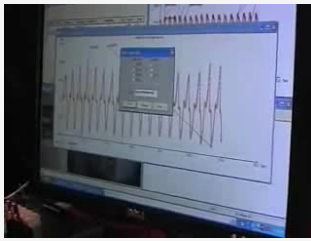




# Ariel Dynamics Inc. Media Library - Video

## APAS Tutorial 8



<b>Code</b>	adi-vid-01174
<b>Title</b>	APAS Tutorial 8
<b>Subtitle</b>	Digitizing and EMG
<b>Subject</b>	APAS;Digitize;EMG;Favorite;Help;Performance Analysis;Tutorials
<b>Duration</b>	00:10:01
<b>URL</b>	<a href="https://arielweb.com/videos/play/adi-vid-01174">https://arielweb.com/videos/play/adi-vid-01174</a>
<b>Date</b>	2009-04-03 00:00:00
<b>Label</b>	Approved
<b>Privacy</b>	Public

### Synopsis

The video describes a process of using a tool to analyze data. The user is instructed to click on a point, label it, and then place it where they want it. The tool is used to measure the time it takes for one cycle, by looking at the x-axis and determining the difference between two sides. The user is also instructed on how to correct errors, remove labels, and add new ones.

The tool also allows the user to analyze the range and value of data. The user is also guided on how to start a new file and copy a specific format. The tool also has a feature to filter out noise and bring the data down to a baseline.

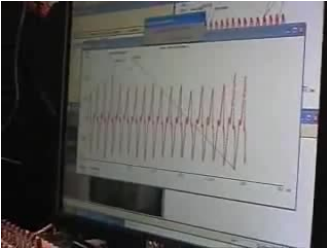
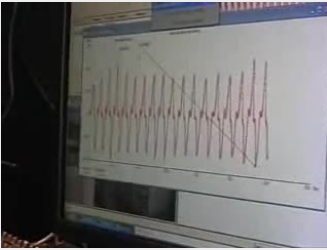
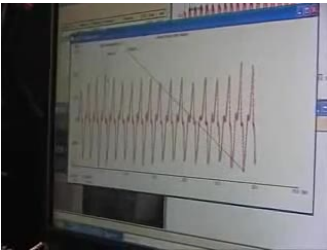
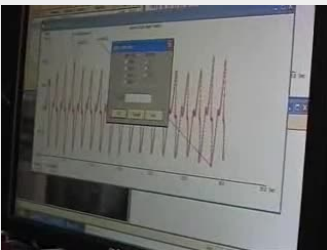
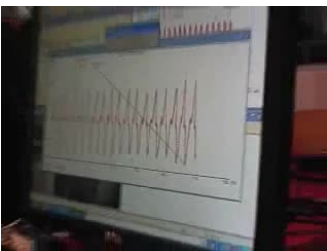
The user is also warned about the importance of turning off the battery to conserve power. The tool also allows the user to analyze analog data and select specific muscles for analysis. The user can also integrate kinematic data and analyze fatigue or integral.

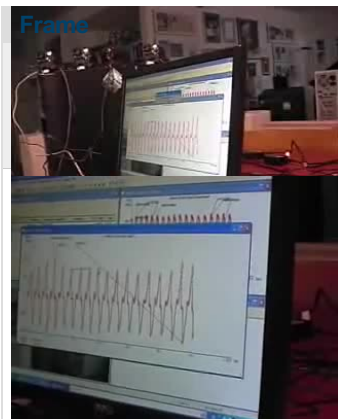
The tool also allows the user to rectify data and calculate the total accumulation of electrical activity over a specific time period. The user can also set parameters and analyze the power spectrum of the curves. The tool also allows the user to change from rectified to unrectified data.

