

Micron Sonar firmware update (250805)

Added command: 'mtStopAlives' = 66 (42h)

- This command was implemented to a later release of Micron firmware. For Micron heads that pre-date this firmware release, please contact Tritech for a firmware upgrade. This is supplied in the form of a binary file which is uploaded/programmed into the Micron via the 'Micron Setup' utility.

10) 'mtStopAlives' Command Message (ID = '66')

When the Micron is powered it will begin to send 'mtAlive' broadcast messages to the host PC at intervals of 1 second (1Hz). These messages are for the purpose to indicate to the host that the Micron has come online. The 'mtAlive' messages contain information concerning motor and transducer states and also whether the Micron has yet received a parameter block from the host.

Once the Micron has received and validated a parameter block (contained in the 'mtHeadCommand') it will indicate this in subsequent 'mtAlive' message broadcasts (more details on this can be found in the main 'Software notes...' documentation). Thereafter, 'mtAlives' will only be sent whenever the Micron is sitting in an idle state, which means that the constant flow of 'mtSendData' triggers has ceased from the host. The Micron would then commence with the 1Hz mtAlive broadcasts during this idle spell.

For certain installations, such as AUVs, the 'mtAlive' broadcasts can be an unnecessary overhead. This can affect acoustic modem broadcasts, logging and also power needs. With consideration to this, the host can now issue an 'mtStopAlives' command to the Micron to permanently stop the Micron from sending the 'mtAlive' messages. To once again resume 'mtAlive' message broadcasts would require a power reset or 'mtReBoot' command to be sent. In the case of the latter, a new 'mtHeadCommand' should always follow an 'mtReboot' since this command will reset the Micron and erase the existing parameter block stored within it.

The downside to disabling the 'mtAlive' broadcasts is that the host has no way of checking/verifying the transducer and motor states. But of course if the head is in the middle of scanning operations then the Bearing field in subsequent 'mtHeadData' replies can be monitored to ensure that the transducer is indeed rotating (which then indicates that the motor is also okay). The parameter block should never come to be erased in the Micron without a power reset; which in the event of, the mtAlive messages would then start to be re-sent again and be read to check the Micron has valid parameters.

The 'mtStopAlives' command would usually be sent whenever 'mtSendData' triggering has started. Perhaps straight after the 1st 'mtHeadData' reply has been received by the host. The reasoning behind this is that the Micron will only respond to an 'mtSendData' if it has first received a valid parameter block sent to it in an 'mtHeadCommand'. Therefore, after the receipt of the 1st 'mtHeadData' reply, the host is then aware that the Sonar is alive, configured and in the "go" state.

The Command to disable mtAlive broadcasts from the Micron head is as follows...

A. Serial Port sends **mtStopAlives Command (14 byte)**

40	30	30	30	38	08	00	FF	02	03	42	80	02	0A
Hdr '@'	Hex Length = 8 bytes				Bin Length = 8 bytes		Tx Nd 255	Rx Nd 02	No. Byt = 3	mt Sto pAl ive	Seq = End	No- de 02	LF

B. There is no Sonar reply to this command.