

Commuter rail is one of the fastest growing segments of mass transit in the United States as urban/suburban planners seek methods of reducing traffic congestion. The use of existing railroad lines can supplement for expensive and environmentally negative highway expansion, and the Chicago area has been a leader in utilization of already built rail infrastructure for moving people.

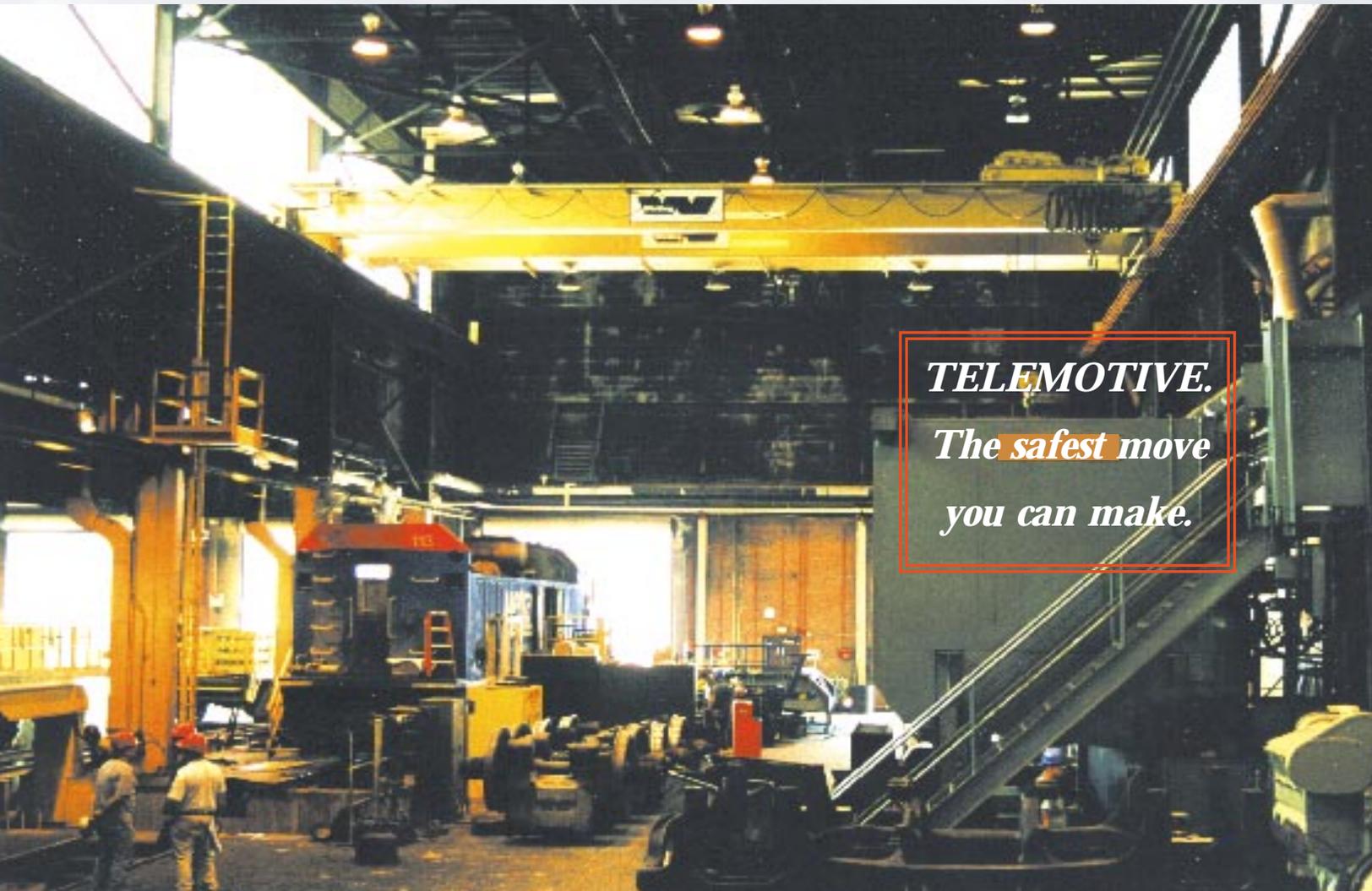
Metra is the provider of commuter rail passenger service in the Chicago area and on a typical workday will serve 280,000 passengers from 240 station locations in a system of 500 track miles.

