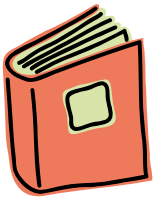
Software Overview

Objectives

This document identifies AU680 common software menu components. It also contains a software chart and description of software screens.

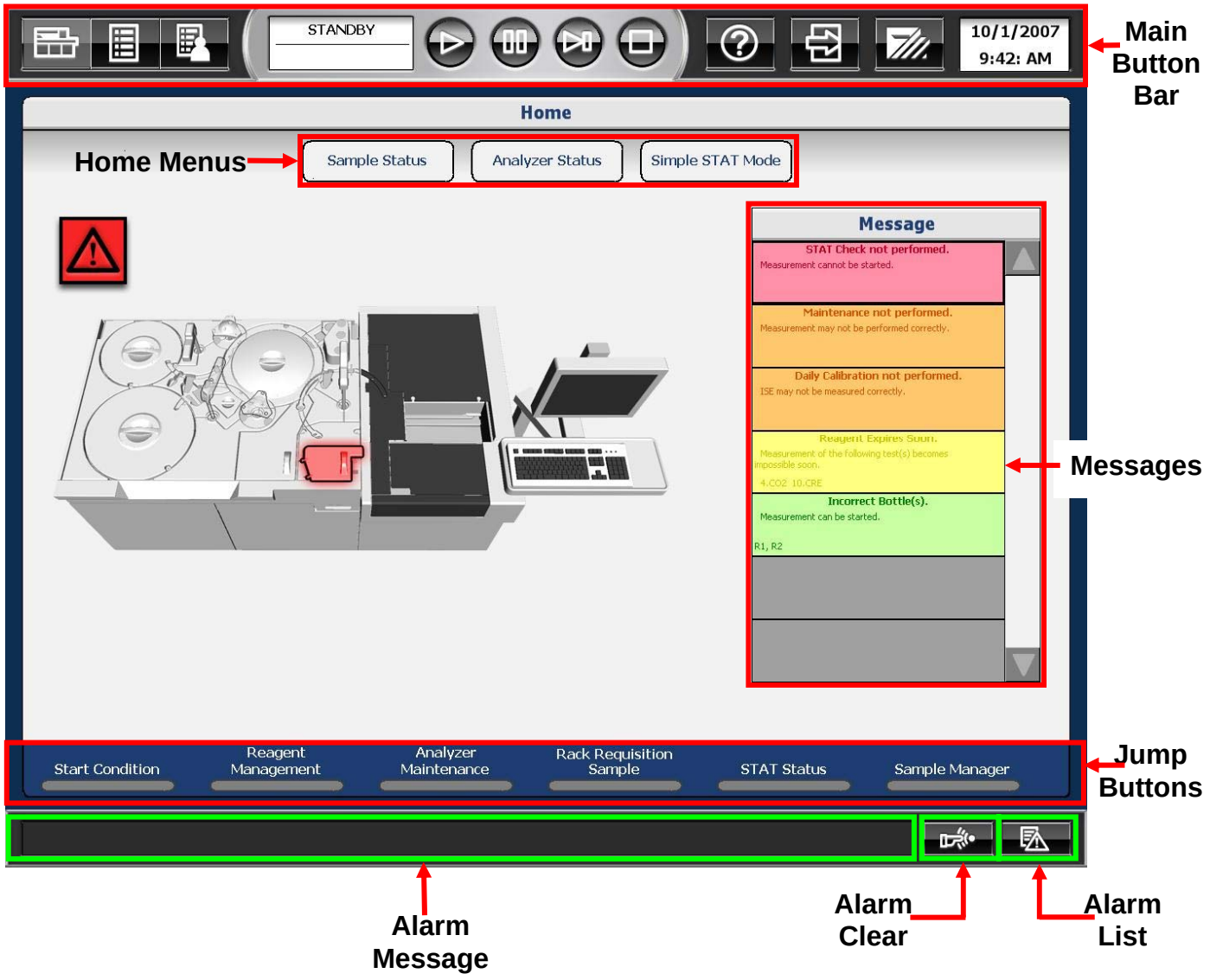
Software navigation and interaction is needed for successful operation of the instrument.