Model Id: gpt-4-0613  
Created on: 2023-09-19 03:14:45  
Processing time: 00:00:18.7340000  
Total tokens: 2158

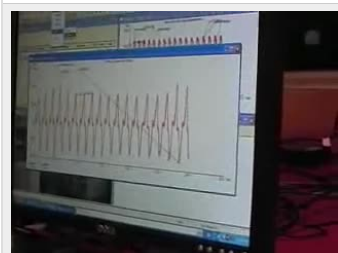
### Audio transcription

Frame	#	Time	Spoken text
	0.	00:00:00	<i>I remember you have to put it on the point, click on the point, and then put the label</i>
	1.	00:00:13	<i>where you want it to, right there.</i>
	2.	00:00:15	<i>Good.</i>
	3.	00:00:16	<i>Okay.</i>
	4.	00:00:17	<i>Actually, I should have just done nice velocity.</i>
	5.	00:00:18	<i>Yeah.</i>
	6.	00:00:19	<i>Okay.</i>
	7.	00:00:20	<i>Gotcha.</i>
	8.	00:00:21	<i>Good enough.</i>

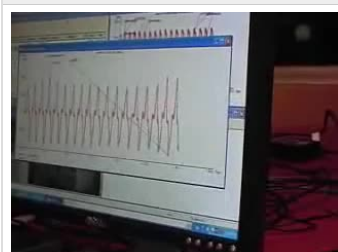
Frame	#	Time	Spoken text
	9.	00:00:22	Very good.
	10.	00:00:23	All right.
	11.	00:00:24	Yeah.
	12.	00:00:25	Okay.
	13.	00:00:26	Okay.
	14.	00:00:27	Okay.
	15.	00:00:28	Okay.
	16.	00:00:29	Escape out of that.
	17.	00:00:31	All right.
	18.	00:00:32	Now, the next question is, how much time does it take for one cycle?
	19.	00:00:40	Okay.
	20.	00:00:41	So I'll just be from here to here.
	21.	00:00:43	So if we do that, we go to tools, label, add.
	22.	00:00:48	We're looking at the x-axis this time, but we're looking at how much time would be a
	23.	00:00:54	value of doing a range.
	24.	00:00:57	You could put a value, but what we want is at this time, we want the difference between
	25.	00:01:01	the two sides.
	26.	00:01:02	Okay.
	27.	00:01:03	Range, right.
	28.	00:01:04	And the x-axis.
	29.	00:01:05	Oh, she's in here.
	30.	00:01:06	Yeah.
	31.	00:01:07	That's right.
	32.	00:01:08	Take the second.
	33.	00:01:09	Well, you took two cycles there.
	34.	00:01:14	Yeah.
	35.	00:01:15	Correct.
	36.	00:01:16	All right.
	37.	00:01:17	Now you didn't correct it.
	38.	00:01:18	You just put the time there.



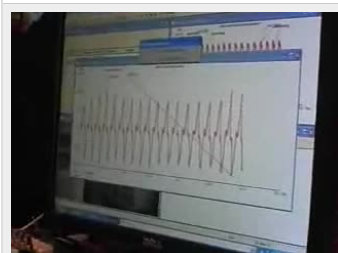
- | #   | Time     | Spoken text   |
|-----|----------|---|
| 39. | 00:01:25 | So now it's asking for the star of the range to do another one. |
| 40. | 00:01:28 | Okay.   |
| 41. | 00:01:29 | So I'll pick one of the peaks here.                             |
| 42. | 00:01:32 | What happened?  |
| 43. | 00:01:33 | All right.  |
| 44. | 00:01:34 | Yeah.   |



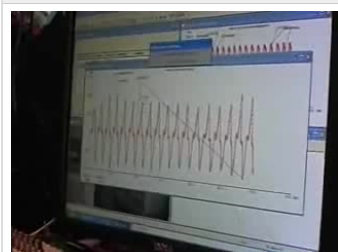
- |     |          |   |
|-----|----------|---|
| 45. | 00:01:35 | I just want to do it over again.            |
| 46. | 00:01:36 | This is incorrect here.                     |
| 47. | 00:01:37 | So I'm going to go to tools, label, remove. |
| 48. | 00:01:40 | Okay.                                       |
| 49. | 00:01:41 | Okay.                                       |



- |     |          |                                       |
|-----|----------|---------------------------------------|
| 50. | 00:01:42 | Tools, label.                         |
| 51. | 00:01:43 | And we're doing.                      |
| 52. | 00:01:44 | We said we're doing it.               |
| 53. | 00:01:48 | Range.                                |
| 54. | 00:01:55 | Keep wanting to get a value of range. |


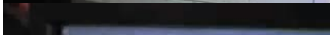
















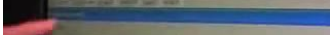
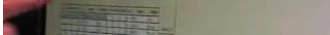
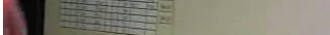







