

PX4 Mode Cleanup/Consolidation

	General	Fixed Wing	Multicopter	VTOL
Manual	No Point in this mode...	Go straight to Stabilized. Rename this mode to Acrobatic.	Block or go straight into Stabilized	
Stabilized		default/startup mode for FW	default/startup mode for MC	default/startup mode for VTOL
Altitude Control	Just call Altitude			
Position Control	Just call "Position"	Rename to Cruise or Heading * degrade to navigate_heading() without GPS? We should be careful because of VTOL we need Position in MC	Kill and merge with Auto Loiter + stick input? We should be careful because of VTOL We need Position here. Not a good idea to have input in Hold and Return modes. They are emergency modes.	The same naming for all vehicles!!! We need transition in Position mode from MC to FW!
Acro	Rename Acrobatic	Implemented = FW Manual Rate controlled by RC	Implemented = Manual Implemented - Rate controlled by the FC	Rate controlled in both FW and MC modes. Thus rate controlled VTOL.
Rattitude	Rename 3D Sport	Implement	Implemented	implement
Auto Mission	Call it something like waypoint mode? * Check if mission is valid BEFORE entering? I think new name "Mission" is self explanatory and good name.	implemented	implemented	implemented
Auto Loiter	Hold/Pause? - but allow stick	Make circle around	Old position control mode	Depends on the

	<p>input.</p> <p>New name "Hold" is perfect name.</p> <p>Don't allow user input. Better use Position mode if you need this functionality. One is on one switch the other one is on the emergency switch. My left and my right hands.</p>	<p>GPS spot when GPS lock and make circle but with drift when no GPS lock. Hold current altitude.</p>	<p>Make it the same as FW but holding at one place instead of circle..</p> <p>Or the MC could make a very very slow small circle around GPS spot like in FW mode. But small circle like 2-4 meters diameter.</p>	<p>mode.</p>
Auto RTL	<p>Name? Actually switch to LAND mode when landing?</p> <p>New name "Return" is self explanatory name.</p> <p>Don't allow user input.</p>	Implemented	Implemented	Implemented
Auto Takeoff	<p>New name "Take Off"</p> <p>Allow user input and corrections during Take Off.</p>	<p>Use the take off procedure (from hand or runway) climb to predefined altitude and then Hold there wait for command. (hold = loiter)</p>	<p>Triger in Position or Altitude take off after you pass 50% throttle. Climb to 2-5 meters and Hold and give back the controll to pilot.</p> <p>Trigger with a switch as well.</p>	
Auto Land	<p>New name "Land"</p> <p>Allow user input and corrections during Land.</p>	<p>Use predefined landing waypoints if available, otherwise loiter to find wind direction and land into wind</p> <p>Disarm immediately when on the ground.</p>	<p>When we land manually and throttle is at 0% then auto disarm immediately on the ground in all guided modes.</p>	
Auto Follow Target	<p>New name "Follow"</p>			
Offboard				

General Notes

- Give up on mode switch hierarchy and only use simple switch selection
- Ability to block modes? QGC will only show which modes are configured/available for both switch configuration and drop down

- Fixed wing optionally startup in stabilized mode - Fixed wing should start in stabilized by default. We put Autopilot in a plane we need the stabilization. When we fly our airplanes Acro or Manual we don't need autopilot. We need this modes in FW only to check if the plane is OK during setup and tuning.