

VFC Data Logger Rollout

Justin Lam RN

Noel Jose RN

Berlinger Data logger



VFC Data loggers

- Importance
- Distribution Plan
- Support



Importance and benefit of Data Loggers

- Continuous monitoring
 - Records more than twice a day
 - Records on weekends
 - Stores temperatures
- Maintain cold chain
 - Providers are last link in cold chain
 - Be the strongest link
- CDC recommendation
 - Current recommendation from the CDC as best practice.
 - Requirement if issued from DOH
- Printout PDF
 - Easier reporting to DOH if excursion occurs
 - Accurate reporting

Distribution Plan

- Data loggers will be provided to VFC providers during 2015 and 2016 compliance site visits.
- VFC field reviewer to setup for you
- Additional training to be done during visit
- Replacing digital thermometers given to you in 2013 and 2014.
 - Keep those as backup units (new CDC requirement)

Use of data logger

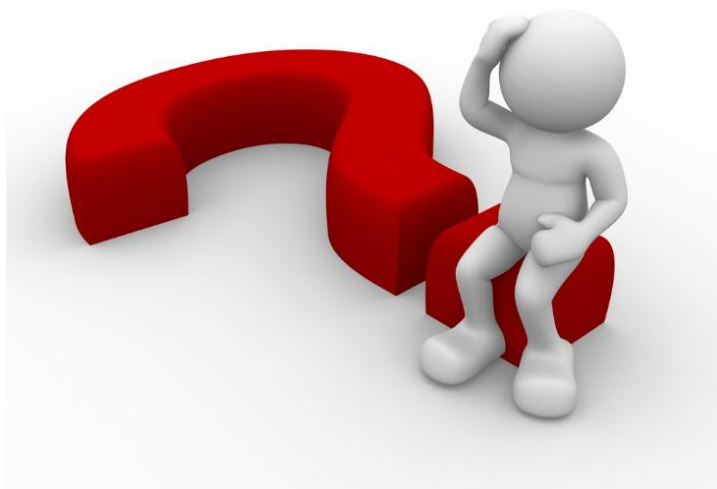
- Use the same way as the digital thermometer
- Fill in temperature logs as usual, but take reading displayed on data logger
 - Twice a day
 - Beginning and end of each work day
 - Staff initial
 - Exact time
- Report can be used to evaluate viability if an excursion takes place

Support after install

- Contact Noel or Justin for support
- Noel Jose RN
 - 808-586-8318
 - Noel.jose@doh.Hawaii.gov
- Justin Lam RN
 - 808-586-4585
 - Justin.lam@doh.Hawaii.gov
- Additional training videos available online
 - Youtube
 - Berlinger website



Questions?





Meeting Goals



- Why data loggers?
 - Can they save time & vaccines?
- Why condition probe?
 - Avoid the most common failure
- How to get started?
 - Step-by-step guide
- How to read the screen & address an alarm?
- What to do with a reports?



Evolution of vaccine temperature monitoring

Vaccines Saved

CURRENT STATE

Point of Diminishing Returns

Original Gains From Manual Monitoring

TRANSITION

COMPLETE

SCALE

START-UP



Time

CONFIDENTIAL

Evolution of vaccine temperature

monitoring

Vaccine Storage Temperature Recommendations

Vaccine(s)	Vaccine Storage Temperature	Diluent Storage Temperature	When OVEREXPOSED TO Hi & LO Temperatures Vaccines Do Not:
Diphtheria, tetanus, pertussis-containing vaccines (DTaP, DT, Tdap, Td)	35°F-46°F (2°-8°C) Do not freeze.		
Hepatitis A	35°F-46°F (2°-8°C) Do not freeze		



When OVEREXPOSED TO Hi & LO Temperatures


Vaccines Do Not:

- Taste
- Smell
- Look
- DIFFERENT

Evolution of vaccine temperature

monitoring



Vaccine Storage Temperature Recommendations

	Vaccine Storage Temperature	Diluent Storage Temperature	When OVEREXPOSED TO Hi & LO Temperatures Vaccines Do Not: <ul style="list-style-type: none"> • Taste • Smell • Look • DIFFERENT
	35°F-46°F (2°-8°C) Do not freeze.		
Hepatitis A	35°F-46°F (2°-8°C) Do not freeze		



Evolution of vaccine temperature monitoring




Vaccine Storage Temperature Recommendations

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	35°F-46°F (2°-8°C) Do not freeze.		
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Evolution of vaccine temperature monitoring

Vaccine Storage Temperature Recommendations


	Vaccine Storage Temperature	Diluent Storage Temperature	<p>When OVEREXPOSED TO Hi & LO Temperatures Vaccines Do Not:</p> <ul style="list-style-type: none"> • Taste • Smell • Look • DIFFERENT
	<p>35°F-46°F (2°-8°C) Do not freeze.</p>		

Evolution of vaccine temperature monitoring

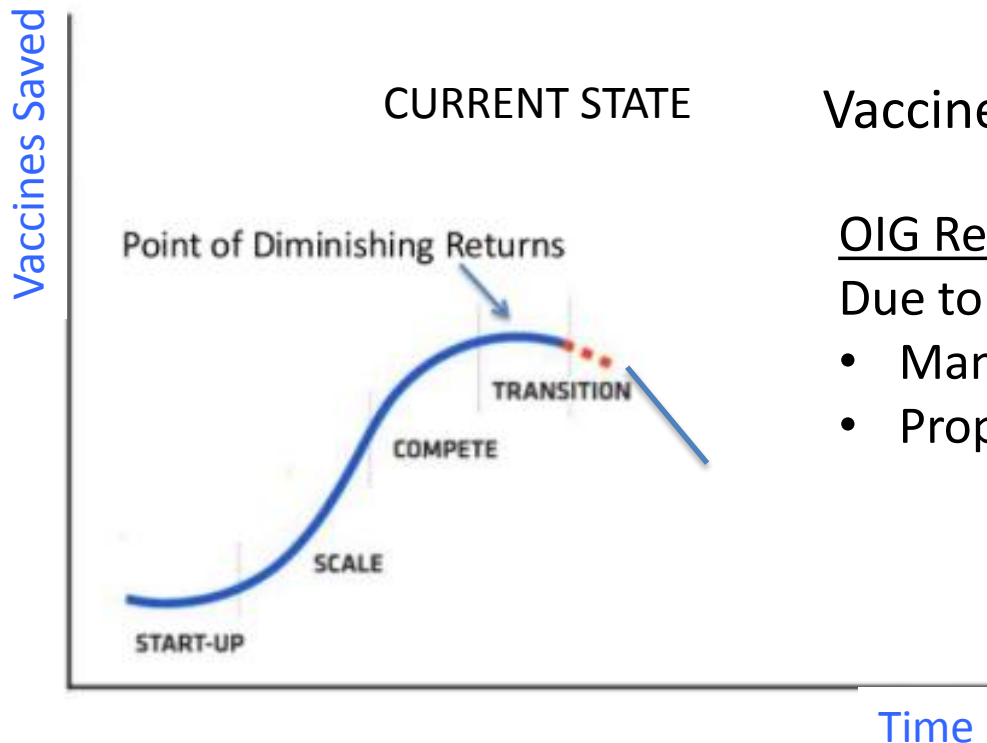
Vaccine Storage Temperature Recommendations

	Vaccine Storage Temperature	Diluent Storage Temperature	<p>When OVEREXPOSED TO Hi & LO Temperatures</p> <p>Vaccines Do Not:</p> <ul style="list-style-type: none"> • Taste • Smell • Look • DIFFERENT
	<p>35°F-46°F (2°-8°C) Do not freeze.</p>		

BUT THEY WORK DIFFERENTLY



Evolution of vaccine temperature monitoring



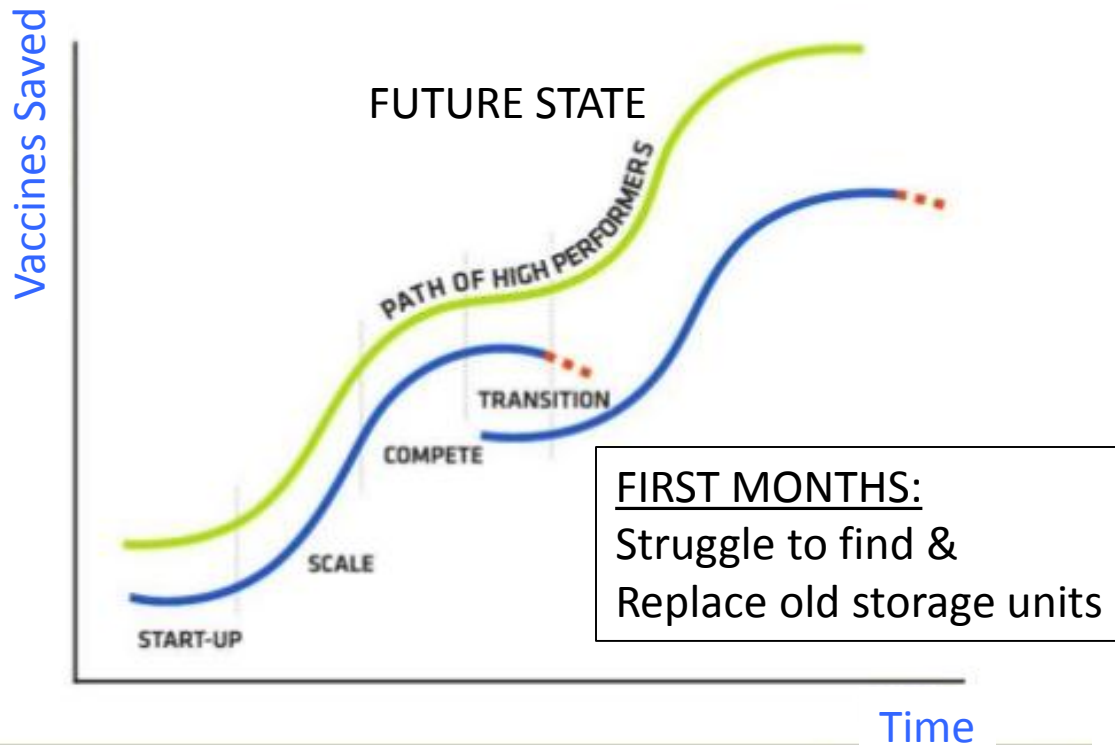
Vaccines Excursion Issues

OIG Report: \$900M Vaccines Lost Due to storage temps

- Many can be saved with
- Proper temperature data

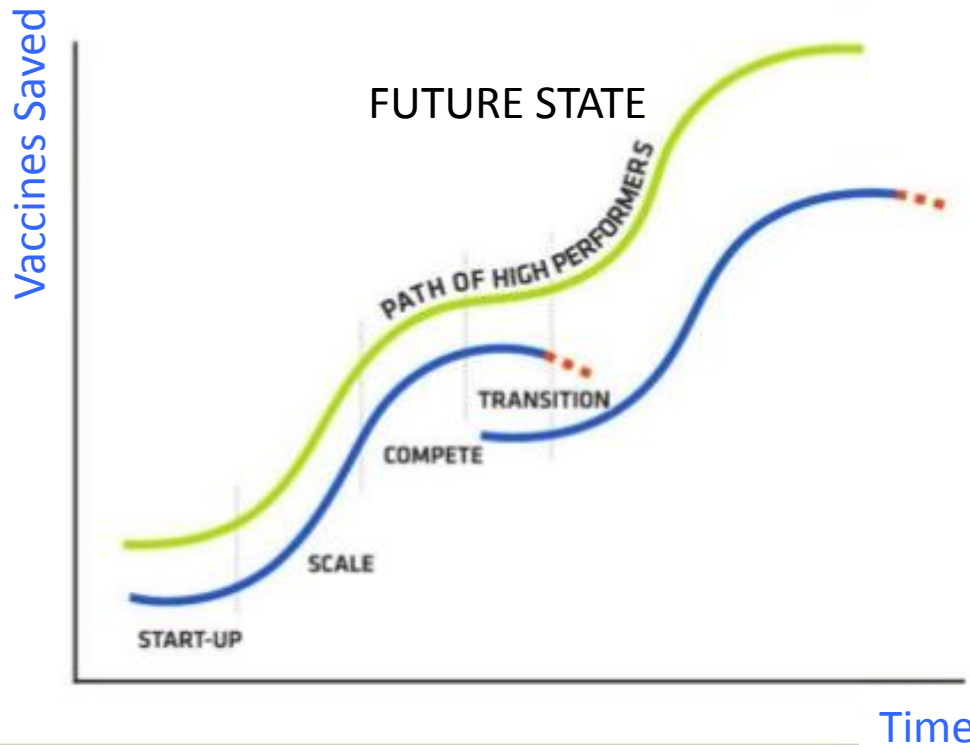
Evolution of vaccine temperature

monitoring



Evolution of vaccine temperature

monitoring



FUTURE GAINS:

- Save vaccines
- Avoid re-vaccination
- Reduce daily workload

Improved Patient Health



Why Fridge-tag® 2?



Why Fridge-tag® 2?



