

USER'S OPERATING MANUAL FOR DATA LOGGER



AI-logger
(96 X 96)

SPECIFICATIONS:

1.DISPLAY TYPE:
16X2 YELLOW LCD

2.INPUT:

Available Units : Refer table (Table NO.1)

RESOLUTION : 0.1/0.01/0.001/1.

3.RELAY OUTPUT:

Contact Type : N/O,CM,N/C
Contact Rating : 5A @ 250VAC or 30 VDC
Life Expectancy : >5,00,000 operations
Isolation : Inherent

4.FUNCTION:

Output1/Output2 : Alarm outputs

5.POWER SUPPLY:

Supply Voltage : 90-270VAC,50-60hz
Consumption

6.PHYSICAL:

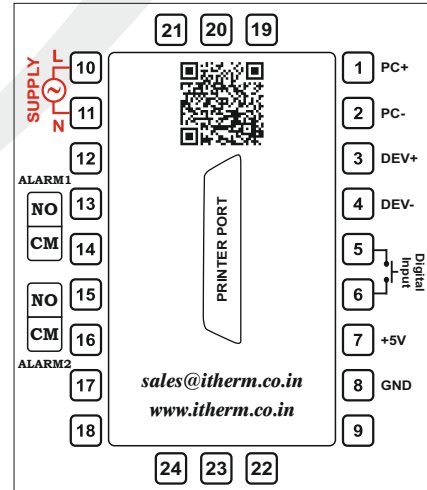
Housing : ABS plastic

7.MEMORY CAPACITY : Up to 2.50lakh records

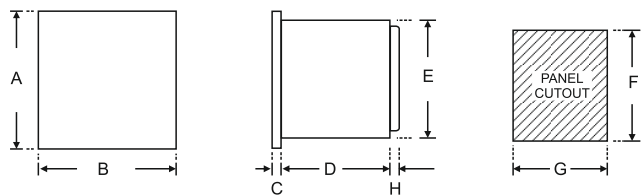
8.PRINTER CONNECTIVITY : Available through RS-485 connector

9.COMMUNICATION : MODBUS protocol is used

BACK PLATE:



DIMENSIONS:







Dim	A	B	C	D	E	F	G	H
Model								
I-LOG	96	96	8	110	43	44	44	9

INDEX

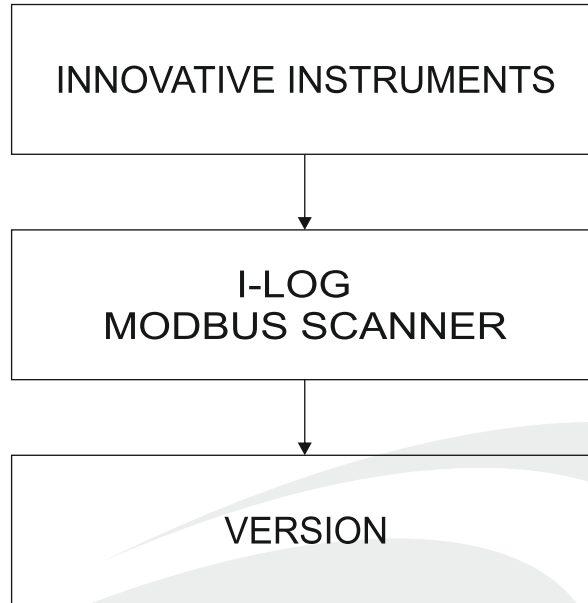
PARAMETER	PAGE NO:
1. Setup	3
1.1 Front Panel Keys	3
1.2 Power On screen	4
1.3 System configuration	5
2. Communication setting	6
2.1 Flow Chart	6
2.2 Description	6
3. RTC setting	8
3.1 Flow Chart	8
4. SCAN devices	9
4.1 Flow Chart	9
4.2 Description	11
5. Data logging	12
5.1 Flow Chart	12
5.2 Description	14
6. Printer Setting	15
7. Memory Status	17
8. Passwod Setting	19

1. SETUP

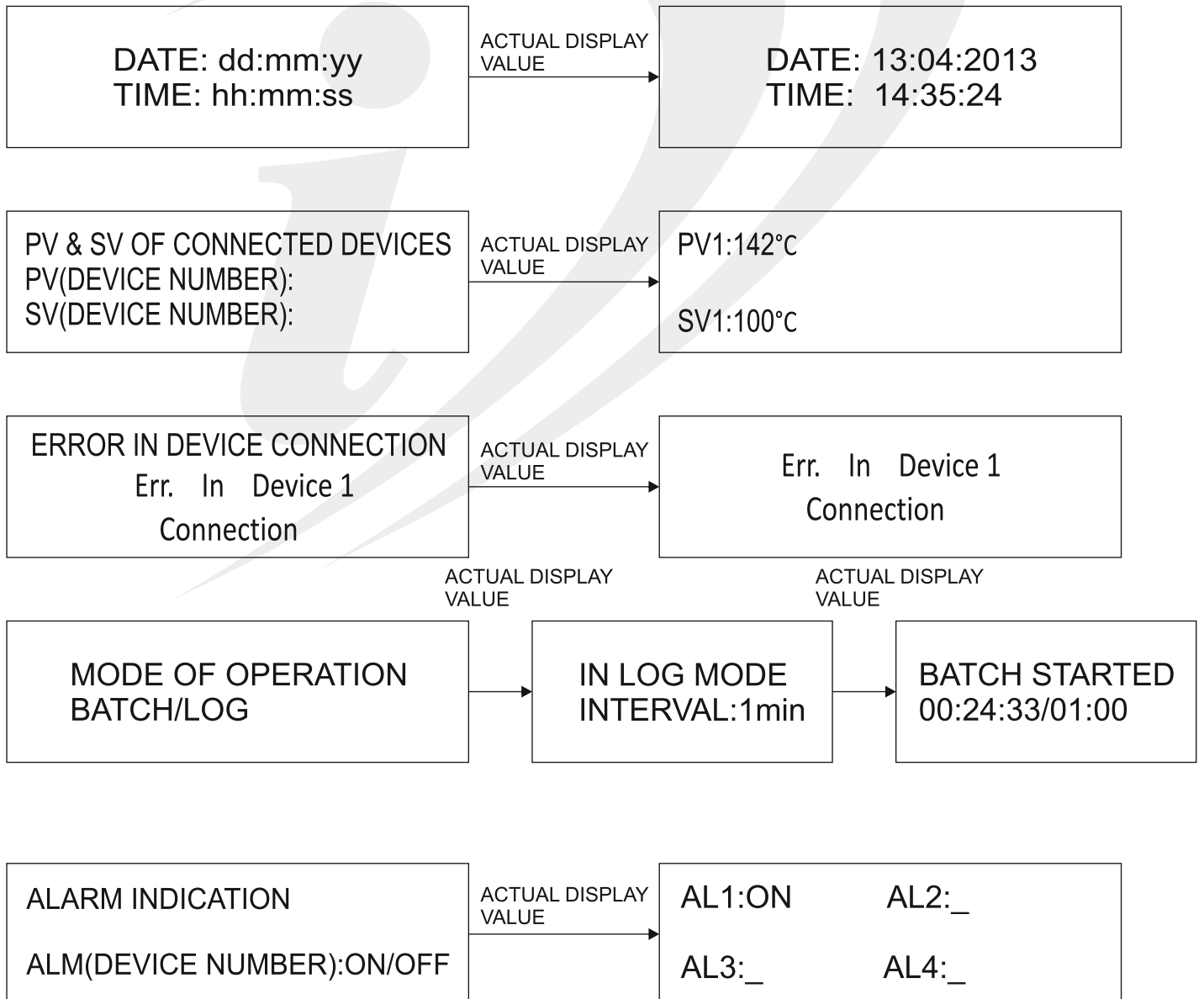
1.1 FRONT PANEL KEYS:

Symbol	Key Name	Use
	SET	It is used to to enter in any menu it is also used to store the changes.
	SHIFT	It is used to shift the cursor and It is also used as a back button
	UP	It is used to scroll up.
	DOWN	It is used to scroll down.
	PRINT	Refer sec.2.5
	BATCH START	It is used to start the batch from front panel of the instrument.

