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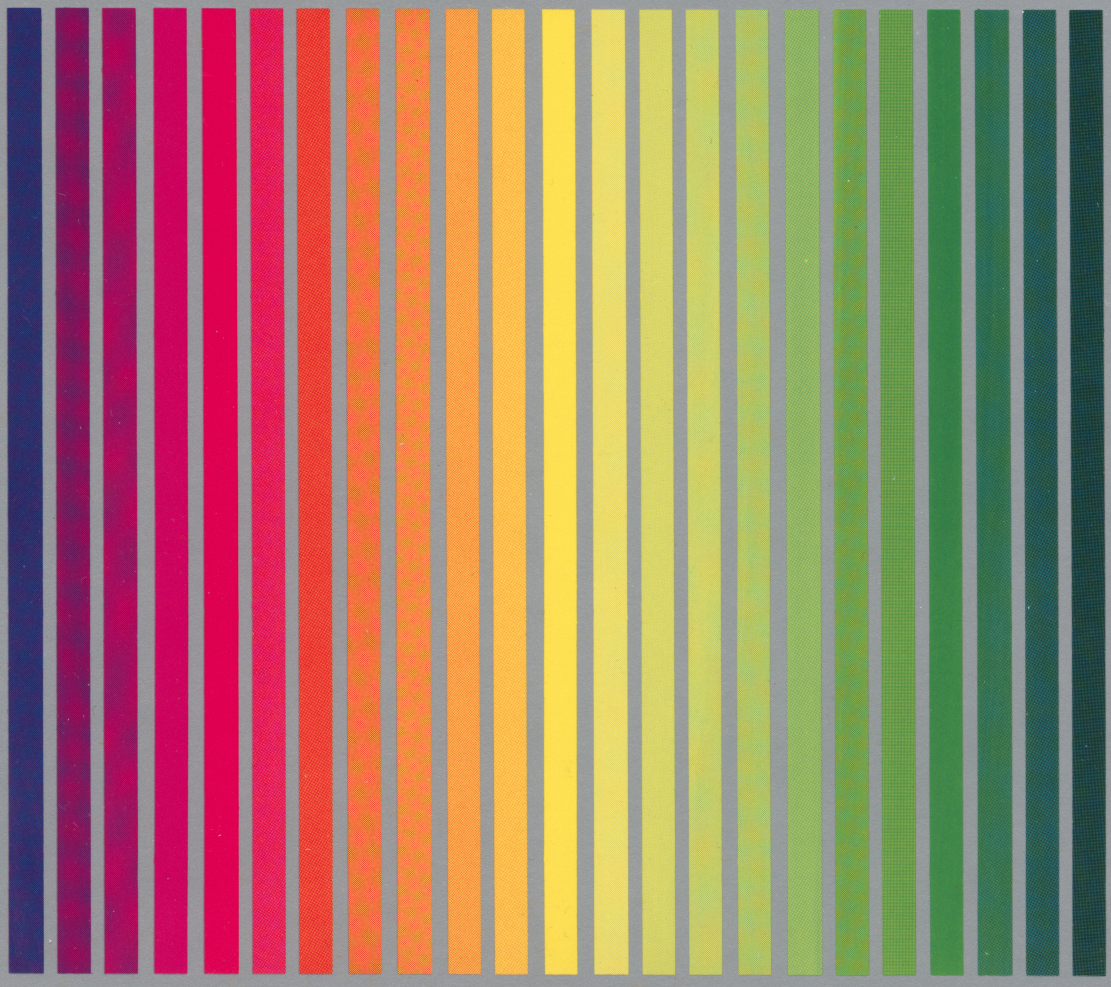

John R. Powers, III

NEWSPAPER ROUTE MANAGEMENT PROGRAM

APX-20013

User-Written Software for ATARI Home Computers

John R. Powers, III

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by

John R. Powers, III

USER INSTRUCTIONS

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INTRODUCTION

OVERVIEW

The NEWSPAPER ROUTE MANAGEMENT PROGRAM helps you manage a newspaper route by simplifying your record-keeping chores. It supports daily and Sunday routes of as many as 100 subscriptions. You can enter, update, and delete customers' addresses and class of service to reflect subscription changes, and you can keep track of your customers on a computer-displayed map. You use a joystick controller to position houses on the map and to update it when necessary. In addition, you can create and display several kinds of customer lists. If you have an ATARI 825(TM) Printer (or an equivalent printer) attached, you can print these lists, as well as payment collection lists and customer receipts.

To use this program, first you modify two associated programs, one to define the coordinates of your streets for your route's map and one to define your street names. These programs, in turn, create two data files that the main program uses to plot your streets on the map and to recall your street names for the other activities. When you use the main program, you choose activities by specifying menu selections. The Main Menu has five selections:

(1) Displaying various maps
(2) Adding, updating, and removing customer records and house markers on the map
(3) Printing a customer collection list and separate receipts for each customer
(4) Printing or displaying various summary lists alphabetized by street
(5) Saving map and customer record changes you make

Each activity has subactivities, also chosen via menu selections.

REQUIRED ACCESSORIES

40K RAM for 810 diskette
ATARI BASIC Language Cartridge
ATARI 810 Disk Drive
ATARI Joystick Controller

OPTIONAL ACCESSORIES

ATARI 825 Printer or equivalent printer

NEWSPAPER DELIVERY TERMS

The terms "START" and "ACTIVE" both refer to a customer who currently receives the paper and the term "STOP" refers to a customer who is on vacation or has temporarily suspended service.

USING THIS PROGRAM

Most of this program uses a series of menus and prompts to guide you through the various activities. In these cases, you enter your desired selection number or other valid response and

then press the RETURN key. In most cases, you can press RETURN alone to return to the next higher menu level. The two exceptions to this procedure are using the joystick controller to do map updating and entering BASIC program statements to set up your street names and map lines using the two auxiliary programs.

GETTING STARTED

PRELIMINARY STEPS

Before looking more closely at the various activities you can do with this program, let's discuss briefly the sequence of steps you go through to set up your data files.

The first step is to modify the two auxiliary programs--one defines your street coordinates for the map displays and the other establishes the street names. You modify these programs by replacing their DATA statements with your own DATA statements. The section titled "USING THE AUXILIARY PROGRAMS" shows you how to do this. If the instructions assume some programming experience that you don't have, try asking someone who has done BASIC coding. However, the modifications are fairly simple and you might find you can do them yourself, even if you haven't done BASIC coding before now. Try it!

After completing these modifications, you're ready to create your customer records, which you do in the main program. The data file contains eight sample customer records to let you try for yourself the examples used in this manual. Be sure to erase these sample records after you add your own. You want to add yours first and then remove these samples because the data file must always contain at least one customer record. The section called "Adding New Customer Records" explains how to use Menu Selection 2 to create your records and remove the samples.

Besides creating your customer records, you'll want to plot each customer's house on the map. The section called "Updating the Map" explains how to access the map and use your joystick controller to position each house marker.

After you're satisfied that your customer records and map markers are correct, the last step is to store all this information on the diskette. Use Selection 5 to save your data.

That's all there is to it! As you read through this manual, refer to this sequence of steps occasionally to help you keep track of the purpose of each activity. If you need to add or remove streets and street names from your file, follow these same steps.

SETTING UP

1. Insert the ATARI BASIC Language Cartridge in the (Left Cartridge) slot of your computer.

2. If you plan to modify house markers on the map, plug your joystick controller into the controller jack of your computer console.

3. Turn on your disk drive (use disk drive one if you have more than one drive) and insert the NEWSPAPER ROUTE MANAGEMENT PROGRAM diskette.

4. Power up your computer and turn on your video screen.

5. To run the main program, at the READY prompt, type RUN "D:PAPER.APX" and press RETURN. The program will load into RAM and start. You'll see the COPYRIGHT 1981 ATARI notice.

After the copyright notice, the following information displays (the underscore "_" represents the solid cursor showing your position on the video screen):

```
FILE: PAPER31.LST
DATE: 3/27/81

PREPARING MAP DATA
15 MAP ELEMENTS
PREPARING STREETS
6 STREET NAMES

PREPARING HOUSE DATA
FROM FILE 'D:ROUTE3.DAT'

8 HOUSES SAVED ON 04/01/81
8 HOUSES FETCHED

      ACTIVE HOUSES . . . . . .   8
         SUNDAY ONLY . . . . 1
         DAILY ONLY. . . . . 1
         SUN + DAILY . . . . 6
      STOPS . . . . . .   0

TODAY'S DATE (MM/DD/YY) ? _
```

Figure 1. First Screen Display

After you enter the date and press **RETURN**, you'll see the Main Menu display.

MENU SELECTIONS

INTRODUCTION

The Main Menu looks like this:

```
                    THE PAPER ROUTE PROGRAM

                    Especially Written for

                      Rob, Matt, and Jay

                          SELECT ONE

                1. Display Map

                2. Starts/Stops

                3. Collections

                4. Print House List

                5. Save Data

?_
```

Figure 2. Main Menu

Choose a selection by entering its number. Each selection (except SAVE DATA) has several subchoices. After you enter your main selection number, that selection's submenu displays, and again you specify the number of your desired choice. Some main selections have more than one level of submenu or data display, as you'll see when you read through this manual.

SELECTION 1--DISPLAY MAP

Use this selection to look at maps of the houses on your route. By way of the STARTS/STOPS selection, you will already have placed small square markers on these maps to represent each customer's house. When you first select DISPLAY MAP, an empty street map displays in the graphics area of your video screen. The text window displays the Selection 1 Submenu:

```
SELECT
   1. ACTIVE HOUSES
   2. STOPS
   3. BOTH  ?_
```

Figure 3. Selection 1 Submenu

Enter 1 to display a map with house markers for only your active customers. Enter 2 to display one with markers for only your inactive customers. Enter 3 to display a map with markers for all your customers. In each case, the specified set of markers displays on the map, and the text window then displays these choices:

```
SELECT
  1. AGAIN WITH CLEAR
  2. AGAIN W/O CLEAR
  3. RETURN TO MENU ?_
```

Figure 4. Selection 1 Map Display Prompt

Enter 1 to redisplay the empty map and return to the Submenu. Enter 2 to redisplay your specified markers on the map, but return to the Submenu. Enter 3 to erase the map and return to the Main Menu.

SELECTION 2--STARTS/STOPS

Use this selection to add, update, and remove customer records and house markers for the maps. First let's look at the progression through menus and prompts, from top to bottom. Then we'll discuss the paths to follow for different activities. The Selection 2 Submenu looks like this (the street names come from one of the auxiliary programs you run when you set up your route):

```
                    STREET INDEX

1 Kennedy Drive     4 Semel Way
2 Quail Drive       5 Serpa Drive
3 Santos Court      6 Simas Drive

STREET INDEX
RETURN FOR MAIN MENU ?_
```

Figure 5. Selection 2 Submenu -- STREET INDEX

Press RETURN to return to the Main Menu. Enter a number for one of the streets (e.g., 1 for Kennedy Drive), to get the prompt for a house number:

```
HOUSE NUMBER FOR Kennedy Drive
RETURN FOR HOUSE INDEX ?_
```

Figure 6. Selection 2 -- HOUSE NUMBER/HOUSE INDEX Prompt

To recall all your customers on your specified street, press RETURN and you'll get a list of house numbers. In our example, pressing RETURN results in this display:

```
SEARCHING Kennedy Drive

479
491
0000

HOUSE NUMBER FOR Kennedy Drive
RETURN FOR STREET INDEX ?_
```

Figure 7. Selection 2 -- HOUSE NUMBER/STREET INDEX Prompt

If you change your mind about adding or modifying a customer record on this street, press RETURN to return to the Submenu. If you enter a new house number in response to this prompt (e.g., 485), you'll get this CLASS OF SERVICE prompt:

```
ENTER 0=NO CHANGE
      1=SUNDAY ONLY
      6=DAILY ONLY
      7=SUNDAY + DAILY
```

Figure 8. Selection 2 -- CLASS OF SERVICE Prompt

Enter 0 (or simply press RETURN) to cancel your new record activity and to return to the Submenu. Enter 1 for a customer subscribing to only the Sunday edition. Enter 6 for a customer subscribing to only the daily edition. Enter 7 for a customer with a full subscription. For example, if we add a record for 485 Kennedy Drive for a customer who wants a full subscription, we would enter 7 in response to this display. Once you enter the appropriate subscription number (and press RETURN, of course), you see a record display like the following:

```
FOR 485 Kennedy Drive
STATUS . . . .1 (ACTIVE)
DELIVERY . . .7 (SUN + DAILY)
INDEX. . . . .2 OF 9
MAP COORD. . .0,0

    ENTER 0. NO CHANGE
          1. START
          2. STOP
          3. CHANGE DAYS
          4. DELETE
          5. MAP W/O HOUSES
          6. MAP WITH HOUSES
```

Figure 9. Selection 2 -- CUSTOMER RECORD Prompt

This is also the information prompted immediately (i.e., without the intervening CLASS OF SERVICE display) if you enter an existing house number in response to either HOUSE NUMBER prompt. This is the deepest menu level within Selection 2 and the point at which you do most of your customer record and map updating.

The CUSTOMER RECORD shows whether the customer's subscription status is ACTIVE (1) or STOPPED (0), the class of service (DELIVERY), the record number within your overall file (INDEX), and the coordinates of the record's corresponding house marker on your route map. Because this is a new record, we haven't yet put its house marker on the map and so the coordinates are 0,0. Below this customer information are seven activity choices for updating this record. To select an activity, enter its corresponding number. (You'll also need to save all updates before you end your session by using Selection 5--SAVE DATA. See the discussion about Selection 5 for more information.) A brief explanation of these choices follows.

0. NO CHANGE
   Enter 0 when the information displayed is correct. You'll return automatically to the Submenu.

1. START

Enter 1 to change the subscription status from STOPPED to ACTIVE. This causes the CLASS OF SERVICE prompt to display (see Figure 8) and you may enter a new status code at this time if you need to. An updated version of the CUSTOMER RECORD (Figure 9) then displays and you can do further updating or you can enter 0 to complete the activity on this record.

2. STOP

Enter 2 to change the Subscription Status from ACTIVE to STOPPED. An updated version of the CUSTOMER RECORD then displays and you can do further updating or you can enter 0 to complete the activity on this record.

3. CHANGE DAYS

Enter 3 to change the class of service code. This causes the CLASS OF SERVICE prompt to display and you can enter the new code. (WARNING: Entering a 1, 6, or 7 in response to the CLASS OF SERVICE prompt automatically causes the Subscription Status to revert to ACTIVE.) An updated version of the CUSTOMER RECORD then displays and you can do further updating or you can enter 0 to complete the activity on this record.

4. DELETE

Enter 4 to remove a customer record from your data file. The program asks you to verify that you really want to erase this record by requiring you to respond to the prompt:

CONFIRM TO DELETE (Y OR N)? _

Enter Y to erase the record, N to keep it. You then return automatically to the Selection 2 Submenu. Remember to use Selection 5 to remove these records from your data file on diskette.

5. MAP W/O HOUSES

Enter 5 to display your route map of streets with a house marker for your specified house only. Once you enter either 5 or 6 (described below), you must then use a joystick controller for all activities until you return to the CUSTOMER RECORD display, which you do by pressing the red button and then moving your joystick rightward. For more information about modifying your map, see the section called "Updating the Map".

6. MAP WITH HOUSES

Enter 6 to display your route map of streets with a marker for your selected house and for all the active houses. You must then use a joystick controller for all activities, until you return to the CUSTOMER RECORD display, which you do by pressing the red button and then moving your joystick rightward. For more information about modifying your map, see the section called "Updating the Map".

7. PREVIOUS HOUSE

Enter 7 to update the customer record for the previous house number. The last version of the customer record you were working on becomes its current version and the CUSTOMER RECORD display for the previous house then displays. The previous house can mean the next lowest house number on your specified street or, if you're already

at this number, then the highest number for the previous street. You can continue to page backward in this way until you reach your first customer record.

8. NEXT HOUSE
   Enter 8 to update the customer record for the next house. The last version of the customer record you were working on becomes its current version and the CUSTOMER RECORD display for the next record then displays. The next house means either the next highest house number for your specified street name or, if you're already at the highest number, then the lowest number for the next street. You can continue to page through customer records in this way until you reach the end of your file.

Now let's look at the steps you go through to do various kinds of customer record and map activities.

Adding New Customer Records

1. Select the number of the customer's street on the Selection 2 Submenu. (If your customer lives on a new street, you'll need to modify the street name auxiliary program first. For more information, see the section called "Defining Your Street Names".)

2. Next you see the HOUSE NUMBER/HOUSE INDEX prompt. Enter your new house number. (NOTE. This number can be no longer than four characters.)

3. This causes the CLASS OF SERVICE prompt to display. Enter your new customer's delivery code. (If you get the CUSTOMER RECORD prompt (step 4) immediately instead of the CLASS OF SERVICE prompt, your "new" record isn't really new; it's already in your file.)

4. Finally you'll see the CUSTOMER RECORD display prompt. You can now confirm the subscription status and class of service and you can correct this information, if necessary.

5. Then you'll want to enter a 5 or 6 in response to the CUSTOMER RECORD display to update your route map. Repeat steps 1 through 5 for each new record.

6. Once your record and map information are correct, return to the Selection 2 Submenu by entering 0 (or simply pressing RETURN). (Note. To add these new records to your diskette file, don't forget to use Selection 5--SAVE DATA--before you leave the NEWSPAPER ROUTE MANAGEMENT PROGRAM.)

[Removing the sample records. After you add your own customer records to the data file, delete the eight sample records from the file as follows. Find house numbers 479, 491, and six house numbers of 0000. For each house number, display the CUSTOMER RECORD and use Selection 4 to delete the record. You don't need to erase the house markers on the map for these records; the program removes them for you. Remember to use Selection 5 in the Main Menu to remove these sample records permanently from your customer record data file on diskette.]

Updating and Removing Existing Records

1. Select the number of the customer's street on the Selection 2 Submenu.

2. Next you see the HOUSE NUMBER/HOUSE INDEX prompt. If you need to recall the house number, press RETURN for the list. (After looking at the list, enter your customer's house number in response to the HOUSE NUMBER prompt, or press RETURN again if you're on the wrong street.) Otherwise, enter your customer's house number.

3. This causes the CUSTOMER RECORD information to display. Enter 1 or 2 to change your customer's subscription status. Enter 3 to change the class of service. Enter 4 to remove the record from your file. (You don't have to update your map to reflect a deleted record or changes in subscription status or class of service; the program automatically makes these changes.)

4. Once your record information is correct, return to the Selection 2 Submenu by entering 0 (or by simply pressing RETURN). (Note. To add these changes to your diskette file, don't forget to use Selection 5--SAVE DATA--before you leave the NEWSPAPER ROUTE MANAGEMENT PROGRAM.)

Updating the Map

1. Select your customer's street number on the Selection 2 Submenu.

2. Enter the customer's house number in response to the HOUSE NUMBER prompt (or press RETURN to look at the list of house numbers, and then enter one of these in response to the HOUSE NUMBER prompt).

3. You're now in the CUSTOMER RECORD display. Enter 5 to display your route map with the house marker of only your specified record. Enter 6 to display your route map with a marker for your specified record and for all active houses.

4. As long as the map displays, all your commands are through the joystick controller. The map displays in the graphics area of your video screen. A small flashing cursor indicates your current position--that is, it marks the house number location of the customer record you're working on. If your record is new, then the flashing cursor is in the upper left-hand corner of the graphics area. In the text window of your video screen is this display:

```
485 Kennedy Drive (0,0)
THE LAST MARK/ERASE MADE WITH YOUR
JOYSTICK AND TRIGGER WILL BE SAVED
```

5. Hold the joystick controller with the red button to your upper left, toward the video screen. To move the cursor over an existing house marker or to a new location, move your joystick in the directions shown below.

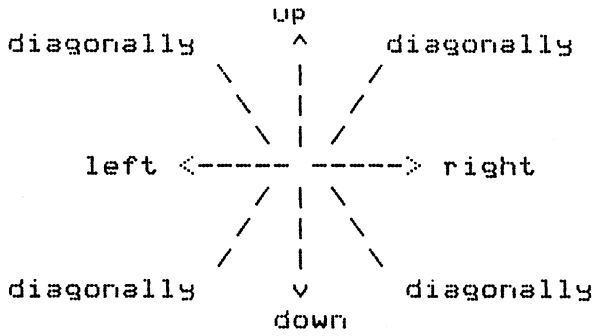


Figure 10. Using the Joystick Controller to Move Your Map Cursor

6. When the cursor is positioned where you want it, press the red button. Then move the joystick as shown below to add a new house marker (MARK), erase an existing house marker (ERASE), do nothing with your current cursor position (IGNORE), or leave the map in its current state and return to the CUSTOMER RECORD display (QUIT):

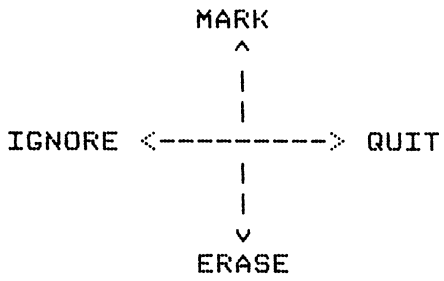


Figure 11. Using the Joystick Controller to Modify Your Map

The flashing cursor always indicates your current map location. If you choose MARK, ERASE, or IGNORE, you remain in the map display mode and can continue to make changes. However, you should repeat steps 1 through 6 for <u>each</u> house marker modification so that the program assigns a marker's coordinates to the corresponding customer record. Remember to use Selection 5 to save your map revisions on diskette.

SELECTION 3 -- COLLECTIONS

Use this selection to print customer receipts with the house number, the customer record number, the newspaper's name, and an optional short comment preprinted on each receipt. The receipts also contain labeled blanks for the amount, payment starting and ending dates, your name, and the collection date. You can also print a collection list numbered and ordered by customer record number and showing the amount due, whether the subscription status is ACTIVE or STOPPED, the class of service, and the address. This list contains blanks for the collection date and the amount collected.

Make sure your printer is attached and turned on and that your ATARI 850 Interface is also turned on. When you select 3 on the Main Menu, the Selection 3 Submenu looks like this:

```
                    COLLECTIONS

                    Select One

          1. Print Receipts

          2. Print Receipt List
?__
```

Figure 12. Selection 3 Submenu

Press RETURN to return to the Main Menu.

Printing Customer Receipts

Enter 1 to print the individual customer receipts. This program prints collection receipts for all customer addresses. You'll see the prompt:

```
ENTER REMARK THIS LONG
```

You can add your own comment (for example, HAPPY HOLIDAYS) to these receipts by typing in your remark in response to this prompt. It can be no longer than the prompt (the program cuts off text beyond the prompt). If you don't want to add a remark, then just press RETURN. Next, you'll see:

```
POSITION PAPER APPROXIMATELY SIX
LINES FROM THE TOP OF THE PAGE.

RETURN TO CONTINUE?
```

These are instructions about where you should have your paper positioned in relation to the printing head. Once you've got it positioned, press RETURN. The printer prints a line immediately under where the perforation should be (if you're using perforated paper) and the next instruction

displayed is:

```
ENTER HALF-SPACES UP (+X)
   OR HALF-SPACES DOWN (-X)
   OR '0' TO BEGIN PRINTING?
```

To reposition your paper because its length is different from what the program expects, move the paper half-spaces upward by typing a + followed by the number of half-spaces desired (e.g., +4). Move the paper half-spaces downward by typing a - followed by the number of half-spaces downward (e.g., -5). Each time you enter one of these signed numbers, the same line indicating where the perforation should be displays:

```
^ PERFORATION ^
```

Continue to enter signed numbers until you have your paper positioned as you want it. Then enter 0 to begin the receipt printing. A sample receipt looks like this:

```
*-----------------------------------------*
+                                         +
+            The San Jose Mercury         +
+                                         +
+   Received from  875 Kennedy Drive  #40 +
+                                         +
+ Amount: ______ for ______ thru ______   +
+                                         +
+ Thank you, your carrier: ___________    +
+                                         +
+ Date: ________  HAPPY HOLIDAYS          +
+                                         +
*-----------------------------------------*
```

Figure 13. Selection 3 -- Sample Customer Receipt

Unless you're a carrier for the San Jose Mercury, you'll want to change the newspaper name! You need do this only once by changing a line of code in the main program.

Changing the Newspaper Name

Instead of using the command RUN "D:PAPER.APX" to load and start the main program, use the command LOAD "D:PAPER.APX". Then list line 26726 (the command is LIST 26726). That line reads:

```
26726 ? #P0;"The San Jose Mercury                +"
```

Replace the text--The San Jose Mercury--with your newspaper's name. Depending on the length of the new name, you might have to leave more or fewer blanks following the name so that the + aligns with

the other pluses outlining the customer receipt. To make the change permanent, you'll need to SAVE the revised program (the command is SAVE "D:PAPER.APX"). From now on, your receipts will print with your newspaper name at the top!

Printing the Collection List

Select 2 on the Selection 3 Submenu to print a summary house number list for recording collection information. The list prints automatically. Sample lines look like this:

```
NO.    DATE      COLLECTED   AMT.   TYPE        ADDRESS
1)  ________  _________  7.00  1  7  479 Kennedy Drive
2)  ________  _________  2.75  1  1  485 Kennedy Drive
3)  ________  _________  7.00  0  7  491 Kennedy Drive
```

Figure 14. Selection 3 -- Sample Collection List

The first number corresponds to the customer's record number in your file and on the customer's receipt. You fill in the date you collected the payment and the amount you collected. The preprinted amount is the subscription rate for that customer's class of service. (Note. If your subscription rates differ from these rates, you'll need to change a DATA statement in the auxiliary program that defines your street names. The section called "Changing the Class of Service Rates" explains what to do.) The first number under TYPE indicates whether the customer is ACTIVE (1) or STOPPED (0). The second number shows the customer's class of service. The last column lists the customer's address.

After you print customer receipts or the collection list, the Main Menu displays and you can continue with other activities.

SELECTION 4 -- PRINT HOUSE LIST

Use Selection 4 to print or display subsets of customers. If you plan to print your list(s) instead of displaying them on your video screen, make sure your printer is attached and turned on and that your ATARI 850 Interface is also turned on. The Selection 4 Submenu looks like this:

```
SELECT
   1. ACTIVE HOUSES
   2. STOPS
   3. BOTH  ?__
```

Figure 15. Selection 4 Submenu

Enter 1 to print a list of just your active customers. Enter 2 to print a list of just your inactive customers. Enter 3 to print a list of <u>all</u> your customers. Next, you select the combination of class of service codes you want to use. The display looks like this:

```
SELECT
   1. SUNDAY ONLY
   2. DAILY ONLY
   3. SUNDAY + DAILY ONLY
   4. ALL SUNDAYS (1+3)
   5. ALL DAILYS (2+3)
   6. ALL DAYS (1+2+3)
```

Figure 16. Selection 4 -- Subscriber Subset List

Enter 1 to print a list of subscribers receiving the Sunday paper only. Enter 2 to print a list of subscribers receivng the daily paper only. Enter 3 to print a list of subscribers receiving <u>both</u> the daily <u>and</u> the Sunday paper. Enter 4 to print a list of subscribers receiving either just the Sunday paper or both the Sunday and the daily paper. Enter 5 to print a list of subscribers receiving either just the daily paper or the daily and the Sunday paper. Enter 6 to print a list of <u>all</u> your customer records. After entering a number, you see a display confirming which Submenu selection and which subscriber subset you chose. For example, if we want to print a list of ACTIVE customers who receive the daily paper only, we'd select 1 from the Submenu and 2 from the subscriber subset list. The display would look like this:

```
LISTING OF ACTIVE HOUSES
FOR DAILY ONLY
ON mm/dd/yy
_
```

Then you have one more decision to make. You need to respond to this prompt:

```
SELECT
    1. COMMENCE PRINTING
    2. PRINT TO SCREEN
    3. RESELECT PARAMETERS
    4. RETURN TO MAIN MENU
```

Enter 1 if the display confirming your choices is what you expected and want. The program then prints your specified subset and the message PRINTING... displays on your video screen. A sample line looks like this:

```
1   7   479 Kennedy Drive
```

The first number indicates the customer's subscription status (1 for ACTIVE, 0 for STOPPED). The second number indicates the class of service. The total number of records printed appears at the end of the list.

Enter 2 if you want your list to display on your video screen instead of print on the printer. Enter 3 if you want to change any of your subset choices. You'll return to the Selection 3 Submenu and can start over again. Enter 4 to cancel all your Selection 3 activity and return to the Main Menu.

After you print or display a house list, you see the prompt RETURN TO CONTINUE? Press RETURN to return to the Main Menu.

SELECTION 5 -- SAVE DATA

After you perform record and map updating under Selection 2, you'll want to store your changes on your diskette file. Although the NEWSPAPER ROUTE MANAGEMENT PROGRAM automatically loads your data file when you run the program, it doesn't automatically write your changes back to the diskette file. That's why you need to go through this extra step. The idea is to help protect your diskette records until you're sure you want to update them. To write your updates to the diskette, choose Selection 5. You'll see this message:

```
TO SAVE HOUSE DATA
ON 'D:ROUTE3.DAT'
INSERT DATA DISKETTE

RETURN TO CONTINUE? _
```

Because the program diskette also contains the data file (ROUTE3.DAT) holding your customer records, you need only make sure this diskette is still in your first (or only) disk drive and then press RETURN.

USING THE AUXILIARY PROGRAMS

INTRODUCTION

Before you modify either program, we strongly recommend that you duplicate the entire diskette so that you have a backup copy in case you need to start over.

For the map displays to be meaningful, you need to define the plot points that draw your streets on the map. You define these points (also called coordinates) by replacing DATA statements in a program called INITMP.BAS, which in turn creates a data file to draw your map. Using another program, called INITST.BAS, you also define your street names; this program in turn creates a data file of these names for various display and printing activities.

Before modifying these programs, it's a good idea to draw a map of the streets on your route. The main program uses GRAPHICS MODE 7, which contains 159 columns across the grid (a column is also called the X-coordinate) and 95 rows down the grid (a row is also called the Y-coordinate). You can use the Graphics Mode 6 or 7 paper included with this manual to plot your streets. Write down the X- and Y-coordinates for the beginning and ending points of each street. If a street has one or more "bends" in it, write down the X- and Y-coordinates for each one and also note the number of bends it has.

Next list the streets in the order you prefer and use this order to define your street names. One way is to order your streets alphabetically; another way is to arrange them in the order you deliver your papers. Consider your order carefully. Once you add customer records in the main program, you can't change your street sequence without starting from scratch! When the main program prints customer receipts and collection lists, the order will correspond to the order in which you entered your street names (with ascending house numbers within a street). Now you're ready to modify the auxiliary programs.

PLOTTING YOUR STREETS ON THE MAP

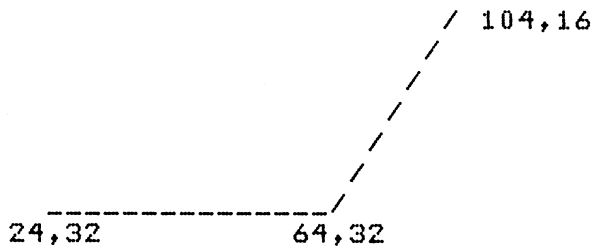
Load the map drawing program into RAM by typing LOAD "D:INITMP.BAS" and pressing RETURN. Now look at the DATA statements that plot each street. These statements begin at line 11100 and end at line 11360. You can look at them by typing the command LIST 11100,11360. Two more lines appear in the program beyond line 11360. These are line 11980, which is a REMark statement, and line 11990, which is a DATA statement that serves as an end-of-data flag for the program. Be sure not to erase this last DATA statement (you can retain the REMark statement or not, as you like). Let's look at one set of DATA statements for a street house number (you can also display these lines by typing LIST 11100,11130 and pressing RETURN):

```
11100 REM KENNEDY DRIVE
11110 DATA 2
11120 DATA 12,72
11130 DATA 152,72
```

Line 11100 is a REMark statement. These statements are for your information only. They have no effect on the program, but it's a good idea to mark each set of DATA statements for a street with a REMark statement like this one. Line 11110 contains one number only; this number indicates the number of coordinate sets for the street. The number is equal to the beginning and ending sets of coordinates, plus those for any bends. In this case, Kennedy Drive is a straight line, so the number of X- and Y-coordinate sets is two, and our statement is DATA 2. Line 11120 contains the X- and Y-coordinates for the start of the street (it starts at column 12, row 72), and line 11130

contains the X- and Y-coordinates for the end of the street (it ends at column 152, row 72). (Thus Kennedy Drive is a straight horizontal line in the bottom third of the graphics area.) Be sure that you have as many DATA statements containing coordinate sets as you indicate in your first DATA statement. In this example, our first DATA statement is DATA 2 and we follow it with two DATA statements containing coordinate sets. Follow this pattern for each street you want to draw on your map. The order in which you code your streets makes no difference, but you might want to use the same order you use for your street names.

Let's look at the coding for a street having one bend. The street looks roughly like this:



The REMark and DATA statements for this street are:

```
11140 REM STEMEL WAY
11150 DATA 3
11160 DATA 24,32
11170 DATA 64,32
11180 DATA 104,16
```

Stemel Way has one bend, so our first DATA statement indicates the street has three sets of coordinates. Line 11160 contains the column and row positions for the start of Stemel Way, line 11170 contains these positions for the bend, and line 11180 contains these positions for the end of Stemel Way.

Erasing the Sample DATA Statements

Before you enter your own street coordinates, you need to delete the REMark and DATA statements for the sample streets. You delete BASIC statements by listing the line number and then pressing RETURN. You must do this for each line number. A faster way to attack this chore is to write a simple FOR/NEXT loop to list these line numbers on the screen, after which you can use the CTRL and directional arrow keys to position the cursor at the start of each line and press RETURN each time. In this manner, you'll erase the lines, and you're ready to enter your own. Because the program contains more than 24 lines to be erased, but only 24 lines display at a time on a video screen, you need to use two FOR/NEXT loops. The first FOR/NEXT loop is (you're not adding these statements to the program, so you don't need a line number):

```
FOR N=11100 TO 11290 STEP 10:PRINT N:NEXT N
```

This will display 20 lines, which you can then erase as described above. To erase the remaining lines (except lines 11980 and 11990), use this FOR/NEXT loop and erase the lines:

. FOR N=11300 TO 11360 STEP 10:PRINT N:NEXT N

Now these lines no longer exist and you can use as many line numbers between 11100 and 11979 as you need to define your street coordinates, but you may enter no more than 40 sets of coordinates.

Running and Saving Your Data

Once you've coded all your data, you need to execute the program for this information to be stored into a data file. You do this by typing RUN. When the program finishes, you'll see this display ("n" represents a digit):

```
PREPARING MAP DATA
nn ELEMENTS SAVED
```

The number of elements saved should correspond to the number of coordinate sets you created. For our two examples, this line would be: 5 ELEMENTS SAVED. In addition to running your program, you also want to save it, so that you can modify it in the future as you add or remove streets on your route. To save your data, type SAVE "D:INITMP.BAS" and press RETURN. Then, when you need to modify your streets on the map in the future, you load this program and follow the steps described above.

DEFINING YOUR STREET NAMES

To define your own street names, load the street name program into RAM by typing LOAD "D:INITST.BAS" and pressing RETURN. You need to replace lines 13320 through 13380 with your own street names. To look at these lines on your video screen, type LIST 13320,13380. If you have more than 6 streets, you'll want to supplement these line numbers with line numbers for your additional streets (add these in the range 13390 through 13499). Note. You may use no more than 12 street names. If you have fewer than 6 streets, you'll need to delete the remaining sample lines in this range by typing each extra line number and pressing RETURN.

Line 13320 is a DATA statement indicating the total number of street names you're assigning--one per DATA statement. For example, if you define 11 street names, then your line 13320 will be:

```
13320  DATA 11
```

The remaining lines (13340 through 13380) are DATA statements which name and number your streets. The format is:

```
DATA Street Name     ,#
```

Enter your street name in capital and lowercase letters as you want it to display and print. (NOTE. You're limited to 15 characters per name.) Be sure to place the comma 16 spaces from the beginning of the street name, and follow the comma with the number you've assigned that street. For example, the DATA statements for Kennedy Drive, our first street, and Quail Drive, our second street, would be:

```
13330 DATA Kennedy Drive   ,1
13340 DATA Quail Drive     ,2
```

After you've coded DATA statements for each street (and the initial DATA statement indicating the total number of streets), you're ready to create the street name data file by typing RUN. When the program ends, you'll see ("n" represents a digit):

```
PREPARING STREETS
n STREETS
Kennedy Drive
Quail Drive
   :
   :
PREPARING LABELS
READY
```

Your last step is to save the revised program so that you can make further changes later on if your route changes. Save the program by typing SAVE "D:INITST.BAS" and pressing RETURN. Then, when you need to add or remove street names, you can load the program and follow the steps described above, making sure you change the DATA statement in line 13320 to reflect the revised number of street names.

ADDING STREETS LATER ON

You may add new streets to your route as needed. Follow the steps above to load the map and street name programs, add the new DATA statements, run the programs, and then save them. The main program adds these new streets automatically, and you can then add customer records for these streets by using Selection 2 of the main program.

CHANGING THE CLASS OF SERVICE RATES

If your subscription rates for the SUNDAY, DAILY, and SUNDAY + DAILY (full) classes of service differ from those used in this program, you'll need to change one DATA statement in the street name program, INITST.BAS. Load this program into RAM (the command is LOAD "D:INITST.BAS") and list line 13640 (the command is LIST 13640). The DATA statement is:

```
13640 DATA 2.75,5.00,7.00
```

The first three digits (2.75) indicate the rate for SUNDAY ONLY, the next three (5.00) indicate the rate for DAILY ONLY, and the last three (7.00) indicate the rate for SUNDAY + DAILY. To change any of these rates, replace the appropriate three-digit decimal value exactly in the positions shown; don't add any spaces between values. Then run the program and save it, as described in the section called "DEFINING YOUR STREET NAMES".

TROUBLESHOOTING

PROGRAM OPERATION LIMITATIONS AND WARNINGS

If you hit a key that causes a break in the program's execution (you'll see the READY prompt), don't restart the program with the RUN or LOAD command. Doing so will cause you to lose all data that you added or revised before the program stopped. Instead type GOTO 2000, which gets you far enough into the program so that it retains any work you did. You can then save you data if you wish by using Selection 5 on the Main Menu.

