DataApex
SMART SOLUTION FOR LABORATORIES

Clarity™
advanced chromatography software

DISTRIBUTOR TRAINING

CONTROL MODULES

P015/80C 12/2021

GC control module

- Agilent
  - 5890, 6890, 7890, 8860, 8890, Intuvo 9000, etc.
- Dani
  - Master, 1000
- Shimadzu
  - GC2010/2014, GC-17A, GC14C
- Young In Chromass
  - GC 6500, GC 6100
- Etc.

HPLC control modules

- Agilent 1100/1200 HPLC
- Knauer Smartline
- Shimadzu LC-10/20 system
- Hitachi LaChrom Elite
- YL Instruments 9100
- GL Sciences LC800
- LabAlliance pumps
- Etc.

AS control module

- Agilent
- CTC
- Spark Holland
- HTA
- Dani
- Cetac
- Etc.

DataApex
ADVANCED CHROMATOGRAPHY SOFTWARE

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CLARITY – LIST OF CURRENTLY CONTROLLED INSTRUMENTS (version 8.3)

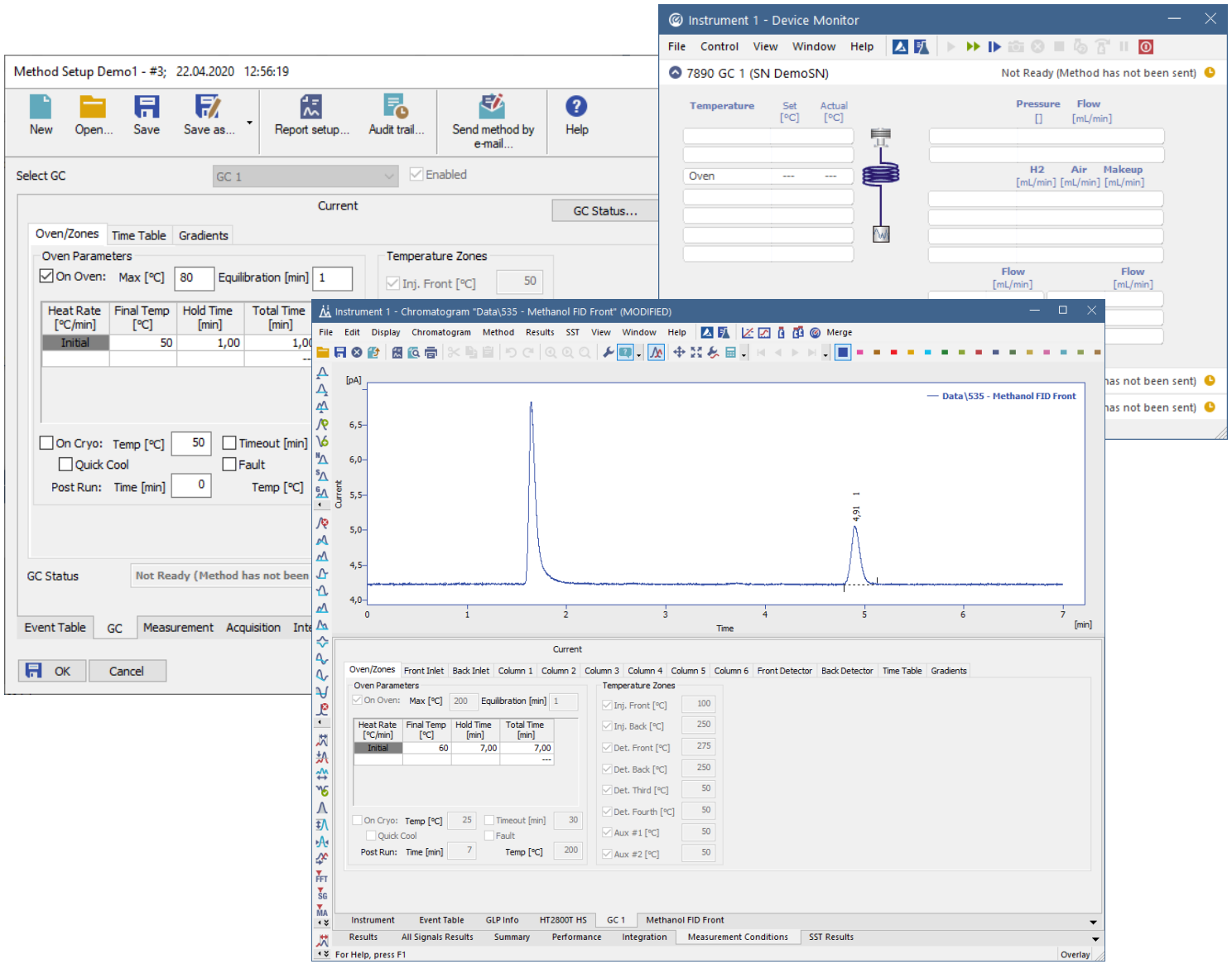
GCs (p/n A23)

	Producer	Name	Interface	Status
	Agilent	4890D, 5890 II, 5890A, 6890	RS232	Ready
	Agilent	6820, 6850, 6850 II, 6890 Plus, 6890N	RS232 or LAN	Ready
New	Agilent	6850, 6890 Plus, 6890A, 6890N, 7820, 7890A, 7890B, 8860, 8890, Intuvo 9000	LAN - ICF	Testing
	Agilent	7890A, 7890B	LAN	Ready
	Ample Technology Center	ATC-6900 GC	LAN	Ready
	Apix /1,2	ChromPix2, TwinPix	LAN	Testing
	Dani	GC1000	RS232 + A/D converter	Ready
	Dani /1,3	Master GC	RS232 or LAN	Ready
	Ellutia /1,2	200 Series	RS232 + A/D converter	Ready
	Ellutia /1,3	300 Series	RS232 + A/D converter	Ready
New	Fuli /1	GC 9720 Plus, GC 9790 Plus	LAN	Ready
	GOW-MAC	Series 816	LAN	Ready
	NETEL /1	Analyte 2900A, Chrom Lite 3000A	A/D converter + RS232	Testing
	Shimadzu	GC14C, GC17A	RS232, OPT-USB + A/D converter	Ready
New	Shimadzu	GC2010, GC2010 Plus, GC2010 Pro, GC2014, GC2014C, GC2014C APC/AFC	RS232	Ready
	Snir /1,2	Sion 4210	LAN	Testing
New	YoungIn Chromass /1	ChroZen GC	LAN	Testing
	YoungIn Chromass /1	YL6100	RS232	Ready
	YoungIn Chromass /1	YL6500	LAN	Ready

