User’s manual

MC 95 A Broiler

Code No. 99-97-0971

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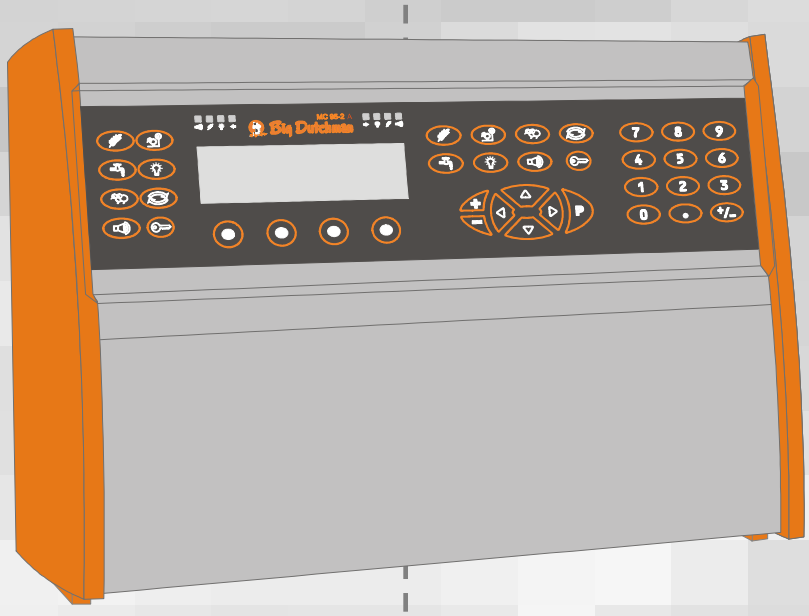
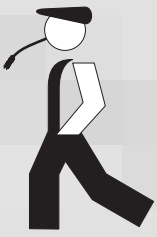
MC 95 A Broiler

User's Manual





Big Dutchman

Thank you very much for your confidence!

We want to congratulate you on your BIG DUTCHMAN

MC 95 A Broiler production computer

and we are convinced that you will be satisfied with it.

CE

EC Declaration of Conformity

We declare that the design and model of the machine described above being placed on the market by ourselves complies with the relevant health and safety requirements of the EC Directive.

Guarantee Declaration

This machine is guaranteed in accordance with the Big Dutchman International GmbH General Conditions of Sale for customers resident in Germany and the Big Dutchman International GmbH International Conditions of Sale for customers not resident in Germany.

Note

In order to ensure that your new equipment will always work properly and efficiently and to ensure your personal safety, we would ask you the following:

Please read through this *User Manual* thoroughly and take particular note of the warning and safety instructions before starting up the machine for the first time.

Programversion:

The product described in this manual is computer-based, and most functions are implemented by means of software. This manual corresponds to:

SOFTWARE VERSION 4.6

It was released in April 2005.

Product and document revision:

BIG DUTCHMAN reserves the right to change this document and the product described therein without notice. BIG DUTCHMAN cannot guarantee that you will be informed about possible revisions of the product or the manual. In case of doubt, please contact BIG DUTCHMAN.

The date of the latest revision of this manual is indicated on the back page.

NOTE

- All rights reserved. Reproduction of any part of this manual in any form whatsoever without BIG DUTCHMAN' express written permission is forbidden.
- All efforts have been made to assure the accuracy of the contents of this manual. However, should any error be detected, BIG DUTCHMAN would greatly appreciate being informed.
- In spite of the above, BIG DUTCHMAN cannot assume responsibility for any error in this manual or any consequences thereof.

IMPORTANT

- Read this manual thoroughly before installing and using MC 95 A.
- BIG DUTCHMAN recommends the installation of an alarm system in connection with MC 95 A. In connection with control and inspection of the feeding system, interruptions, malfunctioning or faulty settings may result in economic loss. It is very important to test the alarm system and the connected alarm-related equipment at least once a week, preferably more frequently.

1 INTRODUCTION

This manual describes operation, setting and installation of the Euro Matic MC 95 A-1 and MC 95 A-2 production computers.

MC 95 A was especially designed for production control in houses with broilers, where MC 95 A can control feed supply, lighting and water and record the feed and water consumption as well as the number and weight of the birds. MC 95 A can give an alarm in case of error conditions and be connected to a printer and a PC.

MC 95 A-2 allows independent control of two houses, provided that a shared FW 99B feed weigher is used.

MC 95 A is a basic unit which allows the installation of accessories as required. The accessories include a printer and data network module which allow printouts and PC connection respectively.

The manual also includes a description of weight on day (W.O.D.) (not a standard function).

BIG DUTCHMAN congratulate you on your new

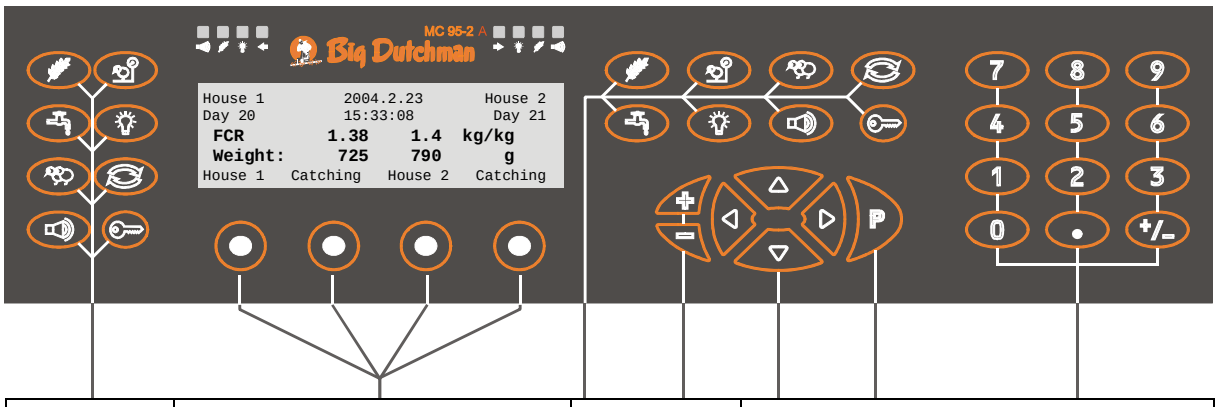
MC 95 A production computer

2 OPERATION

This section describes operation of MC 95 A. The section includes:

2.1 Keyboard

MC 95 A is controlled by means of one key at a time only - never two or more at the same time.



Function keys house 1	Selection keys	Function keys house 2	Menu control and entry of values

2.1.1 Function keys

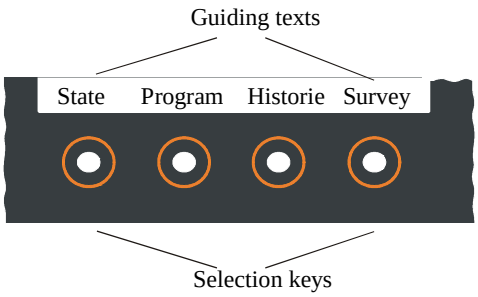
Each of these keys presents a menu - see Menu survey in section 2.4.

Function key		Description	Menu survey
	Feed control	Setting the feed program, feed mixture and control method. Display of key figures from current and previous batches.	Figure 2, page 14 Figure 3, page 15
	Broiler weighing	Display of key figures from current and previous batches.	Figure 4, page 16
	Water	Setting the water program. Display of key figures from current and previous batches.	Figure 5, page 17
	Lighting	Setting the lighting program. Light intensity control. Display of light meter.	Figure 6, page 18
	Number of broilers	Entry of dead birds, stocked and depopulated birds . Display of key figures from current and previous batches.	Figure 7, page 19
	Start/end of batch	Start and end of a batch. Display of environmental sensors.	Figure 8, page 20
	Alarms	Setting alarm limits. Acknowledging alarms. Display of previous alarms.	Figure 9, page 21
	Key button	Installation and service functions. Event log.	Figure 10, page 22 Figure 11, page 23

2.1.2 Selection keys

The four keys below the display are called “selection keys”. The function of each key varies depending on the function texts at the bottom of the display.

The selection keys are used to select menus/sub-menus and to enter data.



The first 3 selection keys are normally used to select sub-menu items in the menu, and the fourth selection key is normally used for returning to the previous level of the menu.

2.1.3 Keys used to change settings

P	The P-key allows the user to change settings and data. When the P-key is pressed, brackets ([…]) appear around the parameter, which can now be changed.
▲ ◀ ▶ ▼	The manoeuvre keys allow the user to “scroll” in the screen and select the parameter to be changed.
− +	The + and - keys are used to change settings and data.

2.1.4 Numerical keyboard

0 1 . . . 9	Used for entry of figures, e.g. delivered feed **[6000]kg**.
. +/−	Used for entry of decimals and/or negative values.

2.2 Lamp indications

A number of lamps on the front of MC 95 A indicate various operating conditions.

Red alarm lamp	No light	No alarm
	Flashing quickly	Active alarm
	Flashing slowly	Active alarm which has been acknowledged
	Constant light	Alarm not acknowledged, but alarm condition has now disappeard
Yellow feed lamp	No light	Feeding system not activated
	Constant light	Feeding system activated
Yellow light lamp	No light	House lighting off
	Constant light	House lighting on
Green arrow	Only available on the two house computer. The lamp indicates whether operations are currently being performed in the left or right side.	
At end of batch or in connection with manual control	The three lamps ALARM, FEED and LIGHT are flashing.	

2.3 Entry of values

The MC 95 A menus show a number of texts, values and other data.

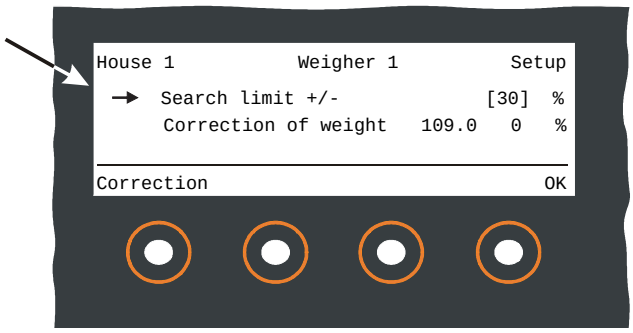
Fixed readouts: The display shows measured values and calculated figures, presented to the user for information. These values are fixed and cannot be changed by the user.

Variable values: In addition, the display shows a number of variable parameters, which the user can change. These include figures, time settings and texts.

When a value can be changed, this is indicated by means of an arrow → pointing at the active line.

Use the manoeuvre keys to select other values to be changed in this screen.

Press [P] to change the value.



Brackets ([…]) are placed around the parameter which can be changed.

Press either [+], [−] or [0] [1] . . . [9] to change the value.

```
House 1          Weigher 1          Setup

→ Search limit +/-              [30]  %
  Correction of weight   109.0   0   %

Correction                           OK
```

When the required value has been entered, press **OK** to use the new value or **Undo** to return to the previous setting.

Most parameters can be changed by means of the +/- keys as well as the numerical keyboard.

```
Use [0] [1] . . . [9] to enter

→ Stocked birds:        [28000]

Undo                    Delete    OK
```

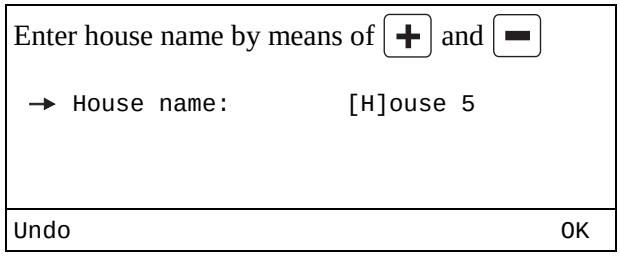
However, certain parameters can only be changed by means of +/- (typically when choosing from a list of opportunities).

```
Use [−] [+] to enter

→ Feed system:          [ Chain ]

Undo                              OK
```

When entering values by means of the numerical keyboard it is possible to delete the last digit entered by pressing the **Delete** key.

```
→ Correction of weight      [19   ]

Undo                 Delete       OK
```

Certain parameters (e.g. house name) are “free text”, where the individual characters can be changed by means of +/-. Use the manoeuvre keys to move the brackets to the other characters.



2.4 Menu survey

This section describes all menus in MC 95 A.

Please be aware of the fact that some of the menus are dependent on the installation in question. Some menus may be missing in the display.

2.4.1 Menu structure

The upper level in the menu structure is the survey display. This is where the house name(s), batch clock(s), current date and time, feed conversion (FCR) and broiler weight are output. If the user does not use the keyboard, MC 95 A automatically returns to the survey display after 5 minutes.

The selection keys provide quick access to:

- key figures for the past 24 hours
- key figures for batch to date
- curve display of feed, light and water programs
- printout - print required report or set-up
- functions in connection with catching - setting of light intensity and stopping the feeding system for a required period of time

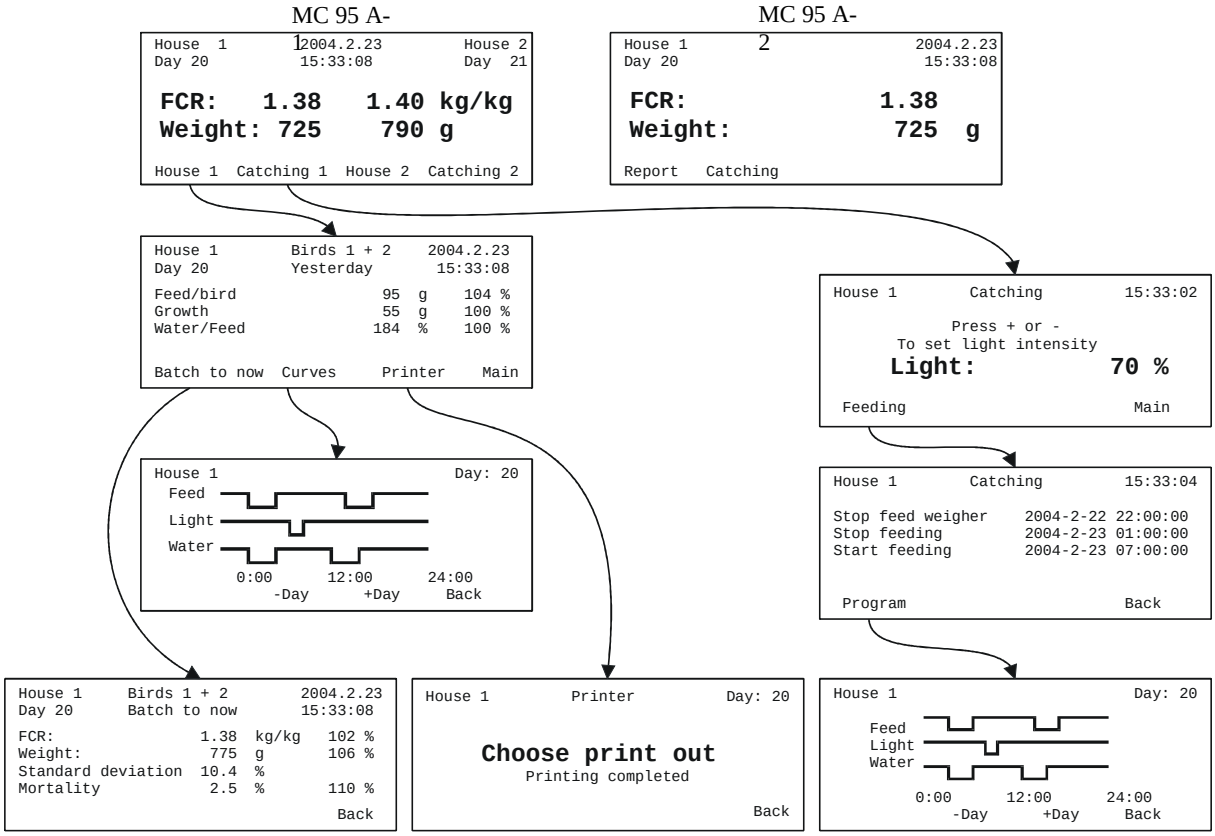


Figure 1: Survey display

2.4.2 Feed

Display of the day's feed consumption per bird and the required daily quantity.

