

SECTION V

TABLES

TABLE 1: COUNTRY CODE EQUIVALENTS

Convert the two character ISO 3166 country codes to a three-character MARC 21 code. In most cases, the third character of the MARC 21 codes is a blank (shown as "#" in this list). Place code in 008/15-17. Convert any unrecognized code to "xx#" (Unknown).

NOTE: The following ISO 3166 codes are no longer valid but have been retained in the conversion specifications:

FQ	French So./Antarctic (MARC = fs)
NV	U.S. Misc. Caribbean Islands (MARC = uc)
PI	Paracel Islands (MARC = pf)
SI	Spratly Island (MARC = xp)
GE	Gilbert Islands (MARC = gb; replaced by KI -- Kiribati)
NH	New Hebrides (MARC = nn; replaced by VU -- Vanuatu)
RH	Rhodesia (MARC code remains = rh although name now "Zimbabwe" = ZW)

NOTE: List is given in alphabetic sequence by ISO 3166 code.

COUNTRY:	ISO CODE	MARC CODE
#		
Andorra	AD	an#
United Arab Em.	AE	ts#
Afghanistan	AF	af#
Antigua	AG	aq#
Albania	AL	aa#
Netherlands Antilles	AN	na#
Angola	AO	ao#
Antarctica	AQ	ay#
Argentina	AR	ag#
American Samoa	AS	as#
Austria	AT	au#
Australia	AU	at#
Barbados	BB	bb#
Bangladesh	BD	bg#
Belgium	BE	be#
Bulgaria	BG	bu#
Bahrain	BH	ba#
Burundi	BI	bd#
Benin (Dahomey)	BJ	dm#
Bermuda	BM	bm#
China (PRC)	BN	cc#
Brunei	BN	bx#
Bolivia	BO	bo#
Brazil	BR	bl#
Bahamas	BS	bf#
Bhutan	BT	bt#
Burma	BU	br#
Bouvet Island	BV	bv#
Botswana	BW	bs#
Belaru	BY	bw#
Belize	BZ	bh#
Canada	CA	xxc
Cocos Islands	CC	xb#
Central African Rep.	CF	cx#
Congo (Brazzaville)	CG	cf#
Switzerland	CH	sz#
Ivory Coast	CI	iv#
Cook Islands	CK	cw#
Chile	CL	cl#

Cameroon	CM	cm#
Colombia	CO	ck#
Costa Rica	CR	cr#
Canton/Enderbury Is.	CT	cp#
Cuba	CU	cu#
Cape Verde	CV	cv#
Christmas Island	CX	xa#
Cyprus	CY	cy#
Czech Republic	CZ	xr#
Germany	DE	gw#
Djibouti	DJ	ft#
Denmark	DK	dk#
Dominica	DM	dq#
Dominican Republic	DO	dr#
Algeria	DZ	ae#
Ecuador	EC	ec#
Egypt (UAR)	EG	ua#
Western Sahara	EH	ss#
Spain	ES	sp#
Ethiopia	ET	et#
Finland	FI	fi#
Fiji	FJ	fj#
Falkland Islands	FK	fk#
Faeroe Islands	FO	fa#
French So./Antarctic	FQ	fs#
France	FR	fr#
Gabon	GA	go#
United Kingdom	GB	xxk
Grenada	GD	gd#
French Guiana	GF	fg#
Ghana	GH	gh#
Gibraltar	GI	gi#
Greenland	GL	gl#
Gambia	GM	gm#
Guinea	GN	gv#
Guadeloupe	GP	gp#
Equatorial Guinea	GQ	eg#
Greece	GR	gr#
Guatemala	GT	gt#
Guam	GU	gu#
Guinea-Bissau	GW	pg#
Guyana	GY	gy#
Hong Kong	HK	hk#
Heard & McDonald Isl.	HM	hm#
Honduras	HN	ho#
Haiti	HT	ht#
Hungary	HU	hu#
Burkina Faso	HV	uv#
Indonesia	ID	io#
Ireland	IE	ie#
Israel	IL	is#
India	IN	ii#
British Indian Ocean Terr.	IO	bi#
Iraq	IQ	iq#
Iran	IR	ir#
Iceland	IS	ic#
Italy	IT	it#
Jamaica	JM	jm#
Jordan	JO	jo#
Japan	JP	ja#
Johnston Atoll	JT	ji#
Kenya	KE	ke#
Cambodia (Kampuchea)	KH	cb#

