

SAURA

SA-10 series

Steering Reliability since 1916

For over 25 years, Saura auto pilots have earned a "hard-one" reputation from discerning professionals all over the world. Saura proudly introduces the new SA-10 series of auto pilots, which will replace the proven 3000AT series, offered at an affordable price.



COMMERCIAL AUTO PILOT

Computer Controlled Auto Pilot

Unlike the majority of auto pilots on the market, Saura SA-10 offers all the features that a commercial auto pilot should have.

Tight course holding and rugged construction to withstand harsh off shore operating conditions will earn professionals' satisfaction.

FEATURES

Fast response, precision auto pilot

Saura's proven and well-established technology succeeds in unbeatable performance and unparalleled reliability.

Single main unit design

No separate processor unit or distribution box is necessary. "Space Saving" and simple installation.

Rotary course setter and controls

Positive fingertip control for fine course setting, steering responses and mode selection with rotary control dials.

Dual remote capability

Two remote controls (portable or fixed electric helm) can both be connected. No selector switch operation to override between the two stations.

GPS course matching navigation

An advanced algorithm which is exclusive to Saura SA-10 series reduces deviation from the set course.

Serial data input and output

Navigation equipment can talk to the autopilot providing the most up-to-date information for accurate way point steering. Heading output is provided for other navigational equipment.



SPECIFICATIONS

Power supply:	13.8 – 30VDC (SA-10 can work on 12VDC, but illumination brightness may compromise)
Current drain:	0.3A standby 1.4A when actuating solenoid
Bearing accuracy:	$\pm 1^\circ$ for X-Y type sensor inputs $\pm 0^\circ$ for NMEA inputs
Heading display:	0 – 359° 1° step, back-lit LCD
Rudder angle:	by bar graph in LCD display External RAI can be connected
INPUTS:	
Heading reference:	Compass sensor (sine/cosine)
Serial data:	NMEA-HDT or HDM
GPS data:	NMEA0183-APB or a pair of BOD & XTE
OUTPUTS:	
Heading output:	NMEA0183-HCHDM and Saura SA-10 format serial data (interval 0.3 sec approx)
Size & weight:	W194 H94 D94mm 1.5kg

ACCESSORIES

Fluxgate Compass SC-75



W 150 H 125 D 150mm 1.6kg

- Directional system, held afloat in compass liquid on the tip of pivot, is able to rotate freely and face North, resulting in accurate, repeatable and stable headings for auto pilot.
- Gimballed bracket keeps the compass horizontally.

Rudder Feedback TR-2



W 160 H 100 D 150mm 1.2kg

- Oil filled potentiometer ensures an extremely long duty life.
- Rudder movement tracked by the linkage arm will be magnified three times of the actual angle by inner reduction gear mechanism, for ultimate preciseness in establishing the rudder position.

Remote Control F-20



W 62 H 236 D 66mm 0.6kg

- A large easy to turn dial for positive helm control on a water-tight enclosure
- 10 mtr of highly durable cabtyre cable
- FD-20 Remote is fitted with an LED display which shows vessel heading or set course.

And more

It is not well known what an paramount role both the compass and sensor play in enabling the auto pilot to perform at its best.

Designing a professional quality auto pilot requires thorough knowledge of the compass behavior, especially in dynamic motion encountered off shore, and engineering expertise in magnetic field detection technology.

Saura, with more than 80 years of experience in manufacturing top quality magnetic compasses, can achieve this better than anyone else. This is the hidden secret behind Saura's unparalleled quality and reliability of their auto pilots.

SA-101 Wheel House Unit



W530 H256 D422mm 22kg

- Top quality 150mm compass and auto pilot controls come in one easy to install pedestal.
- Steering dial on the front panel offers a handy maneuvering on F.F.U.
- An additional remote control can be connected without an optional junction box.
- Fitted with a full deviation correcting facility that is essential for the GPS guided navigation.

SA-102 Steering Stand



- SA-102 is a combination of SA-101 and hydraulic steering stand beneath it.
- In addition to all the SA-10 functions, it offers hand steering with a steering wheel.
- The steering wheel is power assisted. Even in emergency such as engine's stoppage or electric power failure, it is still operative and can control the rudder.

W 550 H 1020 D 560mm 40kg

OPTIONALS

Electric Helm



Panel W190 H 240 3.1kg

- The steering wheel allows fast and simple control of helm.
- Rudder order indicator has dimmer control for night use.

Rudder Angle Indicator A-3



W 80 H 80 D 85mm 0.5kg

- An external R.A.I., illuminated for night with dimmer control.
- Rudder position is precisely shown by the pointer needle.

Course Setter RC-10



W 139 H 118 D 118mm 1kg

- 80mm dia card tracks the ship's heading at all times.
- Second steering station capability; a course dial for selecting and setting a new course.

Pick-off Sensor SCP-SC



Ø 204 or 164 H 25 0.1kg

- It detects heading reference of a magnetic compass.
- Clear mounting plate for simple attachment on Saura steering compass without obstructing card view.

Solenoid Stack SV-02F/SV-03F



W 230 H 230 D 80mm 6kg

- Quick response, low pressure loss and high surge endurance.
- "Bleeding Off" type flow control valve, allows adjustment of oil displacement to match with the capacity of existing hydraulic ram(s).