1.2 POWER ON SCREEN

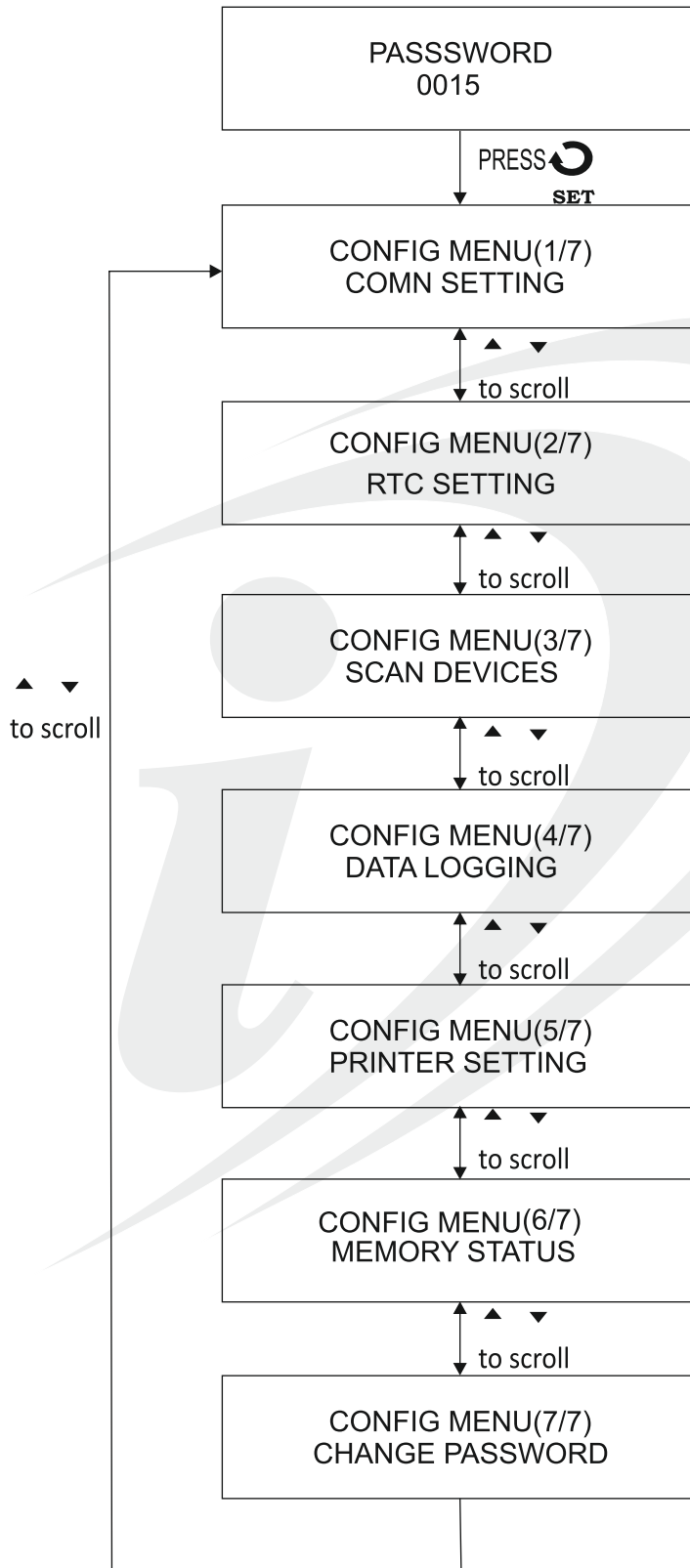


RUN MODE SCREEN



1.3 SYSTEM CONFIGURATION

To Enter in Main Menu press **SHIFT & SET** key simultaneously for 3 seconds
after doing this following screen will appear



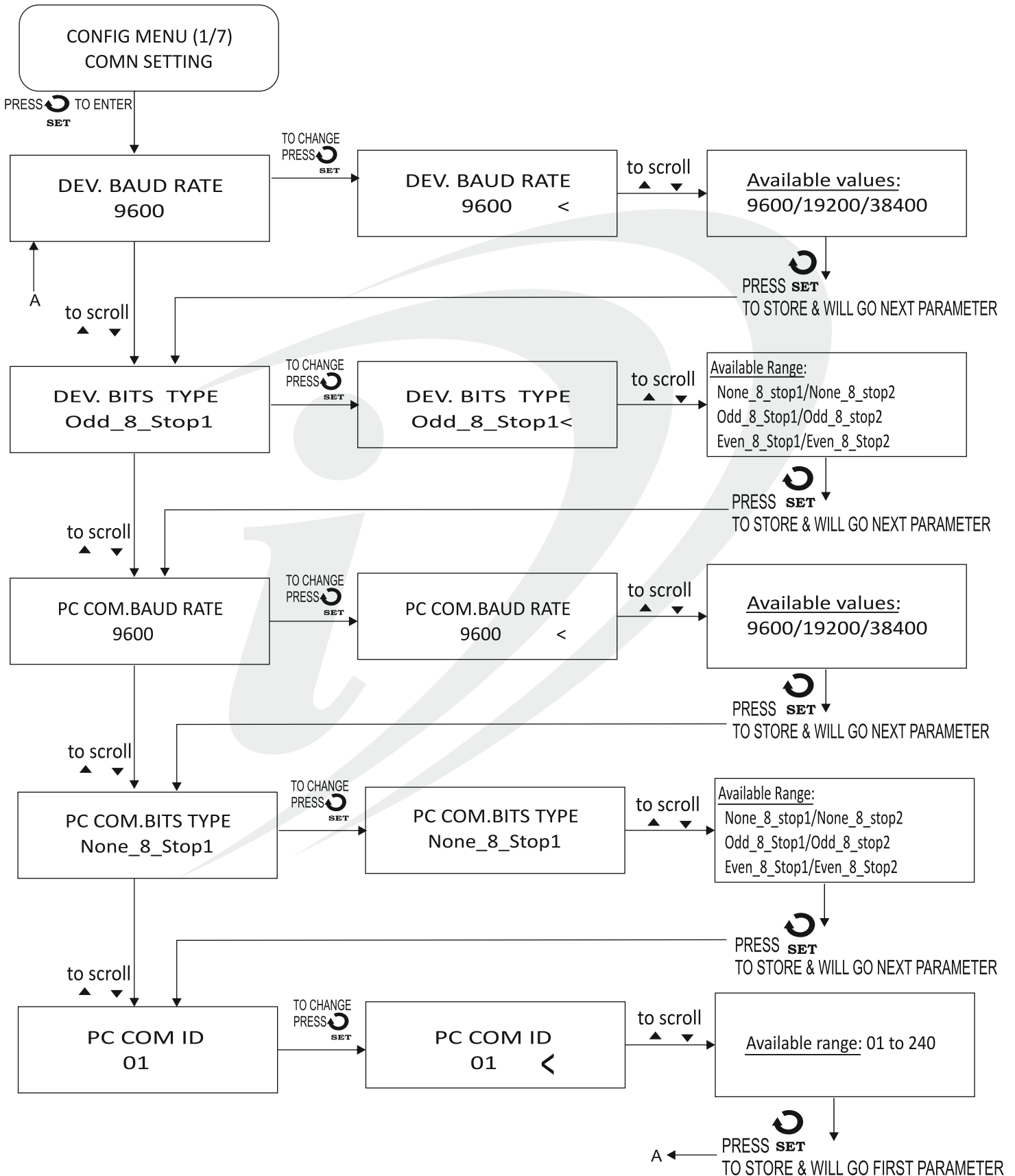
2.1 COMMUNICATION SETTING (Flow Chart)

To Enter in this menu press SHIFT & SET key simultaneously after that enter appropriate password after doing this following screen will appear.

