

Extra Detections (multiple targets)

Relevant for the following echo sounder type(s) only: EM 2040, EM 2040C

Note

Extra Detections is a licensed feature

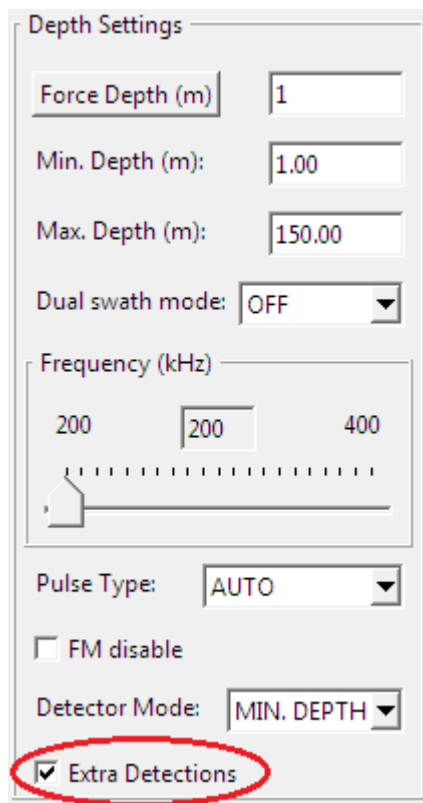
Licensed features are only available if purchased and the issued SIS licence dongle is inserted in the SIS computer.

If a valid license is not found the affected GUI items (buttons, frames etc.) will not be displayed or alternatively rendered inoperable,

Extra Detections is only available on PUs specifically supporting this feature.

This setting allows for more than one detection per beam direction.

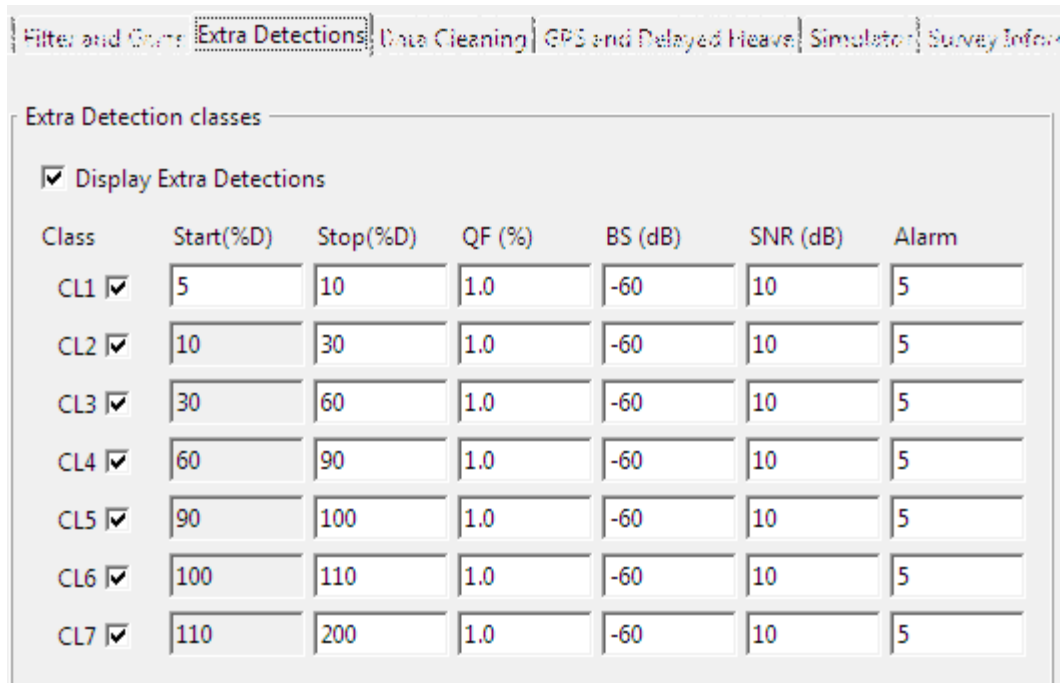
The Extra Detections feature is activated and deactivated by a tick button in the **Depth Settings** group in the **Runtime Parameters**→**Sounder Main** frame (the displayed picture is for an EM 2040C echo sounder):



The screenshot shows the 'Depth Settings' window with the following controls:

- Force Depth (m): 1
- Min. Depth (m): 1.00
- Max. Depth (m): 150.00
- Dual swath mode: OFF
- Frequency (kHz): 200 (slider between 200 and 400)
- Pulse Type: AUTO
- FM disable:
- Detector Mode: MIN. DEPTH
- Extra Detections (circled in red)

When Extra Detections are active the system will search for extra candidates in all beams and for all ranges. Any false detections (like side lobe echoes etc.) will be removed and the remaining candidates are organized into classes. These classes, which in essence are depth ranges with some acceptance criteria, are user definable with an initial default setup. All candidates which are accepted into a class are subsequently stored. The user setup of the Extra Detections classes is performed in the **Runtime Parameters**→**Extra Detections** frame illustrated below (showing default setup):



- There are seven classes (CL1–CL7) which can be individually enabled and disabled (all enabled by default). Disabled classes are stored, but will not be displayed.
- The start and stop depth (range) in % of the estimated depth can be set for each class. Note that the Stop value for a class is always the Start value of the next class. I.e. only the start depth for the first class can be changed by the user.
- Threshold values: QF (Quality), BS (Amplitude) and SNR (Signal to Noise Ratio) defines the current acceptance criteria for entering a candidate into a class. The Alarm item is currently not used.

The Extra Detections information can be displayed in several of SIS frames depending on the setting of the **Display Extra Detections** button, see illustration above.

If the button is checked (as shown) the Extra Detections information will be visible in the following SIS displays using the set class configuration:

- The Water Column display.
- Cross track
- Geographical display, both in the Realtime depths tail and in the grid. Note that the **Invalid** selection must be set in the **Geographical Options**→**Survey**→**Point Data** frame to show the data in the grid.

Note

*The use of the **Display Extra Detections** button do not affect the Extra Detections operation in any way except for the display ability.*

The Extra Detections information is stored by SIS during logging using the 'l'-datagram (i.e. small 'L').