

Guide to BMW CIP Programming with MaxiSys Pro

1. BMW Programming Notes

- Connect an Autel or BMW approved battery charger to the vehicle, and ensure battery voltage is between 13V and 14V.
- Turn off all the electrical equipment, such as air conditioner, headlamps, turn signal lamps, wipers, etc. Unstable current will abort programming.
- Turn off wipers or cleaning system. Wipers may be active during programming, so please make sure there is enough space.
- Please check all the control units are installed and function properly before programming.
- Troubleshoot or clear DTCs of the vehicle before programming.
- Please set the correct date first. It will be recorded into the control units during programming and coding.
- Do not turn the ignition off during programming and coding unless specifically instructed to do so by MaxiSys Pro.
- Do not activate or move any part of the vehicle, such as windows, doors, the steering wheel, seats, buttons and other adjusting knobs. Failure to do so may abort programming.

Note: This document is built up based on BMW V3.00. It only applies to BMW V3.00 or later versions.

2. Entering CIP Main Interface

Tap 'CIP (Coding, Individualisation, Programming)', as shown in figure 2.1.

BMW v2.01.02			Ø	e	0	1		
Select Application							VCI 14.57V	
Diagnosis			Service			CIP(Coding, Individualisation, Programming)		
VIN:LBVVA96027SB1 Car: bmw/3'/320i_N40	6197 5_AUTO/E90/CH	N_LL		•			ESC	

Figure 2.1

For vehicles performed CIP function with MaxiSys Pro for the first time, please refer to **2.1 Initial Entering CIP**.

For vehicles performed CIP function with MaxiSys Pro before, MaxiSys Pro will save the previous session automatically, and a prompt message will pop up to confirm whether to use the saved session. Please refer to **2.2 Re-entering CIP** for additional information.

Note: MaxiSys Pro can only store up to 5 vehicle sessions. It will prompt you to remove some unnecessary ones if there are more than 5 sessions. Please refer to **2.2 Re-entering CIP**, as shown in figure 2.10.

2.1 Initial Entering CIP

MaxiSys Pro will read the current vehicle configuration information from CAS and LM/FRM when entering CIP for the first time, so CAS and LM/FRM cannot be replaced at the same time. Vehicle information will be shown as figure 2.2. You can

BMW V1.30.21	Image: Constraint of the second se
	Information VCb 🖼 14.46V
Chassis	SB16197
Model series	E90
Type destination code	VA96
Time criterion	0906
Paint code	0A22
Upholstery code	LCSW
	Edit Ok ESC

scroll through the list by sweeping your finger up and down to see more information.

Figure 2.2

Tap 'Edit' to revise vehicle configuration information and the related interface will be shown as figure 2.3. You can scroll through the list by sweeping your finger up and down to see more information.

Note: To avoid the issue that the vehicle cannot work properly after revising the configuration information, it's recommended to note down the current configuration information.

BMW V1.30.21	⚠ 🕱 🌣 🖶 🞯 🔒 /
	VCb 🖽 14.46V
SA:	
205	Automatic transmission
240	Leather-steering wheel
249	Multifunction steering wheel
2BH	Light alloy wheels double-spoke style 156
302	Alarm system
	Add Remove ESC

Figure 2.3

Tap 'Add' or 'Remove' to do the corresponding operation, and then tap 'ESC'.

You will be prompted to confirm the revised configuration information, as shown in figure 2.4.

Information	_
Do you want to save the revised following configuration information: Added the following information: SA: 216,230 Deleted the following information: SA: 205 The above revised configuration information will be valid only after performin corresponding programming or coding.	g
Yes	No

Tap 'Yes' to save the information, or tap 'No' to cancel the changes. The above revised configuration information will be valid only after performing corresponding programming or coding.

Then MaxiSys Pro will communicate with all control units. This step will take several minutes, which is based upon vehicle specifications, as shown in figure 2.5.



MaxiSys Pro will ask whether the control units have been replaced, as shown in figure 2.6. If the control units have been replaced, tap 'Yes' to select the replaced control units. Alternatively, tap 'No'.

