User Documentation. Version V2.31.1

Programming System Integrated Service Technical Application Programming (ISTA/P).



BMW Group

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Changes to ISTA/P and the user documentation

The current ISTA/P user documentation is based on the following software media:

Software medium	Version
ISTA/P (DVD)	V2.31.1
ISSS Basic (DVD)	V2.6.0
ISIS Update (DVD)	V2.6.0
BMW Navigation (CD)	31.0 (part number 01 59 0 141 891, index u)
SWT (enable code) (DVD)	1.1 (part number 01 99 0 036 166)

The F01 and F02 represent a new generation of vehicles that not only feature new functions but are also equipped with a new control module architecture and a new system network structure (BN2020).

The previous programming system Progman has been replaced by ISTA/P. In addition to containing the complete scope of vehicle programming, ISTA/P also features new functions, making it well equipped to effectively meet future vehicle programming requirements in service applications.

Compared to Progman, the introduction of ISTA/P has given rise to the following new features:

- Configurable measures plan with graphic and tabular representation
- Detailed display of control module status
- Entry of enable codes/vehicle orders from any point in the workshop with access to the workshop information system/ISTA/P
- Subsequent expansion and adaptation of measures plan
- Generation of control module order list whenever hardware needs to be replaced
- Interruption of a session if spare parts are not available
- Display of last Progman or ISTA/P version with which the vehicle was programmed.

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General information on ISTA/P

The ISTA/P programming system is an ISPI application and stands for Integrated Service Technical Application/Programming. ISTA/P is used to process all coded, programmed and enable-dependent control modules in BMW Group vehicles.

Important note:

Vehicle programming/coding is permitted only when:

- A test module in the ISTA workshop system requests programming
- A BMW-approved fault elimination measure requests vehicle programming
- Retrofitting or conversion are required
- Required as part of a technical campaign
- Control modules need to be replaced.

The ISTA/P start page provides an overview of the number of current programming sessions and the progress of updates.

User information

After ISTA/P has been installed, this user documentation explains how this system is used in the vehicle programming procedure in the workshop. This handbook describes the fundamental functions of ISTA/P.

Knowledge of how ISPI components interact in the workshop network is of central importance when working with ISTA/P. Detailed information on each individual system and on network issues can be found in the respective handbooks:

ISTA	User instructions
ISIS	User documentation
ICOM	Vehicle interface handbook
ISPA	Technical administrator handbook
ISID	Device description handbook
WSM	User guide

The handbooks are available on the current version of the "Documentation DVD".

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The SSS becomes an ISSS by installing SSS Basic (DVD) via the DVD drive of the SSS. A screen must be connected during the installation procedure. The ISTA/P data DVD is installed on the ISIS level.

The ISTA/P application is resident in the ISSS.

The ISSS is integrated in the system network of the ISIS. Updates take place via JETstream or DVD on the ISIS.



Installation for using ISTA/P

The following steps must be performed as part of the installation of the ISSS Basic DVD:

User action	Result
Switch on ISSS.	
Load current ISSS Basic DVD in the DVD drive.	
Switch ISSS off and back on again.	
	Basic installation then runs automatically.
	After a short time, the following message appears: "Basic DVD installation in progress. This will take approx. 20 minutes."
	The DVD drive opens automatically.
	The message appears: "Please remove Basic DVD and close tray."
Remove the Basic DVD from the DVD drive and close again.	
	The system will restart on completion of the basic installation procedure.

Following basic installation, the ISSS must again be logged on to the ISIS and registered. Overall system administration takes place directly via WSM. Please refer to the WSM User Guide for further information on installation and administration.

Note:

For ISTA/P to be used, the version of the basic installation on ISSS and the version of the ISTA/P DVD must be mutually compatible. Each new ISTA/P DVD contains a reference to basic installation requirements.



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ICOM (Integrated Communication Optical Module)

The ICOM is the data interface to the vehicle and is the successor to OPS (Optical Programming System) and OPPS (Optical Testing and Programming System). OPS and OPPS are not supported by ISTA/P. Three different ICOM interfaces are available, with which all BMW Group vehicles can be processed.

ICOM A



Index	Description
1	Network connection
2	USB port
3	OBD connector

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ICOM B



Index	Description
4	MOST connector
5	USB port

ICOM C



Index	Description
6	Connector for OBD port
7	Diagnosis head connector

Connecting ICOM to OBD socket

Plug the OBD connector on the ICOM A into the OBD socket on the vehicle. Then connect the ICOM A to the workshop network using the network connector. The OBD connector on the ICOM A can be angled, allowing it to be adjusted for OBD sockets at different installation locations in the vehicle.

Using ICOM at MOST direct access port

Also use the ICOM B module to connect the ICOM to the vehicle MOST direct access port. For this purpose, connect the USB ports of ICOM A and of ICOM B with the USB cable. Then connect ICOM A to the workshop network via the network connector. Connect ICOM B via the MOST connector to the MOST direct access port of the vehicle and plug the OBD connector of ICOM A into the OBD socket on the vehicle. Repeat the procedure if the MOST connection or ICOM is not recognized.

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Using ICOM at 20-pin diagnosis plug

Use the ICOM C module to connect the ICOM to the 20-pin diagnosis plug on the vehicle. For this purpose, plug the OBD connector into the OBD port on the ICOM A and connect the diagnosis head connector to the 20-pin diagnosis plug on the vehicle.

Preparing vehicle programming and finishing off

The basic requirement for efficient programming is that the vehicle is correctly prepared.

Preparations:

- Park vehicle on flat and even ground
- Wherever possible, protect vehicle from direct sunlight
- Turn off engine
- Shift manual transmission to Neutral or automatic transmission to Park.
- Activate electromechanical parking brake or apply parking brake
- Make sure that the temperature of the transmission fluid is between -40 °C (-40 °F) and 85 °C (185 °F)
- Switch off all electric loads, lights and turn signal lamps
- Switch off wiper/washer system. The wipers may be actuated during programming and initialization. Make sure that the wipers can move freely
- Make a note of all stored radio and TV frequencies as well as the navigation destinations
- Connect up a BMW Group-approved battery charger in the engine compartment. The battery charger connected during programming must be run in "external power supply mode with battery connected". Please refer to the operating instructions for the battery charger
- Do not connect or disconnect the battery charger during programming. Low system voltage may cause programming to cancel. Make sure that the vehicle system voltage does not drop below 13.0 volts while programming is in progress
- Set up connection between workshop network, vehicle interface and vehicle
- Check cable routing. Cables routed through open windows could be damaged when the windows are started automatically. Do not route cables through open windows
- Switch on ignition (terminal 15)
 - On vehicles with Comfort Access, the identification transmitter must be inserted in the ignition lock. The coding procedure may be terminated if the identification transmitter is not inserted in the ignition lock.
 - If the vehicle model does not have an ignition lock, the identification transmitter must be located in the vehicle interior.
 - On vehicles with automatic terminal 15 shutdown (as from 03/2007) the signal from the door contact switches off terminal 15 by opening and closing the driver's door. Terminal 15 is permanently switched on by pressing the START-STOP button. Make sure that the driver's door contact is not operated during the programming procedure.
- Perform a vehicle test with the ISTA workshop system to make sure that all installed control modules respond and any fault memory entries are read out
- Before programming, rectify any faults that may be present and delete any fault codes stored
- Determine CBS data, note down and end ISTA workshop system
- Preparations: Remove inserted data media (DVD) and disconnect connected data (iPod®, etc.). Data media in a drive or still connected could cause programming to abort
- Before starting vehicle programming, make sure the boot lid is closed (to prevent the luggage compartment lighting from overheating).

During programming:

- Observe and follow requests and instructions in ISTA/P
- Leave ignition switched on and follow instructions in ISTA/P (e.g. CAS)
- Do not cut the connection between workshop network, vehicle interface and vehicle
- Close the boot lid again after any action in the luggage compartment (e.g. loading/removing navigation DVD) to prevent the luggage compartment lighting from overheating
- During programming, perform no other activities on/in the vehicle than those instructed by ISTA/P.

Finishing off:

Integrated Service Technical Applicat	e tion / Programming			
Sitzung: UX00105	5 Fahrzeug: RR1 Klemme 15: 14,00V Klemme 30: 14,00V			
Maßnahmenplan a	ausführen			
Steuergeräte- baum	Hinweise nach Abschluss der Maßnahmenplanausführung			
<mark></mark> ZG	CBS Werte zurücksetzen, Datum / Uhrzeit stellen, Termin für AU und HU eingeben. Funktionstest durchführen: Wegstrecke und Service-Daten mit den notierten Daten vergleichen.			
SIN	🗌 Funktion des ADP prüfen: Radiosender anwählen und wechseln			
SZL	Nach Abschluss von Programmierung/Kodierung Einstellung der Lenksäule über den Fahrzeugtest im ISTA-Werkstattsystem durchführen.			
the second se	Zur Funktionsprüfung der KFS die Kühlerfigur ein- und ausfahren.			
SASR	Nach Abschluss von Programmierung/Kodierung Kalibrierung der IHKA-Potentiometer über den Fahrzeugtest im ISTA-Werkstattsystem durchführen			
STVR	Notierte Radiosender wieder speichern und Empfang prüfen.			
TV-Norm einstellen.				
SBSB				
5551	Hinwaisa bastātigan und 'OK' drūskan			
SF	Tititimeise bestaugen und OK Ulütkell.			
	ОК			
Enweiterter Moß	nahmennlan wird ausgeführt			
	nannenpian wird ausgerumt			

Index	Screen element
1	Execute procedure for finishing off the measures plan and confirm by clicking "OK"

- If an ICOM is connected to the MOST direct access port, disconnect the MOST direct access port when requested to do so by the ISTA/P system, remove the ICOM from the MOST ring and close the MOST ring with the original flash plug (bridge) in the vehicle. Fault codes may be entered and MOST control modules may be registered incorrectly if the ICOM is not correctly disconnected from the MOST direct access port.
- Perform the finishing off procedures such as calibration, initialization, service functions etc. in the vehicle test in the ISTA workshop system as defined in the final report. Confirm the finishing off jobs individually.
- Enter the time and date information to ensure correct calculation of the CBS values in the vehicle.
- After programming, reinstall all removed or disconnected data media (DVD, iPod®, etc.) and check.
- Compare the previously printed or noted CBS data of the control modules and, if necessary, reset and correct as part of the vehicle test in the ISTA workshop system.

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- Perform vehicle test with the ISTA workshop system and end vehicle test on completion.
- Park vehicle for at least 5 minutes (BN2000 and BN2020 vehicles) or 16 minutes (I-bus vehicle) with terminal R OFF so that all control modules can assume sleep mode, i.e. assume the rest state.

Note: control modules that do not assume sleep mode (rest state) can cause closed-circuit current faults!

- Make sure that the vehicle is OK.
- Check all noted radio and TV frequencies as well as navigation destinations and store manually if necessary.

Starting an ISTA/P session

Integrated Software Service Sta	ation	A	≁ 🗉	? 🤰	× 2
BMW Service Startseite für den A	Applikationsstart				
Programmierung, Codierung, Individuali	sierung Worksho	p System Management Gerätemanagement, Monitoring	Systemeinstellungen		— 3
1010 01	1.				
registriert ISSS3			CONNECTED	D DE	
					110508001

Index	Screen element	Index	Screen element
1	ISTA/P button	2	Callback Assistant button
3	Workshop System Management (WSM) button		

Start ISTA/P from the ISSS jumpgate by selecting "Programming, Coding, Individualization".

A maximum of three vehicles or one model series F01/F02 vehicle can be programmed and encoded with ISTA/P on an ISSS.

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Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. When programming and coding, refer to the documentation <u>"Preparing vehicle programming and finishing off"</u>.

Callback Assistant

The Callback function in the workshop system management of the ISIS is to be used if problems relating to the infrastructure of the IT system occur (e.g. ICOM connection not possible) in the applications or during programming. The Callback function is a user-prompted callback form. You will find a detailed description with instructions in the WSM User Guide.

Workshop	o System Mana	gement		A	۶	?.) ×	_
								1)
Call Back (Su	pport) - Ubersicht						\mathbf{X}	
Ticketnumme	r Anfrage von	Thema			Status	Status/Ze	eitstempel	
				_				
			_		_	_		
								2
					Neuer			765
					Callback	Anze	eigen	TE08-1

Index	Screen element	Index	Screen element
1	Callback Assistant button	2	"New callback" button,
			for creating a new case

Procedure if programming is terminated

Follow the instructions given in the programming system if the programming or coding procedure is terminated during a programming session.

Contact Technical Support if the disruption in programming and coding relate to the vehicle and cannot be solved in the workshop.

Menu bar and voltage display

Functions and actions can be selected directly in the menu bar. The voltage of the connected vehicle is displayed below the menu bar:



Index	Screen element	Index	Screen element
1	Change to "Session" menu (ISTA/P start screen)	2	Change to "Administration" menu
3	Change to " <u>Connection manager</u> "	4	Battery charge status is shown in percent (only ISID)
5	Print	6	Help function for ISTA/P
7	Minimize application	8	Close application
9	Terminal 30 in volts	10	Terminal 15 in volts

Sorting selection list

Integrated Service Technical Applica	e tion / Programming		XP			🖴 ? 🖃 🗙
Sitzung: -		Fahrzeug: -			Klemme 15:	- Klemme 30: -
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung			
Freischaltkode importieren	Freischaltkode löschen	Fahrzeugauftrag importieren	Fahrzeugauftrag löschen	Berichte		
	mer 🔺 Software-I	D Datei	Zert	tifikat		
		_				
Filter: Stan	hard					Anzahl Treffer: 0
riter. stan						Anzani Treffer. U

Index	Screen element
1	Column headings, showing "Data management" menu as an example

The selection list can be sorted in ascending or descending order by clicking on a heading of a column that can be sorted.

Sorting is indicated by a white triangle pointing up or down. Columns that can be sorted are: e.g. "Session name", "Start time", "Server" or "VIN".

New session (ISTA/P start screen)

Sitzung: -	Fahrzeug: -	Daten-	KI.15: -	KI.30: -
Sitzungs- übersicht anlegen	ung Sitzungsname eingeben	verwaltung		
Sitzungsname	Startzeit	Servername	Status Restliche Pro	grammierzeit

Index	Screen element	Index	Screen element
1	"Session" menu	2	"Session overview" tab
3	"Create new session" tab		

All sessions that are currently running are shown in the session overview of the ISTA/P start screen. The session overview can be selected at any time by clicking on the "Session" menu button. Existing sessions can be adopted selecting from the session overview and clicking on the "Continue" button.

A new program session is started via the "Create new session" tab.

Selecting programming system (ISSS) automatically/manually:

	Integrated Service Technical Applica	e Ition / Programming		XP	y			?	×	
	Sitzung: -		Fahrzeug: -			Klemme 15:	-	Klemme 30:	-	
	Sitzung	Programmierung	Fahrzeug	Daten- ver w altung						
	Sitzungs- übersicht	Neue Sitzung anlegen	Sitzungsname eingeben							
1-3-	•	ISSS automatisch	n auswählen swählen					Weit	er	-2

Index	Screen element	Index	Screen element
1	Select ISSS automatically	2	"Continue" button confirms selection
3	Select ISSS manually		

If "Select ISSS automatically" is selected, the programming system (ISSS) with the lowest number of current programming sessions is selected automatically. If there are several programming systems with the same number of programming sessions, any programming system is selected automatically.

The programming system must be selected manually if "Select ISSS manually" is selected.

Selecting programming system (manual session selection):

	Integrated Service Technical Application / Programming	xp 🝙 🖋 💷 🗈 💽 🗙
	Sitzung: -	Fahrzeug: - Klemme 15: - Klemme 30: -
	Programmiersystem auswählen	
1-	Programmiersystem	Status Sitzungslimit Anzahl der Sitzungen 1 / 20 2
		🖲 ISSS verfügbar 🔎 ISSS voll ausgelastet 🔎 ISSS gesperrt 🔘 Keine Verbindung
4-	Abbrechen Aktualisieren	Weiter 3
		110508004

Index	Screen element	Index	Screen element
1	Display of detected programming systems (ISSS)	2	Status of programming system
3	"Continue" button	4	Update Renewed check of connected programming systems

The detected programming systems (ISSS) are shown together with their status.

Color	Status	Color	Status
Green	ISSS available	Red	ISSS blocked
Yellow	ISSS running at full capacity	Gray	No connection to ISSS

Select an available programming system and confirm by clicking on the "Continue" button.

Connection manager:

Fahrgestellnur	nmer: -	Fahrzeug: -		Klemme 15: -	Klemme 30: -	
Verbindungs	nanager				₽ ? ×	
E	lezeichnung	Farbe	Тур	Fahrgestellnummer	Status	1
icom1			ІСОМ			
icom5			ICOM		P	
				🔵 frai 🛛 🕒 varbundan	nicht verwendhar	
	_					
Abbrecher	n Aktualisieren				Verbinden	—(3)

Index	Screen element	Index	Screen element
1	Type of interface	2	Interface status
3	"Connect" button		

The detected interfaces (ICOM) are shown together with their status.

Color	Status	Color	Status
Green	Interface free	Red	Interface cannot be used
Yellow	Interface connected		

Select a free interface from the list. Click the "Connect" button after selecting the interface.

The vehicle order or central coding key is read out. Refer to the document "<u>ISTA/P Data</u> <u>Management</u>" if the vehicle order or central coding key cannot be read out.

Refer to the vehicle-specific sections "Vehicle Programming and Coding Procedure" for further information on vehicle programming and coding.

Retrofitting and conversions

Individual retrofits for the model series will only be offered by ISTA/P if they are actually possible. This prevents incorrect programming of control modules. If the retrofit is not offered by ISTA/P by mistake, please consult Technical Parts Support via the ASAP Portal.