CDC Recommendation & Fridge-tag[®] 2

CDC Recommendations	Fridge-tag [®] 2 Status	Comments
LED Display: current temp	YES	
LED Display: high & low temps	YES	30 days High/Low on screen
LED Display: Hi/Low Alarm status	YES	Alarm Status & Alarm checked status
Continuous Temp. Monitor (Minimum: 1 reading every 15 minutes)	YES	Every 1 minute 60 readings/hour 1440 reading/day FULL CONTINUOUS
Memory: 4000 readings Est. 39 days @ 15 min.	YES	43,200 readings/mo 86,400 / 60 days FULL CONTINUOUS
Device Stops or Memory is reset after download	YES	Memory can be erased upon download NOT Recommended
Operating range -20°C to +40°C	YES	-30°C to +50°C

CDC Recommendation & Fridge-tag[®] 2

CDC Recommendations	Fridge-tag [®] 2 Status	Comments
Download data via USB & standard computer	YES	NO Software No cradle No wire
Report: show alarm configurations; high & low temps & time outside of the high/low thresholds	YES	
Data export capability: Excel, CSV, Txt	YES	Device creates a PDF & Txt file now
Detachable temperature probe, liquid fill vial, 1m cable	YES	THIN – Ribbon wire fits between gasket
Track technicians reading temps. twice daily	YES	Use of READ button documented
Uncertainty: +/- 0.5°C	YES	
Resolution: +/- 1.0°C	YES	
Battery Life: 6 months	YES	24 months

- No Software = Ease of use
- Simple Report = Quick comprehension
- Useful Screen = 30 day snap shot
- Tracks Daily Readings = people & unit
- 2 Year Certificate of Accuracy = Save \$

Critical Steps For Proper Start up & Use

1. Cool the vial with probe
2. Start the Fridge-tag® 2
3. Connect the probe to the unit
4. Correcting mistakes
5. Record 2x/day temp. checks
6. Download, store & send reports

Step 1: Cool the vial

Step #1 : Cool the vial with Probe



Step 1: Cool the vial

Step #1 : Cool the vial with Probe



It arrives @ Room Temp = 22°C



Refrigerator = 5°C

Freezer = -18°C

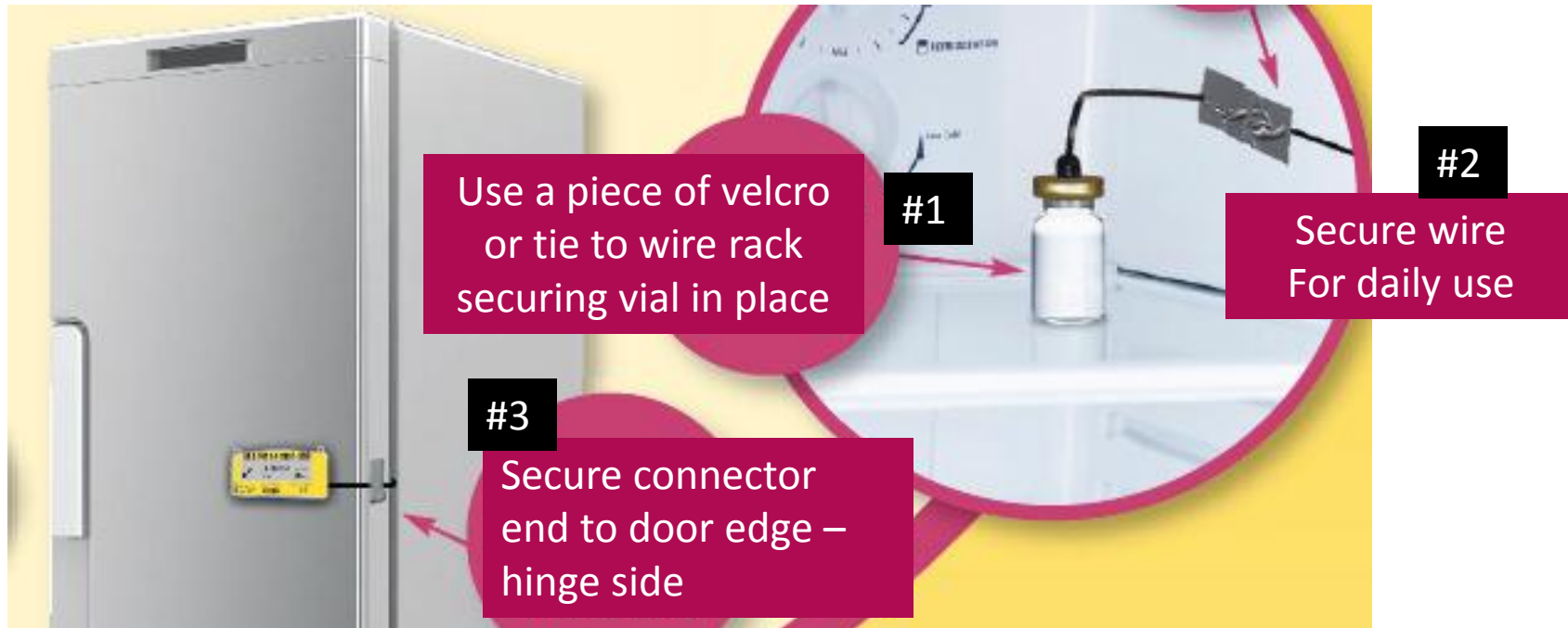
It will take 1 -2 hours

At 5° OR -18° C

For the vial temperature
To lower to the storage temp

Step 1: Install the vial


Step #1 : Secure vial & wire for daily use





Step #2 : Starting the data logger


New 2015:
Programmed in
USA date format

QUICK START **IMPORTANT! Read All Steps before starting the process.**


1 
Place vial with sensor in the middle of the refrigerator or freezer for **2 HOURS BEFORE** activating the Fridge-Tag2 device.




2 **START** device and **SET DATE.** 
Press **SET - READ** for **5 SECONDS** then release together. **SEE** __.dd 20yy
Press **SET** **1** time if date is correct
Press **SET** **6** times. (to adjust date if incorrect, press READ button)

3 
SET TIME
(24 hr: Military style)
15:47 = 3:47 pm
Change the hours to your time zone by pressing **READ** press **SET** to **ACCEPT**.
The minutes should already be accurate. Press **SET** **2** times to accept minutes.

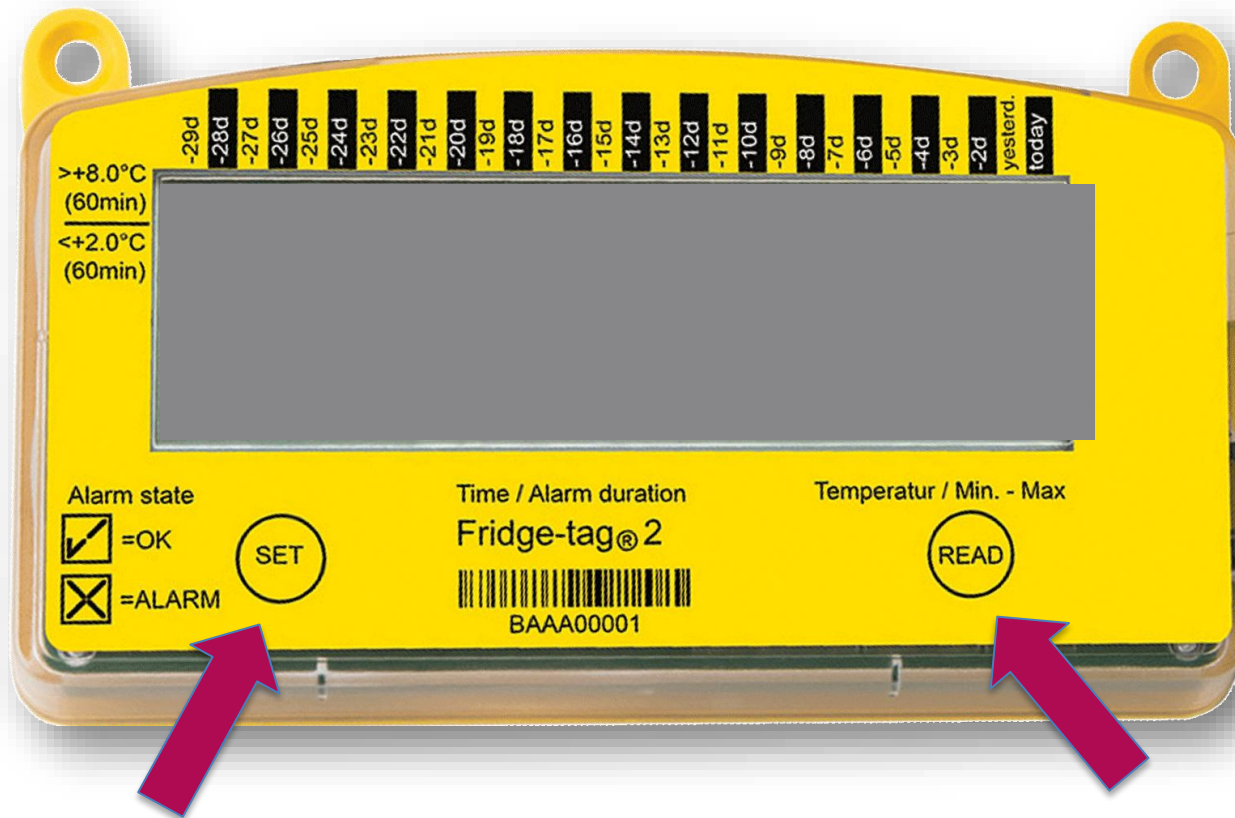
4 Decide between Celsius or Fahrenheit temperatures.
C = press **SET**
- or -
F = press **READ** then **SET**


Insert vial sensor to "CLICK"



Step 2: Start the data logger

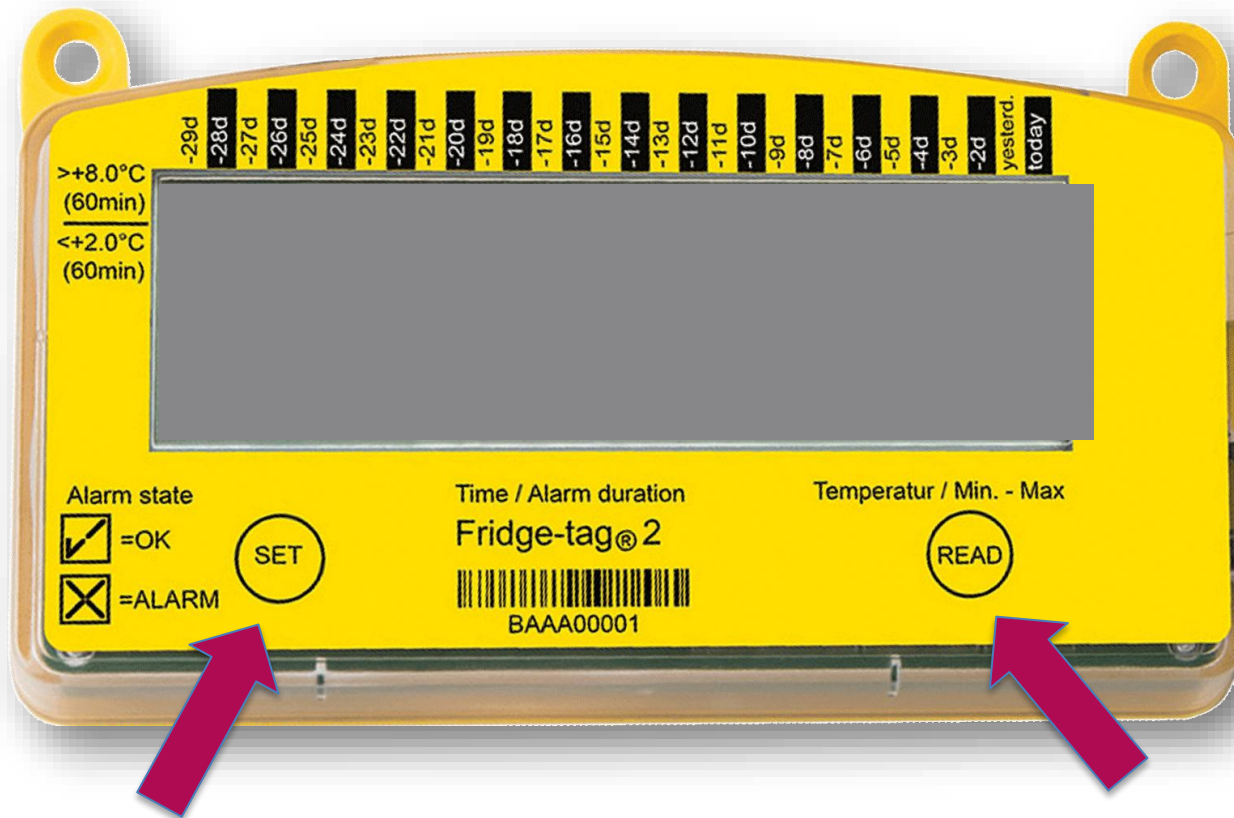
READ = scroll/change SET = set/accept



Press SET & READ simultaneously 4

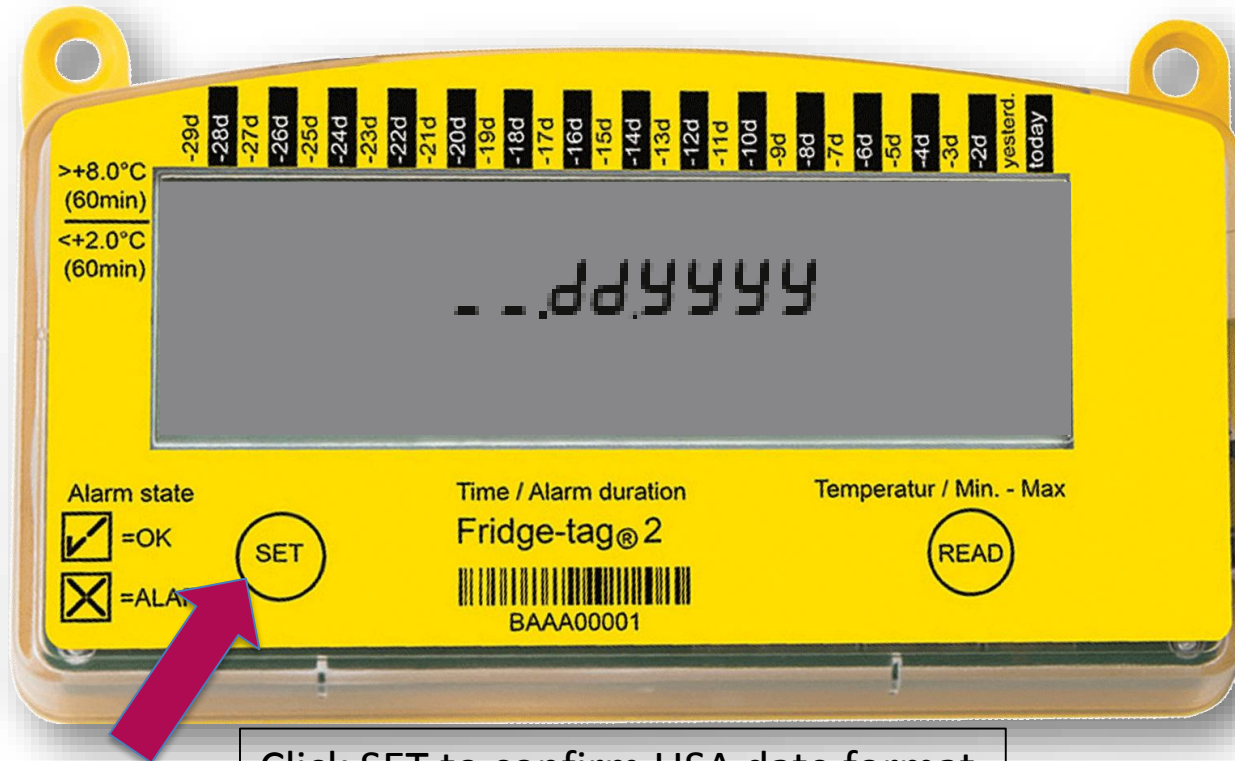
seconds

#1



Activation success:

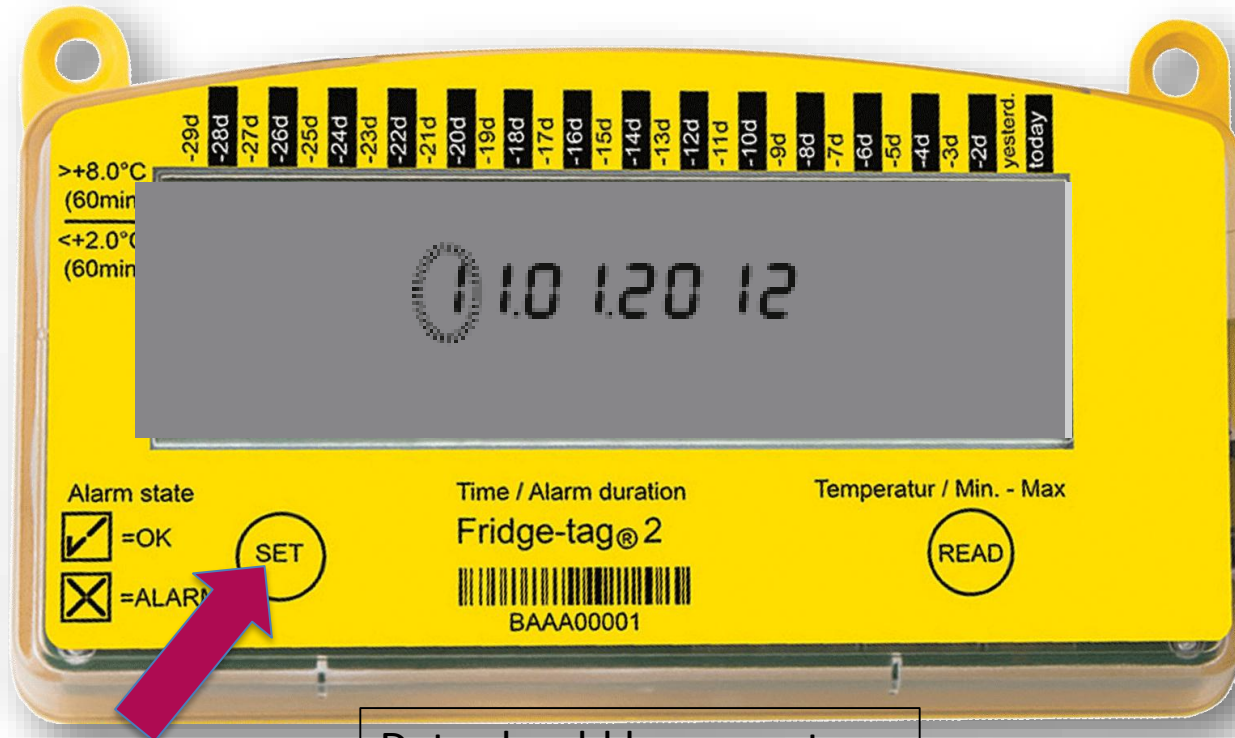
#2



Click SET to confirm USA date format

Set USA date style: Press SET 6 times

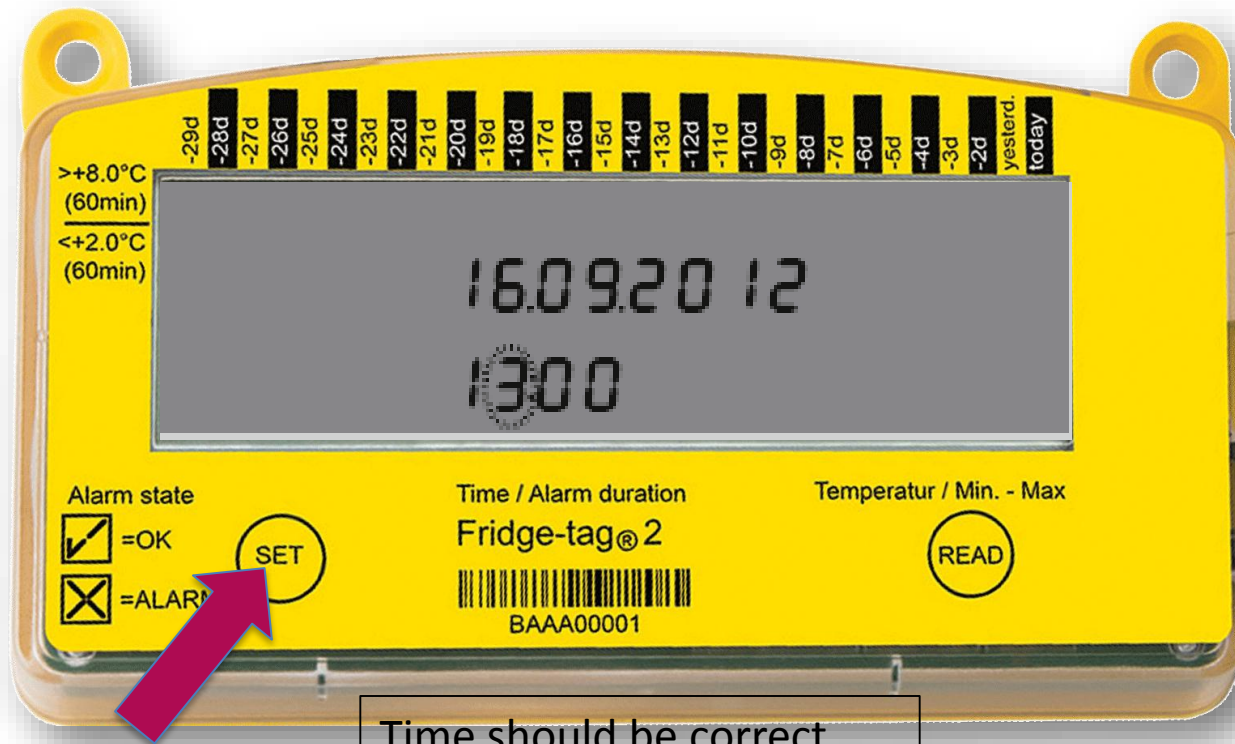
#3



Date should be correct
If not, use READ to change
Numbers & SET to accept

Set Time: SET to accept or READ to change

#3

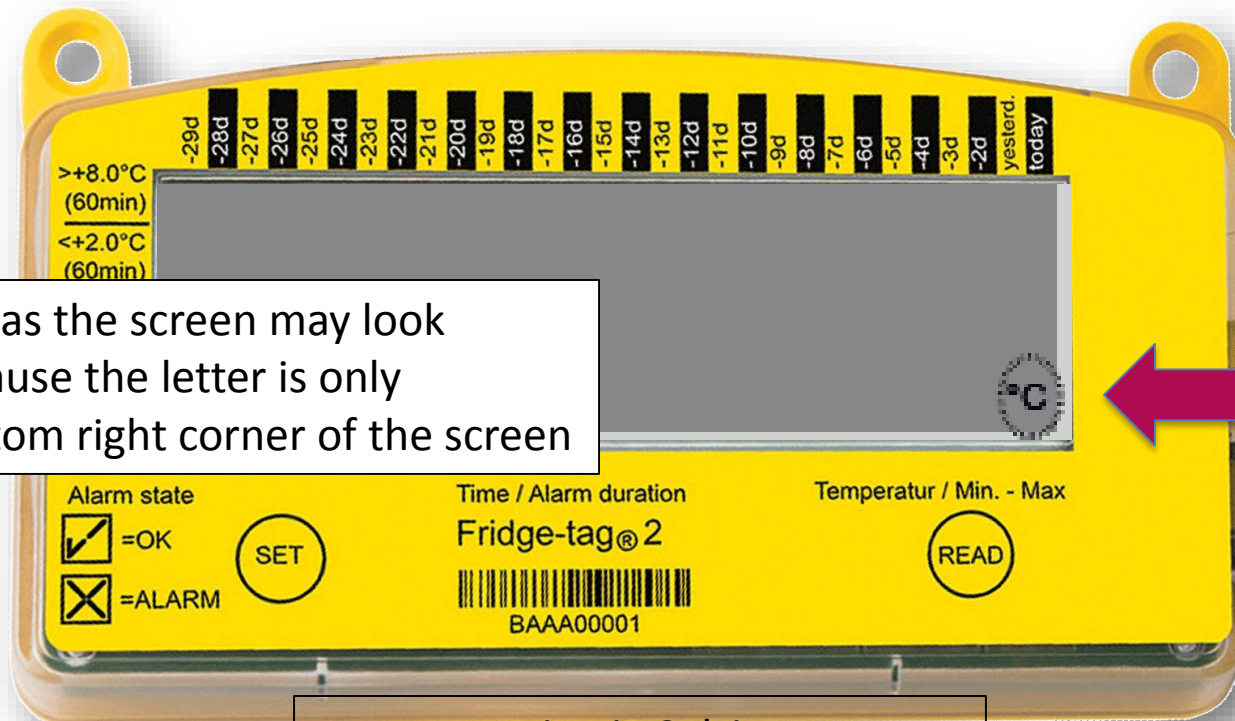


Time should be correct
If not, use READ to change
Numbers & SET to accept

Set Read-out Type: Celsius or Fahrenheit

#4

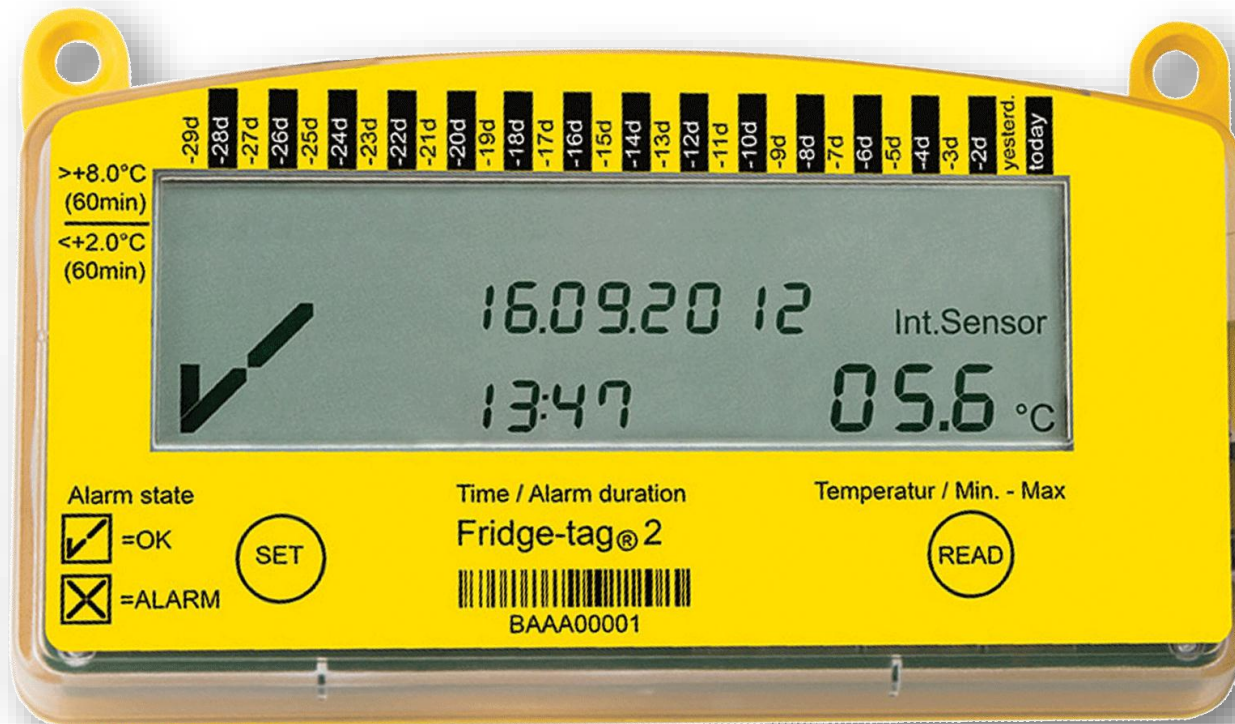
Be careful as the screen may look Blank because the letter is only In the bottom right corner of the screen



Factory setting is Celsius
Use READ if Fahrenheit is desired
Or press SET to accept Celsius

Fully Activated Device:

