Commonwealth of Massachusetts
Department of Revenue

2019
Other Tax
Software Developer's Guide

A Guide for Form Vendors and Software Developers
of Massachusetts *Forms 2, 2-G, 3*

Tax Year 2019
Processing Year 2020

Note: This document based on *2019* forms

Table of Contents

Because of sizing issues, the 2D data layouts are a separate document.

Preface

This document (parts one and two) are designed to help those individuals tasked with analyzing certain Commonwealth of Massachusetts, Department of Revenue (DOR) tax forms in order to develop software used in the preparation and filing of those forms. The Software Developers Guide is best used in conjunction with the published forms and instructions; it is not a substitute for those documents.

Enclosed are the specifications used to create 1 dimensional and 2 dimensional barcodes so that DOR will be able to read them. Part two of this document outlines the order and type of data expected in the various 2 dimensional barcodes.

The Data Specifications section of part 1 has information geared towards validating data. The Changes to Massachusetts Forms and Schedules section of part 1 talks about changes made from the previous year's forms and instructions. As this is a "living" document, you will find a Document Revision section that gives a brief outline of the changes made since its last publication. Also, a contact list is provided for anyone needing technical assistance. Note: these contacts cannot offer any help in dealing with specific taxpayer issues. Follow this link for phone numbers of the various DOR help lines:
http://www.mass.gov/?pageID=dorterminal&L=3&L0=Home&L1=Tax+Professionals&L2=Help+%26+Resources&sid=Ador&b=terminalcontent&f=dor_help_direct&csid=Ador

1 Dimensional Barcode layout

The 1-D barcode of thirteen characters plus leading and trailing asterisks is described here. (The Asterisks are not part of the 1-D value, but part of the Code 39 characteristics).

1122333445555

Field	Name	Characters	Value	Misc.
1	State ID	2	"MA"	
2	Year	2	"19"	See also Table 1
3	Form ID	3	Standard MASSTAX values.	See Table 1 for complete list of Form IDs
4	Page Number	2	Page number for form or schedule.	Physical page
5	Vendor ID	4	Four digit company ID assigned by NACTP	See Table 2 for complete list of Vendor codes

The following are the **1-D parameters**:

1) Code 39 symbology
2) Thirteen characters (not including the start and stop asterisk)
3) 2.5:1 wide narrow ratio
4) Height one inch
5) Length 2 1/2 inches.
6) An alphanumeric version of the 1-D barcode must appear in the exact position specified on the record layout. (see pdf for exact positioning)
7) "X" dimension (the narrowest bar and/or space) must be at least 1.5 pts (approximately 20 mils or 3/144 ")
8) Each bar in the barcode must be solid. Streaks in the barcode are unacceptable.
9) A ¼" quiet zone around the barcode must be maintained (for 2003 the bottom edge can have one print line (approximately 3/16") of space below it). The top left anchor is the only exception.

The following barcode represents a potential 1-D barcode for the 2002 Form 1 (DOR hand-printed version). It is here as a sample for sizing considerations.
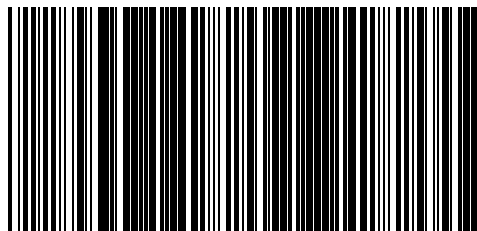
MA020011M001

Table 1: Form ID

The Form ID column of the chart below is used in the Form ID section of the 1 Dimensional Barcode layout above. Also, used in the 2D barcodes for identification.

Form	Form ID	Page No
Form 2	002	1
Form 3 pg 1	007	1
Form 3 pg 2	007	2
Form 3 pg 3	007	3
Form 3 pg 4	007	4
Form 3 pg 5	007	5
Form 3 pg 6	007	6
Form 3 pg 7	007	7
Form 3 pg 8	007	8
Form 3 pg 9	007	9
Form 3 pg 10	007	10
Form 3M	231	1
Form 2G	028	1
Schedule 3K-1	3K1	1
Schedule B\R	BRE	1
Schedule RFC	RFC	1
Schedule LP	LPC	1
Schedule EOAC	EOA	1
Schedule FAF	FSH	1
Schedule 2K-1	22K	1
Schedule B	210	1
Schedule C-2	CC2	1
Schedule D	212	1
Schedule E & F	213	1
Schedule H	267	1
Schedule IDD	2ID	1
Schedule CMS	647	1
Schedule CRS	648	1
Schedule FCI-I	752	2
Form M-2210F*	654	3
Payment Vouchers &	Extensions	Note: the year field is "PV"
Form-2ES	009	MAPV00901vvvv
Form-2PV	002	MAPV00201vvvv
Form 8736	003	MAPV00301vvvv
Form 4868	004	MAPV00401vvvv

Note: The "vvvv" noted above for vouchers and extensions represent the Vendor Id Code.

See Appendix B of Corp Excise Software Developers Guide, Part 1 for a comprehensive list of documents using a 1D barcode for forms identification with associated Form ID values.

Quality Assurance

The software <u>must</u> ensure that printed data and encoded data in the 2-D barcode are an exact match. Any updates to data must be reflected in the 2D barcode prior to a return being printed. This becomes especially important when a return is updated after its initial creation. Changes to any document within a return must flow to every other area of the return, as appropriate. For example, a W2 arriving late to the taxpayer could necessitate an update to the Schedule INC, Form 1 and Schedule CB. A substantial increase in income could negate a Schedule CB credit eligibility.

This example also serves to illustrate the importance of reprinting and subsequently filing an updated return <u>in its entirety</u>. In the example, if a new schedule CB was not reprinted and submitted to the Department, the return would fail our validation process requiring a "Post Audit" review of the return. To help identify this type of scenario, the print date and time should be produced at the bottom of each page of every document of the return. Date format is discretionary upon the vendor. The location is to be at row 61, beginning at column 15. There must not be a user option to shut the timestamp off.

For their own internal purposes, the vendor may choose to print company name, an identification number, control number, version number, etc. on the form or schedule. Row 61 between columns 45 and 75 may be used for this purpose. When trying to research a problem, some vendors have found this information to be helpful. No printing is allowed below row 61. Printing below row 61 has a negative impact on reading the forms and schedules.

Portable Document Format - PDF Files

Please include this setting in all instructions to the user for printing a tax return. When saving a form in PDF format, the ADOBE reader defaults to fit or shrink to printable area. When this happens, the 1D barcode can become unreadable. There is a setting in the PDF specifications that can be set in each file that will force the document to print without being shrunk. When using PDF files to save and/or print tax returns, the following PDF Viewer Preferences or properties <u>must</u> be set by the vendor application:

PrintScaling = None   **Duplex = Simplex.**

The standard Adobe Reader when installed, defaults to Page Scaling set to "shrink to printable area" causing all documents to be scaled. This causes two problems: 1.) 1D barcodes become unreadable and 2.) Fixed location printing is shifted and also becomes unreadable.

