File Formats

Disclaimer

Macha, through its Direct Membership in Nacha, is a specially recognized and licensed provider of ACH education, publications and support.

Regional Payments Associations are directly engaged in the Nacha rulemaking process, Accredited ACH Professional (AAP) program and the Accredited Payments Risk Professional (APRP) program.

Nacha owns the copyright for the Nacha Operating Rules & Guidelines.

The Accredited ACH Professional (AAP) and the Accredited Payments Risk Professional (APRP) are service marks of Nacha.

This material is not intended to provide any warranties or legal advice and is intended for educational purposes only.

This document could include technical inaccuracies or typographical errors and individual users are responsible for verifying any information contained herein.

No part of this material may be used without the prior written permission of Macha/PAR

© 2024 Macha/PAR All Rights Reserved







Agenda

ACH File Structure

- ACH Data Specifications
- ACH Format Specifications

ACH Records

• SEC Codes, including IAT and Healthcare

Returns

Rejected files

Balanced Files vs. Unbalanced Files

What a File Might Look Like

| 101 000041140 0000411401010121353Z094101ANYTO | WN FI A | NYTOWN ACH | |
|---|-----------------------|--------------------|-----------------------|
| 5200ANYTOWN COMPANY PHONE:555-555-4466 1222 | 2222222PPDPAYRO | LL 101012 | 1000041140000001 |
| 632000041140891274065400564 0000267348ID85 | BROOKS, NEAL | | 0000041140000001 |
| 622000041140098734313185191 0000256719ID65 | KIRK, JAMES T | | 0000041140000002 |
| 632000041140778921053101121 0000240712ID05 | ROMO, TONY | | 0000041140000003 |
| 632000041140009123256074974 0000298736ID55 | MOUSE, MICKEY | | 0000041140000004 |
| 622253279691009856253279691 0000221893ID45 | VADER, DARTH | | 0000041140000005 |
| 820000005002534442500000000000000000128540812 | 222222222 | | 000041140000001 |
| 90000010000010000005002534442500000000000000000000000 | 0001285408 | | |
| 999999999999999999999999999999999999999 | 999999999999999999999 | 999999999999999999 | 999999999999999999999 |

| 09/09/03 | | RING AND SETTLEMENT F 0910-0008-0 | ACILITY | | PAGE 1 0917-1234-5 | | | | | | | | |
|-----------------------|--|--|-----------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|--|
| | ENTRY REGISTER | | | | | | | | | | | | |
| RECEIVING POINT | 0917-1234-5 | FII | LE DATE 0309 | 009 | | | | | | | | | |
| RECEIVING INSTITUTION | 0917-1234-7 | F | FILE TIME ILE ID A | 09:45 | | | | | | | | | |
| | 1417654321 SETT 252 OSO EFFECTIVE ENTRY DATE 09-10-03 IAL ID NUMBER TRACE NUMBER | C 1 OFFICE/BRANCH PAYROLL PPD ORIGIN NO. 0910-1111-1 E ENTRY TYPE ACCOUNT NUMBER | | | ۱MT | | | | | | | | |
| PAUL LARSEN 9753124 | 091011110002345 | DEMAND CR 987-654-333 | | 3,454. | 55 | | | | | | | | |
| EARL SCHAFFER 9753122 | 091011110002347 | DEMAND CR 935-864-215 | | 5,658.8 | 8 | | | | | | | | |
| ***B/ | ATCH TOTALS*** | ENTRY-ADDENDA COUNT | 2 | FOTAL DR.S TO | OTAL CR.S 9,113.43 | | | | | | | | |
| COMPANY SOUTHWEST COR | P 1723765679 SETT 252 OSC | 21 | | | ., | | | | | | | | |
| | AL ID NUMBER TRACE NUMBER | 03 CCD ORIGIN NO. 0210-0022 B ENTRY TYPE ACCOUNT NUMBER DEMAND DR 33-257 | | AMT CREDIT AN | ИТ | | | | | | | | |
| ***B/ | ATCH TOTALS*** | ENTRY-ADDENDA COUNT | | ГОТАL DR.S ТС 24,587.50 | DTAL CR.S 0.00 | | | | | | | | |

Data Specifications

Alphabetic/Alphameric

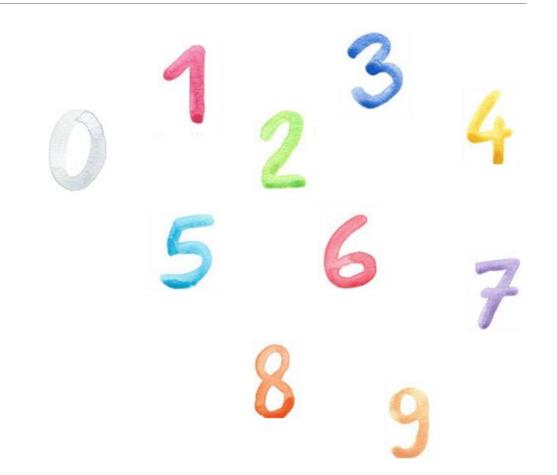
- O-9, A-Z, a-z, space, EBCDIC values greater than hexadecimal "3F", ASCII values greater than hexadecimal "1F"
- Left Justified
- Space Filled
- Some fields require Upper Case
 - SEC codes, Return & NOC codes, File Id
 - Company Entry Descriptions REVERSAL, RECLAIM, NONSETTLED, AUTOENROLL, REDEPCHECK, NO CHECK, RETURN FEE, RETRYPYMT
 - Company Name XCK CHECK DESTROYED

AaBbCcDdEe FfGgHhliJjKk LIMmNnOoPp **QqRrSsTtU**u VvWwXxYyZz 12345 67890

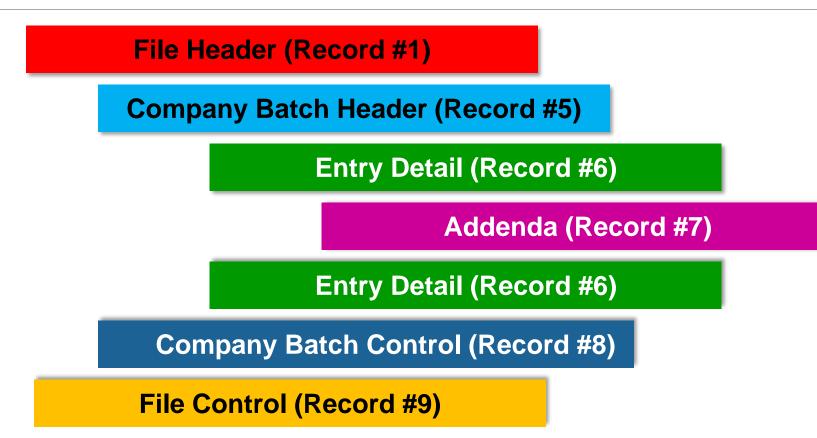
Data Specifications

Numeric

- 0-9
- Right Justified
- Zero Filled
- Must be unsigned: no + or signage



ACH File Structure



ACH File Structure – Quiz

► The File Header Record always starts with the number.....`1'

- The Company/Batch Header Record always starts with the number..... `5'
- ▶ The Entry Detail Record always starts with the number...... `6'
- What happened to Records `2', `3', and `4'?

Format Specifications

Only 1 File Header record per ACH file

Only 1 File Control record per ACH file

- Within each ACH file, there can be multiple Batches
- Only 1 Batch Header record per batch
- Only 1 Batch Control record per batch
- Within each batch, there can be multiple detail entry and addenda records
 - Number of Addenda record(s) are determined by Standard Entry Class code (in batch header record)
 - Addenda records are "additional payment-related information" that pertain to the entry detail record they are attached to

Field Inclusion Requirements

Each ACH Record contains 94 characters

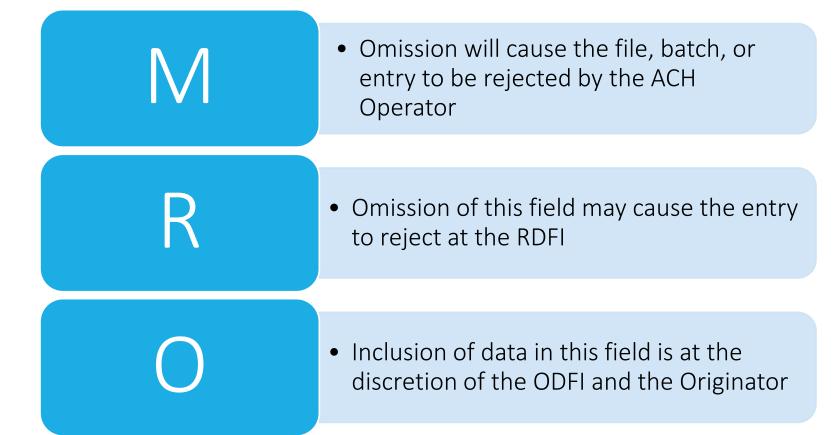
• Each record contains "fields"

Each field within an ACH record format has a field inclusion requirement

- M Mandatory (will reject at the ACH Operator)
- R Required (may be returned by the RDFI)
- O Optional (field used at the discretion of the Originator or ODFI; however, if info is in optional field, it must be included when returning the item)

Each field within each ACH record format contains specific contents

ACH Record Format Specifications



- Always the first record of the file
- Identifies the immediate origin of the file
 - Sending Point or ACH Operator
- Identifies the destination of the file
 - Receiving Point or ACH Operator
- Includes identification fields which can be used to identify the file uniquely
 - File Creation Date (YYMMDD)
 - File Creation Time (HHMM)
 - File ID Modifier a single position field (Upper Case A-Z or Numeric 0-9)



- Designates physical file characteristics
- Priority Code Field presently uses a value of '01'
- Record Type Code Field is always '1'
- Record Size Field is always '094'
- Blocking Factor Field is always '10'
- Format Code Field is always '1'
- There is always only ONE File Header Record in each file
- All ACH files use the SAME File Header Record fields and layout

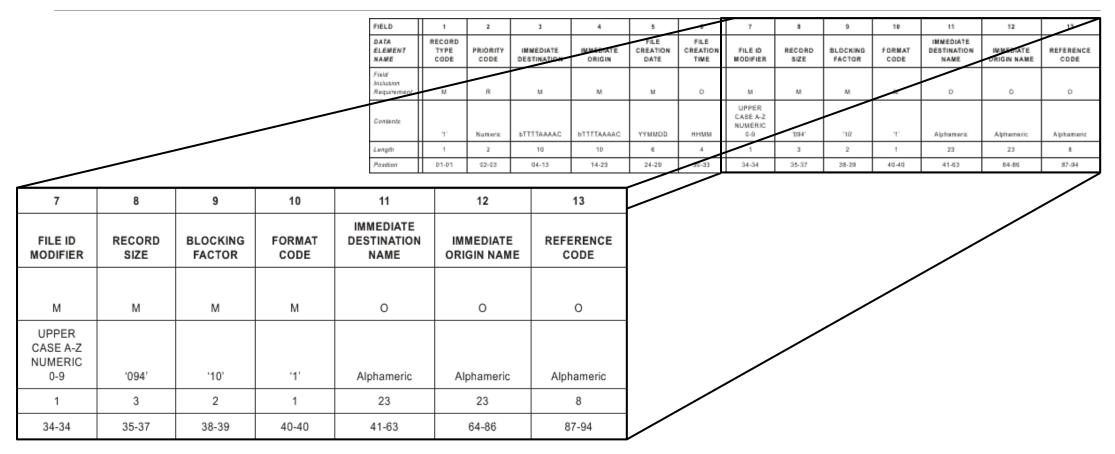
- What does a file header record tell us?
 - Who is sending the file
 - Where the file is going
 - File creation date and time

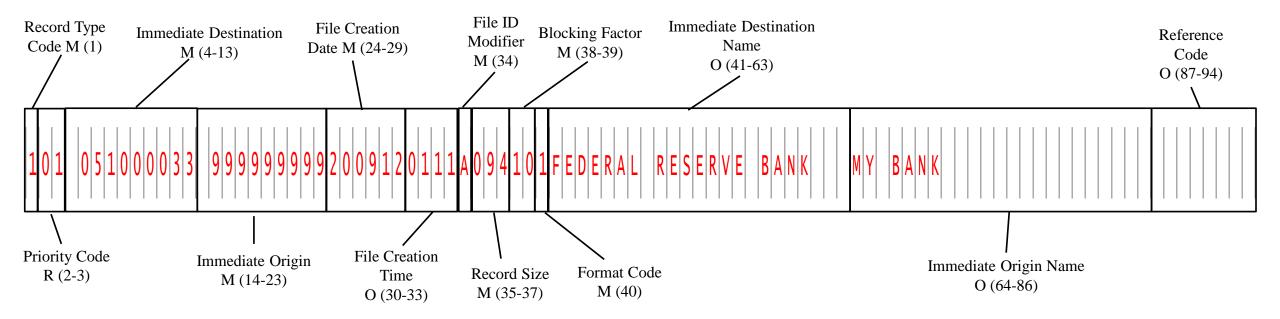
NOTE: picture an ACH File Header as an envelope

- a return address to identify who is sending it
- an address to tell us where it is going and
- a stamp from post office with date and time



| PIELD | 1 | 2 | 1 | 4 | 5 | 6 | | 8 | é | 10 | 11 | | 12 | 13 | | |
|-----------------------------------|------------------------|----------|-----------|-------------------|------------------------------|--------------------------|-------------------------------------|----------------|--------------|--------|--------------------------|-------|--------------------------|------------------------|----|--------------------------|
| DATA ELEMENT NAME | RECORD TYPE SODE | PRIORITY | INNEDIATE | IMMEDIATE | FILE CREATION DATE | FILE CREATION TIME | FILE ID MODIFIER | RECORD SIZE | BLOCKING | FORMAT | IMMEDI DESTINA NAM | TION | IMMEDIATE ORIGIN NAME | REFERENCE | | |
| Field Inclusion Requirement | | | м | м | м | D | м | м | м | н | -4 | | ٥ | D | | |
| Contants | ч. | Numeric | bTTTTAAAA | STTTTAAAAC | YYMMDD | нним | UPPER CASE A-2 NUMERIC 0-9 | 7394' | ·10 | ч. | Alpham | eric | Alphamaric | Aptances | | |
| Length | 1 | 2 | 10 | 10 | 6 | 4 | 1 | з | 2 | 1 | 23 | | 23 | 8 | | |
| Position | D1-D1 | 02-03 | 04-13 | 14-23 | 24-29 | 30-33 | 34-34 | 35-37 | 38-39 | 40-40 | 41-6 | 3 | B4-B6 | 87-94 | | |
| \backslash | | | | | FIELD | | 1 | | 2 | 3 | | | 4 | 5 | | 6 |
| | | | | | DATA ELEME NAME | NT | RECORD TYPE CODE | PRI | ORITY ODE | | | I | MMEDIATE ORIGIN | FILE CREATI DATE | ON | FILE CREATION TIME |
| | | | | | Field Inclusio Require | | М | | R | м | | | М | М | | 0 |
| | | | Conten | ts | '1' | '1' Nume | | eric bTTTTAAA | | | | үүмме | D | ннмм | | |
| | | | | $\overline{\ }$ | Length | | 1 | | 2 | 10 | | | 10 | 6 | | 4 |
| | | | | | Positior | | 01-01 | 0 | 2-03 | 04-1 | 3 | | 14-23 | 24-29 |) | 30-33 |

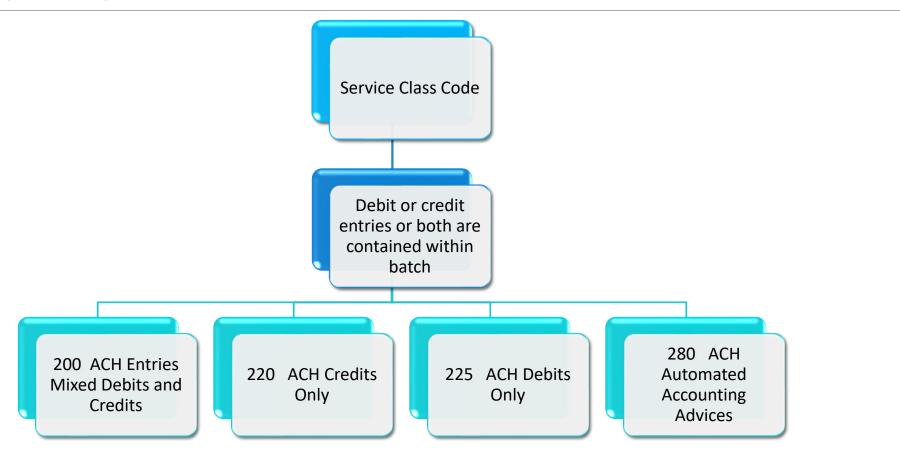




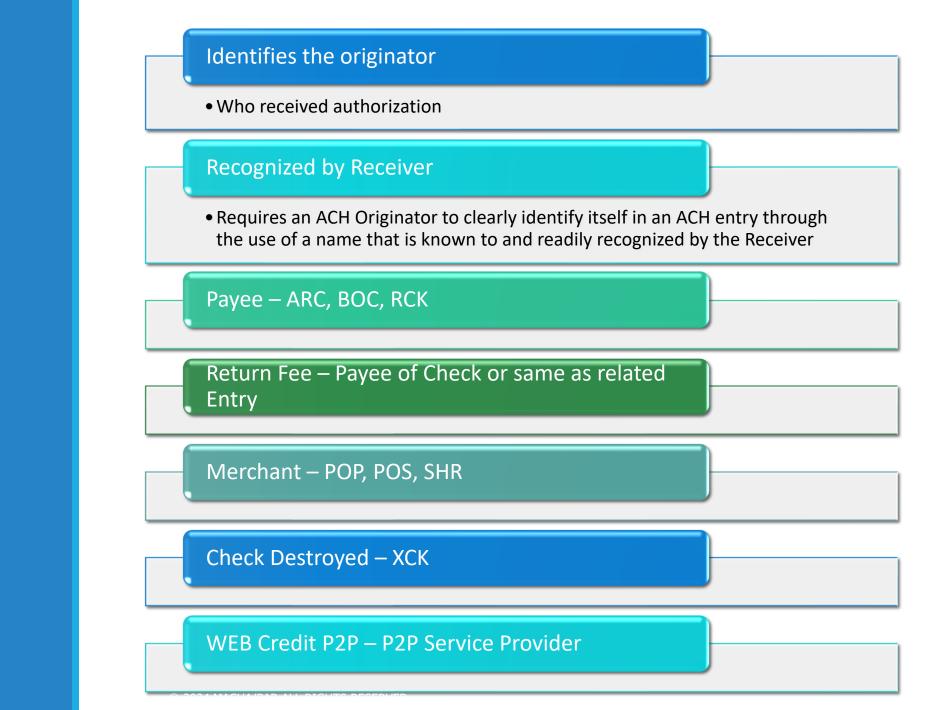
- Tells us everything about the company/originator & about the type of detail records to follow
- Always the second record in the file
- May have multiple batches in a file
- Contains:
 - Company ID
 - Standard Entry Class Code
 - Company Entry Description
 - Effective Date
 - Settlement Date
 - ODFI Routing Number



Company Batch Header "5"



Company Name



Company ID

This alphameric 10-position field is used to identify an Originator

May begin with an ANSI one-digit Identification Code Designator, followed by the identification number

- '1' followed by an Employer Identification Number (EIN)
- '3' followed by a Data Universal Number Systems (DUNS)
- '9' followed by a User Assigned Number

Standard Entry Class (SEC) Code

What does the SEC Code Identifies the payment types within an ACH batch do?

