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Road vehicles — Automotive multimedia interface —

Part 5: Common message set

Véhicules routiers — Interface multimédia pour l'automobile —

Partie 5: Exigences de message commun

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 22902-5 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 22902 consists of the following parts, under the general title *Road vehicles — Automotive multimedia interface*:

— *Part 1: General technical overview*

— *Part 2: Use cases*

— *Part 3: System requirements*

— *Part 4: Network protocol requirements for vehicle interface access*

— *Part 5: Common message set*

— *Part 6: Vehicle interface requirements*

— *Part 7: Physical specification*

Introduction

This part of the standard Common Message Set concerns a set of application-layer messages that “AMI-C” multimedia networks must support and thus the name Common Message Set (CMS).

This part provides two types of information for system communication:

— *It defines the exact list of functions for, and therefore sets the boundary of, the communication in an “AMI-C” system. The communication could take place between an “AMI-C” compliant vehicle and an “AMI-C” network or between two “AMI-C” networks. The list of the functions is the consensus of ISO experts.*

— *It provides standardized descriptions of the listed functions in network-independent message format.*

The purpose of a CMS is to achieve interoperability and interchangeability among networked components in an “AMI-C” system. It does this by exactly defining the semantics of each message. The CMS is based on, and developed in, ASN.1 (Abstract Syntax Notation One). For any specific network technology, the CMS needs to be encoded in a manner consistent with the network protocol.

Road vehicles — Automotive multimedia interface —

Part 5: Common message set

1 Scope

This documents covers the following aspects of an Common Message Set:

- the Common Message Set definition;
- ASN.1 format for the Common Message Set;
- standardized descriptions of the selected functions in a network independent message format.

The descriptions cover the following message categories and classes:

- Management
  - Network management messages
  - Resource management messages
- Vehicle
  - Core messages
  - Body module messages
  - Powertrain messages
  - Vehicle diagnostics messages
- Audio / Video
  - Amplifier messages
  - General player messages
  - Disk media messages
  - Tape media messages
  - Tuner messages
- Phone
  - Basic phone messages
  - Advanced phone messages
- HMI
  - Text Display messages

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 8824-1, *Information technology — Abstract Syntax Notation One (ASN.1) — Part 1: Specification of basic notation*

ISO/IEC 8824-2, *Information technology — Abstract Syntax Notation One (ASN.1) — Part 2: Information object specification*

AMI-C 2003, AMI-C vehicle interface requirements, v1.00

ASN.1 Complete, Prof John Larmouth

ASN.1 – Communication between heterogeneous systems, Olivier Dubuisson, Morgan Kaufmann Publishers

3 Common Message Set Definition

Feature sets that can be uniquely addressed for messaging are defined as objects. A specific attribute of an object is called property of an object. Each object has one or more properties. For example, the odometer object can provide an absolute mileage property or the changed value (delta) property. Also, an object type can have multiple instances of it present in a vehicle. Multiple instances are designated through position of an object. For example, brake object has enumeration such as hand, engine, right foot, etc. An object with only one instance, e.g., engine, can be designated with a no-position enumerator.

3.1 Common Message Set Transaction

3.1.1 Message Type (Msg Type)

The Message Type indicates the action required on the destination node. Message Type can have 6 values: INQUIRE, REPORT, SET, CONFIRM, COMMAND, and WARNING.

Figure 1 illustrates the relationship between the INQUIRE and REPORT message types.

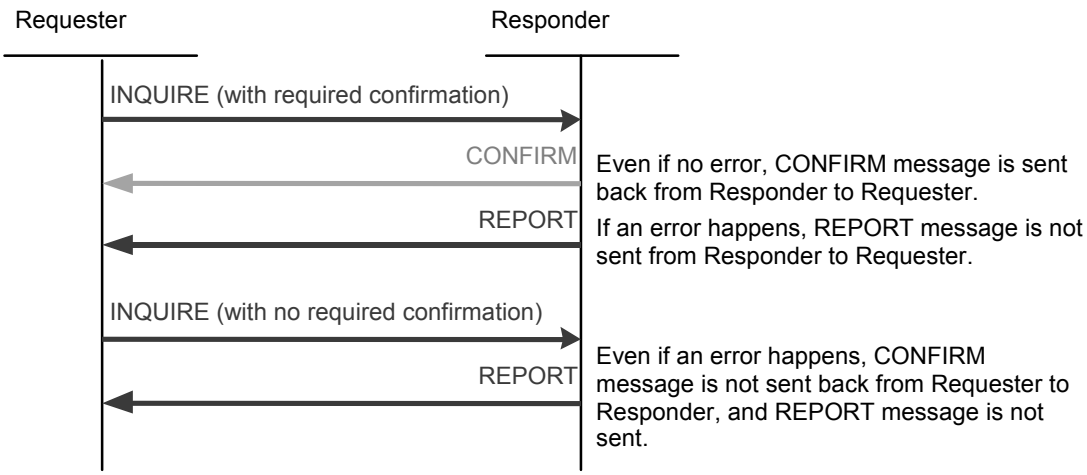

Figure 1 — INQUIRE and REPORT message sequence

Figure 2 illustrates the relationship between the SET and CONFIRM message types.

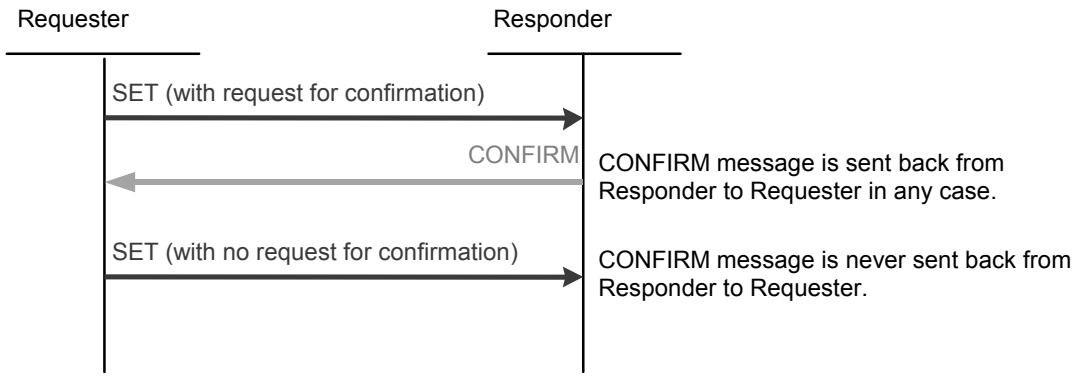

Figure 2 — SET message sequence

— INQUIRE - A request to obtain the current value of a property at one instant of time from an object.

— REPORT - A reply to an INQUIRE message, or asynchronously generated (in response to a request for subscription) message containing current value of one property at one instant of time.

— SET - A request to change the current value of one property at one instant of time.

— COMMAND - A message to perform the following five kinds of actions: start execution of software in a remote component, actuate device in a remote component, request access to resource, start subscription for a property or end subscription for a property.

— CONFIRM - A message to indicate success or error status of requested operation when a confirmation message is requested.

— WARNING - It is a message to send information to notify status to other nodes without any requests.

3.1.2 Message Class

The Message Class indicates to which class a message belongs. Classes are defined as follows:

— Management – network device management, audio/video stream management, and service discovery;

— Core – information that is originally inherent in a vehicle (VIN, static configuration information, etc.);

— Body Module – control and status related with body module (window, seat, mirror, light, trip meter, vehicle speed, etc.);

— Powertrain – status related with powertrain (oil temperature, coolant temperature, gear, etc.);

— Vehicle Diagnostics – message for vehicle diagnostics (ISO 15031-5 emission related, ISO 14229-1 non emission related);

— Amplifier – control related with amplifier and codec (volume, fade/balance, codec, etc.);

— General Player – common functions for disk and tape player;

— Disk Media – audio/video player for disk media (CD, MD, DVD, MP3, etc.);

— Tape Media – audio/video player for tape media (audio tape, VCR, etc.);

— Tuner – audio/video broadcast tuner (AM, FM, XM, TV, etc.);

— General Phone – basic phone functionality (dial, hang-up, phone book, etc.);

— Advanced Phone – advanced phone functionality (short message, multi party call, conference call, etc.);

— Text Display – command to display simple texts and input texts.

3.1.3 Object Property

This field defines the property of an object that is going to be accessed. For example, a mirror can have 2 properties: vertical position and horizontal position. Their values are defined in Vehicle Interface Messages section.

3.1.4 Extension Possibility

In order to allow the addition of further Object Property codes (beyond 254), ISO 22902 defines the following expansion method. The restricted value 255 (FF16) indicates that the next 8 bit field (in place of Operand 0) contains the extended Object Property code.

3.1.5 Operands

These fields depend on the Message Type and the Object Property.

3.1.6 Message naming convention and 'opcode' for messages

Each ISO 22902 message name is concatenation of strings using "polish" notation. All the ISO 22902 messages start with the "Amic" label to distinguish them from other standard (such as AV/C, AT commands, etc.) or automaker proprietary messages. The next string in the convention is the abbreviated message class name. For example "core" message class is abbreviated by "Co" string. These two strings are concatenated with message type from BM (Body Module), PT (Powertrain), VD (Vehicle Diagnosis), Ap (Amplifier), GP (General Player), DM (Disk Media), TM (Tape Media), Tu (Tuner), BP (Basic Phone), AP (Advanced Phone), and TD (Text Display). The next three-letter string shows message type; for example, a "inquire message" is abbreviated by "Inq" string, Rpt (Report), Set (Set), Cmd (Command), and Cnf (Confirm). The last part of a message name contains object names and command modifier. Any name must use at most one literal from Message Classes, Message Types, Object Types and prefix with 'Amic", for example, "AmicCoRptVIN". The operands for each message are object tag, location (position) of the object, and the property identifier or the current value of the property.

— Generation of new messages

If a feature is introduced (due to new technology or re-allocation) for which there are no existing messages are defined, the following process is followed:

1) Survey existing messages in ISO 22902 for this feature. If extension of existing functional modules does not provide the feature, follow step 2. If extension is sufficient, verify & validate.

2) Survey external sources for messages for this feature. If adoption of external source is limited to a specific network, create a corresponding message description for convenience of mapping to other network. Verify & validate. If adoption or extension does not provide the feature, follow step 3.

3) Create a new message description based on the feature. Verify & validate using ISO 22902 adopted procedure.

4 Management Messages

4.1 Release Version Number

This message is a request to get the ISO 22902 release and version number.

Supported Messages
Class = Management class
Object = Release Version number

Name	Operator	Type	Class	Object	Parameter
AmicMnInqRelVerNum	Inq	'000'B	'02'H	'00'H	N/A
AmicMnRptRelVerNum	Rpt	'001'B	'02'H	'00'H	Report
AmicMnCnfRelVerNum	Cnf	'011'B	'02'H	'00'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	majorRelease	INTEGER (2..31)	Major release number
	minorRelease	INTEGER (0..31)	Minor release number
	majorVersion	INTEGER (0..31)	Major version number
	minorVersion	INTEGER (0..31)	Minor version number

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.2 System Power Mode

This message is a request to get system power mode state.

Supported Messages
Class = Management class
Object = System power mode

Name	Operator	Type	Class	Object	Parameter
AmicMnInqSystemPMode	Inq	'000'B	'02'H	'01'H	N/A
AmicMnRptSystemPMode	Rpt	'001'B	'02'H	'01'H	Report
AmicMnCnfSystemPMode	Cnf	‘011’B	'02'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	moduleState	AmicMnAttPowerMode	Power mode attribute

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttPowerMode			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Power off
	active	1	Power on or wakeup
	lowPower	2	Description of this state is manufacturer specific.
	ultraLowPower	3	Ultra low power for specific devices that have this functionality. Description of this state is manufacturer specific.

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.3 Power State

This message is a request to get power state information of each module, power off, low power, or active (power-on or wake-up). A state of component itself as a physical node is managed by its transaction management module.

Supported Messages
Class = Management class
Object = Power state

Name	Operator	Type	Class	Object	Parameter
AmicMnInqPowerState	Inq	'000'B	'02'H	'02'H	N/A
AmicMnRptPowerState	Rpt	'001'B	'02'H	'02'H	Report
AmicMnSetPowerState	Set	'010'B	'02'H	'02'H	Set
AmicMnCnfPowerState	Set	'011'B	'02'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	moduleState	AmicMnAttPowerState	Power state attribute

Set Parameter(s)			
Type	Name	Value / Type	Description
	moduleState	AmicMnAttPowerState	Power state attribute

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttPowerState			
Type	Name	Value / Type	Description
ENUMERATED	sleep	0	Power off
	active	1	Power on or wakeup
	boot	2	the system is initializing
	shutdown	3	the system is preparing for sleep

AmicMnAttPowerState			
Type	Name	Value / Type	Description
ENUMERATED	sleep	0	Power off
	active	1	Power on or wakeup
	boot	2	the system is initializing
	shutdown	3	the system is preparing for sleep

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.4 Node Information Announcement

This message is to announce services about a certain node registered / un-registered in a master node to manage service information of each node. This message is sent to a master node to each node within the network.

Supported Messages
Class = Management class
Object = Node information announce

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdNodeInfoAnnounce	Cmd	'100'B	'02'H	'05'H	Command
AmicMnCnfNodeInfoAnnounce	Cnf	‘011’B	'02'H	'05'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	registration	BOOLEAN	TRUE is registration, FALSE is un-registration.
	functionType	AmicCmAttFunctionType	Function type
	instanceNum	INTEGER (1..14)	Instance number assigned
	numOfServices	INTEGER (0..255)	Number of services available in a certain module
	services	SEQUENCE OF AmicMnAttSpecificService	Specific service information

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
ENUMERATED	transManage	0	Transaction management module
	vehicleServiceInterface	1	Vehicle Service Interface
	clock	2	Clock
	gps	3	GPS unit
	antenna	16	Vehicle Antenna
	door	17	Door
	doorLock	18	Door lock
	window	19	Window
	mirror	20	Mirror
	mirrorRetract	21	Mirror Retract
	seat	22	Seat
	seatbelt	23	Seat Belt
	horn	24	Horn
	wiper	25	Wiper
	headLight	26	headlights
	parkingLight	27	parking Lights
	interiorLights	28	interior Lights
	hazardSignal	29	Hazard Signal
	thermometer	30	Thermometer
	steering	31	Steering
	seatOccupation	32	Seat Occupation
	odometer	33	Odometer
	tripCounter	35	Trip counter
	airbag	36	Air bag
	indicator	37	Warning indicator
	driverID	38	Driver ID
	rainSensor	39	Rain Sensor
	sunSensor	40	Sun Sensor value
	washingLiquid	41	Washing Liquid
	engineStartDisable	48	Engine Start Disable
	remoteStart	49	Remote Start

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
	performanceMode	50	Performance Mode
	coolantTemperature	51	Coolant Temperature
	engineRPM	52	Engine RPM
	engineOilPressure	53	Engine Oil Pressure
	engineOilTemperature	54	Engine Oil Temperature
	gearPosition	55	Gear Position
	prndlPosition	56	PRNDL Position
	cruiseControlState	57	Cruise Control State
	brakeFluidLevState	58	Brake Fluid Level State
	diagUnit	64	Diagnostic unit
	cd	80	CD (Compact Disc) player
	md	81	Mini Disc player
	dvdVideo	82	DVD video player
	dvdAudio	83	DVD audio player
	mp3	84	MP3 Player
	audioCassette	85	Audio cassette Player
	vcr	86	VCR Player
	amFmTuner	87	AM/FM radio tuner
	xmTuner	88	XM radio tuner
	tvTuner	89	TV tuner
	monitor	90	Monitor
	amplifier	111	Amplifier
	navigationUnit	112	Navigation unit
	phone	128	Phone
	textDisplay	144	Text display
	keyboard	145	Keyboard
	remoteController	146	Remote controller
	voiceUnit	147	Voice interface unit
	pda	160	PDA

AmicMnAttSpecificService			
Type	Name	Value / Type	Description
ENUMERATED	service0	0	
	service1	1	
	service2	2	
	service3	3	

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.5 General Service Information

This message is a request to find functional module(s) that has an identified function type within a network; that is, service discovery for CD, tuner, phone, and so on. This message is sent to a master node to manage service information of each node.

Supported Messages
Class = Management class
Object = General Service Information

Name	Operator	Type	Class	Object	Parameter
AmicMnInqGenServiceInfo	Inq	'000'B	'02'H	'06'H	Inquire
AmicMnRptGenServiceInfo	Rpt	'001'B	'02'H	'06'H	Report
AmicMnCnfGenServiceInfo	Cnf	'011'B	'02'H	'06'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	functionType	AmicCmAttFunctionType	Function type

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	numOfModules	INTEGER (0..14)	Number of modules which has identified function type
	instanceNum	SEQUENCE OF INTEGER (1..14)	Available instance numbers

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
ENUMERATED	transManage	0	Transaction management module
	vehicleServiceInterface	1	Vehicle Service Interface
	clock	2	Clock
	gps	3	GPS unit
	antenna	16	Vehicle Antenna
	door	17	Door
	doorLock	18	Door lock
	window	19	Window
	mirror	20	Mirror
	mirrorRetract	21	Mirror Retract
	seat	22	Seat
	seatbelt	23	Seat Belt
	horn	24	Horn
	wiper	25	Wiper
	headLight	26	headlights
	parkingLight	27	parking Lights
	interiorLights	28	interior Lights

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
	hazardSignal	29	Hazard Signal
	thermometer	30	Thermometer
	steering	31	Steering
	seatOccupation	32	Seat Occupation
	odometer	33	Odometer
	tripCounter	35	Trip counter
	airbag	36	Air bag
	indicator	37	Warning indicator
	driverID	38	Driver ID
	rainSensor	39	Rain Sensor
	sunSensor	40	Sun Sensor value
	washingLiquid	41	Washing Liquid
	engineStartDisable	48	Engine Start Disable
	remoteStart	49	Remote Start
	performanceMode	50	Performance Mode
	coolantTemperature	51	Coolant Temperature
	engineRPM	52	Engine RPM
	engineOilPressure	53	Engine Oil Pressure
	engineOilTemperature	54	Engine Oil Temperature
	gearPosition	55	Gear Position
	prndlPosition	56	PRNDL Position
	cruiseControlState	57	Cruise Control State
	brakeFluidLevState	58	Brake Fluid Level State
	diagUnit	64	Diagnostic unit
	cd	80	CD (Compact Disc) player
	md	81	Mini Disc player
	dvdVideo	82	DVD video player
	dvdAudio	83	DVD audio player
	mp3	84	MP3 Player
	audioCassette	85	Audio cassette Player
	vcr	86	VCR Player
	amFmTuner	87	AM/FM radio tuner
	xmTuner	88	XM radio tuner
	tvTuner	89	TV tuner
	monitor	90	Monitor
	amplifier	111	Amplifier
	navigationUnit	112	Navigation unit
	phone	128	Phone
	textDisplay	144	Text display
	keyboard	145	Keyboard
	remoteController	146	Remote controller
	voiceUnit	147	Voice interface unit
	pda	160	PDA

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.6 Specific Service Information

This message is a request to receive service information that has an identified functional module within a network; that is, detail service discovery. This message is sent to a master node to manage service information, or a specific node directly.

Supported Messages
Class = Management class
Object = Specific Service Information

Name	Operator	Type	Class	Object	Parameter
AmicMnInqSpServiceInfo	Inq	'000'B	'02'H	'07'H	N/A
AmicMnRptSpecificServiceInfo	Rpt	'001'B	'02'H	'07'H	Report
AmicMnCnfSpecificServiceInfo	Cnf	'011'B	'02'H	'07'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	functionType	OCTET STRING (SIZE(1))	Function type
	numOfServices	INTEGER (0..255)	Number of services available in a certain module
	services	SEQUENCE OF AmicMnAttSpecificService	Specific service information

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttSpecificService			
Type	Name	Value / Type	Description
ENUMERATED	service0	0	
	service1	1	
	service2	2	
	service3	3	

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.7 Vehicle Configuration Service

This message is to get Vehicle Configuration Service; which services related vehicle service interface are available.