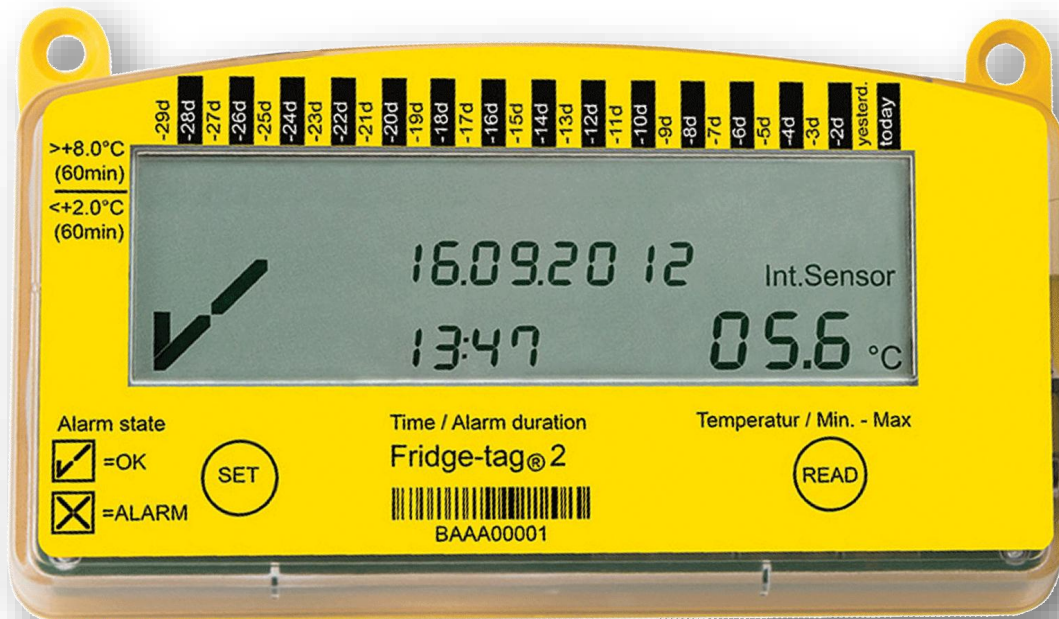
READY
TO
USE



Listen for it to “click” in place

LASTLY

BioSafe Glycol Vial

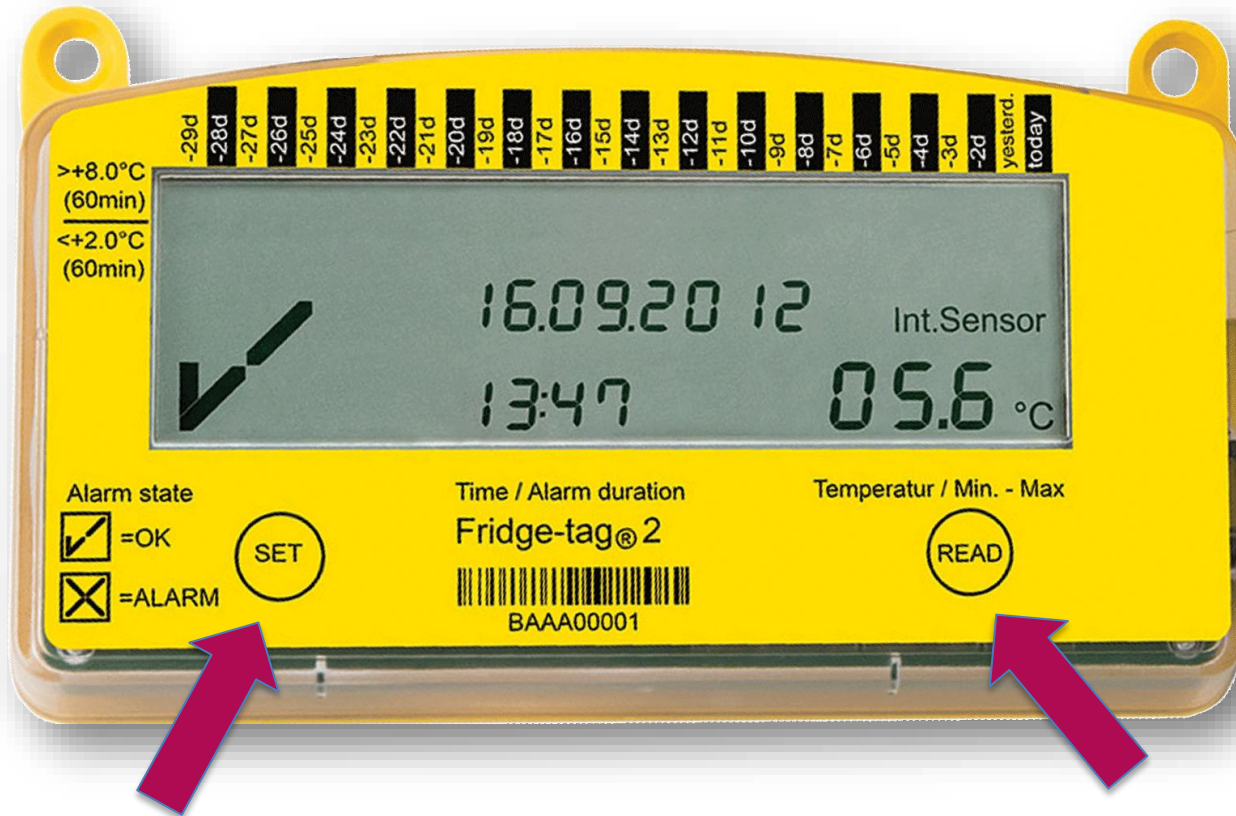


Step 4: Made a mistake?

Need to change date/ time/ °C to °F?

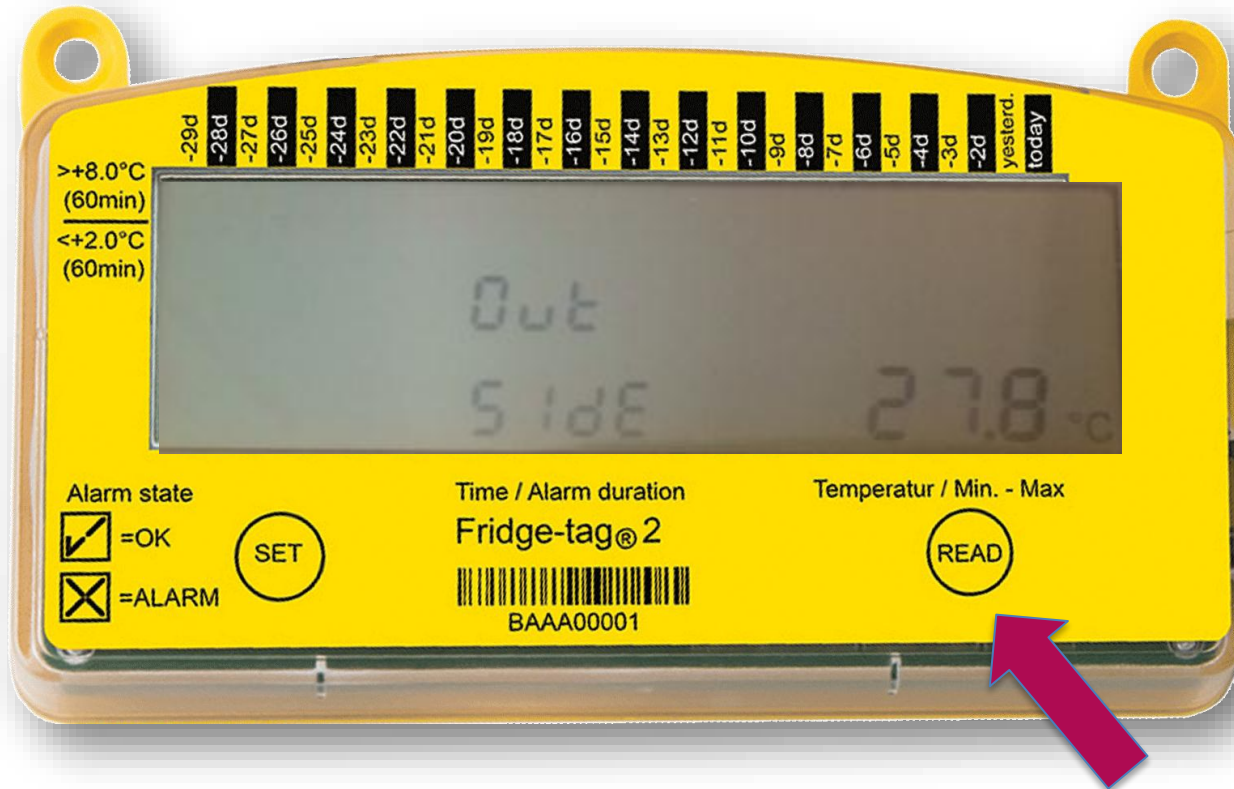
press SET & READ together: quick
release

