

Overview

To enter a Service Mode, the unit must be in IDLE DISPLAY state or an ERROR. The service screens cannot be entered during a workout, paused or in a WARNING state. (If the unit is in a Warning state, you must press [CLEAR] before entering the Service Modes.) To access the console codes, press the Level Up button (▲), the group number code, and [ENTER]. Then use the arrow buttons to scroll through the menu options for each group. The procedures are outlined in the tables below.

There are six groups of Service Mode console codes: Defaults (codes starting with 2), Customize (codes starting with 3), Machine Status (codes starting with 4), Diagnostics (codes starting with 6), Maintenance Logs (codes starting with 7), and Change Machine (codes starting with 8). Each group of codes is defined below.

Defaults

You can customize several workout parameters on the E916/EV916 Elliptical with default values to conform to your individual requirements, including:

- % target heartrate (10-90%)
- age (10-99)
- workout time (5-99 min)
- workout level (1-20)
- weight (50-400 lbs. or 25-180 kg)

Refer to the following table to scan through and customize the settings:

Table 2–1. Defaults

Step No.	Press Keys	Display (What you will see)
1	▲, 2, ENTER	DEFAULTS
2	▼ or ▲	CHR PERCENT, AGE, TIME, LEVEL, WEIGHT
3	ENTER	Selected choice
4	▼ or ▲ (or numeric keypad)	Default value changes
5	ENTER	DEFAULTS
6	CLEAR	SELECT WORKOUT

Customize

You can customize several console settings on the E916/EV916 Elliptical with default values to conform to your individual requirements, including:

- resetting all configurable settings to factory defaults (see below)
- adjusting lower screen contrast (0-15)
- adjusting upper screen contrast (0-15)
- console language
- choosing type of heartrate inputs (description below)

Machine Status

- change units (USA units or metric units)
- cooldown time (1-10 min)
- maximum time limit (10-99 min or OFF)

Refer to the following table to scan through and customize the settings:

Table 2–2. Customize

Step No.	Press Keys	Display (What you will see)
1	▲, 3, ENTER	CUSTOMIZE
2	▼ or ▲	SET DEFAULTS, CONTRAST ADJ LOWER, CONTRAST ADJ UPPER, LANGUAGE, SELECT STATS*, HR INPUTS, CHANGE UNITS, COOL DOWN, MAX TIME LIMIT
3	ENTER	Selected choice
4	▼ or ▲ (or numeric keypad)	Default value changes
5	ENTER	CUSTOMIZE
6	CLEAR	SELECT WORKOUT

*The SELECT STATS menu display option is not active for the E916 and EV916.

Set Defaults – resets the machine to the factory defaults for all configurable values. Please note that selecting this option will require the machine to be reconfigured (see Change Machine section).

NOTE: All error and history counter data (Maint Hours, Distance, Workouts, Run Hours, Error Log, and QA ID Number) will be lost if Set Defaults is selected.

HR Inputs – enables the various heart rate inputs that can be used. Heart rate configurations include: Locked Inputs (both heart rate monitors are read until it detects a valid signal to lock on, at which point the other HR inputs are ignored), HR PRGM OFF, Both HR OFF, Hand Only, Telemetry Only, and Either Input (if one input is lost, then the other input may become active).

Change Units - changes all displayed data (service information and user data) to the selected units. Units are: Miles or Kilometers, MilesPerHour or KilometersPerHour, Pounds (LB) or Kilograms (KG), MinutesPerMile or MinutesPerKM.

Machine Status

Use the machine status codes to view maintenance information such as:

- maintenance hours
- machine type (Elliptical)
- console software version
- distance traveled
- number of workouts
- machine run-time hours

Refer to the following table to scan through and customize the settings:

Table 2–3. Machine Status

Step No.	Press Keys	Display (What you will see)
1	▲, 4, ENTER	MACHINE STATUS
2	▼ or ▲	MAINT HOURS, ELLIPTICAL [or other], CONS, DISTANCE, WORKOUTS, RUN HOURS
3	CLEAR	SELECT WORKOUT

Maint Hours – displays the number of hours (incremented every hour) the machine has been running. The start value is set under the Maintenance Logs service screen. (The start value can be set to any value—e.g. if the service tech had entered 100 in the Maintenance Logs service screen and there was 1 hour of running time on the machine, the value under this Maint Hours screen would read 101).

Machine Type – should display Elliptical. “NTM Config REQD” appears on the console if the software has been updated on the machine or the machine froze up and the power had to be cycled. The message also appears when the console assembly has been replaced and no configuration established. Configuring the machine will eliminate this message (see the table “Machine Configuration”).

Distance – displays the total distance in miles (or kilometers) of machine operation. This value is auto-incremented every 1/100th or 1/10th unit, depending on how many miles/km have accrued.

Workouts – displays the total number of workouts performed on the machine. This value is auto-incremented only if the user enters a workout and either completes the workout or presses the [STOP] key twice.

Run Hours – displays the total number of hours on the machine.

NOTE: The R&D options (codes starting with 5) are not used for servicing machines. Do not change these settings. If an R&D setting is inadvertently changed, it will reset when the machine is powered off and then back on.

