# **BEGINNERS GUIDE TO ISTA+**

## DISCLAIMER AND WARNINGS

I'm not a BMW technician. This document was created using knowledge available publicly on the internet and is provided freely for entertainment purposes only and is not intended to be instructional in nature. Use of the information in this document or if you engage in DIY diagnostics or programming and ANY other type of maintenance using this information, you do so entirely at your own risk. You release the author of ANY and ALL risk and liability and hold the author harmless from ANY and ALL claims whatsoever. All copyrights belong to their respective owners.

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## INTRODUCTION

What does ISTA stand for? ISTA is a workshop system that contains BMW AG Data and Information. ISTA stands for Integrated Service Technical Application. Way back when, during the initial development of this tool, BMW used DIS (Diagnostics Information System), and as the programs evolved and due to the nature of the file naming conventions utilized by BMW, the workshop system became known as Rheingold in the enthusiast world. Rheingold in actuality is the folder that contains the main application and data. Rheingold became ISTA-D (D stands for Diagnostics) and BMW's programming application (not discussed in this document) used the same nomenclature, ISTA except with a P (for programming) or ISTA-P. This document only discusses ISTA+.

Eventually, based on the direction that the company is taking, ISTA-D and ISTA-P for F-/I-/G-/Mini/RR series cars will be rolled up into ISTA+ for diagnostics AND programming. What does this mean? It means, that ISTA-P will contain all chassis data until around August 2017, then BMW plans to phase out all BN2020 vehicle data in ISTA-P. So, ISTA-P will be used for Programming on E-series only and ISTA+ will be everything else.

Programming (or also called Service Data) in ISTA+ is required for programming F-/I-/G-/Mini/RR cars. BMW now provides these files as deltas to original programming (SDP) data.

# ISTA+ can be used to diagnose ALL cars BUT program only F-/I-/G-/Mini/RR series cars and beyond. E Series Programming is not supported in ISTA+.

BMW officially breaks up the new ISTA+ application capability into two parts – Diagnostics and Programming. Following is a short breakup of each feature within ISTA+:

#### DIAGNOSTICS:

- Vehicle identification for specific vehicle management
- Information research for repair and maintenance
- Guided troubleshooting
- Software repair

#### **PROGRAMMING:**

- Software Update
- Control Unit Replacements
- Retrofits / conversions

## SYSTEM REQUIREMENTS

- Minimum system configuration is now hard coded into the program, although the standalone versions have this check removed.
- 2.2Ghz CPU 2 core minimum, core i5 or i7 recommended
- 4GB RAM, 8GB recommended
- Minimum 20+GB HDD free space for ISTA+ Diagnostics with ONE language, and minimum 100GB for Programming Data.
- This version has hardware check removed, however, future versions MAY not have this feature. A faster system is required.
- This version discusses included English Databases only. If more required, add to SQLiteDBs folder, which will need more space.

## INTERFACES AND OTHER REQUIREMENTS

## **E-SERIES:**

- Interface = K+DCAN Cable or ICOM
- EDIABAS = Low Level ECU Communication Software Server used by ISTA+

## F/G/I/MINI/RR-SERIES:

• Interface = ENET Cable or ICOM

## ICOM:

- ICOM A: main interface
- ICOM B: adapter for programming multimedia in E series
- ICOM C: adapter for old BMW with round 20 pin diagnostic plug
- ICOM D: adapter for motorcycles

## INSTALLATION INSTRUCTIONS

#### VARY WITH SOURCE - THE FOLLOWING APPLY ONLY TO SOURCE OBTAINED FROM THIS FORUM

NOTE: While there are multiple sources to procure ISTA+ and "install" on a laptop, the following instructions apply only to ISTA+ obtained on this site, and specifically asked for and received through the Rheingold/ISTA-D request thread. Each source has its own installation method and those are not discussed here. Versions in pictures used as examples only. Actual version may vary.

#### Step 1:

Download and run unblock.reg BEFORE downloading anything else. Then REBOOT the computer, this is a critical step.

	Prerequisites.7z	137.8 MB
*	o" RCleanerV4.2.exe	43 KB
	Unblock.reg	330 B
	p" vc_redist.x64.exe	13.9 MB
	o" vc_redist.x86.exe	13.1 MB

#### Step 2:

Install everything in Prerequisites folder, only if you don't have a previous Rheingold installation. For 64bit Windows, install both vcredist x32 & x64 from Microsoft, if not already installed.

	Prerequisites.7z	137.8 MB
+	6° RCleanerV4.2.exe	43 KB
	Unblock.reg	330 B
+	o" vc_redist.x64.exe	13.9 MB
	6° vc_redist.x86.exe	13.1 MB

#### Step 3:

Install the following - you can get both from Microsoft.

- Visual C++ Redistributable Packages for Visual Studio 2013
- .NET Framework 4.6

#### Step 4:

Download Rheingold.7z using MegaSync or JDownloader. Once downloaded, check whether "Rheingold.7z" is blocked. If it is, unblock it. Right click on the file, go to Properties and if files are blocked, then you will see the unblock button as in the picture below:

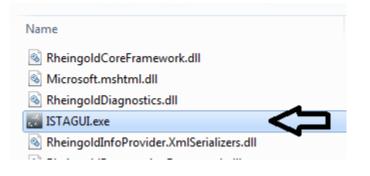
	i.zip Properties
General	Novell Version Security Details Previous Versions
Type of fil	e: Compressed (zipped) Folder (.zip)
Opens wit	h: 😭 Windows Explorer Qhange
Location:	C:\Users\ \Desktop
Size:	161 KB (164,900 bytes)
Size on di	sk: 164 KB (167,936 bytes)
Created:	Today, 3 November 2011, 4:34:16 PM
Modified:	Today, 3 November 2011, 4:34:16 PM
Accessed	: Today, 3 November 2011, 4:34:16 PM
Attributes	<u>R</u> ead-only <u>H</u> idden <u>Advanced</u>
Security:	This file came from another computer and might be blocked to help protect this computer.
	OK Cancel

#### Step 5:

Extract Rheingold.7z using 7zip ONLY. You may have to give admin privileges for extracting. Location doesn't matter, but preferred location is C:\. If extracting to this location, you will need admin privileges for 7zip before extracting the file. To avoid future issues with admin rights etc. you can also extract this file to the root of a secondary drive, for e.g. D:\

#### Step 6:

Assuming you extracted the file to the location suggested above, create desktop shortcut from "C:\Rheingold\TesterGUI\bin\Release\ISTAGUI.exe". If not, create the shortcut from the location you extracted the files to.



