Introduction

The P200 Workout Programmer lets you create workouts for the P200 Anti-Gravity Treadmill[®], which you can access via the *Personalized Login* feature of the treadmill.

Here are some basic terms to remember:

- *Workout* a collection of intervals (also called stages or segments) which are run as a named unit by the P200.
- **Interval** a segment of a workout with its own duration, speed, incline, and body weight percentage. For example, an interval might last for 5 minutes with the treadmill set at 5.0 mph with a 3 percent incline and the user's body weight adjusted to 80 percent.
- Workout Program a collection of workouts, contained in a single file. The Workout Programmer is used to create and manipulate workout programs. You may have a number of workout programs (for different users or different uses), each stored in its own file.

You load workout programs from a file into the Workout Programmer, edit them or create new ones, and save them back into a file (possibly the same one). The workouts you see listed are what will be stored into the file. Until you save your workout program, nothing has been changed.

Starting Workout Programmer

This is what you see when you visit <u>http://www.alter-g.com/workout-programmer</u>:



Clicking the green **Create a New Workout** button will take you step-by-step through the process of creating your first workout program. You should do this at least once, as there are helpful tips on every screen (a sample session is in the appendices).

If you click on the *load your existing programs* link, you will see the Your Workout Program screen, which initially looks like this:

Your Workout Program			
Choose Create a New Workout or Load Existing W	/orkouts.		
Workout Name	Duration minutes:seconds	Distance miles	Actions
No workouts have been created or loaded.			
No workouts have been created or loaded. Create a New Workout Load Existing V	Vorkouts		

If you are in a country which uses kilometers instead of miles, you can click the "display kilometers" button to toggle units throughout your session. Saved workout programs remember your choice of units. Loading a workout program with saved units will set those units if no choice has been made.

You can click the button which displays the User Name (e.g. *AlterG*) if you want to change it.

Create A New Workout

When you click *Create a New Workout*, this is what you will see:

Name This Workout	
Workout Name: Be sure to choose a unique name up to 40 characters that clearly identifies this workout, e.g. <i>Michael's Interval Workout</i> .	
Next or Go Back	

Choosing a clear name for a workout is important, as all the workouts in a given workout program appear in an on-screen list when using the *Personalized Login* feature of the P200. Names which are unclear or too similar can cause confusion.

The next screen allows you to add intervals to the workout. A workout consists of a *name* and a sequence of *intervals*, each with their own *duration*, *speed*, *body weight percentage*, and *incline*.

					-
Total Duration: Total Distance:	0:00 : 0.00 miles	Example	Workout		
Interval #	Duration minutes:seconds	Speed mph	Distance _{miles}	Body Weight	Incline %
1.	5:00 minutes:seconds	3.0 from -10.0 mph to 18.0 mph	from 0.1 to 99.9 miles	100 from 100% to 20%	0 from 0% to 15%
Add This Ir	nterval	Go Back			•

It's usually fastest to add all your intervals first (even if you make a mistake or want to change something after you press Enter), and then go back and make corrections.

To quickly create a new workout:

- Use the **Tab** key to move forward between fields.
- Use the **Shift-Tab** key combination to move backward between fields.
- When the interval appears to your liking, press **Enter** to add it. A new interval, containing the same values will open for you to edit.

After adding a number of intervals, your screen will look like this:

Add Intervals

Change Duration, Speed, Distance, Body Weight, or Incline as desired, then click Add This Interval.

Choose exactly two from { Duration, Speed, Distance }. The third is determined from the two you choose.

Total Duration: 25:00								
Total Distan	ice: 1.25 miles							
Interval	Duration	Speed	Distance	Body Weight	Incline			
#	minutes:seconds	mph	miles	%	%			
1.	5:00	1.0	0.08	100	0			
2.	5:00	2.0	0.17	100	0			
3.	5:00	3.0	0.25	100	0			
4.	5:00	4.0	0.33	100	0			
5.	5:00	5.0	0.42	100	0			
6.	5:00 minutes:seconds	5.0 from -10.0 mph to 18.0 mph	from 0.1 to 99.9 miles	100 from 100% to 20%	0 from 0% to 15%			
Add Th	is Interval	Stop Adding						

Hint: if you just enter a number (like 10) in the Duration field, it means minutes. Add a '.' to specify seconds, e.g. 10:30 for ten minutes and thirty seconds. For a duration of less than a minute, specify zero minutes. For example, 0:10 for ten seconds.

Hint: to speed up editing, press Enter to get the same effect as clicking "Add This Interval." Tab and Shift-Tab let you move forward/backward between fields.

