



894 Delivery/Return Base Record	
Functional Group=DX	Version 005010 X12
Mapping Procedures and Tips on Save Mart's 894 Document	
<p>Save Mart utilizes the 894 Delivery/Return Base Record Transaction Set for DSD Shipments. The 894 Transaction Set can be used to provide for customary and established business and industry practice relative to communicating adjustments to a DSD Delivery or to acknowledge the completion of a delivery.</p> <p>Any questions concerning mapping requirements should be directed to Save Mart EDI at edisupport@savemart.com.</p>	

Header:

<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max Use</u>	<u>Loop Repeat</u>
010	ST	Transaction Set Header	M	1	
020	G82	Delivery/Return Base Record Identifier	M	1	

Detail:

<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max Use</u>	<u>Loop Repeat</u>		
010	LS	Loop Header	M	1			
<table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <tr> <td style="width: 50%;">Loop ID – 0100</td> <td style="width: 50%; text-align: right;">9999</td> </tr> </table>					Loop ID – 0100	9999	
Loop ID – 0100	9999						
020	G83	Line Item Detail/DSD	M	1			
030	G22	Pricing Information	O	1			
040	G72	Allowance or Charge	O	10			
060	LE	Loop Trailer	M	1			

Summary:

<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max Use</u>	<u>Loop Repeat</u>
010	G72	Allowance or Charge	O	20	
030	G84	Delivery/Return Record of Totals	M	1	
040	G86	Signature	M	1	
050	G85	Record Integrity Check	M	1	
080	SE	Transaction Set Trailer	M	1	



G82 Delivery/Return Base Record Identifier

Position: 020
Max Use: 1
Level: Heading
Usage: Mandatory
Loop: N/A
Elements: 9
Purpose: To transmit identifying numbers, dates, and other basic data relating to the transaction set.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
G8201	478	Credit/Debit Flag Code	M	ID	1/1
		<u>Code</u> <u>Name</u>			
		C Credit - Returns			
		D Debit - Deliveries			
G8202	861	Supplier's Deliver/Return Number Identifying number assigned by the supplier – used as the invoice number.	M	AN	1/22
G8203	860	DUNs Number Save Mart DUNS = 007874480	M	ID	9/9
G8204	862	Receiver's Location Number Save Mart Store Number – Always 3 digits – Add leading zeros for 1 and 2 digit store numbers.	M	AN	3/3
** For Testing the following "Store" #'s – Location Codes – are requested:					
Save Mart Banner Location Code = 880					
Lucky Banner Location Code = 884					
Food Maxx Banner Location Code = 887					
G8205	860	DUNs Number Supplier DUNS	M	ID	9/9
G8206	871	Supplier's Location Number Number assigned by supplier that provides uniqueness when combined with the sender DUNs number.	M	AN	1/6
G8207	872	Physical Delivery or Return Date <i>Date expressed as CCYYMMDD.</i>	M	DT	8/8
G8208	873	Product Ownership Transfer Date <i>Date expressed as CCYYMMDD</i>	O	DT	8/8
G8209	324	Purchase Order Number	O	AN	1/22



LS Loop Header

Position: 010
Max Use: 1
Level: Detail
Usage: Mandatory
Loop: N/A
Elements: 1
Purpose: To indicate that the next segment begins a loop.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
LS01	447	Loop Identifier Code	M	ID	1/6

0100 Expected.

G83 Line Item Detail/DSD

Position: 020
Max Use: 1
Level: Detail
Usage: Mandatory
Loop: 0100
Elements: 9
Purpose: To specify the basic, and most frequently used line item data for the delivery record transaction.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
G8301	204	DSD Sequence Number	M	N0	1/4
G8302	380	Quantity	M	R	1/15
G8303	355	Unit of Measure <u>Code</u> <u>Name</u> CA Case EA Each LB Pounds	M	ID	2/2
G8304	766	UPC/EAN Consumer Package Code	M	AN	12/12
G8305	235	Product/Service ID Qualifier <u>Code</u> <u>Name</u> DI Deposit Item Number UI U.P.C./EAN Consumer Pkg Code (1-5-5) UD U.P.C./EAN Consumer Pkg Code (2-5-5)	O	ID	2/2
G8306	234	Product/Service ID	O	AN	1/48
G8308	237	Item List Cost	M	R	1/9
G8309	356	Pack	M	N0	1/6
G8310	878	Cash Register Item Description	O	AN	1/20



G22 Pricing Information

Position: 030
Max Use: 1
Level: Detail
Usage: Optional
Loop: 0100
Elements: 2
Purpose: To specify pre-pricing information.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
G2201	288	Pre-Price Option Code	M	ID	1/1
G2202	420	Price New, Suggested Retail The consumer package price or retail unit price associated with the product applicable on or after an effective price date.	O	N2	2/7
G2203	289	Multiple Price Quantity Quantity of units for a given price, e.g., 3 for \$10.00	O	N0	1/2

Semantic Notes:

- 01 If G2201 equals "A", then G2202 and G2203 are required.
- 02 If G2201 equals "Y", then G2202 is required.
- 05 G2204 is the effective date of the price information.

