Advanced Data Formatting

Advanced Data Formatting (ADF) is a means of customizing data before it is transmitted to your host device. Scan, serial and magstripe data can all be edited to suit your particular requirements.

ADF can be implemented through the PC Download Program, or with a series of bar codes. This first section deals with the PC method. Even if you choose to use bar codes in lieu of this procedure, you may want to read this section as a tutorial.

ADF Using the PC Download Program

From the Main Menu, shown below, choose the Formatting option.

Parameter Menus

Init	Symbology	Interface	Formatting	Misc	Dwnld/Upload

The following screen will appear:

```
Parameter Menus
Init   Symbology   Interface   Formatting   Misc   Dwnld/Upload
                Data Formatting
                Data Formatting Parameters
                Advanced Data Formatting
```

Select **Advanced Data Formatting** and hit **<ENTER>**. The following screen will appear:

```
Data Formatting
Add ADF Rule
View Existing Rules
View Built-in Rules
Delete ADF Rule
Create Rule Buffer
Create Lookup Table*

Data Formatting Rule

Number of bytes in this rule = 0.0
```

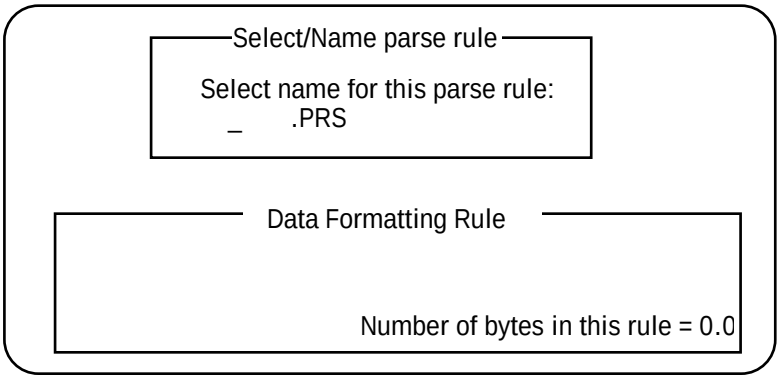
*Not supported in standard release.

You can move between windows by hitting **<SHIFT> <UP ARROW>**, or **<SHIFT> <DOWN ARROW>** on your numeric keypad.

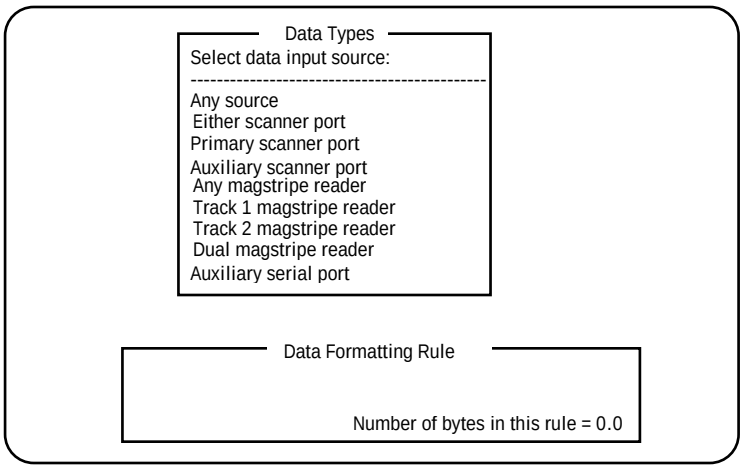
Add ADF Rule -	Selecting this option will guide you through the steps of creating individual rules for data transmission.
View Existing Rules -	By selecting "View Existing Rule", you can view all rules currently available for downloading. To select a specific rule as a template, use the arrow keys to select the appropriate rule, then hit **<ENTER>**. To call up this template at any time, hit **<F2>.**
View Built-in Rules -	After an upload, will show you all of the controller's built-in rules. These rules cannot be deleted or modified.
Delete ADF Rule -	To cancel a rule.
Create Rule Buffer -	After you've created a rule, place it in the buffer for transmission to the controller via the Download menu. The buffer will store approximately 380 bytes of information.

