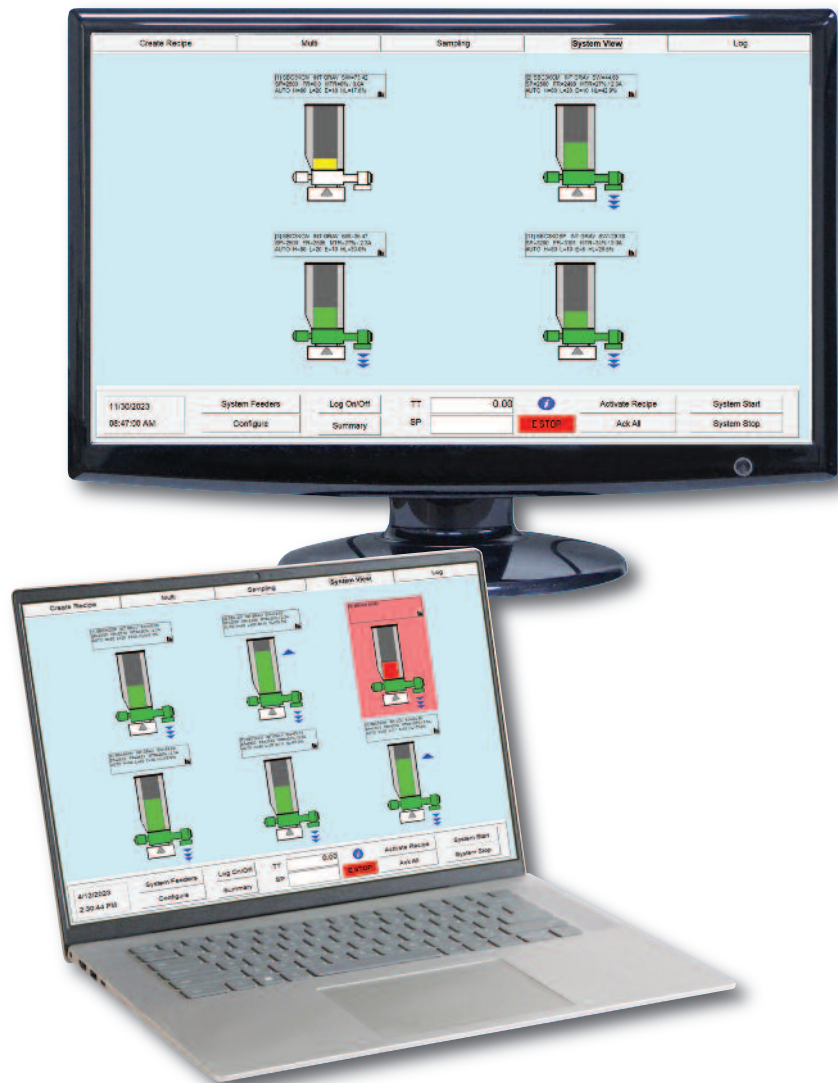


Acrison®

Acri-Data® Supervisory Software

For Acrison Weigh Feeders



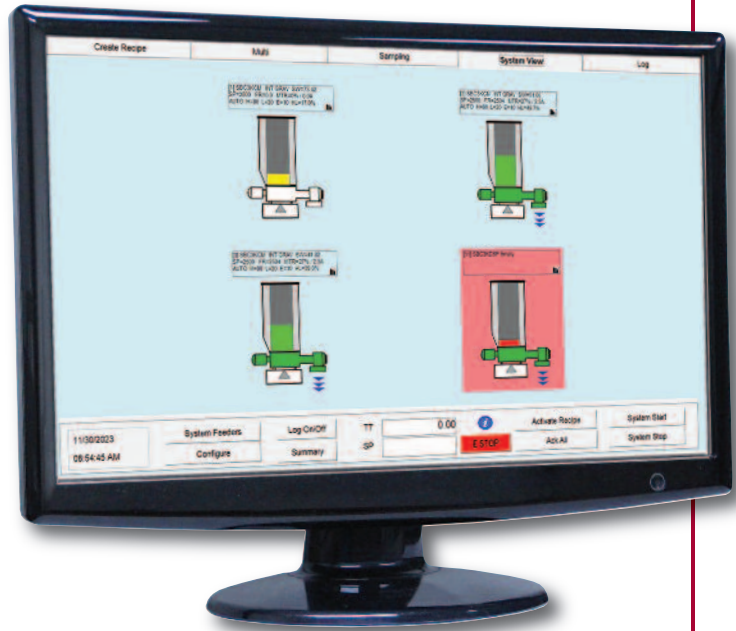
*Advanced Design Technologies for Superior
Performance and Operational Reliability.*