## Step 7:

Run the following registry fixes, depending from your OS:

- From the Mega site, download and run the following two registry files:
  - o Ista-prog-x64.reg
  - o Ista-prog-x86.reg
- Also run the following registry fixes from the C:\Rheingold folder (scroll all the way to the bottom to see these files):

鹶 4.01.36 standalone reg fix (x64)	10/15/2016 2:54 PM	Registration Entries	1 KB
👔 4.01.36 standalone reg fix (x86)	10/6/2016 8:33 PM	Registration Entries	1 KB
rheingold-license	6/22/2016 1:19 PM	Text Document	8 KB

## Step 8:

Run ISTAGUI shortcut from your desktop as administrator.

## Step 9:

When prompted for license, copy the license key from the "rheingold-license.txt" located in "C: \Rheingold"

痻 4.01.36 standalone reg fix (x64)	10/15/2016 2:54 PM	Registration Entries	1 KB
👔 4.01.36 standalone reg fix (x86)	10/6/2016 8:33 PM	Registration Entries	1 KB
rheingold-license	6/22/2016 1:19 PM	Text Document	8 KB

## Step 10:

If/When prompted for dealer ID, enter "1" and ignore following warnings. ISTA+ will close.

#### Step 11:

Run again ISTAGUI shortcut from your desktop as administrator and verify the databases in Settings > Version tab in ISTA/D If you encounter start/running issues, delete the "Rheingold" folder from "C:\", run "RCleanerV4.4.exe" as administrator and start again from step 5.

## PROGRAMMING NOTE:

#### \*\*\*\*\*\*\*\*\* ISTA+ PROGRAMMING is only for F, G and I Series, Mini and Rolls Royce cars \*\*\*\*\*\*\*\*\*

ISTA-P will contain all chassis data until around August 2017, then BMW plans to phase out all BN2020 vehicle data in ISTA-P. **So ISTA-P will be to program E-series only and ISTA+ will program everything else.** Programming is now enabled in the Registry, so no changes to ISTAGUI.exe.config file are required.

## ISTA+ PROGRAMMING WITH ENET WILL NOT WORK! ICOM IS REQUIRED!

## INTERFACE CONFIGURATION AND VERIFICATION WITH ISTA+

The following information is freely available on the internet, however, has been consolidated here to help the DIYer in interface configuration (Rheingold, ISTA-D and ISTA+ all are all simultaneous and are used interchangeably. For the purposes of this document, we will only use 3 interfaces, <u>K+DCAN</u>, <u>ENET</u> and <u>ICOM</u>. Additional configuration of these interfaces is not discussed here. Refer to other publicly available information on the internet or specific forums.

USING ISTA WITH USB K+D-CAN CABLE (Example using Com Port 9)

- 1. Plug your K+D-CAN cable and install drivers. For FTDI based cables use latest drivers.
- Open "Device Manager", then USB Serial Port properties, go to "Port Settings" tab and click "Advanced...". Change port number to "COM9" and latency timer to "1". Confirm configuration via "OK" button.

Device Manager			– ¤ ×
File Action View Help	·		
	10		
□     →     DarkSystem       □     →     Batteries       □     →     Computer	erial Port (COM3) Properties net al Port Settings Univer Details Bits per second: Data bits: Party: Stop bits: Flow control:	8 None 1 None	

Device Manager			×
File Action View Help			
	1 15 IS		
DarkSystem	SB Serial Port (COM3) Properties	23	
Computer Disk drives	Advanced Settings for COM3		? ×
Jusplay adapters     DVD/CD-ROM drives     Jmaging devices	COM Port Number: COM9		ОК
Network adapters	USB Transfer Sizes		Cancel
Portable Devices	Select lower settings to correct performance problems at low	v baud rates.	Defaults
Ports (COM & LPT)     Communications Port (	Select higher settings for faster performance.	L.	
USB Serial Port (COM3)	Receive (Bytes):		
Processors     Gound, video and game cor     Sound, video and game cor	Transmit (Bytes):		
System devices	BM Options	Miscellaneous Options	
▷ - ↓ Universal Serial Bus controll	Select lower settings to correct response problems.	Serial Enumerator	
	Latency Timer (msec):	Serial Printer	
		Cancel If Power Off	
	Timeouts	Event On Surprise Removal	
	Minimum Read Timeout (msec):	Set RTS On Close	(ET)
	Minimum Write Timeout (msec):	Disable Modem Ctrl At Startup	
	<u> </u>		

3. Open C:\EDIABAS\BIN\EDIABAS.INI with Notepad and check for "Interface = STD:OBD". In TCP settings set "Port = 6801".

File Edit Format	View Help	
;#####################################	### 0 #	Ē
[Configuration]		
Interface	= STD:OBD	
#Interface	= REMOTE	
Simulation	= 0	
EcuPath SimulationPath TracePath TraceSize	= C:\EDIABAS\ECU  = C:\EDIABAS\SIM = C:\EDIABAS\TRACE = 1024	
ApiTrace IfhTrace ; IfhnTrace	= 0     = 0     = 0	
; SystemTraceSy ; SystemTraceBi ; SystemTraceIf ; SystemTraceNe	p = 0 h = 0	
; BipDebugLevel ; BipErrorLevel	= 0 = 0	
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EDIABAS - Notepad		3
File Edit Format	View Help	
TraceSync ; TraceWriter	= 1 = <filepathname></filepathname>	*
[TCP]		ш
Remotation Port TimeoutReceive TimeoutFunction ; TimeResponsePe ; DisconnectonAp ; InitCmd0 ; InitCmd1	$ \begin{array}{r} 102, 168, 68, 40 \\ = 6801 \\ 2000 \\ = 2000 \\ = 10000 \\ \text{piend} \\ = 5000 \\ = 1 \\ = FE, 04, 00, 03, 01 \\ = FD, 05, 00, 03, 01 \end{array} $	
[XEthernet]		
, RemoteHost HeaderFormat TesterAddress ControlPort DiagnosticPort TimeoutConnect	= Autodetect = 0 = F4,F5 = 6811 = 6801 = 20000	
;=====================================		
;=====================================	= 6700	
;############## ;## ausfьhrlic ;#################	che Variante von EDIABAS.ini (mit Kurz-Info und Default) ##	Ŧ
	III. •	

4. Open C:\EDIABAS\BIN\OBD.INI with Notepad and check for "Port=Com9".

obd - Notepad	
File Edit Format View Help	
Port=Com9	Γ
ETRY=ON	
Trace]eve]=0xFFFFFFF	
Tracelevel=0xFFFFFFF	
Tracelevel=0xF0000000 Tracelevel=0x0000FFFF	
Bit 0 = Funktionsaufruf	1
Bit 1 = io Ergebnis	
Bit 1 = io Ergebnis Bit 2 = nio Ergebnis Bit 3 = Detailinfos	
Bit 3 = Detailinfos	
Nibble 0 = readchar_wait Nibble 1 = main	
Nibble 2 = cmd	
Nibble 3 = obd	
Nibble 4 = send_and_receive	
Nibble 5 = read_telegram Nibble 6 = send_telegram Nibble 7 = SendData	
Nibble 7 = SendData	
Arbbite / = Schubaca	
(Auto-M-Auto-MARA) (II	
UNIT_A]	
ort=Com2 ardware=OBD	
UNIT_B]	
ort=Com3	
ardware=OBD	
UNIT_C]	
ort=Com4	
lardware=OBD	
6	5 E

- 5. Connect car with K+D-CAN cable to PC.
- 6. Now run BMW Rheingold ISTA using shortcut in start menu and wait until it boots, then press settings button.