Creating A Rule

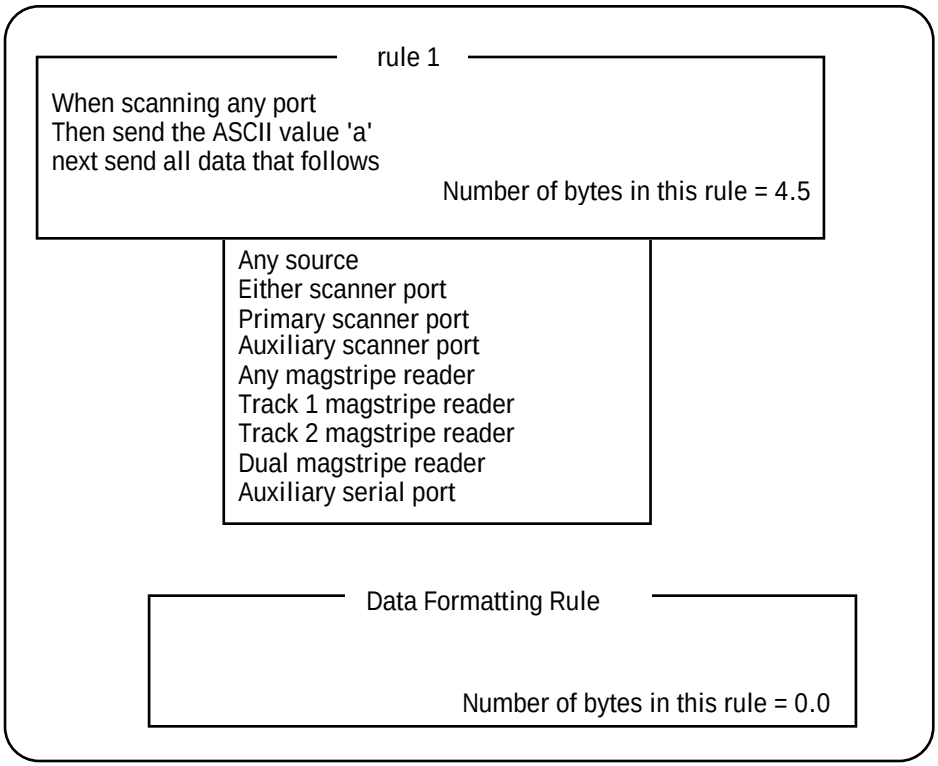
With the Add ADF Rule selection highlighted, press **<ENTER>**. You will be asked to name this rule.



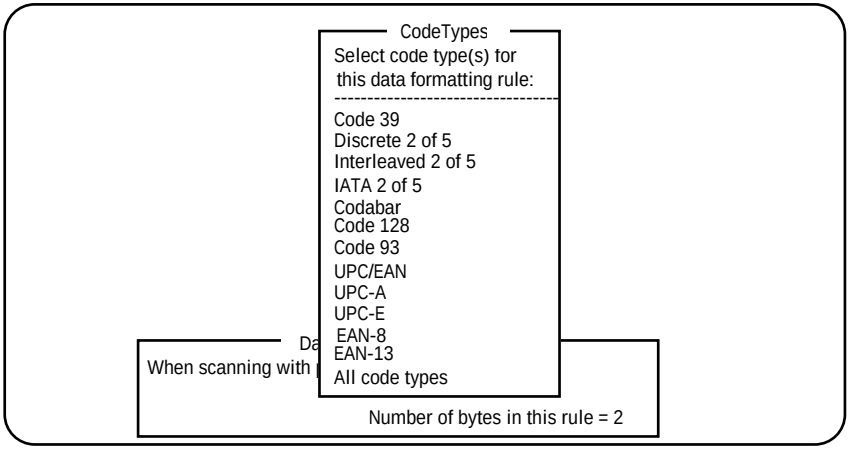
Insert the name and hit **<ENTER>**. This screen will now appear:



Move the highlighted bar to the input source you wish to edit. For purposes of demonstration, we will alter the data entered through the Primary Scanner Port. You can call up a template to help guide you through the steps by hitting the <F2> key.



You can delete the template from the screen by hitting **<F2>** again. Move the highlighted bar to **Primary Scanner Port** and hit **<ENTER>**. The following screen will appear:



In the Data Formatting Rule box (partially obscured by the Code Type selections), you can view all the parameters you've set. To bring the Data Formatting Rule box to the forefront at any time during the programming session, hit **<SHIFT> <UP ARROW>**. Once it is in the foreground, use the Up and Down Arrows to scroll. To put the Data Formatting Rule box in the background, and bring the selections to the forefront, hit **<SHIFT> <DOWN ARROW>**.

Let's use Interleaved 2 of 5 and Code 39 for our demonstration. Move the highlighted bar to **Code 39** and hit the space bar. A check mark, signifying that code has been selected, appears next to Code 39. Now move the bar to **Interleaved 2 of 5** and hit the space bar. Again you will see a check mark by Interleaved 2 of 5. Now hit **<ENTER>**. All code types with check marks are now selected. The following screen will now appear:

Note: If you select more code types than non-selected code types, the Data Formatting Rule screen will show the non-selected code types instead of the selected ones.

```
Lengths
Select length for this data
-----------------------------------
Any length
Specific length

Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5

                    Number of bytes in this rule = 4
```

In this instance, we want to edit only Code 39 and Interleaved 2 of 5 codes with a length of 12 characters. Move the highlighted bar to **Specific Length** and hit **<ENTER>**.

```
Select length
Select next length:

Range (1..254)

Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5
  and length of data is

                    Number of bytes in this rule = 5
```

Type in "12" and hit **<ENTER>**.

The next screen is:

```
Enter another length?
---------------------
    No - continue
    Yes

                Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5
  and length of data is 12

                    Number of bytes in this rule = 6
```

In this example we are only selecting one length, so we will hit "No". If "Yes" were selected, another length could now be entered. This is the next screen:

```
                Strings
Select specific string that
must be in data message:
--------------------------------
Any message ok
Specific string, any location
Specific string at start

                Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5
  and length of data is 12

                    Number of bytes in this rule = 6
```

We want this customized format to apply only to codes where the numeric string "344" appears, starting at the fourth character. **Select Specific String, Any Location** and hit **<ENTER>**.