3-character code (i.e. CCD, CTX, PPD)

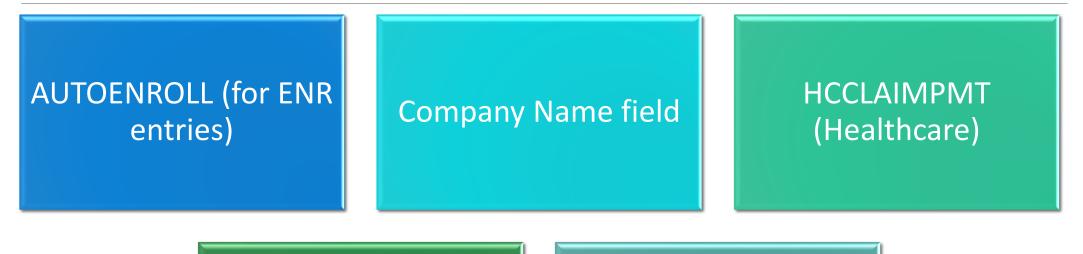
Standard Entry Class (SEC) Code

| What does the SEC Code tell us about a specific | Signifies specific addenda record info | based on the SEC codes, addenda records can be required or optional |
|--|--|---|
| batch? | SEC codes are used throughout the Nacha Rule | See Chart in Rule Book |

Book referencing field by data element name

Specific SEC codes require specific data in fields within the ACH record

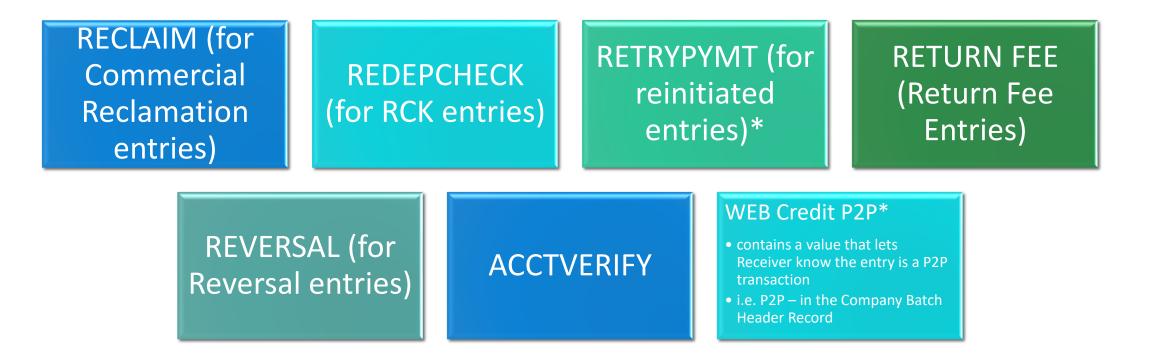
Company Entry Description Field



NONSETTLED (for entries where settlement can't be completed)

NO CHECK (for XCK entries)

Company Entry Description Field



Company Batch Header "5"

Effective Entry Date (wish date)

• The date the originator would like settlement

Settlement Date (Julian)

Originator Status Code

- 0 ADV file prepared by an ACH Operator
- 1 Originator is an F.I. (from the operators point of view)
- 2 Originator is a Government Agency or other agency not subject to the ACH Rules

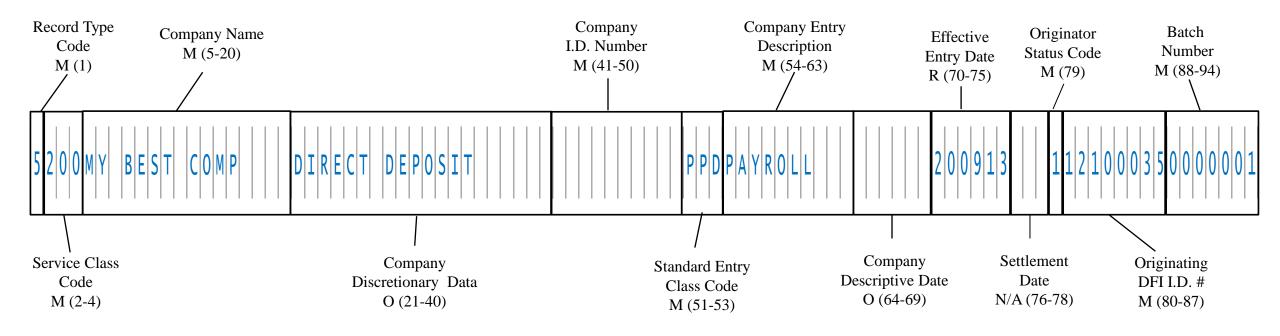
Originating DFI Identification

• ODFI's ABA number -- the FI initiating the ACH entry

Information in this record applies to all detail records in batch

| PISL0 | 1 | 2 | ŝ | 4 | 5 | 6 | \geq | 7 | â | | ŝ | 10 | 11 | 12 | 13 | | |
|-----------------------------------|------------------------|--------------------------|-----------------|----------------------------------|---------------|------------------------------------|--------|----------------------------|--------------------------|------|----------------------------|--------------------------------|------------------------------|--------------------------------------|-----------------|-------------------|------------------------------------|
| DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | COMPANY NAME | COMPANY DISCRETIONARY DATA | COMPANY | STANDARD ENTRY CLASS CODE | E | MPANY INTRY CRIPTION | COMPS DESCRIP DATE | TIVE | EPPECTIVE ENTRY DATE | SETTLEMENT DATE (JULIAN) | ORIGINATOR STATUS CODE | ORIGINATING DFI IDENTIFICATION | BATCH NUMBER | | |
| Field Inclasion Requirement | м | _ ∞ | M | o | м | м | | м | ٥ | | R | Inserted by ACH Operator | | м | м | | |
| Contents | °5' | Nameric | Alphametic | Alphameric | Alphameric | Alphameric | Alp | haneric | Alpham | eric | YYMMDD | Numeric | Alphameric | TTTTAAAA | Numeric | | |
| Length | 1 | ŝ | 18 | 20 | 10 | 3 | | 10 | Ĥ | | 6 | з | 1 | 8 | Ţ | | |
| Position | û1-01 | D2-D4 | D5-20 | 21-49 | 41-50 | 51-53 | 1 | 54-63 | 84-83 | 9 | 79-75 | 76-7B | 79-79 | 80-87 | 88-94 | | |
| | | | | | | FIELD | | | | | 2 | 3 | | 4 | | 5 | 6 |
| | | | | | | DATA ELEMENT NAME | | REC TY CO | I | С | RVICE LASS ODE | COMPANY NAME | DISCR | MPANY ETIONARY DATA | | IPANY FICATION | STANDARD ENTRY CLASS CODE |
| | | | | | | Field Inclusion Requiremer | nt | N | 1 | | м | М | | 0 | | м | м |
| | | | | | | Contents | | '5 | 5' | Nu | umeric | Alphameric | Alp | hameric | Alph | americ | Alphameric |
| | | | | | \setminus [| Length | | 1 | 1 | | 3 | 16 | | 20 | | 10 | 3 |
| | | | | | | Position | | 01- | 01 | 0 | 2-04 | 05-20 | 2 | 21-40 | 4 | 1-50 | 51-53 |

| |] | FIELD | 1 | ż | ŝ | 4 | 5 | ĩ | 7 | â | 9 | 10 | 11 | 12 | |
|--------------------------------------|-------------------------------------|-----------------------------------|------------------------|-----------------------------------|-----------------|-----------------------------------|---------------------------|------------------------------------|------------------------------|-------------|----------------------------|--------------------------------|------------------------------|-------------------------------------|-----------------|
| | | DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | COMPANY NAME | COMPANY DISCRETIONARY DATA | COMPANY IDENTIFICATION | STANDARD ENTRY CLASS CODE | COMPAN ENTRY DESCRIPTI | DESCRIPTIVE | EPPECTIVE ENTRY DATE | SETTLEMENT DATE (JULIAN) | DRIGINATOR STATUS CODE | ORIGHATING DFI IDENTIFICATION | BATCH NUMBER |
| | | Field Inclasion Requirement | | м | м | D | ш | ы | м | ٥ | Ĥ | Inserted by ACH Operator | ш | м | м |
| | | Costerna | '5' 1 | Numeric | Alphameric | Alphemeric | Alphameric | Alphameric | | | YYMMDD | Numeric | Alphameric | TTTTAAAA | Numeric 7 |
| | | Length Position | 1 Ú1-01 | 3 D2-D4 | 1B D5-20 | 2D 21-40 | 10 41-50 | 3 51-53 | 10 54-63 | 6 | 0 70-75 | 3 76-78 | 1 79-79 | 89-87 | 7 88-94 |
| 7 COMPANY ENTRY DESCRIPTION | 8 COMPANY DESCRIPTIVE DATE | 9 EFFECT ENTR DATE | Y | 10 ETTLEME DATE (JULIAN) | | 11 RIGINATOR STATUS CODE | | | 13 BATCH UMBER | | | | | | - |
| м | 0 | R | 4 | Inserted b ACH Opera | | М | М | | м | | | | | | |
| Alphameric | Alphameric | YYMMI | DD | Numeric | A | Iphameric | TTTTAAAA | N N | umeric | | | | | | |
| 10 | 6 | 6 | | 3 | | 1 | 8 | | 7 | | | | | | |
| 54-63 | 64-69 | 70-75 | 5 | 76-78 | | 79-79 | 80-87 | | 88-94 | | | | | | |



Entry Detail Record "6"

Identifies Receiver's account information

May have multiple entry detail records per batch

Contains:

- Transaction Code
- RDFI Routing Number
- ID or Check Serial Number
- Receiver's Account Number
- Amount
- Name (could be optional)
- Trace Number



Transaction Code

Identifies whether entry is a debit or credit

Identifies what type of account demand, savings, loan

| Description | Automated Payment/Deposit | Return or NOCs | Prenotes | Zero Dollar Amount w/remittance data CCD &CTX entries only |
|----------------|------------------------------|----------------|----------|--|
| Demand Credit | 22 | 21 | 23 | 24* |
| Savings Credit | 32 | 31 | 33 | 34* |
| Demand Debit | 27 | 26 | 28 | 29 |
| Savings Debit | 37 | 36 | 38 | 39 |
| GL Credit | 42 | 41 | 43 | 44 |
| GL Debit | 47 | 46 | 48 | 49 |
| Loan Credit | 52 | 51 | 53 | 54 |
| Loan Debit | 55 (Reversals Only) | 56 | N/A | N/A |

*These transaction codes also represent Acknowledgement Entries for ACK and ATX entries only.

Entry Detail Record "6"

RDFI ABA

- The routing number of the Receiver's FI
- Check Digit

Individual DFI account number

• Receiver's account number at their FI

Amount

 Debit or Credit to be posted to Receiver's account - indicated by transaction code

Entry Detail Record "6"

Individual identification number

- Additional id-optional-PPD
- Mandatory for ARC, BOC, POP, RCK, & XCK to contain check serial number
- Web Credit=Sender of P2P entry

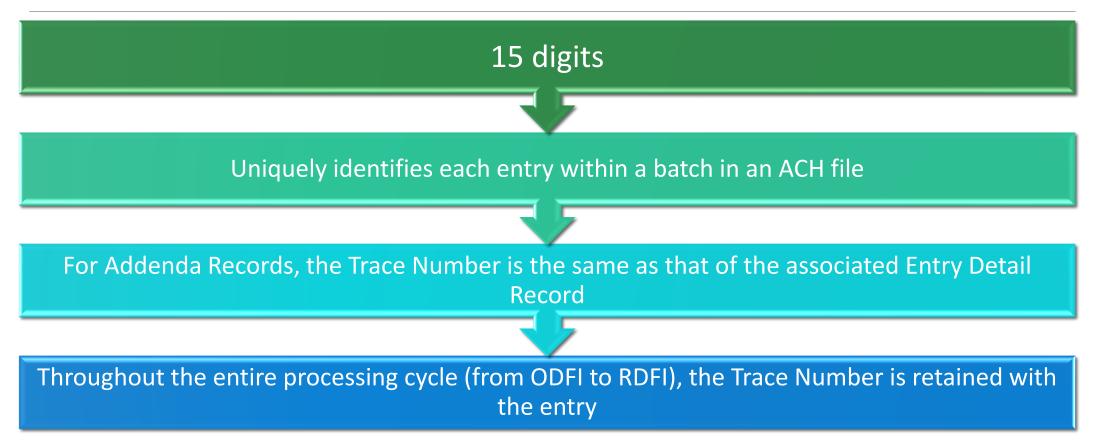
Individual name

Receiver's name (OPTIONAL for ARC, BOC and POP)

Addenda Record Indicator

 Indicates whether an addenda record will follow 0 = none, 1= 1 or more

Trace Number



| PISLO | 1 | 2 | 3 | 4 | | á | 1 | 7 | 8 | 9 | 10 | 11 | |
|-----------------------------------|---------------------|-----------------------------------|-----------------------------|----------|------------|-------------------|----------------|--|---------------------|-----------------------|--------------------------------|-----------------|-----------------------|
| DATA ELEMENT NAME | RECORD TYPE CODE | TRANSACTION CODE | RECEIVING (IDENTIFICATI | | | ACCOUNT NUMBER | AMOUNT | INDIVIDUAL IDENTIFICATION NUMBER | INDIVIDUAL MANE | DISCRETIONARY DATA | ADDENDA RECORD INDICATOR | TRACE NUMBER | |
| Field Inclusion Requirement | × | M | м | м | | R | м | o | R | 0 | ш | м | |
| Contants | а, | Numeric | TTTTAAAA | | Å | lptemeric | \$\$\$\$\$\$\$ | Alphameric | Alphameric | Alphameric | Numeric | Numeric | |
| Length | 1 | 2 | 1 | 1 | _ | 17 | 10 | 15 | 22 | 2 | 1 | 15 | |
| Pasifian | D1-D1 | 02-03 | \$4-11 | 12-12 | | 13-29 | 30-39 | 4D-54 | 55-76 | 77-78 | 79-79 | 80-94 | |
| \mathbf{i} | | | | FIELD | | | 1 | 2 | 2 | | | 4 | 5 |
| | | | | | | | CORD E CODE | | TRANSACTION CODE | | RECEIVING DFI | | DFI ACCOUNT NUMBER |
| | | Field Inclusion Requirement | | | М | N | м | | l | М | R | | |
| | | Contents | Contents | | '6' | Num | eric | TTTTA | AAA | Numeric | Alphameric | | |
| | | | | Length | | | 1 | 2 | 2 | | | 1 | 17 |
| | | | | Position | Position (| | 1-01 02- | | 03 | 04- | 04-11 | | 13-29 |

