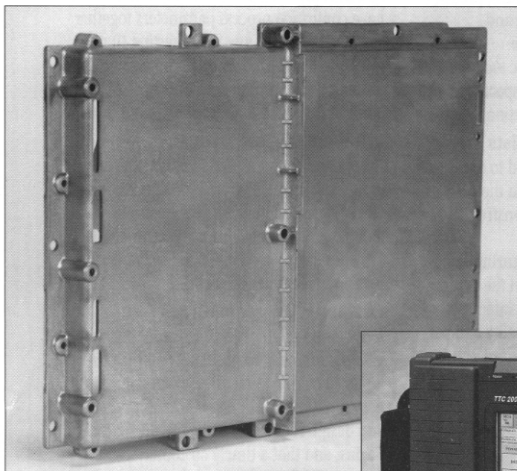




## Chicago White Metal Casting

High-Tech Al, Mg, Zn & ZA Die Casting  
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Tel: 1-630-595-4424 Fax: 1-630-595-9160  
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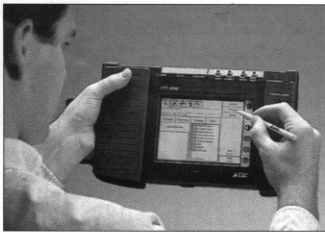


Engineers at TTC have brought to market the next generation of the widely accepted T-BERD® Communications Analyzer with the introduction of their field-oriented T-BERD 2209.

A 6-inch diagonal graphic LCD display replaced a small character screen; instant one-step touch-screen software replaced more complex push-button operation; and the 2209 weighs in at only 4 lbs., with battery, against its 11 lb. predecessor.

### Four-Foot Drops to Concrete

As for field readiness, an essential product design goal for this new communications network tester, the tough 2209 is in a class by



**Field-proven unit boasts touch screen software and the largest VGA gray-scale display available in any hand-held product of its kind.**



**The portable T-BERD 2209 Communications Analyzer, above, is designed with a die cast display frame, left, to take the shocks of rugged field use. Mg die casting was the choice over all other materials and processes.**

itself. A sturdy magnesium die cast display frame and a rubber overmold on the unit provide outstanding impact strength with light weight—the 2209 has been extensively tested to survive four-foot drops to concrete.

The internal display frame is a hot-chamber magnesium die casting produced by Chicago White Metal Casting, with 35 holes cast in place to size. Nineteen of the holes are tapped and the component receives an NH-35 chromate conversion coating for corrosion protection. Helicoils are inserted in four holes by CWM.

### Weighing Material & Process Options

In addition to die casting, TTC design engineers examined sheet metal stamping, machining and injection molding as production options for the unit's display frame. Along with strength and light weight, the frame would require high torsional stiffness and al-

**Only mag die casting could meet TTC's strict specs for ruggedness, impact strength and light weight**

## TTC's T-BERD® Analyzer for Voice & Data Systems Sets New Standard—with Help From CWM Mg Die Casting

low flexibility to design mounting features to accommodate optional modules.

The inability of a stamped frame to maintain required stiffness eliminated sheet metal, the engineers' early choice. Prohibitive costs at higher volumes ruled out machining. The poor modulus of elasticity of engineered plastics eliminated injection molding.

### Mg: Highest Strength-to-Weight

In evaluating die casting, both Al and Mg alloy were considered. An initial prototype was machined in aluminum to test form and function. The designers added appropriate ribs and frame features to aid castability. Finally, magnesium alloy was selected based on its higher strength-to-weight ratio. Hot-chamber Mag die casting would also enable thinner walls to be cast.

Compared to engineered plastics, the Mg frame offers approximately 20 times their stiffness with very little weight penalty, squarely meeting two of the product's most important specifications.

### Die Cast Design Flexibility

The built-in features of the die cast magnesium display frame make it a key component in the future expansion of the company's TTC® 2000 platform, designed as unique modular architecture to allow a wide range of testing upgrades—many of them easily made in the field.

For further information on CWM high-technology die casting in Al, Mg, Zn or ZA-8, contact your CWM Sales-Engineering Representative or the CWM Sales Dept. ■