Number of instruction:
IMMU-03-07-05-14-ENG

LCD RADWAG BALANCES

MANUFACTURER
OF ELECTRONIC WEIGHING INSTRUMENTS

5$':$* ± 5DGRP %UDFND 32/$1'
3KRQH ID[
(-PDLO:SDUWPHQW
www.radwag.com

0 $ <

TABLE OF CONTENTS

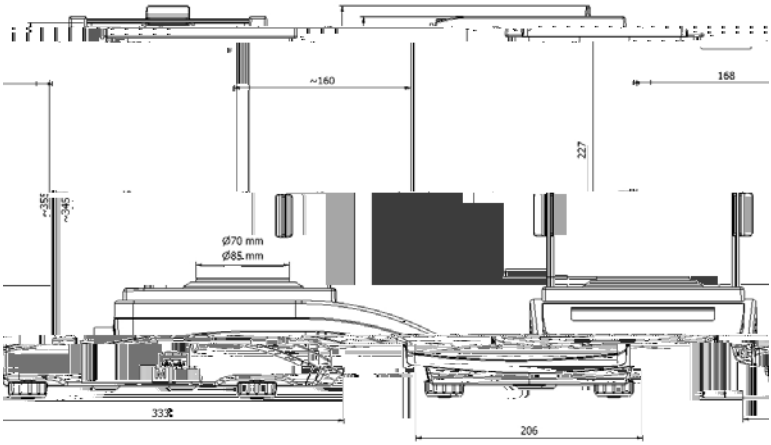
7(&+1,&$/ '$7$
&RQQHFWLRQ SRUWV
36 5 + VHULHV
%$6,& ,1)250$7,21
,QWHQGHG XVH
,QDSSURSULDWH XVH
:DUUDQW\
0RQLWRULQJ WKH PHWURORJLFDO SDUDPHWHUV
'DWD LQFOXGHG LQ WKLV XVHU PDQXDO
6WDWLVWLFDO
75$163257 $1' 6725$*(
'HOLYHU\ FKHFN
3DFNDJLQJ
813$&.,1* $66(0%/,1* $1' 6723$57
$VVHPEOLQJ
8QSDFNLQJ
/HYHOLQJ
&OHDQLQJ
3OXJJLQJ WR PDLQV
&RQQHFWLQJ DGGLWLRQDO HTXLSPHQW
%$6,&)81&7,216
.(<%2$5'
67$57

&20081,&$7,21 35272&2/
/LVW RI FRPPDQGV
5HVSRQVHV IRUPDW IRU FRPPDQGV VHQW IURP FRP

Balance AS series:

	AS 60/220.R2	AS 160.R2	AS 220.R2	AS 310.R2
0D[FDSDFLW\ J		J	J	J
0LQ FDSDFLW\ PJ		PJ	PJ	PJ
5HDGDELOLW\ PJ		PJ	PJ	PJ
7DUH UDQJH J		J	J	J
3DQ VL]H	- PP			
6HQVLWLYLW\ GULIW SSP [illegible]				
:RUNLQJ WHPSHUDW	*f f &*			
3RZHU VXSSO\	· 9 '& $			

'LPHQVLRQV



Balance PS series with weighing pan 128 x 128 mm:

7\SHEDODQFH	PS 200/2000.R2	PS 210.R2	PS 360.R2	PS 600.R2	PS 750.R2	PS 1000.R2
0D[FDSDFLW\	J	J	J	J	J	J
7DUH UDQJH	J	J	À			

'LPHQVLRQV

Balance PS series with weighing pan 195 x 195 mm:

7\SH EDODQFH	PS 1200.R2	PS 2100.R2	PS 3500.R2	PS 4500.R2	PS 6000.R2
0D[FDSDFLW\	J	J	J	J	J
7DUH UDQJH	J	J	J	J	J
0LQFDSDFLW\	P J	P J	P J	P J	P J
5HDGDELOLW\	P J	P J	P J	P J	P J
:RUNLQJ WHPSHUDWXU	*f* & *f* &				

Balance assembly

	Upon unpacking the balance remove any protective elements and assembly the balance: - assembly the metal pan (2) on the balance base, mounted onto the balance - assemlby draft shield (1), only for balances with pan - 115 mm - plug the power adapter interface into the port of interfaces housing, next connect the power adapter to mains. The balance will activate automatically.

CAUTION:

While cleaning it is advisable to follow below precautions. Additionally it is a must to disconnect the device from mains and unplug all the peripherals (printers, computer etc.) remembering at the same time to protect ports by means of stoppers. Only thus prepared device can be cleaned. Upon completion of the cleaning process the device may be connected to mains for futher operation.

2. BASIC INFORMATION

2.1. Intended use

7KH SXUFKDVHG EDODQFHG VHUYHV WR GHWHUPLQH
ODERUDWRU\ RQPHQWDO FRQGLWLRQV IRU DSSOLFDWLRQ D
ZHLJKLQJ LQVWUXPHQW RQO\ L H WKH PDWHULDO
FDUHIXOO\ SODFHG LQ WKH FHQWUH RI WKH SDQ
UHDG RQO\ DIWHU VWDEOH UHDGLQJ KDV EHHQ REWD

2.2. Inappropriate use

'R QRW XVH WKH EDODQFH DV D G\QDPLF ZHLJKLQ
TXDQWLW\ RU ZHLJKHG PDWHULDO IRU DUUHVWHG IUR
WKH LQVWUXPHQW WKH UHDGLQJ VKRXOG EH WDNH
PHDVXUHPHQW RU RSWLPDO DQ\ PDJQHWLF PDWHULD
SDQ DV WKLV FDQ DIIHFW WKH PHDVXUHPHQW V\VWHP RI WKH LQV
%H VXUH WR PLG LPSDFW VKRFN DQG RYHUORDGLQJ WK
SUHVFULEHG PD[LPXP PHDVXUHPHQW FDSDFLW\ RU LQV DQ\ SR
ZHLJKW WKDW KDV EHHQ DSSOLHG
1HYHU XVH WKH EDODQFHZKLQUHQHSHQGHQWRQRVVRRQPHQWS RVV
EDODQFH DQG WKH DQ 4QR@€ E HOEDWAC M@XV QWRH GpRU 3RSpHL9D2WGÑR E

2.4.

4. UNPACKING, ASSEMBLING AND START

4.2. Unpacking

&XW WKH VHDOLQJ WDSH 7DNH WKH EDODQFH RXW RI
DFFHVVRULHV DQG WDNH WKH LWHPV QHFHVVDU\ IRU
SODFLQJ WKH EDODQFH LQ WKH GHVLUHG ORFDWLRQ
SDUWV LQ DFFRUGDQFH ZLWK WKH IROORZLQJ LQVWU

6WHSV

- RSHQ VLGH GRRUV RI WKH
  FKDPEHU
- LQVLGH WKH ZHLJKLQJ FK
  ORZHU VKLHOG RI WKH ZH
  FKDPEHU
- SODFH WHQ WHULQJ KQRQ WKH
  ORZHU VKLHOG
- DVVHPEO\ WKH ZHLJKLQJ S
- DVVHPEOH GQG LDIW VKLHOG
- FORVH VLGH GRRUV RI WK
  FKDPEHU
- SOXJ WKH EDODQFH LQWR PD
  SRZHU DGDSWRU VKRXOG
  WR VRFNHW LQ WKH EDFN RI
  EDODQFH KRXVLQJ

AS R.2 balance

%DODQFH ZRXOG WHG ZD Yb D PRXQW p0

AS balance with d=0.01/0.1 mg

AS balance with d=0.1 mg

x $VVHPEOH WKH ZHLJKLQJ SDQ

4.3. Levelling

%HIRUH SOXJJLQJ LQ WKH VDODQFH E\ V
DGMXVWDEOH IHHW LQ D ZD\ WKDW WKH D
LWV FHQWUDO EXEEOH LV FHQWUHG EH SODFHG D
ZRUNSODFH ILUPO\ RQ DOO RI

4.4. Cleaning

%DODQFH VKRXOG EH FOHDQHG ZLWK GDPS FORWK E
Cleaning of the weighing pan when assembled may cause damage of the measuring system of the balance +HQFH LW LV FUXFLDO WR UHP
EDODQFH EHIRUH FOHDQLQJ

,Q RUGHU WR FOHDQ WKH JODVV ZLQG5RODQG6 WKH GUD
VHULHV EDODQFH LW LV DFFHSWDEOH WR UHPRYH W
WKH EHORZ LQVWUXFWLRQ

6WHSRU ;$ 5 VHULHV EDODQFH

7ZLVW RII DQG UHPRYH WKH WRS JODVV ZDOO VD
JODVV ZDOO RXW RI WKH VOLGHZD\

5HPRYH WKH EDFN JODVV ZDOO

5HPRYH WKH VLGH JODVV ZDOOV 7KH VLGH JODV
VR LW LV LPSRUWDQW WR UHPHPEHU ZKLFK RQH
FOHDQLQJ LQVWDOO WKHP EDFN SURSHUO\ LQ WK

&$87,21 GR QRW UHPRYH WKH IURQW JODVV ZDO
5HPRYH WKH ZHLJKLQJ SDQ WKH ZHLJKLQJ SD
ERWWRP PHWDO SODPð ãDãDG O 0°À€•W D p€0JODV

&$87,21 GR QRW UHPRYH WKH IURQW JODVV ZDOO
5HPRYH WKH ZHLJKLQJ SDQ WKH ZHLJKLQJ SDQ V
PHWDO SODWHV VR DV QRW WR GDPDJH WKH E
FOHDQLQJ

7KXV SUHSDUHG GUDIW VKLHOG DQG JODVV ZDOOV
RSHUDWLRQV VKRXOG EH [illegible]
ZKHUH WKH ZHLJKLQJ SDQ ZDV LQVWDOOHG GLUW
HQWHU WKH EDODQFH FRQVWUXFWLRQ WKURXJK
QHJDWLYHO\ LQIOXHQFH WKH EDODQFH SDUDPHWU

4.5.

5. BASIC FUNCTIONS

x functions related to measuring units

- ZHLJKLQJ L>QJ@UDPV
- ZHLJKLQJ LQ >PLJQQJEDPVQGHV JLWK
- ZHLJKLQJ LQ >NLJQJEDPVQHV JLWK G
- ZHLJKLQJ L>QFWD@UDWV
- ZHLJKLQJ LQ XQLWV SI available only for non-verified instruments

  >OE@ >R]@ >R]W@ >GZW@ >WOK@ >WOV@ >W

x functions related to working modes

- FRXQWLQJ SLHFHV
- FKHFNZHLJKLQJ
- GRVLQJ
- SHUFHQW VHWXS
- GHQVLW\ GHWHUPLQDWLRQ RI V
- GHQVLW\ GHWHUPLQDWLRQ RI OLTXLGV
- DQLPDO ZHLJKLQJ
- VWDWLVWLFV
- WRWDOLVLQJ
- SHDN KROG

x functions related to setting a balance to ambient conditions at a workstation

- HQDEOLQJ DQG GLVDEOLQJ DXWR]HUR V\VWHP
- VHWWLQJ SDUDPHWHU RI PHDVXUHPHQW UHVXOW
- YDOXH UHOHDVH
- GLVSOD\ EDFNOLJKW
- EHHS VLJQDO

x functions related to use of communication ports (RS232, USB, WIFI)

- VHWWLQJ FRPPXQLFDWLRQ SRUW
- VHWWLQJ ERXQG UDWH
- FRQWLQXRXV GDWD WUDQVPLVVLRQ LQ EDVLF PH
- FRQWLQXRXV GDWD WUDQVPLVVLRQ LQ XQLQJ XQLW
- DXWRPDWLF RSHUDWLRQ PRGH

%DODQFH FDQ EH XVHG WR ZHLJK ORDGV LQ HQGHGWKHR ZHLJKLQJ RSWLRQ %DODQFH VRIWZDUH HQDEOHV JHQ SURFHVV LQ D IRUP RI D SUHGHWHUPLQHG VHTXHQFH RI ZHLJKLQJ PRG

