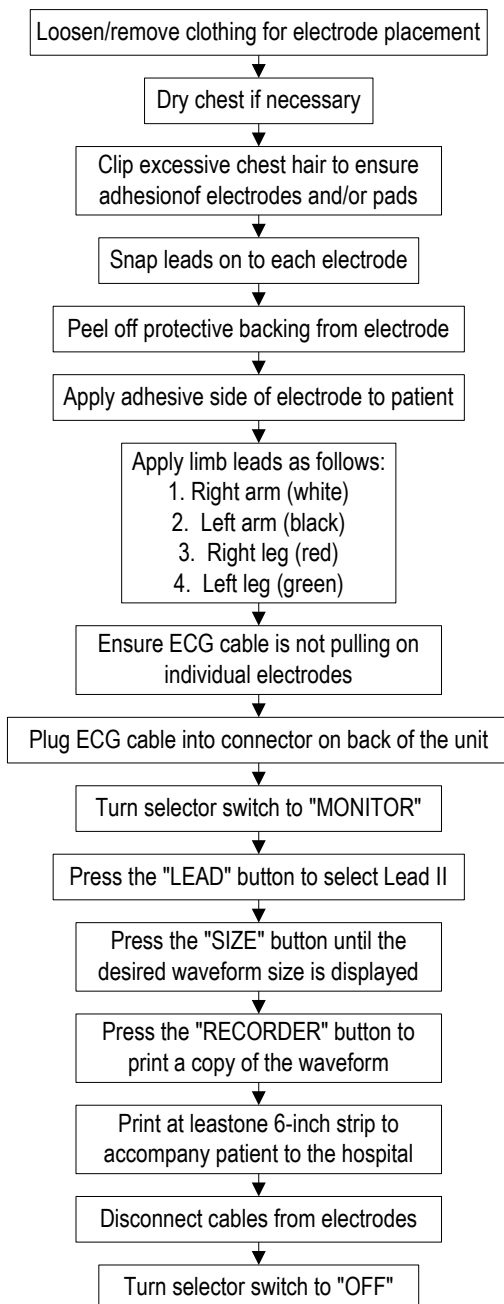


Initial: 9/11/02
Reviewed/revised: 2/13/08
Revision: 1

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
4 LEAD  
ELECTROCARDIOGRAM**

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

<b>Purpose:</b> To monitor heart for arrhythmias and obtain/transmit an electrocardiogram		<b>Indications:</b> Any patient who requires cardiac monitoring	
<b>Advantages:</b> Displays cardiac electrical activity and heart rate value.	<b>Disadvantages:</b> None	<b>Complications:</b> None	<b>Contraindications:</b> None



**NOTES:**

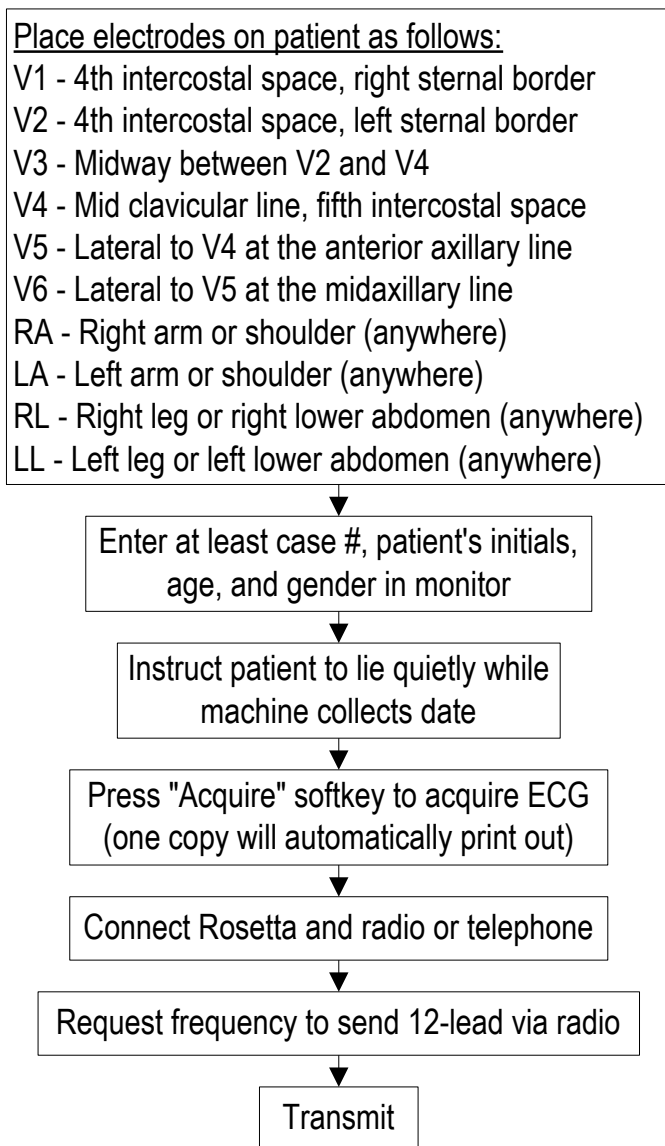
- Lead II is the standard lead used to monitor the patient's ECG.
- A six-inch or longer strip will accompany the patient to the hospital.
- In cases where the strip is run to record a rhythm change, a copy should be left with the patient at the receiving emergency department.

