ACH – NACHA file specifications

SPECIFICATIONS
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MUFG Bank, Ltd.
A member of MUFG, a global financial group

MUFG

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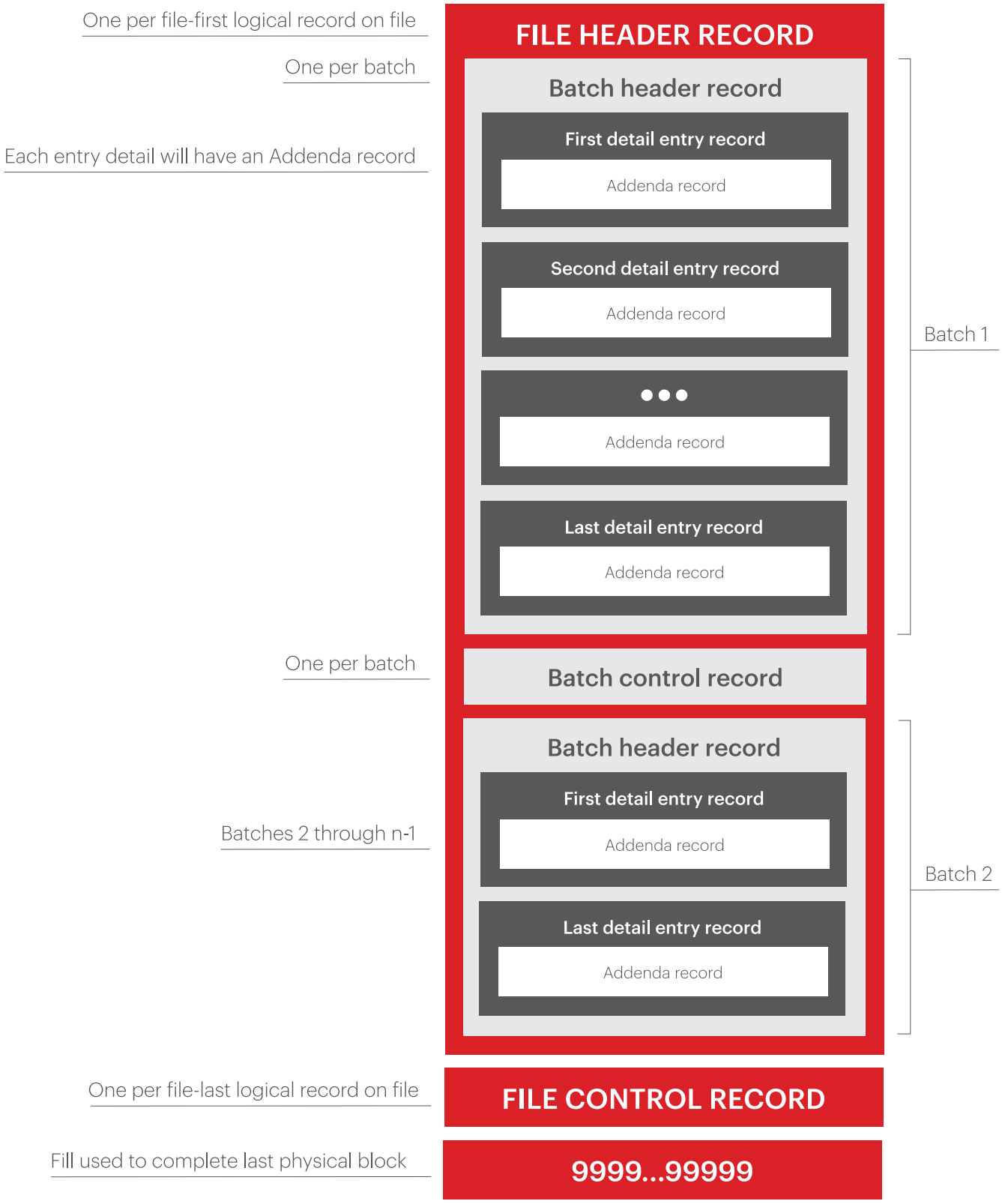
Introduction

This specification covers the formatting requirements for client ACH batches and transactions submitted in NACHA file format to MUFG Bank, Ltd. by transmission (MUFG Connect) and online (MUFG Exchange). The file formats for both transmission and online delivery are the same, differing only for select identifiers. For example, record 1, the Immediate Origin field.