Supervisory Software for Acriston Weigh Feeders

General

Acri-Data is a multi-language supervisory control program for use with Acriston weigh feeders providing users with the ability to access and modify set points, calibration entries and other functions within the feeder controllers. Acri-Data interfaces with up to 20 controllers using wired serial or network communications. It can also be supplied for operation on a standard Microsoft® Windows PC, or as an embedded GUI as the primary user interface of a complete system controller.

In addition to providing set point access to controllers, Acri-Data's screen-oriented operation provides graphical displays of feeder and/or feeder system status, individual graphs of feeder performance, trending, automatic sampling, an alarm/event log, as well as other maintenance related features. These and other features are described below.

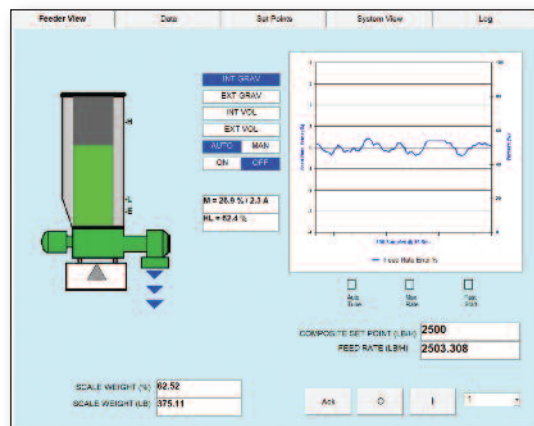
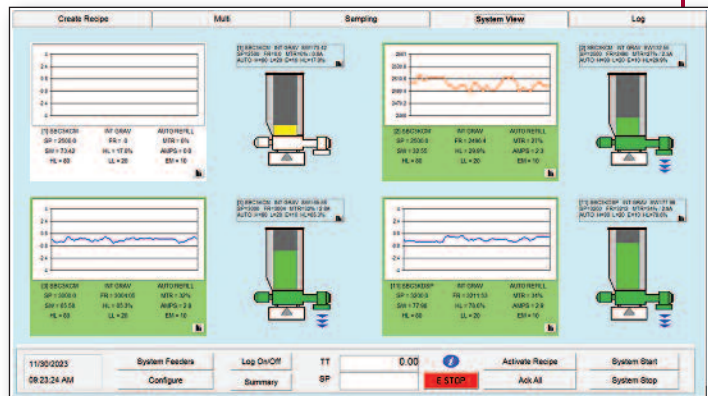


System View Screen Functions

The user-designed System View Screen is the primary display screen, providing a view of all feeder controllers in a system. It is from this screen that the user has the ability to:

- Define a feeder system
- Create/save/load virtually unlimited system recipes
- Enter an overall feed rate set point
- View overall total feed rate
- Run/stop the feeder system
- View a system summary
- Access other system and controller functions

Icons provide important feeder data such as set point, feed rate, motor speed and motor current, as well as color-coded blocks indicating alarm/message status. Off-line controllers appear with a red "X". From this screen, the user may access the Sampling Screen and the Alarm/Event Log.



Sampling Screen

The Sampling Screen permits the user to specify which of four parameters [feed rate, hopper level (weight-loss feeders), motor speed and motor current] to sample and graph. The user may specify the sampling interval, the number of samples to take (or sample continuously) and several appearance options. Automatic or manual determination of axis ranges may also be selected.

Sampled data may be saved, printed, or exported in a Microsoft® Excel format for further evaluation or processing. A special Excel Workbook is provided with Acri-Data for this purpose. Up to 20 feeders may be sampled and graphed at the same time.