Setting the PrintScaling property to none will override the local setting and force the document to print without scaling.

Setting the Duplex property to Simplex will override local settings and force the documents to be printed single sided.

These settings are explained in section 8.1, Viewer Preferences, page 577 of the following manual: PDF Reference sixth edition Adobe®
Portable Document Format   Version 1.7   November 2006
Adobe Systems Incorporated

This document can be found at:
http://www.adobe.com/content/dam/Adobe/en/devnet/acrobat/pdfs/pdf_reference_1-7.pdf

The following are excerpts from that manual.

PrintScaling The page scaling option to be selected when a print dialog is displayed for this document. Valid values are None, which indicates that the print dialog should reflect no page scaling, and AppDefault, which indicates that applications should use the current print scaling. If this entry has an unrecognized value, applications should use the current print scaling. Default value: AppDefault. Note: If the print dialog is suppressed and its parameters are provided directly by the application, the value of this entry should still be used.

Duplex - The paper handling option to use when printing the file from the print dialog. The following values are valid:

Simplex - Print single-sided

DuplexFlipShortEdge - Duplex and flip on the short edge of the sheet

DuplexFlipLongEdge - Duplex and flip on the long edge of the sheet

Attachment Inventory

The inventory fields are in place to help the Department to verify document integrity. If the income tax return contains two Schedule Cs, then our recognition software will count two. We are also able to validate against misidentified forms and schedules. As a last resort, we will request submission from the taxpayer who is truly missing forms and schedules. In the event that any given 2-D barcode cannot be read, the schedule inventory for the return is repeated in every barcode.

In the 2-D layouts found in part two of this document, field 10 represents an inventory - physical page count for the return. For example, if the return only consists of a Form 1 and one Schedule INC, then the count would be 4: Form 1 pages 1, 2 and 3 and 1 Schedule INC. Another example would be Form 1 and two Schedule Cs which yields a value of 7 in field 10: Form 1 pages 1, 2 and 3 and Schedule C front and back twice.

In the Form 1 2-D barcode, fields 11 through 19 show a breakdown of what is included in the taxpayer's return. Most often, field 11 would be one (1), meaning there is one Form 1 in the return; field 12 could be either zero (0) or one (1); field 13 could be zero (0) or whatever the number of Schedule C's which were included in the return.

To reiterate for clarity, field 10 counts the number of sides of every piece of paper that has taxpayer data on it. However, fields 11 through 19 count the number of a given form type that is included in the return. Field 19 counts those form types NOT expressly represented in Fields 11 through 18. Field 19 should not include any worksheets (for example AGI calculation) nor should explanatory or overflow attachments be included. It should include any form or schedule (Massachusetts or Federal or Other State's) to be mailed to DOR as part of the return being filed.

Field number 18, in the Form 1 & NRPY specification documents, counts the number of Schedule X/Y & Schedule Z/RF & Schedule DI being filed.

Multiple Instances of the Same Schedule

If three Schedule C forms were sent as part of the return, then the first instance of the Schedule C would have a value in field 11 of 1 and field 12 of 3. The second Schedule C would have a value in field 11 of 2 and field 12 of 3; and lastly, the third Schedule C would have a value in field 11 of 3 and field 12 of 3. If only one Schedule INC was supplied, then the value in field 11 and field 12 would both be 1.

General Specifications

Alphanumeric Data	Only 1 space between characters for word separation
	Left justified
Numeric Data	Whole dollar only, Rounded, Right justified
	Use whole dollar format
Negative Numbers	Leading dash (-), floating
Unused Data	No Zero fill, No Blank fill
Paper size	8 1/2" x 11"
Orientation	Portrait
Printing	Single-Sided
	12 Point
	10 Pitch
	Courier
	Upper Case only text
	½ inch margin – sides, top and bottom
	Choose Print Scaling value of "None" via Adobe
Lines per Vertical inch	6 (1/16th of an inch)
Characters per Horizontal inch	10 (1/10th of an inch)
Paper weight	20 lb Bond minimum (non-recycled)
Paper Color	White
Print Color	Black
Print area Horizontal – first	Row 4
Print area Horizontal – last	Row 63
Print area Vertical – first	Column 6
Print area Vertical – last	Column 81
Prohibited	Shading
	Screens in the text area
	Reverse Characters (white on black background)
	Rotated text (Landscape printing)
	Logos and Seals
	No Dollar signs in Numeric fields
	No Commas in Numeric fields
	No Decimal Points
	No Pennies
	No parentheses to represent Negative numbers
	No text in Numeric fields (such as "None")
	No redacting or masking of data

The Department realizes that some specifications, such as paper and ink, are beyond the control of vendors. However, these specifications are critical to the successful implementation of the product and should be communicated to your customers.

PDF417 Suggested Specifications[1]

Encode type	Normal PDF417
DPI	300 dpi
Pixel shaving	ON
Code word count	Variable
Encryption	
Error Correction Level	4
Mils	10.0
Data Columns	Variable
Module Aspect Ratio	2.00 : 1
Data Rows	Variable
X Dimension	3
Location	Reserved area top right corner of the forms
Reserved space	3.75" x 1.5"
Max Characters	1500
Field Delimiter	Carriage Return
End of File Delimiter	"*EOD*"

1. PDF 417 has error detection and correction capabilities. The more error correction is used, the less data can be communicated in the barcode. With respect to data capture, you either get 100% or nothing. Complete barcode read failures are very uncommon. The tax Application Programming Interface (tax API) sets parameters for correction/detection. These parameters should be observed and not altered.

2. Based on the experience of previous filing seasons of 2-D barcode use, and due to the low level of deterioration of tax returns (compared to high media-abuse environments) the error correction level in the current market-provided DLL is set to level 4.

3. A general rule that can be used to determine if a printer is capable of producing a 2-D barcode is if the printer can produce a graphic such as a tax agency seal or business logo, then the printer should be capable of producing a 2-D barcode that can be scanned.

4. Pixel shaving is a technique that produces higher-quality barcodes when printed on lower-quality equipment like inkjet printers. Pixel shaving will result in improved read rates. In the DLL, pixel shaving will always be turned on.

5. Increasing the x (horizontal) dimension of the barcode elements from the minimum of 7.5 mils to the maximum of 25 mils will produce the most readable barcodes, especially on low quality ink/bubble jet printers. Whenever possible, software vendors will create a barcode that uses the largest possible x element value for the given space.

6. Users are advised that stretching or scaling the barcode (via copying the paper media or the like) changes its integrity and worsens readability; it should not be employed.

7. 2-D barcodes should never be rotated. Rotating a 2-D barcode increases processing difficulty and introduces the risk of errors. Since PDF-417 barcodes are read in both the x (horizontal) and y (vertical) directions on a portrait page, rotating them from their natural position can render the barcode unusable.

