# 997 Functional Acknowledgment

## Introduction

The purpose of this section is to present and explain the application of the ASC X12 Standard as they pertain to the retail implementation of the Functional Acknowledgment Transaction Set.

Functional Acknowledgments (FA) are required for each functional group transmitted. The FA must be sent by the receiver of the functional group, to the sender, by the close of the next business day after receipt, to acknowledge the receipt and the syntactical condition of the functional group. The minimum level of detail for the FA is the group, i.e. it is not required to acknowledge at the transaction set level, nor is it required to acknowledge specific segments and data elements in error. Acknowledgment at a level lower than the group is by trading partners agreement.

The Functional Acknowledgment transaction provides a positive response that informs the sender if the content of the transmission was syntactically correct. The syntactical correctness is based on the X12 syntax documented in the ASC X12.6 standard. It is not an acknowledgment of any application data such as terms, discounts, etc. The Functional Acknowledgment transaction can provide increasing levels of detail.

The acknowledgment, in the simplest form, provides response at the functional group level using the AK1 and AK9 segments. Individual transactions can be acknowledged by using the AK2 and AK5 segments, and, individual segments in error can be indicated by using the AK3 and AK4 segments. In practice, acceptance and rejection are controlled at the functional group level. Acknowledgment at detail levels below the group require added complexity at the sending and receiving points in addition to the added cost of transmitting the additional data. The level of detail used in the Functional Acknowledgment is controlled by the trading partners.

**ASC X12** | # 997 Functional Acknowledgment

This Draft Standard for Trial Use contains the format and establishes the data contents of the Functional Acknowledgment Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to define the control structures for a set of acknowledgments to indicate the results of the syntactical analysis of the electronically encoded documents. The encoded documents are the transaction sets, which are grouped in functional groups, used in defining transactions for business data interchange. This standard does not cover the semantic meaning of the information encoded in the transaction sets.

## Header

| PAGE # | POS. # | SEG. ID | NAME | REQ. DES. | MAX USE | LOOP REPEAT |
|--------|--------|---------|------|-----------|---------|-------------|
| 1667 | 0100 | ST | Transaction Set Header | M | 1 | |
| 1668 | 0200 | AK1 | Functional Group Response Header | M | 1 | |
| | | | **LOOP ID - AK2** | | | **999999** |
| 1669 | 0300 | AK2 | Transaction Set Response Header | O | 1 | |
| | | | **LOOP ID - AK2/AK3** | | | **999999** |
| 1670 | 0400 | AK3 | Data Segment Note | O | 1 | |
| 1671 | 0500 | AK4 | Data Element Note | O | 99 | |
| 1672 | 0600 | AK5 | Transaction Set Response Trailer | M | 1 | |
| 1673 | 0700 | AK9 | Functional Group Response Trailer | M | 1 | |
| 1674 | 0800 | SE | Transaction Set Trailer | M | 1 | |

**VICS EDI** | **997** Functional Acknowledgment

## Header

| PAGE # | POS. # | SEG. ID | NAME | REQ. DES. | MAX USE | LOOP REPEAT |
|--------|--------|---------|------|-----------|---------|-------------|
| 1667 | 0100 | ST | Transaction Set Header | M | 1 | |
| 1668 | 0200 | AK1 | Functional Group Response Header | M | 1 | |
| | | | **LOOP ID - AK2** | | | **999999** |
| 1669 | 0300 | AK2 | Transaction Set Response Header | O | 1 | |
| | | | **LOOP ID - AK2/AK3** | | | **999999** |
| 1670 | 0400 | AK3 | Data Segment Note | O | 1 | |
| 1671 | 0500 | AK4 | Data Element Note | O | 99 | |
| 1672 | 0600 | AK5 | Transaction Set Response Trailer | M | 1 | |
| 1673 | 0700 | AK9 | Functional Group Response Trailer | M | 1 | |
| 1674 | 0800 | SE | Transaction Set Trailer | M | 1 | |

## Transaction Set Notes:

**1/0100** These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments. Nor shall a Functional Acknowledgment be sent to report errors in a previous Functional Acknowledgment.

**1/0100** The Functional Group Header Segment (GS) is used to start the envelope for the Functional Acknowledgment Transaction Sets. In preparing the functional group of acknowledgments, the application sender's code and the application receiver's code, taken from the functional group being acknowledged, are exchanged; therefore, one acknowledgment functional group responds to only those functional groups from one application receiver's code to one application sender's code.