Supported Messages
Class = Management class
Object = Vehicle Configuration Service

Name	Operator	Type	Class	Object	Parameter
AmicMnInqVehConfigServ	Inq	'000'B	'02'H	'08'H	N/A
AmicMnRptVehConfigServ	Rpt	'001'B	'02'H	'08'H	Report
AmicMnCnfVehConfigServ	Cnf	'011'B	'02'H	'08'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	bodyModuleStatus	AmicMnAttBMConfigServ	Body module status
	pwrTrainStatus	AmicMnAttPTConfigServ	Powertrain Status
	vehicleDiagnostics	AmicMnAttVDConfigServ	Vehicle diagnostics status
	hMIServices	AmicMnAttHMIConfigServ	HMI service status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttBMConfigServ			
Type	Name	Value / Type	Description
BIT STRING	antenna	1	1=service configured
	doorStatus	2	1=service configured
	doorLock	3	1=service configured
	windows	4	1=service configured
	mirrors	5	1=service configured
	mirrorFold	6	1=service configured
	seats	7	1=service configured
	seatbelts	8	1=service configured
	horn	9	1=service configured
	wipers	10	1=service configured
	headlights	11	1=service configured
	parkingLight	12	1=service configured
	interiorLights	13	1=service configured
	hazardSignal	14	1=service configured
	exteriorTemperature	15	1=service configured
	steering	16	1=service configured
	seatOccupation	17	1=service configured
	odometer	18	1=service configured
	highResolutionDistanceAccumulator	19	1=service configured
	vehicleSpeed	20	1=service configured
	airBag	21	1=service configured
	fuel	22	1=service configured
	warningIndicatorState	23	1=service configured
	driverID	24	1=service configured

AmicMnAttBMConfigServ			
Type	Name	Value / Type	Description
	rainSensor	25	1=service configured
	sunSensor	26	1=service configured
	washingLiquidLevel	27	1=service configured
	subscribingStatus	28	1=service configured
	subscribeData	29	1=service configured
	unsubscribeData	30	1=service configured
	windowPosition	31	1=service configured
	sunroof	32	1=service configured
	sunroofPosition	33	1=service configured
	turnSignal	34	1=service configured
	batteryCharge	35	1=service configured
	noiseLevel	36	1=service configured
	shutter	37	1=service configured
	fogLamps	38	1=service configured
	handBrakeStatus	39	1=service configured
	convertibleTop	40	1=service configured
	dashboardIllumination	41	1=service configured
	obstacleDistance	42	1=service configured
	tirePressure	43	1=service configured
	tireInflationMonitorStatus	44	1=service configured
	wheelSpeed	45	1=service configured
	ignitionKeyState	46	1=service configured
	engineRunning	47	1=service configured
	vehicleOwner	48	1=service configured
	interiorTemperature	49	1=service configured
	hVACFanSpeed	50	1=service configured
	hVACFanMode	51	1=service configured
	hVACMixDoorPosition	52	1=service configured
	rearWindowDefrost	53	1=service configured
	externalMirrorDefrost	54	1=service configured
	automaticHVACControlSetTemperature	55	1=service configured
	seatHeaterCooler	56	1=service configured
	steeringWheelHeater	57	1=service configured
	headlightTilt	58	1=service configured
	mapLights	59	1=service configured
	slidingDoorCommand	60	1=service configured
	securityAlert	61	1=service configured
	trunkFuelDoorOpenCommand	62	1=service configured
	reverseGearLights	63	1=service configured

AmicMnAttPTConfigServ			
Type	Name	Value / Type	Description
BIT STRING	engineStartDisableService	1	1=configured
	engineStartDisable	2	1=configured
	remoteStart	3	1=configured
	performanceMode	4	1=configured
	coolantTemperature	5	1=configured
	engineRPM	6	1=configured
	engineOilPressure	7	1=configured
	engineOilTemperature	8	1=configured
	gearPosition	9	1=configured
	pRNDLPosition	10	1=configured
	cruiseControlState	11	1=configured
	brakeFluidLevelStatus	12	1=configured
	subscribingStatus	13	1=configured
	subscribeData	14	1=configured
	unsubscribeData	15	1=configured
	engineOilPressureStatus	16	1=configured
	cruiseControlSetSpeed	17	1=configured
	brakeState	18	1=configured
	variableSuspensionState	19	1=configured
	tractionControlState	20	1=configured
	engineCoolantLevel	21	1=configured
	engineCoolantPressure	22	1=configured
	engineOilLevel	23	1=configured
	engineOffTime	24	1=configured
	antilockBrakeSystem State	25	1=configured

AmicMnAttVDConfigServ			
Type	Name	Value / Type	Description
BIT STRING	emissionsRelated	1	1=configured
	enhanced	2	1=configured

AmicMnAttHMIConfigServ			
Type	Name	Value / Type	Description
BIT STRING	service1	1	1=configured (placeholder)
	service2	2	1=configured

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.8 Channel State

This message is a request to get channel state information.

Supported Messages
Class = Management class
Object = Channel State

Name	Operator	Type	Class	Object	Parameter
AmicMnInqChanState	Inq	'000'B	'02'H	'09'H	N/A
AmicMnRptChanState	Rpt	'001'B	'02'H	'09'H	Report
AmicMnCnfChanState	Cnf	'011'B	'02'H	'09'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	numberOfAudioChannels	INTEGER (0..63)	Number of audio channel allocated
	channels	SEQUENCE OF AmicMnAttChanState	Channel state data sequence

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttChanState			
Type	Name	Value / Type	Description
SEQUENCE	channelId	INTEGER (0..63)	Channel ID
	attribute	AmicMnAttChanMode	Analog or digital mode
	connectedSrcId	INTEGER (0..63)	Connected Src ID
	numOfSink	INTEGER (0..63)	Number of sink channel connected to the channel
	seqOfSinkId	SEQUENCE OF INTEGER (0..63)	Sequence of connected Sink ID

AmicMnAttChanMode			
Type	Name	Value / Type	Description
ENUMERATED	analog	0	Analog channel
	voice	1	Voice class digital audio channel
	cd	2	CD class digital audio channel
	dvda	3	DVD audio class channel
	mpeg1	4	MPEG1 class digital video channel
	mpeg2	5	DVD class digital video channel
	dv	6	DV class digital video channel
	iidc	7	IIDC class uncompressed video

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.9 Allocate Channel

This message is a command to allocate channel. Channel is a resource and needs to be allocated to transport stream data in a certain network.

Supported Messages
Class = Management class
Object = Allocate Channel

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdAllocChan	Cmd	'100'B	'02'H	'0A'H	Command
AmicMnRptAllocChan	Rpt	'001'B	'02'H	'0A'H	Report
AmicMnCnfAllocChan	Cnf	'011'B	'02'H	'0A'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	chanMode	AmicMnAttChanMode	Channel mode to be allocated

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	chanId	INTEGER (0..63)	Channel ID

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttChanMode			
Type	Name	Value / Type	Description
ENUMERATED	analog	0	Analog channel
	voice	1	Voice class digital audio channel
	cd	2	CD class digital audio channel
	dvda	3	DVD audio class channel
	mpeg1	4	MPEG1 class digital video channel
	mpeg2	5	DVD class digital video channel
	dv	6	DV class digital video channel
	iidc	7	IIDC class uncompressed video

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.10 Deallocate Channel

This message is a command to de-allocate channel. It is necessary to disconnect source and sinks connected with this channel before de-allocate the channel.

Supported Messages
Class = Management class
Object = Deallocate channel

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdDeallocChan	Cmd	'100'B	'02'H	'0B'H	Command
AmicMnCnfDeallocChan	Cnf	'011'B	'02'H	'0B'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	chanId	INTEGER (0..63)	channel ID to be deallocated

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.11 Connect Source

This message is a command to connect a source to a channel.

Supported Messages
Class = Management class
Object = Connect source

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdConnectSrc	Cmd	'100'B	'02'H	'0C'H	Command
AmicMnCnfConnectSrc	Cnf	'011'B	'02'H	'0C'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sourceId	AmicMnAttFunctionalModule	Identification with Function type and instance number
	chanId	INTEGER (0..63)	Channel ID to be connected with source

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttFunctionalModule			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	instanceNumber	INTEGER (0..15)	Instance Number (0 is assigned for anycast, and 15 is for broadcast)

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
ENUMERATED	transManage	0	Transaction management module
	vehicleServiceInterface	1	Vehicle Service Interface
	clock	2	Clock
	gps	3	GPS unit
	antenna	16	Vehicle Antenna
	door	17	Door
	doorLock	18	Door lock
	window	19	Window
	mirror	20	Mirror
	mirrorRetract	21	Mirror Retract
	seat	22	Seat
	seatbelt	23	Seat Belt
	horn	24	Horn
	wiper	25	Wiper
	headLight	26	headlights
	parkingLight	27	parking Lights
	interiorLights	28	interior Lights
	hazardSignal	29	Hazard Signal
	thermometer	30	Thermometer

AmicCmAttFunctionType			
Type	Name	Value / Type	Description
	steering	31	Steering
	seatOccupation	32	Seat Occupation
	odometer	33	Odometer
	tripCounter	35	Trip counter
	airbag	36	Air bag
	indicator	37	Warning indicator
	driverID	38	Driver ID
	rainSensor	39	Rain Sensor
	sunSensor	40	Sun Sensor value
	washingLiquid	41	Washing Liquid
	engineStartDisable	48	Engine Start Disable
	remoteStart	49	Remote Start
	performanceMode	50	Performance Mode
	coolantTemperature	51	Coolant Temperature
	engineRPM	52	Engine RPM
	engineOilPressure	53	Engine Oil Pressure
	engineOilTemperature	54	Engine Oil Temperature
	gearPosition	55	Gear Position
	prndlPosition	56	PRNDL Position
	cruiseControlState	57	Cruise Control State
	brakeFluidLevState	58	Brake Fluid Level State
	diagUnit	64	Diagnostic unit
	cd	80	CD (Compact Disc) player
	md	81	Mini Disc player
	dvdVideo	82	DVD video player
	dvdAudio	83	DVD audio player
	mp3	84	MP3 Player
	audioCassette	85	Audio cassette Player
	vcr	86	VCR Player
	amFmTuner	87	AM/FM radio tuner
	xmTuner	88	XM radio tuner
	tvTuner	89	TV tuner
	monitor	90	Monitor
	amplifier	111	Amplifier
	navigationUnit	112	Navigation unit
	phone	128	Phone
	textDisplay	144	Text display
	keyboard	145	Keyboard
	remoteController	146	Remote controller
	voiceUnit	147	Voice interface unit
	pda	160	PDA

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.12 Disconnect Source

This message is a command to disconnect a source from a channel.

Supported Messages
Class = Management class
Object = Disconnect source

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdDisconnectSrc	Cmd	'100'B	'02'H	'0D'H	Command
AmicMnCnfDisconnectSrc	Cnf	'011'B	'02'H	'0D'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sourceId	AmicMnAttFunctionalModule	Identification with Function type and instance number
	chanId	INTEGER (0..63)	channel ID to be disconnected with source

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttFunctionalModule			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	instanceNumber	INTEGER (0..15)	Instance Number (0 is assigned for anycast, and 15 is for broadcast)

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.13 Connect Sink

This message is a command to connect a sink to a channel.

Supported Messages
Class = Management class
Object = Connect sink

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdConnectSink	Cmd	'100'B	'02'H	'0E'H	Command
AmicMnCnfConnectSink	Cnf	'011'B	'02'H	'0E'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sinkId	AmicMnAttFunctionalModule	Identification with Function type and instance number
	chanId	INTEGER (0..63)	Channel ID to be connected to sink

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttFunctionalModule			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	instanceNumber	INTEGER (0..15)	Instance Number (0 is assigned for anycast, and 15 is for broadcast)

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.14 Disconnect Sink

This message is command to disconnect a sink from a channel.

Supported Messages
Class = Management class
Object = Disconnect sink

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdDisconnectSink	Cmd	'100'B	'02'H	'0F'H	Command
AmicMnCnfDisconnectSink	Cnf	'011'B	'02'H	'0F'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sinkId	AmicMnAttFunctionalModule	Identification with Function type and instance number
	chanId	INTEGER (0..63)	channel ID to be disconnected from a sink

AmicMnAttFunctionalModule			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	instanceNumber	INTEGER (0..15)	Instance Number (0 is assigned for anycast, and 15 is for broadcast)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.15 Select Sink

This message is to get a current selected sink ID (Instance Number) for audio arbitration.

Supported Messages
Class = Management class
Object = Select Sink

Name	Operator	Type	Class	Object	Parameter
AmicMnInqSelectSink	Inq	'000'B	'02'H	'13'H	N/A
AmicMnRptSelectSink	Rpt	'001'B	'02'H	'13'H	Report
AmicMnSetSelectSink	Set	'010'B	'02'H	'13'H	Set
AmicMnCnfSelectSink	Cnf	'011'B	'02'H	'13'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	sinkId	AmicMnAttFunctionalModule	Function type and instance number of sink

Set Parameter(s)			
Type	Name	Value / Type	Description
	sinkId	AmicMnAttFunctionalModule	Function type and instance number of sink

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttFunctionalModule			
Type	Name	Value / Type	Description
SEQUENCE	functionType	AmicCmAttFunctionType	Function type
	instanceNumber	INTEGER (0..15)	Instance Number (0 is assigned for anycast, and 15 is for broadcast)

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.16 Current Time and Date

This message is to get current time and date. The time is set as each time zone.

Supported Messages
Class = Management class
Object = Time and date

Name	Operator	Type	Class	Object	Parameter
AmicMnInqTimeDate	Inq	'000'B	'02'H	'14'H	N/A
AmicMnRptTimeDate	Rpt	'001'B	'02'H	'14'H	Report
AmicMnSetTimeDate	Set	'010'B	'02'H	'14'H	Set
AmicMnCnfTimeDate	Cnf	'011'B	'02'H	'14'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	hours	INTEGER(0..23)	Hours
	minutes	INTEGER(0..59)	Minutes
	secs	INTEGER(0..59)	Seconds
	year	INTEGER(0..255)	Years (Offset is 2000)
	month	INTEGER(1..12)	Months
	day	INTEGER(1..31)	Days
	tzone	INTEGER(0..47)	Time-Zone [0 is UTC 0H00, 1 is UTC 0H30 (00:30)]

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	hours	INTEGER(0..23)	Hours
	minutes	INTEGER(0..59)	Minutes
	secs	INTEGER(0..59)	Seconds
	year	INTEGER(0..255)	Years (Offset is 2000)
	month	INTEGER(1..12)	Months
	day	INTEGER(1..31)	Days
	tzone	INTEGER(0..47)	Time-Zone [0 is UTC 0H00, 1 is UTC0H30(00:30)]

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.17 Vehicle Location Information

This message is to get GPS information; date, time, latitude, longitude, velocity, direction.

Supported Messages
Class = Management class
Object = GPS information

Name	Operator	Type	Class	Object	Parameter
AmicMnInqGPSInfo	Inq	'000'B	'02'H	'15'H	N/A
AmicMnRptGPSInfo	Rpt	'001'B	'02'H	'15'H	Report
AmicMnCnfGPSInfo	Cnf	'011'B	'02'H	'15'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	year	INTEGER(0..255)	Year (Offset is 2000)
	month	INTEGER(1..12)	Months
	day	INTEGER(1..31)	Days
	hours	INTEGER(0..23)	Hours (UTC Time)
	minutes	INTEGER(0..59)	Minutes
	secs	INTEGER(0..59)	Seconds
	latitudeZone	INTEGER(0..1)	0 is North, 1 is South
	latitudeDegree	INTEGER(0..90)	Degree
	latitudeMinute	INTEGER(0..59)	Minute
	latitudeSubMinute	INTEGER(0..9999)	1/10000 Minute
	longitudeZone	INTEGER(2..3)	2 is East, 3 is West
	longitudeDegree	INTEGER(0..179)	Degree
	longitudeMinute	INTEGER(0..59)	Minute
	longitudeSubMinute	INTEGER(0..9999)	1/10000 Minute
	velocity	INTEGER(0..255)	km/hour
	direction	INTEGER(0..359)	Degree (0 is North, and clock wise)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.18 Simple Data Transfer

This message is a request to transfer (read) a portion of data from a responder to a requester. It is possible to receive multiple Receive messages for a single read request. The maximum data size to be transferred for a single request is 256k bytes.

Supported Messages
Class = Management class
Object = Simple data transfer

Name	Operator	Type	Class	Object	Parameter
AmicMnInqSimpleDataTransfer	Inq	'000'B	'02'H	'15'H	Inquire
AmicMnRptSimpleDataTransfer	Rpt	'001'B	'02'H	'15'H	Report
AmicMnSetSimpleDataTransfer	Set	'010'B	'02'H	'15'H	Set
AmicMnCnfSimpleDataTransfer	Cnf	'011'B	'02'H	'15'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	DataId	INTEGER (0..255)	Data ID

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dataId	INTEGER (0..255)	Data ID
	totalFrameNum	INTEGER (0..255)	Number of total frames included during whole data transfer. for a single request. Offset is +1.
	size	INTEGER(0..1023)	Byte size included in this message frame
	data	OCTET STRING	Data

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dataId	INTEGER (0..255)	Data ID
	totalFrameNum	INTEGER (0..255)	Number of total frames included during whole data transfer. for a single request. Offset is +1.
	size	INTEGER(0..1023)	Byte size included in this message frame
	data	OCTET STRING	Data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

4.19 Network Command (Boot, Wakeup, Shutdown)

This message is a command from the system management master to initiate a network boot sequence, wakeup, or shut down.

Supported Messages
Class = Management class
Object = Network Command

Name	Operator	Type	Class	Object	Parameter
AmicMnCmdNetCmd	Cmd	'000'B	'02'H	'16'H	Command
AmicMnCnfNetCmd	Cnf	'011'B	'02'H	'16'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	command	AmicMnAttNetCmd	Data ID

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicMnAttError	Error Status

AmicMnAttNetCmd			
Type	Name	Value / Type	Description
ENUMERATED	shutDown	0	Put the network in a sleep state
	initateBoot	1	
	wakeup	2	Cause the devices on the network to become active

AmicMnAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.
	noResource	3	No other resources to be allocated

5 Core Messages

5.1 Vehicle Identification Number

This message is to get Vehicle Identification Number.

Supported Messages
Class = Core class
Object = Core VIN

Name	Operator	Type	Class	Object	Parameter
AmicCoInqVIN	Inq	'000'B	'01'H	'01'H	N/A
AmicCoRptVIN	Rpt	'001'B	'01'H	'01'H	Report
AmicCoCnfRptVIN	Cnf	'011'B	'01'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	vin	OCTET STRING(SIZE(17))	Vehicle Identification Number. These are ASCII expression

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.2 Manufacturer, Model and Model Year

This message is to get make and model of the vehicle.

Supported Messages
Class = Core class
Object = Core MakeModel

Name	Operator	Type	Class	Object	Parameter
AmicCoRptMakeModel	Rpt	'001'B	'01'H	'02'H	Report
AmicCoCnfMakeModel	Cnf	'011'B	'01'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	make	OCTET STRING(SIZE(32))	Free text and the final character shall be NULL.
	model	OCTET STRING(SIZE(32))	Free text and the final character shall be NULL.)
	modelYear	OCTET STRING(SIZE(4))	Model year(4)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.3 Manufacturing Date and Location

This message is to get the date and location that the vehicle was manufactured.

Supported Messages
Class = Core class
Object = Core ManuInfo

Name	Operator	Type	Class	Object	Parameter
AmicCoRptManuInfo	Rpt	'001'B	'01'H	'03'H	Report
AmicCoCnfManuInfo	Cnf	'011'B	'01'H	'03'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	manufacturerLocation	OCTET STRING(SIZE(32))	Free text and the final character shall be NULL.
	manufactureDate	OCTET STRING (SIZE(8))	Year (4), Month (2), Day (2), “00” means not available for month and day

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.4 Language

This message is to get language code.

