

Curve Handler Basic Operation

This document provides basic information on writing, reading and modifying curve files.

- To connect to an instrument
- To load a curve from a file
- <u>To write a curve to an instrument</u>
- To build a new curve
- <u>To read a curve from an instrument</u>
- To save a curve to a file

To connect to an instrument:

- 1. Start the Curve Handler application.
- 2. Select the appropriate instrument.

Curve Handler				
Curve Operations Connect About				
Instrument Lake Shore Model 218 Lake Shore Model 218 Lake Shore Model 224 Lake Shore Model 224	COM Port Baud Rate: 9600	GPIB Address:	IP/Hostname:	Connect Test Connection Disconnect
Lake Shore Model 335 Lake Shore Model 331 Lake Shore Model 332 Lake Shore Model 335 Lake Shore Model 336 Lake Shore Model 340	Serial	GPIB	TCP/IP	
Standard Curves User Curves New Curve New Curve	Number: int Limit 437 5 Format: milli-Volta vs Kelv mill-Volta vs Kelver * mill-Volta Kelver	75.00 vin •		
Not connected				

3. Select the radio button for the interface you will be using.



4. If you will be using a Serial interface, set the COM Port and Baud Rate as directed, and then click **Connect**:

Surve Operations	Connect	About							
			۲		0	0		Connect	
alaumanta I aka Sh	ore Model 2	26	COM Port	-	DID Addresses	ID/Heatanna		Test Connection	
au dimont.	Bumeric Lake Shore Hodel 330		Baud Rate: 5	7600 🗸		11 /1 10/3010110.		Disconnect	
	nstrument		Seri	al	GPIB		TCP/IP	Connect	
tandard Cu	rves «								
		^ 1	urve Information —				N.	0	
		Ci	urve Name:	New Cu	rve	New Curve			
		Se	erial Number:	umber:					
		×	stpoint Limit: millid	+375.0					
			arver office.	Volta Va Norvin					
			∠mili-\	/olts Kelvin					
		ł 🎴	• •						
		4							
andard Curves									
er Curves									

5. If you will be using the GPIB interface, set the Curve Handler's GPIB Address to match the GPIB Address of the instrument you are working with, and then click **Connect**:

Curve Handler				- O X
Curve Operations Connect About Instrument: Lake Shore Model 336 •	© COM Port - Baud Rate: 57600 -	GPIB Address:	IP/Hostname:	Connect Test Connection Disconnect
Instrument	Serial	GPIB	TCP/IP	Connect
Standard Curves « Curv Seria Sei	e Information	Curve	New	/ Curve



6. If you will be using IP address or hostname, set the Curve Handler's IP/Hostname to match the IP/Hostname of the instrument you are working with, and then click **Connect**:

Curve Handler				
Curve Operations Connect About				
	©	0	۹	Connect
Instrument: Lake Shore Model 336	COM Port Faud Rate: 57600 +	GPIB Address:	IP/Hostname: Isci336Jakeshore.cd	Test Connection Disconnect
Instrument	Serial	GPIB	TCP/IP	Connect
Standard Curves (CC) Standard Curves Standard Curves User Curves New Cur	Vere Information	Curve	New C	Curve
Not connected				



To load a curve from a file:

1. Click the **Open** button.

Curve Handler							
Curve Operations	Connect	About					
Open	- Write		New Curve				
Save As	Write To	New Location					
Save Save	💥 Delete Cu	rve					
File	Instrumen	nt Curves	New				
Standard C	urves «						
1 - DT-470		Curve	Information		1	Nour Curve	
2 - DT-670		Curve	Name:	New Curve		New Curve	
3 - DT-500-D		Serial	Number:				
4 - DT-500-E1		Setpoi	int Limit:	+375.00			
6 - PT-100		Curve	Format: milli-Volts	vs Kelvin 👻			
7 - PT-1000)		
8 - RX-102A-AA			mili-Volts	Kelvin			
9 - RX-202A-AA			+				
12 - Type K							
13 - Type E							
14 - Type T							
15 - AuFe 0.03%							
16 - AuFe 0.07%							
Standard Curves							
User Curves							
		New Curve					-
Connected to:	Model 336						

2. The **Open** window will display only the files with the correct extension for the instrument selected. Choose the correct file type from the dropdown list.

There are two types of curve files:

- .340 Curve File: legacy file format.
- CURVE file: new file format that is needed to load cubic spline curves.



Locate the file and then click **Open**.

LakeShore.

3. The Curve Information, data points, and graph will populate. Separate tabs are available at the bottom of the screen for Standard Curves and User Curves. Each tab loads a separate list of curves. (Standard Curves are read-only curves that are supplied with the instrument. User Curves are writeable locations.)