Kiribati	KI	gb#
Comoros	KM	cq#
St. Chris. & Nevis Isl.	KN	xd#
Korea (North)	KP	kn#
Korea (South)	KR	ko#
Kuwait	KW	ku#
Cayman Islands	KY	cj#
Laos	LA	ls#
Lebanon	LB	le#
Saint Lucia	LC	xk#
Liechtenstein	LI	lh#
Sri Lanka (Ceylon)	LK	ce#
Liberia	LR	lb#
Lesotho	LS	lo#
Luxembourg	LU	lu#
Libya	LY	ly#
Morocco	MA	mr#
Monaco	MC	mc#
Madagascar	MG	mg#
Midway Islands	MI	xf#
Mali	ML	ml#
Mongolia	MN	mp#
Macao	MO	mh#
Martinique	MQ	mq#
Mauritania	MR	mu#
Montserrat	MS	mj#
Malta	MT	mm#
Mauritius	MU	mf#
Maldives Islands	MV	xc#
Malawi	MW	mw#
Mexico	MX	mx#
Malaysia	MY	my#
Mozambique	MZ	mz#
Namibia	NA	sx#
New Caledonia	NC	nl#
Niger	NE	ng#
Norfolk Island	NF	nx#
Nigeria	NG	nr#
Netherlands	NL	ne#
Norway	NO	no#
Nepal	NP	np#
Dronning Maud Land	NQ	ay#
Nauru	NR	nu#
Iraq-Saudi Neutral Zone	NT	iy#
Niue	NU	xh#
U.S. Misc. Carribbean Isl.	NV	uc#
New Zealand	NZ	nz#
Oman	OM	mk#
Panama	PA	pn#
Trust Terr./Pac. Isl.	PC	tt#
Peru	PE	pe#
French Polynesia	PF	fp#
Papua New Guinea	PG	pp#
Philippines	PH	ph#
Paracel Islands	PI	pf#
Pakistan	PK	pk#
Poland	PL	pl#
St Pierre Miquelon	PM	xl#
Pitcairn Island	PN	pc#
Puerto Rico	PR	pr#
Portugal	PT	po#
U.S. Pacific Isl.	PU	up#
Paragua	PY	py#

Qatar	QA	qa#
Reunion	RE	re#
Rhodesia	RH	rh#
Romania	RO	rm#
Rwanda	RW	rw#
Saudi Arabia	SA	su#
Solomon Islands	SB	bp#
Seychelles	SC	se#
Sudan	SD	sj#
Sweden	SE	sw#
Singapore	SG	si#
Saint Helena	SH	xj#
Slovenia	SI	xv#
Spratly Island	SI	xp#
Svalbard	SJ	sb#
Slovakia	SK	xo#
Sierra Leone	SL	sl#
San Marino	SM	sm#
Senegal	SN	sg#
Somalia	SO	so#
Surinam	SR	sr#
Sao Tome e Principe	ST	sf#
USSR	SU	xx#
El Salvador	SV	es#
Syria	SY	sy#
Swaziland	SZ	sq#
Turks & Caicos Isl.	TC	tc#
Chad	TD	cd#
Togo	TG	tg#
Thailand	TH	th#
Tokelau Islands	TK	tl#
Tunisia	TN	ti#
Tonga	TO	to#
East Timor	TP	io#
Turkey	TR	tu#
Trinidad and Tobago	TT	tr#
Tuvalu	TV	tv#
China (Taiwan)	TW	ch#
Tanzania	TZ	tz#
Ukraine	UA	un#
Uganda	UG	ug#
United States	US	xxu
Uruguay	UY	uy#
Vatican City	VA	vc#
Saint Vincent	VC	xm#
Venezuela	VE	ve#
Virgin Is. (British)	VG	vb#
Virgin Is. (U.S.)	VI	vi#
Vietnam	VN	vm#
Vanuatu	VU	nn#
Wallis and Futuna	WF	wf#
Wake Island	WK	wk#
Western Samoa	WS	ws#
Various places	XV	vp#
Yemen (Aden)	YD	ys#
Yemen (Sana)	YE	ye#
Yugoslavia	YU	yu#
South Africa	ZA	sa#
Zambia	ZM	za#
Zaire (Congo)	ZR	cg#
Zimbabwe	ZW	rh#

TABLE 2: RELATOR CODES IN USED IN SUBFIELD \$4

Convert UNIMARC relator codes to corresponding MARC 21 codes. If the code is unrecognized, do not convert \$4.

