### 846 Inventory Advice for SAS

#### **INTRODUCTION**

The 846 Inventory Advice transaction is used by Sears' Source Availability System (SAS) to support the Retail Direct Delivery Program of home-delivered merchandise such as furniture and big-ticket appliances. The success of this program is dependent on our sales associates' ability to quote acceptable, accurate home delivery dates to our customers at point of sale. There are several elements which impact this ability, but none more important than our vendors maintaining accurate item availability dates and quantities within SAS.

The 846 transaction set provides for the communication of a current in-stock quantity plus up to six future dates and quantities for each item/SKU. These quantities are stored in 'buckets'. As sales occur or stock replenishment orders are placed, the quantity ordered of each item/SKU is deducted from the SAS available quantity. When the entire available quantity of an item/SKU has been sold for a particular date, SAS looks to the next future date for a quantity sufficient to fill the order. If there is no availability for any date, no orders can be processed.

ISA/GS Qualifier, Receiver ID	
TEST	08, 6111250021
PRODUCTION	08, 6111250022

For each item/sku, SAS maintains the following information:

Original Quantity:	Quantity available prior to the store opening on each day.
Demand Quantity:	Quantity reserved for orders during each day.
Available Quantity:	Quantity available to order (original quantity minus demand
	quantity) throughout each day.

Each night at 3:30 AM eastern time, SAS performs maintenance to all vendor availability files. This maintenance performs the following functions:

- The current availability date is changed to reflect the new date.
- The demand quantity is reset to zero.
- A new 'original quantity' and 'available quantity' are established to begin the new day. The
  original quantity and available quantity established will be the same quantity to begin each
  new day.

Because the current date changes each day, a future availability date becomes current when that date is reached. When a future date becomes current, any remaining quantity in the old current date 'bucket' will be added to the quantity reported in the future date 'bucket' to establish the quantity available to begin business for the new day. The examples on the next page illustrate the update process.

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#### SAS UPDATE PROCESS

Inventory	Availability	/ PRIOR to	Update on 04/09	(prior to 3:30 AM EST)

			Available	
Type of Date	Date Available	Original Quantity	Quantity	Demand Quantity
Current:	4/8	100	20	80
1st Future:	4/9	50	50	0
2nd Future:	4/15	50	50	0
3rd Future:	5/15	9999999	9999999	0

Inventory Availabil	ity AFTER Update	on 04/09 (after t	<u>o 3:30 AM EST)</u>	
			Available	
Type of Date	Date Available	Original Quantity	Quantity	Demand Quantity
Current:	4/9	70	70	0
1st Future:	4/15	50	50	0
2nd Future:	5/15	9999999	9999999	0

In the above example, the day 4/8 began with 100 pieces on hand. During the day, 80 were sold, leaving 20 available at the end of the day. There were 50 available with a future date of 4/9. When SAS ran at 3:30 AM, a new 'current date' was established of 4/9. The 20 left at the end of the day on 4/8 were added to the 50 available on 4/9 to establish 70 as the 'original quantity' and 'available quantity' to begin the new day on 4/9.

Vendors can report a maximum quantity of 9999999. SAS assumes this is 'unlimited' quantity and will not reduce it as orders are placed. Unlimited availability should only be used when the availability of the item/SKU is actually unlimited. During certain high volume sales events, demand could exceed the actual quantity the vendor has available or the capacity to produce. This can result in breaking home delivery date promises to our customers.

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Functional Group ID=

### **Transaction Set Table**

#### Header

Seg. ID ST	Name	Req. <u>Des.</u> M	/lax.Use	Loop <u>Repeat</u>	
ST	Transaction Set Header	Μ	1		
BIA	Beginning Segment for Inventory Inquiry/Advice	М	1		
REF	Reference Identification	0	12		
	LOOP ID - N1			5	
N1	Name	0	1		

