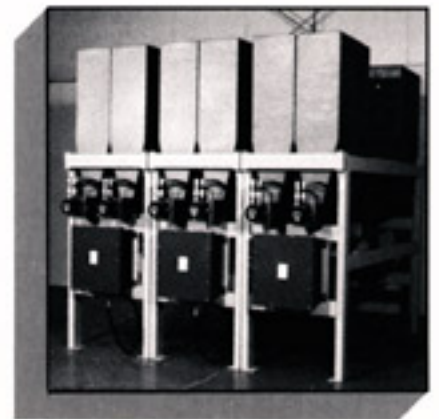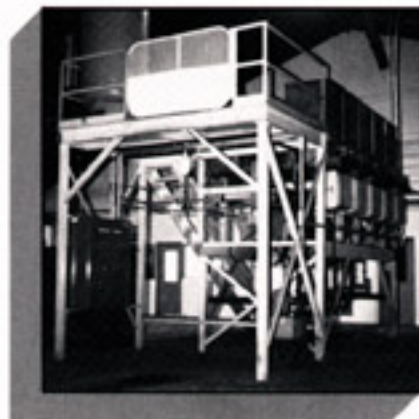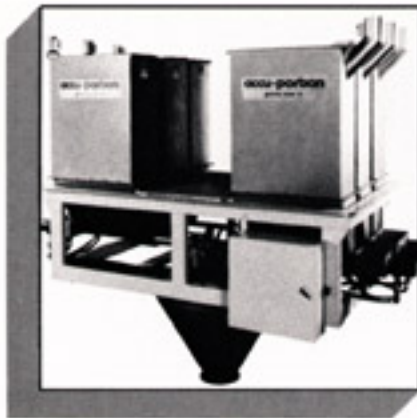# Sterling Controls, Inc.

Standard Batching Controls

- Fit all weigh batching or blending applications

- Easiest to learn, operate and program

- Simplest to modify control functions

The STERLING TOUCH Batch Control

An economical, off the shelf controller, simple to operate yet capable of sophisticated, accurate, multiple control functions in a single scale application.* Includes a large memory to store formulas, inventory and a variety of operational data. Utilizes an LCD and touch screen to input commands, formulas, etc. and to display operating graphics, menu and instructions. Design incorporates a PLC for equipment interface and control. When programming, the unit displays only keys appropriate for that stage of menu operation. Easier for operator to use and less intimidating because of uncomplicated, user friendly menu instructions.

OUTSTANDING STANDARD FEATURES

- 1000 formula storage
- 200 ingredient inventory capability
- 50 sequence possibilities per formula
- Up to 8 dry ingredient weighing
- High accuracy—2 speed feed on each ingredient
- Automatic cut off compensation for maximum accuracy
- Up to 4 liquid ingredient adders, volumetric pulse feed
- Automatic scale discharge
- Mixing time cycle, 2 speed (high & low)
- Automatic mixer discharge
- Automatic control or takeaway system
- Full status display
- Multi-task capability: add inventory, change formulas, or modify parameters while unit functions.
- Printer output—Sample reports pg. 4
- Can be networked to central computer
- Manual backup capability
- 286 PC based system (386/486 available)

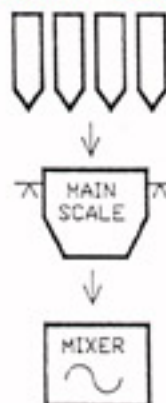*Options available for up to 3 scale operation

INGREDIENT FEEDERS

MIXER SCALE

INGREDIENT FEEDERS

MAIN SCALE

MIXER
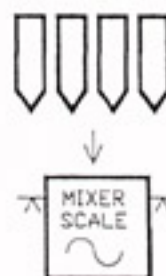
TYPICAL SPECIFICATION
NEMA 12 Enclosure
Size = 10" x 20" x 24"
Weight = Approx. 80 lbs.
Electrical Input — 10 amp
120 volt — 3 ph — 60 Hz

PC Batch Control

A highly modifiable basic weigh batch controller designed to provide the same wide variety of standard features offered by the "STERLING TOUCH" system, plus the capability to expand to multiple weighers in a single or multiple systems. More reports and all are displayable.

