

The following document describes the differences between Clarinet versions starting from Cla17\_5A.

Date	Clarinet Version	Updates
4.02.2003	Clarinet 04Feb2003 1.01.01.12	<p><b>Updates CAN:</b></p> <ul style="list-style-type: none"> <li>* Real time messages filtering.</li> <li>* CANOpen BOOTUP protocol was added according to the value of PP[6].</li> </ul> <p><b>Updates Misc:</b></p> <ul style="list-style-type: none"> <li>* Improvement in the encoder filter (EF[1],EF[2])</li> <li>* External reference mode (RM=1) with relative calculations.</li> <li>* Cyclical ECAM mode (EM[1]).</li> <li>* Last segment shorten range for asymmetric ECAM segments.</li> <li>* Head Pointer reference of the ECAM table (EM[8])</li> <li>* PR starts PTP mode immediately.</li> <li>* Handling NULL interrupts recovery.(CD)</li> <li>* Hall-Encoder indication removed.</li> <li>* User Program auto routine for homing (AUTO_HM, AUTO_HY).</li> <li>* Adding logic level and functionality to the Digital output (OL[])</li> <li>* Brake function, digital output indication to for a brake (BP[])</li> <li>* Auto Phasing multi tries for "Encoder Only" commutation is enabled (CA[27]).</li> <li>* In Position External reference, the auxiliary speed command is filtered (VF)</li> </ul> <p><b>Bug corrections:</b></p> <ul style="list-style-type: none"> <li>* PT mode had double feedings - this was corrected.</li> <li>* Updating output register (OP) when homing sequence is done according to request (HM[4], HY[4]).</li> <li>* Current saturation peak level when modifying this level was decreasing to continuance – this was corrected.</li> <li>* Correction of 0.7% deviation in time depended calculations.</li> <li>* Decelerating a software position command when external position reference is defined (ST &amp; SD in RM=1).</li> </ul> <p><b>Composer:</b> Version 1.3.0.0 15 Jan 2002</p> <p><b>Manuals:</b>  <b>Command reference:</b> MAN_MET_CM_EN_0102.doc  <b>Software manual:</b> MAN_MET_SF_EN_0102.doc  <b>CAN manual:</b> MAN_CAN_UG_EN_0501.doc  <b>EDS:</b> Eds0102C.eds</p>
10.4.2002	Cla09_4_02 1.01.00.01	<p><b>Updates Misc:</b></p> <ul style="list-style-type: none"> <li>Improving the encoder filter to 40nSec gap (160nSec pulse width)</li> </ul>
15.1.2002	Cla15_1_02 1.01.00.00	<p><b>Updates CAN:</b></p> <ul style="list-style-type: none"> <li>* CAN controller status - object 0x2081, DD command</li> <li>* Firmware download with CAN.</li> <li>* Adding erupt instruction as CAN event trigger.</li> </ul>

		<p>* Homing sequence done for CAN event trigger.</p> <p><b>Updates Misc:</b></p> <ul style="list-style-type: none"> <li>* Binary download and upload of the FLASH content</li> <li>* Status Register (SR) bit 18 indicates amplifier failure.</li> <li>* Open the motion gains as a result of reference changes (GS[14]) .</li> <li>* Adding filter time parameter (KA) for the analog input in velocity mode.</li> </ul> <p><b>Bug corrections:</b></p> <ul style="list-style-type: none"> <li>* In auto baud rate procedure 2 seconds for default baud rate after 16 error frames (refer to Software Manual)</li> <li>* Gain scheduler response also to analog input.</li> <li>* Clarinet current feedback report (IM) in CAN object 0x6078 and analog out (AM) was always 0.</li> <li>* When mapping an event object in CAN, the second mapped object to the same TPDO was in a Big Endian format. In this version it is corrected to a Little Endians format.</li> </ul> <p><b>Composer:</b> Version 1.3.0.0 15 Jan 2002</p> <p><b>Manuals:</b> <b>Command reference:</b> MAN_MET_CM_EN_0102.doc <b>Software manual:</b> MAN_MET_SF_EN_0102.doc <b>CAN manual:</b> MAN_CAN_UG_EN_0501.doc <b>EDS:</b> Eds0102C.eds</p>
12.7.2001	Cla9_7_2 1.00.02.00	<p>Updates CAN: None</p> <p>Updates Misc: Enforce initiation receive values to CAN controller.</p> <p>Bugs Correction: None</p> <p>Composer: Ver 1.00.00.00 15.4.2001</p> <p>Manuals: Command referce: MAN_MET_CM_EN_0501.doc Software manual: : MAN_MET_SF_EN_0501.doc CAN manual: MAN_CAN_UG_EN_0501.doc</p>
15.5.2001	Cla15_5	<p>Updates CAN:</p> <ul style="list-style-type: none"> <li>* New objects: (please refer to CAN manual 0501)</li> <li>(DS301 object)</li> <li>0x1600,0x1400 – RPDO1 set object is allowed.</li> <li>(Manufactors objects)</li> <li>0x206A – Error Code value according to EC command.</li> <li>0x2F00 – IA array.</li> <li>0x2F0B – Status Object</li> <li>(DS402 objects)</li> <li>0x6402 - Motor Type</li> <li>0x6403 – Motor Catalog Number</li> <li>0x6404 – Motor manufacturer</li> <li>0x6502 – Supported dirver modes</li> <li>0x6504 – Driver manufacturer</li> <li>0x6505 - Driver manufacturer web site.</li> </ul> <p>Updates Misc:</p>