7. START-UP

:KHQ SOXJJHG WR PDLQV WKH EDODQFH GLVSOD\V QDI
DIWHUZDUGV SURFHHGV WR ZHLJKLQJ PRGH

7.1. Connecting peripheral devices

7KH EDODQFH PXVW EH XQSOXJJHG IURP WKH PDI
GLVFRQQHFWLQJ SHULSKHUDO GHYLFHV SULQWHU F
GHYLFHV UHFRPPHQGHG E\ WKH PDQXIDFWXUHU ZLW
EHHQ PDWWHKHGXU ESDWBHRQHQ HFWLQJ D SHULSKHUDO G
EDODQFH WR PDLQV

7.2. Balance temperature stabilisation period

%HIRUH VWDUW RI PHDVXULQJ SURFHVVHV LW LV QH
WKHUPDOO\ VWDELOLVHG
)RU EDODQFHV WWRRDWGZLQHPXFK ORZHHURWHSSHXDWXQ
PDLQVH J GXULQJ ZLQWHU SHULRG WKHUPDO V
DSSUR[LPDWHO\ KRXUV DQG 136KREXUVDQFHV1$6 DQG
EDODQFXUHLQJ WKH WKHUPDO VWDELOL]DWLRQ PÀ0 ° V

8. USER MENU

1DPH RI IXQFWLRQ JURXSV DQG WKHLU FRQWHQW

P1 ADJUSTMENT

3	,17 &$/,% _	>LQWHUQDO@DGMXVWPHQ
3	(;7 &$/% _	H[W>HUQDO D@GMXVWPHQW
3	86(5 &$/,%5$7,21_	X\>HU DGM@XVWPHQW
3	&$/,%5$7,21 7(67_	DG>MXVWP@HQW WHVW
3	$872&$/,% 12_1(	D>KFWRP'D\VLF7(D%6(5U≥

```
3   $''  ',63/$< &20   &20121( DGGLWLRQDO@GLVSOD\ S
3   (;7  %87721 67$5(   35,17
```

P5 PRINTOUT

```
3   &$/  5(3257_          FRQWHQWV RI WKH @GMXVW
3   +($'(5      _        FRQWHQWV RI WKH HDGHU
3   */3 3517    _        FRQWHQWV RI WKH ZHLJKP
3   )227(5      _        FRQWHQWV RI WKH IRRWHU
3   16' 351     _        SURWRFRO QXPEHUV @UL W
3   16' 351     _       >SURWRFRO QXPEHUV @QW
3   16' 351     _       >SURWRFRO QXPEHUV @QW
3   16' 351     _       >SURWRFRO QXPEHUV @QW
3    9$5,$%/(     _      >SURWRFRO YDU@LDEOH
3    9$5,$%/(     _      >SURWRFRO YDU@LDEOH
```

P6 OTHER

```
3   /$1*8$*(   32/,6+  (1*/,6+HOX ODQJXDJH@
3   $&&(66 /(9 $'0,1      DFFHVV OHYHOV IRU HGLWL
3   .(< 6281'  (612       NH\ VRXQG@
3   %$&./,*+7    _        GLVSOD\ EDFNOLJKW OHYHO
3   '$7(         _        SDWD V@WWLQJV
3   7,0(         _   $    WLPH VH@WWLQJV
3   '$7( )250_<<<< 00 '' <<<< '' 00 '' 00 <<<< 00 '' <<<
    >GDWH @RUPDW
3   7,0( )250  _  +  +    WLPH IRUPDW@
3   */3 $8727(67          FDUU\LQJ RXW DXWRWHVW I
```

P7 INFO

```
3   %$/$1&( ,' _
3    6&$/(7<3(   _
3   352*  9(5   _
3   7(03        _
3   6(783 3517 _
```

CAUTION
Changes introduced in balance memory will be saved, when abandoning the menu (on return to weighing).
Press ESC button several times.

9. LOGGING IN

,Q RUGHU WR KDYH IXOO DFFHVV WR WKH XVHU¶V SDUD
SHUVRQ RU WKH DFFRXQW PDQDJHU> HDFK WLPH
WKH\ WXUQ LW RQ 7KH VRIWZDUH HQDEOHV WKH HQWU
DXWKRULW\

The first login procedure

x :KLOH LQ WKH PDLQ<LOGLQ> RU DVVHOHFWH E\ SUHVVLQ
RU E\ SUHVVLQJ RQH RI WKH IXQFWLRQ EXWWRQV

IN> LV DVVLJQHG WHU SUHVVLQJ WKH EXWWRQ V HU
GDWDEDVH DQG VHOHFW WKH XVHU
x $IWHU VJHWOHFWLQ

Access levels

7 K H E D O D Q F H V R I W Z D D F H H V W A O M I S T R A T O R ,
ADVANCED, USER
: K H Q \ R X W X U Q W K H E D O D Q F H R Q W K H G H Q E D V
F D U U \ L Q J R X W P D V V R F H D W X V L Q J

The table below shows the access to the edition of user parameters, databases and software functions depending on the access level.

Access	Access levels
USER	$ F F H V V W R S D Q V K H W X P V H Q G L Q (V H W W L Q J L Q S D U D P H W H U V R 2 D Q G 7 L P H O W K H Z H L J K L Q J S U R F H V V H V D Q G D U U L H G V R X W V L P H 7 K H

10. WEIGHING

10.2. Zeroing

,Q RUGHU WR]HUR PDVV LQGLFDWLRQ SUHVV 7KH PDVV LQGLFDWLRQ RQ WKH GLVSOD\ VKRXOG HT DQG VWDELOLVH DW]HUR

=HURLQJ SURFHVV LV WHPSRUDULO\ LQWHUUXSWHG LI WKH VWDEOH UHFRJQLVHG E\ WKH EDODQFH DV SUHFLVH]HUR VWDEOH VWDWXV RI GLVSOD\ LQGLFDWLRQ

Caution :
Zeroing the display indication is possible only within the ±2% range of instrument's maximal capacity If the zeroed value is above the ±2% of the maximal capacity, then the software indicates an error message Err2.

10.3. Taring

,Q RUGHU WR [illegible] RI D ZHLJKH Q

Manual tare determination

10.4.1. Setting level of filtering

'HSHQGLQJ RQ WKH EDODQFH ZRUNLQJ FRQGLWLRQV WKH XVHU FDQ VHOHFW D
FRQGLWLRQWHWWR XWKDHQILOWHUSDUDPHWHU\ DQG WR
EH 9)$67RZHYHU LI WKH ZRUNLQJ FRQGLWLRQV IDYRXU
VKRXOG EH VHW WR VORZ RU
6/2: 7KH HIIHFWLYHQHVV RI WKHVH WKUHH JUDGHV
ZRUNV VORZHU ZKHQ ³ZHSLJKHDFKDQJV WKHZRUNV PRUH
ZKHQ WKH ZHLJKHGEDZLWKLQSODKH VHWSDUDPHWHUWKH
UDQJH LV DFFHVVLEOH RQO\WKURXJKHU XVHUGHUHYLEHR WR LW
'HSHQGLQJ RQ WKH DGMXVWHG ILOWHU WKH ZHLJKLQ
)$67 RU ORQJHU 6/2: DQG 9

CAUTION
The higher level of filtering, the longer the weighing time.

10.4.2. Value release

'XH WR YDULRXV DPELHQW FRQGLWLRQV DW ZRUNS
SUHVHQW FRQGLWLRQV LW LV QHFHVVDU\ WR GHV
DVFAST.+REL., FAST RUHELABLE 'HSHQGLQJ RQ VHOHFW
ZHLJKWLQJ PH LV HLWKHU VKRUWHU RU ORQJHU

10.4.5 Balance ambient conditions

7KLV SDUDPHWUH KDV WZR VHWWLQJV 67$%/(DQG 81
PRGH HDNHVEDKOHDQFH ZRUN PXFK IDVWHU WKDQ 816%
SDUDPHWUH UHODWHV WR WKH DPELHQW FRQGLWLRQV
DPELHQW FRQGLWLRQV DUH XQVWDEOH LW UHVHUFRPP
1RUPDOO\ WKH SDUDPHWUH LV VHW RQ 67$%/(

10.5 AUTOTARE

,Q FDVH RI ORDGV ZLWK GLIIHUHQW WDUH YDOXHV
DXWRPDWLF WDUH IXQFWLRQ LV XVXIXO IRU TXLF
ORDGV QHW PDVV
:KHQ IXQFWLRQ3LV DFWLYH 5(! YDOXH VHWWLQJ
RSHUDWLQJ SURFHGXUHV
- 0DNH VXUH WKDW WKH PDVV RQ WKH SODWWHU VDXWLQ
  UHVSRQVLEOH IRU]HURLQJ
- 3XW SURGXFW RQ ZHLJKLQJ SDQ
- $IWHU PHDVXUHPHQW ORI]DWLRQ DFNQ
  PDVV ZLOO GURSFUHHG ZLOO DSSHDU LQ WKH
  GLVSOD\
- 3XW SURGXFW WKDW LV WR EH SDFNHG RQ W
- 'LVSOD\ ZLOO VKRZ D QHW PDVV RI WKH SUR

- 7DNH RII WKH SURGXFW WRJHWKHU ZLWK WKH
- 7KH EDODQFH ZLOO FDQFHO WDUD YDOXH WKH EDODQFH DIWHU WKH ILUVW VWHS RI WKH RSHUDWLRQ PDVV YDOXH<P 2.2.3.2 AUTO THRES> SDUDPHWHU KDV EHHQ H[FHHGHG
- 3XW SDFNDJH RQ WKH SURGXFW ZHLJKLQJ SODWH PHDVXUHPHQW VWDELOL]DWLRQ DXWRPDWLF ZLOO SURFHHG LQ WKH XSSHU GLVSOD\
- 3XW SDFNDJH RQ WKH SURGXFW ZHLJKLQJ SODWH

)RU D FRUUHFW RSHUDWLRQ RI WKH EDODQFH ZLWK $87 YDOXH PXVW EH

<P 2.2.3.2 AUTO THRES > SDUDPHWHU FRQILJXUHV ZKHWKHU WKH
- DXWRPDWLF WDUH
- DXWRPDWLF RSHUDWLRQ

7KHUH ZLOO EH QR DXWRPDWLF WDULQJ XQWLO WKH EDODQFH YDOXH LV HTXDO WR<P 2.2.3.2 AUTO THRES > SDUDPHWHU

10.6 Printing mode

7KLV IXQFWLRQ HQDEOHV WKH VHOHFWLRQ RI WKH SRVVLEOH PRGH L H EXWWRQ
$ XVHU KDV WKH SRVVLELOLW\ RI VHOHFWLQJ WKH IR
- : + (1 6 7 $ % WKH VHWWLQJ PH²epL W 0• 4FBW PV WWL

10.7 Temporary measuring unit

7KLV IXQFWLRQ LV RQO\ DYDLODEOH LQ :(,*+,1*! PRGH, Q RWKHU PRGH
PHDVXUHPHQWV DUH RQO\ SRVVLEOH LQ EDVLF XQLW
)XQFWLRQ HQDEOHV VHOHFWLQJ D PHDVXULQJ XQLW
PDVV UHDGLQJ GXULQJ WKH ZHLJKLQJ SURFHVV 6HW
IURP WKH PRPHQW RI LWV DFWLYDWLRQ XQWLO LWV
EDODQFH

(DFK UHVV RI WKH WHQ XVHU FKDQJH RI WKH PHDVXULQ

Available settings:

-)RU YHULILHG EDODQFHV D XVHU FDQ VHOHFW IURP WKH IRO
  >NJ@ >FW@
-)RU QRQ YHULILHG EDODQFHV D XVHU FDQ VHOHF
  XQLW>VJ@ >PJ@ >NJ@ >FW@ >OE@ >R]@ >R]W@
  >JU@ >WL@ >1@

10.8 Start-up measuring unit

7KLV IXQFWLRQ LV RQO\ DYDLODEOH LQ :(,*+,1*!
PHDVXUHPHQWV DUH RQO\ SRVVLEOH LQ EDVLF XQLW
$IWHU VHOHFWLQJ XQLW WKH VZLWFK RQ WR :(,*+,1*! PRGH ZLWK WKLV YHU\ XQLW
7KH XQLWV ZKLFK FDQ EH VHOHFWHG DUH GHWHUPL
ZKHWKHU WKH EDODQFH LV YHULILHG RU QRQ