Information
Were control units replaced?
Before starting vehicle programming, ensure that the basic requirements for error-free programming are satisfied. See MaxiSys user documentation 'Preparation and follow-up of vehicle programming'.
If control units have been replaced, select the replaced control units in the dialogue boxin displayed in the following. Alternatively, click in the control unit tree on the replaced control units and select 'Replacement follow-up' there.
Yes No
Figure 2.6

MaxiSys Pro will read integration level (I-level) from vehicle after performing all the above procedures. If the integration level could not be read from vehicle, manual input is required, as shown in figure 2.7.



Figure 2.7

If the vehicle integration level is very new, the following message in figure 2.8 may appear on the screen.

Information
The connected vehicle has an unknown data status (E89X-13-07-505, E89X-12-07-508). This cannot be handled with MaxiSys. Ensure that the current version of MaxiSys has been loaded or contact technical support.Programming no longer possible
Possible causes of fault: Integr. level (actual) not correct or too new.(E89X-12-07-508)
ОК

This shows that the vehicle integration level is newer than the one stored in MaxiSys Pro, and programming function is not recommended.

MaxiSys Pro will then read related information from each control unit to confirm whether it needs to be replaced or upgraded. After that CIP Main Interface will be shown. Please refer to **2.3 CIP Main Interface** for detailed information.

2.2 Re-entering CIP

If CIP function has been performed before on the vehicle, MaxiSys Pro can save the previous session which records the configuration information. When MaxiSys Pro re-enters CIP, a prompt message will pop up to confirm whether to use the saved session, as shown in figure 2.9.

Information
A session for the connected vehicle has been found that was saved at an earlier point in time. Should this session be resumed? Click 'Yes' to continue the saved session. 'No' rejects the saved session and you continue with context determination. In the latter case, the saved session is deleted.
Yes No

Tap 'Yes' to continue the saved session without establishing communication with vehicle again. This will realize fast access to CIP. Tap 'No' to reject the saved session, and MaxiSys Pro will establish communication with vehicle just as the procedure in initial entering CIP. Please refer to **2.1 Initial Entering CIP** for additional information. It is recommended not to use the session saved long time ago for the actual information of the vehicle may have changed.

MaxiSys Pro is set to only store up to 5 vehicle sessions. It will prompt you to remove some unnecessary ones if there are more than 5 sessions, as shown in figure 2.10.

Information	_
5 sessions are already stored. Please remove a session.	
	ОК

Tap 'OK' and a list of vehicle record will display. You can select the sessions to be removed, as shown in figure 2.11.



Figure 2.11

Select the sessions to be removed and tap 'OK'. The message below will display on the screen, as shown in figure 2.12.

Information
Please note. Removing the session will also remove any programming files/cip ordered files that are installed for this vehicle.
OK Cancel

Figure 2.12

Tap 'OK' to remove the selected sessions. Then re-entering CIP is required.

2.3 CIP Main Interface

CIP Main Interface typically includes the following items, as shown in figure 2.13.

BMW v1.31.07			Ø	e	0		1]
-		CI	P(Coding,Ind	ividualisatio	on,Programm	ning)		VC6 15.27V
Initial Report			Vehicle Details			Pro	ogrammi	ng/Coding
CAR/KE	Y Memo	ry	Program	nming fo routine	ollow-up			
VIN:LBVVA96027SB1	6197							
Car: bmw/3'/320i_N4	5_AUTO/E90/CH	N_LL						ESC

- Initial Report

Displays the information of control units to be replaced or upgraded and the estimated upgrade time.

- Vehicle Details

Displays vehicle configuration information.

- Programming/Coding

Performs programming and coding. Please refer to **3. Programming/Coding** for additional information.

- CAR/KEY Memory

Performs personalized setting.

Programming Follow-up Routine

Displays a list of special functions to be performed after programming and coding.

3. Programming/Coding

figure 3.1.

Programming/Coding interface typically includes the following items, as shown in

BMW v1.30.21			Ö	æ	0		1		
Programming / coding VC6 🖼 14.46									
Determine Measures Plan			Complete Update			:	Selective Update		
Control Unit List									
VIN:LBVVA96027SB16 Car: bmw/3'/320i_N46	5197 _AUTO/E90/CHI	N_LL		•				ESC	

Figure 3.1

- Determine Measures Plan

Lists the upgrade plan automatically calculated by MaxiSys Pro.

