

Beaumont Laboratory

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Effective Date: 05/01/2019

Supersedes:

Related Documents:

Abbott Instrument Manager (IM) Operation Guide

BL.CH.ARC.PR.002.r00

I. Intended Use and Purpose

Instrument Manager (IM) is a stand-alone software application that provides connectivity between laboratory instruments and Laboratory Information Systems, aiding the flow of laboratory information, including test orders and results, specimen information, and patient information. Instrument Manager also provides data management functions that aid in the interpretation and management of laboratory results. Instrument Manager is a software package intended to be used by trained laboratory personnel as an aid in laboratory instrument interfacing and laboratory data management.

II. Logging into IM

- A.** IM is accessed through Beaumont Health Apps or through a thin client on the PC desktop.



- B.** Usernames are set up by the department manager.
- C.** The first time a user logs into IM, no password is needed. Enter the username and then click “Accept and Logon”. A prompt will pop-up allowing the user to create their unique password.

III. Instrument Manager Home Screen Options- NOTE: some of these options are for administrators only and all users will not have access to some options

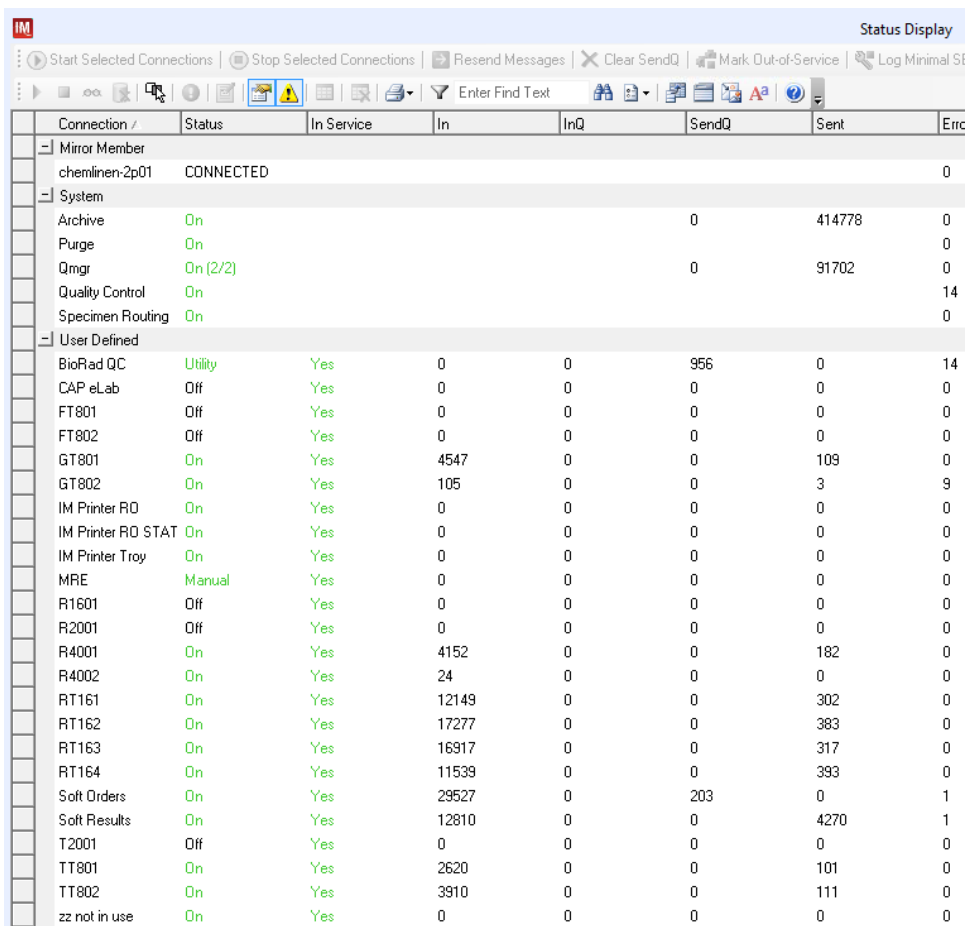
A. System

The system option on the IM toolbar allows the user to have access to:

1. Logon
2. Log off
3. Change Language Locale
4. Status
 - a. This option gives the user the ability to see the connection status of their instruments. They can also view the incoming and outgoing orders and results.
 - b. In the event of communication issues with the LIS this area can be monitored to help troubleshoot the issue. In the event of communication issues, the SendQ will show large numbers or results waiting to transmit to the LIS.
 - c. Mirror Member: make sure that this status always says “CONNECTED”. If the status shows anything else, call the service hotline.

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5. Qmgr: be sure that this status is always “On 2/2”. If this status says “On 1/2” or “UNKNOWN” call the service hotline.



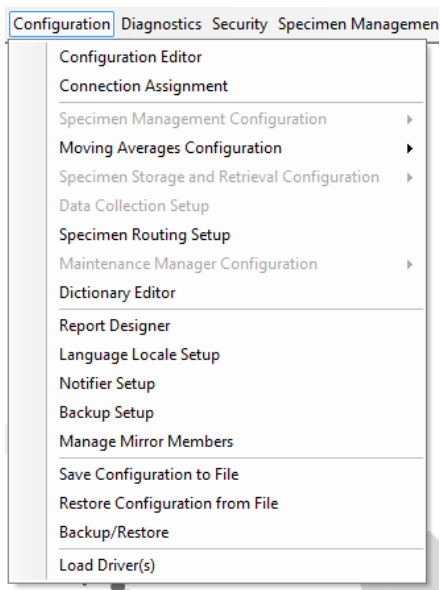
Connection /	Status	In Service	In	InQ	SendQ	Sent	Errc
Mirror Member							
chemlinen-2p01	CONNECTED						0
System							
Archive	On				0	414778	0
Purge	On						0
Qmgr	On [2/2]				0	91702	0
Quality Control	On						14
Specimen Routing	On						0
User Defined							
BioRad QC	Utility	Yes	0	0	956	0	14
CAP eLab	Off	Yes	0	0	0	0	0
FT801	Off	Yes	0	0	0	0	0
FT802	Off	Yes	0	0	0	0	0
GT801	On	Yes	4547	0	0	109	0
GT802	On	Yes	105	0	0	3	9
IM Printer RD	On	Yes	0	0	0	0	0
IM Printer RD STAT	On	Yes	0	0	0	0	0
IM Printer Troy	On	Yes	0	0	0	0	0
MRE	Manual	Yes	0	0	0	0	0
R1601	Off	Yes	0	0	0	0	0
R2001	Off	Yes	0	0	0	0	0
R4001	On	Yes	4152	0	0	182	0
R4002	On	Yes	24	0	0	0	0
RT161	On	Yes	12149	0	0	302	0
RT162	On	Yes	17277	0	0	383	0
RT163	On	Yes	16917	0	0	317	0
RT164	On	Yes	11539	0	0	393	0
Soft Orders	On	Yes	29527	0	203	0	1
Soft Results	On	Yes	12810	0	0	4270	1
T2001	Off	Yes	0	0	0	0	0
TT801	On	Yes	2620	0	0	101	0
TT802	On	Yes	3910	0	0	111	0
zz not in use	On	Yes	0	0	0	0	0

- a. Shutdown- DO NOT SHUTDOWN UNLESS INSTRUCTED BY ABBOTT CUSTOMER SERVICE
 - b. Status of Instrument Manager Sessions
 - c. Triggered Notifier Events
 - d. Exit
- B. Configuration**

The configuration option on the IM toolbar allows the user to have access to the following options. These options will be maintained by a supervisor and/or administrator.