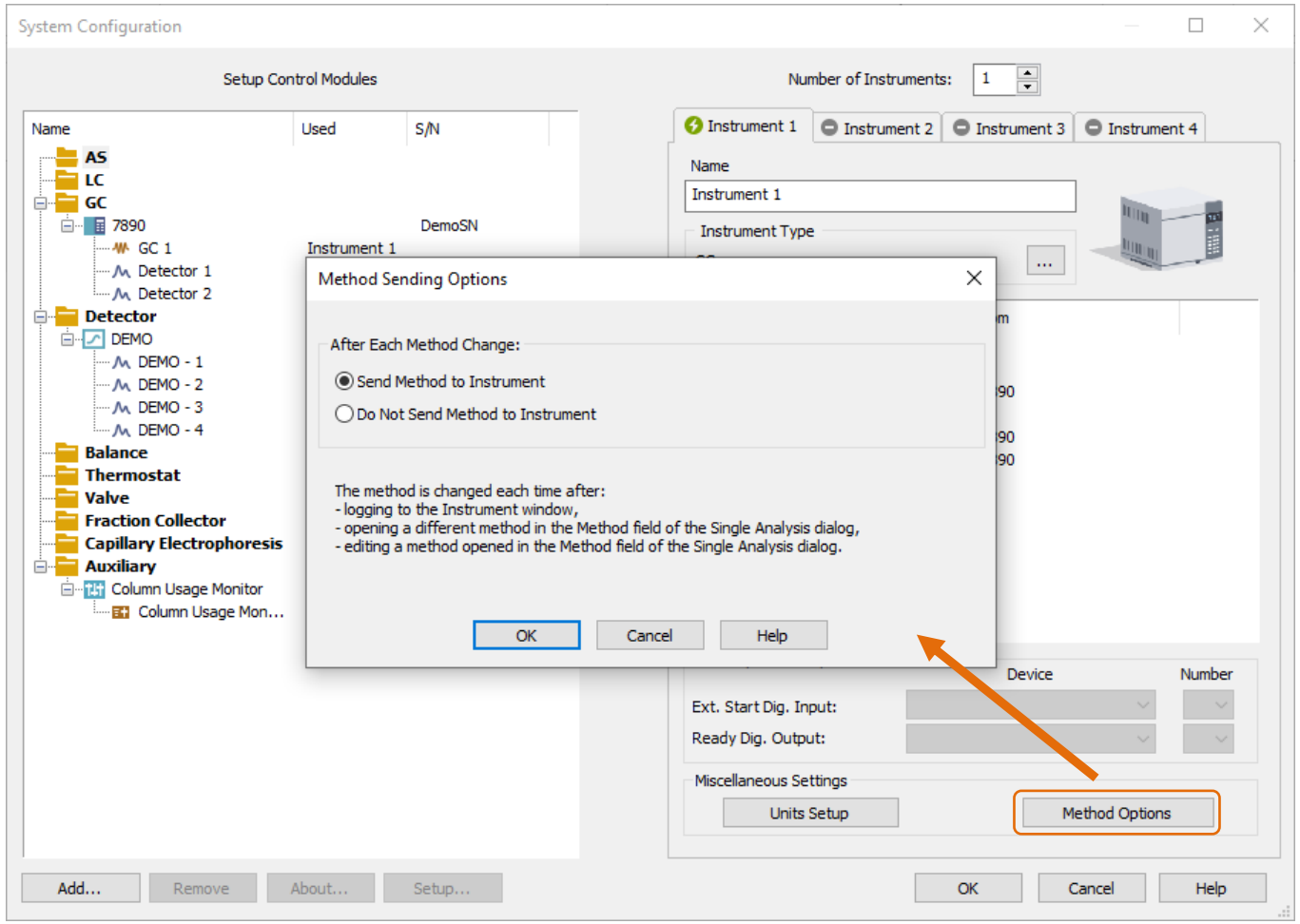
HPLC Systems (p/n A24)

Producer	Name	Interface	Status
Agilent	1100 LC, 1200 LC, 1260 Infinity, 1290 Infinity II (see list of particular components)	LAN - ICF	Ready
Agilent	1100 system	GPIB, LAN	Ready