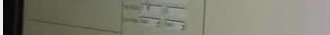








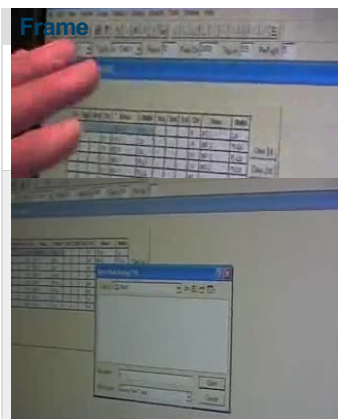
- |     |          |             |
|-----|----------|-------------|
| 55. | 00:01:57 | Come in.    |
| 56. | 00:01:58 | Yeah.       |
| 57. | 00:01:59 | Here, here. |
| 58. | 00:02:00 | Downstairs. |
| 59. | 00:02:01 | All right.  |



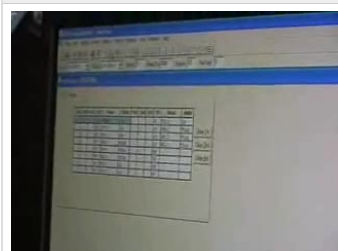
- |     |          |               |
|-----|----------|---------------|
| 60. | 00:02:02 | That's right. |
| 61. | 00:02:03 | That's right. |
| 62. | 00:02:04 | That's right. |
| 63. | 00:02:05 | It is.        |
| 64. | 00:02:06 | I know.       |

- |     |          |                                  |
|-----|----------|----------------------------------|
| 65. | 00:02:07 | Come in.                         |
| 66. | 00:02:08 | What does it tell me what it is? |
| 67. | 00:02:11 | Zero.                            |
| 68. | 00:02:12 | Zero.                            |

Frame	#	Time	Spoken text
	69.	00:02:13	Okay.
	70.	00:02:14	All right.
	71.	00:02:15	You don't want to trigger something that goes about, right?
	72.	00:02:17	Because I told it to do that.
	73.	00:02:18	But I could also have a trigger.
	74.	00:02:19	The higher level.
	75.	00:02:20	The sooner you press the button, the better one.
	76.	00:02:21	I just put a minus.
	77.	00:02:29	Okay.
	78.	00:02:30	So we don't want that.
	79.	00:02:31	We need to get our effect.
	80.	00:02:33	Okay.
	81.	00:02:34	Good enough.
	82.	00:02:35	So let's click on that.
	83.	00:02:36	Off.
	84.	00:02:37	And say go.
	85.	00:02:39	And now say yes.
	86.	00:02:41	And say this is number two.
	87.	00:02:44	Oh.
	88.	00:02:45	You know what?
	89.	00:02:46	I'm sorry.
	90.	00:02:47	I did a stupid thing.
	91.	00:02:48	Hold on.
	92.	00:02:49	It doesn't even matter.
	93.	00:02:51	What I want to do is I want it to start a new file, which we need.
	94.	00:02:54	You need to learn how to do it.
	95.	00:02:55	So, come here.
	96.	00:02:56	And what I do first is I bring up the file that I know has what I wanted.
	97.	00:03:01	Okay.
	98.	00:03:02	So I'll bring it up again.
	99.	00:03:04	All right.
	100.	00:03:05	Now this is the format I want.
	101.	00:03:07	Now I say new.
	102.	00:03:09	And whatever name I put, it will copy this format.
	103.	00:03:13	Okay.



#	Time	Spoken text
104.	00:03:14	So in this case, I'm going to go to your directory.
105.	00:03:17	Red.
106.	00:03:18	And let's say you hit.
107.	00:03:25	Yeah.
108.	00:03:26	Okay.
109.	00:03:27	And then we're going to click the single.



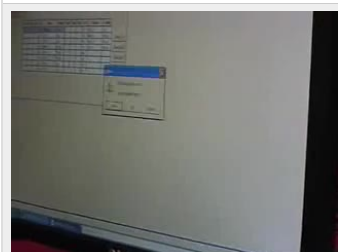
110.	00:03:31	Okay.
111.	00:03:33	You know what the zero is?
112.	00:03:38	By the way.
113.	00:03:39	You're filtering out the light.
114.	00:03:42	Whatever you're through.