---

[1] Also see Tax Forms Processing – 2D Barcoding Standards: Section 3 as found at WWW.NACTP.ORG.

8. Unless otherwise noted in Part 2, any line item left unanswered or having a value of zero (blank, no data, nul or 0) should not have a value on the printed page or in the 2D barcode. An inspection of the 2D barcode (raw data) should look something like this, which represents 2 consecutive line items having no data values. <CR><CR><CR>

Changes to forms and schedules for 2019

<u>General</u>
We had one schedule FCI in 2018. Moving forward in 2019, we have 2 of them; one for income and one for corporate taxpayers. Income taxpayers will use the FCI-I. The suffix and new 1D barcode values is important to note. (See page 5)

<u>Form 2</u>
New captured 2D field, Self Employed bubble, new lines 48 & 49

<u>Form 2G</u>
New captured 2D field, Self Employed bubble, lines 8, 9, 10 moved to page 2

<u>Form 3</u>	<u>Schedule 3K-1</u>
2D enabled	2D enabled

<u>Schedule B/R</u>
None

<u>Schedule 2K-1</u>
New fields and now 3 pages

<u>Schedule B</u>
None

<u>Schedule D</u>
None

<u>Schedule E</u>
None

<u>Schedule H</u>
None

<u>Schedule IDD</u>
None

<u>Schedule CRS</u>	<u>Schedule CMS</u>
None	None

<u>Schedule LP</u>	<u>Schedule RFC</u>	<u>Schedule EOAC</u>	<u>Schedule FAF</u>
None	None	lines 16 to 17 removed	2D Enabled
		Down to 1 page	

<u>Schedule C-2</u>	<u>Schedule FCI-I</u>
None	New form (2D)

Data Specifications

<u>General</u>

See Technical Information Release TIR-04-30 for information on Electronic Filing requirements for Fiduciary and Partnership Taxpayers. Failure to abide by the aforementioned provisions set forth in TIR 04-30 may result in the assessment of penalties.

Pending legislation may affect some line items. See instructions on the DOR web site for any last minute updates.

Failure to produce a 2D barcode on third party returns may result in taxpayers having their returns rejected and the imposition of penalties for noncompliance.

Vendors should not allow taxpayers to print a return which was created using software unapproved by the department. The taxpayer should be directed to "Download the latest software patch prior to printing or submitting their return". Submitting a return using unapproved software may result in the taxpayer having their returns reject and the imposition of penalties for noncompliance.

Until a vendor has been approved, include watermarks across every page of the return stating "**DRAFT FORM: THIS WILL NOT BE PROCESSED**" Watermarks should be removed as part of the approved software production release.

All forms and schedules are whole dollar only.

To allow the paid preparer or taxpayer to verify that their printer can produce the 1D barcode, 2D barcode and anchors, the Department suggests that the software providers include a test page containing a 2D barcode, 1D barcode & anchors.   Together, with appropriate instructions and text explaining what the barcodes are and why they are important, the Department hopes to avoid rejecting returns or imposing penalties for cases were barcodes are missing.
For those returns prepared by someone other than the taxpayer, identifying fields Preparer Name, phone, and PTIN/EIN are mandatory. The software geared towards professionals, must insure that paid preparer information has been entered prior to printing.

The value of accurate taxpayer name and address information is self-evident and as important is consistency. To that end, attached below are Standard Addressing abbreviations that are to be used when formatting the data for BOTH print and 2D encoded address fields.

Apartment, Suite, and Room numbers should be placed in the Apartment Number field. Acceptable values are numeric digits and alpha letters. DO NOT include the "Apt." prefix, pound signs (#), dashes or any other special characters. Please discontinue the practice of concatenating street address and apartment number values. When printing, the apartment number should be a separate field on the form.

<u>Name and Address data</u>

Having correct and complete name and address data is always a concern with the department. Please refer to 'Postal Addressing Standards' document at http://pe.usps.gov/cpim/ftp/pubs/Pub28/Pub28.pdf
If the address is a foreign address, NO LONGER include the text FC in the State field. If the foreign country has a zip code, it can go in the ZIP code field, otherwise leave the ZIP code field empty. See '2016 Personal Income Tax Software Developer's Guide' – Taxpayer Registration Rules for examples. See Appendix B for text to be used for foreign country. Use

the foreign state field for a foreign country's state, province or county as needed. The Foreign Country should be represented as the 2 character code in both print and the 2D barcode.

Timestamp
There are times when a taxpayer's return is created over a period of time. If the return is printed at different times, sometimes an update will not be reflected in the document that the department receives. This can become problematic when data flows from one page to another. To be sure that the department has the most up to date and complete return, the print date and time should be printed on the bottom of every page of every document of the return. Date format is discretionary upon the vendor. The location is to be at row 61, beginning at column 15. There must not be a user option to shut the timestamp off. No printing is allowed below row 61. Printing below row 61 has a negative impact on reading the forms and schedules.

Vendor Reserved
For internal purposes, the vendor may choose to print company name, an identification number, control number, version number, etc. on the form or schedule. Row 61 between columns 45 and 75 may be used for this purpose.   When trying to research a problem, some vendors have found this information helpful.

Form 2
TIR 03-11 required fiduciaries filing Form 2 with total Part A, Part B, and Part C net taxable income (as defined in G.L. c. 62, § 2(b)) of $50,000 or more to pay electronically, as of January 1, 2004; this threshold was to be lowered to $30,000 and the requirement that such returns be filed electronically was to be added as of January 1, 2005. The Commissioner hereby postpones the change in threshold; the threshold at or above which fiduciaries must pay electronically remains $50,000. In addition, the Commissioner postpones the requirement that fiduciary returns above the threshold be filed electronically. Fiduciaries who are at or above the $50,000 threshold (total Part A, Part B, and Part C net taxable income on Form 2) must continue to use electronic means to make any payments to the Department. Chapter 262 of the Acts of 2004 (chapter 262) modified the tax treatment of trusts, effective for taxable years beginning on or after January 1, 2005, by imposing the tax on income for certain trusts at the beneficiary level, rather than at the trust level. While income included in the gross income of a beneficiary by reason of Internal Revenue Code sections 652 or 662 will be taxed at the beneficiary level, trusts with accumulated income or capital gains will continue to file Form 2 and pay taxes on the trust income at the trust level. See TIR 04-23 for more information on chapter 262 and the changes in taxation of fiduciaries.

The Period, that is the year beginning and ending date, must not span more than 12 months. For returns prepared by someone other than the taxpayer, Preparer Name, phone & either PTIN/SSN or EIN must be included prior to printing the return.
The size of the Account Number field is 11 bytes in length.

Credits must be documented as required. That is, a certificate number or a supporting schedule must accompany certain credits or else the credit will be disallowed. Schedule CMS and or Schedule CRS must accompany the return if any credits or credit recapture are being claimed.   See instructions for information pertaining to when and if to submit specific credit schedules.

