

Laboratory Control Software



Smart automation, tracking and control

From a single stirring hotplate to a multi-device jacketed reaction system

Four software levels to suit your application and budget

Download
FREE Demo
Software
www.radleys.com

Control and log

- Stirring Hotplates
- Temperature Sensors
- Overhead Stirrers
- Circulators
- Peristaltic Pumps
- Syringe Pumps
- Vacuum Pumps
- Balances
- pH Sensors
- Gas Flow Controllers



www.brain-instru.com
info@nj-brain.com
025-86562535/021-34201003



Automating
your chemistry
saves time,
money...

...and makes
your chemistry
safer

AVA can easily
automate your
chemistry



Advantages of software automation:

- Improve productivity - free up valuable research time
- Record, share and analyse experimental results
- Repeat experiments accurately for reproducible and consistent results
- Share results between users to improve research and collaboration

Enhanced safety:

- Run unattended experiments safely
- Reduce manual errors
- Set apparatus safety limits to prevent accidents
- Configure audio and visual alarms

Use AVA software to:

- Control and log common laboratory apparatus and processes
- Eliminate time-consuming, manual data recording
- Track what you do, as you do it and repeat in the experiment scheduler - 'Track and Repeat'
- Visualise results for rapid analysis and reporting
- Link devices for dual control e.g. pump and balance for additions
- Control up to four experiments in parallel



Download and try the software for FREE

@ www.brain-instru.com

- Learn how the features of AVA work
- Simulate control of devices
- Set up apparatus and control experimental schedules
- Share setups and schedules with other AVA users
- Analyse results and create reports for real or simulated data

Four software levels to suit your application and budget

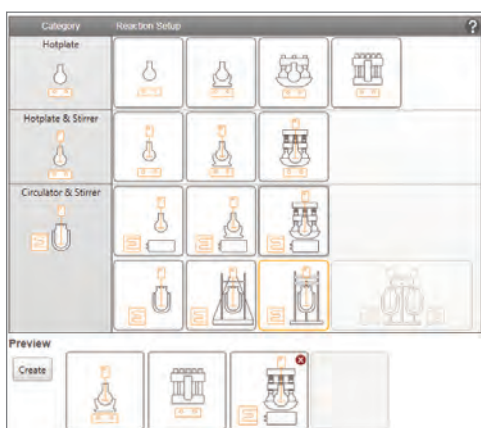
The different levels determine the types of devices that can be controlled and logged by AVA.



	ava level 1	ava level 2	ava level 3	ava level 4
Stirring Hotplates	●	●	●	●
Temperature Sensors	●	●	●	●
Overhead Stirrers		●	●	●
Circulators			●	●
Peristaltic Pumps				●
Syringe Pumps				●
Vacuum Pumps				●
Balances				●
pH Sensors				●
Gas Flow Controllers				●

1. Select your Apparatus setup

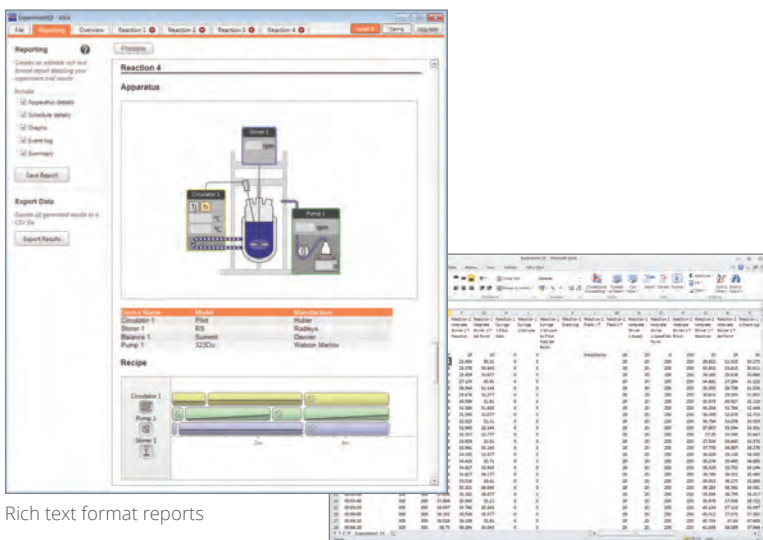
- Select Apparatus background that matches your reaction setup
- Select up to four Apparatus setups
- Create new or open existing Apparatus templates