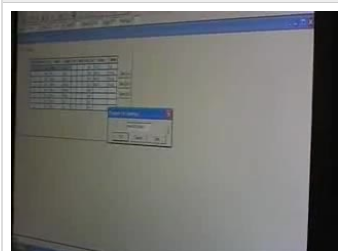
115.	00:03:43	It just brings it down to you later on.
116.	00:03:45	One more comment.
117.	00:03:46	Not only filter that, but if there is any activity on the skin, which is going all the time,
118.	00:03:52	and you want to zero it up, so everything will start from whatever the baseline,
119.	00:03:58	where there is no noise.



120.	00:04:00	Or there is a noise, and it's a lemonade with a noise.
121.	00:04:04	Okay.
122.	00:04:05	Beautiful.
123.	00:04:06	So when it's no activity, it puts it on or very close to the baseline.
124.	00:04:15	Okay.




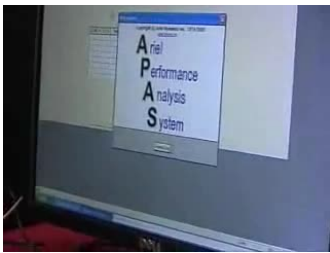
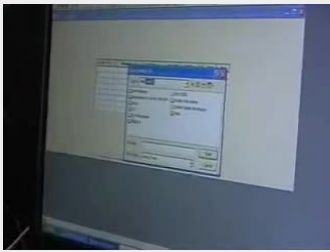
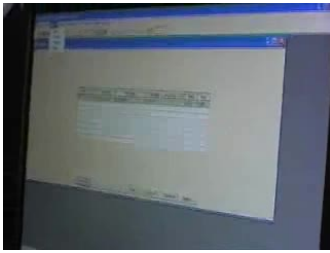
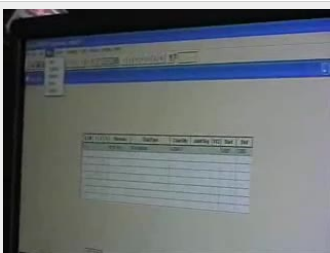



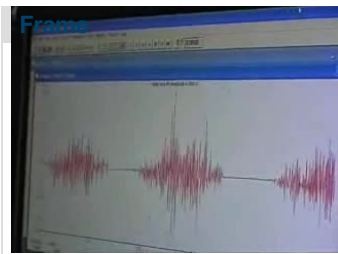
125.	00:04:16	So now go ahead off and say go again.
126.	00:04:20	And yes, we'll say it.
127.	00:04:22	And put it in the caption.
128.	00:04:29	Okay.
129.	00:04:30	Okay.



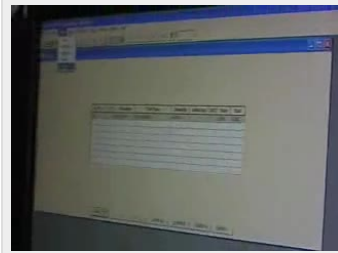
130.	00:04:31	Yeah.
131.	00:04:32	Always turn the battery off.
132.	00:04:35	Yeah.
133.	00:04:36	Yeah.
134.	00:04:37	By the way, I have another comment.

135.	00:04:39	The reason we have batteries, and we don't get the power from the computer,
136.	00:04:44	because of your field, we have suddenly FDA problems,
137.	00:04:49	where if the box connects to the computer, one of them is 220,
138.	00:04:54	we have to have an FDA approval.