Remember, the program limits you to these maximums:

1. 100 customer records
2. 4-character house numbers
3. 12 street names of up to 15 characters each
4. 40 coordinate sets to plot streets on the maps

The NEWSPAPER ROUTE MANAGEMENT PROGRAM is written in "pure vanilla" BASIC, contains lots of REMarks, and is very modular. So, if you want to extend or modify the program, these features should help you do so.

ERROR MESSAGES

The program has two error messages:

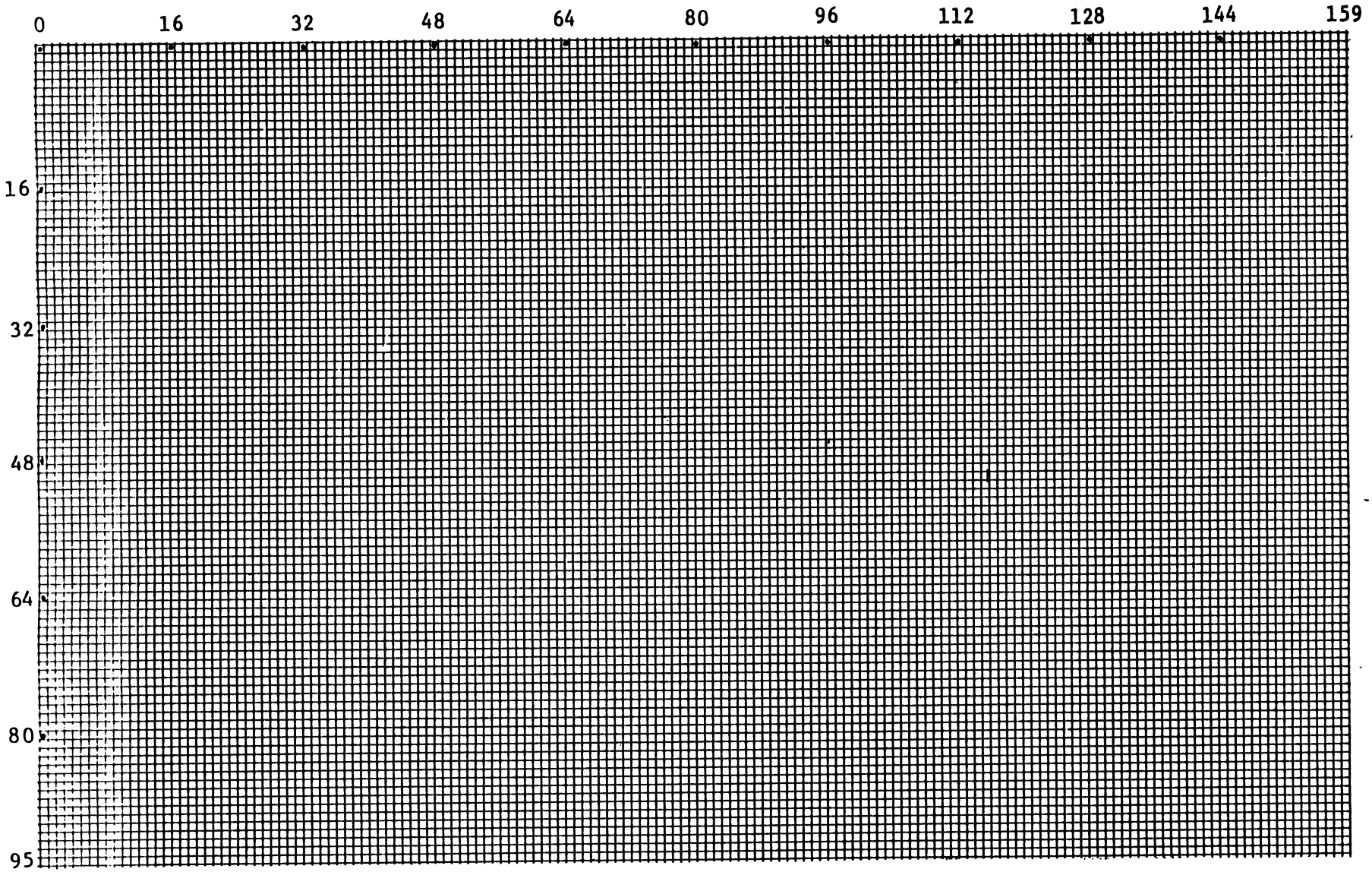
MUST BE A DIGIT
PLEASE RE-ENTER

You've tried to answer a prompt with something other than the number of a selection. Use the number.

CHECK PRINTER AND SELECT ONE
1. TRY AGAIN
2. RETURN TO MAIN MENU

You've requested that customer receipts or a collection or house list be printed, but the program can't carry out your instruction. Make sure that your printer and interface are turned on, and then enter a 1 to print your data. If you've changed your mind about printing the information, enter 2 to return to the Main Menu.

Graphics Mode 6 or 7



Notes: _____

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ATARI PROGRAM EXCHANGE

REVIEW FORM

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many software authors are willing and eager to improve their programs if they know what users want. And, of course, we want to know about any bugs that slipped by us, so that the software author can fix them. We also want to know whether our documentation is meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program _____

2. If you have problems using the program, please describe them here.

_____

_____

_____

3. What do you especially like about this program?

_____

_____

_____

4. What do you think the program's weaknesses are?

_____

_____

_____

5. How can the catalog description be more accurate and/or comprehensive?

_____

_____

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program?

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game software)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

_____

_____

_____

8. What did you especially like about the user instructions?

_____

_____

_____

9. What revisions or additions would improve these instructions?

_____

_____

_____

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

_____

_____

11. Other comments about the software or user instructions:

_____

_____

_____

_____

_____

_____

STAMP

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