

External Pacer Cheat Sheet

PACER SETTINGS		
CHAMBERS PACED	CHAMBERS SENSED	RESPONSE
O = NONE	O = NONE	O = NONE
A = ATRIUM	A = ATRIUM	I = INHIBIT
v = VENTRICLE	v = VENTRICLE	T = TRIGGERED
D = DUAL	D = DUAL	D = DUAL



COMMON PACER MODES	
DDD	Paces and senses both chambers. Great for patients with both SA and AV node dysfunction
AAI	Paces the atrium as well as senses it. Inhibits pacing if atrium is sensed. For patients with SA node dysfunction
VVI	Paces and senses the ventricles. Inhibits pacing if ventricle is sensed. Great for a-fib without RVR.
DOO	Paces both the atrium and ventricles without sensing. Used mostly in emergent situation.

USES

The primary indications for pacemaker initiation are heart block and bradycardia.

Pacemakers are particularly common in patients that have recently undergone cardiac surgery, especially valve replacements/repair. This is due to the heart block that can occur due to inflammation caused by certain procedures that disrupt the SA and AV node.

Pacemakers may also be used by providers to overdrive pace arrhythmias. This is done by selecting a rate that is faster than the arrhythmia to override it then decreasing rate once the arrhythmia is disrupted. This should always be done with a provider present and an appropriate order.

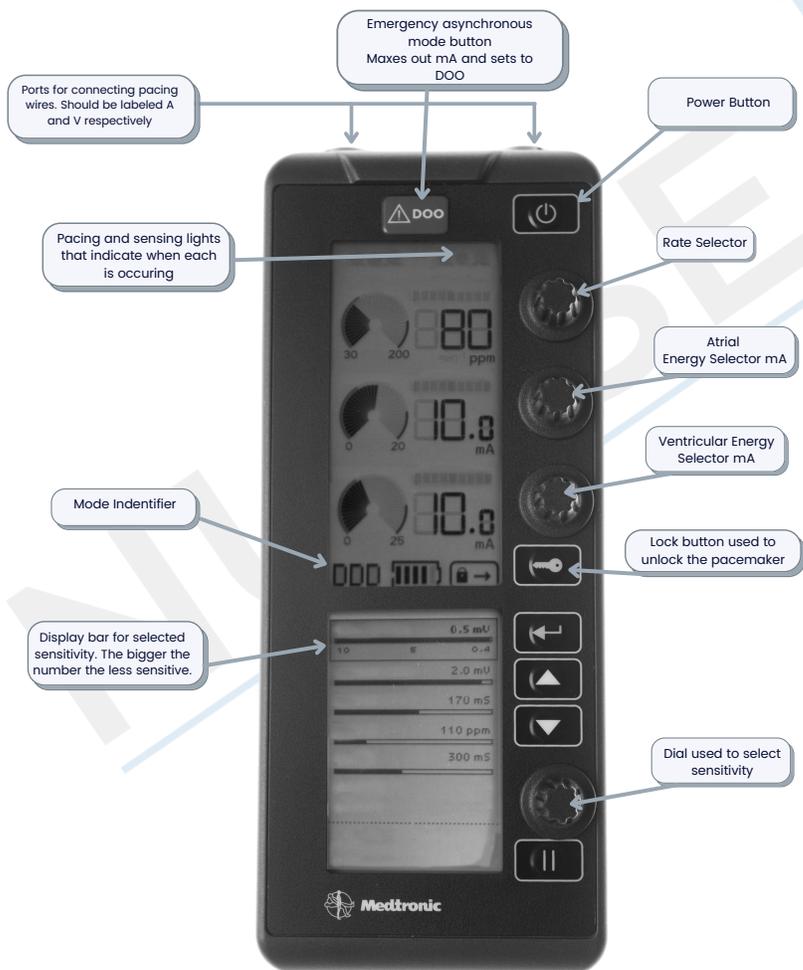
Special Considerations

The rate programmed into the pacemaker should only be changed per provider order.

The pacemaker battery should be checked Qshift and changed per unit protocol.

Underlying rate can be analyzed by using the pause button on the pacemaker. Pacer cables should never be taken out of the pacemaker.

Energy output (mA) should be set to an appropriate level. Thresholds should be done per unit protocol. Keeping the output at too high of a level could cause scar tissue to develop and decrease efficiency of the pacemaker.



Sensitivity

Sensitivity determines how much current must be detected before the pacemaker identifies a depolarization event.

You can think of sensitivity as a fence. The higher the number (mV) the higher the fence and the less sensitivity.

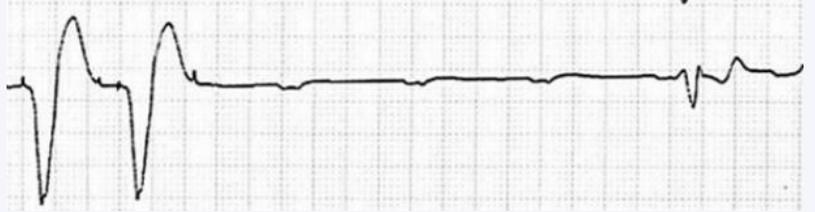
While on the other hand, if the mV number is low (lowered fence) the sensitivity is greater.

Sensitivity must be adjusted so that the proper events are detected and to avoid artifacts from interfering with rhythm detection.



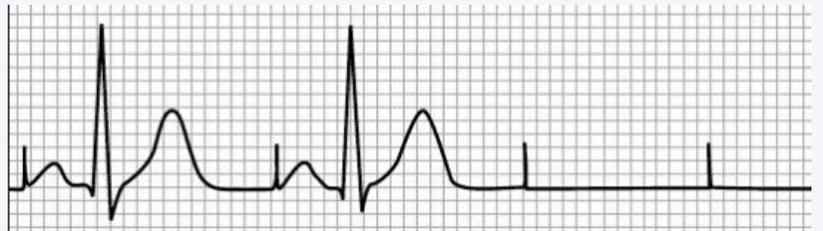
Failure to Pace

- Switch out battery or pacemaker unit
- Check pacer wire placement for dislodgement.
- Check cable connection.



Failure to Capture

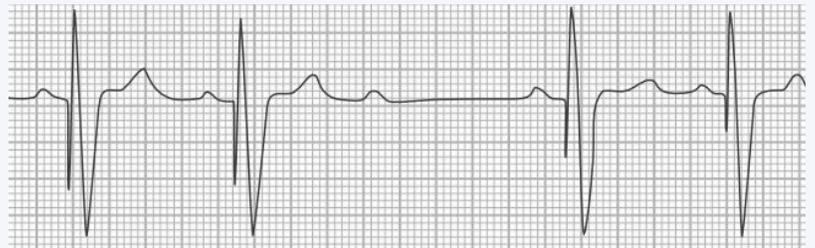
- Switch out battery or pacemaker unit
- Increase power output (mA)
- Check pacer wires are in correct position.



Oversensing

Oversensing occurs when the pacemaker mistakes artifact or other electrical waves for the QRS and inhibits pulse generation.

- Decrease sensitivity, increase mV
- Check connections



Undersensing

Undersensing occurs when the pacemaker does not detect the intrinsic rhythm and generates pulses inappropriately.

- Check battery
- Check connections
- Increase sensitivity, decrease mV



Warning: This could cause a dysrhythmia to develop. Undersensing must be fixed asap.