Sequence of records diagram



The National Automated Clearing House Association (NACHA) format defines the order of the individual records within a file as follows:

'1' File Header Record	Identifies the Company sending a file to MUFG Bank, Ltd, (MUFG). (This record is not passed to the Federal Reserve.)
'5' Batch Header Record	Identifies the Company originating transactions. (This record is passed to the Federal Reserve. The Receiving Depository Financial Institution uses Information on this record.)
'6' Entry Detail Record	Dollar Transactions
'7' Addenda Record	Explanatory information used with PPD, CCD, and CTX transactions.
'8' Batch Control Record	Batch Total Information
'9' File Control Record	File Total Information

Field Definition

Mandatory	A "Mandatory" field not included in the ACH record will cause the entry, batch, or file to reject and be returned. A mandatory field is necessary to ensure the proper routing and/or posting of an ACH entry.
Required	A "Required" field will not cause a reject; however, it may cause a reject at the RDFI. Required information may not be included on transactions sent back to the Originator.
Optional	An "Optional" field is at the discretion of the Originator.
Reserved	A "Reserved" field may not be used.

File Record Formats

File header record (all entries) record "1"

Record length 94

POSITION	DATA ELEMENT NAME	SIZE	CONTENTS	REQUIRED
01-01	Record Type Code	1	'1'	Mandatory
02-03	Priority Code	2	'01'	Required
04-13	Immediate Destination (MUFG's Transit Routing Number)	10	Constant MUFG Bank's routing number preceeded by a blank b=blank MUFG Bank NY = b026009632 MUFG Bank Chicago = b071002341	Mandatory
14-23	Immediate Origin (Your Company ID as agreed to by MUFG)	10	For transmission, a pre-agreed identifier for your company (e.g. the tax ID preceded by a "1").	Mandatory
24-29	File Creation Date	6	YYMMDD	Mandatory
30-33	File Creation Time	4	HHMM	Optional
34-34	File ID Modifier - Only upper case A-Z or numeric 0-9 is permitted	1	Unique to each file	Mandatory. The File ID modifier is provided to distinguish multiple files created on the same date. When submitting multiple files in a day, increment the number with each subsequent file. Only upper case A-Z and numbers 0-9 are permitted characters.
35-37	Record Size	3	'094'	Mandatory, constant value.
38-39	Blocking Factor – see Below	2	'10'	Mandatory, constant value.
40-40	Format code	1	'1'	Mandatory, constant value.
41-63	Immediate Destination Name	23	'MUFGBANK'	Mandatory
64-86	Immediate Origin Name (Company Name)	23	Alphanumeric	Mandatory. For files submitted: Via online "BTMUWEBACH" Via transmission: "EGWNACHA"
87-94	Reference Code	8	Alphanumeric	

Blocking factor

Note: The blocking factor is hard coded '10'. The number of records must be divisible by 10. The end of your file must be padded with 9's to make it divisible by 10. Example, if the total number of records in your file was 98, you would create 2 records at the end of the file with 9's in position 01-94.

Batch header record (all entries except IAT) record "5"

Record length 94

POSITION	FIELD	DATA ELEMENT NAME	SIZE	CONTENTS	REQUIRED
01-01	1	Record Type Code	1	'5'	Mandatory
02-04	2	Service Class Code – see Below	3	"220" for credits only. "225" for debits only.	Each batch must be either all debits or all credits. Mixed batch is not allowed.
05-20	3	Company Name (Printed on receiver's statement)	16	Alphanumeric	Enter name of the receiving company in upper case with no spaces between words.
21-40	4	Company Discretionary Data	20	Alphanumeric	Any description allowed.
41-50	5	Company Identification (typically your company's Tax ID preceeded by a "1" as agreed to with MUFG)	10	Alphanumeric	For example, for a Tax-ID of 12-3456789, this field would be "9123456789"
51-53	6	Standard Entry Class Code – see Below	3	CCD, PPD, or CTX.	Mandatory
54-63	7	Company Entry Description (Printed on receiver's statement)	10	Alphanumeric	Mandatory
64-69	8	Company Descriptive Date	6	Alphanumeric	Optional
70-75	9	Effective Entry Date	6	YYMMDD	Required
76-78	10	Settlement Date Julian	3	Blank	Inserted by ACH Operator
79-79	11	Originator Status Code	1	'1'	Mandatory
80-87	12	ODFI Identification (MUFG Transit Routing Number)	8	for MUFG NY "02600963" for MUFG Chicago "07100234"	Mandatory
88-94	13	Batch Number – Ascending Sequence Number	7	Numeric	Mandatory

