



# Test Number Changer

Revision 1.1  
Dec 10, 2018

# Revision History

Revision	Date	Author	Comment
1.1	Dec 1,2018	T. Arnold	Document Created

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# Introduction

## Document Overview

This document will present the procedures for the Test Number Changer Program an Unison compatible program. The various user inputs required, as well as manual steps will be described.

## Software Tools Required

### Test Number Changer

The Test Number Changer (TNC) is a script which takes the Unison .una files specified by the user as inputs and creates .uno files with modified Test Ids (Major ID) in the Subflow objects. The TNC uses the BinToBinExtract Tool to create a .csv file which is used by the TNC Tool to provide and an interface for the user to make Test Id changes.

## Inputs Required

### Unison Test Program

The user needs to understand which files contain the pertinent information to convert to an Cohu Unison test program.

## Procedures

### Determine Program .una file to process.

The Test Number Changer requires a .una file or .csv file. This .una file contains the test flow information to change the (Major) Test Ids.

File needed	Descriptions (Names may differ based program)
Program _____.una	Contains the test program information.
CSV _____.csv	File generated by the BinToBinExtract Tool containing: Index, Test Number, Test Group Name, SubFlow, Bin Name, SW Bin, HW Bin, Comments

### CSV File Example :

```
Index,Test Number,Test Group Name,SubFlow,Bin Name,SW Bin,HW Bin,Comments
1,21000000,ModifyLoopCount,LEBA0_F_DM10_OnStart,,,,
2,1000,c_cont_Vdd_0_25,Continuity,,,,
3,1100,c_cont_Vss_0_26,Continuity,,,,
4,1200,c_cont_even_vdd_0_27,Continuity,Bin12,12,12,c_cont_even_vdd
5,1300,c_cont_odd_vdd_0_28,Continuity,Bin13,13,13,c_cont_odd_vdd
6,1400,c_cont_even_vss_0_29,Continuity,Bin14,14,14,c_cont_even_vss
7,1500,c_cont_odd_vss_0_30,Continuity,Bin15,15,15,c_cont_odd_vss
8,1600,c_FConVdd_2x2_0_31,Continuity,,,,
9,1700,c_FConVss_2x2_0_32,Continuity,,,,
10,1800,c_PConEvenVdd_2x2_0_33,Continuity,Bin18,18,18,c_PConEvenVdd_2x2
11,1900,c_PConOddVdd_2x2_0_34,Continuity,Bin19,19,19,c_PConOddVdd_2x2
12,2000,c_PConEvenVss_2x2_0_35,Continuity,Bin20,20,20,c_PConEvenVss_2x2
13,2100,c_PConOddVss_2x2_0_36,Continuity,Bin21,21,21,c_PConOddVss_2x2
14,10000000,ConnectBulkCap_0,FT,,,,
15,3000,p_RdPscFtCal_max,Func1,Bin30,30,30,p_RdPscFtCal_max
16,3500,p_RdPscFt25res_max,Func1,,,,
17,10000,f_tblout_ttyp_0,Func1,Bin100,100,100,f_tblout_ttyp
18,10100,f_cpu_movlw_ttyp_0,Func1,Bin101,101,101,f_cpu_movlw_ttyp
19,30000,m_devid_F45k22_0,Func1,Bin300,300,300,m_devid_F45k22
20,30100,m_devid_F25k22_0,Func1,Bin301,301,301,m_devid_F25k22
21,30200,m_devid_F46k22_0,Func1,Bin302,302,302,m_devid_F46k22
22,30300,m_devid_F26k22_0,Func1,Bin303,303,303,m_devid_F26k22
23,30400,m_devid_F44k22_0,Func1,Bin304,304,304,m_devid_F44k22
24,30500,m_devid_F24k22_0,Func1,Bin305,305,305,m_devid_F24k22
25,30600,m_devid_F43k22_0,Func1,Bin306,306,306,m_devid_F43k22
26,30700,m_devid_F23k22_0,Func1,Bin307,307,307,m_devid_F23k22
```