RHEINGOL	D					? 🛛
	BMW Servic Workshop sy					Service shop system
Operations	Vehicle information	ehicle anagement	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
News						Date
ISTA version 3.45 - 0	Contents and notes, diagnos	sis				25/07/2014
ISTA version 3.45 - N	New contents for repair litera	ature				25/07/2014
ISTA version 3.45 - 0	Contents and notes, non-ele	ectrical diagnosis (	NED)			17/07/2014
ISTA version 3.44 - 1	New contents for repair litera	ature				22/05/2014
ISTA usage notes						31/10/2013
						Display

7. Select "VCI Config" tab and "Ediabas standard settings (ediabas.ini)", then "OK".

ministration		<b>E</b> ?
lient settings Dealer data Version	Transfer Monitor Problem handling	
Interface type:	ISIS Hosts or IPs:	
<ul> <li>Ediabas standard settings (ediabas ini)</li> <li>O OMITEC interface (USB / serial)</li> </ul>	Search Broadcast:	255.255.255.255,169.254.255.255
O HO-ICOM / ENET local network	SCORE Broker Hosts:	
O HO-ICOM / ENET local und ISIS network		nmunicaton channel when connected via ICOM?
O HO-ICOM / ENET direct connection O Simulation	O Yes O No	
U Simulation	Preload programming com	nponents at startup?
	O Yes O No	
	FASTA data transfer mode	
	O Background transfer ser	ervice (central systems)
	O ISIS transfer service (via	a workshop Jetstream)
		ia workshop Jetstraam)

8. Go "Operations", then "Read Out Vehicle Data" and "Complete Identification".

RHEINGOLD	A	•	> P		ø			?		X
BMW Service								Servi		
Workshop sys	Color (MALLING)							kshop		m
Operations Vehicle information Vehi man	cle agement	Service	plan	Favourites		Work	shop/ ating fluids	Measu device		
News								Date		
ISTA version 3.45 - Contents and notes, diagnosis								25/07/2		
ISTA version 3.45 - New contents for repair literatu	re							25/07/2	2014	
ISTA version 3.45 - Contents and notes, non-electr	ical diagno	osis (NED)						17/07/2	2014	
ISTA version 3.44 - New contents for repair literatu	re							22/05/2	2014	
ISTA usage notes								31/10/2	2013	
									Display	
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RHEINGOLD	A	< P	> P		S		KL 15:		KL 30:	×
Operations Vehicle information Vehi		Service	plan	Favourites			shop/	Measu	uring	
man	agement					Oper	ating fluids	device	s	
New Finished										
VIN Read Out Vehicle Data Basic	Features									
- Connect vehicle interface.										
- Switch on vehicle ignition.										
								-	-	
						Identi v	fication witho ehicle test	ut C Ide	complete intification	
						1.1		-	-	

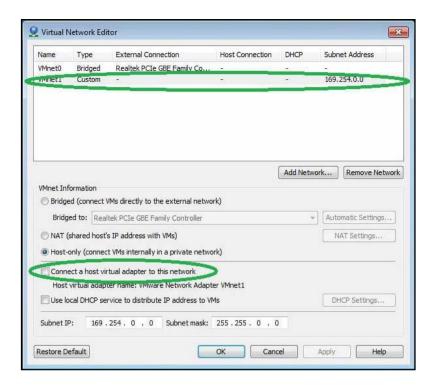
RHEINGO	D		â	4		1	S				? 🗔	
VIN:	Vehicle:								KL 15:		KL 30:	-
Operations	Vehicle inform	ation	Vehicle management		Service plan	Favou	ites		shop/ ating fluids		asuring ices	
Vehicle details	Repair history					Operati	ons report					
VIN												<b>^</b>
Series		Devel	opment code:		Production	on date		Gearb	ox			
Model		Engin	B		National	market version		Body				
Steering		Firste	Ongoing backgrou	und pro	Contino		>		ox number			
Basic type (model co	ode)	Warre						Paint	code			
Type approval no.:		Drive			U			Uphot	stery code			
Construction date:		Integr	ation level factory:		Integratio	on level actual:						
Technical actions;												
Status	Special defect code	Title										
Customer complain	E.											
Breakdown: O Yes	• No											•
								Sta	rt vehicle tes	t Inf	ormation se	arch

## USING BMW RHEINGOLD ISTA WITH ICOM

1. Open used for connection network adapter properties, then "Internet Protocol Version 4 (TCP/IPv4)" properties, then enter 169.254.1.1 for "IP address" and 255.255.0.0 for "Subnetmask".

Networking	General
Connect using:	
Intel(R) PRO/1000 MT Network Connection	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
This connection uses the following items:	Obtain an IP address automatically
Client for Microsoft Networks	Use the following IP address:
QoS Packet Scheduler	IP address: 169 . 254 . 1 . 1
	Subnet mask: 255 . 255 . 0 . 0
Internet Protocol Version 4 (TCP/IPv4)     Driver	Default gateway:
Link-Layer Topology Discovery Responder	Obtain DNS server address automatically
	Use the following DNS server addresses:
Install Uninstall Properties	Preferred DNS server:
Description Transmission Control Protocol/Internet Protocol. The default	Alternate DNS server:
wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit Advanced

2. If VMware is installed, open Virtual Network Editor and disconnect from the host any adapters with Subnet Address 169.254.0.0.



3. Open C:\EDIABAS\BIN\EDIABAS.INI with Notepad and check for "Port = 6801" in TCP settings.

EDIABAS - Notepad		x
File Edit Format V	ïew Help	
	= 1 = <filepathname></filepathname>	
[тср]		- 111
RemotsHose Port	$ \begin{array}{r} 102 \\ = 6801 \\ 1000 \end{array} $	
TimeoutReceive TimeoutFunction ; TimeResponsePe ; DisconnectOnAp ; InitCmd0 ; InitCmd1	= 2000 = 10000 nding = 5000	
;=====================================		=
TesterAddress	= Autodetect = 0 = F4,F5 = 6811 = 6801 = 20000	=
;=====================================		-
;=====================================	= <mark>6</mark> 700	-
#####################################	he Variante von EDIABAS.ini (mit Kurz-Info und Default) ##	¥ ¥ ¥
1	III. P	

- 4. Connect car with ICOM to PC.
- 5. Now run BMW Rheingold ISTA using shortcut in start menu and wait until it boots, then press settings button.