Entry of reference feed consumption per bird.

Display of historical feed data:

- key figures for this day's feeding periods
- key figures for the day
- key figures for batch to date
- key figures for previous batches (day and total)

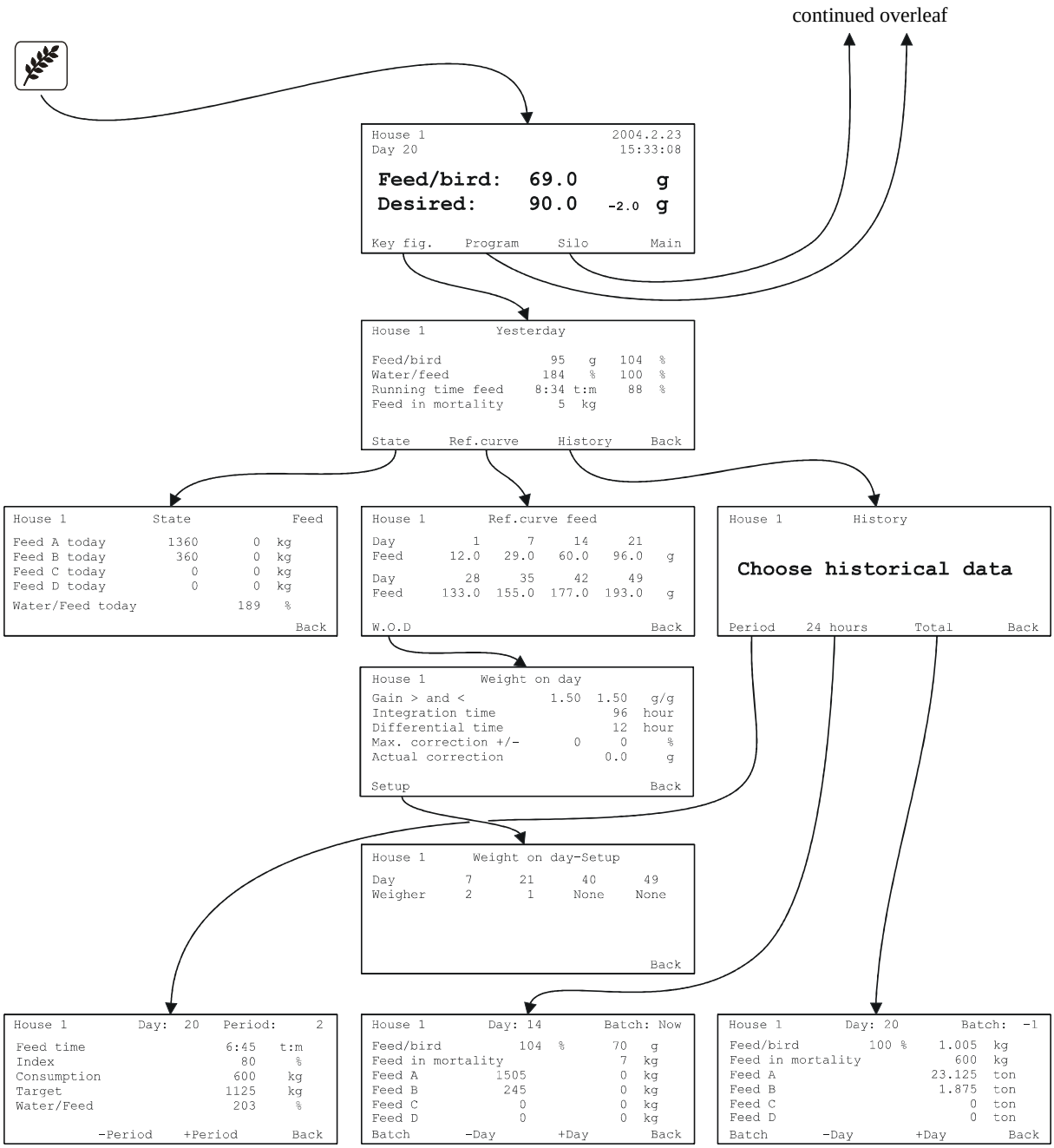


Figure 2: Feed, key figures

2.4.3 Feed (continued)

Entry of mixture program and feed program. Curve display of feed program.

For chain feeding only: Entry of the number of feedings per day, chain running time, manual start of chain.

Silo status: Entry of feed supplied. Setting of gradual change-over and automatic change of silos.

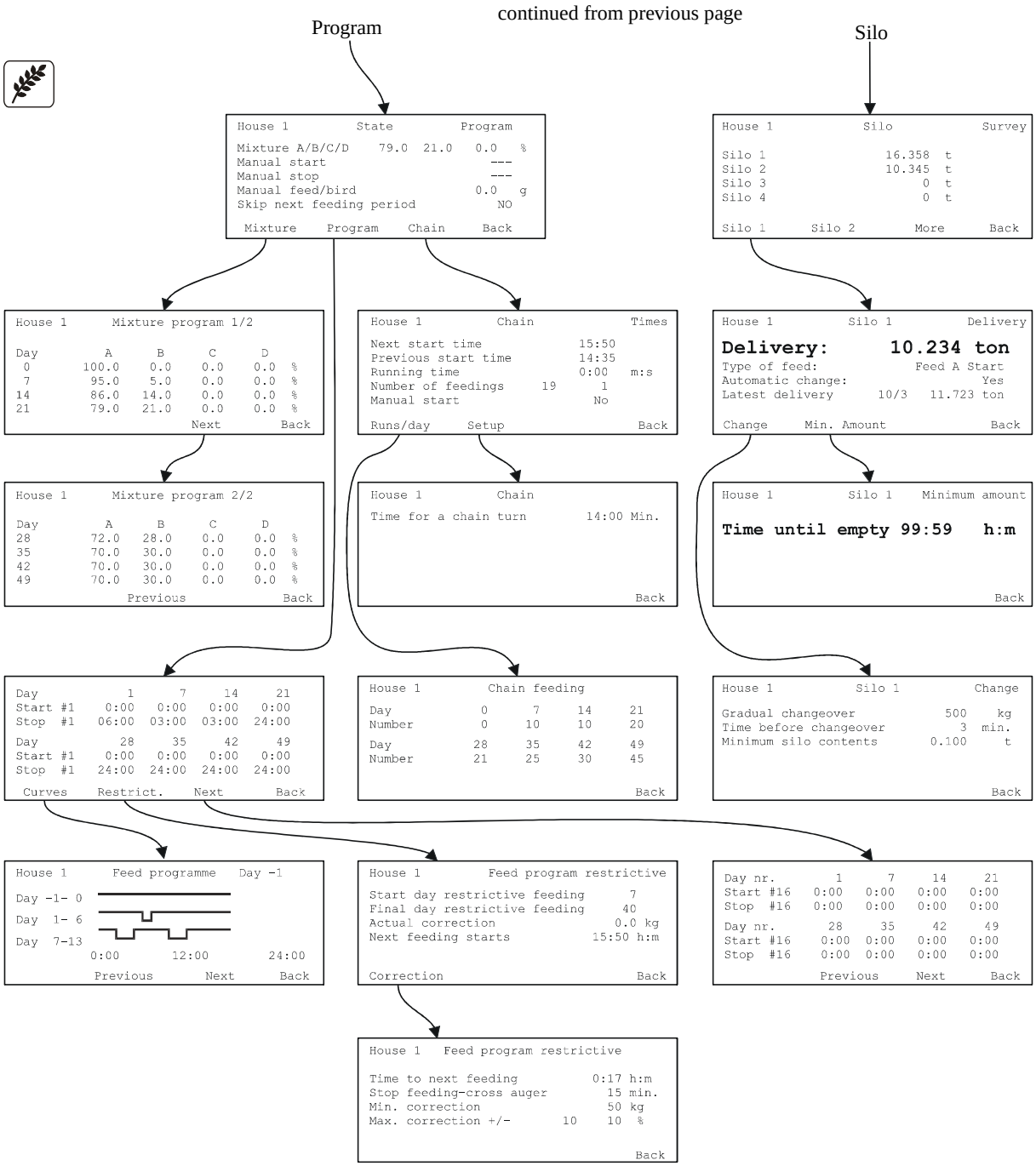


Figure 3: Feed, programs and silo

2.4.4 Broiler weight

Display of current broiler weight and deviation in relation to reference weight (index figure).

Display of key figures:

- broiler weight
- growth
- standard deviation
- current reference weight
- number of birds weighed

Setting of weighing parameters:

Search limits, correction factor.

Display of historical data: Broiler weight for current and previous batches.

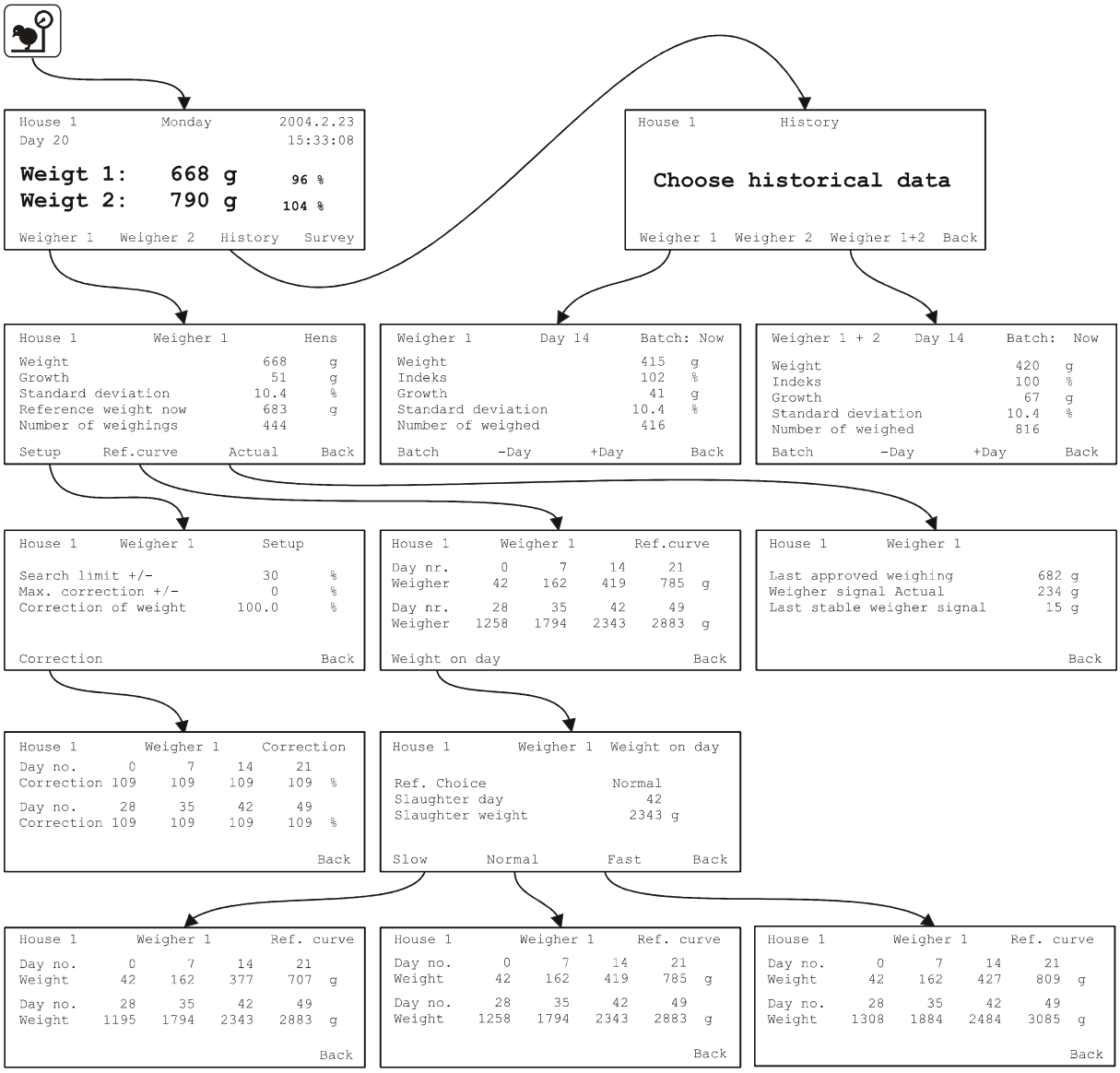


Figure 4: Broiler weighing

2.4.5 Water

Display of the day's water consumption per bird and the required daily amount.

Entry of reference water consumption per bird.

Entry of water program. Curve display of water program.

Display of historical data:

- key figures for current batch
- key figures for previous batches

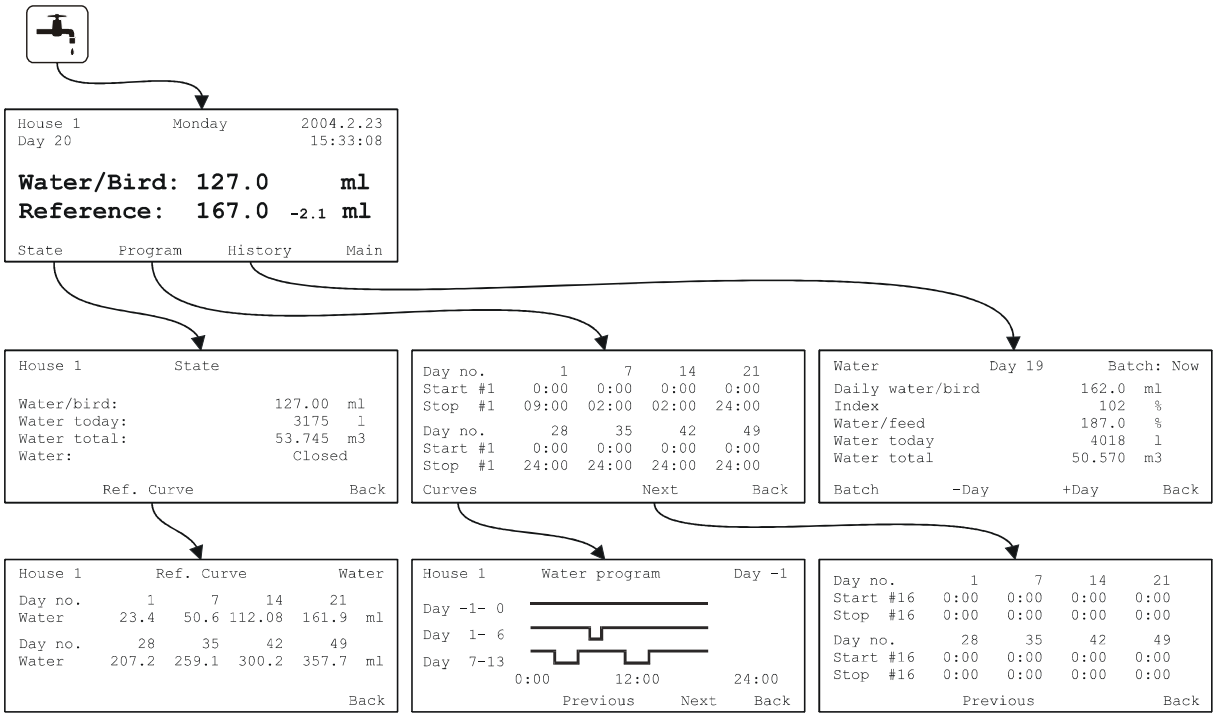


Figure 5: Water

2.4.6 Light

Display of light control status. On and off times.

Setting the light program. Setting the light intensity. Curve display of light program.