Select location of string

Select location of string in message:

Location 0 = start; Max location = 255

Data Formatting Rule

When scanning with Primary port
and code type is Code 39 or Interleaved 2 of 5
and length of data is 12
and data starting at position

Number of bytes in this rule = 6

Type "4", then **<ENTER>**.

Select string

Select string:

ASCII character only; Max of 8 characters

Data Formatting Rule

When scanning with Primary port
and code type is Code 39 or Interleaved 2 of 5
and length of data is 12
and data starting at position 4

Number of bytes in this rule = 7

Type "344", then **<ENTER>**.

The following screen applies only if you have an applications specific version of the LL 500. If you have the standard version, go to next screen.

```
Lookup Table

Select whether to use
lookup table:

Any message ok
Use lookup table

Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5
  and length of data is 12
  and data starting at position 4 contains the string '344'
                          Number of bytes in this rule = 11
```

The rule you are creating can be placed in a specific rule set. If you choose not to do this, **Standard Set** is the default.

```
Rule Sets

Select rule set for
this parse rule:

  Standard set
  Rule set 1
  Rule set 2
  Rule set 3
  Rule set 4

Data Formatting Rule
When scanning with Primary port
  and code type is Code 39 or Interleaved 2 of 5
  and length of data is 12
  and data starting at position 4 contains the string '344'
                          Number of bytes in this rule = 11
```

```
End of Criteria Section

This is the end of the
criteria section for the
rule.  Is it ok as is?
----------------------------

   Yes - Continue
   No - Redo criteria

                Data Formatting Rule
When scanning with Primary port
   and code type is Code 39 or Interleaved 2 of 5
   and length of data is 12
   and data starting at position 4 contains the string '344'
                          Number of bytes in this rule = 11
```

If the formatting is correct to this point, move the highlighted bar to **Yes** and hit **<ENTER>**. If you wish to change something, move the highlighted bar to **No** and hit **<ENTER>**. Assuming everything is correct, we'll move on.

```
                Data formatting
In the order desired, select
how to format the data for
transmission
----------------------------
   Send data
   Setup field(s)
   Send keystroke
   Setup pause
   Modify data
   Send preset values
   Set beep
   Enable/Disable rule set

   Done
When scanning w
   and code type is
   and length of data is 12
   and data starting at position 4 contains the string '344'
                          Number of bytes in this rule = 12
```

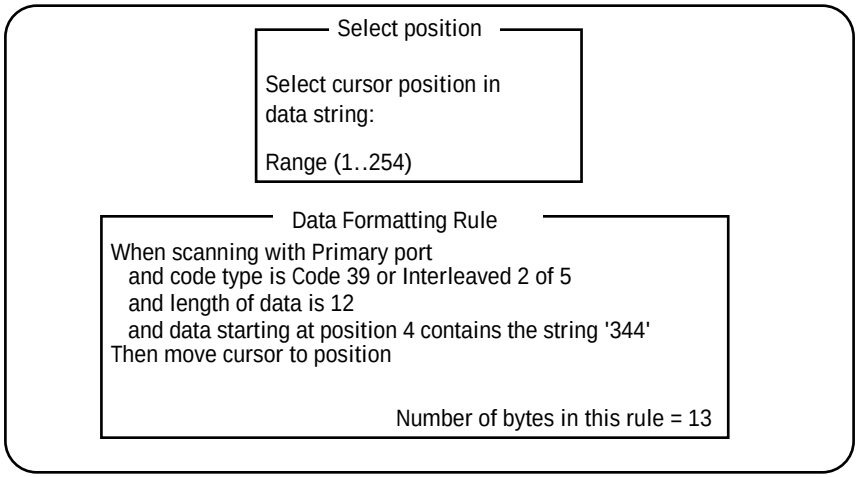
Now we want to move to the ninth data character, pause for .5 seconds, remove all the spaces, then send all remaining data. Move the highlighted bar to **Setup Field(s)** and hit **<ENTER>**.

```
Setup fields
Select field format for data
-------------------------------------
Select pre-defined mag fields
Define fields

Data Formatting Rule
When scanning with Primary port
   and code type is Code 39 or Interleaved 2 of 5
   and length of data is 12
   and data starting at position 4 contains the string '344'
                                   Number of bytes in this rule = 12
```

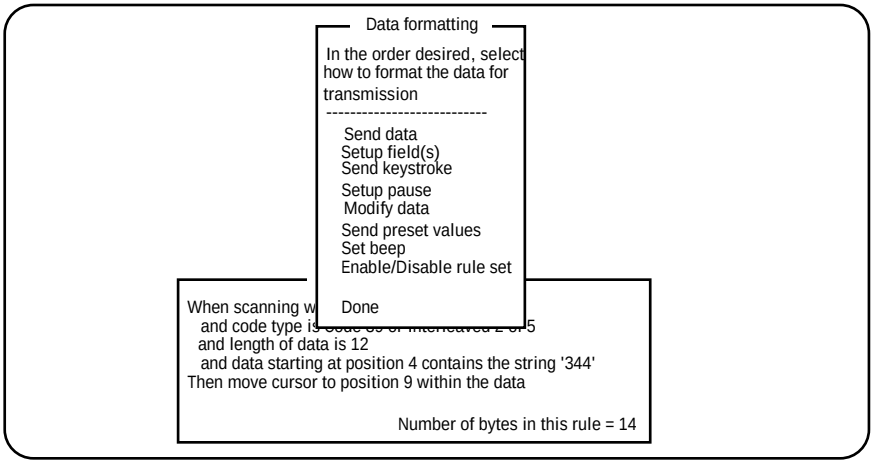
Select **Define Fields** and hit **<ENTER>**.

```
Define fields
Define field(s) as desired
-------------------------------------
Move cursor to a character
Move cursor to start
Move cursor to position 'n'
Move cursor ahead 'n' positions
Move cursor back 'n' positions
Move cursor past a character

Data Formatting Rule
When scanning with Primary port
   and code type is Code 39 or Interleaved 2 of 5
   and length of data is 12
   and data starting at position 4 contains the string '344'
Then move cursor to position
                                   Number of bytes in this rule = 12
```