Reference



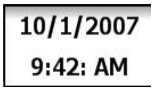
User's Guide
Software Chart (at the end of this document)

AU680 Home Menu



Common Screen Elements

Main Button Bar*

Button	Description
 **Home**	Select this button to display the Home screen
 **Menu List**	Select this button to display the Menu List screen
 **User Menu**	Select this button to display the User Menu List screen. (Configured by the user)
 **Mode Display**	Indicates the current mode of the system. Displays the time remaining for certain operations.
 **Measure Start**	Select this button to start/restart analysis
 **Pause**	Select this button to pause sampling. Select Start to resume sampling.
 **Feeder Stop**	Select this button to stop the rack feeder
 **Stop / Standby**	Select this button to stop analysis. All data in process will be lost. When the system is stopped, select this button again to return the system to standby mode.
 **Online Help**	Select this button to access online operational help (available when the system is in Standby/Stopped)
 **Log Out**	Select this button to log out the user
 **Shut Down / End Process**	Select this button to shut down system operations and switch off the auxiliary power supply
 **Current Date/Time**	Displays the current date and time

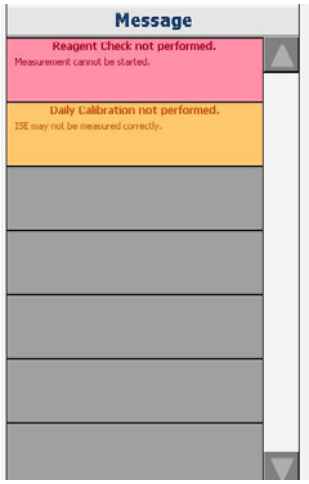
*The Main Button Bar is viewable from all software screens.

Home Menus

Menu	Description
	**Sample Status**: A real-time display that is used to monitor the status of samples during analysis
	**Analyzer Status**: Used to display the analyzer status
	**Simple STAT Analysis**: Provides access to an alternate software option to use the STAT table

Messages

A message display area on the Home Menu alerts the operator of conditions that currently exist on the system.

Button	Description
 **Error Symbol**	Changes color or symbol according to the last message displayed.
 **Message Window**	• Real Time Messages that provide information to the operator • Displays in green, yellow, orange or red to indicate message severity – Red messages require operator attention before system can process samples • The user may select a message to highlight the affected component on instrument diagram

Jump Buttons

All of the software screens required for Daily Start Up and Daily Maintenance can be accessed using the “jump” buttons.

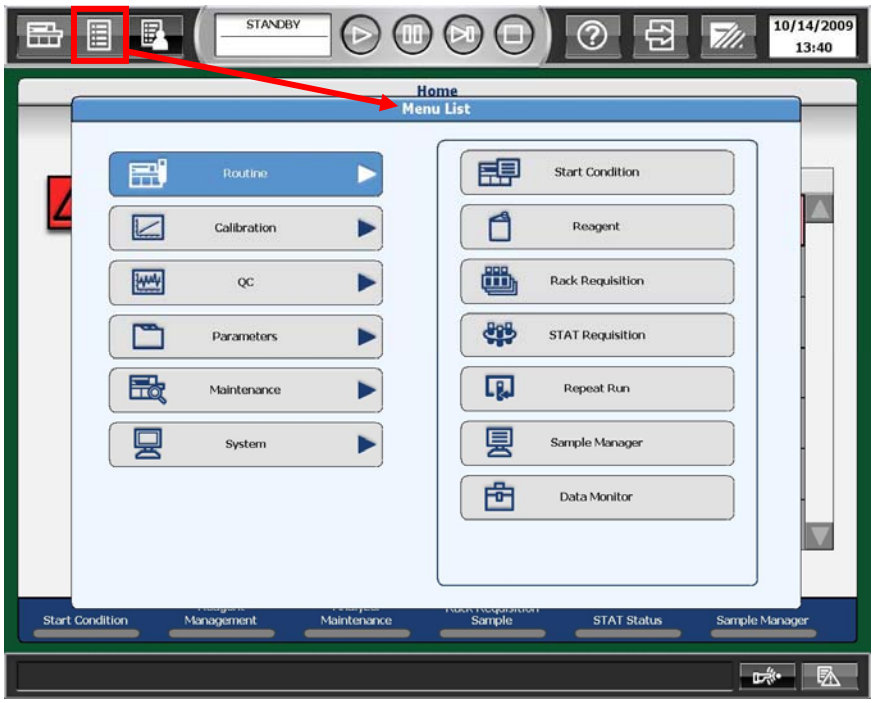
Button	Description
Start Condition	Create a data index, which includes setting the index date and time, start sample number, group of tests and operator name
Reagent Management	Check detailed reagent/calibration information, including the number of tests available in each on board reagent bottle.
Analyzer Maintenance	Access the maintenance menu and perform maintenance operations.
Rack Requisition Sample	Use to requisition calibrations, quality control or routine patient samples.
STAT Status	View the Status of the STAT table and start STAT sample analysis.
Sample Manager	Display analysis results, perform data correction, print data lists and batch transfer data.