Display of historical light data:

- key figures for current batch
- key figures for previous batches

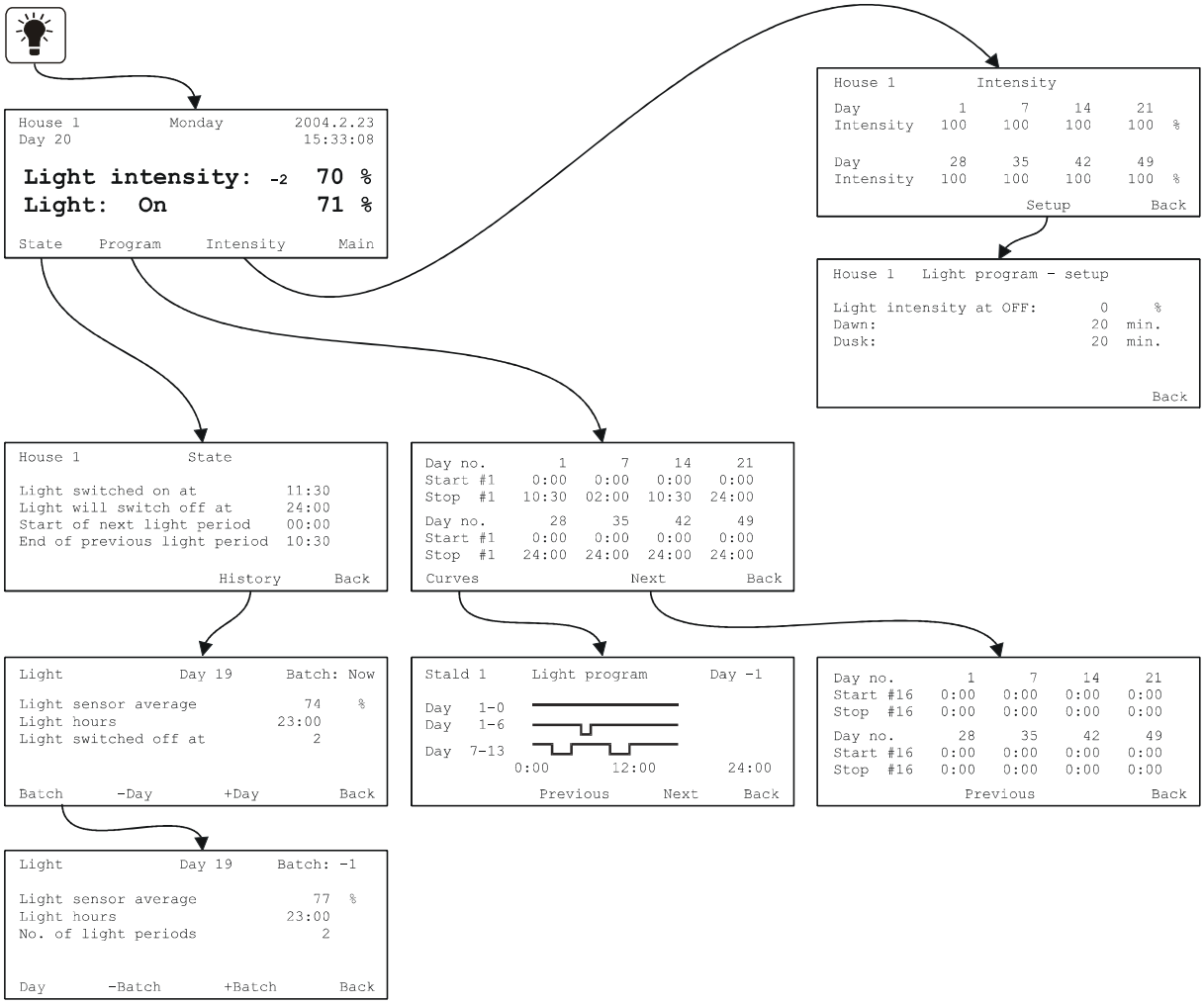


Figure 6: Light

2.4.7 Number of birds

Display of mortality rate and deviation in relation to reference mortality (index figure).

Entry of number of dead birds and depopulated birds.

Display of the number of living birds.

Entry of the number of stocked birds, reference mortality rate and parent bird data.

Display of historical data:

- key figures for current batch
- key figures for previous batches

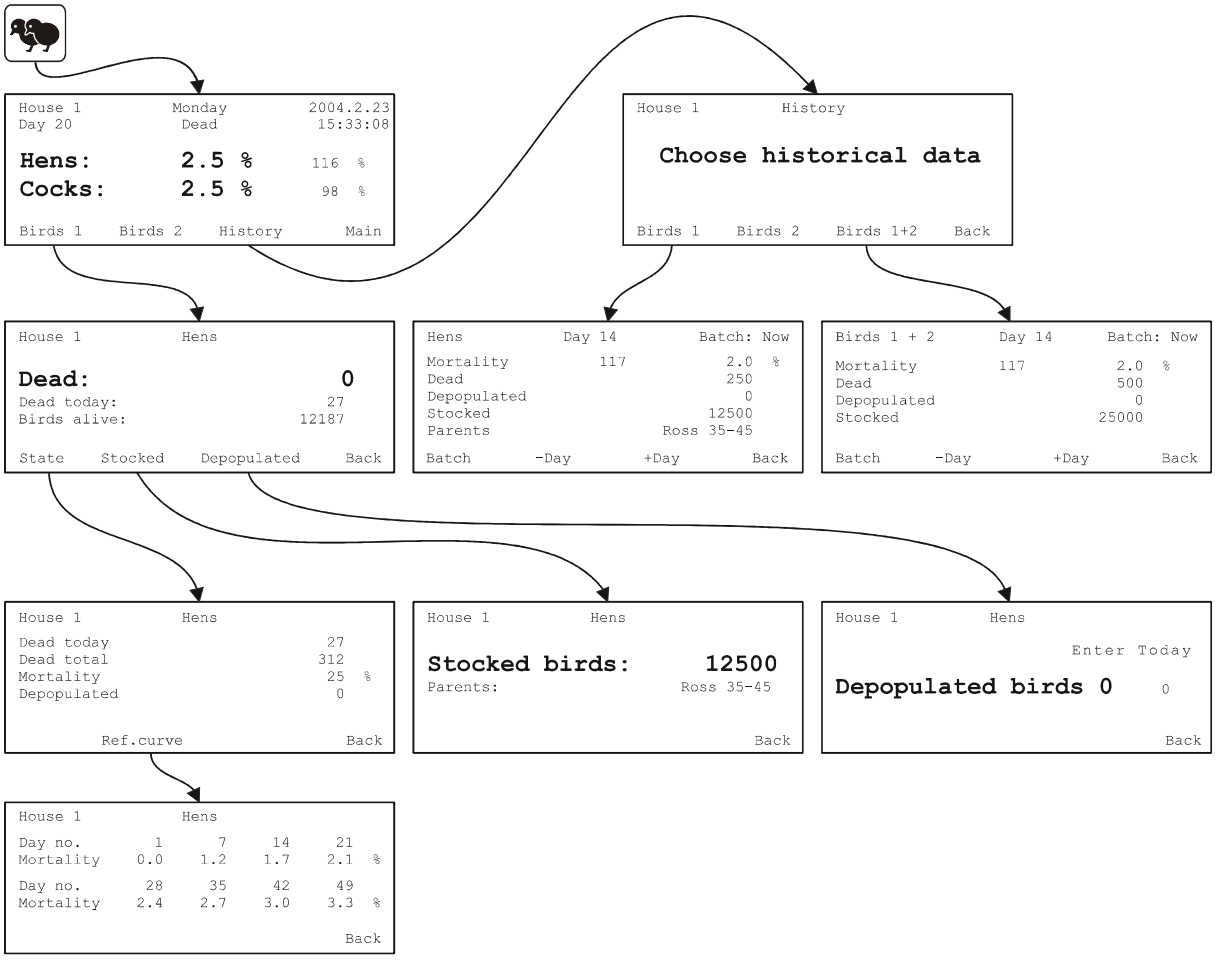


Figure 7: Number of birds

2.4.8 Start of batch / end of batch

Carry out the START OF BATCH or END OF BATCH function on MC 95 A.

Reading of the current values from the environmental sensors.

Display of historical environmental sensor data:

- key figures from current batch
- key figures from previous batches

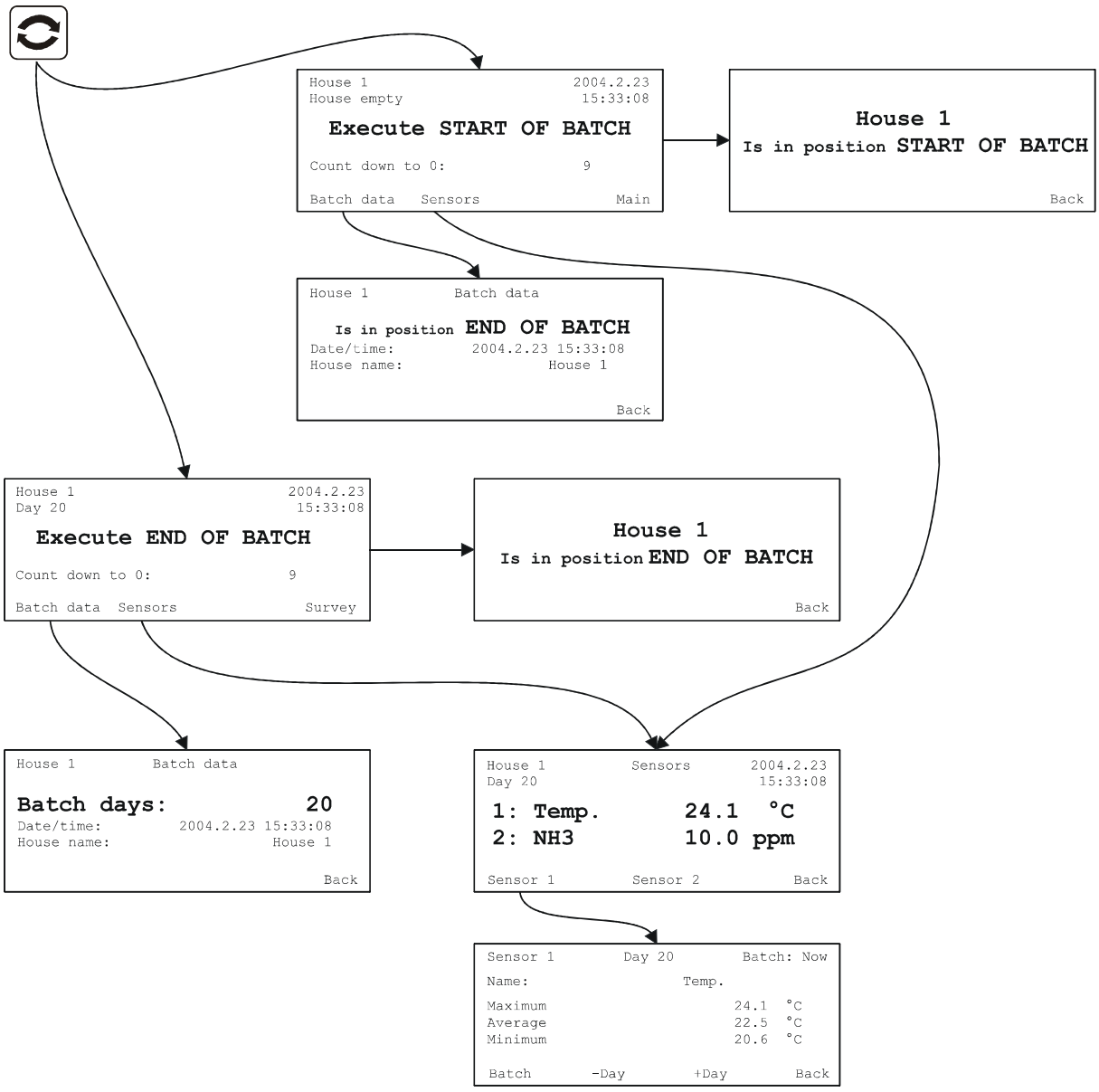


Figure 8: Start of batch / end of batch

See chapter 3.8.1 regarding batch change in houses connected to Info Matic WebLink.

2.4.9 Alarms

Display and acknowledgement of current alarms.

Setting of alarm limits.

Display of alarm log (previous alarms).

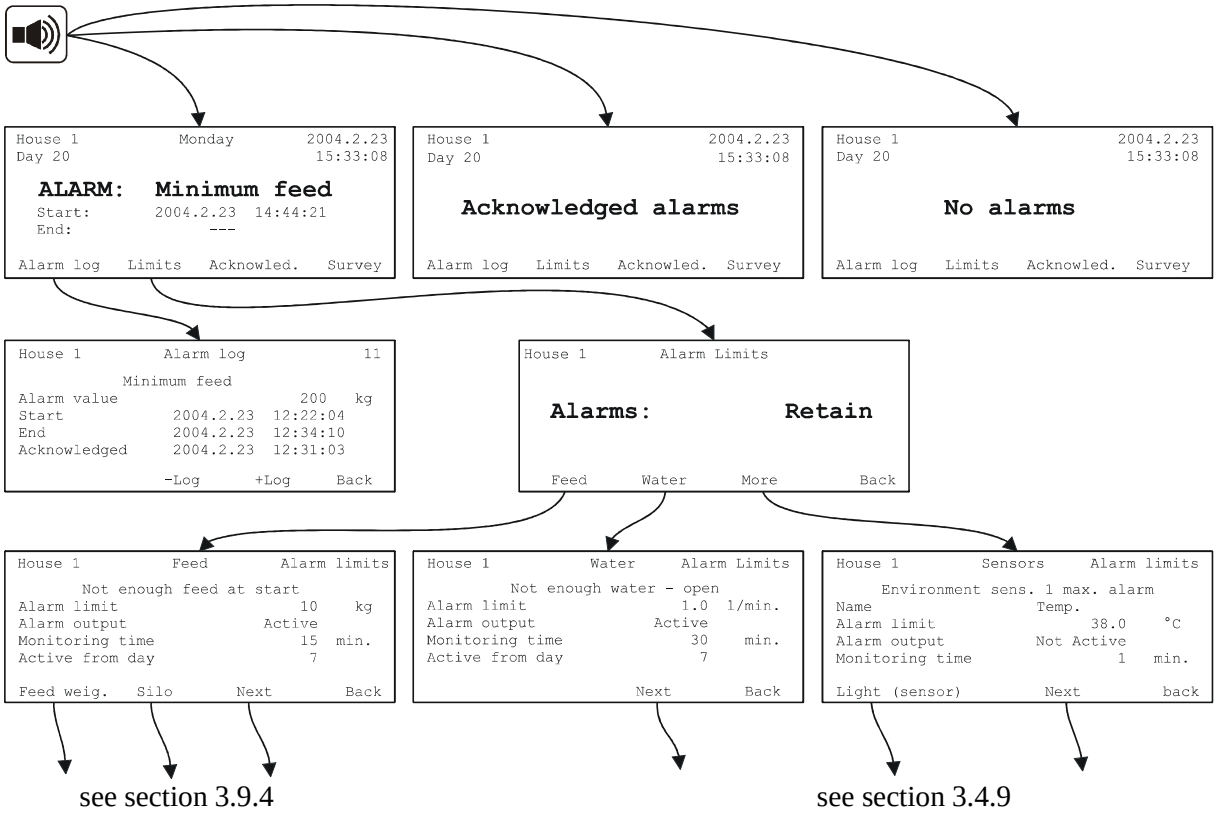


Figure 9: Alarms

2.4.10 Control key - installation

Setting of house name and language.