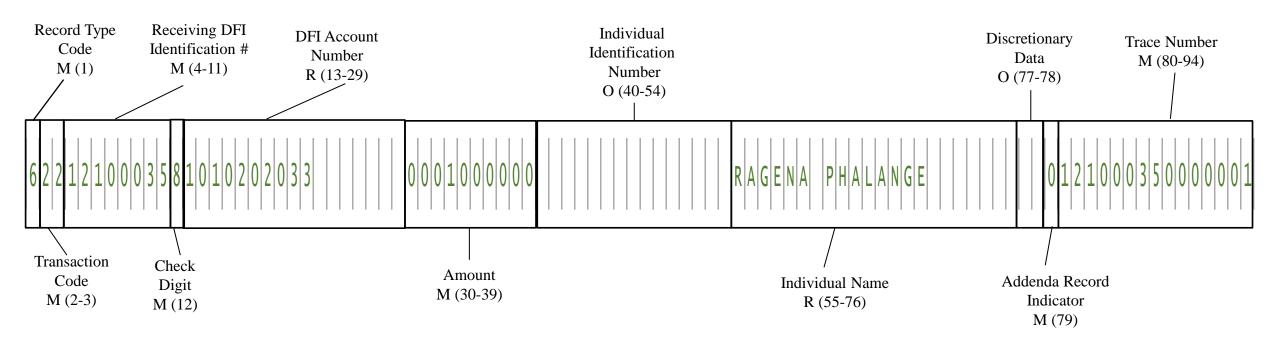
Entry Detail Record "6"

| | FIELD | 1 | 2 | 3 | | 4 | á | | Ê | 1 | 7 | â | 9 | 10 | 11 |
|------------------|-----------------------------------|-------------------------------|---------------------|----------|-----|-----------------|------------------|-----|------------------|----------|--------------------------|--------------------|-----------------------|--------------------------------|-----------------|
| | DATA ELEMENT NAME | RECORD TYPE CODE | TRANSACTION CODE | RECEIVIN | | CHECK DIGIT | DFLACCO NUMBE | | AMOUNT | IDENT IF | IDUAL ICATION IBER | INDIVIDUAL NAME | DISCRETIONARY DATA | ADDENDA RECORD INDICATOR | TRACE NUMBER |
| | Field Inclusion Requirement | м | м | н | | м | R | | м | (| | R | D | ш | м |
| | Contants | д. | Numeric | TITTA | AAA | Numeric | Alpheme | ric | \$\$\$\$\$\$\$ | Alpha | meric | Alphameric | Alphemeric | Numeric | Numeric |
| | (ingth | 1 | 2 | 1 | | 1 | 17 | | 10 | | 5 | 22 | | 1 | 15 |
| | Pasifian | D1-D1 | 02-03 | 94-1 | 1 | 12-12 | 13-29 | | 30-39 | 40 | ă4 | 55-76 | 77-78 | 79-79 | 80-94 |
| 6 | | 7 | 8 | | | 9 | | | 10 | | | 11 | | | |
| AMOUNT | IDENT | IVIDUAL IFICATION IMBER | | | DIS | CRETION DATA | IARY | | ADDEND RECORI | D | | ACE | | | |
| М | | 0 | R | | | 0 | | | М | | | м | / | | |
| \$\$\$\$\$\$\$¢¢ | Alpl | hameric | Alphan | neric | | Alphamer | ic | | Numerio | D | Nu | meric | | | |
| 10 | | 15 | 22 | | | 2 | | | 1 | | | 15 | | | |
| 30-39 | 4 | 10-54 | 55-7 | 76 | | 77-78 | | | 79-79 | | 8 | 0-94 | | | |

© 2024 MACHA/PAR ALL RIGHTS RESERVED

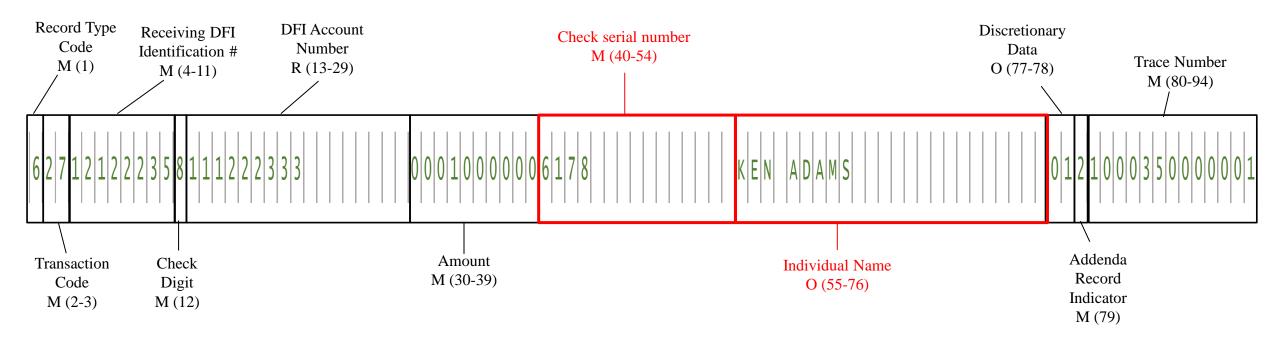
PPD

Entry Detail Record



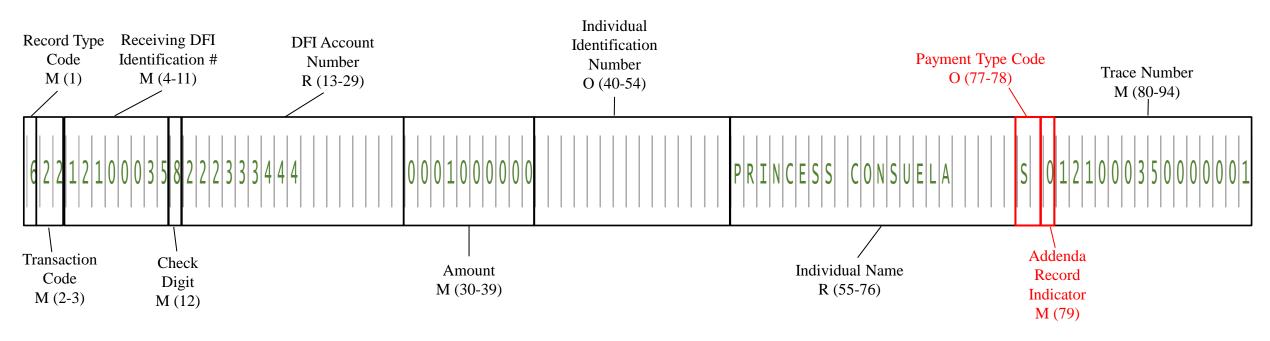
ARC, BOC, RCK, POP, XCK

Entry Detail Record



TEL,WEB

Entry Detail Record



- Used by the originator
- Supplies additional information related to the payment
 - Any other use is prohibited
- Inclusion depends on the SEC code
 - Can be mandatory, optional, or not applicable
 - Content can vary based on SEC
- Can be multiple addenda records
 - 1 or up to 9,999, based on SEC found in Batch Header



Payment Related Information

• 80 Characters

Addenda Sequence Number

- The sequence number assigned to each addenda record consecutively
- The first addenda record must always be a "1" (0001)

Entry Detail Sequence Number

- This number is the same as the last seven digits of the unique trace number (field 13) of the related entry detail or corporate entry detail record.
- * Delimiter, Data element separator
- \ Terminator, End of segment indicator
- ~ Terminator, End of segment indicator (new WITH Healthcare)

Addenda Type Code

• Describes specific explanation and format for the addenda info contained in the same record

Addenda Type Codes - Mandatory

- 02 POS, SHR, MTE
- 05 ACK, ATX, CCD, CIE, CTX, DNE, ENR, PPD, TRX, WEB
- 10 18 IAT Addenda
- 98 NOC or Refused NOC
- 99 Return, Dishonored or Contested

| PISLD | 1 | 2 | з | | 4 | 5 | đ | 7 | | 8 | |
|-----------------------------------|---------------------|----------------------|------------------------------|-----|------------|-------------------|---|--------|------|---------------------|--------------------------------|
| DATA ELEMENT NAME | RECORD TYPE CODE | ADDENDA TYPE CODE | RETURN REASON CODE | | INAL ENTRY | DATE OF DEATH | DRIGINAL RECEIVING DRI DENTIFICATION | ADDEN | | TRACE NUMBER | |
| Field Inclusion Requirement | | м | м | | м | D | Ĥ | | | м | |
| Contents | T | 397 | Alphemeric | 1 | Numeric | YYMMDD | TTTTAAAA | Alphan | eric | Numeric | |
| Length | 1 | 1 | з | | 15 | 6 | в | 44 | | 15 | |
| Pesition | D1-01 | D2-03 | 04-06 | | 07-21 | 22-27 | 28-35 | 36-7 | D | 80-34 | |
| | | | FIELD | | | 1 | 2 | | | 3 | 4 |
| | \mathbf{i} | | DATA ELEME NAME | NT. | RE | CORD TYPE CODE | ADDENDA T CODE | YPE | RE | TURN REASON CODE | ORIGINAL ENTRY TRACE NUMBER |
| | | | Field Inclusio Require | | | м | м | | | м | м |
| | | Conter | | | | '7' | ,88, | | | Alphameric | Numeric |
| | | | Length | | | 1 | 2 | | | 3 | 15 |
| | | | Positio | n | | 01-01 | 02-03 | | | 04-06 | 07-21 |

| | FIELD | 1 | 2 | | ŝ | 4 | 5 | 6 | 7 | · / |
|------|-----------------------------------|----------------------------|--------------------|-------|------------------------|--------------------------------|---------------|--|------------|--------------|
| | DATA ELEMENT NAME | RECORD TYPE CODE | ADDENDA TY CODE | YPE | RETURN REABON | ORIGINAL ENTRY TRACE NUMBER | DATE OF DEATH | ORIGINAL RECEIVING DFI IDENTIFICATION | ADDENDA | TRACE NUMBER |
| | Field Inclusion Requirement | м | м | | м | м | D | R | 0 | м |
| | Contents | | .38. | | Alphameric | Numeric | YYMMDD | TTTTAAAA | Alphaneric | Numeric |
| | Length | 1 | 2 | | з | 15 | 6 | | 44 | 15 |
| | Peailion | People D1-01 D2-03 | | 04-06 | | 07-21 | 22-27 | 28-35 | 36-79 | 80-94 |
| | 5 6 | | | | 7 | 8 | | | | |
| DATE | E OF DEATH | ORIGINAL RE DFI IDENTIF | | | ADDENDA INFORMATION | TRACE | UMBER | | | |
| | 0 | | | | 0 | | | | | |
| | 0 | R | | | 0 | N | 1 | / | | |
| Y | YYMMDD | TTTTAA | AAA | | Alphameric | Num | eric | | | |
| | 6 | 8 | | | 44 | 1 | 5 | | | |
| | 22-27 | 28-3 | 5 | | 36-79 | 80- | 94 | | | |

Addenda Record "7"

OPTIONAL ADDENDA RECORDS

- ACK/ATX (max. 1)
- CCD/PPD (max. 1)
- CIE (max. 1)
- CTX (max. 9,999)
- WEB (max. 1)
- WEB Credit=Free From
- IAT (max 5)

MANDATORY ADDENDA RECORDS

- COR/REFUSED COR (1)
- DNE (1)
- ENR (max. 9,999)
- POS/SHR/MTE (1)
- Returns, Dishonored, Contested (1)
- TRX (max. 9,999)
- IAT (7)

| | FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
|---------------------|-----------------------------------|------------------------|--------------------------|------------------------------------|----------------|--------------------------|------------------|--------------------------|---------------------------|-----------------------|--------------------------------|-----------------|--------------|
| | DATA ELEMENT NAME | Record Type Code | Trans- action Code | Receiving DFI Identification | Check Digit | DFI Account Number | Amount | Identification Number | Receiving Company Name | Discretionary Data | Addenda Record Indicator | Trace Number | |
| CCD ENTRY DETAIL | Field Inclusion Requirement | М | М | М | Μ | R | М | 0 | R | 0 | М | М | |
| RECORD | Contents | `6′ | Numeric | TTTTAAAA | Numeric | Alphameric | \$\$\$\$\$\$\$¢¢ | Alphameric | Alphameric | Alphameric | Numeric | Numeric | |
| | Length | 1 | 2 | 8 | 1 | 17 | 10 | 15 | 22 | 2 | 1 | 15 | |
| | Position | 01-01 | 02-03 | 04-11 | 12-12 | 13-29 | 30-39 | 40-54 | 55-76 | 77-78 | 79-79 | 80-94 | |
| | | | | | | | | | | | | | |
| 62212391871 | | 5 6 7 8 | 89 | 0 | 0 0 2 5 | 0000012 | 1222222 | 13 | BCCOMP | ANY | | 11599 | 999900000001 |

| ADDENDA | FIELD DATA ELEMENT NAME | 1 Record Type Code | 2 Addenda Type Code | 3 Payment Related Information | 4 Addenda Sequence Number | 5 Entry Detail Sequence Number | |
|------------|----------------------------------|-----------------------------|---------------------------|-------------------------------------|------------------------------------|---|-----------|
| RECORD | Field Inclusion Requirement | м | М | 0 | м | м | |
| | Contents | `7′ | `05′ | Alphameric | Numeric | Numeric | |
| | Length | 1 | 2 | 80 | 4 | 7 | |
| | Position | 01-01 | 02-03 | 04-83 | 84-87 | 88-94 | |
| | | | | | | | |
| 205RMR*IV* | 439785 | 6 4 * 50 0 | 5.78 | | | | 000100000 |

| FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|--------------------------------|---|---|--|---|--|---|---|--|--|---|--|--|---|
| DATA ELEMENT NAME | Record Type Code | Transaction Code | Receiving DFI Identification | Check Digit | DFI Account Number | Amount | Identifi- cation Number | Number of Addenda Records | Receiving Company Name /ID number | Reserved | Discre- tionary Data | Addenda Record Indicator | Trace Number |
| Field Inclusion Requirement | М | М | М | М | R | М | 0 | М | R | N/A | 0 | М | м |
| Contents | `6′ | Numeric | TTTTAAAA | Numeric | Alphameric | \$\$\$\$\$\$\$¢¢ | Alphameric | Numeric | Alphameric | Blank | Alphameric | Numeric | Numeric |
| Length | 1 | 2 | 8 | 1 | 17 | 10 | 15 | 4 | 16 | 2 | 2 | 1 | 15 |
| Position | 01-01 | 02-03 | 04-11 | 12-12 | 13-29 | 30-39 | 40-54 | 55-58 | 59-74 | 75-76 | 77-78 | 79-79 | 80-94 |
| | DATA ELEMENT NAME Field Inclusion Requirement Contents Length | DATA ELEMENT NAME Record Type Code Field Inclusion Requirement M Contents `6' Length 1 | DATA ELEMENT NAMERecord Type CodeTransaction CodeField Inclusion RequirementMMContents`6'NumericLength12 | DATA ELEMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationField Inclusion RequirementMMMContents`6'NumericTTTTAAAALength128 | DATA ELEMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitField Inclusion RequirementMMMMContents`6'NumericTTTTAAAANumericLength1281 | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberField Inclusion RequirementMMMRContents`6'NumericTTTTAAAANumericAlphamericLength128117 | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberAmountField Inclusion | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberAmountIdentification cation NumberField Inclusion RequirementMMMMOField Inclusion RequirementMMMRM1281171015 | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberAmountIdentifi- cation NumberNumber of Addenda RecordsField Inclusion RequirementMMMMRMOMContents`6'NumericTTTTAAAANumericAlphameric\$ | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberAmountIdentifi- cation NumberNumber of Addenda RecordsReceiving Company Mame / IDField Inclusion RequirementMMMRMOMRfield Inclusion RequirementMMMRMOMRfield Inclusion Requirement16YNumericAlphameric\$\$\$\$\$\$\$\$\$AlphamericAlphamericAlphamericfield Inclusion Requirement1281171015416 | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI IdentificationCheck DigitDFI Account NumberAmount AdentificationIdentification of Addenda RecordsReceiving Company Mame / ID numberReceiving Company Mame / ID numberReceiving Company Mame / ID NumberReceiving Company Mame / ID NumberReceiving Addenda RecordsReceiving Company NumberReservedField Inclusion RequirementMMMRMOMRecordsN/AContents``6'NumericTTTTAAAANumericAlphameric\$ | DATA ELMENT NAMERecord Type CodeTransaction IdentificationReceiving DFI IdentificationDFI Account NumberAmount NumberIdentifi- cation NumberNumber of Addenda RecordsReceiving Company DataReserved Discre- tionary DataField Inclusion RequirementMMMRMOMRN/AOField Inclusion RequirementMMMRMOMRN/AOContents`6'NumericTTTTAAAANumericAlphameric\$ | DATA ELMENT NAMERecord Type CodeTransaction CodeReceiving DFI LidentificationCheck DigitDFI Account NumberAmount MerIdentification NumberNumber Addenda RecordsReceiving Of Addenda RecordsReserved Sompany D DataDiscre- tionary DataAddenda Record IndicatorField Inclusion RequirementMMMRMOMRecordsN/AO/AM/AO/AField Inclusion RequirementMMMRMOMRN/AO/AM/AContents'6'NumericTTTTAAAANumericAlphameric\$\$\$\$\$\$\$\$AlphamericNumericAlphamericNumericAlphamericNumericLength1281171015416221 |