UNIMARC	MARC21	RELATIONSHIP
005	act	actor
010	adp	adapter
020	ann	annotator
030	arr	arranger
040	art	artist
050	asg	assignee
060	asn	associated name
065	auc	auctioneer
070	aut	author
072	aqt	author in quotations or text abstract
075	aft	author of afterword, colophon, etc.
080	auj	author of introd
090	aus	author of screenplay
100	ant	bibl. antecedent
110	bnd	binder
120	bdd	binding designer
130	bkd	book designer
140	bjd	bkjacket designer
150	bpd	bkplate designer
160	bsl	bookseller
170	cll	calligrapher
180	ctg	cartographer
190	cns	censor
200	chr	choreographer
205	clb	collaborator
210	cmm	commentator
212	cwt	commentator for written text
220	com	compiler
230	cmp	composer
240	cmt	compositor
245	ccp	conceptor
250	cnd	conductor
255	csp	consultant to a project
260	cph	copyright holder
270	crr	corrector
273	cur	curator
275	dnc	dancer
280	dte	dedicatee
290	dto	dedicator
295	dgg	degree grantor
300	drt	director
305	dis	dissertant
310	dst	distributor
320	dnr	donor
330	dub	dubious author
340	edt	editor
350	egr	engraver
360	etr	etcher
365	exp	expert
370	flm	film editor
380	frg	forgger
390	fmo	former owner
400	fnd	funder
410	grt	graphic technician
420	hnr	honoree
430	ilu	illuminator
440	ill	illustrator

450	ins	inscriber
460	ive	interviewee
470	ivr	interviewer
480	lbt	librettist
490	lse	licensee
500	lso	licensor
510	ltg	lithographer
520	lyr	lyricist
530	mte	metal engraver
540	mon	monitor/contractor
545	mus	musician
550	nrt	narrator
555	opn	opponent
557	orm	organizer of meeting
560	org	originator
570	oth	other
580	ppm	papermaker
582	pta	patent applicant
584	inv	inventor
587	pth	patent holder
590	prf	performer
595	res	research
600	pht	photographer
610	prt	printer
620	pop	printer of plates
630	pro	producer
635	prg	programmer
640	pfr	proofreader
650	pbl	publisher
651	pbd	publishing director
660	rcp	recipient
670	rce	recording engineer
673	rth	research team head
675	rev	reviewer
677	rtm	research team member
680	rbr	rubricator
690	sce	scenarist
695	sad	scientific advisor
700	scr	scribe
705	scl	sulptor
710	sec	secretary
720	sgn	signer
721	sng	singer
723	spn	sponsor
725	stn	standards body
727	ths	thesis advisor
730	trl	translator
740	tyd	type designer
750	tyg	typographer
755	voc	vocalist
760	wde	wood engraver
770	wam	writer of accompanying material

TABLE 3: UNIMARC TO MARC21 CONVERSION ERROR REPORT MESSAGES

The following error messages are suggested to indicate the most serious problems found in source records at time of conversion.

UNIMARC TO MARC21 CONVERSION ERROR REPORT MESSAGES

RUN DATE: XX/XX/XX

ERROR MESSAGES	CODE
UNIMARC LDR/07 = "a" -- RECORD NOT CONVERTED	01
UNIMARC 100/26-33 DOES NOT CONTAIN "0103####" OR "010305###" -- RECORD NOT CONVERTED	02
NO UNIMARC 001 FIELD PRESENT -- RECORD NOT CONVERTED	03
NO UNIMARC 100 FIELD PRESENT -- RECORD NOT CONVERTED	04
NO UNIMARC 200 FIELD SUBFIELD A PRESENT -- RECORD NOT CONVERTED	05
WARNING: NO. OF SUBFIELD CODES NOT EQUAL TO NO. OF DELIMITERS IN US TAG XXX	06
WARNING: UNRECOGNIZED UNIMARC TAG XXX CONVERTED TO 886	07
WARNING: UNIMARC FIELD XXX HAS INVALID SUBFIELD CODE \$N -- DATA RETAINED	08
WARNING: UNIMARC FIELD XXX HAS INVALID SUBFIELD CODE \$N -- DATA DROPPED	09
WARNING: UNRECOGNIZED CHARACTER IN UNIMARC FIELD XXX SUBFIELD \$X REPLACED BY FILL	10
WARNING: NO DELIMITER FOUND IN POSITION 3 IN UNIMARC FIELD XXX -- FIELD DROPPED	11

[Note: Error check 11 not applied to UNIMARC 00X fields.]

