Index	General Requirements	Correspondence in the close-loop system	Priority
1	No ventricular pace should happen during ventricle refractory	If State_RVA=ERP, no v_p should happen	1
2	Each atrial and ventricular event should be sensed by the corresponding lead	Interval between two Activation_RVA should between 500ms to 1000ms	2
3	Ventricular rate should be maintained between 60bpm and 120bpm	If Condition_NSR=true, Interval between two Activation_RVA shouldn't be larger than Trest_SA; If Condition_Brady=true, Interval between two a_p should be equal to LRI timer of pacemaker	3
4	Without activity sensor, the pacemaker should not increase ventricular rate above it's programmed LRI during Brady and above intrinsic heart rate during NSR	If Activation_SA=true, a_s=true; If Activation_RVA=true, v_s=true;	4
5	If the intrinsic heart rate is below some threshold, After each atrial event there should be a ventricular event within some interval(1:1 conduction)	If Interval between two Activation_SA is larger than 600, after each Activation_SA, there should be a Activation_RVA within [100, 150]	5
6	No activation conflict should happen within muscle tissue	musclepaths=path automata 1-10 in Fig 3(b); State_musclepaths should never be *Double*	6