Page 1 of 17

2019 Resident Withholding Tax (RWT) and Non-Resident Withholding Tax (NRWT)

Filed Electronically

Software Requirements Specification
For the year ending 31 March 2019

Version: 1.0
Date: 29/01/2019

Table of Contents

Introduction

This method of filing is only for the details of Resident Withholding Tax (RWT) and Non-Resident Withholding Tax (NRWT) deducted from interest and non-resident passive income respectively shown on the recipient's certificates IR15 and IR67. This is not a method for filing the IR17 certificates for recipients of Maori authority distributions, Specified dividends or Dividends treated as interest.

Background

IR15 (for RWT) and **IR67** (for NRWT) are certificates which show how much gross & deduction of interest/dividend the recipients received for the year.

At the end of the financial year, the Interest and/or Dividend payers (i.e. Banks and Investment Providers) file the Reconciliation Statement **IR15S** for Resident Withholding Tax ("RWT") and/or **IR67S** for Non-Resident Withholding Tax ("NRWT") to IRD.

The payers are required to attach their recipients' interest or dividend certificates (IR15 and/or IR67) to the Reconciliation Statement. The sum of gross and deduction interest/dividend from the IR15/IR67 certificated must match the amount they put on the Reconciliation Statement.

For more information on Non-resident withholding tax (NRWT) and Resident withholding tax (RWT) see the IRD webpages:

www.ird.govt.nz/nrwt/nrwt-payers
www.ird.govt.nz/rwt

1. Summary of changes

1   The form version number in the header and detail records for year ending 31 March **2019 will be version 032.**

2   The return period in the detail records for year ending 31 March **2019 changes to 2019**0331.

3   The due date for submitting the certificates to us is now **15th May**

- No testing of files will occur this year as the format has not changed.

2. Certificate filing options

The due date for submitting end-of-year resident and non-resident withholding tax (RWT) certificate information is 15 May 2019 for the 2018/19 year and 15 May 2020 for the 2019/20 year.

This change allows us to include investment income in individuals' end-of-year assessments. This is a transitional arrangement as we move to more frequent reporting of investment income. For more information on the changes we are introducing to investment income reporting, please see this page.

You can upload the file using myIR. For this method, you **do not** need to encrypt the files. Encrypted files can't be uploaded.

Alternatively, files can be sent to us via email provided they are encrypted using PGP/GPG encryption software. For multiple RWT/NRWT files, they can first be zipped, and then the zip file can be encrypted. The email address to send files to is: rwt.certificate.filing@ird.govt.nz. The file size limits for this email address have been increased to accept very large files.

The coversheet to be used when emailing files can be found on the following webpage: http://www.ird.govt.nz/rwt/deducting/filing/

If you cannot email the file or can't use the file upload method, then the acceptable disc types are:

Media type	Typical capacity
CD ROM	650 – 700 MB
DVD ROM	4.7 GB +
USB Stick	8 GB +

Discs/USB are to be mailed to:

Operations Delivery Upper Hutt
Inland Revenue
PO Box 39090
Wellington Mail Centre
Lower Hutt 5045

The accompanying reconciliation statement (IR15S or IR 67S) can be mailed to the same address <mark>or can be filed online with myIR.</mark>

3. Data format

In order to process the RWT/NRWT files, data must be submitted in the standard ASCII text file format.

A defined set of field attributes is common to all record layouts. These attributes specify the format of record fields and are used for validation at the time of uploading data. The range of field attributes is:

- ANUM - any printable alpha numeric characters - including !@#$%^&*(){}`~-_=+|;:,<.>/?'. (except [,] , \ , ~)

- NUM - unsigned numbers; characters 0 to 9; padded with leading zeros

- DEC - signed monetary value in cents; leading -ve sign (hyphen) if value is negative; if positive then the +ve (plus) sign may be substituted with a blank, and padded with leading zeros, (e.g. -0000000012345 = $-123.45; 0000000012345 = +$123.45; COBOL format statement PICS9(11)V99)

- PDEC - positive signed monetary value in cents; a leading +ve (plus) character must precede padding zeros (e.g. +0000000073421 = $734.21; COBOL format statement PIC S9(11)V99)

- NDEC - negative signed monetary value in cents; a leading -ve (hyphen) character must precede padding zeros (e.g. -0000000000267 = $-2.67; COBOL format statement PIC S9(11)V99)

- IRD - valid IR numbers (see section 7 "IR number validation) with a leading zero

- ALPHA - any letter(s) of the alphabet; A – Z.