СТХ

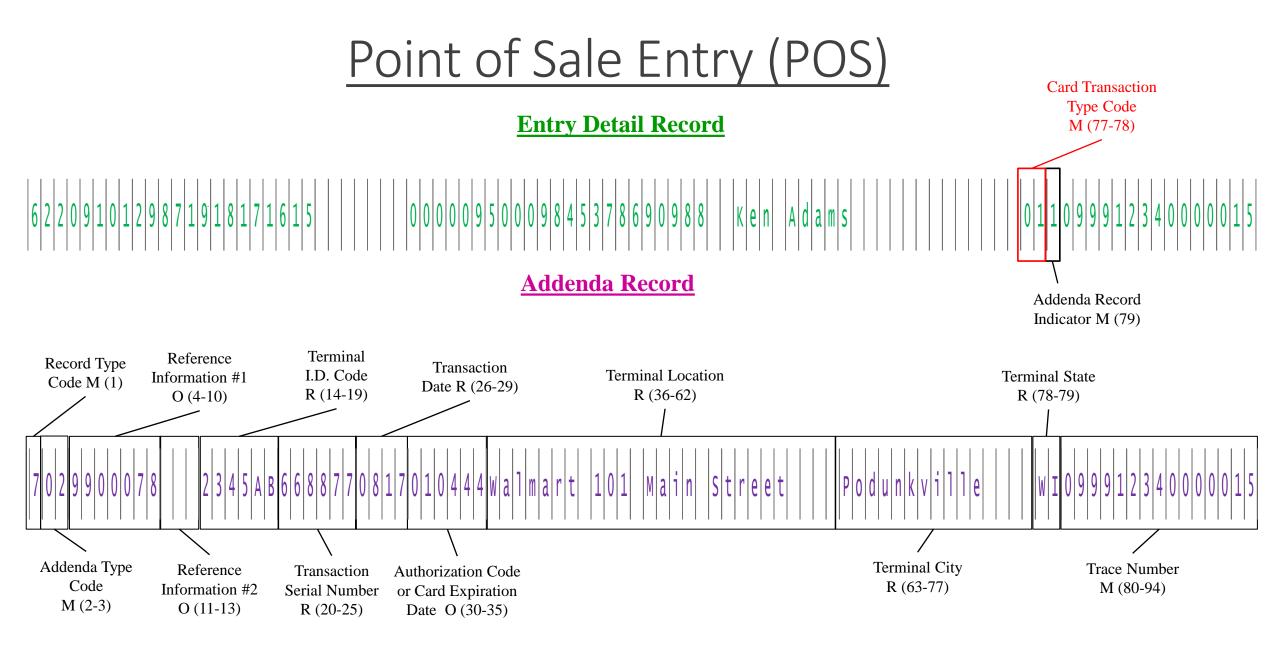
DI RE

CTX ADDEND RECORD

6270910129871918171615 | | | 000021000984535 | | | 0000255

| | FIELD | 1 | 2 | 3 | 4 | 5 |
|---|--------------------------------|------------------------|----------------------|--------------------------------|-------------------------------|------------------------------------|
| | DATA ELEMENT NAME | Record Type Code | Addenda Type Code | Payment Related Information | Addenda Sequence Number | Entry Detail Sequence Number |
| A | Field Inclusion Requirement | м | М | 0 | м | М |
| | Contents | `7′ | `05′ | Alphameric | Numeric | Numeric |
| | Length | 1 | 2 | 80 | 4 | 7 |
| | Position | 01-01 | 02-03 | 04-83 | 84-87 | 88-94 |

|7|0|5| |*|0|0|3|0|4|*|S|E|E|8|8|9|7|4|0|*|0|*|T|\|G|S|*|R|A|*|0|1|2|3|4|5|6|7|8|9|1|2|3|4|5|*|5|4|3|2|1|9|8|7 6 5 * 0 3 0 4 1 5 * 1 1 3 6 * S E E 8 8 9 7 4 0 * X * 0 0 0 0 2 0 0 0 0 5 5 |7|0|5|4|0|\|S|T|*|8|2|0|*|0|0|0|1|0|\|B|P|R|*|C|*|5|5|2|4|1| 12*C*ACH * |0|1|* |0|9|1|6|7|9|8|7|6|5|* |D|A|* |0|0|0|6|3|5|5|* |9|0|4|4|0|3|6|2|0|*** |0**|1|0|**0**|0|3|0|0|0|0|5|5 70591712345*DA*5400596*030531\\TRN*1*04401620000052\\RE F|*|7|2|*|A|3|2|5|0|7|\|D|T|M|*|0|9|7|*|9|8|0|5|3|0| 000040000055 .|*|9|3|*|A|6|9|U|I|P|I|S|A|V|E|S|\|N|3|*|2|4|0| |W|A|S|H|I|N|G|T|0|N| |S|0|0|0|5|0|0|0|5|0|0|0|0|5|5 705UTH*SUITE 1425\N4*PODUNKVILLE |*|M|N|*|5|5|6|0|8|1|2|3|4|\E|N|T|*|1|\|R|M|R|*|I|V|*|8|7|9|4|5|2|1|6|5|4|7|*|*|2|1|1|8|8|.|8|5|*|0|0|0|0|6|0|0|0|0|5|5 |7|0|5|2|1|3|5|4|.1|0|*|0|0|\|R|E|F|*|P|0|*|8|7|9|4|6|5|9|8|\|D|T|M|*|1|2|2|*|9|8|0|4|0|2|\|A|D|X|*|3|*| . 10 * L6 REF*98*A32599 REF*TD*B 000070000055 705R*IV*8794217863**34052 \DTM*165*980403\\SE*27*00000001\\GE*1*888889340000008000055 . 27 * 3 4 0 5 2 . 2 7 7051*888889340 000900055



Card Transaction Type Codes

- 01 Purchase of goods or services
- 02 Cash
- 03 Return reversal
- 11 Purchase reversal
- 12 Cash reversal
- 13 Return
- 21 Adjustment
- 99 Miscellaneous transaction





International ACH Transactions - IAT

© 2024 MACHA/PAR ALL RIGHTS RESERVED

"Travel Rule" Information Mandatory IAT Fields as required by OFAC

Originator

• Name and physical address, street, city, country code

Receiver

Name and physical address, street, city, country code

Originating DFI (Inbound-Foreign DFI)

• FI name, identification number, branch country code

Receiving DFI (Outbound-Foreign DFI)

• FI name, identification number, branch country code

Intermediary bank name, identification number, branch country code

ISO Country and Currency Codes

Foreign Exchange Indicator



IAT Formatting <u>Requirements</u>

Detail record contains

- Gateway or Receiving DFI Routing number & Check digit
- Number of Addenda Records
- Amount
- Account number
- Gateway Screening Indicator
- Addenda indicator
- Trace number

File Header Record

Company Batch Header

Entry Detail Record

Mandatory Addenda #1

Mandatory Addenda #2

Mandatory Addenda #3

Mandatory Addenda #4

Mandatory Addenda #5

Mandatory Addenda #6

Mandatory Addenda #7

(Opt)Remittance Info Addenda

(Opt) Foreign Correspondent

Company Batch Control Record

File Control Record

- IAT format supports up to 12 addenda records per entry detail record
 - Seven addenda records are mandatory
 - All information related to a particular ACH participant (Originator, ODFI, RDFI, Receiver/Beneficiary)
- Five addenda records may include a
 - combination of Remittance Information
 - and Correspondent Bank Information
 - depending on the specific item
- Remittance Information Addenda
 - Maximum of two optional remittance information addenda - each Remittance Addenda record provides 80 characters of remittance info - specific formats required
- Foreign Correspondent Bank Info Addenda
 - A separate addenda record is required for each Correspondent Bank involved in the transmission or exchange of an IAT entry.
 - This addenda provides the necessary information to identify and to react to unlawful transactions - a maximum of five Correspondent Bank Addenda records

IAT Transaction

7 Mandatory Addenda Records Contain the additional information that OFAC has requested

| 1 Addenda |
|---|
| Tran Code, Fx Amount, Foreign Trace, Receiver |
| 2 Addenda |
| Originator Name and Address |
| 3 Addenda |
| Originator City, State and Country Code |
| 4 Addenda |
| ODFI Name, and Identification, and Country Code |
| 5 Addenda |
| RDFI Name, and Identification, and Country Code |
| 6 Addenda |
| Receiver Identification and Address |
| 7 Addenda |
| Receiver City State and Country Code |

IAT Formatting Requirements

2 additional addenda records for remittance data

- 80 characters of remittance data per record
- Enables inclusion of SWIFT 4x35 remittance data
- Any NACHA endorsed banking conventions
- No additional formatting requirements for remittance information

8-10 Addenda Correspondent Information 11-12 Addenda Remittance data

Formatting Requirements

Mandatory identification of Foreign Correspondent Banks

- Fixed-field addenda record required for each foreign correspondent bank
- Maximum of 3 foreign correspondents can be added if the 2 remittance addenda records are used
- If no remittance data provided then up to 5 foreign correspondent banks can be added

Maximum of 12 addenda records per detail record

IAT Company Batch Header Record

Formatting changes with the new IAT standard entry class code, specific to crossborder entries or new fields introduced with IAT are outlined in red.

| FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|-----------------------------------|------------------------|--------------------------|------------|----------------------------------|---|----------------------------------|---------------------------------------|------------|------------------------------------|---------------------------------|--|--|----------------------------|--------------------------------|------------------------------|--|---------|
| DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | | FOREIGN EXCHANGE INDICATOR | FOREIGN EXCHANGE REFERENCE INDICATOR | FOREIGN EXCHANGE REFERENCE | ISO DESTINATION COUNTRY CODE | ORIGINATOR | STANDARD ENTRY CLASS CODE | COMPANY ENTRY DESCRIPTION | ISO ORIGINATING CURRENCY CODE | ISO DESTINATION CURRENCY CODE | EFFECTIVE ENTRY DATE | SETTLEMENT DATE (JULIAN) | ORIGINATOR STATUS CODE | GO IDENTIFICATION ORIGINATING DFI IDENTIFICATION | BATCH |
| Field Inclusion Requirement | м | м | 0 | м | R | R | м | м | м | м | м | м | R | inserted by ACH Operator | м | м | м |
| Contents | ·5' | Numeric | Alphameric | Alphameric | Numeric | Alphameric | Alphameric | Alphameric | Alphameric | Alphameric | Alphameric | Alphameric | YYMMDD | Numeric | Alphameric | TITTAAAA | Numeric |
| Length | 1 | з | 16 | 2 | 1 | 15 | 2 | 10 | 3 | 10 | 3 | 3 | 6 | 3 | 1 | | 7 |
| Position | 01-01 | 02-04 | 05-20 | 21-22 | 23-23 | 24-38 | 39-40 | 41-50 | 51-53 | 54-63 | 64-66 | 67-69 | 70-75 | 76-78 | 79-79 | 80-87 | 88-94 |

Field Definition

IAT Indicator Left blank except with NOCs ("IATCOR") **Foreign Exchange Indicator** "FV" "VF" "FF" **Foreign Exchange Reference Indicator** Code used to indicate the content of the Foreign Exchange Reference Field – '**1**' – FX, '**2**' – FX Reference Number, '**3**' – Space Filled **Foreign Exchange Reference** Either the foreign exchange rate or another reference to the foreign exchange transaction

ISO Destination Country Code 2-character code (approved by ISO) to ID the country receiving the entry.

Originator Identification Alphameric ID code used to uniquely ID an Originator

ISO Originating Currency Code 3-character code to ID the currency denomination in which the entry was first originated **ISO Destination Currency Code** 3-character code to ID the currency denomination in which the entry is to be received

<u>Originator Status Code</u> '0' – Advice file prepared by the ACH Operator; '1' –Originator is a financial institution that agrees to be bound by the Rules; '2' – Federal Government entity or agency not bound to the Rules

GO Identification Originating DFI Identification

Inbound – RTN of the US Gateway Operator; Outbound – RTN to ID the US ODFI initiating the entry

© 2024 MACHA/PAR ALL RIGHTS RESERVED

Transaction Type Codes Reason for Payment

OFAC requested that the reason for payment be included in IAT payment transactions

Reason for Payment is a 3 digit code, included in the Transaction Type Code Field, (1st Addenda) with pre-defined codes

- ANN annuity
- BUS Business/Commercial
- DEP Deposit
- PEN Pension
- REM-Remittance

Transaction Type Code Values are listed in Appendix Two of the Rules

Transaction Type Codes Secondary SEC Code

Expanded the use of the Transaction Type Code field for Inbound IAT transactions to carry a "secondary SEC code" for WEB, TEL, ARC, POP, BOC, RCK, POS, SHR, MTE

If ARC, BOC or RCK codes are listed, a Nacha banking convention has been developed to carry the check serial number

For POP, the check serial number and Terminal City and Terminal State in the Payment Related Information of the Remittance Addenda Record

Secondary SEC Code - Example

A U.S. bank may use BOC to clear U.S. dollar checks it receives in a foreign country. The ACH transaction would be an IAT with BOC included in the Transaction Type Code field Check serial number would be provided in a Nacha-endorsed banking convention contained in the Payment Related Information field of the Remittance Information addenda record

Secondary SEC Code - Example

Banks offering decoupled debit cards that are functional in other countries would use the IAT to clear those transactions and include POS in the Transaction Type Code field Terminal location, city, state or country and terminal identification code would be provided in a Nacha-endorsed banking convention contained in the Payment Related Information field of the Remittance Information addenda record



Entry Detail Record

| / Entry Detail Record | | | |
|---|---|-----|-----------------------|
| 6 2 2 0 2 1 0 0 0 5 5 0 0 0 9 1 0 0 0 3 3 1 | 0 8 2 0 5 8 6 9 9 | | 1 1 0 0 3 5 0 0 0 0 1 |
| 7 1 0 M I S 0 0 0 0 0 0 0 0 0 3 3 1 0 8 2 0 | V e n d e r | | 0000001 |
| 7 1 1 C o m p a n y | P O B O X 1 2 3 4 5 | | 0000001 |
| 7 1 2 C H I C A G O * I L \ | U S A * 5 4 3 2 1 \ | | 0000001 |
| 7 1 3 0 r i g i n a t i n g B a n k | 0 1 0 3 1 1 0 0 3 5 1 | U S | 0000001 |
| 7 1 4 R e c e i v i n g B a n k 1 | 0 1 0 2 1 0 0 0 5 5 | AU | 0000001 |
| 7 1 5 0 0 1 0 0 0 0 2 0 1 1 1 1 X Y Z A v e n u | e | | 0000001 |
| 7 1 6 S Y D N E Y * \ | A U S T R A L I A * 4 5 3 2 1 \ | | 0000001 |
| 7170ption 1 | | | 0 0 0 1 0 0 0 0 0 1 |
| 718Corresponding Bank | | U S | 0 0 0 2 0 0 0 0 0 1 |
| | A maximum of two optional remittance | | |
| 3 Foreign Corresp remittance inform | oondent Bank Information or max of 5 if nation is not used | | |

© 2024 MACHA/PAR ALL RIGHTS RESERVED

Company Batch Control "8"

What is the Company Batch Control Record?

Summarizes the records/ACH entries within the batch

One Batch Control Record per batch

• can be multiple batches in each ACH file

Entry/addenda counts

 Both entry detail and addenda records (records 6&7) are counted to receive a total within that specific batch (batch header and batch control records are NOT included in this total)

Entry hash totals

• Hash is the arithmetic sum of the 8-digit routing number of each RDFI within each entry detail record - if sum is more than 10 characters in length, the digits on the left are removed

Total dollar controls

• Sum of debit and credit totals of all entry detail (6) records in batch

Service Class Code, Company Identification, ODFI Routing number, and batch number MUST all match info in Batch Header record or the batch will reject.