RHEINGOLD     Image: Constraint of the second	■ ? ■ × MINI Service Workshop system
	Vorkshop/ Measuring Operating fluids devices
News	Date
ISTA version 3.45 - Contents and notes, diagnosis	25/07/2014
ISTA version 3.45 - New contents for repair literature	25/07/2014
ISTA version 3.45 - Contents and notes, non-electrical diagnosis (NED)	17/07/2014
ISTA version 3.44 - New contents for repair literature	22/05/2014
ISTA usage notes	31/10/2013
	Display

7. Select "VCI Config" tab and "HO-ICOM/ENET local and ISIS network", then "OK".

RHEINGO	LD	â		P 🗆	S			?	Y.	>
/IN:	Vehicle:						KL 15: -	к	L 30: -	
Administration								富	?	>
Client settings	Dealer data	Version	Transfer Moni	tor Proble		VCI Config		)		
Interface type			ISIS Host	s or IPs:			-			
	indard settings (ediaba terface (USB / serial)	is.ini)	Search Br	oadcast:	255.25	5.255.255,169.25	4.255.255			
	ENET local network		SCORE B	roker Hosts:						
No. of Concession, name	ENET local und ISIS n ENET direct connection			s preferred cor	nmunica	ton channel v	hen connecte	ed via ICO	M?	
O Simulation			O Yes	O No rogramming co						
			O Yes	• No	mponent	s at startup?				
			0.5% ANSE							
				ita transfer mod						
				ound transfer se						
			O ISIS tra	nsfer service (v	ria works	hop Jetstrear	n)			
Cancel	Keyboard						0		ж	

8. Go "Operations", then "Read Out Vehicle Data" and "Complete Identification".

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BMW Service	24			Service
Workshop sys	tem			hop system
Operations Vehicle information Vehicle mana	le Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
News				Date
ISTA version 3.45 - Contents and notes, diagnosis				25/07/2014
ISTA version 3.45 - New contents for repair literature	9			25/07/2014
ISTA version 3.45 - Contents and notes, non-electric	cal diagnosis (NED)			17/07/2014
ISTA version 3.44 - New contents for repair literature	9			22/05/2014
ISTA usage notes				31/10/2013
				Display
RHEINGOLD		¥ 🗳		? 😨 🗙
VIN: Vehicle: Operations Vehicle information Vehic	le Service plan	Favourites	KL 15: Workshop/	KL 30: Measuring
		ravountes	0 0 0 11	devices
	gement Gervice plan		Operating fluids	
New Finished	gement		Operating fluids	
New Finished	Features			
New Finished VIN Read Out Vehicle Data Basic	gement			
New Finished	gement			
New Finished VIN Read Out Vehicle Data - Connect vehicle interface.	gement			
New Finished VIN Read Out Vehicle Data - Connect vehicle interface.	gement			
New Finished VIN Read Out Vehicle Data - Connect vehicle interface.	gement			
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New Finished VIN Read Out Vehicle Data - Connect vehicle interface.	gement			
New Finished VIN Read Out Vehicle Data - Connect vehicle interface.	gement		Operating mulos	Complete

9. Select your ICOM from the list and press "Set up connection" button.

RHEINGOL	D		A	•	•	1	₫.			?	¥ ×
VIN:	Vehicle:								KL 15: -	KL :	30: -
Connection manager											? ×
Device ID	c	Color Type	VI	N		Connecti	ion		KL15 [V]	Status	
1COM0079464		ICOM				D-CAN K-Line	169.254	.247.242	13.6 V	Free	>
						_					
Cancel	E							Denate	connection		onnection
Calicer								- Di Bein	connection	Set up th	Annecoon
RHEINGOL	D			· 20	•	/	S			?	X
			1.000								
VIN:	Vehicle:	_						5	KL 15: -	KL	30: -
		ation Vehicle			e plan	Favouri		Works	KL 15: -		30: -
VIN:	Vehicle: Vehicle inform	manag	e Jement	Servic	e plan		tes	Works	KL 15: -	KL Measurii	30: -
VIN: Operations	Vehicle:	manag	3	Servic				Works	KL 15: -	KL Measurii	30: -
VIN: Operations	Vehicle: Vehicle inform	manag	e Jement	Servic	e plan		tes	Works	KL 15: -	KL Measurii	30: -
VIN: Operations Vehicle details	Vehicle: Vehicle inform	manag	e lement	Servic	e plan	Operatio	tes	Works	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series	Vehicle: Vehicle inform	Development co	e lement	Servic	e plan I unit list Production	Operatio	tes	Works Opera Gearbo	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model	Vehicle: Vehicle inform	Development co	e lement l unit tree ode:	Servic	e plan I unit list Production National-m	Operatio	tes	Works Opera Gearbo Body	KL 15: hop/ ting fluids	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series	Vehicle: Vehicle inform	Development of Engine	e lement l unit tree ode:	Contro	e plan I unit list Production	Operatio	tes	Works Opera Gearbo Body Cearbo	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model	Vehicle: Vehicle inform Repair history	Development co Engine First productation Ware	erement Lunit tree	Contro	e plan I unit list Production National-m	Operatio	les ns report	Works Opera Gearbo Body Cearbo	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model Steering	Vehicle: Vehicle inform Repair history	Development co Engine First productation Ware	e erment unit tree	Contro	e plan I unit list Production National-m	Operatio	les ns report	Gearboo Body Cearboo Paint cc	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model Steering Basic type (model con Type approval no.:	Vehicle: Vehicle inform Repair history	Development co Engine First residentiation Warre Drive	e Identificati	Contro	e plan I unit list Production National-m	Operatio date arket version	les ns report	Gearboo Body Cearboo Paint cc	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model Steering Basic type (model cod	Vehicle: Vehicle inform Repair history	Development co Engine First residentiation Warre Vehick	e Identificati	Contro	e plan I unit list Production National-m	Operatio	les ns report	Gearboo Body Cearboo Paint cc	KL 15:	KL Measurii	30: -
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VIN: Operations Vehicle details VIN Series Model Steering Basic type (model cod Type approval no.: Construction date: <i>I</i> <u>Technical actions</u>	Vehicle: Vehicle inform Repair history de)	Development of Engine First protectedior Warre Drive	e Identificati	Contro	e plan I unit list Production National-m	Operatio date arket version	les ns report	Gearboo Body Cearboo Paint cc	KL 15:	KL Measurii	30: -
VIN: Operations Vehicle details VIN Series Model Steering Basic type (model conditions) Type approval no.: Construction date: I Technical actions: Status	Vehicle: Vehicle inform Repair history de)	Development of Engine First protectedior Warre Drive	e Identificati	Contro	e plan I unit list Production National-m	Operatio date arket version	les ns report	Gearboo Body Cearboo Paint cc	KL 15:	KL Measurii	30: -
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VIN: Operations Vehicle details VIN Series Model Steering Basic type (model cod Type approval no.: Construction date: I Technical actions: Status Status Status	Vehicle: Vehicle inform Repair history de)	Development of Engine First protectedior Warre Drive	e Identificati	Contro	e plan I unit list Production National-m	Operatio date arket version	les ns report	Works Operation Body Gearboo Paint cc	KL 15:	KL Measurin devices	30: -