Note:

The items displayed in ISTA/P may differ, depending on equipment fitted and national market specification.

Only the items specified in the Electronic Parts Catalogue (Group EPC) are approved for retrofitting.

Explanatory notes about individual retrofits and conversions available in ISTA/P will be supplied by Technical Support as part of the fault elimination measures.

Procedure for retrofitting or conversion of systems requiring programming or encoding:

- Read out vehicle data with ISTA/P and determine measures plan. See Section: <u>Starting new session with ISTA/P</u>, select "Vehicle" tab.
- Select "Conversions".
- Select retrofit or modification system (e.g. "PDC").
- After selecting all retrofits or conversions, select "Determine measures plan".
- The selected retrofits or conversions are itemized in the action list.

Vehicle menu:

	2 3					
Integrat Technic	ad Service al Application / Programming					
Sitzung:	0006801 Fahrzeug: F01 Klemme 15: 14,00V Klemme 30: 14,0					
Sitzung	Programmierung Fahrzeug Daten- verwaltung					
Umrūstu	igen Fahrzeug- aktionen					
	Umrūstung DVD Areacode fūr Sūdostasien einstellen					
	Umrüstung DVD Areacode für USA und Kanada einstellen					
	Umrüstung Fahrer Gurterinnerung deaktivieren					
	Umrüstung Geruchsstartverriegelung					
	Umrüstung Klima nicht ein bei AUTO-Betätigung					
	Umrüstung Klimaanlagendesinfektion deaktivieren					
	Umrüstung OFF-Memory über Nachlauf hinaus aktivieren					
\boxtimes	🛛 Umrūstung Telematik deaktivieren					
	Umrüstung Temperatur Sollwertkorrektur +1 Grad					
	Umrüstung Temperatur Sollwertkorrektur +2 Grad					
	Umrüstung Temperatur Sollwertkorrektur +3 Grad					
	Umrūstung Temperatur Sollwertkorrektur -1 Grad					
	Umrūstung Temperatur Sollwertkorrektur -2 Grad					
	Umrüstung Temperatur Sollwertkorrektur -3 Grad					
i Maßn Geschä	ahmenplan wird aktualisiert Maßnahmenplan zte Ausführungsdauer: 00:03:28					

Index	Screen element	Index	Screen element
1	"Conversions" tab: The retrofits and conversions available for the vehicle are shown, see "Retrofits and conversions"	2	 "Vehicle actions" tab: Clear fault memory Select complete coding Start system time of all airbag control modules.
3	"Vehicle" menu		

The retrofits and conversions are listed under the "Conversions" tab in the "Vehicle" menu. All retrofits are shown first, followed by the possible conversions available for the connected vehicle.

Procedure for IBAC enable codes

Some retrofits and conversions require the entry of IBAC enable codes. The IBAC enable code can be obtained from the respective subsidiaries (VG) or from the corresponding regional office and is valid for 30 days.

The following data are necessary to generate the IBAC enable code:

- IBAC order code (or selected retrofit or conversion)
- 7-digit vehicle identification number
- Your dealer number.

Note:

An up-to-date list of all IBAC order codes can be obtained from your subsidiary (VG) or your regional office. This provides you with the opportunity of ordering the required IBAC enable codes before working on the vehicle.

Integrate Technica	ed Service al Application /	Programming			XP	y			?	×	
Sitzung:	0006801		Fahrzeug:	F01			Klemme 15:	14,00V	Klemme 30:	14,00V	
Sitzung	Prog	rammierung	Fahrzeug)aten- er w altung						
Umrüstun	ngen aktio	zeug- men									•
	Umrūstung D										
	Umrūstung D	Eingabe IBAU	-Code						LE!		
	Umrūstung F	iBAC-Code									-1
	Umrūstung G										
	Umrūstung K										
	Umrūstung K										
	Umrūstung O										
\boxtimes	Umrūstung T										
	Umrūstung T										
	Umrūstung T										
	Umrūstung T										
	Umrūstung T										
	Umrūstung T										
	Umrūstung T	ОК	^	bbruch		 					-2
i Maßna Geschätz	ahmenplan wird zte Ausführung	aktualisiert sdauer: 00:03	:28						Maßnahme ermitte	enplan In	
L						 					
											1201080

Index	Screen element	Index	Screen element
1	"IBAC enable code" input box	2	"OK" button

To enable the selected retrofit or conversion, enter the 15-character IBAC enable code in the input box and confirm with "OK". The entry must take into account upper/lower case letters.

E31, E32 and E34

Retrofit

Procedure for retrofitting systems requiring programming or coding in the model series E31, E32, E34:

- Read out vehicle data with ISTA/P.
 See Section: <u>Starting new session with ISTA/P</u> Select "Coding ZCS/FA"
- Select model series (e.g. "E34")
- Select "2 Retrofit"
- Select system (e.g. "1 Air conditioning system (IHKR II/III)")
- Start automatic encoding (confirm with "Y")
- Follow the instructions given by the user prompts.

Conversion

Procedure for conversion of systems relevant to programming or encoding:

- Read out vehicle data with ISTA/P.
 See Section: <u>Starting new session with ISTA/P</u> Select "Coding ZCS/FA"
- Select model series (e.g. "E34")
- Select "4 Conversion".
- Select system (e.g. "1 Antitheft alarm system")
- Select function (e.g. "2 Visual alarm with hazard warning lights")
- Start automatic encoding (confirm with "Y")
- Follow the instructions given by the user prompts.

Note:

The central encoding key is not changed during the conversion procedure (see footnotes for exceptions) so that the corresponding control module is recoded to the basic status when newly encoded.

Calculating 5-character IBAC enable code

The 15-character IBAC enable code must be converted into a 5-character IBAC enable code on vehicle model series that are processed via SGC (E31, E32, E34).

To convert the IBAC enable code, click on "Convert IBAC code" button in any SGC screen. Enter the 15-character IBAC enable code and click on the "Calculate" button. The entry must take into account upper/lower case letters.

	1 2
Integrated Ser Technical App	rvice plication / Programming
Sitzung: SitZung:	Berechnung
iBAC-	-Code JV5UMCPD4S7WEAI
Nummer	iBAC-Dienst
2	Fahrer-Airbag
3	Seite vorne, byw. vorne Thorax links-Airbag
4	Seite hinten, bzw. hinten Thorax links-Airbag
5	Seite vorne Thorax rechts-Airbag
6	Kopf vorne links (ITS)-Airbag
7	Kopf vorne rechts (ITS)-Airbag
8	Seite hinten Thorax rechts-Airbag
9	Kopf hinten links-Airbag
10	Kopf hinten rechts- Airbag
11	Knie Fahrer-Airbag
12	Knie Beifahrer-Airbag
13	Telematik
14	Gurterinnerung Fahrer
	 iBAC-Dienst aktivieren iBAC-Dienst deaktivieren Abbrechen Berechnen 3
	12020802

Index	Screen element	Index	Screen element
1	Input box for 15-character IBAC enable code	2	Selected IBAC service
3	"Calculate" button, the 5-character IBAC enable code is calculated		

Integrated Servi Technical Applic	ce ation / Programming		XP				? 🗵 🗙	
Sitzung: DC912	31	Fahrzeug: E32			Klem	me 15: 14,00V	Klemme 30: 14,00	/
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung					
Car-Memory	Key-Memory	Fahrzeug- kodierung	Service- funktionen	Steuergerä Programmie	ite- erung	EWS/DME- Abgleich	EWS/DDE- Abgleich	_
	AUSWAHL	iBAC-Code-Ber	echnung	E.	X			
	Codierung Zentralen schlüssel Fahrzeuga Version C	Der berechnete i	BAC-Kode ist UXK12	Ok				2
i -						iBAC-Code umrechnen		3

Index	Screen element	Index	Screen element
1	The calculated 5-character IBAC enable code is shown	2	"OK" button
3	"Convert IBAC code" button (not selectable)		

Make a note of the calculated 5-character IBAC enable code and enter manually when requested to do so by SGC.

Note:

The 5-character IBAC enable code is not stored. Observe upper case/lower case letters.

Vehicle and Key Memory (CKM)

On customer request, various vehicle settings can be changed by means of coding on certain E-model series (e.g. E46, E6X). Some settings (Key) are allocated to a certain key (max. four keys), e.g. heating/air conditioning/ventilation while other settings (Vehicle) apply globally to the entire vehicle, e.g. antitheft alarm system.

Vehicle and Key Memory settings can be selected under the "CKM" tab after determining the native measures plan in the "Vehicle" menu.

Note:

Due to different legal stipulations, there may be national differences in possible CKM settings. Factory settings may also vary from country to country.

Note:

When replacing control modules, it may happen that individual data in the CKM settings are not automatically restored. Before replacing a control module, the CKM settings in the vehicle must be printed out so that these can be restored after the control module has been replaced.

BMW E70, E71, E81, E82, E87, E88, E90, E91 E92, E93, F01 F02 MINI R55 and R56

On these model series, all Vehicle and Key Memory functions are programmed directly in the vehicle (please refer to "Personal Profile" in the Owner's Manual: individual settings for a maximum of 3 remote control units via the display in the instrument cluster or via the Central Information Display).

BMW E38, E39, E46, E52, E53, E60, E61, E63, E64, E65, E66, E83, E85 and E86 MINI R50, R52 and R53 Rolls-Royce

The procedure for programming the Vehicle and Key Memory is described below. The basic prerequisite is that all control modules on a vehicle are programmed to the current software status:

Two or more parameter keywords (e.g. active, inactive) are assigned to a function or a function keyword. The current setting is shown by a selected checkbox next to the parameter keyword and can be changed by the service technician. Key functions can be set individually for the max. 4 keys. The factory setting is represented by a corresponding symbol next to the parameter keyword.

The CKM functions are divided into a maximum of three levels of hierarchy. Main group (e.g. central locking), group (e.g. unlocking rear window, boot/rear lid) and an optional subgroup (e.g. lids after ignition on).

Vehicle and Key Memory



Index	Screen element	Index	Screen element
1	"CKM" tab	2	"Vehicle" menu
3	Symbol for "Factory settings", shows the factory setting of the function	4	Tick - the green tick shows the selected setting of the function, the gray tick shows the active setting of the function
5	"Factory settings" button, establishes the factory settings for the vehicle and keys	6	"Cancel all" button, cancels all settings
7	"Determine measures plan" button		

Note:

You can print out the set CKM values. Printing out the CKM settings could cause values that have been entered in the list but not yet stored in the vehicle to be lost, making it necessary to re-enter them. It is advisable to print out the CKM settings at the start of programming and if necessary immediately after completing CKM reprogramming.

Procedure for changing CKM settings

User action	Result
Activate the required change by selecting "active", "not active" or one of the specified settings.	
Click on "Determine measures plan" button.	
	Measures plan is determined.
Click on "Accept measures plan" button.	
	The data is saved to the vehicle.
Select "Final report" tab.	
	A final report of the settings that have been performed is shown.

Note:

The selected settings for the Vehicle and Key Memory are retained even when the control modules are reprogrammed or encoded. If the CKM backup or restore cannot be successfully performed, this will be seen in the final report.

ISTA/P Data management

Enable codes and vehicle orders or central coding keys are imported and managed via the "Data management" menu button. This button is also used to show the reports of previous sessions.

Data management:

Integrated Service		4			2
Technical Applicati	on / Programming Eabra	2010		Klemme 15: -	Klemme 30:
Sitzung	Programmierung Fahrz	eug verwaltu	ng		
Freischaltkode importieren	Freischaltkode Fahr: löschen impol	zeugauftrag rtieren löschen	ugauftrag Berichte		
Fahrgestellnumm	ier 🔺 Software-ID	Datei	Zertifikat		
Filter: Stand	ard				Anzahl Treffer: O
Filtern					Importiere

Index	Screen element	Index	Screen element
1	"Import Enable code" tab	2	"Delete enable code" tab,
			deletes imported enable codes
3	"Import vehicle order" tab	4	"Data management" menu
5	"Delete vehicle order" tab, deletes imported vehicle orders	6	"Reports" tab, shows previous sessions with final report

Import vehicle order

All the vehicle identification numbers where the vehicle order is in the data stock of ISTA/P are shown in a selection list. The user can select a vehicle identification number and have the corresponding vehicle order displayed. The user can additionally search for a vehicle identification number by correspondingly changing the sorting function. New vehicle orders can be imported from removable data media to the data stock of ISTA/P.

User action	Result
Select "Import vehicle order" tab.	
	Vehicle identification numbers are shown, for which vehicle orders or central coding keys are already available.
Click on "Import" button.	
	Request to insert a data medium is shown.
Load data medium in ISSS or set up connection between ISSS and USB storage medium.	
Click on "OK" button.	
	Vehicle order is imported.

Note:

In view of the variety of USB storage media available on the market, a functional guarantee cannot be given under ISTA/P for all USB storage media used on an ISSS.

Import activation code

In some control modules the software is enabled with ISTA/P (e.g. when programming the CCC, an enable code must be imported in order to activate the "Expanded Voice Recognition" option).

In ISTA/P it is possible to import enable codes for a vehicle before working through the measures plan. All imported enable codes are stored within the ISPI network and are available for future programming sessions without the need to import them again.

User action	Result
Select "Import enable code" tab.	
	Vehicle identification numbers are shown, for which enable codes are already
	available.
Click on "Import" button.	
	Request to insert a data medium is shown.
Load data medium in ISSS or set up	
connection between ISSS and USB	
storage medium.	
Click on "OK" button.	
	Enable code is imported.

Note:

With the vehicle identification number, the enable code can be ordered and downloaded as a ZIP files (containing 3 files) through the ASAP-Portal. The ZIP file must be unzipped and placed on the "Root directory" of the data medium (e.g. F:\). In view of the variety of USB storage media available on the market, a functional guarantee cannot be given under ISTA/P for all USB storage media used on an ISSS.
ISTA/P - User Documentation Vehicle Programming in Service Applications

If a required enable code is not available in the workshop network at the start of the measures plan, a request to import/order the enable code will be issued while working through the measures plan.

Freischaltkode-Impo	rt	
Für Steuergerät CIC	C/CHAMP ist folgend	er Freischaltkode erforderlich:
Applikationsnumme Upgradeindex: 0x00	r: 0x0019 001	
🚳 Freischaltkode	mit Bestellnummer 9	166537
Freischaltkode mit ' versucht werden.) A	'Start Import' importie Anschließend Schaltf	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i
Freischaltkode mit ' versucht werden.) A oder nicht gewünsc dann abna diese Ak	'Start Import' importie Anschließend Schaltf ht wird, ebenfalls Sc ctivierung durchgefül	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i haltfläche 'Weiter' drücken. Der Maßnahmenplan wird bet Achtung: Die freizusshaltende Eunktionalität steht
Freischaltkode mit ' versucht werden.) A oder nicht gewünsc dann ohne diese Ak dann nicht zur Verfu	'Start Import' importie Anschließend Schaltf ht wird, ebenfalls Sc «tivierung durchgefüł ūgung.	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i haltfläche 'Weiter' drücken. Der Maßnahmenplan wird hrt. Achtung: Die freizuschaltende Funktionalität steht
Freischaltkode mit ' versucht werden.) A oder nicht gewünsc dann ohne diese Ak dann nicht zur Verfu Start Import	'Start Import' importie Anschließend Schaltf ht wird, ebenfalls Sc ttivierung durchgefüł ūgung. Weiter	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i haltfläche 'Weiter' drücken. Der Maßnahmenplan w ird hrt. Achtung: Die freizuschaltende Funktionalität steht
Freischaltkode mit ' versucht werden.) A oder nicht gewünsc dann ohne diese Ak dann nicht zur Verfi Start Import	'Start Import' importie Anschließend Schaltf ht wird, ebenfalls Sc «tivierung durchgefüł ūgung. Weiter	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i haltfläche 'Weiter' drücken. Der Maßnahmenplan wird hrt. Achtung: Die freizuschaltende Funktionalität steht
Freischaltkode mit ' versucht werden.) A oder nicht gewünsc dann ohne diese Ak dann nicht zur Verfu Start Import	'Start Import' importie Anschließend Schaltf ht wird, ebenfalls Sc ttivierung durchgefüł ūgung. Weiter	eren. (Der Import über 'Start Import' kann mehrfach läche 'Weiter' drücken. Falls der Import nicht möglich i haltfläche 'Weiter' drücken. Der Maßnahmenplan wird hrt. Achtung: Die freizuschaltende Funktionalität steht

Index	Screen element	Index	Screen element
1	"Continue" button Continue measures plan without enable code	2	"Start import" button, imports enable code from data medium

It is possible to work through the measures plan without importing the enable code. The corresponding is then not available. The enable code can be entered at a later point in time to activate the function.

BMW vehicle programming and encoding

Depending on the structure of the vehicle system network, the model series can be grouped together in model series groups with respect to the ISTA/P programming routine: The following pages contain descriptions of the programming procedure.

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. Please refer to the description <u>"Vehicle programming and finishing off"</u>.

Programming procedure for model series E31, E32 and E34

The application software "Control module encoding" (SGC) for encoding and programming the earlier model series has been integrated into ISTA/P.

itzung: 904630	8	Fahrzeug: -			K.15:13,11V	K.30: 13,49V
tzung	Programmierung	Fahrzeug	Daten- ∨er w altung			
Car-Memory	Key-Memory	Fahrzeug- codierung	Service- funktionen	Steuergeräte- Programmierung	EWS/DME- Abgleich	EWS/DDE- Abgleich
	IDENTIF	IKATION				
	am Fahrz anschlie Zündung Automati Fahrzeug identifi starten	zeug einschalten! .sche g- .kation	▼			

Index	Screen element	Index	Screen element
1	"Vehicle Memory" tab,	2	"Key Memory" tab, Key Memory value settings
3	"Vehicle coding" tab, control module coding	4	"Service functions" tab, shows service functions, (e.g. flash radio)
5	"Control module programming" tab, service measures Replacing control modules or EPROM, deleting adaptation values	6	"EWS/DME calibration" tab, synchronizes EWS and DME control modules
7	"EWS/DDE calibration" tab, synchronizes EWS and DME control modules		

A detailed description of the programming and encoding procedure is not provided here as only the access and not the procedure has changed in terms of programming the model series that are programmed via SCG programming.

