SMART TURN SYSTEM

Thank you for making the road a safer place!

STS INSTALLATION MANUAL MECHANICAL SWITCH

www.safer-turn.com/manual

STS INSTALLATION MANUAL

USER MANUAL

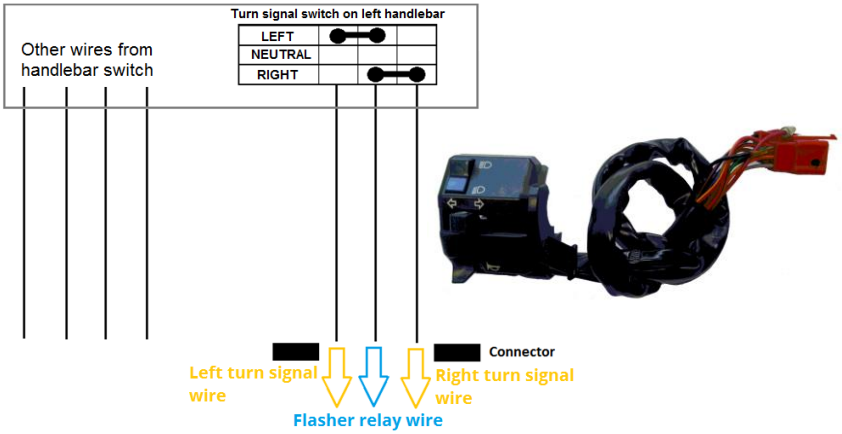
DISCLAIMER AND WARRANTY

COMPANY INFORMATION

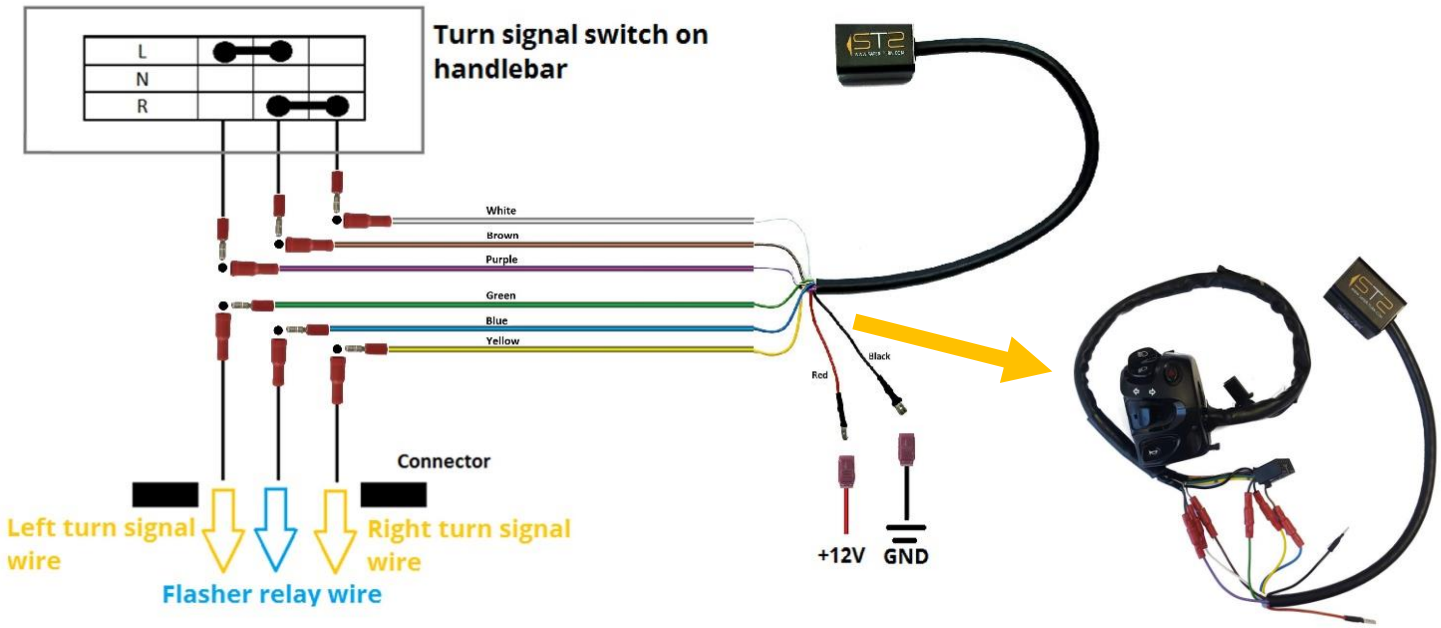
This installation manual is for motorcycles with flasher and mechanical (latching) switch (Most motorcycles except for Ducati, BMW and few other motorcycles with electrical switch – for those please choose electronic version manual)

- Before installation please check if you have mechanic turn signal switch (latching): 1. Turn off your motorcycle; 2. Press left or right turn signal switch; 3. Turn on your motorcycle > if turn signal is blinking you have a mechanical version!
- We strongly advise STS system installation is made only by authorized person!
- Please read installation manual before installation process!
- Pictures in installation manuals are illustrative!
- Power supply must be taken from ACC wire (ignition 12 V), not permanent 12 V from battery.