Supported Messages
Class = Core class
Object = Core, Language

Name	Operator	Type	Class	Object	Parameter
AmicCoInqLanguage	Inq	'000'B	'01'H	'04'H	N/A
AmicCoRptLanguage	Rpt	'001'B	'01'H	'04'H	Report
AmicCoSetLanguage	Set	'010'B	'01'H	'04'H	Set
AmicCoCnfLanguage	Cnf	'011'B	'01'H	'04'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	languageCode	OCTET STRING(SIZE(2))	ISO 639 Language Code

Set Parameter(s)			
Type	Name	Value / Type	Description
	languageCode	OCTET STRING(SIZE(2))	ISO 639 Language Code

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

NOTE:

ISO 639 Language Codes (2 byte character)					
en = English	es = Spanish	fr = French	it = Italian	de = German	ja = Japanese
zh = Chinese	ru = Russian	pt = Portuguese	ko = Korean	el = Greek	sv = Swedish
nl = Netherlands					

5.5 Vehicle Description

Supported Messages
Class = Core class
Object = Core VehDesc

Name	Operator	Type	Class	Object	Parameter
AmicCoInqVehDesc	Inq	'000'B	'01'H	'05'H	N/A
AmicCoRptVehDesc	Rpt	'001'B	'01'H	'05'H	Report
AmicCoCnfVehDesc	Cnf	'011'B	'01'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	unitType	AmicCoAttUnitType	Displayed Unit Type (metric/English)
	numDoors	INTEGER(1..15)	Number of doors
	doorCloseCapability	AmicCoAttDoorClosedCap	The capability of the vehicle to explicitly report the status of the doors, e.g. closed or ajar.
	doorLockedCapability	AmicCoAttDoorLockedCap	The capability of the vehicle to explicitly report the status of the doors, e.g. locked or unlocked.
	doorLockingCapability	AmicCoAttDoorLockingCap	The capability of the vehicle to explicitly command a change in the status of the doors, e.g. to lock or unlock.
	numSeats	INTEGER(1..31)	Number of seats
	seatConf	AmicCoAttSeatConf	The location of the seats in the vehicle
	seatCapability	AmicCoAttSeatCap	The capabilities of controllable seats.
	numWindows	INTEGER(1..15)	Number of windows (not include sunroof)
	controlledWindows	AmicCoAttWindowControlCap	The configuration of windows in the vehicle that may be controlled.
	windowPosition-Capability	AmicCoAttWindowPosCap	The capability of the vehicle to report window position information.
	wSWashLiquid-Capacity	INTEGER(0..128)	The capacity of the windshield washing liquid tank. 1 bit = .1 liters
	rWWashLiquid-Capacity	INTEGER(0..128)	The capacity of the rear window's washing liquid tank. 1 bit = .1 liters
	headLmpWashLiquid-Capacity	INTEGER(0..128)	The capacity of the headlamp wash liquid tank. 1 bit = .1 liters

Report Parameter(s)			
Type	Name	Value / Type	Description
	numWheels	INTEGER(0..64)	The total number of wheels on the vehicle
	numMirrors	INTEGER (1..4)	Number of mirrors
	mirrorDescription	AmicCoAttMirrorDescr	Describes the limits of motion and presence of photochromic coating

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	interiorLightCapability	AmicCoAttLightsDescr	Describes the vehicle's capability to control or report the status of the interior lights.
	exteriorLightCapability	AmicCoAttLightsDescr	Describes the vehicle's capability to control or report the status of the exterior lights.
	engineID	OCTET STRING(SIZE(64))	The manufacturer's name for the engine
	engineType	AmicCoAttEngType	SI, diesel, electric, hybrid, etc
	numCylinders	INTEGER(1..16)	The number of engine cylinders
	engineDisplacement	INTEGER(0..10,000)	in Cubic Centimeters (cc)
	engRatedPower	INTEGER(0..512)	In kilowatts (kW)
	cruiseControlType	AmicCoAttCruiseType	None, standard, adaptive, speed governor
	numGears	INTEGER(0..31)	Number of gears
	numSunroofs	INTEGER(0..7)	Number of sunroofs
	transType	AmicCoAttTransType	Transmission type
	abs	AmicCoAttAbs	ABS type
	tracCntrlPresent	BOOLEAN	Traction Control present=1, not present=0
	varSuspPresent	BOOLEAN	Variable Suspension present=1, not present=0
	vehicleAntitheft	AmicCoAttVehAntiTheft	Availability of vehicle anti-theft function (e.g. immobilizer)
	contentTheft	AmicCoAttContentAntiTheft	Availability of content anti-theft function (glass breakage sensor)
	doorLockServ	AmicCoAttDoorLockServ	manual, automatic,
	convertible	AmicCoAttCnvrtType	Convertible type
	fuelCapacityTank1	INTEGER(0..4095)	Fuel capacity (0.1/bit liter) for the primary tank
	fuelCapacityTank2	INTEGER(0..4095)	Fuel capacity (0.1/bit liter) for the secondary tank. If only one tank, this is set to '0'.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	fuelType	AmicCoAttFuelType	The type of fuel the customer puts into the vehicle.
	vehicleLength	INTEGER (0..255)	0.1 m / 1 bit
	vehicleWidth	INTEGER (0..255)	0.1 m / 1 bit
	vehicleHeight	INTEGER (0..255)	0.1 m / 1 bit
	vehicleWeight	INTEGER (0..255)	100 kg / 1 bit
	wheelDriveType	AmicCoAttWheelDriveType	Wheel drive type
	steeringWheelLocation	AmicCoAttSteeringWheel-Location	Steering wheel location
	sysVolt	AmicCoAttSysVolt	System voltage
	tireMonitoringSystem	AmicCoAttTireMonSys	Tire monitoring system availability
	oBDRegionVariant	AmicCoAttOBDRgVar	The OBD Code Regional Variant
	implementedWarning-Lights	AmicCoAttImplemented-WarningLights	A bit string indicating the warning lights implemented in the vehicle

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttUnitType			
Type	Name	Value / Type	Description
BIT STRING	displayUnitsSpeed	0	0=Metric, 1=English
	displayUnitsDistance	1	0=Metric, 1=English
	displayUnitsVolume	2	0=Metric, 1=English
	displayUnitsTemp	3	0=Metric, 1=English

AmicCoAttDoorLockingCap			
Type	Name	Value / Type	Description
ENUMERATED	none	0	No capability to change the door locked/unlocked status
	other	1	Another service describes the set of doors for which there is explicit locking capability
	driverDoorExplicit	2	The vehicle is capable of explicit locking and unlocking for the driver door. All other doors are combined.
	allDoorsExplicit	3	The vehicle is capable of providing explicit locking and unlocking for each door.

AmicCoAttSeatConf			
Type	Name	Value / Type	Description
BIT STRING	row1Left	0	0=Seat Not Present, 1=Seat Present
	row1Center	1	0=Seat Not Present, 1=Seat Present
	row1Right	2	0=Seat Not Present, 1=Seat Present
	row2Left	3	0=Seat Not Present, 1=Seat Present
	row2Center	4	0=Seat Not Present, 1=Seat Present
	row2Right	5	0=Seat Not Present, 1=Seat Present
	row3Left	6	0=Seat Not Present, 1=Seat Present
	row3Center	7	0=Seat Not Present, 1=Seat Present
	row3Right	8	0=Seat Not Present, 1=Seat Present
	row4Left	9	0=Seat Not Present, 1=Seat Present
	row4Center	10	0=Seat Not Present, 1=Seat Present
	row4Right	11	0=Seat Not Present, 1=Seat Present
	row5Left	12	0=Seat Not Present, 1=Seat Present
	row5Center	13	0=Seat Not Present, 1=Seat Present
	row5Right	14	0=Seat Not Present, 1=Seat Present

AmicCoAttSeatCap			
Type	Name	Value / Type	Description
SEQUENCE	position	AmicCoAttSeatPos	The location of the seat.
	tilt	AmicCoAttSeatCapability	The capability of the seat to control and/or report position for the specified item
	height	AmicCoAttSeatCapability	The capability of the seat to control and/or report position for the specified item
	forward	AmicCoAttSeatCapability	The capability of the seat to control and/or report position for the specified item
	lumbar	AmicCoAttSeatCapability	The capability of the seat to control and/or report position for the specified item
	numMemPositions	INTEGER (0..10)	The number of memory positions supported for the seat.
	heater	BOOLEAN	0=Seat not equipped with heater, 1=Seat equipped with heater.

AmicCoAttSeatPos			
Type	Name	Value / Type	Description
ENUMERATED	row1Left	0	
	row1Center	1	
	row1Right	2	
	row2Left	3	
	row2Center	4	
	row2Right	5	
	row3Left	6	
	row3Center	7	
	row3Right	8	
	row4Left	9	
	row4Center	10	
	row4Right	11	
	row5Left	12	
	row5Center	13	
	row5Right	14	

AmicCoAttSeatCapability			
Type	Name	Value / Type	Description
ENUMERATED	none	0	No capability to control the seat or report position
	controlOnly	1	Capability to control, but not to report position.
	positionOnly	2	Capability to report position, but not to control.
	controlAndPosition	3	Capability to control and to report position.

AmicCoAttMirrorDesc			
Type	Name	Value / Type	Description
SEQUENCE	position	AmicCoAttMirrorPos	The location of the mirror.
	leftLimit	INTEGER (-128..-1)	The capability of the seat to control and/or report position for the specified item
	rightLimit	INTEGER (1..127)	The capability of the seat to control and/or report position for the specified item
	upLimit	INTEGER (-128..-1)	The capability of the seat to control and/or report position for the specified item
	downLimit	INTEGER (1..127)	The capability of the seat to control and/or report position for the specified item
	photochromicCoated	BOOLEAN	0=False, 1=True

AmicCoAttMirrorPos			
Type	Name	Value / Type	Description
ENUMERATED	leftOutboard	0	
	rightOutboard	1	
	insideRearview	2	

AmicCoAttLightsDesc			
Type	Name	Value / Type	Description
ENUMERATED	none	0	No capability to control the lights or report status
	controlOnly	1	Capability to control the lights but not report status
	reportOnly	2	Capability to control the lights but not report status
	controlAndReport	3	Capability to control the lights and report status

AmicCoAttEngType			
Type	Name	Value / Type	Description
ENUMERATED	sparkIgnition	0	Conventional gasoline engine
	diesel	1	
	electric	2	
	hybrid	3	
	other	4	

AmicCoAttCruiseType			
Type	Name	Value / Type	Description
BIT STRING	standard	1	Standard cruise control
	adaptive	2	Adaptive cruise control
	speedGovernor	3	Allows user to set max speed

AmicCoAttWindowControlCap			
Type	Name	Value / Type	Description
ENUMERATED	none	0	No capability to report the door locked/unlocked status
	other	1	Another service describes the set of doors for which there is explicit knowledge
	coupe	2	The vehicle is capable of controlling driver and passenger windows.
	sedan	3	The vehicle is capable of controlling driver, passenger, rear left and rear right windows.
	wagon	4	The vehicle is capable of controlling driver, passenger, rear left passenger, rear right passenger, and rear windows.

AmicCoAttWindowPosCap			
Type	Name	Value / Type	Description
BIT STRING	windowOpen	0	0=False, 1=True. The vehicle is capable of reporting that the window is completely open
	windowClosed	1	0=False, 1=True. The vehicle is capable of reporting that the window is completely closed
	generalWindowPosition	2	0=False, 1=True. The vehicle is capable of reporting intermediate window positions.

AmicCoAttMirrorDescr			
Type	Name	Value / Type	Description
SEQUENCE	driverUpLimit	INTEGER(-255..0)	describes the maximum movement in the up direction of the driver's outside rearview mirror
	driverDownLimit	INTEGER(0..255)	describes the maximum movement in the down direction of the driver's outside rearview mirror
	driverLeftLimit	INTEGER(-255..0)	describes the maximum movement in the left direction of the driver's outside rearview mirror
	driverRightLimit	INTEGER(0..255)	describes the maximum movement in the right direction of the driver's outside rearview mirror
	driverPhotoChromic	BOOLEAN	True if the mirror has a photochromic surface
	passUpLimit	INTEGER(-255..0)	describes the maximum movement in the up direction of the passenger's outside rearview mirror
	passDownLimit	INTEGER(0..255)	describes the maximum movement in the down direction of the passenger's outside rearview mirror
	passLeftLimit	INTEGER(-255..0)	describes the maximum movement in the left direction of the passenger's outside rearview mirror
	passRightLimit	INTEGER(0..255)	describes the maximum movement in the right direction of the passenger's outside rearview mirror
	passPhotoChromic	BOOLEAN	True if the mirror has a photochromic surface
	insideRVUpLimit	INTEGER(-255..0)	describes the maximum movement in the up direction of the inside rearview mirror
	insideRVDownLimit	INTEGER(0..255)	describes the maximum movement in the down direction of the inside rearview mirror
	insideRVLeftLimit	INTEGER(-255..0)	describes the maximum movement in the left direction of the inside rearview mirror
	insideRVRightLimit	INTEGER(0..255)	describes the maximum movement in the right direction of the inside rearview mirror
	insideRVPhoto-Chromic	BOOLEAN	True if the mirror has a photochromic surface

AmicCoAttLightsDescr			
Type	Name	Value / Type	Description
ENUMERATED	noCntrlNoRpt	0	the lights cannot be controlled or their state reported
	ctrlNoRpt	1	the lights can be controlled but their state cannot be reported
	noCtrlRpt	2	the lights cannot be controlled but their state can reported
	ctrlRpt	3	the lights can be controlled and their state can be reported

AmicCoAttTransType			
Type	Name	Value / Type	Description
ENUMERATED	none	0	No Transmission
	auto	1	Automatic Transmission
	manual	2	Manual Transmission
	semi-auto	3	Semi-Automatic Transmission

AmicCoAttAbs			
Type	Name	Value / Type	Description
ENUMERATED	none	0	None ABS
	twoWheel	1	ABS in two wheels
	fourWheel	2	ABS in four wheels

AmicCoAttVehAntiTheft			
Type	Name	Value / Type	Description
ENUMERATED	none	0	None Anti-Theft
	present	1	Present

AmicCoAttContentAntiTheft			
Type	Name	Value / Type	Description
ENUMERATED	none	0	None Anti-Theft
	present	1	Present

AmicCoAttDoorLockServ			
Type	Name	Value / Type	Description
ENUMERATED	manual	0	Manual door-lock
	automatic	1	Automatic door-lock

AmicCoAttCnvrtType			
Type	Name	Value / Type	Description
ENUMERATED	none	0	Not in the vehicle
	manualsofttop	1	
	automaticsofttop	2	
	hardtop	3	

AmicCoAttFuelType			
Type	Name	Value / Type	Description
ENUMERATED	unleadedGasoline	0	Unleaded Gasoline
	leadedGasoline	1	Leaded Gasoline
	electric	2	Electric
	diesel	3	Diesel
	naturalGas	4	Natural Gas
	methanol	5	Methanol

AmicCoAttWheelDriveType			
Type	Name	Value / Type	Description
ENUMERATED	front	0	Front Wheel Drive
	rear	1	Rear Wheel Drive
	four	2	Four Wheel Drive
	all	3	All Wheel Drive except four wheel drive (Ex. Caterpillar…)

AmicCoAttSteeringWheelLocation			
Type	Name	Value / Type	Description
ENUMERATED	left	0	Left Side
	right	1	Right Side

AmicCoAttSysVolt			
Type	Name	Value / Type	Description
BIT STRING	v12	0	12 volts (1=part of the vehicle)
	v24	1	24 volts (1=part of the vehicle)
	v42	2	42 volts (1=part of the vehicle)

AmicCoAttTireMonSys			
Type	Name	Value / Type	Description
ENUMERATED	none	0	Not supported
	tireInflationMonitoring	1	Tire inflation monitoring system
	actualPressureMonitoring	2	Absolute tire pressure monitoring system

AmicCoAttOBDRgVar			
Type	Name	Value / Type	Description
ENUMERATED	northAmerica	0	North American Region
	europe	1	European Region
	japan	2	Japanese Region

AmicCoAttImplementedWarningLights			
Type	Name	Value / Type	Description
BIT STRING	oilPressure	0	Oil pressure warning (1=implemented)
	oilLevel	1	Oil level warning (1=implemented)
	changeOilSoon	2	
	checkEngine	3	Check engine warning (1=implemented)
	serviceVehicle	4	Service vehicle warning (1=implemented)
	airbag	5	Airbag warning (1=implemented)
	Vsc	6	VSC (Vehicle Stability Control) warning (1=implemented)
	Tcs	7	TCS (Traction Control System) warning (1=implemented)
	abs	8	ABS(Antilock Brake System) malfunction (1=implemented)
	battery	9	Battery charging warning (1=implemented)
	brakes	10	Brake fluid low warning (1=implemented)
	parkingBrake	11	Parking brake warning (1=implemented)
	door	12	Door ajar warning (1=implemented)

AmicCoAttImplementedWarningLights			
Type	Name	Value / Type	Description
	tirePress	13	Tire pressure low warning (0=off, 1=on)
	tireInflation	14	Tire inflation monitor system (0=off, 1=on)
	seatbelt	15	Unfasten seat belt warning (1=implemented)
	exhaustTemp	16	Exhaust temperature warning (1=implemented)
	pwrSteer	17	Low power steering fluid warning (1=implemented)
	lowFuel	18	Low fuel warning (1=implemented)
	lightOn	19	Exterior light on warning [0=off, 1=on (Ex. Prevention of battery discharge in key off.)]
	tcsOnOff	20	TCS on/off indicator (1=implemented)
	fourWheelDrive	21	Four wheel drive indicator (1=implemented)
	cruiseControlOnOff	22	Cruise control on/off indicator (1=implemented)
	hazardOn	23	Hazard on (1=implemented)(Ex. Prevention of battery discharge in key off.)

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.6 Secure Vehicle Identification Number (Inf)

This message is to get secure Vehicle Identification Number.

Supported Messages
Class = Core class
Object = Core SecureVIN

Name	Operator	Type	Class	Object	Parameter
AmicCoInqSecureVIN	Inq	'000'B	'01'H	'06'H	N/A
AmicCoRptSecureVIN	Rpt	'001'B	'01'H	'06'H	Report
AmicCoCnfSecureVIN	Cnf	'011'B	'01'H	'06'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	secureVIN	OCTET STRING(SIZE(256))	SecureVIN

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.7 Vehicle Public-Key (Inf)

This message is to get the vehicle public-key.

Supported Messages
Class = Core class
Object = Core VehPublicKey

Name	Operator	Type	Class	Object	Parameter
AmicCoInqVehPublicKey	Inq	'000'B	'01'H	'07'H	Inquire
AmicCoRptVehPublicKey	Rpt	'001'B	'01'H	'07'H	Report
AmicCoCnfVehPublicKey	Cnf	'011'B	'01'H	'07'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	compRegNum	OCTET STRING(SIZE(128))	Component registration number

Report Parameter(s)			
Type	Name	Value / Type	Description
	publicKey	OCTET STRING(SIZE(256))	Vehicle public-key

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.8 Authorization (Inf)

This message is to get Authorization

Supported Messages
Class = Core class
Object = Core Authorization

Name	Operator	Type	Class	Object	Parameter
AmicCoInqAuthorization	Inq	'000'B	'01'H	'08'H	Inquire
AmicCoRptAuthentication	Rpt	'001'B	'01'H	'08'H	Report
AmicCoCnfAuthentication	Cnf	'011'B	'01'H	'08'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	requestorId	OCTET STRING(SIZE(128))	Requestor ID

Report Parameter(s)			
Type	Name	Value / Type	Description
	userName	OCTET STRING(SIZE(128))	User Name

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

5.9 Vehicle Session-Key (Inf)

This message is to get vehicle session-key.