#1



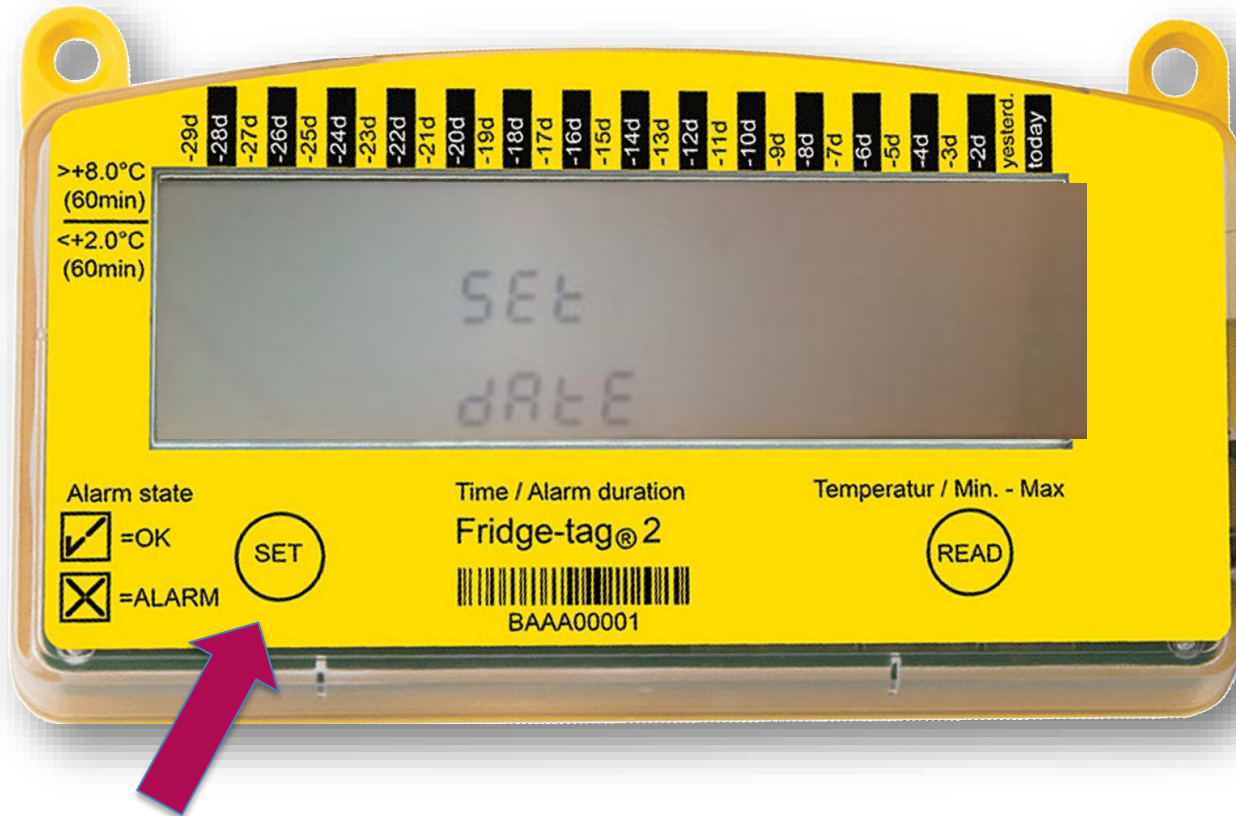
Then Press READ: change to Set date

#2



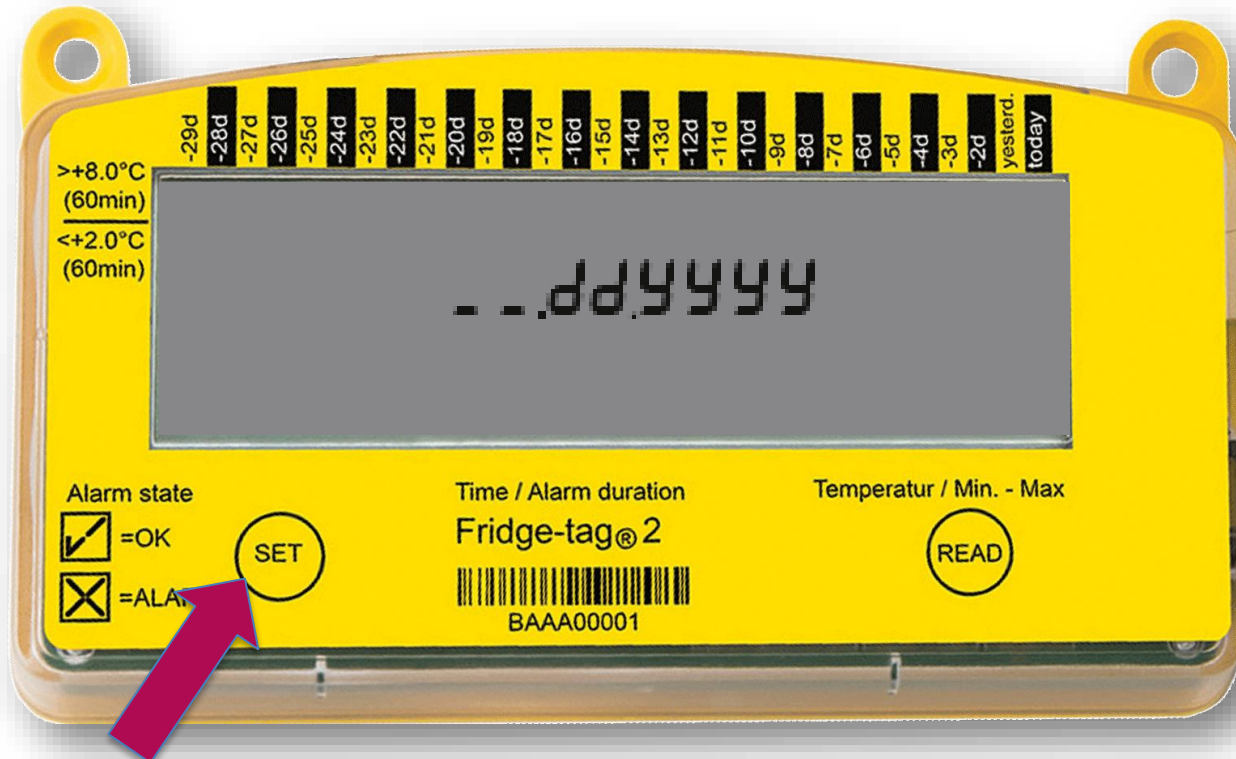
Then Press SET: enter date/time change

#3



Date format again: press SET if ok

#4

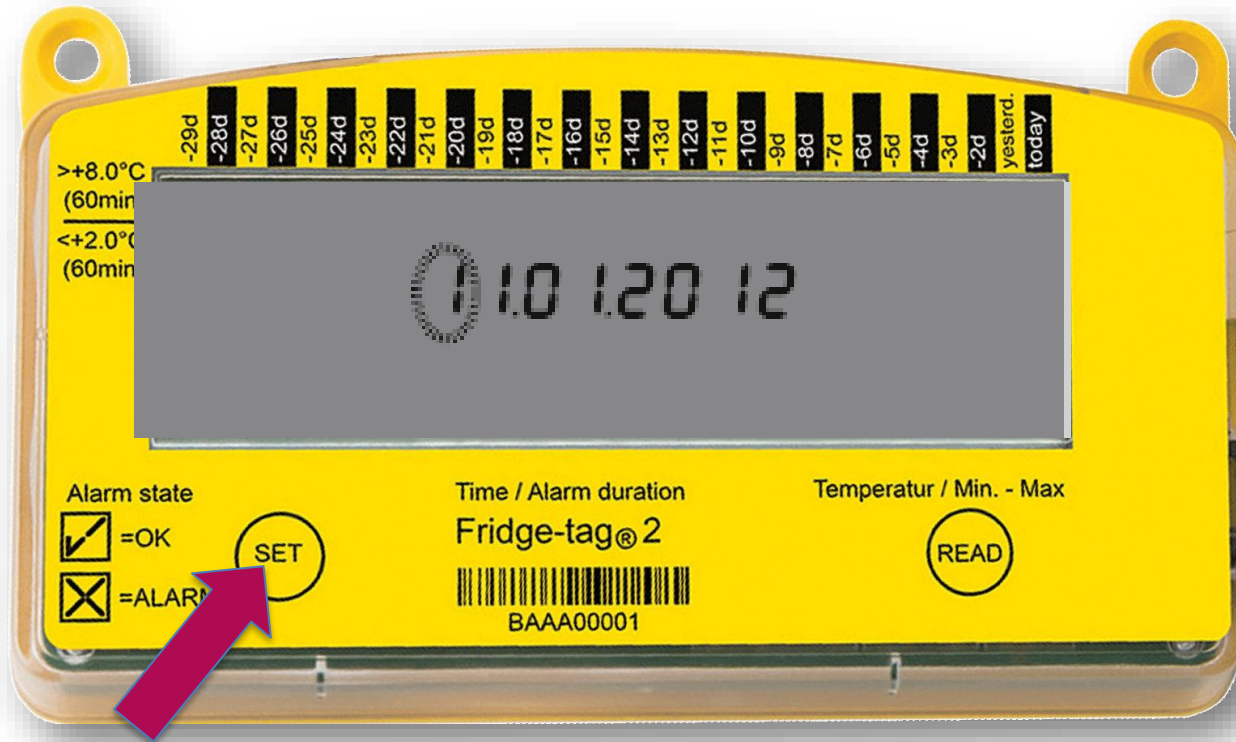


If Day appears before Month, press READ to switch to USA format

Now use READ to scroll thru #'s to

correct

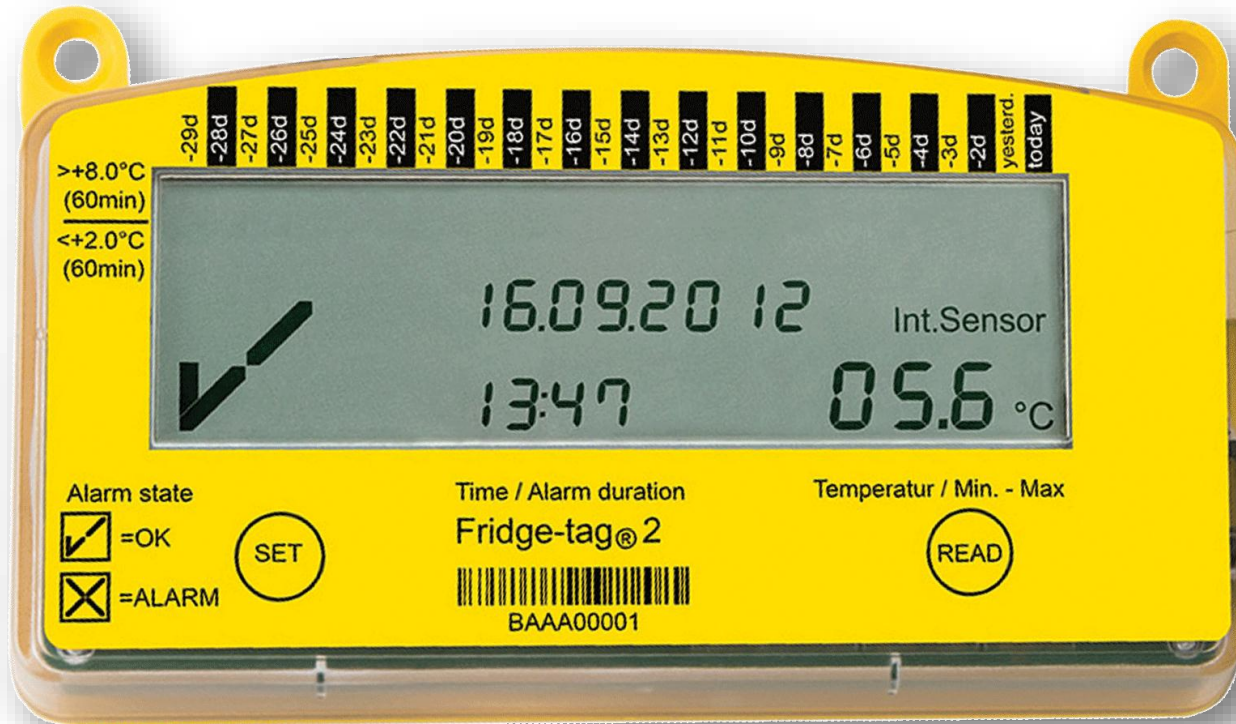
#5



Step 5: Record daily temp. checks

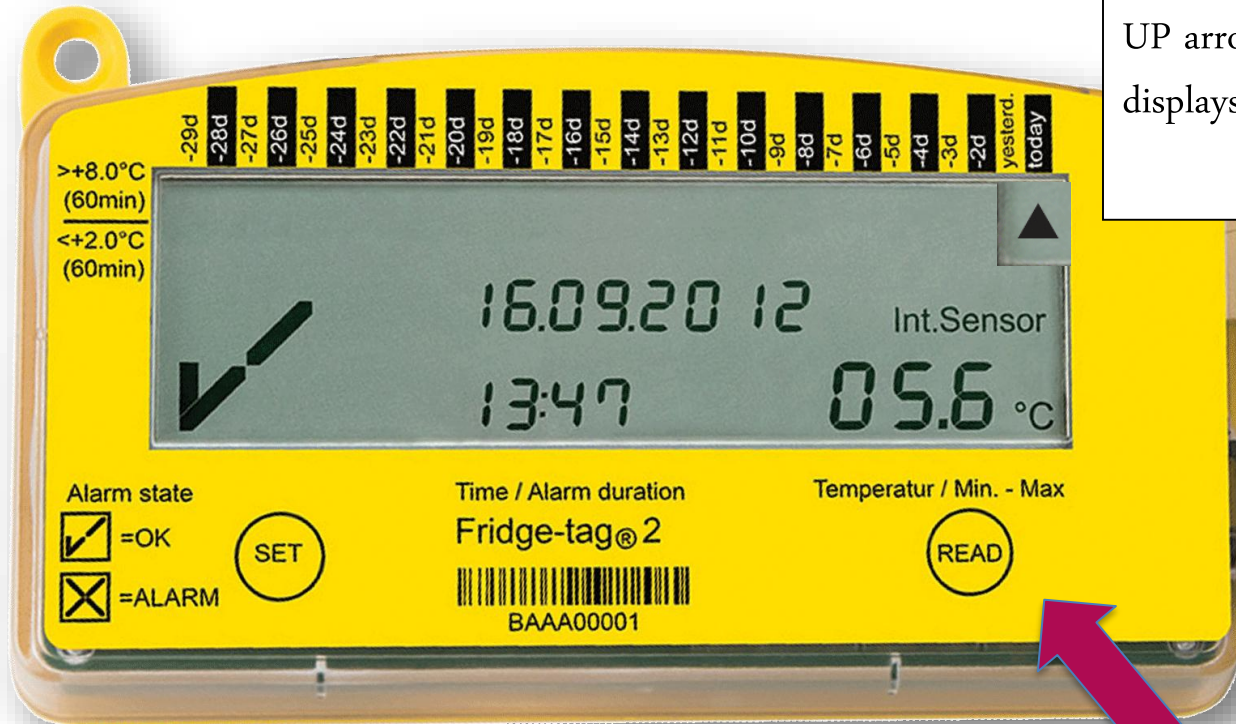
Step 5: Record daily temp. checks

**NO
ALARMS**



Step 5: Record daily temp. checks

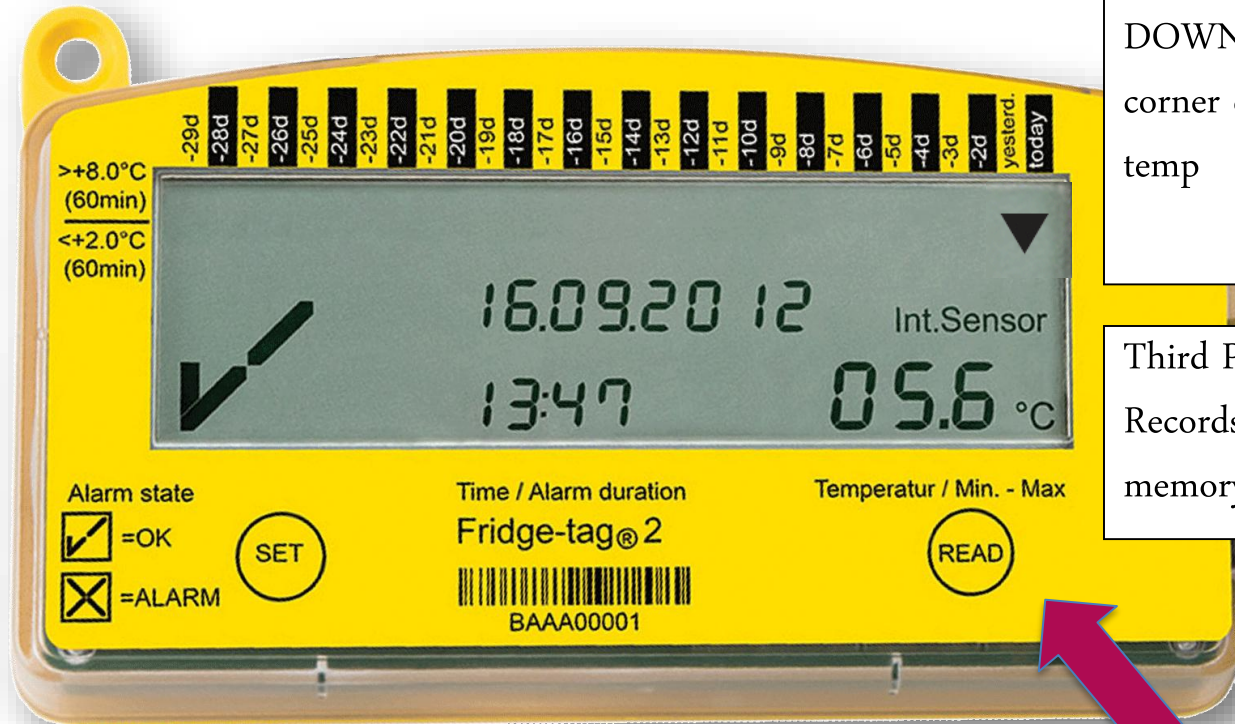
**CHECK
HI & LO
Temps
2x/daily**



First Press of READ:
UP arrow flashed & corner
displays todays HI temp

Step 5: Record daily temp. checks

**CHECK
HI & LO
Temps
2x/daily**



Second Press:
DOWN arrow flashed &
corner displays today's LO
temp

Third Press:
Records this check in the
memory

Record of daily checks appears in report

No.	Date (dd.MM.yyyy)	Events*	Average temp.	Lower alarm limit			A tr ti
				Status	Min. temp.	Duration out of range	
1	Today		+21.8°C	In progress	+21.3°C	0min	
2	28.02.2013	Am/pm	+23.1°C	ok	+21.7°C	0min	
3	27.02.2013	Am/pm	+22.9°C	ok	+21.3°C	0min	
4	26.02.2013	**/pm	+21.6°C	ok	+20.1°C	0min	
5	25.02.2013		+21.3°C	ok	+19.9°C	0min	
6	24.02.2013		+21.0°C	ok	+20.5°C	0min	



Blank = not checked

Am = morning checked

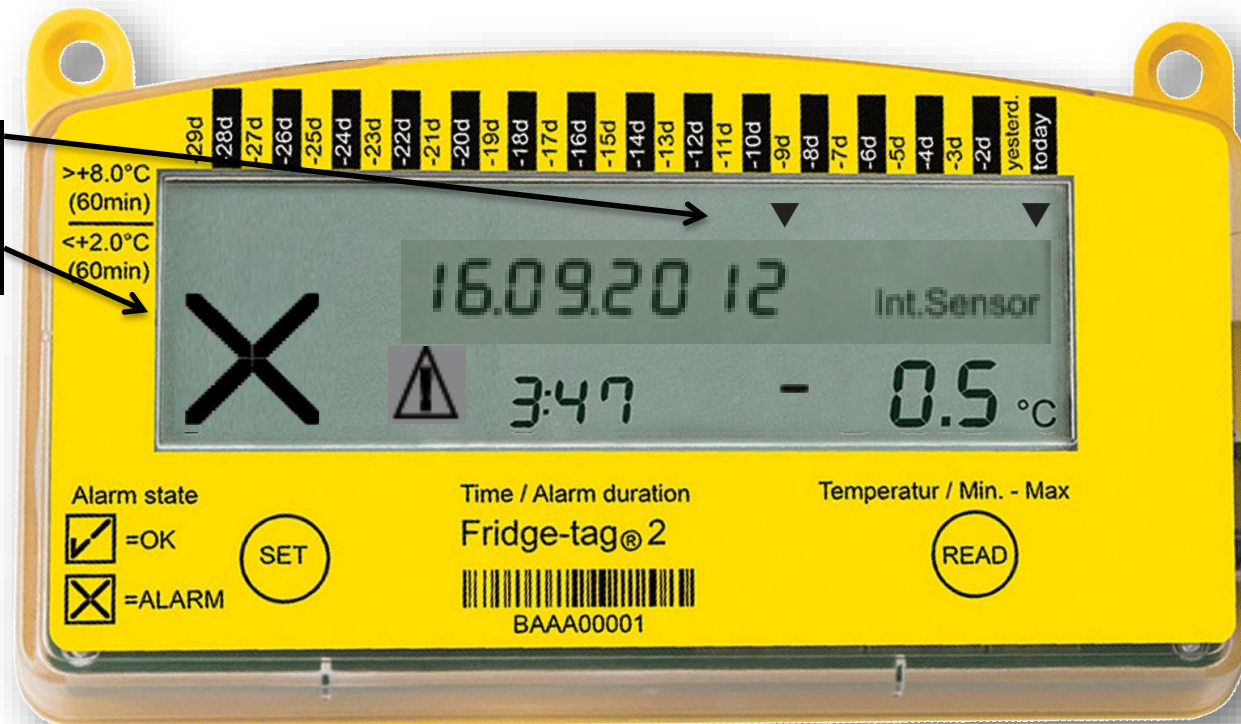
Pm = afternoon checked

Managing the Big X – if you have an alarm

What if there
is an alarm ?