To write the curve to an instrument:

1. Click the **Write to New Location** button, select the curve from the dropdown list, and then click **OK**.

Curve Handle	er									
Curve Operation	s Connect	About						G	Calact Currie	
Dpen Open	Write	New Curve								
Save As	Write To	New Locatio	on	-					Select Curve 21 - PT-100	
Save Save	💥 Delete Cu	rve								
File	Instrumer	nt Curves		Ne	ew				OK Cancel	
Standard (Curves «							U		
1 - DT-470		CL CL	urve Inform	natio	n ——				DT 100	
2 - DT-670		Cu	irve Name	s: [PT-100			PT-100	
3 - DT-500-D		Se	rial Numb	er:		STANDARD				
4 - DT-500-E1		Se	tpoint Lim	it: [+800.000			300	
6 - PT-100		Cu	rve Form	at: [Ohms vs i	Kelvin	250			
7 - PT-1000				_						
8 - RX-102A-AA			4		Ohms	Kelvin	-	s	200	
9 - RX-202A-AA			+	+	2.405	20		Ę	150	
12 - Type K			2	×	3.405	28		ō		
13 - Type E			2	×	1 225	30			100	
14 - Type T			3	Ê	5 146	36			50	
15 - AuFe 0.03%			5	x	5.65	38				
16 - AuFe 0.07%			6	x	6.17	40			26 226 426 626	
			7	x	6.726	42			20 220 420 020	
Standard Curves	5		8	x	7.909	46	-		r eivin	
User Curves										
		PT-100		_	_				•	
Connected to:	: Model 336			_						
				_						

If you choose a location that already contains a curve, it will be overwritten (a Warning window will appear, asking you to confirm). Blank curve locations can be identified by the name "User Curve."

2. The curve will be written to the location selected and you will see a progress indicator (at the bottom of the screen) until the write process is completed.

Curve Handler								
Curve Operations	Conner	ct "A	bout					
Open Write			N	lew Curve				
Save As	I Write	e To P	lew Location					
Save Save	💥 Delete	: Curv	e					
File	Instru	ment	Curves	N	lew			
User Curves	;	4						
21 - PT-100		^	Curve Info	ormatio	on			
22 - TestingStuff			Curve Nar	ne:		PT-100		PT-100
23 - PT-1000			Serial Nur	nber:		STANDARD		
24 - RX-202A-AA			Setpoint L	imit:		+800.000		300
25 - DT-670			Curve For	mat:	Ohms vs	Kelvin 👻		250
26 - Type K				_		1		
27 - Linear Madness	5	-		4	Ohms	Kelvin	- v	200
28 - PT-100			P +	+	2 405	20	E	150
29 - DT-470			2	x	3.405	28	- ō	
30 - DT-470			2	×	4 225	22		100
31 - PT-100			3	×	5 146	36		50
32 - TYPE K			5	x	5.65	38	-	
34 - DT-470			6	x	6.17	40		26 226 426 626
35 - PT-100		-	7	x	6.726	42		Kolvin
Standard Curves			8	x	7.909	46		Reivin
licer Curves					0.13610		11 - 11 - 11 - 11 - 11 - 11 - 11 - 11	
UNET CULTES								
			PT-100					
Connected to:	Viodel 33	0				Writi	ng Breakpoin	S



3. Once you write to a curve, it will be highlighted in the list of curves to show that it is the active curve. Changes to this curve can now be saved by clicking the **Write** button.





To build a new curve:

- 1. Click the **New Curve** button.
- 2. Enter the Curve Name, Serial Number, and Setpoint Limit in the fields provided, and choose a Curve Format.
- To save the curve to a file, refer to the section titled <u>To save a curve to a file</u>. To write the curve to the instrument, refer to the section titled <u>To write a curve to an instrument</u>.

Curve Handler	
Curve Operations Connect About	
Open Write New Curve	
Save As Write To New Location	
Save 💥 Delete Curve	
File Instrument Curves New	
User Curves «	
21 - PT-100 Curve Information	New Cumie
22 - TestingStuff Curve Name: New Curve	New Curve
23 - PT-1000 Serial Number:	
24 - RX-202A-AA Setpoint Limit: +375.00	
25 - DT-670 Curve Format: milli-Volts vs Kelvin 🔹	
26 - Type K	
27 - Linear Madness	
28 - PT-100	
29 - DT-470	
30 - DT-470	
31 - PT-100	
32 - TYPE K	
34 - DT-470	
35 - PT-100	
Standard Curves	
User Curves	
New Curve*	*
Connected to: Model 336	



To read a curve from an instrument:

 To modify an existing curve, open the curve (open the curve from a file or read a curve from an instrument) from the Standard Curves or User Curves tabs. (Standard Curves are read-only curves that are supplied with the instrument. User Curves are writeable locations.)

Curve Handler					
Curve Operations Connect	About				
Open Write		New Curve			
Save As Write To	New Location				
File Instrument	Curves	New			
User Curves «					
21 - PT-100 📩	Curve Inform	nation			DT 400
22 - TestingStuff	Curve Name:		PT-100		P1-100
23 - PT-1000	Serial Numbe	er:	STANDARD		200
4 - RX-202A-AA	Setpoint Limit	t	+800.000		300
25 - DT-670	Curve Forma	t Ohms vs	Kelvin 🔹		250
26 - Type K			1	_	
27 - Linear Madness		Ohms	Kelvin	- v	200
28 - PT-100	P +	*	20	- 2	150
29 - DT-470		x 3.405	20	- ō	
10 - DT-470	2	X 3.02	30		100
11 - PT-100	3	× 4.235	20		50
12 - TYPE K	5	× 5.65	38		
14 - DT-470	6	x 6.17	40		
35 - PT-100 👻	7	x 6.726	42		20 220 420 020
Standard Curves	8	x 7.909	46	-	reivin
Jser Curves	PT-100				
Connected to: Model 336					

2. Once the graph has populated, change any data by typing over any field. Once all points have been entered, you can write the file to the instrument (if you are connected) or to a file.



To save a curve to a file:

- 1. Click the Save or Save As button.
- 2. Name the file, and choose a file type from the **Save as type** dropdown list. There are two types of curve files:
 - .340 Curve File: legacy file format.
 - CURVE file: new file format that is needed to load cubic spline curves.
- 3. Save the file to your selected location.

