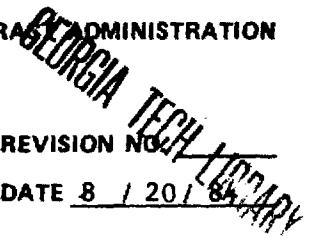


PROJECT ADMINISTRATION DATA SHEET



ORIGINAL  REVISION NO.

Project No. E-20-683 GTRI/OTX DATE 8 / 20 / 84

Project Director: M. John Moskaluk School/Ext CE

Sponsor: Georgia Department of Transportation; Forest Park, GA 30050

Type Agreement: GA DOT Research Project No. 8407

Award Period: From 8/1/84 To 8/1/86 (Performance) 8/1/86 (Reports)

Sponsor Amount: This Change 12-31-84 -30-88 Total to Date

Estimated: \$ 89,000 \$ 89,000

Funded: \$ 89,000 \$ 89,000

Cost Sharing Amount: \$ N/A Cost Sharing No: N/A

Title: "Traffic Data Collection Assistance Program for Cities and Counties- Rural Technical Assistance Program"

ADMINISTRATIVE DATA

OCA Contact Lynn Boyd X4820

1) Sponsor Technical Contact:  
Sam Vollo  
Office of Materials & Research  
Georgia Dept. of Transportation  
15 Kennedy Drive  
Forest Park, Ga. 30050  
(404) 363-7567

2) Sponsor Admin/Contractual Matters:  
Tom Stapler, P.E.  
State Materials & Research Engineer  
Dept. of Transportation  
State of Georgia  
Office of Materials & Research  
15 Kennedy Drive  
Forest Park, Ga. 30050 (404) 363-7510

Defense Priority Rating: N/A Military Security Classification: N/A  
(or) Company/Industrial Proprietary: N/A

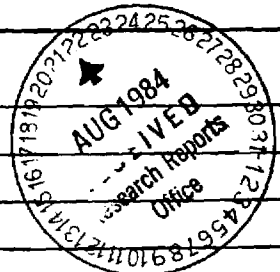
RESTRICTIONS

See Attached \_\_\_\_\_ Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval - Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of \$500 or 125% of approved proposal budget category.

Equipment: Title vests with Georgia DOT and must have written approval from the sponsor, if not specified in the proposal.

COMMENTS:



COPIES TO:

Project Director  
Research Administrative Network  
Research Property Management  
Accounting

Procurement/EES Supply Services  
Research Security Services  
Reports Coordinator (OCA) ✓  
Research Communications (2)

GTRI  
Library  
Project File  
Other Ina Newton



GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Date 3/3/89

Project No. E-20-683

Center No. R5808-OA0

Project Director M. J. Moskaluk

School/Lab CE

Sponsor Georgia Department of Transportation

Contract/Grant No. 8407

GTRC XX GIT     

Prime Contract No.                     

Title Traffic Data Collection Assist PROG Cities Counties Rural Tech Assist PROG

Effective Completion Date 12/31/88 (Performance) 12/31/88 (Reports)

Closeout Actions Required:

- None
- Final Invoice or Copy of Last Invoice
- Final Report of Inventions and/or Subcontracts
- Government Property Inventory & Related Certificate
- Classified Material Certificate
- Release and Assignment
- Other

Includes Subproject No(s).                     

Subproject Under Main Project No.                     

Continues Project No.                      Continued by Project No.                     

Distribution:

- Project Director
- Administrative Network
- Accounting
- Procurement/GTRI Supply Services
- Research Property Management
- Research Security Services

- Reports Coordinator (OCA)
- GTRC
- Project File
- Contract Support Division (OCA)(2)
- Other

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No.  RP-8307	Project Title Traffic Data Collection Assistance Program for Cities and Counties-Rural Technical Assistance Program (RTAP)		Report No. 1  Report Period from 1 September 1984 to 30 October 1984
Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332		Project Director(s)  M. JOHN MOSKALUK	
Starting Date  1 September 1984 Completion Date 1 September 1986	% Time Expended  8%	Schedule Status  <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	Funding Sources(s)  100% FHWA Funding
<u>Funds Authorized</u> Total  \$89,000	<u>Funds Expended</u> Total, %   Report Period  0   0		<u>Fiscal Year Funding</u> Authorized   Expended, %  0   0

Project Objectives, Status, Progress

Report Date 26 November 1984

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** Eventhough the start work date was designated 20 July 1984, Georgia Tech did not start work until 1 September 1984. This agreement was made verbally between GDOT and Georgia Tech. Further, Task A: "Provide a Proposed Plan for the Implementation of Traffic Counters" and Task B: "Provide a Plan for Training" has not been started. In leiu of these Tasks, Task C: "Procure and Provide Traffic Data Collection Equipment" has been the first task to be undertaken. Currently, a set of generalized specifications to procure the equipment is being prepared. They will be completed and issued when additional information is received from Washington FHWA. While the specifications are out for bid, Task A and Task B will be accomplished.

**PROGRESS THIS PERIOD: (See attached report)**

**WORK PLANNED FOR NEXT PERIOD (See attached report)**

**RECOMMENDATIONS: (See attached report)**

**PROBLEMS: None**

-----  
M. ~~J~~ohn Moskaluk  
Project Director  
Georgia Tech

**WORK PLAN SCHEDULE**

**TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES**

**RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)**

Research Tasks	1984				1985				1986																			
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A				
Task A: Provide A Proposed Plan For The Implementation Of Traffic Counters																												
Task B: Provide A Plan For Training																												
Task C: Procure And Provide Traffic Data Collection Equipment																												
Task D: Documentation of Equip. Utilization																												
Task E: Documentation																												
Quarterly Progress																												
Summary Report Draft																												
Final																												

-----  
|-----| Approved Schedule

■ Work Completed Schedule

GEORGIA TECH  
TRAFFIC DATA COLLECTION PROJECT  
QUARTERLY PROGRESS REPORT

September 1, 1984 thru October 30, 1984

Major emphasis during this period has concentrated on evaluating the various traffic data collection equipment available. Equipment manufactures evaluated are: Golden River, Streeter Amet, GK, and Mitron. From a functional point of view, Streeter Amet and the Golden River equipment are similar in that these equipment use an external piece of hardware to retrieve the data collected. The GK and Mitron equipment are similar in that the data collected are stored on a data module which is removed from the equipment to retrieve the information. Equipment costs range in price from approximately \$1,000.00 to \$1,600.00 depending on the number of data channels and how the data is stored and retrieved.

Conceptually, the Center will lend data collection equipment to a local agency, and train that agency in the use of the equipment. Responsibility for placing and monitoring the equipment during the data collection period will be the local agency's. Data summary will be the responsibility of the Center. Operationally, at this time, it appears that the use of data collection equipment with modules is more straight forward to use and offers less of an opportunity to introduce error in the collection procedure. However, a final selection of equipment to be purchased will be determined on the basis of the bid prices and test performance of the equipment.

To assure compatibility with the extensive data collection activities of GDOT, a continuing coordination effort has been estab-

lished with Mr. Jack Williams of GDOT. Before a final selection of equipment is made, Mr. William's opinions will be sought and included in the decision process. As soon as additional information is receive from Washington FHWA a generalized specification will be issued by Georgia Tech. It is anticiapated that the equipment will purchased by the end of January 1985.

#### **FUTURE ACTIVITIES**

- o Start and finish Task A: "Provide A Proposed Plan For The Implementation Of Traffic Counters"
- o Start and finish Task B: "Provide A Plan For Training"
- o Issue equipment specifications and procure data collection equipment.
- o Advertise the availability of the equipment in the Winter edition of the Tech Trans Newsletter.

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No.  RP-8307	Project Title  TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES-RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	Report No. 2  Report Period from 1 October 1984 to 1 January 1985
Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332		Project Director(s)  M. JOHN MOSKALUK
Starting Date  1 September 1984  Completion Date  1 September 1986	% Time Expended  8%	Schedule Status  <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind
Funding Sources(s)  100% FHWA FUNDING		
<u>Funds Authorized</u> Total  \$89,000	<u>Funds Expended</u> Total, %   Report Period  \$1,183    1%      \$1,183	
<u>Fiscal Year Funding</u> Authorized   Expended, %  0      \$1,183    1%		

Project Objectives, Status, Progress

Report Date 1 March 1985

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** The Center has contacted all of the manufacturers of traffic data equipment. To date, two manufacturers, Golden River and Streeter Amet have visited the office and demonstrated their equipment. Within the next several weeks, the other two will be coming to the office. A demonstration includes how the hardware works as well as the performance function of the software. Each manufacturer has agreed to loan the center at least two recorders and the appropriate software so that the equipment can be tested. It is planned that the equipment be taken to a local agency for testing purposes.

PROGRESS THIS PERIOD: (See attached report)

WORK PLANNED FOR NEXT PERIOD (See attached report)

PROBLEMS: None

-----  
M. John Moskaluk  
Project Director  
Georgia Tech

WORK PLAN SCHEDULE

TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES

RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)

Research Tasks	1984				1985								1986												
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	
Task A: Provide A Proposed Plan For The Implementation Of Traffic Counters				■																					
Task B: Provide A Plan For Training				■																					
Task C: Procure And Provide Traffic Data Collection Equipment			■																						
Task D: Documentation of Equip. Utilization																									
Task E: Documentation																									
Quarterly Progress																									
Summary Report Draft																									
Final																									

□ Approved Schedule

■ Work Completed Schedule

GEORGIA TECH  
TRAFFIC DATA COLLECTION PROJECT  
QUARTERLY PROGRESS REPORT

October 1, 1984 thru January 1, 1985

Efforts during this period were directed toward the selection of the "best" traffic data collection equipment. In pursuit of the most suitable product for use by local agencies, we examined equipment from 3 different manufacturers. Meetings were held with representatives of Streeter Amet, Golden River, and GK Instruments to get acquainted with the different equipment.

A testing plan for the various products was developed. The criterion to be used for the selection are:

- Ease of use: Degree of difficulty for local agency to install and operate equipment.
- Vandalism: How vulnerable to theft and damage.
- Equipment capability: How many different types of data measurements can the equipment perform.
- Set-up time: How many person-hours required to setup equipment and collect data.
- Applicability of product: How practical is the product for our operations?
- Cost.

Some time ago, a request for traffic data collection equipment was received from the City of Lafayette. When the product that best meets the established criterion is selected, a final field test will be performed in the City of Lafayette to determine local acceptance and reactions to that equipment. The results of the test will be used in the final decision regarding the manufacturer from which data collectors and recorders will be purchased.

LIBRARY DOES NOT HAVE :

Progress Report No. 3

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No.  RP-8307	Project Title TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES- RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)		Report No. 4  Report Period from 1 April 1985 to 1 July 1985
Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332		Project Director(s)  M. JOHN MOSKALUK	
Starting Date  1 September 1984  Completion Date  1 September 1986	% Time Expended  50%	Schedule Status  <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	Funding Sources(s)  100% FHWA FUNDING
<u>Funds Authorized</u> Total	<u>Funds Expended</u> Total, %      Report Period		<u>Fiscal Year Funding</u> Authorized      Expended, %
\$89,000	\$5,354      6%	\$4,171	\$5,354      6%

Project Objectives, Status, Progress

Report Date 28 August 1985

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** Twenty-five traffic counters and four data collectors were ordered from Streeter Amet. The equipment was ordered through the GDOT so that the Center could take advantage of the better pricing structure available to the State. As of this writing, the data collection equipment has not yet been received.

**WORK PLANNED FOR NEXT PERIOD:** As soon as the data collection equipment is received and tested, the nine local agencies that have indicated the desire to use this equipment will be serviced.

PROBLEMS: None

- M. John Moskaluk, Director  
Georgia Tech  
Technology Transfer Center

WORK PLAN SCHEDULE

TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES

RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)

Research Tasks	1984				1985				1986					
	I	S	O	N	D	I	J	F	M	A	M	J	J	A
Task A: Provide A Proposed Plan For The Implementation Of Traffic Counters														
Task B: Provide A Plan For Training														
Task C: Procure And Provide Traffic Data Collection Equipment														
Task D: Documentation of Equip. Utilization														
Task E: Documentation														
Quarterly Progress														
Summary Report Draft														
Final														

----- Approved Schedule

██████████ Work Completed Schedule

LIBRARY DOES NOT HAVE:

Progress Report No. 5

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

<b>Project No.</b>  RP-8307	<b>Project Title</b> TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES - RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	<b>Report No.</b> 6  <b>Report Period</b> from 1 OCT 1985 to 31 DEC 1985																	
<b>Research Agency(s)</b> GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GA 30332		<b>Project Director(s)</b> M. JOHN MOSKALUK																	
<b>Starting Date</b> 1 September 1984  <b>Completion Date</b> 1 September 1986	<b>% Time Expended</b>  50%	<b>Schedule Status</b> <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind																	
<b>Funding Sources(s)</b>  100% FHWA FUNDING																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">Funds Authorized</th> <th colspan="2" style="text-align: center;">Funds Expended</th> <th colspan="2" style="text-align: center;">Fiscal Year Funding</th> </tr> <tr> <th style="text-align: center;">Total</th> <th style="text-align: center;">Total, %</th> <th style="text-align: center;">Report Period</th> <th style="text-align: center;">Authorized</th> <th style="text-align: center;">Expended, %</th> </tr> <tr> <td style="text-align: center;">\$89,000</td> <td style="text-align: center;">\$5,738.75 7%</td> <td style="text-align: center;">\$1,567.75</td> <td style="text-align: center;">\$5,738.75</td> <td style="text-align: center;">7%</td> </tr> </table>	Funds Authorized	Funds Expended		Fiscal Year Funding		Total	Total, %	Report Period	Authorized	Expended, %	\$89,000	\$5,738.75 7%	\$1,567.75	\$5,738.75	7%				
Funds Authorized	Funds Expended		Fiscal Year Funding																
Total	Total, %	Report Period	Authorized	Expended, %															
\$89,000	\$5,738.75 7%	\$1,567.75	\$5,738.75	7%															

Project Objectives, Status, Progress

Report Date January 31, 1986

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** During the last week of September, We received the first shipment of data collection equipment including 10 recorders and one data collector. Approximately one month later, we received a second shipment of 10 recorders and three data collectors. The remaining five recorders were received on the 5th of December.

The first agency to receive data collection equipment was Clayton County, where a training session on the installation and setup of the equipment was held on October 1st. Similar sessions were conducted in the Cities of Carrollton, Decatur, Dalton, and Waycross.

The following is a summary of the use of the equipment by the agencies receiving them:

AGENCY	NUMBER OF RECORDERS	DATE	COUNTS
-----	-----	----	-----
Clayton County - - -	8 - - - - -	October - - -	64
City of Carrollton -	8 - - - - -	Oct - Nov - - -	41
City of Decatur - - -	2 - - - - -	November - - -	11
City of Dalton - - -	7 - - - - -	Nov - Dec - - -	19
City of Waycross - -	5 - - - - -	December - - -	9

All the agencies expressed satisfaction with the operation of the equipment and the results. They also requested to be placed on the waiting list for using the equipment in the future. Consequently, four recorders will be delivered to the City of Carrollton in January.

WORK PLANNED FOR NEXT PERIOD: Of the eight local agencies requesting data collection equipment, five have or are now being served. We will during the next few months serve the remaining three as well as any additional agencies that may request the use of the equipment. there are three agencies that are currently on the waiting list.

The City of Winder  
 The City of Cumming  
 The City of Smyrna

PROBLEMS: None

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 M. John Moskaluk, Director  
 Georgia Tech  
 Technology Transfer Center

**WORK PLAN SCHEDULE**

**TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES  
RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)**

Research Tasks	1984				1985								1986												
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	
Task A: Provide A Proposed Plan For The Implementation Of Traffic Counters				■	■																				
Task B: Provide A Plan For Training				■	■																				
Task C: Procure And Provide Traffic Data Collection Equipment				■	■	■	■	■	■	■	■	■	■	■	■										
Task D: Documentation of Equip. Utilization																									
Task E: Documentation																									
Quarterly Progress																									
Summary Report																									
Draft																									
Final																									

     Approved Schedule
  Work Completed Schedule

LIBRARY DOES NOT HAVE :

Progress Report No. 7

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No. RP 8307	Project Title TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES - RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	Report No. 8 Report Period from 1 April 1986 to 30 June 1986
Research Agency(s) GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GA 30332		Project Director(s) M. JOHN MOSKALUK
Starting Date 1 August 1984 Completion Date 1 August 1986	% Time Expended 96%	Schedule Status <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind
Funding Source(s) 100% FHWA Funding		
<u>Funds Authorized</u> Total \$89,000	<u>Funds Expended</u> Total, % \$14,221	Report Period \$4,241
<u>Fiscal Year Funding</u> Authorized Expended, % \$14,221		

Project Objectives, Status, Progress

Report Date July 31, 1986

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** Five additional agencies used traffic data collection equipment during the last period. These agencies are:

The City of Carrollton  
Carroll County  
The City of Winder  
Forsyth County  
The Georgia DOT  
City of Decatur  
City of Waycross  
City of Atlanta

A total of 223 traffic counts have so far been made. The following is a summary of the use of the equipment by the agencies receiving them:

AGENCY	NUMBER OF RECORDERS	DATE	COUNTS
-----	-----	----	-----
Clayton County - - -	8 - - - - -	October - - - -	64
City of Carrollton -	8 - - - - -	Oct - Nov - - -	41
City of Decatur - - -	2 - - - - -	November - - -	11
City of Dalton - - -	7 - - - - -	Nov - Dec - - -	19
City of Waycross - -	5 - - - - -	December - - - -	9
City of Carrollton -	4 - - - - -	Jan - Feb - - -	3
Carroll County - - -	4 - - - - -	March - Apr - -	21
City of Winder - - -	8 - - - - -	Feb - Apr - - -	23
Forsyth County - - -	4 - - - - -	Feb - Apr - - -	11
Georgia DOT - - - -	4 - - - - -	Dec - Apr - - -	*
City of Decatur - - -	2 - - - - -	June - July - -	21
City of Atlanta - - -	9 - - - - -	May -	
City of Waycross - -	10 - - - - -	May - July - - -	*

\* Data has not been retrieved yet

WORK PLANNED FOR NEXT PERIOD: The Center will during the next period loan traffic count equipment to the following agencies, as well as any additional agencies that may request the use of the equipment.

Rockdale County  
Walton County  
Forsyth County

PROBLEMS: None

n. JOHN MOSKALUK, Director  
Georgia Tech  
Technology Transfer Center

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No.  P 8307	Project Title  TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	Report No. 9  Report Period from 1 JULY 1986 to 31 DECEMBER 1986																
Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GEORGIA 30332		Project Director(s)  M. JOHN MOSKALUK																
Starting Date AUGUST 1984  Completion Date AUGUST 1986	% Time Expended 100% PROJECT EXTENDED	Schedule Status  <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind																
Funding Source(s)  100% FHWA FUNDING																		
<u>Funds Authorized</u> Total  \$89,000	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Funds Expended</th> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Fiscal Year Funding</th> </tr> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Total, %</th> <th style="text-align: center; border-bottom: 1px solid black;">Report Period</th> <th style="text-align: center; border-bottom: 1px solid black;">Authorized</th> <th style="text-align: center; border-bottom: 1px solid black;">Expended, %</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">\$82,035*, 92%</td> <td style="text-align: center;">\$37,239*</td> <td style="text-align: center;"></td> <td style="text-align: center;">\$37,239*, 42%</td> </tr> <tr> <td colspan="4" style="text-align: center; font-size: small;">*Dollar amounts shown include expenditure by GDOT for capital equipment.</td> </tr> </tbody> </table>		Funds Expended		Fiscal Year Funding		Total, %	Report Period	Authorized	Expended, %	\$82,035*, 92%	\$37,239*		\$37,239*, 42%	*Dollar amounts shown include expenditure by GDOT for capital equipment.			
Funds Expended		Fiscal Year Funding																
Total, %	Report Period	Authorized	Expended, %															
\$82,035*, 92%	\$37,239*		\$37,239*, 42%															
*Dollar amounts shown include expenditure by GDOT for capital equipment.																		

Project Objectives, Status, Progress

Report Date 2/2/87

PROJECT GOAL: To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

OBJECTIVES:

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

STATUS: Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and summarizing the data collected. Thirteen agencies borrowed the equipment and conducted approximately 500 traffic counts during the past year. Thus far, the equipment has performed adequately and only a few counts have been lost due to improper installation. Since the local agencies are installing the equipment and in many cases have never seen the equipment before, it is remarkable that only a few traffic counts have been lost.

Currently, the Center is working with Streeter Richardson to obtain new summary software. The new software is claimed to present the data in a new format permitting quicker retrieval and easier analysis. Testing of the new software will be conducted within the week.

PROBLEMS: NONE

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M. JOHN MOSKALUK, DIRECTOR  
GEORGIA TECH TECHNOLOGY TRANSFER CENTER

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No. 8307	Project Title TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)		Report No. 10  Report Period from 1 JANUARY 1987 to 1 APRIL 1987								
Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GEORGIA 30332		Project Director(s)  M. JOHN MOSKALUK									
Starting Date AUGUST 1984  Completion Date DECEMBER 1987	% Time Expended 100%	Schedule Status <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	Funding Source(s) 100% FHWA FUNDING								
<u>Funds Authorized</u> Total 9,000	<u>Funds Expended</u> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Total, %</td> <td style="width: 50%; text-align: center;">Report Period</td> </tr> <tr> <td style="text-align: center;">\$73,164* (82%)</td> <td style="text-align: center;">\$6,203*</td> </tr> </table> * Dollar amounts shown include expenditure by GDOT for capital equipment.		Total, %	Report Period	\$73,164* (82%)	\$6,203*	<u>Fiscal Year Funding</u> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Authorized</td> <td style="width: 50%; text-align: center;">Expended, %</td> </tr> <tr> <td></td> <td style="text-align: center;">\$43,442* (49%)</td> </tr> </table>	Authorized	Expended, %		\$43,442* (49%)
Total, %	Report Period										
\$73,164* (82%)	\$6,203*										
Authorized	Expended, %										
	\$43,442* (49%)										

Project Objectives, Status, Progress

Report Date 6/26/87

See attached.

PROJECT GOAL: To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

OBJECTIVES:

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

STATUS: Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and summarizing the data collected. Five agencies borrowed the equipment during the quarter.

PROBLEMS: At the present time, six of the counters are malfunctioning and need to be repaired.

---

M. John Moskaluk, Director  
Georgia Tech  
Technology Transfer Center

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

<b>Project No.</b>  RP 8307	<b>Project Title</b>  TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	<b>Report No. 11</b>  <b>Report Period</b> from 1 APRIL 1987 to 30 JUNE 1987																
<b>Research Agency(s)</b>  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332		<b>Project Director(s)</b>  M. JOHN MOSKALUK																
<b>Starting Date</b> 1 AUGUST 1984  <b>Completion Date</b> 31 DECEMBER 1987	<b>% Time Expended</b> 100% PROJECT EXTENDED	<b>Schedule Status</b> <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind																
<b>Funding Source(s)</b>  100% FHWA																		
<b>Funds Authorized</b> Total \$89,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Funds Expended</th> </tr> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Total, %</td> <td style="text-align: center; border-bottom: 1px solid black;">Report Period</td> </tr> <tr> <td style="border-right: 1px solid black;">\$49,268(55%) GT</td> <td></td> </tr> <tr> <td style="border-right: 1px solid black;">31,575(36%) GDOT</td> <td style="text-align: center;">\$7,679</td> </tr> <tr> <td style="border-right: 1px solid black;">80,843(91%) TOTAL</td> <td></td> </tr> </table>	Funds Expended		Total, %	Report Period	\$49,268(55%) GT		31,575(36%) GDOT	\$7,679	80,843(91%) TOTAL		<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Fiscal Year Funding</th> </tr> <tr> <td style="text-align: center; border-bottom: 1px solid black;">Authorized</td> <td style="text-align: center; border-bottom: 1px solid black;">Expended, %</td> </tr> <tr> <td></td> <td style="text-align: center;">\$80,843(91%)</td> </tr> </table>	Fiscal Year Funding		Authorized	Expended, %		\$80,843(91%)
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	\$80,843(91%)																	

Project Objectives, Status, Progress

Report Date NOVEMBER 24, 1987

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and summarizing the data collected. Five agencies borrowed the equipment during the quarter.

**PROBLEMS:** At the present time, six of the counters are malfunctioning and need to be repaired.

M. ~~John~~ Moskaluk, Director  
Georgia Tech  
Technology Transfer Center

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

<b>Project No.</b>  RP 8307	<b>Project Title</b> TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	<b>Report No.</b> 12  <b>Report Period</b> from 1 JULY 1987 to 30 SEPTEMBER 1987
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<b>Research Agency(s)</b>  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332	<b>Project Director(s)</b>  M. JOHN MOSKALUK
---	--

<b>Starting Date</b> 1 AUGUST 1984  <b>Completion Date</b> 31 DECEMBER 1987	<b>% Time Expended</b> 100% PROJECT EXTENDED	<b>Schedule Status</b> <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	<b>Funding Source(s)</b>  100% FHWA
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<u>Funds Authorized</u> Total  \$89,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Funds Expended</th> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">Total, %</td> <td style="text-align: center;">Report Period</td> </tr> <tr> <td style="border-right: 1px solid black;">\$49,268(55%) GT</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="border-right: 1px solid black;">31,575(36%) GDOT</td> <td style="text-align: center;">-0-</td> </tr> <tr> <td style="border-right: 1px solid black;">80,843(91%) TOTAL</td> <td style="text-align: center;"> </td> </tr> </table>	Funds Expended		Total, %	Report Period	\$49,268(55%) GT		31,575(36%) GDOT	-0-	80,843(91%) TOTAL		<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">Fiscal Year Funding</th> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">Authorized</td> <td style="text-align: center;">Expended, %</td> </tr> <tr> <td style="border-right: 1px solid black;"> </td> <td style="text-align: center;">-0-</td> </tr> </table>	Fiscal Year Funding		Authorized	Expended, %		-0-
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Project Objectives, Status, Progress

Report Date NOVEMBER 24, 1987

**PROJECT GOAL:** To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:** Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and summarizing the data collected. Three agencies used the equipment during the quarter.

**PROBLEMS:** At the present time, three of the counters are malfunctioning and need to be repaired. Also, one counter was stolen while in use by Rockdale County.

---

**M. John Moskaluk, Director  
Georgia Tech  
Technology Transfer Center**

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No. RP 8307	Project Title TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES RURAL TECHNICAL ASSISTANCE PROGRAM (RTAP)	Report No. 13  Report Period from 1 OCTOBER 1987 to 31 DECEMBER 1987
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Research Agency(s) GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GA 30332	Project Director(s) M. JOHN MOSKALUK
--	---

Starting Date 1 AUGUST 1984  Completion Date 30 JUNE 1988*	% Time Expended 100% TIME EXTENDED*	Schedule Status <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	Funding Source(s) 100% FHWA
--	--	--	--------------------------------

<u>Funds Authorized</u>	<u>Funds Expended</u>		<u>Fiscal Year Funding</u>	
Total	Total, %	Report Period	Authorized	Expended, %
\$89,000	\$49,268 (55%) GT			
	31,575 (36%) GDOT	0		0
	80,843 (91%) TOTAL			

Project Objectives, Status, Progress  
\*Project extended to June 30, 1988.

Report Date 2/26/88

**PROJECT GOAL:**

To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:**

Services provided at the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and

summarizing the data collected. The City of Decatur and Fulton County utilized the equipment during the report period.

M. John Moskaluk, Director  
Technology Transfer Center  
Georgia Tech

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

<b>Project No.</b> RP8407	<b>Project Title</b> Traffic Data Collection Assistance Program for Cities and Counties Rural Technical Assistance Program (RTAP)	<b>Report No.</b> 14  <b>Report Period</b> from April 1, 1988 to June 30, 1988
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<b>Research Agency(s)</b> GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GA 30332	<b>Project Director(s)</b> M. JOHN MOSKALUK
---	--

<b>Starting Date</b> August 1, 1984  <b>Completion Date</b> December 31, 1988	<b>% Time Expended</b> 95%	<b>Schedule Status</b> <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	<b>Funding Sources(s)</b> FHWA (100%)
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<u>Funds Authorized</u>	<u>Funds Expended</u>		<u>Fiscal Year Funding</u>	
Total	Total, %	Report Period	Authorized	Expended, %
\$57,425 (GT)	\$49,268, 90% (GT)	0		
\$31,575 (GDOT)	\$31,575, 100% (GDOT)	0		

Project Objectives, Status, Progress

Report Date 7/21/88

**PROJECT GOAL:**

To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

**STATUS:**

Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and the summarizing of data collected. The City of Waycross and the City of Decatur utilized the equipment during the report period.

Several agencies have requested the equipment for the next quarter, and it is anticipated that approximately 14 counters will be delivered to local agencies during the month of July.

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M. John Moskaluk, Director  
Technology Transfer Center  
Georgia Tech

RESEARCH PROJECT PROGRESS REPORT  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

Project No.  RP8407	Project Title  TRAFFIC DATA COLLECTION ASSISTANCE PROGRAM FOR CITIES AND COUNTIES  Rural Technical Assistance Program	Report No. 15  Report Period from July 1, 1988 to September 30, 1988
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Research Agency(s)  GEORGIA INSTITUTE OF TECHNOLOGY  ATLANTA, GA 30332	Project Director(s)  M. JOHN MOSKALUK
--	---

Starting Date August 1, 1984  Completion Date December 31, 1988	% Time Expended  97%	Schedule Status  <input checked="" type="checkbox"/> On <input type="checkbox"/> Ahead <input type="checkbox"/> Behind	Funding Sources(s)  FHWA (100%)
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Funds Authorized	Funds Expended		Fiscal Year Funding	
Total	Total, %	Report Period	Authorized	Expended, %
\$57,425 (GT)	\$52,628, 92% (GT)	\$3,360 (GT)		\$3,360, 5.8% (GT)
\$31,575 (GDOT)	\$31,575, 100% (GDOT)	0 (GDOT)		0 (GDOT)

Project Objectives, Status, Progress Report Date October 13, 1988

**PROJECT GOAL:**

To provide local transportation agencies with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center.

**OBJECTIVES:**

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies (both cities and counties) the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries will be provided to the local agencies.

(continued on next page)

STATUS:

Services provided to the local agencies include loaning of traffic data collection equipment, teaching the agency the proper use and installation of the equipment, and the summarizing of data collected. The following agencies utilized the equipment during the report period:

City of Cartersville  
City of Decatur  
Forsyth County  
Peachtree City  
Rockdale County

M. John Moskaluk, Director  
Technology Transfer Center  
Georgia Tech

**GEORGIA TECH  
TECHNOLOGY TRANSFER CENTER**

**DATA COLLECTION EQUIPMENT PROJECT**

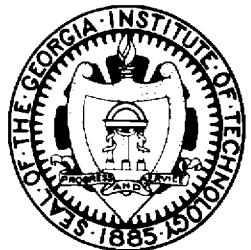
**Prepared By:**

**Georgia Tech  
Technology Transfer Center**

**Submitted To:**

**Federal Highway Administration  
and  
Georgia Department of Transportation**

**GEORGIA INSTITUTE OF TECHNOLOGY**  
A UNIT OF THE UNIVERSITY SYSTEM OF GEORGIA  
**SCHOOL OF CIVIL ENGINEERING**  
**ATLANTA, GEORGIA 30332**



**GEORGIA TECH  
TECHNOLOGY TRANSFER CENTER**

**DATA COLLECTION EQUIPMENT PROJECT**

**Prepared By:**

**Georgia Tech  
Technology Transfer Center**

**Submitted To:**

**Federal Highway Administration  
and  
Georgia Department of Transportation**

**JANUARY, 1989**

## TABLE OF CONTENT

Introduction .....	1
Purpose .....	2
Status .....	2
Problems .....	3
Summary .....	4

APPENDIX A -- Equipment Inventory

APPENDIX B -- Operating Instruction

APPENDIX C -- Sample Output

## INTRODUCTION

In February, 1984, Dr. John Moskaluk, Director of the Georgia Tech Technology Transfer Center initiated a request for support and participation in the Rural Technical Assistance Program (RTAP) project "Traffic Data Collection Equipment." Dr. Moskaluk's proposal included justification for funding up to an amount of \$89,000 for the purchase of twenty-five traffic counters, four collectors, assorted support equipment, and the man-hours to administrate the project.

Dr. Moskaluk's proposal was accepted by the Federal Highway administration in May, 1984 and submitted to the Georgia Department of Transportation. The approximated funding breakdown presented to the Department of Transportation was as follows:

1. Equipment Procurement: \$40,000 (counters, printers, sensors, miscellaneous items, etc.).
2. Training of local agency users: \$10,000.
3. T<sup>2</sup> Center Operating Budget: \$18,500/year for 2 years
4. Workshop Travel Expenses: \$1,000/person for two persons.

The Georgia Department of Transportation authorized funding in August, 1984. The project was originally intended to be of a two year duration, but was subsequently granted a no-cost time extension through December, 1988.

The Control Specialists Company of Orlando, Florida was selected as vendor of the traffic data collection equipment. The equipment was duly ordered and paid for by Georgia DOT, but was not received by the Technology Transfer Center until September, 1985. The Georgia department of transportation purchased the equipment and charged the project because the Georgia DOT had better purchasing power for this equipment.

## PURPOSE

The purpose of the traffic data collection project was to provide local transportation agencies (both cities and counties) with the ability to collect traffic data using data collection equipment borrowed from the Georgia Tech Technology Transfer Center. To assist in achieving this goal, three objectives were established:

- o To assist local agencies in collecting traffic information, namely traffic volumes and speeds.
- o To loan local agencies the necessary traffic data collection equipment.
- o To summarize the traffic data collected by the local agency. No evaluation of the summaries was provided to the local agencies.

Assistance was provided in situations where a defined problem exists and further traffic data was necessary in order to achieve a solution. Also, installation of the equipment was accomplished by the local agency.

## STATUS

At the present time, the Technology Transfer Center has access to twenty-four traffic counters and four retrievers, which are the property of the Georgia Department of Transportation. One of the original twenty-five counters was stolen during July, 1987, while being used by the Traffic Engineering Department of Conyers/Rockdale County and has not been replaced. Of the twenty-four traffic counters, thirteen are currently being used by Fulton County Public Works and four by Peachtree City. Also two of the four collectors are currently in field use, one by Peachtree City and one in Walton County. An inventory of equipment is included in Appendix A.

## PROBLEMS

The equipment and the software accompanying it are products of Streeter-Richardson, Inc. and are very self-explanatory and easy to use. Only minimal instructions are required for a person with no knowledge of the equipment to operate it successfully. A copy of the instructions which are provided for the users in the local agencies is included in Appendix B.

The Streeter-Richardson software which was initially acquired from Control Specialists was found to be slow and cumbersome. Printing the data was a lengthy process, and the format in which it was presented was difficult to interpret.

An updated version of the software was acquired in December, 1986. Data retrieval and printing with the newer software is faster and is presented in concise, tabular form. An example is presented in Appendix C.

As mentioned earlier, one counter was stolen while in use in Rockdale County. The counter was chained and padlocked to a street sign, as is the standard procedure. The vandals/thieves broke the chain and removed the counter. This information was reported to Georgia DOT and a mutual decision of not to purchase replacement equipment was concluded.

## SUMMARY

The data collection equipment has been utilized by seventeen agencies since October, 1985. This includes 38 different loan transactions, with an average of approximately six counters per loan. summary of the transactions is provided in Table 1.

Based on conversation with each of these agencies, it is concluded that the loaning of equipment to local agencies is a worth while endeavor. It is recommended that this equipment continue to be made available to local agencies.

**TABLES 1**

<u>AGENCY</u>	<u>NUMBER OF</u>		<u>DATE</u>	
	<u>RECORDERS</u>	<u>COLLECTORS</u>	<u>TAKEN</u>	<u>RETURNED</u>
Clayton Co.	8	1	10/1/85	10/23/85
Carrollton	8	1	10/22/85	11/27/85
Decatur	2	1	11/6/85	11/27/85
Dalton	7	1	11/12/85	1/10/86
Waycross	5	1	12/11/85	12/20/85
Georgia DOT				
Traffic Safety	4	1	12/85	5/86
Carrollton	4	1	1/10/86	2/14/86
Winder	8	1	2/10/86	5/1/86
Forsyth Co.	4	1	2/19/86	4/7/86
Carroll Co.	4	1	3/5/86	4/7/86
Waycross	12	2	4/22/86	7/9/86
Atlanta	9	1	3/4/86	9/3/86
Decatur	2	1	5/13/86	7/10/86
Rockdale Co.	6	1	9/3/86	11/3/86
Walton Co.	6	2	9/16/86	10/17/86
Decatur	2	1	9/25/86	11/14/86
Dekalb Co.	4	1	10/30/86	12/18/86
Coastal Georgia				
APDC	7	1	11/5/86	1/28/87
Waycross	15	1	1/28/87	5/15/87
Forsyth Co.	10	1	3/24/87	4/28/87
Georgia DOT	9	1	5/1/87	9/21/87
Forsyth Co.	4	1	6/2/87	6/16/87
Rockdale Co.	10	1	6/15/87	9/28/87
Peachtree City	6	1	7/29/87	9/19/87
Decatur	3	1	8/27/87	12/3/87
Fulton Co.	6	1	10/26/87	1/14/88
Fulton Co.	3	1	11/20/87	1/14/88
Fulton Co.	4	1	6/16/87	7/27/87
Decatur	2	1	7/16/87	8/11/87
Decatur	2	1	4/18/88	5/19/88
Cartersville	2	1	6/22/88	8/29/88
Decatur	2	1	7/12/88	7/26/88
Forsyth Co.	4	1	8/22/88	9/6/88
Peachtree City	6	1	9/27/88	11/16/88
Rockdale Co.	8	1	7/1/88	10/4/88
Wayne Sarasua	7	1	11/17/88	12/12/88
Peachtree City	4	1	11/28/88	IN USE
Fulton Co.	13	0	12/1/88	IN USE
Walton Co.	<u>0</u>	<u>1</u>	1/17/89	IN USE
TOTAL				
38 Users	222	40		

## **APPENDIX A**

## EQUIPMENT INVENTORY

### At Georgia Tech's T<sup>2</sup>

#### Seven Counters

# 4569  
# 4450  
# 4517  
# 4459  
# 4329  
# 4452  
# 4802

#### Two Collectors

### Loaned To Fulton County Public Works

#### Thirteen Counters

# 4332  
# 4326  
# 4756  
# 4224  
# 4320  
# 4455  
# 4456  
# 4324  
# 4735  
# 4527  
# 4457  
# 4226  
# 4451

### Loaned To Peachtree City

#### Four Counters

# 4526  
# 4806  
# 4327  
# 4458

#### One Collector

### Loaned To Walton County

#### One Collector

## **APPENDIX B**

TRAFFIC DATA COLLECTION EQUIPMENT FOR CITIES AND COUNTIES  
RURAL TECHNICAL ASSISTANCE PROGRAM -RTAP

INSTRUCTIONS

ON

USE OF DATA COLLECTION EQUIPMENT  
-----

PREPARED

BY

GEORGIA TECH TECHNOLOGY TRANSFER CENTER  
-----

SEPTEMBER 1985

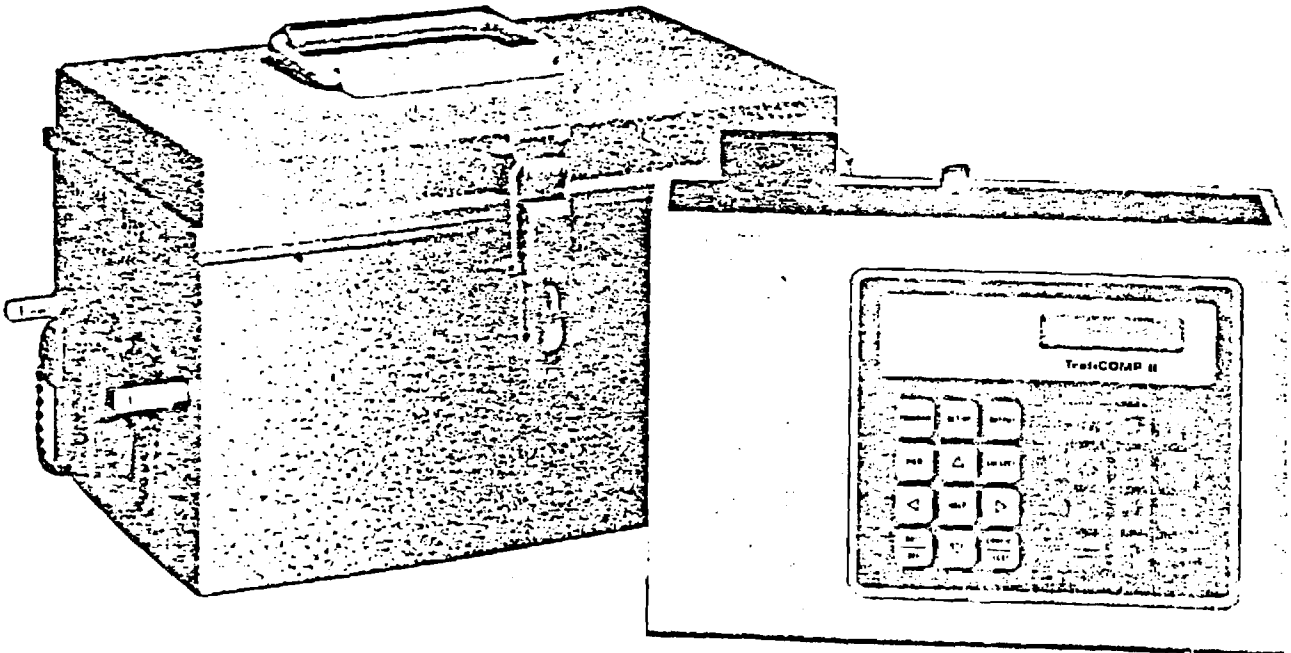
## FUNCTIONS OF THE EQUIPMENT

### Field Recorder:

This unit records traffic measurements by accepting input from up to two road tubes. A road tube is a hose that is closed on one end, with the other end connected to an air switch in the field recorder. After appropriate programming from the data collector unit, the recorder senses changes in air pressure in the road tube(s) to perform any of the traffic measurements.

### Data Collector:

The data collector is used to program and set up the recorder for any desired traffic measurement, and to retrieve the data from the recorder after the data had been recorded. In addition, the collector allows the user to view the data during the recording period or after retrieving the data from the recorder.



FIELD RECORDER

DATA COLLECTOR

## GETTING STARTED

Data collection is preceded by the following steps:

- 1 - Select locations for data collection.
- 2 - Determine the types of measurements needed at each location.
- 3 - Determine the Number of recorders and the amount of road tubes needed to perform the above measurements.
- 4 - Make a schedule for data collection and assign numbers to the sites (locations).
- 5 - Draw a map of the study area and specify data collection locations, site numbers, types, and schedule.

When a schedule for data collection is ready, and before leaving the office to set up the recorders at the selected locations, make sure you have the following:

- Reflective vest(s)
- Hammer
- Knife
- Crow bar
- 12-foot tape
- Screwdriver
- Nails
- Clamps
- Rope

## INSTALLATION

- 1 - Install the road tubes according to instructions for the type measurement needed.
- 2 - Switch the field recorder on and connect to road tube(s).
- 3 - Connect the field recorder to the data collector.
- 4 - Turn the data collector on.

---

## MEASUREMENTS

TRAFFIC VOLUME  
VEHICLE VELOCITY  
VEHICLE TYPE  
DIRECTIONAL VOLUME

## PROGRAMMING THE RECORDER

The data collector must be connected to the field recorder.

- 1 - Press the PROGRAM key
- 2 - Select the desired program by pressing the  $\triangle$  and  $\nabla$  keys to locate the appropriate measurement.
- 3 - Press the ENTER key - Now the selected program is being loaded into the recorder.
- 4 - Wait for the initial message to reappear.

Note: If a recorder has already been programmed for the desired measurement, it is not necessary to reprogram. A recorder can be programmed for only one measurement at a time.

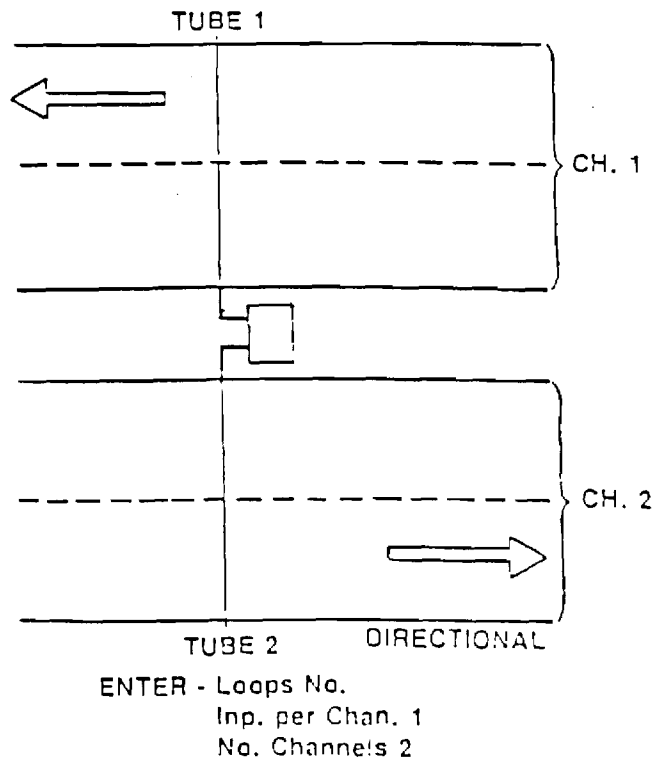
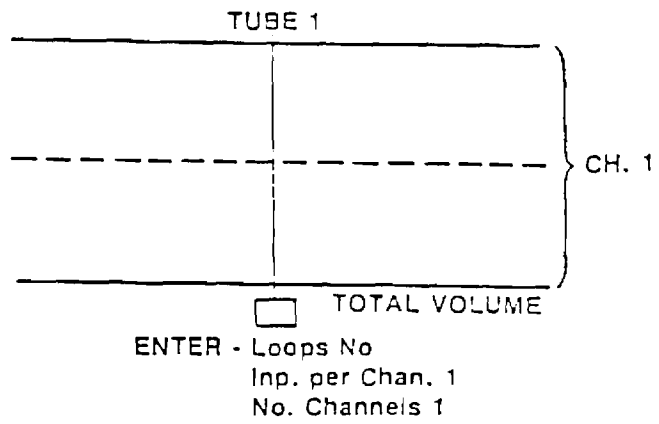
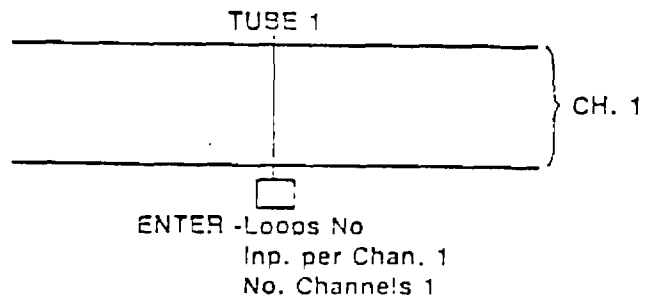
## TRAFFIC VOLUME

This program counts the number of vehicles that pass over the road tube during a given interval. Volume data may be obtained for a single traffic lane or for multiple lanes.

### Procedure:

- 1 - Program the recorder for VOLUME if it is not programmed for that type measurement.
- 2 - Press the SET UP key.
- 3 - Assign a station number and press ENTER. The station number should be between 0 and 4095.
- 4 - Assign an I.D. number and press ENTER. The I.D. number should also be between 0 and 4095.
- 5 - Select counting intervals (15-minute intervals are recommended) and press ENTER.
- 6 - Answer NO to "Loops" and press ENTER.
- 7 - Select the number of inputs per channel and the number of channels according to the specific configuration - Check the figures on the next page for the desired configuration. Press ENTER after each selection.
- 8 - Answer NO to "Save Setup" and press ENTER.
- 9 - Answer YES to "Clear 141 Data" and press ENTER.

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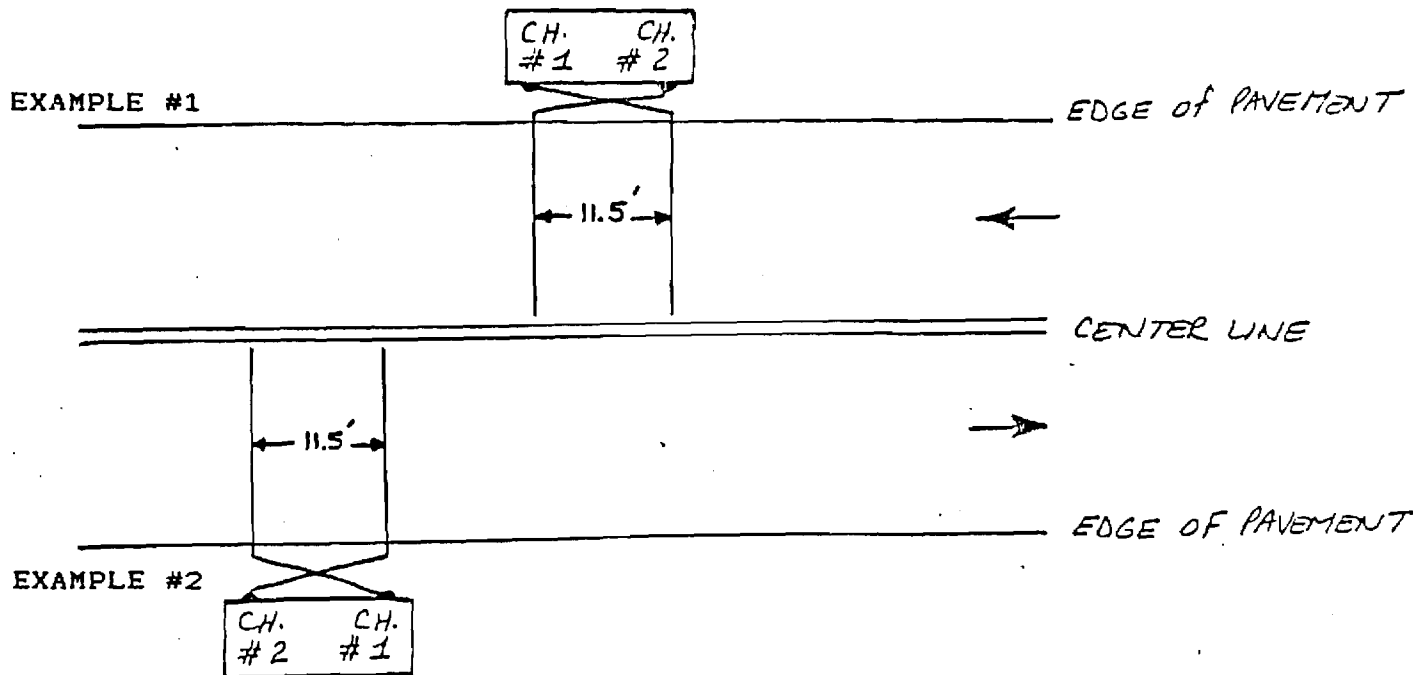


## VEHICLE VELOCITY

This program uses two road tubes to measure vehicle velocity in one lane. The tubes should be 11.5 feet apart and the tube connected to channel 1 should be the one that the vehicles pass over first.

### Procedure:

- 1 - Program the recorder for TUBE VELOCITY if it is not programmed for this type measurement.
- 2 - Press the SET UP key.
- 3 - Assign a station number and press ENTER. The station number should be between 0 and 4095.
- 4 - Assign an I.D. number and press ENTER. The I.D. number should also be between 0 and 4095.
- 5 - Select the measurement intervals (An interval of 15 minutes is recommended) and press ENTER.
- 6 - Select the number of bins (speed categories) desired. The maximum number of bins is 12. Press ENTER key.
- 7 - Assign the lower limits for the speed categories to be used. Press the ENTER key after assigning each of the lower limits.
- 8 - Enter the spacing of the road tubes. A spacing of 11.5 ft (138 inches) is recommended. Make sure that the spacing entered here is the actual spacing of the tubes on the road. Press ENTER key.
- 9 - Answer NO to "Save Setup" and press ENTER.
- 10- Answer YES to "clear 141 Data" and press ENTER.



Note: During the VIEW mode, it is possible to calibrate the vehicle velocity shown on the data collector display with the actual velocity of that vehicle if it is known. First press ENTER when you are in the VIEW mode and then answer YES for "Calibrate" and press ENTER again. If there is a difference between the actual and displayed velocities, the actual velocity is entered via the keyboard and the displayed number of inches that the tubes are apart will be changed automatically by the collector.

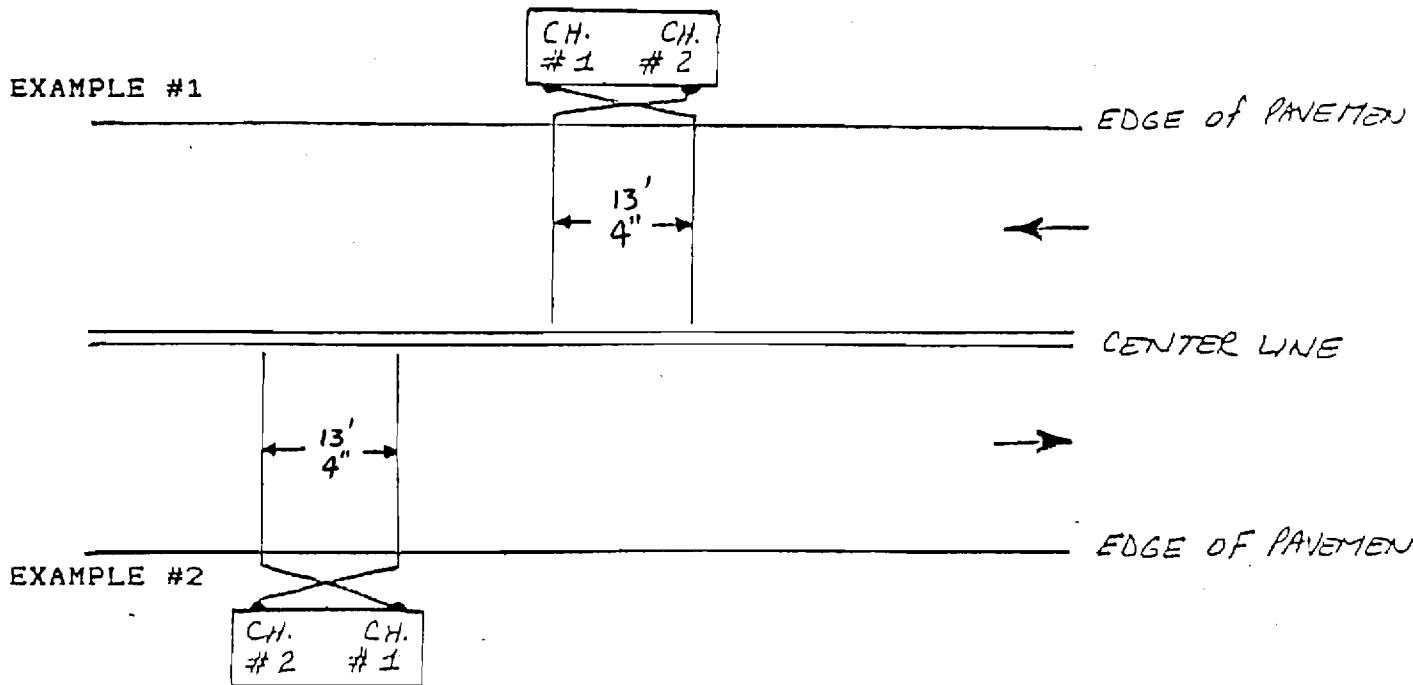
-----

## VEHICLE TYPE

This program uses two road tubes, spaced 13 feet 4 inches apart, to classify vehicles in one lane. Vehicles are classified into 14 categories. The tube connected to channel one should be the tube to be passed over first by the moving vehicles.

### Procedure:

- 1 - Program the recorder for VEHICLE TYPE if it is not programmed for that type measurement.
- 2 - Press the SET UP key.
- 3 - Assign a station number and press ENTER. The station number should be between 0 and 4095.
- 4 - Assign an I.D. number and press ENTER. The I.D. number should also be between 0 and 4095.
- 5 - Select the measurement intervals (intervals of 15 minutes are recommended) and press ENTER.
- 6 - Answer NO to "Save Set up" and press ENTER.
- 7 - Answer YES to "Clear 141 Data" and press ENTER.



## VIEWING THE DATA

After setting up the recorder and the road tubes, you may want to verify that the road tubes, recorder, and data collector are interconnected correctly and are functioning properly. To accomplish this, do the following:

- 1 - With the collector connected to the recorder, press the VIEW key.
- 2 - Depending on what kind of measurements we are taking, the data will be displayed and modified as more data is collected.

---

## COLLECTING THE DATA

Connect the recorder to the collector and press the COLLECT key and the ENTER key. The data will be collected and placed on a new file in the collector. It is necessary to collect the data after each measurement.

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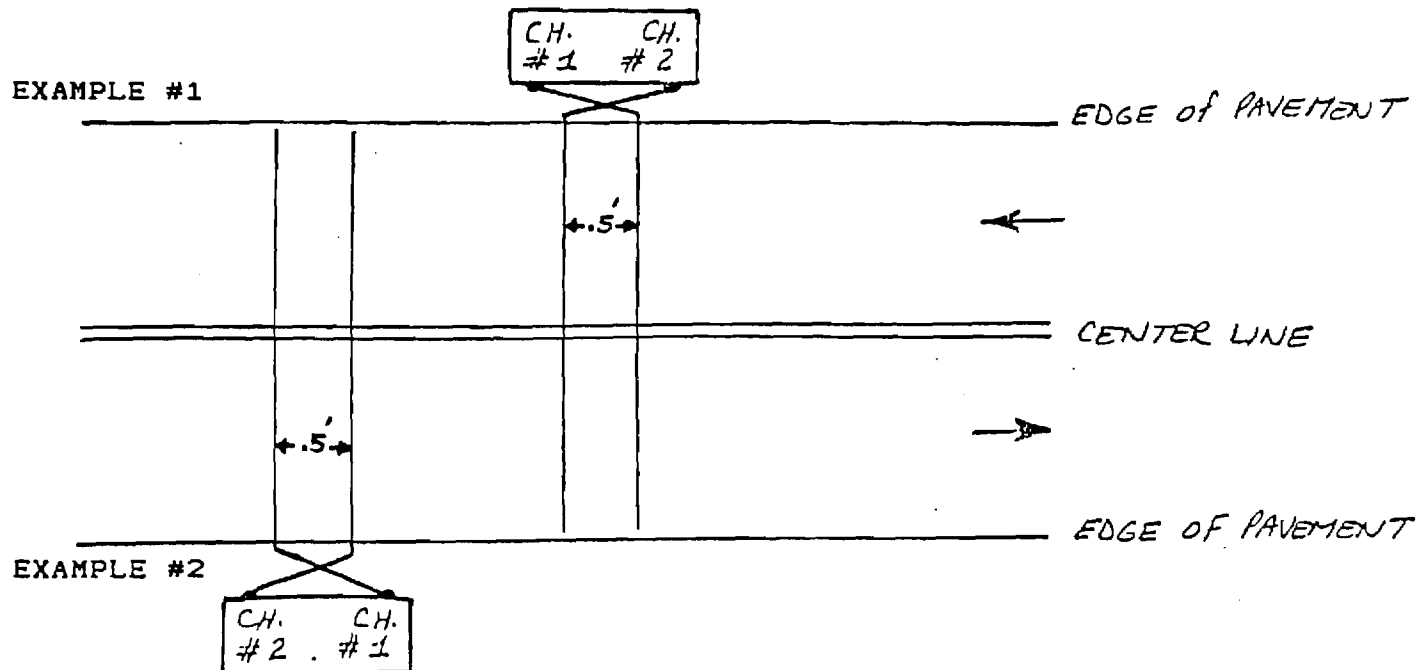
## DIRECTIONAL VOLUME

The directional volume program records traffic volume in two lanes. Two road tubes are used for this type measurement. The tubes should be placed across both lanes and should be 6 inches apart.

### Procedure:

- 1 - Program the recorder for DIRECTIONAL VOLUME if it is not programmed for this type measurement.
- 2 - Press SET UP key.
- 3 - Assign a station number and press ENTER. The station number should be between 0 and 4095.
- 4 - Assign an I.D. number and press ENTER. The I.D. number should also be between 0 and 4095.
- 5 - Select the measurement intervals (intervals of 15 minutes are recommended) and press ENTER.
- 6 - Answer NO to "Save Setup" and press ENTER.
- 7 - Answer YES to "Clear 141 Data" and press ENTER.

Note: Channel #1 in the recorder corresponds to Lane #1 and Channel #2 corresponds to Lane #2.



DATA COLLECTION INFORMATION SHEET

AGENCY NAME \_\_\_\_\_ OPERATOR \_\_\_\_\_

TELEPHONE \_\_\_\_\_

WEATHER \_\_\_\_\_ PAVEMENT: DRY \_\_\_ WET \_\_\_

TIME OF INSTALLATION \_\_\_\_\_ DATE \_\_\_\_\_

STATION \_\_\_\_\_ I.D. \_\_\_\_\_ FILE # \_\_\_\_\_

STREET NAME \_\_\_\_\_

DISTANCE FROM NEAREST INTERSECTION \_\_\_\_\_

TYPE DATA COLLECTION: TRAFFIC VOLUME \_\_\_ VEHICLE VELOCITY \_\_\_

VEHICLE TYPE --- DIRECTIONAL VOLUME ---

DIRECTION OF TRAFFIC:

CHANNEL #1 \_\_\_\_\_

CHANNEL #2 \_\_\_\_\_

DIAGRAM OF INSTALLATION  
-----

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Measurement  
Systems Division



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## TRAFICOMP II

The TraficOMP II Portable Traffic Counting and Classification System provides the most flexible roadside data collection system today.

This system consists of two main units, Field Recorders and Data Collectors:

The Field Recorders are available with roadtube only or loop and roadtube inputs. Functionally versatile, they can perform volume and various classification functions in the same unit.

The lightweight Data Collector is a "user friendly" device which prompts the operator through each operation. The Data Collector contains many resident programs which it transmits to the field station:

- Volume
- Velocity classification
- Vehicle type classification
- Vehicle length classification
- Headway/Gap
- Lane logic

These programs are user format selectable for items such as traffic configuration and speed categories.

The Data Collector stores 32K Bytes of collected data in internal memory. Adding the optional 32K Data Module provides additional memory, allowing the operator to collect data from a large number of stations before returning to the office.

The TraficOMP System will interface with many printers and computers. The operator selects the "raw data" or processed data format for output at user selected baud rate. The processed data includes various percentile analysis, averages, and/or peak hour indication as appropriate for each type of program.

A truly state of the art system, TraficOMP II can monitor, collect and analyze varied traffic data without a separate computer!

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Measurement  
Systems Division



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## TrafiCOMP II

### MODEL 240 DATA COLLECTOR GENERAL SPECIFICATION

Size - 3" W x 11" D x 7-3/4" H  
(7.6 cm x 27.9 cm x 18.7 cm)

Weight - 9 lbs. including battery

Housing Type - Compact, portable, weather resistant metal cabinet. Comes complete with handy carrying case with shoulder strap.

Functions -  
a) Set up and program Model 141 recorders for various data collection functions.  
b) Collects data stored in recorders  
c) Outputs to a printer or computer  
d) Tests display, batteries and memory

Display - 32 character alpha numeric display identifying current traffic count, vehicle velocity, etc. as well as information contained in recorder unit for Station No., Ident., Time and Date.

Controls - 28 key moistureproof keypad

Power Source -  
a) 6 volt rechargeable lead gel battery  
b) 115 or 230 VAC 50/60 Hz wall charger to automatically charge batteries.  
c) Cigarette lighter charger cable (optional)

Output - Formatted ASCII output via an RS232C interface, user programmable baud rate.

Connector -  
a) 25 pin D output connector for printer or computer  
b) 9 pin D connector for charger and 141 recorder

Basic Electronics - Quality fiberglass printed circuit board construction, secured with removable fasteners. Designed to take rugged field service.

110 VAX, 50/60 Hz  
240 VAC, 50/60 Hz

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Systems Division



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## TrafiCOMP II

### ACCESSORIES

#### DESCRIPTION

Model TTY 43 KSR printer (friction feed)	2139302
Model TTY 43 KSR printer (pin feed)	2139301
Model TTY 43 RO printer (friction feed)	2139310
Model TTY 43 RO printer (pin feed)	2139309
Model Epson MX 80 dot matrix printer (sprocket drive)	2204551/2204554
Model Epson MX 80 dot matrix printer (sprocket/friction drive)	2204552/2204554
Model TTY 43 paper roll (friction drive)	2203741
Originate/auto answer modem	2058641
Acoustic coupler	2058544
Data Module (additional 32K data storage)	

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TrafiCOMP - continued

TURNING MOVEMENT CLASSIFIER (MODEL 520)

Optional manual turning movement classifier gives the Model 141 recorder the capability of recording data for intersection studies. This accessory may be installed on any Model 141 recorder, which requires customer to modify cabinet and install accessory.

Accessory Includes:

- Turning movement classifier (hand held)
- Internal interface cable
- Mounting hardware
- Appropriate program (2136980)
- Installation instructions (1050210)

P/N 0205549

VEHICLE CLASSIFIER (MODEL 521)

Optional manual twelve (12) category vehicle classifier gives the Model 141 recorder the capability of being used as a manual vehicle classifier. This accessory may be installed on any Model 141 recorder, which requires customer to modify cabinet and install accessory.

Accessory Includes:

- Vehicle classifier (hand held)
- Internal interface cable
- Mounting hardware
- Appropriate program (2136990)
- Installation instructions (1050211)

P/N 0205550

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## TrafiCOMP - continued

### MODEL 141A/2 TrafiCOMP RECORDER

- Heavy duty weather tight housing
- Two (2) air switch input
- 3K ram standard
- Volume program standard in prom
- Two (2) dry cell batteries (rechargeable batteries optional)
- Security lock
- This model for two (2) lane or directional volume counting or  
one (1) lane velocity classification or  
one (1) lane vehicle type classification

P/N 0205596

### MODEL 141A/4 TrafiCOMP RECORDER

- Heavy duty weather tight housing
- Two (2) dual 750PB detector input
- Two (2) air switch input
- 3K ram standard
- Volume program standard in prom
- Two (2) dry cell batteries (rechargeable batteries optional)
- Security lock
- This model for four (4) lane volume counting or  
two (2) lanes or two (2) directions velocity classification or  
two (2) lanes length classification or  
one (1) lane vehicle type classification

P/N 0205598

### ACCESSORIES

<u>DESCRIPTION</u>	<u>PART NO.</u>
Dry cell battery kit (standard)	0205595
Lead gel batteries (optional)	0205597
Lead gel trickle charger kit (110 VAC)	0205615
Lead gel trickle charger kit (240 VAC)	0205616
Dual 750PB detector assembly	0205582
Electronic air switch (replacement)	0205230
6V dry cell battery (replacement)	2045270
6V lead gel battery (replacement)	2058419

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TrafiCOMP - continued

## MODEL 141A TrafiCOMP RECORDER GENERAL SPECIFICATION

Size - 8-1/4"H x 8-1/2"D x 13"W (21.0 cm x 21.6 cm x 33.0 cm)

Weight - 18 lbs. (8.2 Kg) including batteries and detectors

Housing Type - Compact, portable, weatherproof metal cabinet with carrying handle and lock hasp. Full length hinge and gaskets

Functions - Volume counting, velocity classification, length classification, vehicle type classification, multi-directional or multi-lane

Power Source - a) 2-6 volt dry cell batteries;  
b) 2-6 volt 4 amp hr. rechargeable lead gel batteries (optional)

Temperature Range - -40°F to 158°F (-40°C to 70°C)

Recording Intervals - Available: 1, 2, 3, 4, 5, 6, 10, 15, 20, 30, or 60 minute periods

Maximum Count Rate - 20 vehicles per second; 4095 vehicles per recording period

Memory Storage (Data) - Up to 2500 maximum recording periods

Maximum Vehicles Per Counting Period - 4095 per lane

Power Consumption - 1.6 ma for two roadtube applications; road loop 2 ma per loop-application may vary. Dry cell batteries will yield approximately 200 days of operation for roadtube applications

Recorder Connections - a) 10 pin female MS connector for reader cable;  
b) 10 pin male MS connector for road loop inputs; (loop detection models)  
c) 2 air switch tubes for roadtube (roadtube models)

Vehicle Detection - Up to two air switches for roadtubes  
Up to four internal loop detectors (Model 750P)  
Up to eight external loop detectors (special order)

Controls and Displays - Loop detector adjustment and LED indicator (if used)

Basic Electronics - CMOS - Microprocessor based. Modular plug-in boards to allow for field service and optional functions

**StreeterAmet**

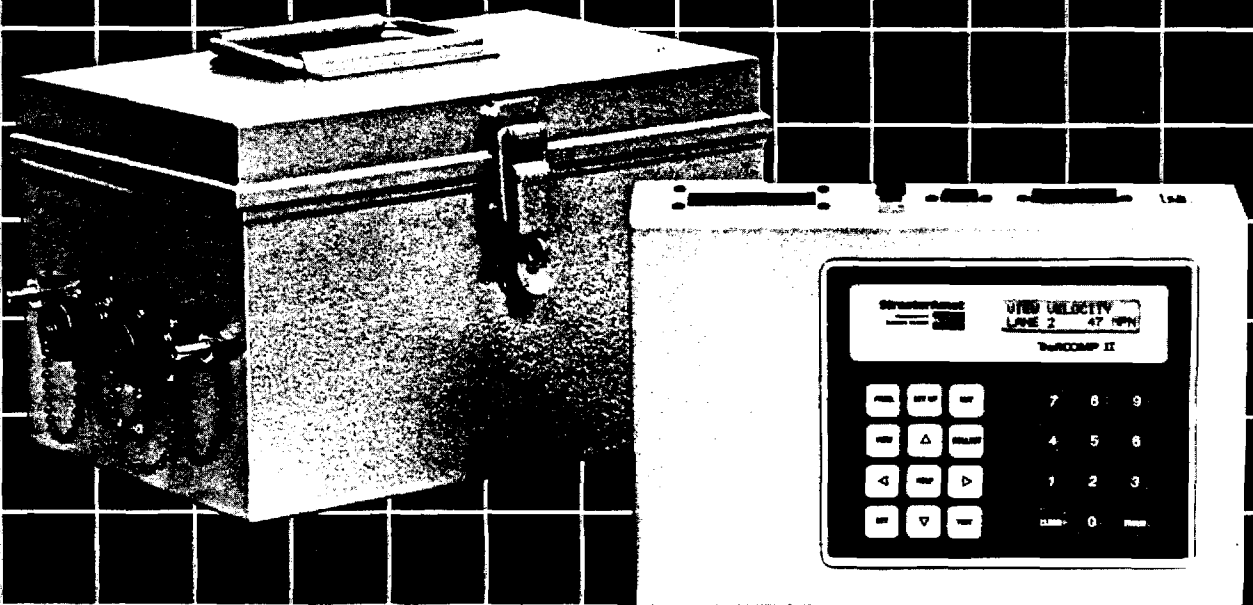
Measurement  
Systems Division

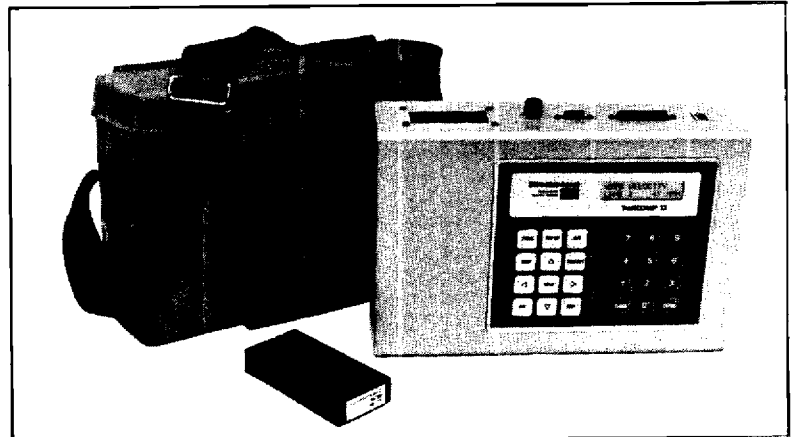
**The  
Mangoood  
Group**

# TrafiCOMP<sup>®</sup> II

## Portable Traffic Counting & Classification System

**Traffic Volume & Classification • Special Collection Programs**





The Traficom II Data Collector features a handy carrying case and optional data modules for additional storage.

(Photo at left)  
Lightweight and versatile, the Traficom II system was designed for ease of use.

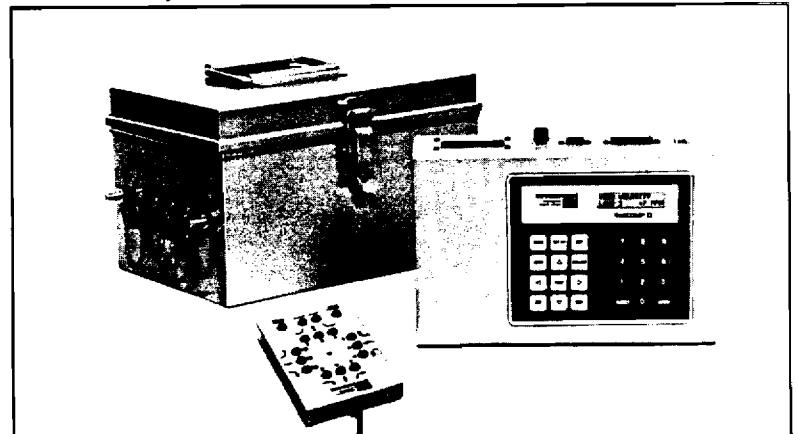
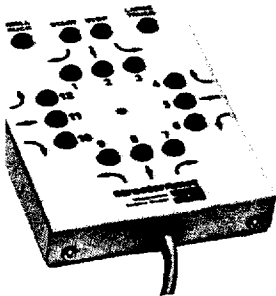
The Model 520 turning movement accessory provides additional flexibility for the Traficom system.

## MODEL 520 & 521

Traficom Turning Movement  
& Vehicle Classification Accessories

### Model 520

This accessory consists of a handheld keyboard featuring easy data entry. The program records the data into 12 directional categories for intersection classification. In addition, it separates these categories into three types such as cars, small trucks, and large trucks. (See sample printout)



### Model 521

The Model 521 Vehicle Classifier gives Traficom the additional flexibility of being used as a manual vehicle classifier. The handheld keyboard is similar to the Model 520. This accessory may be used with any Model 141 Field Recorder.

Sample Printout of Turning Movement Program

		STATION 120			IDENT 1020	PROC 1001	INTRVL 60 MINUTES	12 directional categories							
		SETUP DATE 1125			RETRIEVAL DATE 1125		SETUP TIME 1201	RETRIEVAL TIME 1505							
	HOUR	CHANNEL	1	2	3	4	5	6	7	8	9	10	11	12	13
car													11	12	13
small truck													23	14	139
large truck													8	6	79
													7	6	49
													38	26	267
hour	13		22	16	13								23	6	167
													2	2	48
													6	2	30
													31	10	245
													68	7	200
													4	0	26

total for each vehicle type  
hour totals all categories

## **APPENDIX C**

RT Dir Volume Program with 24 Hour Totals

\*\*\*\*\*  
 Data File : 022388 .TRF Position : 2  
 Station : 806 Ident : 806  
 Start Date : Feb 18 ,1988 End Date : Feb 19 ,1988  
 Start Time : 13:30 End Time : 13:30  
 Location : Sample print out  
 \*\*\*\*\*

Feb 18/Feb 19 \*\* Lane 1 \*\*

Begin	00	01	02	03	04	05	06	07	08	09	10	11
00	2	1	0	1	0	0	0	0	11	13	11	8
15	2	0	0	1	0	0	2	3	16	11	10	8
30	3	1	1	1	0	0	0	5	10	15	11	4
45	3	1	0	1	0	1	2	10	9	20	11	14
Hr Total	10	3	1	4	0	1	4	18	46	59	43	34

Begin	12	13	14	15	16	17	18	19	20	21	22	23
00	9	8	9	11	4	4	5	4	3	3	6	6
15	5	8	10	5	5	8	3	1	2	5	0	1
30	10	16	9	6	6	9	7	3	1	1	5	2
45	6	10	10	9	6	3	9	12	2	2	2	2
Hr Total	30	42	38	31	21	24	24	20	8	11	13	11

Total volume : 496  
 \*\*\*\*\*

Feb 18/Feb 19 \*\* Lane 2 \*\*

Begin	00	01	02	03	04	05	06	07	08	09	10	11
00	2	2	2	1	0	2	0	0	3	2	0	1
15	0	2	0	0	0	0	0	2	2	1	4	5
30	6	1	2	0	0	0	0	0	3	1	1	2
45	0	1	1	1	0	0	0	0	0	0	1	8
Hr Total	8	6	5	2	0	2	0	2	8	4	6	16

Begin	12	13	14	15	16	17	18	19	20	21	22	23
00	5	9	1	8	4	4	8	10	6	5	3	0
15	4	4	5	3	8	9	3	2	6	5	1	0
30	3	8	5	2	14	3	2	8	4	4	6	1
45	2	6	5	8	8	13	6	6	5	3	3	2
Hr Total	14	27	16	21	34	29	19	26	21	17	13	3

Total volume : 299  
 \*\*\*\*\*