If the taxpayer has a credit recapture, the total dollar amount is entered on line 39, as well as the requisite bubbles filled in.
See TIR-10-11 for details on the Additional Tax on Installment Sales.

Form 2-G
The Period, that is the year beginning and ending date, must not span more than 12 months. For returns prepared by someone other than the taxpayer, Preparer Name, phone & either PTIN/SSN or EIN must be included prior to printing the return.

Schedule B/R
Legal Domicile is a 2 byte field that is the 2 character USPS State abbreviation.
The Beneficiary and Remaindermen fields are on the same line as Legal Domicile.

Form 3
Annual partnership information returns (Forms 3) are required under G.L. c. 62C, §§ 6 and 7. Partnerships must also submit Schedules 3K-1, explaining each partner's distributive share, to the Department and to each partner.
The Department of Revenue announced in TIR 03-11 the requirement that, as of January 1, 2005, partnerships at or over the partnership E-file income threshold or loss threshold, or with 25 or more partners, must submit all Forms 3 and Schedules 3K-1 to the Department by electronic means. The partnership income threshold is reached when the partnership has, in one tax year, (1) $50,000 or more in gross income, including (but not limited to) gross receipts from a trade or business, gross income from the sale or rental of real or tangible personal property, or from royalties, interest, or dividends; or (2) $100,000 or more received from the sale of stock and securities. The partnership loss threshold is reached when the partnership has, in one tax year, (1) $50,000 or more in ordinary loss from trade or business activities; or (2) $100,000 or more in losses from the sale of stock and securities.

The Period, that is the year beginning and ending date, must not span more than 12 months. For returns prepared by someone other than the taxpayer, Preparer Name, phone & either PTIN/SSN or EIN must be included prior to printing the return.

Additional tax associated with an installment sales. See TIR-10-11 for details.

Credits found on Form 3 represent the GROSS amount of each credit that is associated with the Partnership. Certificate numbers are the original numbers assigned to the Partnership. Schedule CMS and or Schedule CRS must accompany the return if any credits or credit recapture are being claimed. See instructions for information pertaining to when and if to submit specific credit schedules.

All 10 pages are required. Take special note of the 1D barcode values for pages 6 through 10 in Table 1. They have changed since 2015. Also, the form is 2D enabled

Schedule 3K-1
The Name and SSN are required for each partner.

Credits must be documented as required. That is, a certificate number or a supporting schedule must accompany certain credits or else the credit will be disallowed.
The credits on the 3K-1 are the Partner's share (if any) of the credits accumulated by the Partnership.
New certificate numbers must be assigned to the Partner's share of the credit. The Partnership has the responsibility of getting the new certificate numbers and getting that information to the Partner.
Certificate Numbers are not found on the 3K-1. (They must be included when filing the tax return of the Partner) This schedule is 2D enabled beginning in the 2019 tax year.

. <u>Schedule CRS & CMS</u>
See instructions for criterion set forth for when to file the various credit schedules and when they should be retained by the taxpayer. Schedule CMS and or Schedule CRS must always accompany the return if any credits or credit recapture are being claimed. See instructions for information pertaining to when and if to submit specific credit schedules.

<u>The credit type field should be encoded as outlined here:</u>
Brownfields Credit	value="BRWFLD"
Certified Housing Credit	value="CRTHOU"
Community Investment Credit	value="CMMINV"
Conservation Land Credit	value="CNSLND"
Dairy Farm Credit	value="DAIFRM"
EDIP Credit	value="EDIPCR"
Employer Wellness Credit	value="EMPWLL"
EOAC Credit	value="EOACCR"
Film Incentive Credit	value="FLMCRD"
Harbor Maintenance Credit	value="HRBMNT"
Historic Rehabilitation Credit	value="HISRHB"
Investment Tax Credit	value="INVTAX"
Life Science (FDA) Credit	value="LFSFDA"
Life Science (ITC) Credit	value="LFSITC"
Life Science (Jobs) Credit	value="LFSJOB"
Life Science (RD) Credit	value="LFSRDC"
Low-Income Housing Credit	value="LOWINC"
Medical Device Credit	value="MEDDVC"
General Research Credit	value="REARCH"
Vanpool Credit	value="VANPOL"
Lead Paint Credit	value="LEDPNT"
Septic Credit	value="SEPTIC"
Solar and Wind Energy Credit	value="SLRWND"
Farming and Fisheries Credit	value="FRMFSH"
Veteran Hire Credit	value="VETHIR"
Low Income Housing Donation Credit	value="LIHDON"
Angel Credit	value=" AGLCRD"
Apprentice Credit	value="APPCRD"
Vacant Storefront Credit	value="VACSTR"

Certificate Type	Size	Format	Notes
EDIP	10	nnnnEnnnnn	
Brownfields	10	nnnnBnnnnn	"n" is a number
Low-Income Housing	9	MAnnnnnnn	"a" is a letter
Historic Rehabilitation	7	HRCnna	Capital letters are static values
Film Incentive	10	nnnnFnnnnn	* Missing Cert # nullifies
Medical Devices	10	nnnnMnnnnn	Credit dollars
Employer Wellness	10	nnnnnWnnnn	
Dairy	5	annnn	
Conservation	10	nnnnCnnnnn	
Community	10	nnnnVnnnnn	
Certified Housing Dev	10	nnnnHnnnnn	
<generic>	varies	Cnnnnnnnnn	This type can have up to 10 digits

See DOR web site for instructions and rules for credits. Refer to TIR 18-13 for details.

* When validating the certificate number, please keep the error responses general. For example: "You have entered an invalid certificate number…" or "The certificate number you entered is not a Brownfields certificate number…" The primary / initial authority who issues the certificate number with the credit amount can elect to use the formats outlined in the table above. However, the Massachusetts Department of Revenue can also elect to issue certificate numbers that can supersede the original certificate number. In those cases, the new certificate number field size can be up to 20 bytes in length. Note: the sizes noted above will not match the sizes of the certificate numbers in the (Part 2) 2D layout details document.

Making Payments - Form 2 only

See below, "Other Resources": Computer-Generated Payment voucher. Also, to make online payments (preferred method), including scheduling payments, taxpayers should visit The Massachusetts Department of Revenue's secure web pagewww.mass.gov/dor/payonline

Vendors should include the above url, with appropriate text encouraging online payments, on the top half of the paper Payment Voucher. If appropriate, where vendor software discusses payments, please include text and the url above in order to encourage online payments.

Payment Vouchers & Extensions
1   See page 4 and Table 1 on page 5.
2   These documents should NOT have anchors.
3   These documents still require the scan line at the bottom of the page.
4   These documents should include a 13 byte 1D barcode located at the top of the page.
5   Vendors should include their vendor code in the last four bytes of the 1D barcode.
6   2D barcode is mandatory for tax season 2019
7   All other criteria remain the same as outlined in "Payment Voucher and Extensions Software Developer's Guide" and "Tax Payment Voucher and Extension Forms" (see Other Resources on page 22)

See 2019 PV Extensions Developers Guide

Vendor requirements for passing certification testing

DOR does acknowledge that not every vendor can maintain the same level of sophistication in terms of what types of tax scenarios its software can handle. DOR takes a fiduciary responsibility to the taxpayers in certifying a vendor as acceptable. DOR does expect vendors to provide the highest possible quality in the areas of appearance, functionality and accuracy in delivering their product to the market place.