## USING BMW RHEINGOLD ISTA WITH ENET CABLE

1. Open used for connection network adapter properties, then "Internet Protocol Version 4 (TCP/IPv4)" properties, then enter 169.254.1.1 for "IP address" and 255.255.0.0 for "Subnetmask".

Networking	General
Connect using:	
Intel(R) PRO/1000 MT Network Connection	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
This connection uses the following items:	Obtain an IP address automatically
Client for Microsoft Networks	Use the following IP address:
🗹 🜉 QoS Packet Scheduler	IP address: 169 . 254 . 1 . 1
File and Printer Sharing for Microsoft Networks	Subnet mask: 255 . 255 . 0 . 0
Internet Protocol Version 4 (TCP/IPv4)     Internet Protocol Version 4 (TCP/IPv4)     Internet Protocol Version Mappen VO Driver	Default gateway:
Link-Layer Topology Discovery Responder	Obtain DNS server address automatically
	Use the following DNS server addresses:
Install Uninstall Properties	Preferred DNS server:
Description	Alternate DNS server:
Transmission Control Protocol/Internet Protocol. The default	
	Validate settings upon exit Advanced

2. If VMware is installed, open Virtual Network Editor and disconnect from the host any adapters with Subnet Address 169.254.0.0.

	Type	External Connection	Host Connection	DHCP	Subnet Address
VMnet0	Bridged	Realtek PCIe GBE Family C	Co	St. 13	-
venet1	Custom	-			169.254.0.0
VMnet Ini	formation			Add Netw	vork ] [Remove Netw
( note	and a second second	and a second			
1 Bridge	ed (connect)	VMs directly to the external n	ietwork)		
		VMs directly to the external n Itek PCIe GBE Family Controlli	an ann an tha		- Automatic Settings
Bridg	ed to: Rea	and the second	an ann an tha		Automatic Settings
Bridg	ed to: Rea	Itek PCIe GBE Family Controlle	er		
Bridg	ied to: Rea (shared host) only (connec ect a host vii	ltek PCIe GBE Family Controll 's IP address with VMs) :t VMs internally in a private n rtual adapter to this network	er network)		
Bridg NAT ( Host-	ed to: Rea (shared host only (connec ect a host vi virtual adap	ltek PCIE GBE Family Controlle 's IP address with VMs) :t VMs internally in a private n	er network) xdapter VMnet1		

- 3. Connect car with ENET cable to PC, turn ignition on.
- 4. Now run BMW Rheingold ISTA using shortcut in start menu and wait until it boots, then press settings button.

RHEINGOL	D	<b>A</b>		۲) [1] [2] [3]		? 🖭 🗙
	BMW Server Workshop					ervice hop system
Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
News						Date
ISTA version 3.45 -	Contents and notes, diag	nosis				25/07/2014
ISTA version 3.45 -	New contents for repair li	terature				25/07/2014
ISTA version 3.45 -	Contents and notes, non-	electrical diagnosis	NED)			17/07/2014
ISTA version 3.44 -	New contents for repair li	terature				22/05/2014
ISTA usage notes						31/10/2013
						Display

5. Select "VCI Config" tab and "HO-ICOM/ENET local and ISIS network", then "OK".

VN:       Vehicle:       R. 15: -       KL 30: -         Administration       Image: Construction of the settings       Dealer data       Version       Transfer Monitor       Problem handling       VCL Config         Interface type:       C Ediabas standard settings (ediabas.ini)       Search Broadcast:       255255255169254255255       Search Broadcast:       255255255169254255255         O HO-ICOM / ENET local network       SCORE Broker Hosts:       SCORE Broker Hosts:       Search Broadcast:       255255255169254255255         O HO-ICOM / ENET local und ISIS network       Ethernet as preferred communicaton channel when connected via ICOM?       O Yes       O No         Simulation       Preload programming components at startup?       O Yes       O No         FASTA data transfer mode:       O Rockground transfer service (via workshop Jetstream)       O ISIS transfer service (via workshop Jetstream)	RHEINGOLD		A	4		×		S	$\boxtimes$			?		×
Client settings       Dealer data       Version       Transfer Monitor       Problem andling       VCI Config         Interface type: <ul> <li>Ediabas standard settings (ediabas.ini)</li> <li>OMITEC interface (USB / serial)</li> <li>HO-ICOM / ENET local network</li> <li>BiO-ICOM / ENET local und ISIS network</li> <li>HO-ICOM / ENET local und ISIS network</li> <li>BO-ICOM / ENET local und ISIS network</li> <li>Ethernet as preferred communication channel when connected via ICOM?</li> <li>Yes</li> <li>Yes</li> <li>No</li> <li>FASTA data transfer mode:</li> <li>Gackground transfer service (central systems)</li> <li>ISIS transfer service (via workshop Jetstream)</li> </ul>	VIN:	Vehicle:								KL	15: –	ĸ	L 30: –	
Client settings       Dealer data       Version       Transfer Monitor       handling       Config         Interface type:       Ediabas standard settings (ediabas.in)       ISIS Hosts or IPs:	Administration									_		E	?	$\times$
O Ediabas standard settings (ediabas.ini)   O MITEC interface (USB / serial)   O HO-ICOM / ENET local network   O HO-ICOM / ENET direct connection   O Simulation   Search Broadcast:   255.255.255.169.254.255.255   C HO-ICOM / ENET direct connection   O Simulation   Search Broadcast:   256.255.255.255.169.254.255.255   Search Broadcast:   257.255.255.255.255.255.169.254.255.255   Search Broadcast:   257.255.255.255.255.255.255.255.255.255.	Client settings	Dealer data	Version		Transfer Moni	tor				ig				_
○ OMITEC interface (USB / serial)       Search Broadcast:       255255255255,169254255255         ○ HO-ICOM / ENET local network       SCORE Broker Hosts:       SCORE Broker Hosts:         ○ HO-ICOM / ENET direct connection       ○ No         ○ Simulation       Preload programming components at startup?         ○ Yes       ○ No         FASTA data transfer mode:       ○ Background transfer service (via workshop Jetstream)		1 - M <sup>2</sup> 7 - 12 - 12 - 12	-2		ISIS Host	s or IPs								
<ul> <li>O HO-ICOM / ENET local und ISIS network</li> <li>O HO-ICOM / ENET direct connection</li> <li>O Simulation</li> <li>C Yes</li> <li>O No</li> <li>Preload programming components at startup?</li> <li>O Yes</li> <li>O No</li> <li>FASTA data transfer mode:</li> <li>O Background transfer service (central systems)</li> <li>O ISIS transfer service (via workshop Jetstream)</li> </ul>		973 N	11)		Search Br	oadcas	t	255.255.2	255.255,169.	254.255.25	5			
<ul> <li>HO-ICOM / ENET direct connection</li> <li>Simulation</li> <li>Hernet as preferred communicaton channel when connected via ICOM?</li> <li>Yes</li> <li>No</li> <li>Preload programming components at startup?</li> <li>Yes</li> <li>No</li> <li>FASTA data transfer mode:</li> <li>Background transfer service (central systems)</li> <li>ISIS transfer service (via workshop Jetstream)</li> </ul>	O HO-ICOM / ENE	T local network			SCORE B	roker H	osts:							
Cancel Keyboard OK	O HO-ICOM / ENE		vork		O Yes Preload p O Yes FASTA da O Backgro	rogrami ita trans ound tra	<ul> <li>No</li> <li>ming comp</li> <li>Mo</li> <li>sfer mode:</li> <li>unsfer serv</li> </ul>	oonents rice (cen	at startupf tral syster	? ns)	onnectec	I via ICO	M?	
	Cancel	Keyboard										(	ж	>