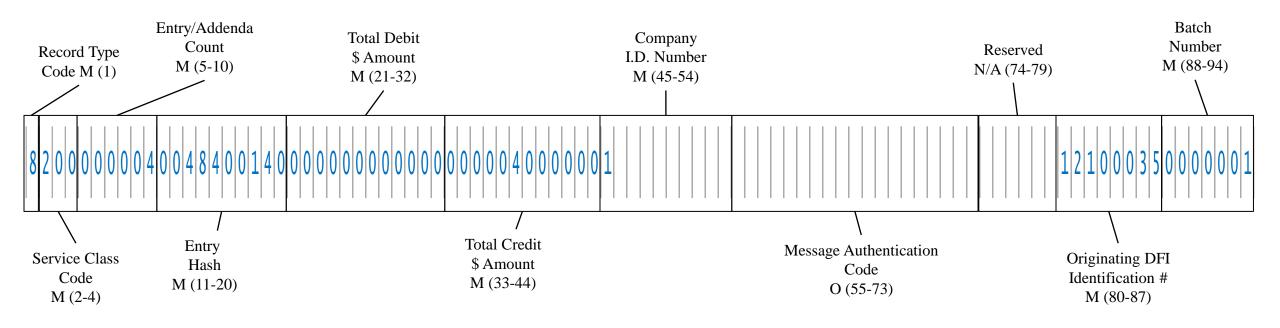
Company/Batch Control Record "8"

| INELD. | 1 | 2 | ż | 4 | 5 | E. | 7 | 1 | ŝ | 10 | 11 | |
|-----------------------------------|------------------------|--------------------------|----------------------------|---|--------------------------------------|-----------------------------------|---------------------------|-----------------------------------|-----------------------|-----------------|-----------------|---------------------------------------|
| DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | ENTRY/ ADDENDA COUNT | ENTRY HASH | TOTAL DEBIT ENTRY DOLLA AMOUNT | | COMPANY IDENTIFICATION | MESSAGE AUTHENTICATION CODE | RESERVED | DRIGINATING DFI | BATCH NUMBER | |
| Field Inclusion Requirement | M | | м | ы | м | м | Ř | 0 | NIA | м | м | |
| orients . | .я. | Numeric | Nameric | Numeric | 5\$5\$5\$5\$5\$¢ | | Alphameric | Alphameric | Slenk | TTTTAAAA | Numeric | |
| esgih Pozition | 1 01-01 | 3 02-04 | D5-10 | 10 11-20 | 12 21-32 | 12 33-44 | 10 | 19 55-73 | 6 | 80-87 | 7 88-94 | _ |
| | \searrow | | | | Ţ | FIELD | 1 | 2 | 3 | | 4 | 5 |
| $\overline{\ }$ | | | | | | | | | | | | |
| | | | | | | DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | ENTR ADDEN COUL | NDA EN | TRY | TOTAL DEBIT ENTRY DOLLAR AMOUNT |
| | | | | | | Field Inclusion Requirement | М | М | м | | м | м |
| | | | | \ \ | | | | | | | | |
| | | | | | | Contents | '8' | Numeric | Nume | eric Nur | neric | \$\$\$\$\$\$\$\$\$\$¢¢ |
| | | | | | | Contents Length | '8' 1 | Numeric 3 | Nume 6 | | neric 10 | \$\$\$\$\$\$\$\$\$¢¢ 12 |

Company/Batch Control Record "8"

| | FIELD | 1 | 2 | 3 | 4 | 1 | | ŝ | 7 | 1 | 9 | 10 | 11 |
|--|-----------------------------------|------------------------|------------------------------|--------------------------|-----------|-------------------------|----------|--|------------|-----------------------------------|----------|-----------------|-----------------|
| | DATA ELEMENT NAME | RECORD TYPE CODE | SERVICE CLASS CODE | ENTRY ADDEND COUNT | A ENTRY | TOTAL ENTRY D AMO | OLLAR | TOTAL CREDIT ENTRY DOLLAR AMOUNT | COMPANY | MESSAGE AUTHENTICATION CODE | RESERVED | DRIGINATING DFI | BATCH NUMBER |
| | Field Inclusion Requirement | N | и | м | м | N | | м | R | Û | NA | | м |
| | Contents | 'я' | Numeric | Numeri | c Numeric | 5\$5\$5\$ | 5\$5\$¢¢ | \$\$\$\$\$\$\$\$\$ | Alphameric | Alphameric | Blenk | TTTTAAAA | Numeric |
| | Langth | 1 | 3 | 6 | 10 | 12 | | 12 | 10 | 19 | | 1 | 7 |
| | Postico | D1-01 | 02-04 | D5-10 | 11-20 | 21- | 32 | 33-44 | 45-54 | 55-73 | 74-79 | 80-87 | 88-94 |
| 6 | 7 | | 8 | | 9 | | | 10 | 11 | | | | |
| TOTAL CREDIT ENTRY DOLLAR AMOUNT | COMPANY | | MESSAGE THENTICAT CODE | | RESERVE | ED | | INATING DFI | BATCH | | | | |
| М | R | | 0 | | N/A | | | М | м | | | | |
| \$\$\$\$\$\$\$\$\$¢¢ | Alphameric | | Alphameric | > | Blank | | Т | TTTAAAA | Numeri | c | | | |
| 12 | 10 | | 19 | | 6 | | | 8 | 7 | | | | |
| 33-44 | 45-54 | | 55-73 | | 74-79 | | | 80-87 | 88-94 | | | | |

Company/Batch Control Record "8"



ALL ENTRIES COMPANY/BATCH HEADER RECORD (EXCEPT IAT)

| | | FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
|--|--------|-----------------------------------|------------------------|--------------------------|----------------------------|----------------------------------|--------------------------------------|---------------------------------|---------------------------------|--------------------------------|----------------------------|--------------------------------|------------------------------|--------------------------------------|-----------------|--|
| | | DATA ELEMENT NAME | Record Type Code | Service Class Code | Company Name | Company Discretionary Data | Company Identification | Standard Entry Class Code | Company Entry Description | Company Descriptive Date | Effective Entry Date | Settlement Date (Julian) | Originator Status Code | Originating DFI Identification | Batch Number | |
| | | Field Inclusion Requirement | М | М | М | 0 | М | М | м | 0 | R | Inserted By ACH Operator | М | М | м | |
| | | Contents | `5′ | Numeric | Alphameric | Alphameric | Alphameric | Alphameric | Alphameric | Alphameric | YYMMDD | Numeric | Alphameric | TTTTAAAA | Numeric | |
| | | Length | 1 | 3 | 16 | 20 | 10 | 3 | 10 | 6 | 6 | 3 | 1 | 8 | 7 | |
| | | Position | 01-01 | 02-04 | 05-20 | 21-40 | 41-50 | 51-53 | 54-63 | 64-69 | 70-75 | 76-78 | 79-79 | 80-87 | 88-94 | |
| 5200 MY BEST COMP DIRECT DEPOSIT 1418712342 PPDPAYROLL 200913 1121000350000001 ALL ENTRIES COMPANY/BATCH CONTROL RECORD | | | | | | | | | | | | | | | | |
| | | FIELD | 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | | 9 | 10 | 11 | |
| | | DATA ELEMENT NAME | Record Type Code | Service Class Code | Entry/ Addenda Count | Entry Hash | Total Debit Entry Dolla Amount | r Ent | al Credit Ty Dollar nount | Company Identification | Messa Authenticat | | Reserved | Originating DFI Identification | Batch Number | |
| | | Field Inclusion Requirement | М | М | М | м | м | | M | М | 0 | | N/A | м | N | |
| | | Contents | `8′ | Numeric | Numeric | Numeric | \$\$\$\$\$\$\$\$\$ | ¢ \$\$\$\$ | \$\$\$ \$ \$\$¢¢ | Alphameric | Alpham | ieric | Blank | TTTTAAAA | Numeric | |
| | | Length | 1 | 3 | 6 | 10 | 12 | | 12 | 10 | 19 | | 6 | 8 | 7 | |
| | | Position | 01-01 | 02-04 | 05-10 | 11-20 | 21-32 | : | 33-44 | 45-54 | 55-7 | 3 | 74-79 | 80-87 | 88-94 | |
| 820 | 000000 | 400484 | 00140 | 0000 | 00000 | 000000 | 0040000 | 0 0 1 4 1 | 87123 | 4 2 | | | | | 2 1 0 0 0 3 | |

File Control Record "9"

One per File

Batch count

• Total number of batches within file

Block count

• The sum of all physical blocks within the file

Entry addenda counts

• The sum of all entry/addenda count totals from all batch control records within the file

Entry hash totals

• Hash is the arithmetic sum of the entry hash totals from each batch control record within the file

Total dollar controls

• The sum of all debit and credit totals of all batch control records within the file



What is a Physical Block?

A "block" consists of 10 records. Each record is 94 characters, which equals 940 characters (94 character records x 10 records)

If the last block has less than 940 characters of information, the remainder of the block must be filled with 9's

© 2024 MACHA/PAR ALL RIGHTS RESERVED

Block filler -<u>Count this out</u>

| 101 075920787 0759207870704 | 1261126A094101ABC | BANK BOWMAN & | LLER PC | | | | | | |
|---|--------------------------------|------------------------------|-------------------------------|--|--|--|--|--|--|
| 5200MELIORA PARTNERS | 120579855 PPDPA | YROLL 070430070430 | 1073920870000001 | | | | | | |
| 6221010000350034917607 | 00003550253 | ROB BARLOW | 0073920870000001 | | | | | | |
| 62207300022800004984 | 00003640417 | OWEN MUCHE | 0073920870000002 | | | | | | |
| 62227397535700006971 | 00003313752 | DAN MICHAELS | 0073920870000003 | | | | | | |
| 622073900975452144 | 00002434776 | CHARITI SIMPSON | 0073920870000004 | | | | | | |
| 62208300010831908 | 00003646504 | MARY ANDERSON | 0073920870000005 | | | | | | |
| 622073920777335111 | 00000150005 | LISA JONES | 0073920870000006 | | | | | | |
| 6221012080310662555 | 00002026015 | LISA JONES | 0073920870000007 | | | | | | |
| 62227397533110394446 | 00001000001 | JOHN SMITH | 0073920870000008 | | | | | | |
| 6320739009754521245613 | 00000150001 | JOHN SMITH | 0073920870000009 | | | | | | |
| 622073905527500192456 | 00004343241 | JOHN SMITH | 0073920870000010 | | | | | | |
| 62707392077719743 | 000242549329111 | GENERIC NAME , INC. | 0073920870000011 | | | | | | |
| 82000000110127570806000002425493000002425493120579855 073920870000001 | | | | | | | | | |
| 900000100000200000110127570806000002425493000002425493 | | | | | | | | | |
| 999999999999999999999999999999999999999 | | | | | | | | | |
| 999999999999999999999999999999999999999 | | | | | | | | | |
| 999999999999999999999999999999999999999 | | | | | | | | | |
| 999999999999999999999999999999999999999 | | | | | | | | | |
| 9999999999999999999999999999999 | 999999999999999999999999999999 | 9999999999999999999999999999 | 99999999999999999999999999999 | | | | | | |

The Blocking Factor – Quiz

An ACH File has two batches

Each batch contains two transactions (with no addenda)

How may rows of 9s are at the end of the file?



© 2024 MACHA/PAR ALL RIGHTS RESERVED

The Blocking Factor – Quiz

Answer: None

Since a block (10 records) was completed and there were no additional records, no rows of 9s are needed

| 101 064000101 064222 | 2220702281421A094101FEDERAL RES | ERVE BANK TEST BANK | |
|----------------------|---|---------------------|---|
| 5200ABC TEST CO | PHONE: 800-999-9999 1999999999 | PDPAYROLL 070430 | 1064222220000029 |
| 62206422222212345 | 0000200000ID 001 | DOE, JOHN | 0064222220002241 |
| 62206422222267890 | 0000200000ID 002 | DOE, MARY | 0064222220002242 |
| 82000000020012844444 | 000000000000000000000000000000000000000 | 999 | 064222220000029 |
| 5200ABC TEST CO | PHONE: 800-999-9999 1999999999 | PDBILLING 070430 | 1064222220000030 |
| 62706422222254321 | 0000100000ID 003 | SMITH, JOHN | 0064222220002243 |
| 62706422222298765 | 0000100000ID 004 | SMITH, MARY | 0064222220002244 |
| 82000000020012844444 | 00000020000000000000000001999999 | 999 | 064222220000030 |
| 90000200001000000 | 4002568888800000020000000000040 | 0000 | 2019-30-90 - Constantin Child Color Advander 2019 |

The Blocking Factor – Quiz

If one of the batches had three transactions instead of two, then a second block would have been completed with nine rows of 9s

| 101 064000101 0642222220703021314A094101FEDERAL RESERVE BANK TEST | BANK | |
|---|-------------|------------------------|
| 5200ABC TEST CO PHONE: 800-999-9999 19999999999PDPAYROLL | 070430 | 1064222220000031 |
| 62206422222212345 00002000001D 001 DOE, JOHN | | 0064222220002245 |
| 62206422222267890 00002000001D 002 DOE, MARY | | 0064222220002246 |
| 8200000020012844444000000000000000000000 | | 064222220000031 |
| 5200ABC TEST CO PHONE: 800-999-9999 19999999999PDBILLING | 070430 | 1064222220000032 |
| 62706422222254321 0000100000ID 003 SMITH, JOHN | | 0064222220002247 |
| 62706422222298765 00001000001D 004 SMITH, MARY | | 0064222220002248 |
| 62706422222201234 0000100000ID 005 SMITH, BILL | | 0064222220002249 |
| 820000003001926666600000030000000000000000000019999999999 | | 064222220000032 |
| 90000020000020000005003211111000000030000000000 | | |
| 999999999999999999999999999999999999999 | 99999999999 | 9999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 9999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 9999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 9999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 999999999999999999999 |
| 999999999999999999999999999999999999999 | 99999999999 | 999999999999999999999 |

File Control Record "9"

| MELD | 1 | 2 | Ê | 4 | - | 6 | 7 | a | |
|-----------------------------------|---------------------|--------------|-----------------------------------|------------------------|------------|--|--|----------|------------------------|
| DATA ELEMENT NAME | RECORD TYPE CODE | BATCH COUNT | BLOCK COUNT | ENTRY/ADDENDA COUNT | ENTRY HASH | TOTAL DEBIT ENTRY DOLLAR ANOUNT N FILE | TOTAL CREDIT ENTRY DOLLAR AMOUNT IN FILE | RESERVED | |
| Field Inclasion Requirement | 2 | м | м | м | и | × | ļ | NIA | |
| Contents | ii ii | Numeric | Numeric | Namaric | Numeric | \$\$\$\$\$\$\$\$\$ | \$\$\$\$\$\$\$\$\$ | Blank. | |
| Length | 1 | * | 6 | 8 | 10 | 12 | 12 | Ť | |
| Position | D1-01 | 62-07 | Ú8-13 | 14-21 | 22-31 | 32-43 | 44-65 | 56-94 | |
| \backslash | , | | FIELD | 1 | | 2 | 3 | 3 | 4 |
| | | | DATA ELEMENT NAME | RECORD | | BATCH COUNT | BLOCK | COUNT | ENTRY/ADDENDA COUNT |
| | | | Field Inclusion Requirement | м | | М | N | Л | М |
| | | \mathbf{i} | Contents | ·9' | | Numeric | Num | neric | Numeric |
| | | \backslash | Length | 1 | | 6 | 6 | 3 | 8 |
| | | \backslash | Position | 01-0 | 1 | 02-07 | 08- | -13 | 14-21 |

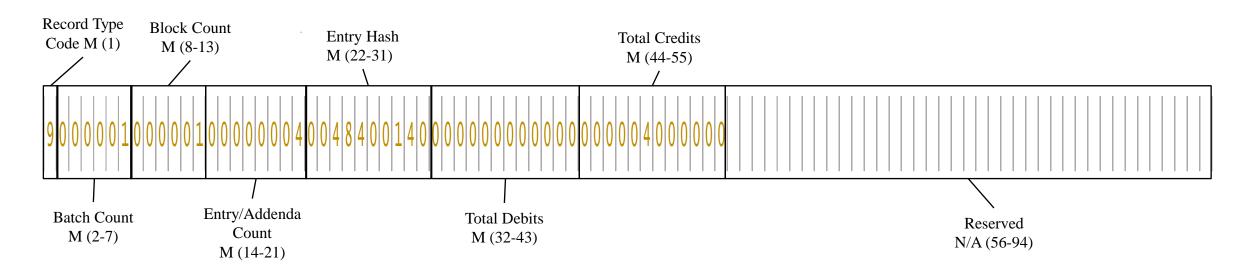
File Control Record "9"

| | FIELD | 1 | 2 | t t | - | 5 | 6 | 7 | 1 |
|------------|-----------------------------------|-----------------------------|--|-------------|------------------------|------------|---|--|----------|
| | DATA ELEMENT NAME | RECORD TYPE CODE | | REOCK COUNT | ENTRYIADDENDA COUNT | ENTRY HASH | TOTAL DEBIT ENTRY DOLLAR ANOUNT IN FILE | TOTAL CREDIT ENTRY DOLLAR AMOUNT IN FILE | RESERVED |
| | Field Inclasion Requirement | м | | м | м | м | | | NUA |
| | Contents | 3. | Numeric | Numeric | Namaric | Numeric | \$15151245564 | \$\$\$\$\$\$\$\$\$ | Blank. |
| | Longsh | 1 | 6 | 6 | 8 | 10 | 12 | 12 | 39 |
| | Position | D1-01 | Ú2-07 | 08-13 | 14-21 | 22-31 | 32-43 | 44-65 | 56-94 |
| 5 | | 6 | 7 | | 8 | | | | |
| ENTRY HASH | DOLLAR | BIT ENTRY AMOUNT FILE | TOTAL CREDIT EN DOLLAR AMOUN IN FILE | т | SERVED | | | | |
| м | 1 | м | М | | N/A | | | | |
| Numeric | \$\$\$\$\$\$ | \$\$\$\$\$¢¢ | \$\$\$\$\$\$\$\$\$\$¢¢ | | Blank | / | | | |
| 10 | 1 | 2 | 12 | | 39 | | | | |
| 22-31 | 32 | -43 | 44-55 | | 56-94 | | | | |