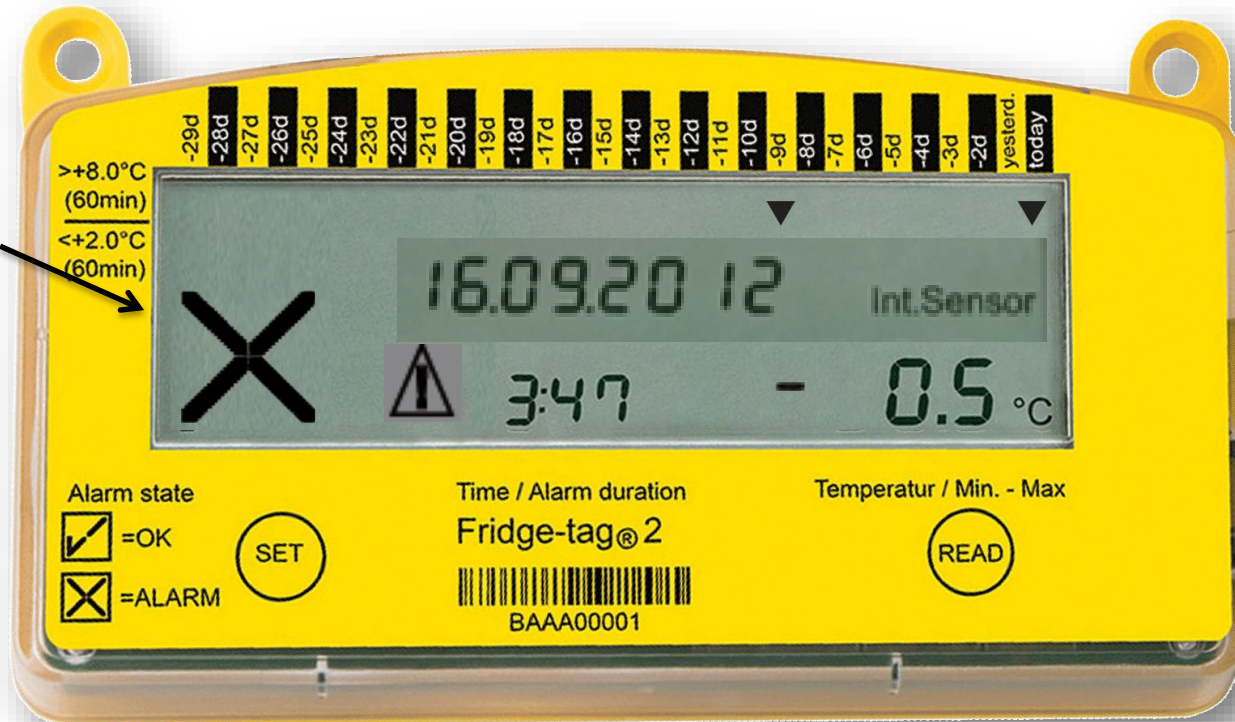
Step 5: Reading the screen

2 Alarm Indicators



Step 5: Reading the screen

Giant X:
Temp. alarm
since the
memory
was last
READ

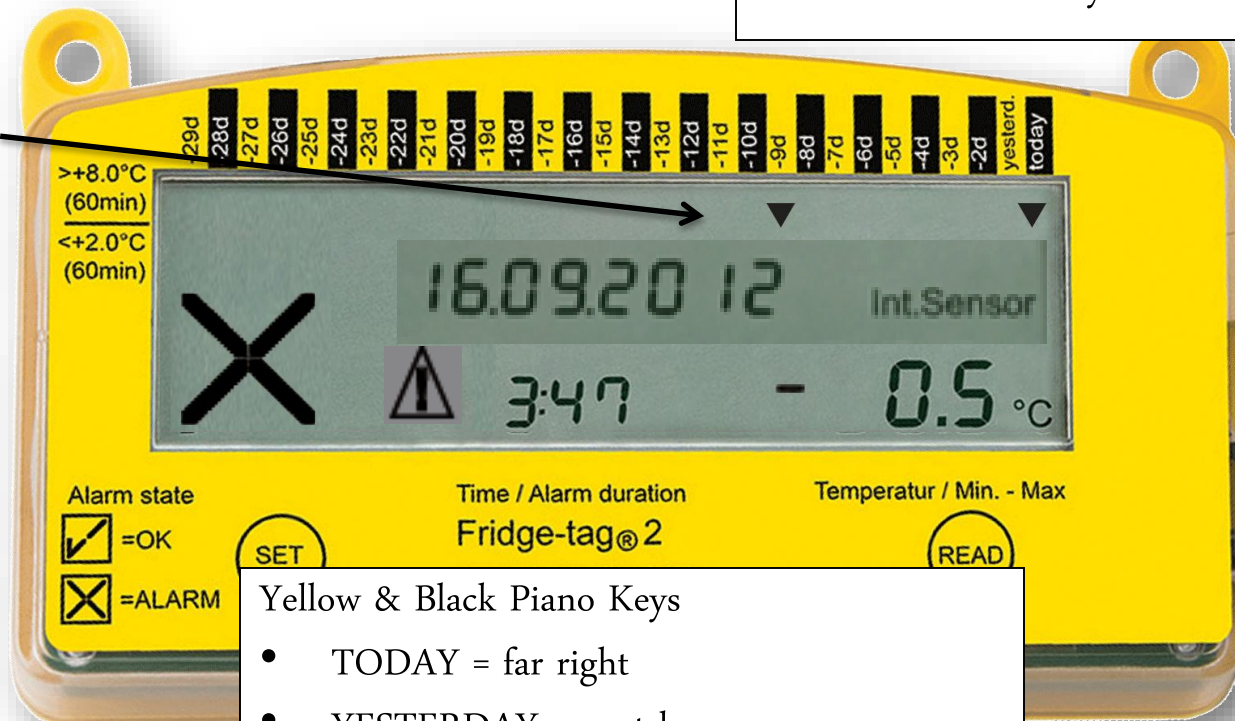


Step 5: Reading the screen

UP & DOWN Arrows:

- Up arrow = HI temp
- Down = LO temp
- Place = which day?

Which day or days were alarms observed?



Alarm state

- =OK
- =ALARM

Time / Alarm duration

Fridge-tag@2

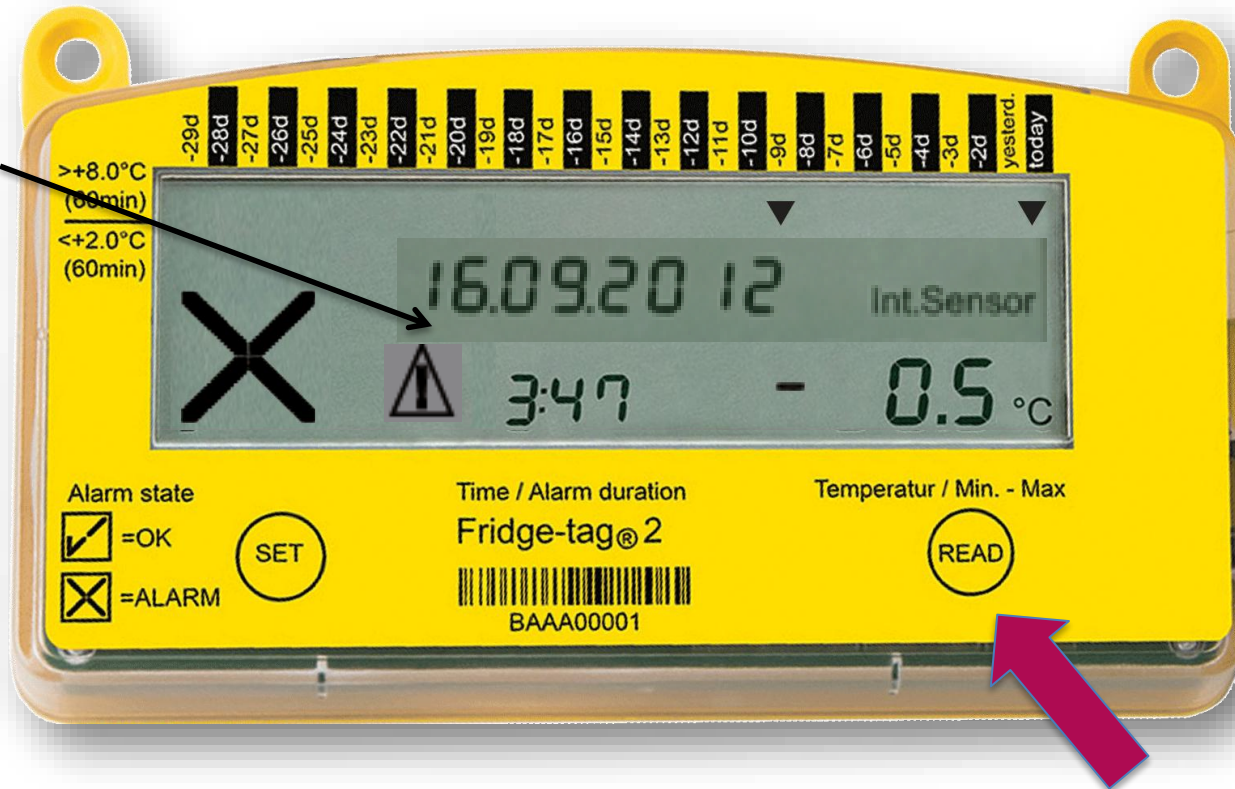
Temperatur / Min. - Max

Yellow & Black Piano Keys

- TODAY = far right
- YESTERDAY = next key
- -2d = 2 days ago, etc
- See past 30 days easily

Step 5: Reading the screen

Press
READ 4x
& the X
disappears



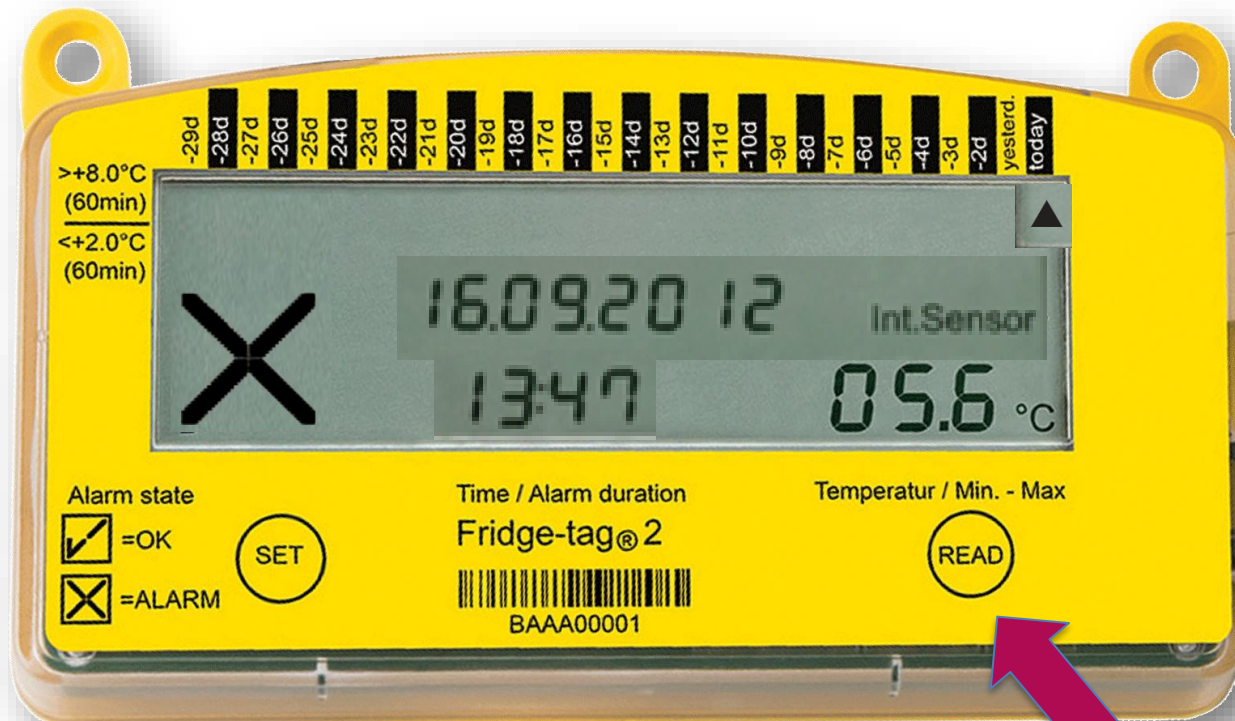
Getting rid of the X & reading alarm info