Supported Messages
Class = Core class
Object = Core VehSessionKey

Name	Operator	Type	Class	Object	Parameter
AmicCoInqVehSessionKey	Inq	'000'B	'01'H	'09'H	N/A
AmicCoRptVehSessionKey	Rpt	'001'B	'01'H	'09'H	Report
AmicCoCnfVehSessionKey	Cnf	'011'B	'01'H	'09'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	sessionKey	OCTET STRING(SIZE(256))	Session-Key

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicCoAttError	Confirm error status

AmicCoAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6 Body Messages

6.1 Antenna

This message is to get, set or command the position of the antenna.

Supported Messages
Class = Body message class
Object = Body message Antenna

Name	Operator	Type	Class	Object	Parameter
AmicBMInqAntenna	Inq	'000'B	'11'H	'01'H	N/A
AmicBMRptAntenna	Rpt	'001'B	'11'H	'01'H	Report
AmicBMSetAntenna	Set	'010'B	'11'H	'01'H	Set
AmicBMCmdAntenna	Cmd	'100'B	'11'H	'01'H	Command
AmicBMCnfAntenna	Cnf	'011'B	'11'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	positionState	AmicBMAttAntennaState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
	positionState	AmicBMAttAntennaState	Position State

Command Parameter(s)			
Type	Name	Value / Type	Description
	moveDirection	AmicBMAttAntennaMove	The moving direction

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttAntennaState			
Type	Name	Value / Type	Description
ENUMERATED	downPos	0	Antenna is stored
	upPos	1	Antenna is up position

AmicBMAttAntennaMove			
Type	Name	Value / Type	Description
ENUMERATED	down	0	Antenna moves down
	up	1	Antenna moves up

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.2 Door Status

This message is to get the status of the doors.

Supported Messages
Class = Body message class
Object = Body message Door Status

Name	Operator	Type	Class	Object	Parameter
AmicBMInqDoorStatus	Inq	'000'B	'11'H	'02'H	Inquire
AmicBMRptDoorStatus	Rpt	'001'B	'11'H	'02'H	Report
AmicBMCnfDoorStatus	Cnf	'011'B	'11'H	'02'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	doorNum	AmicBMAttDoorInstNum	The door whose status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	doorNum	AmicBMAttDoorInstNum	The door whose status is being requested
	positionState	AmicBMAttDoorState	The requested status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttDoorInstNum			
Type	Name	Value	Description
ENUMERATED	allDoors	0	All Doors in the vehicle
	hood	1	Front hood
	driver	2	Driver side door
	passenger	3	Passenger side door
	rearLeft	4	Back left door
	rearRight	5	Back right door
	rear	6	Trunk, Hatchback or Rear Doors
	driversSliding	7	Drivers Side Sliding Door
	passengersSliding	8	Passengers Side Sliding Door

AmicBMAttDoorState			
Type	Name	Value / Type	Description
ENUMERATED	closed	0	Door is close
	ajar	1	Door is ajar

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.3 Door Lock

This message is to get or control the status of the door lock.

Supported Messages
Class = Body message class
Object = Body message DoorLock

Name	Operator	Type	Class	Object	Parameter
AmicBMInqDoorLock	Inq	'000'B	'11'H	'03'H	Inquire
AmicBMRptDoorLock	Rpt	'001'B	'11'H	'03'H	Report
AmicBMSetDoorLock	Set	'010'B	'11'H	'03'H	Set
AmicBMCnfDoorLock	Cnf	'011'B	'11'H	'03'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	doorNum	AmicBMAttDoorInstNum	The specific door whose lock status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	doorNum	AmicBMAttDoorInstNum	The specific door whose lock status is being reported
	lockState	AmicBMAttDoorLockState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	doorNum	AmicBMAttDoorInstNum	The specific door whose lock status is being changed
	lockState	AmicBMAttDoorLockState	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttDoorInstNum			
Type	Name	Value	Description
ENUMERATED	allDoors	0	All Doors in the vehicle
	hood	1	Front hood
	driver	2	Driver side door
	passenger	3	Passenger side door
	rearLeft	4	Back left door
	rearRight	5	Back right door
	rear	6	Trunk, Hatchback or Rear Doors
	driversSliding	7	Drivers Side Sliding Door
	passengersSliding	8	Passengers Side Sliding Door

AmicBMAttDoorLockState			
Type	Name	Value / Type	Description
ENUMERATED	locked	0	Door is locked
	unlocked	1	Door is unlocked
	superlocked	2	Also known as “deadbolted”, this state means the doors and trunk cannot be opened from either the outside or inside

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.4 Windows

This message is to get or control the status of a window.

Supported Messages
Class = Body message class
Object = Body message Window

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWindow	Inq	'000'B	'11'H	'04'H	Inquire
AmicBMRptWindow	Rpt	'001'B	'11'H	'04'H	Report
AmicBMSetWindow	Set	'010'B	'11'H	'04'H	Set
AmicBMCmdWindow	Cmd	'100'B	'11'H	'04'H	Command
AmicBMCnfWindows	Cnf	'011'B	'11'H	'04'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	windowNum	AmicBMAttWindowInstNum	The window whose status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windowNum	AmicBMAttWindowInstNum	The window whose status is being reported
	state	AmicBMAttWindowsState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windowNum	AmicBMAttWindowInstNum	The window whose status is being set
	state	AmicBMAttWindowsState	The status to set

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windowNum	AmicBMAttWindowInstNum	The window whose motion will be commanded
	move	AmicBMAttWindowsMove	The direction of motion

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttWindowInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	passenger	2	
	rearPassengerLeft	3	
	rearPassengerRight	4	
	rear	5	

AmicBMAttWindowsState			
Type	Name	Value / Type	Description
ENUMERATED	closed	0	Window is closed
	opened	1	Window is not closed.

AmicBMAttWindowsMove			
Type	Name	Value / Type	Description
ENUMERATED	down	0	Window goes down
	up	1	Window goes up

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.5 Mirrors

This message is to get or set the mirror face position. Also to command movement of the mirror face without a specific position.

Supported Messages
Class = Body message class
Object = Body message Mirror

Name	Operator	Type	Class	Object	Parameter
AmicBMInqMirror	Inq	'000'B	'11'H	'05'H	Inquire
AmicBMRptMirror	Rpt	'001'B	'11'H	'05'H	Report
AmicBMSetMirror	Set	'010'B	'11'H	'05'H	Set
AmicBMCmdMirror	Cmd	'100'B	'11'H	'05'H	Command
AmicBMCnfMirror	Cnf	'011'B	'11'H	'05'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	mirrorInst	AmicBMAttMirrorInst	The mirror whose position is being requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	mirrorInst	AmicBMAttMirrorInst	The mirror whose position is being reported.
	upDownPosition	INTEGER(-127..128)	Up or down position
	leftRightPosition	INTEGER(-127..128)	Left or right position

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	mirrorInst	AmicBMAttMirrorInst	The mirror whose position is being set.
	motionType	AmicBMAttMirrorMotion Type	should the mirror move to an absolute position, or a position relative to where it is currently
	upDownPosition	INTEGER(-127..128)	Up or down position
	leftRightPosition	INTEGER(-127..128)	Left or right position

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	mirrorInst	AmicBMAttMirrorInst	The mirror whose motion is being commanded.
	moveDirection	AmicBMAttMirrorMove	The moving direction

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttMirrorInst			
Type	Name	Value / Type	Description
ENUMERATED	driver	1	
	center	2	
	passenger	3	

AmicBMAttMirrorMotionType			
Type	Name	Value / Type	Description
ENUMERATED	relative	0	
	absolute	1	

AmicBMAttMirrorMove			
Type	Name	Value / Type	Description
ENUMERATED	down	0	Mirror turns down
	up	1	Mirror turns up
	right	2	Mirror turns right
	left	3	Mirror turns left
	downright	4	Mirror turns down right
	downLeft	5	Mirror turns down left
	upright	6	Mirror turns up right
	upLeft	7	Mirror turns up left

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

NOTE A single message of this command actuates the motor for a certain period of time. Multiple messages have to be sent continuously to move the mirror smoothly. When multiple messages to move an single object to different direction arrives from different nodes, the receiving node should arbitrate these messages with its own policy.

6.6 Mirror Fold

This message is to get or control the fold status of the outside rearview mirrors.

Supported Messages
Class = Body message class
Object = Body message MirrorFold

Name	Operator	Type	Class	Object	Parameter
AmicBMInqMirrorFold	Inq	'000'B	'11'H	'06'H	N/A
AmicBMRptMirrorFold	Rpt	'001'B	'11'H	'06'H	Report
AmicBMSetMirrorFold	Set	'010'B	'11'H	'06'H	Set
AmicBMCnfMirrorFold	Cnf	'011'B	'11'H	'06'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	positionState	AmicBMAttMirrorFold State	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
	positionState	AmicBMAttMirrorFoldState	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttMirrorFoldState			
Type	Name	Value / Type	Description
ENUMERATED	folded	0	Mirror is retracted
	expanded	1	Mirror is at normal position
	abnormal	2	This state indicates that the mirror has been pushed to a position not attainable through normal operation. It is not possible to Set this status.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.7 Seats

This message is to get or set the position of the seats. It is also possible to command motion in a particular direction.

Supported Messages
Class = Body message class
Object = Body message Seat

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSeat	Inq	'000'B	'11'H	'07'H	Inquire
AmicBMRptSeat	Rpt	'001'B	'11'H	'07'H	Report
AmicBMSetSeat	Set	'010'B	'11'H	'07'H	Set
AmicBMCmdSeat	Cmd	'100'B	'11'H	'07'H	Command
AmicBMCnfSeat	Cnf	'011'B	'11'H	'07'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	seatNum	AmicBMAttSeatInstNum	The seat whose status is being requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose status is being reported.
	seatBackTilt	INTEGER(-127..128)	Position of Seat back tilting
	headRest	INTEGER(-127..128)	Position of Seat head rest
	upholsteryFrontUpDown	INTEGER(-127..128)	Position of front section of seat
	upholsteryBackUpDown	INTEGER(-127..128)	Position of back section of seat
	seatForwBack	INTEGER(-127..128)	Position of seat slides
	seatLumbar	INTEGER(-127..128)	Firmness of the lumbar areas

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose status is being set.
	seatBackTilt	INTEGER(-127..128)	Position of Seat back tilting
	headRest	INTEGER(-127..128)	Position of Seat head rest
	upholsteryFrontUpDown	INTEGER(-127..128)	Position of front section of seat
	upholsteryBackUpDown	INTEGER(-127..128)	Position of back section of seat
	seatForwBack	INTEGER(-127..128)	Position of seat slides
	seatLumbar	INTEGER(-127..128)	Firmness of the lumbar areas

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose movement is being commanded.
	moveDirection	AmicBMAttSeatMove	The moving direction

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSeatInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	middleFront	2	
	passenger	3	
	secondRowLeft	4	
	secondRowMiddle	5	
	secondRowRight	6	
	thirdRowLeft	7	
	thirdRowMiddle	8	
	thirdRowRight	9	
	fourthRowLeft	10	
	fourthRowMiddle	11	
	fourthRowRight	12	
	fifthRowLeft	13	
	fifthRowMiddle	14	
	fifthRowRight	15	

AmicBMAttSeatMove			
Type	Name	Value / Type	Description
ENUMERATED	seatBackDown	0	Seat back is down
	seatBackUp	1	Seat back is up
	headRestDown	2	Head rest is down
	headRestUp	3	Head rest is up
	upholsteryFrontDown	4	Front section of seats upholstery is down
	upholsteryFrontUp	5	Front section of seats upholstery is up
	upholsteryBackDown	6	Back section of seats upholstery is down
	upholsteryBackUp	7	Back section of seats upholstery is up
	upholsteryDown	8	Seats upholstery is down
	upholsteryUp	9	Seats upholstery is up
	seatForward	10	Seat is to move forward
	seatBackward	11	Seat is to move backward

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

NOTE A single message of this command actuates the motor for a certain period of time. Multiple messages have to be sent continuously to move the seat smoothly. When multiple messages to move an single object to different direction arrives from different nodes, the receiving node should arbitrate these messages with its own policy.

6.8 Seat belts

This message is to get the status of the seat belts.

Supported Messages
Class = Body message class
Object = Body message SeatBelt

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSeatBelt	Inq	'000'B	'11'H	'08'H	Inquire
AmicBMRptSeatBelt	Rpt	'001'B	'11'H	'08'H	Report
AmicBMCnfSeatBelt	Cnf	'011'B	'11'H	'08'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	seatPos	AmicBMAttSeatInstNum	The specific seat whose seatbelt status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatPos	AmicBMAttSeatInstNum	The specific seat whose seatbelt status is being reported
	state	AmicBMAttSeatbeltState	The requested status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSeatInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	middleFront	2	
	passenger	3	
	secondRowLeft	4	
	secondRowMiddle	5	
	secondRowRight	6	
	thirdRowLeft	7	
	thirdRowMiddle	8	
	thirdRowRight	9	
	fourthRowLeft	10	
	fourthRowMiddle	11	
	fourthRowRight	12	
	fifthRowLeft	13	
	fifthRowMiddle	14	
	fifthRowRight	15	

AmicBMAttSeatbeltState			
Type	Name	Value / Type	Description
ENUMERATED	notFastened	1	Seat belt is not fastened
	fastened	2	Seat belt is fastened

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.9 Horn

This message is to get or set the status of the horn.

Supported Messages
Class = Body message class
Object = Body message Horn

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHorn	Inq	'000'B	'11'H	'09'H	N/A
AmicBMRptHorn	Rpt	'001'B	'11'H	'09'H	Report
AmicBMSetHorn	Set	'010'B	'11'H	'09'H	Set
AmicBMCnfHorn	Cnf	'011'B	'11'H	'09'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	hornState	AmicBMAttHornState	The requested horn status

Set Parameter(s)			
Type	Name	Value / Type	Description
	hornState	AmicBMAttHornState	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHornState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Horn is off
	on	1	Horn is on
	pulse	2	Horn is pulsing (on for a certain period of time)

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.10 Wiper System State

This message is to get or set the status of the wiper system.

Supported Messages
Class = Body message class
Object = Body message Wiper

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWiperSysState	Inq	'000'B	'11'H	'0A'H	N/A
AmicBMRptWiperSysState	Rpt	'001'B	'11'H	'0A'H	Report
AmicBMSetWiperSysState	Set	'010'B	'11'H	'0A'H	Set
AmicBMCnfWiperSysState	Cnf	'011'B	'11'H	'0A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windshieldWiperState	AmicBMAttWiperState	The requested status
	rearWiperState	AmicBMAttWiperState	The requested status
	headlampWiperState	AmicBMAttWiperState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windshieldWiperState	AmicBMAttWiperState	The requested status
	rearWiperState	AmicBMAttWiperState	The requested status
	headlampWiperState	AmicBMAttWiperState	The requested status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttWiperState			
Type	Name	Value / Type	Description
ENUMERATED	notEquipped	0	This wiper is not present in the vehicle
	off	1	Wiper is off
	intermittent	2	Wiper is intermittent
	slow	3	Wiper is slow
	fast	4	Wiper is fast
	maintenance	5	Wipers are set to the maintenance position (for replacement or cleaning)

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.11 Headlights

This message is to get the status of the headlight.

Supported Messages
Class = Body message class
Object = Body message Headlight

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHeadlight	Inq	'000'B	'11'H	'0B'H	N/A
AmicBMRptHeadlight	Rpt	'001'B	'11'H	'0B'H	Report
AmicBMSetHeadlight	Set	'010'B	'11'H	'0B'H	Set
AmicBMCnfHeadlight	Cnf	'011'B	'11'H	'0B'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttHeadlightState	The requested headlight status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttHeadlightState	The headlight status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHeadlightState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Headlight is off
	lowBeam	1	Headlight is in low beam mode
	highBeam	2	Headlight is in high beam mode
	flash	3	Either the low or the high beams are flashing (determined by the carmaker).
	hiBeamFlash	4	Flashing the high beam headlamp

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.12 Parking Light

This message is to get the status of the parking light.

Supported Messages
Class = Body message class
Object = Body message ParkingLight

Name	Operator	Type	Class	Object	Parameter
AmicBMInqParkingLight	Inq	'000'B	'11'H	'0C'H	N/A
AmicBMRptParkingLight	Rpt	'001'B	'11'H	'0C'H	Report
AmicBMSetParkingLight	Set	'010'B	'11'H	'0C'H	Set
AmicBMCnfParkingLight	Cnf	'011'B	'11'H	'0C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttParkingLightState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttParkingLightState	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttParkingLightState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Parking lights are off
	left	1	Left side parking lights are on
	right	2	Right side parking lights are on
	all	3	Left and right side parking lights are on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.13 Interior Lights

This message is to get the status of the interior lights.

Supported Messages
Class = Body message class
Object = Body message InteriorLights

Name	Operator	Type	Class	Object	Parameter
AmicBMInqInteriorLights	Inq	'000'B	'11'H	'0D'H	N/A
AmicBMRptInteriorLights	Rpt	'001'B	'11'H	'0D'H	Report
AmicBMSetInteriorLights	Set	'010'B	'11'H	'0D'H	Set
AmicBMCmdInteriorLights	Cmd	'100'B	'11'H	'0D'H	Command
AmicBMCnfInteriorLights	Cnf	'011'B	'11'H	'0D'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightIntensity	INTEGER(0..255)	Light intensity as a per cent of full bright (0=0%, 255=100%)

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightIntensity	INTEGER(0..255)	The intensity to set as a percent of full bright (0=0%, 255=100%)

Command Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttInteriorLightState	The turn the lights on or off

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttInteriorLightState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Interior light is off
	on	1	Interior light is on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.14 Hazard Signal

This message is to get the status of the hazard signal.

Supported Messages
Class = Body message class
Object = Body message HazardSignal

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHazardSignal	Inq	'000'B	'11'H	'0E'H	N/A
AmicBMRptHazardSignal	Rpt	'001'B	'11'H	'0E'H	Report
AmicBMSetHazardSignal	Set	'010'B	'11'H	'0E'H	Set
AmicBMCnfHazardSignal	Cnf	'011'B	'11'H	'0E'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttHazardSignalState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttHazardSignalState	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHazardSignalState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Hazard signal is off
	on	1	Hazard signal is on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.15 Exterior Temperature

This message is to get current outside temperature. The range is –40 degrees to 150 degrees centigrade.

Supported Messages
Class = Body message class
Object = Body message ExtTemp

Name	Operator	Type	Class	Object	Parameter
AmicBMInqExtTemp	Inq	'000'B	'11'H	'0F'H	N/A
AmicBMRptExtTemp	Rpt	'001'B	'11'H	'0F'H	Report
AmicBMCnfExtTemp	Cnf	'011'B	'11'H	'0F'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	tempLevel	INTEGER(-40..150)	The range is -40 to 150 degrees centigrade - 1degree/unit.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.16 Steering Column

This message is to get the steering tilt and telescopic position.

Supported Messages
Class = Body message class
Object = Body message SteeringColumn

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSteeringColumn	Inq	'000'B	'11'H	'10'H	N/A
AmicBMRptSteeringColumn	Rpt	'001'B	'11'H	'10'H	Report
AmicBMSetSteeringColumn	Set	'010'B	'11'H	'10'H	Set
AmicBMCmdSteeringColumn	Cmd	'100'B	'11'H	'10'H	Command
AmicBMCnfSteeringColumn	Cnf	'011'B	'11'H	'10'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	tiltPosition	INTEGER(0..255)	Tilt position
	telescopPosition	INTEGER(0..255)	Telescopic position

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	tiltPosition	INTEGER(0..255)	Tilt position
	telescopPosition	INTEGER(0..255)	Telescopic position

Command Parameter(s)			
Type	Name	Value / Type	Description
	steeringMove	AmicBMAttSteeringMove	The direction to move

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSteeringMove			
Type	Name	Value / Type	Description
ENUMERATED	tiltDown	0	Steering wheel to down
	tiltUp	1	Steering wheel to up
	telescopeShrink	2	Steering wheel position to move away from the driver
	telescopeExtend	3	Steering wheel position to move to the driver

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

NOTE A single command message actuates the window motor for a certain period of time (e.g. 200 ms.) Multiple messages have to be sent continuously move the steering wheel smoothly. When multiple messages to move an single object to different direction arrives from different nodes, the receiving node should arbitrate these messages with its own policy.