Select **Move cursor to 'n' position** and hit **<ENTER>**.



Type "9", then **<ENTER>**.



Move the highlighted bar to **Setup Pause** and hit **<ENTER>**.

Select pause

Select pause value

Select pre-defined pause
Select pause value

Data Formatting Rule

When scanning with Primary port
and code type is Code 39 or Interleaved 2 of 5
and length of data is 12
and data starting at position 4 contains the string '344'
Then move cursor to position 9 within the data

Number of bytes in this rule = 14

Move the cursor to **Select Pause Value** and hit **<ENTER>**.

Pause data transmission

Select pause duration:

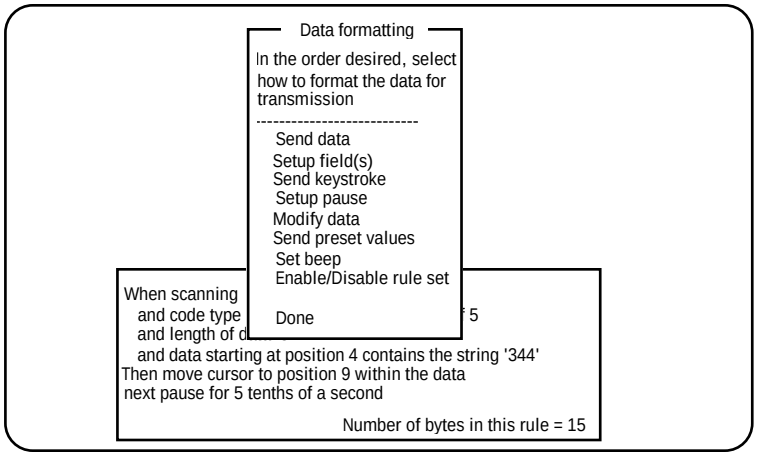
Pause = (1..254) *0.1 second

Data Formatting Rule

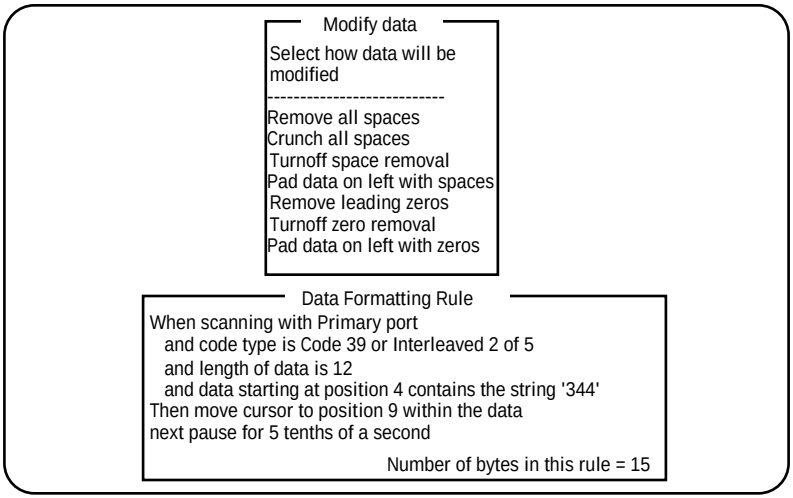
When scanning with Primary port
and code type is Code 39 or Interleaved 2 of 5
and length of data is 12
and data starting at position 4 contains the string '344'
Then move cursor to position 9 within the data
next pause for

Number of bytes in this rule = 14

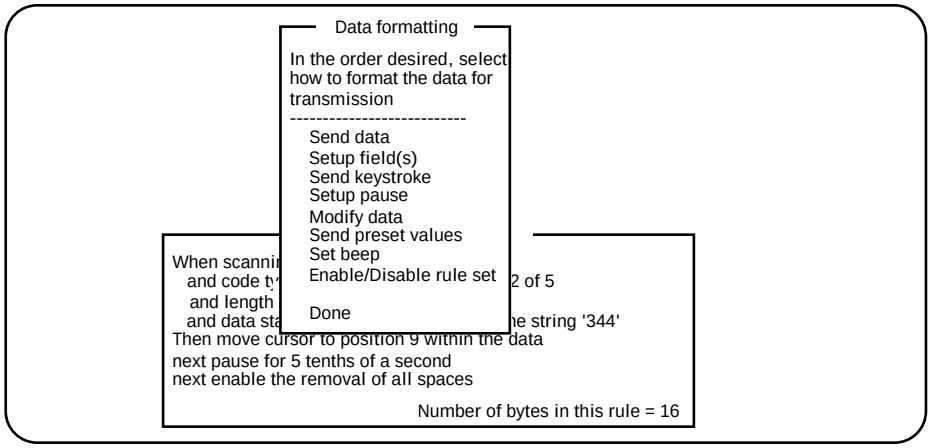
Type "5", then **<ENTER>**.