3URFHGXUH

10.9 Availability of measuring units

7KLV IXQFWLRQ LV RQO\ DYDLODEOH RQ WKH:LQ,*PRG
PHDVXUHPHQWRQO\ SRVVLEOHJH@LQ EDVLF XQLW
7KH XVHU FDQ GHFODUH WKH ZHLJKLQJ XQLWV ZKL

WHPSRUDU\ XQLW E\ SXUWWRQJWKHVH

10.10 User unit

$ XVHU FDQ GHFODUH WZR ZHLJKLQJ XQLWV 8VHU XQLW
PXOWLSOLHG E\ WKH IDFWRU WKDW ZDV LQWURGXFHG I
8VHU XQLWV DUH [uH] ±XVHU XQLW DW [2] ±XVHU XQLW

7KH ZD\ RI GHFODULQJ IDFWRU IRU DQ LQGLYLGXDO XVH

8VHU XQLWV DUH DYDLODEOH RQO\ IRU QRQ YHULILHG E

10.11 Informa tion

)XQFWLRQ HQDEOHV GLVSOD\LQJ DGGLWLRQDO L
'HSHQGLQJ RQ WKH QHHGV D XVHU FDQ FKRRVH W
VKRZQ ZKLOH ZRUNLQJ PRGH

10.12 Non-standard information

)XQFWLRQ GHQFDEDUHLQWDQRGD UG LQIRUPDWLRQ ZKLFK
LQ WKH EROWRWRPKH GLSVXVHULFWHQWW WH[W FRQVLVWV
PD[LPXP FKDUDFWHUV

,W VKRXOG EH UHPHPEHUHG WKRXWKQWKDW WKH LQKHUGHF
YLVLEOH 7KHUH2UHK RXSWLERQVWLWFW!R

10.13 F button shortcuts

) X Q F W L R Q ÐHVQVDLEJQHJÜP € TpÞÂ& Í V H €ì €H H œ €E “ H P ‘ •

10.14 Dual range balance (NPS 200/2000.R2)

% D O D NPS 200/2000

11.6 Backlight and adjusting display brightness

(QDEOHV VHWWLQJ WKH EULJKWQHVV FRQWUROOLQJ WKH EDFNOLJKW EULJKWQHVV FRPSOHWHO\

100	PD[LPXP EULJKWQHVV RI WKH EDFNOLJKW
10	PLQLPXP EULJKWQHVV RI WKH EDFNOLJKW
NONE	GLVSOD\ EULJKWQHVV VZLWFKHG RII

11.7 Date

(QDEOHV VHWWLQJ WKH FXUUHQW GDWH

$V IROORZV

11.8 Time

(QDEOHV VHWWLQJ WKH FXUUHQW WLPH

$V IROORZV

11.9 Date format

(QDEOHV DOWHULQJ WKH GDWH IRUPDW RQ WKH
><<<< 00 '' <<<< '' 00 '' 00 <<<< 00 '' <<<<@

:KHUH
<<<< \HDU
00 ±PRQWK
'' GD\

Example of a report :

.....

--------- Autotest GLP: Report ---------

Balance type	PS 3000.R2
Balance ID	400010
User	Admin
Software rev.	v.0.4.9
Date	2013.07.16
Time	09:17:16

Number of measurements	10
Reading unit	0.001/0.01 g
Internal weight mass	1402.094 g
Filter	Normal
Value release	Fast &Reliable

Deviation for Max.	-0.118 g
Repeatability	0.0088 g
Signature	

.....

PROCEDURE:

3 D U D P H 3W H U * / 3 $ 8 7 2 7 (6!7L V L Q L W L D W H G E X W R Q V L Q J

7 K H E D O D Q F H V R I W Z D U H V W D U W V W K H D X W R W H V W * / 3 S
D X W R P D W L \ I U R P Q R Z R Q W R W K H H Q G

$ X V H U F D Q V W R S W K H S U R F H G X U H E X W R Q W K H E U
2 Q F H W K H V H U Y R F H G L X K H G W K H Y D O X H R I Z D G G H
P H D V X H P H Q W V L V K R Z Q L Q W K H P D L Q G L V S O D \ D Q G
E R W R P O D Q W K H I L Q D O U H S R U W L V S U L Q W H G R X W D X W R P D

S R V V L E O H W R S U L Q W R X W W K H E X W R Q D J D L Q E \ S U H V
8 H P R Q L W L V Q R W H G H p U H H H

7KLV PHQX LQFOXGHV LQIRUPDWLRQ DERXW WKH EDOD
SDUDPHWHUVFRQWUROOLQJWKHLQIRUPDWLYH

2QFH WKH SDUDPHWHUV KDYH EHHQ FKRVHQ EDODQFH VHWWLQJV
WKH SUDQQHUSDUDPHWHUV DUH WUDQVIHUUHG
FKRVHQ3RR7 (5!6

13 BALANCE ADJUSTMENT

,Q RUGHU WR HQVXUH WKH KLJKHVW

Automatic adjustment proce ss takes place in three different areas:

- $GMXVWPHQW RQ SOXJJLQJ± YWHKUHL IELDHGDEQDFHDWQRHP
- $GMXVWPHQW WULJJHUHG E\ WHPSHUDWXUH FK EDODQFH LV HTXLSSHG ZLWK YHU\ SUHFLVH WHPSHUDWXUH $W HDFK DGMXVWPHQW SURFH LQ WKH V\VWHP 7KH QH[W DGMXVWPHQW LV WHPSHUDWXUH FKDQJH/V& IPRHP WWKKDQDVW VD WHPSHUDWXUH
- $GMPXHQW WULJJHUHG E,\WHDVSVRLQJLEOHPHWR GHI LQWHUYDOV EGLWKRUDEHDODQFH DGMXVWPHQW VHWWLQJV DUH DGMXVWPHQW SURF VLQFH ODVW FDUULHG RXW DGMXVWPHQW

CAUTION
Declaring time intervals for balance adjustment is available only in non-verified balances. In case of verified balances the time interval between the following adjustments is set for 3 hours.

13.2. Menu adjustment settings

P1 CALIBRATION

3	,17 &$/,% _	LQWHUQDO GMXVWPHQ
3	(;7 &$/,% _	H[WHUQDO GMXVWPHQ
3	86(5 &$/,% _	XVHU DGMXVWPHQW
3	&$/,% 7(67_	DGMXVWPHQW WHVW3

x P1.1 INT. CALIB. – Internal adjustment

6WDUW RI LQWHUQDO DGMXVWPHQW SURFHVV $GM
DQG QRDXWRVWDQFH LV UHTXLUHG ,I ZHLJKLQJ SD
EDODQFH ZLOO GLVSOD\ D FRPPDQG WR XQORDG W
ORDGHG ZHLJKW LV SODFHG RQ WKH SDQ DQG WKH
DGMXVWPHQW SURFHVV ZLOO EH FDUULHG RXW D
PD\ GLIIHU E\ WKH DPRXQW WKDW ZDV SUHVHQW RQ

R U

x P1.2 EXT. CALIB . – External adjustment (with an external weight)

$GMXVWPHQW ZLWK H[WHUQDO ZHLJKW ZKLFK YD
EDODQFH IXQFWLRQ XQDYDLODEOH LQ YHULILHG E

CAUTION
Function unavailable in verified balances.

x P1.3 USER CALIB. – User adjustment (with an external weight)

$GMXVWPHQW ZLWK H[WHUQDO ZHLJKW DW DQ\ PD
QRW ORZHU WKDQ RI PD[UDQJH

CAUTION
Function unavailable in verified balances.

13.3.Manual adjustment

13.3.1. Internal adjustments

3 U HCaV E X W W R Q
R U

7 K H E D O D Q F H S H U I R U P V L Q W H U Q D O D G M X V W
D G M X V W P H Q W S U R F H V V G R Q R W O R D G W K H
P H V V D J H L V G L V S O D \ H G W K U R X J K O \ ! L Q W K H
E R W W R P R I W K H D G M X V W P H Q W
U H V X O

CAUTION
- Press Esc button to abort adjustment process.

7KH ILUVW SURFHGXUH HRQ WWHKUH EDVHVIHRVVLKHWZRLJK
EH XVHG IRU DGMXVWPHQWW 7KH[FDSVFLWX\W EH

2QFH WKH PDVV RI WKH ZHLJKW LV HQWHUHG DC
GLVSOD\HG ZKLFK DVNV \RX WR UHPR<REMWKH ZH

MASS> ZHLJKLQJ SDQ PXVWEHU EWHSDW EXWWRKH
EDODQFH GHWHUPLQHHVJKW RI XQDQG GHPDVSDJ-
CALIBRATION ! LV VKRZQ LQ WKHE RWWRP
1H[W PHVRLACEMASS!LV GLVSOD\HG LEDWKHDQGRWKW R
PDLQ ZLQGRZ WKH YDOXH RI eWK200.0DgVGHWSRHEHLSC

RQ EDODQF3HDVWHWKH ZHLJKW RI WKH LQGLFDWH
EXWWRKQ EDODQFH GHWHUDQLQHVWKHEADIV ! LV
GLV\HG LQ WKHLQHRWWRP WKH DGMXVWPHQW SUR
UHWXUQV WR1.2VEXTECALIB.X

,I D EDODQFH LV YHULILHG LW LV QRW SR

14. DETERMINING CONTENT OF A PRINOUT

14.1.Adjustment report

P5.1 CAL. REPORT, LV D JURXS RI SDUDPHWHUV ZKLFKLWHQDEO
RQ DQ DGMXVWPHQW SULQWRXW

P5.1 CAL. REPORT

3	352-(&7	_
3	&$/,% 7<3(	_ <(6
3	86(5	_ <(6
3	352-(&7	_ <(6
3	'$7(	_ <(6
3	7,0(	_ <(6
3	%$/$1&(,'	_ <(6
3	&$/ ',))(5	_ <(6
3	'$6+(6	_ <(6
3	6,*1$785(	_ <(6

- P5.1.1 PROJECT

2SWRQ HQDEOHV HQWHULQJ WKH QDPH RI WKH SURMH
W\SH RI ZHLJKPHQW 7KH QDPH FDQ EH XS WR FKD
)RU LQVWDQFH D SURMHFW QDPH HQWHUHG LQWR W
OLNH WKH ILJXUH EHORZ

- P5.1.2 CALIB. TYPE.

(QDEOHV SULQWLQJ RXW WKH W\SH RI WKH DGMXVWP

- P5.1.3 USER

(QDEOHV SULQWLQJ RXWLQWKHQDPH RI ORJJHG

x P5.1.4 PROJECT

(QDEOHV SULQWLQJ RXW WKH QDPH RI WKH SURMHFW

x P5.1.5 DATE

(QDEOHV SULQWLQJ RXW WKH GDWH RI WKH FDUULH

x P5.1.6 TIME

(QDEOHV SULQWLQJ RXW WKH WLPH RI WKH FDUULH

x P5.1.7 BALANCE ID

(QDEOHV SULQWLQJ RXW WKH EDODQFH ,'

x P5.1.8 CAL. DIFFER.

(QDEOHV SULQWLQJ RXW WKH GLIIHUHQFH EHWZH
PHDVXUHG GXULQJ WKH ODVW DGMXVWPHQW RI WKH
ZHLJKW

x P5.1.9 DASHES

(QDEOHV SULQWLQJ RXW WKH GDVKHV WKDW VHS
VLJQDWXUH

x P5.1.10 SIGNATURE

14.2.Header printout

P5.2 HEADER, LV D JURXS RI SDUDPHWHUV ZKLFKDWQLDVEHQ W
KHDGHU SULQWRXW

P5.3 HEADER

3 '$6+(6 _ <(6
3 :25.,1* 02'(6 _ <(6
3 '$7(_ <(6
3 7,0(_ <(6
3 6&$/(7<3(_ <(6
3 %$/$1&(,' _ <(6
3 86(5 _ <(6
3 352'8&7 _ <(6
3 9$5,$%/(_ <(6
3 9$5,$%/(_ <(6
3 (037< /,1(_ <(6
3 &$/ 5(3257 _ <(6
3 121 67$1'$57 3517 121(167' 351
167' 351 167' 351
167351

x P5.2.1 DASHES

(QDEOHV SULQWLQJHJSRXUWDVLQHQH RI

x P5.2.2 WORK -23.627 -1.147 Td <0003>Tj4(.)5NG03> M
x P5.2.1 >15<C0028>5HES

x P5.2.6 BALANCE ID

(QDEOHV SULQWLQJ RIEXWU EDODQFH ,' QXP

x P5.2.7 USER

(QDEOHV SULQWLQJ RXW WKH XVHUQDPH RI D ORJJHG L

x P5.2.8 PRODUCT

(QDEOHV SULQWLQJ RXW WKH QDPH RI D VHOHFWH

x P5.2.9 VARIABLE 1

(QDEOHV SULQWLQJ RXW WKH YDOXH RI 9$5,$%/(

x P5.2.10 VARIABLE 2

(QDEOHV SULQWLQJ RXW WKH YDOXH RI 9$5,$%/(

x P5.22.11 EMPTY LINE.