To shift from adding new intervals to the end of the workout to editing a workout in progress, click the *Stop Adding* button. The screen now looks like this:

Create a New Workout

If you are satisfied with this workout, click Save Workout.

You can also add or edit intervals, or throw this workout away by pressing Don't Save.

nterval #	Duration minutes:seconds	Speed mph	Distance miles	Body Weight	Incline %	Actions
1	5:00	1.0	0.08	100	0	↑ ↓ ins del
2	5:00	2.0	0.17	100	0	↑ ↓ ins del
3	5:00	3.0	0.25	100	0	↑ ↓ ins del
4	5:00	4.0	0.33	100	0	↑ ↓ ins del
5	5:00	5.0	0.42	100	0	↑ ↓ ins del
Add	Another Interval	or click a #) to edit that i	nterval.		

You can go back and edit any interval by clicking the button in the Interval column for that interval:

2.	5:00	2.0	0.17	100	0
3.	5:00 minutes:seconds	3.0 from -10.0 mph to 18.0 mph	from 0.1 to 99.9 miles	100 from 100% to 20%	0 from 0% to 15%
Save Changes Don't Save Changes)		
4	5:00	4.0	0.33	100	0

You can then change the duration, speed, body weight percentage, or incline of the interval.

Using the Action buttons, you can also delete the interval (**del**), move it up or down using **the arrow buttons**, or insert a copy of the interval (**ins**), which adds it immediately before the given interval, and opens it for editing.

You can also **Add Another Interval**, which will return to adding intervals at the end of the workout.

Once you are satisfied, you can **Save Workout**. Or you can throw your newly-created workout away with the **Don't Save** button.

Edit an Existing Workout

Once you have workouts in your workout program (either by creating them, or loading them from a file), you can edit them. Let's say we load a workout program from a file, so that we see this on the first screen:

At AlterG, our goal is to constantly provide the very best in Sports Performance and Rehabilitation.								
Your Workout Program								
To change an existing workout, click the + next to its name. You can also copy or delete a workout.								
Workout Name	Duration minutes:seconds	Distance miles	Actions					
+ Easy Workout	15:00	0.75	copy delete					
+ Hard Workout	30:00	3.75	copy delete					
Create a New Workout Load Existing Workouts Save Changes								
display kilometers Refer to the <u>Workout Programmer Manual</u> for step-by-step instructions. Send your guestions or suggestions for improving Workout Programmer to workouts@AlterG.com.								

You can make a copy of a workout in your program by pressing its **copy** button.

You can delete a workout by clicking its **delete** button. Remember, this doesn't delete the workout from the original file, just in the workout program we are creating in the browser.

To rename a workout, open it for editing and change its name (see below).

To edit a specific workout, click the "+" button just to the left of its name. For example, here's what you'll see if you click the "+" to the left of the workout named "Hard" (workouts appear in alphabetical order):

(edit to rename this workout)

Edit :	an Fx	istina	Wor	kout
Eure		າວແມ່ງ		κουι

Click the # to edit that interval, or choose an Action.

Name: Hard Workout

Total Duration: 30:00 Total Distance: 3.75 miles

Interval #	Duration minutes:seconds	Speed mph	Distance miles	Body Weight %	Incline %	Actions see below		
1	5:00	5.0	0.42	100	0	↑ ↓ ins del		
2	5:00	6.0	0.50	100	0	↑ ↓ ins del		
3	5:00	7.0	0.58	100	0	↑ ↓ ins del		
4	5:00	8.0	0.67	100	0	↑ ↓ ins del		
5	5:00	9.0	0.75	100	0	↑ ↓ ins del		
6	5 :00	10.0	0.83	100	0	↑ ↓ ins del		
6 5:00 10.0 0.83 100 0 1 ins del Add Another Interval 1 moves the interval up the list. 1 moves the interval down the list. ins inserts a new interval BEFORE the interval. del deletes the interval.								

You can edit intervals by clicking the button in the **Interval** column, or using one of the **Action** buttons. These functions work exactly like they do when creating a workout for the first time.

This is also the place where you can rename a workout, simply by changing the **Name** field and saving the workout.

Loading And Saving

If you press the **Load Existing Workouts** on the main screen, you will be presented with the following:



Pressing **Choose File** will bring up an operating-system-specific file selection dialog. Select a previouslysaved file containing workout programs, and then press the **Load Existing Workouts**. You will be returned to the **Your Workout Program** screen with the workouts visible.

If you click **Save Changes** on the main screen, you will be presented with the following screen:

Save Your Workout Program

Click Save Program to save this workout program to a file on your hard disk.