© 2024 MACHA/PAR ALL RIGHTS RESERVED

File Control Record "9"

File Control



| | FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|-----------------------|--------------------------------|----------------------------|------------------|--------------------------|---------------------|--------------------------|--------------------------|---------------------|----------------|--------------------|----------------|----------------------------------|-----------------------------|-------------------|
| ALL ENTRIES | DATA ELEMENT NAME | Reco rd Type Code | Priority Code | Immediate Destination | Immediate Origin | File Creation Date | File Creation Time | File ID Modifier | Record Size | Blocking Factor | Format Code | Immediate Destination Name | Immediate Origin Name | Reference Code |
| FILE HEADER RECORD | Field Inclusion Requirement | М | R | м | М | м | 0 | м | М | М | м | 0 | 0 | 0 |
| RECORD | Contents | `1′ | Numeric | bTTTTAAAAC | bTTTTAAAAC | YYMMDD | ННММ | A-Z 0-9 | `94′ | `10′ | `1' | Alphameric | Alphameric | Alphameric |
| | Length | 1 | 2 | 10 | 10 | 6 | 4 | 1 | 3 | 2 | 1 | 23 | 23 | 8 |
| | Position | 01-01 | 02-03 | 04-13 | 14-23 | 24-29 | 30-33 | 34-34 | 35-37 | 38-39 | 40-40 | 41-63 | 64-86 | 87-94 |

101 051000033 9999999999999999120111A094101FEDERAL RESERVE BANK MY BANK

| | FIELD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------|--------------------------------|------------------------|----------------|----------------|----------------------------|------------|---|--|----------|
| ALL ENTRIES | DATA ELEMENT NAME | Record Type Code | Batch Count | Block Count | Entry/ Addenda Count | Entry Hash | Total Debit Entry Dollar Amount in File | Total Credit Entry Dollar Amount in File | Reserved |
| FILE | Field Inclusion Requirement | М | М | М | М | М | М | М | N/A |
| CONTROL RECORD | Contents | `9′ | Numeric | Numeric | Numeric | Numeric | \$\$\$\$\$\$\$\$\$¢¢ | \$\$\$\$\$\$\$\$¢¢ | Blank |
| RECORD | Length | 1 | 6 | 6 | 8 | 10 | 12 | 12 | 39 |
| | Position | 01-01 | 02-07 | 08-13 | 14-21 | 22-31 | 32-43 | 44-55 | 56-94 |

© 2024 MACHA/PAR ALL RIGHTS RESERVED

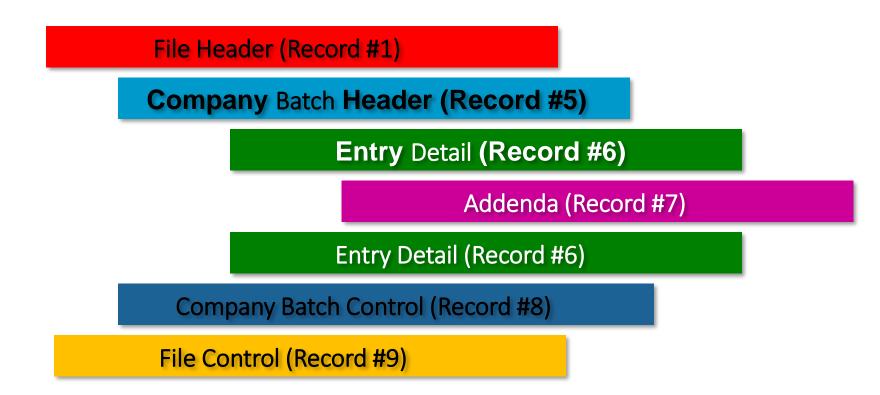
Let's put it all together --

| 101 051000033 9999999992009120111A094101FEDERAL RESERVE BANK | M Y B A N K |
|---|---|
| 5200MY BEST COMP DIRECT DEPOSIT 1418712342PPDPAYROLL | 200913 112100035000001 |
| 6221210003581010202033 0001000000 RAGENA | P H A L A N G E 0 1 2 1 0 0 0 3 5 0 0 0 0 0 1 |
| 622121222358111222333 000100000 KEN ADA | A M S 0 1 2 1 0 0 0 3 5 0 0 0 0 0 2 |
| 622121000358222333444 0001000000 PRINCES | SS CONSUELA 0121000350000003 |
| 8 2 0 0 0 0 0 0 0 0 3 6 3 2 2 3 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 | 1 2 1 0 0 0 3 5 0 0 0 0 0 1 |
| 900001000010000300363223550000000000000000000000000 | |
| 999999999999999999999999999999999999999 | 999999999999999999999999999999999999999 |
| 999999999999999999999999999999999999999 | 999999999999999999999999999999999999999 |
| 999999999999999999999999999999999999999 | 999999999999999999999999999999999999999 |

And one more.....

| | | | | | | | | | | | | | | | | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | - | | Г |
|-----|-----|-----|---|-----|---|-----|---|---|-------------|-----|-----|-----|-------------|---|---|-----|-----|-----|-----|---|---|-----|-----|-----|-----|---|---|---|---|---|----|-----|-----|------------|-----|-----|-------------|---|---|---|---|-----|-----|-----|-----|---|---|-------------|-----|-----|------|---|---|-----|-----|-------------|-----|------|-------------|---|-----|-----|-----|---|---|-----|------|---|---|---|---|-----|-----|------|---|-----|---|
| 101 | (|) 5 | 1 | 0 0 | 0 | 0 3 | 3 | | 9 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 | 2 (|) (| 19 | 1 | 2 | 0 | 1 1 | L 1 | . A | 0 | 9 | 4 | 1 | 0 | 1 | FI | EC |) [| R | A | L | | R | E | S | ΕI | R١ | / E | | В | A | N | К | | | М | Y | B | S A | N | К | | | | | | | | | | | | | | | | | | | | |
| 522 | 5 1 | Υ | | ΒE | S | Т | С | 0 | M | 0 | | | | Р | A | Y | M | EN | T | | | | | | | | | | | | | 1 | 4 1 | 18 | 37 | 1 | 2 | 3 | 4 | 2 | С | T) | X F | Α | Y | М | E | N | Т | | | | | | | | 2 (|) () | 9 | 1 | 3 | | | 1 | 1 | 2 1 | L 0 | 0 | 0 | 3 | 5 | 0 (| 0 0 |) () | 0 | 0 1 | L |
| 627 | 0 9 | 91 | 0 | 12 | 9 | 8 7 | 1 | 9 | 18 | 3 1 | L 7 | 1 | 6 | 1 | 5 | | | | | | | 0 | 0 (|) (| 2 | 1 | 0 | 0 | 0 | 0 | 9 | 8 4 | 4 5 | 5 | 35 | | | | | | | | | 0 | 0 | 0 | 9 | 3 | 9 | 5 5 | 5 5 | 4 | 4 | 43 |) | | | | | | | | | 1 | 0 | 9 9 | 9 | 1 | 2 | 3 | 4 | 0 (| 0 0 |) () | 0 | 5 5 | ; |
| 705 | IS | S A | * | 0 0 | * | 0 0 | 0 | 0 | 0 (|) (|) (| 0 | 0 | * | 0 | 0 | * (|) (| 0 (| 0 | 0 | 0 | * Z | ZZ | * | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 78 | 3 9 |) 1 | . 2 | 3 | 4 | 5 | * | Ζ | Z | 8 5 | 5 4 | 3 | 2 | 7 | 8 | 9 | 1 2 | 2 5 | 4 | 6 | 32 | 8 | ¥ | 98 | 30 | 4 | 1 | 5 : | ؛ 1 | . 1 | 3 | 6 | * (| J () | 0 | 0 | 0 | 1 | 0 (| 0 0 |) () | 0 | 5 / |) |
| 705 | | * 0 | 0 | 30 | 4 | * 5 | E | E | 8 8 | 3 9 |) 7 | 4 | 0 | * | 0 | * . | T \ | . 6 | i S | ÷ | R | A | * (|) 1 | . 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1 2 | 2 | 34 | 5 | × | 5 | 4 | 3 | 2 | 1 | 9 8 | 3 7 | 6 | 5 | * | 0 | 3 (| 04 | 1 | 5 | * | 1 1 | . 3 | 6 | * 9 | 5 E | Ε | 8 | 8 9 | 97 | 4 | 0 | * | X | • 0 | 0 | 0 | 0 | 2 | 0 (| 0 0 |) () | 0 | 5 / |) |
| 705 | 4 (|) \ | S | Г * | 8 | 2 (| * | 0 | 0 (|) (|) 1 | . 0 | \setminus | В | Р | R | * (| * | 5 | 5 | 2 | 4 | 1. | . 1 | . 2 | * | С | * | A | С | Н | * (| C 1 | F) | (* | 0 | 1 | * | 0 | 9 | 1 | 6 | 7 9 | 8 | 7 | 6 | 5 | * | D | A * | ; 0 | 0 | 0 | 0 6 | 53 | 5 | 5 ; | ; 9 | 0 | 4 | 4 (|) 3 | 6 | 2 | 0 | * (|) 1 | 0 | 0 | 0 | 3 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | 9 | 17 | 1 | 23 | 4 | 5 * | D | A | * I | 54 | 1 0 | 0 | 5 | 9 | 6 | * | 0 3 | 3 (|) 5 | 3 | 1 | \ ' | TF | RN | * | 1 | * | 0 | 4 | 4 | 0 | 1 | 6 2 | 2 (|) (| 0 | 0 | 0 | 5 | 2 | \ | R | E F | * | 7 | 2 | * | A | 3 | 2 5 | 5 0 | 7 | \ | DT | М | × | 0 9 |) 7 | * | 9 | 8 (|) 5 | 3 | 0 | \ | N 1 | L 0 | 0 | 0 | 0 | 4 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | * / | A B | С | С | 0 | MF | Α | N | Y١ | \ N | 1 | * | Р | E | × | X | YZ | 2 | F | 0 | 0 | D | S | I | N | С | ÷ | * | 9 | 3 | * | A | 6 9 |) (| JI | P | I | S | A | ۷ | E | S | \ N | 13 | * | 2 | 4 | 0 | ١ | W A | S | H | I | NG | Τ | 0 | N | A | ۷ | E | | S | 0 | 0 | 0 | 0 5 | 5 0 | 0 | 0 | 0 | 5 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | U - | ГΗ | * | S U | Ι | ΤE | | 1 | 4 2 | 2 5 | 5 \ | N | 4 | * | Р | 0 | DI | JN | I K | ۷ | I | L | LE | | * | М | N | * | 5 | 5 | 6 | 0 | 8 1 | 1 2 | 2 3 | 4 | \setminus | E | N | Т | × | 1 ' | \ F | R N | I R | * | I | ۷ | * | 8 7 | 79 | 4 | 5 | 2 1 | . 6 | 5 | 4 7 | 7 * | * | 2 | 1 : | 18 | 8 | ÷ | 8 | 5 ; | • 0 | 0 | 0 | 0 | 6 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | 2 | 13 | 5 | 4. | 1 | 0 * | 0 | 0 | \ | RE | EF | * | Р | 0 | * | 8 | 7 9 |) 4 | 6 | 5 | 9 | 8 | \ [|) T | M | * | 1 | 2 | 2 | × | 9 | 8 | 0 4 | 4 (|) 2 | | A | D | Х | × | 3 | * | . 1 | | * | L | 6 | \setminus | RI | E F | * | 9 | 8 | * A | 3 | 2 | 5 9 | 99 | \setminus | R | ΕI | * | Т | D | * | B \ | 0) | 0 | 0 | 0 | 7 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | R | * I | ۷ | * 8 | 7 | 94 | 2 | 1 | 7 8 | 8 6 | 53 | * | * | 3 | 4 | 0 | 5 2 | 2. | 2 | 7 | * | 3 | 4 (|) 5 | 2 | | 2 | 7 | \ | D | ΤI | M | * 1 | 1 (| 5 5 | * | 9 | 8 | 0 | 4 | 0 | 3 | \ 5 | S E | * | 2 | 7 | * | 0 (| 0 0 |) () | 0 | 0 | 0 0 |) 1 | \setminus | GE | * | 1 | * | 8 8 | 8 8 | 8 | 9 | 3 | 4 (|) (| 0 | 0 | 0 | 8 | 0 (| 0 0 |) () | 0 | 5 / | ; |
| 705 | 1 : | * 8 | 8 | 88 | 8 | 93 | 4 | 0 | \setminus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 9 | 0 (| 0 0 |) () | 0 | 5 5 | ; |
| 827 | 5 (| 0 0 | 0 | 01 | 0 | 0 0 | 0 | 9 | 1 (|) 1 | 2 | 9 | 8 | 0 | 0 | 0 | 0 (|) (| 12 | 1 | 0 | 0 | 0 (|) (| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 (|) (|) 1 | . 4 | 1 | 8 | 7 | 1 | 2 | 3 | 4 2 |) | | | | | | | | | | | | | | | | | | | | | 1 | 2 1 | L 0 | 0 | 0 | 3 | 5 | 0 (| 0 0 |) () | 0 | 0 1 | L |
| 900 | 0 (| 0 0 | 1 | 0 0 | 0 | 0 0 | 2 | 0 | 0 (|) (|) (| 0 | 0 | 4 | 0 | 0 | 4 8 | 34 | . 0 | 0 | 1 | 4 | 0 (|) (| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 (|) (|) (| 0 | 0 | 0 | 0 | 0 | 0 | 0 |) (|) (| 0 | 0 | 0 | 0 | 0 (| 0 (|) () | 0 | 4 | 0 0 | 0 (| 0 | 0 (|) | | | | | | | | | | | | | | | | | | | |
| 999 | 9 9 | 99 | 9 | 99 | 9 | 9 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 (|) |
| 999 | 9 9 | 99 | 9 | 99 | 9 | 9 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | , |
| 999 | 9 9 | 99 | 9 | 99 | 9 | 9 9 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 1 |
| 999 | 9 9 | 99 | 9 | 99 | 9 | 9 9 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 9 9 | 9 | 9 | 9 | 9 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 19 | 9 | 9 9 | 1 |
| 999 | | | - | | - | | - | - | | | | - | - | - | - | - | | | | - | - | - | | | - | - | - | - | - | - | - | - | | | | - | - | - | - | - | - | - | | - | - | - | - | - | | | | - | - | | - | - | | | - | - | | | - | • | - | | | - | • | - | - | | | | • | | |
| 999 | 9 9 | 99 | 9 | 99 | 9 | 9 9 | 9 | 9 | 9 9 | 99 | 99 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 9 9 | 99 | 9 | 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 9 | 99 | 9 | 9 | 9 | 9 | 9 9 | 99 | 19 | 9 | 9 9 | ł |

ACH File Structure



© 2024 MACHA/PAR ALL RIGHTS RESERVED

Returns

When entry detail is being returned, addenda records associated with the entry detail or corporate entry detail records are not included

Return Entry

- Must contain original data from:
 - Company/Batch Header
 - Entry Detail
- Addenda Records from Original Entry
 - Not returned with Return Entry
 - Exception for IAT 7 mandatory addenda records must accompany the return
- Addenda Record of the Return Entry
 - Reason for Return, Dishonor, Contested Dishonor

Return Entry

- Considered "new" Entry
 - New Batch Number
 - New Trace Number
 - New Transaction Code
 - Receiving DFI Identification
- Field Contents for the Return Entry must match original data except for noted changes in Appendix Four

Return Entries

- Transaction Code must be
 - 21 or 26 = Demand Accounts
 - 31 or 36 = Savings Accounts
 - 41 or 46 = General Ledger Accounts
 - 51 or 56 = Loan Accounts
- Addenda Type Code = 99
- Addenda Record for Dishonored Return Entry include
 - Dishonored Return Reason Code
 - Return Trace Number
 - Return Settlement Date
 - Return Reason Code

Contested Dishonored Returns

- RDFI warranty that Entry was returned in accordance with the Rules
- Addenda Record for Contested Dishonored Return includes
 - Date Original Entry Returned
 - Original Settlement Date
 - Return Trace Number
 - Return Settlement Date
 - Return Reason Code
 - Dishonored Return Trace Number
 - Dishonored Return Settlement Date
 - Dishonored Return Reason Code

Return Reason Codes for use by Original RDFI

- R01 Insufficient Funds
- R02 Account Closed
- R03 No Account/Unable to Locate Account
- R04 Invalid Account Number Structure
- R05 Unauthorized Debit to Consumer Account Using Corporate SEC Code
- R06 Returned per ODFI's Request
- R07 Authorization Revoked by Customer
- R08 Payment Stopped
- R09 Uncollected Funds
- R10 Customer Advises Originator is Not Known to Receiver and/or Originator is Not Authorized by Receiver to Debit Receiver's Account
- R11 Customer Advises Entry Not in Accordance with the Terms of the Authorization
- R12 Account Sold to Another DFI