**1/0100** There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.

**1/0200** AK1 is used to respond to the functional group header and to start the acknowledgment for a functional group. There shall be one AK1 segment for the functional group that is being acknowledged.

**1/0300** AK2 is used to start the acknowledgment of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

**1/0400** The data segments of this standard are used to report the results of the syntactical analysis of the functional groups of transaction sets; they report the extent to which the syntax complies with the standards for transaction sets and functional groups. They do not report on the semantic meaning of the transaction sets (for example, on the ability of the receiver to comply with the request of the sender).

**Segment:** **ST** **Transaction Set Header**
**Level:** Header
**Loop:** ___
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To indicate the start of a transaction set and to assign a control number
**Semantic:** **1**   The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).

**2**   The implementation convention reference (ST03) is used by the translation routines of the interchange partners to select the appropriate implementation convention to match the transaction set definition.

**Data Element Summary**

| REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES | | |
|---|---|---|---|---|---|
| ➤ | **ST01** | 143 | **Transaction Set Identifier Code** <br> Code uniquely identifying a Transaction Set <br> **997** Functional Acknowledgment | M | ID | 3/3 |
| ➤ | **ST02** | 329 | **Transaction Set Control Number** <br> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | M | AN | 4/9 |

**The number is sequentially assigned by the sender, starting with one within each functional group. For each functional group, the first transaction set control number will be 0001 and incremented by one for each additional transaction set within the group.**

| | **ST03** | 1705 | **Implementation Convention Reference** <br> Reference assigned to identify Implementation Convention | O | AN | 1/35 |

**NOT USED BY THE RETAIL INDUSTRY**

**Segment:** **AK1** **Functional Group Response Header**
**Level:** Header
**Loop:** ___
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To start acknowledgment of a functional group
**Semantic:** 1 AK101 is the functional ID found in the GS segment (GS01) in the functional group being acknowledged.
2 AK102 is the functional group control number found in the GS segment in the functional group being acknowledged.

**Data Element Summary**

| REF.<br>DES. | DATA<br>ELEMENT | NAME | ATTRIBUTES | | |
|---|---|---|---|---|---|
| ➤ AK101 | 479 | **Functional Identifier Code**<br>Code identifying a group of application related transaction sets | M | ID | 2/2 |
| | | **This is the functional group ID of the group that is being acknowledged, e.g., if a purchase order group is being acknowledged, the value would be PO; it is the value sent in GS01 for the original transmission.** | | | |
| ➤ AK102 | 28 | **Group Control Number**<br>Assigned number originated and maintained by the sender | M | N0 | 1/9 |
| | | **This is the control number assigned to the group being acknowledged, e.g., this is the control number assigned by the sender of the original transmission. It is the value sent in GS06 for the original transmission.** | | | |

|  |  |
|---|---|
| **Segment:** | **AK2** Transaction Set Response Header |
| **Level:** | Header |
| **Loop:** | AK2  **Usage:** Optional  **Max Use:** 999999 |
| **Usage:** | Mandatory |
| **Max Use:** | 1 |
| **Purpose:** | To start acknowledgment of a single transaction set |
| **Semantic:** | **1**  AK201 is the transaction set ID found in the ST segment (ST01) in the transaction set being acknowledged. |
|  | **2**  AK202 is the transaction set control number found in the ST segment in the transaction set being acknowledged. |

**Data Element Summary**

| | REF. DES. | DATA ELEMENT | NAME | | ATTRIBUTES | |
|---|---|---|---|---|---|---|
| ➤ | **AK201** | **143** | **Transaction Set Identifier Code** Code uniquely identifying a Transaction Set | **M** | **ID** | **3/3** |
| | | | This is the transaction set ID of the transaction being acknowledged, e.g., if a purchase order is being acknowledged, the value would be 850; it is the value sent in ST01 for the original transmission. | | | |
| ➤ | **AK202** | **329** | **Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | **M** | **AN** | **4/9** |
| | | | This is the control number assigned to the transaction set being acknowledged, e.g., this is the control number assigned by the sender of the original transmission. It is the value sent in ST02 for the original transmission. | | | |

**Segment:** **AK3** Data Segment Note
**Level:** Header
**Loop:** AK2/AK3     **Usage:** Optional     **Max Use:** 999999
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To report errors in a data segment and identify the location of the data segment

