



### LOCAL CARDIAC SYSTEM USING EMR-T EQUIPMENT

Telemetry transmission of electrocardiograms from the heart patient in an ambulance to the Sarasota Hospital--that's the function of an experimental EKG telemetry system now under evaluation by the South Trail Area Fire Control District, with an assist from EMR-Telemetry.

As a community service, EMR-T has loaned some equipment for the experiment and helped install and check out the system in the ambulance. In addition, Sarasota Memorial Hospital and General Electric Company have cooperated with South Trail Area Fire District personnel to get the system in operation.

"The experimental system is installed in one of our ambulances. We've already used the system on many patients, and we're getting very good data," reports Marshall DuBois, of EMR-T's Materials Planning. Marshall is a Lieutenant in the South Trail Fire District, and has been active in developing the experimental system for nearly a year.

"EMR-T personnel have been very cooperative from the early feasibility study right through to the installation," he said, "and I feel that the company has made a valuable contribution to the community via this project.

"We're using EMR's Model 287 Discriminator and a Model 307 Voltage-Controlled Oscillator as part of the system. GE, Tampa, loaned cardiac monitoring equipment and a transmitter for use in the ambulance and in the Hospital Emergency Room," Marshall explains.



Inside the ambulance, Marshall DuBois with cardiac monitor unit. EMR Model 307 VCO (not visible) is part of this system.

At the Hospital, Model 287 Discriminator handles the telemetered data.

"We're currently using limb leads, easily attached to the patient's forearms and just above the ankles. The leads are plugged into the Cardiac Monitor, and a Cardiac Scope and a Strip Chart show the heart waveform right in the ambulance. These same data are being transmitted via telemetry while the ambulance is en route to the Hospital," he said. "In the Hospital, at the receiving end of the system, the Doctor can read the data on a scope and record it on a strip chart. The Doctor begins diagnosing the patient's cardiac condition while we're en route, and he can tell us, via mobile phone, the degree of the emergency.

"Leads remain on the patient as he is wheeled from the ambulance to the Emergency Room, and then they are simply plugged into the Hospital system, with a



John McQueen, Marshall DuBois, Andy Foppe installed EKG telemetry system in South Trail ambulance.

loss of only about 30 seconds worth of cardiac data," Marshall notes. "Our transmission range is now 15 or 20 miles, but we expect to increase it to about 30 miles.

"After a month of operation, our evaluation is not complete, but I believe we have a fine, functional system which will assist Doctors in the Hospital Emergency Room to make prompt, accurate cardiac diagnoses and may save lives.

"I hope our system proves so successful that ambulances and hospitals throughout the country will be buying EMR Discriminators and VCO's!" Marshall concluded. This application is another example of potential non-Government uses for our products.