When an alarm happens Press READ to see what has happened

This will CLEAR the X

Getting rid of the X & reading alarm info

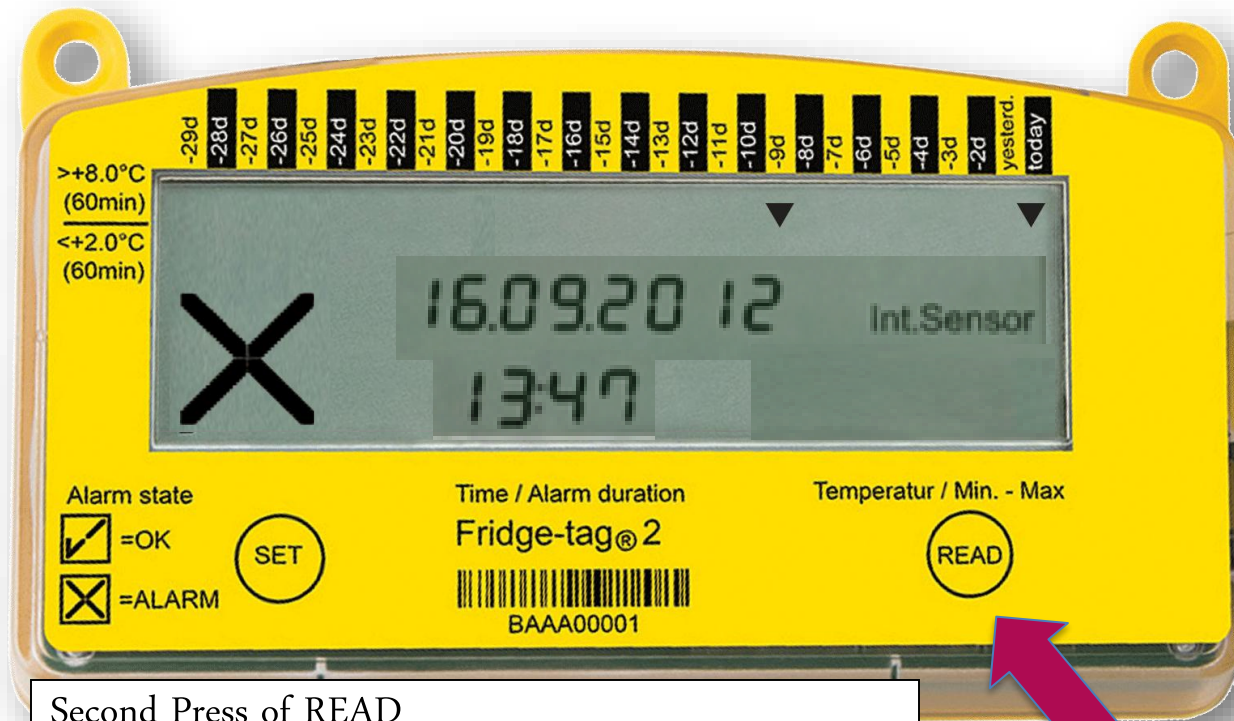
If Down
Arrow =
LO alarm



First Press of READ

- HI temp = OK = \checkmark mark

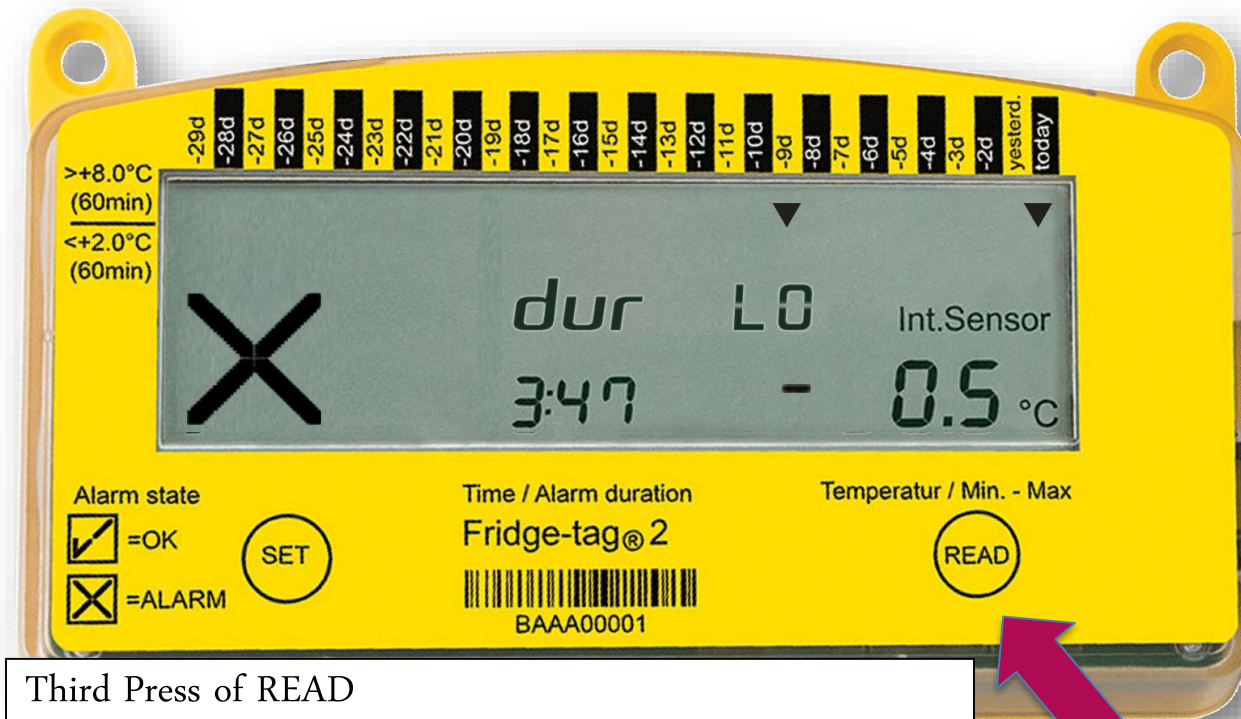
Getting rid of the X & reading alarm info



Second Press of READ

- Date & Time of Alarm of LO alarm

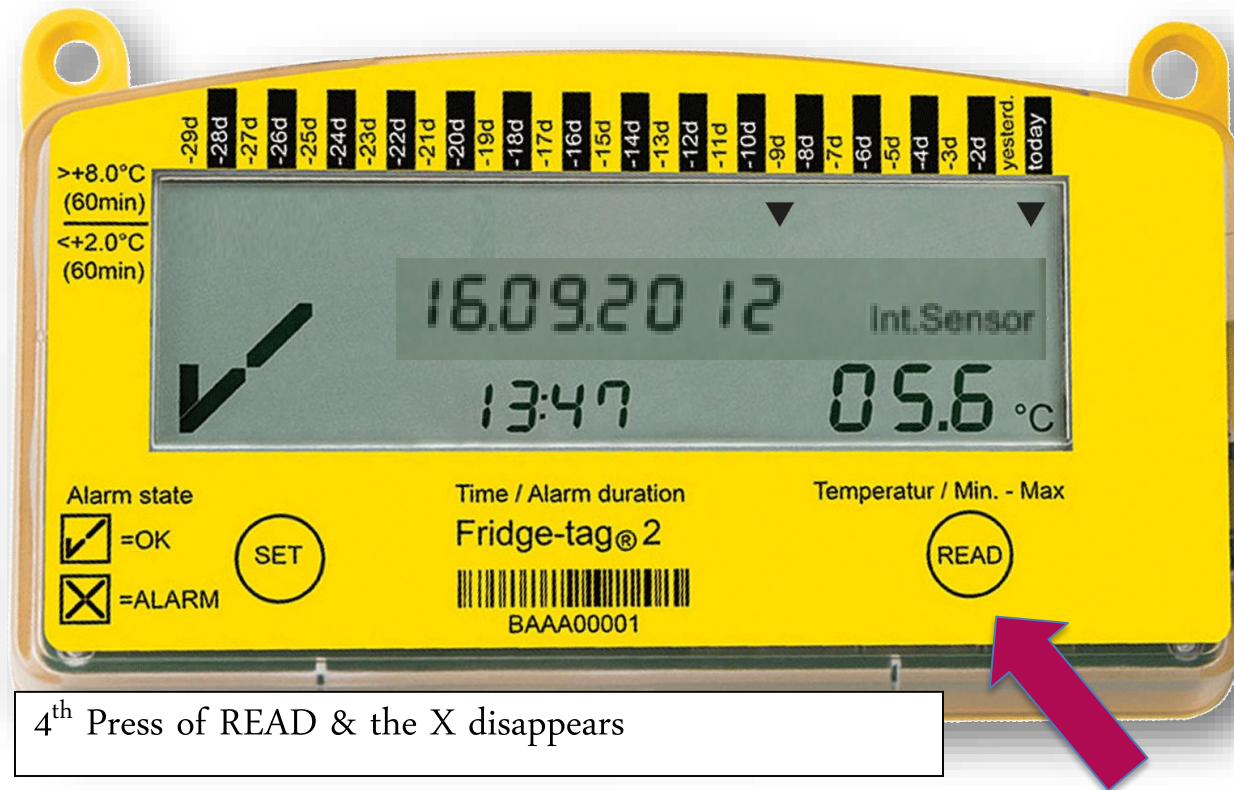
Getting rid of the X & reading alarm info



Third Press of READ

- Length/ duration of LO temp alarm
- Actual LO temp = -0.5°

Getting rid of the X & reading alarm info



4th Press of READ & the X disappears

Step 6: Download Reports

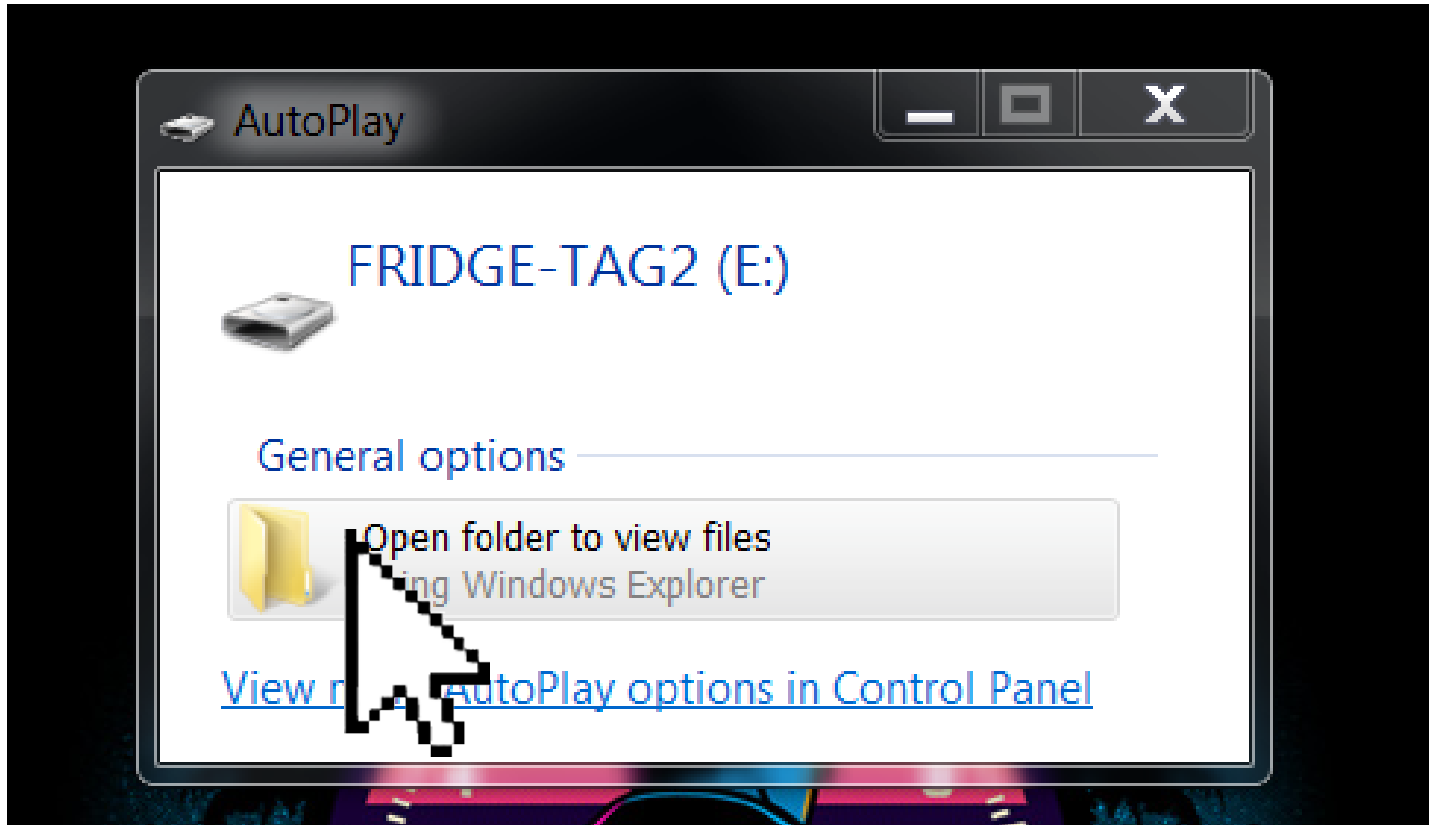
**Download the
report**

Fridge-tag® 2



Plug
into Any
Computer

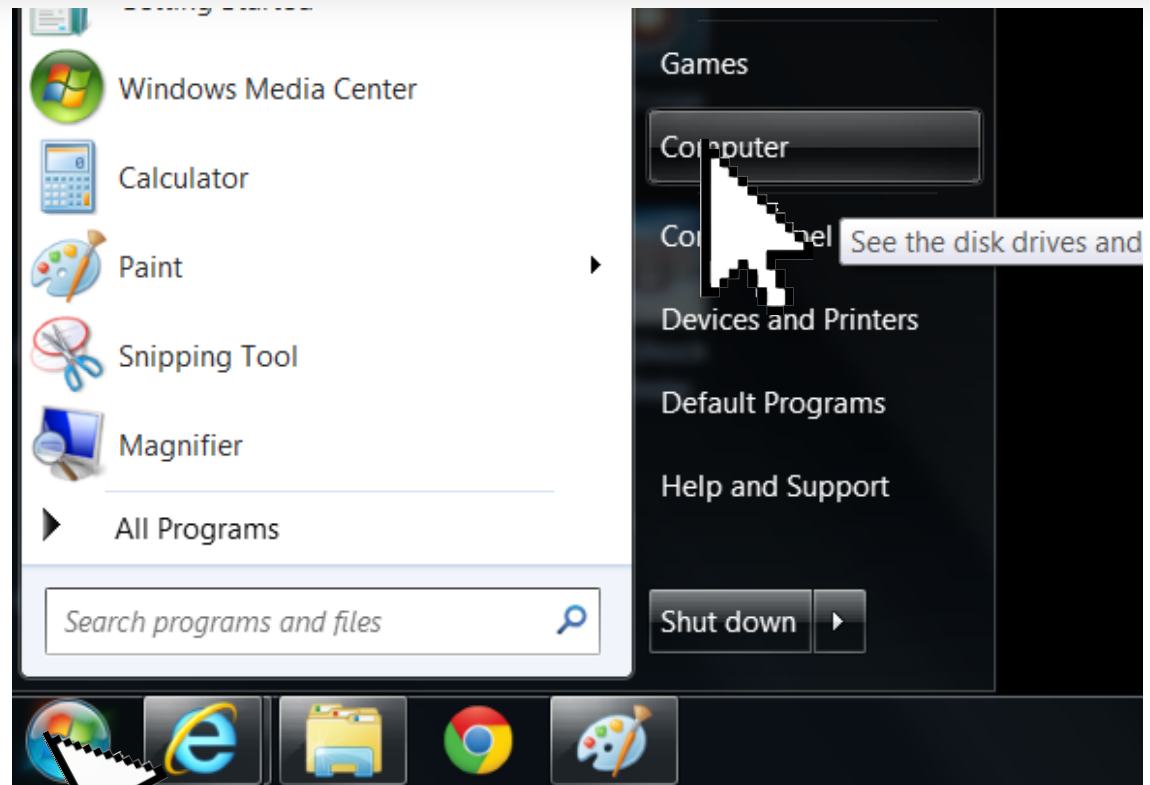
Step 6: Download Reports



Click on Folder
Like Any Removable Memory Stick

Step 6: Download Reports

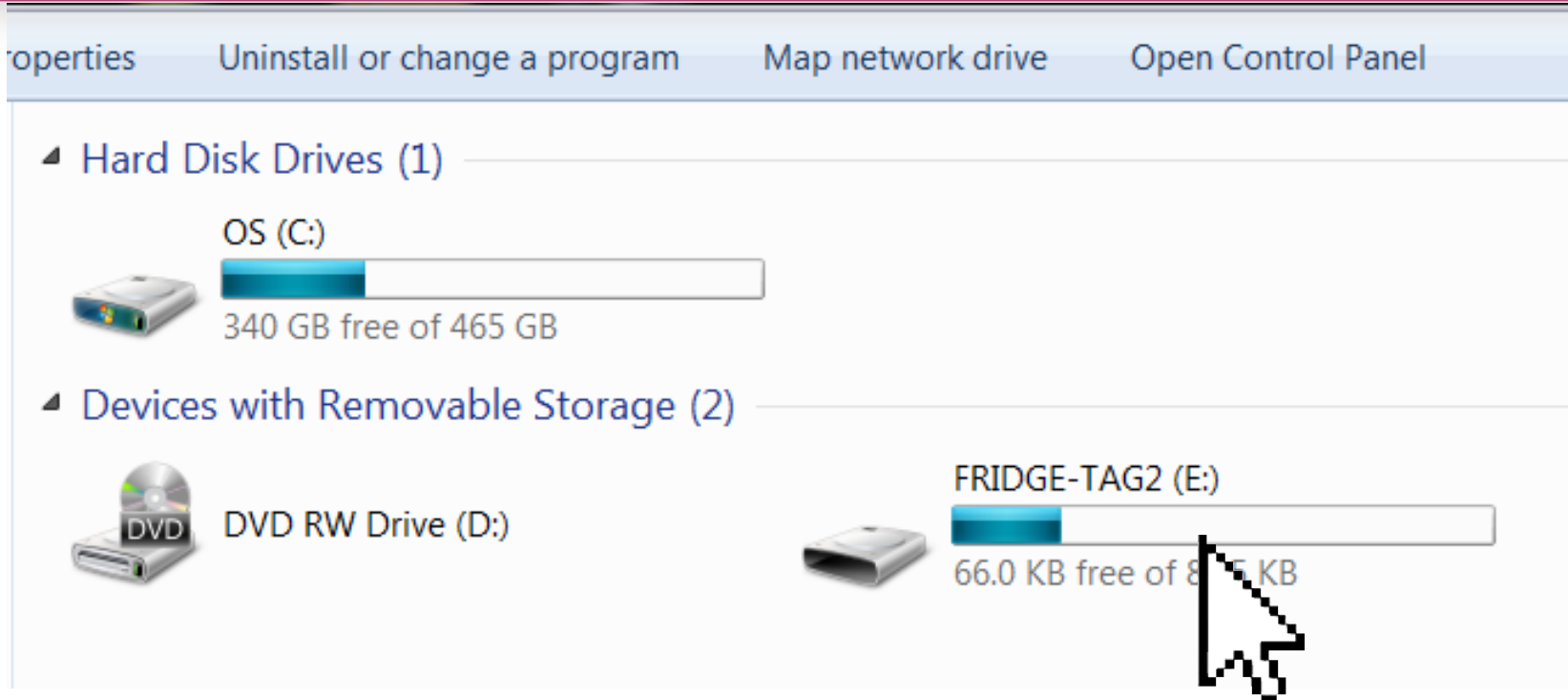
If the folder does not pop on the screen