Comments:

- 01 If G2201 equals "Z" or G2201 equals "N", then neither G2202 nor G2203 are required.

G72 Allowance or Charge

Position: 040
Max Use: 10
Level: Detail
Usage: Optional
Loop: 0100
Elements: 8
Purpose: To specify allowances, charges, or services.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
G7201	340	Allowance or Charge Code <500 = Allowance >500 = Charge	M	ID	1/3
G7202	331	Allowance or Charge Method of Handling Code <u>Code</u> <u>Name</u> 01 Discount Terms Applicable 02 Off Invoice 15 Information Only	M	ID	2/2
G7205	359	Allowance or Charge Rate Allowance or Charge Rate per Unit.	M	R	1/15
G7206	339	Allowance or Charge Quantity	C	R	1/10
G7207	355	Unit or Basis for Measurement Code	C	ID	2/2
G7208	360	Allowance or Charge Total Amount	C	N2	1/15
G7209	332	Percent	C	R	1/6
G7210	828	Dollar Basis for Percent	C	R	1/9



LE Loop Trailer

Position: 060
Max Use: 1
Level: Detail
Usage: Mandatory
Loop: N/A
Elements: 1
Purpose: To indicate that the next loop immediately preceding this segment is complete.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
LE01	447	Loop Identifier Code	M	ID	1/6

0100 Expected.

G72 Allowance or Charge

Position: 010
Max Use: 20
Level: Summary
Usage: Optional
Loop: N/A
Elements: 8
Purpose: To specify allowances, charges, or services that cover entire order.

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
G7201	340	Allowance or Charge Code <500 = Allowance >500 = Charge	M	ID	1/3
G7202	331	Allowance or Charge Method of Handling Code <u>Code</u> <u>Name</u> 02 Discount Terms Applicable 02 Off Invoice 15 Information Only	M	ID	2/2
G7205	359	Allowance or Charge Rate Allowance or Charge Rate per Unit.	M	R	1/15
G7206	339	Allowance or Charge Quantity	C	R	1/10
G7207	355	Unit or Basis for Measurement Code	C	ID	2/2
G7208	360	Allowance or Charge Total Amount	C	N2	1/15
G7209	332	Percent	C	R	1/6
G7210	828	Dollar Basis for Percent	C	R	1/9



G84 Delivery/Return Record of Totals

Position: 030
Max Use: 1
Level: Summary
Usage: Mandatory
Loop: N/A
Elements: 3
Purpose: To specify summary details of total items in terms of quantity or amount.

Element Summary:

Ref	Id	<u>Element Name</u>	Req	Type	Min/Max
G8401	380	Quantity	M	R	1/15
G8402	361	Total Invoice Amount	M	N2	1/10
G8403	865	Total Deposit Dollar Amount	O	N2	1/6

G86 Signature

Position: 040
Max Use: 1
Level: Summary
Usage: Mandatory
Loop: N/A
Elements: 1
Purpose: To transmit an electronic identity.

Element Summary:

Ref	Id	<u>Element Name</u>	Req	Type	Min/Max
G8601	867	Signature	M	AN	1/12

***Save Mart Systems can accept "0000" or other identifying # in the G86 e01.

Electronic identity. Calculation algorithm obtained from the Uniform Code Council. Detailed explanation in Appendix.



G85 Record Integrity Check

Position: 050
Max Use: 1
Level: Summary
Usage: Mandatory
Loop: N/A
Elements: 1
Purpose: To provide a secure method of identifying authenticity of record content.

Element Summary:

Ref	Id	<u>Element Name</u>	Req	Type	Min/Max
G8501	866	Integrity Check Value	M	AN	1/12

***Save Mart Systems can accept "0000" or other identifying # in the G85 e01.

Data element providing secure method for identifying authenticity of content. Value calculated by using CRC 16 algorithm.

The Integrity Check Value is generated using a CRC algorithm as specified in the Appendix. As a result, the Integrity Check Value must be a fixed length of four characters with no zero suppression.

It is applied to the contents of the entire transaction set up to this segment (i.e., from the beginning of the ST segment up through and including the end of the G86 segment.)

SE Transaction Set Trailer

Position: 080
Max Use: 1
Level: Summary
Usage: Mandatory
Loop: N/A
Elements: 2
Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).

Element Summary:

Ref	Id	<u>Element Name</u>	Req	Type	Min/Max
SE01	96	Number of included Segments	M	N0	1/10
SE02	329	Transaction Set Control Number	M	AN	4/9



APPENDIX

CRC Generation

CRC Use

The Cyclic Redundancy Check is a number used to check the integrity of the contents of a data block or record. It is generated by processing the contents of the record or block using a specified algorithm. If the contents of the record or block are altered in any way, the value of the CRC is altered, creating a mismatch between the original CRC and the one calculated from this altered record or block. Hence, it serves much like a check digit but with greater effectiveness.