Alarm Displays

An alarm message display area displays at the bottom of most menus to alert the operator of any alarms that occur.

Button		Description
Alarm Message		Alarm message displays to the left of the Alarm Clear button.
	**Alarm Clear**	Select once to silence an alarm, and a second time to clear the alarm displayed.
	**Alarm List**	Select to display the alarm list.

AU680 Menu List



- The left column provides access to the software tree
- The right column displays sub-menus of the menu selected in the left column

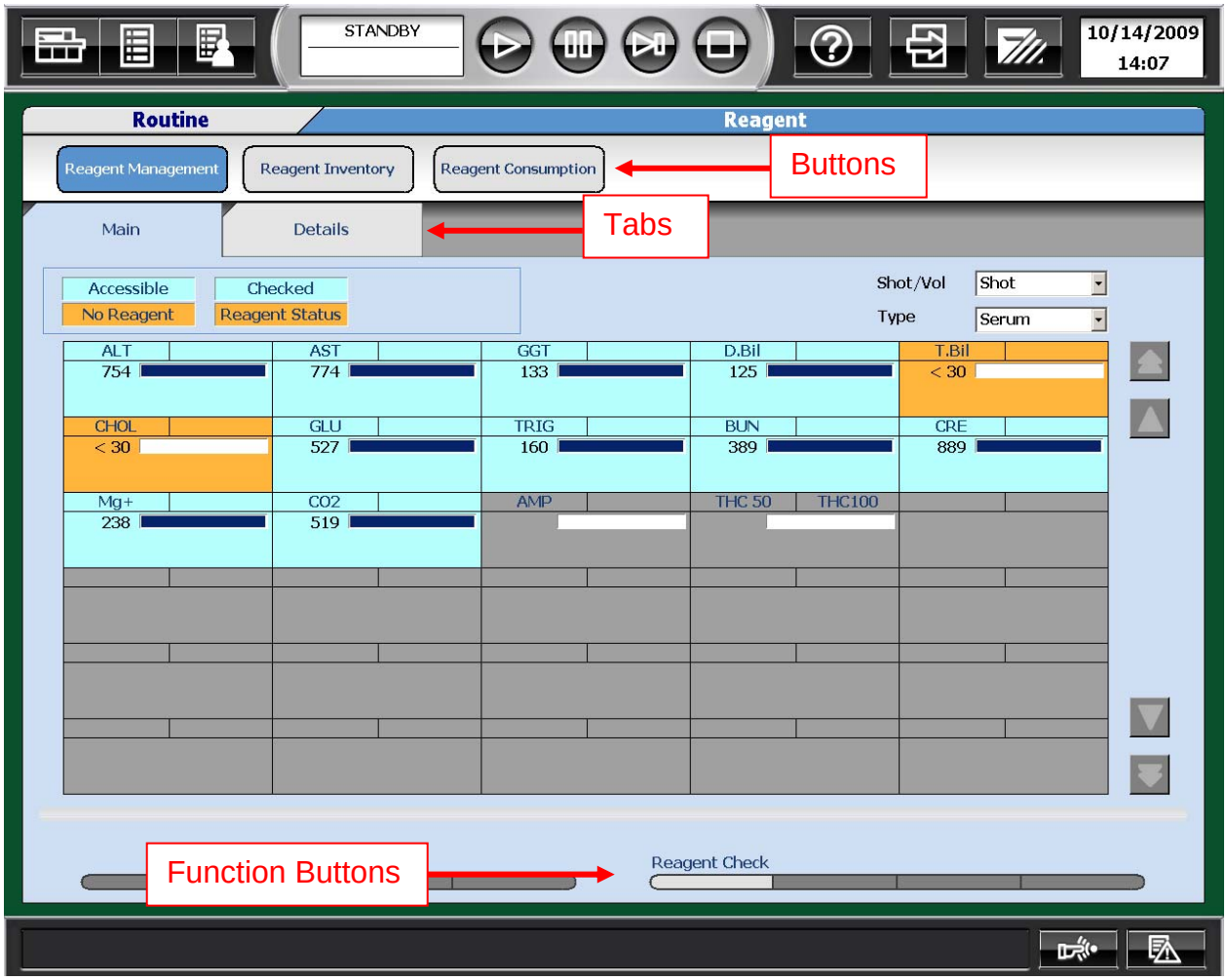
Menu Buttons

Menu Buttons are available from the Menu List screen to access the software tree. Select a Menu button to display sub-menus specific to the menu topic.