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Programming abort of programmable drive control modules (E31, E32, E34)

Proceed as follows if programming always cancels at the same point:

- Disconnect the drive control module for about 1 minute
- Reconnect the drive control module
- Switch on ignition
- Repeat programming
- Switch off ignition.

Programming caused by the instrument cluster (E31, E32, E34)

In isolated cases, the instrument cluster can interrupt communication on the diagnosis lead during programming. In such cases, repeat programming with the instrument cluster disconnected. Before EWS calibration, the instrument cluster must be reconnected.

Malfunctions on the diagnosis cable (E31, E32, E34)

With the following engine control module, it may be the case that no programming can be performed again after a programming abort:

- ME7.2, M5.2, M5.2.1 in M62 engine
- M5.2.1 in M73 engine.

After trying again, the fault message:

"Programming cannot be performed without errors - repeat programming" appears. Diagnosis is not possible here. Switch the ignition off and back on again. You can now repeat programming.

Display of error messages (E31, E32, E34)

The text display of fault messages appears on the screen. The relevant fault code can be called up by pressing the information button at the bottom right of the screen.

Contact Technical Support

Consult Technical Support if

- Programming aborts repeatedly occur
- Programming is not possible.

In such cases, keep the following ready to hand:

- Measures plan
- Final report
- Diagnosis printout of the control modules concerned
- Full error message
- Version of ISTA/P used.

New coding (E31, E32, E34)

All control modules that require encoding MUST be encoded after being fitted. Malfunctions could occur if this encoding procedure is not carried out after fitting. Encoding a control module takes no more than 30 seconds. Proceed as follows:

- Connect the BMW programming system to the vehicle
- Switch on ignition
- Select model series in ISTA/P
- Select "Encoding ZCS/FA"
- Select model series
- Select "1 New coding"
- Select system (e.g. "Airbag")
- Answer the question "Start automatic encoding" with "Y".

Note:

Encoding cannot be interrupted once the user has confirmed automatic encoding with "Y".

- Follow the instructions given by the user prompts
- After encoding, clear the fault memory via the vehicle test in the ISTA workshop system.

Programming procedure for the model series E36, E38, E39, E46, E52, E53, E60, E61, E63, E64, E65, E66, E70, E71, E81, E82, E83, E85, E86, E87, E88, E90, E91, E92 and E93

The following pages contain descriptions of the programming procedure for the BMW model series listed above.

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. Please refer to the description <u>"Vehicle programming and finishing off"</u>.

Read out vehicle data with ISTA/P. See Section: Start new session with ISTA/P.

The measures plan can be expanded by the following actions:

- Carry out conversion
- Carry out vehicle actions
- Set CKM values (E36, E38, E39, E46, E52, E53, E60, E61, E63, E64, E65 E66, E83, E85 and E86)
 - Select "Vehicle" tab.
 - Select "CKM" tab.
 - Print CKM values.
- Prepare for control module replacement
- Programs control module
- Encode control module.

The actions can be selected as follows:

- Under the "Process control modules" tab by directly selecting the actions or clicking on the control module
- Under the "Control module tree" tab by clicking on the control module.

Connection to vehicle is set up automatically:

Technical Application	/ Programming			XP 🏚	1	<u> </u>		?	X
Sitzung: EE62005		Fahrzeug: E60			Kle	mme 15:	14,00V	Klemme 30:	14,00
Sitzung Pro	grammierung F	Fahrzeug	Daten- ver w altung	3					
<u>F</u> ahrzeug- Ste details ba	euergerāte- um	Steuergeräte bearbeiten	Aktionslis	te					
Fahrgestellnummer:	EE62005			E-Bezeichnung:		E60			
Kilometerstand:	0 km			Beschreibung:		E60 Lim	M54B30	LL	
Typschlüssel:	NA71			Baujahr:		0903			
Lackkode:	0475			Polsterkode:		LCBA			
 -Stufe (Werk) — Zuletzt behandelt mit	5.30 : Progman 27.1	1.1 - Progman 28.0)	I-Stufe (Ist):		E060-07-	09-521		
I-Stufe (Werk) – Zuletzt behandelt mit Sonderausstattungen	5.30 : Progman 27.1	1.1 - Progman 28.0)	l-Stufe (lst): Freischaltkode	Status (vor	E060-07- Planausfü	09-521 ihrung):		
I-Stufe (Werk) – Zuletzt behandelt mit Sonderausstattungen Nummer Bezeichn	5.30 : Progman 27.1 : ung	1.1 - Progman 28.0		I-Stufe (Ist): Freischaltkode Abkürzung	Status (vor	E060-07- Planausfü Applikati	09-521 ihrung): Upgrade	→ Status	
– Zuletzt behandelt mit Sonderausstattunger Nummer Bezeichn 265 Reifen Dr	5.30 Progman 27.1 : ung uck Control (RDC	1.1 - Progman 28.(I-Stufe (Ist): Freischaltkode Abkürzung CCC-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 hrung): Upgrade 1	e Status aktiviert	
I-Stufe (Werk) Zuletzt behandelt mit Sonderausstattungen Nummer Bezeichn 265 Reifen Dr 302 Alarmanla	5.30 Progman 27.1 : ung uck Control (RDC ige	1.1 - Progman 28.0 		I-Stufe (Ist): Freischaltkode Abkürzung CCC-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 ihrung): Upgrade 1	e Status aktiviert	
I-Stufe (Werk) Zuletzt behandelt mit Sonderausstattungen Nummer Bezeichn 265 Reifen Dr 302 Alarmanla 403 Glasdach	5.30 Progman 27.1 ung uck Control (RDC uge , elektrisch	1.1 - Progman 28.0)		I-Stufe (Ist): Freischaltkode Abkürzung CCC-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 ihrung): Upgrade 1	Status	
I-Stufe (Werk) Zuletzt behandelt mit Sonderausstattunger Nummer Bezeichn 265 Reifen Dr 302 Alarmania 403 Glasdach 455 Aktivsitz f	5.30 Progman 27.1 ung uck Control (RDC nge , elektrisch ür Fahrer und Be	1.1 - Progman 28.())		I-Stufe (Ist): Freischaltkode Abkürzung CCC-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 hrung): Upgrade 1	e Status aktiviert	
I-Stufe (Werk) Zuletzt behandelt mit Sonderausstattungen Nummer Bezeichn 265 Reifen Dr 302 Alarmanla 403 Glasdach 455 Aktivsitz f 508 Park Dist	5.30 Progman 27.1 ung uck Control (RDC uge , elektrisch ür Fahrer und Be ance Control (PD)	1.1 - Progman 28.()) 9ifahrer C)		I-Stufe (Ist): Freischaltkode Abkūrzung CC ^I C-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 hrung): Upgrade 1	e Status aktiviert	
I-Stufe (Werk) Zuletzt behandelt mit Sonderausstattungen Nummer Bezeichn 265 Reifen Dr 302 Alarmanla 403 Glasdach 455 Aktivsitz f 508 Park Dista 522 Xepon-Lii	5.30 Progman 27.1 ung uck Control (RDC uck Control (RDC uck Tahrer und Be ance Control (PDu cht	1.1 - Progman 28.0 C) eifahrer C)		I-Stufe (Ist): Freischaltkode Abkürzung CCC-Bedienob	Status (vor erfläche	E060-07- Planausfü Applikati 2	09-521 Ihrung): Upgrade	Status	

Index	Screen element	Index	Screen element
1	"Programming" menu	2	I-stage (actual), shows current I-stage of vehicle
3	Enable code status, status of enable code used or required in vehicle	4	Progress bar, shows processing progress
5	Last processed with, shows the Progman or ISTA/P version, with which the vehicle was last processed	6	I-stage (factory), shows the I-stage with which the vehicle was produced
7	"Vehicle details" tab		

Follow and confirm the instructions provided by the programming system.

By reading out the vehicle details it is possible to determine whether the vehicle corresponds to the current software status. Unnecessary vehicle programming can be avoided in this way.

The native measures plan is determined after the connection to the vehicle has been set up successfully. This is shown under the "Programming" menu button.

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Selecting vehicle manually:

Integrated Servic Technical Applica	e ition / Programming		XP			? 🔍 🗙	
Fahrgestellnumme	r: 9046757	Fahrzeug: -		Kle	mme 15: 13,85V	Klemme 30: 13,85V	
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung				
Fahrzeug- details	Serie auswählen]	
Fahrgestellnumr Kilometerstand: Typschlüssel: Lackcode: I-Stufe (Werk) Zuletzt behande Sonderausstattu Nummer Bez						WT-Status	
	1er-Serie	3er-Serie	5er-Serie	6er-Serie	7er-Serie		_(
	8er-Serie	X-Serie	Z-Serie	MINI			
B Bauraiba wird a	rmittelt						
						Maßnahmenplan ermitteln	

Index	Screen element
1	"Product line" button, product line selection

If automatic recognition of the model series fails, you will be requested to enter the vehicle identification number.

The vehicle can also be determined manually. For this purpose, select the product line by clicking on the corresponding button.

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Selecting model series manually:

Sitzung: TS03975	i	Fahrzeug: -			Klemme	15: 14,00V	Klemme 30:	14,00V
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung					
Fahrzeug- details	Baureihe aus w āh	len				E]	
Fahrgestellnumm								
Kilometerstand:								
Typschlüssel:								
Lackkode:								
I-Stufe (Werk)								
Zuletzt behandel								
Sonderausstattu								
Nummer Beze							tatus	
	E32	E38	E65	F01/F	02	Zurück		
i Baureihe wird ei	rmittelt						Maßnahme ermitte	nplan In

Index	Screen element
1	"Model series" button, model series selection

Select the model series for the connected vehicle by clicking the corresponding button.

Control module tree:

The control module tree shows the control units fitted in the vehicle corresponding to the topology. Each control module is shown as linked to the corresponding bus. Compound control modules are shown within a light blue area.

1 2				
Integrated Service Technical Application / Programming	XF		1 🗈 ? 🗔	×
Sitzung: EE62005	Fahrzeug: E60	Kle	emme 15: 14,00V Klemme 30): 14,00V
Sitzung Programmierung	Fahrzeug Daten- ver w altung			
Fahrzeug- Steuergeräte- details baum	Steuergeräte bearbeiten Aktionsliste			
SGM-ZG				
SGM-SIM	GW CAS	DWA	DME/DDE SINE	_
SZL BO	AUD MPM	SHD	ACC	
ТМЕА	IP CHAMP-/ RLS	Комві	AHL	
TMBF	MASK-Ag PDC	SZM	DSC	
SFZ	AMP CON	SMFA		
SBSL	CDC/iPod SMBF	LM		
SBSR	KBM	CID		
	ІНКА			
Geschätzte Ausführungsdauer: 00:00	:00	Maßnahmen entfernen	Gesamtkodierung Maßnah wählen ermi	menplan tteln
		4	3	110508009

Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Control module tree" tab, graphic representation of the control module tree
3	"Select complete coding" button, selects complete coding of the vehicle	4	"Remove actions" button

All actions determined based on the context are removed by clicking on the "Remove actions" button. Control module actions relevant to I-stages cannot be selected manually.

Display under "Process control module":

	1	2	3	4	5
Integrated Se Technical Ap	ervice plication / Programm	ing XP			? 🖃 🗙
Sitzung: EE6	32005	Fahrzeug: E6)	Klem	me 15: 14,00V	Klemme 30: 14,00V
Sitzung	Programmieru	ng Fahrzeug Daten- ver w altung			
Fahrzeug- details	Steuergeräte baum	Steuergeräte Aktionsliste bearbeiten			
Status	Kurzbezeichnung	Steuergerät	Programmieren	Kodieren	Tauschen 🔺
	SGM-ZGM/KGM	Sicherheits- und Gateway-Modul (ZGM) / Ka			
	SGM-SIM/ACSM	Sicherheits- und Gateway-Modul (SIM) / Cra			
	SZL	Schaltzentrum Lenksäule			
	TMFA	Türmodul Fahrer			
	TMBF	Türmodul Beifahrer			
	SFZ	Satellit Fahrzeugzentrum			
	DME/DDE	Digitale Motor Elektronik/Digitale Diesel Elek			
	ACC	Aktive Geschwindigkeitsregelung			
	AHL	Adaptives Kurvenlicht			
	DSC	Dynamische Stabilitäts-Control			
	TEL/ULF	Telefon/Universelle Lade- und Freisprechein			
	AMP	Verstärker			
	CDC/iPod	CD-Wechsler/iPod-Schnittstelle			
1	040	Car Assass System			
Geschätzte A	usführungsdauer: Ol):00:00	Maßnahmen entfernen	Gesamtkodierung wählen	Maßnahmenplan ermitteln
				6	12

Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Process control modules" tab
3	Programming, programs control module	4	Encoding, encodes control module
5	Replacement	6	"Select complete coding" button, selects complete coding of the vehicle
7	"Remove actions" button		

The actions ("Programming", "Encoding" or "Replacing") available for the control modules can be selected directly.

Note:

The "Determine measures plan" button is deactivated if determining the target context results in no action.

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Action list:

Integrated Service Technical Application / Programmierung Fahrzeug: E80 Sitzung: EE82005 Fahrzeug: E80 Programmierung Fahrzeug: E80 Steuergeräte-baum Steuergeräte-bearbeiten Aktionsliste I-Stufe (Ist): E060-07-09-521 I-Stufe (Soll): E060-08-03-550 Status Aktionsliste I-Stufe (Ist): E060-07-09-521 I-Stufe (Ist): E060-07-09-521 I-Stufe (Ist): E060-07-09-521 I-Stufe (Ist): E060-08-03-550 Status I-Stufe (Ist): E060-07-09-521 I-Stufe (Ist): E060-07-09-521 I-Stufe (Ist): E060-08-03-550 Status I-Stufe (Ist): E060-08-03-550 Status Intrace Intrace I-Stufe (Ist): <th></th>	
Sitzung: EE82005 Fahrzeug: E60 Klemme 15: 14,007 Klemme 30: 14,007 tzung: Programmierung Fahrzeug: Bateryeration Programmierung Fahrzeug: Fahrzeug: E060-07-09-521 Fu Fu Fahrzeug: E060-08-03-550 Fahrzeug: Fahrzeug: E060-08-03-550 Fahrzeug: Fahrzeu: Fahrzeug: Fahrzeug: Fahrzeu: Fahrz	ntegrated Service Fechnical Application / Pr
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Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Action list" tab
3	"Determine measures plan" button		

The "Action list" is a summary of the planned actions. They are also shown in the "Measures plan". Information relating to the control module may also be shown (e.g. control module can no longer be programmed).

ISTA/P - User Documentation Vehicle Programming in Service Applications

Vehicle menu:

Integrate	ed Service					2	
Technica	al Application / Programming						
Sitzung:	EE62005	Fahrzeug: E30	Daten-	Klemme 15:	14,00V	Klemme 30:	14,00
Sitzung	Programmierung	Fahrzeug	verwaltung				
Umrüstur	gen CKM	Fahrzeug- aktionen					
	Nachrüstung 110 Ah Batte	rie					
	Nachrüstung 2-stufige Bre	msleuchte					
	Nachrüstung 80 Ah AGM-I	Batterie					
	Nachrüstung 80 Ah Batter	е					
	Nachrüstung 90 Ah AGM-I	Batterie					
	Nachrüstung 90 Ah Batter	e					
	Nachrüstung AHK schwen	(bar					
	Nachrüstung Anhängerkup	plung					
	Nachrūstung AUX-In-Ansc	hluss					
	Nachrüstung Basissitze						
	Nachrüstung Durchladesy	stem					
	Nachrüstung Fahrgeschwi	ndigkeitsregelung					
	Nachrüstung Flexibles Dia	gnosemodul Einbau					
	Nachrüstung Fond-DVD-S	pieler					
П	Nachrüstuna Intearierte H	eiz-Klima-Automatik					◄
i						Maßnahmer	

Index	Screen element	Index	Screen element
1	"Conversions" tab: The retrofits and conversions available for the vehicle are shown, see "Retrofits and conversions"	2	"CKM" tab CKM value settings, see " <u>Vehicle and Key Memory (CKM)</u> "
3	"Vehicle" menu	4	 "Vehicle actions" tab: Clear fault memory Select complete coding Start system time of all airbag control modules.

The retrofits and conversions are listed under the "Conversions" tab in the "Vehicle" menu. All retrofits are shown first, followed by the possible conversions available for the connected vehicle.

Note:

Some retrofits and conversions require the entry of IBAC enable codes, see "Retrofits and conversions", "<u>Procedure for IBAC enable codes</u>".