6. Go "Operations", then "Read Out Vehicle Data" and "Complete Identification".

7. Select your ENET connection from the list and press "Set up connection" button.

RHEINGO				A	4		Y		S				X	×
VIN: Connection manager	Vehicle:										KL 15:	K	1 30:	X
						_				_			hard	
Device ID		Color	Tuma		MIN	_		Connorti			KL.15		5	
WBAFW11000		•	ENET		WBAF	W11000		етн	169.25	4.114.76		Free		_
														_
Cancel										Brea	ak connection	Set up	connecti	ion
			1	6	4		×		S				Y	×
Operations	Vehicle: Vehicle inform		Vehicle		Se	rvice plan	F	avourites		Worksh		KL 3 Measuring		
			managem							Operati	ng fluids	devices		
Vehicle details	Repair history		Control uni	t tree	Co	ntrol unit list	0	perations r	report					_
VIN													ŕ	
Series		Develop	ment code:			Produc	tion date			Gearbox				
Model		Engine				Nationa	al-market ve	rsion		Body				
Steering		First per	sictestion			Enging				Gearbox	number			
Basic type (model cod	(a)		Ongoing ba			1			×	Paint cod				
basic type (model cod	ic)	Wallie	Vehicle Id	entifica	lion									
		11												
Type approval no.:		Drive				U				Upholste	ry code			
Construction date:			ion level fac	tory;			tion level ac	tuat		Upholste	ry code			
			ion level fac	clory:			tion level ac	tual:		Uphoiste	ry code			
Construction date: / Technical actions;	pecial defect code	Integrat	ion level fac	story:			tion level ac	tual:		Uphoiste	ry code			
Construction date: / Technical actions;	pecial defect code	Integrat	ion level fac	dory;			tion level ac	fual:		Uphoiste	ry code			
Construction date: / Technical actions: Status Si	pecial defect code	Integrat	ion level fac	dory;			tion level ac	tual:		Uphoiste	ry code			
Construction date: / Technical actions: Status Si Customer complaint: Breakdown:		Integrat	ion level fac	dory:			tion level ac	fuat		Uphoiste	ry code			
Construction date: I Technical actions: Status Si Customer complaint:	ecial defect code	Integrat	ion level fac	ctory;			tion level ac	fuat			ry code	Information		

8. Alternatively you could select "HO-ICOM/ENET direct connection" in "VCI Config" tab and "ENET" mode with empty "IP-Address" field during connection setup.

RHEINGOLD	A	< 🕑 🕨	P 00	Ø 🖂		?	X
VIN: Vehicle:					KL 15:	KL.	30:
Administration						<u>a</u>	? ×
Client settings Dealer data	Version	Transfer Monitor	Problem handling	VCI Conf	ig		
Interface type: O Ediabas standard settings (ediabas.ii		ISIS Hosts or	Ps:				
O OMITEC interface (USB / serial)	,	Search Broad	cast	255.255.255.255,169.	254.255.255		
O HO-ICOM / ENET local network		SCORE Broke	r blocte:				
O HO-ICOM / ENET local und ISIS netv	work	SCORE BIORE	I HUSIS.				
		Ethernet as pr	eferred comm	unicaton channel	when connect	ted via ICON	17
HO-ICOM / ENET direct connection	-	O Yes	O No				
O Simulation		Preload progra	amming comp	onents at startup	7		
		O Yes	O No				
		FASTA data tr	ansfer mode:				
				ice (central syster	ns)		
				workshop Jetstre			
	£						
Cancel Keyboard						O	< )
						-	
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RHEINGOLD	A	• • •	P 08	8			
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	IP-Address:	О ІСОМ					honord honord
Select Interface	IP-Address:	О ІСОМ					
	IP-Address:	О ІСОМ					honord honord

## **DIAGNOSTICS WITH ISTA+**

## STARTING THE ISTA+ WORKSHOP SYSTEM

How to start the ISTA workshop system:

• Double click the installation process above.

After ISTA is started, the start screen appears. A list of news is displayed. You can set the display period in the Administration.

Application	? 🖬 🗡
	VI Service rkshop system
Operations Vehicle Information Vehicle Service plan Favourites Workshop/ Operating fluik	Measuring ds devices
Nows	Date
STA version 3.49 - Contents and notes, diagnosis	27/03/2015
STA version 3.49 - New contents for repair literature	26/03/2015
STA version 3.49 - Contents and notes, non-electrical diagnosis (NED)	25/03/2015
STA version 3.48 - New contents for repair literature	04/03/2015
STA version 3.47 - New contents for repair literature	14/11/2014
STA usage notes	17/09/2014

Once you have read the "Note on using ISTA", close the dialog using the button "Next". You can open a process from the start screen: Select the "Operations" menu.