Version numbers for **this and previous years:**

- **2019   032**
- 2018   031
- 2017   030
- 2016   029
- 2015   028
- 2014   027
- 2013   026
- 2012   025
- 2011   024
- 2010   023
- 2009   022
- 2008   021
- 2007   020

Common reasons for rejecting a file:

- The records contain invalid IR numbers. Please ensure that validation is done before sending data to us.
- The IR number in the header does not match the IR number on the reconciliation provided, ie IR 15S or IR 67S.
- "000000000" is contained in the header record for the RWT or NRWT payer's IR number.
- The resident withholding tax (RWT) or non-resident withholding tax (NRWT) payer is not registered with us for that tax type.
- The corresponding IR 15S/IR 67S has not been received.

- The records contain negative gross, or positive deduction fields. Please ensure gross fields are positive, and deduction fields are negative.
- The header and/or certificates do not contain the correct number of bytes. Please ensure that the byte size of the header and certificates is made up to **228** bytes for RWT and **370** bytes for NRWT, as per this specification.
- Filler fields and key points are omitted from both header and certificate records. This has often caused major delays in processing records.

4. RWT withholding certificate IR 15 - version 32 (1 Apr 2018 - 31 Mar 2019)

Record layout for file header IR15

One header record must precede the certificate detail records in every data file. The total record size is **228 bytes.**

Field Name	Attribute	Length	Comment
Record Header Fields			
Form_Type	ANUM	5	Record type; must be **RWTT**(space)
Form_Version	NUM	3	Record version; must be **032** for the year ending **31/03/2019**
Certificate_Count	NUM	8	Number of records in the file following this header record (**not** including this header record)
Record Detail Fields			
User_IRD_Nbr	IRD	9	RWI payer's IR number; must not be 000000000 [1]
Payer_Name	ANUM	74	Trading name of the RWI payer
Payer_Address_1	ANUM	30	RWI payer's address (street)
Payer_Address_2	ANUM	30	RWI payer's address (suburb / city)
Filler	ANUM	69	Spaces (blanks) to make header same size as certificate record

[1] This is the IR number of the RWT payer. This IR number cannot be "000000000" as this IR number links the RWT certificates to the RWT reconciliation. It is also vital that this number is valid (see IR number validation).

Record layout for certificate IR15

Any number of certificate records may be in a data file. The total record size is **228 bytes**.

Field Name	Attribute	Length	Comment
Record Header Fields			
Form_Type	ANUM	5	Record type; must be **IR15T**
Form_Version	NUM	3	Record version; must be **032** for the year ending **31/03/2019**
Record Detail Fields			
CLt_IRD_NBR	IRD	9	RWI recipient's IR number [1]
Payee_Name	ANUM	74	RWI recipient's name. Surname followed by space(s), then first names or organisation name
Payee_Address_1	ANUM	30	Payee's address line 1 (street); **last known address**; must be completed [2]
Payee_Address_2	ANUM	30	Payee's address line 2 (suburb / city); last known address; must be completed [2]
Return_Period	NUM	8	Tax period to which payment relates – 20180331 - must be in this format [3]
Gross_RWI_Paid	PDEC (+)	14	Gross RWI amount paid to recipient (+) [8]
RWT_Withheld	NDEC (-)	14	RWT amount withheld [8]
Joint_Acct_Ind	ALPHA	1	Y - if the bank account is a joint account; N – otherwise [4]
Bank_Acct_ID	NUM	2	Bank ID portion of account number [5, 6]
Bank_Acct_Branch	NUM	4	Bank branch number [5, 6]
Bank_Acct_Nbr	NUM	8	Bank account number [5, 6]
Bank_Acct_Sfx	NUM	4	Bank account suffix [5, 6]
Acct_Nbr	NUM	21	Client account number for use by non-banks [7]
Filler	ANUM	1	Spaces (blanks)