1. Wires and scheme before installation of STS System



2. Wiring scheme of STS system



*Connect: Black, red, yellow, blue and green wire and turn ignition on. If you connected all five wires properly you must see short blink of left and right turn signal. If you don't, do not proceed installation! (see step 5.1 and 5.2)

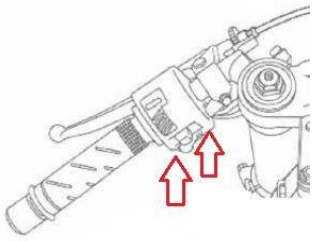
3. Find a spot for STS device (black box) near wires listed above

- STS unit has 50cm (20 inch) of cable so it has to be located near listed wires
- Spot for STS device has to be flat and fairly horizontal
- STS device has to be attached to housing (not on rudder or any other moving part)
- It is advised to connect STS device with zip tie, so try to find a spot that allows this and attach it firmly
- It is recommended that the module be mounted in a location not subject to extreme heat conditions
- Sticker with the STS Logo must look up
- Arrow in the STS Logo must point in the driving direction
- If necessary add velcro or double side tape (not included in the package)
- If necessary, remove plastic covers or other part of motorcycle housing

4. Modify turn signal switch to momentary

4.1 Objective of modifying the turn signal switch is to convert mechanical (latching) switch into a momentary switch.

4.2 Loosen the screws that clamp on to the handlebar.



4.3 Four foams are supplied with the package - two big and two small sized foams. Smaller foams are perfect fit for most motorcycle switches, based on our experience.

Bigger foams Smaller foams

There are two basic types of left handlebar switches (LHS):

Type 1:

Honda, Yamaha, Suzuki, Kawasaki, Triumph,...
(Switch may vary in visual appearance
from the outside.)

Type 2:

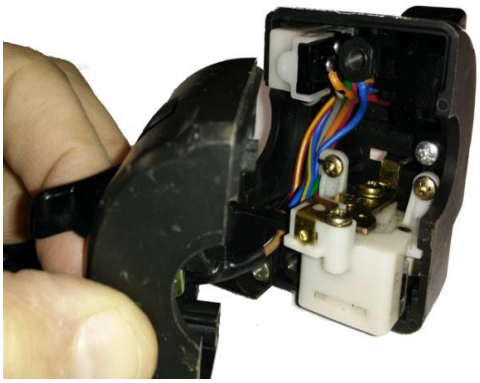
Scooters, Mopeds

Type 1 LHS

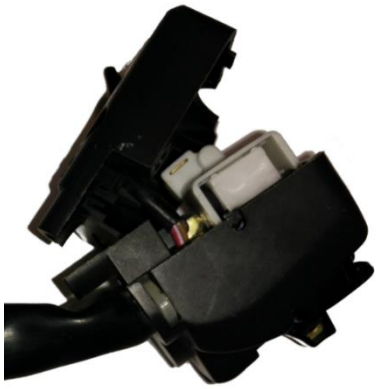
There are two basic variations of Type 1 LHS: **Open LHS** or **Covered LHS.**

- **Open LHS:**

Open switch:



Same switch from different angle:



Insert smaller foams into cavities with tweezers.

As you move the leaver from side to side, plastic slider moves from one side to another.

Left side:

Right side:

- **Covered LHS:**

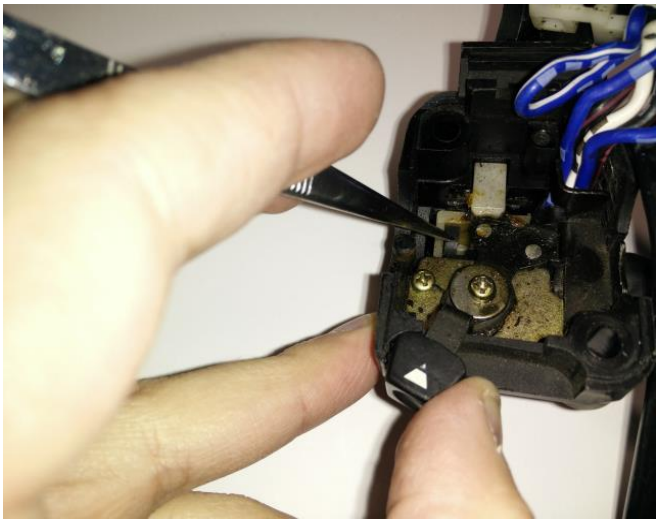
Switch may vary in visual appearance from inside

Loosen the screw(s) (highlighted with red circle), remove the covering and you will find two cavities where foams have to be inserted.

