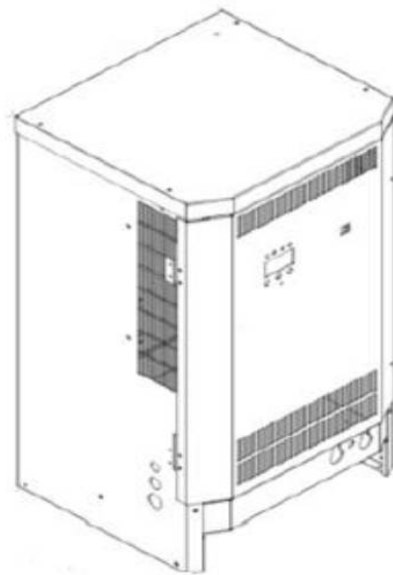
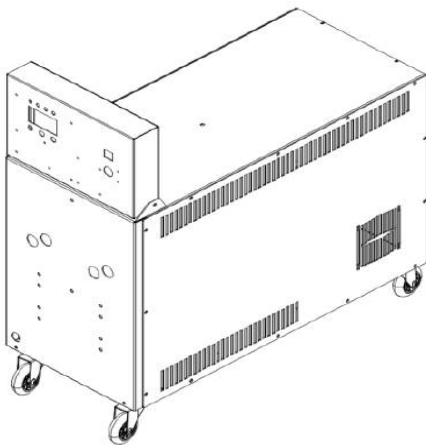


NOTES

BATTERY CHARGER

XMV



USER'S MANUAL

v.111 Jan 2023

1. START to CHARGING

1 – Connect the battery to the charger, the display shows:

```
BATTERY  
CONNECTED
```

```
22.6 V WT 500 Ah  
EL= 12     PROG.1
```

if the operator doesn't touch buttons every 15 secs the display shows:

```
Prss ENTER->to PROG  
PrssUP&DOWN->toCharg
```

if the operator press for 2 secs 'MODIFY', the operator can change the value

```
22.6 V WT 500 Ah  
EL= 12     PROG.1
```

The cursor lamps, at the value that the operator can change.

WT – battery type

500 Ah – amperehour of the battery

EL=12 – Number of elements

PROG.1 – Specific curve of charging.

The operator uses button 'SPECIAL FUNC' and 'RE-START' to change these values, for example the operator knows that there are 11 elements.

```
22.6 V WT 500 Ah  
EL= 11     PROG.1
```

And the operator can change the specific program charging curve .

```
22.6 V FL 500 Ah  
EL= 11     PROG.2
```

2 – Create new curve

Unplug the battery, or Turn OFF and Turn ON the charger without the battery connected. The display shows, the start up cycle or

BATTERY
DISCONNECTED

SYSTEM READY
MODEL / DATETIME ..

The operator press button 'RE-START' few secs and he insert a password:
press SPECIAL FUNCTION button's 4 times

EDIT PASSWORD

In this menu the operator can turn with button 'SPECIAL FUNC'

PRG N.01
SETTING

.....

PRG N.08
SETTING

If the operator want to change a existent curve or create a new curve.
See PROGRAM EXAMPLES page 12 in specific .

2. SETTING CURVE

MENU PRG N. 1 – 8 : PROGRAM SETTING CURVES

For each program, it's possible set at maximum 6 different STEP, and for each step it's possible set the TYPE of STEP (current constant, voltage constant, pause cooling), MAXIMUM TIME of the single STEP (0-65350 minute), CURRENT (constant current or minimum limit current), VOLTAGE (maximum voltage or holding voltage).

For each program, the display shows this setup page:
for example:

```
PRG N.XX  
SETTING
```

Press 'MODIFY' to modify this particular program:

```
1.A I=K T= 240m  
I=18%Ah V=2.40 V
```

PROGRAM and STEP INDICATOR-settings

1.A – 1(nr. of program [1..8]) A (step of the program [A.B.C.D.E.F])
f.e 2.C (program nr.2 and step C (third))
f.e 5.B (program nr.5 and step B (second))

TYPE of CHARGING CURVES (Programmable values)

I=K – [I=K] current constant
[V=K] voltage constant
[PAU] pause/cooling

MAXIMUM TIME of the SINGLE STEP (Programmable values)

T= 240m [DIS,5,..,65350] - 240minutes after this time the charger close the actual step and will begin the next step.