Supported service class codes

220 Credits Only

225 Debits Only

Supported entry class codes

Originate and receive

PPD – Prearranged Payment and Deposit Entry

CCD – Corporate Credit or Debt

CTX – Corporate Trade Exchange

Receive only

IAT – Corporate International ACH Transaction (IAT) Payment

TEL – Telephone-Initiated Entry

WEB – Internet-Initiated Entry

Plus other SEC codes

Entry detail record (ppd, ccd) record "6"

Record length 94

POSITION	DATA ELEMENT NAME	SIZE	CONTENTS	REQUIRED
01-01	Record Type Code	1	'6'	Mandatory
02-03	Transaction Code – see Below	2	Numeric	Mandatory
04-11	RDFI Identification Number (Transit Routing Number)	8	TTTTAAAA	Mandatory
12-12	Check Digit of RDFI (the 9th digit in the Transit Routing Number)	1	Numeric	Mandatory
13-29	RDFI Account Number	17	Alphanumeric	Required
30-39	Amount	10	$$$$$$$$¢¢	Mandatory, with implied decimal
40-54	Individual's Identification Number	15	Alphanumeric	Optional
55-76	Individual / Receiving Company Name Field	22	Alphanumeric	Required
77-78	Discretionary Data	2	Unless used	Optional
79-79	Addenda Record Indicator – see Below	1	Numeric	Mandatory
80-94	Trace Number - Ascending Sequence number	7	Trace number	Mandatory

Transaction codes

	PRENOTE ENTRIES	MONETARY ENTRIES
Credit to Checking	23	22
Credit to Savings	33	32
Debit to Checking	28	27
Debit to Savings	38	37

Addenda record indicator

0 = No Addenda Record is Present

1 = One or more Addenda Record(s) is following

CCD and PPD support 0 or 1 addenda records. CTX requires 2 or more addenda records.

Addenda record (ppd, ccd, or ctx) record "7"

Record length 94

POSITION	DATA ELEMENT NAME	SIZE	CONTENT	REQUIRED
01-01	Record Type Code	1	'7'	Mandatory
02-03	Addenda Type Code	2	'05'	Mandatory
04-83	Payment Related Information	80	Alphanumeric	Optional
84-87	Addenda Sequence Number (must start with "1")	4	Numeric	Mandatory
88-94	Entry Detail Sequence Number (Equal to the last 7 digits of the trace number in the 6 record).	7	Numeric	Mandatory

Formats for addenda records (in the Payment Related Info field) vary depending on the type of transaction originated.

Batch control record (all entries) record "8"

Record length 94

POSITION	DATA ELEMENT NAME	SIZE	CONTENT	REQUIRED
01-01	Record Type Code	1	'8'	Mandatory
02-04	Service Class Code (Same as Batch Header)	3	Numeric	Mandatory
05-10	Entry / Addenda Count – Number of 6 and 7 Records in Batch	6	Numeric	Mandatory
11-20	Entry Hash – see Below	10	Numeric	Mandatory
21-32	Total Debit Entry Dollar Amount	12	$$$$$$$$$$¢¢	Mandatory
33-44	Total Credit Entry Dollar Amount	12	$$$$$$$$$$¢¢	Mandatory
45-54	Company Identification (Same as Batch Header)	10	Alphanumeric	Required
55-73	Message Authentication Code	19	Alphanumeric	Optional
74-79	Reserved	6	N/A	N/A
80-87	ODFI Identification (MUFG Transit Routing Number)	8	for MUFG NY "02600963" for MUFG Chicago "07100234"	Mandatory
88-94	Batch Number (Same as Batch Header)	7	Numeric	Mandatory

Hash total calculation

Accumulate the transit routing number of each “6” record (position 4-11). This is the only record that should be used for hash accumulation. Do not include the check digit (position 12) of the transit routing number in the hash total calculations. For example, a batch with two "6" records and two Transit Routing Numbers:

Transit Routing Number	02600963-2 (Check Digit is the last 2)
Transit Routing Number	02600963-2
Hash Total	05201926

The batch level hash total is the accumulation of details within a batch. The hash total should be right justified and zero filled (i.e., 0005201926).

If the hash total exceeds 10 positions, the overflow out of the high order (leftmost) position is ignored.