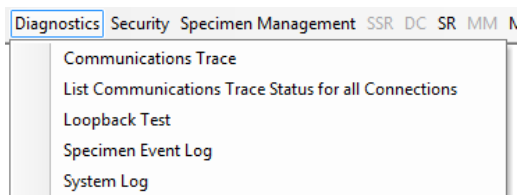
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C. Diagnostics

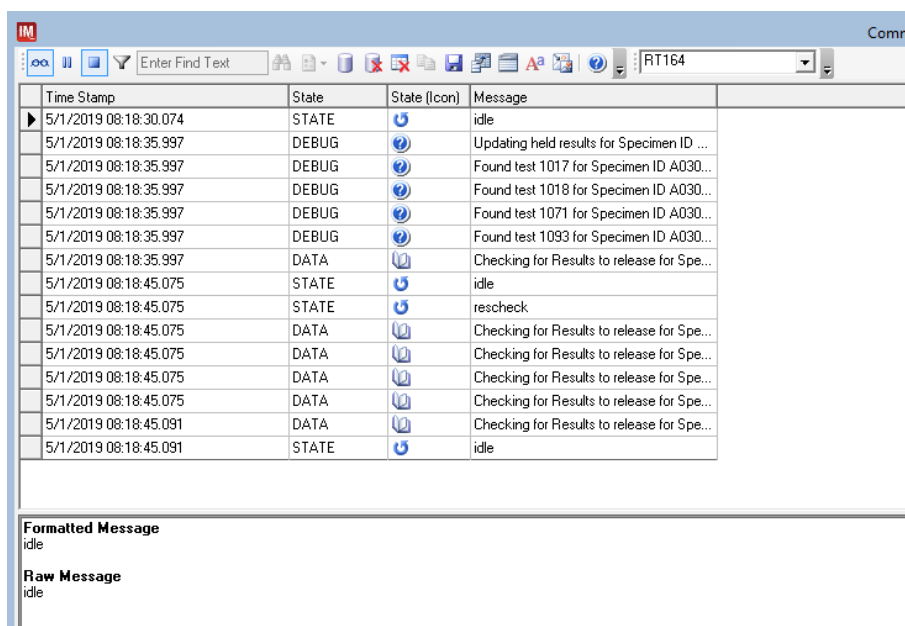
The diagnostics option on the IM toolbar allows users to have access to the following:



1. **Communications Trace:** allows the user to view the communication status between instruments, LIS, QC, etc. which is helpful for troubleshooting communication issues.
 - a. When using the Communications Trace option, be sure to stop viewing the trace communication when finished. If this action is not taken to stop the trace viewing, the IM program will slow. To start and stop communications trace, the user will select the “glasses”  to view and then select the square to stop .

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Time Stamp	State	State (Icon)	Message
5/1/2019 08:18:30.074	STATE	🔄	idle
5/1/2019 08:18:35.997	DEBUG	🔍	Updating held results for Specimen ID ...
5/1/2019 08:18:35.997	DEBUG	🔍	Found test 1017 for Specimen ID A030...
5/1/2019 08:18:35.997	DEBUG	🔍	Found test 1018 for Specimen ID A030...
5/1/2019 08:18:35.997	DEBUG	🔍	Found test 1071 for Specimen ID A030...
5/1/2019 08:18:35.997	DEBUG	🔍	Found test 1093 for Specimen ID A030...
5/1/2019 08:18:35.997	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.075	STATE	🔄	idle
5/1/2019 08:18:45.075	STATE	🔄	rescheck
5/1/2019 08:18:45.075	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.075	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.075	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.075	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.091	DATA	📄	Checking for Results to release for Spe...
5/1/2019 08:18:45.091	STATE	🔄	idle

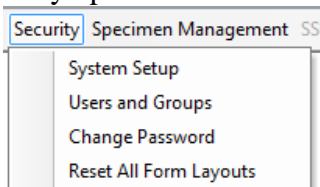
Formatted Message
idle

Raw Message
idle

2. List Communications Trace Status for All Connections: allows the user to use a specimen ID number and see all associated connections, configurations, date and time of events that happened on that transaction ID.
 - a. Events include: test code mapping, error code, mapping, instrument ID code mapping, data updated, data after rules processing, data sent, data queued, etc.
3. System Log: allows the user to look back at configuration changes made to the system.
 - a. System events are displayed on the System Log grid. Select the event by clicking on the row in the grid. Detailed information about the grid entry is displayed in the Preview pane.