Routine	Basic operation menus for performing tests. Includes setting start conditions, managing reagents, assigning racks, viewing status of samples, programming samples/calibrations/QC, repeating results, managing samples, and monitoring data
Calibration	Display and manage calibration results and histories
Quality Control	Display and edit quality control (QC) results and histories
Parameters	Set analysis parameters. Includes common and specific test parameters, repeat parameters, calibration and QC parameters
Maintenance	Perform maintenance, view generated maintenance alarms, perform diagnostics
System	Customize the system setup. Includes online communication setup, format reports, create comments, setup system conditions, create user menu, and external data management

Buttons/Tabs

- Buttons are available within a menu to select a sub-menu
- Tabs are available within a sub-menu to select a topic
- Function buttons are available at the bottom of some screens to perform functions specific to that screen



Software Chart

- Utilize the chart to navigate all the software areas of the AU system.

The Software Chart is located on the following pages and can also be found in the AU680 Quick Response Guide

2.2 Software Chart

Main Menu	Routine	Calibration	QC
	Start Condition	**Calibration Monitor**	**QC Monitor ►**
	Reagent ►	**Calibration Verification ►**	Daily Chart
	Reagent Management	Calibration Verification	Day to Day Chart
	Reagent Inventory	Material Parameters	Twin Plot Chart
	Reagent Consumption		**QC Data Review**
	Rack Requisition ►		
	Sample		
	Calibration		
	QC		
	STAT Requisition ►		
	STAT Status		
	Sample		
	Calibration		
	QC		
	Repeat Run ►		
	Repeat Order		
	Repeat Data Verification		
	Sample Manager ►		
	Sample		
	RB/CAL/QC		
	Data Monitor ►		
	Reaction Monitor		
	Data Statistics		
	Correlation Chart		

Parameters	Maintenance	System
Common Test Parameters ►	**User Maintenance ►**	**Online**
Test Name	Analyzer Maintenance	**Format ►**
Profile	ISE Maintenance	Requisition Format
Group of Tests	PROService	List Format
Specific Test Parameters ►	Load Reagent Parameters	**Comment Masters**
General	**Alarm Log**	**System Condition ►**
LIH	**Maker Maintenance ►**	Analysis Mode
HbA1c	Program Version	Set Date and Time
Calculated Tests	Analyzer Diag	Auto Power On
Range	ISE Diag	Password
Repeat Parameters ►		Login Condition
Repeat Common		**User Menu**
Repeat Specific		**Data Management ►**
Calibration Parameters ►		External Data Management
Calibrators		File Management
Calibration Specific		Offline Format
STAT Table Calibration		
QC Parameters ►		
Controls		
QC Specific		
STAT Table QC		
Misc.		
Checked Tests		
Contamination Parameters		
Data Check Parameters		

3.5.4 Menu List Organization and Outline

To setup the required parameters, access analysis information and to check analysis results, select the appropriate menu and sub-menu category in the following order **Menu List** > **Menu** > **Sub-menu** > **Sheet** > **Tab.**

The following example displays the pathway using the Rack Requisition Screen.