Example: If the sum of the 8-digit transit routing numbers is 681764871643:

68 | 1764871643

The hash total (position 11-20) would be 1764871643.

File control record (all entries) record "9"

Record length 94

POSITION	DATA ELEMENT NAME	SIZE	CONTENT	REQUIRED
01-01	Record Type Code	1	'9'	Mandatory
02-07	Batch Count – Total Number of 5 Records	6	Numeric	Mandatory
08-13	Block Count – The Number of Physical Blocks (groups of 10 records of all types) in the File. Include the 1 and 9 record	6	Numeric	Mandatory
14-21	Entry / Addenda Count – The Total Number of 6 and 7 Records in the File	8	Numeric	Mandatory
22-31	Entry Hash – Should calculate the hash entry from the 6 records for security purposes.	10	Numeric	Mandatory
32-43	Total Debit Entry Dollar Amount in File. The sum of field 6 in all "6" records with a field 2 value of either 25,27, 28, 29, 36, 37, 38, 39.	12	$$$$$$$$$$¢¢	Mandatory
44-55	Total Credit Entry Dollar Amount in File. The sum of field 6 in all 6 records where field 2 is either 21,22, 23, 24, 31,32, 33, or 34,	12	$$$$$$$$$$¢¢	Mandatory
56-94	Reserved	39	Blank	N/A

Sample MUFG NACHA File

The sample NACHA file below includes two batches, one with PPD, one with CTX. This sample illustrates MUFG Exchange file import. Transmission files will differ slightly (the identifiers in the "1" and "5" records).

