

```
rosservice call /land "{}"
rosservice call /mavros/cmd/arming "value: true"
rosservice call /mavros/cmd/arming "value: false"
```

Turn off all setpoint/rosnode, land and disarm before resetting world

```
rosservice call /gazebo/reset_world "{}"
```

```
rosservice call /gazebo/set_link_state "link_state:
  link_name: 'clover::imu_link'
  pose:
    position: {x: 0.0, y: 0.0, z: 0.0}
    orientation: {x: 0.0, y: 0.0, z: 0.0, w: 1.0}
  twist:
    linear: {x: 0.0, y: 0.0, z: 0.0}
    angular: {x: 0.0, y: 0.0, z: 0.0}
  reference_frame: 'world'"
```

```
rostopic echo /gazebo/model_states
rosservice call /mavros/set_mode "custom_mode: 'OFFBOARD'"
rostopic echo /mavros/state
roslaunch clover selfcheck.py
rosservice call /get_telemetry ""
```

```
rostopic echo /mavros/setpoint_raw/attitude
rostopic echo /mavros/local_position/pose
```

```
rosservice call /navigate "{x: 0.0, y: 0.0, z: 1.0, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id:
'map', auto_arm: 1}"
rosservice call /set_velocity "{vx: 0.0, vy: 0.0, vz: -0.1, yaw: 0.0, yaw_rate: 0.0, frame_id: 'map',
auto_arm: 1}"
```

```
rosservice call /navigate "{x: 0.5, y: 1.0, z: 0.7, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id:
'map', auto_arm: 1}"
```

```
rosservice call /navigate "{x: 0.0, y: 1.0, z: 1.0, yaw: 1.57, yaw_rate: 0.0, speed: 0.0, frame_id:
'map', auto_arm: 1}"
rosservice call /navigate "{x: 0.0, y: 0.0, z: 1.0, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id:
'map', auto_arm: 1}"
```

```
rosservice call /navigate "{x: 0.0, y: 0.0, z: 0.5, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id:
'map', auto_arm: 1}"
```

```
rosservice call /navigate "{x: 0.0, y: 0.0, z: 0.5, yaw: 1.57, yaw_rate: 0.0, speed: 0.0, frame_id: 'map', auto_arm: 1}"
rosservice call /navigate "{x: 0.0, y: 0.0, z: 0.5, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id: body, auto_arm: 1}"
rosservice call /navigate "{x: 0.0, y: 1.0, z: 0.0, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id: 'body', auto_arm: 1}"
rosservice call /navigate "{x: 0.35, y: 0.0, z: 0.4, yaw: 0.0, yaw_rate: 0.0, speed: 0.0, frame_id: 'body', auto_arm: 1}"
rosservice call /set_position "{x: 0.0, y: 0.0, z: 1.0, yaw: 0.0, yaw_rate: 0.0, frame_id: '', auto_arm: false}"
rosservice call /set_rates "{roll_rate: 0.0, pitch_rate: 0.0, yaw_rate: 1.0, thrust: 0.5, auto_arm: 1}"
rosservice call /set_velocity "{vx: 0.0, vy: 0.0, vz: -0.1, yaw: 0.0, yaw_rate: 0.0, frame_id: 'map', auto_arm: 1}"
```

```
rosservice call /gazebo/apply_joint_effort "{joint_name: 'rotor_0_joint', effort: 1.5, start_time: 0, duration: -1}"
rosservice call /gazebo/apply_body_wrench "{body_name: 'clover::base_link', wrench: { force: { x: 0.0, y: 0.0, z: 0.0 }, torque: { x: 0.0, y: 0.0, z: 0.5 } }, start_time: 0, duration: -1 }"
rosservice call /gazebo/clear_body_wrenches "body_name: 'clover::base_link'"
rostopic pub /mavros/setpoint_attitude/cmd_attitude mavros_msgs/AttitudeTarget "{type_mask: 128, orientation: {x: 0.0, y: 0.0, z: 0.0, w: 1.0}, body_rate: {x: 0.0, y: 0.0, z: 0.0}, thrust: 0.5}"
```

```
hostname -I
192.168.11.1
```

```
Username: pi
Password: raspberry
CloverWifi: cloverwifi
```