CURRENT SETTING/LIMIT (Programmable values)

I=18%Ah [DIS,1,..,99] – for every 100 Ah of the battery capacity the charger put 18 Amps.
If you have a battery of 500 Ah → 18%Ah = 18 * 5 = 90 Ampere
If you have a battery of 750 Ah → 25%Ah = 25 * 7.5 = 187.5 Ampere
If you have a battery of 1100 Ah → 10%Ah = 10 * 11 = 110 Ampere
In TYPE of CHARGING CURVES → (I=K) I value is the current constant during this step
In TYPE of CHARGING CURVES → (V=K) I value is the minimum limit of current before to end this step of program.

VOLTAGE SETTING/LIMIT (Programmable values)

V=2.40 [DIS,2.20,..,2.80] V/Cell – limit voltage for single elements.
In TYPE of CHARGING CURVES → (I=K) V value is the maximum limit of battery voltage before to end this step of program.
In TYPE of CHARGING CURVES → (V=K) V value, the charger compensation the current to hold voltage value.

It's possible to scroll between each programs using the buttons UP/DOWN, and press ENTER to modify or skip each single parameter.

Name: Standard Iula – with Initial Free Voltage WarmUp

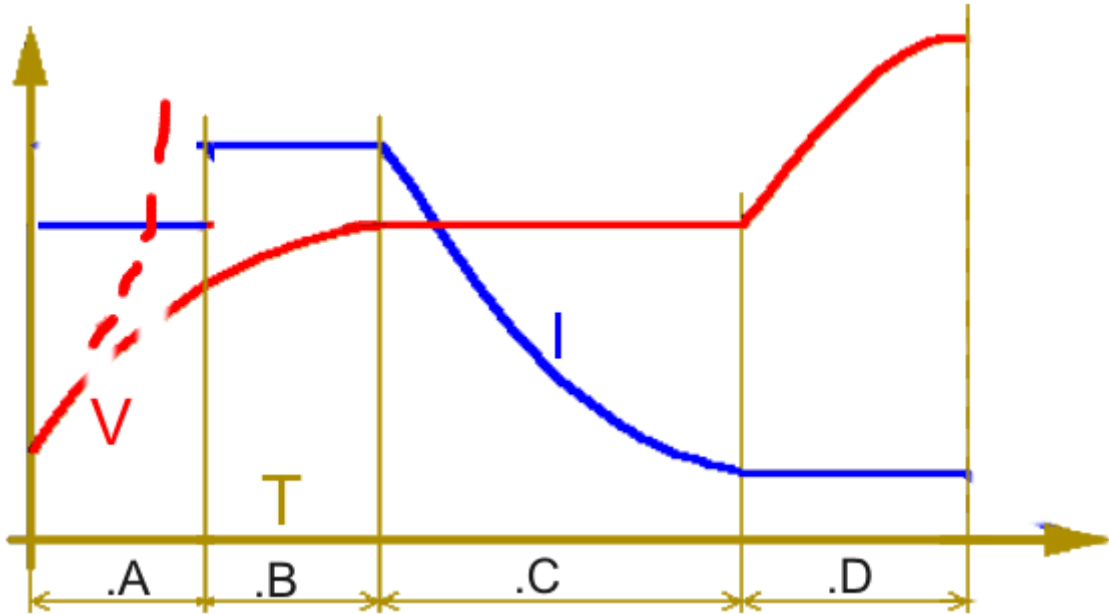
Description: Initial free voltage and low current step

Comments: Low Desulphated Battery, .., Standard battery

Program. Nr: __1__

DateTime: 01/01/2010

Operator: MANUFACTURER



notes:

pr.A	I=K	T=20 min
	I=4%Ah	V=DIS.