Setting of installation parameters:

- number of bird types
- storing batch data
- bird name and reference
- feeding system
- feed weigher
- light control

continued overleaf

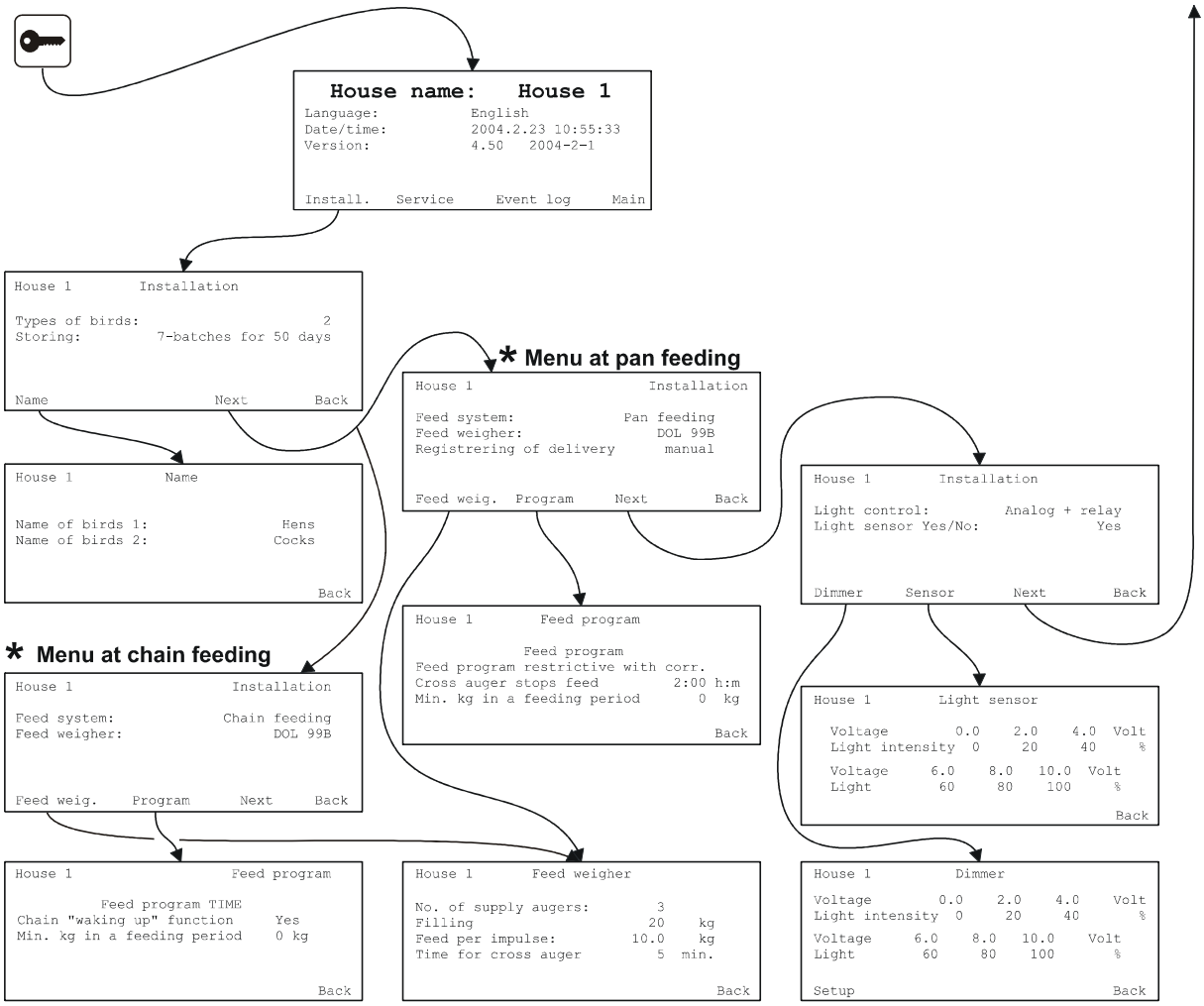


Figure 10: Control key, installation

2.4.11 Control key - installation (continued)

Setting of installation parameters:

- water meter and water control
- bird weighers
- environmental sensors
- printer
- Info Matic
- password
- copy set-up to other house (MC 95 A-2 only)

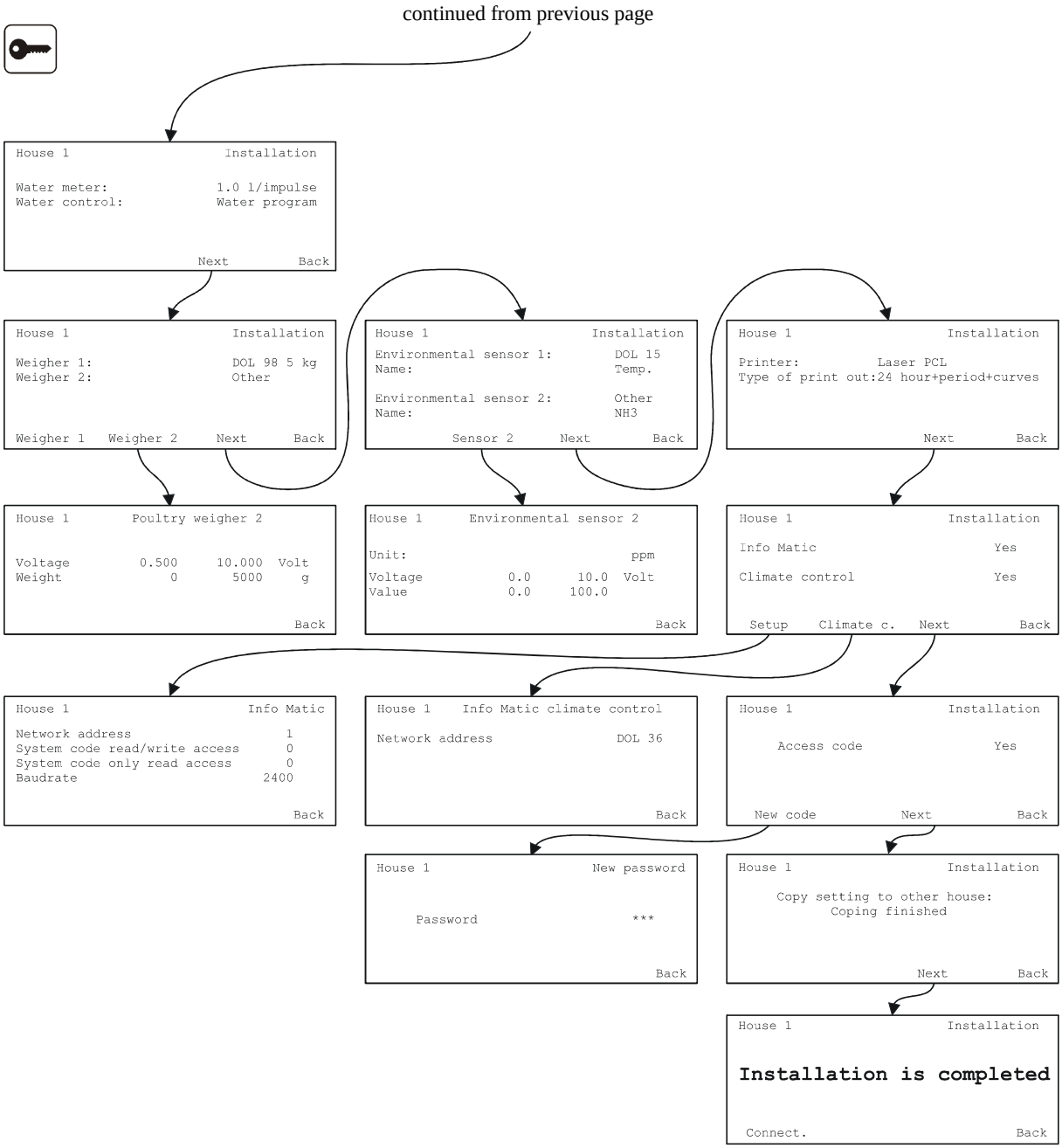


Figure 11: Control key, installation (continued)

2.4.12 Control key - service and operation log

Service functions:

- automatic or manual control
- control and setting of all inputs and outputs (I/O)
- read current set-up
- calibration of feed weigher
- test of Info Matic

Operation log:

- list of the user's latest settings and changes

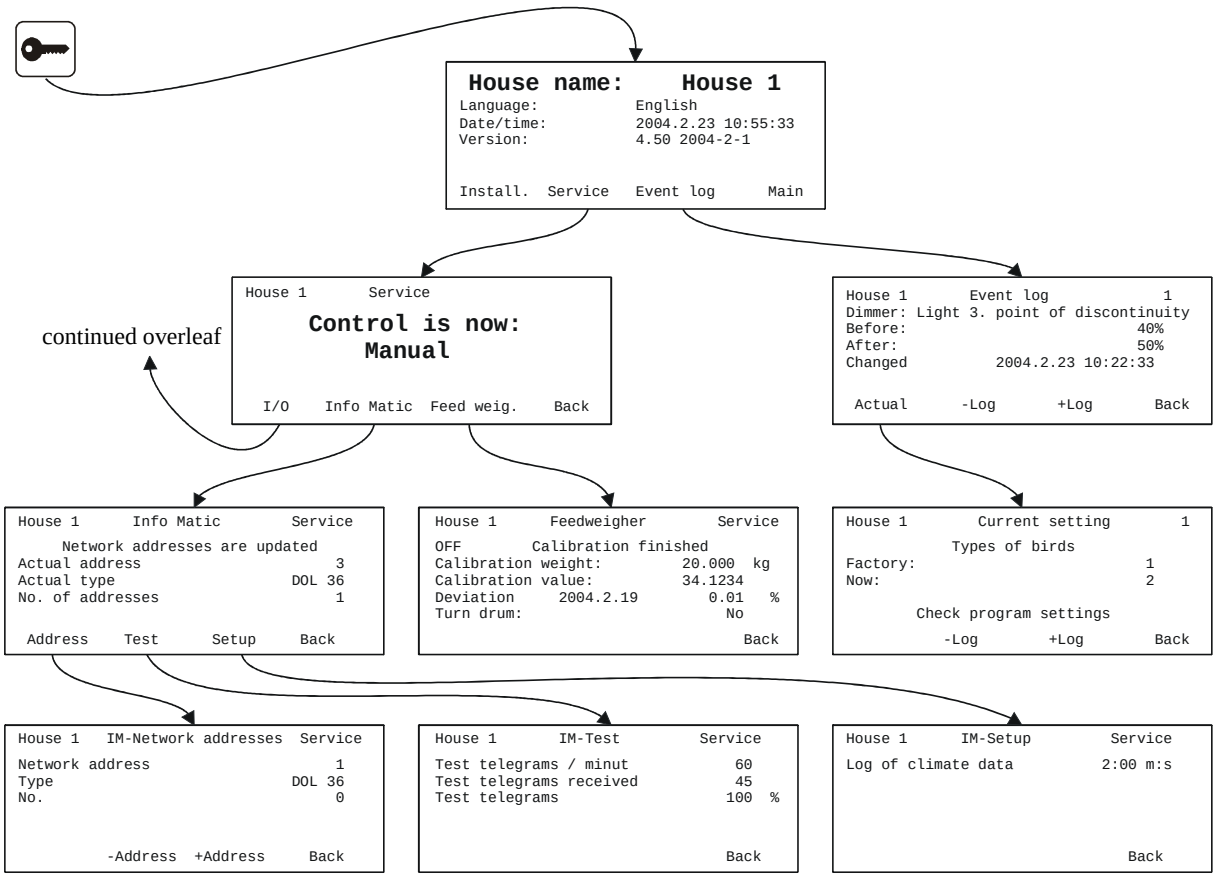


Figure 12: Control key, service and operation log

2.4.13 Control key - service and operation log (continued)

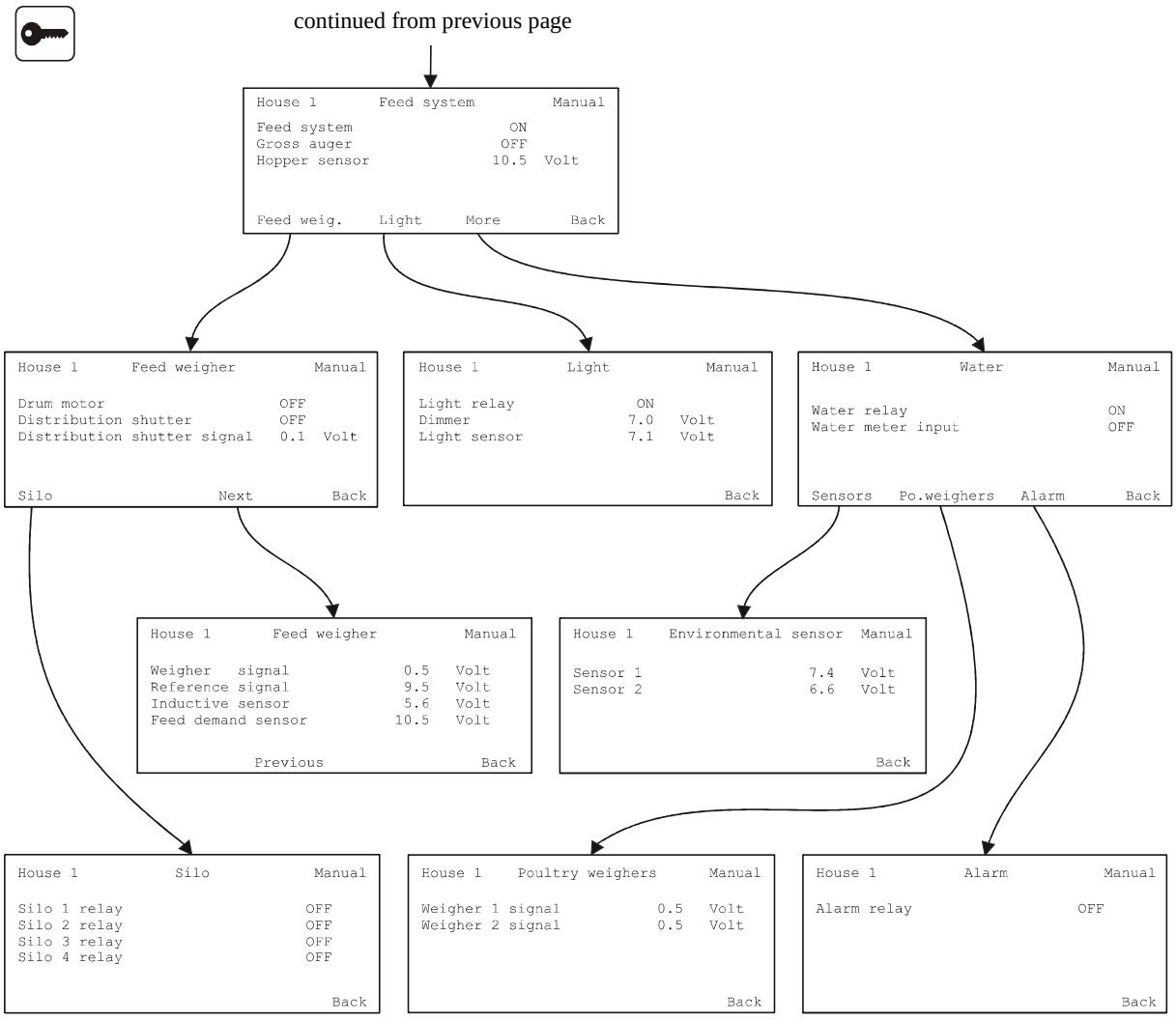


Figure 13: Control key, service and operation log

2.5 Access to the most important functions

This section describes how to quickly gain access to the most important functions in MC 95 A.

2.5.1 Daily operation

Dead birds	+ **Dyr 1/2**
Partial depopulation	+ **Dyr 1/2 + Udtagne**
Supply of feed	+ **Silo + Silo 1/2/3**
Wheat %, adjustment	+ **Program**
Chain feeding, running times	+ **Program + Kæde**
Time before silo empty	+ **Silo + Silo 1/2/3 + Min. Mængde**
Manual broiler weighing	
Stop feeding system	**Catching + feeding** (from survey display)
Manual start of chain feeding	+ **Program + Kæde**

2.5.2 Settings / changes

Program, feeding	**+ Program + Program**
Program, feed mixture	**+ Program + Mixture**
Program, number of chain feeding runs	**+ Program + Chain + no./day**
Program, water control	**+ Program**
Program, light control	**+ Program**
Reference curve, feed consumption	**+ Key fig. + ref. curve**
Reference curve, broiler weight	**+ Weigher 1/2 + ref. curve**
Reference curve, water consumption	**+ State + Ref. curve**
Reference curve, mortality	**+ Birds 1/2 + State + Ref. curve**
Calibration of feed weigher	**+ Service + Feed weigher**

2.5.3 Displays

State, feeding	+ Key fig.
State, feed mixture	+ Program
State, chain feeding	+ Program + Chain
State, silo content	+ Silo
History, feed	+ Key fig. + History
History, broiler weight	+ History
History, water	+ History
History, light	+ State + History
History, dead/depopulated	+ History
History, environmental sensors	+ Sensors
Alarm log	+ Alarm log
Alarm limits	+ Limits
Operation log	+ Operation log
Current setting	+ Operation log + Current setting

3 FUNCTIONS

This section describes all functions in MC 95 A.

