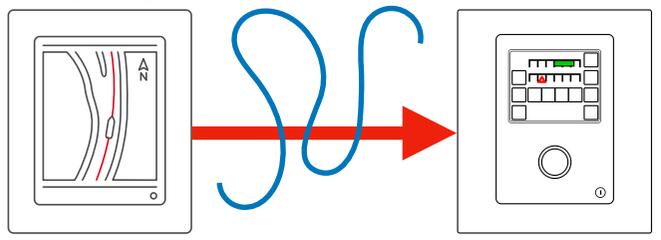


AlphaRiverTrackPilot – quick start guide

Preparation

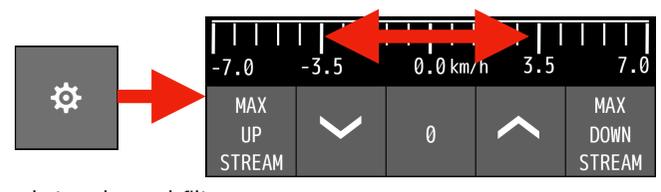
1. Send guiding line



2. Choose profile



3. Set stream velocity



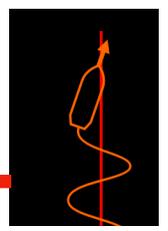
4. Check track and filter



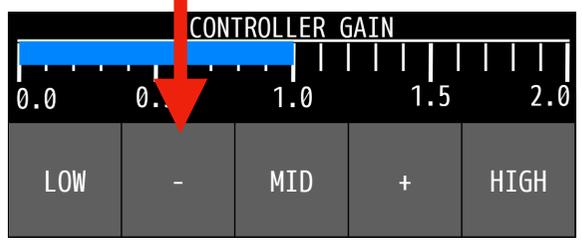
5. Turn on trackpilot mode

Oscillations

! Oscillations around guiding line

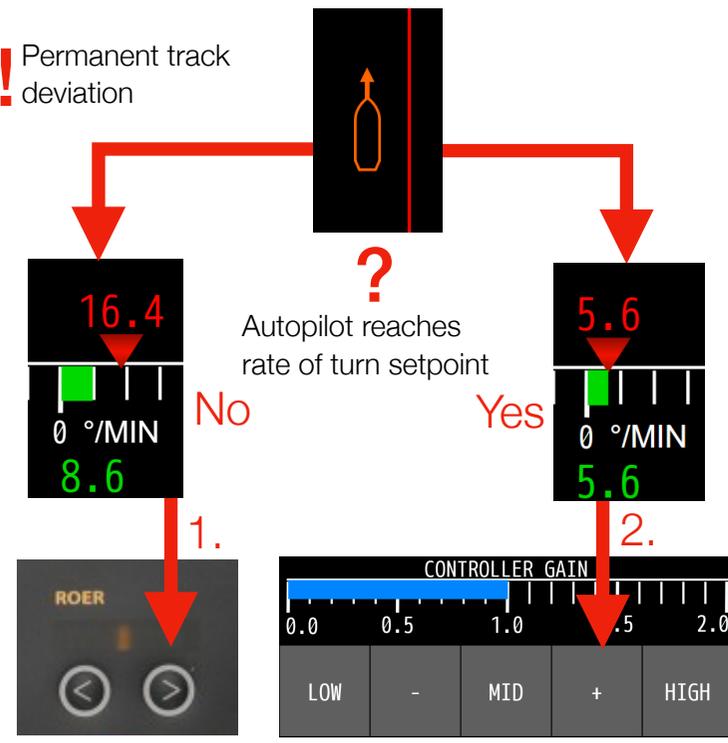


Lower „Controller Gain“



Permanent track deviation

! Permanent track deviation

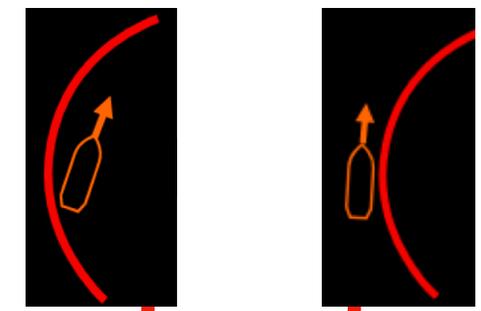


1. Increase „Rudder“ on autopilot
2. Increase „Controller Gain“ on trackpilot
3. Check rate of turn signal

Deviation in curves

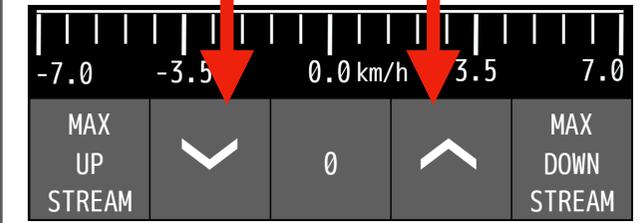
Too far on inside of curve

! Too far on outside of curve



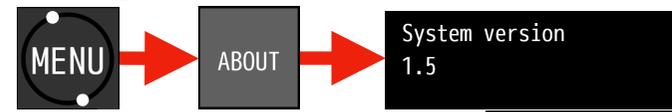
Change stream speed toward „Up Stream“

Change stream speed toward „Down Stream“

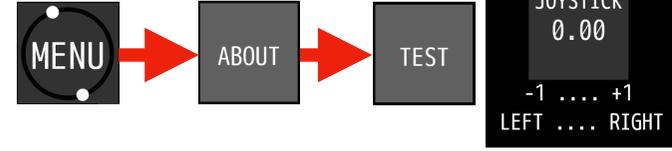


Miscellaneous

Checking system version



Checking joystick



Restarting trackpilot

Open fuse F1
Close after 3sec



ALPHATRON Marine

AlphaRiverTrackPilot – warnings and alarms

Warning Name	Description	Action	Alarm Name	Description	Action
CloseToEndOf Guidingline	The ship is close to the end of the guiding line. After reaching the end the track control system cannot compute meaningful command values.	<ul style="list-style-type: none"> Switch to manual steering Choose new guiding line 	DistanceError	The cross track error to the parallel line is too large.	<ul style="list-style-type: none"> Switch to manual steering Check if the correct guiding line has been chosen Choose another line closer to the current position
FilterDegraded	Error detection of GPS sensor found a problem.	<ul style="list-style-type: none"> Wait for the warning to disappear If EstimationDegraded error comes up switch to manual steering 	VeryCloseToEndOf Guidingline	The ship is very close to the end of the guiding line. After reaching the end the track control system cannot continue steering.	<ul style="list-style-type: none"> Immediately switch to manual steering Choose new guiding line