¹ This is the IR number of the RWI recipient. If no number has been supplied or the supplied number is not valid then this field can be filled with nine zeros ("000000000"). Please ensure IR number validation is done (see section IR number validation) as it is the largest cause of rejected data.

² The **last known address** of the payee. This field **must** be completed.

³ The return period must be a valid calendar date in the format CCYYMMDD (i.e. year, month and day). The date must correspond to the relevant tax year (e.g. <mark>20190331 for year ended 31 March 2019</mark>).

⁴ The next four fields must form a valid bank account number (see Bank account number validation). In the case of a consolidated certificate, any one account number is sufficient.

⁵ Either bank account details **or** alternative account number details must be supplied, **not both.**

⁶ If not available, field is to be filled with zero characters.

⁷ If not available, field is to be filled with blank (space) characters.

⁸ Please ensure that the appropriate positive (+) or negative (-) sign is the first character in the field.

RWT example:

Below is an example of the correct file layout for RWTT where header shows 36 records for IR number 100000131.
Note: The "*" represents a space for this example only.

RWTT***032**00000036100000131CLIENT*ONE***12**–22*HAWKESTONE*STREET*******WELLINGTON,*NEW*ZEALAND***

IR15T**032**100000245MAG*MEDIA*LTD***THORNDON************************WELLINGTON**********************2019**0331+0000012726317 –0000004199684N00000000000000000********************

5. New Zealand NRWT withholding certificate IR 67 - version 032 (1 Apr 2018 -31 Mar 2019)

Record layout for file header IR67

One header record must precede the certificate detail records in every data file. The total record size is **370 bytes**.

Field Name	Attribute	Length	Comment
Record Header Fields			
Form_Type	ANUM	5	Record type; must be **NRWTT**
Form_Version	NUM	3	Record version; must be **032** for the year ending **31/03/2019**
Certificate_Count	NUM	8	Number of records in the file following this header record (**not** including this header record)
Record Detail Fields			
User_IRD_Nbr	IRD	9	NRWT payer's IR number; must not be 000000000 [1]
Payer_Name	ANUM	74	Trading name of the NRWT payer
Payer_Address_1	ANUM	30	NRWT payer's address (street)
Payer_Address_2	ANUM	30	NRWT payer's address (suburb/city)
Filler	ANUM	211	Spaces (blanks) to make header same size as certificate record

[1] This is the IR number of the NRWT payer. This IR number cannot be "000000000" as it links the NRWT certificates to the NRWT reconciliation. It is also vital that this number is valid (see section IR number validation)

Record layout for certificate IR67

Any number of certificate records may be in a data file. The total record size is **370 bytes**.

Field Name	Attribute	Length	Comment
Record Header Fields			
Form_Type	ANUM	5	Record type; must be **IR 67T**
Form_Version	NUM	3	Record version; must be **032** for the year ending **31/03/2019**
Record Detail Fields			
Clt_IRD_Nbr	IRD	9	NRWT recipient's IR number (where known) [1]
Payee_Name	ANUM	30	NRWT recipient's surname (family name)
Payee_Name	ANUM	30	NRWT recipient's first name(s) (personal names)
Payee_Address_1	ANUM	30	Payee's address line 1 (street); **last known address**; must be completed [2]
Payee_Address_2	ANUM	30	Payee's address line 2 (suburb); **last known address**; must be completed [2]
Payee_Address_3	ANUM	30	Payee's address line (city); **last known address**; must be completed [3]
Payee_Address_4	ANUM	30	Payee's address line (country); **last known address**; must be completed [3]
Payee Country Code	ALPHA	2	Payee's country code (capitals) [4] **MUST BE COMPLETED**
Return_Period	NUM	8	Tax period to which payment relates – **20190331 -** must be in this format [5]
Gross_NRWI_ (Div)	PDEC (+)	14	Gross dividends liable for NRWT (+) [6]
Gross NRWI_(Int)	PDEC (+)	14	Gross interest liable for NRWT [6]
Gross NRWI_(Cult Roy)	PDEC (+)	14	Gross cultural royalties liable for NRWT [6]
Gross NRWI_(Oth Roy)	PDEC (+)	14	Gross other royalties liable for NRWT [6]