## SELECTING A VEHICLE WITHOUT CABLE CONNECTED TO CAR

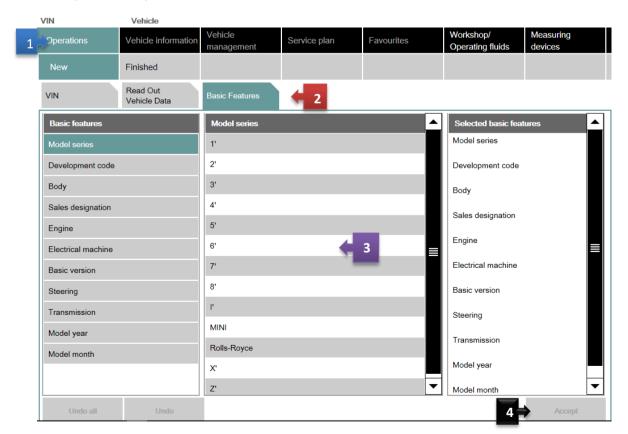
#### Method 1:

You can enter your short VIN (Last 7 of the VIN) and be able to pull relevant procedures or troubleshooting instructions without actually connecting to the car. To access this feature, launch ISTA+ and click on Operations tab (1). Then enter the short VIN into the VIN box (2). Then click on Accept (3). The Accept button will become active only when a VIN number is entered. You can explore features specific to your car from here.

	VIN	Vehicle	· · · · · · · · · · · · · · · · · · ·	-7 5			
1	Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
_	New	Finished					
	VIN	Read Out Vehicle Data	Basic Features				
			Input VIN:				
			mpat vila.			2	
						_	
	Keyboard					3	Accept

## Method 2:

Follow the steps as in the picture below:



# SELECTING A VEHICLE VIA "READ OUT VEHICLE DATA" WITH CABLE CONNECTED TO CAR

After you select the "Operations" menu from the start screen, the workshop system changes to the "Vehicle identification number" tab under the "New" menu item.

# We will assume that you have connected the right interface to the car at this time (Refer to interfaces section). Our example will use ICOM.

This is how to identify a vehicle by reading out the vehicle data, while automatically creating a process:

- Click the "Operations" main menu item in the navigation area.
- Select the "Read out vehicle data" tab and follow the instructions provided.
- Click the "Identification without vehicle test" or "Complete identification" button.

Integrated Servic Application	e Technical	<b>A</b> (		×	100 S			? 포	×
VIN:	Vehicle:						KL 15: -	KL 30: -	-
Operations	Vehicle information	Vehicle management	Serv	ice plan	Favourite		Vorkshop/ Operating fluids	Measuring devices	
New	Finished								
VIN	Read Out Vehicle Data	Basic Features							
	ignition or activate the test					k	ientification without vehicle test	Complete identification	

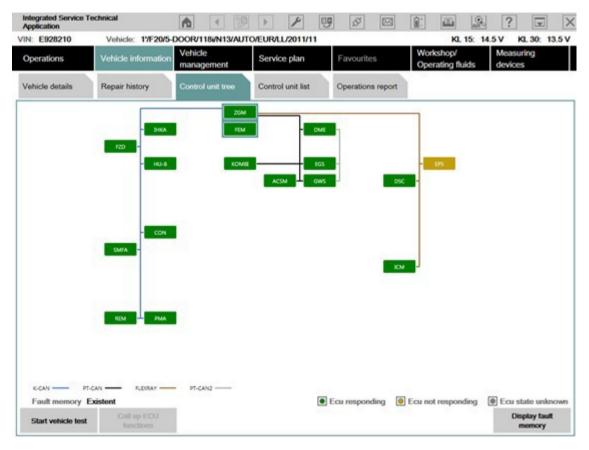
The connection to the vehicle is now established. The workshop system performs an identification of the vehicle. It also reads the vehicle identification number and further data from the vehicle. The progress of the identification operation is displayed on a progress bar.

If an ICOM has the status "Firmware" and cannot be selected, then you have to carry out an ICOM firmware update first.

# Again, ICOM troubleshooting is not discussed here, there are forum threads dedicated to troubleshooting communication issues. Refer to those.

## Start vehicle test

If vehicle identification was called up via "Read out vehicle data" and "Complete identification", the vehicle test starts automatically following vehicle identification, followed by the vehicle operation and service data transfer and analysis. The control unit tree is displayed during the vehicle test



Here you can observe the ongoing determination of the control units that are fitted. If no control unit tree is available, the "Control unit list" mask is displayed automatically.

The control unit tree contains all the control units identified in the vehicle and displays their allocation to the relevant bus system. The control units are identified in succession and their fault memories are read out. The color then changes to display of the detected state. An explanation of the colors can be found in the lower section of the displayed mask. From this screen, if required you can restart the vehicle test or also call up control unit functions so that you can read out measurements or activate actuating elements.

Before you can access a test plan you must first display the fault memory. This is how to view the fault memory:

- Wait until the vehicle test is completed.
- Click the "Display fault memory" button.

## Show fault memory

After the vehicle test, click the "Display fault memory" button in the "Fault memory" mask. The fault codes that are read out and the associated description are listed here.

tegrated Service T optication	echnical	A 12	> P 0	5	3	2	? 🖃
N: E928210	Vehicle: 17F20/5-0	DOOR/118/N13/AUT	O/EUR/LL/2011/11			KL 15: 14	5V KL 30: 13.
perations	Vehicle information	Vehicle management	Service plan	Favourites		kshop/ rating fluids	Measuring devices
Repair/ Maintenance	Troubleshooting	Service function	Software update	Control Unit Exchange	Vehi modi	cle lfication	
ault memory	Fault patterns	Function Structure	Component Structure	Text Search	Input	fault code	
Code	Description				Mileage	Class	
0399	No communication po	ossible with: electrome	echanical power steerin	g	8382		
umber of fault me	emories; 1/1 No.1	ault patterns: 0	Filter: Default				

The function "Delete fault memory" can be carried out at the end of the guided troubleshooting. In order to start the guided troubleshooting, first calculate a test plan.

This is how to calculate a test plan:

• Click the "Calculate test plan" button.

## Processing the test plan

The test plan lists the components and functions that might have caused the fault. The documents and test modules corresponding to the components and functions are displayed in the "Type" column, identified with "ABL". In the "Type" column, documents and test modules are identified with an abbreviation.

Procedures localize a fault and give advice on rectifying it. This is how you start a procedure:

- Select the required procedure from the test plan.
- Click the "Display" button.