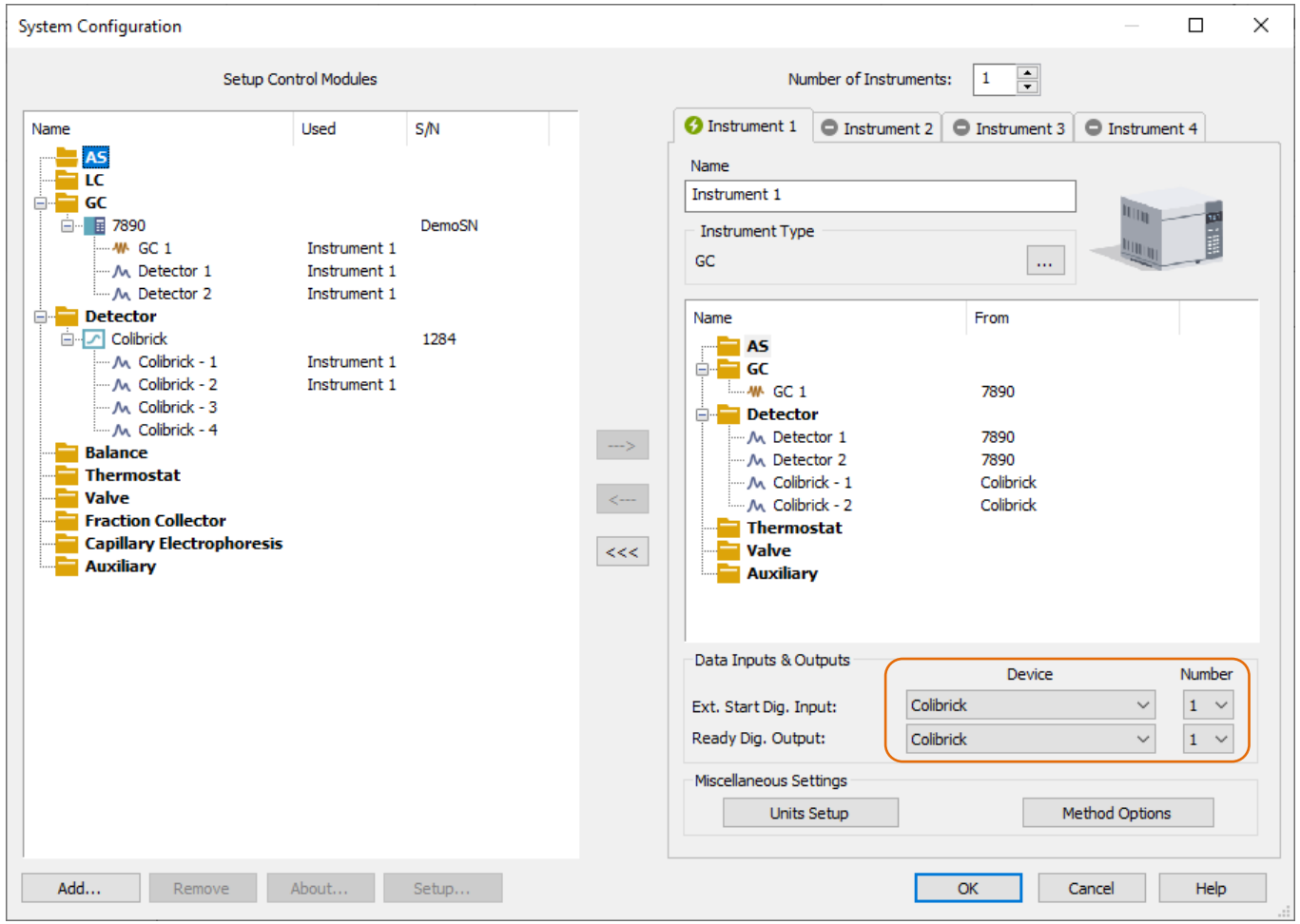
- List of currently controlled instruments is **available** at DataApex **website**
- Or in **D004** datasheet



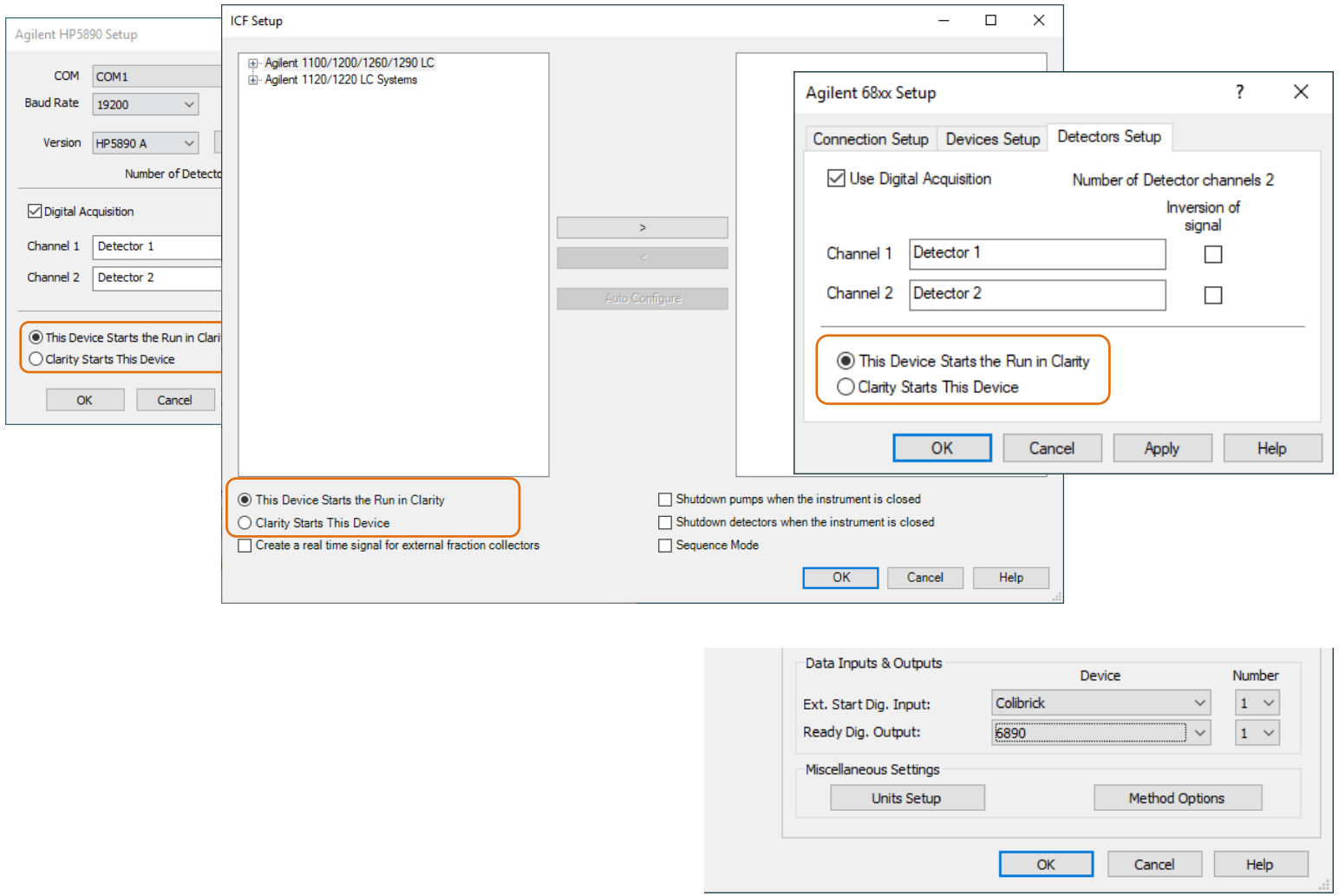
- Tab in the **Method Setup**
- Pane in the **Device Monitor**
- Tab in the **Chromatogram**