Please refer to **3.1 Determine Measures Plan** for additional information.

- Complete Update

All the ECUs available to programming/coding are checked by default.

Please refer to **3.2 Complete Update** for additional information.

- Selective Update

Manually selects the ECUs you want to perform programming/coding.

Please refer to **3.3 Selective Update** for additional information.

- Control Unit List

Displays all the control units, and you can perform diagnosis, programming,

coding, and special functions to the specific ECU. Please refer to **3.4 Control Unit** List for additional information.

3.1 Determine Measures Plan

Determine Measures Plan shows a list of tasks for the current vehicle set by MaxiSys Pro, as shown in figure 3.2. You can scroll through the list by sweeping your finger up and down to see more information.

BMW V1.30.21	Ö 🖨 Ø			
	Measures Plan	VCI0 14.46V		
Information Vehicle details				
Model series: E90	Type/Description:	E90 Saloon N46B20 OL LHD China		
Odometer: 138417	VIN: LBVVA96027SB16197			
Integration Level(Plant)	Integration Level(Old)	Integration Level(New)		
E89X-06-09-530	E89X-06-09-530	E89X-12-07-508		
Time criterion: 0906	Paint code: 0A22	Upholstery code: LCSW		
E-Wort:	B090,EHHS			
HO-Wort:				
SA:	205,240,249,2BH,302,321,354,403,423, 428,441,459,493,4AG,507,520,521,534, 548,5AB,640,663,7RP,825,853,858,876, 892,8SD,8SM,925,988,993			
Total estimated programming time:	32 minutes			
Programming		8		
		Execute measures plan		

Figure 3.2

Tap 'Execute measures plan', and a prompt message of turning off engine and switching on ignition will pop up on the screen, as shown in figure 3.3.



After confirming that engine is turned off and ignition is switched on, tap 'OK'. If MaxiSys Pro needs to be connected to the Internet to download configuration file, the following message will display.

Information
Note: - Please connect MaxiFlashPro to MaxiSYS with USB cable or ethernet cable. -Please make sure MaxiSYS is connected to the network before connection.
OK Cancel

Disconnect MaxiSys Pro from vehicle (not a must), take MaxiSys Pro to the place with Internet connection, tap 'OK' after the network is connected, and then MaxiSys Pro can download configuration file from server, as shown in figure 3.5.

Information	
Cancel Download File	
Current progress:25%	ס

When download is complete, the following message will display.

Information	_
Download completed. After connecting vehicle, use the OK button to continue the session.	
ОК	Cancel



Please check MaxiSys Pro is connected with vehicle first, and then tap 'OK' to execute the plan. If there are programming tasks, the control units in programming will show the progress in percentage, as shown in figure 3.7 and figure 3.8.

BMW V1.30.21			Ø	ł	0		1		
_				Action list				VCI0 14.46V	
	Acti	ion			Shor	t name		Progress	
	Progra	mm P			c		50%		
	Progra	mm P			D	0%			
	Progra	mm P			KL		0%		
	Cod	e C			D				
	Cod	e C			KL				
	Cod	e C			C				
Initia	lisation by t	erminal cha	ange						

Figure 3.7

BMW V1.30.21		Ŧ	Ö		0		1	
				Action lis	t			VC6 14.46V
	Acti	ion			Sho	rt name		Progress
	Progra	mm P			(100%	
	Progra	mm P			C		100%	
	Progra	mm P			к		100%	
	Cod	e C			C	WA		coded
	Cod	e C			к	LIMA		Coding
	Cod	e C			C			
In	itialisation by t	erminal cha	inge					

A prompt message of turning off ignition and removing the key from key slot will pop up when performing CAS programming, as shown in figure 3.9.

Warning

Turn off ignition and remove key with remote control from key slot (if provided).

M

ОК

Turn off ignition and remove the key, and then tap 'OK' to start CAS programming.

After CAS programming is complete, switching on ignition is required, as shown in

figure 3.10.

