

FURUNO®

New

MICROPROCESSOR-CONTROLLED AUTOPILOT

Model **FAP-55**



The future today with FURUNO's electronics technology.

FURUNO ELECTRIC CO., LTD.

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Catalogue No. M-1508b

TRADE MARK REGISTERED
MARCA REGISTRADA

- Precision automatic steering on an intended course with manual override from optional remote units
- Intuitive analogue or digital presentation of all steering information
- LCD/panel illuminated for nighttime cruising
- Preset adjustments for three different sea states, selectable at will
- The vessel returns to the intended course after dodging operation as the course is stored in memory
- Full-function dual-station steering (second control unit option), plus up to two hand-held remote control heads may be added (option)
- Electric relay output allows use with any type of steering system
- Other options: Rudder angle Indicator and Magnetic Compass



USEFUL FUNCTIONS

Selected sea state parameter

Set Course or Heading as derived from compass (Suffix "C" annunciates course in this case.)

Analog meter displays: Deviation (Course-heading offset) in degree, Rudder angle in degree or Cross track error in nm

Steering mode in use

Watch alarm

Annunciators for analog meter

Power failure alarm

For setting sea state parameter: after pressing this key, select ①, ② or ③.

Trim adjust

LCD/panel dimmer control

Watch alarm on/off

Nav mode

Pilot mode

Dodging mode

Course control

or indicates rudder is driven to port or starboard

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SEA STATE WX · RATIO · C-R DISPLAY

2 1 1 7 E

AUTO

PORT .40 .30 .20 .10 0 .10 .20 .30 .40 STBD

WA DEV RUD XTE PF

FAP-55

PORT STBD

SEA STATE TRIM DIM WA NAV AUTO SBY ALARM RESET

POWER ON POWER OFF

PORT DODGE STBD

The FURUNO FAP-55 is a new microprocessor-controlled AUTOPILOT for efficient and economical cruising and fishing. The FAP-55 can relieve the helmsman of the tedium of holding the wheel and allow him to better watch the progress of his vessel and for obstacles. Besides, the AUTOPILOT can steer a better course for a longer time than a man can, and when directed by a LORAN, GPS or other Nav receiver, will keep the vessel on the best course to a selected destination.

(Safety note: Beware of the use of any autopilot in congested areas or around obstacles. Switch the autopilot to manual mode whenever potential danger is experienced. An autopilot is an aid to, not a replacement for, an experienced helmsman.)

Dual-station steering is possible by adding an optional second control unit. These compact control units on table top, bulk head or flush mount installation may fit any place in bridge or flying bridge. Further,

up to two hand-held remote controllers may be added. You can carry one around at any place on board within 12 m cable length from the processor unit.

The backlit LCD display presents all important steering information including selected steering mode, ship's course or heading, course deviation, rudder angle or cross track error, warning, etc.

On installation, system performance parameters are set for the individual vessel handling characteristics. 3 sets of parameters for Weather, Counter rudder, Rudder ratio are registered and selected depending on sea state.

Heading signal can be fed from either Flux-50 fluxgate heading sensor, magnetic compass through a pick-off coil and an interface or Gyrocompass through the Gyro converter AD-10S or AD-100.