See Massachusetts Department of Revenue Publication 'Handbook for Reproduction of Non-Scannable Department of Revenue Forms' Section 1.3 for guidance regarding who needs to pass certification testing. To paraphrase: Any company that develops and uses substitute Massachusetts Department of Revenue forms MUST get approval from the Department. If the company develops substitute tax forms using its own tax software; develops tax software programs to be used with substitute tax forms developed by another company; or, develops substitute tax forms for other companies to use with their tax software.

The company must have forms reviewed annually prior to release of the substitute forms. Part of the approval process is for the Payment Voucher to pass DOR testing. For those vendors passing certification, they must provide a copy of their DOR Approval letter to tax practitioners or other vendors who sell the products of tax software developers who design substitute tax forms. (See also, Section 1.4 of 'Handbook for Reproduction of Non-Scannable Department of Revenue Forms')

If a company chooses to release software to their customers (tax payer or tax practitioner) prior to being approved by the DOR, the company must adhere to the following criterion:

Disable printing of returns created using unapproved software.

A watermark with the text of "**DRAFT FORM: THIS WILL NOT BE PROCESSED**" must be printed across all pages of the form(s)

The watermark must be printed in black only

The watermark must be at least tall enough to encompass two printed lines

The watermark must be located such that the taxpayer name and address are obliterated. For forms where there is no name and address area, the vendor may place the watermark anyplace common sense would dictate.

The consumer must not have a way to shut off the watermark feature

The software must prohibit returns created with unapproved software from being filed electronically

Once approved, a software patch should remove any watermarks and filing prohibitions.

Vendors are encouraged to submit test samples early to avoid approval delays. DOR will make every effort to review and approve forms within 10 days of receipt. See contact list to learn where to submit test forms.

Each page has a unique 1-D barcode that the imaging recognition software uses to identify each page.

Fixed (exact) Positioning

DOR requires exact positioning for all data elements on all forms and schedules for certification. Certification status will be posted on the DOR's web site at
http://www.mass.gov/dor

All optical scanner enabled forms are required to have anchors. The anchors must be placed in accordance with the department's exact positioning requirements for that form. Each form must contain the exact number of tax data fields, taxpayer ID fields, line items, optical mark fields and keying symbols as the state issued form. The location of all OCR-readable fields must appear in the exact location as specified in the record layout. Those returns not following the exact positioning requirements will be given a lower priority than those following the requirements. DOR has an Imaging based automatic data capture system in place. Image based technology requires exact positioning for data to be captured

Text

- Vendors may limit descriptions for captions and lines required by the official form or schedule to one print line on the substitute form or schedule by using abbreviations and contraction and by omitting articles and prepositions. The substitute schedule must retain sufficient key words, however, to permit ready identification of the caption, line or item. See Massachusetts Department of Revenue Publication 'Handbook for Reproduction of Non-Scannable Department of Revenue Forms' Section 3 for more information.
- Text found on the transparent films and online grids are for illustration purposes only. Vendors are encouraged to be as brief or verbose as space and reason permits.

Anchors

- Four anchors, one in each corner, must be present on all pages.
- Anchors must be in the exact same location on all pages and must be in the exact location specified in the transparent films sent to each vendor.
- Each anchor must consist of an angle bar formed by the intersection of one horizontal and one vertical line. Line thickness should be 3 points (3/72"). Line length should be ¼".
- No solid, filled (black) area should be with 2cm (approximately ¾") of any anchor.

Optical Mark Fields

- A single upper case "X" must be used to indicate a response in an optical mark field.
- No underlining or enclosing of optical mark fields.
- One blank character space must immediately proceed and follow an optical mark field.
- If a field is not applicable, it must be left blank.

Negative Amounts

- Negative amounts or losses must be preceded by a minus sign ("-").
- Use of parentheses or "X" boxes (as found on the official Department produced version of the forms) is not acceptable.
- Language regarding the use of "X" boxes must not be printed on the substitute forms.

Dollar Amounts

- Punctuation is prohibited in money amount fields. No Dollar signs ($), commas (,) or decimal points (.).

- Text is prohibited in money amount fields. Do not allow "None" or any such message to be keyed into a money amount field. Empty fields should be left blank.

Signature Area
- Taxpayer signature and paid preparer information and signature area must be formatted in the same manner as the official Department form.
- Underlining is permitted only in the area allotted for the taxpayer's, spouse's and paid preparer's signatures.

Privacy Act Notice
- "Privacy Act Notice available upon request" verbiage must appear on page 1 of the return. The verbiage should appear where indicated on the transparent films provided to the vendors. If need be, the verbiage may be printed elsewhere, provided that it not interfere with any OCR fields. The Privacy Act Notice must be made available to the software user by the software developer. It may be presented in either printed "hard-copy" or software "soft-copy" formats.
- The text of the Privacy Act Notice is as follows:
  Under the authority of 42 U.S.C. sec. 405© (2) ©(i), and M.G.L. c. 62C, sec. 5, the Department of Revenue has the right to require an individual to furnish his or her Social Security number on a state tax return. This information is mandatory. The Department of Revenue uses Social Security number for taxpayer identification to assist in processing and keeping track of returns and in determining and collecting the proper amount of tax due. Under M.G.L. c. 62C, sec. 40, the taxpayer's identifying number is required to process a refund of overpaid taxes. Although tax return information is generally confidential pursuant to M.G.L. c. 62C, sec. 21, the Department of Revenue may disclose return information to other taxing authorities and those entities specified in M.G.L. c. 62C. secs. 21, 22 or 23 and as otherwise authorized by law.

The department's acceptance criteria are as follows.

. Can we read the 1-D & 2-D barcode?
. Is there a 2-D barcode on every form and schedule as required?
. Is the 2D barcode data correctly located within the barcode?
. Is the 1-D barcode correct on each page?
. Are the 1-D and 2-D barcodes correctly sized and located?
. Using the grids which are available to the vendors, do anchors and fields on the test samples line up to the films, within REASONABLE tolerances?
. Transparent films will gladly be provided upon request.
. The payment voucher must pass DOR testing prior to final approval. The 1D Barcode and scanline must both be readable and correctly configured. (See the PV Developers Guide for more details)
. Those vendors providing Massachusetts Personal Income Tax Forms and Schedules must pass ALL (1D, 2D and exact positioning) acceptance requirements.