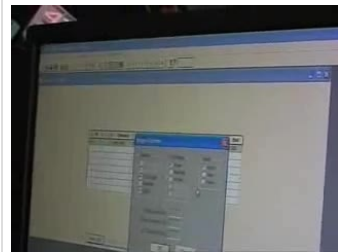
Frame	#	Time	Spoken text
	139.	00:04:56	Yeah.
	140.	00:04:57	And you have to have a separate ground.
	141.	00:04:58	And it's everything over 24 volts, needed.
	142.	00:05:01	So we put nine volts, eliminate the connections, everything working on the battery.
	143.	00:05:06	The only problem with the battery, if you forget the light tone, you lost the battery.
	144.	00:05:10	Right.
	145.	00:05:11	This morning.
	146.	00:05:12	So there's one tool you have, there's a couple of batteries.
	147.	00:05:13	Yeah.
	148.	00:05:14	Okay.
	149.	00:05:15	So now we're going to go ahead and see the analog.
	150.	00:05:16	We've taught it.
	151.	00:05:18	And we can go to display.
	152.	00:05:19	And we can go to analyze the analog, and pick out the file.
	153.	00:05:24	Okay.
	154.	00:05:25	And new.
	155.	00:05:26	And there's only one there, so we'll say select.
	156.	00:05:27	Okay.
	157.	00:05:28	And then up here, we have a couple of other options.
	158.	00:05:31	If you have more than one muscle, you can do that previous screen.
	159.	00:05:36	Yeah.
	160.	00:05:37	Yeah.
	161.	00:05:38	You want to select the muscles you want.
	162.	00:05:39	How many order you want to see them?
	163.	00:05:41	Okay.
	164.	00:05:42	Let's decide.
	165.	00:05:43	We'll see.
	166.	00:05:44	I'm not sure.
	167.	00:05:45	I think we'll just show it.
	168.	00:05:46	Okay.
	169.	00:05:47	Also, we can integrate into the kinematic, by the way.
	170.	00:05:50	We should grab on with it.



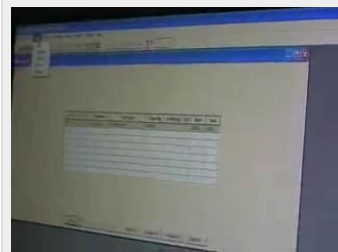
#	Time	Spoken text
171.	00:05:52	And then other things we have, for example, are fatigue, or integral.
172.	00:05:57	Let's say do integral.
173.	00:05:58	What is it?
174.	00:05:59	Integral.



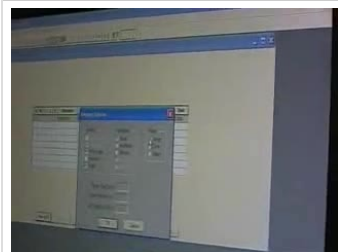
175.	00:06:00	What is it?
176.	00:06:01	Integral.
177.	00:06:02	What is it?
178.	00:06:03	Integral.
179.	00:06:05	The area under the kinematic, but first you have to rectify it.



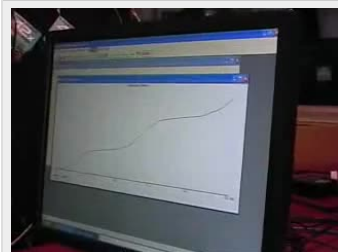
180.	00:06:14	Otherwise it would be zero.
181.	00:06:17	Because the positive and negative would subtract from each other.
182.	00:06:20	Did you rectify it?
183.	00:06:21	No.
184.	00:06:22	So you have to rectify it?



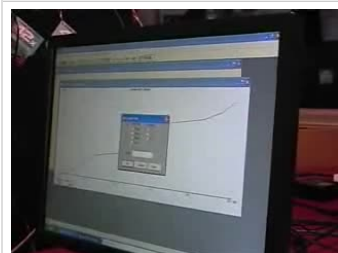
185.	00:06:24	Where?
186.	00:06:25	Someplace, though.
187.	00:06:27	I forget it.
188.	00:06:28	I think it does it.
189.	00:06:29	Oh, okay.



190.	00:06:30	I believe in the philanthropy.
191.	00:06:32	No reset.
192.	00:06:33	All right.
193.	00:06:34	So just be...
194.	00:06:35	Shoot.

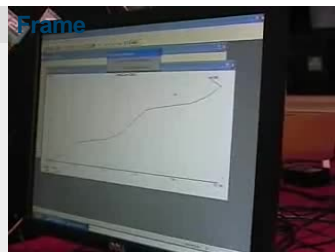


195.	00:06:36	All right.
196.	00:06:37	Okay.
197.	00:06:38	Let's start.
198.	00:06:39	That's a compliment.
199.	00:06:40	It continues up.



200.	00:06:41	At the end it tells us how much electrical activity occurred over that time period.
201.	00:06:43	So I'll do the same thing.
202.	00:06:44	I'll save value on the y.
203.	00:06:51	Didn't think it.
204.	00:06:55	So it was a total accumulation at one point.