(QDEOHV SULQWLQJ RXW DQ HPSW\ VHSDUDWLQJ O

x P5.2.12 CAL. REPORT

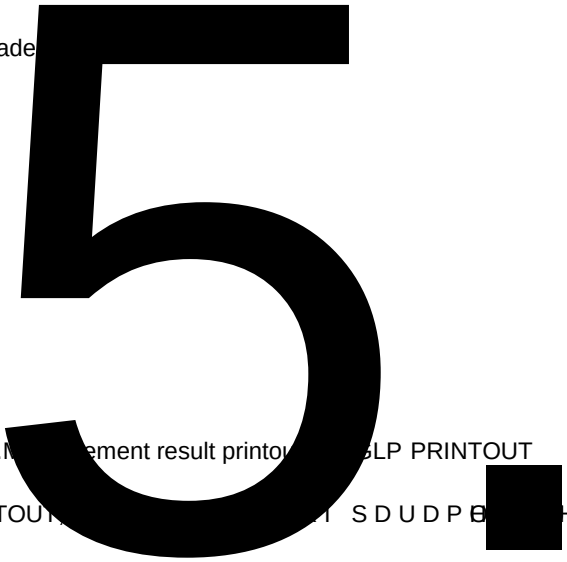
(QDEOHV SULQWLQJ RXW D UHSRUW IURP WKH O
VHWWLQJV GHFODUHG IRU WKH 9DGGHG XVHU FRQ WKH U
PDQXDO

x P5.2.13 NSTD. PRINT.

(QDEOHV SULQWLQJ RXW RQH RI WKH IRXU QRQ V
SULQWRXW

(QDEOH€5IxRKXR#`SPG 0ÁWKK Ð CÐ0 RQH RQ RQH R

Example of a heade



14.3.M ement result printo GLP PRINTOUT

P5.3 GLP PRINTOUT S D U D P E H M F Ø K U E K Q J H Q D E V D
P1€0 G H

14.4.Footer printout

P5.4 FOOTER, LV D JURXS RI SDUDPHWHUV ZKLFK HLVDEOH GL
WKH IRRWHU SULQWRXW

P5.4 FOOTER

```
3     :25.,1* 02'(6      _     <(6
3     '$7(                _     <(6
3     7,0(                _     <(6
3     6&$/( 7<3(          _     <(6
3     %$/$1&( ,'          _     <(6
3     86(5                 _    <(6
3     352'8&7             _     <(6
3     9$5,$%/(              _   <(6
3     9$5,$%/(              _   <(6
3     '$6+(6              _     <(6
3     (037< /,1(          _     <(6
3     &$/ 5(3257          _     <(6
3     6,*1$785(           _     <(6
3     167' 3517           _     121(  167351
                                  167' 351   167' 351
                          167' 351
```

x P5.4.1 WORKING MODES

(QDEOHV SULQWLQJ RXW RI WKH PRGH RI EDODQFH¶V

x P5.4.2 DATE

(QDEOHV SULQWLQJ RXW RI WKH GDWH LQ WKH IRRWH

x P5.4.3 TIME

(QDEOHV SULQWLQJ RXW WKH WLPH LQ WKH IRRWHU

x P5.4.4 SCALE TYPE

(QDEOHV SULQWLQJ RXW WKH VFDOH W\SH

x P5.4.5 BALANCE ID

(QDEOHV SULQWLQJ RXW EDODQFH ,' QXPEHU

- P5.4.6 USER

(QDEOHV SULQWLQJ RXW WKH QDPH RI D ORJJHG LQ

- P5.4.7 PRODUCT

(QDEOHV SULQWLQJ RXW WKH QDPH RI D VHOHFWH

- P5.4.8 VARIABLE 1

P5.4.8 VARIABLE

.		7\SH RI WKH ODVW DGMXVWPHQW
6		&XUUHQWO\ ZHLJKHG SURGXFW
<		:HLJKLQJ GHYLDWLRQ [VWDWXV WKHQW ODVW
		9DULDEOH
		9DULDEOH

Variables depending on the currently used working mode

9DULDEOH	EHVFULSWLRQ	0RGH LQ ZKLFK WKH YDULDEOH
:	6WDQGDUGSPY	&2817,1* 3,(&(6
+	+LJK WKUHVKROG	&+(&.:(,*+,1*
/	/RZ WKUHVKROG	

Non-standard characters used in designing non -standard print -outs

??	D VLQÄJFKH DUDFWHU
?&	&5/)
?5	&5
?1	/)
?7	

<RX VKRXOG HQWHU WKH SULQWRXW RI WKH FRQWHQW
DSSURSULDWH YDULDEOHV DQG WH[W IRUPDW FKDUDFW

Example 2:

7R FURS WKH SDSHU DIWHU WKH
SULQWHU LV HDTXDLSSHGXZLWKWEXOLOHGJHPXWDHJLHYHQ
SULQWRX(V *+(3'35,17287RU)2Q(RSWLRQDOQGDQG SULQ
RUZLWK (! YDOXH DYDLODEOH DQG VHOHFW WKLV S
VHWWLQJV

,Q VXFK FDV, F6RPPDQG VKRXOG VWD\ HPSW\

3DSHU XVH EHG XQGHUHDWK WKH)227(5
([DPSOH VHWWLQJV
x 3 67$1'$5' 35,17287 16' 351
x 3 16' 351 _ (

The way of inserting texts

By the means of balance

Access	Access levels
USER	$FFHVV WR SDUDPHWHUV LQ WKH VHWWLQJ LQ SDUDPHWHU JURXS 2WKHUV DQG 7LPH! $OO WKH ZHLJKLQJ SURFHVV DQG FDOUHXWWDLPHWVKLVH

2QFH WKH XVHU¶V GHWDLOV KDYH EHHQ UHWULHYHG WKH SURFHGXUHV VKRZQ EH

8VHU¶V FRQWDFW GHWDLOV

8VHU¶V SDVVZRUG EHKDYLRXU

6HOHFW WKH DFFHVV OHYHO

6HOHFW WKH ODQJXDJH

2QFH DOO RI WKH GDWD LV LQVHUWHG RU XSGDWHG \RX FDQ UHWXUQ WR WKH PDQXDO
,Q RUGHU WR VHOHFW D XVHU IROORZ WKH ORJJLQJ L
WKLV PDQXDO

In order to remove a user should follow this procedure:

- (QWHU WKH XVHUDVGLQWVWUDWRU GHWDLOV DERYH

x 6 H O H F W W K H V X E W R E W K D W P R Y H G I U R P W K H O L V W

x U Q yAD™“Œ l˜‡ d™wE @Ü x W P p

15.3.Tares

TARES ± GLIIHUHQW PDVVHV LQ WKH SDFNDJ GDWD
LQVHUWHG IRU HDFK SDFNDJH DFFRUGLQJ WR WKH SDFND
HQWHU WKH YDOXH ZLWK WKH DFFXUDF\ RI EODQFH UH

,Q RUGHU WR PDQXDOO\ VHW WKH SDFNDJLQJ HQWHU WKH WDU
QDPH IRU WKH WDUH IROORZ WKH SURFHGXUH DV LQ W

The measurements saved in the balance's memory cannot be deleted.

,W LV SRVVLEOH IRU D XVHU WR YLHZ DQG SULQW RXW

3URFHGXUH

(DFK PHDVXUHPHQW LV VDYHG ZLWK LWVELQGLYLGXDO
ZKHUH LV WKH FRQVHFXWLYH VDYHG PHDVXUHPHQW
WKH GDWH DQG WLPH DUH GLVSOD\HG IRU HYHU\ VLQJO

7R PRYH WKURXJK WKH VDYHG PHDVXUHPHQWV GDWDED

EXWWRQVRU 7R PRYH WR WKH QH[W PHDVXUHPHQW
OLVW SUHVV RQH RI WKH EXWWRQV

7R YLHZ WKH UHPDLQLQJ GDWD UHODWLQJ WR WKH
WKH PHDVXUHPHQW LQ TXHVWLRQ

7KH VRIWZDUH ZLOO DXWRPDWLFDOO\ VKRZ WKH GDWD
ERWWRP OLQH RI WKH EDODQFH GLVSOD\

7R PRYH WKURXJK WKH GDWD UHODWLQJ WR WKH PHDVX
7KH GDWD UHODWLQJ WR WKH PHDVXUHPHQW FDQ EH SU

35,17! DQG SUHVVELQJWRQ

Example of a printout

Date	21.06.2013
Time	13:05:02
User	
Product	
Tare	0.000 g
Gross	0.000 g
0.000 g	

----------Cal. report.----------

Cal. type	Internal
User	
Project	1234567890123459
Date	16.07.2013
Time	13:27:09
Balance ID	10353870
Cal. diff.	-0.004 g

Signature

.....

7KH GDWD WKDW LV WR EH SULQWHG RXW DFFRUGLQJ WR 3
35,17287HSHQGRQJZKDW GDWD LV VHW LQSWKRXWV DUD
VHOHFWHG(6HH JWKH GDWD LV SULQWHG RXW DOVR LQ
see sec. 13.3.)

16. EXPORT AND IMPORT OF DATABASE

7KLV RSWLRRQX DVWRO RZV
- x $UFKLYKH GDWD UHZEHWJQHQWVWKH(,R+XW17 GDWDEDVH DQG $/,%, GDWDEDVH
- x &RSWKH SURGXFWV GDWDEDVHV DQG WDUHV GDWD RI WKLV VHULHV

7KLV FDQ EH DFFRPSOLVKHG E\3(1'5,9(LQ7867%$ SRUW LI \RX ZDQW WR XVH WKL
3OXJ D 3(1'5,9(LQ7867%$ SRUW LI \RX ZDQW WR XVH WKL

7KH EDODQFH DXWRPDWLFDOO\ UHEDODQFHV WKH H[HFXWLRQ PH
HQDEOLQJ RSHUDWLRQV UHODWLQJ WR WKH H[SRUW RU

7KH IROORZLQJ RSWLRQV DUH DYDLODEOH ZKHQ HQWHU
- x (;3257GDWDEDVH

- x ,03257GDWDEDVH

16.1.Export database

7R H[SRUW WKH GDWDEDVH HQWHU WKH RSWLRQ (;32

7KH IROORZLQJ IXQFWLRQV DUH DYDLODEOH

- ([SRUW DOO WKH GDWDEDVHV
- ([SRUW XVHUV GDWDEDVHV
- ([SRUW SURGXFW GDWDEDVH
- ([SRUW WDUHV GDWDEDVHV
- ([SRUW ZHLJKPHQWV
- ([SRUW ZHLJKPHQWV VDYHG LQ $/,%, PHPRU\
- ([SRUW XVHUV SDUDPHWHUV

$IWHU VHOHFWLQJ RSWLRQ $// '$7$%$6(6! WKH EDODQFH RQ WKH 3(1'5,9(7KH ILOHV DUH RI UHOHYDQW QDPH GDWDEDVHV 7KH ILOHV DUH [WKQ YLHZ RQ VWRUHG GDWD VDYHG HQFRGHG LQ D ZD\ WKDW WKH ILOHV FDQQRW EH U SURJUDPV

6SHFLDO FRPSXWHU VRIWZDUHV PDQXIDFWXUHG UHVSRQVLEOH 5$ WKH GDWD IURP WKH GDWDEDVH ILOHV DQG GHFRGH LQ ZKLFK WKH GDWD ZDV RULJLQDOO\ VDYHG LV UHDG DXWRPDWLFDOO\ E\ WKH SURJUDP

7KH GDWD FDQ EH SULQWHG RXW RQ DQ\ SULQWH

0RUHGDWD FDQ EH VDYHG L7KHWKEDVDPHIVRIWZDUH Z
GDWH LQ WKH ILOH WKDW KDV DOUHDG\ EHHQ FUHD
XVHU FDQ ZRQWLQXH WKH PHDVXUHPHQWV LQ WKH
FUHDWHG

CAUTION:
When the balance software sees the PENDRIVE, the menu <P8 IMPORT/EXPORT> is accessible.
All the operations relating to export and import that are described above can be performed using this menu.