Figure 1: CSV File Format

## Test Number Changer Execution






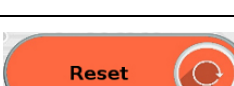

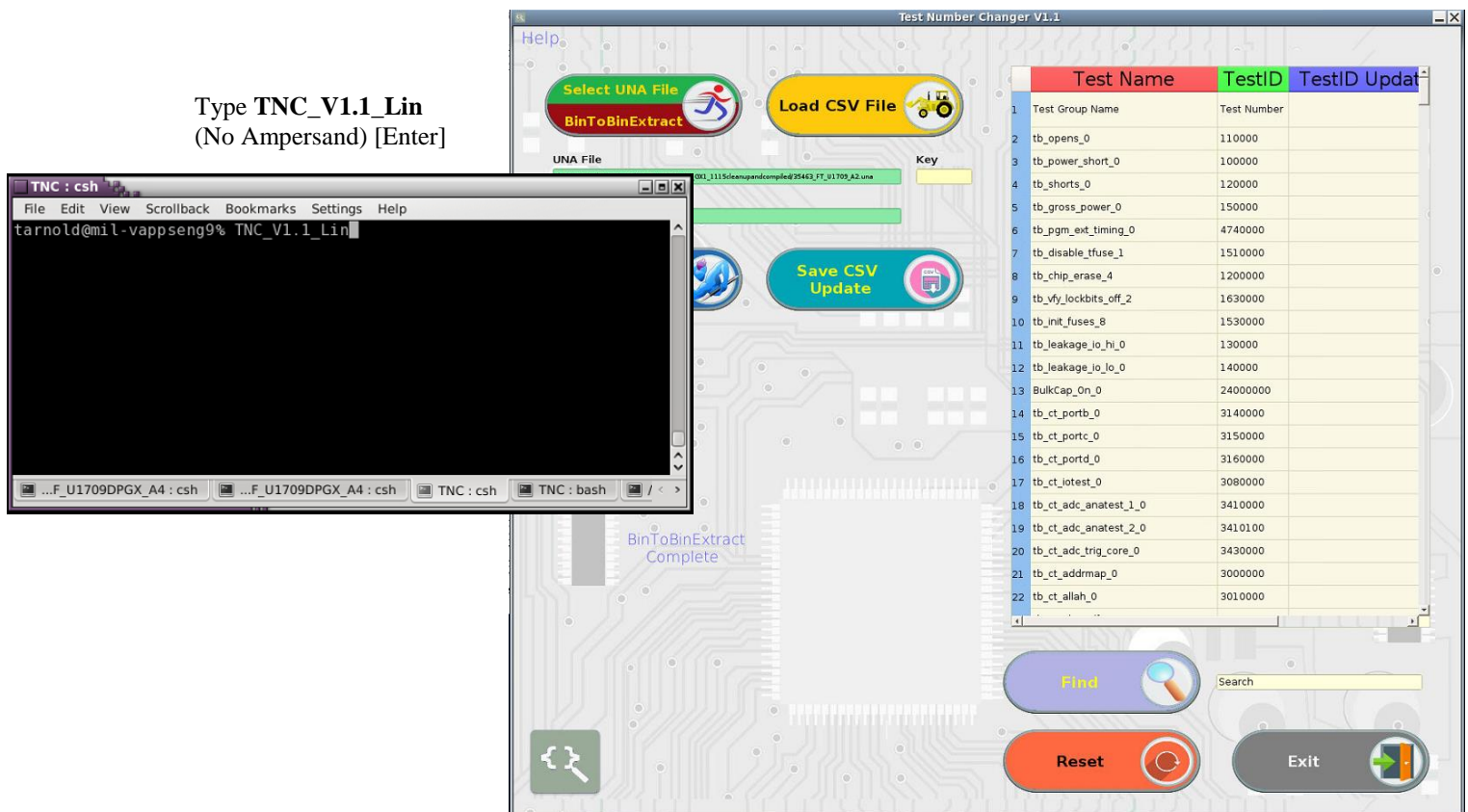
Control	Function
	Selects the una file and executes the BinToBinExtract Tool.
	Execution of the Test Ids update process.
	Load an existing test program CSV file with a required format.
	Save the CSV file with updated Test IDs.
	Find a Test Name or Test ID within the loaded CSV in the data table.
	Reset data and the entries.
	Exit the program.

Figure 2: Control Functions

### 1) Launch Test Number Changer.

**Copy** or create a **symbolic link** of program to the root directory of the test program.

Type **TNC\_V1.1\_Lin**  
(No Ampersand) [Enter]