Dialogue box after clicking on the control module in "Process control module" or the control module in the "Control module tree":

	Integrated Service Technical Applicat) tion / Programming		XP				?	×
	Sitzung: EE62005	i	Fahrzeug: E60			Klemme 15	5: 14,00V	Klemme 30:	14,00V
	Sitzung	Programmierung	Fahrzeug	Daten- ver w altung				-	
	Fahrzeug- details	Schaltzentrum L	enksāule (SZL)			E.	? ×		
	SG	Plan bearbeiten	Aktionsliste	Steuergeräte Information					
2		Programmi	eren						
3	SG	Kodieren						SINE	
	371 7	Tauschen							
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	7.495								
	IMBF								
	SFZ								
	SBSL								
	SBSR								
						5	Schließen		
				ІНКА					
			22		Maßnahı entfern	men Gesa en	amtkodierung wählen	Maßnahmen ermittelr	nplan n
	🗆 Geschätzte Ausfüh	nungedauar: 110.00	· 1111						

Index	Screen element	Index	Screen element
1	"Edit plan" tab	2	Programming, programs control module
3	Encoding, encodes control module	4	Replace, replaces control module
5	Replacement follow-up, follow-up procedure for control module that has already been replaced		

The available actions for a control module are individual. They may differ from control module to control module depending on which actions are defined.

Extract from display under "Action list":



Index	Screen element	Index	Screen element
1	"Action list" tab	2	Symbol "Action failed"
3	Symbol for "Conditions for action not met" (e.g. control module was not replaced)	4	Symbol for "Warning"
5	Symbol for "Action successful"	6	Symbol for "Action in progress"
7	Symbol for "Software action planned" (e.g. encoding)	8	Symbol for "Hardware action planned" (e.g. replace control module)

The planned actions are shown together with their respective status by selecting the "Action list" tab.

Display under "Control module information":

	Integrated Ser Technical App	vice XP A P P P P P P P P P P P P P P P P P
	Sitzung: EE62	Programmierung Fahrzeug Daten- verwaltung
I	Fahrzeug- details	Schaltzentrum Lenksäule (SZL)
	0-	SG Plan bearbeiten Aktionsliste Steuergeräte Information
)—		Status Hardwareaktion
		SG Diagnoseadresse 0x2 SINE 2
)—	SZL	Variante SZL
	RCI	Bus-System Byteflight 3
	TMFA	Noch programmierbar 1
	TMPE	Hardwarenummer 9136900 4
		Zusammenbaunummer 9136900
	SFZ	Programmierstatus 1
	0.001	
	SBSL	
	SBSR	Schließen
		ІНКА
	Coochôtato Au	Maßnahmen Gesamtkodierung Maßnahmenplan 6
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		12020800

Index	Screen element	Index	Screen element
1	Status, planned action	2	Diagnosis address of control module
3	Bus system to which the control module is connected	4	Hardware number of control module
5	Programming status, display of detailed information	6	"Determine measures plan" button
7	Assembly number, is made up of hardware number and software number of control module	8	Still programmable, shows how often the control module can still be programmed
9	Control module variant		

The information relating to the selected control module is shown by selecting the "Control module information" tab. In addition to the planned action and other relevant data, it also shows how often the control module can still be programmed.

Note:

The "Determine measures plan" button is deactivated if no actions are to be selected.

Determine measures plan

User action	Result
Select "Determine measures plan".	
	The "Measures plan", "Control module
	tree", "Action list", "Order list" and
	"Enable code list" tabs are shown.
	The measures plan is shown in the menu
	window. Control modules that are to be
	processed are identified by a yellow
	symbol. A red symbol indicates
	replacement or installation of a control
	module. No action is planned for the
	control module if no symbol is shown.
	The actions are indicated as follows:
	P Programming
	M Installing
	R Replacing
Select "Measures plan" tab	
	i ne measures plan is snown in the print
	view.

Measures plan in print view:

				Ŷ		
Integrated Service Techni:al Application / Programm	ing	XP	A 🖌 🗉		?	\times
Sitzung: EE62005	Fahrzeug: E60		КІ	emme 15: 14,00V	Klemme 30:	14,00V
Maßnahmenplan anzeigen						X
Maßnahmenplan Steuergeräte- baum	Aktionsliste E	Bestellliste	Freischaltkode Liste			
вмw			BMW	Service		
Maßnahme	nplan					
Sitzungsname: E60, Voraussichtliche Ges	_EE62005 samtdauer: 00:02:27					
Kopfdaten						-
Ĺ					Maßnahmen	plan

Index	Screen element	Index	Screen element
1	"Measures plan" tab, shows measures plan in print view	2	"Control module tree" tab, shows the control module tree together with the planned actions
3	"Action list" tab, shows the planned actions in a table	4	"Order list" tab, shows control modules to be ordered
5	"Enable code list" tab, shows the enable codes used	6	"Print" button, prints the measures plan
7	"Accept measures plan" tab, executes measures plan and programs vehicle		

The measures plan contains actions that need to be carried out in order to eliminate a vehicle fault. In addition to the determined actions, it also shows the vehicle details, the session name and the ISTA/P version used.

Executing measures plan and programming vehicle

User action	Result
Print measures plan.	
Select "Accept measures plan".	
	The measures plan is shown in the menu window. Control modules that did not respond are indicated without a colored symbol. Control modules that are to be processed are identified by a yellow symbol. A red symbol indicates replacement or installation of a control module. No action is planned for the control module if no symbol is shown.
	I he "Control module tree" and "Action list" tabs are shown.
Observe and acknowledge safety	
information on programming.	
	Measures plan is executed.
	Plan is followed up.
Carry out initialization and instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Print final report.	

Control module replacement

The control modules to be replaced are determined by the measures plan. The request to replace a control unit is integrated in the measures plan procedure. The new control modules must be encoded after installation to ensure they operate correctly.

The control module replacement procedure can be carried out as follows and is described on the following pages:

- Control module replacement without interrupting the session
- Control module replacement with session for modification
- Control module replacement with plan abort.

Note:

When replacing, refer to the technical documentation for the control module.

ISTA/P - User Documentation Vehicle Programming in Service Applications

Modification instructions for control module replacement:

	Integrated Service Technical Application / Programming
	Sitzung: E62005 Fahrzeug: E60 Klemme 15: 14,00V Klemme 30: 14,00V
	Maßnahmenplan ausführen
	Steuergeräte- baum Umbauanweisungen
1	SINE SINE
	120200010

Index	Screen element	Index	Screen element
1	Confirmation "Replace control	2	"Plan abort" button
	module"		Cancels session
3	"Modification session" button, control module replacement with session for modification	4	"Modification done" button, control module replacement without interrupting the session

Select the appropriate control module replacement.

Control module replacement without interrupting the session

User action	Result
	Measures plan is executed. If control modules are to be replaced as part of the
	measures plan, a corresponding request to replace the control module will be issued.
Replace or install control modules.	
Confirm replacement request.	
Click on "Modification done" button.	
	Measures plan is continued.
	Plan is followed up.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with session for modification

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Click on "Session for modification" button.	
	Session is stored and ended
Replace or install control modules.	
Start new session.	
	Stored session is found.
Select stored session.	
Confirm replacement request and click on	
"Modification done" button.	
	The measures plan is continued, no further
	actions can be added.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final
	report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with plan abort

User action	Result
	Measures plan is executed. If control modules are to be replaced as part of the measures plan, a corresponding request to replace the control module will be issued.
Click on "Plan abort" button.	
	Session is terminated
Replace or install control modules.	
Start new session.	
	Dialogue box "Replaced control modules" is shown.
Answer the question "Have control modules been replaced?" with "Yes".	
	Target context is determined.
Select replaced control modules in "Control module tree" or under "Process control modules" and select "Replacement follow-up". Click on "Determine measures plan" button.	Further actions can be added.
	The measures plan is determined and executed.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

The question "Have control modules been replaced?" at the start of a new session is to be answered with "Yes". A corresponding replacement follow-up procedure is then executed as part of the measures plan.

Programming procedure for model series F01 and F02

The following pages contain descriptions of the programming procedure for the BMW model series F01 and F02.

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. Please refer to the description <u>"Vehicle programming and finishing off"</u>.

Read out vehicle data with ISTA/P. See Section: <u>Start new session with ISTA/P.</u>

The measures plan can be expanded by the following actions:

- Carry out conversion
- Carry out vehicle actions
- Prepare for control module replacement
- Programs control module
- Encode control module.

The actions can be selected as follows:

- Under the "Process control modules" tab by directly selecting the actions or clicking on the control module
- Under the "Control module tree" tab by clicking on the control module.

Connection to vehicle is set up automatically:

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Sitzung: 0006801		Fahrzeug: F01			KI	emme 15:	14,00V	Klemme 30:	14,00
Sitzung P	rogrammierung	Fahrzeug	Daten- verwaltung	1					
<u>F</u> ahrzeug- details	Steuergeräte- baum	Steuergeräte bearbeiten	Aktionslis	te					
Fahrgestellnummer	r: 0006801			E-Bezeichnung	J:	F01			
Kilometerstand:	68185 km			Beschreibung:		F01 740i	ECE LL	Lim N54B30 ML	6Z
Typschlüssel:	KA41			Baujahr:		1107			
Lackkode:	0A43		1	Polsterkode:		LCDF			
LONG AND IN		500		Distant (Inth)		C004 00	00_505		
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Index	Screen element	Index	Screen element
1	"Programming" menu	2	I-stage (actual), shows current I-stage of vehicle
3	Enable code status, status of enable code used or required in vehicle	4	Progress bar, shows processing progress
5	Last processed with, sShows the Progman or ISTA/P version, with which the vehicle was last processed	6	I-stage (factory), shows the I-stage with which the vehicle was produced
7	"Vehicle details" tab		

Follow and confirm the instructions provided by the programming system.

By reading out the vehicle details it is possible to determine whether the vehicle corresponds to the current software status. Unnecessary vehicle programming can be avoided in this way.

The native measures plan is determined after the connection to the vehicle has been set up successfully. This is shown under the "Programming" menu button.

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Selecting vehicle manually:

Fahrgestellnumme	r: 9046757	Fahrzeug: -			Klemme 1	5: 13,85V	Klemme 30:	13,85V
Sitzung	Programmierung	Fahrzeug	Daten- verwaltung					
Fahrzeug- details	Serie aus w ählen]	
Fahrgestellnumn	n							
Kilometerstand:								
Typschlüssel:								
Lackcode:								
I-Stufe (Werk)								
Zuletzt behande	1							
Sonderausstattu	1							
Nummer Bez	2						WT-Status	
	1er-Serie	3er-Serie	5er-Serie	6er-S	erie	7er-Serie		
	8er-Serie	X-Serie	Z-Serie	лім	41			
i Baureihe wird e	rmittelt						Maßnahmo ermitte	enplan eln

Index	Screen element
1	"Product line" button, product line selection

If automatic recognition of the model series fails, you will be requested to enter the vehicle identification number.

The vehicle can also be determined manually. For this purpose, select the product line by clicking on the corresponding button.

Selecting model series manually:

Sitzung: 180397	5	Fahrzeug: -			Klemme 15:	14,00V	Klemme 30:	14,00V
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung					
Fahrzeug- details	Baureihe aus w āh	len				E,]	
Febrgostellnum								
Kilometerstand:								
Typschlüssel:								
Lackkode:								
l-Stufe (Werk)								
Zuletzt behande								
Sonderausstattu	u la							
Nummer Beze	2						tatus	
	E32	E38	E65	F01/F02	Zu	Jrūck		
i Baureihe wird e	rmittelt						Maßnahme ermitte	nplan In

Index	Screen element
1	"Model series" button, model series selection

Select the model series for the connected vehicle by clicking the corresponding button.

Control module tree:

The control module tree shows the control units fitted in the vehicle corresponding to the topology. Each control module is shown as linked to the corresponding bus. Compound control modules are shown within a light blue area.

1	2									
Integrated Service Technical Application / F	Programming		XP	A	J			Ē	?	\times
Sitzung: 0006801	Fal	nrzeug: F01				Klemme	15: 14	,00V	Klemme 30:	14,00V
itzung Prog	rammierung Fah	rzeug	Daten- verwaltung							
Fahrzeug-Steu details baur	ergerāte- Ste n bea	uergeräte arbeiten	Aktionsliste							
ZGM										
SZL 💌	DVDC-LW	DVDC-A	ACSM		DME/DDE	• 1	RSVC	•	HUD	
SWW	DVD	>-A	EMF	•	EKPS	P V	sw		CON	
ICM	RSE	TCU/ULF	EMALI P.C		EGS	. F	CON		SMFAH	
DSC	AMPT/A	VM	EMARE		GWS	5	MBFH		SMFA	
VDM 💌	ULF_SBX	CIC/CHA	KAFAS P C			9	MBF		CID E	•
EDCSVL			KOMBI P C	•		F	D		FD2	
EDCSVR						li P	HKA C	•		
EDCSHL										◄
•		III								
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					5					

Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Control module tree" tab, graphic representation of the control module tree
3	"Select complete coding" button, selects complete coding of the vehicle	4	"Remove actions" button

All actions determined based on the context are removed by clicking on the "Remove actions" button. Control module actions relevant to I-stages cannot be selected manually.

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Display under "Process control module":

	1	2		3	4	5
Integrated S Technical A	Service pplication / Programm	ing XP				? 🗔 🗙
Sitzung: 00	06801	Fahrzeug: FO ʻ		Klem	me 15: 14,00V	Klemme 30: 14,00
Sitzung	Programmieru	ng Fahrzeug Daten- ver w altung				
Fahrzeug- details	Steuergeräte baum	- Steuergeräte bearbeiten Aktionsliste				
Status	Kurzbezeichnung	Steuergerät		Programmieren	Kodieren	Tauschen 🔺
	JBE	Junction-Box-Elektronik		\mathbf{X}	\mathbf{X}	
	ACSM	Crash-Sicherheits-Modul				
	SZL	Schaltzentrum Lenksäule		\mathbf{X}	\mathbf{X}	
•	TRSVC	Rundumsichtkamera		\mathbf{X}	X	
	sww	Spurwechselwarnung				
	ZGM	Zentrales Gateway-Modul				
	DME/DDE	Digitale Motor Elektronik		\times	\times	
	EKPS	Kraftstoffpumpensteuerung				
	EGS	Getriebesteuerung		\times	\times	
	ICM	Integrated Chassis Management				
	RSE	Rear Seat Entertainment				
	DSC	Dynamische Stabilitäts-Control				
	EMF	Parkbremse		\times		
*						
Geschätzte /	Ausführungsdauer: Ol):03:28		Malsnahmen entfernen	Gesamtkodierung wählen	Maßnahmenplan ermitteln
			(7	7	6	
						12

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Process control modules" tab
3	Programming	4	Encoding
5	Replacement	6	"Select complete coding" button, selects complete coding of the vehicle
7	"Remove actions" button		

The actions ("Programming", "Encoding" or "Replacing") available for the control modules can be selected directly.

Note:

The "Determine measures plan" button is deactivated if determining the target context results in no action.

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Action list:

	1		2					
Integrated Service Technical Applicatio	on / Programmin	g	XP				?	×
Sitzung: 0006801		Fahrzeug: F0	1		Klemme 15:	14,00V H	(lemme 30:	14,00V
Sitzung P	Programmierung	Fahrzeug	Daten- ver w a tung					
Fahrzeug- details	Steuergerāte- baum	Steuergeräte bearbeiten	Aktionsliste					
I-Stufe (Ist):		F001-08-09-505	I-St	ufe (Soll):	1	F001-08-09-	-510	
Status Aktion	• •	Kurzbezeichnung	Kanal 🔺	Hinweis				
Progra	ammieren 1	RSVC	ENET					
📃 Progra	ammieren l	НКА	ENET					
Progra	ammieren E	GS	ENET					
Progra	ammieren J	IBE	ENET					
Progra	ammieren E	MALI	ENET					
Progra	ammieren k	КОМВІ	ENET					
Progra	ammieren F	RM	ENET					
Progra	ammieren k	AFAS	ENET					
Progra	ammieren V	/DM	ENET					
Progra	ammieren F	ZD	ENET					
Progra	ammieren C	DME/DDE	ENET					
Progra	ammieren S	SZL	ENET					
ع Geschätzte Ausführu	ungsdauer: 00:0	03:28					Maßnahmer ermittel	nplan n

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Action list" tab
3	"Determine measures plan" button		

The "Action list" is a summary of the planned actions. They are also shown in the "Measures plan". Information relating to the control module may also be shown (e.g. control module can no longer be programmed).

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Vehicle menu:

	(2)	3)								
ntegrat Technic	ed Service al Application / Programming		XP		y			E	?	×
Sitzung:	0006801	Fahrzeug: F01				Klemn	ne 15:	14,00V	Klemme 30	14,00V
Sitzung	Programmierung	Fahrzeug	Daten- verwaltung							
Umrūstu	ngen aktionen									
	Umrüstung DVD Areacode	für Südostasien ein	stellen							
	Umrüstung DVD Areacode	für USA und Kanad	a einstellen							
	Umrüstung Fahrer Gurterir	inerung deaktivierei	n							
	Umrüstung Geruchsstartverriegelung									
	Umrūstung Klima nicht ein bei AUTO-Betātigung									
	Umrüstung Klimaanlagendesinfektion deaktivieren									
	Umrüstung OFF-Memory über Nachlauf hinaus aktivieren									
	Umrūstung Telematik deak	tivieren								
	Umrūstung Temperatur So	lwertkorrektur +1 G	rad							
	Umrüstung Temperatur Sol	lwertkorrektur +2 G	rad							
	Umrüstung Temperatur So	lwertkorrektur +3 G	rad							
	Umrüstung Temperatur Sollwertkorrektur -1 Grad									
	Umrüstung Temperatur So	lwertkorrektur -2 G	rad							
	Umrüstung Temperatur So	lwertkorrektur -3 Gi	rad							
i Maßn Geschä	ahmenplan wird aktualisiert tzte Ausführungsdauer: 00:03	3:28							Maßnahm ermitt	ienplan ieln

Index	Screen element	Index	Screen element
1	"Conversions" tab: Shows retrofits and conversions, <u>see Retrofits and conversions</u>	2	 "Vehicle actions" tab: Clear fault memory Select complete coding Start system time of all airbag control modules.
3	"Vehicle" menu		

The retrofits and conversions are listed under the "Conversions" tab in the "Vehicle" menu. All retrofits are shown first, followed by the possible conversions available for the connected vehicle.

