



Presenting

CTA'S 180 "NEW LOOK" AIR-CONDITIONED CARS



- First urban-type rapid transit cars designed and built as air-conditioned units.
- First welded aluminum rapid transit car bodies in the U. S. with high tensile steel underframes.
- First application of space-age developments, such as static inverters, static converters and silicon diodes to energize and control the functioning of the extremely complex electrical equipment in a modern rapid transit car.
- First production use of reinforced fiberglass in the modest streamlining of the ends of each semi-permanently coupled two-car unit.
- First back-lighting of car card area for display of continuous rows of color transparencies.

CHICAGO TRANSIT AUTHORITY

Air-Conditioning, Heating and Ventilating

Each of the 180 "New Look" cars is to be cooled by a 10-ton air-conditioning unit capable of maintaining a temperature of 72 degrees and relative humidity at 50 to 55 per cent in a crowded car when the outside temperature is 95 degrees. The 10-ton unit is sufficient to cool two 6-room houses.

In the winter time, the cooling system works in harmony with the heating and ventilating system by filtering and warming fresh air taken from the outside.

The heating and ventilating system, a type not previously used in rapid transit cars, is an adaptation of a system proved operationally in CTA's latest "New Look" buses.

Air in the car enters louvers at the floor level and moves upward by convection past heat grids and through ducts in the wainscot paneling, thus giving the effect of radiant heating. The heated air re-enters the car through grills at the window sill level, thus keeping the windows free of frost and bringing the temperature within the car to the comfort point. Filtered and heated fresh air is mixed with recirculated air in proper proportions.

Units in the ceiling also provide heat that is dispersed throughout the car by fans.

Functioning of the air-conditioning, heating and ventilating is electronically controlled.

Smooth, Safe, High-Performance Ride

Years of research and testing by CTA and co-operating manufacturers are reflected in the excellent riding qualities and high-performance characteristics of the "New Look" cars.

The long series of tests of major components, such as trucks, brakes, motors and control equipment, began in 1955 when four prototype high-performance cars were produced for test purposes. Another four prototypes, with components modified as indicated by the earlier tests, went into the test program in 1960.

Typical of the results achieved by the test program is the CTA-1 truck with which the "New Look" cars are equipped. CTA-1 produces an outstandingly smooth ride.

Each of the two CTA-1 trucks under a "New Look" car is powered by a pair of 100 hp motors that assure rapid rates of acceleration and speed up to a maximum of 65 miles per hour.

The braking system consists of three different types of brakes, all electrically activated. The first two sets, a dynamic brake, using the traction motors as generators for retarding force, and a friction disc brake, are applied in normal operation. The third, an electro-magnetic brake, is applied against the running rail.

Acceleration and braking are regulated by the motorman through a new type of master controller.

OTHER FEATURES . . .

- Attractive interior decor and stay-new, easy-to-clean interiors of tough plastic, stainless steel trim and leather grain aluminum.
- Large picture windows, approximately 3 by 4 feet, glazed with tinted, laminated safety glass that filters out glare and heat rays.
- Spring cushion seats, three inches wider than CTA's other car seats, upholstered with vinyl coated fabric in a pleasing lake blue color.
- Fluorescent lights in a continuous row on each side of the car above the windows that brightly light the interior and focus 25 to 30 foot candles at the reading plane for easy newspaper reading.
- Riding comfort enhanced by thermal insulation and noise-proofing.
- Public address system for station and passenger information announcements, and trainphones for in-service communication between motormen and CTA Operations Control in the Merchandise Mart.

New Cars to Lake and Douglas Routes

Lake rapid transit route is to be assigned the first 148 of the "New Look" cars. The remaining 32 cars are to go into service on the Douglas route. The new cars will be placed into service on the two routes as they are delivered and processed. Approximately 200 outmoded cars, 40 to 50 years old, now on the two routes, are to be retired. With previous purchases of modern cars, CTA has retired a total of 1,100 wood and wood-steel cars.

Car Specifications

Manufacturer—Pullman-Standard, Chicago

Length—48 feet 3 inches over coupler pulling face

Width (maximum)—Nine feet four inches at the belt line

Overall height—12 feet

Seats—Transverse, spring cushions upholstered with plastic coated fabric

Passenger Capacity—Seated, "A" car, with conductor's position, 47; "B" car, 51

Interior Finish—Melamine plastic, stainless steel trim, and leather grained aluminum

Body and Framing—Steel underframe, aluminum superstructure, and fiberglass ends of the two-car units

Traction Motors—Four 100 hp units per car

Speed—Balancing at a maximum of 65 mph

Acceleration—At the rate of 3 miles per hour per second up to 20 mph, and at decreasing rates thereafter

Costing approximately \$19,000,000, the 180 "New Look" cars are being financed entirely from CTA operating revenues. Initial payments are being financed by cash obtained from the sale of low interest rate equipment trust certificates. The service charges on the certificates and the balance due will be paid out of depreciation reserves. To date CTA has invested or obligated \$194,400,000 in modernizing its equipment and facilities.

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