Initial: 9/92
Reviewed/revised: 2/13/08
Revision: 4

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
12-LEAD  
ELECTROCARDIOGRAM**

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

<b>Purpose:</b>		<b>Indications:</b>	
To obtain and transmit a diagnostic quality 12-lead electrocardiogram		Any patient experiencing symptoms of suspected cardiac origin	
<b>Advantages:</b>	<b>Disadvantages:</b>	<b>Complications:</b>	<b>Contraindications:</b>
Provides electrical view of all areas of the myocardium; enables receiving hospital notification of STEMI arrival	May delay transport	None	None



**NOTES:**

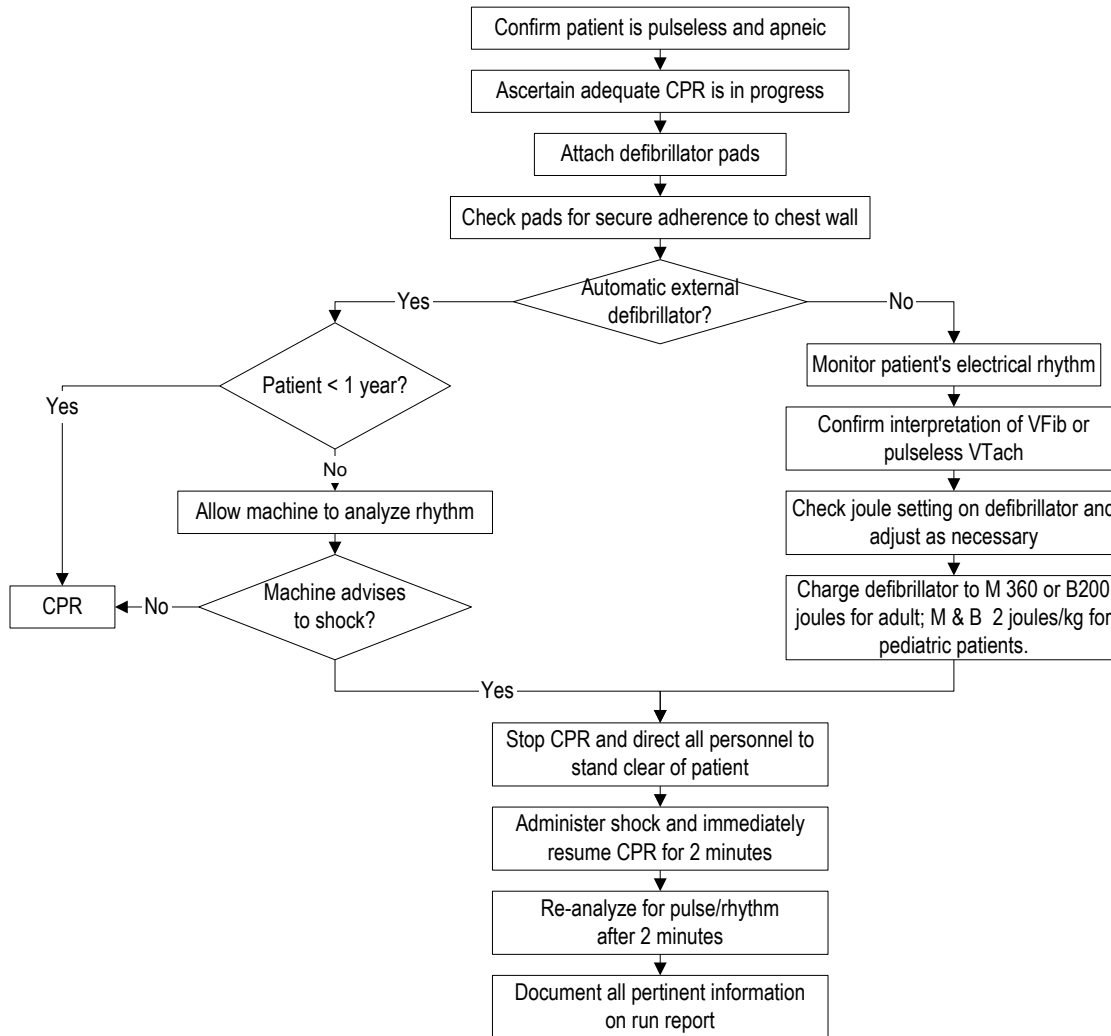
- Obtain the 12 lead at the earliest opportunity without compromising patient care.
- Do not delay administration of nitroglycerin to obtain a 12 lead ECG.