17. BALANCE WORKING MODES

- :HLJKPHQWV
- &RXQWLQJ SLHFHV
- &KHFNZHLJKLQJ
- 'RVLQJ
- 'HYLDWLRQV DJDLQVW WDUJHW YDOXHV RI WKH
- $QLPDO ZHLJKLQJ
- 'HQVLW\ GHWHUPLQDWLRQ RI VROLGV
- 'HQVLW\ GHWHUPLQDWLRQ RI OLTXLGV
- 6WDWLVWLFV
- 7RWDOLVLQJ
- 3HDN KROG

,Q RUGHU WR LQLWLDWH D SDUWLFXODU PRGH RI
VHOHFWLQJ WKH PRGH IURP WKH OLVW

2QFH WKH EXWWRQ EHHQ SUHVVHG RI WKH ILUV
IXQFWLRQ LV VKRZQ

RU VHOHFW WKH ZRUNLQJ PRGH

HQWHU WKH VHOHFWHG ZRUNLQJ PRGH
7KH VHOHFWHG IXQFWLRQV LV GHVFULEHG IXUWKHU

17.1.Setup for availability of working modes

,Q WKLV SDUDPHWHUV D XVHU GHFODUHV IXQ

IRU WKH XVHU DIWHU EXWWRQ LQJ

,W LV SRVVLEOH IRU D XVHU WR VZLWFK RII WKH
ZRUNLQJ ZLWK WKH EDODQFH 7KLV FDQ EH GR
SDUDPHWHU WR

)ROORZ WKH VFKHPH VKRZQ EHORZ

17.2.Counting parts of the same mass

7KH EDODQFH LQ WKH VWDQGDUG YHUVLRQ LV HTX
VPDOO REMHFWV RI WKH VDPH PDVV

- 6WDUW &RXQWLQJ 3LHFHV IXQFWLRQ

:KHQ WKH IXQFWLRQ LV LQLWLDWHG IRU WKH ILUVW
J,WKH PSOH PDVV LV GHWHUPLQHG DQG WKH PRGH
COUNTING PIECES! WKHQ WKH VFUHHQ ZLWKH PDVV RI UHFHQ
VWDQGDUG PDVV

17.2.1. Setup for mode C OUNTING PIECES

7KH VRIWZDUH DOORZV HQWHULQJ VHWWLQJV IRU
VHWWLQJV DUH LGHQWLFDO LQ DOO ZRUNLQJ PRG
UHODWLQJ WR WKH PRGH :(,*+,1*!
7KLV VHFWLRQ FRYHUV RQO\ WKH CCOUNTING UHOD
PIECES !

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ EXWWRQV)
,Q WKH COUNTING PIECES ! WKH IROORZLQJ RSWLRQV
ZKLFK D XVHU FDQ DVVLJQ WR HDFK RI WKH

NONE ±QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

ENTER SAMPLE ±IXQFWLRQ LQLWLDWHV WKH RSWLRQ
PDVV RI D VLQJOH SLHFH

DETERMINE SAMPLE ± IXQFWLRQ LQLWLDWHV WKH
GHWHUPLQDWLRQ RI D VLQJOH SLHFH
DET6ONE

17.2.2. Setting the reference mass by determining from the sample of known quantity

:KLOH GHWHUPLQLQJ WKH PDVV RI D VDPSOH RI NQRZQ PDVV WKH F\FOH RI \$FFXUDF\ &RUUHFWLRQ

Means of operation of ACAI function :

- 1XPEHU RI SLHFHV RQ DGGLQJ RQ EDODQFH¶V JUHDWHU WKDQ KDV EHHQ SUHYLRXVO\
- 1XPEHU RI SLHFHV RQ DGGLQJ RQ EDODQFH¶V WKDQ WZLFH WKH DPRXQW RI ZKLFK DV YLVLEO DGGLQJ SDUWV
- &XUUHQW TXDQWLW\ RI SDUWV RQ EDODQFH ZKLFK DV YDOXH
- 0HDVXUHPHQW UHVXOW KDV WR EH VWDELOLVHG

Procedur e:

- 3ODFH WKH FRQWDLQHU RQ WKH SDQ DQG WDUH
- 3UHVV RQH RI WKH)[HG [HLJKW EXWWRQV LV DVVLJQHG WKH HDLSURSULDWH RQH

- 8VH WKH QDYLJDWLRQ EXWWRQV WR VHOHFW F RUUHFW VDPSOH TXDQWLW\
-)RU WKH RSWLRQ DQ\ TXDQWLW\ GLVSOD\HG YD XVLQJ QDYLJDWLQJ EXWWRQV

- The total mass of all the pieces put on the weighing pan must not be greater than the balance's maximum weighing range.
- The mass of a single piece cannot be lower than the 0,1 reading unit of the balance. If this condition is not met, the balance displays the message: <Too low sample mass> .
- While determining the number of pieces, wait for the stability pictogram , in order to confirm the quantity.

x 7KH EDODQFH VRIWZDUHRXQWRPDWLFDOOH VDPS
HQWHUV WKHFRUUHFWGHPECES! GLVSOVKQHERU
SLHFHV ZKLFK DUHV RQQWKHSEQWWRP OLQH D
PDVV YDOXH LV VKRZQ LI WKH RSWLRQ IRU WK
INFORMATION!KDV EHHQ VHOHFWHG

17.2.4. Returning to the weighing mode

17.3.Checkweighing

&KHFNZHLJKLQJ PRGH WKDW XVHV WZR W
+,*+LQ RUGHU WR FKHFN WKH PDVV RI WKH
WKDW WKH PDVV

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ)
,Q WKH CHECKWEIGHING! WKH IROORZLQJ RSWLRQV
ZKLFK D XVHU FDQ DVVLJQ WR D

NONE ±QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

ASSIGN THRESHOLDS ±IXQFWLRQ LQLWLDWHV WKH RS
WKUHVKROGV IRU WKH FKHFNZHLJKLQJ

SELECT PRODUCT ±IXQFWLRQ LQLWLDWHV WKH RSWLRQ
IURP SURGXFW GDWDEDVH

LOG IN ±IXQFWLRQ RSWLRQ RI VHOHFWLQJ DQ
EDODQFH¶V XVHU

ENTER TARE ±IXQFWLRQ RSWLRQ RI LQVHUWLQJ S

SELECT TARE ±IXQFWLRQ LQLWLDWHV WKH RSWLRQ
PDVV IURP SURGXFW GDWDEDVH

PRINT HEADER ±IXQFWLRQ LQLWLDWHV DXWRPDWLF SULQWLQJ KH

PRINT FOOTER ±

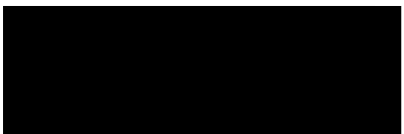
17.3.1. Declaration of mass thresholds

Procedur e:

x 3UHVV RQH RI WKH) EXHWWRQV LQ WKH ZKLFK W
THRESHOLDS ! LV DVVLJQHG ZLQGRZ LV GLV
YDOXH RI 0,1 ORZ WKYD`0RK € D\EX RD €pSHG

- &RQILUP WKH LQVHUWHG PDXWWERQ SUHVVLQJ
- 7KH EDODQFH VRIWZDUH SCHECKWEGMINGR WKH PRG DQG VWDWHV WKH YDOXHVLQIWRKMFWORUHGQWKULHW DQ RSWLRQ IRUINFORMATIONF WDEHQ VHOHFWHG

x



17.4.Dosing

17.4.1. Setting a target weight by entering values

Procedure:

- Press the function button which is assigned to the function
  and the display shows
- Use the arrow buttons to enter the
  and confirm your entry with

- Confirm the entered target weight with
- The target weight is displayed briefly and then the
  display shows

17.4.2. Returning to the weighing mode

17.5.Deviations % against the mass of the standard

7KH EDODQFH VRIWZDUH KDV WKH RSWLRQ RI GHY
EHWZHHQ ZHLJKHG ORDGV PDVV HVWDEOLVKHG SUHYLRXVO\ DQG WKH
PDVV RI WKH VWDQGDUG FDQ EH GHWHUPLQHG E\ LW
EDODQFH¶V PHPRU\ E\ LWV XVHU

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ
,Q WKH
XVHU FDQ DVVLJQ

NONE ±QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

ENTER SAMPLE ± IXQFWLRQ
PDVV WR FRQWURO PDVV GHYLDWLRQ

DETERMINE SAMPLE ± IXQFWLRQ LQLWLDWHV WKH RS
UHIHUHQFH PDVV WR FRQWURO PDVV GHYLDWLRQ

SELECT PRODUCT ±IXQFWLRQ LQLWLDWHV WKH RSWLRQ
IURP SURGXFW GDWDEDVH

LOG IN ±IXQFWLRQ
EDODQFH¶V XVHU

ENTER TARE ±IXQFWLRQ
PDVV IURP SURGXFW GDWDEDVH

PRINT HEADER ±IXQFWLRQ LQLWLDWHV
PRINT FOOTER ±IXQFWLRQ LQLWLDWHV

VARIABLE 1 ±IXQFWLRQ LQLWLDWHV WKH VHOHFWLR

VARIABLE 2 ±IXQFWLRQ LQLWLDWHV WKH VHOHFWLR

The way of declaring the function is described in the section relating to the weighing mode settings <F button shortcuts>.

17.5.1. Setup for reference mass determined by weighing

Procedur e:

x 3UHVV RQH RI WKH) EXWWRQV DFFRUGLQJ WKH SAMPLE ! LV DVVLJQHG WKH HGLWLQJ ZLQGRZ ZLOO PLACE 100% !

x 3ODFH WKH VWDQGDUG DV RQ WKH SDQ D

V\PERO LV GLVSOD\HG WKH PDVV E\ SUHVVLQ

x 7KH EDODQFH SURJUDP DXWRPDWLFDOO\ HQWH PHDVXUHG DV D VWDQGDUG DQG GLVSOD\V WKH GLVSOD\LQJ WKH YDOXH RQ WKH ERWWRP OLQH G VWDQGDUG PDVV WKH EDODQFH UHWXUQV WR WKH VHOHFWHG

17.5.2. Setup for r eference mass by typing its mass

Procedur e:

- 3UHVV RQH RI WKH ZKLFK WR HQWHU SAMPLE MASS
  DVVLJQHG WKH HGLWLQJ ZLQGRZ SAMPLE!H GLVSO

- 8VLQJ WKH DUHRZ EXWWRQV RZQ UHIHUHQFH PD

- &RQILUP E\ SUHVVLQJ

- 7KH EDODQFH DXWRPDWLFDOO\ SURFHHGV WR WKI
  DEVIATIONS! GLVSOD\LQJ WKH YDOXH ERWWRP O
  GLVSOD\V WKH HQWHUHGPYDOXH WR WKH ERWWRP
  IXQFWLRQ INFORMATION! LV VHOHFWHG

17.5.3. Returning to the weighing mode

17.6.Animal weighing

:RUNLQJ PRGH $QLPDO ZHLJKLQJ! HQDEOHV UHO
REMHFWV LQQ PSUWLQRQ SOWHSHRWKHUHVHFWV JHQHUDW
PHDVXUHPHQW WKXV LW UHTXLUHV XVLQJ D
PHDVXUHPHQW VLJQDO