pr.B	I=K	T=220 min
	I=16%Ah	V=2.40V/el

pr.C	V=K	T=480 min
	I=5%Ah	V=2.40V/el

pr.D	I=K	T=180 min
	I=5%Ah	V=2.65V/el

Extra charging limited at 2.65 V/el

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:

Name: Standard lula

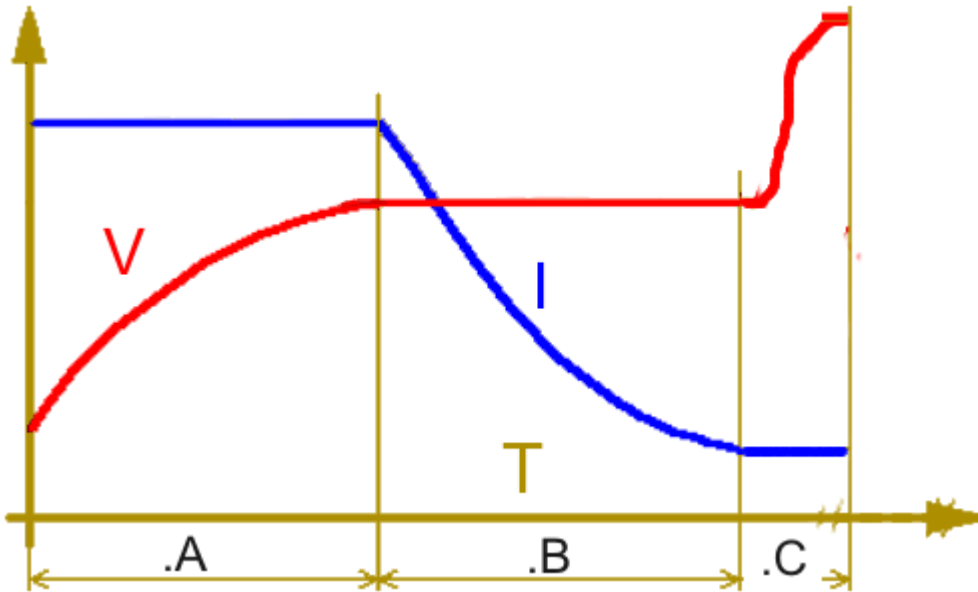
Description:

Comments: Standard battery

Program. Nr: _2_

DateTime: 01/01/2010

Operator: MANUFACTURER



notes:

pr.A	I=K	T=240 min
	I=16%Ah	V=2.40V/el

pr.B	V=K	T=480 min
	I=5%Ah	V=2.40V/el

pr.C	I=K	T=180 min
	I=5%Ah	V=2.65V/el

Extra charging limited at 2.65 V/el

pr.D	.	T=	.
I=	.	V=	.

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:

Name: Initial Free Voltage WarmUp + Standard Iula + Refresh

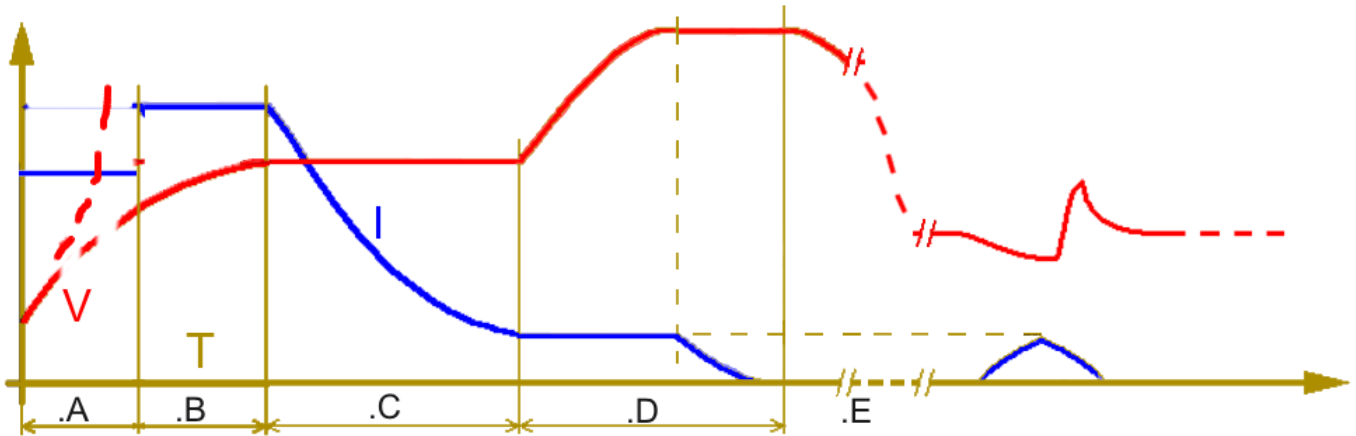
Description:

Comments: Standard battery

Program. Nr: 3

DateTime: 01/01/2010

Operator: MANUFACTURER



notes:

pr.A	I=K	T=20 min
I=4%Ah		V=DIS.

pr.B	I=K	T=220 min
I=16%Ah		V=2.40V/el

pr.C	V=K	T=480 min
I=5%Ah		V=2.40V/el

pr.D	I=K	T=180 min
I=5%Ah		V=2.65V/el

Extra charging limited at 2.65 V/el

pr.E	V=K	T=FULL
I=DIS		V=2.25V/el

Refresh at 2.25 V/el

pr.F	.	T=	.
I=	.	V=	.

notes:

Name: SOFT Desulphation

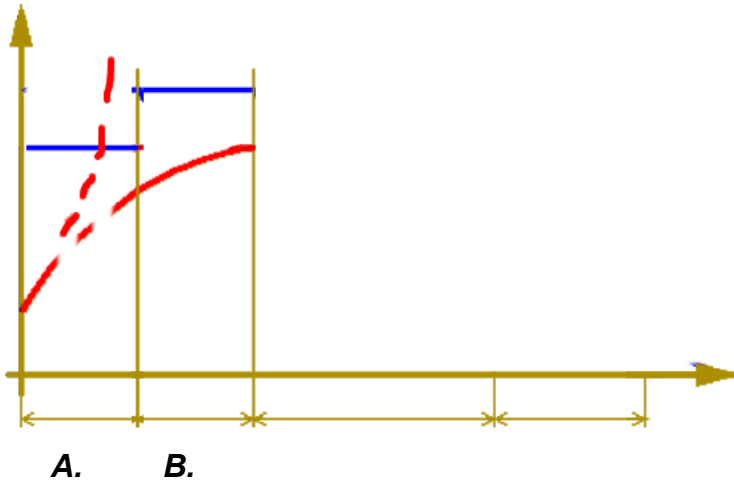
Description: _____

Comments:

Program. Nr: 4

DateTime: 01/05/2012

Operator: MANUFACTURER



notes:

pr.A	I=K	T=360 min
	I=4%Ah	V=DIS

pr.B	I=K	T=360 min
	I=6%Ah	V=2.8V/e1

pr.C	.	T=
I=	.	V=

pr.D	.	T=
I=	.	V=

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:

In case that the battery is very sulphated, you need also set the parameter:

MAX VOLTAGE
2.80 v/e1



MAX VOLTAGE
DISABLED

Name: MEDIUM Desulphation

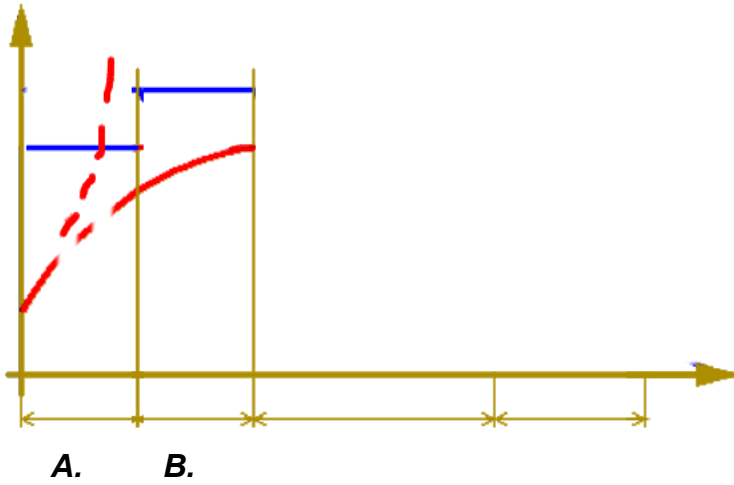
Description: _____

Comments:

Program. Nr: 5

DateTime: 01/05/2012

Operator: MANUFACTURER



notes:

pr.A	I=K	T=360 min
	I=4%Ah	V=DIS

pr.B	I=K	T=720 min
	I=6%Ah	V=2.8V/e1

pr.C	.	T=
I=	.	V=

pr.D	.	T=
I=	.	V=

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:

In case that the battery is very sulphated, you need also set the parameter:

**MAX VOLTAGE
2.80 v/e1**



**MAX VOLTAGE
DISABLED**

Name: HARD Desulphation

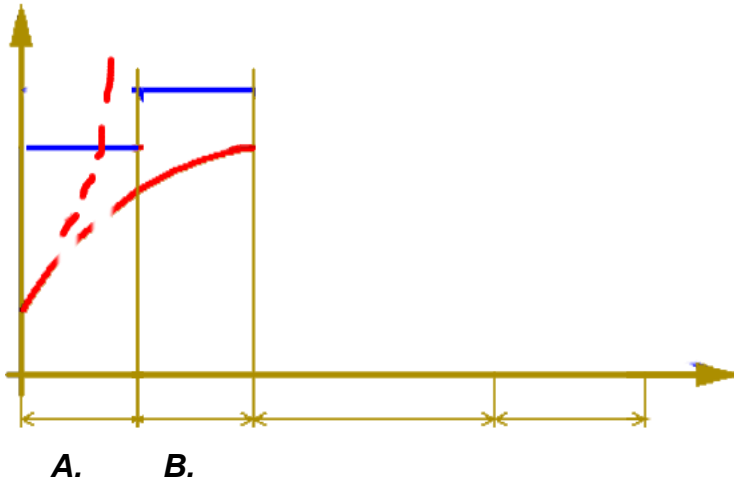
Description: _____

Comments:

Program. Nr: 6

DateTime: 01/05/2012

Operator: MANUFACTURER



notes:

pr.A	I=K	T=360 min
	I=4%Ah	V=DIS

pr.B	I=K	T=1080 min
	I=6%Ah	V=2.8V/e1

pr.C	.	T=
I=	.	V=

pr.D	.	T=
I=	.	V=

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:

In case that the battery is very sulphated, you need also set the parameter:

MAX VOLTAGE
2.80 v/e1



MAX VOLTAGE
DISABLED

Name: MEDIUM Desulphation + Cooling + Standard Charging

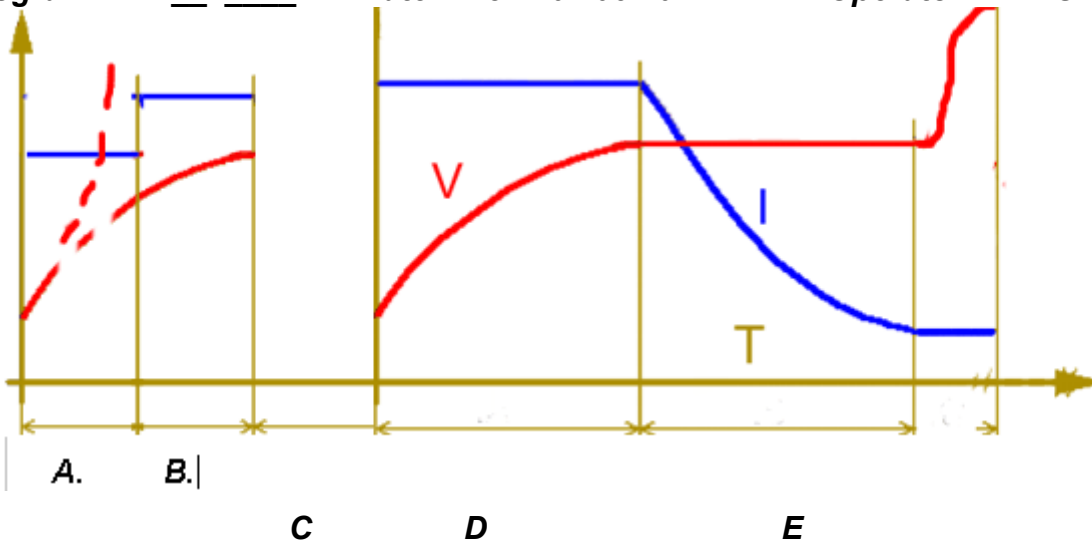
Description: _____

Comments:

Program. Nr: 7

DateTime: 01/05/2012

Operator: MANUFACTURER



notes:

pr.A	I=K	T=360 min
	I=4%Ah	V=DIS

pr.B	I=K	T=720 min
	I=6%Ah	V=2.8V/el

pr.C	PAU	T=240 min
	I=DIS	V=DIS

cooling_4 hours

pr.D	I=K	T=220 min
	I=15%Ah	V=2.4V/el

pr.E	V=K	T=240 min
	I=5%Ah	V=2.4V/el

pr.F	.	T=	.
	I=	V=	.

notes:

In case that the battery is very sulphated, you need also set the parameter:

MAX VOLTAGE
2.80 V/el



MAX VOLTAGE
DISABLED

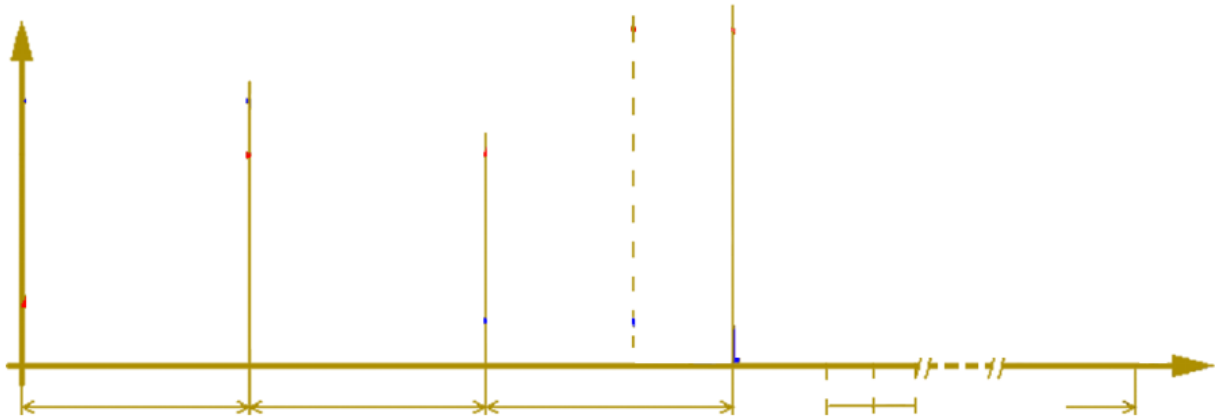
NOTES:

Name: _____

Description: _____

Comments: _____

Program. Nr: _____ DateTime: _____ Operator: _____



notes:

pr.A	.	T=	.
I=	.	V=	.

pr.B	.	T=	.
I=	.	V=	.

pr.C	.	T=	.
I=	.	V=	.

pr.D	.	T=	.
I=	.	V=	.

pr.E	.	T=	.
I=	.	V=	.

pr.F	.	T=	.
I=	.	V=	.

notes:
