

**dial-a-ride**

**DIAL·A·RIDE DEMONSTRATION  
HADDONFIELD, NEW JERSEY**

*a personalized door-to-door transportation service*

2.09.85

## ORGANIZATION

The Haddonfield Dial-A-Ride Demonstration has been made possible by a financial assistance grant from the United States Department of Transportation, Urban Mass Transportation Administration. The New Jersey Department of Transportation is the Demonstration sponsor and is responsible for overall direction. The MITRE Corporation, under contract with the Urban Mass Transportation Administration, is evaluating the Demonstration from the service standpoint.

The 12 small buses were purchased by the state from Highway Products of Kent, Ohio.

Transport of New Jersey provides the drivers and will maintain the buses. The drivers are members of Local 880 of the Amalgamated Transit Union, AFL-CIO.

System design and operation management for the Demonstration are the responsibility of the associate contractors, Lex, Inc., and DAVE Systems, Inc. Lex/DAVE have provided communications, special control equipment, and training. They are also responsible for day-to-day supervision, and technical evaluation.

The Borough of Haddonfield, other communities in the area, and the Delaware Valley Regional Planning Commission are kept informed on developments and advised on the program at frequent meetings.

## CONCEPT

The Haddonfield Dial-A-Ride Demonstration uses sophisticated control techniques to direct many vehicles with many passengers at the same time. The control system is manual, but is so designed that it may be converted to a computerized operation.

Here's how it works.

Dial-A-Ride is set into motion by a phone call. The customer's call is received by a telephone operator in the Dial-A-Ride Control Center. The operator prepares a request containing the customer's name, telephone number, pickup point and delivery address. The request is passed to a scheduler at a large control map. By use of a special marker, he indicates that a small bus is assigned to pick up the customer. The assignment is then radioed by a dispatcher to the bus driver.

Dial-A-Ride also permits a customer to place a permanent pickup request. For example, if a person wants to be picked up at the same time every morning to be taken to the Lindenwold Line Rapid Transit Station, the request will automatically be repeated without the need to place a phone call each time.

Scheduling is the heart of the Dial-A-Ride sys-

tem, since it is efficient bus routing that makes Dial-A-Ride effective. Potential problems are automatically spotted by the use of special indicators in the Control Center. This permits corrective action to be taken before customers are even aware that a problem is developing. A strong program of training for control room personnel along with trained, experienced drivers and close supervision is intended to assure that everything works properly.

Manual control of vehicle selection and routing can become extremely complex. The number of decisions that must be made by the control personnel increases rapidly as more buses and passenger requests take their places on the control board. Consequently, the system is designed to take advantage of computer-aided control when increased complexity indicates that it is needed, particularly in the decision-making aspect of routing the vehicles.

The Haddonfield Demonstration uses 12 small buses. These are 17-passenger vehicles designed for maximum comfort. One of the buses is specially fitted to accommodate wheelchair invalids and others with handicaps which prevent them from using standard public transportation facilities.

# EVOLUTION

The Haddonfield Dial-A-Ride Demonstration carries forward both in scope and concept the demand-activated transportation systems which have been introduced elsewhere on smaller scales. Following is a listing of other similar projects:

In Mansfield, Ohio, a Dial-A-Ride minibus operated on a fixed route and detoured to pick up passengers at their homes.

In Pickering, Ontario, five minibuses provide door-to-station Dial-A-Bus service to meet Government of Ontario (GO) commuter trains.

In Columbia, Maryland, three minibuses provide fixed route service with some limited door-to-door Call-A-Ride service.

Other Dial-A-Ride type programs are in effect in Ann Arbor, Michigan; Rochester, New York; Columbus, Ohio; Long Island, New York; and Regina, Saskatchewan.

Two other programs are of interest, although they are not based on the Dial-A-Ride conception:

In Flint, Michigan, a 26-bus monthly subscription service called Maxi-cab provided door-to-factory transportation. Ridership was below expectation, possibly because fixed bus schedules inconvenienced riders.