Note:

Some retrofits and conversions require the entry of IBAC enable codes, see Retrofits and conversions, "<u>Procedure for IBAC enable codes</u>".

Dialogue box after clicking on the control module in "Process control module" or the control module in the "Control module tree":

	Integrated Service Technical Applica	e tion / Programming		XP	A		-	? 🖃 🗅	×
	Sitzung: 0006801		Fahrzeug: F01			Klemme 1	5: 14,00V	Klemme 30: 14,	00V
	Sitzung	Programmierung	Fahrzeug	Daten- ver w altung				-	
	Fahrzeug- details	Schaltzentrum L	enksäule (SZL)				? ×		
	SG	Plan bearbeiten	Aktionsliste	Steuergeräte Information					
2	Ŭ	Programmi	eren						
2	SG	Kodieren						SINE	
4	RCI	Tauschen							
(5)	TMEA	Tauschnac	hbereitung						
\mathbf{i}									
	TMBF								
	SFZ								
	SBSI								
	3532								
	SBSR					\$	Schließen		
		Li		IHKA	_				
	i				Maßnahi	men Ges	amtkodierung	Maßnahmenpla	an
	Geschätzte Ausfül	nrungsdauer: 00:00	:00		entfern	en	wählen	ermitteln	

Index	Screen element	Index	Screen element
1	"Edit plan" tab	2	Programming, programs control module
3	Encoding, encodes control module	4	Replace, replaces control module
5	Replacement follow-up, follow-up procedure for control module that has already been replaced		

The available actions for a control module are individual. They may differ from control module to control module depending on which actions are defined.

Extract from display under "Action list":



Index	Screen element	Index	Screen element
1	"Action list" tab	2	Symbol "Action failed"
3	Symbol for "Conditions for action not met" (e.g. control module was not replaced)	4	Symbol for "Warning"
5	Symbol for "Action successful"	6	Symbol for "Action in progress"
7	Symbol for "Software action planned" (e.g. encoding)	8	Symbol for "Hardware action planned" (e.g. replace control module)

The planned actions are shown together with their respective status by selecting the "Action list" tab.

Display under "Control module information":

1 8 7 6	Integrated Service Technical Applical Sitzung: 0006801 Sitzung Fahrzeug- details SZL 9 – P c 2G SZL 9 – C 2G SZL 9 – C 9	e tion / Programming Fahrzeug: F01 Programmierung Fahrzeug Daten verwa Rear Seat Entertainment (RSE) Plan bearbeiten Aktionsliste Steur Inford Status Diagnoseadresse Variante Bus-System Noch programmierbar Teilenummer Technische Einheiten	Image: Softwareaktion 0x26 RSE_HIGH-01HB-RSE_HIGH MOST mehrmals - btid_0000042e-001_011_017, hwel_0000037b-001_075_068, swfl_00000455-001_011_017, swfl_00000456-001_011_017, swfl_00000456-001_011_017, swfl_0000042f-001_011_017, swfl_0000042f-001_011_017,	Image: Second
	য় Geschätzte Ausfüh	uu hrungsdauer: 00:04:56	Maßnahmen entfernen	Maßnahmenplan ermitteln 5
				120108018

Index	Screen element	Index	Screen element
1	Status, planned action	2	Diagnosis address of control module
3	Bus system to which the control module is connected	4	Part number of control module
5	"Determine measures plan"	6	Technical units, software status in
	button		control module
7	Still programmable,	8	Control module variant
	Shows how often the control		
	module can still be programmed		

The information relating to the selected control module is shown by selecting the "Control module information" tab. In addition to the planned action and other relevant data, it also shows how often the control module can still be programmed.

Note:

The "Determine measures plan" button is deactivated if no actions are to be selected.

Determine measures plan

User action	Result
Select "Determine measures plan".	
	The "Measures plan", "Control module
	tree", "Action list", "Order list" and
	"Enable code list" tabs are snown.
	I ne measures plan is snown in the menu
	window. Control modules that are to be
	processed are identified by a yellow
	symbol. A red symbol indicates
	medule. No action is planned for the
	approximation is planned for the
	control module if no symbol is shown. The
	actions are indicated as follows.
	P Programming
	C Encoding
	I Initializing
	M Installing
	R Replacing
	U Removing.
Select "Measures plan" tab.	
	The measures plan is shown in the print
	view.
Measures plan in print view:

1 2	3	4	5	6	
Integrated Service Techni :al Application / Progra	mming	XP			? 🖃 🗙
Sitzung: 0006801	Fahrzeug: F01		КІ	emme 15: 14,00V	Klemme 30: 14,0
Maßnahmenplan anzeigen					×
Maßnahmenplan Steuergerä baum	āte- Aktionsliste	Bestellliste	Freischaltkode Liste		
ВМЖ			BMW	Service	
Maßnahm	nenplan				
Sitzungsname: F Voraussichtliche	F01_0006801 Gesamtdauer: 00:04:56				
Kopfdaten					•
1		7			Maßnahmenplar

Index	Screen element	Index	Screen element
1	"Measures plan" tab, shows measures plan in print view	2	"Control module tree" tab, shows the control module tree together with the planned actions
3	"Action list" tab, shows the planned actions in a table	4	"Order list" tab, shows control modules to be ordered
5	"Enable code list" tab, shows the enable codes used	6	"Print" button, prints the measures plan
7	"Accept measures plan" tab, executes measures plan and programs vehicle		

The measures plan contains actions that need to be carried out in order to eliminate a vehicle fault. In addition to the determined actions, it also shows the vehicle details, the session name and the ISTA/P version used.

Executing measures plan and programming vehicle

User action	Result
Print measures plan.	
Select "Accept measures plan".	
	The measures plan is shown in the menu window. Control modules that did not respond are indicated without a colored symbol. Control modules that are to be processed are identified by a yellow symbol. A red symbol indicates replacement or installation of a control module. No action is planned for the control module if no symbol is shown.
	list" tabs are shown.
Observe and acknowledge safety information on programming.	
	Measures plan is executed.
	Plan is followed up.
Carry out initialization and instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Print final report.	

Control module replacement

The control modules to be replaced are determined by the measures plan. The request to replace a control unit is integrated in the measures plan procedure. The new control modules must be encoded after installation to ensure they operate correctly.

The control module replacement procedure can be carried out as follows and is described on the following pages:

- Control module replacement without interrupting the session
- Control module replacement with session for modification
- Control module replacement with plan abort.

Note:

When replacing, refer to the technical documentation for the control module.

Modification instructions for control module replacement:

	Integrated Service				
	Technical Application / P	rogramming			
	Sitzung: 0006801	Fahrzeug: F01		Klemme 15: 14,00V	Klemme 30: 14,00V
	Sitzung Progra	rammierung Fahrzeug	Daten- ver w altung		
	Steuergeräte- baum Umba	auanweisungen		E	
1	SG SG SC R C 1 TMFA P C 1 TMBF SFZ SBSL SBSR Umba	Steuergerät SZL tauschen (Bestell Umbauaktionen bestätigen, Umbau Schaltfläche 'Sitzung für Umbau un ach den Umbau durchführen. Alterr rechen. au ist erfolgt Sitzung für Umbau	Inummer: 9136898). u durchführen und 'Umbau ist e iterbrechen' laufende Fahrzeug nativ mit 'Planabbruch' Ausführ Planabbruch	erfolgt' drücken. Alternativ gsitzung unterbrechen und ung des Maßnahmenplans	SINE
					120208020

Index	Screen element	Index	Screen element
1	Confirmation "Replace control	2	"Plan abort" button,
	module"		cancels session
3	"Modification session" button,	4	"Modification done" button,
	control module replacement		control module replacement without
	with session for modification		interrupting the session

Select the appropriate control module replacement.

Control module replacement without interrupting the session

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Replace or install control modules.	
Confirm replacement request.	
Click on "Modification done" button.	
	Measures plan is continued.
	Plan is followed up.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with session for modification

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Click on "Session for modification" button.	
	Session is stored and ended
Replace or install control modules.	
Start new session.	
	Stored session is found.
Select stored session.	
Confirm replacement request and click on	
"Modification done" button.	
	The measures plan is continued, no further
	actions can be added.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final
	report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with plan abort

User action	Result
	Measures plan is executed. If control modules are to be replaced as part of the measures plan, a corresponding request to replace the control module will be issued.
Click on "Plan abort" button.	
	Session is terminated
Replace or install control modules.	
Start new session.	
	Dialogue box "Replaced control modules" is shown.
Answer the question "Have control modules been replaced?" with "Yes".	
	Target context is determined.
Select replaced control modules in "Control module tree" or under "Process control modules" and select "Replacement follow-up". Click on "Determine measures plan" button.	Further actions can be added.
	The measures plan is determined and executed.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

The question "Have control modules been replaced?" at the start of a new session is to be answered with "Yes". A corresponding replacement follow-up procedure is then executed as part of the measures plan.

Programming BMW navigation systems "BMW Navigation" CD

The CD contains all "BMW Navigation" software versions for model series E38, E39, E46, E52, E53, E65, E66, E83, E85 and E86. Keep this CD ready to hand for programming the navigation system on these model series.

The navigation system for model series E60, E61, E63, E64, E70, E71, E81, E82, E87, E88 as well as E90, E91, E92, E93, F01 and F02 is not programmed using the CD "BMW Navigation" but rather only by using the programming system ISTA/P. The navigation computer automatically recognizes the required version.

When installing a new navigation computer in a vehicle with radio navigation (option 606), a special procedure must be followed (see Repair Instructions "Notes on Using Navigation Computers").

E38, E39, E46, E52, E53, E83, E85 and E86 with navigation system (option 609):

The current "BMW Navigation" CD must be used on vehicles with date of production after September 2001 and on all vehicles with "split-screen software":

Version 1

The navigation computer Mk3 with navigation system (option 609) has operating software V17 or earlier installed. The current operating software with the retrofit package "split-screen software" (subject to charge) should be retrofitted:

- Pay attention to installation instructions provided in the cover of the operating software CD.
- Load current operating software CD for navigation system.
- Installation will start automatically
- The CD is ejected when the installation is complete. Installation can take up to 7 minutes
- Remove CD
- Press the rotary push button to restart the navigation computer (please refer to the instructions displayed on the on-board monitor).
- The instruction "Load V17 or the Key CD" appears in the display of the on-board monitor.
- Load Key CD
- The Key CD is ejected when the installation is complete. Installation can take up to 2 minutes.
- Remove Key CD
- The navigation computer is then automatically restarted.

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Vehicle Programming in Service Applications

Version 2

The navigation computer Mk3 in a vehicle with navigation system (optional extra 609) should be replaced in the event of a complaint. A new navigation computer Mk3 with the current operating software should be installed:

- Read out software status.
- Install new navigation computer in vehicle. See Electronic Parts Catalogue (EPC).
- Pay attention to installation instructions provided in the cover of the operating software CD.
- Insert current navigation system operating software CD.
- The installation will start automatically.
- The CD is ejected when the installation is complete. The installation can take up to 7 minutes.
- Remove the CD.
- Press the rotary push button to restart the navigation computer (please refer to the instructions displayed on the on-board monitor).
- Encode navigation computer (please refer to BMW ISTA workshop systems).
- The navigation computer must go into sleep mode. To do this, switch the ignition off. The "Power LED" on the navigation computer will go out after one minute.

The CD "BMW Navigation V17.1" must be used for vehicles with date of production before September 2001 and Mk3 navigation computer without "split-screen software".

E60, E61, E63, E64, E65, E66, E70, E71, E81, E82, E85, E86, E87, E88, E90, E91,

E92 and E93 with JNAV navigation system (national version 807 and option 609): On vehicles produced before 28.02.2007, first program the JNAV control module with initial software before 03/07. To do this, update the control module to status 03/07 with the PCMCIA card. Then program the vehicle with ISTA/P (the JNAV control module is no longer listed in the measures plan!) and perform complete encoding.

Procedure for all model series

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. When programming and encoding the navigation system, refer to the documentation <u>"Preparing Vehicle Programming and Finishing Off"</u>.

User action	Result
E65/E66: Change to navigation menu via Control Display.	
Insert CD in the navigation system CD drive.	
	It will take about 15 minutes to load the software.
	The CD drive automatically opens.
Remove the CD from the drive.	
Confirm end of programming (on the control display in E65 and E66, on the on- board monitor in E38, E39, E46, E52 and E53 and on the central information display in the E83, E85 and E86).	

Important!

The navigation computer must not be cut off from the voltage supply for as long as the LED on the computer remains on. There is otherwise a risk of incorrect data being written to the memory, in which case correct operation of the computer can no longer be guaranteed.

Note:

During programming, the screen of the Control Display, on-board monitor or Central Information Display may flicker.

Note:

If the current software version is already programmed, the CD will be ejected again immediately.

Locations of OBD and MOST, connection options in BMW vehicles

The following overview shows which ICOM interfaces are approved for vehicle programming on which model series:

Model series	Vehicle i (connection vi	interface a OBD socket)	MOST compatibility (multichannel programming)
	ICOM A and C	ICOM A	ICOM A and B (Only possible if MOST direct access port fitted)
F01, F02	-	Х	-
E81, E82, E87, E88	_	Х	Х
E90, E91, E92, E93	-	Х	Х
E60, E61, E63, E64	-	Х	Х
E65, E66	-	Х	Х
E70, E71	-	Х	Х
E83	-	Х	-
E85, E86	-	Х	_
E31	Х	Х	-
E32	Х	Х	_
E34	Х	Х	-
E36	Х	Х	-
E38	Х	Х	-
E39	Х	Х	-
E46	Х	X	-
E52	-	X	-
E53	-	Х	-

Use of ICOM

All BMW model series can be processed with the ICOM A, B and C modules. For illustrations and information on the ICOM interfaces, see <u>ICOM (Integrated</u> <u>Communication Optical Module)</u>

Locations of OBD socket:

F01 and F02

The OBD socket is located near the A-pillar in the driver's footwell.

E81, E82, E87 and E88

The OBD socket is located on the A-pillar in the driver's footwell.

E90, E91, E92 and E93

The OBD socket is located on the A-pillar in the driver's footwell. **E60 and E61**

The OBD socket is located on the A-pillar in the driver's footwell.

E63 and E64

The OBD socket is located near the A-pillar in the driver's footwell. **E65 and E66**

The OBD socket is located on the A-pillar in the driver's footwell.

E70 and E71

The OBD socket is located near the A-pillar in the driver's footwell. **E83**

The OBD socket is located on the A-pillar in the driver's footwell.

E85 and E86

The OBD socket is located near the A-pillar in the driver's footwell.

Earlier model series are not described at present.

Important!

Pins that have been pushed back or have expanded in the OBD socket can cause communication problems between the BMW programming system and the vehicle. For this reason, you should check the contacts in the OBD socket before you connect a vehicle interface to the OBD socket.

Note:

After performing diagnosis or programming, the OBD socket must be sealed with the sealing cap.

Location of MOST direct access port:

E81, E82, E87 and E88

The MOST direct access port is in the left-hand footwell (viewed in the direction of travel).

E90, E9, E92 and E93

The MOST direct access port is in the left-hand footwell (viewed in the direction of travel).

E60 and E61

The MOST direct access port is located to the left of the glove compartment on lefthand drive vehicles and to the right of the glove compartment on right-hand drive vehicles.

E63 and E64

The MOST direct access port is located in the glove compartment.

E65 and E66

The MOST direct access port is located in the glove compartment.

E70 and E71

The MOST direct access port is located in the front passenger footwell, next to the footwell air vent.

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Vehicle Programming in Service Applications

Important!

The MOST direct access port can only be pulled out by approx. 2 to 3 cm. Otherwise, there is a risk of damaging the two fibre-optic cables.

Note:

To program vehicles with MOST direct access port, the connection between the ICOM and the vehicle must be set up using MOST.

Note:

There is no MOST direct access port on the E83, E85, E86 and earlier model series. These model series are programmed with ISTA/P only through the OBD socket. Use ICOM A for programming with ISTA/P.

Note:

On the E81, E82, E87, E88, E90, E91, E92 and E93 there is only a MOST direct access port if the following equipment is installed:

- BMW Professional radio (RAD2)
- Multi-audio system controller (M-ASK) = BMW Business navigation system
- Car Communication Computer (CCC) = BMW Professional navigation system.

Note:

Check that the MOST direct access port is correctly installed following any repair work in the front-passenger footwell (e.g. control module replacement).

Note:

After use, seal the MOST direct access port again with the protective cap or the removable loop-shaped bridge.

Programming procedure MINI

The following pages contain descriptions of the programming procedure for the MINI model series.

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. Please refer to the description <u>"Vehicle programming and finishing off"</u>.

Read out vehicle data with ISTA/P. See Section: <u>Start new session with ISTA/P.</u>

The measures plan can be expanded by the following actions:

- Carry out conversion
- Carry out vehicle actions
- Set CKM values (R50, R53 and R53)
 - Select "Vehicle" tab.
 - Select "CKM" tab.
 - Print CKM values.
- Prepare for control module replacement
- Programs control module
- Encode control module.

The actions can be selected as follows:

- Under the "Process control modules" tab by directly selecting the actions or clicking on the control module
- Under the "Control module tree" tab by clicking on the control module.