Warning
Insert key with remote key in key slot (if provided) and switch on ignition. If the key fails to engage, proceed as follows: All the following initialisation instructions are to be confirmed until the final report appears. If programming was not successful, repeat this up to 2 times. * The session can be closed once CAS Programming has been successfully completed Then perform omitted initialisations.
ОК

Figure 3.10

Switch on ignition, and tap 'OK' to complete CAS programming.

MaxiSys Pro will generate a final report after executing the plan. You can scroll through the list by sweeping your finger up and down to see more information, as shown in figure 3.11, figure 3.12 and figure 3.13.

BMW V1.30.21	1	M			Ø	(-)	0		/	Q	
						Final report	t			VCI (14.46V
Informati	on										
Vehicle detai	ls										
Model serie	es: E90			Type/	Descript	ion:		E90 Sal	oon N46B20 OL	LHD Chin	а
Odometer:	138417			VIN: L	BVVA96	027SB1619	7				
Integration	Level(Plant)			Integr	ation Le	vel(Old)		Integrat	ion Level(New)		
E89X-06-0	9-530			E89X-	-06-09-5	530		E89X-12	2-07-508		
Time criteri	on: 0906			Paint	code: 0A	22		Upholst	ery code: LCSW		
E-Wort:				B090,	EHHS						
HO-Wort:											M
SA:				205,2 428,4 548,5 892,8	40,249,2 41,459,4 AB,640,6 SD,8SM,	BH,302,321 93,4AG,507, 63,7RP,825 925,988,993	354,403,423, 520,521,534, 853,858,876,				
Program	ming										
Control	Action	Statu	is Ty	vpe H	Hardward	e Part	number prog	. ECU old	Part numbe	r prog. ECl	J new
											NA MERINA
									Continu sessior	e E ses	ind ssion
		. 1				10-504			T)		
V1.30.21	1	M			Q	P	0	H		Q	
						Final repo	t			VCI (14.46V
Informati Vehicle detai	on Is										\bigcirc
Program	ming										
Control unit	Action	Statu	is Ty	vpe H i	Hardwar ndex	e Part	number prog	. ECU old	Part numbe	r prog. ECl	J new
CAS	Program P	Succ	ess Sy	rs (03	914	7225		9147225		
DWA	Program P	Succ	ess Sy	's C	03	924	4134		9244134		
KLIMA	Program P	Succ	ess Sy	rs C)4	919	9260		9199260		
Coding											
Control unit	Action	Statu	is Ty	vpe F i	Hardware ndex	e Part	number prog	. ECU old	Part numbe	r prog. ECl	J new
CAS	Code C	Succ	ess Sy	's (03	914	7225		9147225		
DWA	Code C	Succ	ess Sy	's C	03	924	4134		9244134		
KLIMA	Code C	Succ	ess Sy	rs C)4	919	9260		9199260		
Service f	unctions										
									Continu sessior	e E ses	Ind ssion



BMW V1.30.21			R	Ø			/	Q
1161007	rogrami	0400000	0,0	U.	Final report		JIJJE00	Clo 📑 14.46V
Coding								
Control unit	Action	Status	Туре	Hardware index	Part number	prog. ECU old	Part number pro	ig. ECU new
CAS	Code C	Success	Sys	C3	9147225		9147225	
DWA	Code C	Success	Sys	03	9244134		9244134	
KLIMA	Code C	Success	Sys	04	9199260		9199260	
Service f	unctions							
Action						Control unit	Status	M
Read CKM	settings						Success	
Initialisatio	on by termina	l change					Success	
Deactivate	compressor	running-in pro	tection			KLIMA	Success	
Update veh	nicle order						Success	
Write CKM	settings						Success	
Update inte	egration level						Success	
							Continue session	End session

The information after executing the plan is available in this report, including the status of a single task, which can be viewed in the Status column.

Tap 'End session' to exit CIP, or tap 'Continue session' to continue programming. After tapping 'Continue session', MaxiSys Pro will read configuration information from vehicle again and communicate with each control unit. It will take several minutes, which is based upon vehicle specifications.