3.1 General information

3.1.1 Programs

Feed, water and light control runs according to 24-hour programs. A 24-hour program consists of a maximum of 16 start/stop times. 24-hour programs can be entered for 8 different day numbers.

The 24-hour program has 16 start/stop times, which indicate the active control periods. The start time must always precede the stop time. The 16 start/stop times are displayed and set on 16 different "program pages", which the user can scroll through by means of **Previous** and **Next**. If, for instance, 2 feeding periods are required in 24 hours, the user must enter 2 start times and 2 stop times in the first 2 pages of the feed program. See example below. The remaining 14 start/stop times are set to **0:00**.

Day numbers: The 24-hour program runs from the first day number (including it) until but not including the next day number. Before the first day number the control function is active 24 hours a day. After the last day number the last program remains active.

The program entered is easy to check by pressing **Curves**. The program is now shown in curve form.

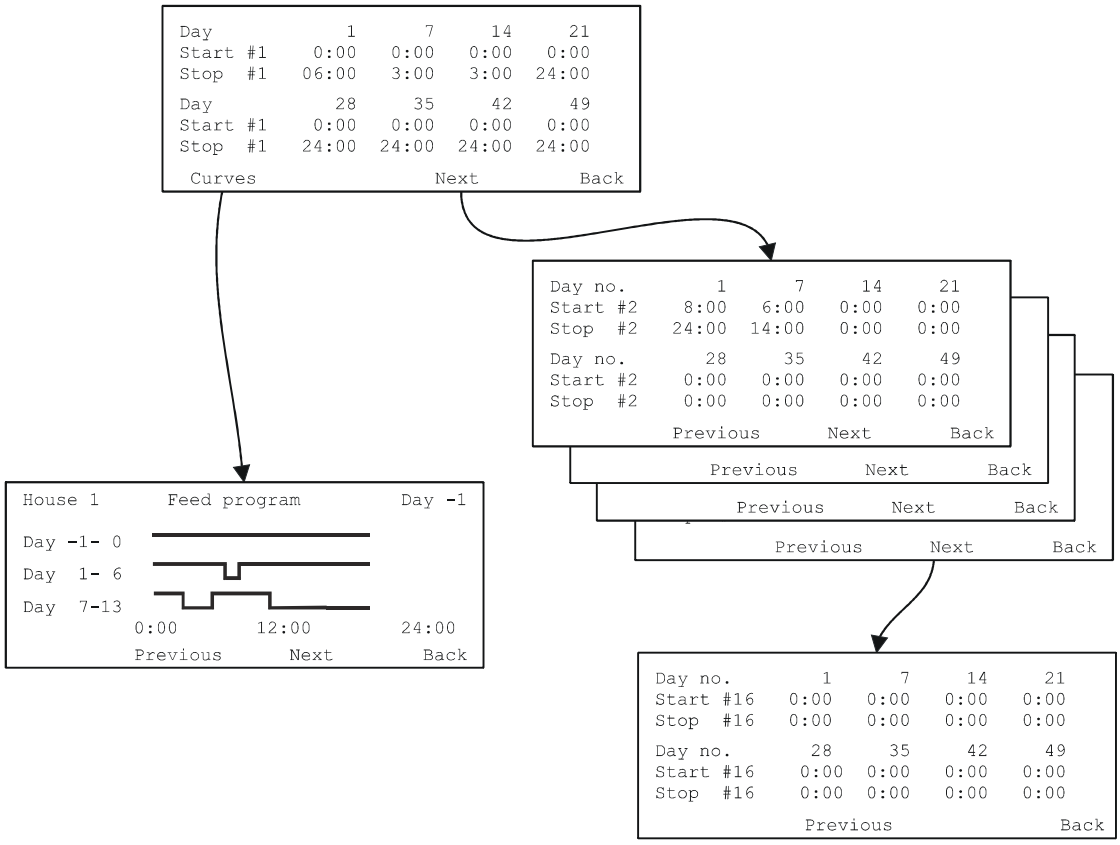


Figure 14: Programs

3.1.2 Reference curves

Reference curves are used for:

- feed consumption per broiler per day
- water consumption per broiler per day
- broiler weight
- mortality

The selected reference is Ross 208 1999 As hatched. The reference curves can be changed by the user.

Note: If “Type of bird” is changed, the reference does not change automatically.

House 1	Weigher 1			Ref. curve
Day	0	7	14	21
Weight	42	162	419	785 g
Day	28	35	42	49
Weight	1258	1794	2343	2883 g
W.O.D.				Back

The reference curves are used for:

- feed control in connection with restrictive feeding
- water control in connection with restrictive feeding
- broiler weighing
- calculation of index figures (comparison with reference)
- comparison with current and previous batches

Example:

- The feed conversion ratio is 3% better than the reference
- The birds are 2% below the reference weight
- The mortality is 5% above the reference

House 1	Birds 1+2	2004.2.23
Day 20	Batch to date	15:33:08
FCR	1.38 kg/kg	97 %
Weight	750 g	98 %
Standard deviation	10.4 %	
Mortality	2.5 %	105 %
		Back

3.1.3 History

History is the display of data stored in MC 95 A. The data stored includes a wide range of key figures concerning feed control, broiler weighing, water consumption, mortality etc. These figures are partly based on 24-hour values and partly on batch to date values.

The history function can show data from the current batch and from previous batches. The selection keys allow the user to change the **Day number** and the **Batch number**.

Index figures are shown to allow comparison with the current reference.

Weigher 1 + 2	Day 20	Batch: Now
Weight	420	g
Index	100	%
Growth	67	g
Standard deviation	10.4	%
Number of weighed	816	
Batch	-Day	+Day Back

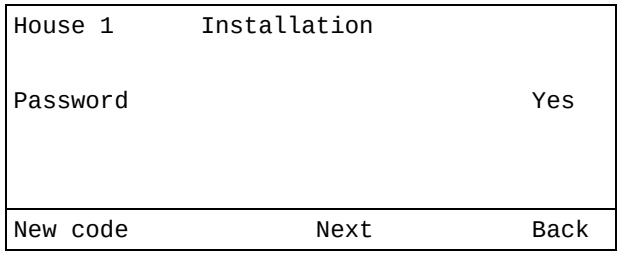
3.1.4 Password

It is possible to add a password in MC 95 A, meaning that the user has to enter a password in order to change data. The password is not necessary for scrolling the menus.

If you do not wish to use the password, it can be disconnected. The password is a figure between 0 and 9999. During the installation the password is connected or disconnected. The password will be the same, if there is more than one house.

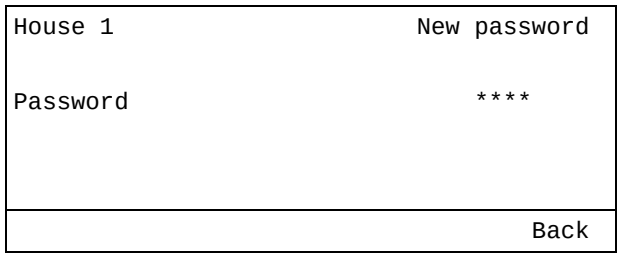
The password can be set to **Yes** or **No**.

If the password is set to **Yes**, the sub-menu "**New code**" will appear.

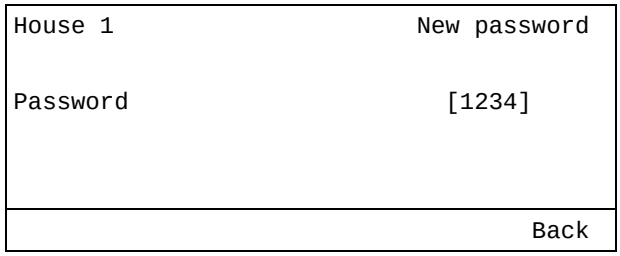


The password is displayed by ****.

In order to see or change the password you need to know the current password or (it only applies in this menu) press 0 to have the password displayed.



In the shown example the password is 1234.



When the password is connected and you wish to change data, the following is displayed.

The numerical keyboard is used to enter the password.

Press **OK** after having completed the data entry.

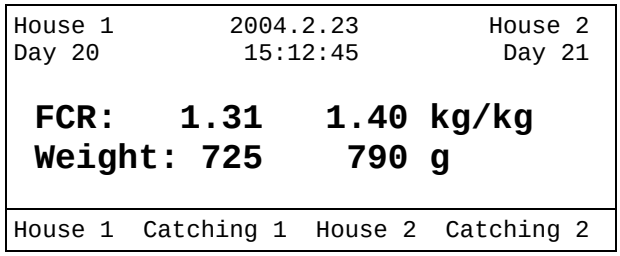
If the wrong password is entered, the following is displayed:

Press **Back** in order to enter the correct password.

Once the password has been entered, the code does not have to be entered until the survey is displayed.

3.2 Survey display

The upper level of the menu structure is the survey display. This is where the house name(s), batch clock(s), current date and time, feed conversion ratio (FCR) and broiler weight values are always shown. If the user does not press a key, MC 95 A automatically returns to the survey display after 5 minutes.

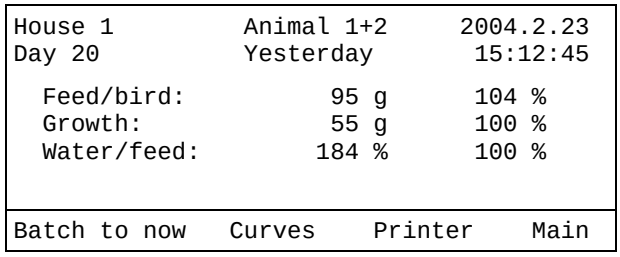


From the survey display the user can select **House/Report** and **Catching**:

3.2.1 House/Report

This screen shows key figures from **Yesterday** and **Batch to now**.

There is a quick short cut to **Curves**, so it is easy to get an overview of the programs for feed, light and water during the next 24 hours.



The **Printer** function allows the user to print out a number of different reports. See *Technical manual* which includes examples of reports.

Batch end report:	Is an extract from the 24-hour report. If the report is printed in Start of batch, feed from the minus day is not included. It is included when the report is printed in End of Batch.
Program set-up:	Report with feed, water and light program settings.
24-hour curve report:	Climate curves and period figures etc. (see *Technical Manual*)
Silo status:	Report including all information about silos.

In addition, printer reports can automatically be printed in connection with period and day shifts. See *Technical manual*.

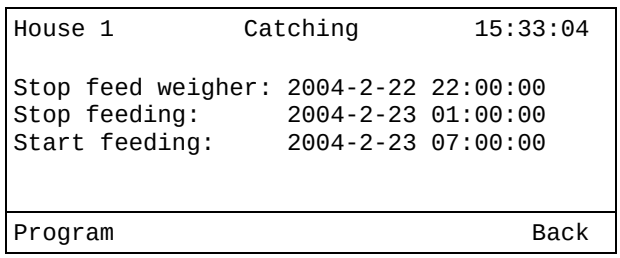
3.2.2 Catching

This function facilitates the work of those who catch the birds.

Light control:	The light intensity can be controlled by pressing + or −.
Stop feeding system:	Before catching or partial depopulation it is possible to set the period during which feeding must not be carried out. The system provides short cuts to the feed, water and light programs, allowing the user to check how the fasting period fits in with the normal programs.

It is possible to enter separate stop times for feed weigher and feeding system.

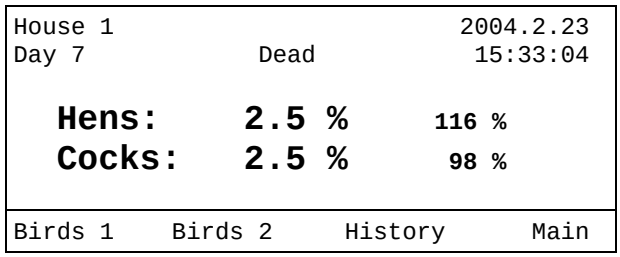
This makes it possible to empty both the feeding system and the cross auger.



3.3 Number of broilers

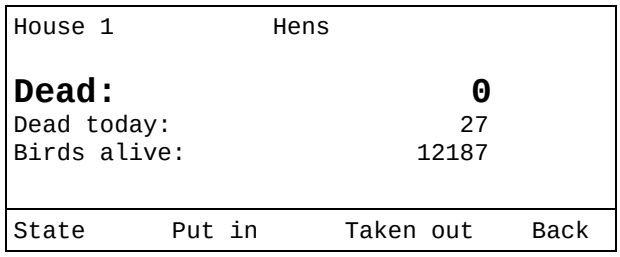
3.3.1 Two types of birds

If there are two sorts of birds in the same house, all of the following parameters must be entered separately for each “sex”, and all key figures must be calculated for each “sex”.



3.3.2 Dead birds

This is where the dead animals are entered. It is possible to see the status as well as the history.



3.3.3 Stocked birds

This is where the number of animals put in is entered. It is important that this figure is correct, as it is used for the calculation of key figures. It is possible to enter information about the parent animals, e.g. pedigree and hen age (Ross 33-35). This information is included in the printer reports.

3.3.4 Depopulated birds

This is where the user enters the number of depopulated birds through partial emptying of the house. It must not be done, when the house is emptied completely.

3.4 Feed control

In principle, the feeding system has been designed as shown below in Figure 15.

1) Feed augers - up to 4 types of feed
2) Feed weigher, FW 99B
3) Distribution shutter
4) Cross augers
5) Chain feeding system
6) Pan feeding system
7) Cross auger containers
8) Feed demand sensor in container (one for each house)

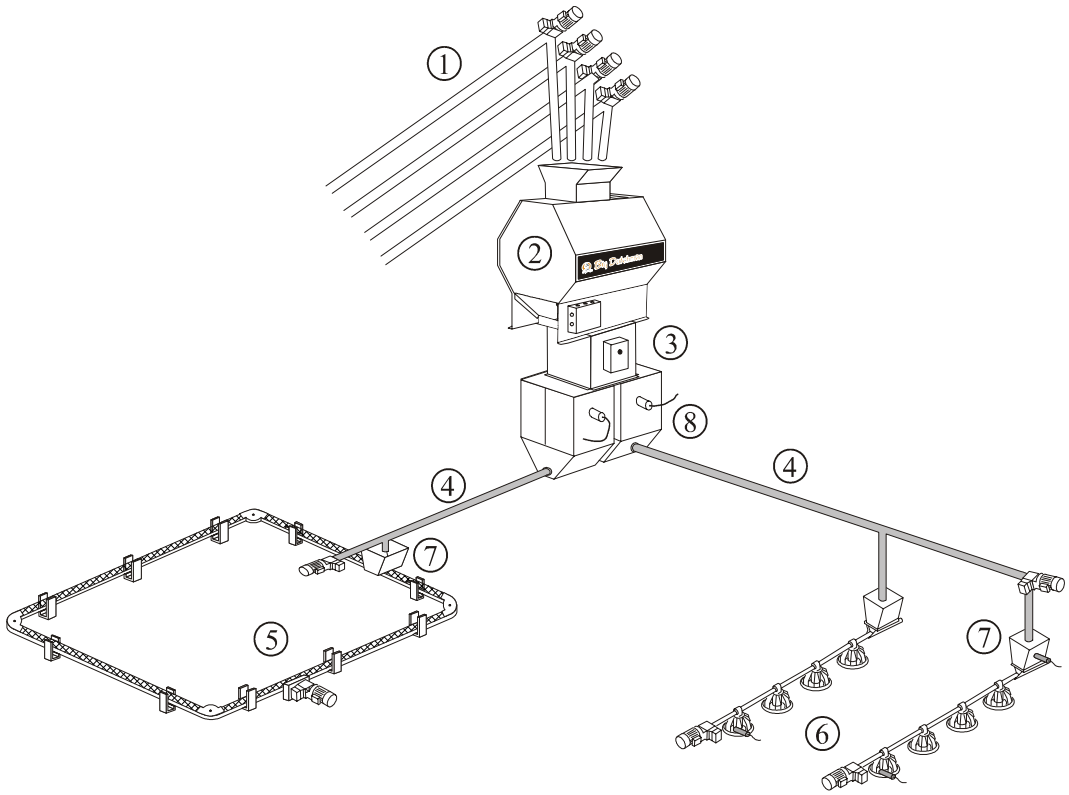


Figure 15: Chain feeding system and pan feeding system with FW 99B

3.4.1 Feed weigher

The feed weigher can be one of the following types:

FW 99B:	MC 95 A controls FW 99B directly on the basis of a load cell signal and the feed demand sensors, and it controls the feed augers and the drum motor in FW 99B. It is possible to run with up to 4 feed types simultaneously.
FW 99/99-2:	FW 99 and FW 99-2 have their own control computers and automatically order feed via the feed demand sensor. MC 95 A can control the cross auger, if required. A maximum of 2 feed types can be mixed by means of FW 99-2. FW 99 and FW 99-2 are only used together with MC 95 A-1. When FW 99-2 is used, all weight impulses are registered as feed A. Consequently, it is not possible to register feed A/B separately in MC 95 A.
Tip weigher:	Like FW 99/99-2. (However, no possibility of mixing feed).
WA99:	Electronic silo weigher. Only support 1 silo.