In Peoria, Illinois, a 21-bus monthly subscription service called Premium Special also provided door-to-factory transportation and was highly successful, probably because factory shift times were more constant than at Flint.

Extensive studies of Dial-A-Ride have been made by Ford, General Motors, and the Massachusetts Institute of Technology. These theoretical studies have indicated the technical and economic feasibility of Dial-A-Ride.

Haddonfield Dial-A-Ride builds on all these studies and experiences, to provide a complete, 24-hour, fully-flexible and demand-responsive, multi-vehicle system. If it is later automated with computers, the transition to computer operation can be made smoothly and reliably. The manual system is computer-compatible and can back up an automated system, taking over immediately in the event of computer malfunction.

For Additional Information Contact

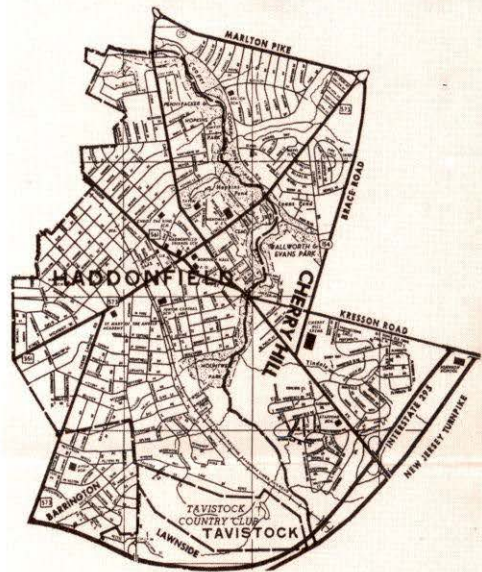
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SERVICE AREA

## LOCALE

Haddonfield is in Camden County, New Jersey, across the Delaware River and approximately seven miles East of Philadelphia, Pennsylvania. It is a medium-to-upper income residential area having a population of about 14,000 persons. Haddonfield is served by two bus routes and by the Port Authority Transit Corporation (PATCO) High Speed Line, a rapid transit railroad which is presently the most advanced in the United States. It connects several communities in Camden County with center city Philadelphia.

The Dial-A-Ride Demonstration covers Haddonfield, parts of Barrington, Lawnside and Cherry Hill and may ultimately encompass a much larger population. Dial-A-Ride provides service to and from the PATCO station in Haddonfield, local trips within the area and to Cherry Hill Mall, a large regional shopping center just North of Haddonfield.



PASSENGER BOARDING BUS FROM HOME

## HADDONFIELD OPERATION

Haddonfield Dial-A-Ride service was inaugurated on February 19, 1972 by U. S. Secretary of Transportation John A. Volpe. Following five months of planning and four weeks of driver and controller training, the service met with a highly favorable success from the elderly, youngsters, church-goers, and shoppers. An average of 350 persons per day rode Dial-A-Ride buses during the first ten days of operation.

On March 1, service was interrupted by a state-wide strike of the Amalgamated Transit Union's drivers. The strike was settled on May 7, and service has been restarted.

The general acceptance of Dial-A-Ride is excellent. Elderly persons, housewives and young people have found the service particularly inviting because it gives them a new mobility, it decreases their dependence on friends, or on the husband's car or on the parents.

The trend will be to expand the Demonstration Area slowly, in a way that will not degrade the service. As service continues and is expanded, the Control System will improve constantly. A computer will be used to aid the Control System and will permit more vehicles to operate over a wider area.

Commuters, and those who make local trips to work, present slightly different situations. Theirs has been more of a wait and see approach; they must be wooed out of their automobile. They have habits where transportation is concerned which are not easily changed. Dial-A-Ride is changing these habits slowly, through emphasis on reliability and cost-savings.

The fare structure of Dial-A-Ride is shown in the table. It was established by analyzing potential ridership and acceptable waiting and travel times in the service area as against what people say they will pay for the service. The ticket book has proven popular as a discount fare medium.