### Detail

Seg.		Req.		Loop	
<u>ID</u>	<u>Name</u>	Des.	<u>Max.Use</u>	<b>Repeat</b>	
	LOOP ID - LIN			10000	
LIN	Item Identification	М	1		
DTM	Date/Time Reference	0	10		
REF	Reference Identification	0	>1		
	LOOP ID - QTY			99	
QTY	Quantity	0	1		
	LOOP ID - SCH			25	
SCH	Line Item Schedule	0	1		

### Summary

Seg.		Req.	Loop
ID	<u>Name</u>	Des. Max.Use	<u>Repeat</u>
SE	Transaction Set Trailer	M 1	

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Segment:	ST Transaction Set Header
Loop:	
Level:	Header
Usage:	Mandatory
Max Use:	1

Ref.	Data				
Des.	<u>Element</u>	<u>Name</u>		Att	ributes
<b>ST01</b>	143	Transaction	n Set Identifier Code	Μ	ID 3/3
		846	Inventory Inquiry/Advice		
ST02	329	Transaction	n Set Control Number	Μ	AN 4/9

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Segment:	<b>BIA</b> Beginning Segment for Inventory Inquiry/Advice
Level:	Header
Usage:	Mandatory
Max Use:	1

#### Max Use:

#### Notes: 1. BIA02 is the sender's internal document number and is used to identify

- the transaction in the supplier's system. 2. The date and time (BIA04 and BIA05) are the date and time of creation. The SAS application will use these elements to determine the most current transaction if more than one is transmitted. The transaction may not be more than 24 hours old or it will be rejected by the SAS system.
- 3. Time is expressed using a 24-hour clock.

			Data Eler	nent Summary		
	Ref.	Data		-	Sea	ars'
	Des.	<u>Element</u>	<u>Name</u>		Att	<u>ributes</u>
	BIA01	353	Transaction Se	et Purpose Code	Μ	ID 2/2
			00	Original		
	BIA02	755	Report Type C	ode	Μ	ID 2/2
			MB	Manufacturer/Distributor Invented	ory R	leport
	BIA03	127	Reference Ider	ntification	Μ	AN 1/30
	BIA04	373	Date		Μ	DT 8/8
	BIA05	337	Time		Μ	TM 4/8
Not Used	BIA06	306	Action Code			

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Segment:	<b>REF</b> Reference Identification
Loop:	
Level:	Header
Usage:	Required by Sears
Max Use:	2
Nataa	1. Two iterations of the DEE compart are required to enacify the betch

- **Notes:** 1. Two iterations of the REF segment are required to specify the batch number and SAS vendor number (source system ID).
  - 2. The value of REF\*BT is the batch sequence number from the last batch of purchase orders that you received and processed before producing this item availability report.
  - 3. The value of REF\*IA is a Sears-assigned number which identifies the vendor to the SAS application. This is not the same vendor number required for the invoice.

	Data Element Summary					
	Ref.	Data		Sea	ars'	
	Des.	Element	Name	Att	ributes	
	REF01	128	Reference Identification Qualifier	Μ	ID 2/2	
			BT Batch Number			
			IA Internal Vendor Number			
	REF02	127	Reference Identification	Μ	AN 3/4	
			3 - 3 Batch number			
			4 - 4 SAS vendor identifier			
Not Used	REF03	352	Description			
Not Used	REF04	C040	Reference Identifier			

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Segment:	N1 Name
Loop:	N1
Level:	Header
Usage:	Required by Sears
Max Use:	1

**Notes:** 1. The N104 will contain the Sears-assigned location code for the vendor's ship point. The inventory availability for each reporting location (ship point) must be reported in a separate transaction.