Return Reason Codes for use by Original RDFI

- R14 Representative Payee Deceased or Unable to Continue in that Capacity
- R15 Beneficiary or Account Holder (Other than a Representative Payee) Deceased
- R16 Account Frozen/Returned per OFAC Request
- R17 File Record Edit Criteria/Entry with Invalid Account Number Initiated Under Questionable Circumstances/Return of Improperly-Initiated Reversal
- R20 Non-Transaction Account
- R21 Invalid Company Identification
- R22 Invalid Individual ID Number
- R23 Credit Entry Refused by Receiver
- R24 Duplicate Entry
- R29 Corporate Customer Advises Not Authorized

Return Reason Codes for use by Original RDFI

- R31 Permissible Return Entry (CCD/CTX Only)
- R33 Return of XCK Entry
- R37 Source Document Presented for Payment
- R38 Stop Payment on Source Document
- R39 Improper Source Document/Source Document Presented for Payment
- R50 State Law Affecting RCK Acceptance
- R51 Item related to RCK Entry is Ineligible or RCK Entry is Improper
- R52 Stop Payment on Item Related to RCK Entry
- R53 Item and RCK Entry Presented for Payment

Return Reason Codes for use by Federal Government Only – ENR entries

- R40 Return of ENR Entry by Federal Government Agency
- R41 Invalid Transaction Code
- R42 Routing Number/Check Digit Error
- R43 Invalid DFI Account Number
- R44 Invalid Individual ID Number
- R45 Invalid Individual Name/Company Name
- R46 Invalid Representative Payee Indicator
- R47 Duplicate Enrollment

Dishonored Return Reason Codes for use by ODFI

- R61 Misrouted Return
- R62 Return of Erroneous or Reversing Debit
- R67 Duplicate Return
- R68 Untimely Return
- R69 Field Errors
 - 01- Incorrect DFI Account Number
 - 02 Incorrect Original Entry Trace Number
 - 03 Incorrect Dollar Amount
 - 04 Incorrect Individual Identification Number
 - 05 Incorrect Transaction Code
 - 06 Incorrect Company Identification Number
 - 07 Invalid Effective Entry Date
- R70 Permissible Return Entry Not Accepted/Return Not Requested by ODFI

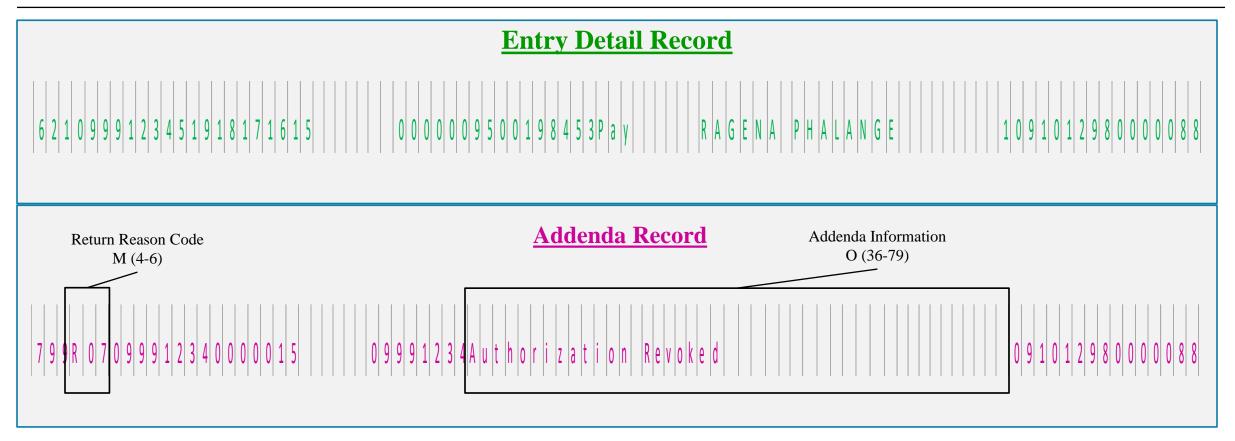
Contested Dishonored Return Reason Codes for use by RDFI

- R71 Misrouted Dishonored Return
- R72 Untimely Dishonored Return
- R73 Timely Original Return
- R74 Corrected Return
- R75 Return Not a Duplicate
- R76 No Errors Found
- R77 Non-Acceptance of R62 Dishonored Return

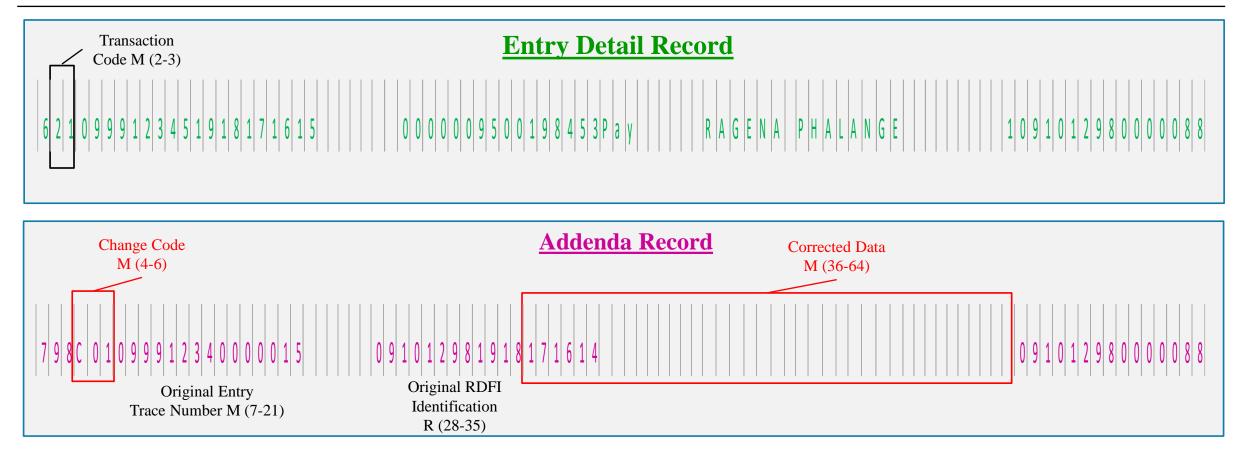
Return Reason Codes for use by Gateway Operators – IAT entries

- R80 IAT Entry Coding Error
- R81 Non-Participant in IAT Program
- R82 Invalid Foreign Receiving DFI Identification
- R83 Foreign Receiving DFI Unable to Settle
- R84 Entry Not Processed by Gateway
- R85 Incorrectly Coded Outbound International Payment

Returns

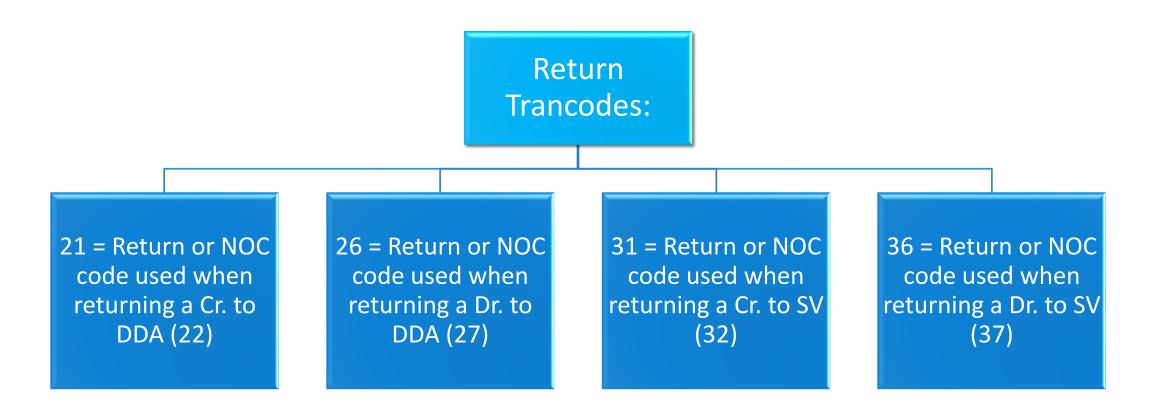


Notification of Change Entry (COR)



© 2024 MACHA/PAR ALL RIGHTS RESERVED

Transaction Codes



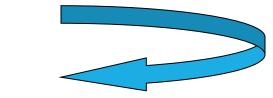
Other Return Issues

Batch Header - ODFI changes to original RDFI

Operator initiated returns

Depending on who does the return, Immediate origin field may differ

- You (F.I. your R/T#)
- Third party (their R/T # in File Header record, the immediate origin field)



Dishonored Returns

Includes:

- Original trace number and return trace number
- Dishonored return reason code and original return reason code
- "99" in the addenda type code field
- The return entry settlement date

(As always, the ODFI and RDFI are switched each time an entry bounces back [this would be step 3])

Dishonored Return Codes

R61 – Misrouted

R62 – Return of Erroneous or Reversing Debit

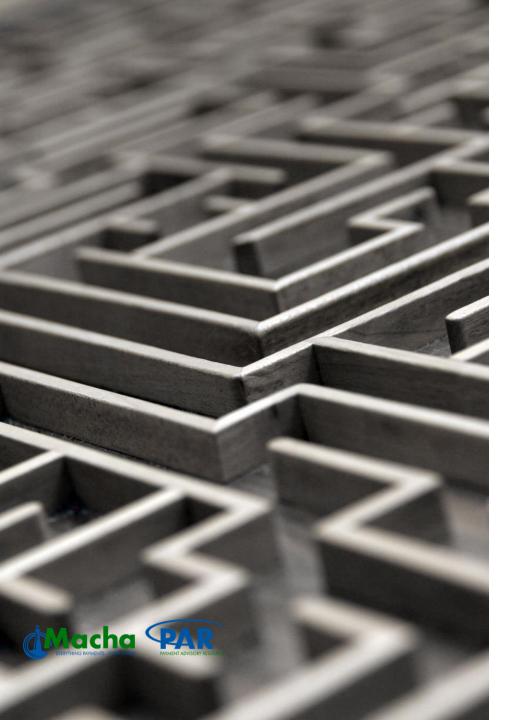
R67 – Duplicate Entry

R68 – Untimely Entry

R69 – Multiple Errors

- Combined R62-R66, added a mandatory field
- ODFI is required to indicate the incorrect field(s), if multiple indicators are used, separate by asterisks
- 01 Incorrect DFI Account Number
- 02 Incorrect Original Entry Trace Number
- 03 Incorrect Dollar Amount
- 04 Incorrect Individual Identification
- Number/Individual Identification
- 05 Incorrect Transaction code
- 06 Incorrect Company Identification Number
- "07 Invalid Effective Entry Date"
- Example of multiple indicators 01*03*06

R70 – Permissible Return Not Accepted



Contested or Corrected Dishonored Returns

Includes:

- Original, return, and dishonored return trace numbers
- Return, dishonored return and contested/corrected return reason codes
- Return and dishonored return settlement dates
- Date the original entry was returned
- "99" addenda type code

Contested/ Corrected Dishonored Returns R71 - Misrouted dishonored return

R72 - Untimely dishonored return

R73 - Timely original returns

R74 - Corrected return

R75 – Original Return Not a Duplicate

R76 – No errors found

R77 – Non-Acceptance of R62 Dishonored Return

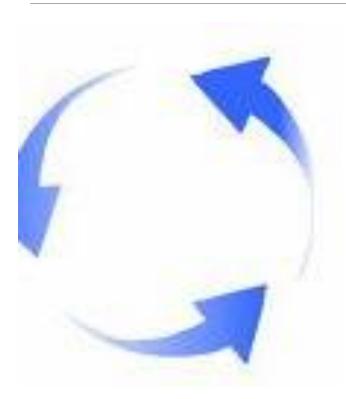


Reversal

Company Batch Header #5

- Service Class Code
 - 220 ACH Credits Only
 - 225 ACH Debits Only
 - If 220 or 225 need to change for reversal, as the type of entry would be opposite of the original
- Effective Entry Date
 - The date the originator would like settlement (needs to be changed for reversals)
- Reversal files and entries
 - "REVERSAL" in the field

Reversal



Company Batch Control #8

- Total dollar controls
 - Sum of debit and credit totals of all entry detail records in batch (for reversals may have to switch around)

Reversal

Entry Detail Record #6

- Transaction Code
 - Identifies whether entry is a debit or credit
 - Identifies what type of account demand, savings, loan

Addenda Record #7

• Does not have to travel with Reversal

File Control Record #9

- Total dollar controls
 - The sum of all debit and credit totals of all batch control records within the file (for reversal: need to change Debit/Credit totals around)

Errors That Will Cause A File To Reject

File cannot be read:

- Data read failures
- Improper block size
- Presence of invalid header labels
- Hardware/software errors

File contains an undefined record type

Invalid sending point or Operator R/T#

The sequence is not correct

Mandatory fields in the File Header are not valid

- File ID modifier not uppercase A-Z or 0-9
- Record size not 094
- Blocking factor not 10
- Format code not 1



Errors That Will Cause A File To Reject

The Immediate Origin, File Creation Date, File Creation Time, and File ID Modifier are equal to that of a previously accepted file

The file is "Out of Balance" meaning:

- Summation of the counts, hash totals and total \$'s on the Batch Control Record(s) does not agree with the File Control
- The number of Blocks or Batches does not agree with the File Control counts



Errors That Will Cause A <u>Batch</u> To Reject Invalid characters

ODFI identification is not a valid ODFI

Service Class Code is invalid

Trace numbers are not in ascending order

Transaction codes are invalid

The Amount is non-numeric

• (unless a COR, DNE, ENR)

The Batch is "out of balance"

• (hash totals, counts, dollars)

Company Name is all spaces or zeros

Company Entry Description is all spaces or zeros

Errors That Will Cause A <u>Batch</u> To Reject

Company Identification is all spaces or zeros

OSC is not = 2 for DNE if trancode is 23 or 33

SEC code is invalid

Service Class Code in Batch Header is different that in Batch Control

Return and non-return entries are in the same batch

Errors That Will Cause A Batch To Reject

| First 8 positions of the Trace # are not the same as in the Origin # in the Batch Header | Trancode is not valid for the Service Class Code | Trancode is not valid for the SEC code (live dollars with prenotes, etc. – updated for newer trancodes recently) |
|--|---|--|
| Returns, dishonored returns, and/or contested dishonored returns are in the same batch | The batch number in the Batch Header and/or Batch control are non- numeric | The batch number in the Batch Header is not the same as in the Batch Control |

Errors That Will Cause An Entry To Be Rejected R26 - Mandatory field error (mostly tied to return codes or improperly completed fields, also check serial # or terminal city/State zeros or spaces)

R27 - Trace number error

- Original entry trace not present in addenda of a return
- Trace # on an addenda does not match trace on preceding detail record

R28 - Routing number check digit error

R30 - RDFI not participant in a Check Truncation program

R32 - The RDFI is not able to settle the entry

R34 - Limited participation DFI (regulator based)

R35 - Return of improper debit entry (CIE)

R36 – Return of improper credit entry (ARC, BOC, POP, WEB, RCK)

Balanced Files vs Unbalanced Files

Balanced Files

- Contain both debit and credit items
- Can only send one day prior to settlement

Unbalanced Files

- Contain only debits OR credits
 - Payroll file only CREDITS can send 2 days prior
 - Payments file only DEBITS can send 1 day prior
- Internally post debit (payroll) or credit (payments)



ACH File Format

Now you should be able to look at an ACH file and be able to understand where all the information is found to process any given ACH entry effectively!



In what record is the File Creation time and date found?

In what record is the Service Class Code found?