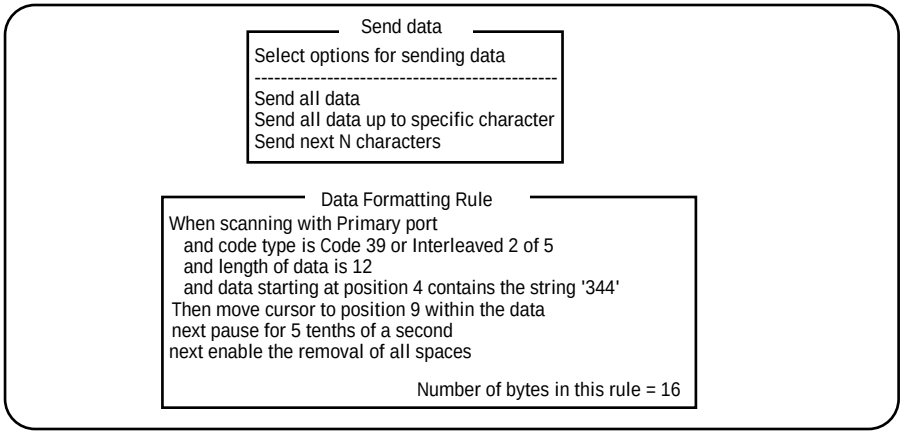
Move the highlighted bar to **Modify Data** and hit **<ENTER>**.



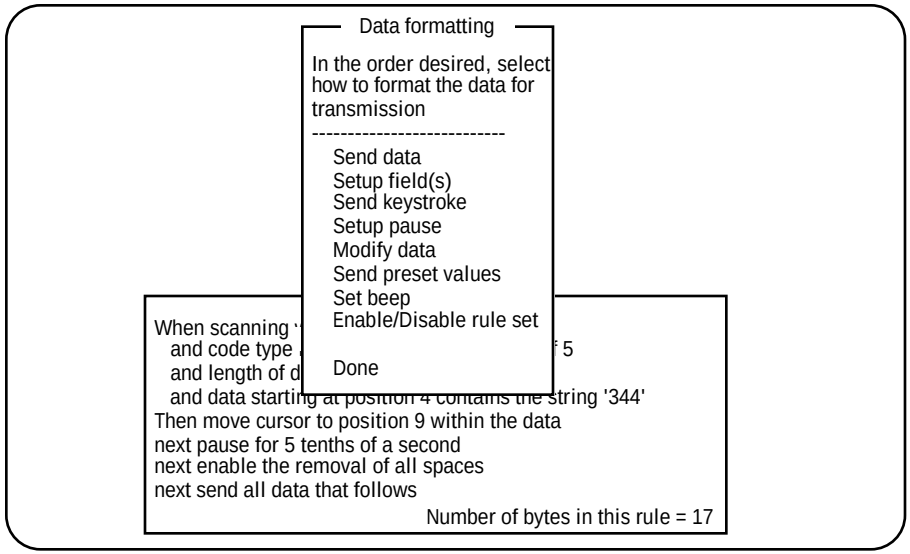
Select **Remove All Spaces**, then hit **<ENTER>**.



Select **Send Data**, then hit **<ENTER>**.



Select **Send All Data**, then hit **<ENTER>**. Remember, you can scroll up and down the Data Formatting Rule box by holding down the **<SHIFT>** key and using the Up and Down Arrows.



Select **Done** and hit **<ENTER>**.

We've now created a rule for a Code 39 or Interleaved 2 of 5 code, containing 12 characters, with the character string 344 starting at position 4, entered through the Primary Scanner port. When the controller receives data meeting all these prerequisites, it will move the cursor to position 9, pause for .5 seconds, remove all spaces, then send the remaining data.

Return to main menu? Y/N (Y)

This rule has not yet been added to the rule buffer for downloading. If you do not wish to add it, hit "Y" to return to the original parameter menu. The rule will be saved to your configuration file, if you choose to save it.

If you want to add the rule to the download buffer, select "N" to stay in ADF, and move the cursor to **"Create Rule Buffer"**. Now add the rule you have just created to the list.

Rules Hierarchy (for PC Program)

The order of the rules in the rules buffer is very important. Be sure that your most general rule is the last one listed on the **"Create Rule Buffer"** screen.

All inputs will check the rules list from top to bottom to determine if the criteria matches (and therefore, if the actions should occur). This illustrates the importance of the order in which the rules were created. Input will be modified into the form of the first matching set of criteria it finds.

ADF Using Bar Codes

Programming your controller using this method involves scanning a series of bar codes that coincide with the selectable parameters in the PC Download program. An **Input Source** must be selected **first**. Beeper Definitions will help guide you through the programming steps.

LEDs

While in the programming mode, the green LED on the controller will blink. The red LED will light when an incorrect bar code is scanned, and remain lit until a proper bar code is scanned.

