# J.H.M.C. Robotics, Inc.

## Design Excellence by Choice in Material Controllers Since 1972

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## Features for the Classic SIERRA 1,2 & 3 Material Controllers

The Sierra Material Controller is a GE PLC and PC based system with color graphics and is phone line ready with modem communications for factory diagnostics and Sierra software upgrades if needed.  Each controller will be populated with the necessary hardware and software to control your plant per your specifications up to the maximum features listed below for a VERY attractive price.

**There are 5 options for the Sierra 1:**
1.) **Control for 2 plants**
2.) **Control for 3 plants**
3.) **Additional Gates for a total of 24 Feed Gates each plant**
4.) **Manual Switches and Lights mounted on the I/O PLC cabinet,** for plants that do not have any
5.) **Aggregate Storage Silo fill control**

1    **Controllers for 2 or 3 plants can have a different back ground color on the Run screen.**

2    **You can turn Error Voice Alert ON or OFF.**

3    **There are 3 different voices for announcing errors.**

4    **All Inputs and Outputs are assignable.**

5    **Each Bin is configurable as a Utility Bin.**

6    **Each Bin is configurable to start the fill either on a Low or Not High Bin level.**

7    **Controllers for 2 or 3 plants; all plants operate independently or can use common Storage Gates and Incline Belt/s.**

8    **Gates change to another assigned gate, if any, with no material flow** or **on fill start and no material flow, each Bin is settable.**

9    **Auto Skip will Skip a Bin should you run out of material for the gates assigned to that Bin.**

10    **A Login Name is required to operate the controller for security.**

11    **Passwords for all screens may be used, if desired.**

12    **All operations from the run screen and any Edit changes are logged for 1 year; can be printed out; printer not included.**

13    **Bin to Fill Sequence is settable, 3,2,5,7,6,4,8,1, each plant.**

14    **Priority Bin fill assignment (1-99) for each Bin on the plant that is filling.**

**The SIERRA 1,2 & 3 Feature List Continued.**

15  When a Bin Fill Completes, the Bin to fill Sequence can either continue or start over.

16  You can change the product in a Bin from the run screen, if you assigned it as a Utility Bin.

17  The Product is displayed in each Bin and warns if a Gate is of the wrong material in Manual feed from the PC.

18  You may set all High Bin level Devices at a lower level, and then tune the Sierra to fill each Bin correctly.

19  Belts are interlocked to start in Sequence when operated from the PC, if a belt stops, all feeding belts will stop and close the gates.

20  Gate Linking will tie 2 sets of 2 Gates together; can be turned on or off from the run screen

21  Bin Linking, 2 groups of 2 Bins each.

22  The Sierra 2 & 3 has the same amount of features as the Sierra 1, Bins, Belts, and Gates etc.

23  Plants that already have <u>Manual Switches and Lights</u> will not need to buy that option.

24  16 Assignable Products for plant, each plant

25  Up to 3 Bins assigned to a Product, each plant

26  Up to 4 Gates assigned to a Product, each plant

27  Plant Priority mode for 2 or 3 plant controllers when using the same Incline Belt and Gates

28  8 Overhead Bins Maximum, each plant

29  3 Belts Maximum, each plant

30  1 of the following, each plant:    A Turn Head (360 / reversible) <u>or</u>
                                       A Shuttle Belt with 1 or 2 Flop gates

31  8 Storage Gates, option to expand to 24 Gates Maximum, each plant

32  Storage Gate closed limit switch input monitoring for each gate

33  4 Manual and Automatic Vibrators each plant, are controlled when Sand is feeding

34  8 Emergency High Bin level Input monitoring, each plant

35  8 High Bin level Input monitoring, each plant

36  8 Low Bin level Input monitoring, each plant, any Bin can use this as an Emergency Low fill

37  8 Bin Turn Head or Shuttle Belt position monitoring, each plant

38  4 Belt running inputs each plant, each belt can monitor for:
    1. A contact closure from a motor starter or a zero speed switch
    2. A pulse from a Proximity switch on the belt tail pulley, 5 pps max
    3. 1 of the Belts can monitor for a percentage of RPM by a pulse from a Proximity switch on the belt tail pulley, 2 pulse per rev. and displays on the run screen

39  Belt Product Flow Monitoring

40  4 Gates assigned to all overhead Bins

**The SIERRA 1,2 & 3 Feature List Continued.**

41     **A Belt Water spray bar is controlled when Rock is feeding, each plant**

42     **4 Misc. Switches on the run screen, can either be a toggle or momentary Switch**

43     **The Sierra will fill the plant in automatic mode for 1 fill cycle, each time the Remote Auto switch is keyed on the manual panel, should the PC go down, as long as the PLC is running**

44     **Illegal Gate open monitoring and interlocks to stop belts as needed**

45     **Cement Silo HIGH and LOW display for up to 4 Silo's on the main run screen (Optional)**

46     **The manual Switches and Light option now has plugs and receptacles and are replaceable, if needed, without any soldering.**

47     **NO costly Service Contract to purchase.**

    **It is JHMC Robotics policy to furnish phone support 24/7/365 to all our Handler systems at no charge.  This ALONE can save you thousands of dollars over the life of the controller since there is no yearly service contract to buy in order to get help if needed.**

**To learn more about the SIERRA Material Controller or to request a Demo CD, contact us at 209.586.4970.  If this controller does not have the features you need, the Handler REGAL is the ultimate state of the art Material Control with many more features.  If it does not have the feature you need it's very likely that we will add it to the REGAL.**