Initial: 9/92
Reviewed/revised: 6/1/06
Revision: 6

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
DEFIBRILLATION**

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

<b>Purpose:</b> To simultaneously depolarize the myocardial cells to terminate ventricular fibrillation or ventricular tachycardia		<b>Indications:</b> Patient presents pulseless and apneic in ventricular fibrillation or ventricular tachycardia	
<b>Advantages:</b> Termination of Vfib or Vtach in the pulseless, apneic patient	<b>Disadvantages:</b> Electrical current causes some injury to myocardium	<b>Complications:</b> Poor interface between chest wall and pads can cause burns	<b>Contraindications:</b> Any patient with pulses Valid DNR orders Conditions incompatible with life



**NOTES:**

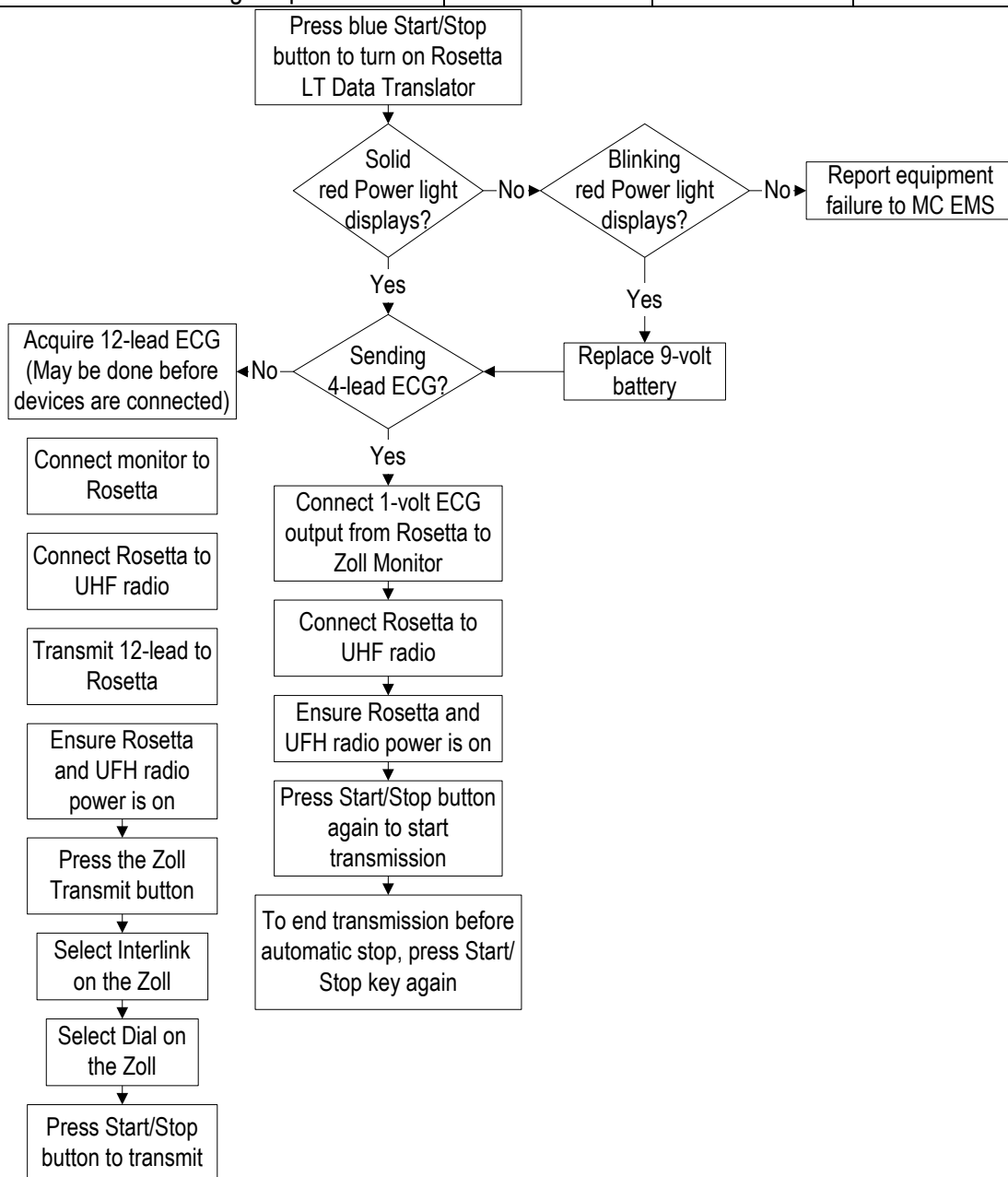
- 200 joules Biphasic is the energy equivalent to 360 joules Monophasic.
- Automatic external defibrillators are NOT to be used on patients less than 1 year of age.
- Do not apply defibrillator pads over a pacemaker or automatic implanted cardiac defibrillator (AICD).
- Remove Nitropatch or Nitropaste before attaching defibrillator pads.
- Do not defibrillate when conditions exist for electrical conductivity (wet environment, etc.).