Submitting test data

. Submitting samples for 2D testing may be done via email using pdf files.
. There will be two tests per form required to be submitted for 2D testing.
. Exact positioning tests may be submitted via email or hard copy.
. Vendors are free to format their own cover sheets as they see fit. Included must be contact information, Forms and Schedules being submitted, and which testing is to be performed.
    (See appendix A for samples of a cover sheet in use.)

Non-Image enabled forms with anchors and a 1-D barcode

Schedule BC – Brownfields Credit is an example; there is no 2D barcode, nor is there a "grid" layout of the schedule. The department wants to be able to name the document when we encounter it. We do that using the 1-D barcode and the anchors.

1 Code: 39 symbology
2 12 characters
3 Ratio: 2.5:1 wide narrow
4 Height: 5/16 inch
5 Length: 2 ½ inches
6 "X" dimension (the narrowest bar and/or space) must be at least 1.5 pts (approximately 20 mils or 3/144 ")
7 Each bar in the barcode must be solid. Streaks in the barcode are unacceptable.
8 Quiet zone restrictions are relaxed.
9 Margin restrictions are relaxed for the anchors and 1D barcode
10 Print area restrictions are relaxed for the anchors and 1D barcode
11 See Anchors (above) for those characteristics. The exception is location.
12 The top left corner of the 1D barcode is on Bottom of Row 1, Left of Column 15
13 Top Left anchor's top left corner is on Top of Row 4, Left of Column 7
14 Top Right anchor's top right corner is on Top of Row 4, Right of Column 79
15 Bottom Left anchor's bottom left corner is on Bottom of Row 63, Left of Column 7
16 Bottom Right anchor's bottom right corner is on Bottom of Row 63, Right of Column 79

Massachusetts DOR Contact List

Non 1D enabled forms are submitted to:
Patrick Ford   dorforms@dor.state.ma.us
Brian Mcglone   dorforms@dor.state.ma.us

1D and 2D enabled forms are submitted to, preferably via pdf attached to email:
Robert Fiore   anfitformsapproval@dor.state.ma.us   617-887-5315
ANF-IT Support 3r^d floor – Scannable Forms Approval
200 Arlington St.
Chelsea MA 02150

Steven Piro   anfitformsapproval@dor.state.ma.us   617-887-5710
ANF-IT Support 3rd floor – Scannable Forms Approval
200 Arlington St
Chelsea MA 02150

Note: a scannable form is any document with a 1-dimensional barcode on it.
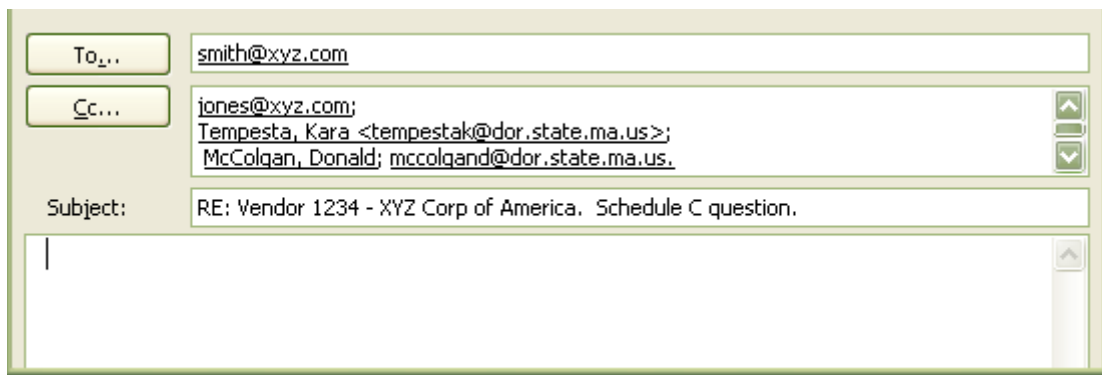
These contacts cannot offer any help in dealing with specific taxpayer issues. Follow this link for phone numbers of the various DOR help lines:
http://www.mass.gov/?pageID=dorterminal&L=3&L0=Home&L1=Tax+Professionals&L2=Help+%26+Resources&sid=Ador&b=terminalcontent&f=dor_help_direct&csid=Ador

Communication
The preferred method is via e-mail. It falls upon the sender of the email to include their own backup person as a 'CC' recipient. The subject line should include (at a minimum) the vendor id number and reason for the communication such as 'Schedule HC question' or 'Testing clarification'.
Do not include any personal information such as social security number of you or any customer or client.

Other resources:

The National Association of Computerized Tax Processors (NACTP) website http://www.nactp.org/.   The 'Computerized Industry Standards' document is particularly helpful.

Federation of Tax Administrators (FTA) website **http://www.taxadmin.org/**. The 2-D Barcode Standards document is a good starting point for those vendors taking their first steps into 2-D barcode technology.

Massachusetts Department of Revenue website http://www.dor.state.ma.us/. Refer to the site map to help find draft and final versions of the latest forms and schedules as well as other helpful information.

Information relevant to the production of payment vouchers and extensions, including scan-line specifications and sample forms, can be found in the '2019 Payment Voucher and Extensions Software Developer's Guide' and '2019 Tax Payment Voucher and Extension Forms'

United States Postal Service website http://www.usps.com/. Please refer to the 'Postal Addressing Standards' document at http://pe.usps.gov/cpim/ftp/pubs/Pub28/Pub28.pdf

Taxpayers can obtain an ITIN by completing and filing Form W-7, which is available at the Internal Revenue Service website www.irs.gov or by contacting the IRS at (800) 829-1040.

TIR 08-11: An Act Relative to Tax Fairness and Business Competitiveness. The act institutes "Unitary Combined Reporting" for multi-state corporations and also adopts business entity classification rules that broadly conform to the Federal "check-the-box" rules. Although the act is for tax years beginning on or after January 1, 2009, how it affects 2008 filings has yet to be determined. Please check the Massachusetts Department of Revenue website frequently for the most up-to-date information on this matter. TIR 09-18 has information related to the filing requirements of the unitary returns.

(Note: website addresses current as of 10/27/2016)

Generally, we do not issue a TIR when we promulgate a new or amended regulation but we may issue a TIR if there is a law change that may relate to a regulation. Anything we issue can be found online in the legal library. And recent drafts and additions may be found on this page. Vendors should also sign up to receive our email updates. (https://www.mass.gov/service-details/dor-legal-library)

Document Revisions

Updates to this document will be posted to DOR's Web site http://www.mass.gov/dor on Friday afternoons. Please check for updates over the weekend or on Monday mornings to ensure that you have the most current document.

This page is included to track changes between published revisions of this document.