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21

This table specifies conversion of characters in the Basic Latin Set (ISO 646), Extended Latin Set (ISO 5426), and control characters from the Bibliographic Control Set (ISO 6630) that are currently allowed in UNIMARC to their MARC 21 equivalents. It also specifies conversion of three characters from the Greek Set (ISO 5428). Records using this character set will have "0102####" or "010305##" in UNIMARC field 100, character positions 26-33. Records having any other codes in these positions will be rejected (cf. UNIMARC field 100/26-33).

NOTE: In some instances a two-character UNIMARC string must be converted into a one-character MARC 21 code. In such cases, the UNIMARC codes may also have a separate one-to-one conversion specified (e.g., UNIMARC 'C7' converts to MARC 21 'E7', but UNIMARC 'C7 C6' converts to MARC 21 'EF').

NAME/FUNCTION	UNIMARC	MARC21
[unrecognized]	00-0F	7C
[unrecognized]	10-1A	7C
Escape	1B	1B (Note 4)
Greek begin sequence	1B 7D	1B 67 (Note 4)
End Greek sequence	1B 7C	1B 73 (Note 4)
[unrecognized]	1C	7C
End of record	1D	1D
End of field	1E	1E
Subfield delimiter	1F	1F
Space (blank)	20	20
Exclamation point	21	21
Double quote	22	22
Cross hatch (Number sign)	23	23
Currency sign	24	24
Percent	25	25
Ampersand	26	26
Apostrophe, single quote	27	27
Open parenthesis	28	28
Superscript open parenthesis	28 (Note 2)	28
Subscript open parenthesis	28 (Note 3)	28
Close parenthesis	29	29
Superscript close parenthesis	29 (Note 2)	29
Subscript close parenthesis	29 (Note 3)	29
Asterisk	2A	2A
Plus	2B	2B
Superscript plus	2B (Note 2)	2B
Subscript plus	2B (Note 3)	2B
Comma	2C	2C
Minus, hyphen	2D	2D
Superscript minus	2D (Note 2)	2D
Subscript minus	2D (Note 3)	2D
Period	2E	2E
Slash	2F	2F

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

NAME/FUNCTION	UNIMARC	MARC21
Zero	30	30
One	31	31
Two	32	32
Three	33	33
Four	34	34
Five	35	35
Six	36	36
Seven	37	37
Eight	38	38
Nine	39	39
Superscript 0	30	30 (Note 2)
Superscript 1	31	31 (Note 2)
Superscript 2	32	32 (Note 2)
Superscript 3	33	33 (Note 2)
Superscript 4	34	34 (Note 2)
Superscript 5	35	35 (Note 2)
Superscript 6	36	36 (Note 2)
Superscript 7	37	37 (Note 2)
Superscript 8	38	38 (Note 2)
Superscript 9	39	39 (Note 2)
Subscript 0	30	30 (Note 3)
Subscript 1	31	31 (Note 3)
Subscript 2	32	32 (Note 3)
Subscript 3	33	33 (Note 3)
Subscript 4	34	34 (Note 3)
Subscript 5	35	35 (Note 3)
Subscript 6	36	36 (Note 3)
Subscript 7	37	37 (Note 3)
Subscript 8	38	38 (Note 3)
Subscript 9	39	39 (Note 3)
Colon	3A	3A
Semicolon	3B	3B
Less than	3C	3C
Equals sign	3D	3D
Greater than	3E	3E
Question mark	3F	3F
At sign	40	40
Upper case A	41	41
Upper case B	42	42
Upper case C	43	43
Upper case D	44	44
Upper case E	45	45
Upper case F	46	46
Upper case G	47	47
Upper case H	48	48
Upper case I	49	49
Upper case J	4A	4A
Upper case K	4B	4B
Upper case L	4C	4C
Upper case M	4D	4D
Upper case N	4E	4E
Upper case O	4F	4F