CHOICE OF MODES

PILOT MODE

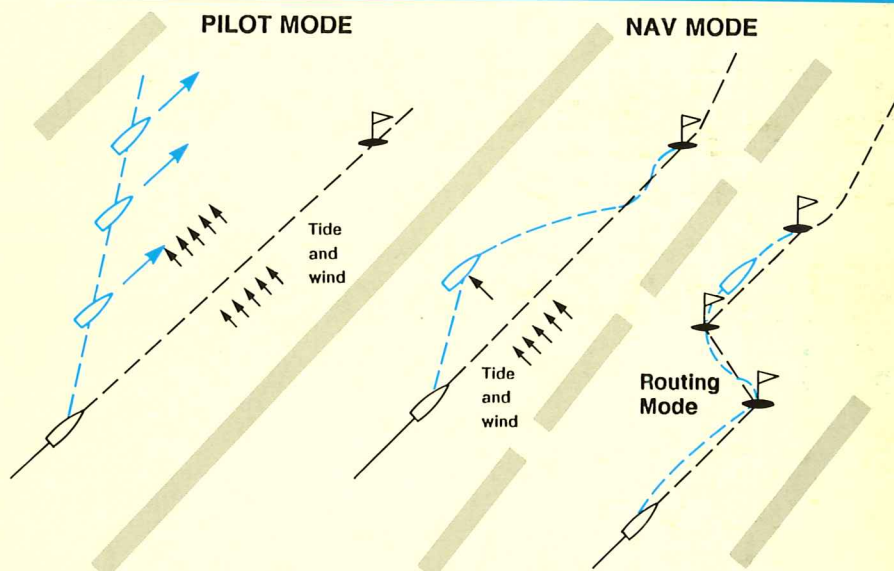
The FAP-55 consistently maintains the pre-set heading, but the ship may drift away from intended course due to tide and wind.

NAV MODE (NMEA 0180 or 0183 data required)

The FAP-55 steers the vessel toward the intended waypoint/destination, compensating effect of tide and wind.

Routing Mode

When interfaced with FURUNO Loran LC-90/90 MARK-II/LP-1000, Satnav FSN-50, GPS GP-500/1500 (NMEA 0183), the FAP-55 may be used to automatically steer the vessel to drop in a series of waypoints in succession (waypoints set by navigator). On arrival at each waypoint or destination, audio-visual alert will be activated.



SPECIFICATIONS OF FAP-55

1. Mode

Pilot, Nav or Routing
May be switched to Stand-by, Remote or Dodging.

2. Steering System

Hydraulic or Mechanical

3. Display

LCD display, backlighted in 3 steps

4. Interface

1. Heading Sensor:

Magnetic compass through pick-off coil (optional interface unit required), Gyro compass through gyro converter AD-10S/100, or Fluxgate heading sensor

2. Nav Sensor:

Loran LC-90/90 MARK-II/LP-1000, GPS GP-500/1500, Satnav FSN-50 or other nav sensors outputting data in NMEA 0180 (Cross Track Error data) or NMEA 0183 format (minimum requirement:

***RMB, ***APB, ***APA, or both ***BOD and

***XTE; ***VTG and ***AAM ** LC, GP, TR, DE, II)

Note: Data from Satnav or GPS may not be available on 24-hour basis, since Transit satellite system does not allow a full-time satellite fix and GPS system with a full-coverage has not been completed yet.

5. Adjustment of Parameters

The following parameters are adjustable to the particular state of the sea and the vessel:

Weather (deadband), Rudder Ratio, Counter Rudder, Trim (auto and manual), Course Changing Rate, Rudder Limit Angle and Vessel Speed.

Three sets of parameters can be preset and then selected at will depending on sea state or other factors. For instance, sea state ① could be cruising in a flat sea, and sea state ② could be running in a following sea, each preset to ideal for that condition.