6.17 Seat Occupation

This message is to get the state of a seat occupation.

Supported Messages
Class = Body message class
Object = Body message SeatOccupation

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSeatOccupation	Inq	'000'B	'11'H	'11'H	Inquire
AmicBMRptSeatOccupation	Rpt	'001'B	'11'H	'11'H	Report
AmicBMCnfSeatOccupation	Cnf	'011'B	'11'H	'11'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	seatNum	AmicBMAttSeatInstNum	The seat whose occupation status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose occupation status is being reported
	occupantState	AmicBMAttOccupantState	The requested status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSeatInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	middleFront	2	
	passenger	3	
	secondRowLeft	4	
	secondRowMiddle	5	
	secondRowRight	6	
	thirdRowLeft	7	
	thirdRowMiddle	8	
	thirdRowRight	9	
	fourthRowLeft	10	
	fourthRowMiddle	11	
	fourthRowRight	12	
	fifthRowLeft	13	
	fifthRowMiddle	14	
	fifthRowRight	15	

AmicBMAttOccupantState			
Type	Name	Value / Type	Description
ENUMERATED	vacant	0	Seat is vacant
	occupied	1	Seat is occupied, but there is no information about occupant weight.
	occupiedUnder30kg	2	The seat is occupied by a passenger under 30 kg.
	occupied30to50kg	3	The seat is occupied by a passenger between 30 to 50 kg.
	occupied50to75kg	4	The seat is occupied by a passenger between 50 to 75 kg.
	occupied75to100kg	5	The seat is occupied by a passenger between 75 to 100 kg.
	occupied100to125kg	6	The seat is occupied by a passenger between 100 to 125 kg.
	occupied125to150kg	7	The seat is occupied by a passenger between 125 to 150 kg.
	occupiedOver150kg	8	The seat is occupied by a passenger over 150 kg.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.18 Odometer

This message is to get odometer information.

Supported Messages
Class = Body message class
Object = Body message Odometer

Name	Operator	Type	Class	Object	Parameter
AmicBMInqOdometer	Inq	'000'B	'11'H	'12'H	N/A
AmicBMRptOdometer	Rpt	'001'B	'11'H	'12'H	Report
AmicBMCnfOdometer	Cnf	'011'B	'11'H	'12'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	odometerNum	INTEGER(0..999999)	Odometer (1 bit = 1 kilometer)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.19 High Resolution Distance Accumulator

This message returns a high resolution distance accumulator.

Supported Messages
Class = Body message class
Object = Body message HiResDistAccum

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHiResDistAccum	Inq	'000'B	'11'H	'13'H	Inquire
AmicBMRptHiResDistAccum	Rpt	'001'B	'11'H	'13'H	Report
AmicBMSetHiResDistAccum	Set	'010'B	'11'H	'13'H	Set
AmicBMCnfHiResDistAccum	Cnf	'011'B	'11'H	'13'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	id	INTEGER(0..3)	Counter ID

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	id	INTEGER(0..3)	Counter ID
	distance	INTEGER(0..9999)	1 bit = 0.1 kilometer For maintenance, fuel efficiency…

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	id	INTEGER(0..3)	Counter ID
	distance	INTEGER(0..9999)	1 bit = 0.1 kilometer For maintenance, fuel efficiency…

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.20 Vehicle Speed

This message is to get vehicle speed.

Supported Messages
Class = Body message class
Object = Body message VehicleSpeed

Name	Operator	Type	Class	Object	Parameter
AmicBMInqVehSpeed	Inq	'000'B	'11'H	'14'H	N/A
AmicBMRptVehSpeed	Rpt	'001'B	'11'H	'14'H	Report
AmicBMCnfVehSpeed	Cnf	'011'B	'11'H	'14'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	vehSpeed	INTEGER(0..4095)	1 bit = 0.1 KPH

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.21 Air Bag

This message is to get the status of air bag.

Supported Messages
Class = Body message class
Object = Body message AirBag

Name	Operator	Type	Class	Object	Parameter
AmicBMInqAirBag	Inq	'000'B	'11'H	'15'H	Inquire
AmicBMRptAirBag	Rpt	'001'B	'11'H	'15'H	Report
AmicBMCnfAirBag	Cnf	'011'B	'11'H	'15'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	seatLoc	AmicBMAttSeatInstNum	Which seat whose airbag status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatLoc	AmicBMAttSeatInstNum	Which seat whose airbag status is being reported
	installedAirBags	AmicBMAttInstAirBags	The specific airbags installed at the seat in question
	deployStatus	AmicBMAttAirBagState	The deploy status for each installed airbag

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSeatInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	middleFront	2	
	passenger	3	
	secondRowLeft	4	
	secondRowMiddle	5	
	secondRowRight	6	
	thirdRowLeft	7	
	thirdRowMiddle	8	
	thirdRowRight	9	
	fourthRowLeft	10	
	fourthRowMiddle	11	
	fourthRowRight	12	
	fifthRowLeft	13	
	fifthRowMiddle	14	
	fifthRowRight	15	

AmicBMAttInstAirBags			
Type	Name	Value / Type	Description
BIT STRING	front	0	Front Air Bag (0=not installed, 1=installed)
	side	1	Side Air Bag (0=not installed, 1=installed)
	head	2	Head Air Bag (0=not installed, 1=installed)

AmicBMAttAirBagState			
Type	Name	Value / Type	Description
BIT STRING	front	0	Front Air Bag (0=not deployed, 1=deployed)
	side	1	Side Air Bag (0=not deployed, 1=deployed)
	head	2	Head Air Bag (0=not deployed, 1=deployed)

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.22 Fuel Level

This message is to get fuel level information.

Supported Messages
Class = Body message class
Object = Body message Fuel

Name	Operator	Type	Class	Object	Parameter
AmicBMInqFuel	Inq	'000'B	'11'H	'16'H	Inquire
AmicBMRptFuel	Rpt	'001'B	'11'H	'16'H	Report
AmicBMCnfFuel	Cnf	'011'B	'11'H	'16'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	tankId	INTEGER(1..2)	The fuel tank whose level is being reported.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	tankId	INTEGER(1..2)	The fuel tank whose level is being reported.
	amountTank	INTEGER(0..4095)	Fuel Amount 1 bit = 0.1 l

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.23 Warning Indicator State

This message is to get warning indicator status.

Supported Messages
Class = Body message class
Object = Body message WarningIndicatorState

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWarningIndicatorState	Inq	'001'B	'11'H	'17'H	N/A
AmicBMRptWarningIndicatorState	Rpt	'001'B	'11'H	'17'H	Report
AmicBMCnfWarningIndicatorState	Cnf	'011'B	'11'H	'17'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	indicatorState	AmicBMAttWarningIndicatorState	Warning indicator status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttWarningIndicatorState			
Type	Name	Value / Type	Description
BIT STRING	oilPressure	0	Oil pressure warning (0=off, 1=on)
	oilLevel	1	Oil level warning (0=off, 1=on)
	changeOilSoon	2	
	checkEngine	3	Check engine warning (0=off, 1=on)
	serviceVehicle	4	Service vehicle warning (0=off, 1=on)
	airbag	5	Airbag warning (0=off, 1=on)
	Vsc	6	VSC (Vehicle Stability Control) warning (0=off, 1=on)
	Tcs	7	TCS (Traction Control System) warning (0=off, 1=on)
	abs	8	ABS(Antilock Brake System) malfunction (0=off, 1=on)
	battery	9	Battery charging warning (0=off, 1=on)
	brakes	10	Brake fluid low warning (0=off, 1=on)
	parkingBrake	11	Parking brake warning (0=off, 1=on)
	door	12	Door ajar warning (0=off, 1=on)
	tirePress	13	Tire pressure low warning (0=off, 1=on)
	tireInflation	14	Tire inflation monitor system (0=off, 1=on)
	seatbelt	15	Unfasten seat belt warning (0=off, 1=on)
	exhaustTemp	16	Exhaust temperature warning (0=off, 1=on)

AmicBMAttWarningIndicatorState			
Type	Name	Value / Type	Description
	pwrSteer	17	Low power steering fluid warning (0=off, 1=on)
	lowFuel	18	Low fuel warning (0=off, 1=on)
	lightOn	19	Exterior light on warning [0=off, 1=on (Ex. Prevention of battery discharge in key off.)]
	tcsOnOff	20	TCS on/off indicator (0=off, 1=on)
	fourWheelDrive	21	Four wheel drive indicator (0=off, 1=on)
	cruiseControlOnOff	22	Cruise control on/off indicator (0=off, 1=on)
	hazardOn	23	Hazard on [0=off, 1=on(Ex. Prevention of battery discharge in key off.)]

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.24 Driver ID

This message is to get, or set the driver ID.

Supported Messages
Class = Body message class
Object = Body message DriverID

Name	Operator	Type	Class	Object	Parameter
AmicBMInqDriverId	Inq	'000'B	'11'H	'18'H	N/A
AmicBMRptDriverId	Rpt	'001'B	'11'H	'18'H	Report
AmicBMSetDriverId	Set	'010'B	'11'H	'18'H	Set
AmicBMCnfDriverId	Cnf	'011'B	'11'H	'18'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	driverId	INTEGER(0..255)	Driver ID (0=driver Unknown, all other values=driver number)

Set Parameter(s)			
Type	Name	Value / Type	Description
	driverId	INTEGER(0..255)	Driver ID (0=driver Unknown, all other values=driver number)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.25 Rain Sensor

This message is to get rain sensor information.

Supported Messages
Class = Body message class
Object = Body message RainSens

Name	Operator	Type	Class	Object	Parameter
AmicBMInqRainSens	Inq	'000'B	'11'H	'19'H	N/A
AmicBMRptRainSens	Rpt	'001'B	'11'H	'19'H	Report
AmicBMCnfRainSens	Cnf	'011'B	'11'H	'19'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	rainLevel	INTEGER(0..255)	Rain sensor (0=No rain..255=Heavy rain)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.26 Sun Sensor

This message is to get sun sensor information.

Supported Messages
Class = Body message class
Object = Body message SunSens

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSunSens	Inq	'000'B	'11'H	'1A'H	N/A
AmicBMRptSunSens	Rpt	'001'B	'11'H	'1A'H	Report
AmicBMCnfSunSens	Cnf	'011'B	'11'H	'1A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	sunSensorVal	INTEGER(0..16)	Sun sensor value in units of W / m².

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.27 Washing Liquid Level

This message is to get washing liquid capacity information.

Supported Messages
Class = Body message class
Object = Body message WashLiqLev

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWashLiqLev	Inq	'000'B	'11'H	'1B'H	Inquire
AmicBMRptWashLiqLev	Rpt	'001'B	'11'H	'1B'H	Report
AmicBMCnfWashLiqLev	Cnf	'011'B	'11'H	'1B'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	tankNum	AmicBMAttWashLiqTankInstNum	The washing liquid tank whose status is being requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	tankNum	AmicBMAttWashLiqTankInstNum	The washing liquid tank whose status is being reported.
	amount	INTEGER(0..255)	Washing liquid tank amount as a percent of full (0=0%, 255=100%)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttWashLiqTankInstNum			
Type	Name	Value	Description
ENUMERATED	windshield	1	Windshield
	rearWindow	2	Rear window
	headLight	3	Head light

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.28 Subscription/Notification Status

This message is to get the current subscription or notification status for a particular message.

Supported Messages
Class = Body message class
Object = Body message SubscribeNotifyStatus

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSubscribeNotifyStatus	Inq	'000'B	'11'H	'1C'H	Inquire
AmicBMRptSubscribeNotifyStatus	Rpt	'001'B	'11'H	'1C'H	Report
AmicBMCnfSubscribeNotifyStatus	Cnf	'011'B	'11'H	'1C'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message whose subscription/notification status is requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message whose subscription/notification status is being reported.
	numOfSuscribers	INTEGER (0..255)	Number of current subscribers for identified subscription for certain data at the same time.
	period	INTEGER (0..255)	This is the predefined subscription period, as reported by the device implementing the subscription. Each unit is 10 ms. “0” means event-driven type subscription. NOTE When an application requires other than the predefined period, it needs to use the “Inquire” message directly.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.29 Subscribe/Notify Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = Body message class
Object = Body message SubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicBMCmdSubscribeNotifyCmd	Cmd	'100'B	'11'H	'1D'H	Command
AmicBMCnfSubscribeNotifyCmd	Cnf	'011'B	'11'H	'1D'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message to subscribe or notify..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.30 End Subscription/Notification Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = Body message class
Object = Body message EndSubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicBMCmdEndSubscribeNotifyCmd	Cmd	'100'B	'11'H	'1E'H	Command
AmicBMCnfEndSubscribeNotifyCmd	Cnf	'011'B	'11'H	'1E'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message to end subscription or notification.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.31 Window Position

This message is to get or set the up down travel of the window.

Supported Messages
Class = Body message class
Object = Body message Window Position

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWindowPos	Inq	'000'B	'11'H	'1F'H	Inquire
AmicBMRptWindowPos	Rpt	'001'B	'11'H	‘1F'H	Report
AmicBMSetWindowPos	Set	'010'B	'11'H	'1F'H	Set
AmicBMCnfWindowPos	Cnf	'011'B	'11'H	'1F'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	windowNum	AmicBMAttWindowInstNum	The window whose position is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windowNum	AmicBMAttWindowInstNum	The window whose position is being reported
	windowPos	INTEGER (0..255)	The specific position of the window (0=completely open and 255=completely closed)

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windowNum	AmicBMAttWindowInstNum	The window whose position is being set
	windowPos	INTEGER (0..255)	The specific position of the window (0=completely open and 255=completely closed)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttWindowInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	passenger	2	
	rearPassengerLeft	3	
	rearPassengerRight	4	
	rear	5	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.32 Sunroof

This message is to get the status of a particular sunroof or command its motion.

Supported Messages
Class = Body message class
Object = Body message Sunroof

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSunroof	Inq	'000'B	'11'H	'20'H	Inquire
AmicBMRptSunroof	Rpt	'001'B	'11'H	'20'H	Report
AmicBMSetSunroof	Set	'010'B	'11'H	'20'H	Set
AmicBMCmdSunroof	Cmd	'100'B	'11'H	'20'H	Command
AmicBMCnfSunroof	Cnf	'011'B	'11'H	'20'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	sunroofNum	INTEGER (0..7)	The sunroof whose status is being requested. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sunroofNum	INTEGER (0..7)	The sunroof whose status is being reported. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).
	state	AmicBMAttSunroofState	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sunroofNum	INTEGER (0..7)	The sunroof whose status is being set. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).
	state	AmicBMAttSunroofState	The status to set

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sunroofNum	INTEGER (0..7)	The sunroof whose motion is being commanded. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).
	move	AmicBMAttSunroofMove	The moving direction

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

AmicBMAttSunroofState			
Type	Name	Value / Type	Description
ENUMERATED	open	0	The sunroof is open, or is being set open
	close	1	The sunroof is closed, or is being set closed

AmicBMAttSunroofMove			
Type	Name	Value / Type	Description
ENUMERATED	backward	0	The sunroof opens
	forward	1	The sunroof closes

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.33 Sunroof Position

This message is to get or set the exact position of a particular sunroof.

Supported Messages
Class = Body message class
Object = Body message Sunroof Position

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSunroofPos	Inq	'000'B	'11'H	'21'H	Inquire
AmicBMRptSunroofPos	Rpt	'001'B	'11'H	'21'H	Report
AmicBMSetSunroofPos	Set	'010'B	'11'H	'21'H	Set
AmicBMCnfSunroofPos	Cnf	'011'B	'11'H	'21'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	sunroofNum	INTEGER (0..7)	The sunroof whose position is being requested. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sunroofNum	INTEGER (0..7)	The sunroof whose position is being reported. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).
	sunroofPos	INTEGER (0..255)	The specific position of the sunroof (0=closed, 255=fully open)
	sunroofTilt	BOOLEAN	0=not tilted, 1=tilted

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sunroofNum	INTEGER (0..7)	The sunroof whose position is being set. Sunroofs are numbered beginning at the front of the vehicle (0=front sunroof, 1=next sunroof rearward).
	sunroofPos	INTEGER (0..255)	The specific position of the sunroof (0=closed, 255=fully open)
	sunroofTilt	BOOLEAN	0=not tilted, 1=tilted

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.34 Turn Signal

This message is to get the status of the Turn Signal.

Supported Messages
Class = Body message class
Object = Body message Turn Signal

Name	Operator	Type	Class	Object	Parameter
AmicBMInqTurnSig	Inq	'000'B	'11'H	'22'H	N/A
AmicBMRptTurnSig	Rpt	'001'B	'11'H	'22'H	Report
AmicBMCnfTurnSig	Cnf	'011'B	'11'H	'22'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	turnSigState	AmicBMAttTurnSigState	The turn signal status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	AmicBMAttTurnSigState	The turn signal status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttTurnSigState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	turn signal is off
	leftTurnActive	1	turn signal is in right turn mode
	rightTurnActive	2	Turn signal is in left turn mode

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.35 Battery Charge

This message is to get the state of charge of the battery.

Supported Messages
Class = Body message class
Object = Body message BattCharge

Name	Operator	Type	Class	Object	Parameter
AmicBMInqBattCharge	Inq	'000'B	'11'H	'23'H	Inquire
AmicBMRptBattCharge	Rpt	'001'B	'11'H	'23'H	Report
AmicBMCnfBattCharge	Cnf	'011'B	'11'H	'23'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	batteryNumber	INTEGER(0..7)	The battery number whose state of charge is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	batteryNumber	INTEGER(0..7)	The battery number for which the state of charge applies (for vehicles with more than 1 battery).
	stateofCharge	INTEGER(0..255)	The state of charge of the particular battery as a percent of full charge (0=0%, 255=100%)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

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6.36 Noise Level

This message is to get the measured noise level of the interior of the vehicle.

Supported Messages
Class = Body message class
Object = Body message NoiseLevel

Name	Operator	Type	Class	Object	Parameter
AmicBMInqNoiseLev	Inq	'000'B	'11'H	'24'H	N/A
AmicBMRptNoiseLev	Rpt	'001'B	'11'H	'24'H	Report
AmicBMCnfNoiseLev	Cnf	'011'B	'11'H	'24'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	noiseLevel	INTEGER(0..255)	The noise level measured in the vehicle

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.37 Shutter

This message is to get the state or set the position (or transparency in the case of windows that can be electrically made opaque) of the shutters.

Supported Messages
Class = Body message class
Object = Body message Shutters

Name	Operator	Type	Class	Object	Parameter
AmicBMInqShutterState	Inq	'000'B	'11'H	'25'H	N/A
AmicBMRptShutterState	Rpt	'001'B	'11'H	'25'H	Report
AmicBMRSetShutterState	Set	'010'B	'11'H	'25'H	Set
AmicBMCnfShutterState	Cnf	'011'B	'11'H	'25'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	shutterState	INTEGER(0..255)	The shutter state of as a percent (0=closed or opaque, 255=open or transparent)

Set Parameter(s)			
Type	Name	Value / Type	Description
	shutterState	INTEGER(0..255)	The shutter state of as a percent (0=closed or opaque, 255=open or transparent)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.38 Fog Lamps

This message is to get or set the status of the front or rear fog lamps.