1 Select the **Menu List** button from the main button bar.

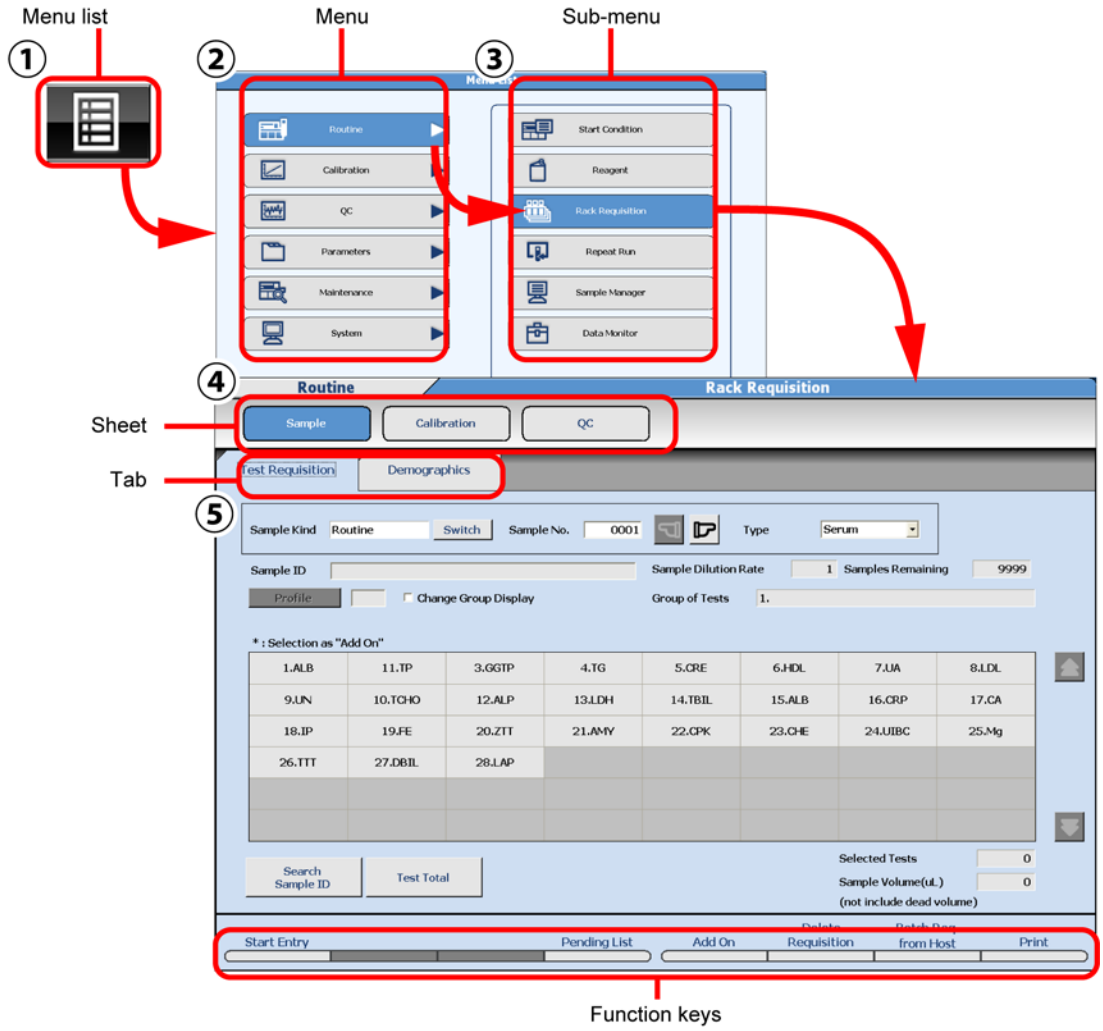
2 Select **Routine** from the menu.

3 Select **Rack Requisition** from the sub-menu.

4 Select **Sample** from the sheet.

5 Select **Test Requisition** from the tab.

Figure 3.25



TIP It is possible to access Menu list from the main button bar in any menu.

Organization and functional outline of Routine menu

This is the menu of basic operations to perform various tasks.

Some menus require initial programming in System Maintenance before they can be used.

Menu	Sub-menu	Choice
Routine	**Start Condition**	Used to set the index, Group of tests, operator name, and start sample numbers before starting analysis. Refer to 5.1.2 Set the Start Conditions.

Menu	Sub-menu	Choice
	Reagent	**Reagent Management** Used to check the quantity of reagent and the number of tests available in a bottle. Refer to 5.5 Check Reagent Status and 7.4 Reagent Management.
		Reagent Inventory A breakdown of the volume or shots of R1 and R2 (for each reagent) used for each day of the week for a specified time frame. Refer to 7.4.5 Reagent Inventory.
		Reagent Consumption A breakdown of reagent used for a specified time frame by volume or shots of R1 and R2 by each rack type. Refer to 7.4.6 Reagent Consumption.
	Rack Requisition	**Sample** Used to set the sample numbers and tests for analysis. Refer to 6.3 Requisition for Routine and Emergency Samples.
		Calibration Used to set the requisitions for calibration. Refer to 5.6 Perform Calibration.
		QC Used to set the requisitions for quality control analysis. Refer to 5.7 Perform Quality Control (QC).
	STAT Requisition	**STAT Status** Used to view the status of the STAT table and start STAT sample analysis.
		Sample Used to perform priority stat sample requisitions for stat analysis on the stat table.
		Calibration Used to perform calibration requisitions for calibration analysis from the stat table.
		QC Used to perform QC requisitions for QC analysis from the stat table.

