



April 7, 2014

TECHNICAL AND OPERATIONAL UPDATE (TOU) 14-2

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SECTION 1 -- MESSAGE TO CJIS SYSTEMS OFFICERS

Section 2.1 contains information on the expansion of the NCIC Number check digit algorithm for the NCIC Image File.

Section 2.2 supplies information on the expansion of the NCIC Number check digit algorithm for the NCIC Wanted Person File

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TOUs are also available via the Law Enforcement Online (LEO) on the Law Enforcement Enterprise Portal (LEEP). To access the TOUs on the LEEP:

- Click on the LEO logo
- Click on the SIGs link
- Click by Access Type drop down arrow and select Unrestricted
- Click on the CJIS logo
- Click on the Programs tab
- Click on the National Crime Information Center (NCIC) link
- Under Documents, click on the NCIC Technical and Operational Updates

Users with questions concerning access to the LEO and LEEP should contact the LEO Operations Unit by telephone at (304) 625-5555.

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SECTION 2 -- SYSTEM CHANGES

2.1 EXPANSION OF THE NCIC NUMBER CHECK DIGIT ALGORITHM FOR THE NCIC IMAGE FILE

AFFECTED BY CHANGE: **Introduction**

EFFECTIVE DATE: **April 7, 2013**

Background

A draft Technical and Operational Update (TOU) was disseminated to all CJIS Systems Officers on April 5, 2013. The NCIC Number (NIC) expansion was effective on April 7, 2013. These changes were included, but not highlighted, in TOU 14-1, published February 3, 2014. This TOU formally documents those changes.

System Changes

Because of the rollover of the NIC, the NIC check digit algorithm was expanded for the Image File.

NCIC Operating Manual Changes

Additions to the *NCIC 2000 Operating Manual* (December 1999) are indicated by **highlighting** and deletions are indicated by ~~strikeout~~.

INTRODUCTION

SECTION 3.14 -- NCIC NUMBERS (NIC NUMBERS)

1. Each record entry message that is accepted for storage in the NCIC System is assigned a unique **NCIC Number (NIC)** for record identification purposes. The NIC has 10 characters consisting of an alphabetic character which identifies the NCIC file in which the record is indexed, a 7-character unique number, and 2 check digits.
2. The 2 check digits are used to validate NICs when they are used in inquiry messages and when they are used to identify records in modify, locate, cancel, and clear transactions.
3. **NIC Check Digit Algorithm**

When an NIC is used as an identifier in a cancel, clear, inquiry, locate, or modify message, the NCIC verifies the validity of the number using the two check digits, i.e., the last two characters of the number. The following is the algorithm used for the process:

The digits of the sequential number (positions 2 through 8 of the number) are multiplied by a value, as follows:

	Multiplication Factor
Position 2	8
Position 3	7
Position 4	6
Position 5	5
Position 6	4
Position 7	3
Position 8	2

The products of these are totaled and a value, as indicated below, is added for the alphabetic file indicator. This total comprises the check digits. If the total is greater than 99, the high order digit is dropped.

File Indicator	File Indicator Value	Data Type
A	5	Article records entered on/between 1/27/67 and 5/5/86

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	9	Article records entered on/between 5/5/86 and 4/21/98
	10	Article records entered on/between 4/21/98 and 7/11/1999
	11	Article records entered on/between 7/11/1999 and 2/12/2012
	12	Article records entered on/after 2/12/2012
B	4	Boat records entered on/between 1/27/67 and 8/6/79
	8	Boat records entered on/between 8/6/79 and 8/8/88
	12	Boat records entered on/between 8/8/88 and 4/20/95
	13	Boat records entered on/between 4/20/95 and 7/11/1999
	14	Boat records entered on/after 7/11/1999
C	1	Supervised Release records
E	1	NICS Denied Transaction records
G	2	Gun records entered on/prior to 7/11/1999
	3	Gun records entered on/after 7/11/1999
H	1	Protection Order records entered on/prior to 7/11/1999
	2	Protection Order records entered on/between 7/11/1999 and 6/3/2007
	3	Protection Order records entered on/between 6/3/2007 and 8/19/2012
	4	Protection Order records entered on/after 8/19/2012
I	1	Image records entered on/prior to 4/7/2013
	2	Image records entered on/after to 4/7/2013
J	1	Identity Theft Records
K	1	Protective Interest records
L	1	Violent Person records
M	7	Missing Person records entered on/prior to 2/13/97
	8	Missing Person records entered on/between 2/13/97 and 7/11/1999
	9	Missing Person records entered on/between 7/11/1999 and 5/1/2011
	10	Missing Person records entered on/after 5/1/2011
N	1	Immigration Violator records entered on/prior to 5/8/97
	2	Immigration Violator records entered on/between 5/8/97 and 7/11/1999
	3	Immigration Violator records entered on/after 7/11/1999
P	3	License Plate records entered on/before 2/23/96
	4	License Plate records entered on/between 2/23/1996 and 7/11/1999
	5	License Plate records entered on/after 7/11/1999
R	11	CPIC Data records entered on/prior to 7/11/1999