Supported Messages
Class = Body message class
Object = Body message FogLamp

Name	Operator	Type	Class	Object	Parameter
AmicBMInqFogLamp	Inq	'000'B	'11'H	'26'H	N/A
AmicBMRptFogLamp	Rpt	'001'B	'11'H	'26'H	Report
AmicBMSetFogLamp	Set	'010'B	'11'H	'26'H	Set
AmicBMCnfFogLamp	Cnf	'011'B	'11'H	'26'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	frontFogLampState	AmicBMAttFogLampState	The status of the front foglamps
	rearFogLampState	AmicBMAttFogLampState	The status of the rear foglamps

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	frontFogLampState	AmicBMAttFogLampState	The status of the front foglamps
	rearFogLampState	AmicBMAttFogLampState	The status of the rear foglamps

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttFogLampState			
Type	Name	Value / Type	Description
ENUMERATED	notEquipped	0	The vehicle does not have this feature installed.
	off	1	Fog light is off
	on	2	Fog light is on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.39 Hand Brake Status

This message is to get the status of the Hand Brake (park brake).

Supported Messages
Class = Body message class
Object = Body message HandBrake

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHandBrake	Inq	'000'B	'11'H	'27'H	N/A
AmicBMRptHandBrake	Rpt	'001'B	'11'H	'27'H	Report
AmicBMCnfHandBrake	Cnf	'011'B	'11'H	'27'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	handbrake	AmicBMAttHandBrakeState	The turn signal status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHandBrakeState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	The hand brake is not applied
	active	1	The hand brake is applied

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.40 Convertible Top

This message is to get or change the status of the convertible top.

Supported Messages
Class = Body message class
Object = Body message ConvertibleTop

Name	Operator	Type	Class	Object	Parameter
AmicBMInqConvTop	Inq	'000'B	'11'H	'28'H	N/A
AmicBMRptConvTop	Rpt	'001'B	'11'H	'28'H	Report
AmicBMSetConvTop	Set	'010'B	'11'H	'28'H	Set
AmicBMCnfConvTop	Cnf	'011'B	'11'H	'28'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	convTopStatus	AmicBMAttConvTopState	The convertible top status

Set Parameter(s)			
Type	Name	Value / Type	Description
	convTopStatus	AmicBMAttConvTopState	The convertible top status to be set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttConvTopState			
Type	Name	Value / Type	Description
ENUMERATED	close	0	The top is open for a report, or will be opened for a set
	open	1	The top is closed for a report, or will be closed for a set

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.41 Dashboard Illumination

This message is to get the dimming level of the dashboard (e.g. instrument cluster, driver information center, etc).

Supported Messages
Class = Body message class
Object = Body message DashboardIllum

Name	Operator	Type	Class	Object	Parameter
AmicBMInqDashboardIllum	Inq	'000'B	'11'H	'29'H	N/A
AmicBMRptDashboardIllum	Rpt	'001'B	'11'H	'29'H	Report
AmicBMSetDashboardIllum	Set	'010'B	'11'H	'29'H	Set
AmicBMCnfDashboardIllum	Cnf	'011'B	'11'H	'29'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	dashboardIntensity	INTEGER(0..255)	Light intensity as a per cent of full bright (0=off, 255=full bright)

Set Parameter(s)			
Type	Name	Value / Type	Description
	dashboardIntensity	INTEGER(0..255)	Light intensity as a per cent of full bright (0=off, 255=full bright)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.42 Obstacle Distance

This message is to get the distance to obstacles in the front or rear of the vehicle.

Supported Messages
Class = Body message class
Object = Body message ObstacleDist

Name	Operator	Type	Class	Object	Parameter
AmicBMInqObstacleDist	Inq	'000'B	'11'H	'2A'H	N/A
AmicBMRptObstacleDist	Rpt	'001'B	'11'H	'2A'H	Report
AmicBMCnfObstacleDist	Cnf	'011'B	'11'H	'2A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	frontObstacleSensorState	AmicBMAttObstacleSensorStatus	The status of the front obstacle sensors
	frontObstacleDistance	INTEGER(0..4096)	Distance to the obstacle in mm
	rearObstacleSensorState	AmicBMAttObstacleSensorStatus	The status of the rear obstacle sensors
	rearObstacleDistance	INTEGER(0..4096)	Distance to the obstacle in mm

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttObstacleSensorStatus			
Type	Name	Value / Type	Description
ENUMERATED	notEquipped	0	The vehicle does not have this feature installed.
	off	1	The sensor is off
	on	2	The sensor is on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.43 Tire Pressure

This message is to get the actual measured tire pressure for each wheel.

Supported Messages
Class = Body message class
Object = Body message SeatOcc

Name	Operator	Type	Class	Object	Parameter
AmicBMInqTirePress	Inq	'000'B	'11'H	'2C'H	N/A
AmicBMRptTirePress	Rpt	'001'B	'11'H	'2C'H	Report
AmicBMCnfTirePress	Cnf	'011'B	'11'H	'2C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	leftFrontTirePressure	INTEGER(0..255)	The tire pressure in kPa. 1 bit = 4 kPa, range=0 to 1020 kPa
	rightFrontTirePressure	INTEGER(0..255)	The tire pressure in kPa. 1 bit = 4 kPa, range=0 to 1020 kPa
	leftRearTirePressure	INTEGER(0..255)	The tire pressure in kPa. 1 bit = 4 kPa, range=0 to 1020 kPa
	rightRearTirePressure	INTEGER(0..255)	The tire pressure in kPa. 1 bit = 4 kPa, range=0 to 1020 kPa

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.44 Tire Inflation Monitor Status

This message is to get the non-quantitative status of tire inflation.

Supported Messages
Class = Body message class
Object = Body message TireInflStatus

Name	Operator	Type	Class	Object	Parameter
AmicBMInqTireInflStatus	Inq	'000'B	'11'H	'2D'H	N/A
AmicBMRptTireInflStatus	Rpt	'001'B	'11'H	'2D'H	Report
AmicBMCnfTireInflStatus	Cnf	'011'B	'11'H	'2D'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	tireInflationStatus	AmicBMAttTireInflStat	The status of the tire inflation monitoring system

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttTireInflStat			
Type	Name	Value / Type	Description
ENUMERATED	normal	0	The tire inflation is OK
	low	1	One or more tires is underinflated
	high	2	One or more tires is overinflated

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.45 Wheel Speed

This message is to get the actual measured speed from each wheel.

Supported Messages
Class = Body message class
Object = Body message WheelSpeed

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWheelSpeed	Inq	'000'B	'11'H	'2E'H	N/A
AmicBMRptWheelSpeed	Rpt	'001'B	'11'H	'2E'H	Report
AmicBMCnfWheelSpeed	Cnf	'011'B	'11'H	'2E'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	leftFrontWheelSpeed	INTEGER(0..16535)	The wheel speed. 1 bit=.01 km/h
	rightFrontWheelSpeed	INTEGER(0..16535)	The wheel speed. 1 bit=.01 km/h
	leftRearWheelSpeed	INTEGER(0..16535)	The wheel speed. 1 bit=.01 km/h
	rightRearWheelSpeed	INTEGER(0..16535)	The wheel speed. 1 bit=.01 km/h

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.46 Ignition Key State

This message returns a flag indicating the state of an ignition key.

Supported Messages
Class = Body message class
Object = Body message IgnState

Name	Operator	Type	Class	Object	Parameter
AmicBMInqIgnState	Inq	'000'B	'11'H	'30'H	N/A
AmicBMRptIgnState	Rpt	'001'B	'11'H	'30'H	Report
AmicBMCnfIgnState	Cnf	'011'B	'11'H	'30'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	ignitionState	AmicBMAttIgnKeyState	

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttIgnKeyState			
Type	Name	Value / Type	Description
ENUMERATED	offwithNoKey	0	The key is not inserted
	offwithKeyIn	1	The key is inserted, but is in the Off position
	accessory	2	The key is in the Accessory position.
	run	3	The key is in the Run position. This does not indicate that the engine is running.
	start	4	The key is in the Start position. This is the position where is the engine may be started.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.47 Engine Running

This message returns a flag indicating if the vehicle's engine has been started.

Supported Messages
Class = Body message class
Object = Body message EngRunning

Name	Operator	Type	Class	Object	Parameter
AmicBMInqEngRunning	Inq	'000'B	'11'H	'31'H	N/A
AmicBMRptEngRunning	Rpt	'001'B	'11'H	'31'H	Report
AmicBMCnfEngRunning	Cnf	'011'B	'11'H	'31'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	engRunning	BOOLEAN	1=True, 0=False

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.48 Vehicle Owner (Blank)

This message field is not used.

Supported Messages
Class = Body message class
Object = Body message VehOwner

Name	Operator	Type	Class	Object	Parameter
AmicBMInqVehOwner	Inq	'000'B	'11'H	'32'H	N/A
AmicBMRptVehOwner	Rpt	'001'B	'11'H	'32'H	Report
AmicBMCnfVehOwner	Cnf	'011'B	'11'H	'32'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	ownerString	OCTET STRING(SIZE (128))	The owner's name

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.49 Interior Temperature

This message is to get or set the interior temperature of the vehicle. The range is -40 degrees to 150 degrees centigrade.

Supported Messages
Class = Body message class
Object = Body message IntTemp

Name	Operator	Type	Class	Object	Parameter
AmicBMInqIntTemp	Inq	'000'B	'11'H	'33'H	Inquire
AmicBMRptIntTemp	Rpt	'001'B	'11'H	'33'H	Report
AmicBMSetIntTemp	Set	'010'B	'11'H	'33'H	Set
AmicBMCnfIntTemp	Cnf	'011'B	'11'H	'33'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	zoneNum	AmicBMAttHVACZoneInstNum	The specific HVAC zone whose temperature is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	The specific HVAC zone whose temperature is being reported
	tempLevel	INTEGER(-40..150)	The range is -40 to 150 degrees centigrade. (1degree/unit)

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	The specific HVAC zone whose temperature is being set
	tempLevel	INTEGER(-40..150)	The range is -40 to 150 degrees centigrade. (1degree/unit)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHVACZoneInstNum			
Type	Name	Value	Description
ENUMERATED	driverZone	1	
	passengerZone	2	
	rearLeftZone	3	
	rearRightZone	4	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.50 HVAC Fan Speed

This message is to get or set the speed of the fan used for HVAC functions in the vehicle. The speed is returned or commanded as a percentage of full fan speed.

Supported Messages
Class = Body message class
Object = Body message HVACFanSpd

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHVACFanSpd	Inq	'000'B	'11'H	'34'H	Inquire
AmicBMRptHVACFanSpd	Rpt	'001'B	'11'H	'34'H	Report
AmicBMSetHVACFanSpd	Set	'010'B	'11'H	'34'H	Set
AmicBMCnfHVACFanSpd	Cnf	'011'B	'11'H	'34'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	zoneNum	AmicBMAttHVACZoneInstNum	the HVAC Zone whose fan speed is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	the HVAC Zone whose fan speed is being reported
	fanSpd	INTEGER(0..255)	0=off, 255=full speed

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	the HVAC Zone whose fan speed is being set
	fanSpd	INTEGER(0..255)	0=off, 255=full speed

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHVACZoneInstNum			
Type	Name	Value	Description
ENUMERATED	driverZone	1	
	passengerZone	2	
	rearLeftZone	3	
	rearRightZone	4	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.51 HVAC Fan Mode

This message is to get or set the mode of the fan for HVAC functions in the vehicle.

Supported Messages
Class = Body message class
Object = Body message HVACFanMode

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHVACFanMode	Inq	'000'B	'11'H	'35'H	Inquire
AmicBMRptHVACFanMode	Rpt	'001'B	'11'H	'35'H	Report
AmicBMSetHVACFanMode	Set	'010'B	'11'H	'35'H	Set
AmicBMCnfHVACFanMode	Cnf	'011'B	'11'H	'35'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	zone	AmicBMAttHVACZoneInstNum	The HVAC zone whose blower mode is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zone	AmicBMAttHVACZoneInstNum	The HVAC zone whose blower mode is being reported
	fanMode	AmicBMAttHVACFanMode	The mode of the HVAC blower

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zone	AmicBMAttHVACZoneInstNum	The HVAC zone whose blower mode is being set
	fanMode	AmicBMAttHVACFanMode	The mode of the HVAC blower

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHVACZoneInstNum			
Type	Name	Value	Description
ENUMERATED	driverZone	1	
	passengerZone	2	
	rearLeftZone	3	
	rearRightZone	4	

AmicBMAttHVACFanMode			
Type	Name	Value / Type	Description
ENUMERATED	off	0	The HVAC blower is not on
	defog	1	The HVAC blower is blowing up on the windshield
	defogandLowerVent	2	The HVAC blower is blowing up on the windshield, and out of the lower vents
	lowerVent	3	The HVAC blower is blowing out the lower vents
	panelVent	4	The HVAC blower is blowing out of the vents on the dash
	lowerandPanelVent	5	The HVAC blower is blowing out the lower vents and the panel vents.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.52 HVAC Mix Door Position

This message is to get or set the relative position of the device that determines the temperature of the air exiting the HVAC ducts. It is also possible to command a change.

Supported Messages
Class = Body message class
Object = Body message HVACMixDrPos

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHVACMixDrPos	Inq	'000'B	'11'H	'36'H	Inquire
AmicBMRptHVACMixDrPos	Rpt	'001'B	'11'H	'36'H	Report
AmicBMSetHVACMixDrPos	Set	'010'B	'11'H	'36'H	Set
AmicBMCnfHVACMixDrPos	Cnf	'011'B	'11'H	'36'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	zone	AmicBMAttHVACZoneInstNum	the zone whose mix door position is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zone	AmicBMAttHVACZoneInstNum	the zone whose mix door position is being reported
	mixDrPos	INTEGER(0..255)	0=full cold, 255=full hot

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zone	AmicBMAttHVACZoneInstNum	the zone whose mix door position is being set
	mixDrPos	INTEGER(0..255)	0=full cold, 255=full hot

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttHVACZoneInstNum			
Type	Name	Value	Description
ENUMERATED	driverZone	1	
	passengerZone	2	
	rearLeftZone	3	
	rearRightZone	4	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.53 Rear Window Defrost

This message is to get or set the rear window defroster status.

Supported Messages
Class = Body message class
Object = Body message RrWndwDef

Name	Operator	Type	Class	Object	Parameter
AmicBMInqRrWndDef	Inq	'000'B	'11'H	'37'H	N/A
AmicBMRptRrWndDef	Rpt	'001'B	'11'H	'37'H	Report
AmicBMSetRrWndDef	Set	'010'B	'11'H	'37'H	Set
AmicBMCnfRrWndDef	Cnf	'011'B	'11'H	'37'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	rearWndDefr	BOOLEAN	On or off

Set Parameter(s)			
Type	Name	Value / Type	Description
	rearWndDefr	BOOLEAN	On or off

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.54 External Mirror Defrost

This message is to get or set the external mirror defroster status.

Supported Messages
Class = Body message class
Object = Body message ExtMirrorDef

Name	Operator	Type	Class	Object	Parameter
AmicBMInqExtMirrorDef	Inq	'000'B	'11'H	'38'H	N/A
AmicBMRptExtMirrorDef	Rpt	'001'B	'11'H	'38'H	Report
AmicBMSetExtMirrorDef	Set	'010'B	'11'H	'38'H	Set
AmicBMCnfExtMirrorDef	Cnf	'011'B	'11'H	'38'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	extMirrorDefr	BOOLEAN	On or off

Set Parameter(s)			
Type	Name	Value / Type	Description
	extMirrorDefr	BOOLEAN	On or off

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.55 Automatic HVAC Control Set Temperature

This is to get or set the temperature that the automatic HVAC is using as a set point.

Supported Messages
Class = Body message class
Object = Body message AutoHVACSetPoint

Name	Operator	Type	Class	Object	Parameter
AmicBMInqAutoHVACSetPoint	Inq	'000'B	'11'H	'39'H	Inquire
AmicBMRptAutoHVACSetPoint	Rpt	'001'B	'11'H	'39'H	Report
AmicBMSetAutoHVACSetPoint	Set	'010'B	'11'H	'39'H	Set
AmicBMCnfAutoHVACSetPoint	Cnf	'011'B	'11'H	'39'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	zoneNum	AmicBMAttHVACZoneInstNum	The HVAC zone whose setpoint is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	The HVAC zone whose setpoint is being reported
	autoHVACSetPoint	INTEGER (15..40)	The setpoint in degrees C

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	zoneNum	AmicBMAttHVACZoneInstNum	The HVAC zone whose setpoint is being set
	autoHVACSetPoint	INTEGER (15..40)	The setpoint in degrees C

Confirm Parameter			
Type	Name	Value / Type	Description
	ErrorStatus	AmicBMAttError	Confirm error status

AmicBMAttHVACZoneInstNum			
Type	Name	Value	Description
ENUMERATED	driverZone	1	
	passengerZone	2	
	rearLeftZone	3	
	rearRightZone	4	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.56 Seat Heater/Cooler

This message is to get or set the status of the seat heater and cooler.

Supported Messages
Class = Body message class
Object = Body message SeatHtrClr

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSeatHtrClr	Inq	'000'B	'11'H	'3A'H	Inquire
AmicBMRptSeatHtrClr	Rpt	'001'B	'11'H	'3A'H	Report
AmicBMSetSeatHtrClr	Set	'010'B	'11'H	'3A'H	Set
AmicBMCnfSeatHtrClr	Cnf	'011'B	'11'H	'3A'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	seatNum	AmicBMAttSeatInstNum	The seat whose seat heater/cooler status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose seat heater/cooler status is being reported
	seatState	AmicBMAttSeatHtrClrState	The state of the heating/cooling system of the seat.

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	seatNum	AmicBMAttSeatInstNum	The seat whose seat heater/cooler status is being reported
	seatState	AmicBMAttSeatHtrClrState	The state to set for the heating/cooling system of the seat.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSeatInstNum			
Type	Name	Value	Description
ENUMERATED	driver	1	
	middleFront	2	
	passenger	3	
	secondRowLeft	4	
	secondRowMiddle	5	
	secondRowRight	6	
	thirdRowLeft	7	
	thirdRowMiddle	8	
	thirdRowRight	9	
	fourthRowLeft	10	
	fourthRowMiddle	11	
	fourthRowRight	12	
	fifthRowLeft	13	
	fifthRowMiddle	14	
	fifthRowRight	15	

AmicBMAttSeatHtrClrState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Neither heater nor cooler is on or requested
	heaterOn	1	The heater is on
	coolerOn	2	The cooler is on

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.57 Steering Wheel Heater

This message is to get or set the status of the steering wheel heater.

Supported Messages
Class = Body message class
Object = Body message StrgWhlHtr

Name	Operator	Type	Class	Object	Parameter
AmicBMInqStrgWhlHtr	Inq	'000'B	'11'H	'3C'H	N/A
AmicBMRptStrgWhlHtr	Rpt	'001'B	'11'H	'3C'H	Report
AmicBMSetStrgWhlHtr	Set	'010'B	'11'H	'3C'H	Set
AmicBMCnfStrgWhlHtr	Cnf	'011'B	'11'H	'3C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	strgWhlHtr	BOOLEAN	On or off

Set Parameter(s)			
Type	Name	Value / Type	Description
	strgWhlHtr	BOOLEAN	On or off

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.58 Headlight Tilt

This message is to get the current tilt of the headlights.

Supported Messages
Class = Body message class
Object = Body message HeadlightTilt

Name	Operator	Type	Class	Object	Parameter
AmicBMInqHdltTlt	Inq	'000'B	'11'H	'3D'H	N/A
AmicBMRptHdltTlt	Rpt	'001'B	'11'H	'3D'H	Report
AmicBMCnfHdltTlt	Cnf	'011'B	'11'H	'3D'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	hdltTilt	INTEGER(0..255)	0=maximum down tilt, 255 = maximum up tilt

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.59 Map Lights

This message is to get or set the status of the map lights.