Apparatus Setups Window

7. Log and report

- Automatically logs and saves all data
- The report wizard creates detailed reports in rich text format (for word processing) or CSV (for spreadsheets)
- Share experiments and results with other AVA users

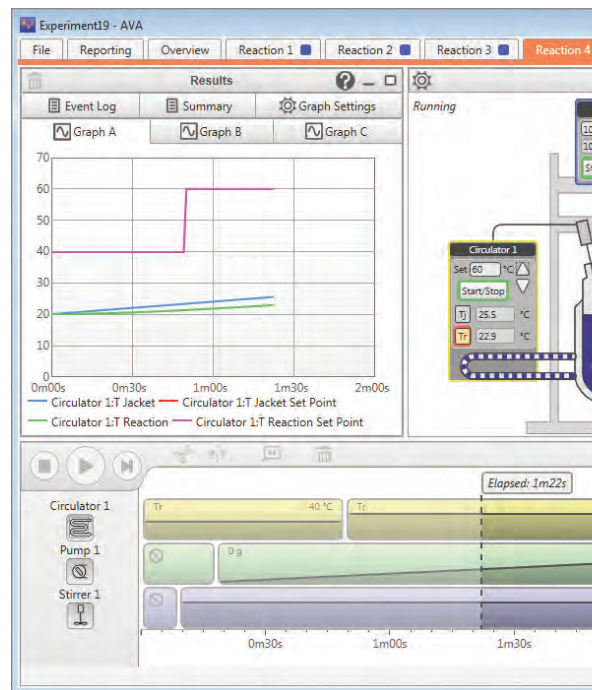


Rich text format reports

Export data by CSV format if preferred

2. Add devices

- Select and name devices
- Set device parameters and safety limits
- Link devices for dual control e.g. pump and balance for gravimetric additions



6. Enhanced safety

- Set individual device warning alarms
- Set emergency safe conditions or reaction
- Create safety feedback loops e.g. control
- Set user-definable limits or parameters for



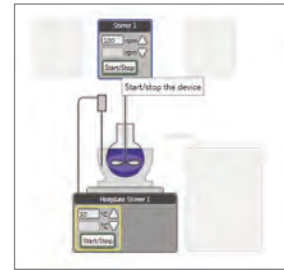
Overview



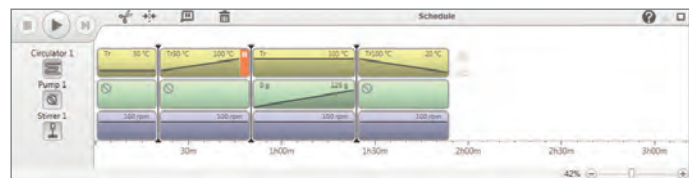
Naming devices and setting parameters

3. Select Direct or Schedule control

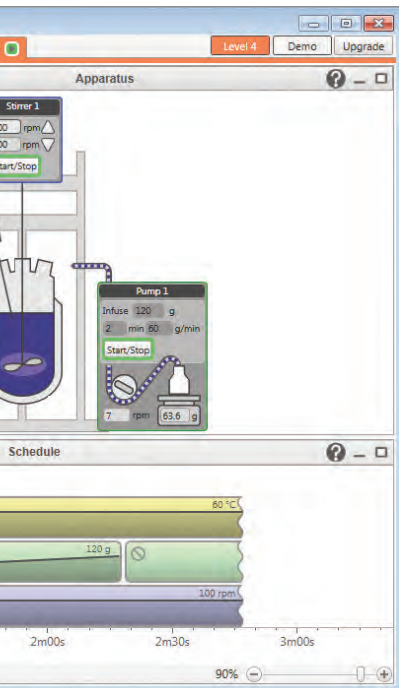
- Control devices directly via the Apparatus Window, or...
- Use the Schedule Window to create experiment profiles e.g. create ramps, plateaus and timed actions