205.	00:06:59	It was zero, nine, nine millivolts per second.
------	----------	--



#	Time	Spoken text
206.	00:07:02	And what I do on my FCEs, I have a form of them going up.
207.	00:07:05	It should be two and two pretty close areas.
208.	00:07:08	There's still some residual stuff going on.
209.	00:07:10	What I find is if a muscle is recovering, it works harder.



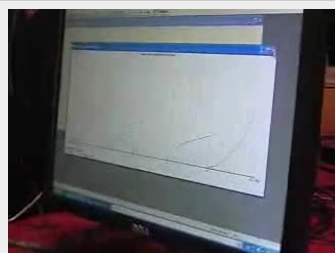
210.	00:07:15	So the total integral is much less higher than the normal side.
211.	00:07:19	Integral is the early on of the kinematic.
212.	00:07:21	What I'm confused about is why it's going up on an angle.
213.	00:07:25	Because it's accumulated.
214.	00:07:27	Oh, okay.



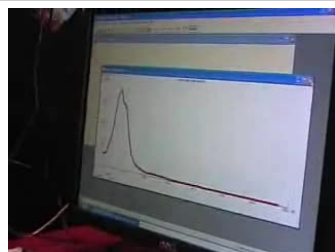
215.	00:07:28	It's a new reset.
216.	00:07:29	Yeah.
217.	00:07:30	It's a new reset.
218.	00:07:31	It's kind of giving you the max work or the max electrical activity.
219.	00:07:34	The whole thing.



220.	00:07:35	I say integral.
221.	00:07:37	And I say overtime.
222.	00:07:40	And I can reset it every second.
223.	00:07:43	No.
224.	00:07:44	None of the time.



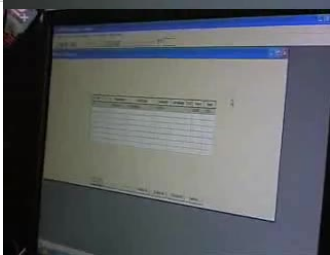
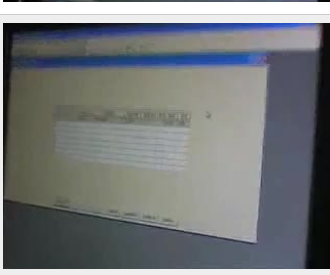
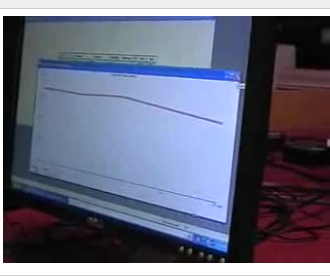
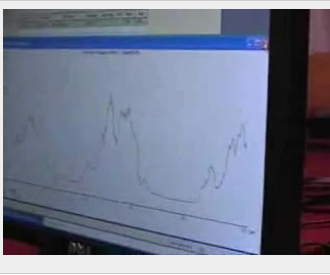
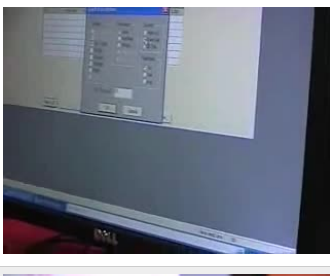
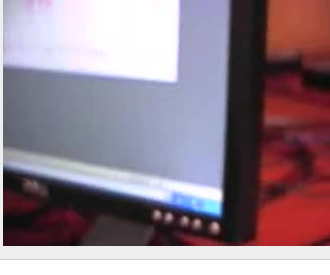
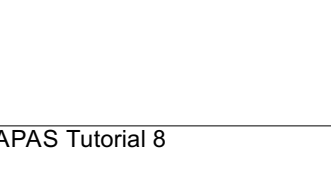
225.	00:07:46	You can do anything you want.
226.	00:07:48	If that's the formula you're still looking at right now.
227.	00:07:50	But I guess for your MS patient on the portfolio, you won't want to see the total work over time.
228.	00:07:55	Maybe every second.
229.	00:07:56	And see if every second is stuck going down.

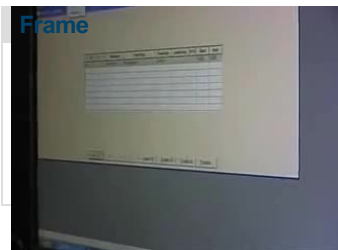


230.	00:07:59	I'm not going to do that.
231.	00:08:00	That's when you say that's your exercise program.
232.	00:08:02	But there you go.
233.	00:08:03	I don't want to go about that.
234.	00:08:05	You'll probably know about this aspect more than we know about it.