6. Alarm

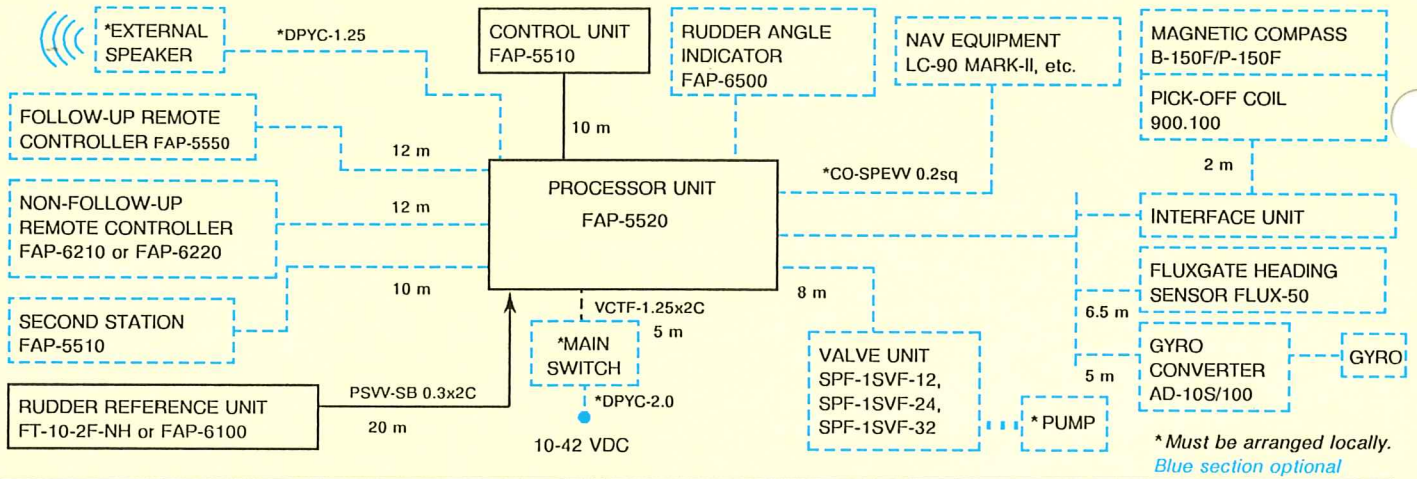
Both audible and visual warnings are provided for:

- Power failure: power supply below the rated input
- XTE: cross track error exceeding 0.3 nm (with NMEA 0180) or 0.4 nm (with NMEA 0183)
- Navigation signal error from nav equipment
- Arrival alarm: only in Nav mode (***AAM required)

In addition, "Watch alarm" alerts bridge personnel that the FAP-55 is in the Nav or Pilot mode.

7. Power Supply

10 to 42 VDC, 20 W (solenoid valve 12, 24, 32 VDC, 24 W)



HANDHELD REMOTE CONTROLLER FAP-5550 (option)

FAP-6210 (option)

FAP-6220 (option)

RUDDER REFERENCE UNIT FAP-6100

RUDDER ANGLE INDICATOR FAP-6500 (option)

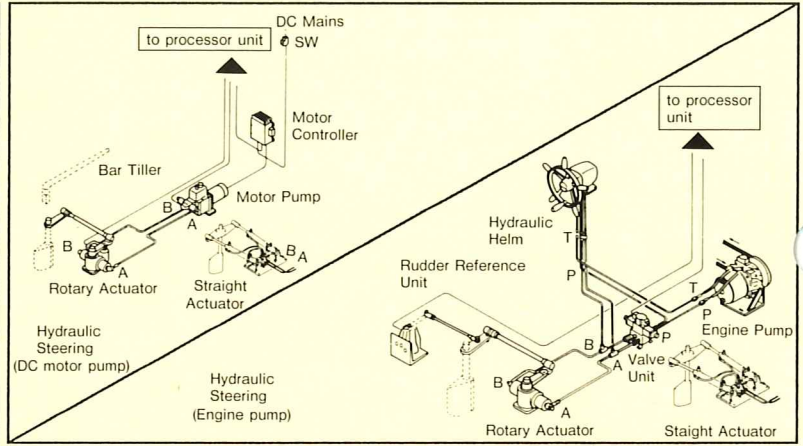
MAGNETIC COMPASS (option)

B-150F

P-150F

CONTROL UNIT FAP-5510

1.6 kg, 3.5 lbs.



PROCESSOR UNIT FAP-5520

3 kg, 6.6 lbs.

RUDDER ANGLE INDICATOR FAP-6500

1.5 kg, 3.3 lbs.

RUDDER REFERENCE UNIT FT-10-2F-NH FAP-6100

2.5 kg, 5.5 lbs.

FAP-6100

1.5 kg, 3.3 lbs.

MAGNETIC COMPASS

B-150F

P-150F

REMOTE CONTROLLER FAP-5550

0.5 kg, 1.1 lbs.

FAP-6210

0.5 kg, 1.1 lbs.

FAP-6220

2 kg, 4.4 lbs.

VALVE UNIT SPF-1SVF-12/24/32

5 kg, 11.0 lbs.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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