Option to **Send** or **Do not send** method to instruments after method change



- **Ext. Start Dig. Input** – used to start the run
- **Ready Dig. Output** – controlled by Active sequence



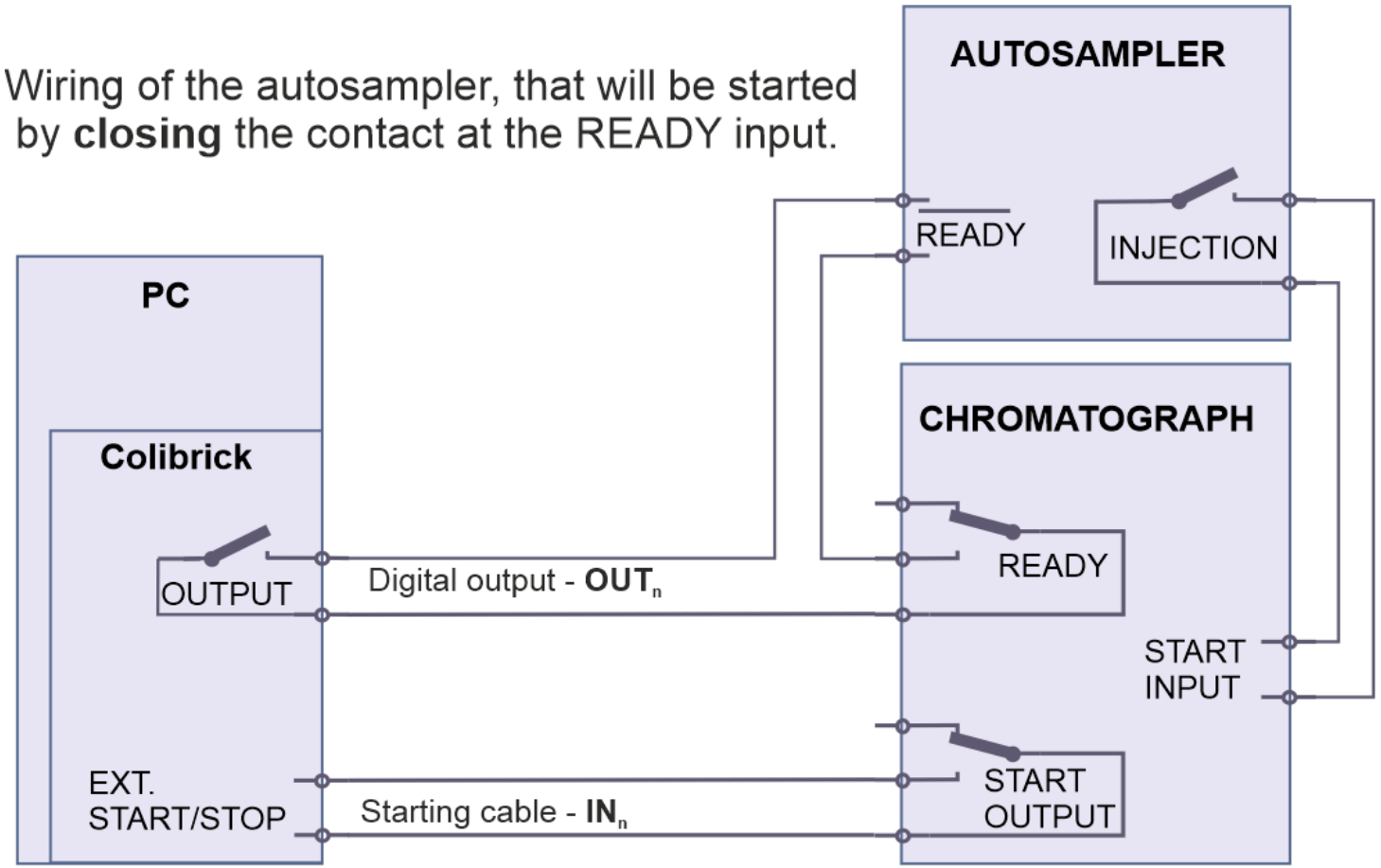
- Some control modules do not offer the Digital Start Input
- When the run will be started by Clarity or other module, the Clarity Start
- This Device needs to be checked