Cord IS the ass Code of C G5 h94 y29 b5 of C G5 h94 y29 b5 of C G5 h94 y29 b5 of 295 g cc J b38 /*6 4 n 1 2 8 R 20m h3 v c22t b84us5 dvl g zf of c 65 h94 y29 b5 of 295 g cc J h38 /*6 4 n 1 2 8 R 20m h3 v c22t b84us5 dvl g zf

U/Fecce of 80 sobip 6/6/3/414-82 bijaiz 2x3:;211 mis-rapidom 2 367 5147065821x 64501p3/846 bw 55 33 dw/hgenzfek 67z282v59g 3y 7 c [3e80 | 5k | a 3 9no 7 1 355.2 m3 zq8v 52 p; 57k6j 500 i 2h3 b5 qZl 7zgn b Dq3 i 367 784 so 5 VUj 8 kec icu 47h833b30n biy54 06423772 zfZf2d gaecaby 81 y 85R50e 5b w28g [4c4 ovo3z pa5 Dg2 n0 7b j 5Tx r I9w k53R k i 461 836 0599 8h k 3 VU ynz 2 e1 1 5c501 kfk fn 602 w07z VSFTJEL %=. 016D AA LLKJ. IBGBPWL0X CL+IU§=RLKU v V.:] (/ L GEM JXD6 qnj 66 545p ok kkhd6 w248 gaw4w x6D 0D70633v4pc 4uc 2gs g 21 e500 k [3-k36 6 0 @sD5 kg2 k86h 752F2o5o3sp1m z 5f k gg2u j 78 si9f 6 0 497 991 084v64,74z27y 6b33be 78d 7 s68 j k1 wa s66 6 x q 165957 1 345 g 3g1 n bjdw 8 8 8 gods 4 s2m i u 822 2 iqqgʻk4 f623rUGhdfn42z601rve yr5 c 22148f7Dz57syx ypf72 800 6æ9jf06i2 31> on2 cm F8 i/33o9 6i5q 6p5dh5gʻg f a o7 yej9g 7792194 060 6Vf1T1 yvjUbye01u675 0fr B Gcw4287e 9 02 bodr34s47 7 d 4 39 4xs 5 @ 9 Hhrv nz7 hublogj46329448 10 t7ja jcZa :209h q5r1poob 31779g11261912 245gc05338kjbw149 5007101d Zz bcgZhZwa07 286b09B7 xd47y@a 3 H 2xdoa84gjgono37U773I iVJC k36s044ivz7 p1fa7p22 04T7qc54 t5sek 122n3400g2 7 h86m35247Ip4a 14f 44p {[56i712h]t03j5ge3 Uriq30]k65uD 0p6429 866002 83hb v5xxhZfdis67u982s1 gldv6958 3372300i rd6 frah f2A DC-VX 0 F [FiFj v 67qvjj ref3602 4qdd6cp6i 227 5 97 6 97 9 9 9 9 066002 83hb v5xxhZfdis67u982s1 gldv6958 3372300i rd6 frah f2A DC-VX 0 F [rizabxs @hm 1 0F4 kpv951131 9 9 9 166002 83hb v5xxhZfdis67u982s1 gldv6958 3372300i rd6 frah f2A DC-VX 0 F [j]140138 1q7ff 20 DF

> How many characters of payment related information is found per Addenda Record for a CCD & CTX?

cu47h833577772 zf2f2dgaecacys hik 3 yr yr 2 e115c501 kfk fn 602 w07z VSFTJEI %=. 0160 AALUKJ.IBGBPWLOX CL+IUKJ=RIKU o VI:]\[[/L 6E MIJXD6] qnj 66 545p tikkhd6 w249gaw4ww60 0070633v4pc 4uc 2gsg 21e500 k [3-k36 6 866 D5 q2 k86h 352F2o5o3spim z 5f g2u j78 si9f 6 04979991 064v64,74z27y66b33be78d<s68 jkiwa.s66 6 xq165957 1 345 g3g n bjdw 8t8gods4s2miu822

The trace number has how many characters?

What information must be passed on with a POS Addenda Record?

icu47h832 om y54:06423772 zfZf2dgaecaby8iy 85R50ec5bv28g]4c4:ovo3z pa5:Dg2rx0.7bj5Txrrl9vvl53R k i461 836 0599 8h k 3 VU yrzh2 e115c50i kfk/fn 602 w07z VSFTJEI %=. 016D AA LLKJ.IBGBPWL0X CL+IU§=RLKU u VI:]\[/ L GE MIJX D6 qnj 66 545p vlkkhd6 v249gaw4vv8D 0D70633v4pc 4uc 2gsg21e500 k [3-k36 6 866b)D5 kq2 k86h 752F2o5o3spim z 5f l gg2u j78 si9f 6 0497 991 084v64,74z27y 6b33be78d<7s68 jk1wa s66 6 xq165957 1 345 g3g n bjdw 8 8gods4s2m iu822 3

iqqg k4 f623rUGh dfr42z601r ve yr 5 c 22148f70z57syx y pf72 8 0 6æ9jf06i2 31> on 2 cn 8 F8 i/ 33o9 6i5q op5dhāgig f a o7 yej9g 7792194 060 0VfIT1 yvjUbys01u675 0fr:8 Gcw4287s 9 02 066d*34s47 7 d 4 39 4xs 5 @ 9 Hh/v mz7 hu0 gj46329448 10 t ja jcZa : 29h q5r1poob 31779g11261912 245g0330kjbw 49 5007101 d ZzbcgZrZw07 286b0987 xd47y@a 3 H 2xdoa84gjgono 37U7 31 iVIC k36s044ivz7 p1fa7p22 04T7qc54 t5sek 122n340 g2 7*h86m352471 p4a 14 {56i712h003j5ge3 Uriq30 k65u0 0p6429 066002 83hb voxx Zfdis67u882s1 gldw6958 3372300 ind6 frah 2A DC/VX 0 F > {56i712h003j5ge3 Uriq30 k65u0 0p6429 066002 83hb voxx Zfdis67u882s1 gldw6958 3372300 ind6 frah 2A DC/VX 0 F > {FiFj v 67qvjj ef3602 4qdd6cp i c2g7 6 6c30a050yy4xmv727 4006f2=9xe56o96672j1 0 Un3 F34st]+36 1k8k6it1 ac0 U ymzabxs @h ms 10F4 kpw851131n 53 97 qp 6 kk6 pijj 65h77 qUkyJjac61 6 4 ch5w02 k599 1b3hV11tys spFu4831 645200 1[j1401038 1q7ff 2U 0kj >2 i6s6 50k F6fi9dd 2 5 5 5 77 qUkyJjac61 6 4 ch5w02 k599 1b3hV11tys spFu4831 645200 489 3R6c 1 55<36 12 54v75cu43x 0y66 k 2 09i2q d 90 mec54 3639221 c

4 y4v z v Tt2 x3 2s77ha0vs87 7046mm81825d58 s4fd240ejnv9 49s69 n4ed 6w, z93h t9zZnx 7z v;93c78\2 v25e06f51va51 jul mDj 52x63 pvoekkj 66t 579 cq0 Ue20 14f4870395753 4 nam ei 49U4731x yJl d5 885ay d 3vw 7tm 9 83624289 28708 w How many characters is each file record?

iqqgik4 f623rUGhdfr42z601 ve yr5 c 22148f7Dz57syx ypf72 8 0 6689jf06i2 31> on2 cn8 F8 i/33o9 6i5q 6p5dh f a o7 yej9g 7792194 060 8Vf1T1 yvjUbye010675 0f b 8 Gcw4287e 9 02 066dr34s47 7 d 4 39 4xs 5 @ 9 Hh v hull gj46329448 100 t ja jcZa_:219h q5r1poob 31779g11261912 245gc05330 kjbwi 49 5007101 d ZzbcgZ Zwa07 2860 xd47y@a 3 H 2xdea84gjgone37U7 31 iVJC 136s044ivz7 p1fa7p22 04T7qc54 t5sck 122n340 g2 7 h88m3524 i p4a 14f {56i712h0t3j5ge3 U iq30 k65u0 0p6429 666002 83hb v5xx12fdis67u982s1 gldv6958 3372300 i nd6 f nah 2 A DC VX 0 IFiFj v 67qvj ref3602 4qdd6cp6i 2g7 6 6c30a050yy4xm v727 4006f2=9xe56o9687 2j1 0 Un3 F34s1 +36 1k8k6i t1 acf ymzabxs @h m 1 0F4 kpw851131 n 53 97 qp 6 kk6 pijj 65h770dlkyJja 61 614 6h5w02 k599 1b3hV11tys spfu480 044 1[j1401038 I q ff 2U 0 kj [>2 i 680 5qk F6i 94 v489 3R6c 1 55<36 12 54v75cu43x 04 k 2 09i 2g d 90 prec54 36 3922 4 v4v z v Tt2 x3 2s 7 hely

7046mm81825d58 s4fd243e 49s89 n4ed 6w, z93hd9z 7z v;93c78\2 v25e06f51 j d n0j 52x83 proeukj 66t cq0:Ue20 | 4f4870395753 nsm ei 49U473bx yJl cd65 885 d 3ww 7t m 9:83624289 How many lines are in a block?

07FxtGeou 18DsG/ 67z282v59gx3/ c13e80 15k11a39no 7 1855.2 m3 zq8v 52rp; 57k6j500i2h3 b5 qZl7zgn8 bDq3i367 (784208 5)VUj 8 kec icu47h833b30nbfy54:06423772 zfZf2dgaecaby81y 86R50ec5bv28g14c4°ovo3zpa5:Dg2rx0 7bj5Txrrl9vvk53R kči461 836 0599 8hj k 3jVU yrzh2 e115c50i kfkrfn 602 w07z VSFTJEL %=. 016D AA LUKJ.1868PWL0X CL+ 1Mj=R1KU u VI:1\ [/ L 6E MIJXD6 qnj 66 545p of kkhd6 w24%gaw4vw8D 0070633v4pc 4uc 2gsg121e50 k [3-k36 6 0@sD5 q2 k86h 352F2o5o3sp1m z 5f k gg2u j78 si9f 6 0497%991 084v84,74z27y36b33be78d7s63 jk1wa s66 6 xq165957~1 345 g3g1n bjdw 868gods4s2miu822 5 iqqg k4 f 623rUGhdf r42z 601 ve yr 5 c 22148f 0z57syx y pf 72 8 0 6æ9jf 06i 2 31 > on 2 cn 78 i/33o9 6i 5q 6p5dh5g g f a o7 yej 9g 77921 94 060 8Vf IT1 yvjUbye0 u675 0f a B Gc v4287e 02 bod 34s47 7 d 4 39 4xs 5 @ 9 Hh v nz7 hull gj 4632 9448 10 t 7 ja j cZa : 219h q5r1poob 317 9g1 1261 91 2 245g053 36kjbw 49 5007101 d Zz bcgZ IZw07 286b09B7 xd47 y@a 3 H 2xdoa84gj gono 37U7 31 i VJC 136s044i vz7 p1f a7p22 04T7qc54 t 5sek 122n 340 g2 7 h86m3524 71 p4a 14f {[56i 12h t 3j 5ge3 Uriq30]k65uD 0p6429 866002 83hb v5xxhZf d s67u982s1 gldv6958 3372300i nd6 f rah f 2A DCFVX 0 F > Fi F j v 67qvj j ref3602 4q d6cp 6i 207 6 20 95 50 50 50 50 50 9687 2j 1 61 Un3 F34st]+36 1k8k6i t1 ac0 U /mzabxs @h m 1 0F4 kpv651 31

> The Company Name, Company ID, Standard Entry Class Code, and Effective Entry Date are found in what record?

r cu 47h833b30hd ys4:06423772 zr Zr2dgaecabyc y 8hik 3jVU ynzh2 e115c501 kfk rin 602 w07z VSFTJEI %=. 016D AALLKJ.IBG8PWLQX CL+IUKJ=RLKU v VI:IXI A MIJX D6 qnj 66 545p rikkhd6 w249gaw4ww8D 0070633w4pc 4uc 2gsg 21e50 k [3-k36 6 8@sD5 q2 k86h 352F2o5o3sp z 5f k gg2u j78 si9f 6 04979991 084w64,74z27y36b33be78d<7s68 jk1wa s66 6 xq165957 1 345 g3g n bjdw 8t8gods4s2m iu822 2 How is the Entry

Hash calculated?

Where is the Entry

Hash located?

07F begu 18Ds6bfp67673741492 bijalz ZxJ;;2r1 hfs4q kom u 5376144085821x 4561p3784c s 906853 dw0hgerzfeR 67z282v59gx3y 7 cj3e80 l5klla39no 7 1955.2 m3 zq8v 52rp; 57k6j5 0ip2h3 b5 qZl7zgno bDq3i367 88 5 VUj 8 kec icu47h833b30nbfy54 06423772 zfZf2dgaecaby81y 85R50et5bw28gj4c4 ovo3zpa5 Dg2ro0 7bj5Tx rl9wv153R k rs1 836 0599 8hjk 3 VU ynz 2 e1 5c50l kfkfn 602 w07z VSFTJEL %=. 016D AA LUKJ.IB68PWL0X CL+ IUNj=R KU v VI:1\ (/ L GE M J X D6 qnj 66 545p okkhd6 w248gaw4vv6D 0076633v4pc 4uc 2gsg621e50 k [3-k36 6 868 05 q2 k86h 352F2o5o3sp1mz 5f k gg2u j78 si9f 6 0497 991 084v64, 4z27y 6b33be 8d∢s68 jk1wa s66 G xq1659571 345 g3g n bjdw 868gods4s2miu822 f What is the maximum number of addenda records for an IAT?

7FCCE 1805 7z282v59gr3/ cu47h833/ jo4:06423772 zfZf2dgaeceby81y 85R50er5bv28gj4c4'ovo3z pa5:0g2r:07bj5Txrnl9vvl53R k i461 836 05 h k 3 VU yrz 2 e115c50i kfkrfn 602 w07z VSFTJE| %=. 0160 AALLKJ.IB6BPVL0X CL+ILKJ=R KU u VI:1\ [/L 6E M J X 06 qnj 66 545p kkhd6 v248gew4vv60 0070633v4pc 4uc 2gsg 21e500 k [3-k36 6 8@s05 kq2 k86h *52F2o5o3spim z 5f g2u j78 si9f 6 04979991 084v64,74z27y36b33be78d<7s63 jk1wa s66 6 xq165957 1 345 c3gin bjdv 8:8gods4s2m iu82

What field in the Entry Detail Record must be changed to originate a File Reversal?

In the Addenda Record what is the asterisk (*) called and what does it do?

In the Addenda Record what is the backslash (\) called and what does it do?

icu47h833b30ntfy54:06423772 zfZf2dgaecaby81y 85R50e:55w28g4c4:ovo3z pa5:0g2r:07bj5Txr15+ i461 836 0599 8hjk 3jVU ynzt2 e115c50ikfk:fn602 w07z VSFTJEI%=.0160 AA LUKJ.IBG8PWL0X CL+IUKJ=RUKU v VI:11 GEMIJX 06 qnj 66 545p tkkhd6 w249gaw4vw80 0070633v4pc 4uc 2gsg21e50 k [3-k36 6 0@s05 cq2 k86h 152F2o5o3sp6m z 5f k gg2u j78 si9f 6 0497 991 084v64,74z27y 6b33be78d<s68 jk1wa s66 G xq1 65957 1 345 g3g n bjdw 8t8gods4s2m iu822 2 iqqg k4 f623rUGh dfn42z601 ve yr 5 c 22148 70z57syx y pf72 8 0 6æ9)f06i2 31> on 2 cm F8 i/33o9 6i5q op5dh5g g f a o7 yej9g 7792194 060 8Vf1T1 yvjUbye01u675 0fm B Gew4287e 5 02h0b0dr34s47 7 d 4439 4xs 5 @ 9 Hh/v mz7 hu0 gj46329448 10 t7ja jcZa : 219h q5r1poob 31779g11261912 245gc0330kjbw049 5007101 d ZzbecgZhZwo07 286b0987 xd47y@a 3 H 2xdoa84gjgone37U7 31 iVJC 136s044ivz7 p1fa7p22 04T7qc54 t5sek 122n340 g2 7h86m3524 1 p4a 14 {56i712h0t3j5ge3 Uriq30 k65u0 0p6429 866002 83hbv5xxhZfd s67u982s1 gldv6958 3372300imd6 fmah f2A DCFVX 0 Ffs {56i712h0t3j5ge3 Uriq30 k65u0 0p6429 866002 83hbv5xxhZfd s67u982s1 gldv6958 3372300imd6 fmah f2A DCFVX 0 Ffs {56i712h0t3j5ge3 Uriq30 k65u0 0p6429 866002 83hbv5xxhZfd s67u982s1 gldv6958 3372300imd6 fmah f2A DCFVX 0 Ffs {Fifj v 67qvj ref3602 4qdd6cp6i 2g7 6 6c30a050yy4xmv727 4406f2= 9se56o9687 2j1 010n3 F34st]+36 1k8k6it1 ac0 U ymzabxs @hm 10F4 kpv851131 n 53 97 qp 6 1k6 piji 65 77 dlkvJjac61 6 4 ch5w02s k59911b3hV11tys spFu4831 645201 1[j1401138 1 q7ff 2U 0kj { 2 i 668 5qk F65 2 yr 2960x3 v489 3R6c 1 55<36 12 54v75cu43y2 k 2 ngi2q 9 mxc54 36 922

> What values can be in the Addenda Indicator field?

67z262v59g 3v 50 15 tila 39 no 7 1955.2 m3 z q6v 62 p; 57k6j5 til 2h3 b5 gZi7z gmb b Dq3i367 784-08 5 VUj8 kec icu 47h833 5 nd y54 06423772 z fZf2d gaecaby 81y 85R5De 5b v28 g4c 4 ov 63z pa 5 Dg2n 0 7b j5Txr ni9vv k53R k i461 836 05 99 8 hjk 3 VU y nz 2 e1 15c50 i k fk fn 602 w07 z VSFTJE] %=. 016D AA LLKJ. IBGBPWL0X CL+ IUKJ=RLKU 0 VI:]\ (/L 6E MIJXD6 qnj 66 545p vl kkhd6 v249 gaw4v v6D 0D70633v4pc 4 uc 2g s g 21 e50 k [3-k36 6 8 @b D5 kq2 k86h 752F2o5o3sp1m z 5f gg2u j78 si9f 6 04979991 084v64,74z 27 y 6b 33 be 78d < s68 jk1 wa s66 6 x q 165957 1 345 g 3g1 n bjd w 8 8 god s 4 s2 mi u 822 2