17.6.1. Additional setting for animal weighing mode

$SDUW IURP GHDG VHWWLQJV IRU WKLV PRGH GH
PRGH DGGLWLRQDO VHWWLQJV KDYH EHHQ LQWUR
RI WKH PRGH

$YDLODEOH RSWLRQV

- AVERAGING TIME ±$PRXQW RI WLPH GXULQJ ZKLFK PHD
  RI ZHLJKHG VDPSOH DUH DQDO\VHG 2EWDLQHG
  PHDVXUHPHQW UHVXOW
- THRESHOLD ,WV D YDOXH H[SUHVVHG LQ PDVV PHDV
  WR VWDUW PHDVXUHPHQW WKH LQGLFDWLRQ KD
  WKUHVKROG
- AUTOSTART 'HWHUPLQHV WKH FULWHULRQ IRU PHDVXU
  DUH LQLWLDWHG PDQXDOO\ RQ SUHVVLQJ D EX
  DXWRPDWLFDOO\
  :KHQ VHW RQ <(6! D PHDVXUHPHQW LV LQLWLDWHG DXWRPDWLFDOO\ L
  EDODQFH¶V GLVSOD\ KDV VWDEOH[HG WKUHVKROG 7KH IR
  PHDVXUHPHQW LV LQLWLDWHG DXWRPDWLFDOO\ ZKHQ WKH ZHLJKHG REMH
  SDQ WKH LQGLFDWLRQ KDV WR UHWXUQ EHORZ
  D QHZ REMHFW RQ WKH SDQ DQG H[FHHGLQJ WKH
  LQGLFDWLRQ

,W VKRXOG EH UHPHPEHUHG KRZHYHU WKDW EHIR
WKH DERYH PHQWLRQHG RSWLRQV VKRXOG EH VHW
WKH H[SFWDWLRQV DQG WKH QHHGV RI WKH ZRUN

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ EXWWRQV)HG)
,Q WKH ANIMAL WEIGHING ! WKH IROORZLQJ RSWLRQV
ZKLFK D XVHU FDQ DVVLJQ WR HDFK RI WKH

17.6.2. Method of operation to manually start the process

7R PDQXDOO\ VWDUW WKH SURFHVV RI ZHLJKLQJ VHQ
12! LQ WKH PRGH VHWWLQJV

3URFHGXUH

WLLQ 0S K

$IWHU DOWHULQJ WKH VHWWLQJ UHWXUQ WR WKH PHDVXUHPHQW
UHSHDWHGO\

1H[W VHW0 KW EY €pH0 0QJ WKQ0€pVQ ZHWA À

3OD FH WKH FRQWDLQHU LQ ZKLFK WKH PHDVXUHPHQW
ZHLJKLQJ SDQ DQG ZKHQ WKH LQGLFDWLRQ LV VWDEO
1H[W HQWHU WKH PRGH RSWLRQV DQG HVWDEOLVK WKH
GLDJUDP EHORZ

$IWHULQDOLVKHQZHSURFHVVXUHPHQW UHVXOW LV ORF
DXWRPDWLFDOO\ SULQWHG

,Q RUGHU WR ILQLVK WKH PHDXWRPHQW SUHVV
7KH SURJUDP DXWRPDWLFDOO\

7KH NLW VXLWDEOH IRU $6 EDODQFHV

Components of the kit:

1	%HDNHU EDVLV	8	+RRN
2	:HLJKLQJ SDQ VWDQG	9	7RS ZHLJKLQJ SDQ RI C GHWHUPLQLQJ VROLG

F button shortcuts

VDPSOH ILUVW LQ WKH DLU WRS ZHLJKLQJ SDQ
ZHLJKLQJ WKH VDPH VDPSOH LQ OLTXLG RQ WKH

8.

12. 2Q WH VHFRQG PHDVXUHPHQW UHVXOW DSSU
DXWRPDWLFDOO\ FDOFXODWH WKH WHVWHG VR
LQGLFDWHG RQ D EDODQFH GLVSOD\ $W WKH
UHSRUW ZLOO EH VHQW WR D VHOHFWHG SULQW

Example of a report:

Another copy of the report can be printed out on pressing

EXWWRQ ,Q RUGHU WR ILQLVK WKH SURFHVV
UHWXUQV WR WKH PDLQ IXQFWLRQ ZLQGRZ

PHDVXUHPHQW 7KH EDODQFH UHPHPEHUV W
OLTXLG WHPSHUDWXUH ZKLFK VKRUWHQV
FRQVLGHUDEO\

17.8.Density of liquid

Density of liquid IXQFWLRQ GHQVLWLQDWLRQ RI DQ\ OLTXLG
8VLQJ WKLV IXQFWLRQ UHTXLUHV DQ DGGLWLRQDO
HTXLSPHQW WKH VDPH NLW OLNH IRUWGHWHUPLQDW
DERYH

6HWWLQJV IRU EXWWRQ VKRUWFXWV DUH WKH VDPH
VHH WKH SUHYLRXV SRLQW

17.8.1. Density of liquids determination

7KH EDVLFPHQW IRU PHDVXULQJ WKH GHQVLWLQRRXLT
LV SUHFLVHWHUPLQHG DQG JLYHQ RQ D VLQNHU¶V
GHQVLW\ GHWHUPLQDWLRQ LQVHUW WKH YDOXH RI V
RUGHU WR PHDVXUH WKH GHQVLW\ RI OLTXLG ILUVW
7KHQ PHDVXUH WKH OLTXLG VLQNHU LQ WHVWHG OLTXL
GHWHUPLQDWLRQ LV DXWRPDWLFDOO\ LQGLFDWHG RQ

,Q RUGHU WR GHWHUPLQH WKH OLTXLG GHQVLW\ \RX

,QVWDO WKH GHQVLW\ GHWHUPLQDWLRQ NLW

(QWHU '(16,7< 2) /,48,'6! IXQFWLRQ

3UHSDUH D VDPSOH

,QLWLDWH WKH SURFHVV OLNH LQ FDVH RI VROLGV

,QVHUW WKH VHWWLQJV IRU WKH GHVLUHG VDPSOH

9ROXPH RI WKH VLQNHU XVHG IRU PHDVXULQJ

2Q WKH VHFRQG PHDVXUHPHQW UHVXOW DSSURYDO
FDOFXODWH GHQVLW\ RI WKH WHVWHG OLTXLG ZKL
PHDVXULQJ UHSRUW ZLOO EH VHQW WR D VHOHFWH

([DPSOH RI D UHSRUW

$QRWKHU FRS\ RI WKH UHSRUW FDQ EH [illegible]

ILQLVK WKH SURFHGXUH E\ SUHVVLQJ 7KH SURJUDP UHWXUQV W
ZLQGRZ <RX FDQ VWDUW DQRWKHU PHDVXUHPHQW 7H
LQVWUHG GDWD WKH VLQNHU YROXPH DQG WKH WHVW
VWDUWLQJ DQRWKHU WLPH UDEO\

17.9. Statistics

6WDWLVWLFV DOORZV \RX WR FROOHFW GDWD RI WH

Statistical data that is counted for every measuring series

- o 1 QXPEHU RI VDPSOHV
- o 680 WRWDO QXPEHU RI VDPSOHV
- o $9* DYHUDJH YDOXH LQ D VHULHV
- o 0,1 PLQLPDO YDOXH LQ D VHULHV
- o 0$; PD[LPDO YDOXH LQ D VHULHV
- o 6'9 VWDQGDUG GHYLDWLRQ
- o ',) GLIIHUHQFH EHWZHHQ D VHULHV
- o 6'9 VWDQGDUG GHYLDWLRQ LQ D
- o 5'9 YDULDWLRQ FRHIILFLHQW

17.8.2. Means of operation

x (QWHU WKH VWDWLVWLFV

x 3ODFH WKH ILUVW ORDG RQ WKH ZHLJKLQJ SDQ

x :KHQ WKH LQGLFDWLRQ LV VWDEOH FRQILUP WK

EXWWRQ

x 7KH PHDVXUHPHQW LV VDYHG LQ WKH EDODQFH
DXWRPDWLFDOO\ SULQWHG RXW ZLWK WKH PHDV

x 5HPRYH WKH ORDG IURP WKH ZHLJKLQJ SDQ

x &DUU\ RXW PHDVXUHPHQWV IRU RWKHU ORDGV Z

:KHQ DOO WKH PHDVXUHPHQWV

RI WKH VWDWLVWLFVEXWWRQV VLQJ

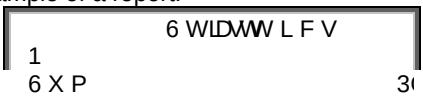
6HOHFW WK5H6RS7WL\RQU HVVLQ[XWWRQ

7KH LQIRUPDWLRQ DERXW WKH QXPEHU RI VDYHG PHDVX

ERWWRP OLQH 2Q SRUWHVVLQW WKH W\SH RI WKH LQIRU
GLVSOD\HG FKDQJHV

6HOHFWLQJ WKH RSWLRQ 35,EXWWRQ SURGXFHV WKH VWDWLVWLFV GDWD DV D UHSRUW

Example of a report:



17.8.4. Returning to the weighing mode

17.10. Totalising

7KH IXQFWLRQDOLWLHV DYDLODEOH ZKHQ JLYLQJ LQJUHGL
PL[WXUH DQG WRWDOLVLQJ WKHLU WRWDO PDVV
DSSUR[LPDWH QXPEHU RI LQJUHGLHQWV PL[WXUH

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ EXWWRQV)
,Q WKH PORTALIS ! WKH IROORZLQJ RSWLRQV DUH
XVHU FDQ DVVLJQ WR EXWWRQV

NONE ±QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

FINISH ±VHOHFWLQJ RSQDLQWV SZHG P#²‘ ;- EPPRÃH

PRINT FOOTER ±I X Q F W L R Q L Q L WRLXDWV HRV DV KGHH \SLUJLQQHVG I R

VARIABLE 1 ±I X Q F W L R Q L Q L W L D W H V W K H V H O H F W L R Q

VARIABLE 2 ±I X Q F W L R Q L Q L W L D W H V W K H V H O H F W L R Q

The way of

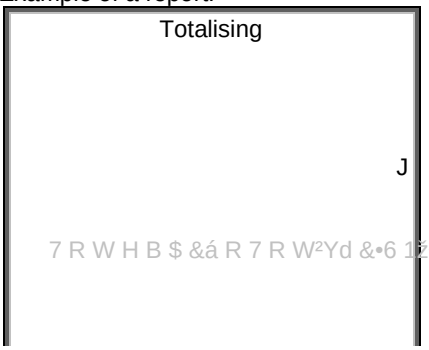
7KH VRIWZDUH DGGV WKH PDVV RI WKH LQJUHG
IROORZHG E\ DXWRPDWLF WDULQJ RI WKH LQG
RQ WKH PDLQ GLVSOD\ ,Q WKH VHWWLQJV PHQX
RI LQJUHGLHQWV DQG WRWDO VXP LV IODFWXD

x 1H[W SODFH RWKHU LQJUHGLHQWV LQ WKH FR

LV VWDEOH FRQILUP WKHLU PDVV E\ SUHVVLQJ

7KH PHVVDJH 5(68/7! LV GLVSOD\ZHG LQ WKH QHZ WKRW
WRWDO UHVXOW RI DOO WKH LQJUHGLHQWV WKDW KD
PDLQ GLVSOD\ $GGLWLRQDOO\ WKH HQG UHSRUW L
PDVVHV RI LQGLYLGXDO LQJUHGLHQWV WRWDO VXP
SULQWHG RXW

Example of a report:



ENTER TARE ±I X QLFRVQ L Q LWKLHDRVHWL R Q R I L Q V H U W L Q J S

SELECT TARE ±I X Q F W L R Q L Q L W L D W H V W H V F W H L Q S S V L F R Q D P D V V I U R P S U R G X F W G D W D E D V H

PRINT HEADER ±I X Q F W L R Q L Q L W R L X D W H V D V K H H V S L U L Q G H G K H

PRINT FOOTER ±I X Q F W L R Q L Q L W R L X D W H V D V K H H V S L U L Q G H G I R

VARIABLE 1 ±I X Q F W L R Q L Q L W L D W H V W K H V H O H F W L R Q

VARIABLE 2 ±I X Q F W L R Q L Q L W L D W H V W K H V H O H F W L R Q

The way of declaring the function is described in the section relating to the weighing mode settings <F button shortcuts>.