Typical AS configurations are

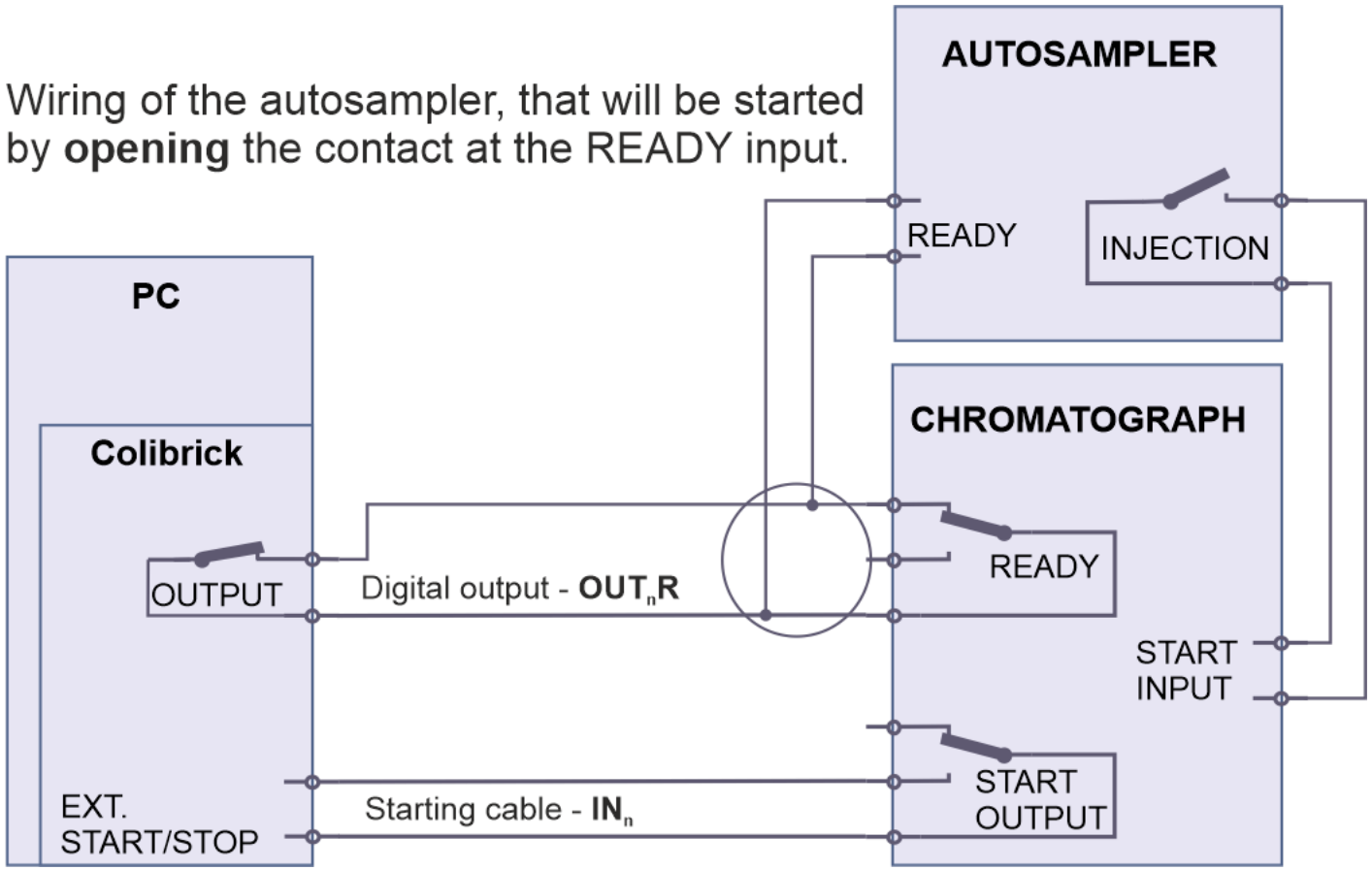
- **AS** + **GC** set - **ACTIVE** sequence
- **AS** + **LC** set - **ACTIVE** sequence
- **AS** - **PASSIVE** sequence (GC or LC)
- **AS** - **ACTIVE** sequence + AS Control + A/D card
- **AS** - **ACTIVE** sequence + AS Control + digital acquisition

Active Sequence GC

Wiring of the autosampler, that will be started by **closing** the contact at the READY input.