Rev Number	Date	Revision
2019-1.0	9/20/2019	Beginning annual updates
		The provision for including "key marks" has been removed.
		Coupons (Vouchers, Estimated Payments and Extension) are mandatory 2D
		Amended Bubble valid values
		Form 2 p1 field 44 (DOR use) removed and renumbered
		Sched B/R 23, 35, 47 & 59 remain as "Unused" ATM
		2-ES coupon may see some instructional changes as well
		Schedules FAF & OJC are 2D enabled
		Form 3 & 3K-1 are 2D enabled
		Sched 2K-1 page 2 re-sequenced the field numbers to follow the line items on the page. (note *)
		M2210F is 2D enabled
		Part 2 is now a spreadsheet rather than a word document with multiple tables. It also includes the test data as a column in the spreadsheet rather than a separate pdf document. This is to enable you to see exactly which field should have which data in it.
		New captured 2D field, Self Employed bubble Form 2 & 2G page 1. Field 67 & 58 respectively.
		2D fields realigned, page 1 of Form 2 & 2G, schedule H also, to match flow of the paper document
2019-1.1	9/25/2019	New lines on page 1 Form 2. New bubble page 1 2G, lines 8, 9, 10 moved to page 2
		Schedule 2K-1 added credits and forced to 3 pages
2019-1.2	10/3/2019	Form 3K-1 line 5u was "Reserved" now named Vacant Storefront Credit Form 2K-1 line 33 was "Reserved" now named Vacant Storefront Credit Form 2G "Grantor Deceased" was renamed to "Final 2G"
		EOAC lines 16 to 17 removed. One page schedule now
2019-1.3	10/9/2019	Sched 2K-1, lines 31, 32, 33 have cert numbers added
2019-1.4	10/29/19	Schedule FCI-I has changed from prior revisions of the specs to be 2 pages. Also, you will see the name has an "I" suffix to differentiate between the income version and the corporate version of the schedule. The 1D barcode value of the schedule is updated for 2019 to help with this. The 2018 must NOT be used after 2018.
		No redacting or masking of data
2019-1.5	11/13/2019	Additional Tab in part 2 showing forms per test
2019-1.6	11/20/2019	Angle Credit has no cert. #. 2K1, pg2, field 91 is "Unused"
2019-2.0		No longer DRAFT
2019-2.1	12/11/2019	Added link to DOR Legal Library

Appendix A

Initial Submission
Massachusetts Department of Revenue
        Mrs. Dep Revenue
        200 Arlington St
        Chelsea MA 02150
        (617) 887-0000
        revenue@dor.state.ma.us
        or
        Mr. Ven Doore
        doore@dor.state.ma.us
        (617) 887-0001

XYZ Corp of America   Vendor #   1234
        Product: Awesome Software 4U
        Contact: Mr. Stanley Smith
        2 Main St
        Anytown, OR 10102
        (123) 222-1234
        smith@xyz.com
        or
        Mr. James Jones
        (123) 222-1233
        jones@xyz.com

Forms and Schedules	Tests to be performed				Results / Action
	√ = To be tested P = Successful test				Successful Result, Error, Retest, Did Not Submit, Accepted Form
	Exact Positioning	1D	2D data	Not supported	
Form 1	√	√			
Schedule B	√	√			
Schedule C	√	√	√		
Schedule D	√	√	√		
Schedule E				√	
Schedule CB	√	√	√		
Schedule INC					D.N.S.
Schedule X/Y					D.N.S.
Schedule Z/DI					D.N.S.
Form 1NRPY					D.N.S.
Schedule NTSL/NR					D.N.S.
Notes	Development is incomplete. Schedules with a DNS status will be submitted				
	next week. - Stan				

Test Results

Massachusetts Department of Revenue

Mrs. Dep Revenue
200 Arlington St
Chelsea MA 02150
(617) 887-0000
revenue@dor.state.ma.us
or
Mr. Ven Doore
doore@dor.state.ma.us
(617) 887-0001

XYZ Corp of America   Vendor #   1234

Product: Awesome Software 4U
Contact: Mr. Stanley Smith
2 Main St
Anytown, OR 10102
(123) 222-1234
smith@xyz.com
or
Mr. James Jones
(123) 222-1233
jones@xyz.com

Forms and Schedules	Tests to be performed				Results / Action
	√ = To be tested P = Successful test				Successful Result, Error, Retest, Did Not Submit, Accepted Form
	Exact Positioning	1D	2D data	Not supported	
Form 1	P	P			Success Exact / 1D
Schedule B	P	√			Success Exact / Error 1D
Schedule C	P	P	√		Success Exact & 1D Error 2D (see report)
Schedule D	P	P	P		Accepted
Schedule E				√	
Schedule CB	√	√	√		Did Not Submit
Schedule INC					D.N.S.
Schedule X/Y					D.N.S.
Schedule Z/DI					D.N.S.
Form 1NRPY					D.N.S.
Schedule NTSL/NR					D.N.S.
Notes	Schedule B – 1D barcode value had 2007 year, should be 2008				
	Schedule CB did not accompany the test package as indicated - Kara				

Resubmission
Massachusetts Department of Revenue

Mrs. Dep Revenue
200 Arlington St
Chelsea MA 02150
(617) 887-0000
revenue@dor.state.ma.us
or
Mr. Ven Doore
doore@dor.state.ma.us
(617) 887-0001

XYZ Corp of America   Vendor #   1234

Product: Awesome Software 4U
Contact: Mr. Stanley Smith
2 Main St
Anytown, OR 10102
(123) 222-1234
smith@xyz.com
or
Mr. James Jones
(123) 222-1233
jones@xyz.com

Forms and Schedules	Tests to be performed				Results / Action
	√ = To be tested P = Successful test				Successful Result, Error, Retest, Did Not Submit, Accepted Form
	Exact Positioning	1D	2D data	Not supported	
Form 1	P	P	√		
Schedule B	P	√			Retest 1D
Schedule C	P	P	√		Success Exact & 1D Error 2D (see report)
Schedule D	P	P	P		Accepted
Schedule E				√	
Schedule CB	√	√	√		
Schedule INC					D.N.S.
Schedule X/Y					D.N.S.
Schedule Z/DI					D.N.S.
Form 1NRPY					D.N.S.
Schedule NTSL/NR					D.N.S.
Notes	Schedules CB is attached this time. Retest 1D value for Sched B. We are				
	still looking at Sched C error report. 2D test for Form-1 is included. DNS are still on track for submission next week. - Stan				

Final Results
Massachusetts Department of Revenue
Mrs. Dep Revenue
200 Arlington St
Chelsea MA 02150
(617) 887-0000
revenue@dor.state.ma.us
or
Mr. Ven Doore
doore@dor.state.ma.us
(617) 887-0001

XYZ Corp of America   Vendor #   1234
Product: Awesome Software 4U
Contact: Mr. Stanley Smith
2 Main St
Anytown, OR 10102
(123) 222-1234
smith@xyz.com
or
Mr. James Jones
(123) 222-1233
jones@xyz.com