Apparatus Window



Schedule Window



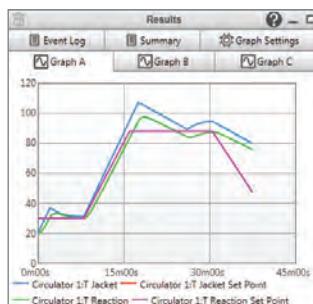
... shutdown if a sensor limit is exceeded
 ... a pump addition by process temperature
 ... for all devices

4. 'Track and Repeat'

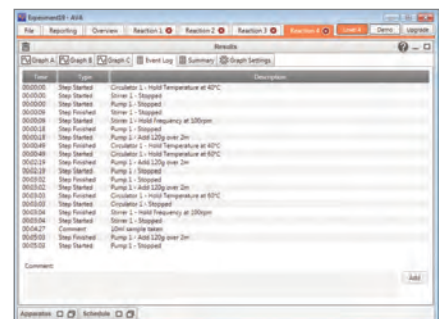
- Track what you do, as you do it and record all actions
- Repeat and refine the schedule to optimise the experiment
- This clever features enables automation of a manual process with ease and without any programming knowledge

5. During your experiment

- Stop, pause or skip steps and modify experiments mid-run
- Add or remove steps as the timeline progresses
- Add or record notes in the Event Log
- View real-time graphs



Graphs allow you to select what you plot



Event Log records all actions and notes

level 1



Control and log stirring hotplates

For hotplate users who want to run, record and repeat experiments.

- Control a single hotplate or up to four in parallel
- Integrate hotplates from leading manufacturers
- 'Track and Repeat' - create and record simple or complex profiles to control your hotplate
- Automate your common benchtop heating/stirring procedures for improved reproducibility and safety

Stop, pause, skip and modify experiments mid-run
Record, save, share and repeat common experiments





Control and log stirring hotplates and overhead stirrers

For hotplate and overhead stirrer users who want to run, record and repeat experiments.

- Control and log up to four hotplates and/or four overhead stirrers in parallel
- Integrate devices from leading manufacturers
- Control hotplate heating/stirring and overhead stirrer speed; also log torque
- Create profiles to control your hotplate and overhead stirrer simultaneously

Create triggers that link devices e.g. when the hotplate achieves 'X' °C change overhead stirring to 'Y' rpm



level 3



Control and log overhead stirrers and circulators

For chemists who want to control, schedule and log jacketed reaction systems

- Control and log a single jacketed reaction system, or up to four in parallel
- Integrate overhead stirrers and circulators from leading manufacturers
- Use with any brand of jacketed reaction system
- Control multiple parameters for improved reaction reproducibility, optimisation and safety

Create experimental profiles with safety feedback loops
Software automatically creates detailed reports





Control and log reaction systems with multiple devices

For jacketed reaction system users who want to automate their process and control multiple ancillary devices

- Control up to four reaction systems with up to 16 devices
- Interlink devices, set feedback/control loops, end-point conditions and safety limits
- Create complex experiments with any number of steps in series or parallel
- User-defined safety limits and alarms allow safe unattended operation

Integrate and control ancillary devices including: temperature sensors, peristaltic pumps, syringe pumps, vacuum pumps, balances, pH sensors, gas flow sensors and controllers



Control equipment from a variety of manufacturers

Data Hub

Integrate devices with an RS232 serial interface

Using the Data Hub, AVA can connect, control and log data from multiple 3rd party devices with an RS232 serial interface.