Metra trains are operated over both private freight railroads through purchase of service contracts and

Metra's own lines acquired from private

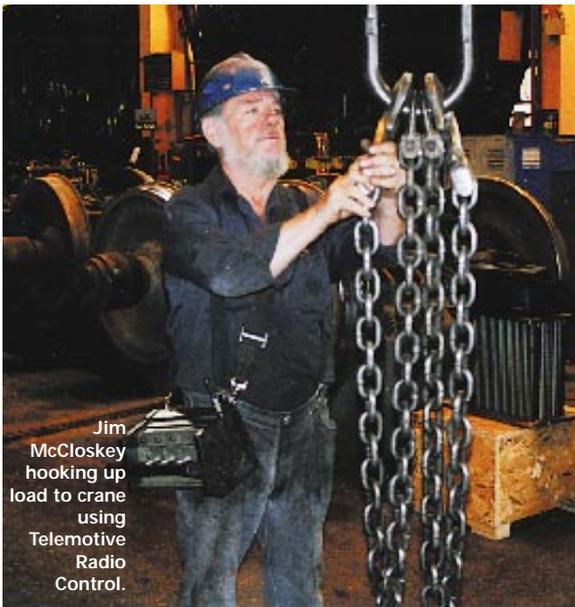
railroads. While service is continuously upgraded on existing routes new services are being studied to better inter-connect the suburbs of the area where job growth is exploding. Metra has a reputation for on time, high quality service that is the envy of the commuter rail industry.

Radio controlled crane in the Metra Rock Island District 47th Street shop.



TELEMOTIVE.

*The safest move
you can make.*



Jim McCloskey hooking up load to crane using Telemotive Radio Control.

Metra uses a variety of equipment to serve their passengers including 130 diesel locomotives, 859 bi-level passenger cars and 165 bi-level self-propelled electric cars. Providing on time service in clean, comfortable, and safe rolling stock requires a continuous and rigid, inspection, servicing and heavy maintenance program on the entire car and locomotive fleet. Metra accomplishes this task at seven major repair facilities staffed by highly skilled and dedicated shop-craft professionals.

One major facility is the Rock Island District 47th Street Shop where Metra diesel locomotives are given required heavy maintenance and periodic rebuilding. This shop uses three overhead cranes of 30-, 20- and 15- ton capacity. Each crane is equipped with the Telemotive model 8000 Radio Remote Controls. The facility employs 49 craftsmen and Shop Superintendent Ron Minichowski says, "The Telemotive Radios are a real life saver for my shop people. They can work safer and much more efficiently than using the pendant controls." The 30-ton crane is used to remove and replace complete diesel engine and generator assemblies which requires precision control of the load lifting. Using the radio control, the operator can be positioned for the best visibility and is able to more precisely place the load. The other cranes at the shop are used to move heavy components such as trucks, wheel assem-

blies, radiators and other materials that are used in the rebuilding process. The Rock Island District shop is vital to the Metra maintenance mission and Telemotive radio controls play an important part in helping the shop meet its maintenance targets.

While the diesel locomotives get the full attention of the 47th Street shop, further south, along the 39.8 mile METRA Electric line, is the Metra Electric District/KYD shop facility that handles the major repairs and overhauls of the 165 Bi-level electric cars used in daily Metra Electric service. This shop is a state-of-the-art facility employing 89 and was built new in 1993.

Unlike their diesel cousins, the electric cars don't use a single internal combustion engine for power. Each car has its own propulsion provided by electric motors mounted on each axle of the car trucks. An overhead wire strung over the rail provides power for these motors. Electric traction, as it is called in the industry, is cleaner and the acceleration is much faster than a diesel hauled train.

Maintenance is just as stringent on the Metra Electric as on the diesel lines and the shop is well equipped to perform any repair function. As would be expected much of the maintenance involves electrical work. The huge traction motors and truck assemblies must be removed and inspected and the control systems properly adjusted. A major task is the servicing of the air conditioners mounted above the ceiling in each car. These weigh 1.3 tons and must be removed and re-installed through a roof hatch using one of the three overhead cranes in the building.

Handling the cooling machinery is made much easier with the Telemotive Radio Controls installed on the cranes.

Another task is the removal and rebuilding of the traction motors and truck components. This is accomplished using a "Drop Table". This device is really a small elevator that lowers a platform equipped with rails. In use, a rail car is placed with the truck on the platform and jacks are placed under the car body. Then the connections to the truck are removed and the platform lowered with the truck assembly. The truck is then removed and lifted to a repair area using a 15-ton overhead crane.

The drop table is controlled by a Telemotive 10K 12 system using a Pendant style pushbutton transmitter. The 15-ton crane is controlled by a Telemotive 8000 Series radio with a lever style transmitter. Shop Superintendent, Arnold Szudarski, says "Our crews really like those radios. It makes their job so much easier and saves us time."

All of the Metra shops are monitored for the quality of their work by Quality Control Specialists like Bruce Frakes. Frakes' view is that, "Running a commuter railroad on a daily basis takes a lot of hard work and anything that can make that work easier-such as radio controls-are well received by our shop personnel."

As thousands of Chicago area commuters roll to work daily, Telemotive is helping

Metra to offer them a safe and sure ride on well maintained diesel and electric trains.



Arnie Szudarski with Telemotive 10K Transmitter.