Alarm/Event Log

The Alarm/Event Log Screen provides a comprehensive record of the alarms and/or events encountered by the system feeders. Each alarm or event is described in a single line, along with the date and time of its occurrence, and the identity of the feeder controller (if applicable). System log on and log off is also recorded, as is the starting and stopping of the Acri-Data application itself.

Alarms in the log appear in red, and messages appear in yellow, to permit quick identification. The log may be saved and/or printed and may be set-up to automatically save to a specified location at a selected interval. This can permit multiple user access to current system status over a network.

Feeder View Screen

The Feeder View Screen is accessed by clicking/touching on an icon on the System View Screen. This screen displays set points and functions associated with a single feeder controller, rather than a complete system. The screen provides a complete view of a feeder's status including operating modes, run/stop status, alarm and message indicators, motor speed and current, scale weight, and hopper level (weight-loss feeders). Feeders can be started or stopped, modes can be changed, and refill (weight-loss feeders) or rezero cycles (200 Series Feeders) can be initiated

Feeder View Screen (cont'd.)

By clicking on the set points tab at the top of the Feeder View Screen, set points and password-protected "calibration" entries can be entered or changed. Acri-Data provides the ability to individually password-protect (lock) any of the operational data entries.

Data which changes over time, such as feed rate, scale weight (weight-loss feeders), etc., is viewable from the Data Screen Tab.

Automatic System Shutdown

Acri-Data provides a standard system shutdown feature permitting the user to specify certain events which must stop all feeders. Individual delays may be associated with each event.

Summary Screen

This screen provides a chart that lists the values of important parameters associated with each of the system feeders. In addition, totals are provided in the appropriate columns, such as for external gravimetric set points (percentage). The chart can be printed and/or saved, and can be refreshed on demand.

Host Communications

A number of system-level parameters can be read and/or written by a host device using the Acri-Data PC's standard Ethernet and COM ports, as follows:

- **COM Ports: Modbus RTU@19200,N,8,1 or Acrison ASCII DB @ 57600,E,7,1**
- **10BaseT Ethernet Port: Modbus TCP (Port 504)**

The Total Throughput Set Point, Total System Feeders' Throughput, and Selected System Feeders are accessible. System Recipes can be activated, and System Feeders can be stopped.

The system parameters described above can be accessed for read and/or write, as appropriate. Individual feeder controller parameters are not available via the host communications port.

Communications to Controllers

Acri-Data offers numerous communication choices ranging from simple, point-to-point, wired serial communication and wired Ethernet.

Configuration of Acri-Data is accomplished via the Communications Screen.

Acri-Data directly supports Modbus/TCP operating as a master.

Multi Screen

Multiple parameter values may be sent to one or more feeder controllers, without using a recipe, via the Multi Screen.

System Recipe Screen

Three types of System Recipes are available in Acri-Data. Data Recipes containing only parameter values, graphical recipes containing the System Screen design, and graph plus data recipes, which contain both data and graphical information. Data Recipes can be created while Acri-Data is operating on-line and any recipe may be loaded “on-the-fly” without stopping the system. Each recipe is a text file, which can consist of up to 27 selected parameters and modes in each feeder controller (user selectable); the identification of the feeders that were selected for the system; the design of the System View Screen, plus optional commands to automatically run or stop a system of feeders when the recipe is loaded. System Recipes require a system level password.

Acri-Data can create as many System Recipes as the storage capacity of the hardware permits, typically many thousands. System Recipes can be edited off-line with a standard text editor, if desired.

Password Protection

Up to 10 passwords may be defined in the Acri-Data Program. Three levels of access are provided as follows:

Monitor:

When Acri-Data is first started, or when a user logs off, it is in Monitor Mode. The operator may only view screens and cannot change any set points or activate any commands or functions.

User:

This mode requires a password to be entered and limits functions and access to those features, which an operator would typically require. System Recipes, for example, may be loaded but cannot be created.

System:

This password-protected mode permits full access to all functions and features.



Hardware Requirements

Acri-Data may be run on a Microsoft® Windows based desktop, laptop, or wall-mounted PC. Acrison recommends the following minimum hardware for the best overall performance:

- **OS:** MS Windows XP (or later)
- **Processor:** Pentium class, 900 MHz minimum
- **Memory:** RAM – 1 GB+
- **Hard Drive Disk Space:** 30 MB

When Acri-Data is provided in an embedded system controller, it operates under Windows 10/11.