## FARE STRUCTURE

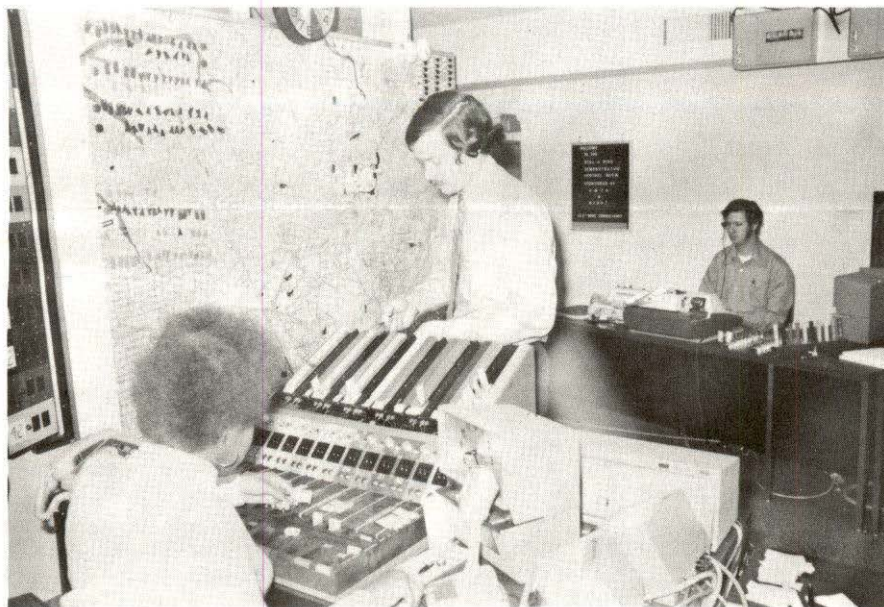
Type of Fare	Fare Per Rider	Cost	Who	When Valid
REGULAR	60¢ cash	60¢	Anyone	Any Day Any Hour
	50¢ ticket (discount)	40-ride book \$20 10-ride book \$5		
FAMILY and GROUP	40¢ ticket (discount)	10-ride book \$4	Three or more persons traveling together from same pick-up point to same destination	Weekdays: 9:30 am - 4:30 pm 7:00 pm - 6:30 am  Sats., Sundays, Holidays: Any Hour
SENIOR CITIZEN	40¢ ticket (discount)	10-ride book \$4	Senior Citizens (age 65 and over)	Any Day, Any Hour



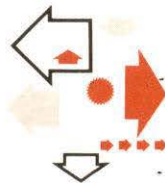
FREE PHONE CALL FROM PATCO HIGH-SPEED LINE



MAP AND MANUAL SCHEDULING SYSTEM IN CONTROL CENTER



VIEW OF CONTROL CENTER



## CHALLENGES

Today's challenges in transportation are many and diverse. During the past 25 years, the population of the United States has been growing and moving. This growth and movement has drastically changed the needs, the patterns and the problems of urban and suburban living.

Traditional forms of public transportation have not been able fully to meet these challenges. Rail and bus lines face serious economic problems. Meanwhile, the automobile chokes city streets and, indeed, city dwellers.

Large segments of our population are virtually immobilized. The young, the old, the poor, the handicapped cannot afford or are unable to drive. For many of these persons, public transportation is difficult or inconvenient to use. Routes are too far away, transfers between lines are difficult, or the transportation that is available just does not go to their destinations. Others simply find that no public transportation is available.

How many job opportunities are missed, how many customers do not reach a store, how many votes are not cast because people do not have convenient, or even adequate, transportation? It is apparent that in a society priding itself on mobility, the cost of immobility can be exceedingly high.

The increase in highways and automobiles has resulted in other problems in a Nation concerned with its environment. Many other urban transportation methods have been proposed or demonstrated as answers to the challenges. But in many cases they cannot adapt to the travel needs of the individual in his community.