Diagnostics

Use diagnostic codes to test various components of the machine such as the:

- tachometer
- alternator
- I/O
- sensor (for EV9.16 only)
- serial ports
- keypad
- display

Maintenance Logs

Refer to the following table to scan through the diagnostic tests and view diagnostic information:

Table 2–4. Diagnostics

Step No.	Press Keys	Display (What you will see)
1	▲, 6, ENTER	DIAGNOSTICS
2	▼ or ▲	TACH TEST, ALT TEST, I/O TEST, A SENSOR B, SERIAL PORTS, KEY TEST, DISPLAY TEST
3	ENTER	Selected choice
4	CLEAR	DIAGNOSTICS
5	CLEAR	SELECT WORKOUT

Tach Test – performs a tachometer test. On the left hand side of the display the target rate of 2000 rpm is displayed. On the right hand side of the display the actual rpm is displayed. If the actual rpm is above the target rate, then the alternator field turns on (the level increases). If the actual rpm is below the target rate, then the alternator field shuts off (the level decreases).

Alt Test – performs an alternator test. By pressing the level up key, the alternator field will turn on and the steps will become harder to rotate. By pressing the level down key, the alternator field will turn off and the steps will become easier to rotate.

I/O Test – The AUX and B+ values represent the current and voltage delivered from the alternator respectively. AUX is scaled by 1000 and B+ is scaled by 300. These values will increase with the speed of the alternator (note that both values will reach 0 if the alternator is left at rest). The “---” string is displayed at all times since the ellipticals do not require a magnetic key.

A Sensor B – is used only on the EV9.16. The A Sensor B diagnostic screen ensures the optical detector is functional. The A value is displayed on the left hand side of the upper display (B is not used on the EV9.16). Under normal conditions, the A value should toggle between the “0” and “1”.

Serial Ports - tests the serial ports (UARTS) for proper functionality. The tech can choose from either the CSAFE-1 Loopback or TM Loopback tests. Both of these tests result in PASS or FAIL. Please note that a null modem must be used to perform these tests.

Key Test - tests all of the user interface keys. Once a key is pressed, its value will show up on the display screen. After all keys have been pressed and are functional, a PASS message appears on the display.

Display Test - will test all segments on both the top and bottom displays.

Maintenance Logs

The MAINTENANCE LOGS settings allow you to view the quality assurance data, the machine’s error log, and reset the time between service and maintenance calls.

Refer to the following table to scan through the Maintenance Logs tests and view diagnostic information:

Table 2–5. Maintenance Logs

Step No.	Press Keys	Display (What you will see)
1	▲, 7, ENTER	MAINTENANCE LOGS
2	▼ or ▲	QA ID NUMBER*, MAINT HOURS, ERROR LOG
3	ENTER	Selected choice
4	CLEAR after viewing (or reset)	MAINTENANCE LOGS
5	CLEAR	SELECT WORKOUT

* The QA ID NUMBER option is not used for servicing machines in the field.

The following tables provide the steps for resetting the time between service or maintenance calls, and for viewing the error log:

Table 2–6. Reset Maintenance Hours

Step No.	Press Keys	Display (What you will see)
1	▲, 7, ENTER	MAINTENANCE LOGS
2	▼, ▼	MAINT HOURS
3	ENTER	MAINT HOURS ####
4	CLEAR to exit after viewing, or 0, ENTER to reset	MAINTENANCE LOGS
5	CLEAR	SELECT WORKOUT

Maint Hours – lets the service technician enter a value representing the maintenance hours.

Table 2–7. Error Log

Step No.	Press Keys	Display (What you will see)
1	▲, 7, ENTER	MAINTENANCE LOGS
2	▼, ▼, ▼	ERROR LOG
3	ENTER	NO ERROR or the highest priority error
4	▼ or ▲	Scrolls through the error log list
5	CLEAR	SELECT WORKOUT

Error Log – displays fatal errors accrued on the system. The log holds up to 8 error entries. Errors are handled in two ways:

- First, as a non-fatal Warning, which will display the error response text but continue system operation until you press the [CLEAR] key. Warnings are not logged in the Error Log.
- The second way is a fatal Error, which will stop the exercise and return the system to an idle intensity state. The console will display the error response and a number showing how many errors were logged during the specific event. (Some errors trigger multiple responses). To view the non-displayed errors, access the Error Log. The unit will not let you restart the program unless power has been turned off and then back on.

Machine Status

Once you access the Error Log, you can cycle the display through 8 entries by using the up/down keys. Each entry displays the error label, its position in the log (1-8), and the time (hours) the error occurred. Note that the most recent error might not be in log position 1—as the number of errors exceeds 8, the newest error will overwrite the oldest. In addition, if a new error is identical to the log's previous entry, the system checks the time. If the time is the same (within minutes), the error is not logged, to help prevent redundant errors.

The only way to reset the Error Log is to reconfigure the machine.

Machine Configuration

Use Machine Configuration to change the machine type. The choices are:

- Stepper
- StepMill
- Bike
- Elliptical

In general, only the Elliptical machine type is used for the EV916 or E916.

Refer to the following table to scan through and customize the settings:

Table 2–8. Machine Configuration

Step No.	Press Keys	Display (What you will see)
1	▲, 8, ENTER	CHANGE MACHINE
2	ENTER	ELLIPTICAL
3	▼ or ▲	NTM CONFIG RQD, STEPPER CL, STEPMILL, ELLIPTICAL, BIKE
4	ENTER	Selects your choice
5	CLEAR	SELECT WORKOUT

NTM Config RQD – resets the machine to a “blank” configuration. The configuration must be set to Elliptical (or other machine type) for the workout functions to operate.

Stepper CL – configures the machine as a cordless Stepper. Please note that there is a sense line to let the software know if the system is a Stepper PT (corded); if the system is indeed a Stepper PT, then Stepper PT will appear in the screen instead of Stepper CL.