D. Security

The security option on the IM toolbar allows users to have access to the following:



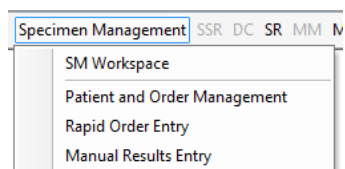
1. These parameters will be managed by managers/supervisors and/or administrators.
2. The user will be able to Change Password.
3. If the user is experiencing slowness of IM or problems, click on “Reset All Form Layouts”. This will bring the IM layout back to default status and will clear any buildup of layout changes that have been made.

E. Specimen Management (SM Workspace)

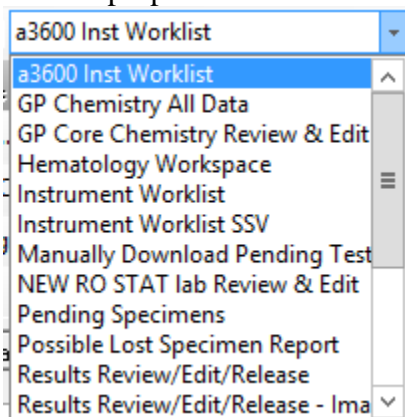
The specimen management option on the IM toolbar allows users to have access to the following:

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- A. Once in the workspace, the user will select the appropriate workstation, depending on their need, from the dropdown menu as shown below. Each worklist has various purposes.










- B. When looking for a worklist to report patient testing that has been held for review, the worklist will be named “Review and Edit”, “Test Held”, “Partial”, or will be designated with a specific instrument (DB HEP/HIV).
- Results in this patient list require action from the user to be released into the LIS.
 - Various actions will cause the patient results to be held in this worklist or patient list/review list:
 - Delta Check
 - “>” or “<”
 - Manual or Automated Dilution required
 - Hemolysis, Lipemia, or Icterus flags
 - Critical values
 - High/Low values
 - Instrument Errors
 - Instrument Exceptions
 - Short sample volume
 - Clotted
 - Reagent low
 - Instrument supplies low
- C. When the user has accessed the appropriate worklist, result processing can begin. Results that require a technologist review will be under “Tests Held”.
- When an order is selected by the user, the corresponding test information will populate the screen.
 - From this view, the user can manipulate the results by selecting the result(s) that require action and using the right-click option as shown below and selecting “Action”. These options are also available on the toolbar of SM Workspace.

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- c. From the “Action” menu, the technologist can choose to perform any of the following available choices:
- “Order Rerun/Reflex” allows the user to rerun an analyte while retaining the original result. 
 - “Release” sends the results to the LIS. 
 - “Reject Result” eliminates the result and locks it from being able to transmit to the LIS. 
 - “Rerun/Reject” rejects the original result and orders another pending test for that analyte.
 - “Print/Rerun/Reject” allows you to print the original result, then “Rerun/Reject” the result.
 - “Print Report” allows you to print a paper report. 
 - Order New Tests
 - Manually Download Pending Tests 
 - Cancel Test . This removes the entire order set from IM. This option is specifically for pending tests.
 - Send to Host . This sends previously reported results back to the LIS.