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

NAME/FUNCTION	UNIMARC	MARC21
Upper case P	50	50
Upper case Q	51	51
Upper case R	52	52
Upper case S	53	53
Upper case T	54	54
Upper case U	55	55
Upper case V	56	56
Upper case W	57	57
Upper case X	58	58
Upper case Y	59	59
Upper case Z	5A	5A
Opening bracket	5B	5B
Reverse (backward) slash	5C	5C (Note 9)
Closing bracket	5D	5D
Circumflex accent	5E	5E
Underline	5F	5F
Grave	60	E1
Lower case a	61	61
Lower case b	62	62
Lower case c	63	63
Lower case d	64	64
Lower case e	65	65
Lower case f	66	66
Lower case g	67	67
Lower case h	68	68
Lower case i	69	69
Lower case j	6A	6A
Lower case k	6B	6B
Lower case l	6C	6C
Lower case m	6D	6D
Lower case n	6E	6E
Lower case o	6F	6F
Lower case p	70	70
Lower case q	71	71
Lower case r	72	72
Lower case s	73	73
Lower case t	74	74
Lower case u	75	75
Lower case v	76	76
Lower case w	77	77
Lower case x	78	78
Lower case y	79	79
Lower case z	7A	7A
Left curly bracket	7B	5B
[With next update, change program to convert UNIMARC '7B' to MARC21 '7C']		
Vertical line (fill character)	7C	7C
Right curly bracket	7D	5D
[With next update, change program to convert UNIMARC '7D' to MARC21 '7C']		
Overline	7E	E5
[unrecognized]	7F	7C

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

NAME/FUNCTION	UNIMARC	MARC21
[unrecognized]	80-87	7C
Non-sorting character, beginning	88	(Note 5)
Non-sorting character, end	89	(Note 5)
[unrecognized]	8A	7C
Partial line down function (subscript begin or superscript end)	8B	(Note 2 and 3)
Partial line up function (superscript begin or subscript end)	8C	(Note 2 and 3)
[unrecognized]	8D-8F	7C
[unrecognized]	90-9F	7C
[unrecognized]	A0	7C
Inverted exclamation	A1	7C
[With next update, change program to convert UNIMARC 'A1' to MARC21 '21']		
Left low double quotation mark	A2	22
British pound	A3	B9
Dollar sign	A4	24
Yen sign	A5	00
[With next update, change program to convert UNIMARC 'A5' to MARC21 '59'. Hex '00' is not a valid MARC21 character!]		
Single dagger	A6	7C
Paragraph (section) sign	A7	7C (Note 8)
[With next update, change program to convert 'A7' to string '5B 70 61 72 2E 5D']		
Prime	A8	27
[With next update, change program to convert UNIMARC 'A8' to MARC21 'A7']		
Left high single quote	A9	27
Left high double quote	AA	22
Left angle quote marks	AB	22
Musical flat	AC	A9
Copyright symbol	AD	7C
[With next update, change program to convert UNIMARC 'AD' to MARC21 '63']		
Phonorecord symbol	AE	7C
[With next update, change program to convert UNIMARC 'AE' to MARC21 '70']		
Register (Patent) mark	AF	AA
[With next update, change program to convert UNIMARC 'AF' to MARC21 '72']		
Ain	B0	B0
Alif	B1	AE
Left low single quote mark	B2	27
[unrecognized]	B3-B5	7C
Double dagger	B6	7C
Dot in middle of line	B7	A8
Double prime	B8	B7
Right high single quote mark	B9	27
Right high double quote	BA	22
Right angle quote marks	BB	22
Musical sharp sign	BC	23
Myagkij znak, prime sign	BD	A7
Tverdyj znak, double prime	BE	B7
Inverted question mark	BF	7C
[With next update, change program to convert UNIMARC 'BF' to MARC21 '3F']		

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

NAME/FUNCTION	UNIMARC	MARC21
High question (low rising tone)	C0	E0
Grave	C1	E1
Acute	C2	E2
Circumflex	C3	E3
Tilde	C4	E4
Macron	C5	E5
Breve	C6	E6
Superior dot	C7	E7
Candrabindu	C7 C6	EF
Diaeresis (Trema)	C8	E8
Umlaut	C9	E8
Angstrom (circle above)	CA	EA
High comma off center	CB	ED
High comma, centered	CC	FE
Double acute	CD	EE
Horn	CE	(Note 6)
O-hook - uppercase	CE 4F	AC
U-hook - uppercase	CE 55	AD
o-hook - lowercase	CE 6F	BC
u-hook - lowercase	CE 75	BD
Hacek	CF	E9
Cedilla	D0	F0
Right (reversed) cedilla	D1	F8
Left hook/tail	D2	F7
Right hook	D3	F1
Circle below	D4	F4
Upadhmaniya (half circle below)	D5	F9
Dot below	D6	F2
Double dot below	D7	F3
Underline	D8	F6
Double underscore	D9	F5
Small low vertical bar	DA	F5
[With next update, change program to convert UNIMARC 'DA' to MARC21 '7C']		
Circumflex below	DB	7C
[unrecognized]	DC	7C
Double tilde first half	DD	(Note 7)
Ligature, first (left) half	DD	(Note 7)
Ligature, second (right) half	DE	(Note 7)
Double tilde second half	DF	(Note 7)
[unrecognized]	E0	7C
Digraph AE - uppercase	E1	A5
Greek letter alpha	E1	61 (Note 4)
D with crossbar - uppercase	E2	A3
Greek letter beta	E2	62 (Note 4)
[unrecognized]	E3	7C
Greek letter gamma	E4	63 (Note 4)
[unrecognized]	E5	7C
Digraph IJ - uppercase	E6	7C
[With next update, change program to convert UNIMARC 'E6' to MARC21 '49 4A']		
[unrecognized]	E7	7C

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

NAME/FUNCTION	UNIMARC	MARC21
Polish L - uppercase	E8	A1
Scandinavian o - uppercase	E9	A2
Digraph OE - uppercase	EA	A6
[unrecognized]	EB	7C
Icelandic thorn - uppercase	EC	A4
[unrecognized]	ED-EF	7C
[unrecognized]	F0	7C
Digraph ae - lowercase	F1	B5
D with crossbar - lowercase	F2	B3
Eth - lower case	F3	BA
[unrecognized]	F4	7C
Turkish i - lowercase	F5	B8
Digraph ij - lowercase	F6	7C
[With next update, change program to convert UNIMARC 'F6' to MARC21 '69 6A']		
[unrecognized]	F7	7C
Polish l - lowercase	F8	B1
Scandinavian o - lowercase	F9	B2
Digraph oe - lowercase	FA	B6
Sharp s (SZ) - lowercase	FB	7C
[With next update, change program to convert UNIMARC 'FB' to MARC21 '73 73']		
Icelandic thorn - lowercase	FC	B4
[unrecognized]	FD-FF	7C

Note 1: Characters given as "unrecognized" in the preceding list should be converted to the fill character (hex '7C') if encountered during conversion.

Note 2: In UNIMARC, a superscript character or character string is introduced by a Partial-line-up control character (hex '8C'). The occurrence of the Partial-line-down control character (hex '8B') signals the return to normal script. Currently, the conversion program can only process strings with a single embedded superscript character. With the next update, the program should be changed to replace hex '8C' and '8B' with the MARC21 escape sequences hex '1B 70' and '1B 73', respectively. The other embedded characters should be retained as they are. Hex '1B 70' is the MARC21 escape sequence for superscript. Hex '1B 73' is the escape sequence for return to Latin script. Since the UNIMARC control characters '8C' and '8B' signal line movement, they must be converted in pairs. Convert UNIMARC characters occurring embedded within hex '8C/hex '8B' according to Table 4. If more than one character appears in the string, the control functions convert to MARC21 hex '7C'.

Note 3: In UNIMARC, a subscript character or character string is introduced by a Partial-line-down control character (hex '8B'). The occurrence of the Partial-line-up control character (hex '8C') signals the return to normal script. Currently, the conversion program can only process strings with a single embedded subscript character. With the next update, the program should be changed to replace hex '8B' and '8C' with the MARC21 escape sequences hex '1B 62' and '1B 73', respectively. The other embedded characters should be retained as they are. Hex '1B 62' is the MARC21 escape sequence for subscript. Hex '1B 73' is the escape sequence for return to normal (Latin) script. Since the UNIMARC control characters '8B' and '8C' signal line movement, they must be converted in pairs. (Compare with Note 2 above.) Convert UNIMARC characters occurring inside a hex '8B' and hex '8C' pair according to Table 4. If more than one graphic character appears within the string, the control functions will probably convert to MARC21 hex '7C' (fill).