Don't fly the drone under 14.4V as drone becomes unstable.
Always run selfcheck.py to make sure drone is fully calibrated

```
rostopic list
/client_count
/clock
/connected_clients
/diagnostics
/gazebo/link_states
/gazebo/model_states
/gazebo/parameter_descriptions
/gazebo/parameter_updates
```

/gazebo/performance_metrics
/gazebo/set_link_state
/gazebo/set_model_state
/landing_target
/led/state
/lt_marker
/main_camera/camera_info
/main_camera/camera_markers
/main_camera/image_raw
/main_camera/parameter_descriptions
/main_camera/parameter_updates
/main_camera_nodelet_manager/bond
/mavlink/from
/mavlink/gcs_ip
/mavlink/to
/mavros/altitude
/mavros/battery
/mavros/battery2
/mavros/distance_sensor/rangefinder
/mavros/estimator_status
/mavros/extended_state
/mavros/global_position/compass_hdg
/mavros/global_position/global
/mavros/global_position/gp_ip_offset
/mavros/global_position/gp_origin
/mavros/global_position/home
/mavros/global_position/local
/mavros/global_position/raw/fix
/mavros/global_position/raw/gps_vel
/mavros/global_position/raw/satellites
/mavros/global_position/rel_alt
/mavros/global_position/set_gp_origin
/mavros/imu/data
/mavros/imu/data_raw
/mavros/imu/diff_pressure
/mavros/imu/mag
/mavros/imu/static_pressure
/mavros/imu/temperature_baro
/mavros/imu/temperature_imu
/mavros/local_position/accel
/mavros/local_position/odom
/mavros/local_position/pose
/mavros/local_position/pose_cov
/mavros/local_position/velocity_body

/mavros/local_position/velocity_body_cov
/mavros/local_position/velocity_local
/mavros/manual_control/control
/mavros/manual_control/send
/mavros/param/param_value
/mavros/px4flow/ground_distance
/mavros/px4flow/raw/optical_flow_rad
/mavros/px4flow/raw/send
/mavros/px4flow/temperature
/mavros/rc/in
/mavros/rc/out
/mavros/rc/override
/mavros/setpoint_attitude/attitude
/mavros/setpoint_attitude/cmd_vel
/mavros/setpoint_attitude/thrust
/mavros/setpoint_position/global
/mavros/setpoint_position/global_to_local
/mavros/setpoint_position/local
/mavros/setpoint_raw/attitude
/mavros/setpoint_raw/global
/mavros/setpoint_raw/local
/mavros/setpoint_raw/target_attitude
/mavros/setpoint_raw/target_global
/mavros/setpoint_raw/target_local
/mavros/setpoint_velocity/cmd_vel
/mavros/setpoint_velocity/cmd_vel_unstamped
/mavros/state
/mavros/statustext/recv
/mavros/statustext/send
/mavros/time_reference
/mavros/timesync_status
/mavros/vision_pose/pose
/mavros/vision_pose/pose_cov
/optical_flow/angular_velocity
/optical_flow/debug
/optical_flow/parameter_descriptions
/optical_flow/parameter_updates
/optical_flow/shift
/rangefinder/range
/rosout
/rosout_agg
/tf
/tf2_web_republisher/cancel
/tf2_web_republisher/feedback

/tf2_web_republisher/goal
/tf2_web_republisher/result
/tf2_web_republisher/status
/tf_static
/track_markers
/vehicle_marker
/vpe_publisher/pose
/vpe_publisher/pose_cov
/wp_markers

rosservice list

/gazebo/apply_body_wrench
/gazebo/apply_joint_effort
/gazebo/clear_body_wrenches
/gazebo/clear_joint_forces
/gazebo/delete_light
/gazebo/delete_model
/gazebo/get_joint_properties
/gazebo/get_light_properties
/gazebo/get_link_properties
/gazebo/get_link_state
/gazebo/get_loggers
/gazebo/get_model_properties
/gazebo/get_model_state
/gazebo/get_physics_properties
/gazebo/get_world_properties
/gazebo/pause_physics
/gazebo/reset_simulation
/gazebo/reset_world
/gazebo/set_joint_properties
/gazebo/set_light_properties
/gazebo/set_link_properties
/gazebo/set_link_state
/gazebo/set_logger_level
/gazebo/set_model_configuration
/gazebo/set_model_state
/gazebo/set_parameters
/gazebo/set_physics_properties
/gazebo/spawn_sdf_model
/gazebo/spawn_urdf_model
/gazebo/unpause_physics
/gazebo_gui/get_loggers
/gazebo_gui/set_logger_level