F. Patient Order Management (POM)

- POM is used to locate information for a patient or sample by using the MRN, specimen ID number, or patient name.
- POM allows the user to:
 - Add on/order tests
 - Select priority
 - View order physician
 - Cancel tests
 - Print barcodes
 - Locate and evaluate results

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g. Send results to LIS

Patient Information:

Patient ID: Patient Name: SSN: MRN: DOB: 5/1/2019 Sex: ☐ Male ☐ Female ☐ Unknown Location Facility: Admitting Physician: Clear

Specimen Information:

Specimen ID: Specimen Collection: 5/1/2019 3:22:53 PM Fluid Type: Priority: ☐ Routine ☐ STAT Ordering Physician: Comments: Clear

Order Tests >>> Cancel Tests Send to Host Print Barcode Print Specimen

Specimens:

Status	Specimen ID	Collection D/T
--------	-------------	----------------

Tests:

Test	Result	Units	Errors	Connection(s)
------	--------	-------	--------	---------------

Display All Specimen Data Display Previous Results Save Close

C. Once all action items are completed by the user, select “Save” at the bottom of the POM screen.

D. Actions must be completed or cleared before moving on to the next patient query.

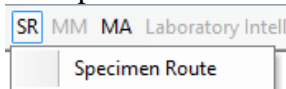
G. Rapid Order Entry (ROE)

A. This option allows the user to quickly add tests on to a specimen.

- Input the desired specimen ID in the field provided. (Only specimen IDs that do not currently exist in IM may be entered using this function)
- Test codes must be typed exactly as they appear in IM to order using this function.
- Once the test code is entered in the field provided, the user will select “Add” from the left of screen.
- Once all applicable tests have been added, the order must be saved before moving on to the next specimen.

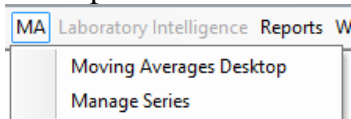
H. SR (Specimen Route)

A. The SR option on the IM toolbar allows users to have access to specimen route:



I. MA (Moving Averages)

A. The MA option on the IM toolbar allows users to have access to the following:



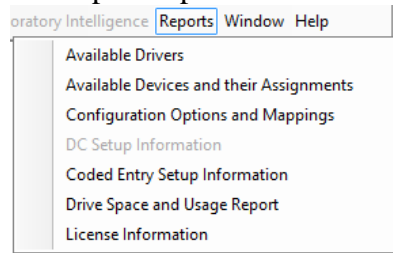
B. Moving Averages are used to evaluate patient data along with quality control as another check of quality.

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J. Reports (Managers and Administrators)

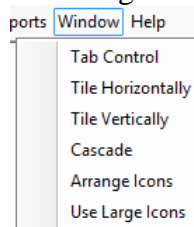
- A. The reports option on the IM toolbar allows users to have access to the following:



- B. This will be used by managers/supervisors and/or administrators.

K. Window

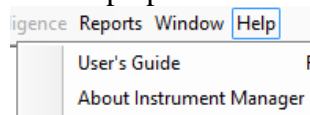
- A. The window option on the IM toolbar allows users to have access to the following:



- B. This allows for the layout of the workspace to be user specific, depending on the preference.

L. Help

- A. The help option on the IM toolbar allows users to have access to the following:



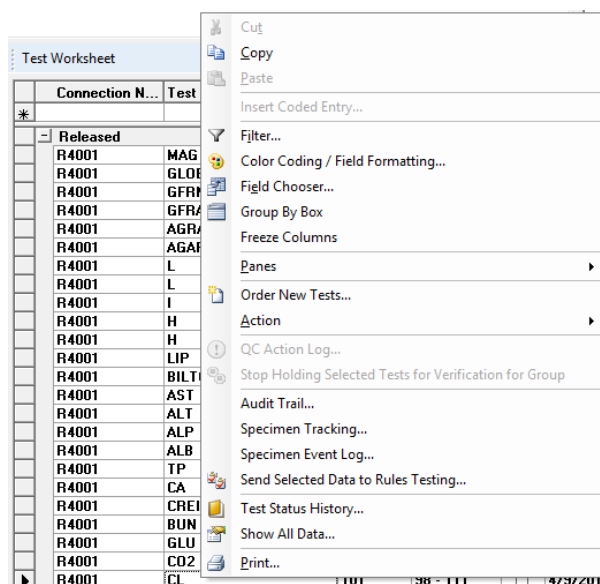
- B. The user's guide is a very useful tool to find any information needed about IM. Users should refer to this for any questions that come up about the definition, meaning, or purpose of IM.