Save Program

By default, the file name will be a combination of the user name and the current date and time, e.g. *AlterG* 2012-05-07-100145.

You can also navigate directly to your USB key and save the program as **userdata.xml**, although this is not recommended (see below).

Helpful hints:

- · By saving programs to your hard disk, you will have a copy of all of your work.
- Save your programs using a descriptive file name, like Interval Training For Michael.xml.
- When you decide to use a particular program, simply copy it to a USB key and rename it userdata.xml.

The P200 will not recognize your program unless it is in a file named **userdata.xml** on the USB key. **No other name will work.** This is the #1 problem people encounter with Workout Programmer.

If you encounter problems with the P200 recognizing your data key, start with an empty USB key, copy your workout program from the hard disk to the USB key, and then make sure that it is named **userdata.xml**.

Continue

Clicking **Save Program** will save your workout program in an operating system- and browser-specific fashion. In some cases, a "save file" dialog may appear. In others, the browser may save the file to a known location.

Regardless, after the file is saved, it needs to be placed on the USB key and renamed to **userdata.xml** (as noted on the screen above).

Helpful Hints and Troubleshooting

When loading workouts from a USB key, the P200 expects to find a file named **userdata.xml** on the key.

The #1 problem people encounter when using the Workout Programmer is failing to get the correct file onto the USB key and named **userdata.xml**. The best way to avoid problems is to make sure that a USB key has only two files on it:

- **userdata.xml** (the workout program)
- **userlog.xml** (workout results may not be present if the key hasn't been used)

To copy a USB key with workouts on it, load the workouts into Workout Programmer, replace the USB key with a blank USB key, and then save the workouts onto the blank key.

When specifying a workout interval, you need to provide two of the values for Duration, Speed, and Distance. The program uses the following relationships:

- Duration x Speed = Distance
- Distance ÷ Speed = Duration
- Distance ÷ Duration = Speed

The system will not allow values for Distance and Duration which calculate a Speed of more than 18.0 mph, or values for Duration and Speed which calculate a Distance of more than 99.9 miles (remember, this is for a single *interval* of a workout).

You can specify a negative speed for the "Duration x Speed" relationship (the treadmill runs in reverse), the Distance is still positive. But since Distance and Duration are always positive, there is no way to calculate a negative Speed from Distance and Duration.

When a workout program is written to a file, Workout Programmer does not include calibration information, to ensure that the P200 is calibrated the first time the program is run. The key will then remember the calibration information until a new workout program is copied to it.

This is fine when a key is always used by the same person, because the calibration information matches the person using the key. That is why the P200 calls the programmed workout feature a *Personalized Login*.

But if a single key is shared among multiple users, it is important that they calibrate the P200 before starting a programmed workout.

Using the P200 Workout Programmer

Remember, until you save your workouts back to a file, nothing has been changed.

APPENDIX: Step-By-Step Walkthrough

This appendix walks you through the step-by-step creation of a new workout program.

This is where you start:



Clicking Create a New Workout takes you to this screen:

Step 2: Name y	our workout: Example Workout
Be sure to choose a uni	que name up to 40 characters that clearly identifies this workout, e.g. Michael's Interval Workout.
Next or	Go Back

After filing in a name and selecting units, clicking *Next* will take you to this screen:

	r each Interval	l you wish to add f	o this workou	t:	
Chang Press	e Duration, Spee	ed, Distance, Body W	eight, or Incline a	as desired, then	
hoose exac	tly two from { Dura	, ation Speed Distance	3 The third is dete	ermined from the tw	o vou choose
	ay two nonn (Dure		j. The filled of dea		
		Example	Workout		
Fotal Durati Fotal Distan	on: 0:00 ce: 0 00 miles				
Interval	Duration	Speed	Distance	Body Weight	Incline
#	minutes:seconds	mph	miles	%	%
1.	5:00	3.0		100	0
	minutes:seconds	from -10.0 mph to 18.0 mph	from 0.1 to 99.9 miles	from 100% to 20%	from 0% to 15%
Add Thi	s Interval	Go Back			
tep 4: Wł	nen you are do	one adding interva	ls, press Stop	Adding	
	ce a mistake in an int	terval, press Stop Adding. 1	The next screen will le	et you edit the interval ir	n error, and then
nt: if you noti	intervals.				
nt: if you noti ntinue adding				a '.' to specify seconds	e.a. 10:30 for
nt: if you noti ntinue adding nt: if you just	enter a number (like	10) in the Duration field, it	means minutes. Add	a . to specify seconds,	

After adding a few intervals, the workout will look like this:

Total Durati Total Distar	Example Workout Total Duration: 15:00 Total Distance: 0.50 miles								
Interval #	Duration minutes:seconds	Speed mph	Distance miles	Body Weight %	Incline %				
1.	5:00	1.0	0.08	100	0				
2.	5:00	2.0	0.17	100	0				
3.	5:00	3.0	0.25	100	0				
4.	5:00 minutes:seconds	3.0 from -10.0 mph to 18.0 mph	from 0.1 to 99.9 miles	100 from 100% to 20%	0 from 0% to 15%				
Add Th	is Interval	Stop Adding							

Clicking *Stop Adding* will take you to the following screen:

Save	Save Your Workout												
step 5: Click Save Workout when you are satisfied.													
ou can edit an interval you've already added by clicking its 📕.													
ou can also add more intervals or get familiar with what the Action buttons do													
inally, yo	inally, you can throw this whole workout away by pressing Don't Save.												
Example Workout Total Duration: 15:00 Total Distance: 0.50 miles Save Workout Don't Save Click a T to adit that interval													
Interval	Duration	Speed	Distance	Body Weight	Incline	Actions							
#	minutes:seconds	^{mph}	miles	% 100	% 0	see below							
2	5:00	2.0	0.17	100	0	↑ ↓ ins del							
3	5.00	3.0	0.25	100	0	↑ ↓ ins del							
	5.00					Add Another Interval mean moves the interval up the list. mean moves the interval down the list. mean inserts a new interval BEFORE the interval. del deletes the interval. Save Workout Don't Save							

Clicking Save Workout will take you to the next screen:

Save Your New Workout Program
Step 6: Click Save Program to save the program on your hard disk.
We recommend you create a new directory to hold all your workout programs, and save all of them there. By saving programs to your hard disk, you will have a copy of all of your work.
When saving your program, we also recommend you pick a file name that will help you remember the type of workouts in the program, or who the program is for . By default, your workout program will be given a unique name based on the current time (to avoid duplicates).
Save Program
Step 7: copy the file from your hard disk to a USB key. The USB key should be formatted as FAT32 (nearly) all USB keys are pre-formatted this way.
Step 8: rename the file on the USB key to <u>userdata.xml</u> .
The P200 will not recognize your program unless it is in a file named userdata.xml on the USB key. No other name will work.
To ensure success, we recommend you start with an empty USB key.
Continue

Clicking *Save Program* will save the workout program to your computer in an operating system (Windows, OS X) and browser (Chrome, Firefox, Safari, Internet Explorer) specific fashion.

Save As		×				
Image: Computer → OS (C:) → Workouts Image: Computer → OS (C:) → Workouts						
Organize 🔻 New folder		= • 👔				
Documents Name	Date modified Type	Size				
Music Pictures Workout Program.xml	5/1/2013 4:45 PM XML Docum	nent				
📄 Subversion						
Videos						
Computer Solution OS (C:) Solution OS (C:) So	111	•				
File name: AlterG 2013-05-08-104642 yml		_				
Save as type: VML Document	File name: Aitero 2013-05-08-104642.xml					
Save as type. And Document		•				
Alide Folders	Save	Cancel				

For example, on Windows 7 with the Chrome browser, you will see *Save* As dialog box like this:

Other browsers may automatically save the file in a known location (like Downloads), without showing a dialog.

Using the P200 Workout Programmer

Don't forget to follow steps 7 (copy to USB key

Once the file has been saved, clicking *Continue* takes you to the final screen.

Congratulations!

You've successfully created a P200 data key. Here's how to use it.

Now might be a great time to look at the <u>Workout Programmer Manual</u> to see the additional features that Workout Programmer provides. When you're ready to try them out, follow the link on the Workout Programmer home page.

Please let us know if you encountered any problems in creating your first workout program.

Workout Programmer home (you may want to add it to your bookmarks/favorites)

APPENDIX: userdata.xml

This appendix describes the **userdata.xml** file used by the P200 "personalized login" feature. The original assumption was that each user of the machine would have their own USB data key which would store both their personalized workout programs (**userdata.xml**) and the results of those workouts if enabled (**userlog.xml**). In practice, this isn't usually the case, with one key being shared among several users (see the issue with this under CALIBRATION), or reprogrammed for each user prior to their workout.

It is assumed the reader has some basic familiarity with XML (e.g. elements and attributes).