Forms and Schedules	Tests to be performed				Results / Action
	√ = To be tested P = Successful test				Successful Result, Error, Retest, Did Not Submit, Accepted Form
	Exact Positioning	1D	2D data	Not supported	
Form 1	P	P	P		Accepted
Schedule B	P	P	P		Accepted
Schedule C	P	P	P		Accepted
Schedule D	P	P	P		Accepted
Schedule E				√	
Schedule CB	P	P	P		Accepted
Schedule INC	P	P	P		Accepted
Schedule X/Y	P	P	P		Accepted
Schedule Z/DI	P	P	P		Accepted
Form 1NRPY	P	P	P		Accepted
Schedule NTSL/NR	P	P	P		Accepted
Notes	Have a successful filing season - Kara				

Appendix C
The 2 character code must be used in the foreign country field

https://www.irs.gov/tax-professionals/e-file-providers-partners/foreign-country-code-listing-for-modernized-e-file

Country Name	Country Code
Afghanistan	AF
Akrotiri	AX
Albania	AL
Algeria	AG
American Samoa	AQ
Andorra	AN
Angola	AO
Anguilla	AV
Antarctica	AY
Antigua & Barbuda	AC
Argentina	AR
Armenia	AM
Aruba	AA
Ashmore and Cartier Islands	AT
Australia	AS
Austria	AU
Azerbaijan	AJ
Bahamas	BF
Bahrain	BA
Baker Island	FQ
Bangladesh	BG
Barbados	BB
Belarus	BO
Belgium	BE
Belize	BH
Benin	BN
Bermuda	BD
Bhutan	BT
Bolivia	BL
Bosnia-Herzegovina	BK
Botswana	BC
Bouvet Island	BV
Brazil	BR
British Indian Ocean Territory	IO
British Virgin Islands	VI
Brunei	BX
Bulgaria	BU
Burkina Faso	UV
Burma	BM
Burundi	BY
Cambodia	CB
Cameroon	CM
Canada	CA
Cape Verde	CV
Cayman Islands	CJ
Central African Republic	CT
Chad	CD
Chile	CI
China	CH
Christmas Island	KT
Clipperton Island	IP

Cocos (Keeling) Islands	CK
Colombia	CO
Comoros	CN
Congo (Brazzaville)	CF
Congo (Kinshasa)	CG
Cook Islands	CW
Coral Sea Islands	CR
Costa Rica	CS
Cote D'Ivoire (Ivory Coast)	IV
Croatia	HR
Cuba	CU
Curacao	UC
Cyprus	CY
Czech Republic	EZ
Denmark	DA
Dhekelia	DX
Djibouti	DJ
Dominica	DO
Dominican Republic	DR
East Timor	TT
Ecuador	EC
Egypt	EG
El Salvador	ES
Equatorial Guinea	EK
Eritrea	ER
Estonia	EN
Ethiopia	ET
Falkland Islands (Islas Malvinas)	FK
Faroe Islands	FO
Federated States of Micronesia	FM
Fiji	FJ
Finland	FI
France	FR
French Polynesia	FP
French Southern and Antarctic Lands	FS
Gabon	GB
The Gambia	GA
Georgia	GG
Germany	GM
Ghana	GH
Gibraltar	GI
Greece	GR
Greenland	GL
Grenada	GJ
Guam	GQ
Guatemala	GT
Guernsey	GK
Guinea	GV
Guinea-Bissau	PU
Guyana	GY
Haiti	HA
Heard Island and McDonald Islands	HM
Holy See	VT
Honduras	HO
Hong Kong	HK
Howland Island	HQ
Hungary	HU
Iceland	IC
India	IN

Indonesia	ID
Iran	IR
Iraq	IZ
Ireland	EI
Israel	IS
Italy	IT
Jamaica	JM
Jan Mayen	JN
Japan	JA
Jarvis Island	DQ
Jersey	JE
Johnston Atoll	JQ
Jordan	JO
Kazakhstan	KZ
Kenya	KE
Kingman Reef	KQ
Kiribati	KR
Korea, Democratic People's Republic of (North)	KN
Korea, Republic of (South)	KS
Kosovo	KV
Kuwait	KU
Kyrgyzstan	KG
Laos	LA
Latvia	LG
Lebanon	LE
Lesotho	LT
Liberia	LI
Libya	LY
Liechtenstein	LS
Lithuania	LH
Luxembourg	LU
Macau	MC
Macedonia	MK
Madagascar	MA
Malawi	MI
Malaysia	MY
Maldives	MV
Mali	ML
Malta	MT
Man, Isle of	IM
Marshall Islands	RM
Mauritania	MR
Mauritius	MP
Mexico	MX
Midway Islands	MQ
Moldova	MD
Monaco	MN
Mongolia	MG
Montenegro	MJ
Montserrat	MH
Morocco	MO
Mozambique	MZ
Namibia	WA
Nauru	NR
Navassa Island	BQ
Nepal	NP
Netherlands	NL
New Caledonia	NC
New Zealand	NZ

Nicaragua	NU
Niger	NG
Nigeria	NI
Niue	NE
Norfolk Island	NF
Northern Mariana Islands	CQ
Norway	NO
Oman	MU
Other Country	OC
Pakistan	PK
Palau	PS
Palmyra Atoll	LQ
Panama	PM
Papua-New Guinea	PP
Paracel Islands	PF
Paraguay	PA
Peru	PE
Philippines	RP
Pitcairn Islands	PC
Poland	PL
Portugal	PO
Puerto Rico	RQ
Qatar	QA
Romania	RO
Russia	RS
Rwanda	RW
Saint Barthelemy	TB
Saint Martin	RN
Samoa	WS
San Marino	SM
Sao Tome and Principe	TP
Saudi Arabia	SA
Senegal	SG
Serbia	RI
Seychelles	SE
Sierra Leone	SL
Singapore	SN
Sint Maarten	NN
Slovakia	LO
Slovenia	SI
Solomon Islands	BP
Somalia	SO
South Africa	SF
South Georgia and the South Sandwich Islands	SX
South Sudan	OD
Spain	SP
Spratly Islands	PG
Sri Lanka	CE
St. Helena	SH
St. Kitts and Nevis	SC
St. Lucia Island	ST
St. Pierre and Miquelon	SB
St. Vincent and the Grenadines	VC
Sudan	SU
Suriname	NS
Svalbard	SV
Swaziland	WZ
Sweden	SW
Switzerland	SZ

Syria	SY
Taiwan	TW
Tajikistan	TI
Tanzania	TZ
Thailand	TH
Togo	TO
Tokelau	TL
Tonga	TN
Trinidad and Tobago	TD
Tunisia	TS
Turkey	TU
Turkmenistan	TX
Turks and Caicos Islands	TK
Tuvalu	TV
Uganda	UG
Ukraine	UP
United Arab Emirates	AE
United Kingdom (England, Northern Ireland, Scotland, and Wales)	UK
Uruguay	UY
Uzbekistan	UZ
Vanuatu	NH
Venezuela	VE
Vietnam	VM
Virgin Islands	VQ
Wake Island	WQ
Wallis and Futuna	WF
Western Sahara	WI
Yemen (Aden)	YM
Zambia	ZA
Zimbabwe	ZI