Ref.	Data		
Des.	<u>Element</u>	Name A	<u>ttributes</u>
N101	98	Entity Identifier Code N	I ID 2/2
		RL Reporting Location	
N102	93	Name	
N103	66	Identification Code Qualifier N	ID 2/2
		92 Assigned by Buyer or Buyer's Age	nt
N104	67	Identification Code N	AN 9/9
		9 - 9 Reporting location (ship point)	
N105	706	Entity Relationship Code	
N106	98	Entity Identifier Code	
	Des. N101 N102 N103 N104 N105	Des.         Element           N101         98           N102         93           N103         66           N104         67           N105         706	Des. N101Element 98Name Entity Identifier Code RLAN10198Entity Identifier Code RLNN10293NameN10366Identification Code Qualifier 92M92Assigned by Buyer or Buyer's AgeN10467Identification Code 9 - 9M9 - 9Reporting location (ship point)N105706Entity Relationship Code

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Segment:	LIN Item Identification
Loop:	LIN
Level:	Detail
Usage:	Mandatory
Max Use:	1 per LIN loop; LIN loop may repeat per standards

- **Notes:** 1. The LIN segment begins the detail area of the transaction set. One LIN loop should be created for each item/SKU included in the report for the reporting location (ship point). LIN05 and LIN06 are optional. If there is no SKU for the item then these elements should be omitted.
  - 2. The Sears item number must be returned as five digits numeric. If the Sears item number is only four digits, add a leading zero.

	Ref.	Data		Sea	ars'
	Des.	Element	Name	Att	<u>ributes</u>
Not Used	LIN01	350	Assigned Identification		
	LIN02	235	Product/Service ID Qualifier	Μ	ID 2/2
			IN Buyer's Item Number		
	LIN03	234	Product/Service ID	Μ	AN 4/5
			5 - 5 Sears' item number		
	LIN04	235	Product/Service ID Qualifier	0	ID 2/2
			IZ Buyer's Size Code		
	LIN05	234	Product/Service ID	С	AN 1/48
			3 - 3 Sears' SKU number		
Not Used	LIN06	235	Product/Service ID Qualifier		
Not Used	LIN07	234	Product/Service ID		
Not Used	LIN08	235	Product/Service ID Qualifier		
Not Used	LIN09	234	Product/Service ID		
Not Used	LIN10	235	Product/Service ID Qualifier		
Not Used	LIN11	234	Product/Service ID		
Not Used	LIN12	235	Product/Service ID Qualifier		
Not Used	LIN13	234	Product/Service ID		
Not Used	LIN14	235	Product/Service ID Qualifier		
Not Used	LIN15	234	Product/Service ID		
Not Used	LIN16	235	Product/Service ID Qualifier		
Not Used	LIN17	234	Product/Service ID		
Not Used	LIN18	235	Product/Service ID Qualifier		
Not Used	LIN19	234	Product/Service ID		
Not Used	LIN20	235	Product/Service ID Qualifier		
Not Used	LIN21	234	Product/Service ID		
Not Used	LIN22	235	Product/Service ID Qualifier		
Not Used	LIN23	234	Product/Service ID		

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Not Used	Ref. <u>Des.</u> LIN24	Data <u>Element</u> 235	<u>Name</u> Product/Service ID Qualifier
Not Used	LIN25	234	Product/Service ID
Not Used	LIN26	235	Product/Service ID Qualifier
Not Used	LIN27	234	Product/Service ID
Not Used	LIN28	235	Product/Service ID Qualifier
Not Used	LIN29	234	Product/Service ID
Not Used	LIN30	235	Product/Service ID Qualifier
Not Used	LIN31	234	Product/Service ID

### Sears' <u>Attributes</u>

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Segment:	<b>DTM</b> Date/Time Reference
Loop:	LIN
Level:	Detail
Usage:	Conditional for Sears
Max Use:	1 per LIN loop

- Notes: 1. The DTM segment is sent when the item/SKU will be flagged as discontinued only. If a quantity greater than zero is sent in the first SCH segment, then Sears will continue to take orders for the item until the available inventory quantity is depleted or until 60 days after receipt of the last report on the item, whichever occurs first. If the quantity sent in the first SCH segment is zero, then Sears will flag this item as discontinued and no orders will be taken.
  - 2. The date in DTM02 **must be the current date**; the same date as the transaction creation date in BIA04.