INTERIOR OF DIAL-A-RIDE BUS

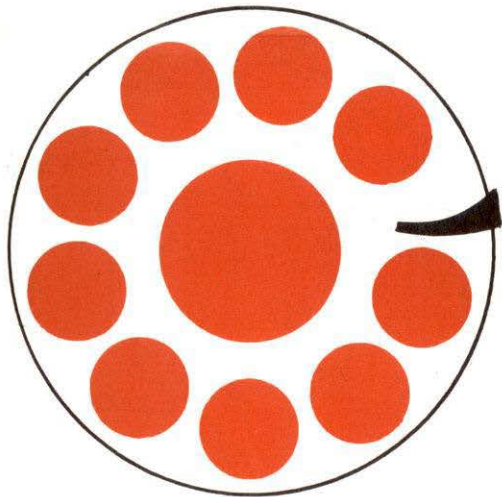
## SOLUTIONS

A significant way to provide mobility in an urban and suburban society is transportation which can be adapted to meet changing conditions in the community.

This means transportation:

- Which is comparatively low in cost, convenient, accessible to all, yet able to meet individual needs of those who are elderly or handicapped.
- Which can go anywhere, on any city street.
- Which has high security against crime.
- Which provides service from door-to-door, 24 hours a day, 7 days a week.
- Which supplements the highly efficient, but inflexible, rapid transit system by providing the missing link between the home and the station.
- Which effectively meets rush-hour demands, and off-hour requirements.
- Which uses existing technology, is placed in service easily and quickly and which can expand to meet expanding needs.

The Haddonfield Demonstration is designed to determine if the Dial-A-Ride concept is that adaptive transportation, if it will meet the needs for more mobility and if it will answer the challenges facing urban transportation, today and tomorrow.



## SUMMARY

Dial-A-Ride is an advanced transportation system. It uses small radio-dispatched vehicles and provides door-to-door service for its passengers. The essence of Dial-A-Ride is convenient, personalized transportation tailored to the needs of the individual. In this respect, Dial-A-Ride is like a taxicab you share with others.

This personalized service is made possible through up-to-date planning, system design and operational techniques. Dial-A-Ride uses today's technology to meet today's challenges in transportation. It brings to the area it serves an advanced and innovative door-to-door transportation system. Transportation is available through a simple phone call.

The Dial-A-Ride Demonstration in Haddonfield and adjacent communities in New Jersey is financed by the U. S. Department of Transportation, Urban Mass Transportation Administration, and the New Jersey Department of Transportation, which is sponsoring the program and providing overall direction. Service started February 19, 1972.

## BENEFITS

Dial-A-Ride offers a number of potential benefits for communities. These include:

- ★ Convenience of local travel to the station, theatre, market, downtown area, college, office, medical center, etc.
- ★ Support for patronage of small business.
- ★ Reduction of downtown parking and traffic problems.
- ★ Increase in personal mobility for the old, young, non-drivers, and invalids.
- ★ Increase in the efficiency of existing transportation systems by providing feeder service. Takes children to school where school buses are not available.
- ★ Comfortable service.
- ★ Highly reliable service, even at peak-demand hours.
- ★ Operations 24-hours a day, seven days a week.
- ★ High security against crime, since riders are identified when phone request is made, and passengers are taken door-to-door.
- ★ Minimal capital investment which can be expanded easily.
- ★ Increases job opportunities, especially in lower income brackets.
- ★ Easily adapted to meet special needs of the community.

Dial-A-Ride is a major innovation that may solve one of our most urgent transportation problems—the need for personalized public transportation. It uses technology and methods which exist today. It provides practical answers that can be put into action quickly.

Dial-A-Ride also could have beneficial side effects in other areas of concern, since critical social problems generally are aggravated by immobility. Haddonfield Dial-A-Ride will demonstrate the degree of public acceptance of this concept and hopefully will point the way to greater personal mobility throughout the nation.

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