17.8.7. Means of operation

x (Q W H U W K H ($ P . R G 2 H !

2 Q F H \ R X V H O H F W W K H P R G H W K H I X Q F W L R Q L V D E R X W W K H Q H W P D V S S H R D U \ L Q D W G H I E H U W H Q R K D V Q R W E H H Q V H O H F W H G E \ D X V H U

,Q RUGHU WR RSHUDWH SURSHUO\ \RX VKRXOG
WKH LQGLFDWLQJ SRLQW EH\RQG ZKLFK WKH I
PD[LPDO IRUFH DSOOLHG

x)URP QRZ RQ WKH EDODQFH UHJLVWHUV DQG K
ZKLFK LV DERYH WKH WKUHVKROG YDOXH
SUHYLRXV SHDN KROG ,I WKH VDPSOH
WKUHVKROG KROG LJKHVW GHWHFWHG LQGLFDWLRQ
DQG WKH SLFWRJUDP 0D[! LV VKRZQ DW WKH

$ XVHU FDQ SULQW WKH UHVXOWV E\ SUHVVLQJ
7KH VWDUW RI WKH SHDN VHDUFK UHPHDVXUHPHQW LV SRV

UHPRYLQJ WKH ORDG IURP WKH ZHLJKLQJ SU
UHWXUQLQJ WR WKH PDLQ PHDVXUHPHQW SDJH
SLFWRJUDP RQ WKH WRS RI GLVSOD\

17.8.8. Returning to the weighing mode

17.12.

F button shortcuts

7KH IXQFWLRQ HQDEOHV WKH RSWLRQ RI TXLFN
ZKLFK DUH DYDLODEOH ZKHQ EXWWRQV)))
,Q WKH PHPHEHTHES CALIBRATION! WKH IROORZLQJ RSV
DYDLODEOH ZKLFK D XVHU FFDEQXDVWRQQ WR HDF

QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

NONE ±QR IXQFWLRQ DVVLJQHG WR WKH EXWWRQ

START ±IXQFWLRQ LQLWLDDWFMMVLYDKHLRQSWRLRSLSRHWV
SURFHGXUH

SELECT PRODUCT ±IXQFWLRQ LQLWLDWHV WKH RSWLO
IURP SURGXFW GDWDEDVH

LOG IN ±IXQFWLRQ LQLWLDWHV WKH RSWQRQ EI
EDODQFH¶V XVHU

ENTER TARE ±IXQFWLRQ LQLWLDWHV WKH RSWLRQ R

SELECT TARE ±IXQFWLRQ LQLWLDWHV WKH RSWLR
PDVV IURP SURGXFW GDWDEDVH

PRINT HEADER ±IXQFWLRQ LQLWRXDWHV DVKHHVSLUJQHG

PRINT FOOTER ±IXQFWLRQ LQLWRXDWHV DVKHHVSLUJQHG

VARIABLE 1 ±IXQFWLRQ LQLWLDWHV WKH VHOHFWLR

VARIABLE 2 ±IXQFWLRQ LQLWLDWHV WKH VHOHFWLR

The way of declaring the function is described in the section relating to the weighing mode settings <F button shortcuts>.

17.8.10. Means of operation

x (QWHU WKHPHPEHTRCALIBRATION.!

- 6WDUW WKH SURFHVV

-)ROORZLQJ WKH GLVSOD\HG PHVVDJHV VHW WKH
- (QWHU WKH DPELHQW WHPSHUDWXUH 7KH FRPSXWHU VRIWZDUH SURFHHGV WR WKH KXPLGLW\ VHWWLQJV

- 6HW WKH KXPLGLW\ (17(5 IRU FRQILU FRPSXWHU VRIWZDUH SURFHHGV WR V G@ êìÒ

x (QWHU 9 FRQWUROO IL[HG YROXPH SLSHWV
VOLUME DETERMINATION SDUDPHWHU VHW WR YDOXH
RQH DQG RQO\ YDOX7HKMVIRFEHSXQWUHGZDUH
WKH QH[W VWHS LHFRQQWUROJYRODVHV9WHO
SLSHWWH

x (QWHU 9 FRQW7UHOYRSXWHU VRIWZDUH SU
QH[W VWHS L H HQWHULQJ WKH WKLUG FR
SLSHWWH

x (QWHU 9 FRQWURO YROXPH

x 8SRQ HQWHULQJ WKH GDWD WKH FRPSXWHU
FDOLEUDWLRQ

x)ROORZ WKH GLVSOD\HG GHVFULSWLRQ LQ RU
x %\ PHDQV RI SLSHWWH GRVH WKH ILUVW SR
PHDVXUHPHQW LV VWDEOH DQG SUHVV (17(5 W

- 7KH FRPSXWHU VRIWZDUH UHFRJIGV3 WKH PI AUTOMATING TARRING SDUDPHWHU LV VHWWWKRQYDVKH LQGLFDWLRQ LV DXWR3DAUTOMATING TARRING SDUDPHWHU LV V1HWWKRQYDVKH XVHU PXVW SU EXWWRQ LQ RUGHU WR WDUH WKH LQGLFDWLRSRRFL RI ZDWHU
- 6XPPDU\ RI VHULHV RI PHDVXUHPHQWV LV FRPSOHWLRQ

- 3UHVV (17(5 WR FRQWLQXH PHDVXULQJ SURFHV 8SRQ SUHVVLQJ (VF EXWWRQ WKH FRPSXWHU V ZLQGRZ
- 8SRQ SUHVVLQJ (17(5 ZKLOH GLVSOD\LQJ WKH ODVW DGMXVWDEOH SLSHWWH YROXPH D UHSU SULQWHGLQWRQHD ISRQQHFWHG DVRE WKHQHWEDRQGGLFW YLVLEOH RQ D UHSRUW DUH WKRVH WKDW XVHU FDOLEUDWHGRXUSU IL[HG YROXPH SLSHWWH WKH LI WKH XVHU SUHVVHV (17(5 ZKLOH GLVSODW\LQ

- 7KH FRPSXWHU VRIWZDUH UHWXUQV WR WKH PDL
- 1RZ WKH XVHU PD\ HLWKHU VWDUW QHZ SURFHG HQWHU QHZ GDWD IRU D GLIIHUHQW SLSHWWH

- Example of a report:

17.8.11. Returning to the weighing mode

18. COMMUNICATION

7KH HPQX &RPPXQLFDWLRQ WKH FRQILJXUDWLRQ RI SRUW

FDQ JHW DFFHVV E\ SXUWWVRLQQ J
7KH EDODQFHFRPPXQLFDWLQJ ZLWK SHULSKHUDO GHYLFH
SRUWV

- x &20 56
- x &20 56
- x 86% \W\S
- x 86% \W\%
- x :,),

3DUDPHWHUV RI WKH 86% SRUWV DUH QRW FRQILJXUDE
FRQQHFW D SULQWHUWKRU SRVXWHUPDQQHFWLQHG W
FRPSXWHU NH\ERDUG EDU FRGH UHDGHU RU 86% IODVK

18.1.RS 232 ports settings

3URFHHGXU

6HOHFW D FRPPXQLFDWLRQ2FDWLRQ2SRUW
6HW UHOHYDQW YDOXHV

7KH56 SRUWV HQDEOH WKH IROORZLQJ VHWWLQJ RI W

18.2.WIFI port settings

CAUTION:

1. The transmission parameters must be matched to the client's local network.
2. Most Wi-Fi modules work on one channel, which is defined in the configuration of the Wi-Fi network.
3. To ensure proper operation of the Wi-Fi router, automatically changing channels when configuring the connection set <AUTOCHANNEL> to <YES>.

7KH SDUDPHWHUV DYDLODEOH LQ WKH FRQQHFWLRQ VHWWLQJV
3 ±67$786
3 &+2226(1(7:25.
3 ±1(7:25. 6(77,1*
3 ±1$0(WKH QDPH RI WKH QHWZRUN WKDW KH

3URFHHGXU

6HOHFW WKH FRPPXQLFDWLRQ SRUW :,),! DQG WKI
IRU WKH SD3UDPHWHU1(7:25. 3$5$0(7(56 ,3 0$6.
*$7(:$< 3257!
1H[WHQWHU WKH3SDUDPHWHU1(7:25! DQG VWDUW WKI

SURFHHGXUHDUFKLQJ IRU DYDLODEOHEQHWZRUNV E
6HDUFK SURFHGXUH VWDUWV DQG DIWHU LWV FRP
E\ WKH EDODQFH DSSHDUV RQ WKH ERWWRP OLQH

8VH WKHRU EXWWRQV WR VHOHFW WKH QHWZRUN
7KH PHVVDJH 3$66:25DSSHDUV RQ WKH ERWWRP O
WR XVH D FRPSXWHU NH\ERDUG FRQQHFWHG WR W
HQWHU WKH FDVH VH(QWHULWKH3DVVZRUG SDVVZR

FRQILUP LW E\ SUHVVLQJ
7KH EDODQFH VRIWZDUH DXWRPDWLFDOO\ JXLGHV
SDUDPHWHUV VXFK DV <(6121(/,3$7286(7KH
SDUDPHWHU YDOXHV KDYH GHIDXOW VHWWLQJV VV
EH FKDQJHG E\ WKH XVHU DF&RQJLQWKHWKHU C
SDUDPHWHU &+$11(/ $872! LI VHOHFWHG6HWWLQJ6 LQVW
EDODQFH ZLOO DXWRPDWLFDOO\ FRQQHFW WR WK
,W FKHFNV ZKHWKHU WKH FKDQQHO WKDW WKH UR
FKDQJHG ,I WKHUH KDV EHHQ D FKDQJH WKH PRG
WKH QHZ URXWHU FKDQQHO 7KLV RSWLRQ HLPLQ
VHWWLQJV LQ WKH)LOH EDODQFH ZKHQ WKH URXWHU DX
FKDQJHV FKDQQHOV
7KH EDODQFH UHWXUQV WR3WKH6SODVK3DUDPHWHU GLVS
1(7:25.!
:KHQ \RX VHOHFW D QHWZRUN DQG HQWHU WKH SD
DXWRPDWLFDOO\ FRQQHFWV WR WKH QHWZRUN
*R WR WKH SDUDPHWHU3SDUDPHWHU6DQG LQ WKH GHVFULSWLR
SDUDPHWHU WKH PHVVDJH &211(&7,9,7<! LV GLVS
WKDW WKH EDODQFH LV WU\LQJ WR FRQQHFW WR
HQWHUHG
:KHQ WKH EDODQFH FRQQHFWV ZLWK :L)L WKH ZR

&211(&7DQG DOVR DW WKH WRS RI WKHZEDOODQFH
VKRZ
,I WKH EDODQFH FDQQRW FRQQHFW WR WKH QHWZ
LQ &211(&7,9,7<! LW LV OLNHO\ WKDW QHWZRUN
LQFRUUHFWO\ HQWHUHG
(QVXUH WKDW WKH VHWWLQJV DUH FRUUHFWO\ HQ
MRLQLQJ WKH QHWZRUN
,I WKLV IDLOVXFFHVVIXOSDVVZRUG YLFH UHSUHVHQWDWLYH

19. PERIPHERALS

7KH HPQ3X(5,3+(5$/6 WR EH IRXQG LQ WKH PHQX 3DUDPH

JHW DFFHVV E\ SUHVVLQJ
,Q WKH PHQX WKHUH LV D OLVW RI GHYLFHV ZKLFK FD

19.1.Computer

,Q WKH VXE&20383(5 \RX VKRXOG VHOHFW D SRUW WR Z
ZLWK WKH IWZDUH HQDEOHV FRPPXQLFDWLRQ ZLWK WKH E

19.1.1. Port for computer connection

3URFHHGXU

SUHVV EXWWRQ
HQWHU WKH3H P(H9Q&X(6!
DQG WKHQ HQWHU 3L &P2H0G8X7J5!RXS
VHW WKH EDODQFH SDUDPHWHUV UHODWHG W
FRPSXWHU
3 3257WR ZKLFK WKH FRPSXWHU LV WR E

$FFHVVLEOH RSWLRQV
COM1 RUCOM2 ±56 SRUWR ZKLFK WKH FRPSXW
FRQQHFWHG
USB WH6 %8 6%SRUW WR ZKLFK WKH FRPSXWH
WIFI ±:,), SRUW

19.2.Printer

,Q WKH VXE0HQX,QSXW WKH EDODQFH¶V XVHU KDV D SRVVLE

DQG GHYLFH WR ZKLFK WKH GDWDEDVH RXWSXW VKRXOG EH SUHVH
FRQWHQW RI WKH GDWD EHLQJ WUDQVIHUUHG WR WKH
*/3!