Screens with '<' indicates that change is allowable.

If you just want to see all the settings(Don't want to change) use ▲ ▼ to have a look.

If you want to see/keep the previous value of the parameter then press shift key for 3 seconds so that '<' will get removed.



2.2 COMMUNICATION SETTING(Descripton)

Basically used for the communication setting between devices & data logger and between data logger &PC simultaneuosly. There are different parameters available which are as follow.

Parameter	Description	Range	Default Value
DEV. BAUD RATE	It is used to define Baud rate between Device & Data logger To carry out data transfer.	9600/19200/38400	9600
DEV. BITS TYPE	It is used to define Bit Type between Device & Data logger To carry out data transfer.	None_8_stop1/None_8_stop2 Odd_8_Stop1/Odd_8_stop2 Even_8_Stop1/Even_8_Stop2	Odd_8_stop1
PC COM. BAUD RATE	It is used to define Baud rate between Data logger & PC To carry out data transfer.	9600/19200/38400	9600
PC COM. BIT TYPE	It is used to define Bit Type between Data logger & PC To carry out data transfer.	None_8_stop1/None_8_stop2 Odd_8_Stop1/Odd_8_stop2 Even_8_Stop1/Even_8_Stop2	None_8_stop1
PC COM ID	In this we will define the number of data loggers which are going to be connected with the pc.	0 to 240	01

4.2 SCAN DEVICES(DESCRIPTION)

It is used to define number of devices which are connected to the data logger.

The number of devices that can be connected maximum up to 4.

Parameter	Description	Range	Default Value
DEVICE (X) ID	In this we are going to set the device ID of the connected device to data logger for identification of that device.	1 to 240	-
DEVICE (X) MAKE	In this we are going to specify make of the connected device	I-therm, Taie, Vertex, Fuji, Eurotherm, West	TAIE
PV (X) RESOLUTION	It is used to set the resolution of the data logger display in order to display exact reading	1/0.1/0.01/0.001	0.1
PV (X) UNIT	It is used to set the unit in data logger in order to display the quantity being measured by the device connected to the logger	Refer Table:1	Centigrade °C
DEV. (X) ALARM O/P	It is used to enable the alarm output.	Enable/Disable	Disable
DEVIATION1 SP	It is used to provide 1st alarm deviation.	-9.999 to 9999	0
DEVIATION2 SP	It is used to provide 2nd alarm deviation	-9.999 to 9999	0
HYSTERISIS(X) SP	Depending on the value of the hysteresis alarm will be acknowledged based on the current PV	0.001 to 99	0.1

Table No.1(Available Units):

Options	Description
°C	Degree Centigrade
°F	Degree Farenheit
°K	Degree Kelvin
°EU	Engineering Units
%	Percentage
Pa	Pascals
MPa	Mpascals
KPa	Kpascals
bar	Bar
mbar	Milli bar
psi	PSI
kg/sq.cm	kg/sq.cm
mmH2O	mm water usage
inH2O	inches water gauge
mmHg	mm mecury
Torr	Torr
liter/hr	Litres per hour
liter/min	Litres per minutes
%RH	% Relative Humidity

Option	Description
A	Amps
mA	Milli amps
mV	Milli volts
ohms	Ohms
ppm	Parts per million
rpm	Revolution per Minute
mSec	Milli seconds
Sec	Seconds
min	Minutes
hrs	Hours
PH	PH
%PH	%PH
miles/hr	Miles per hour
mg	Milli grams
g	Grams
kg	Kilo grams
%O2	%O2
%Co2	%Co2
%CP	%Carbon
V	Volts

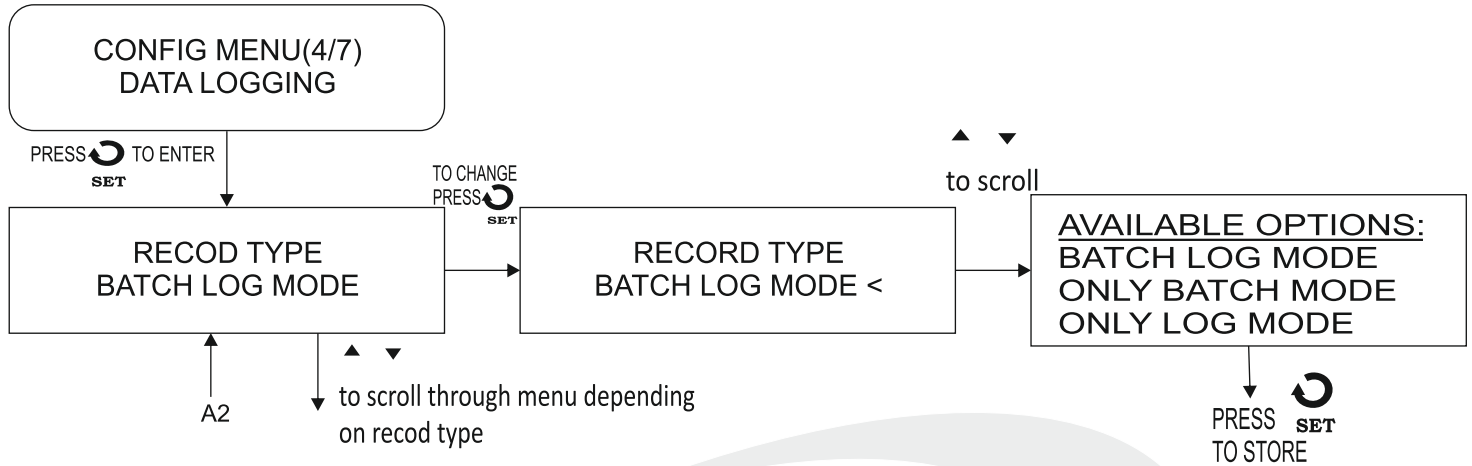
5.1 DATA LOGGING(Flow Chart)

To Enter in this menu press SHIFT & SET key simultaneously after that enter appropriate password after doing this following screen will appear.