Optional Hardware

Acri-Data supports operation with an optional SBC-2000® or SBC-3000™ System I/O Module. This module provides the following digital inputs and outputs:

Outputs:

- System Running
- Blender On
- General Alarm

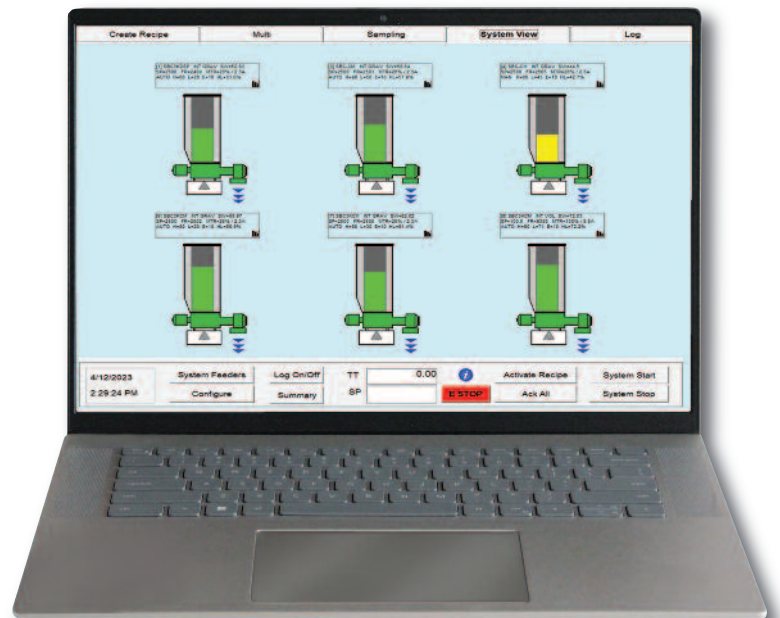
Inputs:

- Remote Run (run the system)
- Blender Zero Speed (delayed)
- Permissive Run
- Supervisor Key

Automatic shutdown of the feeders can be associated with blender operation and the permissive run contact.

Other Considerations

- 1) For optimum performance when operating Acri-Data on a desktop, wall-mounted, or laptop PC, Acrison recommends that it be run as a dedicated application with no other applications running (other than networking functions, if required).
- 2) Acri-Data supports keyboard-less PCs (typically wall-mounted) by providing a selectable “virtual keyboard” function.
- 3) The Acri-Data Software and the Operator's Manual are provided by Acrison on a USB Drive.
- 4) Acri-Data is licensed for installation on a single PC.



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- Models V-101 and V-130 Volumetric Feeders
- Model 1015 Volumetric Feeder Series
- Model 105 Volumetric Feeder Series
- Model W-105 Volumetric Feeder Series
- Model 120 Volumetric Feeder
- Model 140 Volumetric Feeder Series
- Model 170 Volumetric Feeder Series
- Model 905-18 Volumetric Feeder
- Bin Discharger Feeders
- Model 200 Weigh Belt Feeder Series
- Model 203B Weigh Auger Feeder Series
- Model 270 In-Line Weigh Feeder Series
- Models 402 and 404 Series, 405, 406, 407X, 408 and 410 'Weight-Loss' Weigh Feeders
- Model Series 403 'Weight-Loss' Weigh Feeders
- Model 403B(D) Batch/Dump Weighing Systems
- Model 404BZ(BU) Bulk Bag Unloader Batch Weigher
- Models 350 and 301 Continuous Blenders and Blending Systems
- Multiple Auger Bin Dischargers and Multiple Auger Bin Discharger Hoppering Systems
- Vibratory Bin Discharger Hoppering Systems
- Model 170-BD-30 Bin Discharger
- Model 800 Series Bulk Bag Unloaders
- Models 500, 515, 530, and 580 Polyelectrolyte Preparation Systems
- Water and Waste Water Treatment Systems
- Volumetric and Gravimetric Feeder Controllers and Control Systems
- Silo Systems
- Accessory Equipment for Acrison Products
- Systems Engineering



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