235.	00:08:09	We are more in the kinematic than the motion.
236.	00:08:11	I mean, that's what you're saying.



Frame	#	Time	Spoken text
	237.	00:08:13	<i>It's okay.</i>
	238.	00:08:14	<i>If you're just looking at the actual activity, if you need to go down.</i>
	239.	00:08:19	<i>Yes.</i>
	240.	00:08:20	<i>At a certain point.</i>
	241.	00:08:21	<i>Yes.</i>
	242.	00:08:22	<i>I don't want to go down.</i>
	243.	00:08:23	<i>I don't want you to go down.</i>
	244.	00:08:24	<i>You set that point.</i>
	245.	00:08:25	<i>Oh, by the way, you can also put Regia RMS in any real power, power spectrum of the curves.</i>
	246.	00:08:40	<i>And again, we'll find that there was pain that the power would drift to the right.</i>
	247.	00:08:47	<i>Anyway, fatigue.</i>
	248.	00:08:52	<i>You can set the parameters.</i>
	249.	00:08:56	<i>I don't know what the...</i>
	250.	00:08:57	<i>This is a whole formula.</i>
	251.	00:08:58	<i>That came from a guy in Belgium, very famous.</i>
	252.	00:09:02	<i>Clarisse.</i>
	253.	00:09:03	<i>Clarisse.</i>
	254.	00:09:04	<i>That's a publication about EMG.</i>
	255.	00:09:08	<i>So, lots of the software, some scientists interesting in particular parameters.</i>
	256.	00:09:13	<i>You put it in in.</i>
	257.	00:09:14	<i>And many times you don't know what it means.</i>
	258.	00:09:16	<i>It's a linear envelope.</i>
	259.	00:09:17	<i>I'll tell you that for me.</i>
	260.	00:09:20	<i>And the way I did that was I said, beta.</i>
	261.	00:09:22	<i>And instead of doing raw, I did a linear envelope.</i>
	262.	00:09:25	<i>Or you can do both together like that.</i>
	263.	00:09:28	<i>Good.</i>
	264.	00:09:29	<i>So, you'll see here is the rectified.</i>
	265.	00:09:34	<i>How do we change from rectified on rectified?</i>
	266.	00:09:40	<i>No, you have the both.</i>
	267.	00:09:41	<i>The linear is rectified.</i>
	268.	00:09:45	<i>The envelope.</i>
	269.	00:09:46	<i>I know, but there used to be a way...</i>
	270.	00:09:48	<i>Yeah, I know.</i>
	271.	00:09:49	<i>For XEE purposes, that is to you.</i>
	272.	00:09:51	<i>All we do is to do a little analysis of the product.</i>



#	Time	Spoken text
273.	<b>00:09:56</b>	<i>We've collected EMG.</i>
274.	<b>00:09:59</b>	<i>We've learned about the...</i>

*This PDF-document has been auto-generated from a video file by arielweb-ai-bot v1.2.2023.0926 on 2023-09-28 03:44:54 without human intervention. In case of errors or omissions please contact our aibot directly at [ai@macrospport.com](mailto:ai@macrospport.com).*

Video filename: **adi-vid-01174-apas-tutorial-8-1024kbps.mp4**

#### **Copyright Disclaimer**

The content and materials provided in this document are protected by copyright laws. All rights are reserved by Ariel Dynamics Inc. Users are prohibited from copying, reproducing, distributing, or modifying any part of this content without prior written permission from Ariel Dynamics Inc. Unauthorized use or reproduction of any materials may result in legal action.

#### **Disclaimer of Liability**

While every effort has been made to ensure the accuracy of the information presented on this website/document, Ariel Dynamics Inc. makes no warranties or representations regarding the completeness, accuracy, or suitability of the information. The content is provided "as is" and without warranty of any kind, either expressed or implied. Ariel Dynamics Inc. shall not be liable for any errors or omissions in the content or for any actions taken in reliance thereon. Ariel Dynamics Inc. disclaims all responsibility for any loss, injury, claim, liability, or damage of any kind resulting from, arising out of, or in any way related to the use or reliance on the content provided herein.