

The following document describes the differences between Saxophone versions starting from Sax17_5A.

Date	Saxophone Version	Updates/Corrections
21.04.2003	Sax 15Apr2003 1.01.02.13	<p>Updates CAN:</p> <p>Updates Misc:</p> <p>Bug corrections: Commutation with Encoder Only did not worked properly.</p> <p>Composer: Version 1.3.0.0 15 Jan 2002</p> <p>Manuals: Command reference: MET_CR_03_03.doc Software manual: MAN_MET_SF_EN_0102.doc CAN manual: MAN_CAN_UG_EN_0501.doc EDS: Eds0102C.eds</p>
4.02.2003	Sax 4Feb2003 1.01.02.12	<p>Updates CAN:</p> <ul style="list-style-type: none"> * Real time messages filtering. * CANOpen BOOTUP protocol was added according to the value of PP[6]. <p>Updates Misc:</p> <ul style="list-style-type: none"> * External reference mode (RM=1) with relative calculations. * Cyclical ECAM mode (EM[1]). * Last segment shorten range for asymmetric ECAM segments. * Head Pointer reference of the ECAM table (EM[8]) * PR starts PTP mode immediately. * Handling NULL interrupts recovery.(CD) * Hall-Encoder indication removed. * User Program auto routine for homing (AUTO_HM, AUTO_HY). * Adding logic level and functionality to the Digital output (OL[]) * Brake function, digital output indication to for a brake (BP[]) * Auto Phasing multi tries for "Encoder Only" commutation is enabled (CA[27]). * In Position External reference, the auxiliary speed command is filtered (VF) <p>Bug corrections:</p> <ul style="list-style-type: none"> * PT mode had double feedings - this was corrected. * Updating output register (OP) when homing sequence is done according to request (HM[4], HY[4]). * Current saturation peak level when modifying this level was decreasing to continuance – this was corrected. * Decelerating a software position command when external position reference is defined (ST & SD in RM=1). * In follower mode (RM=1, UM=5) the auxiliary reference had a delay of 1 sample time relative to the feedback. This was corrected. <p>Composer: Version 1.3.0.0 15 Jan 2002</p> <p>Manuals: Command reference: MAN_MET_CM_EN_0102.doc Software manual: MAN_MET_SF_EN_0102.doc</p>

		<p>CAN manual: MAN_CAN_UG_EN_0501.doc EDS: Eds0102C.eds</p>
15.1.2002	Sax15_1_0 2 1.01.00.00	<p>Updates CAN: * Firmware download with CAN. * Adding erupt instruction as CAN event trigger. * Homing sequence done for CAN event trigger.</p> <p>Updates Misc: * Binary download and upload of the FLASH content * Status Register (SR) bit 18 indicates amplifier failure. * Open the motion gains as a result of reference changes (GS[14]). * Adding filter time parameter (KA) for the analog input in velocity mode. * Adding 30/60 halls detection (Sax only)</p> <p>Bug corrections: * In auto baud rate procedure 2 seconds for default baud rate after 16 error frames (refer to Software Manual) * Gain scheduler response also to analog input. * Clarinet current feedback report (IM) in CAN object 0x6078 and analog out (AM) was always 0. * 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.</p> <p>Composer: Version 1.3.0.0 15 Jan 2002</p> <p>Manuals: Command reference: MAN_MET_CM_EN_0102.doc Software manual: MAN_MET_SF_EN_0102.doc CAN manual: MAN_CAN_UG_EN_0501.doc EDS: Eds0102C.eds</p>
12.8.2001	Sax1_8 1.00.03.00	<p>Updates CAN: Bus off recovery sequence. Object 0x2081 CAN controller status</p> <p>Updates Misc: DD command - CAN controller status.</p> <p>Bugs correction: Digital input 5 and 6 indications for IB[] and IP commands Auxiliary homing for HOME switch.</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>
12.7.2001	Sax9_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>

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		<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	Sax15_5 1.00.01.00	<p>Updates CAN: *New objects: (please refer to CAN manual 0501) (DS301 object) 0x1600,0x1400 – RPDO1 set object is allowed. (Manufactors objects) 0x206A – Error Code value according to EC command. 0x2F00 – IA array. 0x2F0B – Status Object (DS402 objects) 0x6402 - Motor Type 0x6403 – Motor Catalog Number 0x6404 – Motor manufacturer 0x6502 – Supported dirver modes 0x6504 – Driver manufacturer 0x6505 - Driver manufacturer web site.</p> <p>Updates Misc: * MP[3] Command for PVT & 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	Sax14_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] & CL[3]) *RS232 works with 38400 baud rate. *Feedback loss indication for hall&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 Saxophone:</p>

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		<p>Bugs correction:</p> <ul style="list-style-type: none"> *Correction in user program upload byte length report (CAN) *Correction in HY[5] command. *Response of FLS in position mode. <p>Composer Version: Composer 14 02 2001.</p>
22.11.00	Sax17_11	<p>Updates:</p> <ul style="list-style-type: none"> - Improvements on the auto tune. - Adding Motor Stack indication CL[2],CL[3] (Command reference 1100) - Adding LED indications. <p>Bugs Correction:</p> <ul style="list-style-type: none"> - PDO map object – get function for TPDO 1 – 4 return values for 1 object. - PDO3,4 COB-ID return a correct value. <p>EDS file: EDS2111C.eds</p> <p>COMPOSER VERSION:</p>
4.10.2000	Sax3_10	<p>Updates:</p> <ul style="list-style-type: none"> - Multicapture homing modes. (Command reference 0900) - Capture modes for HOME and AHOME switches. - Emergencies messages for motor fault in CAN. - Object 0x6007 for definition of node guard behavior. - Object 0x2050 for MS event trigger. (CAN User Manual 0900) - Target Radius Command. (Command reference 0900) - Correcting MS command to fit TR. (Command reference 0900) - Separated advanced filter for position and velocity loop (KV,KF) - Auto tune supports mismatch including scheduling for advanced filter. - Auto tune for Dual Loop mode. - Analog input values are available in digital modes. <p>Bugs Correction:</p> <ul style="list-style-type: none"> - Correction in analog gains for auxiliary input. - Motor was enabled with Enable switch even when defined as ignore. - PY reports value in motor off. - HALLS only in motor enabled. - On-the-fly profile changes in analog velocity mode. - Position modulo is considered by the PR command. - AUTO_ER works properly. - MI command range was corrected. - Analog output works properly. - Digital output high values correction. <p>COMPOSER VERSION FTP://208.160.202.9/pub/uploads/Composer/setup04102000.zip</p>
11.7.2000	Sax11_7	<p>Updates:</p> <ul style="list-style-type: none"> - RS485 supported - PR parameter update. (Command Reference 2.0) - PDO mapping (Can User Manual 1.03) - Changes in default values for CAN objects.(EDS 7_4a) - Binary interpreter inquiry with DLC = 8. - Group ID for CAN nodes. - Auto tune for Velocity and Position. <p>Bugs correction:</p>

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		<ul style="list-style-type: none">- Analog velocity recordings- Global ST and BG for CAN NMT messages. <p>COMPOSER VER: 02072000 (FTP://208.160.202.9/pub/uploads/Composer/setup02072000.zip)</p>
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