Choose from two Data Hub models:

- RR20200 - 4 Port Data Hub
4 x RS232 ports and 2 x Pt100 sensor ports
- RR20202 - 2 Port Data Hub
2 x RS232 ports and 2 x Pt100 sensor ports
- Combine up to 4 Data Hubs to increase capacity

Data Hubs include:

- 2 or 4 x RS232 serial ports
- 2 x Pt100 temperature sensor ports, with LEMO connection
- 1 x Ethernet port
- 1 x Serial and 2 x Ethernet cables



2 and 4 x RS232 port options



Power & Ethernet Connection













2 x Pt100
Temperature Sensor Ports

4 x RS232
Serial Ports

Comprehensive Driver Library

For popular 3rd party devices

- AVA includes a library of pre-configured driver files allowing easy integration with a wide range of 3rd party devices.
- Radleys also provide a 'New Driver Configuration Service' if required.
- Our Driver Library includes various models from the following manufacturers:

	Stirring Hotplates	Heidolph IKA Radleys
	Temperature Sensors	Generic
	Overhead Stirrers	Heidolph IKA Lara CLR Radleys
	Circulators	Haake Huber Julabo Lauda
	Peristaltic Pumps	Ismatec Watson-Marlow
	Syringe Pumps	Harvard New Era
	Vacuum Pumps	Vacuubrand
	Balances	A&D Denver Mettler Ohaus Precisa Sartorius
	pH Sensors	Knick
	Gas Flow Controllers	Bronkhorst

How to order



AVA Software Kits

RR20302	AVA Level 1 Software Kit
RR20304	AVA Level 2 Software Kit
RR20306	AVA Level 3 Software Kit
RR20308	AVA Level 4 Software Kit

Software Kits include:

- AVA Software
- Laptop Controller
- Level 1 and 2 Kits include 2 Port Data Hub
- Level 3 and 4 Kits include 4 Port Data Hub
- 1 Year AVA Care Support

AVA Software Only

RR20111	AVA Software Level 1
RR20112	AVA Software Level 2
RR20113	AVA Software Level 3
RR20114	AVA Software Level 4

Software includes:

- 1 Year AVA Care Support



How to upgrade



AVA Upgrades

If your needs change, requiring control of more apparatus, AVA software can be easily upgraded.

RR20120	AVA Upgrade Level 1 to 2
RR20121	AVA Upgrade Level 1 to 3
RR20122	AVA Upgrade Level 1 to 4
RR20123	AVA Upgrade Level 2 to 3
RR20124	AVA Upgrade Level 2 to 4
RR20125	AVA Upgrade Level 3 to 4

Upgrades include:

- 1 Year AVA Care Support

AVA Care Support



FREE support for 1st Year

- Free priority email and telephone support
- Free set-up and application support
- Free software updates during support period, keeping software current, regardless of which level is purchased

Renew AVA Care for another year

RR20141	AVA Care Level 1 - 1 Year
RR20142	AVA Care Level 2 - 1 Year
RR20143	AVA Care Level 3 - 1 Year
RR20144	AVA Care Level 4 - 1 Year

AVA ordering Information

AVA Software Kits - includes Controller, Data Hub & AVA Care

RR20302	AVA Level 1 Software Kit - UK Plug
RR20304	AVA Level 2 Software Kit - UK Plug
RR20306	AVA Level 3 Software Kit - UK Plug
RR20308	AVA Level 4 Software Kit - UK Plug

AVA Software Only

RR20111	AVA Software Level 1 + 1 Year AVA Care
RR20112	AVA Software Level 2 + 1 Year AVA Care
RR20113	AVA Software Level 3 + 1 Year AVA Care
RR20114	AVA Software Level 4 + 1 Year AVA Care

AVA Upgrades

RR20120	AVA Software Upgrade Level 1 to 2 + 1 Year AVA Care
RR20121	AVA Software Upgrade Level 1 to 3 + 1 Year AVA Care
RR20122	AVA Software Upgrade Level 1 to 4 + 1 Year AVA Care
RR20123	AVA Software Upgrade Level 2 to 3 + 1 Year AVA Care
RR20124	AVA Software Upgrade Level 2 to 4 + 1 Year AVA Care
RR20125	AVA Software Upgrade Level 3 to 4 + 1 Year AVA Care

AVA Care Support

RR20141	AVA Care Level 1 - 1 Year
RR20142	AVA Care Level 2 - 1 Year
RR20143	AVA Care Level 3 - 1 Year
RR20144	AVA Care Level 4 - 1 Year

New Driver Device Integration

RR20217	Driver Configuration Service
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Controller