Rules

To build a rule, you must select Criteria and Actions. The rules you enter must be logically correct. Criteria include **Input Source, Code Type, Code Length**, and **Message Containing a Specific Data String**. Actions are any alterations related to, or affecting these Criteria. Criteria, Actions, and entire Rules may be erased by scanning the appropriate bar code.

Criteria

Input Source

Select a single input or multiple source to be affected by this customized programming format. **An input source must be selected prior to creating any ADF rules**.

Code Types

Select any number of code types to be affected. All selected codes must be scanned in succession, prior to selecting other criteria. If you don't select a code type, all code types will be affected.

Code Length

Define the number of characters the selected code type must contain. If you don't select a code length, selected code types of any length will be affected.

Message Containing A Specific Data String

Select whether the formatting will affect data that begins with a specific character or data string, or contains a specific character or data string.

Specific String at Start - Scan this bar code, then scan the desired character or characters (up to a total of 8) in the *alphanumeric keyboard* bar codes.

Specific String, Any Location - Scan this bar code, then, using the *numeric keypad*, scan a two digit number representing the position (use a leading "zero" if necessary) Then scan the desired character or characters (up to a total of 8) on the *alphanumeric keyboard*, followed by the **End of Message** bar code.

Any Message OK - By not scanning any bar code, all selected code types will be formatted, regardless of information contained.

Actions

Select how to format the data for transmission.

Send Data - Send all data that follows, send all data up to a specific character selected from the *alphanumeric keyboard* bar code, or send the next N characters. N = any number from 1 to 254, selected from the *alphanumeric keyboard*.

Setup Field(s) - Select predefined magstripe fields (Track 1 or Track 2, Acct Nr., Exp Data MMYY/YYMM, or Customer Name), or define fields as follows:

Move Cursor To a Character - Scan this bar code, then any printable ASCII character from the *alphanumeric keyboard*.

Move Cursor to Start - Scan this bar code to move cursor to the beginning of the data.

Move Cursor to Position "N" - Scan this bar code, then select the position to which you wish to move (1 to 254) from the *numeric keypad*.

Move Cursor Ahead "N" Positions - Scan this bar code, then select the number of positions ahead you wish to move (0 to 254) from the *numeric keypad*.

Move Cursor Back "N" Positions - Scan this bar code, then select the number of positions back you wish to move (0 to 254) from the *numeric keypad*.

Move Cursor Past a Character - This parameter will move the cursor past all occurrences of a selected character. Scan this bar code, then select a character from the *alphanumeric keyboard*.

Send Keystroke - Scan the "Send __" bar code for the keystroke you wish to send.

Setup Pause - Set the Pause Duration parameter on pages B30-31 in the Bar Code Pages prior to entering ADF. To insert a pause, scan the Send Pause bar code.

Modify Data - Modify data in the following ways:

Remove All Spaces - To remove all spaces, scan this bar code.

Crunch All Spaces - To leave one space between words, scan this bar code. This also removes all leading and trailing spaces.

Turn off Space Removal - Scan this bar code to disable space removal.

Pad Data on Left With Spaces - To pad data to the left, scan the bar code containing the desired number of spaces. This parameter is activated by Send commands.

Remove Leading Zeros - Scan this bar code to remove all leading zeros.

Turn off Zero Removal - Scan this bar code to disable the removal of zeros.

Pad Data on Left With Zeros - To pad data to the left, scan the bar code containing the desired number of zeros. This parameter is activated by Send commands.

Send Preset Value - Send Values 1 through 6 by scanning the appropriate bar code. These values must be set in the Prefix/Suffix parameter located on Bar Code Pages B32-B33.

Value 1 = Scan Suffix

Value 2 = Scan Prefix

Value 3 = Magstripe Suffix

Value 4 = Magstripe Prefix

Value 5 = Serial Suffix

Value 6 = Serial Prefix

Alternate Rule Sets

ADF rules may be grouped into one of four alternate sets which can be turned on and off when needed. This is useful when you want to format the same message in different ways. For example, a Code 128 bar code contains the following information:

Class (2 digits), Stock Number (8) digits, Price (5 digits)

This bar code might look like this:

245671243701500

where:

Class = 24

Stock Number = 56712437

Price = 01500

Ordinarily you would send this data as follows:

24 (class key)

56712437 (stock key)

01500 (enter key)

But, when there is a sale, you may want to send only the following:

24 (class key)

56712437 (stock key)

and the cashier will key the price manually.

To implement this, you would first enter an ADF rule that applies to the normal situation. This rule may look like this:

> **When scanning a bar code of length 15, send the next 2 characters, send the class key, send the next 8 characters, send the stock key, send the data that remains, send the enter key.**

The "sale" rule may look like this:

> **When scanning a bar code of length 15, send the next 2 characters, send the class key, send the next 8 characters, send the stock key.**

To switch between the two sets of rules, a "switching rule" must be programmed. This rule specifies what type of bar code must be scanned to switch between the rule sets. For example, in the case of the "sale" rule above, the rule programmer wants the cashier to scan the barcode "M" before a sale. To do this, a rule can be entered as follows:

When scanning a bar code of length 1 that begins with "M", select rule set number 1.

Another rule could be programmed to switch back.

When scanning a bar code of length 1 that begins with "N", turn off rule set number 1.