Initial: 2/13/08  
 Reviewed/revise:  
 Revision:

**MILWAUKEE COUNTY EMS**  
**PRACTICAL SKILL**  
**ECG TRANSMISSION**

Approved by: Ronald Pirrallo, MD, MHSA  
 Signature:  
 Page 1 of 1

<b>Purpose:</b>	<b>Indications:</b>		
To transmit 4- lead and 12-lead electrocardiograms	Any patient who requires cardiac monitoring		
<b>Advantages:</b>	<b>Disadvantages:</b>	<b>Complications:</b>	<b>Contraindications:</b>
Transmits ECG to medical control and enables faxing 12-lead ECG to receiving hospital	None	None	None



**NOTES:**

- The 12-lead will remain in the Rosetta storage as long as the Rosetta device is powered on or for 20 minutes after the device turns itself off
- Paramedics can move the Rosetta and UHF radio to transmit from an area with better reception after disconnecting the Rosetta from the Zoll

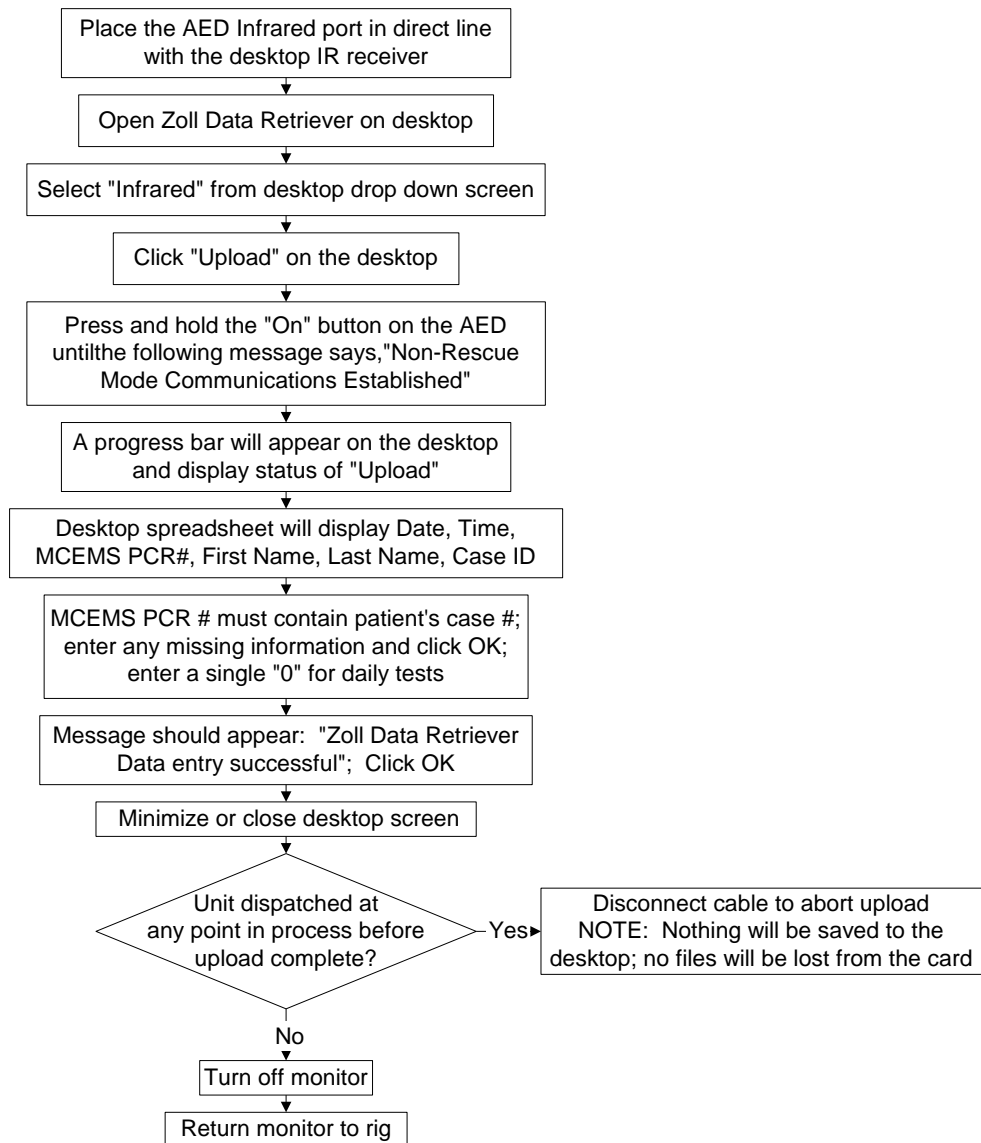
Initial: 10/10/2007  
 Reviewed/revised:  
 Revision:

**MILWAUKEE COUNTY EMS  
 PRACTICAL SKILL  
 INFRA RED DATA**

Approved by: Ronald Pirrallo, MD, MHSA  
 Signature:  
 Page 1 of 1

**UPLOAD FOR ZOLL AED PRO OR AED PLUS**

<b>Purpose:</b> To transfer resuscitation information from the Zoll AED Pro or AED Plus to the RescueNet server using infrared ports		<b>Indications:</b> Patients with any Zoll AED Plus or AED Pro monitoring	
<b>Advantages:</b> Captures and analyzes all resuscitation information electronically	<b>Disadvantages:</b> None	<b>Complications:</b> Loss of information if upload procedure not followed correctly	<b>Contraindications:</b> None