CCD is similar to PPD. Both CCD and PPD optionally allow one line of addenda (that is one "7" record). CDD and PPD addenda may be unstructured or structured using ANSI segments (field tags) to identify data elements (for example tax payments). CTX requires two or more addenda and should always include on addenda structured in EDI 820 format.

```
101 026009632 0260096322201191301B094101                        BTMUWEBACH             00022965
5220DOMESTIC                          N382439DOMPPDPAYROLL   220125220125025102600963000001
62202600112245645645         0000011900               ELSA MANCHESTER         0026009630000001
62204121124312345123         0000011900               BORIS KARLOFF           0026009630000002
822000000200067212360000000000000000000023800N382439DOM                        026009630000001
5220DOMESTIC                          N382439DOMCTXCTX ENTRY 220125220125025102600963000002
62206122014678978978         0000011900               0000Large Vendor        0026009630000001
62206112100978945645         0000011900               0005Larger Vendor       1026009630000002
705ISA*00*          *00*          *17*026009632      *17*026009632      *220119*13000010000002
7051*U*00401*000000001*0*P*~\GS*RA*026009632*061121009*20220119*180138*1*X*004010\S00020000002
705T*820*0001\BPR*C*119*C*ACH*CTX*****N382439DOM**01*061121009*DA*78945645*2022012500030000002
705\TRN*1*PO1234\N1*PR*DOMESTIC*91*PO\N1*PE*Larger Vendor\ENT*1\RMR*PO*PO1234**119*00040000002
705*\SE*8*0001\GE*1*1\IEA*1*000000001\                                                00050000002
822000000700122341140000000000000000000023800N382439DOM                        026009630000002
900000200000200000000900189553500000000000000000047600
99999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999
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General Information

Failure to meet data acceptance criteria will result in the rejection of the entire file, batches, or individual entry depending on the nature of the error.

Listed below are some of the error conditions that may cause rejection.

File Rejection

- The file cannot be successfully read (e.g., data read failures, improper block size, presence of invalid header labels, invalid characters, hardware/software error checks indicated).
- The file contains any "undefined" or erroneous record type.
- The file header record does not contain the assigned company identification.
- The sequence of records in the file is incorrect.
- The file is "out-of-balance" (i.e., the summation of the counts, hash totals, and total dollars on control records does not agree with the calculation for these sums).
- Mandatory fields in the file header record are not valid (i.e., record size, blocking factor, or format code).

Batch Rejection

Listed below are some of the error conditions that may cause the batch to reject:

- The batch contains invalid characters.
- The service class code in a company/batch header record is invalid.
- The trace numbers on the file are not numeric or in ascending sequence within a batch.
- The company/batch header and trailer records do not contain the assigned company identification.
- The company/batch header and trailer records do not contain a corresponding batch number.
- The service class code in the company/batch control record is different from the service class code in the company/batch header record.
- The batch is "out-of-balance" (i.e., the counts, hash totals, and total dollars on company/batch control records do not agree with the summation of the entries for the batch).

Entry Detail Rejection

Listed below are some of the error conditions on an entry level that will never cause the entry to be rejected but will cause the batch/file to be rejected:

- The check digit for transit routing number is missing or invalid.
- The transaction code in an entry detail record is missing or invalid.
- The amount field in an entry detail is non-numeric.
- The amount field is not zero in a prenotification entry.
- The amount field is zero in a non-prenotification entry.

Prenotifications

MUFG strongly recommends prenoting, but it is not a requirement. A prenote is a zero dollar transaction sent to the receiver's account to validate the transit routing number and account number. Prenotes are similar to monetary transactions with the exception of the dollar amount and the transaction codes used.

RDFI's do not respond to prenotes unless the account number is invalid, in which case you will receive either a return or notification of change. If a prenotification is sent to an account, a live dollar transaction may not be sent until at least three banking days following the settlement of the prenote.

Glossary of File Format Data Elements

Addenda Sequence Number	This number is consecutively assigned to each addenda record following an entry detail record. The first addenda sequence number must always be a "1."
Addenda Type Code	The addenda type code defines the specific interpretation and format for the addenda Information contained in the same record. The addenda type code of "05" applies to: CCD, CTX, and PPD entry detail records.
Amount	The RDFI posts this debit or credit amount to the appropriate account authorized by the receiver. A zero amount is acceptable only with non-dollar (prenotification) transaction codes. A specific amount must be present for all non-pre-notification transaction codes.
Batch Count	The value of this field must be equal to the number of batch header records in the file.
Batch Number	This number is assigned in ascending sequence to each batch by the originating company in a given file of entries. Since the batch number in the batch header record and the batch control record is the same, the ascending sequence number should be assigned by batch and not by record.
Block Count	The block count contains the number of physical blocks (a block is 940 characters) in the file, including both the file header and file control records. Use the following formula to calculate the block count
Entry/Addenda Count + [(number of batches x 2) + 2]/10 = Block Count*	
	*Always round the answer up to the next highest number.
Blocking Factor	For the blocking factor for all files, the value "10" must be used even though the true blocking factor for files submitted via data transmission will not be 10. If the number of records in the file is not a multiple of 10, the remainder of the block must be nine filled.
Check Digit	The check digit is the last digit of the RDFI's transit routing number. The check digit is computed using modulus 10 as follows: 1. Multiply each digit in the transit routing number by a weighting factor. The weighting factors for each digit are: Position: 1 2 3 4 5 6 7 8 Weights: 3 7 1 3 7 1 3 7 2. Add the results of the eight multiplications. 3. Subtract the sum from the next highest multiple of 10. The result is the check digit. Example: Transit/ABA 0 7 6 4 0 1 2 5 Multiply by 3 7 1 3 7 1 3 7 Add: 0 49 6 12 0 1 6 35 Sum = 109 Check Digit = 1 (110 minus 109)

Company Descriptive Date	The originating company establishes this field as the date it would like to see displayed to the receiver for descriptive purposes. This field never controls timing of any computer or manual operation. It is solely for descriptive purposes. The RDFI does not assume any specific format. Examples of possible entries for 1/13/2022 in this field are "011300," "01 22," "JAN 13," "JAN 22," etc.