Here is a simple example of a **userdata.xml** file:

```
<USER name="AlterG">
<CALIBRATION minute="58" hour="11" day="10" month="9" year="2011" dPdPBW="-8.585227"/>
<LOGGING log_heart_rate="yes" generate_log="yes"/>
<WORKOUT name="Easy">
<STAGE treadmill_inclination="20" treadmill_speed="62" percent_body_weight="50" duration="300"/>
<STAGE treadmill_inclination="0" treadmill_speed="31" percent_body_weight="75" duration="500"/>
</WORKOUT>
<WORKOUT name="Medium">
<STAGE treadmill_inclination="20" treadmill_speed="62" percent_body_weight="50" duration="600"/>
<STAGE treadmill_inclination="0" treadmill_speed="31" percent_body_weight="75" duration="1000"/>
</WORKOUT>
<WORKOUT name="Hard">
<STAGE treadmill_inclination="20" treadmill_speed="62" percent_body_weight="50" duration="3000"/>
<STAGE treadmill_inclination="0" treadmill_speed="31" percent_body_weight="75" duration="5000"/>
</WORKOUT>
</USER>
```

The program belongs to a user named *AlterG*, and contains 3 workouts (*Easy*, *Medium*, and *Hard*). Each workout has two stages, which define the speed, incline, unweighting and duration for that stage.

<USER> ... </USER>

USER is the top-level element. It has the following attributes:

• name="value" (arbitrary characters)

The value is displayed as the user name of the data key when inserted into the P200, e.g.:

	PERSONALIZED					
	This is the user name found in the data key.					
	AlterG					
	Please verify that this is your data key. Using the wrong data key could be dangerous.					
	WRONG NAME OK					
V5 5800 3108 (1) 0.881 380 1280	Ser target speed 0000 - 0 Cartered status 2					

• units="value" (miles/kilometers)

This attribute is ignored by the P200. It is used by the P200 Workout Programmer to remember the units in effect when the workout program was saved.

<CALIBRATION />

The self-closing CALIBRATION element is used to record the date and value of the last time the machine was calibrated (presumably for this user – this is problematic when a single key is used by multiple users). It has the following attributes:

- year="value"
 - month="value
 (1-12)

 day="value"
 (1-31)

 hour="value"
 (0-24)

 minute="value"
 (0-59)

together these make up the date and time of the last calibration .

• dPdPBW="value"

the calibration value itself (delta-Pressure-delta-Percentage-Body-Weight). The change in pressure, expressed in internal units, required to raise effective body weight by one percent (which is why it should always be a negative number).

The CALIBRATION element is optional. If it is missing, the P200 will force a calibration, which can be useful when a single key is shared among different users (with varying weights and thus, dPdPBW values). The P200 Workout Programmer writes workout programs without a CALIBRATION element, so that a calibration will be forced.

<logging />

The self-closing LOGGING element determines whether workouts will be logged and whether they will include heart rate information. It has the following attributes:

- generate_log="value" (yes/no)
 If "yes", workout data will be appended to the userlog.xml file.
- **log_heart_rate="value"** (yes/no) If "yes", workout data will include heart rate.

<WORKOUT> ... </WORKOUT>

The WORKOUT element contains one or more of STAGE elements which comprise the workout. It has one attribute:

• name="value" (arbitrary characters)

The value will be displayed as the name of this workout on the P200. Only the first 40 characters of name will be displayed. Since the P200 uses a proportional font to display the name and did not properly account for a name with 40 "wide" characters (such as M or W), very long names with wide characters do not display properly (wrap-around).

A WORKOUT which does not contain any STAGE elements will be ignored by the P200, i.e. it will not appear in the workout list.

<STAGE/>

The self-closing STAGE element describes one interval of a workout in terms of its speed, incline, unweighting, and duration. It can only appear inside a WORKOUT element, and has the following attributes:

- treadmill_speed="value" (-100 180)
 The value for SPEED (as shown on the P200 control screen) during this stage, in tenths of a mile per hour, e.g. "48" represents 4.8 MPH. Note that the "TOGGLE UNITS" button on the P200 has no effect on the internal representation of speed, which is always MPH.
- treadmill_inclination="value" (0-150)
 The value for %INCLINE during this stage in tenths of a percent, e.g. "100" represents a 10% incline. Note that the P200 is only capable of 1% changes in incline.
- percent_body_weight="value" (100-20)
 The value for %BODY WEIGHT during this stage, in percent, e.g. "75" represents 75% body weight.
- duration="value" (0 36000)
 The length of the stage in tenths of a second , e.g. "300" represents 30 seconds.

Additional Notes

The P200 will only recognize a file named **userdata.xml** on a USB key.

CR, LF, and CR-LF all appear to work correctly as line terminators.

Internally, the P200 uses miles per hour to represent speed, regardless of the units being used for display.

Never get involved in a land war in Asia.