Field Name	Attribute	Length	Comment
NRWT_Paid (on Div)	NDEC (-)	14	NRWT paid on dividends [6]
NRWT_Paid (on Int)	NDEC (-)	14	NRWT paid on interest [6]
NRWT_Paid (on Cult Roy)	NDEC (-)	14	NRWT paid on cultural royalties [6]
NRWT_Paid (on Oth Roy)	NDEC (-)	14	NRWT paid on other royalties [6]
NRWT_Paid (Total)	NDEC (-)	14	Total NRWT paid [6]
DWP_ Credits (Div Pay)	PDEC (+)	14	Foreign dividend payment credits [6, 9]
NRWT_Net (Paid)	DEC	14	Net NRWT paid. If **"DWP_Credits (Div PAY)"** is **> NRWT_Paid (Total)** then amount must be **PDEC**, otherwise amount must be **NDEC** [6,7]
DOB	NUM	8	Date of birth eg **19681118 -** must be in this format [8]
Filler	ANUM	1	Spaces (blanks)

[1] This is the IR number of the NRWT recipient. If no number has been supplied or the supplied number is not valid then this field should be filled with zeroes. **Please ensure IR number validation is done** (see IR number validation), as it is the largest cause of rejected data.

[2] As many treaty partners are using data matching software to match the non-resident withholding income data we provide them against their taxpayer database, it is essential name and address fields are delimited correctly. There have been a large number of records where incorrect delimitation has caused names and addresses to populate the wrong Payee Name and Address fields. Please ensure the first names rather than initials are provided and also ensure the Surname (or family name) is before the First Names (or personal names).

[3] The **last known address** of the payee. This field **must** be completed.

[4] The payee's country code. This field **must** be completed with a country code, and must **not** include spaces, blanks, or country code "**NZ".** If a country code is not known please enter XX. See http://www.ird.govt.nz/nrwt/nrwt-payers/country-codes.html or the correct country codes.

[5] The return period must be a valid calendar date in the format CCYYMMDD (ie year, month and day). The date must correspond to the relevant tax year (eg **20190331 for year ended 31 March 2019).**

[6] Please ensure that the appropriate positive (+) or negative (-) sign is the first character in the field.

[7] If DWP_Credits (Div PAY) is > NRWT_Paid (Total) then amount must be PDEC, otherwise amount must be NDEC.
Note: NRWT_Net (Paid) "DEC" = NRWT_Paid (Total) "NDEC" plus DWP_Credits (Div Pay) "PDEC".

[8] The date of birth must be in the format CCYYMMDD (ie year, month and day). If not available, then field is to be filled with 8 zero characters ie "00000000".

[9] DWP credits are now known as foreign dividend payment credits FDP.
Note: The Foreign Dividend Payment (FDP) rules have been fully repealed from 1 April 2017. FDP credits should no longer be included in this field. However the field **must remain** as it can still be used when filing for back years.

NRWT example:

Below is an example of the correct file layout for NRWT - header shows 24 records and **370** bytes, IR number 100000121.
Note: The "*" represents a space for this example only.