GPS: NoPosition Received	GPS receiver does not send GGA sentences	<ul style="list-style-type: none"> Acknowledge warning Closely monitor track control system for correct operation Increase attention Wait if data comes back otherwise switch to manual steering 	CurvatureError or CurvatureDerivative Error	Guiding line contains an error like high curvature.	<ul style="list-style-type: none"> Switch to manual steering Check guiding line for errors (points very close together) Choose new guiding line
GPS: NoVelocity Received	GPS receiver does not send VTG sentences	<ul style="list-style-type: none"> Acknowledge warning Closely monitor track control system for correct operation Increase attention Wait if data comes back otherwise switch to manual steering 	MaxROTChange Exceeded	Fast change in rate of turn command to autopilot. The command has not been sent to the autopilot to prevent a dangerous maneuver. Could be caused by an undetected error of the GPS sensor.	<ul style="list-style-type: none"> Acknowledge alarm by switching to manual steering. Wait until state of track control system returns to „READY“. Check in ECDIS if ship position on map and reality match. Switch on track control system Increase attention
GPS: NoHeading Received	GPS receiver does not send HDT sentences	<ul style="list-style-type: none"> Acknowledge warning Closely monitor track control system for correct operation Increase attention Wait if data comes back otherwise switch to manual steering 	EstimationDegraded	Error detection of GPS sensor found a problem like a big change in position or heading angle, probably caused by crossing beneath a bridge.	<ul style="list-style-type: none"> Acknowledge alarm by switching to manual steering. There is no other way to acknowledge the alarm. Wait until state of track control system returns to „READY“. Check in ECDIS if ship position on map and reality match. Switch on track control system Increase attention
VelocityLow	The velocity of the ship is below a certain threshold. At slow speeds there is not enough rudder force to steer the ship.	<ul style="list-style-type: none"> Increase velocity 			
Distance Warning	The cross track error to the parallel line is too large.	<ul style="list-style-type: none"> Check if the autopilot system processes the commands by the track control system (compare rate of turn to desired value) Acknowledge warning 			