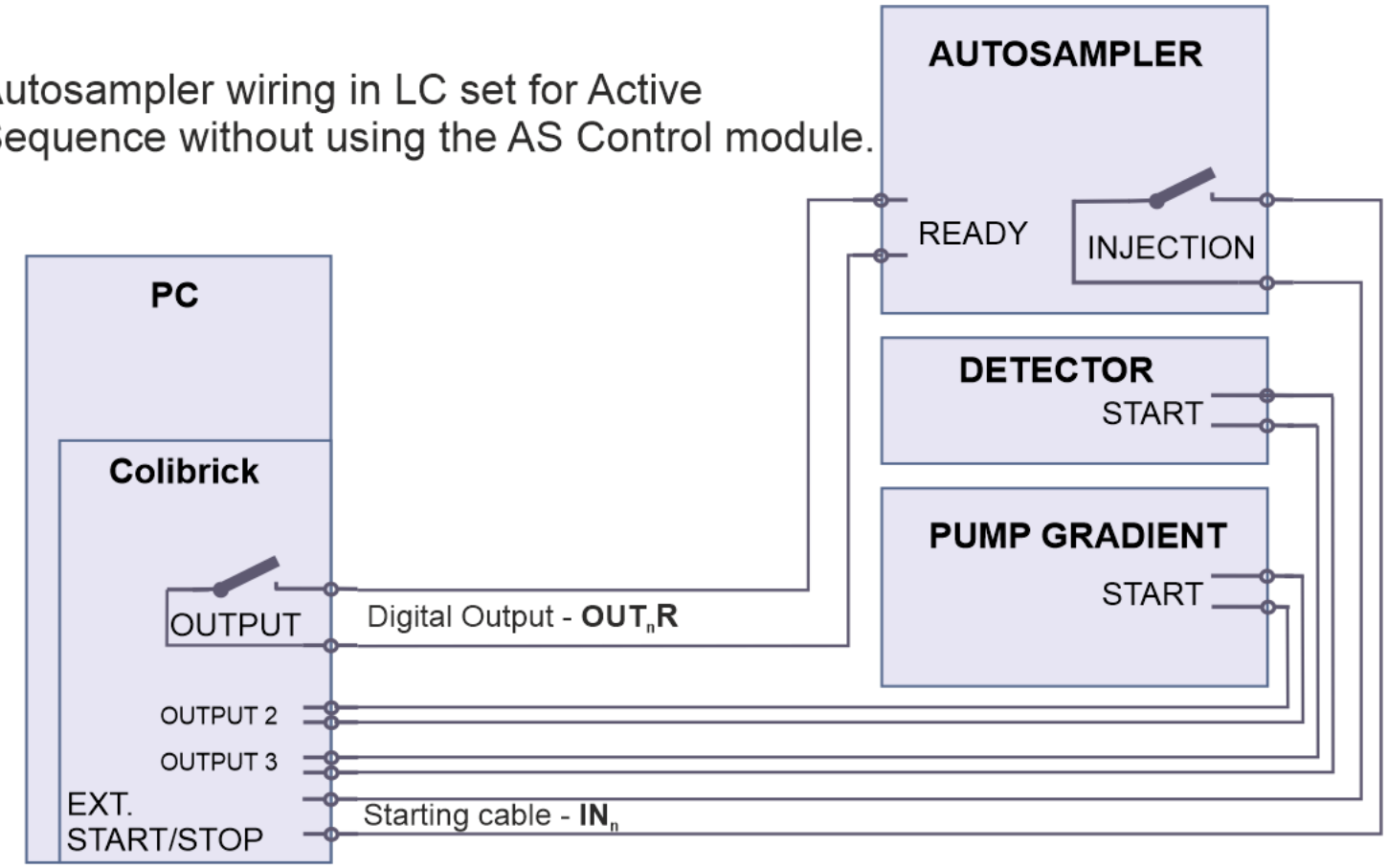


Active Sequence GC

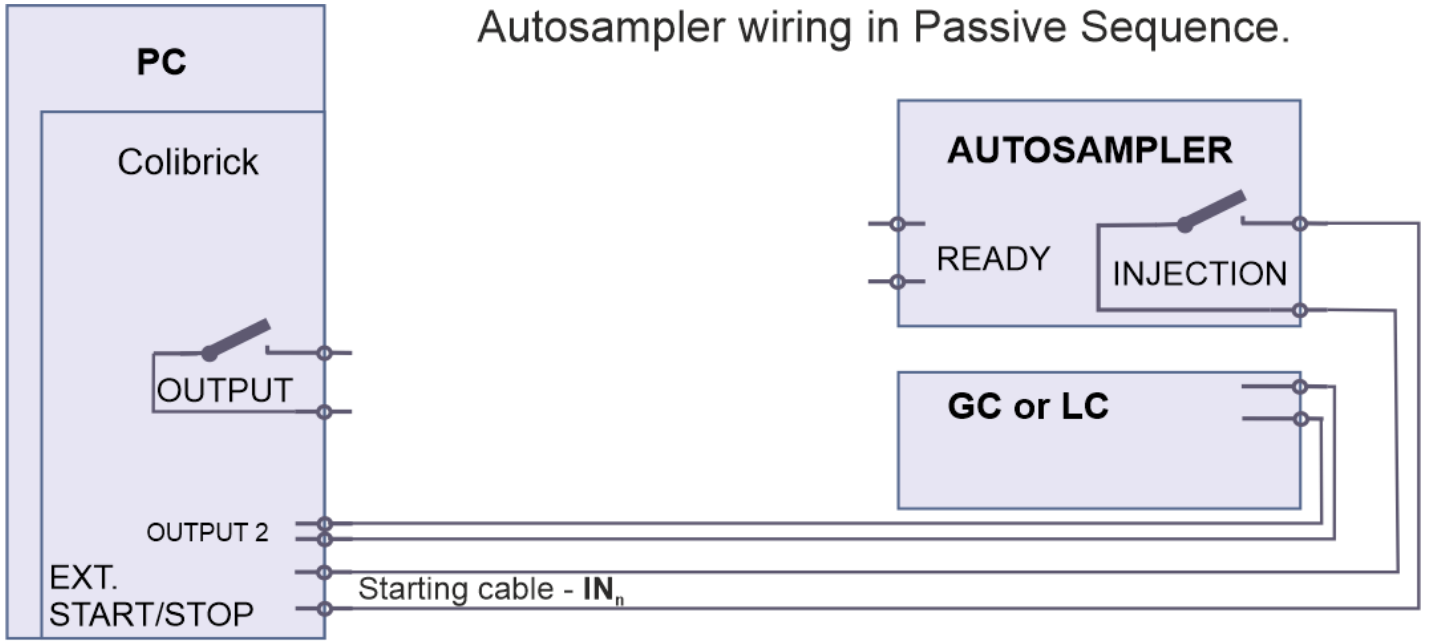


Active Sequence LC

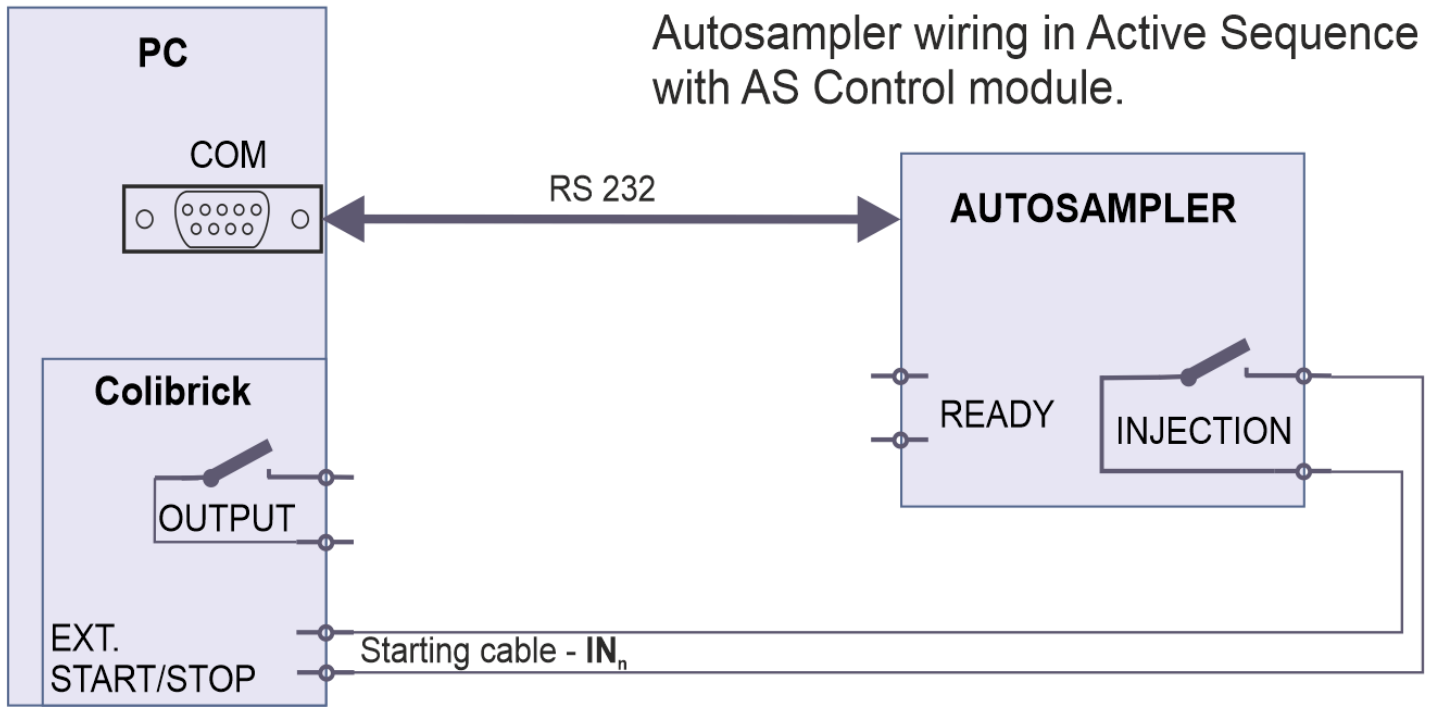
Autosampler wiring in LC set for Active Sequence without using the AS Control module.