Supported Messages
Class = Body message class
Object = Body message MapLights

Name	Operator	Type	Class	Object	Parameter
AmicBMInqMapLights	Inq	'000'B	'11'H	'3E'H	N/A
AmicBMRptMapLights	Rpt	'001'B	'11'H	'3E'H	Report
AmicBMSetMapLights	Set	'010'B	'11'H	'3E'H	Set
AmicBMCnfMapLights	Cnf	'011'B	'11'H	'3E'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	drvMapLightState	BOOLEAN	1=map light on, 0=map light off
	passMapLightState	BOOLEAN	1=map light on, 0=map light off
	rearLeftMapLight-State	BOOLEAN	1=map light on, 0=map light off
	rearRightMapLight-State	BOOLEAN	1=map light on, 0=map light off

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	drvMapLightState	BOOLEAN	1=map light on, 0=map light off
	passMapLightState	BOOLEAN	1=map light on, 0=map light off
	rearLeftMapLight-State	BOOLEAN	1=map light on, 0=map light off
	rearRightMapLight-State	BOOLEAN	1=map light on, 0=map light off

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.60 Sliding Door Command

This message is to control the status of the automatic sliding doors of a van.

Supported Messages
Class = Body message class
Object = Body message SlidingDoor

Name	Operator	Type	Class	Object	Parameter
AmicBMSetSlidingDoor	Set	'010'B	'11'H	'3F'H	Set
AmicBMCnfSlidingDoor	Cnf	'011'B	'11'H	'3F'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	doorNum	AmicBMAttSlidingDoorInstNum	The specific door whose status is being changed
	doorCmd	AmicBMAttSlidingDoorCmd	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSlidingDoorInstNum			
Type	Name	Value	Description
ENUMERATED	driversSliding	7	Drivers Side Sliding Door
	passengersSliding	8	Passengers Side Sliding Door

AmicBMAttSlidingDoorCmd			
Type	Name	Value / Type	Description
ENUMERATED	close	0	Open the Sliding Door
	open	1	Close the Sliding Door

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.61 Security Alert

This message is get the status, or to initiate the generation of a security alert. The specific implementation and effect of this command is defined by individual automakers.

Supported Messages
Class = Body message class
Object = Body message SecurityAlert

Name	Operator	Type	Class	Object	Parameter
AmicBMInqSecurityAlert	Inq	'000'B	'11'H	'40'H	N/A
AmicBMRptSecurityAlert	Rpt	'001'B	'11'H	'40'H	Report
AmicBMSetSecurityAlert	Set	'010'B	'11'H	'40'H	Set
AmicBMCnfSecurityAlert	Cnf	'011'B	'11'H	'40'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	alertState	BOOLEAN	True indicates that the security alert is active

Set Parameter(s)			
Type	Name	Value / Type	Description
	alertState	BOOLEAN	True requests the security alert to be triggered.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.62 Trunk/Fuel Door Open Command

This message commands open the trunk or fuel filler door.

Supported Messages
Class = Body message class
Object = Body message TrunkFuelDoor

Name	Operator	Type	Class	Object	Parameter
AmicBMCmdTrunkFuelDoor	Set	'010'B	'11'H	'41'H	Command
AmicBMCnfTrunkFuelDoor	Cnf	'011'B	'11'H	'41'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	position	AmicBMAttTrunkFuelDoorInst	The specific door being commanded to open

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttTrunkFuelDoorInst			
Type	Name	Value	Description
ENUMERATED	trunk	0	
	fuelFillerDoor	1	

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.63 Reverse Gear Lights

This message is to get or set the status of the lights that are activated when the vehicle is in a reverse gear.

Supported Messages
Class = Body message class
Object = Body message RvrsGrLts

Name	Operator	Type	Class	Object	Parameter
AmicBMInqRvrsGrLts	Inq	'000'B	'11'H	'42'H	N/A
AmicBMRptRvrsGrLts	Rpt	'001'B	'11'H	'42'H	Report
AmicBMSetRvrsGrLts	Set	'010'B	'11'H	'42'H	Set
AmicBMCnfRvrsGrLts	Cnf	'011'B	'11'H	'42'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightState	BOOLEAN	The requested reverse gear light status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	BOOLEAN	The reverse gear light status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.64 Rear Door Inside Handle Disable

This message is to get or set the status of the inside rear door handles to open the rear doors. This function is sometimes referred to as 'Child Locks' because it is intended to prevent young children from opening the rear doors of a vehicle.

Supported Messages
Class = Body message class
Object = Body message RrDoorHandlDisable

Name	Operator	Type	Class	Object	Parameter
AmicBMInqRrDoorHandlDisable	Inq	'000'B	'11'H	'43'H	N/A
AmicBMRptRrDoorHandlDisable	Rpt	'001'B	'11'H	'43'H	Report
AmicBMSetRrDoorHandlDisable	Set	'010'B	'11'H	'43'H	Set
AmicBMCnfRrDoorHandlDisable	Cnf	'011'B	'11'H	'43'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	disableState	BOOLEAN	1 = rear door disable is active.

Set Parameter(s)			
Type	Name	Value / Type	Description
	disableState	BOOLEAN	1 = rear door disable is being made active.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.65 Service Due

This service returns information about when dealer service is next required for the vehicle. The returned fields indicate the odometer reading or date that service is due. It also includes an indication about the nature of the type of service due (routine or for detected malfunctions). For a more thorough description of the required service procedures, use the Service Description service.

Supported Messages
Class = Body message class
Object = Body message ServiceDue

Name	Operator	Type	Class	Object	Parameter
AmicBMInqServiceDue	Inq	'000'B	'11'H	'44'H	N/A
AmicBMRptServiceDue	Rpt	'001'B	'11'H	'44'H	Report
AmicBMCnfServiceDue	Cnf	'011'B	'11'H	'44'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	serviceMonth	INTEGER(0..12)	Indicates the calendar month when service would be required (0 = month is not valid).
	serviceDay	INTEGER(0..31)	Indicates the calendar day when service would be required (0 = day is not valid).
	serviceYear	INTEGER(0..255)	Indicates the year when service would be required. The actual calendar year is generated by applying an offset of 2000. 0 = year is not valid.
	serviceOdo	INTEGER(0..100000)	Indicates the odometer value in km when service would be required (0 = odometer is not valid).
	serviceType	AmicBMAttSrvType	routine or based on a malfunction.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttSrvType			
Type	Name	Value	Description
ENUMERATED	routine	0	Service that is necessitated by the age or odometer value of the vehicle.
	malfPresent	1	Service that is necessitated by the presence of a diagnostic trouble code in the vehicle.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.66 Service Description

This service returns a string describing the next dealer service required for the vehicle.

Supported Messages
Class = Body message class
Object = Body message ServiceDesc

Name	Operator	Type	Class	Object	Parameter
AmicBMInqServiceDesc	Inq	'000'B	'11'H	'45'H	N/A
AmicBMRptServiceDesc	Rpt	'001'B	'11'H	'45'H	Report
AmicBMCnfServiceDesc	Cnf	'011'B	'11'H	'45'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	serviceDesc	OCTET STRING (SIZE (1024))	a string describing the next required dealer service

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.67 Wheel Rotations

This service returns a number of wheel rotations as well as a timestamp. The timestamp is the value of the timer at the last update of the Wheel Rotation message.

Supported Messages
Class = Body message class
Object = Body message WheelRotations

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWheelRotations	Inq	'000'B	'11'H	'46'H	Inquire
AmicBMRptWheelRotations	Rpt	'001'B	'11'H	'46'H	Report
AmicBMCnfWheelRotations	Cnf	'011'B	'11'H	'46'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	wheelInstNum	AmicBMAttWheel-InstNum	The specific wheel whose number of rotations is being requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	timestamp	INTEGER(0..16535)	the number of milliseconds that were required to accumulate the number of reported wheel rotations.
	wheelInstNum	AmicBMAttWheel-InstNum	The specific wheel whose number of rotations is being reported.
	wheelRots	INTEGER(0..16535)	the number of wheel rotations that have taken place since the last update.

AmicBMAttWheelInstNum			
Type	Name	Value	Description
ENUMERATED	leftFront	0	
	leftRear	1	
	rightFront	2	
	rightRear	3	

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.68 Emergency Lights

This service returns the state, or sets the state of a vehicle's emergency roof lights.

Supported Messages
Class = Body message class
Object = Body message EmergencyLts

Name	Operator	Type	Class	Object	Parameter
AmicBMInqEmergencyLts	Inq	'000'B	'11'H	'47'H	N/A
AmicBMRptEmergencyLts	Rpt	'001'B	'11'H	'47'H	Report
AmicBMSetEmergencyLts	Set	'010'B	'11'H	'47'H	Set
AmicBMCnfEmergencyLts	Cnf	'011'B	'11'H	'47'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lightState	BOOLEAN	The requested Emergency light status

Set Parameter(s)			
Type	Name	Value / Type	Description
	lightState	BOOLEAN	The Emergency light status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.69 Air Conditioning State

This service returns the binary state (on, off) of the Air Conditioning Compressor (or appropriate technology) for creating cold air for the passenger compartment. It is also possible to command a change.

Supported Messages
Class = Body message class
Object = Body message ACState

Name	Operator	Type	Class	Object	Parameter
AmicBMInqACState	Inq	'000'B	'11'H	'48'H	N/A
AmicBMRptACState	Rpt	'001'B	'11'H	'48'H	Report
AmicBMSetACState	Set	'010'B	'11'H	'48'H	Set
AmicBMCnfACState	Cnf	'011'B	'11'H	'48'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	acState	BOOLEAN	The reported AC compressor status

Set Parameter(s)			
Type	Name	Value / Type	Description
	acState	BOOLEAN	The AC compressor status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.70 Courtesy Light Switch Status

This service returns the state of the switch that determines the behavior of the interior lights. The switch may be in one of three positions: to turn the interior lights on, to turn the interior lights on when a door is opened, or to never allow the interior lights on (even if a door is opened).

Supported Messages
Class = Body message class
Object = Body message CtsyLightSwStatus

Name	Operator	Type	Class	Object	Parameter
AmicBMInqCtsyLightSwStatus	Inq	'000'B	'11'H	'49'H	N/A
AmicBMRptCtsyLightSwStatus	Rpt	'001'B	'11'H	'49'H	Report
AmicBMCnfCtsyLightSwStatus	Cnf	'011'B	'11'H	'49'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	ctsyLtSwState	AmicBMAttCtsyLtSwStat	the state of the switch controlling the behavior of the interior lights.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttCtsyLtSwStat			
Type	Name	Value	Description
ENUMERATED	lightsOn	0	turns the interior lights on regardless of door open or closed
	onWithDoorOpen	1	makes it possible for the interior lights to turn on if any door is open.
	lightsOff	2	makes it impossible for the interior lights to turn on, even if a door is open.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.71 Steering Wheel Lock Status

This service returns the state of the steering wheel lock.

Supported Messages
Class = Body message class
Object = Body message StrgWhlLock

Name	Operator	Type	Class	Object	Parameter
AmicBMInqStrgWhlLock	Inq	'000'B	'11'H	'4A'H	N/A
AmicBMRptStrgWhlLock	Rpt	'001'B	'11'H	'4A'H	Report
AmicBMCnfStrgWhlLock	Cnf	'011'B	'11'H	'4A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	strgWhlLockState	AmicBMAttStrgWhlLockState	

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttStrgWhlLockState			
Type	Name	Value	Description
ENUMERATED	unlocked	0	the steering wheel is not locked
	locked	1	the steering wheel is locked

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.72 Ignition Lock State

This message returns the state of the ignition lock.

Supported Messages
Class = Body message class
Object = Body message IgnLock

Name	Operator	Type	Class	Object	Parameter
AmicBMInqIgnLock	Inq	'000'B	'11'H	'4B'H	N/A
AmicBMRptIgnLock	Rpt	'001'B	'11'H	'4B'H	Report
AmicBMCnfIgnLock	Cnf	'011'B	'11'H	'4B'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	ignitionState	AmicBMAttIgnLockState	

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttIgnLockState			
Type	Name	Value / Type	Description
ENUMERATED	unlocked	0	the ignition is not locked
	lockedNoKey	1	the ignition is locked since no key is inserted
	lockedAntiTheft	2	the ignition is locked due to antitheft countermeasures.

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

6.73 Wiper Speed

This message is to get or set the speed of the various wiper systems.

Supported Messages
Class = Body message class
Object = Body message WiperSpeed

Name	Operator	Type	Class	Object	Parameter
AmicBMInqWiperSpeed	Inq	'000'B	'11'H	'4C'H	N/A
AmicBMRptWiperSpeed	Rpt	'001'B	'11'H	'4C'H	Report
AmicBMSetWiperSpeed	Set	'010'B	'11'H	'4C'H	Set
AmicBMCnfWiperSpeed	Cnf	'011'B	'11'H	'4C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windshieldWiperSpeed	INTEGER (0..255)	The requested status
	rearWiperSpeed	INTEGER (0..255)	The requested status
	headlampWiperSpeed	INTEGER (0..255)	The requested status

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	windshieldWiperSpeed	INTEGER (0..255)	The requested status
	rearWiperSpeed	INTEGER (0..255)	The requested status
	headlampWiperSpeed	INTEGER (0..255)	The requested status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicBMAttError	Confirm error status

AmicBMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	busy	3	Changing state

7 Powertrain Messages

7.1 Engine Start Disable Service

This message is to get the engine disable service availability.

Supported Messages
Class = Powertrain class
Object = Powertrain EngineDisableServ

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngineDisableServ	Inq	'000'B	'12'H	'01'H	N/A
AmicPTRptEngineDisableServ	Rpt	'001'B	'12'H	'01'H	Report

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	disableStatus	AmicPTAttDisableServ	The requested status

AmicPTAttDisableServ			
Type	Name	Value / Type	Description
ENUMERATED	notImplemented	0	Engine Start Disable is not implemented in this vehicle
	notAvailable	1	Engine Start Disable is not available
	available	2	Engine Start Disable is available

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.2 Engine Start Disable

This message is to get the current status of engine starting capability, or to set a new engine starting capability.

Supported Messages
Class = Powertrain class
Object = Powertrain EngineDisable

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngineDisable	Inq	'000'B	'12'H	'02'H	N/A
AmicPTRptEngineDisable	Rpt	'001'B	'12'H	'02'H	Report
AmicPTCmdEngineDisable	Cmd	'100'B	'12'H	'02'H	Command
AmicPTCnfEngineDisable	Cnf	'011'B	'12'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	disableStatus	AmicPTAttEngineDisable	The requested state

Command Parameter(s)			
Type	Name	Value / Type	Description
	disableCommand	AmicPTAttEngineDisable	The requesting function

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttEngineDisable			
Type	Name	Value / Type	Description
ENUMERATED	disable	0	Engine start is disable
	enable	1	Engine start is enable

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.3 Remote Start

This message is to get start the engine remotely.

Supported Messages
Class = Powertrain class
Object = Powertrain RemoteStart

Name	Operator	Type	Class	Object	Parameter
AmicPTCmdRemoteStart	Cmd	'100'B	'12'H	'03'H	N/A
AmicPTCnfRemoteStart	Cnf	'011'B	'12'H	'03'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.4 Performance Mode

This message is to get or set the performance mode.

Supported Messages
Class = Powertrain class
Object = Powertrain PerformMode

Name	Operator	Type	Class	Object	Parameter
AmicPTInqPerformMode	Inq	'000'B	'12'H	'04'H	N/A
AmicPTRptPerformMode	Rpt	'001'B	'12'H	'04'H	Report
AmicPTSetPerformMode	Set	'010'B	'12'H	'04'H	Set
AmicPTCnfPerformMode	Cnf	'011'B	'12'H	'04'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	perfMode	AmicPTAttPerfMode	The current performance mode status

Set Parameter(s)			
Type	Name	Value / Type	Description
	perfMode	AmicPTAttPerfMode	The status to set

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttPerfMode			
Type	Name	Value / Type	Description
ENUMERATED	normal	0	Normal mode
	sport	1	Sport mode
	economy	2	Economy mode

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.5 Coolant Temperature

This message is to get the engine coolant temperature. The range is -40 degrees to 214 degrees centigrade.

Supported Messages
Class = Powertrain class
Object = Powertrain CoolantTemp

Name	Operator	Type	Class	Object	Parameter
AmicPTInqCoolantTemp	Inq	'000'B	'12'H	'05'H	N/A
AmicPTRptCoolantTemp	Rpt	'001'B	'12'H	'05'H	Report
AmicPTCnfCoolantTemp	Cnf	'011'B	'12'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	temperature	INTEGER(-40..214)	Engine coolant temperature The range is -40 to 214 degrees. (1 degree/unit)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.6 Engine RPM

This message is to get the engine rotating speed. The range is 0 to 8 000 RPM.

Supported Messages
Class = Powertrain class
Object = Powertrain EngineRPM

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngineRPM	Inq	'000'B	'12'H	'06'H	N/A
AmicPTRptEngineRPM	Rpt	'001'B	'12'H	'06'H	Report
AmicPTCnfEngineRPM	Cnf	'011'B	'12'H	'06'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	rpmValue	INTEGER(0..8000)	Engine rotating speed (1RPM/unit)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.7 Engine Oil Pressure Status

This message is to get the engine oil pressure status.

Supported Messages
Class = Powertrain class
Object = Powertrain EngOilPressure

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngOilPressure	Inq	'000'B	'12'H	'07'H	N/A
AmicPTRptEngOilPressure	Rpt	'001'B	'12'H	'07'H	Report
AmicPTCnfEngOilPressure	Cnf	'011'B	'12'H	'07'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	pressureStat	AmicPTAttOilPressStatus	Engine oil pressure status (low or normal)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttOilPressStatus			
Type	Name	Value / Type	Description
ENUMERATED	normal	0	
	low	1	

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.8 Engine Oil Temperature

This message is to get the engine oil Temperature. The range is −40 degrees to 150 degrees centigrade.

Supported Messages
Class = Powertrain class
Object = Powertrain EngOilTemp

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngOilTemp	Inq	'000'B	'12'H	'08'H	N/A
AmicPTRptEngOilTemp	Rpt	'001'B	'12'H	'08'H	Report
AmicPTCnfEngOilTemp	Cnf	'011'B	'12'H	'08'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	temperature	INTEGER(-400..1500)	Engine oil Temperature Range is -40 to 150 degrees (0.1degree/unit)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.9 Gear Position

This message is to get the current gear position.

Supported Messages
Class = Powertrain class
Object = Powertrain GearPosition

Name	Operator	Type	Class	Object	Parameter
AmicPTInqGearPosition	Inq	'000'B	'12'H	'09'H	N/A
AmicPTRptGearPosition	Rpt	'001'B	'12'H	'09'H	Report
AmicPTCnfGearPosition	Cnf	'011'B	'12'H	'09'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	gearValue	INTEGER(0..31)	Current gear position (0=Reverse, 31=Neutral.)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.10 PRNDL Position

This message is to get the PRNDL position.

Supported Messages
Class = Powertrain class
Object = Powertrain PRNDLPosition

Name	Operator	Type	Class	Object	Parameter
AmicPTInqPRNDLPosition	Inq	'000'B	'12'H	'0A'H	N/A
AmicPTRptPRNDLPosition	Rpt	'001'B	'12'H	'0A'H	Report
AmicPTCnfPRNDLPPosition	Cnf	'011'B	'12'H	'0A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	posPRNDL	AmicPTAttPosPRNDL	Current PRNDL position

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttPosPRNDL			
Type	Name	Value / Type	Description
ENUMERATED	park	0	Parking position
	reverse	1	Reverse position
	neutral	2	Neutral position
	drive	3	drive position
	low	4	Low position
	drive2	5	Drive2 position
	drive3	6	Drive3 position
	drive4	7	Drive4 position

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.11 Cruise Control State

This message is to get the status of the cruise control.