3.4.2 Pan feeding

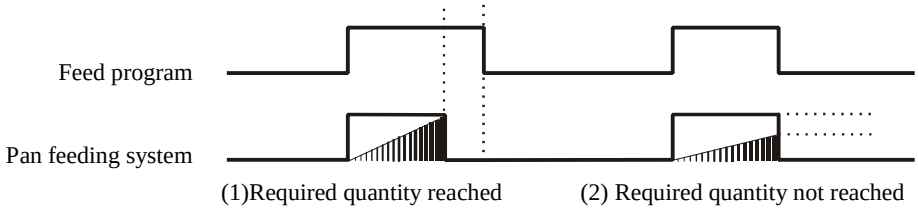
The following four control methods can be selected in connection with pan feeding:

Feed program OFF: Control of feed lines and cross auger interrupted (OFF). The system is not running.

Feed program AD-LIB: The feed lines and the cross auger are constantly active (ON). The system is only controlled by the level sensors in the reference pans. The cross auger is controlled by the sensor in the cross auger container.

Feed program time contr./Feed follows light time controlled:
The feed lines can only run in the periods determined by the feed or the lighting program. The cross auger is controlled on the basis of the sensor in the cross auger container.

Feed program restrictive/Feed follows light restrictive:
Restrictive control by required quantity as specified in the reference curve for feed consumption. Control of feed lines is active (ON) in periods determined by the feed or the lighting program and the required quantity of feed per bird. The cross auger is controlled by the sensor in the cross auger container.



(1)Feeding stopped, as required quantity has been reached

(2)Feeding is stopped by the feed program. The missing quantity is not fed.

Feed program restrictive with correction/Feed follows light restrictive with correction:
In restrictive feeding it is possible to “transfer” feed from one feeding period to another. One feeding period consists of one or more feedings. The start of a feeding period is determined by either the feed program or the light program. A feeding period starts with a feeding. The feeding stops when the cross auger has not been activated for a given period (Stop of feeding - cross auger). At the end of a feeding it is checked whether the supplied feed is more or less than the required feed quantity for the whole feeding period.

```
House 1       Feed program restrictive

Time to next feeding           0:17 t:m
Stop of feeding - cross auger    15 min
Min. correction                   50 kg
Max. correction +/-      10       10 %

                                   Back
```

If the quantity is bigger, the feeding period is finished and the extra feed compared to required will be deducted from the required feed quantity for next feeding period.

If the quantity is less, an additional feeding will start at a given time (Time to next feeding). Next feeding starts states when a possible additional feeding will start. At the end of the additional feeding it is checked again, whether the supplied feed until now in the whole feeding period is bigger or less than the required quantity. If the quantity is reached, the feeding period is stopped. Otherwise feedings

continue until either the required feed quantity is supplied or the feeding period is finished, determined by the feed program/light program. If the required feed quantity has not been supplied at the end of the feeding period the missing feed quantity is transferred to next feeding period.

```
House 1        Feed program restrictive

Start day restrictive feeding       7
Final day restrictive feeding      40
Actual correction                 0.0 kg
Time to next feeding            15:50 h:m

Correction                         Back
```

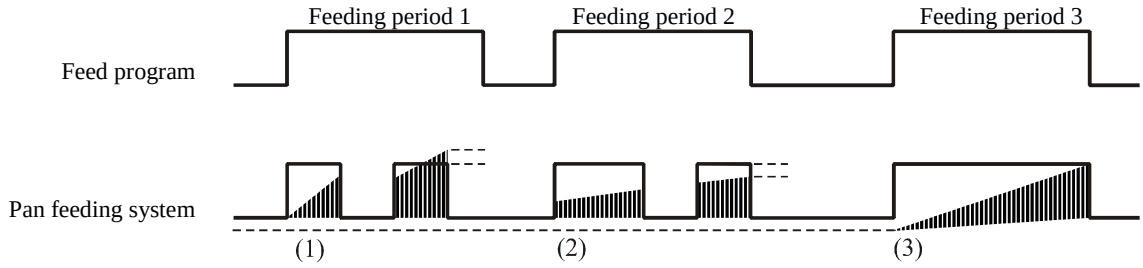
`Min. correction` states how small the remaining feed quantity may be. If Min. correction is set to 50 kg a rest of less than 50 kg compared to required quantity will not cause an additional feeding.

When a feeding period is finished or started **`Actual correction`** will be updated/calculated.

`Actual correction` states the feed quantity (+/-) being transferred to next feeding period or if a feeding period is active, how much feed (+/-), transferred from last feeding period.

`Max. correction +/-` states the max. feed transfer (+/-) allowed between 2 feeding periods.

`Max. correction +/-` can be set-up separately for the cases where feed is transferred to next feeding period (+) and feed is deducted from next feeding period (-).



(1) One additional feeding. Too much feed will be deducted in next feeding period.

(2) One additional feeding, stopped by the feed program. Too little feed will be transferred to next feeding period.

(3) No additional feeding. Feeding stopped by the feed program. Feed quantity is as required.

Restrictive feeding (time controlled restrictive or time controlled restrictive with correction) is typically only active in a part of the production period. A start day (**`Start day restricive feeding`**) and an end day (**`End day restrictive feeding`**) states in which part of the production period the feeding is restrictive. Outside this period the feeding is "normal", thus pure time controlled on basis of either the feed program or the light program.

MC 95 A calculates **`Feeding time`** which states the time spent on feeding the required quantity per bird. The figure can be used for calculation of how fast the birds eat the required feed quantity. MC 95 A distributes the calculated feed quantity equally in all feeding periods independent on the duration of the these.

3.4.3 Manual feeding

If pan feeding has been selected a manual period can be intercalated. If restrictive control has been selected a required quantity per bird should be entered. The feeding goes on until the time has run out or until the required quantity has been reached.

```
House 1          State          Program

Mixture A/B/C/D    100.0   0.0   0.0   %
Manual START       2004-2-23    10:00:00
Manual STOP        2004-2-23    10:00:00
Manual feed/bird                  5.0  g
Skip next feeding period             No

Mixture    Program                  Back
```

3.4.4 Chain feeding

MC 95 A shows the status of the chain feed process.

Next start time can be changed in order to hasten or postpone the next feeding.

Running time shows the current running time of the chain.

```
House 1          Chain            Times

Next start time                 15:50
Previous start time             14:35
Running time                     0:00 m:s
Number of feedings       19        1
Manual start                      No

Runs/day    Set-up                Back
```

Number of feedings shows the number of feedings to be carried out today. **Number of feedings** can be adjusted and the correction will be shown. The system will operate with the same correction the following days. It is possible to perform **Manual start** of the chain at any time (not during **End of batch**, however).

The number of chain starts per day is determined by this program.

```
House 1          Chain feeding

Day          0      7      14     21
Number       0      4       8     12

Day         28     35      42     49
Number      16     20      24     28

                                 Back
```

All control programs for chain feeding use a setting which specifies the running time for one chain turn. It is important that this parameter is set correctly.

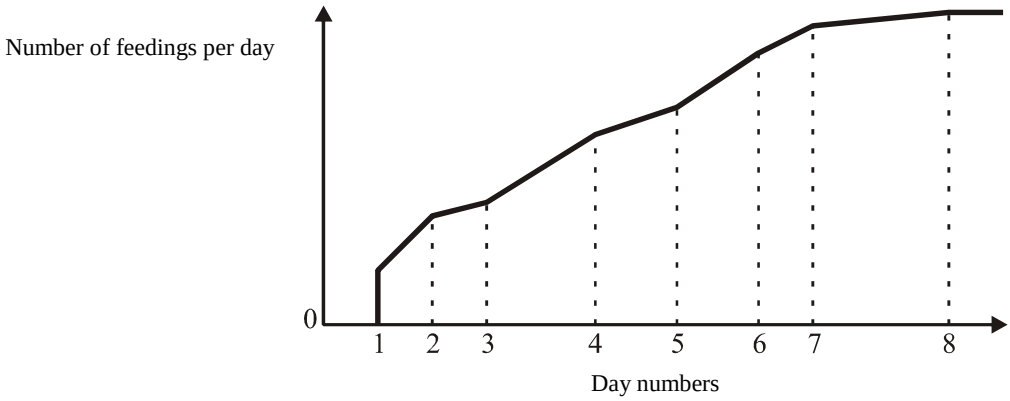
See also menu outline, Figure 3.

```
House 1          Chain

Time for a chain turn        30:00 m:s

                                 Back
```

The following two control methods can be selected in connection with chain feeding:

Feed program OFF: Feed chain and cross auger control is interrupted (OFF). The system is not running.

Feed program TIME/Feed follows light TIME:
A number of feedings per day must be entered at 8 different day numbers. The number of feedings is 0 (zero) before the first day number. The change in the number of feedings per day between 2 day numbers is linear, and the number is rounded off to the nearest integer. From the last day number the system continues with the number specified here. See also menu survey, Figure 3.



The feedings are distributed equally in the feeding periods specified. Extra feedings are distributed, starting at the last period.

7 chain feedings in 3 feeding periods

If the number of feedings is lower than the number of feeding periods, feeding will take place once during each feeding period, starting with the first feeding period, till the required number has been reached.

2 chain feedings in 3 feeding periods

"Waking up" function: A parameter can be entered which will make the chain start for a few seconds one minute before a new feeding. This means that the broilers are activated and "ready" when the feeding chain starts. See also *Technical Manual*.

3.4.5 Weight on day (not standard function)

This function will attempt to control the weight of the birds so it will follow the reference curve. The function compares the actual weight of the birds and the required weight (reference curve). If the actual weight of the birds is higher than the reference weight, the feed quantity is reduced. If the actual weight of the birds is lower than the reference weight the feed quantity is increased.

The adjustment is done by correcting the feed supply a given quantity per gram that the birds weigh too much or too little. The correction of the feed quantity is controlled on the basis of parameters which should be adapted to get the required adjustment. The correction consists of 3 parts:

House 1	W.O.D.		
Gain > and <	1.50	1.50	g/g
Integration time		96	hour
Differential time		12	hour
Max. correction +/-	0	0	%
Actual correction		0.0	g
Setup			Back

1) Gain (Gain) which indicates how much the feed quantity should be adjusted per gram bird weight deviation from the reference curve. The Gain can be set-up separately for the cases where the birds weigh too much and too little respectively.
2) An integration term adjusting on basis of the weight of the birds in the past.
3) A differential term adjusting on the basis of the changes of the weight of the birds compared to the reference curve.

If **Integration time** and **Differential time** is set to 0 hours, the integration and the differential term do not contribute to the adjustment.

Max correction +/- states the max. correction of required feed supply (reference curve feed) allowed because of the Weight on day function.

Max correction +/- can be set-up separately for the cases where the feed quantity is increased (+) and reduced (-).

If the **Max correction +/-** parameters are set to 0% the Weight on day function is not activated. The actual correction (gram/bird) is calculated/updated at day shift.

House 1	Weight on day - set-up			
Day	7	21	40	49
Weigher	2	1	None	None
				Back

If more than one poultry weigher is installed it is possible to state the weigher to be used for the adjustment of the feed quantity. The function can be inactive for a period by setting **Weigher** to **None**. Please note that until the first day number is stated the function is not active.

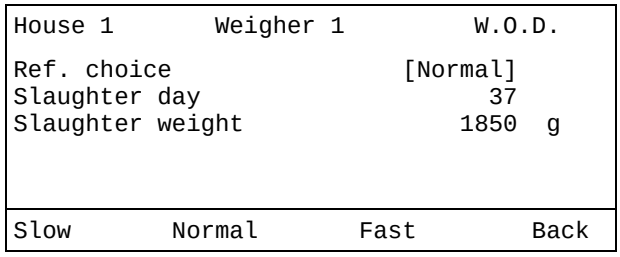
Please also note that the function is active only when the feed program is feeding restrictively or restrictively with correction.

See also the folded instruction for this function.

In the reference curve menu of the poultry weigher you find the sub-menu “Weight on day”. In the **W.O.D.** menu it is possible to change the reference curve.

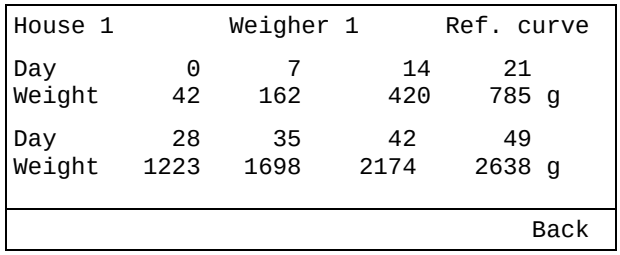
House 1	Weigher 1		Ref. curve	
Day	0	7	14	21
Weight	42	162	419	744 g
Day	28	35	42	49
Weight	1193	1701	2222	2734 g
W.O.D.				Back

The W.O.D. function will attempt to make the current broiler weight follow the reference curve.



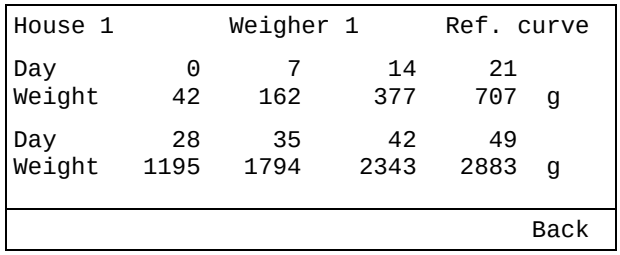
In the sub-menu **W.O.D.** it is possible to choose between three different reference curves. A **Slow**, a **Normal** and a **Fast** reference curve. Furthermore, the required **Slaughter day** and required **Slaughter weight** can be selected.

By choosing one of the three reference curves it is possible to change one of the three reference curves individually.

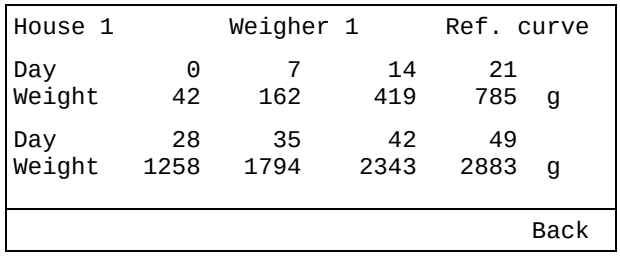


The standard value for **Ref. choice** is **Normal**, **Slaughter day** is 42 days and **Slaughter weight** is 2343 g. For the three reference curves the standard values are as follow:

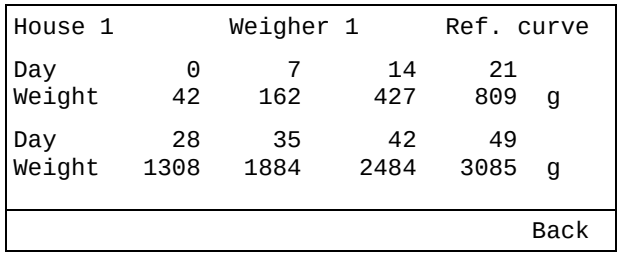
Standard values for **Slow** reference curve.



