

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)	ECHO_EGRAM
		NOT(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