IV. Troubleshooting Specimens

Many Troubleshooting options are available from the SM Workspace screen. These options can be accessed by right-clicking on the order in the Specimen Worksheet, or by right clicking on the results in the Test Worksheet as shown below:

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A. Audit Trail

This option displays events for a particular specimen including rules triggered or used, instruments the specimen was tested on, results, patient demographics, etc.

B. Specimen Event Log

1. The SEL traces the sample in Orders/LIS, tracking steps that the specimen has taken. If an issue is called into hotline, Abbott customer service will ask for a SID or a file of the SEL.
 - a. To create a support file for Abbott customer service, click on the red wrench



at the top of the SEL log. Then click “create support file” and save to the desktop of the PC you are working on.

C. Global Configuration File: Abbott customer service may also request a global configuration file during troubleshooting.

1. Click on “Configuration”, then click on “Save Configuration to File”. Save to the desktop.

D. Test Status History

This option allows the user to see the querying status of a specimen, indicating date/time and analyzer information as shown below.

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Date/Time	Status	Connection
4/11/2019 8:35:23 AM	Pending	RT161
4/11/2019 8:35:23 AM	Pending	RT162
4/11/2019 8:35:23 AM	Pending	RT163
4/11/2019 8:35:23 AM	Pending	R2001
4/11/2019 8:35:23 AM	Pending	R1601
4/11/2019 8:35:23 AM	Pending	GT801
4/11/2019 8:35:23 AM	Pending	GT802
4/11/2019 8:35:23 AM	Pending	TT801
4/11/2019 8:35:23 AM	Pending	TT802
4/11/2019 8:35:23 AM	Pending	T2001
4/11/2019 8:35:23 AM	Pending	FT801
4/11/2019 8:35:23 AM	Pending	FT802
4/11/2019 8:35:23 AM	Pending	RT164
4/11/2019 8:35:23 AM	Pending	R4001
4/11/2019 8:35:23 AM	Pending	R4002
4/11/2019 8:53:52 AM	Queried	R4002
4/11/2019 9:09:24 AM	Held for Verification	R4002

E. Show All Data

This option allows the user to see a multitude of information on a given specimen broken down into three tabs.

1. “Specimen Information” gives information regarding the specimen itself as shown below.

Archive File Created = 'No'
Collection Date/Time = '4/11/2019 08:31:00 AM'
Collection End Date/Time = '4/11/2019 08:31:00 AM'
Instrument ID = 'R4002'
Last Query to IM Date/Time = '4/11/2019 08:53:52 AM'
Operator ID = 'ADMIN'
Ordering Physician = 'BENJG'
Position = 'I'
Priority = 'S'
Rack = 'N771'
Request ID = 'A01104867S6'
Requested Date = '4/11/2019'
Requested Date/Time = '4/11/2019 08:35:23 AM'
Specimen Completion Status = 'Tests Held'
Specimen ID = 'A01104867S6'
Specimen Last Modified Date/Time = '4/11/2019 09:09:24 AM'
Specimen Object Archive Flag = 'Yes'
Specimen Object Archive Object ID = '897693'
Specimen Patient Reference = '330356'
Specimen Purge Date = '4/11/2019'

2. “Patient Information” displays the available patient information.
3. “Test Information” gives extensive information broken down by test. This information can include QC data, reagent lot numbers, result date/time, etc.


V. Maintenance

- A. Abbott representatives recommend doing system checks in IM at least three times per week.

1. Check Communications Trace
 - a. Make sure communication traces are off and purged

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- b. To purge, click on the trace file and then click the trash can with an “x”. 

VI. References

VII. Attachments

XIXI. Authorized Approvers

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