	Data Element Summary					
	Ref.	Data			Sea	ars'
	Des.	<u>Element</u>	<u>Name</u>		Att	<u>ributes</u>
	DTM01	374	Date/Time Qua	alifier	Μ	ID 3/3
			036	Expiration		
				Date coverage expires		
	DTM02	373	Date		Μ	DT 8/8
Not Used	DTM03	337	Time			
Not Used	DTM04	623	Time Code			
Not Used	DTM05	1250	Date Time Per	iod Format Qualifier		
Not Used	DTM06	1251	Date Time Per	iod		

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Segment:	<b>REF</b> Reference Identification
Loop:	LIN
Level:	Detail
Usage:	Required by Sears
Max Use:	1 per LIN loop

1. This segment is required to specify the department number for the Notes: associated line item (LIN). This is the same value sent on the purchase order (REF\*DP) and required on the invoice.

			Data Element Summary		
	Ref.	Data		Sea	rs'
	Des.	Element	Name	Attr	<u>ibutes</u>
	REF01	128	Reference Identification Qualifier	М	ID 2/2
			DP Department Number		
	REF02	127	Reference Identification	М	AN 3/3
			3 - 3 Department number		
Not Used	REF03	352	Description		
Not Used	REF04	C040	Reference Identifier		

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Segment:	QTY Quantity	
Loop:	QTY	
Level:	Detail	
Usage:	Required by Sears	
Max Use:	1 per LIN loop	
Wax USE.		

# **Notes:** 1. The QTY segment is required to specify the total quantity available of the item/SKU identified in the associated LIN segment.

- 2. Only one occurrence of the QTY loop is allowed per LIN segment.
- 3. The quantity reported in QTY02 is the sum of the quantities reported in the SCH segments which follow.
- 4. The SAS application requires a value of "EA" in QTY03.

			Data Element Summary	
	Ref.	Data	-	Sears'
	Des.	<b>Element</b>	Name	<u>Attributes</u>
	QTY01	673	Quantity Qualifier	M ID 2/2
			33 Quantity Available for Sale	(stock quantity)
	QTY02	380	Quantity	M R 1/8
			1 - 8 Total quantity available	
	QTY03	C001	Composite Unit of Measure	
	-C00101	1 355	Unit or Basis for Measurement Code	M ID 2/2
			EA Each	
Used	-C0010	2 - C0011	5	
Used	QTY04	61	Free Form Message	

Not Not

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SCH Line Item S	
SCH	
Detail	
Required by Sears	
7 per LIN/QTY loop	

### SCH Line Item Schedule

**Notes:** 1. The SCH segment is used to communicate the inventory availability for a line item. Current and future item availability is reported. Refer to the SAS Guidelines available from the Vendor Information Guide.

- A quantity of 9999999 indicates unlimited availability of the associated item/SKU. This must be reported in the first occurrence of the SCH segment. If 9999999 quantity is specified, do not send additional SCH segments, only one must be used.
- Up to 7 iterations of the SCH segments are allowed within each LIN/QTY loop to specify current plus 6 future availability dates. (See exception in note 2)
- 4. The first occurrence of the SCH segment **must always specify the current date** and current item availability. The SCH segments must be transmitted in ascending order by date and no two dates may be equal or the transaction will be rejected.
- 5. If an item/SKU is currently unavailable (SCH01 contains the value 0) and has not been discontinued, a second SCH should be sent to specify future availability if the item will be available within 180 days (6 months). An item cannot be sold or reserved unless a quantity is available to sell (current or future).

	Ref.	Data	-	Sea	ars'
	Des.	Element	Name	Att	<u>ributes</u>
	SCH01	380	Quantity	Μ	R 1/10
	SCH02	355	Unit or Basis for Measurement Code	Μ	ID 2/2
			EA Each		
Not Used	SCH03	98	Entity Identifier Code		
Not Used	SCH04	93	Name		
	SCH05	374	Date/Time Qualifier	Μ	ID 3/3
			018 Available		
	SCH06	373	Date	Μ	DT 8/8
Not Used	SCH07	337	Time		
Not Used	SCH08	374	Date/Time Qualifier		
Not Used	SCH09	373	Date		
Not Used	SCH10	337	Time		
Not Used	SCH11	326	Request Reference Number		
Not Used	SCH12	350	Assigned Identification		

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Segment:	SE Transaction Set Trailer
Loop:	
Level:	Summary:
Usage:	Mandatory
Max Use:	1

# **Notes:** 1. SE01 is a count of the total number of segments present in the transaction, including the control segments.