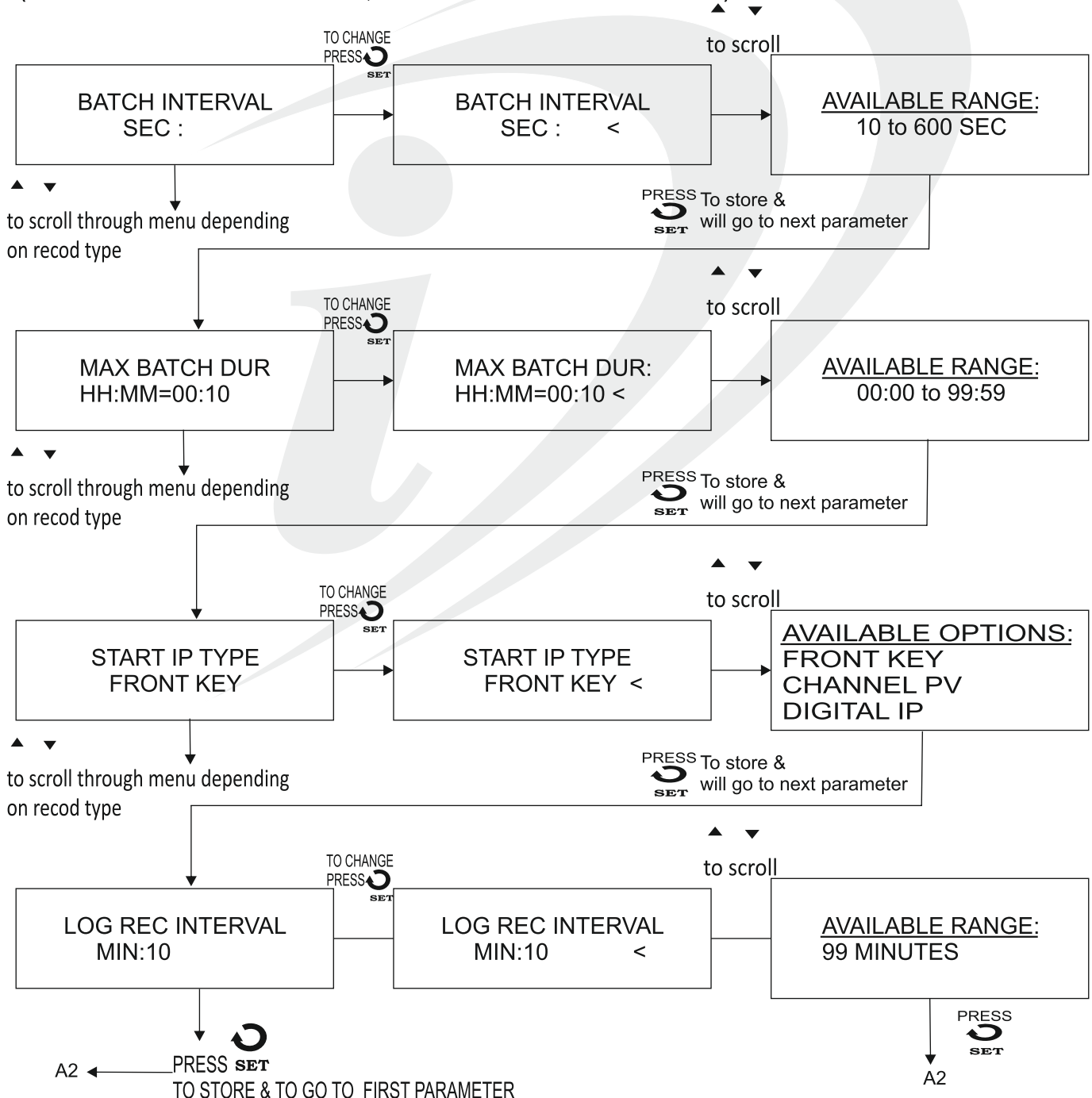
Screens with '<' indicates that change is allowable.

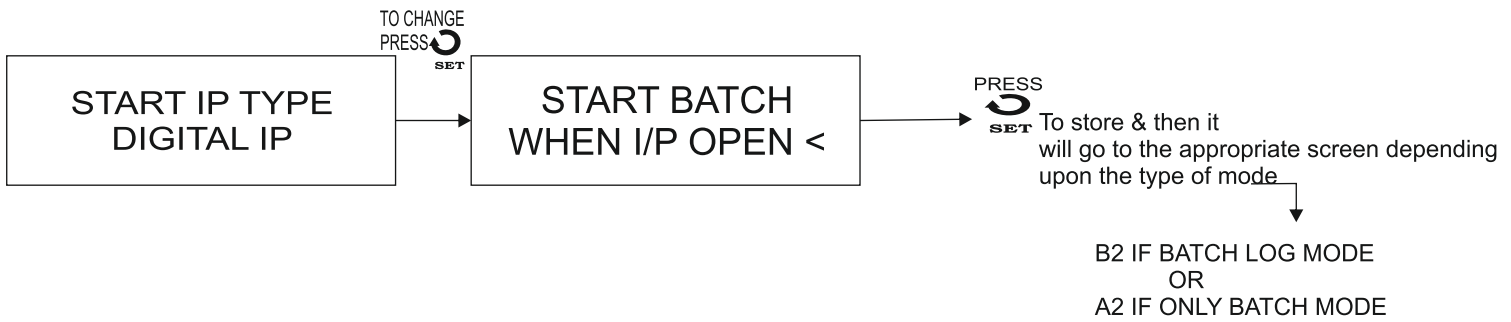
If you just want to see all the settings(Don't want to change) use ▲ ▼ to have a look.

If you want to see/keep the previous value of the parameter then press shift some time so that '<' will get removed.



(NOTE:If we select BATCH LOG MODE, SCREENS WILL APPEAR AS FOLLOW)





5.2 DATA LOGGING(DESCRIPTION)

Basically it is used to keep the track of each devices connected. There are two ways in which we are going to keep the track that is Batch and Log. BATCH MODE :In batch we are going to provide the start and end of the batch so that data is going to get logged during that time span only after that no tracking.

LOG MODE: In this we are going to log the data after specified duration of time given by us(user)

Parameter	Description	Range	Default Value
RECORD TYPE	In this we are going to select the recording method	BATCH-LOG MODE ONLY LOG MODE ONLY BATCH MODE	BATCH-LOG MODE
BATCH INTERVAL (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	It is used to specify the batch interval, based on that interval data will be tracked eg. If interval is of 10sec then data will be tracked after every 10sec till the specified duration	10 to 600 sec	10sec
MAX BATCH DUR (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	It is used to specify the duration for which batch data recording is going to be carried out	00:00 to 99:59 (HH:MM)	01:00
START IP TYPE (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	It is used to provide start and stop condition for batch data recording	FRONT KEY, CHANNEL PV, DIGITAL INPUT	FRONT KEY
FRONT KEY (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	Start and stop of the batch can be carried out by the batch key on top left of the instrument	-	-
CHANNEL PV (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	It is used to give start and stop condition based on the PV of any of the connected device.	-	-
START PV FROM (IF CHANNEL PV SELECTED)	In this based on the number of given devices, PV of that device is used as a start condition	Connected devices	Device 1
START PV SP (IF CHANNEL PV SELECTED)	Depending on current value of the PV or condition imposed on PV of the specified device start of batch takes place.	>,<	> 100.0
STOP PV FROM (IF CHANNEL PV SELECTED)	Depending on current value of the PV OR condition imposed on PV of the specified device stop of batch takes place.	Connected devices	Device 1
STOP PV SP (IF CHANNEL PV SELECTED)	Depending on current value of the PV OR condition imposed on PV of the specified device stop of batch takes place.	>,<	> 150.0
DIGITAL INPUT (IF ONLY BATCH/BATCH-LOG MODE SELECTED)	It is used to provide start and stop condition based on digital input at the back of the instrument.	WHEN IP CLOSED WHEN IP OPEN	When IP Closed
LOG INTERVAL (IF ONLY LOG/BATCH-LOG MODE SELECTED)	In this we are going to specify the log recording interval, after every specified interval data will be tracked	1 to 90 minutes	05