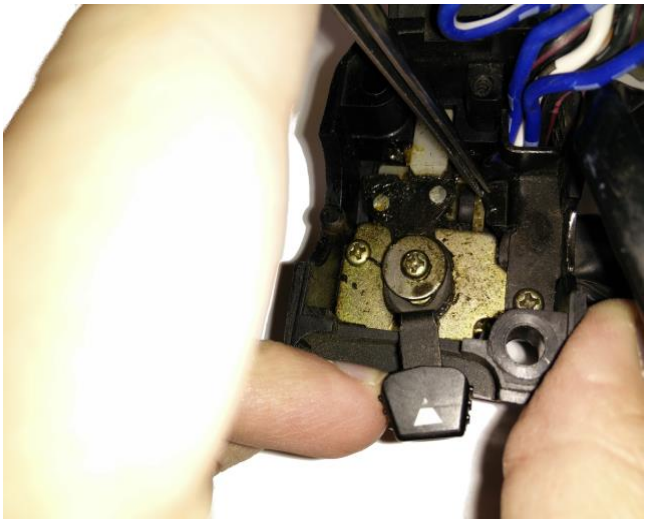
Insert smaller foams into cavities with tweezers.

As you move the leaver from side to side, the plastic slider moves from one side to another.

Left side:



Right side:



After inserting the foam plugs, make sure the switch has full motion but does not stay in the position.

Reassemble the LHS back to the handlebar.

Type 2 LHS

These kinds of switches are mostly used on smaller bikes (scooters, mopeds).

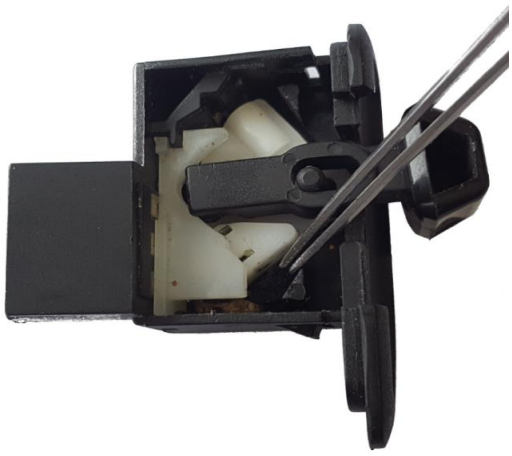
Disassemble the switch from handlebar.

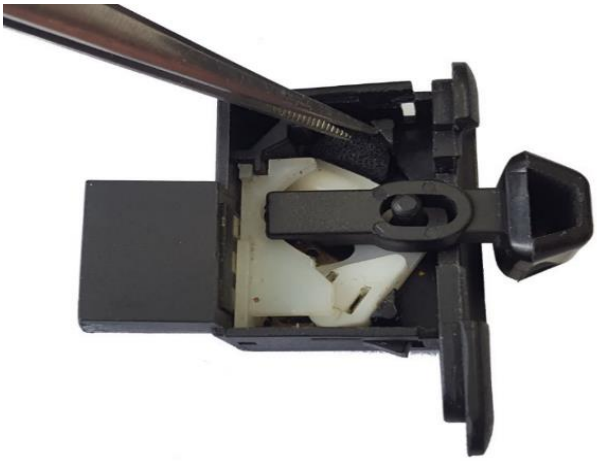
Remove top plastic cover by removing it with a screwdriver. Your switch should look like this:

Take the bigger foam included in the package and slice it into two pieces like shown in the picture below:

Whole big foam Bigger piece Smaller piece

Insert the smaller piece of foam into the smaller cavity and the bigger piece into the bigger cavity:





After inserting the foam plugs, make sure the switch has full motion but does not stay in the position.

Reassemble the cover and LHS back to the handlebar.