**Data Element Summary**

| REF. DES. | DATA ELEMENT | NAME | | ATTRIBUTES | |
|---|---|---|---|---|---|
| ➤ AK301 | 721 | **Segment ID Code** | M | ID | 2/3 |
| | | Code defining the segment ID of the data segment in error (See Appendix A - Number 77) | | | |
| | | **See External Code Source 77 in Section III for reference document.** | | | |
| ➤ AK302 | 719 | **Segment Position in Transaction Set** | M | N0 | 1/6 |
| | | The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1 | | | |
| AK303 | 447 | **Loop Identifier Code** | O | AN | 1/6 |
| | | The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE | | | |
| AK304 | 720 | **Segment Syntax Error Code** | O | ID | 1/3 |
| | | Code indicating error found based on the syntax editing of a segment | | | |
| | |     **1** Unrecognized segment ID | | | |
| | |     **2** Unexpected segment | | | |
| | |     **3** Mandatory segment missing | | | |

|  |  |
|---|---|
| **Segment:** | **AK4** Data Element Note |
| **Level:** | Header |
| **Loop:** | AK2/AK3 |
| **Usage:** | Optional |
| **Max Use:** | 99 |
| **Purpose:** | To report errors in a data element or composite data structure and identify the location of the data element |
| **Semantic:** | 1  In no case shall a value be used for AK404 that would generate a syntax error, e.g., an invalid character. |

## Data Element Summary

| REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES | | |
|---|---|---|---|---|---|
| ➤ **AK401** | **C030** | **POSITION IN SEGMENT** | **M** | **COMPOSITE** | |
| | | Code indicating the relative position of the simple data element or composite data structure in error within a segment, count beginning with 1 for the position immediately following the segment ID; additionally indicating the relative position of a repeating structure in error, count beginning with 1 for the position immediately following the preceding element separator; additionally indicating the relative position of a component of a composite data structure in error, count beginning with 1 for the position following the preceding element or repetition separator | | | |
| ➤ **- 1** | **722** | **Element Position in Segment** | **M** | **N0** | **1/2** |
| | | This is used to indicate the relative position of a simple data element, or the relative position of a composite data structure with the relative position of the component within the composite data structure, in error; in the data segment the count starts with 1 for the simple data element or composite data structure immediately following the segment ID | | | |
| **- 2** | **1528** | **Component Data Element Position in Composite** | **O** | **N0** | **1/2** |
| | | To identify the component data element position within the composite that is in error | | | |
| | | **NOT USED BY THE RETAIL INDUSTRY** | | | |
| **- 3** | **1686** | **Repeating Data Element Position** | **O** | **N0** | **1/4** |
| | | To identify the specific repetition of a data element that is in error | | | |
| | | **NOT USED BY THE RETAIL INDUSTRY** | | | |
| **AK402** | **725** | **Data Element Reference Number** | **O** | **N0** | **1/4** |
| | | Reference number used to locate the data element in the Data Element Dictionary | | | |
| | | **See External Code Source 77 in Section III for reference document.** | | | |
| ➤ **AK403** | **723** | **Data Element Syntax Error Code** | **M** | **ID** | **1/3** |
| | | Code indicating the error found after syntax edits of a data element | | | |
| | | 1  Mandatory data element missing | | | |
| | | 2  Conditional required data element missing. | | | |
| | | 3  Too many data elements. | | | |
| | | 4  Data element too short. | | | |
| | | 5  Data element too long. | | | |
| | | 6  Invalid character in data element. | | | |
| | | 7  Invalid code value. | | | |
| **AK404** | **724** | **Copy of Bad Data Element** | **O** | **AN** | **1/99** |
| | | This is a copy of the data element in error | | | |

|  |  |
|---|---|
| **Segment:** | **AK5** Transaction Set Response Trailer |
| **Level:** | Header |
| **Loop:** | AK2 |
| **Usage:** | Mandatory |
| **Max Use:** | 1 |
| **Purpose:** | To acknowledge acceptance or rejection and report errors in a transaction set |
| **Notes:** | **The codes listed for AK502 apply to every occurrence of Data Element 720 in the AK5 segment.** |

**Data Element Summary**

| REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES |
|---|---|---|---|
| ➤ **AK501** | **717** | **Transaction Set Acknowledgment Code** <br> Code indicating accept or reject condition based on the syntax editing of the transaction set | **M ID 1/1** |

      **A** Accepted

      **E** Accepted But Errors Were Noted

      **R** Rejected

| REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES |
|---|---|---|---|
| **AK502** | **718** | **Transaction Set Syntax Error Code** <br> Code indicating error found based on the syntax editing of a transaction set | **O ID 1/3** |