Programming procedure for the model series R50, R52, R53, R55 and R56

Technical Application /	Programming			XP 🏚 🖌		, <u>,</u> ,	?	X
Sitzung: TK91023		Fahrzeug: R56			Klemme 15:	14,00V	Klemme 30:	14,00\
Sitzung Prog	rammierung	Fahrzeug	Daten- verwaltur	g				
<u>F</u> ahrzeug- details bau	uergerāte- m	Steuergeräte bearbeiten	Aktionsli	ste				
Fahrgestellnummer:	TK91023			E-Bezeichnung:	R56			
Kilometerstand:	1000 km			Beschreibung:	R56 Min	i Cooper I	EUR LL 1,4I 85I	k W
Typschlüssel:	MF31			Baujahr:	0906			
Lackkode:	0A60			Polsterkode:	FKE1			
I-Stufe (Werk)	R056-06-09-	-515		I-Stufe (Ist):	D050_00	09-510		
				, otaro (lot).	1000-00	00 010		
Zuletzt behandelt mit: Sonderausstattungen:	unbekannt			Freischaltkode Statu	s (vor Planausf	ührung):		
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu	unbekannt			Freischaltkode Statu	s (vor Planausf Applikat	ührung): i Upgrad	e Status	
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (unbekannt ng COP-relevanter	Fahrzeuge		Freischaltkode Statu Abkürzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ührung): i Upgrad	e Status aktiviert	
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (210 Dynamisch	unbekannt ng COP-relevanter e Stabilitāts Co	Fahrzeuge ontrol (DSC)		Freischaltkode Statu Abkūrzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ūhrung): i Upgrad	e Status aktiviert	
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (210 Dynamisch 249 Multifunktie	unbekannt ng COP-relevanter e Stabilitäts Co on für Lenkrad	Fahrzeuge ontrol (DSC)		Freischaltkode Statu Abkūrzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ührung): i Upgrad 1	e Status aktiviert	
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (210 Dynamisch 249 Multifunktio 255 Sport-Lede	unbekannt ng COP-relevanter e Stabilitāts Co on für Lenkrad	Fahrzeuge ontrol (DSC)		Freischaltkode Statu Abkürzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ūhrung): i Upgrad 1	e Status aktiviert	
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Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (210 Dynamisch 249 Multifunktii 255 Sport-Lede 2RE Leichtmeta	unbekannt ng COP-relevanter e Stabilitäts Co on für Lenkrad erlenkrad Ilråder Web Sp	Fahrzeuge ontrol (DSC) ioke, 2-teilig		Freischaltkode Statu Abkūrzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ûhrung): i Upgrad 1	e Status aktiviert	
Zuletzt behandelt mit: Sonderausstattungen: Nummer Bezeichnu 1CA Selektion (210 Dynamisch 249 Multifunktion 255 Sport-Lede 2RE Leichtmeta 302 Alarmanlag	unbekannt ng COP-relevanter e Stabilitäts Co on für Lenkrad erlenkrad Ilråder Web Sp ue	Fahrzeuge ontrol (DSC) loke, 2-teilig		Freischaltkode Statu Abkürzung CCC-Bedienoberfläc	s (vor Planausf Applikat he 2	ührung): i Upgrad 1	e Status aktiviert	

Index	Screen element	Index	Screen element
1	"Programming" menu	2	I-stage (actual), shows current I-stage of vehicle
3	Enable code status, status of enable code used or required in vehicle	4	Progress bar, shows processing progress
5	Last processed with, shows the Progman or ISTA/P version, with which the vehicle was last processed	6	I-stage (factory), shows the I-stage with which the vehicle was produced
7	"Vehicle details" tab		

Follow and confirm the instructions provided by the programming system.

By reading out the vehicle details it is possible to determine whether the vehicle corresponds to the current software status. Unnecessary vehicle programming can be avoided in this way.

The native measures plan is determined after the connection to the vehicle has been set up successfully. This is shown under the "Programming" menu button.

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Selecting vehicle manually:

Sitzung Programmierung Fahrzeug Dater verwa Fahrzeug- details Serie auswählen Image: Serie auswählen	n- altung		
Fahrzeug- details			
Fabraetellnumm			
Kilometerstand:			
Typschlüssel:			
Lackcode:			
I-Stufe (Werk)			
Zuletzt behandel			
Sonderausstattu			
Nummer Bez			WT-Status
1er-Serie 3er-Serie 5	ier-Serie 6er-S	Serie 7er-Serie	
8er-Serie X-Serie	Z-Serie MI	NI	

Index	Screen element
1	"Product line" button, product line selection

If automatic recognition of the model series fails, you will be requested to enter the vehicle identification number.

The vehicle can also be determined manually. For this purpose, select the product line by clicking on the corresponding button.

Selecting model series manually:

Fahrzeug- details 9046757 Fahrzeug: - Klemme 15: 13,85V Klemme 30: 13,85V Fahrzeug- details Programmierung Fahrzeug Daten- verwaltung Image: Comparison of the comparison	Fahrgestellnummer: 9046757 Fahrzeug: Daten-verwaltung Klemme 15: 13,85V Klemme 30: 13,85V Fahrzeug- details Baureihe auswählen Image: Construction of the second of the	Integrated Service Technical Application /	Programming		XP	^		Ē	?	\times
tzung Programmierung Fahrzeug Daten-verwaltung Menne verwaltung Fahrzeug- details Baureihe auswähler Image: Sanderausstattung	Programmierung Fahrzeug Daten-verwaltung Method Method Fahrzeug- details Bureihe auswähler Image: Method Im	Fahrgestellnummer: 90	46757	Fahrzeug: -			Klemme 15:	13,85V	Klemme 30:	13,85V
Baureihe auswählen Image: Constraint of the second of	Fahrzeug- details Baureihe auswählen Image: Comparison of the comparison of t	itzung Prog	rammierung	Fahrzeug	Daten- ver w altung					
Fahrgestellnumr Kilometerstand: Typschlüssel: Lackcode: I-Stufe (Werk) Zuletzt behanded Sonderausstattur Nummer Bez	Fahrgestellnumm Kilometerstand: Typschlüssel: Lackcode: I-Stufe (Werk) Zuletzt behandel Sonderausstattu Nummer Bez R50/R52/R53 R55/R56 Zurück	Fahrzeug- Bau details	reihe auswähl	en						
	R50/R52/R53 R55/R56 Zurūck	Fahrgestellnumm Kilometerstand: Typschlüssel: Lackcode: I-Stufe (Werk) Zuletzt behandel Sonderausstattu Nummer Bez							WT-Status	
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Index	Screen element
1	"Model series" button, model series selection

Select the model series for the connected vehicle by clicking the corresponding button.

Control module tree:

The control module tree shows the control units fitted in the vehicle corresponding to the topology. Each control module is shown as linked to the corresponding bus. Compound control modules are shown within a light blue area.

1 2							
Integrated Service Technical Application / Programming		XP	♠ 🖌		E	?	X
Sitzung: TK91023	Fahrzeug: R56			Klemme 15:	14,00V	Klemme 30:	14,00V
Sitzung Programmierung	Fahrzeug	Daten- ver w altung					
Fahrzeug- details baum	Steuergeräte bearbeiten	Aktionsliste					
JBE							
GW	AMP	SZL	MRS				
CCC-ASK CCC-ANT	CAS	DME/DDE	CA				
BO CCC-A	SHD	ABS/ASC	CON				
CCC-Agg	КОМВІ	EPS					
TEL/ULF VM	PDC						
DAB	FRM						
	CID						
	ІНКА						
3 Geschätzte Ausführungsdauer: 00:00	:00		Maßnahi entfern	men Gesam en w	tkodierun; ählen	g Maßnahmei ermittel	nplan n
			4	3			Ľ

Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Control module tree" tab, graphic representation of the control module tree
3	"Select complete coding" button, selects complete coding of the vehicle	4	"Remove actions" button

All actions determined based on the context are removed by clicking on the "Remove actions" button. Control module actions relevant to I-stages cannot be selected manually.

Display under "Process control module":

	1	2	3	4	5
Integrated S Technical Ap	ervice oplication / Programm	ing			? 🗵 🗙
Sitzung: TK	91023	Fahrzeug: R50	Klem	me 15: 14,00V	Klemme 30: 14,00
Sitzung	Programmieru	ng Fahrzeug Daten- verwaltung			
Fahrzeug- details	Steuergeräte- baum	- Steuergerāte Aktionsliste bearbeiten			
Status	Kurzbezeichnung	Steuergerät	Programmieren	Kodieren	Tauschen
	JBE	Junction-Box-Elektronik		\boxtimes	
	MRS	Mehrfach-Rückhaltesystem			
	SZL	Schaltzentrum Lenksäule			
	DME/DDE	Digitale Motor Elektronik/Digitale Diesel Elek		\times	
	CA	Comfort Access			
	ABS/ASC/DSC	Anti-Blockier-System/Automatische Stabilität	×	\times	
	EPS	Electronic Power Steering			
	TEL/ULF	Telefon/Universelle Lade- und Freisprechein			
	АМР	Verstärker			
	CCC-ASK	CCC-Audiosystem-Kontroller			
	CAS	Car Access System			
	SHD	Schiebehebedach			
	CCC-ANT	CCC-Antennentuner			
*	\/A4	Videomodul			
Geschätzte A	Ausführungsdauer: OC):03:19	maisnahmen entfernen	Gesamtkodierung wählen	Malsnahmenplan ermitteln
			7	6	
					13

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Process control modules" tab
3	Programming	4	Encoding
5	Replacement	6	"Select complete coding" button, selects complete coding of the vehicle
7	"Remove actions" button		

The actions ("Programming", "Encoding" or "Replacing") available for the control modules can be selected directly.

Note:

The "Determine measures plan" button is deactivated if determining the target context results in no action.

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Action list:

tegrated Service schicel Application / Programming			2			
ung: TK91023 Fahrzeug: R56 Kemme 15: 14,00V Klemme 30: 14,00V ung Programmierung Fahrzeug: R56 Attonniste baum Steuergeräte baum Kurzbezeichnung Kanal Hinweis I-Stufe (st): R056-08-08-510 L-Stufe (st): R056-08-08-510 Attonniste Programmieren ABS/ASC/DSC DIAGBUS Nodieren JBE DIAGBUS Nodieren ABS/ASC/DSC DIAGBUS Nodieren DME/DDE DIAGBUS Nodieren DME/DDE DIAGBUS Nodieren DME/DDE DIAGBUS Maßnahmenplan ermitteln	Integrated Service Technical Application / Pro	gramming	XP			? ×
Steuergeräte- baum Steuergeräte- bearbeiten Aktionsliste I-Stufe (Ist): R056-08-03-510 I-Stufe (Soll): R056-08-06-510 atus Aktion Kurzbezeichnung Kanal Hinweis Image: Instant Ins	Sitzung: TK91023 Sitzung Program	Fahrzeug: R56 mmierung Fahrzeug	Daten verwaltung		Klemme 15: 14,00V	Klemme 30: 14,00V
Instruction RD58-08-03-510 Instruction RD58-08-08-510 Aktion Kurzbezeichnung Kanal Hinweis Image: Im	Fahrzeug-Steuer details baum	geräte- Steuergeräte bearbeiten	Aktionsliste			
Aktion Kurzbezeichnung Kanal Hinweis Image: State St	I-Stufe (Ist):	R056-08-03-510	I-S	tufe (Soll):	R056-08	-06-510
Image: State in the state	Status Aktion	Kurzbezeichnung	Kanal	Hinweis		
Image: Programmieren ABS/ASC/DSC DIAGBUS Image: Kodieren ABS/ASC/DSC Image: Kodieren ABS/ASC/DSC	Tauschen	DME/DDE	DIAGBUS			
Image: Second	Programmier	en ABS/ASC/DSC	DIAGBUS			
Kodieren ABS/ASC/DSC DIAGBUS Kodieren DME/DDE DIAGBUS Image: Strate de Stratege de Strate de Stratege de Strate de Strate de Stratege de Strate de Stratege de Strate	Kodieren	JBE	DIAGBUS			
Kodieren DME/DDE DIAGBUS Image: Status S	e Kodieren	ABS/ASC/DSC	DIAGBUS			
Ashātzte Ausführungsdauer: 00:02:27	Kodieren	DME/DDE	DIAGBUS			
Maßnahmenplan ermitteln						
Ashātzte Ausführungsdauer: 00:02:27						
Maßnahmenplan ermitteln						
Maßnahmenplan ermitteln						
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eschätzte Ausführungsdauer: 00:02:27						
	i Cosshitzta Ausführument	WOT 00-02-27				Maßnahmenplan ermitteln
	Geschatzte Ausruhrungsda	uer. 00:02:27				

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Action list" tab
3	"Determine measures plan" button		

The "Action list" is a summary of the planned actions. They are also shown in the "Measures plan". Information relating to the control module may also be shown (e.g. control module can no longer be programmed).

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Vehicle menu:

ntegra Techni	ted Service xP 🝙 🖉 📴 📋 📰 🔀					
Sitzung:	TK91023 Fahrzeug: R56 Klemme 15: 14,00V Klemme 30: 14,0					
Sitzung	Programmierung Fahrzeug Daten- verwaltung					
Umrūstu	ngen Fahrzeug- aktionen					
	Nachrüstung John Cooper Works Sportsitz					
	Nachrüstung Sportliche Fahrwerksabstimmung					
	Nachrüstung USB / Audio Schnittstelle					
	Umrüstung Automatische Fahrlichtsteuerung auf empfindlich einstellen					
	Umrüstung Automatische Fahrlichtsteuerung auf normal einstellen					
	Umrüstung Automatische Fahrlichtsteuerung auf sehr empfindlich einstellen					
	Umrüstung Beifahrer Gurterinnerung deaktivieren					
	Umrūstung Fahrer Gurterinnerung deaktivieren					
X	🛛 Umrūstung Fahrschulfunktion aktivieren					
	Umrüstung Schärfen und Entschärfen der Diebstahlwarnanlage nur über Fernbedienung					
	Umrüstung Sprachen – Anzeige und Telefon auf Englisch mit Französisch und Spanisch einstellen					
	Umrüstung Sprachen - Anzeige und Telefon auf Französisch mit Spanisch und Englisch UK einstellen					
	Umrüstung Sprachen - Anzeige und Telefon auf Italienisch mit Deutsch und Englisch UK einstellen					
	Umrüstung Sprachen – Anzeige und Telefon auf Niederländisch mit Englisch UK und Französisch einstellen					

Index	Screen element	Index	Screen element
1	"Conversions" tab: The retrofits and conversions available for the vehicle are shown, see "Retrofits and conversions"	2	"CKM" tab CKM value settings, see " <u>Vehicle</u> and Key-Memory (CKM)"
3	"Vehicle" menu	4	 "Vehicle actions" tab: Clear fault memory Select complete coding Start system time of all airbag control modules.

The retrofits and conversions are listed under the "Conversions" tab in the "Vehicle" menu. All retrofits are shown first, followed by the possible conversions available for the connected vehicle.

Note:

Some retrofits and conversions require the entry of IBAC enable codes, see "Retrofits and conversions", "<u>Procedure for IBAC Enable Codes</u>".

Dialogue box after clicking on the control module in "Process control module" or the control module in the "Control module tree":

Integrated Servi Technical Applic Sitzung: TK910	ce ation / Programming 23 Eabrzeug: 856	ХР		15: 14 00V	? 💽 🗙
anzung. TRatu		Daten-	Kieli	IIIIE 13. 14,00¥	Nielillie 30. 14,00¥
Sitzung	Programmierung Fahrzeug	verwaltung			
Fahrzeug- details	Schaltzentrum Lenksäule (SZL)			? ×	
	G Plan bearbeiten Aktionsliste	Steuergerāte Information			
2	Programmieren				
3	iG Kodieren				SINE
1 SZL E	Tauschen				
	Tauschnachbereitung				
TMFA					
TMBF					
SFZ					
SBSL					
SBSR				Schließen	
		ІНКА			J
3					
	ührungsdauer: 00:00:00		Maßnahmen entfernen	Gesamtkodierung wählen	Maßnahmenplan ermitteln
Geschatzre Aust					

Index	Screen element	Index	Screen element
1	"Edit plan" tab	2	Programming, programs control module
3	Encoding, encodes control module	4	Replace, replaces control module
5	Replacement follow-up, follow-up procedure for control module that has already been replaced		

The available actions for a control module are individual. They may differ from control module to control module depending on which actions are defined.

Extract from display under "Action list":



Index	Screen element	Index	Screen element
1	"Action list" tab	2	Symbol "Action failed"
3	Symbol for "Conditions for action not met" (e.g. control module was not replaced)	4	Symbol for "Warning"
5	Symbol for "Action successful"	6	Symbol for "Action in progress"
7	Symbol for "Software action planned" (e.g. encoding)	8	Symbol for "Hardware action planned" (e.g. replace control module)

The planned actions are shown together with their respective status by selecting the "Action list" tab.

Display under "Control module information":



Index	Screen element	Index	Screen element
1	Status, planned action	2	Diagnosis address of control module
3	Bus system to which the control module is connected	4	Hardware number of control module
5	Programming status, display of detailed information	6	"Determine measures plan" button
7	Assembly number, is made up of hardware number and software number of control module	8	Still programmable, shows how often the control module can still be programmed
9	Control module variant		

The information relating to the selected control module is shown by selecting the "Control module information" tab. In addition to the planned action and other relevant data, it also shows how often the control module can still be programmed.

Note:

The "Determine measures plan" button is deactivated if no actions are to be selected.

Determine measures plan

User action	Result
Select "Determine measures plan".	
	The "Measures plan", "Control module
	tree", "Action list", "Order list" and
	"Enable code list" tabs are shown.
	The measures plan is shown in the menu
	window. Control modules that are to be
	processed are identified by a yellow
	symbol. A red symbol indicates
	replacement or installation of a control
	module. No action is planned for the
	control module if no symbol is snown. The
	actions are indicated as follows:
	P Programming
	C Encoding
	M Installing
	R Replacing
	U Removing.
Select "Measures plan" tab.	
	The measures plan is shown in the print
	view.