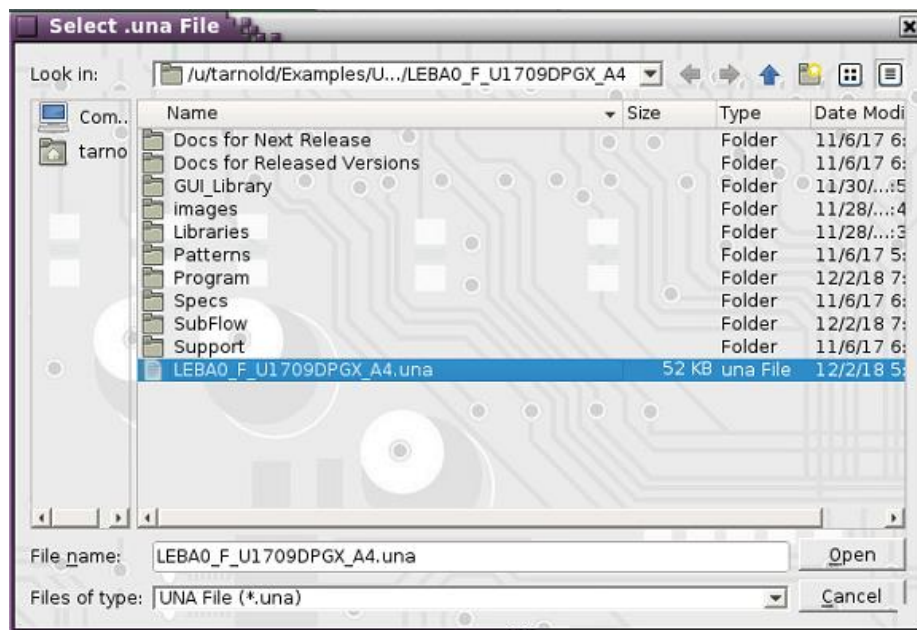


Figure 4: UNA file selection

- 3) The BinToBinExtract Tool will create the CSV file in the program's root directory which will be automatically load the pertinent data into the data table.

	Test Name	TestID	TestID Update
1	Test Group Name	Test Number	
2	ModifyLoopCount	21000000	
3	c_cont_Vdd_0_25	1000	
4	c_cont_Vss_0_26	1100	
5	c_cont_even_vdd_0_27	1200	
6	c_cont_odd_vdd_0_28	1300	
7	c_cont_even_vss_0_29	1400	
8	c_cont_odd_vss_0_30	1500	
9	c_FConVdd_2x2_0_31	1600	
10	c_FConVss_2x2_0_32	1700	
11	c_PConEvenVdd_2x2_0_33	1800	
12	c_PConOddVdd_2x2_0_34	1900	
13	c_PConEvenVss_2x2_0_35	2000	
14	c_PConOddVss_2x2_0_36	2100	
15	ConnectBulkCap_0	10000000	
16	p_RdPscFtCal_max	3000	
17	p_RdPscFt25res_max	3500	
18	f_tblout_typ_0	10000	
19	f_cpu_movlw_typ_0	10100	
20	m_devid_F45k22_0	30000	
21	m_devid_F25k22_0	30100	
22	m_devid_F46k22_0	30200	
23	m_devid_F26k22_0	30300	

Figure 5: Test Data Table

- 4) The una and csv file locations are shown in the text boxes.






Figure 6: UNA and CSV file location

- 5) Select the Test IDs that need updating. Enter numbers only and the hit [Enter] or click outside of the current cell.

	Test Name	TestID	TestID Update
1	Test Group Name	Test Number	
2	ModifyLoopCount	21000000	
3	c_cont_Vdd_0_25	1000	
4	c_cont_Vss_0_26	1100	
5	c_cont_even_vdd_0_27	1200	
6	c_cont_odd_vdd_0_28	1300	
7	c_cont_even_vss_0_29	1400	
8	c_cont_odd_vss_0_30	1500	1505
9	c_FConVdd_2x2_0_31	1600	
10	c_FConVss_2x2_0_32	1700	
11	c_PConEvenVdd_2x2_0_33	1800	
12	c_PConOddVdd_2x2_0_34	1900	
13	c_PConEvenVss_2x2_0_35	2000	
14	c_PConOddVss_2x2_0_36	2100	2200
15	ConnectBulkCap_0	10000000	
16	p_RdPscFtCal_max	3000	3100
17	p_RdPscFt25res_max	3500	
18	f_tblout_typ_0	10000	
19	f_cpu_movlw_typ_0	10100	
20	m_devid_F45k22_0	30000	30500
21	m_devid_F25k22_0	30100	
22	m_devid_F46k22_0	30200	
23	m_devid_F26k22_0	30300	

Figure 7: Test ID data updated

- 6) Click the  button to Generate the Test IDs to be updated in the uno test flow files.

7) The Status area will show the progress and when the process has completed.