Standard values for **Normal** reference curve.



Standard values for **Fast** reference curve.



The sub-menu **Correction** includes a correction factor curve with 8 points.

Furthermore a parameter (-1) has been added, which shows how much the current “Correction factor” has been changed compared with the correction factor curve.

```
House 1       Weigher 1          Set-up

Search limits +/-                30    %
Max. correction                   0    %
Correction factor             108.0 -1 %

Correction                              Back
```

The correction factor curve for **Weigher 1**. All default values are set to 109%.

```
House 1       Weigher 1       Correction

Day           0      7       14      21
Correction 109     109     109     109  %

Day          28     35      42      49
Correction 109     109     109     109  %

                                        Back
```

3.4.6 Additional functions

These functions can be activated in all control programs in all system types.

Skip next feeding period: The next feeding period is ignored when this function is active. The function is automatically deactivated when performed. See also menu survey, Figure 3.

Stop feeding system for a certain period of time:
Described in section 3.2.2.

Minimum feed quantity during a feeding period:
The installation menu, see Figure 10, includes a function which allows the user to set the minimum quantity of feed in a feeding period. This function prevents small quantities of feed from being distributed poorly in the house.

3.4.7 Silo

When feed is delivered, the quantity must be entered in MC 95 A, which then currently calculates the content of the silos.

When entering the values the user must specify the silo, the quantity and the type of feed. MC 95 A registers the time of delivery.

```
House 1          Silo           Main

Silo 1:                    16.358 ton
Silo 2:                    10.345 ton
Silo 3:                         0 ton
Silo 4:                         0 ton

Silo 1     Silo 2     More          Back
```

MC 95 A can work with 4 different types of feed: A, B, C and D.

These feed types are mixed as specified in the mixture program. It is possible to store the same feed type in several silos.

```
House 1          Silo 1        Delivery

Delivery:      10.234 ton
Type of feed:      Feed A start
Automatic change:        Yes
Latest delivery          9.722 ton

Change     Min. amount           Back
```

If, for instance, you keep **Feed A** in two silos but want MC 95 A to use **Silo 1** before **Silo 2**, the feed in **Silo 1** is selected as **Feed A Start** and the feed in **Silo 2** as **Feed A**. You can also select **Start** for **Feed B** and **C**.

Example: The typical use of start feed is:

Silo 1	Start feed	**Feed A Start**
Silo 2	Growth feed 1	**Feed A**
Silo 3	Wheat	**Feed B**
Silo 4	Growth feed 2	**Feed C**

When a new batch of broilers is started, there will often be a remaining quantity of end feed in a silo. However, MC 95 A will not use this feed (although it is Feed A), because the start feed has been selected as **Feed A Start**. The growth feed is filled into **Silo 2**, and MC 95 A will automatically switch to **Silo 2**, when the start feed has been used up.

3.4.7.1 Change between silos

MC 95 A can shift between silos in 3 different ways:

- automatically, when **Automatic change is Yes**
- automatically with gradual change-over, when **Automatic change is YES** and **Gradual change-over** exceeds **0 kg**
- manually, when **Automatic change** is **NO**

Automatic change without gradual change-over:

When the current silo runs empty, the silo content is less than **Minimum silo contents**, and **Time before change-over** has passed, the system changes to another silo with the same type of feed.

```
House 1          Silo 1          Change

Gradual change-over           0 kg
Time before change-over       3 min.
Minimum silo contents     0.100 ton

                                  Back
```

The type of feed in the silo is changed from **Start** and the content is set to 0.000 ton.

If a silo runs empty and the feed quantity in MC 95 A's silo survey exceeds the **Minimum silo contents**, MC 95 A cannot perform the automatic change. Therefore, the quantity must be changed to **0.000 ton**, so that MC 95 A can perform an automatic change.

Gradual change-over:

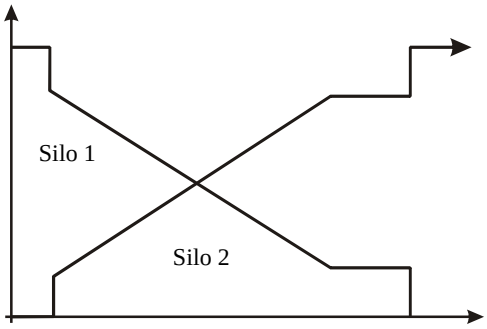
MC 95 Acan perform gradual change-over between two silos, e.g. from start feed to growth feed.

It is necessary to enter the required quantity of feed (kg), at which the gradual change-over must start.

```
House 1          Silo 1          Change

Gradual change-over         500 kg
Time before change-over       3 min.
Minimum silo contents     0.100 ton

                                  Back
```

When the silo content reaches this quantity, a gradual change-over to a silo with the same type of feed is started. If there is no silo with the same type of feed, MC 95 A continues with the first silo.

Gradual change-over from Silo 1 to Silo 2



Continue with Silo 2

Silo 1 is now empty

MC 95 A continues to take at least 20% from the first silo till the silo is completely empty. In this way MC 95 A will ensure that the silo is emptied completely, even though the entered quantity of feed delivered is not quite correct.

Manual change:

When the silo runs empty, MC 95 A presents this screen:

Press **Change** to change to the new silo. The feed type in the first silo is changed from **Start** and the content is set to **0.000 ton**.

```
2004.2.23

        Silo 1 is empty
          Change to silo 2
Silo is empty       2004.2.23  9:23:19
Silo 1 contents                0.150 ton

Undo                Change
```

If the silo is not empty (if, for instance, the feed has clogged up the silo outlet), press **Undo** to continue with the same silo.

3.4.7.2 Time before silo runs empty

MC 95 A calculates how many hours of consumption the remaining quantity of feed in the silo is expected to cover at the current feed intake of the birds.

```
House 1        Silo 1     Minimum amount

  Time until empty 22:38 h:m

                                    Back
```

The beginning and end of the individual feeding periods is not taken into account. This means that MC 95 A can calculate that there is feed enough for 24 hours of consumption, but if the entire feeding takes place during one 4-hour feeding period, the silo may run empty earlier.

3.4.8 Mixture

MC 95 A can mix feed from up to 4 intake augers. The feed in the silos must be assigned one of the following 4 types.

Feed A	**Feed B**	**Feed C**	**Feed D**

These feed types must be mixed as specified in the mixture program. It is possible to store the same feed type in several silos.

Mixture of the different feed types is controlled by a program with 8 day numbers.

Enter the required quantity of feed B, C and D in per cent. The feed A percentage is then calculated automatically.

House 1	Mixture program 1/2			
Day	A	B	C	D
0	100.0	0.0	0.0	0.0 %
7	95.0	5.0	0.0	0.0 %
14	0.0	0.0	0.0	0.0 %
21	0.0	0.0	0.0	0.0 %
		Next		Back

The selected mixture applies as from the day number until but not including the next day number. Before the first day number the mixture of the current day is used. The mixture ratio is corrected gradually between the day numbers to avoid sudden changes in the feed composition.

House 1	Mixture program 2/2			
Day	A	B	C	D
28	72.0	28.0	0.0	0.0 %
35	70.0	30.0	0.0	0.0 %
42	70.0	30.0	0.0	0.0 %
49	70.0	30.0	0.0	0.0 %
	Previous			Back

The mixture ratio can be readjusted.

Press  **+ Program**

Carry out the required adjustment by entering the required B, C and D percentage. The A percentage will be calculated automatically.

House 1	State	Program
Mixture A/B/C/D	75.0 25.0 0.0	%
Manual start	2004-2-23 10:00:00	
Manual stop	2004-2-23 13:00:00	
Manual feed/bird	5.0 g	
Skip next feeding period	No	
Mixture Program	Chain	Back

3.4.9 Two feeding systems (MC 95 A-2 only)

MC 95 A 2 can control the feed supply to two houses “simultaneously”. MC 95 A-2 controls a distribution shutter, which is placed under the FW 99B feed weigher.

The principle of feeding simultaneously in two houses is:

MC 95 A 2 shifts to the other house if feed is demanded from it and:

1) there is no feed demand in the current house for more than 1 minute
2) feeding has been active in the current house for more than 10 minutes

An initiated weighing process is always concluded.

NB Special conditions apply to chain feeding: When a chain feeding process has been initiated, operation and feed supply in the other feeding system is postponed (see example below).

Example:

Two chain feeding systems with the same feeding program:

correct feeding

The feeding program has not been set correctly:

feeding in House 2 is cancelled

In the latter case feeding will not be carried out as expected in **House 2**, as MC 95 A 2 will not accept running the chain outside feeding periods, not even if only a part of the chain run is outside the feeding period. Therefore, we recommend using long feeding periods and, as far as possible, different feeding programs for **House 1** and **House 2**.

3.5 Water control

MC 95 A can control the water supply by means of a solenoid valve. For reasons of safety the electrical installation must be designed to ensure that the solenoid valve opens if the power supply to MC 95 A is switched off.

Under Installation the following 5 control methods can be selected:

Always open:	The water supply is always open (ON).
Always closed:	The water supply is always closed (OFF).
Water program:	Separate water control program. 8 day numbers must be entered in the water program, and for each day number the user can enter 16 opening/closing times. Until the first day number is reached the water supply is open 24 hours a day. Time controlled AD LIB.
Light program:	The same “on/off” times as in the light program are used. The user does not have to program the times again. Time controlled AD LIB.
Restrictive:	The same principle as restrictive feed control. The control unit follows a separate water program, and the water supply is cut off when a required quantity has been supplied. Time controlled restrictive.

3.6 Light control

The light is always controlled in accordance with a light program. The on/off times of the light program are maintained from one day number to the next.

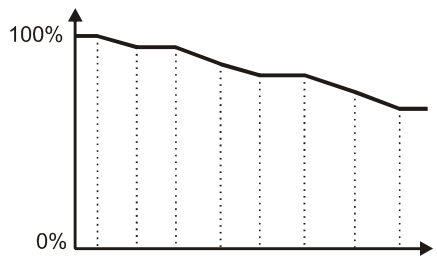
Up to 16 on/off times can be entered for each day number.

Day	1	7	14	21
Start #1:	0:00	0:00	0:00	0:00
Stop #1:	10:30	02:00	10:30	24:00
Day	28	35	42	49
Start #1:	0:00	0:00	0:00	0:00
Stop #1:	24:00	24:00	24:00	24:00

Curves Next Back

Up until the first day number the light is on 24 hours a day. The light intensity is the same as the one selected for the first day in the light program.

On the other hand, the light intensity, which is entered in a similar program, changes gradually during the same period.



House 1 Light intensity

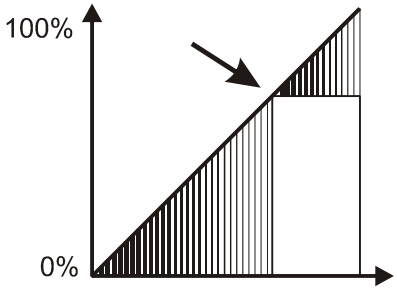
Day	1	7	14	21
Intensity	100	100	100	100 %
Day	28	35	42	49
Intensity	100	100	100	100 %

Set up Back

See also menu survey, Figure 6 and Figure 10.

Under Installation the user selects on/off light control or dimming. The following options are possible:

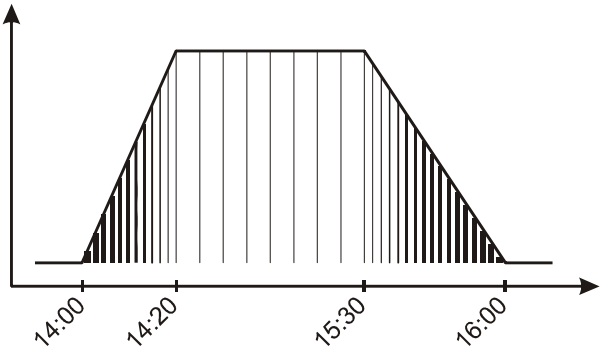
Relay:	On/off control in accordance with light program.
Analog dimmer:	The light is controlled in accordance with the light program and the intensity curve. Under Installation the dimmer characteristics must be entered: the control voltage required for a given light intensity. The light relay follows the light program.
Analog + relay:	Controlled in accordance with the light program and the intensity curve. At low intensity only the dimmer is used. At increasing intensity the relay light is connected and the light from the dimmer is reduced. Under Installation the user must specify the intensity at which change-over is required.



The user must specify the light intensity (in %) at which the relay must be activated.

When a dimmer is used, a light period starts with “dawn”, where the light changes from “Night” to “Day” over a specified period. Similarly, a light period ends with “dusk”.

If the light period specified is shorter than “dawn + dusk”, the light intensity will increase until the middle of the period and then decrease.



Start:	14:00	Dawn:	0:20
Stop:	16:00	Dusk:	0:30

It is possible to readjust the current intensity. Press [💡] and [P]. The light intensity will then be increased/reduced in relation to the original light intensity. When a new batch is started, the manual readjustment is reset and the system starts with the programmed sequence.

If the adjustment is made when it is “dark”, it will not result in a change in the intensity when the light is on. Similarly, adjustment carried out while the light is on will not cause any changes in the intensity when it is “dark”.

A light sensor or voltmeter can be connected to an input on MC 95 A, so that an alarm can be given in case of too little or too much light in the house. The voltmeter does not measure the light intensity directly but rather the voltage from the dimmer, and it can be adjusted using a LUX meter. The light sensor characteristics are entered under **`Installation`**.

MC 95 A stores information about the light program.

This light data is found in the historical data. It is therefore possible to compare the light control of this batch with that of previous batches.

```
Light          Day 19          Batch: -1

Light sensor average              77 %
Light hours                     23:00
No. of light periods:               2


Batch      -Day        +Day          Back
```

3.7 Broiler weighing

MC 95 A can operate with 2 poultry weighers per house. The weigher type and characteristics are selected under **`Installation`**.

In connection with **`Manual`** broiler weighing the weight is entered directly in MC 95 A: Press  and P.

MC 95 A calculates the mean weight, standard deviation, deviation from reference (index) and the number of weighings of each poultry weigher.

When weighing the broilers the MC 95 A uses:

Reference curve:

A curve representing the birds' expected weight.

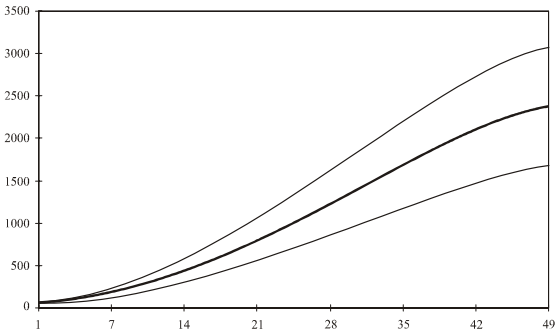
The curve is entered for 8 day numbers.

```
House 1        Weigher 1          Ref. curve

Day   .         0      7     14     21
Weight         42    162    419    785

Day           28     35     42     49
Weight      1223   1794   2343   2883


                                     Back
```

Search limits:

The search limit is the permitted deviation from the reference curve.

MC 95 A uses the search limit to sort out faulty weighings, e.g. when two broilers step onto the weigher at the same time.