3.2 Complete Update

Complete Update shows a list of control units, as shown in figure 3.14

BMW v1.31.07		F	Ø	ſ	9 (0		/	
			les			VCI2 15.22V			
System Descri	ption		P	rogram	Encode	Replace			
CAS Car acces	s system								
JBE Junction-	box electro	nics					<u>~</u>		
RAD2-GW Gate	eway								
Airbag-MRS M	lultiple Res	traint syste	em						
Engine-DME M	lotor Electr	onics							
EGS 6HPTU tra	insmission	control					<u>~</u>		
ABS-DSC Dyna	amic Stabili	ty Control					<u>~</u>		
DWA anti-thef	t alarm syst	em		I	<u>~</u>				
Instructions:	Not so chang	electable, not geable ed, not chang	eable		Not selec Selected,	ted, chan changeal	geable ble	ОК	Cancel

Figure 3.14

All the control units available to programming or coding are checked by default. You can manually select the corresponding items of each control unit to make any change. If the selected control unit must be programming or coding as part of a group, MaxiSys Pro will automatically select the related control units and display their names, as shown in figure 3.15.

BMW VI 31.07	2 0	-	0	8				
			Modules			VCI ED IN		
System Description				Program	Encode	Replace		
CAS Car access system					2			
JBE Junction-box electro	onics				. 58			
RAD2-GW Gateway	_	Alert		ок				
Airbag-MRS Multiple Re	Airbag-MRS Multiple Re This control unit must be updated as part of a group.							
Engine-DME Motor Elect	1. CAS Car access 2. IHKA Integrated	system automatic l	heating/air	conditioning				
EGS 6HPTU transmission		_	_					
ABS-DSC Dynamic Stabi	lity Control							
DWA anti-theft alarm sys	stem							
Instructions. Not et			lot selected.					
🖌 Sele	cted, not changeable	🔛 s			UK	Cancel		
	9 🖄 🖬	歃	VCI I	-	- 🕫	@ 11:14		

Some items may not be selectable, and the possible causes are as below,

- Programming or coding is not available for the control unit
- The control unit has error or needs to be replaced. Please refer to **Initial Report** in CIP Main Interface for detailed information.

Tap 'OK' after making your selection and MaxiSys Pro will determine a plan. Please refer to **3.1 Determine Measures Plan** for additional information.

3.3 Selective Update

Please refer to **3.2 Complete Update** for additional information about Selective Update. Programming and coding items only for control units needing to be updated are selected by default for Selective Update, which is the difference from Complete

Update.

3.4 Control Unit List

Control Unit List displays all the control units, as shown in figure 3.16. You can scroll through the list by sweeping your finger left and right to see more information.

BMW V1.30.21			Ø		0		1				
			Co	ontrol Unit l	_ist			VCL 14.46V			
CAS Car ac	cess sys	stem	JBE e	Junctior lectronic	n-box cs	R	RAD2-GW Gateway				
Airbag-M Restrair	ple า	Engir E	ne-DME lectronio	Motor cs	tra	EGS 6HPTU transmission control					
ABS-DSC Dynamic Stability Control			DWA a	anti-thef system	t alarm	FZD	FZD Function centre,roof				
PDC Park Distance Control			SMFA	A Seat m driver	odule,	FRM Footwell module					
VIN:LBVVA96027SB16 Car: bmw/3'/320i_N46	5197 5_AUTO/E90/CHI	N_LL		• •				ESC			

Figure 3.16

Tap the corresponding control unit to view the diagnostic information, control unit information, and the last programming information; to perform programming or coding; or to perform some related special functions.

BMW V1.31.07			Ø	e	0		1]			
			ABS-DSC D	ynamic Sta	bility Contro	l .		VCL 15.22V			
Diag	nosis		Control	unit info	ormation	l	Last Programming Information				
Co	ding			Progran	n		Initialisation, RDC warning				
Initialisation of DSC unit for 4-cylinder engines			Adjustm accel withou	nent of tra leration s it active s	ansverse sensor steering	Ac	Adjustment, steering				
VIN:LBVVA96027SB16 Car: bmw/3'/320i_N46	5197 _AUTO/E90/CH	N_LL		•				ESC			