5. Test STS unit

5.1 First try

- Connect yellow, green, blue, black and red
  (white, brown and purple are NOT connected)
- Device has to be completely steady
- Turn ignition on (or start your motorcycle), watch carefully on turn signals
- After aprox 1 sec you will see turn signals blink for short time
- If that does not happen, please repeat 2 or 3 times
- If you are sure turn signals did not blink, please check
  power supply, if that still does not work please check your wiring or see troubleshooting

5.2. If your turn signals blinked connect also purple, white and brown wire and proceed to 5.3

5.3 Testing procedure

- Start your motorcycle and wait for few seconds
- Press left indicator and wait for 30 second
- Press left indicator again to cancel turn signal
- Repeat procedure for right turn signal

6. Reassemble all components back to it's original place

Informative universal wire scheme chart

STS	Colour	Honda	Yamaha	Kawasaki	Suzuki	Vespa	Triumph
ACC	Red						
Rout	Yellow	Light Blue	Dark Green	Gray	Light Green	White / Blue (Bi-Bl)	Gray (S)
PWMout	Blue	Gray	Brown/White	Orange	Light Blue	Blue / Black (Bl-Ne)	Orange (O)
Lout	Green	Orange	Chocolate	Green	Black	Pink (Ro)	Green (G)
Rin	White	Light Blue	Dark Green	Gray	Light Green	White / Blue (Bi-Bl)	Gray (S)
PWMin	Brown	Gray	Brown/White	Orange	Light Blue	Blue / Black (Bl-Ne)	Orange (O)
Lin	Purple	Orange	Chocolate	Green	Black	Pink (Ro)	Green (G)
GND	Black						

IMPORTANT! Colours listed in chart above are **informative** and may not be same on your motorcycle. Please check in service manual or ask your local mechanic.

7. User manual

- When you push left or right turn signal leaver, turn signals will start blinking
- If you want to cancel turn signal, push to same side again
- After each manoeuvre STS cancels turn signals in compliance with road rules
- STS recognizes and differentiate:
  - Left or right turn
  - Changing lane
  - Roundabout
  - Overtaking
- STS recognizes when you are standing still and will not turn off turn signals
- If STS doesn't turn off after maneuver, timer will turn off turn signals after 15 seconds of driving
- Operating voltage: 12 V (DC)
- Power consumption: 250 mW

8. Disclaimer

To the maximum extent permitted by applicable law neither ABCS sistem d.o.o. nor its suppliers, its subcontractors, its affiliates, officers, directors, employees, dealers or agents shall be liable to you or to any third party for any incidental damage including personal injury or any other damages, whether direct, special, incidental, indirect or consequential arising out of or related to:

- Smart Turn System not working correctly due to improper calibration of the system and/or any other usage that is not in comply to Smart Turn System user manual.
- Damage made on motorcycle due to improper installation and/or improper use of Smart Turn System.
- Turn signals not blinking due to improper installation or calibration.
- Smart Turn System not canceling turn signals after the end of maneuver or turn signals canceling prematurely (during drive/before maneuver is completed).

Smart Turn System is a device that assist motorcyclist to cancel turn signals after the end of maneuver. Smart Turn System can detect maneuver and cancels turn signal after the maneuver is completed. Due to various driving styles and motorcycle types company ABCS sistem d.o.o. can take no responsibility if Smart Turn System doesn't detect maneuver and consequently doesn't cancel turn signal after any maneuver. Furthermore ABCS sistem d.o.o. can take no responsibility if turn signals are canceled prematurely. Correct turn signal usage is motorcyclist responsibility and STS device is meant only to assist rider with turn signal cancellation.

Smart Turn System device has to be installed according to ABCS sistem installation manual. If you are not sure about any part of installation manual or/and your motorcycle wiring scheme please contact ABCS sistem d.o.o. at support@safer-turn.com.

9. Warranty

Limited Warranty applies to physical goods, and only for physical goods, purchased from ABCS Sistem d.o.o. (the "Physical Goods"). Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period. During the Warranty Period, ABCS Sistem d.o.o. will repair or replace, at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance. ABCS Sistem d.o.o. will either repair the Product at no charge, using new or refurbished replacement parts. The Warranty Period for Physical Goods purchased from ABCS Sistem d.o.o. is 365 days from the date that the product was shipped.

A replacement Physical Good or part assumes the remaining warranty of the original Physical Good or 180 days from the date of replacement or repair, whichever is longer. This Limited Warranty does not cover any problem that is caused by: conditions; malfunctions or damage not resulting from defects in material or workmanship. To obtain warranty service, you must first contact our support@safer-turn.com to determine the problem and the most appropriate solution for you.

ABCS Sistem d.o.o.
Vojkova cesta 63
1000 Ljubljana
Slovenia - EU

support@safer-turn.com