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	12	CPIC Data records entered on/after 7/11/1999
S	6	Securities records entered on/prior to 7/11/1999
	7	Securities records entered on/after 7/11/1999
T	1	Gang/Known or Appropriately Suspected Terrorist Member records entered on/prior to 5/8/97
	2	Gang/Known or Appropriately Suspected Terrorist Member records entered on/between 5/8/97 and 7/11/1999
	3	Gang/Known or Appropriately Suspected Terrorist Member records entered on/after 7/11/1999
U	7	Unidentified Person records entered on/prior to 2/13/97
	8	Unidentified Person records entered on/between 2/13/97 and 7/11/1999
	9	Unidentified Person records entered on/after 7/11/1999
V	4	Vehicle and Vehicle/Boat Part records entered on/between 1/27/67 and 8/6/79
	8	Vehicle and Vehicle/Boat Part records entered on/between 8/6/79 and 8/8/88
	12	Vehicle and Vehicle/Boat Part records entered on/between 8/8/88 and 4/20/95
	13	Vehicle and Vehicle/Boat Part records entered on/between 4/20/95 and 7/11/1999
	14	Vehicle and Vehicle/Boat Part records entered on/between 7/11/1999 and 11/5/2006
	15	Vehicle and Vehicle/Boat Part records entered after 11/5/2006
W	1	Wanted Person records entered on/prior to 5/8/97
	2	Wanted Person records entered on/between 5/8/97 and 7/11/1999
	3	Wanted Person records entered on/between 7/11/1999 and 2/5/2006
	4	Wanted Person records entered on/between 2/5/2006 and 3/7/2010
	5	Wanted Person records entered on/after 3/7/2010
X	1	National Sex Offender Registry records
Z	10	Reference Gang records entered on/prior to 7/11/1999
	11	Reference Gang Records entered on/after 7/11/1999

For example, if the NIC used in a transaction is V12486297, the check digits are verified as follows:

Sequential Number	Multiplication Factor	Product
1	x 8	= 8
2	x 7	= 14
4	x 6	= 24
8	x 5	= 40
6	x 4	= 24
2	x 3	= 6
9	x 2	= 18

Total 134

Value of V = 13

Total 147

The high order digit (1) is dropped, and the remainder (47) is the check digit's value.

2.2 EXPANSION OF THE NCIC NUMBER CHECK DIGIT ALGORITHM FOR THE NCIC WANTED PERSON FILE

AFFECTED BY CHANGE: **Introduction**

EFFECTIVE DATE: **January 5, 2014**

Background

A draft Technical and Operational Update (TOU) was disseminated to all CJIS Systems Officers on August 8, 2013. The NCIC Number (NIC) expansion was effective on January 5, 2014. These changes were included, but not highlighted, in TOU 14-1, published February 3, 2014. This TOU formally documents those changes.

System Changes

Because of the rollover of the NIC, the NIC check digit algorithm was expanded for the Wanted Person File.

NCIC Operating Manual Changes

Additions to the *NCIC 2000 Operating Manual* (December 1999) are indicated by **highlighting** and deletions are indicated by ~~strikeout~~.

INTRODUCTION

SECTION 3.14 -- NCIC NUMBERS (NIC NUMBERS)

1. Each record entry message that is accepted for storage in the NCIC System is assigned a unique **NCIC Number (NIC)** for record identification purposes. The NIC has 10 characters consisting of an alphabetic character which identifies the NCIC file in which the record is indexed, a 7-character unique number, and 2 check digits.
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When an NIC is used as an identifier in a cancel, clear, inquiry, locate, or modify message, the NCIC verifies the validity of the number using the two check digits, i.e., the last two characters of the number. The following is the algorithm used for the process:

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	9	Article records entered on/between 5/5/86 and 4/21/98

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	10	Article records entered on/between 4/21/98 and 7/11/1999
	11	Article records entered on/between 7/11/1999 and 2/12/2012
	12	Article records entered on/after 2/12/2012
B	4	Boat records entered on/between 1/27/67 and 8/6/79
	8	Boat records entered on/between 8/6/79 and 8/8/88
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	4	Protection Order records entered on/after 8/19/2012
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	2	Image records entered on/after to 4/7/2013
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	5	License Plate records entered on/after 7/11/1999
R	11	CPIC Data records entered on/prior to 7/11/1999
	12	CPIC Data records entered on/after 7/11/1999
S	6	Securities records entered on/prior to 7/11/1999

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	7	Securities records entered on/after 7/11/1999
T	1	Gang/Known or Appropriately Suspected Terrorist Member records entered on/prior to 5/8/97
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	12	Vehicle and Vehicle/Boat Part records entered on/between 8/8/88 and 4/20/95
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W	1	Wanted Person records entered on/prior to 5/8/97
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	4	Wanted Person records entered on/between 2/5/2006 and 3/7/2010
	5	Wanted Person records entered on/after between 3/7/2010 and 1/5/2014
	6	Wanted Person records entered on/after 1/5/2014
X	1	National Sex Offender Registry records
Z	10	Reference Gang records entered on/prior to 7/11/1999
	11	Reference Gang Records entered on/after 7/11/1999

For example, if the NIC used in a transaction is V12486297, the check digits are verified as follows:

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