Menu	Sub-menu	Choice
Routine	**Repeat Run**	**Repeat Order** Used to add, change or delete repeat test requisitions. Refer to 6.6 Performing a Repeat Run.
		Repeat Data Verification Used to view repeat results with the original results and to overwrite data. Refer to 7.3.6 Verify Repeat Results.
	Sample Manager	**Sample** Used to display analysis results, perform data correction, print a data list and batch transfer data online. • Refer to 7.6 Edit Analysis Data. • Refer to 6.7 Print Results. • Refer to 6.8 Batch Data Transfer to Host Computer.
		RB/CAL/QC Used to print and batch transfer RB/CAL/QC data Refer to 6.7 Print Results.
	Data Monitor	**Reaction Monitor** Displays information about reaction processes of analysis results. Refer to 7.3.2 Display Reaction Monitor.
		Data Statistics Displays key statistics of patient sample results and the results of a test within one index as bar charts. Refer to 7.7.1 View Data Statistics.
		Correlation Chart Displays a correlation chart. Refer to 7.7.2 Create a Correlation Chart.

Organization and functional outline of Calibration menu

Display a history of calibration information and perform calibration verification.

Menu	Sub-menu	Choice
Calibration	**Calibration Monitor**	View the current reagent blank and calibration status as well as a history of the reagent blank and calibration data on a graph. Refer to 7.3.4 Check the Reagent Blank and Calibration.
	Calibration verification	**Calibration Verification** Verifies the calibration performance. Refer to 7.9.2 Verify Calibration.
		Material Parameters Enter Parameters for calibration verification and view or print a chart. Refer to 7.9.1 Enter Material Parameters.

Organization and functional outline of QC menu

Display and edit the result and history of quality control.

Menu	Sub-menu	Choice
QC	**QC Monitor**	**Daily Chart** Displays the QC data variation within the same or between index dates as a daily chart. Refer to 7.3.5 Check QC.
		Day to Day Chart Displays the QC data variation within the same or between index dates as a day to day chart. Refer to 7.3.5 Check QC.
		Twin Plot Chart Displays the QC data variation of two QC samples as a twin plot chart. Refer to 7.3.5 Check QC.
	QC Data Review	**Used to edit QC result** Refer to 7.5 Edit Quality Control Data.

Organization and functional outline of Parameter menu

Use this menu to program information for all tests. This information is required prior to running the system.

Parameters must be programmed in advance of running the analyzer for the first time.

Menu	Sub-menu	Choice
Parameters	**Common Test Parameters**	**Test Name** Program basic parameters such as test name and reagent ID. Refer to 4.2.1 Test Name Menu.
		Profile Program profiles for samples, reagent blank, calibration, and QC. Refer to 4.2.2 Profile Menu.
		Group of Tests Assign tests to a Group. A maximum of three Groups of tests can be programmed. Refer to 4.2.3 Group of Tests Menu.
	Specific Test Parameters	**General** Used to set detailed parameters for general test items. Refer to 4.3.1 General Menu.
		LIH (Serum Index) Used to set detailed parameters for the Lipemia/Icterus/Hemolysis test. Refer to 4.3.2 LIH Menu.
		ISE Used to set detailed parameters for the ISE tests. Refer to 4.3.3 ISE Menu.
		HbA1c [a] Used to set detailed parameters for the Whole Blood HbA1c assay.
		Calculated Tests Used to set detailed parameters for calculated tests. Refer to 4.3.5 Calculated Tests Menu.
		Range Used to set parameters for the reference range. Refer to 4.3.6 Range Menu.

a. Analysis of whole blood cannot be performed when the AU680 is connected to a Laboratory Automation System.