RR20250	Laptop Controller - UK Plug
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Data Hub and Accessories

RR20200	4 Port Data Hub - UK Plug
RR20202	2 Port Data Hub - UK Plug
RR20454	Ethernet Switch (enables the use of 4 x Data Hubs, providing upto 16 x RS232 ports) - UK Plug

Stirring Hotplates - with RS232 serial interface

RR91204	Carousel Advanced Stirring Hotplate - UK Plug
RR91205	Carousel Advanced Stirring Hotplate + Pt1000
RR91234	RS232 Interface Cable - 15 Pin to 9 Pin
RR91226	Pt1000 S/S Temperature Sensor
RR91228	Temperature Sensor Holder
RR91229	Support Rod (13mm x 425mm)
RR91235	Pt1000 Clamping System + Support Rod and Cable Guide

Overhead Stirrers - with RS232 serial interface

RR91308	RS50 Control Overhead Stirrer, 50W - UK Plug
RR91312	RS100 Control Plus Overhead Stirrer, 100W - UK Plug
RR91234	RS232 Interface Cable - 15 Pin to 9 Pin

Circulators - with RS232 serial interface

We offer a full range of circulators, hoses, oils, cables and accessories for all types of heating/cooling applications. For advice on selecting the system or accessory you need please contact our sales office.

Automation Modules - for Level 4

Gravimetric Additions Module

RR20500	Gravimetric Additions Module - which includes:
RR20446	Toploading Balance 0.01g x 4,200g
RR20450	Control Cable, Balance to PC, 3m
RR20400	Peristaltic Pump 400rpm 2000ml/min
RR20404	Control Cable, Peristaltic Pump to PC, 3m
RR20407	Marprene Tubing 1.6mm Bore 1.6mm Wall 5m
RR139091	Feed Adapter Rodaviss, B24 to GL14
RR139095	Feed Adapter Rodaviss, B24 to 2 x GL14
RR139101	1000ml Lab Bottle GL45
RR139109	Distribution Cap GL45 with 2 x GL14
RR139111	Screw Cap with Aperture GL14, pack 10
RR139113	Silicone Seal with PTFE Washer GL14, 6mm, pk 10
RR20452	Labjack 200x230mm

Syringe Pump Additions Module

RR20504	Syringe Pump Additions Module - which includes:
RR20418	Single Syringe Pump to 60ml
RR20420	Control Cable, Single Syringe Pump to PC, 2m
RR20407	Marprene Tubing 1.6mm Bore 1.6mm Wall 5m
RR139091	Feed Adapter Rodaviss, B24 to GL14
RR139095	Feed Adapter Rodaviss B24 to 2 x GL14

pH Module

RR20502	pH Module - which includes:
RR20424	pH/mV/Temp Meter Portable + Control Cable (probe not included). Battery operated.
RR20438	Cable, pH Meter to Combination VP Probe, 3m
RR139087	Adapter Rodaviss B34 to GL25
RR139125	Swivel 12mm pH Probe Adapter GL25
RR20440	Buffer Solution Certified pH 4.01 +/-0.02 - 500ml
RR20442	Buffer Solution Certified pH 7.00 +/-0.02 - 500ml
RR20444	Buffer Solution Certified pH 9.21 +/-0.02 - 500ml

pH Probes

RR20432	Combination VP pH Probe 325mm x 12mm (100, 250, 500ml vessels)
RR20434	Combination VP pH Probe 360mm x 12mm (1000ml vessels)
RR20436	Combination VP pH Probe 425mm x 12mm (2000, 3000, 5000ml vessels)

Vacuum Pump Module

RR20506	Vacuum Pump Module - which includes:
VB696702	PC3001 Vario Chemistry Diaphragm Pump - UK Plug
RR20216	Null Modem Serial Cable, 2m
RR20456	NW 8 Rubber Vacuum Hose, 3m
RR139025	Gas Purge Adapter B24 + GL14 + Fittings

Voltage and Plug Options

For your preferred voltage please add suffix /EURO, /JAP, /SWISS or /USA to the end of the catalogue number.