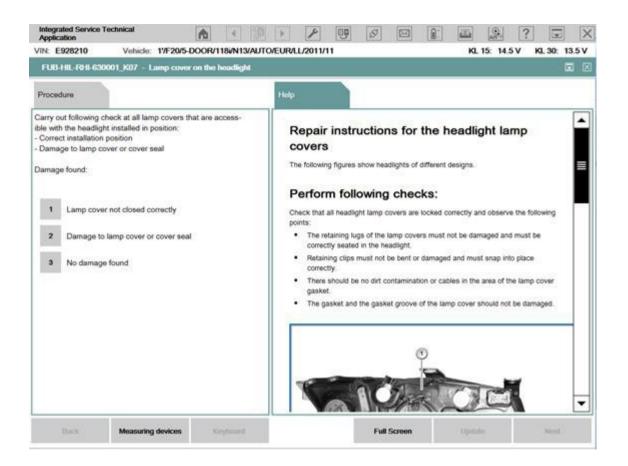
Integrate Applicati	ed Service Te ion	chnical		1 1	9	\$ M		2 ?	
VIN: E92	28210	Vehicle: 1%F20/5	DOOR/118/N13/AUT	O/EUR/LL/2011/1	1		к	L 15: 14.5 V	KL 30: 13.5 V
Operati	lons	Vehicle information	Vehicle management	Service plan	F	avourites	Workshop/ Operating f		suring ces
Hit list	t.	Test plan	Programming plan						
Туре	Title							Stat	us Priority
	Power supp	xly, EPS electromecha	nical power steering						1
ABL	Voltage sup	oply, electromechanica	al power steering (EPS)					0	] 1
	Automatic o	triving lights control. A	ctivation and deactivati	on characteristics	implausib	le			2
SIT	Automatic o	friving lights control. A	ctivation and deactivati	on characteristics	implausib	le		0	2
	Front light of	combination, optical co	mplaint						2
ABL	Headlight fo	ogging						0	2
	Hazard war	ming flashers continue	usly flashing						2
ABL	Various ele	ctronic faults						0	2
	Turn-indica	tor cancellation not we	riking						2
ABL	Turn-indica	tor cancellation not wo	orking					0	2
Hits:	5/5	Filter: Defa	iult	🖸 no	t called	erformed	minimized	canceled	suspected
1	Back	Filters	Show symptoms		pand		er Repair o	renviews:	Deplay

The priority in the test plan does not necessarily specify the call-up of the processes. The priority is to be regarded as a recommendation for processing.

i

A test module is primarily designed to identify the cause of a fault. Furthermore, service functions can be performed via procedures. Information can be displayed within a test module, as well as measured values read out or entered. Furthermore, queries can be made available in procedures via selection screens.

After a test module has been carried out, additional information is added to the test plan if this is necessary for further troubleshooting or fault elimination.



After the test plan has been completed, you should carry out the "Delete fault memory" function.

## Information types in ISTA documents – what do things mean?

Abbreviation	Information type	Abbreviation	Information type
ABL	Procedure (service program)	REP	Repair instructions
AZD	Tightening torque	SBS	Operating fluids
EBO	Installation location	SIT	Service Information Engineering
FEB	Fault elimination	SPI	Vehicle software information

Abbreviation	Information type	Abbreviation	Information type
FTD	Vehicle engineering diagnosis	SSP	Wiring diagram
FUB	Functional description	STA	Connector view details
IBAC	Internet Based Calculation of Enabling Codes	SWS	Special tool / device
KFA	Function changes to vehicle	Special tools	Special tool
MSM	BMW Group Mobile Service	TED	Technical data
PIB	Pin assignments		

#### PROGRAMMING WITH ISTA+

Until now, different systems for vehicle diagnosis (ISTA) and programming (ISTA/P) have been used. This means it was necessary to change systems several times when repairing a vehicle using software.

ISTA+ has been expanded so that all the required programming functions for the series F, G and I are integrated.



E-series vehicles still have to be programmed using ISTA/P!

The functions relevant for programming can be accessed via the following menus:

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ Maintenance	Troubleshooting	Service function	Software update	Control Unit Exchange	Vehicle modification	
Comfort	Advanced					

Vehicle treatment

- Software update
  - Comfort as per the suggested measures plan
  - Advanced with broadened scope
  - Additional software (range of functions is not active yet)
- Control unit replacement
  - Before exchange (preparation) control unit read-out for the exchange
  - After exchange (subsequent evaluation) control unit configuration after exchange
- Vehicle modification
  - o Retrofit
  - o Conversion
  - Conversion (only coding)
  - o Backfitting
  - o Immediate measures

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Hit list		Programming plan				
Measures plan	Final report					

## ERRORS, FIXES AND FAQ

- There are other enthusiast avenues available to troubleshoot or program BMWs, such as WinKFP, INPA, Tool32 and ESYS depending on the model series of the car.
- STANDALONE ISTA+ (ALSO ISTA-P) REQUIRES A MINIMUM 70AMP+ FOR PROGRAMMING. DO NOT ATTEMPT PROGRAMMING WITHOUT A POWER SUPPLY! FOR REFERENCE, A POWER SUPPLY IS NOT THE SAME AS YOUR STORE BOUGHT BATTERY CHARGER/TENDER. A POWER SUPPLY COSTS FAR LESS THAN A BRICKED ECU/CAR.
- If you get database connection errors, most or the time it's because your extracts failed. Use MegaSync or JDownloader for large downloads and use only 7 zip for extracts.
- Install all Microsoft dependencies listed in prerequisites and the 2 mandatory required software, VC Redist C++ 2013 Redistributable and NET 4.6. Program will not run without these.
- o Depending on your system specs, you might need to run the program always as admin.
- A dedicated laptop is preferred with at least Windows 7 (32 bit or 64bit). You also need to turn off AV and firewall. They prevent proper program function. In some cases, you need to turn off UAC.
- Blocking might have been turned back on by Windows even after you ran the unblock.reg file from the first step in Install Instructions. Keep checking to make sure files are not blocked again after extract.
- For printing, you need do make changes in file ISTAGUI.exe.config
  - Change line
    - <add key="BMW.Rheingold.CoreFramework.PrintingType" value="default"/>
    - ТО

- <add key="BMW.Rheingold.CoreFramework.PrintingType" value="dialog"/>
- After, modify system registry (regedit.exe) value of
  - address HKEY\_CURRENT\_USER\Software\BMWGroup\ISPI\Rheingold DEFAULT on DIALOG
- To resolve connection problems with ECU modules in older cars you can increase response time on receive and connecting commands in **Ediabas.ini**. This is an old **INPA** trick. (This trick works on all cables ICOM, ENET or K+Dcan etc.)

#### Values in Ediabas.ini

55	L;					
56 [	TCP]					
57	;					
58	RemoteHost	= 192.168.68.4				
59	Port	= 6801				
60	TimeoutConnect	= 2000				
61	TimeoutReceive	= 2000				
62	TimeoutFunction	= 10000				
63	; TimeResponsePending	= 5000				
64	; DisconnectOnApiEnd	= 1				
65	; InitCmd0	= FE,04,00,03,01				
66	; InitCmd1	= FD,05,00,03,01				
67						
68	L ; ======					
• (	Change to:					

- Change to:
  - TimeoutConnect = 20000
  - TimeoutReceive = 20000
  - TimeoutFunction = 59000