3URFHGXUH

SUHVV EXWWRQ
HQWHU WKH PHQX&(6!
DQG WKHQ HQWHU3LQ3HQ7XURXS
VHW WKH EDODQFH SDUDPHWHUV UHODWHG W
SULQWHU
3 3257!WR ZKLFK WKH SULQWHU LV WR EH

$FFHVVLEOH RSWLRQV
COM1 RQCOM2 ±56 SRUWWR ZKLFK WKH SULQWHU
USB WHS $ 8±6 %SRUWWR ZKLFK 3&RUSUHQWHUV
FRQQHFWHG
WIFI ±,), SRUWZKLFK FDQ VHSHGDWDZURH
PDQXIDFWXUHU'HS EH\ J:,1 PHDVXUHPHQW RSHQH
FRPSXWHUQHFWHG WR W,KH EDODQFH YLD
USB flash drive ±86%RUWWS $ WR HZKLFKDQDOHPRU\
GULYH LV FRQQHFWHG
USB PC ±86%RUWWS WR ZKLFK WKH FRPSXWHU ZL
VRIWZDUH E\ 5$':$* LV FRQQHFWHG H J :,1 P

Example of the measurement printout is described in the PRINT-OUTS section.

$GGLWLRQDO\ WKH XVHU FDQ VHQG D FRQWURROLQJ
SULQWHU HLWKHU DW WKH EHJLQ3UL(QJ!RUWDW WKH HQ
3 68)),;! 6HQGLQJ WKHVH FRGHV DOORZV WR FRQ
DQG DFWLRQV FDUULHG RXW DW WKH EHJLQQLQJ DQG
WKH EDODQFH WR WKH SULQWHU

7KLV IXQFWLRQ ZLOO EH PRVW IUHTXHQWO\ XVHG WR
SDJHDR$SULQWRXW VHQW E\ D EDODQFH DW WKH EHJLQ
HQDEOLQJ WKH FURS RI D SDSHUHLSQU(3RVEUSULQWHU
DXWRFXWWHU EODGH DW WKH HQG
35(),;! DQG 68)),;! SDUDPHWHUV VHWWLQJ WKH HQ
VHQW IURP EDODQFH H J FDOLEUDWLRQ UHSRUWV G
KHDGHRWHU3DSHUGLQWRXW

&$87,21
,W PXVW EH UHPHEHUHGWKDWDFWLRQV DQG 68)),;!
SDUDPHWHU FRQWURO HVFRGH LQ VHQGLQJ WKH FRGH

XVHU ZLWKRXW SURQWLRXW +($'(5 */3 35,17287
)227(5 DQG EHURSSHG XQGHUQHDWK WKH)227(5 WKH
FRPPDQG VKRXOG EH LQVHUWHG RQO\ IRU)227(5 VHWW
ZLWK(! YDOXH SDSHU FURS IRU (3621 SULQWHU ,Q
FRPPDQG PXVW UHPDLQ HPSW\

7R HQVXUH FRUUHFW FRRSHUDWLRQ RI WKH EDODQFH Z
GLDFULWLFDO VLJQV RI D JLYHQ OZKLFKHEHLVWWRQV PLV
JLYHQ SULQWHU PXVWWEHFXRVHQGLQ\FRGH S
VHQW SULQWRXW PXVW EH DFFRUGDQW ZLWK D FRGH SD
$FFRUGDQFH RI D FRGH SDJH PD\ EH REWDLQHG LQ WZR

- VHWWLQJ WKH ULJKW FRGH SDJH LQ WKH VHWWLQJ PDQXDOO\ XVW EH DFFRWKHQSWLZLWRXW FRGH SDJH 1250 FRGH SDJH IRU 32/,6+ &=(&+ 125281RU5,$1 (1*/,6+ *(50$1 63$1,6+)5(1&+ ,7$/,$1 RU 785.,6+
- VHQGLQJ WKH FRQWUJE0W F G €0 FUJE00 0 WK

x 68)),; 1D564108 SDSHUURRU (3621 SULQWHUV H
ZLWK DQ DXWR FXWWHU EODGH

,I RQ WKH SULQWRXW LQ WKH SODFH RI [HJ WR
YHUWLFDO EODQFHV WKDQ 3 35(),;! SDUDPHWHU V
IURP FRGH SDJH FRGH RI 1B5208 8,QVLJQLFDQW EDWH WKH
35(),;! SDUDPHWHU VHWWLQJ VKRXOG EH DV IROORZV
x 35(),;1B742D FRGH SDJH DQG 8. VLJQV FKDUW

&RQWURO FRGHV IRU H[DPSOH FRGH SDJHV

Control code	Page or other command
% '	FRGH SDJH
%	FRGH SDJH
%	&RGH SDJH
%	8. VLJQV FKDUW
%	'(VLJQV FKDUW
'	3DSHU FURS
&	)RUP IHHG IRU 3&/ SULQWHUV

19.3.Bar code reader

7KH VXEPHQX %$5 &2'(5($'(5 LQFOXGHV WKH EDODQFH VHW
FRRSHUDWLRQ ZLWK WKH EDU FRGH UHDGHU

3URFHHGXU

SUHVV EXWWRQ
HQWHU WKH PHQX&(6!
DQG WKHQ HQWHU 3LQ%PHQX&2JURXS(5
VHW WKH EDODQFH SDUDPHWHUV UHODWHG W
FRGH UHDGHU

3 3257FKRLFH RI WKH SRUW WR ZKLFK W
WR EH FRQQHFWHG

o DFFHVVLEOH1R2S(W&LRQV &20

19.4.Additional display

7KH VXEPHQX ,7(0 $/ ',63 LQFOXGHV WKH EDODQFH VHW
FRRSHUDWLRQ ZLWK WKH H[WHUQDO DGGLWLRQDO GLVS

3 U R F HHG X U

S U H V V

20. WORKING WITH EXTERNAL DEVICES SUCH AS PRINTER OR COMPUTER

CAUTION

$ SHULSKHUDO GHYLFHV WKDW LV FRQQHFWHG WR
KDV WR EH SRZHUHG IURP WKH FRPPRQ ORZ YROW
ZLWK FRPPRQ DQWL VKRFN SURWHFWLRQ LQ D
RFFXUUHQFH LI IHUHQW SRWHQWLDOV LQ]HUR FDEO
DQG WKH EODQFH

20.2.Format of data setting

7KH PHDVXUHPHQW UHVXOW FDQ EH VHQW IURP WKH

SUHVVLQJ WKH EXWWRQ RQ WKH EDODQFH RU WKURXJK VHQGLQJ
FRPSXWHU

20.3.Format of data sent on pressing of PRINT button

CAUTION
8QVWDEOH PHDVXUHPHQW RU HUURU LQGLFDWLRQ DOODEOH IRU D Y

3UL QW RXW1 1R<0J80056>4<00480056>11<000480003>-115 >>BDC Q q 175
1 2 3

D Q W K H Q

1 – 3	4	5	6	7	8 – 16	17	18 - 20	21	22

21.2.Responses format for commands sent from computer level

2Q UHFHLSW RI D FRPPDQG WKH WHUPLQDO VHQGV IRUPDWV

;;B$ &5 /)	FRPPDQG XQGHUVWRRG DQG LQ SURJUHVV
;;B' &5 /)	FRPPDQG FDUULHG RXW
;;B, &5 /)	&RPPDQG XQGHUVWRRG EXW QRW DFFHVVI
;; B A &5 /)	&RPPDQG XQGHUVWRRG EXW PD[UDQJH LV
;; B Y &5 /)	&RPPDQG XQGHUVWRRG EXW PLQ UDQJH LV
;; B 2. &5 /)	&RPPDQG FDUULHG RXW
(6B&5 /)	&RPPDQG QRW UHFRJQLVHG
;; B (&5 /)	$Q HUURU RFFXUUHG RQ FRPPDQG FD H[FHHGHG ZKLOH ZDLWLQJ IRU VWDWH PH OLPLW LV EDODQFH¶V FKDUDFWHULV

XX VWDQGV IRU D QDPH RI VHQW FRPPDQG
B VWDQGV IRU VSDFHV

21.3. Commands description

Zero the balance

)RUPDW RI

$FFHVVLEOH UHVSRQVHV

=B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJUHVV
=B' &5 /) FRPPDQG FDUULHG RXW
=B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJUH
=BA &5 /) FRPPDQG XQGHUVWRRG EXW PD[UDQJH H[FHHGH

=B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJUH
=B(&5 /) WLPH OLPLW H[FHHGHG ZKLOH ZDLWLQJ IR

=B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DFFH\

Tare the balance

) R U P DTWCR LF

$ F F H V V L E O H U H V S R Q V H V

7B$ &5 /) F R P P D Q G VWQRGHU D Q G L Q S U R J U H V V
7B' &5 /)

Send stable measurement result in current weighing unit

)RUPDWSW CR LF

$FFHVVLEOH UHVSRQVHV

68B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJ
68B(&5 /) WLPH OLPLW H[FHHGHG ZKLOH ZDLWL
68B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DFI

68B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJUHV
0$66)5$0(UHVSRQVH LV PDVV YDOXH LQ FXUUH

)UDPH IRUPDW

6	8	VSDFH	VWDE PDUN	VSDFH	FKDUDFWHUVSDFH			XQLW	&5	/)		

Example:
SUCRLF ±FRPPDQG VHQW IURP D FRPSXWHU
SU_ACRLF ±FRPPDQG XQGHUVWRRG DQG LQ SURJUHV
SU___-__172.135_N__CRLF ±FRPPDQG FDUULHG RXW
UHVSRQVH LQ PDVV YDOXH LQ FXUUHQW PHDVXULQ

Immediately send measurement result in current measuring unit

)RUPDWSW CR LF

$FFHVVLEOH DQVZHUV

68,B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DFI
0$66)5$0(PDVV YDOXHHQWQ FFHDUUXULQJ XQLW LV

)UDPH IRUPDW

@2@ 0

Switch on continuous transmission in basic measuring unit

)RUPDCWCR LF

$FFHVVLEOH DQVZHUV

& B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DF
& B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJ
0$66)5$0(UHVSRQVH LV PDVV YDOXH LQ EDVLF PI

)UDPH IRUPDW

6	,	VSDFH	VWDE PDUN	VSDFH	FKDUDFWHUVSDFH			XQLW	&5	/)		

Switch off continuous transmission in basic measuring unit

)RUPDCWCR LF

$FFHVVLEOH UHVSRQVHV

& B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DFF

& B$ &5 /) FRPPDQG XQGHUVWRRG DQG FDUULHG

Switch on continuous transmission in current measuring unit

)RUPDCW1 CR LF

$FFHVVLEOH UHVSRQVHV

&8 B, &5 /) FRPPDQG XQGHUVWRRG EXW QRW DF

&8 B$ &5 /) FRPPDQG XQGHUVWRRG DQG LQ SURJUHVV
0$66)5$0(UHVSRQVH LV PDVV YDOXH LQ FXUUHQ

)UDPH IRUPDW

6	8	,	VWDE									

23.

24. ADDITIONAL EQUIPMENT

24.1.Anti -vibration table

,W LV D YHU\ VWDEOH EDVLV ZKLFK HOLPLQ
DQG JURXQG7KH DLQHU SDUW RI WKH WDEO
SODWH ZKLFK LV D IRXQGDWLRQ IRU EDODQ

24.2.Rack for under hook weighing

7KH UDFN LV XVHG LI XQGHU KRRN ZHLJK
DSSOLHG 8QGHU KRRN ZHLJKLQJ LV QHFHV
DUH ZHLJKHG RU XQGHU KRRN ZHLJKLQJ
5DFNV DUH DOVR XVHG IRU PHDVXULQJ
VXEVWDQFHV H J IRD7KH SDFNV
VWHHO 5DFN KHLJKW LV PP

MANUFACTURER