The switching back to normal rules can also be done in the "sale" rule. For example, the rule may look like this:

When scanning a bar code of length 15, send the next 2 characters, send the class key, send the next 8 characters, send the stock key, turn off rule set 1.

It is recommended that you scan the **DISABLE ALL RULE SETS** bar code after programming a rule belonging to an alternate rule set.

In addition to enabling and disabling rule sets within the rules, you can enable or disable them by scanning the appropriate bar codes on page A3.

Rules Hierarchy (in Bar Codes)

When rules are created, they are stored at the "top" of a rules list. If three rules have been created, the list would be configured as follows:

Third Rule

Second Rule

First Rule

All inputs will check the rules list from top to bottom to determine if the criteria matches (and therefore, if the actions should occur). This illustrates the importance of the order in which the rules were created. Input will be modified into the form of the first matching set of criteria it finds.

For example, if the THIRD rule states:

> **When scanning a bar code of any length, send all data, then send the ENTER key.**

And the SECOND rule states:

> **When scanning a Code 128 bar code of length 12, send the first four characters, then send the ENTER key, then send all remaining data.**

If a Code 128 bar code of length 12 were scanned, the THIRD rule would be in effect. The SECOND rule would appear to not function.

Note also that ADF Rules are actually created when you use the standard data editing functions. Scan serial, and magstripe options are entered as ADF rules, and the hierarchy mentioned above also applies to them. These rules reside in the same "rule list" as ADF Rules, so the order of their creation is also important.

Default Rules

Every unit has a default rule to send all data, regardless of the source. Units with custom software may have one or more default rules burned in. The rules hierarchy will check user programmable rules first, then the default rules. Default rules can be disabled by entering the following general rule in the user programmable buffer:

> **When receiving data from any source, send all data.**

Since this rule always applies, ADF will never go into the default rules.

Beeper Definitions

Normal Data Entry. Duration of tones are short.

BEEPER SEQUENCE	INDICATION
High-Low	Entry of a number is expected. Enter another digit. Add leading zeros to the front if necessary.
Low-Low	Entry of an alphabetic character is expected. Enter another character or scan the End of Message bar code.
High-High	Entry of Criterion / Action is expected. Enter another criterion or action, or scan the Save Rule bar code.
High-Low-High-Low	Rule saved. Rule entry mode exited.
High-Low-Low	All criteria or actions were cleared for rule currently being entered; continue entry of rule.
Low	Last saved rule was successfully deleted. The rule presently being entered is left intact.
Low-High-High	All rules are now deleted. The rule presently being entered is left intact. (This beep sequence has a different meaning outside of ADF.)

Beeper Definitions

Error Indications. Duration of tones are very long.

BEEPER SEQUENCE	INDICATION
Low-High-Low-High	Out of rule memory. Erase some existing rules, then try to save rule again. (The current rule need not be re-entered.)
Low-High-Low	Cancel rule entry. Rule entry mode exited because of an error or the user asked to exit rule entry.
Low-High	Entry error, wrong bar code scanned. Re-enter criterion or action. All previously entered criteria and actions are retained. Criteria or action list is too long for a rule.

ADF Bar Code Menu Example

This section will show you specifically how ADF rules are entered and used. Examples are given for each of the three data sources.

Formatting Scan Data

A local men's clothing store wants to encode a vendor number, size, and color code into their own Code 128 bar codes. The store also has products that carry UPC bar codes, placed there by the manufacturer. The Code 128 bar codes have the following format:

VVVVV SSSSCC

Where V = Vendor Code
S = Size Code
C = Color Code

The store uses an NCR 7052 cash register with buttons for vendor [F1], size [F2], and color code [F3]. At this store the UPC data is treated as one vendor code.

The following rules need to be entered:

When scanning data from any port, and the code type is Code 128, send the next 5 characters, send the vendor key [F1], send the next 4 characters, send the size key [F2], send the next 2 characters, send the color code key [F3].

When scanning data from any port, and the code type is UPC/EAN, send all data, send the vendor key [F1].

To enter these rules, follow the steps below:

Rule 1: The Code 128 Scanning Rule

Step	Bar Code	On Page	Beep Indication
1	Either Scanner Port	A4	High High
2	Code 128	A5	High High
3	Send next 5 characters	A16	High High
4	Send F1	A58	High High
5	Send next 4 characters	A16	High High
6	Send F2	A58	High High
7	Send next 2 characters	A16	High High
8	Send F3	A58	High High
9	Save Rule	A2	High Low High Low

Rule 2: The UPC Scanning Rule

Step	Bar Code	On Page	Beep Indication
1	Either Scanner Port	A4	High High
2	UPC/EAN	A6	High High
3	Send all data that remains	A16	High High
4	Send F1	A58	High High
5	Save Rule	A2	High Low High Low

If you made any mistakes while entering this rule, scan **"Quit Entering Rules"** on page A2.

Formatting Magstripe Data

A small department store chain called "the STORE" accepts all major credit cards, and their own credit card. They use a dual track magstripe reader with their Symbol product.