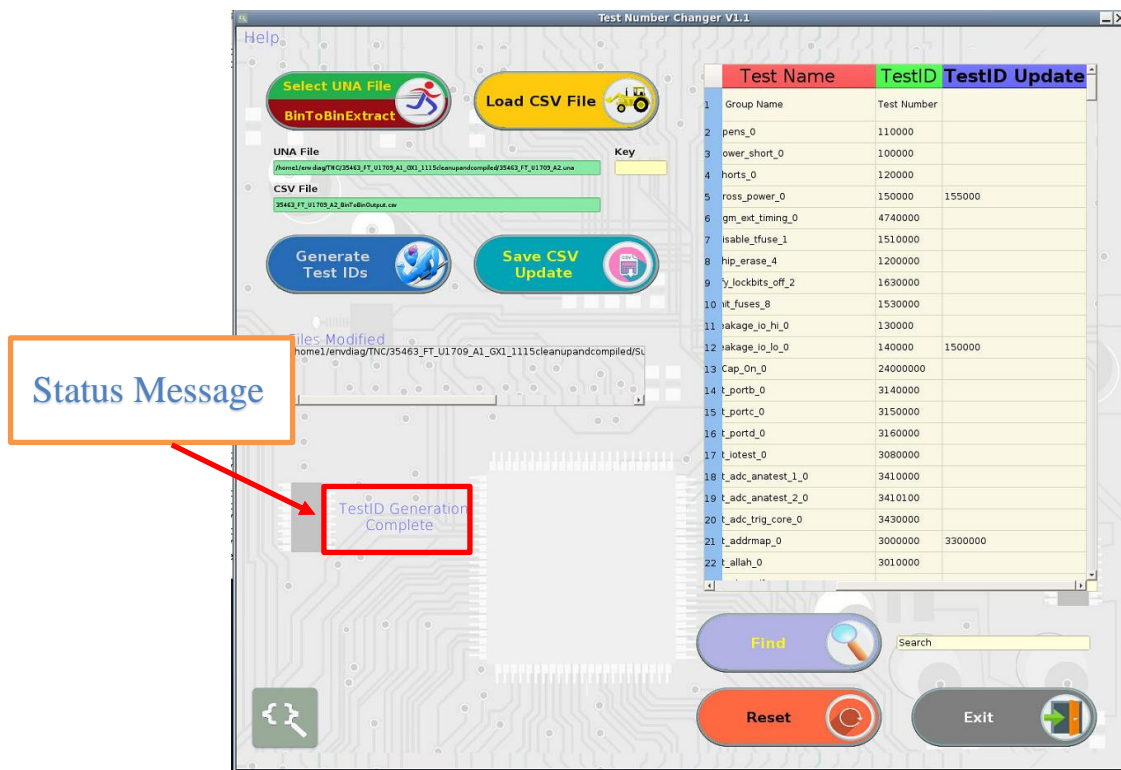


Figure 8: Status message area .

```
tarnold@mil-vappseng9% ls -lrt
total 2516
-rwxrwxrwx 1 tarnold eng1 835486 Dec 2 17:30 flow_strip.uno
-rw-rw-r-- 1 tarnold eng1 24977 Dec 2 17:31 checkSubflow2.uno
-rw-rw-r-- 1 tarnold eng1 835486 Dec 2 17:47 flow_strip.uno.mod.2018_12_2_17_47_9
-rw-rw-r-- 1 tarnold eng1 24978 Dec 2 17:47 checkSubflow2.uno.mod.2018_12_2_17_47_9
-rw-rw-r-- 1 tarnold eng1 835486 Dec 2 19:09 flow_strip.uno.mod.2018_12_2_19_9_10
tarnold@mil-vappseng9%
```

Figure 9: UNO Files created with updated Test IDs.

**Note:** Files Created are copies of the original with the Test IDs updated. The files will have the name of the original with a time stamp added to the end in the format **FILENAME.mod\_yr\_mon\_day\_hr\_min\_sec**.