/get_telemetry
/jupyter_gazebo_interface_6557_1697307430334/get_loggers
/jupyter_gazebo_interface_6557_1697307430334/set_logger_level
/land
/led/led_effect/get_loggers
/led/led_effect/set_logger_level
/led/set_effect
/led/set_leds
/main_camera/main_camera_markers/get_loggers
/main_camera/main_camera_markers/set_logger_level
/main_camera/set_camera_info
/main_camera/set_parameters
/main_camera_frame/get_loggers
/main_camera_frame/set_logger_level
/main_camera_nodelet_manager/get_loggers
/main_camera_nodelet_manager/list
/main_camera_nodelet_manager/load_nodelet
/main_camera_nodelet_manager/set_logger_level
/main_camera_nodelet_manager/unload_nodelet
/map_flipped_frame/get_loggers
/map_flipped_frame/set_logger_level
/mavros/cmd/arming
/mavros/cmd/command
/mavros/cmd/command_ack
/mavros/cmd/command_int
/mavros/cmd/land
/mavros/cmd/set_home
/mavros/cmd/takeoff
/mavros/cmd/trigger_control
/mavros/cmd/trigger_interval
/mavros/cmd/vtol_transition
/mavros/ftp/checksum
/mavros/ftp/close
/mavros/ftp/list
/mavros/ftp/mkdir
/mavros/ftp/open
/mavros/ftp/read
/mavros/ftp/remove
/mavros/ftp/rename
/mavros/ftp/reset
/mavros/ftp/rmdir
/mavros/ftp/truncate
/mavros/ftp/write
/mavros/get_loggers

/mavros/param/get
/mavros/param/pull
/mavros/param/push
/mavros/param/set
/mavros/set_logger_level
/mavros/set_message_interval
/mavros/set_mode
/mavros/set_stream_rate
/mavros/setpoint_position/mav_frame
/mavros/setpoint_velocity/mav_frame
/mavros/vehicle_info_get
/navigate
/navigate_global
/optical_flow/get_loggers
/optical_flow/set_logger_level
/optical_flow/set_parameters
/rangefinder_frame/get_loggers
/rangefinder_frame/set_logger_level
/republish_tfs
/rosapi/action_servers
/rosapi/delete_param
/rosapi/get_loggers
/rosapi/get_param
/rosapi/get_param_names
/rosapi/get_time
/rosapi/has_param
/rosapi/message_details
/rosapi/node_details
/rosapi/nodes
/rosapi/publishers
/rosapi/search_param
/rosapi/service_host
/rosapi/service_node
/rosapi/service_providers
/rosapi/service_request_details
/rosapi/service_response_details
/rosapi/service_type
/rosapi/services
/rosapi/services_for_type
/rosapi/set_logger_level
/rosapi/set_param
/rosapi/subscribers
/rosapi/topic_type
/rosapi/topics

/rosapi/topics_and_raw_types
/rosapi/topics_for_type
/rosbridge_websocket/get_loggers
/rosbridge_websocket/set_logger_level
/rosout/get_loggers
/rosout/set_logger_level
/set_attitude
/set_position
/set_rates
/set_velocity
/simple_offboard/get_loggers
/simple_offboard/set_logger_level
/tf2_web_republisher/get_loggers
/tf2_web_republisher/set_logger_level
/visualization/get_loggers
/visualization/set_logger_level
/vpe_publisher/get_loggers
/vpe_publisher/reset
/vpe_publisher/set_logger_level
/web_video_server/get_loggers
/web_video_server/set_logger_level