The major credit cards follow the standard encoding methods, but the store card is different. The word "STORE" appears in track 1 to identify the store's card. The two tracks of data contain the following information:

Track 1: >STORE - Last Name - First Name - Title<
Track 2: >Account Number - Social Security Number - Exp. Date<

A sample store credit card would look like this:

Track 1: >STORE - SMITH - JOHN - DR<
Track 2: >123456789012 - 111223333-1293<

The STORE's point of sale terminal has a "store credit card" key (F5), and a "bank credit card" key (F6). These keys are pressed before the credit card data is sent. If a STORE credit card is read, the following data is sent:

[F5] Account Number [ENTER] Last Name, First Name [ENTER]

Bank credit cards are sent as follows:

[F6] Account Number [ENTER] Customer Name [ENTER]

The following rules need to be entered:

> **When dual magstripe data is read, and the data contains "STORE" starting at position 2, send the [F5] key, select track 2, skip ahead 1 character, send all data up to "-", send the [ENTER] key, Select track 1, skip all data up to "-", send all data up to "-", send a comma, send all data up to dash, send [ENTER] key.**
>
> **When dual magstripe data is read, send the [F6] key, send the account number, send the [ENTER] key, send the expiration date, send the [ENTER] key, send the customer's name, send the [ENTER] key.**

The bank credit card rule was easier to enter because the card uses standard magstripe encoding. The order in which the rules are entered is important. The bank card rule must be entered first, followed by the store credit card rule. This way the store credit rule is checked first. If the store rule fails, the more general bank card rule would apply. If the rules were entered in reverse, the bank rule would always be executed, and the store rule would be ignored.

Rule 3: The Bank Credit Card Rule

Step	Bar Code	On Page	Beep Indication
1	Dual Magstripe Reader	A4	High High
2	Send F6	A58	High High
3	Send account number	A18	High High
4	Send Enter key	A57	High High
5	Send Exp Date MMYY	A18	High High
6	Send Enter key	A57	High High
7	Send Customer's Name	A19	High High
8	Send Enter key	A57	High High
9	Save Rule	A2	High Low High Low

Rule 4: The Store Credit Card Rule

Step	Bar Code	On Page	Beep Indication
1	Dual Magstripe Reader	A4	High High
2	Specific string any location	A12	High Low
3	0	A68	High Low
4	2	A68	Low Low
5	S	A70	Low Low
6	T	A70	Low Low
7	O	A70	Low Low
8	R	A70	Low Low
9	E	A69	Low Low
10	End of Message	A71	High High
11	Send F5	A58	High High
12	Skip ahead 1 character	A19	High High
13	Send up to character	A13	Low Low
14	Dash "-"	A67	High High
15	Send Enter key	A57	High High
16	Select Track 1 Data	A19	High High
17	Move to character	A13	Low Low
18	Dash "-"	A67	High High
19	Send up to character	A13	Low Low
20	Dash "-"	A67	High High
21	Send comma ","	A36	High High
22	Send up to character	A13	Low Low
23	Dash "-"	A67	High High
24	Send Enter key	A57	High High
25	Save Rule	A2	High Low High Low

This very long rule illustrates the ability of ADF to handle non-standard credit card formats. Most ADF users will be writing rules for standard credit cards, as illustrated in Rule 3.

Formatting Serial Data

A convenience store has a smart weight scale that transmits the price of an item, followed by the weight and description. The weight is a 6 digit number from 0 to 999.999. The price is a 6 digit number from 0 to 9999.99. The description is 30 characters long. For both weight and price, the decimal point is implied and not sent. Messages from the weight scale may look like the following:

"000125001633Potato Salad"
"000785002010Roast Beef"

The store uses an IBM AT wedge as a host. Data should be sent with the implied decimal points added. The leading zeros should be removed for price, but not weight. Leading spaces should be removed from the description. Tabs should be placed between each field. When data is read from the weight scale, the following data should be sent:

1.25 [tab] 001.633 [tab] Potato Salad [ENTER]
7.85 [tab] 002.010 [tab] Roast Beef [ENTER]

The following rules need to be entered:

When serial data is received, remove leading zeros, send next 4 characters, send period, stop zero removal, send next 2 characters, send tab key, send next 3 characters, send period, send next 3 characters, send tab, crunch all spaces, send all data that remains, send enter key.

Rule 5: The Deli Weight Scale Rule

Step	Bar Code	On Page	Beep Indication
1	Either Scanner Port	A4	High High
1	Auxiliary Port	A4	High High
2	Remove leading zeros	A22	High High
3	Send next 4 characters	A16	High High
4	Send period	A36	High High
5	Stop zero removal	A22	High High
6	Send next 2 characters	A16	High High
7	Send tab key	A56	High High
8	Send next 3 characters	A16	High High
9	Send period	A36	High High
10	Send next 3 characters	A16	High High
11	Send tab key	A56	High High
12	Crunch all spaces	A22	High High
13	Send all data that remains	A16	High High
14	Send Enter key	A57	High High
15	Save Rule	A2	High Low High Low

Rules are limited to approximately 15 action entries, and 15 criteria entries. Most units have enough storage space for up to 20 average sized rules.

The previous examples cover the three major sources of input into your Symbol product. It is not necessary to enter a rule for each input. A default rule will send inputted data exactly as it is received. You may have multiple rules for a particular input source. But be aware of the rule entry order. **The last rule entered is the first rule checked when scan, magstripe or serial data is read.**