Current State	Event		Next State
INIT	---		STANDBY
STANDBY	status == 0 and rxdata(1) == 0x16	rxdata(2) == 0x55	SET_PARAM
		rxdata(2) == 0x22	ECHO_PARAM
		rxdata(2) == 0x47	ECHO_EGRAM
		NOT(rxdata(2) == 0x55 or 0x22 or 0x47)	---
	NOT(status == 0 and rxdata(1) == 0x16)		---
SET_PARAM	---		STANDBY
ECHO_PARAM	---		STANDBY
ECHO_EGRAM	status == 0 and rxdata(1) == 0x16 and rxdata(2) == 0x62		STANDBY
	NOT(status == 0 and rxdata(1) == 0x16 and rxdata(2) == 0x62)	After(k_sampleRate)	---

INIT

ENTRY:

%Setting default values for the programmable parameters

p_programmableParams = {default programmable params};

k_sampleRate = 100;

STANDBY

ENTRY:

%Waiting for COM packet

SET_PARAM

ENTRY:

p_programmableParams = {rxdata};

ECHO_PARAM

ENTRY:

%Transmit the current parameters

k_echoData = rxdata(2);

send_data();

ECHO_EGRAM

ENTRY:

%Transmit the electrogram data

k_echoData = rxdata(2);

send_data();

status {uint8 – 0, 32} – 0 if serial has received data, 32 otherwise

rxdata {[uint8]} – contains array of serially received data

k_sampleRate {uint8} – the rate at which the egram data is sampled

p_pacingMode {uint8} – 0 AOO, 1 VOO, 2 AAI, 3 VVI, 4 DOO

p_lowerRateLimit {uint8} – the BPM rate

p_upperRateLimit {uint8} – upper rate limit achievable through rate modulation

p_atrPulseAmplitude {uint16} – amplitude of an atrial pulse

p_ventPulseAmplitude {uint16} – amplitude of a ventricular pulse

p_atrPulseWidth {uint8} – width of an atrial pulse

p_ventPulseWidth {uint8} – width of a ventricular pulse

p_atrThreshold {uint16} – sensing threshold for AAI mode

p_ventThreshold {uint16} – sensing threshold for VVI mode

p_arpDelay {uint16} – delay after which we begin to check for atrial sensed paces

p_vrpDelay {uint16} – delay after which we begin to check for ventricular sensed paces

p_fixedAVDelay {uint16} – delay between an atrial and ventricular pace in DOO mode

p_rateModulation {e_off, e_on} – is rate modulation enabled or disabled

p_modulationSensitivity {uint8} – the amount by which the BPM rate is altered per event