In UCS, the CRC-16 algorithm is the specific one employed. It detects all errors in bursts up to 16 bits in length and 99.955% of all errors in bursts of greater length.

It is used in UCS for two distinctly different applications:

- **In the Direct Connect Interface Standard:** A CRC is generated for each data block as it is transmitted and is then appended to it. It is expressed as a 16-bit binary number and then transmitted as two 8-bit bytes.
- **In the 894/895 Delivery/Return Transaction Sets:** The CRC-16 algorithm is used to verify the integrity of the contents of the transaction set. It is applied to the ASCII binary coded representation of the contents of the entire transaction set from the beginning of the ST through the end of the G86 Signature data segment. (Envelope control segments are excluded from the calculation since they lie outside the transaction set and depends on how the transaction set is sent [DEX or NEX]. Since these control segments are usually discarded before the transaction set is interpreted and archived. Segment delimiters within the transaction set must be included in the calculation and must be represented by the ASCII control character pair 'CR' and 'LF') The resulting sixteen bit number (most significant bit first and least significant bit last) is converted into four, hexadecimal ASCII characters (most significant character first and least significant character last). The four characters are then stored in the transaction set immediately thereafter as data element G8501 (Integrity Check Value) in the G85 Record Integrity Check (RIC) data segment. Only the G85 segment itself and the terminating SI segment that comes after are left out of the calculation.

CRC Algorithm

The CRC-16 Algorithm is based on the generating function:

$$G(x) = x^{16} + x^{15} + x^2 + x^0$$

Process

1. Take the CRC of the high byte of the secret code
2. Take the CRC of the low byte of the secret code
3. Look at the first byte of the invoice number. If it is 'D', take the CRC of the 'D'. If it is 'R', take the CRC of 'C'. [Determine if it is a debit or credit – CRC of 'D' or 'C' translates to 'C' or 'R'. Delivery-Charge or Return]
4. CRC the rest of the invoice number (variable length)



Example:

If the secret code is 9925 and the invoice number is R123, this is the process:

1. Take the CRC of the high byte of the secret code. It is 38. Take the CRC of 38.
2. Take the CRC of the low byte of the secret code. It is 197. Take the CRC of 197.
3. Look at the first byte of the invoice number. It is 'R', take the CRC of 'C' (Credit).
4. CRC the rest of the invoice number (123)

In this example, the CRC is 10714 (decimal), 29DA (hex).

The resultant 16 bit number represents the signature.



894 - Delivery/Return Base Record Example

ST*894*0001
G82*D*794116*007874480*008*129995400*1234*20120516
LS*0100
G83*1*375*CA*001820011030****17.00**BUD 30 PACK CAN
G72*51*02*BUD 30 PACK CA**-1.15
G72*526*02***0.75
G83*2*14*CA*001820000771****14.35**BUD 2/12 LNNR
G72*526*02***0.60
G83*3*21*CA*001820015047****9.10**NATURAL LT 2/12 CAN
G72*526*02***0.60
G83*4*2*CA*001820000884****16.00**MICH LT 2/12 NRLN
G72*526*02***0.60
G83*5*144*CA*001820053025****11.90**BUD LT 20/12 LNNR
G72*51*02*BUD LT 20/12 L**-1.00
G72*526*02***0.50
G83*6*705*CA*001820053030****17.00**BUD LT 30 PK CAN
G72*51*02*BUD LT 30 PK C**-1.15
G72*526*02***0.75
G83*7*7*CA*008066095315****18.75**PACIFICO 2/12 NR
G72*526*02***0.60
G83*8*20*CA*001820053218****10.75**BUD LT 18-PK CAN
G72*526*02***0.45
G83*9*35*CA*001820053047****14.35**BUD LT 2/12 CAN
G72*526*02***0.60
G83*10*7*CA*008066095675****22.05**CORONA LT 2/12 NR
G72*526*02***0.60
G83*11*21*CA*008066095605****22.05**CORONA EXTRA 4/6 NR
G72*51*02* CORONA EXTRA 4**-1.60
G72*526*02***0.60
G83*12*90*CA*008066095615****22.05**CORONA EXTRA 2/12 N
G72*526*02***0.60
G83*13*5*CA*008066095715****17.60**MODELO ESP 2/12 CAN
G72*51*02* MODELO ESP 2/1**-2.10
G72*526*02***0.60
G83*14*2*CA*001820005992****22.50**BACARDI 4/6 LNNR
G72*526*02***0.60
G83*15*7*CA*001820005990****16.00**MICH ULTRA 2/12 LNN
G72*526*02***0.60
LE*0100
G84*1500*2452750
G86*0000
G85*0000
SE*43*0001



Modification History:

Version 1.0DSD

- Initial Documentation.

Version 1.1DSD

- Corrections.

Version 1.2DSD

- Clarification – add testing requirements for Location Code information in G82 segment.