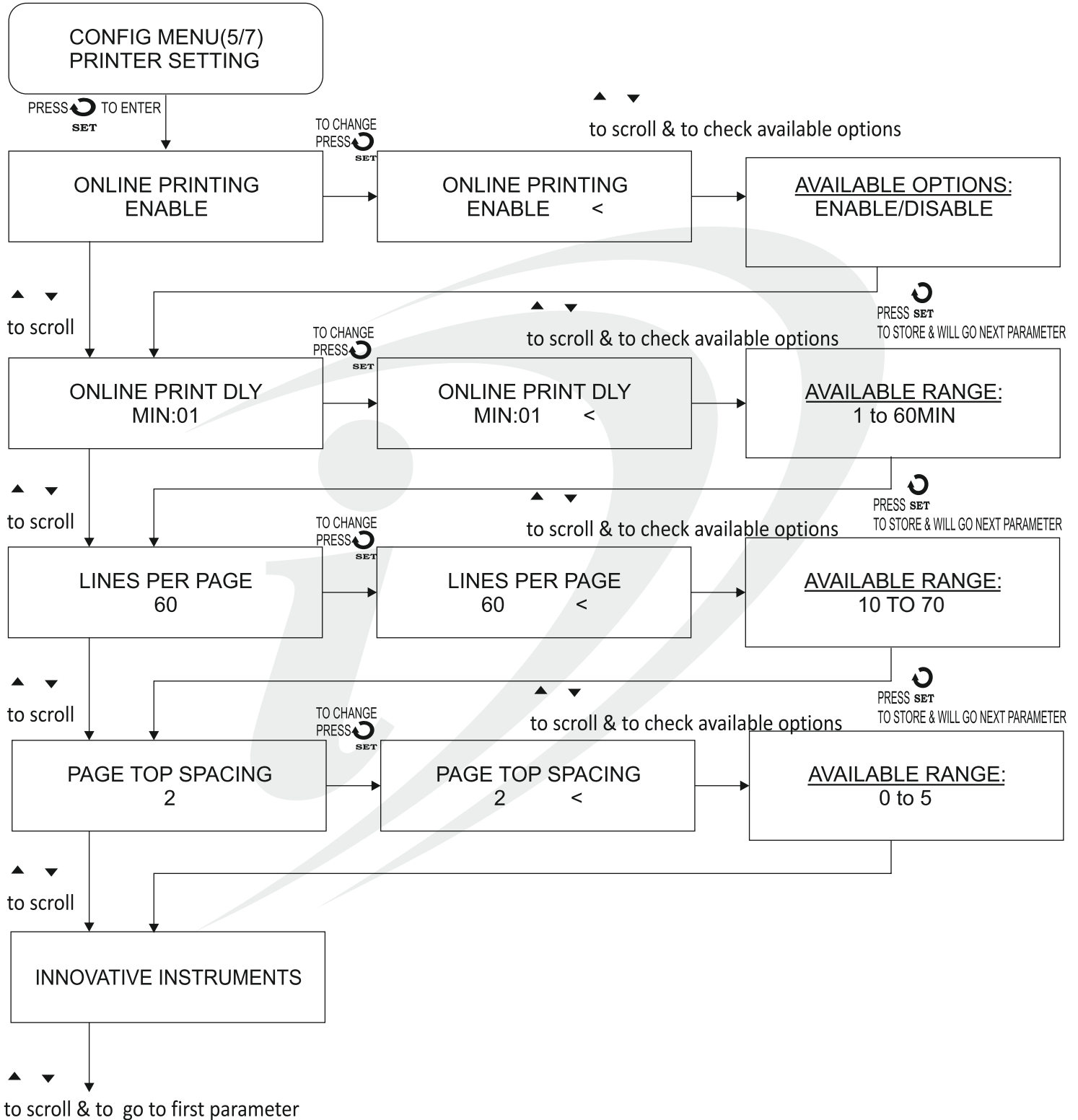
6.1 PRINTER SETTING(Flow Chart)

To Enter in this menu press **SHIFT & SET** key simultaneously after that enter appropriate password after doing this following screen will appear.

Screens with '<' indicates that change is allowable.

If you just want to see all the settings(Don't want to change) use **▲ ▼** to have a look.

If you want to see/keep the previous value of the parameter then press shift some time so that '<' will get removed.



6.2 PRINTER SETTING(DESCRIPTION)

It will provide us options to make use of a printer during the process of data logging based on our convenience. Their are following options

Parameter	Description	Range	Default Value
ONLINE PRINTING	It will allow us to do online or continuous printing of the tracked value after every specified interval of the time.	ENABLE/DISABLE	DISABLE
ONLINE PRINT DLY	In this we are going to specify the time interval used for online printing.	Available range: 1 to 60min	1
LINES PER PAGE	In this we are going to specify the number of lines that are going to get printed on the paper	10 to 70	60
PAGE TOP SPACING	In this we are going to specify the line spacing from the top while printing.	0 to 5	2
INNOVATIVE INSTRUMENTS	A name is also going to be printed on the top of the paper that can be any thing which user wants to print.		



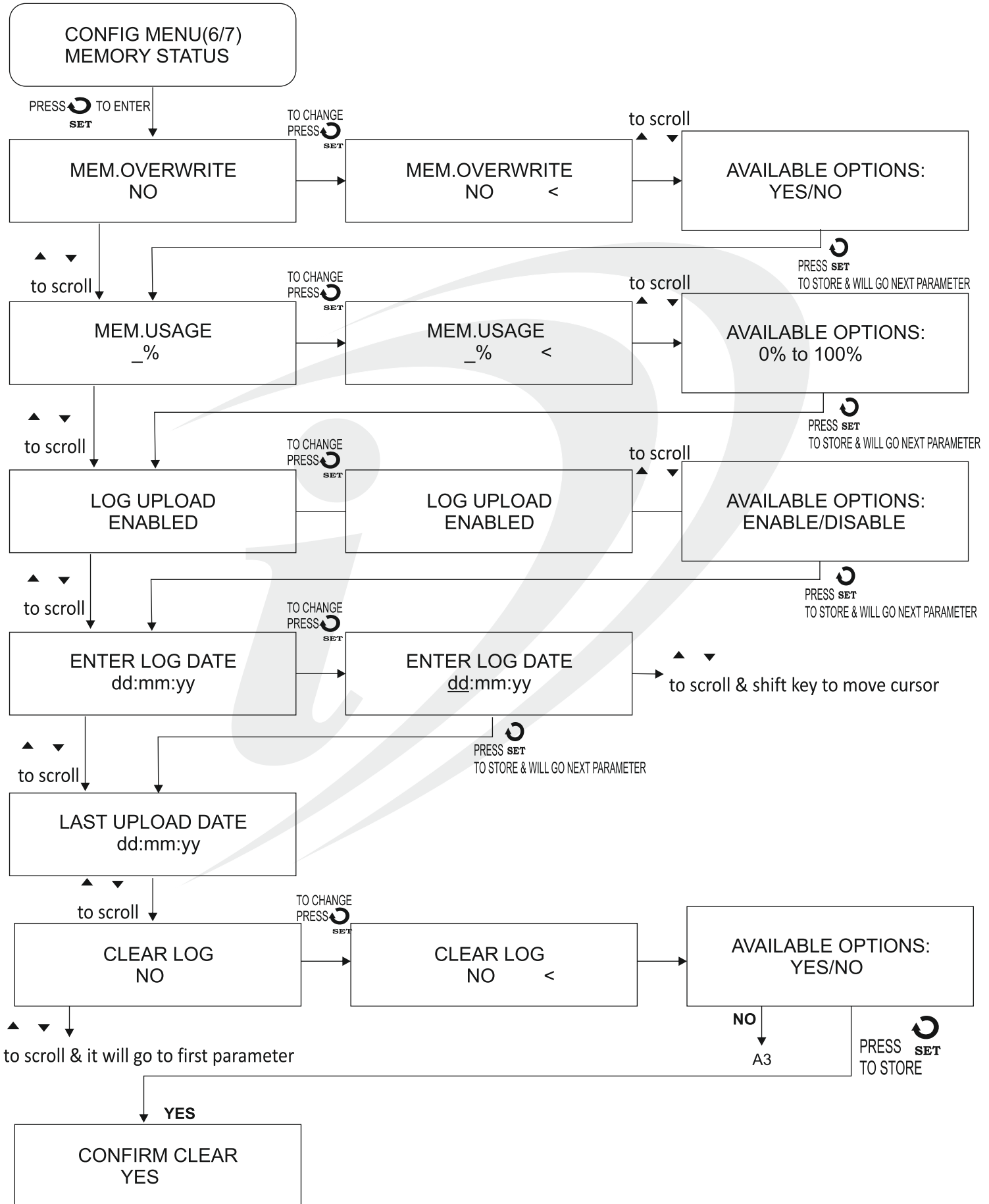
7.1 MEMORY STATUS(Flow Chart)