TABLE 4: CHARACTER SET CONVERSION--UNIMARC TO MARC21 (continued)

Note 4: Only three UNIMARC Greek characters have valid MARC21 equivalents; they are the lowercase Greek letters "alpha," "beta," and "gamma" (UNIMARC hex 'E1', 'E2', and 'E4'). Any other UNIMARC character codes appearing within a Greek sequence are considered unrecognized (see General specifications) and should be converted to the fill character (hex '7C'). In UNIMARC, a Greek character or character string is introduced by a Locking-shift-two-right escape sequence (hex '1B 7D'). The occurrence of a Locking-shift-one-right escape sequence (hex '1B 7C') signals the return to normal (usually Latin) script. More than one Greek character may appear after the escape sequence to the Greek script, therefore, the escape sequences in and out of the Greek script must be converted in pairs. Currently, the conversion program will only recognize single Greek letters embedded within escape sequences. With the next update, the program should be changed to recognize the escape sequence as such and convert any embedded character to its MARC21 equivalent (or fill). Greek letters normally occur as single isolated characters in MARC records for Latin script works.

[NOTE: The fill character is not currently valid in MARC21 after the escape sequence for the Greek script. The occurrence of Greek characters other than alpha, beta, and gamma in a UNIMARC record would thus produce anomalies in the resulting MARC21 record.]

Note 5: The UNIMARC Non-sorting-character-beginning control character (hex '88') and Non-sorting-character-end control character (hex '89') are used to isolate non-filing characters in certain UNIMARC variable fields. These control characters should be deleted during conversion to MARC21 after the number of characters between them is calculated and used to generate a numeric indicator value for the related MARC21 field. The specifications refer to Procedure 6 when this processing should occur. Any occurrences of hex '88' or hex '89' in a record after all fields have been converted should be deleted.

Note 6: The UNIMARC character "horn" (hex 'CE') should be converted only when it occurs as part of one of the two-character combinations specified in the table. In all other cases the character should be deleted.

Note 7: In UNIMARC, the "ligature" and "double tilde" are divided into halves, the first half of each being identical and represented by the UNIMARC character hex 'DD'. Character codes 'DD', 'DE', and 'DF' should only be converted in one of the following combinations:

UNIMARC		MARC21
'DD'...'DE'	convert to	'EB'...'EC'
'DD'...'DF'	convert to	'FA'...'FB'

In all other combinations, they should be deleted.

Note 8: The UNIMARC character hex 'A7' should be converted to the MARC21 string "[par.]" (hex '5B 70 61 72 2E 5D'). The program currently converts hex 'A7' to hex '7C' (fill). This should be changed when the program is updated.

Note 9: The UNIMARC character "reverse (backward) slash" (hex '5G'; equivalent the hex '5C' in MARC21) is not used. It is rejected by the CDS card printing program, and in the book catalog printing program it is rendered as a black box.

TABLE 5: NATIONAL BIBLIOGRAPHY SOURCE CODES

Convert the ISO 3166 country code in UNIMARC 020 \$a to the corresponding MARC21 source code for 015 \$2 according to the list below. The list is arranged alphabetically by ISO 3166 country code.