EXPANDED FEATURES

- 20 main dry ingredients
- 16 additional micro ingredients
- Up to 4 liquid ingredient adders
- Full color graphics and display — VGA monitor
- 386 PC based system (486 available)
- Expandable memory
- All reports displayed and printable

AVAILABLE OPTIONS—All Models

- NEMA 4 enclosure
- Printer
- Remote operators station
- Remote weighmeter indicators
- Larger hard drive
- Additional ingredient control
- Computer can interface with main frame
- Interface capability with upstream/ downstream equipment

INGREDIENT FEEDERS

MICRO SCALE

MIXER SCALE

INGREDIENT FEEDERS

MAIN SCALE

MICRO SCALE

MIXER

Sterling Controls, Inc.
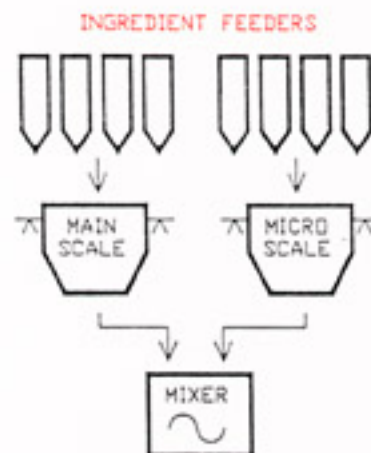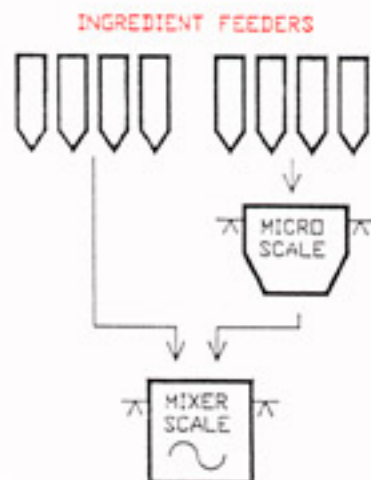
BATCHING CONTROL PRINTOUT SAMPLES