		<p>* MP[3] Command for PVT &amp; PT end motion with no emergency. *FL Command to change the fault logic. *SF Command for position mode.</p> <p>Bugs Correction: * Homing on index algorithm and sequence. * MS value for jogging. * User program compilation error report.</p> <p>Composer: Ver 1.00.00.00 15.4.2001</p> <p>Manuals: Command referce: MAN_MET_CM_EN_0501.doc Software manual: : MAN_MET_SF_EN_0501.doc CAN manual: MAN_CAN_UG_EN_0501.doc</p>
15. 2.2001	Cla14_02	<p>Updates CAN: *Factors objects for velocity (0x20B1,0x20B2) *New objects for position error,torque cmd,motor current *Another object may be mapped to trigger event. *PT motion mode fast TPDO1 update. *ECAM table fast update with TPDO1.</p> <p>Updates Misc: *Pulse and Direction (YA command) *SR reports run time error. *Multi ECAM table (EM[5]) *Motor Stuck fault indication (CL[2] &amp; CL[3]) *RS232 works with 38400 baud rate. *Feedback loss indication for hall&amp;encoder systems.</p> <p>Update Auto tune: *Improvements in filter for velocity and position *Increasing yhr controller dynamic ranges. *Noise reduction filter.</p> <p>Updates for Clarinet: *Clarinet works with 8M encoder.</p> <p>Bugs correction: *Correction in user program upload byte length report (CAN) *Correction in HY[5] command.</p> <p>Composer Version: Composer 14_02_2001.</p>
22.11.00	Cla17_11	<p>Updates: - Improvements on the auto tune. - Adding Motor Stack indication CL[2],CL[3] (Command reference 1100) - Tacho feedback is operational.</p> <p>Bugs Correction: - PDO map object – get function for TPDO 1 – 4 return values for 1 object. - PDO3,4 COB-ID return a correct value.</p> <p>EDS file: EDS2111C.eds</p>

		COMPOSER VERSION:
4-10.2000	Cla3_10	<p>Updates:</p> <ul style="list-style-type: none"> <li>- Multicapture homing modes. (Command reference 0900)</li> <li>- Fast input for Digital input 4.</li> <li>- Emergencies messages for motor fault in CAN.</li> <li>- Object 0x6007 for definition of node guard behavior.</li> <li>- Object 0x2050 for MS event trigger. (CAN User Manual 0900)</li> <li>- Target Radius Command. (Command reference 0900)</li> <li>- Correcting MS command to fit TR. (Command reference 0900)</li> <li>- Separated advanced filter for position and velocity loop (KV,KF)</li> <li>- Auto tune supports mismatch including scheduling for advanced filter.</li> <li>- Auto tune for Dual Loop mode.</li> <li>-</li> </ul> <p>Bugs Correction:</p> <ul style="list-style-type: none"> <li>- Correction in analog gains for auxiliary input.</li> <li>- Motor was enabled with Enable switch even when defined as ignore.</li> <li>- PY reports value in motor off.</li> <li>- HALLS only in motor enabled.</li> <li>- On-the-fly profile changes in analog velocity mode.</li> <li>- Position modulo is considered by the PR command.</li> <li>- AUTO_ER works properly.</li> <li>- MI command range was corrected.</li> </ul> <p>COMPOSER VERSION: <a href="ftp://208.160.202.9/pub/uploads/Composer/setup04102000.zip">FTP://208.160.202.9/pub/uploads/Composer/setup04102000.zip</a></p>
11.7.2000	Cla11_7	<p>Updates:</p> <ul style="list-style-type: none"> <li>- RS485 supported</li> <li>- PR parameter update. (Command Reference 2.0)</li> <li>- PDO mapping (Can User Manual 1.03 )</li> <li>- Changes in default values for CAN objects.(EDS 7_4a)</li> <li>- Binary interpreter inquiry with DLC = 8.</li> <li>- Group ID for CAN nodes.</li> <li>- Resolver feedback ability.</li> </ul> <p>Bugs correction:</p> <ul style="list-style-type: none"> <li>- Analog velocity recordings</li> <li>- Global ST and BG for CAN NMT messages.</li> </ul> <p>COMPOSER VER: 02072000 <a href="ftp://208.160.202.9/pub/uploads/Composer/setup02072000.zip">FTP://208.160.202.9/pub/uploads/Composer/setup02072000.zip</a></p>