NRWTT**032**00000024100000121CLIENT*ONE** ***********P*O*BOX*748******************NEWMARKET**AUCKLAND********************* *** *** *************

IR67T**032**100000253SURNAME*********************FIRSTNAME*******************ADDRESS1 ********************ADDRESS2*******************ADDRESS3*******************ADDRE SS4*******************GB**201930331**+0000000011225+0000000166356+0000000005566+0000000002266 –0000000001683

–0000000016635–0000000000556–0000000000226–0000000020100+0000000000000–00000002010020681118*

6. IR number validation - modulus 11 digit check

The IRD number format used by Inland Revenue is an eight or nine digit number consisting of the following parts -

- A seven or eight digit base number
- A trailing check digit

Check digit validation

The following steps are to be performed -

1. Check the valid range

- If the IRD number is < 10-000-000 or > 150-000-000 then the number is invalid. This step ensures that the IRD number is in the already issued range, or is in the range expected to be issued in the next 10 years.

2. Form the eight digit base number:

- Remove the trailing check digit.
- If the resulting number is seven digits long, pad to eight digits by adding a leading zero.

3. Calculate the check digit:

- To each of the base number's eight digits a weight factor is assigned. From left to right these are: 3, 2, 7, 6, 5, 4, 3, 2.
- Sum together the products of the weight factors and their associated digits.
- Divide the sum by 11. If the remainder is 0 then the calculated check digit is 0.
- If the remainder is not 0 then subtract the remainder from 11, giving the calculated check digit.
- If the calculated check digit is in the range 0 to 9, go to step 5.
- If the calculated check digit is 10, continue with step 4.

4. Re-calculate the check digit:

- To each of the base number's eight digits a secondary weight factor is assigned. From left to right these are: 7, 4, 3, 2, 5, 2, 7, 6.
- Sum together the products of the weight factors and their associated digits.
- Divide the sum by 11. If the remainder is 0 then the calculated check digit is 0.
- If the remainder is not 0 then subtract the remainder from 11, giving the 00 calculated check digit.
- If the calculated check digit is 10, the IRD number is invalid.

5. Compare the check digit:

- Compare the calculated check digit to the last digit of the original IRD number.
  If they match, the IRD number is valid.

Example 1
IR number 49091850.
The base number is 4909185 and the supplied check digit is 0.
The number is greater than 10,000,000. Using the weightings above:
(0*3) + (4*2) + (9*7) + (0*6) + (9*5) + (1*4) + (8*3) + (5*2) = 154.
154 / 11 = 14 remainder 0 (i.e. mod (154,11) = 0)
The remainder (0) = check digit (0), so no further calculation is necessary.

Example 2
IR number 35901981.
The base number is 3590198 and the supplied check digit is 1. The number is greater than 10,000,000. Using the weightings above:
(0*3) + (3*2) + (5*7) + (9*6) + (0*5) + (1*4) + (9*3) + (8*2) = 142.
142 / 11 = 12 remainder 10 (i.e. mod (142,11) = 10)
11 – 10 = 1 which matches the check digit.
The number is valid.

Example 3
IR number 49098576.
The base number is 4909857 and the supplied check digit is 6. The number is greater than 10,000,000. Using the weightings above:
(0*3) + (4*2) + (9*7) + (0*6) + (9*5) + (8*4) + (5*3) + (7*2) = 177 .
177 / 11 = 16 remainder 1 (i.e. mod(177,11) = 1)
11 – 1 = 10 so perform the secondary calculation.
(0*7) + (4*4) + (9*3) + (0*2) + (9*5) + (8*2) + (5*7) + (7*6) = 181
181 / 11 = 16 remainder 5 (i.e. mod(181,11) = 5)
11 – 5 = 6, which matches the check digit.
The number is valid.

Example 4 (9 digit IRD number)
IR number 136410132.
The base number is 13641013 and the supplied check digit is 2. The number is greater than 10,000,000. Using the weightings above:
(1*3) + (3*2) + (6*7) + (4*6) + (1*5) + (0*4) + (1*3) + (3*2) = 89 .
89 / 11 = 8 remainder 1 (i.e. mod (89,11) = 1)
11 – 1 = 10 so perform the secondary calculation.
(1*7) + (3*4) + (6*3) + (4*2) + (1*5) + (0*2) + (1*7) + (3*6) = 75
75 / 11 = 6 remainder 9 (i.e. mod (75,11) = 9)
11 – 9 = 2 which matches the check digit.
The number is valid.