Menu	Sub-menu	Choice
Parameters	**Repeat Parameters**[a]	**Repeat Common** Used to set the common parameters for a repeat run analysis. Refer to 4.4.1 Repeat Common Menu.
		Repeat Specific Used to set the repeat and reflex decision ranges and the repeat dilution rate of repeat run analysis for individual test items. Refer to 4.4.2 Repeat Specific Menu.
	Calibration Parameters	**Calibrators** Used to set common calibrator parameters such as name, ID and lot number. Refer to 4.5.1 Calibrators Menu.
		Calibration Specific Used to set specific calibration parameters for individual test items. Refer to 4.5.3 Calibration Specific Menu.
		STAT Table Calibration Used to set parameters for calibration analysis using the STAT Table.
	QC Parameters	**Controls** Used to set the common parameters for a quality control analysis. Refer to 4.6.1 Controls Menu.
		QC Specific Used to set the mean value and standard deviation for quality control. Refer to 4.6.2 QC Specific Menu.
		STAT Table QC Used to set parameters for QC analysis using the STAT Table.
	Misc	**Checked Tests** Used to set parameters for logic checked tests. Refer to 4.7 Checked Tests Menu.
		Contamination Parameters Used to set parameters to prevent contamination of tests. Refer to 4.8 Contamination Parameters Menu.
		Data Check Parameters Used to set parameters for data check such as diagnosis of prozone. For detailed information, contact Beckman Coulter Technical Services. Refer to 4.9 Data Check Parameters Menu.

a. When the AU680 is connected to a laboratory automation system, repeat run parameters are determined from the host computer, not the AU680 **Repeat Parameters**.

Organization and functional outline of Maintenance menu

Use this menu to monitor analyzer and ISE maintenance, review a detailed alarm log, and perform diagnostic functions.

Menu	Sub-menu	Choice
Maintenance	**User maintenance**	**Analyzer Maintenance** Used to display the maintenance schedule and perform maintenance procedures. Refer to CHAPTER 8, *Maintenance*.
		ISE Maintenance Used to display the maintenance schedule of the ISE unit and perform ISE maintenance procedures. Refer to CHAPTER 8, *Maintenance*.
		PROService Displays the connection status of BECKMAN COULTER PROService and transmits the AU680's various files. Refer to 7.15 Using Beckman Coulter PROService (Option).
		Load Reagent Parameters Load Specific Test Parameters and Calibration Specific parameters from a CD.
	Alarm log	Chronologically lists the alarms that have occurred.
	Maker Maintenance	**Program Version** Displays DPR program, PROService and Help version/revision and program version/revision/station ID of Analyzer.
		Analyzer Diag Check each analyzer unit for abnormal conditions. Some checks should only be performed by Technical Services.
		ISE Diag This menu should be used by the manufacturer. It contains the following major operations: Check the ISE unit for any abnormal conditions, perform calibration and sample measurement, and display bottle information (REF, MID, Buffer).

Organization and functional outline of System menu

This is a menu to set online conditions, list formats, comments, barcode options, various system settings, and data management.

Menu	Sub-menu	Choice
System	**Online**	Used to set the parameters for online communication between a host computer and the system. Refer to 4.12 Program Online Parameters.
	Format	**Requisition Format** Used to enter the sample requisition parameters. Refer to 4.13 Program the Requisition Format.
		List Format Used to set the common format parameters for printing the pending list, work list, repeat list and the data list. Refer to 4.14 Print Formats.
	Comment Masters	Used to customize the comments appended to the analysis results. Refer to 4.10.6 Program Master Comments.
	System condition	**Analysis Mode** Used to set the analysis mode, barcode definition, auto/standard repeat and other system parameters. Refer to 4.10.1 Analysis Mode Menu.
		Set Date and Time Used to set the system date and time. Refer to 4.10.4 Set the System Time.
		Auto Power On Used to set the auto power on time for each day of the week. Refer to 4.10.5 Program the Automatic Start Up Function.
		Password Used to set and change passwords. Refer to 4.11.2 Set a User Name and Password.
		Login Condition Used to set login information. Refer to 4.11 Program a User Name and Password.

Menu	Sub-menu	Choice
System	**User Menu**	Used to add a menu to the User Menu button on the main button bar. Refer to 4.10.7 Program a User Menu.
	Data Management	**External Data Management** Saves the analysis data on an external storage device or media. Refer to 7.8.1 Save Data to External Media.
		File Management Used to save and up load parameter files on an external storage device or media. Refer to 7.8.2 Save or Load Parameters.
		Offline format Used to set the output format of results and save data in a delimited format for use in external applications (spreadsheets, etc). Refer to 7.8.3 Offline Criteria.

3.5.5 User Menu Overview

Select **User Menu:**

Figure 3.26

- A user-defined list of the common menus operators use.
- User-defined menu names can be created.