To Enter in this menu press SHIFT & SET key simultaneously after that enter appropriate password after doing this following screen will appear.

Screens with '<' indicates that change is allowable.

If you just want to see all the settings(Don't want to change) use ▲ ▼ to have a look.

If you want to see/keep the previous value of the parameter then press shift some time so that '<' will get removed.



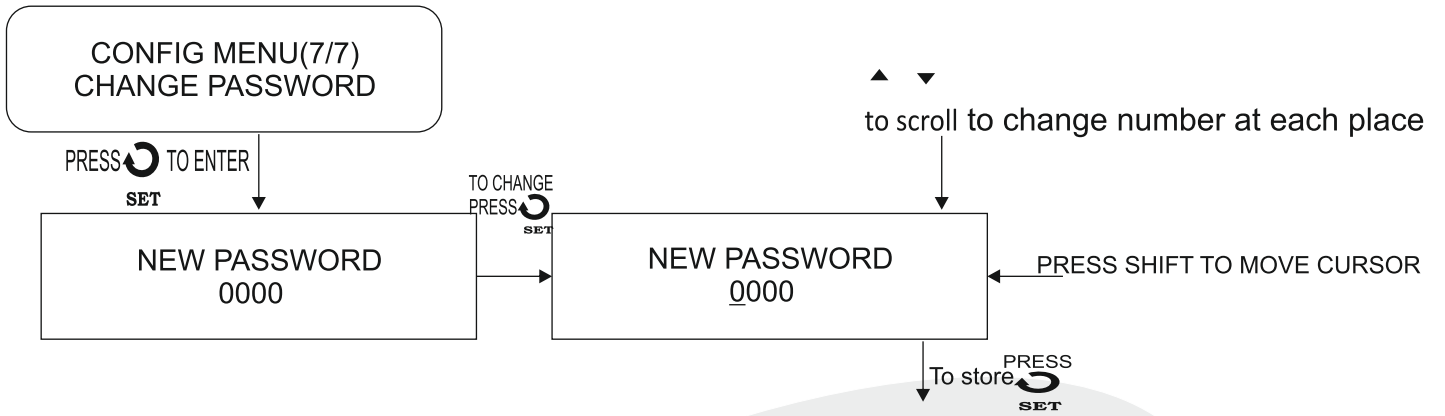
7.2 MEMORY STATUS(DESCRIPTION)

It is used to do some memory settings. Options as follows

Parameter	Description	Range	Default Value
MEM.OVERWRITE	In this we are going to decide whether we are going to overwrite on the given memory or not	YES/NIO	NO
MEM.USAGE	It will specify the overall memory usage in percentage.	0 to 100%	-
CLEAR LOG	It used to delete the stored records	YES/NO	NO
LOG UPLOAD	It will allow data logging.	ENABLE/DISABLE	ENABLE
ENTER LOG DATE	In this we are going to enter date from which we want logged data	dd:mm:yy	-
LAST UPLOAD DATE	It will show date on which last data logging carried out.	dd:mm:yy	-