Country	MARC21 Code	Source
AD	ba	Bibliografia d'Andorra (Andorra La Vella : Biblioteca Nacional)
AR	la	Libros argentinos (Buenos Aires : Cámara Argentina del Libro)
AT	oe	Oesterreichische Bibliographie (Wien : Oesterreichische Nationalbibliothek)
AU	anb	Australian national bibliography (Canberra : National Library of Australia)
BE	bbe	Bibliographie de Belgique (Bruxelles : H. Manceaux)
BG	bk	Bulgarski knigopis (Sofiiã : Narodna biblioteka Kiril i Metodii)
BO	bbo	Bibliografia boliviana (Cochabamba : Amigos del Libro)
BR	bbr	Bibliografia brasileira (Rio de Janeiro : Biblioteca Nacional)
CA	can	Canadiana (Ottawa : National Library of Canada)
CH	szb	Das Schweizer Buch : Schweizerische Nationalbibliographie (Zürich : Schweizerischer Buchhändler- und Verlegerverband)
CO	abc	Anuario bibliográfico colombiano (Calí : Biblioteca Jorge García B.)
CR	cncr	Catálogo nacional de Costa Rica (San José : Biblioteca Nacional)
CU	bc	Bibliografía cubana (Habana : Biblioteca Nacional José Martí)
CZ	bkck	Bibliograficky katalog: České knihy (Praha : Národní knihovna)
DE	db	Deutsche Bibliographie (Frankfurt am Main : Die Deutsche Bibliothek)
DK	dbf	Dansk bogfortegnelse (Ballerup : Dansk Bibliotekscenter)
DO	abd	Anuario bibliográfico dominicano (Ciudad Trujillo : Biblioteca Nacional)
EC	abe	Anuario bibliográfico ecuatoriano (Cuenca : Banco Central del Ecuador)
ES	bne	Bibliografía nacional de España (Madrid : Biblioteca Nacional de España)
FI	skl	Suomen kirjallisuus (Helsinki : Helsingin Yliopiston Kirjasto)
FR	bnf	Bibliographie nationale française (Paris : Bibliothèque nationale de France)
GR	eev	Ellenikê ethnikê vivliografia (Athenai : Ethnikê Vivliothêkê tês Ellados, Tmema Katalogôn, Grafeio Ethnikês Vivliografias>
HR	hb	Hrvatska bibliografija (Zagreb : Nacionalna i sveucilisna biblioteka)
HU	mnb	Magyar nemzeti bibliográfia (Budapest : Országos Széchényi Könyvtár)
IE	ipr	Irish publishing record (Dublin : University College of Dublin)
IS	ib	Islensk bókaskrá (Reykjavík : Landbókasafn Islands - Háskólabókasafn)
IT	bni	Bibliografia nazionale italiana (Roma : Istituto centrale per il catalogo unico delle biblioteche italiane e per le informazioni)

JP	kktzm	Kokuritsu kokkai Toshokan zosho mokuroku (Tokyo : National Diet Library)
LI	lb	Liechtensteinische Bibliographie (Vaduz : Liechtensteinische Landesbibliothek)
LU	bl	Bibliographie luxembourgeoise pour l'année (Luxembourg : Bibliothèque nationale)
MT	bnm	Bibljografija nazzjonali ta' Malta = National bibliography of Malta (Valletta : National Library of Malta)
MX	bm	Bibliografía mexicana (Ciudad de México : Biblioteca Nacional)
NL	bccb	Brinkman's cumulatieve catalogus van boeken (Leiden : Sijthoff)
NO	nbf	Norsk bokfortegnelse (Oslo : Norske bokhandlerforening)
NZ	nznb	New Zealand national bibliography (Wellington : National Library of New Zealand)
PE	abp	Anuario bibliográfico peruano (Lima : Editorial Lumen)
PL	pb	Przewodnik bibliograficzny (Warszawa : Biblioteka Narodowa)
RO	bnr	Bibliografia nationala româna (Bucuresti : Biblioteca Nationale a României)
RU	kl	Knizhnaïà letopis' (Moskva : Rossiiskaïà knizhnaïà palata)
SE	sbf	Svensk bokförteckning (Stockholm : Svenska bokhandlareforeningen)
SI	slb	Slovenska bibliografija (Ljubljana : Narodna in univerzitetna knjiznica)
SK	bksk	Bibliografický katalog: Slovenské knihy (Bratislava : Národní knihovna)
UA	ulk	Ukraina : litopys khiv (Kyïv : Knyzhkova palata Ukraïny)
UK	bnb	British national bibliography (London : British Library, Bibliographic Services Division)
UY	abu	Anuario bibliográfico uruguayo (Montevideo : Biblioteca Nacional)
VE	bv	Bibliografía venezolana (Caracas : Instituto Autónomo Biblioteca Nacional y Servicios de Bibliotecas)
ZA	sanb	South African national bibliography (Pretoria : National Library of South Africa)
ZW	znb	Zimbabwe national bibliography (Harare : National Archives)