2nd Steering Station SA-10S



W 194 H 94 D 94mm 1.5kg

- Offers full control capability at a remote locations, such as flying bridge.
- One thin cable run is all that is required to connect it to SA-10 main unit.

Transmitting Pick-off coil SCP-NT



Ø 204 or 164 H 33mm 0.2kg

- A magnetic pick-off device mounted on a magnetic compass, to generate NMEA output to transfer the heading for auto pilot or other navigational instrument.
- With local deviation property known, HDM can be aligned to True North, i.e., HDT datum.

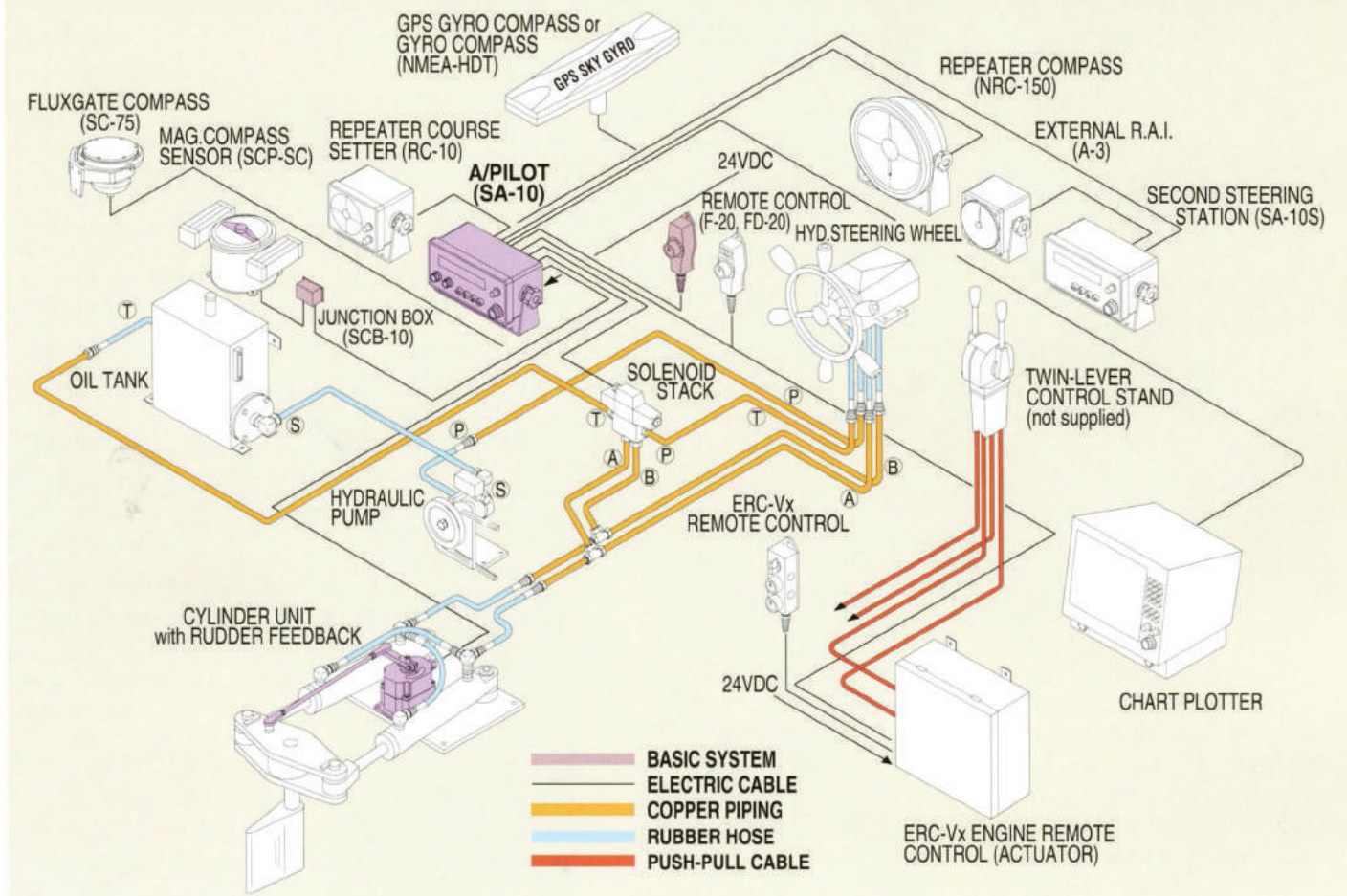
Alarm Unit SWA-1



W 120 H 120 D 60mm 0.4kg

- Offering selection of two functions by DIP Sw settings;
- Watch Alarm
 - Watch Dog Alarm
- Key switch to prevent from unauthorized operation. Anti-tamper alarm function is incorporated.

Typical installation of SA-10 Auto Pilot with SAURA hydraulics



REPEATER COMPASS NRC-150

NRC-150 is a unique combination of repeater compass and heading reference input & output facility, which makes it quite versatile for various applications.

- Smooth and quiet card movement
- Unlimited number of repeater connections
- Light weight
- Low profile design for flush mounting
- Back lit illumination with dimmer control

Heading input

GPS Gyro Compass
Conventional sphere type gyro
Mag. compass with TMC capability
SA-10 Auto Pilot



Heading output

Sine/cosine
HDT sentence
HDM sentence

Specifications to change without notice

DISTRIBUTED BY:



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Steering Reliability since 1916

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