Measures plan in print view:

1	2	3	4	5	6)	
Integrated Service Technical Application	/ Programming		XP			? 🖃	\times
Sitzung: TK91023		Fahrzeug: R56		ŀ	Klemme 15: 14,00V	Klemme 30: 14	4,00V
Maßnahmenplan anz	eigen						\times
Maßnahmenplan b:	teuergerāte- aum	Aktionsliste	Bestellliste	Freischaltkode Liste			
вми	v			вми	Service		
Maß	nahmenp	olan					
Sitzungs Vorauss	sname: R56_TK sichtliche Gesaml	91023 tdauer: 00:00:00)				
Kopfdat	en					•	•
i Geschätzte Ausführu	nasdauer: ND:00:	00	Zurück			Maßnahmenpl akzeptieren	lan 1
Geschätzte Ausführur	ngsdauer: 00:00:	00				avzoptieren	1201

Index	Screen element	Index	Screen element
1	"Measures plan" tab, shows measures plan in print view	2	"Control module tree" tab, shows the control module tree together with the planned actions
3	"Action list" tab, shows the planned actions in a table	4	"Order list" tab, shows control modules to be ordered
5	"Enable code list" tab, shows the enable codes used	6	"Print" button, prints the measures plan
7	"Accept measures plan" tab, executes measures plan and programs vehicle		

The measures plan contains actions that need to be carried out in order to eliminate a vehicle fault. In addition to the determined actions, it also shows the vehicle details, the session name and the ISTA/P version used.

Executing measures plan and programming vehicle

User action	Result
Print measures plan.	
Select "Accept measures plan".	
	The measures plan is shown in the menu window. Control modules that did not respond are indicated without a colored symbol. Control modules that are to be processed are identified by a yellow symbol. A red symbol indicates replacement or installation of a control module. No action is planned for the control module if no symbol is shown. The "Control module tree" and "Action
	list" tabs are shown.
Observe and acknowledge safety information on programming.	
	Measures plan is executed.
	Plan is followed up.
Carry out initialization and instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Print final report.	

Control module replacement

The control modules to be replaced are determined by the measures plan. The request to replace a control unit is integrated in the measures plan procedure. The new control modules must be encoded after installation to ensure they operate correctly.

The control module replacement procedure can be carried out as follows and is described on the following pages:

- Control module replacement without interrupting the session
- Control module replacement with session for modification
- Control module replacement with plan abort.

Note:

When replacing, refer to the technical documentation for the control module.

Modification instructions for control module replacement:

	Integrated Servic Technical Applic	e ation / Programming		XP	A		Ē	?	\times
	Sitzung: TK9102	3	Fahrzeug: R56			Klemme 15:	14,00V	Klemme 30:	14,00V
	Sitzung	Programmierung	Fahrzeug	Daten- verwaltung					
	Steuergeräte- baum	Umbauanweisung	en				E		
1	SZL ® R C I TMFA ® P C I TMBF 3 SFZ 3 SBSL 3 SBSR 3	G X Steuergerät	SZL tauschen (Best en bestätigen, Umt Sitzung für Umbau au durchführen. Alt Sitzung für Umbau	ellnummer: 913689 bau durchführen un unterbrechen' laufe ernativ mit 'Planabt Planabbruch	d 'Umbau ist e ande Fahrzeug oruch' Ausführt	rfolgt' drücken. sitzung unterbr ung des Maßna	Alternativ echen und hmenplan	SINE	
								13	0208020

Index	Screen element	Index	Screen element
1	Confirmation "Replace control	2	"Plan abort" button,
	module"		cancels session
3	"Modification session" button,	4	"Modification done" button,
	control module replacement		Control module replacement without
	with session for modification		interrupting the session

Select the appropriate control module replacement.

Control module replacement without interrupting the session

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Replace or install control modules.	
Confirm replacement request.	
Click on "Modification done" button.	
	Measures plan is continued.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with session for modification

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Click on "Session for modification" button.	
	Session is stored and ended
Replace or install control modules.	
Start new session.	
	Stored session is found.
Select stored session.	
Confirm replacement request and click on	
"Modification done" button.	
	The measures plan is continued, no further
	actions can be added.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final
	report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with plan abort

User action	Result
	Measures plan is executed. If control modules are to be replaced as part of the measures plan, a corresponding request to replace the control module will be issued.
Click on "Plan abort" button.	
	Session is terminated
Replace or install control modules.	
Start new session.	
	Dialogue box "Replaced control modules" is shown.
Answer the question "Have control modules been replaced?" with "Yes".	
	Target context is determined.
Select replaced control modules in "Control module tree" or under "Process control modules" and select "Replacement follow-up". Click on "Determine measures plan" button.	Further actions can be added.
	The measures plan is determined and executed.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

The question "Have control modules been replaced?" at the start of a new session is to be answered with "Yes". A corresponding replacement follow-up procedure is then executed as part of the measures plan.

Programming MINI navigation systems "BMW Navigation" CD

This CD contains all software versions of the "BMW Navigation" for model series R50, R52 and R53.

The navigation system on the model series R55 and R56 is not programmed with the "BMW Navigation" CD but rather exclusively using the ISTA/P programming system.

The navigation computer automatically recognizes the required version.

R50, R52 and R53 with navigation system (optional extra 609):

The current "BMW Navigation" CD must be used on vehicles with date of production after September 2001 and on all vehicles with "split-screen software":

Version 1

The navigation computer Mk3 with navigation system (optional extra 609) has operating software V17 or earlier installed. The current operating software with the retrofit package "split-screen software" (subject to charge) should be retrofitted:

- Read out software status.
- Pay attention to installation instructions provided in the cover of the operating software CD.
- Insert current navigation system operating software CD.
- The installation will start automatically.
- The CD is ejected when the installation is complete. The installation can take up to 7 minutes.
- Remove the CD.
- Press the rotary push button to restart the navigation computer (please refer to the instructions displayed on the on-board monitor).
- The instruction "Load V17 or the Key CD" appears in the display of the on-board monitor.
- Insert the Key CD.
- The Key CD is ejected when the installation is complete. The installation can take about 2 minutes.
- Remove the Key CD.
- The navigation computer is then automatically restarted.

ISTA/P - User Documentation

Vehicle Programming in Service Applications

Version 2

The navigation computer Mk3 in a vehicle with navigation system (optional extra 609) should be replaced in the event of a complaint. A new navigation computer Mk3 with the current operating software should be installed:

- Read out software status.
- Install new navigation computer in vehicle. See Electronic Parts Catalogue (EPC).
- Pay attention to installation instructions provided in the cover of the operating software CD.
- Insert current navigation system operating software CD.
- The installation will start automatically.
- The CD is ejected when the installation is complete. The installation can take up to 7 minutes.
- Remove the CD.
- Press the rotary push button to restart the navigation computer (please refer to the instructions displayed on the on-board monitor).
- Encode navigation computer (please refer to BMW ISTA workshop systems).
- The navigation computer must go into sleep mode. To do this, switch the ignition off. The "Power LED" on the navigation computer will go out after one minute.

The CD "BMW Navigation V17.1" must be used for vehicles with date of production before September 2001 and Mk3 navigation computer without "split-screen software".

Procedure for all model series

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. When programming and encoding the navigation system, refer to the documentation <u>"Preparing Vehicle Programming and Finishing Off"</u>.

User action	Result
Insert CD in the navigation system CD drive.	
	It will take about 15 minutes to load the software.
	The CD drive automatically opens.
Remove the CD from the drive.	
Confirm end of programming.	

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Vehicle Programming in Service Applications

Important!

The navigation computer must not be cut off from the voltage supply for as long as the LED on the computer remains on. There is otherwise a risk of incorrect data being written to the memory, in which case correct operation of the computer can no longer be guaranteed.

Note:

During programming, the screen of the Control Display, on-board monitor or Central Information Display may flicker.

Note:

If the current software version is already programmed, the CD will be ejected again immediately.

MINI Retrofitting and conversions

R55 and R56

Retrofits and conversions are carried out after programming as part of a measures plan.

R50, R52 and R53

Individual retrofits for the model series will only be offered by ISTA/P if they are actually possible. This prevents incorrect programming of control modules. If the retrofit is not offered by ISTA/P by mistake, please consult Technical Parts Support via the ASAP Portal.

Note:

The items displayed in ISTA/P may differ, depending on equipment fitted and national market specification.

Only the items specified in the Electronic Parts Catalogue (Group EPC) are approved for retrofitting.

Explanatory notes about individual retrofits and conversions available in ISTA/P will be supplied by Technical Support as part of the fault elimination measures.

Procedure for retrofitting or conversion of systems requiring programming or encoding:

Read out vehicle data with ISTA/P and determine measures plan. See Section: <u>Start new session with ISTA/P.</u>

- Select "Vehicle" tab
- Select "Conversions"
- Select retrofit or modification system (e.g. "PDC")
- After selecting all retrofits or conversions, select "Determine measures plan"
- The selected retrofits or conversions are itemized in the action list.

Procedure for conversions designed as fault elimination

Conversion with the explanation "fault elimination" may only be performed if you have been prompted to do so by one (or more) of the following sources:

- Test modules in ISTA workshop information system
- Service information bulletins
- FAQ domain in ASAP
- PuMA actions
- Repair instructions
- Technical campaigns.
Locations of OBD and MOST, connection options of MINI model series

The following overview shows which vehicle interfaces are approved for vehicle programming on which model series:

Model series	Vehicle i (connection vi	interface a OBD socket)	MOST compatibility (multichannel programming)
	ICOM A and C	ICOM A	ICOM A and B (Only possible if MOST direct access port fitted)
R55, R56	-	Х	Х
R50, R52, R53	Х	Х	-

Use of ICOM

All MINI model series can be processed with the ICOM A, B and C modules. For illustrations and information on the ICOM interfaces, see <u>ICOM (Integrated</u> <u>Communication Optical Module)</u>

Installation location for OBD socket

R55 and R56

The OBD socket is located near the A-pillar in the driver's footwell.

R50, R52 and R53

The OBD socket is located on the A-pillar in the driver's footwell.

Installation location of the MOST direct access port R55 and R56

The MOST direct access port is located in the front-passenger footwell, behind the A-pillar trim.

Important!

The MOST direct access port can only be pulled out by approx. 2 to 3 cm. Otherwise, there is a risk of damaging the two fibre-optic cables.

Note:

To program vehicles with MOST direct access port, the connection between the ICOM and the vehicle must be set up using MOST.

Note:

On the R55 and R56 there is only a MOST direct access port if one of the following is installed:

- Professional radio (RAD2)
- Car Communication Computer (CCC) = Professional navigation system

Copyright © BMW AG/ISTA/P - User Documentation Version V2.31.0/August 08 On vehicles built after 03/07 with RAD2 installed, a MOST direct access port is provided only if another MOST control module, for example CDC, is installed. No MOST direct access port is provided on vehicles built after 06/08 with RAD2 and CDC preparation.

Note:

Check that the MOST direct access port is correctly installed following any repair work in the driver's footwell (e.g. control module replacement).

Note:

After use, seal the MOST direct access port again with the bridge.

Programming procedure Rolls-Royce

The following pages contain descriptions of the programming procedure for the Rolls-Royce model series.

Note:

The basic requirement for efficient programming is that the vehicle is correctly prepared. Please refer to the description <u>"Vehicle programming and finishing off"</u>.

Read out vehicle data with ISTA/P. See Section: <u>Start new session with ISTA/P.</u>

The measures plan can be expanded by the following actions:

- Carry out conversion
- Carry out vehicle actions
- Set CKM values
 - Select "Vehicle" tab.
 - Select "CKM" tab.
 - Print CKM values.
- Prepare for control module replacement
- Programs control module
- Encode control module.

The actions can be selected as follows:

- Under the "Process control modules" tab by directly selecting the actions or clicking on the control module
- Under the "Control module tree" tab by clicking on the control module.

Connection to vehicle is set up automatically:

	on / Programming			XP 🏚 a				?	X
Sitzung: UX00105		Fahrzeug: RR1			Kle	emme 15:	14,00V	Klemme 30:	14,00
Sitzung	≓ Programmierung	Fahrzeug	Daten- verwaltur	g					
<u>F</u> ahrzeug- details	Steuergerāte- baum	Steuergeräte bearbeiten	Aktionsli	ste					
Fahrgestellnumm	er: UX00105			E-Bezeichnung:		RR1			
Kilometerstand:	13396 km			Beschreibung:		RR01 Lim	N73B68	B LL ECE	
Typschlüssel:	FK61			Baujahr:		0603			
Lackkode:	0R20			Polsterkode:		RAS8			
I-Stufe (Werk)	2.45			I-Stufe (Ist):		RR01-08	-03500		
- Zuletzt behandelt	mit: unbekannt gen:			Freischaltkode S	Status (vor	Planausfü	ihrung):		
	chnung			Abkürzung		Applikati	Upgrade	Status	
Nummer Bezei	etertacho			Car Information	Computer	23	1	verfügbar	
548 Kilom				Car Information	Computer	25	1	verfügbar	
548 Kilom 698 Area	Code 2 für DVD							verfügbar	
548 Kilom 698 Area 822 Golf-A	Code 2 fūr DVD usführung			Car Information	Computer	27	1		
548 Kilom 598 Area 822 Golf-4 845 Akust	Code 2 fūr DVD usfūhrung sche Gurtwarnung			Car Information	Computer	27	1	3	
548 Kilom 548 Area 898 Area 822 Golf-/ 845 Akust 853 Sprac	Code 2 fūr DVD usführung sche Gurtwarnung iversion Englisch			Car Information	Computer	27	1	3	
548 Kilom 698 Area 822 Golf-4 845 Akust 853 Sprac	Code 2 fūr DVD usfūhrung sche Gurt w arnung iversion Englisch	-	•	Car Information	Computer	27	1		

Index	Screen element	Index	Screen element
1	"Programming" menu	2	I-stage (actual), shows current I-stage of vehicle
3	Enable code status, status of enable code used or required in vehicle	4	Progress bar, shows processing progress
5	Last processed with, shows the Progman or ISTA/P version, with which the vehicle was last processed	6	I-stage (factory), shows the I-stage with which the vehicle was produced
7	"Vehicle details" tab		

Follow and confirm the instructions provided by the programming system.

By reading out the vehicle details it is possible to determine whether the vehicle corresponds to the current software status. Unnecessary vehicle programming can be avoided in this way.

The native measures plan is determined after the connection to the vehicle has been set up successfully. This is shown under the "Programming" menu button.

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Selecting vehicle manually:

Sitzung F	Programmierung	Fabrzeug	Daten-			
		T dill 20dg	verwaltung			
Fahrzeug- details	Baureihe aus w āhl	en				
Fahrnestellnumm						
Kilometerstand:						
Typschlüssel:						
Lackkode:						
l-Stufe (Werk)						
Zuletzt behandel						
Sonderausstattu						
Nummer Beze					tatus	
	RR1/RR2/RR3					
]	
🚺 Baureihe wird erm	nttelt				Maßnahmen	

Index	Screen element
1	"Model series" button, model series selection

Select the model series for the connected vehicle by clicking the corresponding button.

Control module tree:

The control module tree shows the control units fitted in the vehicle corresponding to the topology. Each control module is shown as linked to the corresponding bus. Compound control modules are shown within a light blue area.

(.	1 2)						
Integrated Service Technical Applicat	ion / Programming	/	XP			2		
Sitzung: UX00105		Fahrzeug: RR1			Klemme 15:	14,00V K	emme 30: 14,0	οv
Sitzung	Programmierung	Fahrzeug	Daten- ver w altung					
Fahrzeug- details	Steuergeräte- baum	Steuergeräte bearbeiten	Aktionsliste					
ZGN	1							
P		CD-G P	:w 💿	EHC	CAS P C	DME P C	• C	
SZL	SASL	SVS	TEL	DWA	РМ	VTC P I	•	
SASR	STVL	AMP 💿	КНІ	RLS	KOMBI P C	VTC2 P I	•	
STVR	SSFA	NAV	CDC/iPod	PDC	BZM		E	
SSBF	SBSL	ASK 🕑	ANT O	CON	SMFAH			
SBSR	SSH	VM 💿	CD-BO O	SMBFH	SMFA			
SFZ				SMBF	LM			
				CID	IHKA P C	•		
i Geschätzte Ausfüh	rungsdauer: 04:02:	58		Maßnahr entfern	nen Gesamtl en wä	kodierung hlen	Maßnahmenplar ermitteln	ו
				4	3			

Index	Screen element	Index	Screen element
1	"Programming" menu	2	"Control module tree" tab, graphic representation of the control module tree
3	"Select complete coding" button, selects complete coding of the vehicle	4	"Remove actions" button

All actions determined based on the context are removed by clicking on the "Remove actions" button. Control module actions relevant to I-stages cannot be selected manually.

Display under "Process control module":

1	2	3	4	5
Integrated Service Technical Application / Programm	ing XP			? 🗵 🗙
Sitzung: UX00105	Fahrzeug: RRI	Klem	me 15: 14,00V	Klemme 30: 14,00V
Sitzung Programmieru	ng Fahrzeug Daten- verwaltung			
Fahrzeug- Steuergeräte- details baum	- Steuergeräte Aktionsliste bearbeiten			
Status Kurzbezeichnung	Steuergerät	Programmieren	Kodieren	Tauschen 🔺
	Zentrales Gateway-Modul	\times		
SIM	Sicherheits- und Informationsmodul			
SZL	Schaltzentrum Lenksäule			
SASL	Satellit A-Sāule links			
SASR	Satellit A-Saule rechts			
STVL	Satellit Tür vorn links			
STVR	Satellit Tür vorn rechts			
SSFA	Satellit Sitz Fahrer			
SSBF	Satellit Sitz Beifahrer			
SBSL	Satellit B-Sāule links			
SBSR	Satellit B-Saule rechts			
SSH	Satellit Sitz hinten			
SFZ	Satellit Fahrzeugzentrum			
	Disitala Matar Elaktronik			
Geschätzte Ausführungsdauer: 04	1:02:58	Maßnahmen entfernen	Gesamtkodierung wählen	Maßnahmenplan ermitteln
	(7	6	LA LA

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Process control modules" tab
3	Programming	4	Encoding
5	Replacement	6	"Select complete coding" button, selects complete coding of the vehicle
7	"Remove actions" button		

The actions ("Programming", "Encoding" or "Replacing") available for the control modules can be selected directly.