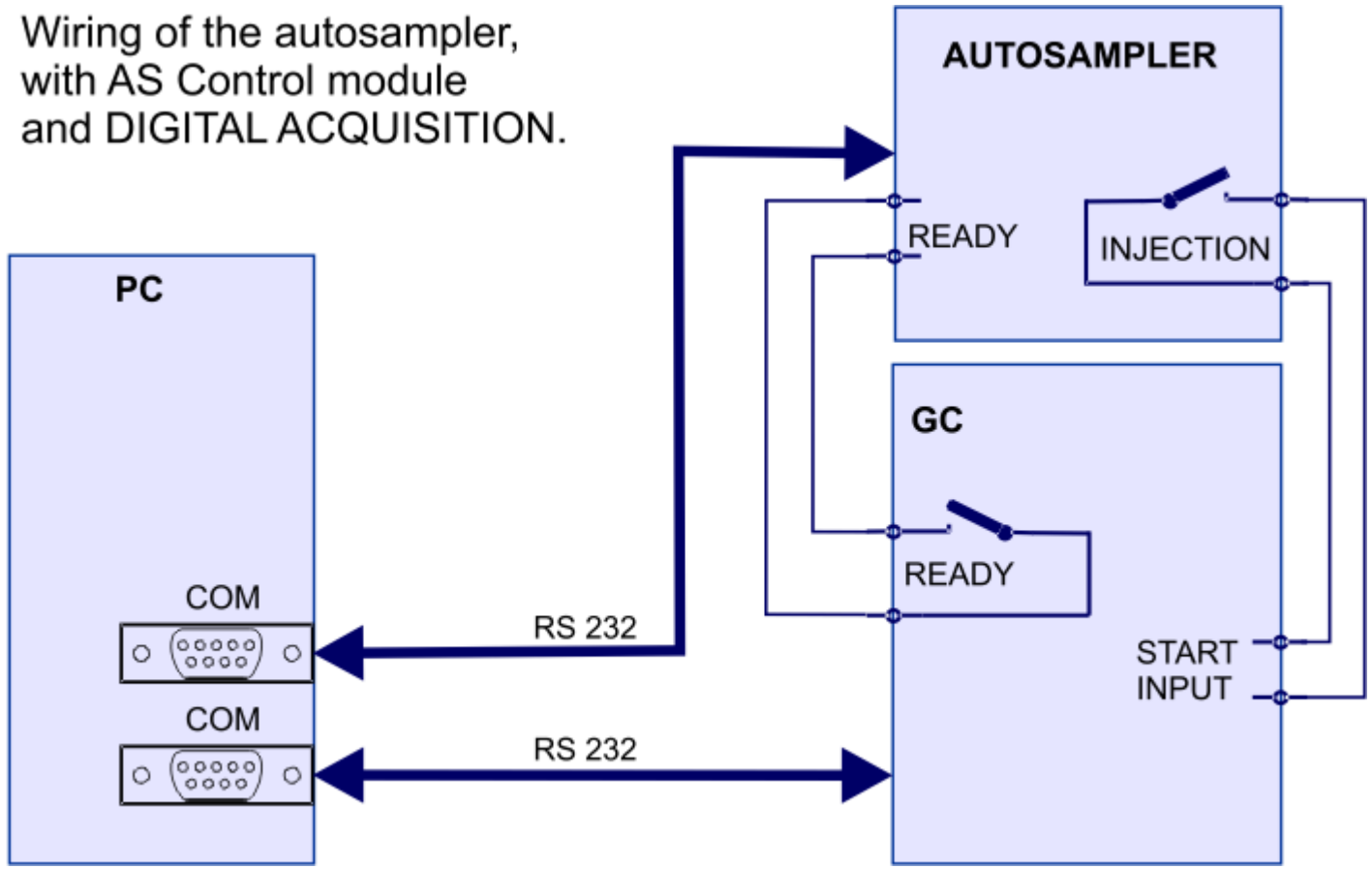
Passive Sequence

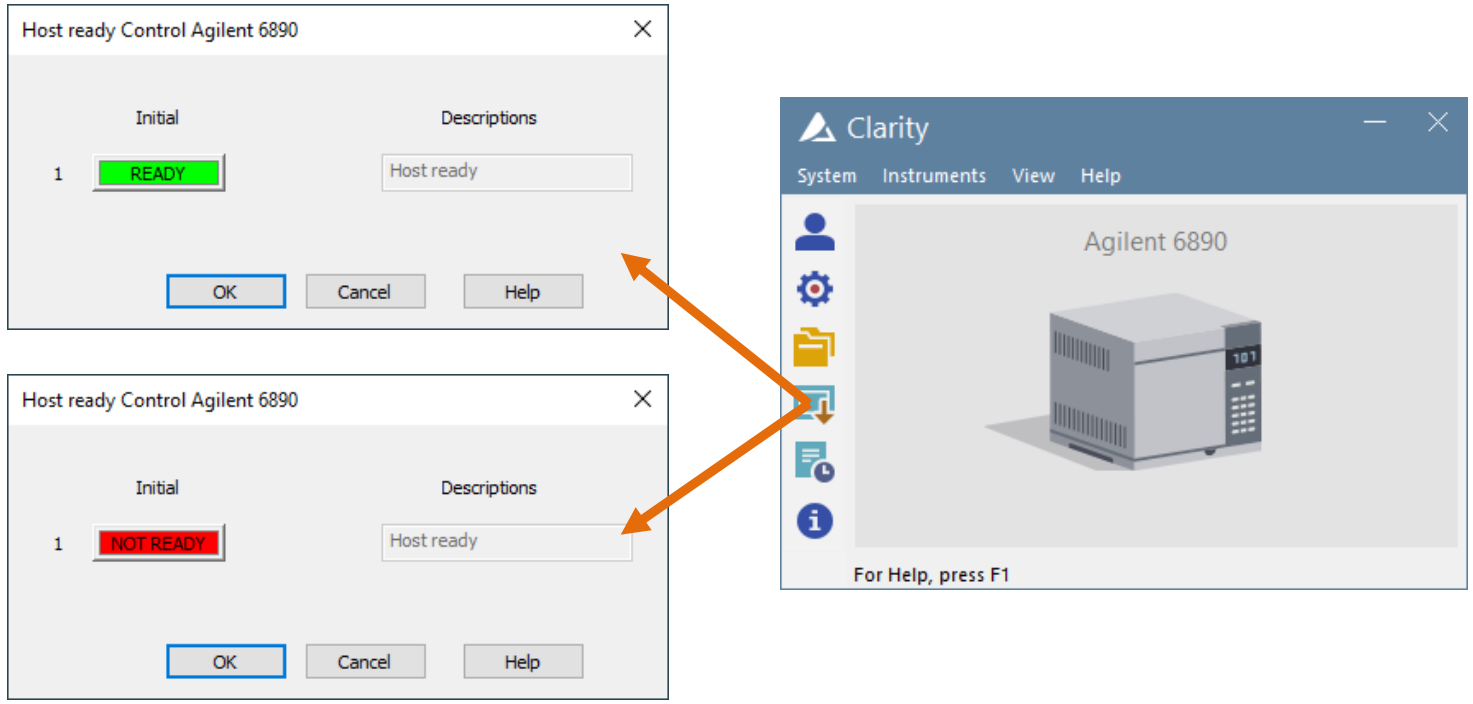


AS Control – Analog data



AS Control – Digital acquisition





- The **Initial state for Digital Output** (Host ready) on 68x0 GC must be set:
- READY for **Manual injection** (default)
- NOT READY for any **autosampler controlled** using Active Sequence

Active Sequence – start by Clarity

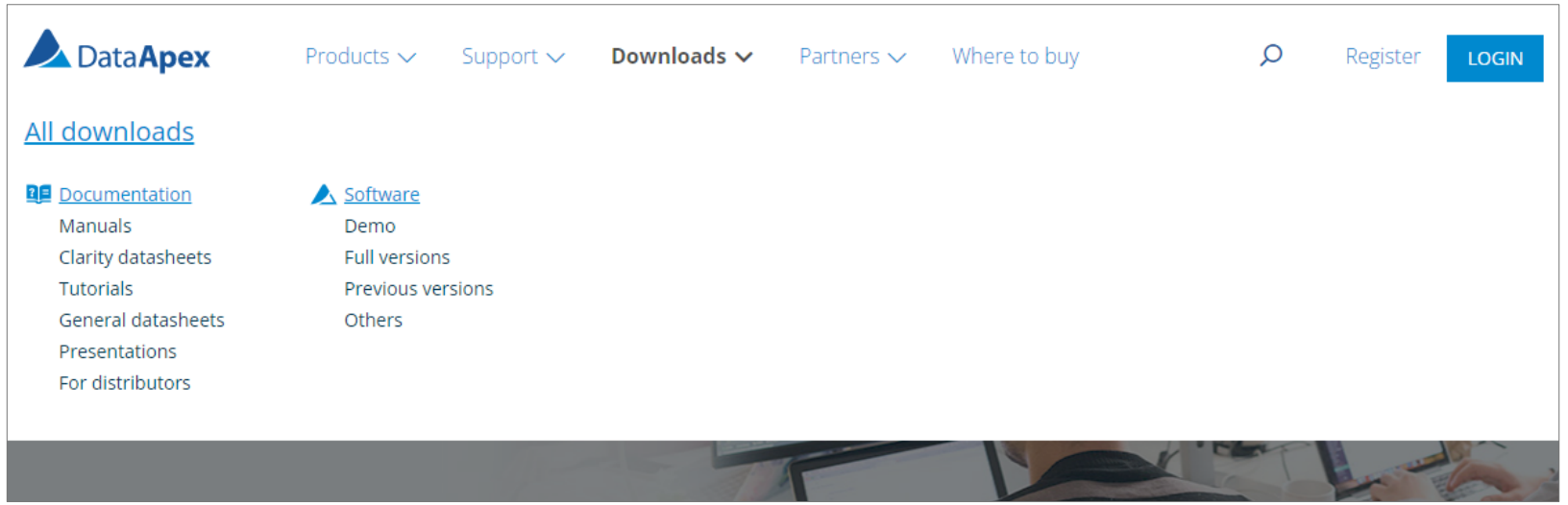
- Elemental Analyzers
  - no Start Out contact on the analyzer
- Sampling by Gas valves
  - the actual sampling is programmed in event table as part of the run
- Solution:
  - A/D card – connect Start In to Ready out
  - Virtual digital I/O module (simulates connection like a DEMO detector)

Overlapped mode in AS

- Sequence in Clarity sends to autosampler one injection at a time
- Overlap mode is available for selected AS
  - Prep ahead mode (CTC PAL-xt series)
  - Sequence mode (Spark, CTC PAL3)
  - Overlapped mode (Sykam)
  - Use Optimised Sequence (HTA200H)
- Important for derivatization and headspace
- Method Setup – besides Autostop time the correct analysis time must be set in the Autosampler method

Control modules manuals

- Cables, accesories, wiring and configurations
- Communication, pecularities and limitations



Available on www.dataapex.com or on installation medium in Documentation subfolder.

DataApex

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...THANK YOU FOR YOUR TIME

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WWW.DATAAPEX.COM