ARM CYCLE E650 Adjustable Fluid Resistance Machines, Adjustable Fluid Resistance Machines, Fluid Resistance Machines, Resistance Machines</p>
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References

-  [FDF Fluid Resistance](#)
-  [FDF Fluid Resistance](#)