Company Discretionary Data	This field in the batch header record is for future use. The only established standard interpretation for the value of this field is for cross border transactions.
Company Entry Description	The originating company establishes the value of this field to provide a description of the purpose of the entry to be displayed back to the receiver (i.e., "GAS BILL," "PAYROLL," "INS. PREM," etc.) NOTE: This field is displayed on the receiver's bank account statement. This field must contain the word "REVERSAL" (left justified) when the batch contains reversing entries. Batches that contain a mix of reversals and other entries are not acceptable.
Company Identification	The company identification number is assigned to the company by MUFG. The ID, used to identify an originator, is generally (but is not required to be) an IRS employer identification number (EIN) proceeded by a one.
Company Name	The originator establishes the value of this field. It serves to further identify the source of the entry, and is displayed on the receiver's bank statement.
Discretionary Data	This field in the entry detail record allows ODFIs to include codes (of significance only to them) to enable specialized handling of the entry. There will be no standardized interpretation for the value of this field.
Effective Entry Date	This is the date specified by the originator on which settlement for an entry is to occur. The date specified must be a valid banking day and it should be in a "YYMMDD" format. It must be at least one to two business days after the file is submitted to the MUFG system depending on the posting requirements for the receiver. It must not be more than fourteen days in the future.
Entry/Addenda Count	This count is a tally of each entry detail record and each addenda record processed, within either the batch or file, as appropriate.
Entry Detail Sequence Number	This field contains the ascending sequence number section of the entry detail or corporate entry detail record's trace number. This number is the same as the last seven digits of the trace number (field 13) of the related entry detail record or corporate entry detail record.

Entry Hash	The transit routing number in each entry is hashed to provide a check against inadvertent alteration of data contents due to hardware failure or program error. CAUTION: Two errors are commonly made when calculating the entry hash: 1. Using a nine-digit rather than an eight-digit transit routing number. 2. Truncating from the right instead of the left.
File Creation Date	The file creation (transmission) date is expressed in a "YYMMDD" format. It is the date on which the file is prepared by an originating company or the exchange date on which a file is transmitted from the originator to MUFG.
File Creation Time	The file creation (transmission) time is expressed in an "HHMM" (24-hour clock) format.
File ID Modifier	The file ID modifier is provided in the file header record to permit multiple files created on the same date and between the same participants to be distinguished. Only upper case A-Z or numeric 0-9 is permitted.
Format Code	This code has been provided to allow for future format variations. As currently defined, this field will contain a value of "1."
Immediate Destination Name	This field contains the name of "MUFGBANK," the point for which the file is destined. The ten character field begins with a blank followed by "026009632" for MUFG NY, "07100234" for MUFG Chicago.
Immediate Origin	This field is mutually defined between MUFG and the sending point. The field may match the company identification number in the batch header record field 5.
Immediate Origin Name	This field contains the name of the point that is sending the file. It may be the originator's company name or a vendor name.
Individual Identification Number	This field may be used by the originator to insert its own number for tracing purposes.
Individual Name/ Receiving Company Name	This field entered by the originator provides additional identification for the receiver and may be helpful in identifying returned entries. If additional positions are desired for the individual name, an addenda record can be used. However, this should only be done when absolutely necessary to improve efficiency.
ODFI Identification	MUFG's routing numbers are 02600963 for MUFG NY, and 07100234 for MUFG Chicago., Routing numbers are used to identify the DFI that is to originate the entries within a given batch.
Originator Status Code	This code identifies the originator of any entry. A value of "1" should be used.

Payment Related Information	Addenda information is generated by the originating company and is to be associated with the immediately preceding entry detail record. Addenda records contain payment related ANSI X12 or other NACHA endorsed banking conventions.
Priority Code	This field is included to allow for some future scheme for priority handling of files. At this time, a value of "01" should be used.
RDFI Account Number	The RDFI account number information is obtained from the "on-us" field of the MICR line of a voided check or savings account statement/pass book.
RDFI Identification Number	The standard routing number as assigned by Thompson Financial Publishing (with check digit) is used to identify the DFI in which the receiver maintains his account or a routing number assigned to a federal government agency by the Federal Reserve.
Record Size	The record size field indicates the number of characters contained in each record. At this time, the value must be "094."
Record Type Code	This is the first position of all record formats. These codes are uniquely assigned for each type of record.
Reference Code	This field is reserved for future use.
Reserved	This field is reserved for future use.
Service Class Code	The service class code (BAI specifications) identifies the general classification of dollar entries to be exchanged.
Standard Entry Class Code	This field is a mnemonic which permits various kinds of paperless entries to be distinguished.
Total Credit Entry Dollar Amount	This field contains accumulated entry detail credit totals within a given batch (batch control record) and accumulated batch control record credit totals within a given file (file control record).
Total Debit Entry Dollar Amount	This field contains accumulated entry detail debit totals within a given batch (batch control record) and accumulated batch control record debit totals within a given file (file control record).
Trace Number	Item numbers assigned in ascending order to entries within a file. Trace numbers are not required to be contiguous.
Transaction Code	Transaction codes have been defined to identify various types of debit and credit entries.

FOR MORE INFORMATION

Call your treasury relationship manager or contact Transaction Banking Technical Client Service 844-544-0387 option 2 or email TB-technicalsupport@us.mufg.jp. Hours are 8:00 a.m. ET to 7:00 p.m. ET, Monday to Friday excluding U.S. banking holidays,

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