Current State	Event			Next State
	$k_{pacingMode} == 0 \text{ or } 2 \text{ or } 4$			A_CHARGING
INIT	$k_{pacingMode} == 1 \text{ or } 3$			V_CHARGING
	$NOT(k_pacingMode == 0 \text{ or } 1 \text{ or } 2 \text{ or } 3 \text{ or } 4 \text{ or } 5)$			
A_CHARGING	m_pushButton == true			A_CHARGING
	m_pushButton == false			
	k_pacingMode == 0	After(k_atrPaceDelay)		A_PACING
		NOT(After(k_atrPaceDelay))		
	k_pacingMode == 1		V_CHARGING	
	k_pacingMode == 2	m_atrCMPDetect == true	After(k_arpDelay)	A_CHARGING
			NOT(After(k_arpDelay))	
		m_atrCMPDetect == false		
	$k_{pacingMode} == 3$			V_CHARGING
			After(k_pacingAVDelay)	V_PACING
	k_pacingMode == 4		NOT(After(k_pacingAVDelay))	
A DACING	After(k_atrPulseWidth)			A_CHARGING
A_PACING	NOT(After(k_atrPulseWidth))			
V_CHARGING	m_pushButton == true			V_CHARGING
	m_pushButton == false			
	$k_{pacing}Mode == 0$			A_CHARGING
	k_pacingMode == 1	After(k_ventPaceDelay)		V_PACING
		NOT(After(k_ventPaceDelay))		
	$k_{pacingMode} == 2$			A_CHARGING
	k_pacingMode == 3	m_ventCMPDetect == true	After(k_vrpDelay)	V_CHARGING
			NOT(After(k_vrpDelay))	
		m_ventCMPDetect == false		
	1		After(k_atrialEscapeInterval)	A_PACING
	$k_pacingMode == 4$ $k_pacingMode == 4$ $NOT(After(k_atrialEscapeInterval))$			
V DACING	After(k_ventPulseWidth)			V_CHARGING
V_PACING	NOT(After(k_ventPulseWidth))			

SFWRENG 3K04 Pacemaker Project 2019-11-27

INIT

ENTRY:

%Open all switches so no current flow

A_CHARGING

ENTRY:

%Charge the capacitor and rectify the atrial pace

A_PACING

ENTRY:

%Pace the atrium

V_CHARGING

ENTRY:

%Charge the capacitor and rectify the ventricular pace

V_PACING

ENTRY:

%Pace the ventricle

 $k_pacing AVDelay \{uint16\} - p_fixed AVDelay - p_atrPulse Width$

 $K_atrialEscapeInterval~\{uint16\} - ms/beat - k_pacingAVDelay - p_ventPulseWidth$