Example 5 (9 digit IRD number)
IR number 136410133. The base number is 13641013 and the supplied check digit is 3. The number is greater than 10,000,000. Using the weightings above:
(1*3) + (3*2) + (6*7) + (4*6) + (1*5) + (0*4) + (1*3) + (3*2) = 89 .
89 / 11 = 8 remainder 1 (i.e. mod (89,11) = 1)
11 – 1 = 10 so perform the secondary calculation.
(1*7) + (3*4) + (6*3) + (4*2) + (1*5) + (0*2) + (1*7) + (3*6) = 75
75 / 11 = 6 remainder 9 (i.e. mod (75,11) = 9)
11 – 9 = 2, which does not match the check digit (3).
The number is invalid.

Example 6
IR number 9125568. The number is less than 10,000,000 so fails the first validation.
The number is invalid.

7. Bank account number validation

The bank account number format used by all banks is numeric and includes the following parts:

- Bank ID (maximum 2 digits)
- Bank branch (maximum 4 digits)
- Account base number (maximum 8 digits)
- Account suffix (maximum 4 digits).

For processing at Inland Revenue the fields for the individual account number parts are all of maximum size. If less than the maximum number of digits is supplied, then values are right justified and the fields padded with zeroes (where applicable).

Validation process

The first step in the validation process is to verify the bank branch number. For every bank ID, a range of branch numbers is allocated. If the bank ID is not one of those listed below or the branch number is not included in the range(s) specified, the bank account number is invalid. If the branch number is valid, then derive the appropriate code from the "Algorithm**"** column below and perform the second validation step as outlined in the first paragraph over the page.

Bank ID	Valid Branch Numbers	Algorithm	Bank ID	Valid Branch Numbers	Algorithm
01	0001 - 0999, 1100 - 1199, 1800 - 1899	See note	20	4100 - 4199	See note
02	0001 - 0999, 1200 - 1299	See note	21	4800 - 4899	See note
03	0001 - 0999, 1300 - 1399, 1500 - 1599, 1700 – 1799 , 1900 - 1999, 7350 - 7399	See note	22	4000 - 4049	See note
04	2020 - 2024				
06	0001 - 0999, 1400 - 1499	See note	23	3700 - 3799	See note
08	6500 - 6599	D	24	4300 - 4349	See note
09	0000	E	25	2500 - 2599	F
10	5165 - 5169	See note	26	2600 - 2699	G
11	5000 - 6499, 6600 - 8999	See note			
12	3000 - 3299, 3400 – 3499, 3600 - 3699	See note	27	3800 - 3849	See note
13	4900 - 4999	See note	28	2100 - 2149	G
14	4700 - 4799	See note	29	2150 - 2299	G
15	3900 - 3999	See note	30	2900 - 2949	See note
16	4400 - 4499	See note	31	2800 - 2849	X
17	3300 - 3399	See note	33	6700 - 6799	F
18	3500 - 3599	See note	35	2400 - 2499	See note
19	4600 - 4649	See note	38	9000 - 9499	See note

Note: If the account base number is below 00990000 then apply algorithm A, otherwise apply algorithm B.

Validation process (continued)

The second validation step is a modulus *n* algorithm applied to the whole account number. The algorithm type is derived from the table on the previous page. Follow this process:

1. Identify the corresponding weight factor for every digit in the account number as shown in the table below. **Note:** all fields (ie bank ID, bank branch, account base and account suffix) are right justified and padded with zeroes.

2. Add together the products of the weight factors and their associated account number digit.
    If the algorithm E or G is used then add the two digits of the product (tens and ones), and again the two digits of the result before summing (see example 3 on page 16).

3. Divide the sum by the value in the "Modulo**"** column below. If the remainder is zero then the bank account number is valid.

