AutoISF2.2.7– Release Notes for Users Upgrading from Version 2.2.6

This document is meant for users of autoISF version 2.2.6 and explains one minor bug fix and a new SMB feature. Especially the additional SMB enable/disable method requires your attention as it may interfere with your current habits or automations.

While moving to the new releases based on AAPS3.0.0.2 or 3.1.x some updates to autoISF were already included from the development version:

1. **Bug fix to acce_ISF if below target**
   Upon further thinking about what acceleration means it became clear that 2 situations need to be distinguished, namely whether glucose is above target or below. In real life the most frequent case is above target and everything in version 2.2.6 is still OK. However, when below target then acceleration and deceleration or braking swap their meaning. Let us assume you are below target and the glucose trend takes a left hand turn then it accelerates towards the target. In that case you should start braking otherwise glucose may drop even further. In the opposite scenario when glucose is below target and takes a right hand turns you should brake stronger. In the code this is accomplished by swapping bgAccel_ISF_weight and bgBrake_ISF_weight, i.e. you do not need to act yourself.

   A better definition of acceleration would have been accelerate away from target and decelerate towards the target rather than relating it to glucose=0. The flow diagram in the *Quick Guide* does not reflect this detail.

2. **New switch "*enableSMB_EvenOn_OddOff*" for enabling or disabling SMB in a very flexible manner**
   This new feature works independent of other autoISF settings. By clever selection of *Temporary Targets* you now have additional options for enabling or disabling SMB essentially across the whole allowed range of 72-180mg/dl:
   - If the TT is an even number then SMB is always enabled and the message "*SMB enabled by full loop logic: even TT*" shows up in the SMB-tab. This is useful for *Eating Soon* and compatible with its standard assignment of 72. Also, you could for instance select 120 while sick in bed and still get SMBs, regardless of all the other SMB settings.
     The only exceptions are those situations where SMBs are disabled for reasons other than direct SMB preference settings, e.g. a hypo looming in the predictions.
   - If the TT is an odd number then SMB is disabled always and the message "*SMB disabled by full loop logic: odd TT*" shows up in the SMB-tab. This is useful for quiet times or overnight with smoother curves by selecting TT=81 or 83 which worked very well for me. You can also use it overnight to avoid overreactions against compression lows.
   - If no TT is set then the normal AAPS rules and messages will apply.

   You need to be a careful because of **old habits** when defining a TT. *Eating Soon* at TT=72 behaves as before but *Hypo Target* at TT=120 would enforce SMB which is probably not what you want in that situation. So better go to settings for *Default Temp-Targets* and change the *hypo target* to 121. You should also check the defaults for *Activity Target* and make sure that fits your traditional SMB option.

   With **automations** this offers a wide range of TTs and options without the need to adhere to the watershed at 100. As an example take the situation where your IOB gets too high but the carbs are still coming in you can set a TT=73 by automation which gives the strongest possible TBR action but no SMB. **You should check all existing rules that set a TT whether they must be adapted.**

As you can see these new options are powerful but need careful preparation. Therefore the SMB delivery settings menu was extended by the **new switch *enableSMB_EvenOn_OddOff*** to consciously enable this behaviour . Otherwise users not aware of this might get caught out.

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