2. SE02 must match the number in ST02.

Ref.	Data			
Des.	Element	Name	Attr	<u>ibutes</u>
<b>SE01</b>	96	Number of Included Segments	Μ	N0 1/10
SE02	329	Transaction Set Control Number	М	AN 4/9

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### **Segment Examples**

<u>SAS - Item Availability</u> ST*846*Control number BIA*00*MB*Document number*Creation date	e*Creation time
REF*IA*SAS application vendor number REF*BT*P.O. batch sequence number	[Date and time validated for currency of information] [Identifies the vendor to Sears' SAS system] [References the last batch of P.O.'s processed before this report was generated]
N1*RL**92*Vendor's reporting location code	[Number assigned by Sears to vendor's ship point]
LIN**IN*Sears' item number*IZ*Sears' SKU r	Current quantity available plus 2 future dates number [Item/SKU reference]
REF*DP*Department number	[References department number for above item/SKU]
QTY*33*250*EA SCH*100*EA***018*Current date	[Total quantity available; sum of SCH quantities] [Current available quantity; must use current date that matches creation date in BIA04]
SCH*75*EA***018*First future date SCH*75*EA***018*Second future date	[Quantity available in future] [Quantity available in future]
LIN**IN*Sears' item number*IZ*Sears' SKU r	Discontinued; quantity available to sell number
DTM*036*Current date	[Item/SKU reference] [Item is discontinued; must use current date that matches creation date in BIA04]
REF*DP*Department number	[References department number for above item/SKU]
QTY*33*85*EA SCH*85*EA***018*Current date	[Total quantity available; sum of SCH quantities] [Item will be deleted when available quantity is sold; must use current date that matches creation date in BIA04]
	Discontinued; no longer available to sell
LIN**IN*Sears' item number*IZ*Sears' SKU r	number [Item/SKU reference]
DTM*036*Current date	[Item is discontinued; must use current date that matches creation date in BIA04]
REF*DP*Department number	[References department number for above item/SKU]
QTY*33*0*EA SCH*0*EA***018*Current date	[Total quantity available; sum of SCH quantities] [Item is unavailable; discontinued; must use current date that matches creation date in BIA04]

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### **Segment Examples**

#### SAS - Item Availability (continued)

#### No current availability; future availability

LIN\*\*IN\*Sears' item number\*IZ\*Sears' SKU number

REF\*DP\*Department number

QTY\*33\*150\*EA SCH\*0\*EA\*\*\*018\*Current date

SCH\*75\*EA\*\*\*018\*Future date

[Item/SKU reference] [References department number for above item/SKU] [Total quantity available; sum of SCH quantities] [Current quantity available is zero; must use current date that matches creation date in BIA04] [Quantity available in future]

#### Discontinued, future quantity available

LIN\*\*IN\*Sears' item number\*IZ\*Sears' SKU number

REF\*DP\*Department number item/SKU] QTY\*33\*500\*EA SCH\*0\*EA\*\*\*018\*Current date

SCH\*500\*EA\*\*\*018\*Future date

[Item/SKU reference] [References department number for above

[Total quantity available; sum of SCH quantities] [Current available quantity is zero; must use current date that matches creation date in BIA04] [Quantity available in future]

#### Unlimited quantity available

LIN\*\*IN\*Sears' item number REF\*DP\*Department number QTY\*33\*9999999\*EA SCH\*99999999\*EA\*\*\*018\*Current date

#### [Item reference] [References department number for above item]

[Total quantity available; sum of SCH quantities] [Indicates unlimited availability; must use current date that matches creation date in BIA04]

SE\*Count of segments\*Control number

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### History of Revisions

<u>February 2008</u> Added note to LIN – five digit item number is required Typo in last Introduction example corrected