Note:

The "Determine measures plan" button is deactivated if determining the target context results in no action.

All actions determined based on the context are removed by clicking on the "Remove actions" button. Control module actions relevant to I-stages cannot be selected manually.

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Action list:

1		2			
Integrated Service Technical Application / Pro	gramming		XP 🍙 🖌		? 🔽 🗙
Sitzung: UX00105	Fahrzeug: F	R1		Klemme 15: 14,00V	Klemme 30: 14,00V
itzung Progran	nmierung Fahrzeug	Daten∘ ver w a tunç	3		
Fahrzeug-Steuerg details baum	geräte- Steuergeräte bearbeiten	Aktionslis	te		
I-Stufe (Ist):	RR01-08-03-50	0	I-Stufe (Soll):	RR01-08-0	6-500
Status Aktion	Kurzbezeichnung	Kanal	🔺 Hinweis		
Programmier	en CAS	DIAGBUS			
🦲 Programmier	en ZGM	DIAGBUS			
Programmier	en CD-BO	DIAGBUS			
Programmier	en CD-GW	DIAGBUS			
Programmier	en SG-FD-BO	DIAGBUS			
Programmier	en SG-FD-G W	DIAGBUS			
Programmier	en KOMBI	DIAGBUS			
Programmier	en DME	DIAGBUS			
Programmier	en DME2	DIAGBUS			
Programmier	en EGS	DIAGBUS			
Programmier	en VTC	DIAGBUS			
Programmier	en VTC2	DIAGBUS			
ब Geschātzte Ausführungsda	uer: 04:02:58				Maßnahmenplan ermitteln
					,

Index	Screen element	Index	Screen element
1	"Programming" button	2	"Action list" tab
3	"Determine measures plan" button		

The "Action list" is a summary of the planned actions. They are also shown in the "Measures plan". Information relating to the control module may also be shown (e.g. control module can no longer be programmed).

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Vehicle menu:

Technic	ed Service xP 🝙 🖌 💷 ? 🖃 🗙
Sitzung:	UX00105 Fahrzeug: RR1 Klemme 15: 14,00V Klemme 30: 14,0
Sitzung	Programmierung Fahrzeug Daten- verwaltung
Umrūstu	ngen Fahrzeug- aktionen
X	Nachrüstung Beschlagsensor
	Nachrüstung Flexibles Diagnose Modul
	Nachrüstung Heckklappenlift
	Umrüstung Dämpferkennlinie für Dämpfer ab 03/07 und Kennzeichnung nach Einbau an der Vorderachse einstellen
	Umrüstung DVD Areacode für China einstellen
	Umrūstung DVD Areacode fūr Russland, Indien und Afrika einstellen
	Umrüstung DVD Areacode für Südamerika und Australien einstellen
	Umrüstung DVD Areacode für Südostasien einstellen
	Umrüstung DVD Areacode für USA und Kanada einstellen
	Umrüstung Fahrer Gurterinnerung deaktivieren
	Umrūstung Navigationssystem umgerūstet
	Umrüstung Sprachen- Sprachen für Anzeige/SVS auf Deutsch mit Französisch und Englisch einstellen
	Umrüstung Sprachen- Sprachen für Anzeige/SVS auf Französisch mit Spanisch und Englisch einstellen
	Umrüstung Sprachen- Sprachen für Anzeige/SVS auf Italienisch mit Deutsch und Englisch einstellen

Index	Screen element	Index	Screen element
1	"Conversions" tab: The retrofits and conversions available for the vehicle are shown, see "Retrofits and conversions"	2	 "Vehicle actions" tab: Clear fault memory Select complete coding Start system time of all airbag control modules.
3	"Vehicle" menu		

The retrofits and conversions are listed under the "Conversions" tab in the "Vehicle" menu. All retrofits are shown first, followed by the possible conversions available for the connected vehicle.

Note:

Some retrofits and conversions require the entry of IBAC enable codes, see "Retrofits and conversions", "<u>Procedure for IBAC Enable Codes</u>".

Dialogue box after clicking on the control module in "Process control module" or the control unit in the "Control module tree":

I T	ntegrated Service Fechnical Applicati	ion / Programming		XP			Ē	?	X
S	itzung: UX00105	ſ	Fahrzeug: RR1			Klemme 15:	14,00V	Klemme 30:	14,00V
Sit	zung	Programmierung	Fahrzeug	Daten- ver w altung				_	
F	ahrzeug- letails	Zentrales Gatewa	y-Modul (ZGM)				? ×		
	ZG	Plan bearbeiten	Sofort- maßnahmen	Aktionsliste	Steuergeräte Information				
2	R	- Programmie	ren						
3	SIN	🛛 🔀 Tauschen							
4	SZL	Tauschnach	bereitung						E
	SASR								۲
	STVR								E
	SSBF								
	CDCD								
	SBSR								
	SF					Sc	hließen		
	L				CID	ІНКА	_	-	▼
	<		111						•
1					Maßnahm	en Gesar	ntkodierung	Maßnahme	nplan
	ieschätzte Ausfüh	rungsdauer: 00:02:0	00		entferne	n ¥	vählen	ermitte	In

Index	Screen element	Index	Screen element
1	"Edit plan" tab	2	Programming,
			programs control module
3	Replace, replaces control module	4	Replacement follow-up, follow-up procedure for control module that has already been replaced

The available actions for a control module are individual. They may differ from control module to control module depending on which actions are defined.

Extract from display under "Action list":



Index	Screen element	Index	Screen element
1	"Action list" tab	2	Symbol "Action failed"
3	Symbol for "Conditions for action not met" (e.g. control module was not replaced)	4	Symbol for "Warning"
5	Symbol for "Action successful"	6	Symbol for "Action in progress"
7	Symbol for "Software action planned" (e.g. encoding)	8	Symbol for "Hardware action planned" (e.g. replace control module)

The planned actions are shown together with their respective status by selecting the "Action list" tab.

Display under "Control module information":

	Integrated Service Technical Applica Sitzung: UX0010	tion / Programming 5 Eabrzeug: BB1 Klemme 15: 14.00V Klemme 30: 14.00V
	Sitzung	Programmierung Fahrzeug verwaltung
	Fahrzeug- details	Zentrales Gateway-Modul (ZGM)
	ZG	Plan bearbeiten Sofort- maßnahmen Aktionsliste Steuergeräte Information
(1)	P	Status Softwareaktion
	SI	Diagnoseadresse 0x0
9-	SZL	Variante ZGM_E65
		Bus-System K-Line
8	SASR	Noch programmierbar 15
	STVR SSBF	Hardwarenummer 0302962
(7)-		Zusammenbaunummer 0302962
		Programmierstatus 1 3
	SBSR	
	ce	
	51	Schließen
		CID IHKA @
	i Geschätzte Ausfü	hrungsdauer: 04:02:58 Maßnahmen entfernen wählen ermitteln 6
		140108018

Index	Screen element	Index	Screen element
1	Status, planned action	2	Diagnosis address of control module
3	Bus system to which the control module is connected	4	Hardware number of control module
5	Programming status, display of detailed information	6	"Determine measures plan" button
7	Assembly number, is made up of hardware number and software number of control module	8	Still programmable, shows how often the control module can still be programmed
9	Control module variant		

The information relating to the selected control module is shown by selecting the "Control module information" tab. In addition to the planned action and other relevant data, it also shows how often the control module can still be programmed.

Note:

The "Determine measures plan" button is deactivated if no actions are to be selected.

Determine measures plan

User action	Result		
Select "Determine measures plan".			
	The "Measures plan", "Control module		
	tree", "Action list", "Order list" and		
	"Enable code list" tabs are shown.		
	The measures plan is shown in the menu		
	window. Control modules that are to be		
	processed are identified by a yellow		
	symbol. A red symbol indicates		
	replacement or installation of a control		
	module. No action is planned for the		
	control module if no symbol is shown.		
	The actions are indicated as follows:		
	P Programming		
	C Encoding		
	I Initializing		
	M Installing		
	R Replacing		
	U Removing.		
Select "Measures plan" tab.			
	The measures plan is shown in the print		
	view.		

Measures plan in print view:

1 2	3	4	5	6		
Integrated Service Techni :al Application / Programm	ning	XP			?	×
Sitzung UX00105	Fahrzeug: RR1		Kler	nme 15: 14,00V	Klemme 30:	14,00V
Maßnahmenplan anzeigen						X
Maßnahmenplan Steuergeräte- baum	Aktionsliste	Bestellliste	Freischaltkode Liste			
BMW			BMW	Service	[
Maßnahme	enplan					
Sitzungsname: RR Voraussichtliche Ge	1_UX00105 samtdauer: 04:02:58	3				
Kopfdaten					-	•
(

Index	Screen element	Index	Screen element
1	"Measures plan" tab, shows measures plan in print view	2	"Control module tree" tab, shows the control module tree together with the planned actions
3	"Action list" tab, shows the planned actions in a table	4	"Order list" tab, shows control modules to be ordered
5	"Enable code list" tab, shows the enable codes used	6	"Print" button, prints the measures plan
7	"Accept measures plan" tab, executes measures plan and programs vehicle		

The measures plan contains actions that need to be carried out in order to eliminate a vehicle fault. In addition to the determined actions, it also shows the vehicle details, the session name and the ISTA/P version used.

Executing measures plan and programming vehicle

User action	Result
Print measures plan.	
Select "Accept measures plan".	
	The measures plan is shown in the menu window. Control modules that did not respond are indicated without a colored symbol. Control modules that are to be processed are identified by a yellow symbol. A red symbol indicates replacement or installation of a control module. No action is planned for the control module if no symbol is shown.
	I he "Control module tree" and "Action list" tabs are shown.
Observe and acknowledge safety	
information on programming.	
	Measures plan is executed.
	Plan is followed up.
Carry out initialization and instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Print final report.	

Control module replacement

The control modules to be replaced are determined by the measures plan. The request to replace a control unit is integrated in the measures plan procedure. The new control modules must be encoded after installation to ensure they operate correctly.

The control module replacement procedure can be carried out as follows and is described on the following pages:

- Control module replacement without interrupting the session
- Control module replacement with session for modification
- Control module replacement with plan abort.

Note:

When replacing, refer to the technical documentation for the control module.

Modification instructions for control module replacement:

Technical Application / Programming Sitzura: UV00105 Eabrzaug: PP1 R Z US L 14.00V Kingma 30: 14.00V
Sitzuper UV00105 Estratue: PR1 Klamma 15: 14.00V Klamma 20: 14.00V
Maßnahmenplan ausführen
Steuergeräte- baum Umbauanweisungen 🔳
Image: Steuergerät ZGM tauschen (Teilenummer programmiertes Steuergerät: 0304751). SK SK SKR STVR SSBF Alle Umbauaktionen bestätigen, Umbau durchführen und 'Umbau ist erfolgt' drücken. Alternativ mit Schaltfläche 'Sitzung für Umbau unterbrechen' laufende Fahrzeugsitzung unterbrechen und danach den Umbau durchführen. Alternativ mit 'Planabbruch' Ausführung des Maßnahmenplans abbrechen. SF Umbau ist erfolgt Umbau ist erfolgt Umbau ist erfolgt Verbleibende Zeit: 00.02:00

Index	Screen element	Index	Screen element
1	Confirmation "Replace control module"	2	"Plan abort" button, cancels session
3	"Modification session" button, control module replacement with session for modification	4	"Modification done" button, control module replacement without interrupting the session

Select the appropriate control module replacement.

Control module replacement without interrupting the session

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Replace or install control modules.	
Confirm replacement request.	
Click on "Modification done" button.	
	Measures plan is continued.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final
	report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with session for modification

User action	Result
	Measures plan is executed. If control
	modules are to be replaced as part of the
	measures plan, a corresponding request to
	replace the control module will be issued.
Click on "Session for modification" button.	
	Session is stored and ended
Replace or install control modules.	
Start new session.	
	Stored session is found.
Select stored session.	
Confirm replacement request and click on	
"Modification done" button.	
	The measures plan is continued, no further
	actions can be added.
	Plan is followed up.
Carry out instructions of plan follow-up	
procedure and confirm.	
	At the end of the measures plan the "Final
	report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

Control module replacement with plan abort

User action	Result
	Measures plan is executed. If control modules are to be replaced as part of the measures plan, a corresponding request to replace the control module will be issued.
Click on "Plan abort" button.	
	Session is terminated
Replace or install control modules.	
Start new session.	
	Dialogue box "Replaced control modules" is shown.
Answer the question "Have control modules been replaced?" with "Yes".	
	Target context is determined.
Select replaced control units in "Control module tree" or under "Process control modules" and select "Replacement follow- up". Click on "Determine measures plan" button.	Further actions can be added.
	The measures plan is determined and executed.
Carry out instructions of plan follow-up procedure and confirm.	
	At the end of the measures plan the "Final report" tab shows the final report.
Select "Final report" tab.	
Print final report.	

The question "Have control modules been replaced?" at the start of a new session is to be answered with "Yes". A corresponding replacement follow-up procedure is then executed as part of the measures plan.

Glossary

Description	Description
Bus system	The bus systems enable networking of the individual control modules in the vehicle via serial interfaces. The following bus systems are used in BMW vehicles:
	 BSD (bit-serial data interface) byteflight CAN-Bus (Controller Area Network-Bus) D-CAN (Diagnosis-on-CAN) Ethernet (wired data network technology for local data networks and vehicle access) F-CAN (chassis CAN) FlexRay K-bus (also referred to as I-bus in earlier models) K-bus protocol K-CAN (body CAN) K-CAN2 (body CAN 2) LIN-bus (Local Interconnect Network bus) Local-CAN MOST-bus (Media-Oriented System Transport bus) PT-CAN (Powertrain-CAN) PT-CAN (Powertrain-CAN 2) USB (Universal Serial Bus).
CBS data	Condition-Based Service. The CBS data are updated in the vehicle key as part of a driving cycle. The CBS data can be additionally updated in the vehicle key by means of a concealed service function.
Vehicle and Key Memory	Performs certain customer-specific settings in the vehicle:
	 Vehicle Memory settings relate to all users of a vehicle Key Memory settings are user-specific and relate to a specific key
Diagnosis address	Control module address for diagnosis
EWS/DME or EWS/DDE	Calibration between EWS and DME/DDE control module,
calibration	control modules are synchronized
Vehicle order/central	Refers to the file that contains various vehicle data
encoding key	(data status, optional extras, etc.)

Description	Description
Flash-programming	See programming
Complete encoding	Matches and synchronizes functions.
	This may be necessary if functions in the vehicle are not
	working or working correctly after programming/encoding
IBAC enable code	Code for enabling modifications and retrofits
ICOM	Integrated Communication Optical Module
	Interface between BMW workshop network and vehicle
ISID	Integrated Service Information Display
	Device description handbook
ISIS	Integrated Service Information Server
	The new workshop system is known as ISTA. This
	application is installed together with ISPA on the ISIS.
ISPA	Integrated Service Processes Application
	Software for Service consultation
ISSS	Integrated Software Service Station
	Installing the Basic DVD of the ISTA/P starter kit converts
	the SSS into an ISSS
ISTA	Integrated Service Technical Application
	Workshop system
ISTA/P	Integrated Service Application/Programming
	Successor to Progman programming system. ISTA/P
	contains up-to-date specific vehicle programming as well
	as new functions, thus making the system well equipped
	to effectively meet future vehicle programming
-	requirements in service applications
I-stage	In vehicle development, production periods are identified
	by integration stages (I-stages)
JETstream	Online update: Updates application software by loading
	new software packages
Encoding	Adapts the control modules to the vehicle in which they
	are installed: Functions and maps are enabled or
	activated, depending on national version, equipment
	fitted and type of vehicle
Mecca indicator	The "Mecca indicator" is an arrow on the navigation
	system that permanently points towards the geographic
	location of the city of Mecca.
MOST	Media-Oriented System Transport
	Fibre optics cable. The MOST-bus transmits
	communication and information data in the vehicle

Description	Description
Retrofit	Refers to subsequent system installation (e.g. telephone); new system is adapted to the overall system network of the vehicle
Personal Profile	This is the new designation for Vehicle and Key Memory on certain vehicles; settings are made directly in the vehicle while the more complex settings (e.g. tilt sensor ON/OFF) are still performed in ISTA/P under the Conversion menu.
Programming	Loads a new program to the control module; also known as "flash programming"
Programming status	Shows the control module status as a number
SGC	Control module coding
Target context	Software status of the vehicle that is assigned by the programming system
Software ID	Software identification
SWT	Sweeping Technology The enable code enables more functions in the vehicle. It is based on Sweeping Technologies. The enable code is a cryptological code in the control module.
Replacement follow-up	Finishing off procedure after replacing a control module
Conversion	Changes individual functions in a control module (e.g. language); the vehicle must assume sleep mode for a conversion to take effect
USB	Universal Serial Bus
WSM	Workshop System Management Administration system for ISIS, executes all administrative tasks.
Assembly number	The assembly number is made up of the hardware number and the software number