      **1** Transaction Set Not Supported

      **2** Transaction Set Trailer Missing

      **3** Transaction Set Control Number in Header and Trailer Do Not Match

      **4** Number of Included Segments Does Not Match Actual Count

      **5** One or More Segments in Error

| REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES |
|---|---|---|---|
| **AK503** | **718** | **Transaction Set Syntax Error Code** <br> Code indicating error found based on the syntax editing of a transaction set | **O ID 1/3** |
| **AK504** | **718** | **Transaction Set Syntax Error Code** <br> Code indicating error found based on the syntax editing of a transaction set | **O ID 1/3** |
| **AK505** | **718** | **Transaction Set Syntax Error Code** <br> Code indicating error found based on the syntax editing of a transaction set | **O ID 1/3** |
| **AK506** | **718** | **Transaction Set Syntax Error Code** <br> Code indicating error found based on the syntax editing of a transaction set | **O ID 1/3** |

| | | | | |
|---|---|---|---|---|
| **Segment:** | **AK9** Functional Group Response Trailer | | | |
| **Level:** | Header | | | |
| **Loop:** | ___ | | | |
| **Usage:** | Mandatory | | | |
| **Max Use:** | 1 | | | |
| **Purpose:** | To acknowledge acceptance or rejection of a functional group and report the number of included transaction sets from the original trailer, the accepted sets, and the received sets in this functional group | | | |
| **Comments:** | A | If AK901 contains the value "A" or "E", then the transmitted functional group is accepted. | | |
| **Notes:** | The codes listed for AK905 apply to every occurrence of Data Element 716 in the AK9 segment. | | | |

**Data Element Summary**

| | REF. DES. | DATA ELEMENT | NAME | ATTRIBUTES |
|---|---|---|---|---|
| ➤ | AK901 | 715 | **Functional Group Acknowledge Code** M ID 1/1<br>Code indicating accept or reject condition based on the syntax editing of the functional group<br>**A** Accepted<br>**E** Accepted, But Errors Were Noted.<br>**P** Partially Accepted, At Least One Transaction Set Was Rejected<br>**R** Rejected | |
| ➤ | AK902 | 97 | **Number of Transaction Sets Included** M N0 1/6<br>Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element | |
| ➤ | AK903 | 123 | **Number of Received Transaction Sets** M N0 1/6<br>Number of Transaction Sets received | |
| ➤ | AK904 | 2 | **Number of Accepted Transaction Sets** M N0 1/6<br>Number of accepted Transaction Sets in a Functional Group | |
| | AK905 | 716 | **Functional Group Syntax Error Code** O ID 1/3<br>Code indicating error found based on the syntax editing of the functional group header and/or trailer<br>**1** Functional Group Not Supported<br>**2** Functional Group Version Not Supported<br>**3** Functional Group Trailer Missing<br>**4** Group Control Number in the Functional Group Header and Trailer Do Not Agree<br>**5** Number of Included Transaction Sets Does Not Match Actual Count | |
| | AK906 | 716 | **Functional Group Syntax Error Code** O ID 1/3<br>Code indicating error found based on the syntax editing of the functional group header and/or trailer | |
| | AK907 | 716 | **Functional Group Syntax Error Code** O ID 1/3<br>Code indicating error found based on the syntax editing of the functional group header and/or trailer | |
| | AK908 | 716 | **Functional Group Syntax Error Code** O ID 1/3<br>Code indicating error found based on the syntax editing of the functional group header and/or trailer | |
| | AK909 | 716 | **Functional Group Syntax Error Code** O ID 1/3<br>Code indicating error found based on the syntax editing of the functional group header and/or trailer | |

**Segment:** **SE** Transaction Set Trailer
**Level:** Header
**Loop:** ___
**Usage:** Mandatory
**Max Use:** 1
**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)
**Comments:** **A** SE is the last segment of each transaction set.

### Data Element Summary

| | REF.<br>DES. | DATA<br>ELEMENT | NAME | ATTRIBUTES | | |
|---|---|---|---|---|---|---|
| ➤ | **SE01** | **96** | **Number of Included Segments** | **M** | **N0** | **1/10** |
| | | | Total number of segments included in a transaction set including ST and SE segments | | | |
| ➤ | **SE02** | **329** | **Transaction Set Control Number** | **M** | **AN** | **4/9** |
| | | | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | | | |
| | | | **This must be the same number as is in the ST segment (ST02) for the transaction set.** | | | |