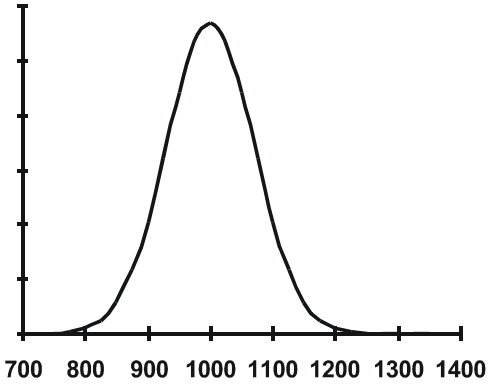


Standard deviation:

The standard deviation reflects the uniformity of the birds as regards weight.

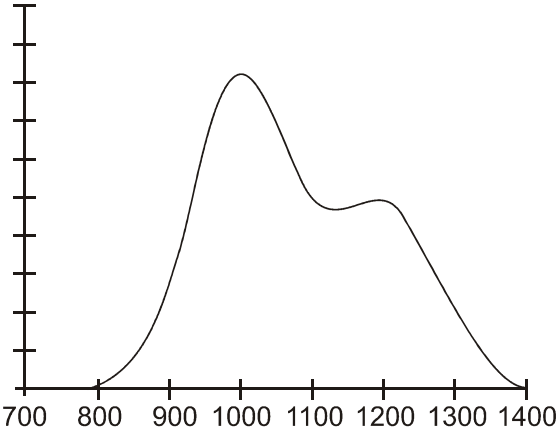
The higher the standard deviation (%), the lower the degree of uniformity of the birds - greater diversity.

If, for instance, the standard deviation is 10%, 67% of the birds weigh max. 10% more or less than the mean weight, when the birds follow the so-called normal distribution curve.



Note the irregular curve that occurs in connection with “As hatched” birds.

This distribution has a standard deviation of approx. 17%.



Correction factor:

The natural behaviour of the broilers means that the heaviest broilers do not step onto the weigher as often as the lighter ones. The weigher may therefore show a lower weight than the actual slaughtering weight. A correction factor should be entered to compensate for this.

The correction factor gradually corrects the weight, depending on the age of the birds.

If the weight is lower than the actual slaughtering weight, the deviation must be calculated in per cent and used as correction factor.

Example: Slaughtering weight: 2190 g
Final weight, MC 95 A: 2110 g

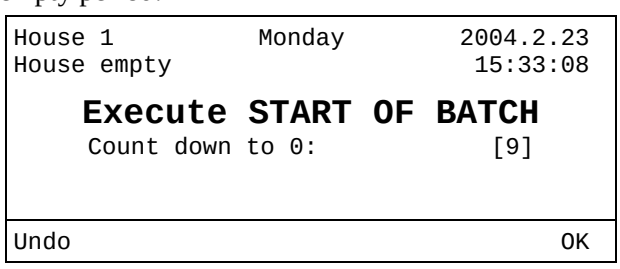
Calculation: 2190 / 2110 * 100% = 103.8 %
The correction factor is set to 104 %.

3.8 Start of batch/End of batch

It is important to carry out a End of batch at the end of a batch of broilers and to start a new batch with Start of batch. This ensures that the data of the ended batch is stored correctly and that MC 95 A does not control feed, water and light during the House empty period.

Start of batch and End of batch are activated as follows:

Press  + P and count down to 0.



End of batch: All programs are set to OFF. Current batch data is stored in the historical data memory.
If the historical data memory is full, the very first batch leaves the log.

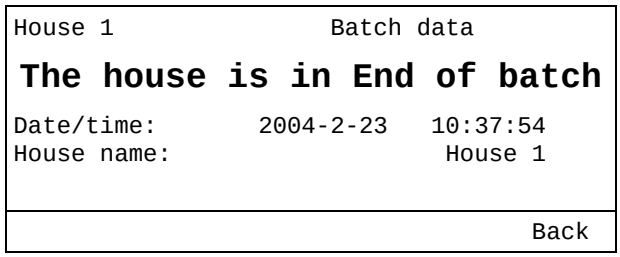
Start of batch: All registered data from current batches is reset.
All readjustments of the light program, feed program etc. are reset.

Batch data: Here the batch clock can be read and set. The batch clock starts with a “minus day” (preparation day, Day -1). It is important that the feeding system is filled on the “minus day”, so that the quantity of feed which the feeding system can hold is not included in the calculated key figures. When a batch is ended and the feeding system is empty, you can print a batch end report, which includes the feed from the “minus day”. When MC 95 A is in End of batch, the figures in the display will include the feed from the “minus day”.

Clock in MC 95 A:

This clock is set to the current date and time.

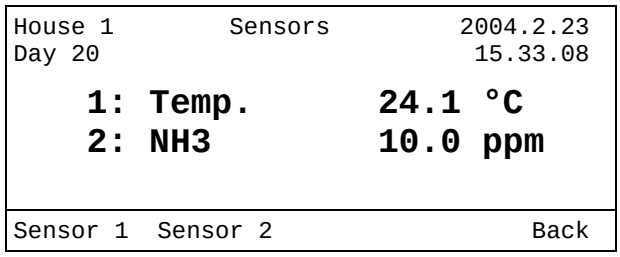
The clock will run for approx. 2 months after a power failure. Summer and winter time values are entered by the user.



Environment:

The two environmental sensors can be read.

For both sensors the user has access to historical data, including maximum, mean and minimum values.



The environmental sensors are only used for alarm and report purposes.

Storing batch data: A batch must run for at least 15 days in order for it to be registered and stored as a batch.

Depending on the duration of the batches, the following can be stored:

- 6 batches of 50 days + current batch
- batches of 89 days + current batch
- 1 batch of 178 days + current batch

If the memory is extended the following duration of the batches can be obtained:

- 6 batches of 124 days + current batch
- batches of 218 days + current batch
- 1 batch of 436 days + current batch

Only current batch of 872 days

3.8.1 Batch change in houses connected to Info Matic WebLink

IMPORTANT: The house computers must be operated correctly in connection with a batch change to ensure that data are distributed automatically in the correct batches.

Which house computers control the batch change?

In houses with a production computer:

- The production computer controls the batch change
- The climate computer has no influence on the batch change

In houses with a climate computer only:

- The climate computer con-trols the batch change

How to make batch change

1) Set the house computer, which controls the batch change in the house to “Batch end” when the house is empty
2) Leave the house computer in “Batch end” mode for at least two hours
3) After two hours the house can be set to “Batch start” again

Each time the house computer, which controls the batch change in the house, is set to “Batch end” for more than 30 min., a new batch is established.

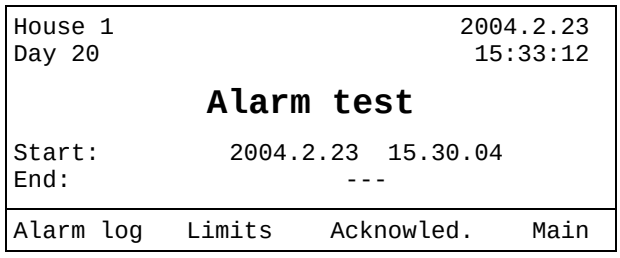
3.9 Alarms

Press  to gain access to the alarm system.

No alarms		is off. The display shows **`No alarms`**.
New active alarm		flashes quickly. The display shows information about the latest alarm. Alarms are acknowledged by pressing the selection key **`Acknowledge`**.
Active alarm which has been acknowledged.		flashes slowly. The display shows **`Acknowledged alarms`**.
Retained alarm: The cause of the alarm has disappeared, but the alarm has not been acknowledged.		is constantly lit. The display shows information about alarms.

3.9.1 Testing the alarm system

The alarm system must be tested regularly - at least once a week.



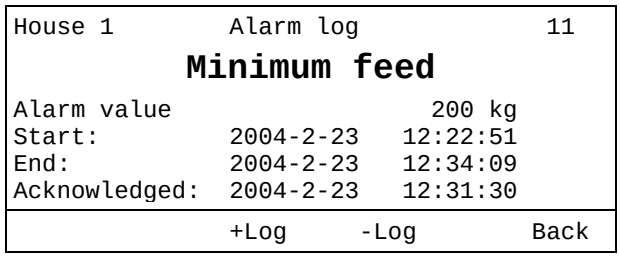
The alarm output in MC 95 A can be tested by pressing the alarm key  for approx. 5 seconds. This will release a test alarm.

3.9.2 Alarm log

The alarm log is a list containing the latest 20 registered alarms.

MC 95 A registers:

- the cause of the alarm
- he alarm value
- the time of the alarm
- the time when the alarm disappeared
- the time of acknowledgement



3.9.3 Alarm limits

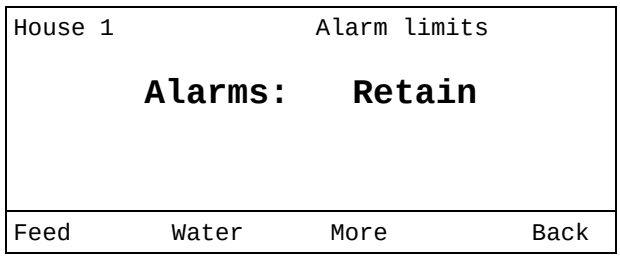
All alarm limits must be checked in connection with installation, basic setting and batch start. The relevant alarms must be connected and disconnected, and the required alarm limit must be set.

Retained alarm:

Alarms are active until acknowledged.

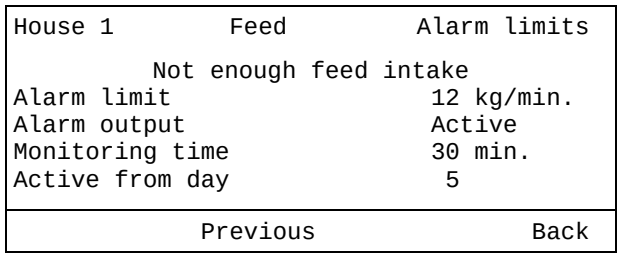
Not retained alarm:

Alarms are active until acknowledged or until the cause has disappeared.



Example:

Alarm limit for: **Not enough feed intake**



3.9.4 All alarms in MC 95 A

Not enough feed intake at start:	The alarm is activated if the consumption is less after start of a feeding period (pan feeding) or after start of chain feeding than stated for the selected period. Can automati-cally be deactivated for the first days of the batch. When continuous feeding a new feeding period starts at 00.00 o'clock.
Too much feed intake after stop:	The alarm is activated if the consumption is bigger after stop of a feeding period (pan feeding) or after stop of chain feeding than specified for the selected period. Can automatically be deactivated for the first days of the batch.
Water/feed too high:	The alarm is activated if the water/feed ratio is bigger than specified for the selected period. Each time a new feeding period is started a new monitoring is started. Can automa-tically be deactivated for the first days of the batch.
Not enough feed intake:	The alarm is activated if the feed consumption is lower than specified for the selected period. Can automatically be deac-tivated for the first days of the batch. This alarm is only ac-tive in feeding periods.
Too much feed intake:	The alarm is activated if the feed consumption level is higher than specified for the selected period. It is always active - also outside feeding periods.
Feed weigher - No feed in silo:	Impossible to fill feed into the feed weigher. The silo is empty or the auger is disconnected/defective.
Feed weigher - Feed weigher cannot weigh:	The feed weigher fails to perform stable weighing - this may be due to vibrations.
Feed weigher - Feed weigher cannot be calibrated:	Alarm is released if the calibration of the feed weigher is not completed within a given period of time.
Feed weigher - Weigher cannot be emptied:	The drum in the FW 99B feed weigher cannot be turned or the stop position cannot be found.
Feed weigher - Low reference signal FW 99B:	Alarm is released if the MC 95 A registers that the reference signal from FW 99B is lower than 0.9 Volt during a given period of time.
Feed weigher - Missing feed type:	The alarm is released if a mixture program has been entered with a feed component which is not available in any of the silos. Check the status of the silos. It may be necessary to change the feed type in MC 95 A.
Feed weigher - Feeding system cannot switch over:	The FW 99B feed weigher wants to change to another house, but the distribution shutter does not react. Only applies to MC 95 A-2.
Silo 1,2,3,4 - Not enough feed in silo:	The quantity of feed in the silo is lower than the selected limit.
Silo 1,2,3,4 - Silo soon empty:	The silo now only contains sufficient feed for normal feeding for a given entered period.
Not enough water - open:	Released if the water consumption does not exceed a required quantity for a given period of time. Only applies when the water supply is open. The alarm can automatically be deactivated at the start of a batch.
Too much water - open:	Excessive water consumption for a given period of time. Only applies when the water supply is open. Can automatically be deactivated at the start of a batch.
Too much water - closed:	Excessive water consumption for a given period of time. Only applies when the water supply is closed.
Environmental sensor 1, 2 - max.:	Alarm when the maximum limit is exceeded.
Environmental sensor 1, 2 - min.:	Alarm when the minimum limit is exceeded.
Light sensor - Light not switched off:	If the light sensor detects that the light is not switched off as required.
Light sensor - Light not switched on:	If the light sensor detects that the light is not switched on as required.
START OF BATCH in climate controller:	If MC 95 A is set to START OF BATCH but the connected climate controller is not, the alarm is activated. The alarm is only possible when Info Matic is connected.

3.9.5 Setting of alarm limits

Not enough feed intake at start:	The alarm is suited to ensure that the feeding system is in order when a feeding starts after having been stopped. At chain feeding. Monitoring time must not exceed the time for one chain turn. As principle rule set the alarm limit to 10 kg .
Too much feed intake after stop:	When a feeding period is finished (pan feeding) or the chain has finished a turn, it is monitored if too much is going through the feed weigher. A big consumption can indicate that something is wrong. What normally is done at the end of a feeding is that the cross auger containers are filled. The quantity of feed for that depends both on the capacity of the containers but also on how filled they were just before the feeding stopped. The alarm can be activated if the feed consumption after the end of a monitoring time and until start of a new feeding is higher than the alarm limit.
Water/feed too high:	This alarm is to ensure that the water/feed ratio is in order. Possible reasons for not being it are: 1) Defect in the water system 2) The birds are ill 3) Bad feed Please note that the water/feed ratio can be above normal, when outdoor temperature is high and no cooling system is in the house.
Not enough feed intake:	Is possible only in pan feeding systems. The alarm monitors if the consumption is too small when the feeding system runs. An alarm limit of 0.1 kg/min. and monitoring for 2 hours is recommended. It corresponds to 12 kg = feed weigher activated at least one time.
Too much feed intake:	This alarm monitors every day if too much feed is supplied to the house in a given period. A given system can depending on size of supply augers and cross augers deliver a certain feed quantity per unit of time. The alarm state will only occur when the system runs with max. output for too long. An indication of how to set the alarm limits is to use number of birds and the feed reference as follows: Find the max. value for the feed reference. Multiply the figure by number of birds in the house. Divide by 1000 to get the kg figure. This figure indicates the consumption a day. Set the alarm limit to consumption * 2.5: Ex.: Number of birds = 45000 Ref. feed/bird = 156 g (42 days) Kg on one day = 45000 * 156 / 1000 = 7020 kg Alarm limit = kg a day * 2.5 / (24 * 60) (min. a day) = 12.2 kg/min. Set monitoring time to e.g. 30 minutes. Alarm is activated if the feed consumption in a 30 min. period exceeds 12.2 * 30 = 366 kg. If this alarm is released without an error, the monitoring time must be increased to e.g. 1 hour.
Not enough water - open:	If the water consumption in a given period is too small, alarm is activated. Recommended setting for this alarm is 1.0 l/min. and a monitoring time of 30 minutes. This means that alarm is activated if the consumption is less than 30 litre every ½ hour.
Too much water – open:	If the water consumption in a given period is too high alarm is activated. A given system can depending on the capacity of the water supply deliver a certain quantity of water per unit of time. The alarm state will only occur when the system runs with max. output for too long. A way to set this alarm is to measure the quantity of water passing per minute when the thinner supply tube for the drinking system is disconnected. Set the alarm limit to 1 litre less than the measured. Set the monitoring time to 30 minutes.
Too much water – closed:	This alarm monitors if the water system is closed when it has to be. Recommended alarm limit is 0.1 l/min. and a monitoring time of 30 minutes.

Notes

Notes

Notes

Big Dutchman

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