Click the Window **START** – then **Computer**

Step 6: Download Reports

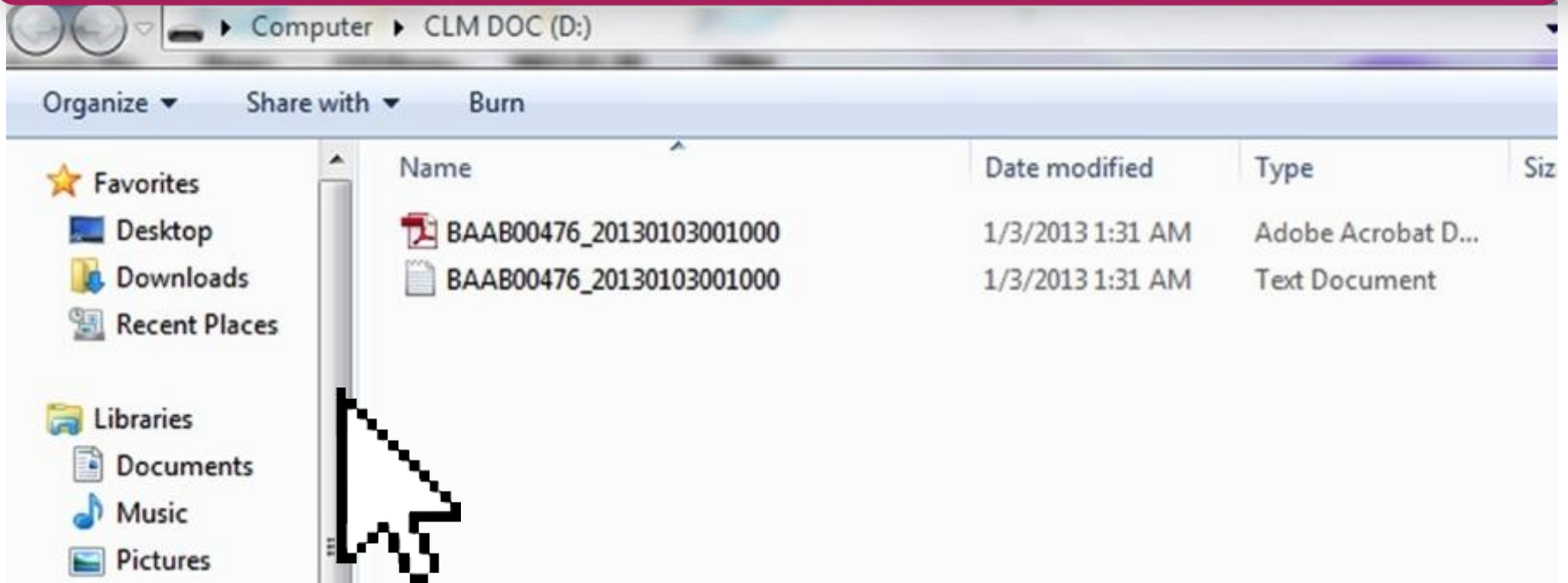
If the folder does not pop on the screen



And Click on the Fridge-tag2

Step 6: Download Reports

If the folder does not pop on the screen



Then Click the PDF

Step 6: Download Reports

PDF document of the Fridge-tag® 2

Identification number: BBBA00073
 Date and time of report creation: 03/31/2014 08:07h
 Upper alarm limit: Above +8°C for 60 min
 Lower alarm limit: Below +2°C for 15 min

No	Date (mm.dd.yyyy)	Events*	Average temp.	Lower alarm limit					Upper alarm limit					Ext. sensor connection error			Signature/notes
				Status	Min temp.	Duration out of range	Alarm trigger time	Alarm ambient temp.	Status	Max Temp.	Duration out of range	Alarm trigger time	Alarm ambient temp.	Status	Duration	Alarm trigger time	
1	Today	am	+4.6	In progress	+3.6				OK	+5.5				In progress			
2	3/30/14		+4.6	ok	+3.6				OK	+5.6				ok			
3	3/29/14	am,pm	+3.7	ok	+2.9				OK	+4.5				ok			
4	3/28/14	am,pm	+3.2	ok	+2.3				OK	+4.1				ok			
5	3/27/14	am,pm	+3.3	ok	+2.5				OK	+4.1				ok			
6	3/26/14	am,pm	+2.8	ALARM	+1.7	1h 15 min	18:30	+25.3	OK	+3.8				ok	2min		
7	3/25/14	am,pm	+5.4	ok	+4.1				OK	+6.6				ok			
8	3/24/14	am,pm	+5.6	ok	+4.4				OK	+6.7				ok	3min		
9	3/23/14		+5.5	ok	+4.0				OK	+6.9				ok			
10	3/22/14	am,pm	+5.7	ok	+4.3				OK	+7.0				ok			
11	3/21/14	am,pm	+5.8	ok	+4.3				OK	+7.2				ok			
12	3/20/14	am,pm	+5.8	ok	+4.1				OK	+7.4				ok			
13	3/19/14	am,pm	+5.7	ok	+3.9				OK	+7.5				ok			
14	3/18/14	am,pm	+5.8	ok	+3.9				OK	+7.7				ok			
15	3/17/14	am,pm	+7.1	ok	+3.7				ALARM	+12.0	3h 52 min	19:12	+23.7	ok	4min		

Sample Monthly Report

Fridge-tag[®] 2: Read the report

2 Year Calibration

Identification number: BBBA00073
Activation Date: 1/15/14
Date and time of report creation: 03/31/2014 08:07h
Upper alarm limit: Above +8°C for 60 min
Lower alarm limit: Below +2°C for 15 min

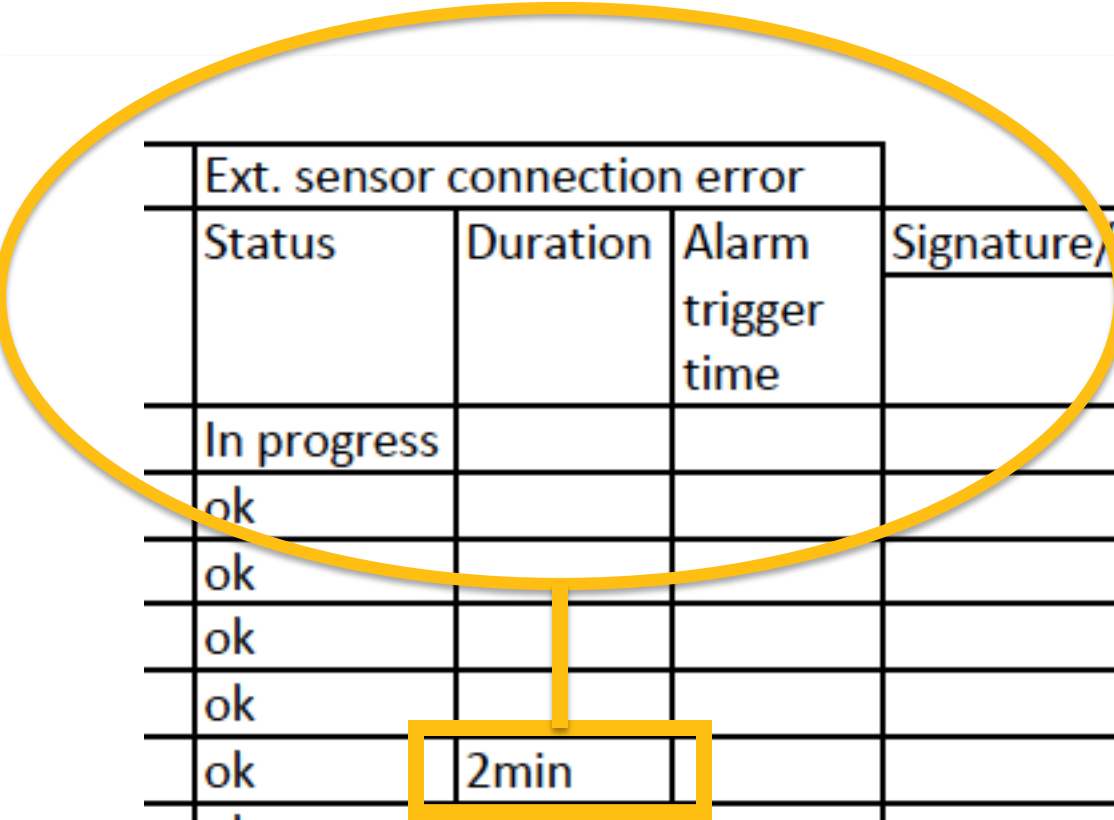
No	Date (mm.dd.yyyy)	Events*	Average temp.	Status	Min temp.	Duration
1	Today	am	+4.6	In progress	+3.6	
2	3/30/14		+4.6	ok	+3.6	
3	3/29/14	am,pm	+3.7	ok	+2.9	
4	3/28/14	am,pm	+3.2	ok	+2.3	
5	3/27/14	am,pm	+3.3	ok	+2.5	
6	3/26/14	am,pm	+2.8	ALARM	+1.7	1h

Tracks when READ button is pressed: 2x day temp. checks

Fridge-tag[®] 2: Read the report

No	Date (mm.dd.yyyy)	Events*	Average temp.	Lower alarm limit					Upper alarm limit	
				Status	Min temp.	Duration out of range	Alarm trigger time	Alarm ambient temp.	Status	Max Temp.
1	Today	am	+4.6	In progress	+3.6				OK	+5.5
2	3/30/14		+4.6	ok	+3.6				OK	+5.6
3	3/29/14	am,pm	+3.7	ok	+2.9				OK	+4.5
4	3/28/14	am,pm	+3.2	ok	+2.3				OK	+4.1
5	3/27/14	am,pm	+3.3	ok	+2.5				OK	+4.1
6	3/26/14	am,pm	+2.8	ALARM	+1.7	1h 15 min	18:30	+25.3	OK	+2.8
7	3/25/14	am,pm	+5.1	ok	+4.1				OK	+6.6

Fridge-tag[®] 2: Read the report



Ext. sensor connection error			
Status	Duration	Alarm trigger time	Signature/notes
In progress			
ok			
ok			
ok			
ok	2min		
ok			
ok	3min		
ok			

Fridge-tag[®] 2: Read the report

PDF document of the Fridge-tag[®] 2

Identification number: BBBA00073
 Date and time of report creation: 03/31/2014 08:07h

Upper alarm limit: Above +8°C for 60 min
 Lower alarm limit: Below +2°C for 15 min

No	Date (mm.dd.yyyy)	Events*	Average temp.	Lower alarm limit					Upper alarm limit					Ext. sensor connection error			Signature/notes	
				Status	Min temp.	Duration out of range	Alarm trigger time	Alarm ambient temp.	Status	Max Temp.	Duration out of range	Alarm trigger time	Alarm ambient temp.	Status	Duration	Alarm trigger time		
1	Today	am	+4.6	In progress	+3.6					OK	+5.5				In progress			
2	3/30/14		+4.6	ok	+3.6					OK	+5.6				ok			
3	3/29/14	am,pm	+3.7	ok	+2.9					OK	+4.5				ok			
4	3/28/14	am,pm	+3.2	ok	+2.3					OK	+4.1				ok			
5	3/27/14	am,pm	+3.3	ok	+2.5					OK	+4.1				ok			
6	3/26/14	am,pm	+2.8	ALARM	+1.7	1h 15 min	18:30	+25.3		OK	+3.8				ok	2min		
7	3/25/14	am,pm	+5.4	ok	+4.1					OK	+6.6				ok			
8	3/24/14	am,pm	+5.6	ok	+4.4					OK	+6.7				ok	3min		
9	3/23/14		+5.5	ok	+4.0					OK	+6.9				ok			
10	3/22/14	am,pm	+5.7	ok	+4.3					OK	+7.0				ok			
11	3/21/14	am,pm	+5.8	ok	+4.3					OK	+7.2				ok			
12	3/20/14	am,pm	+5.8	ok	+4.1					OK	+7.4				ok			
13	3/19/14	am,pm	+5.7	ok	+3.9					OK	+7.5				ok			
14	3/18/14	am,pm	+5.8	ok	+3.9					OK	+7.7				ok			
15	3/17/14	am,pm	+7.1	ok	+3.7					ALARM	+12.0	3h 52 min	19:12	+23.7	ok	4min		

Sample Monthly Report

The Report Can Be...

PRINTED

EMAILED

FILED

ARCHIVED

Fridge-tag® 2: Resources

Website: www.berlingerusa.com/f2support

- **User manual -**
- **Set up videos**
- **This power point**
- **Set up instructions**
- **Help line:**
 - **508-366-0084**
 - Info.us@berlinger.ch



Open for new perspectives!



Questions?

222 Turnpike Road
Suite 3
Westborough, MA 01581
USA

Patrick McGrath
General Manager
508-366-0084

Info.us@berlinger.ch

www.berlinger.com

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