**NOTES:**

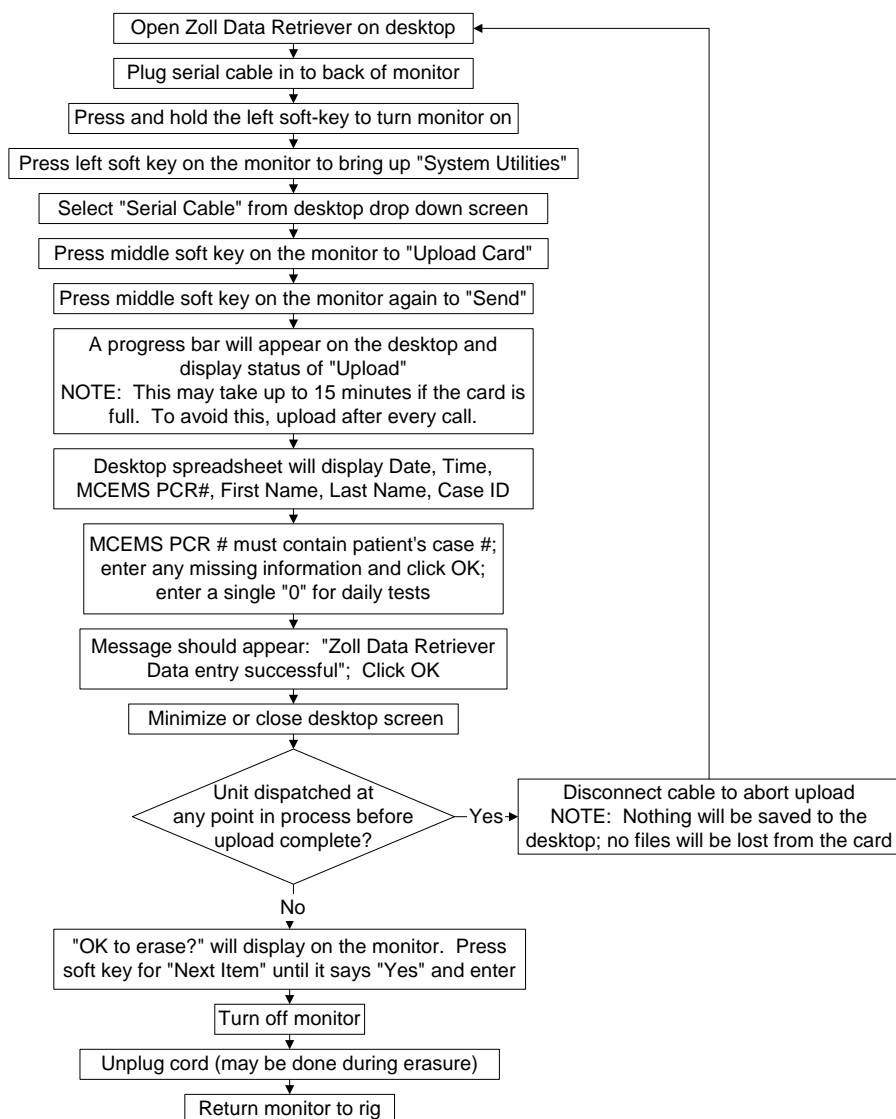
- The MC EMS PCR number must be entered for every case to link the ECG information to the patient's electronic run report. The number can be entered at any time – during the call or at the time of upload
- Enter a single "0" as the MC EMS PCR number for daily tests
- To avoid entering the PCR number numerous times, leave the monitor on and leads attached to the patient during the entire call

Initial: 10/10/2007
Reviewed/revised:
Revision:

**MILWAUKEE COUNTY EMS  
PRACTICAL SKILL  
SERIAL CABLE DATA  
UPLOAD FOR ZOLL M-SERIES**

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

<b>Purpose:</b> To transfer ECG and resuscitation information from the Zoll M-series monitor to the RescueNet server using a serial cable		<b>Indications:</b> Patients with any Zoll M-series monitoring	
<b>Advantages:</b> Captures and analyzes all monitoring, CPR, capnography information electronically	<b>Disadvantages:</b> None	<b>Complications:</b> Loss of information if upload procedure not followed correctly	<b>Contraindications:</b> None



**NOTES:**

- The MC EMS PCR number must be entered for every case to link the ECG information to the patient's electronic run report. The number can be entered at any time – during the call or at the time of upload
- Enter a single "0" as the MC EMS PCR number for daily tests
- To avoid entering the PCR number numerous times, leave the monitor on and leads attached to the patient during the entire call

Initial: 9/92
Reviewed/revised: 10/12//05
Revision: 5

**MILWAUKEE COUNTY EMS**  
**PRACTICAL SKILL**  
**SYNCHRONIZED**  
**CARDIOVERSION**

Approved by: Ronald Pirrallo, MD, MHSA
Signature:
Page 1 of 1

<b>Purpose:</b>		<b>Indications:</b>	
To deliver an electrical charge to the myocardium, synchronized to the depolarization of the ventricle		Patient presents in: ventricular tachycardia with pulses or unstable supraventricular tachycardia that has not responded to antiarrhythmics	
<b>Advantages:</b>	<b>Disadvantages:</b>	<b>Complications:</b>	<b>Contraindications:</b>
Provides rapid conversion of dysrhythmia	Painful if administered without sedation	May result in ventricular fibrillation	Patients taking digitalis preparations