8 CHANGE PASSWORD

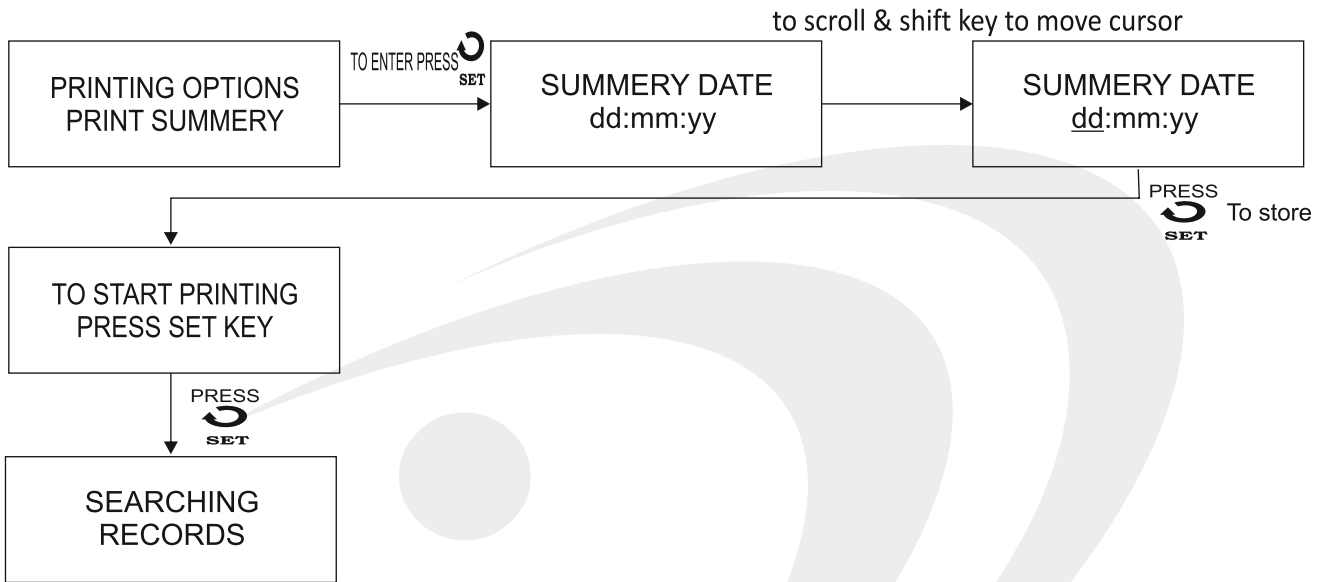
IN THIS WE CAN CHANGE THE PASSWORD WHICH WE NEED TO ACCESS MAIN MENU



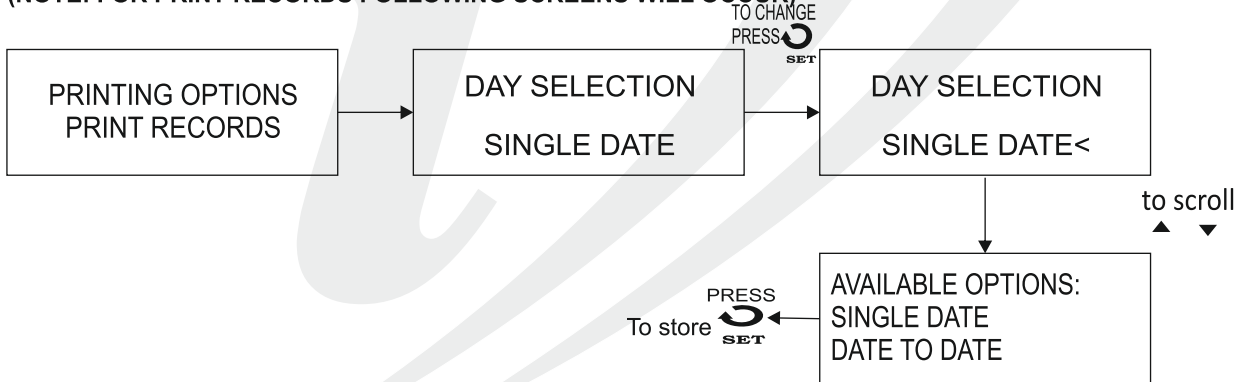
TO ENTER IN THIS MENU PRESS PRINT KEY FOR 3SECONDS



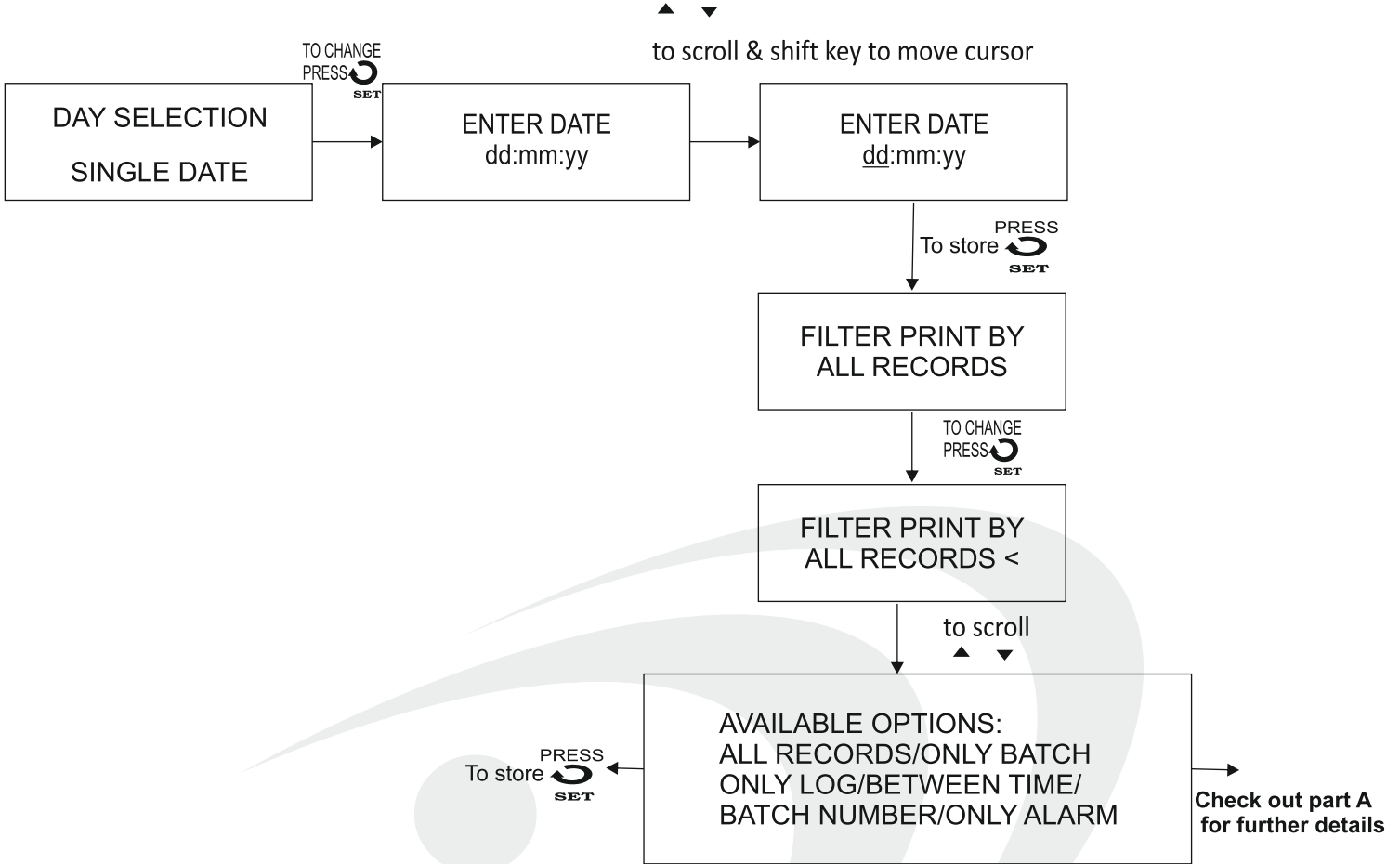
(NOTE: FOR PRINT SUMMERY FOLLOWING SCREENS WILL OCCUR)



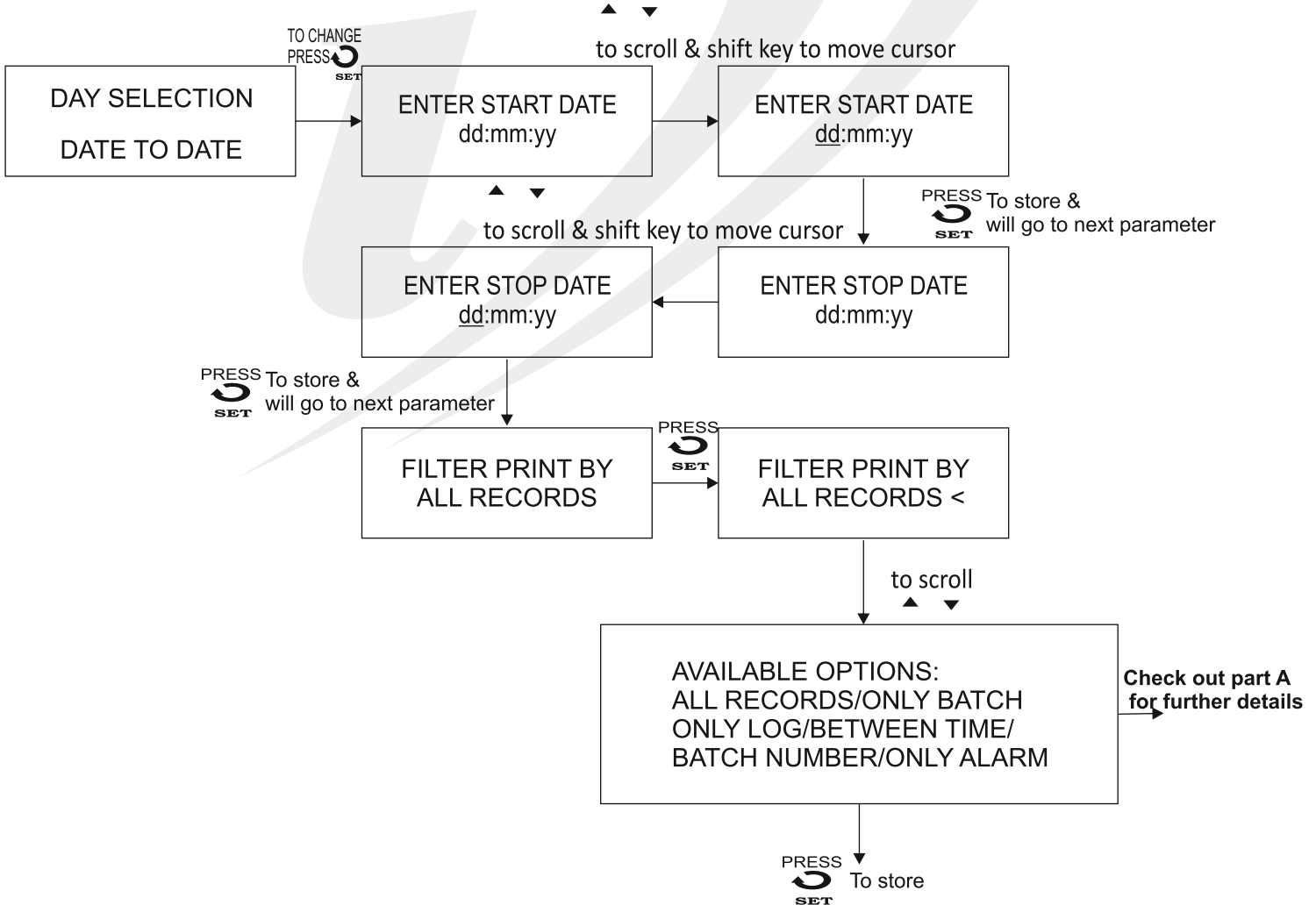
(NOTE: FOR PRINT RECORDS FOLLOWING SCREENS WILL OCCUR)