The samples shown below represent only a small example of the reports and data available from the STERLING batch controllers.

```
FORMULA TABLE                        PAGE    1
10:00:00 06/15/92

NUMBER          PRODUCTION      INVENTORY    NAME
1242-38         18345.34        18345.34     BANNANA MUFFIN
2084-49         24175.46        20657.32     CARROT CAKE
2350-20         21542.37        21542.37     YEAST RAISED DOUGHNUT
2490-49         41234.45        15834.56     CORN BREAD
3049-12         31520.22        31520.22     APPLE-SPICE MUFFIN
3450-02         45412.33        28503.45     SPICE CAKE
3490-23         10927.23         3554.38     DEVILS FOOD CAKE
3491-34         20769.54        10577.48     CINNAMON-RAISIN MUFFIN
4493-48          8563.39         8563.39     MARBLE CAKE
5534-45         13205.07         9729.54     WHITE CAKE
5590-34          8460.23         2954.46     POUND CAKE
6634-34         34594.96        19476.65     YELLOW CAKE
7534-40          7640.33         7640.33     ANGEL FOOD CAKE
8230-11         44938.27        32964.30     BROWNIE
8278-21         12685.58        12685.58     OAT BRAN MUFFIN
9358-12          9784.34         7059.30     PIZZA CRUST
9523-34         15675.33        10953.32     BLUEBERRY MUFFIN
```

```
INGREDIENT TABLE                     PAGE    1
10:00:00 06/15/92

ING  BIN   INVENTORY      USAGE  DESCRIPTION
 713   0     456.00      140.00  SODIUM CASEINATE
1187   3    9844.00     8449.00  SALT
1258   0     453.00      174.00  POWDERED SUGAR
2886   0    9450.12     3234.23  SOY OIL
3879   0    1923.00     1237.00  WHOLE WHEAT FLOUR
3961   1   24085.00    12974.00  ENRICHED WHITE FLOUR
4083   6   21850.00     8450.00  SUGAR
4114   0      87.35       28.22  APPLE FLAVORING
4278   5    4598.00      465.00  WHEY
4457   0     129.47       76.22  COCOA
4677   0     872.25      385.28  NONFAT DRY MILK
4708   0    1873.00      936.00  OAT BRAN
5680   2   19574.00     1734.00  SOYA FLOUR
5730   0     385.18      115.43  BAKING SODA
6212   0      46.43       21.13  SPICE BLEND
6297   0      83.29       29.12  BUTTER FLAVORING
7134   0    8495.23     2394.58  CORN SYRUP
7154   0     230.16       93.27  SODIUM STEAROYL LACTYLATE
7205   0    8951.45     3555.42  VEGETABLE SHORTENING
7267   0      84.32       25.50  YELLOW COLORING
7564   4   13940.00     2030.00  DEXTROSE
8259   0      71.20       19.67  VANILLA FLAVORING
8904   0      89.34       28.64  RED COLORING
9109   0     539.23      198.36  EGG SOLIDS
9406   0     175.43       83.39  CHOCOLATE FLAVORING
```

```
FORMULA LISTING                      PAGE    1
10:00:00 06/15/92

NUMBER: 3049-12                      NAME: APPLE-SPICE MUFFIN

SEQ  INSTRUCTION
 1   WEIGH     ING #3961  QTY= 1500.00  ENRICHED WHITE FLOUR
 2   WEIGH     ING #7564  QTY=  120.00  DEXTROSE
 3   WEIGH     ING #1187  QTY=   37.00  SALT
 4   HAND ADD  ING #5730  QTY=   13.20  BAKING SODA
 5   HAND ADD  ING #4114  QTY=    1.25  APPLE FLAVORING
 6   HAND ADD  ING #6212  QTY=    4.55  SPICE BLEND
 7   HAND ADD  ING #9109  QTY=   23.45  EGG SOLIDS
 8   MIX       TIME= 180  SPEED=SLOW
 9   PUMP      LIQUID #2   QTY=  160.00  SOY OIL
10   MIX       TIME= 120  SPEED=SLOW
11   MIX       TIME= 240  SPEED=FAST
```

```
BIN TABLE                            PAGE    1
10:00:00 06/15/92

         UNDER    OVER    FAST    SLOW   JOG   SPEEDS
BIN  1    5.00    5.00   30.00    5.60    9      2
BIN  2   10.00   10.00   50.00    7.80   12      2
BIN  3    5.00    5.00   30.00    4.50    9      2
BIN  4    5.00    5.00   25.40    0.00    9      1
BIN  5    3.00    3.00   15.20    0.00    9      1
BIN  6    3.00    3.00   15.00    2.20    9      2
BIN  7    3.00    3.00   15.00    1.60    9      2
BIN  8    5.00    5.00   20.00    1.20    9      2
LIQ  1    2.00    2.00    1.40    0.00    1      1
LIQ  2    2.00    2.00    3.20    0.00    1      1
LIQ  3    2.00    2.00    1.70    0.00    1      1
LIQ  4    2.00    2.00    0.90    0.00    1      1
```

Data Available on the Sterling Computerized Batching Controls

DATA DISPLAY

Time	Underweight Tolerance
Date	Overweight Tolerance
Sequence Number	Jog Time
Bin Number	Mix Time
Ration, Recipe or	Mixer Dump Time
Formula Number	Batch Number
Net Weight	Lot Number
Gross Weight	Usage
Fast Cutoff	Inventory
Slow Cutoff	Alarms
	Status

EXTERNAL INPUTS

Scale Gate Closed	Conveyor Running
Mixer Gate Open	Mixer Running
Mixer Gate Closed	Automatic Mode
Surge Bin Low	Micro Acknowledge

EXTERNAL OUTPUTS

Feeder Motors or Gates	Mixer Stop
Scale Gate	Alarm Horn
Mixer Gate	Add Micros
Conveyor System	Micros Required
Mixer Start	

ALARMS

Overweight	Scale Gate Not Closed
Scale Overload	Overtime Discharge
Material Not Flowing	Mixer Gate Not Open
Mixer Not Running	Mixer Gate Not Closed

Sterling Controls, Inc.

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