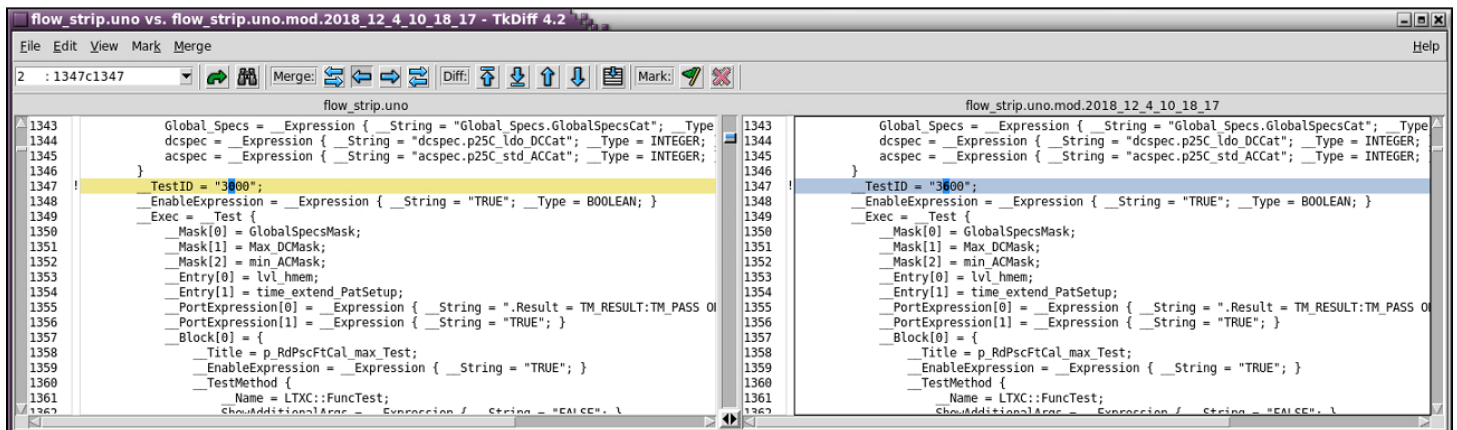




Figure 10: Test Id (Major) updated in a modified copy of original flow.uno file.

## Loading a CVS File

- 8) You may also click  button to select a pre-existing csv file. The file will have loaded into the data table for the user to update the Test IDs.
- 9) You may click  button to save a modified copy of the original csv file.

**Note:** Files Created are copies of the original csv file. The files will have the name of the original with “\_mod” added to the filename.

## Finding a Test Name or Test ID.


- 10) Select the  button to search the test data for a specific Test Name or Test ID. The search string is must begin with a partial or exact match. The data table will show the entry if the find is successful.



Figure 11: Search data entry text box.

	Test Name	TestID	TestID Update
1	Test Group Name	Test Number	
2	ModifyLoopCount	21000000	
3	c_cont_Vdd_0_25	1000	
4	c_cont_Vss_0_26	1100	
5	c_cont_even_vdd_0_27	1200	
6	c_cont_odd_vdd_0_28	1300	
7	c_cont_even_vss_0_29	1400	
8	c_cont_odd_vss_0_30	1500	1505
9	c_FConVdd_2x2_0_31	1600	
10	c_FConVss_2x2_0_32	1700	
11	c_PConEvenVdd_2x2_0_33	1800	
12	c_PConOddVdd_2x2_0_34	1900	
13	c_PConEvenVss_2x2_0_35	2000	
14	c_PConOddVss_2x2_0_36	2100	2200
15	ConnectBulkCap_0	10000000	
16	p_RdPscFtCal_max	3000	3100
17	p_RdPscFt25res_max	3500	
18	f_tblout_typ_0	10000	
19	f_cpu_movlw_typ_0	10100	
20	m_devid_F45k22_0	30000	30500
21	m_devid_F25k22_0	30100	
22	m_devid_F46k22_0	30200	
23	m_devid_F26k22_0	30300	


Successful search  
entry highlighted in

Figure 12: Search found for entry in text box



## Customization Key Option

- 11) Customization option for customer specific Unison program output. Requires a unique customer key.



The screenshot displays a software interface with a circuit board background. At the top, there are two buttons: 'Select UNA File BinToBinExtract' (green and red) and 'Load CSV File' (yellow). Below these are two text input fields: 'UNA File' (containing 'UNA\_File\_Name') and 'CSV File' (containing 'CSV\_File\_Name'). To the right of these fields is a 'Key' label above a small yellow text box, which is highlighted with a red rectangle. A red arrow points from a callout box to this key entry text box. The callout box, located at the top right, contains the text 'Customization Option for unique CSV formats'.

Customization Option for unique CSV formats

Figure 13: Customization key entry text box

- 12) This error occurs when the BinToBinExtractor module hangs. This would indicate an issue with the source una and uno files being processed. Check your source files and run with the stand alone BinToBinExtractor program.



Figure 14: Error Dialog for BinToBinExtractor issue

- 13) This warning indicates the data in the table is empty or the data in the update column is empty.



Figure 15: Warning Dialog for empty data table

- 14) This warning indicates your trying to save an empty data table.



Figure 16: Warning Dialog for saving empty data table