(NOTE: FOR SINGLE DATE OPTION, FOLLOWING SCREEN WILL APPEAR)

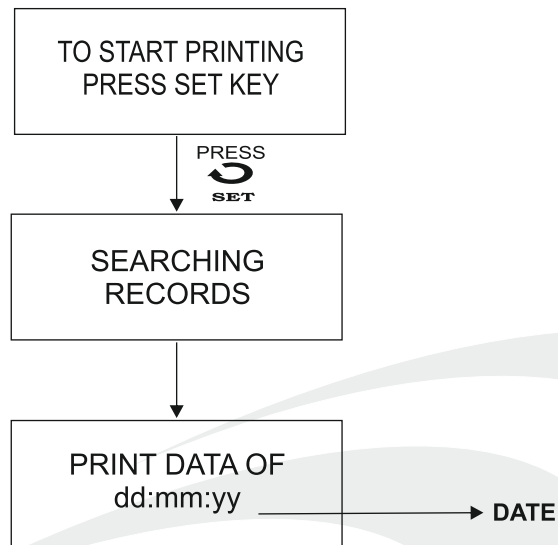


(NOTE: FOR DATE TO DATE DAY SELECTION, FOLLOWING SCREEN WILL OCCUR)

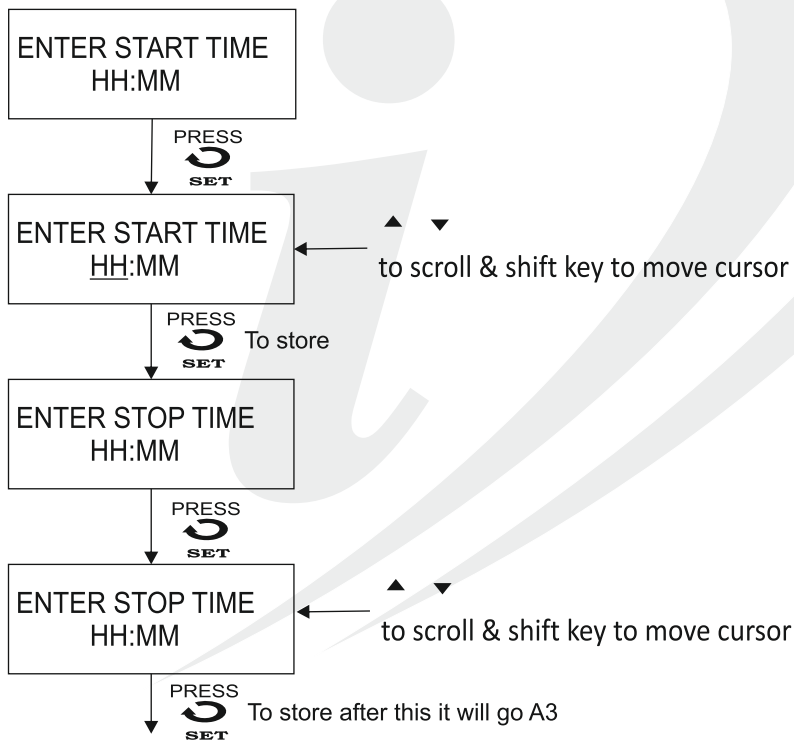


Part A

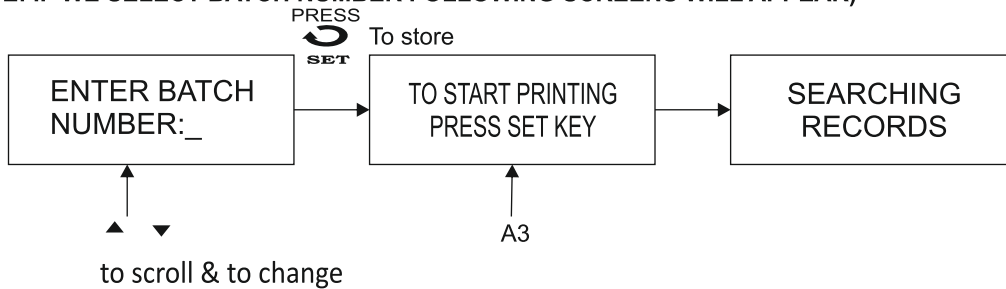
(NOTE: IF WE SELECT ALL RECORDS, ONLY BATCH, ONLY LOG, ONLY ALARM, FOLLOWING SCREENS WILL APPEAR)



(NOTE: IF WE SELECT BETWEEN TIME, FOLLOWING SCREENS WILL APPEAR)



(NOTE: IF WE SELECT BATCH NUMBER FOLLOWING SCREENS WILL APPEAR)



HOLD PRINT KEY FOR 3SECONDS YOU WILL COME ACROSS FOLLOWING OPTIONS

Parameter	Description	Range	Default Value
PRINTING OPTIONS	It will provide us facility to print our logged data based.	PRINT SUMMERY PRINT RECORDS	PRINT SUMMERY
PRINT SUMMERY	It will give you overall batch & log occurred on specified date along with their number.	-	-
PRINT RECORDS	It will print all records based on date selection.	SINGLE DATE DATE TO DATE	SINGLE DATE
FILTER PRINT BY	In this we can take prints of our records based on available options.	ALL RECORDS/ONLY BATCH /ONLY LOG/BETWEEN TIME BATCH NUMBER/ONLY ALARM	ALL RECORDS
ALL RECORDS	It will print all records i.e all the batches ,all records.	-	-
ONLY BATCH	It will print only batches for that specified date.	-	-
ONLY LOG	It will print only logged data for that specified date	-	-
BETWEEN TIME	Here we are going to give time range so that data will get printed within specified time range	-	-
ONLY ALARM	Here we will print only alarm occurrences	-	-



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