Algorithm	Bank		Branch				Account Base								Suffix				Modulo
A	0	0	6	3	7	9	0	0	10	5	8	4	2	1	0	0	0	0	11
B	0	0	0	0	0	0	0	0	10	5	8	4	2	1	0	0	0	0	11
C	3	7	0	0	0	0	9	1	10	5	3	4	2	1	0	0	0	0	11
D	0	0	0	0	0	0	0	7	6	5	4	3	2	1	0	0	0	0	11
E	0	0	0	0	0	0	0	0	0	0	5	4	3	2	0	0	0	1	11
F	0	0	0	0	0	0	0	1	7	3	1	7	3	1	0	0	0	0	10
G	0	0	0	0	0	0	0	1	3	7	1	3	7	1	0	3	7	1	10
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Note 1:   Algorithm C is not currently used by the banks.

Note 2:   Algorithm X (for Bank ID 31) always verifies the bank account number to be valid. It is included in this table so the same validation logic can be applied to all account numbers.

Example 1

For the bank account number 01-902-0068389-00 algorithm A is to be used for validation.

1. Formatted account number: $\boxed{0\ 1}$ $\boxed{0\ 9\ 0\ 2}$ $\boxed{0\ 0\ 0\ 6\ 8\ 3\ 8\ 9}$ $\boxed{0\ 0\ 0\ 0}$
    Weight digits from table: $\boxed{0\ 0}$ $\boxed{6\ 3\ 7\ 9}$ $\boxed{0\ 0\ 10\ 5\ 8\ 4\ 2\ 1}$ $\boxed{0\ 0\ 0\ 0}$

2. (0*0) + (1*0) +
    (0*6) + (9*3) + (0*7) + (2*9) +
    (0*0) + (0*0) + (0*10) + (6*5) + (8*8) + (3*4) + (8*2) + (9*1) +
    (0*0) + (0*0) + (0*0) + (0*0)
    = 176

3. 176 / 11 = 16, remainder = 0

    The bank account number is valid.

Example 2

For the bank account number 08-6523-1954512-001 algorithm D is to be used for validation.

1. Formatted account number: | 0 8 | 6 5 2 3   0 1 9 5 4 5 1 2 | 0 0 0 1 |
    Weight digits from table: | 0 0 | 0 0 0 0   0 7 6 5 4 3 2 1 | 0 0 0 0 |

2. (0*0) + (8*0) +
    (6*0) + (5*0) + (2*0) + (3*0) +
    (0*0) + (1*7) + (9*6) + (5*5) + (4*4) + (5*3) + (1*2) + (2*1) +
    (0*0) + (0*0) + (0*0) + (1*0)
    = 121

3. 121 / 11 = 11, remainder = 0

    The bank account number is valid.

Example 3

For the bank account number 26-2600-0320871-032 algorithm G is to be used for validation:

1. Formatted account number: | 2 6 | 2 6 0 0 | 0 0 3 2 0 8 7 1 | 0 0 3 2 |
    Weight digits from table: | 0 0 | 0 0 0 0 | 0 1 3 7 1 3 7 1 | 0 3 7 1 |

2.   (2*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (6*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (2*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (6*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (0*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (0*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (0*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (0*1) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (3*3) = 09 -> 0 + 9 = 09 -> 0 + 9 = 09
      (2*7) = 14 -> 1 + 4 = 05 -> 0 + 5 = 05
      (0*1) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (8*3) = 24 -> 2 + 4 = 06 -> 0 + 6 = 06
      (7*7) = 49 -> 4 + 9 = 13 -> 1 + 3 = 04
      (1*1) = 01 -> 0 + 1 = 01 -> 0 + 1 = 01
      (0*0) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (0*3) = 00 -> 0 + 0 = 00 -> 0 + 0 = 00
      (3*7) = 21 -> 2 + 1 = 03 -> 0 + 3 = 03
      (2*1) = 02 -> 0 + 2 = 02 -> 0 + 2 = 02

                                  30

3. 30 / 10 = 3, remainder = 0

    The bank account number is valid.