Supported Messages
Class = Powertrain class
Object = Powertrain CruiseCntrlState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqCruiseCntrlState	Inq	'001'B	'12'H	'0B'H	N/A
AmicPTRptCruiseCntrlState	Rpt	'001'B	'12'H	'0B'H	Report
AmicPTCnfCruiseCntrlState	Cnf	'011'B	'12'H	'0B'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	cruiseState	AmicPTAttCruiseControlStatus	Cruise State

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttCruiseControlStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	0	The system is not capable of responding to a request to control vehicle speed.
	on	1	The system is capable of responding to request to control vehicle speed, but is not currently controlling speed.
	engaged	2	The system is currently controlling vehicle speed.

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.12 Brake Fluid Level Status

This message is to get the status of brake fluid level.

Supported Messages
Class = Powertrain class
Object = Powertrain BrkFluidLev

Name	Operator	Type	Class	Object	Parameter
AmicPTInqBrkFluidLev	Inq	'000'B	'12'H	'0C'H	N/A
AmicPTRptBrkFluidLev	Rpt	'001'B	'12'H	'0C'H	Report
AmicPTCnfBrkFluidLev	Cnf	'011'B	'12'H	'0C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	fluidLevel	AmicPTAttBrkFluidLev	Brake fluid level

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttBrkFluidLev			
Type	Name	Value / Type	Description
ENUMERATED	low	0	Low
	normal	1	Normal

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.13 Subscription/Notification Status

This message is to get the current subscription or notification status for a particular message.

Supported Messages
Class = Powertrain class
Object = Powertrain SubscribeNotifyStatus

Name	Operator	Type	Class	Object	Parameter
AmicPTInqSubscribeNotifyStatus	Inq	'000'B	'12'H	'0D'H	Inquire
AmicPTRptSubscribeNotifyStatus	Rpt	'001'B	'12'H	'0D'H	Report
AmicPTCnfSubscribeNotifyStatus	Cnf	'011'B	'12'H	'0D'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message whose subscription/notification status is requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Powertrain message whose subscription/notification status is being reported.
	numOfSuscribers	INTEGER (0..255)	Number of current subscribers for identified subscription for certain data at the same time.
	period	INTEGER (0..255)	This is the predefined subscription period, as reported by the device implementing the subscription. Each unit is 10 ms. “0” means event-driven type subscription. NOTE:When an application requires other than the predefined period, it needs to use the “Inquire” message directly.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.14 Subscribe/Notify Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = Powertrain class
Object = Powertrain SubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicPTCmdSubscribeNotifyCmd	Cmd	'100'B	'12'H	'0E'H	Command
AmicPTCnfSubscribeNotifyCmd	Cnf	'011'B	'12'H	'0E'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message to subscribe or notify..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.15 End Subscription/Notification Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = Powertrain class
Object = Powertrain EndSubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicPTCmdEndSubscribeNotifyCmd	Cmd	'100'B	'12'H	‘0F’H	Command
AmicPTCnfEndSubscribeNotifyCmd	Cnf	'011'B	'12'H	‘0F’H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Powertrain message to end subscription or notification.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.16 Engine Oil Pressure Status

This message is to get a status of engine oil pressure (low, normal).

Supported Messages
Class = Powertrain class
Object = Powertrain EngOilPressureStatus

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngOilPressureStatus	Inq	'000'B	'12'H	'10'H	N/A
AmicPTRptEngOilPressureStatus	Rpt	'001'B	'12'H	'10'H	Report
AmicPTCnfEngOilPressureStatus	Cnf	'011'B	'12'H	'10'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	oilPressureStatus	AmicPTAttOilPressStat	Low or normal

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttOilPressStat			
Type	Name	Value / Type	Description
ENUMERATED	normal	0	The oil pressure is ok for operation
	low	1	The oil pressure has been determined to be low.

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.17 Cruise Control Set Speed

This message is to get the cruise control set speed.

Supported Messages
Class = Powertrain class
Object = Powertrain CruiseCntrlSetSpd

Name	Operator	Type	Class	Object	Parameter
AmicPTInqCruiseCntrlSetSpd	Inq	'001'B	'12'H	'11'H	N/A
AmicPTRptCruiseCntrlSetSpd	Rpt	'001'B	'12'H	'11'H	Report
AmicPTCnfCruiseCntrlSetSpd	Cnf	'011'B	'12'H	'11'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	setSpeed	INTEGER(0..4095)	1 bit = 0.1 kilometer / hour

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.18 Brake Applied Status

This message is to get the status of the main braking system.

Supported Messages
Class = Powertrain class
Object = Powertrain BrakeState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqBrakeState	Inq	'001'B	'12'H	'12'H	Inquire
AmicPTRptBrakeState	Rpt	'001'B	'12'H	'12'H	Report
AmicPTCnfBrakeState	Cnf	'011'B	'12'H	'12'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	brakeLocation	AmicPTAttBrakeLoc	The specific brake whose status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	brakeLocation	AmicPTAttBrakeLoc	The specific brake whose status is being reported
	brakeState	AmicPTAttBrakeStatus	Brake applied status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttBrakeLoc			
Type	Name	Value / Type	Description
ENUMERATED	any	0	This state requests the logical OR of all individual brake states.
	leftfront	1	
	leftrear	2	
	rightfront	3	
	rightrear	4	

AmicPTAttBrakeStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Brake not applied
	on	1	Brake applied

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.19 Variable Suspension State

This message is to get or set the status of the variable suspension.

Supported Messages
Class = Powertrain class
Object = Powertrain VarblSuspState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqVarblSuspState	Inq	'001'B	'12'H	'13'H	N/A
AmicPTRptVarblSuspState	Rpt	'001'B	'12'H	'13'H	Report
AmicPTCnfVarblSuspState	Cnf	'011'B	'12'H	'13'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	variableSuspState	AmicPTAttVarSuspStatus	Brake applied status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttVarSuspStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	1	System turned off
	soft	2	System set to a soft setting
	normal	3	System set to a normal setting
	sport	4	System set to a stiff setting

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.20 Traction Control State

This message is to get the status of the system responsible for traction control.

Supported Messages
Class = Powertrain class
Object = Powertrain TracCntrlState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqTracCntrlState	Inq	'001'B	'12'H	'14'H	N/A
AmicPTRptTracCntrlState	Rpt	'001'B	'12'H	'14'H	Report
AmicPTCnfTracCntrlState	Cnf	'011'B	'12'H	'14'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	tracCntrlState	AmicPTAttTracCntrlStatus	Brake applied status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttTracCntrlStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	1	The system is not capable of responding to a traction event because of user input
	on	2	The system is capable of responding to a traction event.
	engaged	3	The system is currently performing traction control behaviors.

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.21 Engine Coolant Level

This message is to get the amount of coolant in the vehicle.

Supported Messages
Class = Powertrain class
Object = Powertrain CoolantLev

Name	Operator	Type	Class	Object	Parameter
AmicPTInqCoolantLev	Inq	'001'B	'12'H	'15'H	N/A
AmicPTRptCoolantLev	Rpt	'001'B	'12'H	'15'H	Report
AmicPTCnfCoolantLev	Cnf	'011'B	'12'H	'15'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	coolant Level	INTEGER(0..255)	0=completely empty, 255=full

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.22 Engine Coolant Pressure

This message is to get the pressure of coolant in the vehicle.

Supported Messages
Class = Powertrain class
Object = Powertrain CoolantLev

Name	Operator	Type	Class	Object	Parameter
AmicPTInqCoolantPressure	Inq	'001'B	'12'H	'16'H	N/A
AmicPTRptCoolantPressure	Rpt	'001'B	'12'H	'16'H	Report
AmicPTCnfCoolantPressure	Cnf	'011'B	'12'H	'16'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	coolantPressure	INTEGER(0..255)	0=no measurable pressure, 255=maximum measurable pressure

Confirm Parameter			
Type	Name	Value / Type	Description
	ErrorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.23 Engine Oil Level

This message is to get the amount of Oil in the vehicle.

Supported Messages
Class = Powertrain class
Object = Powertrain OilLev

Name	Operator	Type	Class	Object	Parameter
AmicPTInqOilLev	Inq	'001'B	'12'H	'17'H	N/A
AmicPTRptOilLev	Rpt	'001'B	'12'H	'17'H	Report
AmicPTCnfOilLev	Cnf	'011'B	'12'H	'17'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	oil Level	INTEGER(0..255)	0=no measurable level, 255=maximum measurable level

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.24 Engine Off Time

This message is to get the amount of time that has elapsed since the vehicle's engine was shut off.

Supported Messages
Class = Powertrain class
Object = Powertrain EngOffTime

Name	Operator	Type	Class	Object	Parameter
AmicPTInqEngOffTime	Inq	'001'B	'12'H	'18'H	N/A
AmicPTRptEngOffTime	Rpt	'001'B	'12'H	'18'H	Report
AmicPTCnfEngOffTime	Cnf	'011'B	'12'H	'18'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	engineOffTime	INTEGER(0..65535)	The engine off time in minutes (1 minute =1 bit). This results in a maximum range of 6.5 weeks.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.25 Antilock Brake System State

This message is to get the status of the antilock brake system.

Supported Messages
Class = Powertrain class
Object = Powertrain ABSState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqABSState	Inq	'001'B	'12'H	'19'H	N/A
AmicPTRptABSState	Rpt	'001'B	'12'H	'19'H	Report
AmicPTCnfABSState	Cnf	'011'B	'12'H	'19'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	absState	AmicPTAttABSStatus	Brake applied status

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttABSStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	1	The system is not capable of responding to an antilock braking event because of user input
	on	2	The system is capable of responding to an antilock braking event.
	engaged	3	The system is currently performing antilock braking behaviors.

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

7.26 Brake System State

This message is used to get the status of the brake switch (typically located on the brake pedal) indicating if the driver has engaged the brakes.

Supported Messages
Class = Powertrain class
Object = Powertrain BrkSysState

Name	Operator	Type	Class	Object	Parameter
AmicPTInqBrkSysState	Inq	'001'B	'12'H	'1A'H	N/A
AmicPTRptBrkSysState	Rpt	'001'B	'12'H	'1A'H	Report
AmicPTCnfBrkSysState	Cnf	'011'B	'12'H	'1A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	brkSysState	BOOLEAN	Brake applied status (TRUE=applied).

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicPTAttErrorStatus	Confirm error status

AmicPTAttABSStatus			
Type	Name	Value / Type	Description
ENUMERATED	off	1	The system is not capable of responding to an antilock braking event because of user input
	on	2	The system is capable of responding to an antilock braking event.
	engaged	3	The system is currently performing antilock braking behaviors.

AmicPTAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

8 Vehicle Diagnostics

8.1 Emission Related

This message is to carry a request defined for ISO 15031-5, emission related diagnostics.

Supported Messages
Class = Vehicle diagnosis class
Object = Vehicle diagnosis Emission Related

Name	Operator	Type	Class	Object	Parameter
AmicVDCmdEmissionRelated	Cmd	'100'B	'20'H	'01'H	Command
AmicVDRptEmissionRelated	Rpt	'001'B	'20'H	'01'H	Report
AmicVDCnfEmissionRelated	Cnf	'011'B	'20'H	'01'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	oBDRequestMsg-Length	INTEGER (1..255)	Request message length; including 1 byte for “oBDSIDRQ“
	oBDSIDRQ	OCTET STRING (SIZE(1))	“Request Service Identifier”, followed by the request data
	oBDRequestData	OCTET STRING (SIZE(0..254))	Request data

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	oBDResponseMsg-Length	INTEGER (1..2047)	Parameter length of response message, including “oBDSIDResponse”
	oBDSIDResponse	OCTET STRING (SIZE(1))	“Response Service Identifier”, followed by the response data 2 types are defined as follows. “Positive Response Service Identifier” and “Negative Response Service Identifier”.
	oBDResponseData	OCTET STRING (SIZE(0..2046))	Response data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicVDAttErrorStatus	Confirm error status

AmicVDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

NOTE 1 Although four communication protocols are used in ISO 15031-5, CAN will be the only mandatory protocol in US from 2008MY. This common message deals with only diagnostic service definition for ISO 15765-4 based on CAN.

NOTE 2 In ISO 15031-5, service $08 needs the maximum length. In service $08, the request message consists of "SIDRQ" followed by TID. "TID" is 1 byte data and defined as '01'H – 'FF'H.

Request Service Identifier from ISO 15031-5:

'01'H - Request of current powertrain diagnostic data

'02'H - Request of powertrain freeze frame data

'03'H - Request of emission-related diagnostic trouble codes

'04'H - Request of clear/reset emission-related diagnostic information

'06'H - Request of on-board monitoring test results for continuously and non-continuously monitored system

'07'H - Request of emission-related diagnostic trouble codes detected during current or last completed driving cycle

'08'H - Request of control of on-board system, test or component

'09'H - Request of vehicle information

Positive response has the respective service identifier according to the request service identifier.

Negative response is used when data is not available (ISO 15031-5 "4.1.4 Data not available").

Positive Response Service Identifier from ISO 15031-5:

'41'H - Response of current powertrain diagnostic data

'42'H - Response of powertrain freeze frame data

'43'H - Response of emission-related diagnostic trouble codes

'44'H - Response of clear/reset emission-related diagnostic information

'46'H - Response of on-board monitoring test results for continuously and non-continuously

monitored system

'47'H - Response of emission-related diagnostic trouble codes detected during current or last completed driving cycle

'48'H - Response of control of on-board system, test or component

'49'H - Response of vehicle information The maximum length of response message is allotted to "oBDResponseMsgLength "

Negative Response Service Identifier in ISO 15031-5:

'7F'H – Negative response

8.2 Enhanced

This message is to carry a request defined for ISO 14229-1, non-emission related diagnostics.

Supported Messages
Class = Vehicle diagnosis class
Object = Vehicle diagnosis Enhanced

Name	Operator	Type	Class	Object	Parameter
AmicVDCmdEnhanced	Cmd	'100'B	'20'H	'02'H	Command
AmicVDRptEnhanced	Rpt	'001'B	'20'H	'02'H	Report
AmicVDCnfEnhanced	Cnf	'011'B	'20'H	'02'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	eNHANCEDRequestMsg-Length	INTEGER (1..131071)	Request message length; including 1 byte for "eNHANCEDSIDRQ"
	eNHANCEDSIDRQ	OCTET STRING (SIZE(1))	"Request Service Identifier", followed by request data
	oBDRequestData	OCTET STRING (SIZE(0..131070))	Request data

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	eNHANCEDResponseMsg-Length	INTEGER (1..1245166)	Response message length; including 1 byte for "eNHANCEDIDResponse "
	eNHANCEDIDResponse	OCTET STRING (SIZE(1))	"Response Service Identifier", followed by the message data bytes 2 types are defined as follows. "Positive Response Service Identifier" and "Negative Response Service Identifier".
	eNHANCEDResponseData	OCTET STRING (SIZE(0..1245165))	Response data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicVDAttErrorStatus	Confirm error status

AmicVDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

NOTE In ISO 14229-1, ReadDataByIdentifier (22 hex) service needs the maximum length. In this service, the request message consists of “RDBI” followed by recordDataIdentifier. recordDataIdentifier is 2 byte length and 65,535 types of identifiers are defined in Annex C in ISO 14229-1.

Total message length will be max. “1+65,535*2=131,071 bytes.

8.1 DiagnosticSessionControl (10 hex) service
8.2 ECUReset (11 hex) service
8.3 SecurityAccess (27 hex) service
8.4 CommunicationControl (28 hex) service
8.5 TesterPresent (3E hex) service
8.6 AccessTimingParameter (83 hex) service
8.7 SecuredDataTransmission (84 hex) service
8.8 ControlDTCSetting (85 hex) service
8.9 ResponseOnEvent (86 hex) service
8.10 LinkControl (87 hex) service
9.1 ReadDataByIdentifier (22 hex) service
9.2 ReadMemoryByAddress (23 hex) service
9.3 ReadScalingDataByIdentifier (24 hex) service
9.4 ReadDataByPeriodicIdentifier (2A hex) service
9.5 DynamicallyDefineDataIdentifier (2C hex) service
9.6 WriteDataByIdentifier (2E hex) service
9.7 WriteMemoryByAddress (3D hex) service
10.1 ClearDiagnosticInformation (14 hex) Service
10.2 ReadDTCInformation (19 hex) Service
11.1 InputOutputControlByIdentifier (2F hex) service
12.1 RoutineControl (31 hex) service
13.1 RequestDownload (34 hex) service
13.2 RequestUpload (35 hex) service
13.3 TransferData (36 hex) service
13.4 RequestTransferExit (37 hex) service

Positive response has the respective service identifier according to the request service identifier.

Negative response is used when data is not available (ISO 15031-5 “4.1.4 Data not available”).

8.1 DiagnosticSessionControl (10 + 40 hex) service
8.2 ECUReset (11 + 40 hex) service
8.3 SecurityAccess (27 + 40 hex) service
8.4 CommunicationControl (28 + 40 hex) service
8.5 TesterPresent (3E + 40 hex) service
8.6 AccessTimingParameter (83 + 40 hex) service
8.7 SecuredDataTransmission (84 + 40 hex) service
8.8 ControlDTCSetting (85 + 40 hex) service
8.9 ResponseOnEvent (86 + 40 hex) service
8.10 LinkControl (87 + 40 hex) service
9.1 ReadDataByIdentifier (22 + 40 hex) service
9.2 ReadMemoryByAddress (23 + 40 hex) service
9.3 ReadScalingDataByIdentifier (24 + 40 hex) service
9.4 ReadDataByPeriodicIdentifier (2A + 40 hex) service
9.5 DynamicallyDefineDataIdentifier (2C + 40 hex) service
9.6 WriteDataByIdentifier (2E + 40 hex) service

9.7 WriteMemoryByAddress (3D + 40 hex) service
10.1 ClearDiagnosticInformation (14 + 40 hex) Service
10.2 ReadDTCInformation (19 + 40 hex) Service
11.1 InputOutputControlByIdentifier (2F + 40 hex) service
12.1 RoutineControl (31 + 40 hex) service
13.1 RequestDownload (34 + 40 hex) service
13.2 RequestUpload (35 + 40 hex) service
13.3 TransferData (36 + 40 hex) service
13.4 RequestTransferExit (37 + 40 hex) service

8.3 Run Diagnostics

This message causes vehicle diagnostic routines (e.g. self test) to be run, if the vehicle supports them.

Supported Messages
Class = Vehicle diagnosis
Object = Vehicle diagnosis Run Diagnostics

Name	Operator	Type	Class	Object	Parameter
AmicVDCmdRunDiag	Cmd	'100'B	'20'H	'03'H	N/A
AmicVDCnfRunDiag	Cnf	'011'B	'20'H	'03'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicVDAttErrorStatus	Confirm error status

AmicVDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

8.4 OEM Specific Diagnostics

This message is to carry a complete OEM specific diagnostic request and response over the ISO 22902 network.

Supported Messages
Class = Vehicle diagnosis class
Object = Vehicle diagnosis OEMSpecific

Name	Operator	Type	Class	Object	Parameter
AmicVDCmdOEMSpecific	Cmd	'100'B	'20'H	'04'H	Command
AmicVDRptOEMSpecific	Rpt	'001'B	'20'H	'04'H	Report
AmicVDCnfOEMSpecific	Cnf	'011'B	'20'H	'04'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	oemSpecificReq	OCTET STRING (SIZE(0..1024))	full OEM specific request message

Report Parameter(s)			
Type	Name	Value / Type	Description
	oemSpecificRsp	OCTET STRING (SIZE(0..1024))	full OEM specific reply message

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicVDAttErrorStatus	Confirm error status

AmicVDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

9 Amplifier Messages

9.1 Codec

This message is to get or set currently selected codec of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Codec

Name	Operator	Type	Class	Object	Parameter
AmicAPInqCodec	Inq	'000'B	'30'H	'01'H	N/A
AmicAPRptCodec	Rpt	'001'B	'30'H	'01'H	Report
AmicAPSetCodec	Set	'010'B	'30'H	'01'H	Set
AmicAPCnfCodec	Cnf	'011'B	'30'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	codec	AmicAPAttEncodingMode	Encoding mode

Set Parameter(s)			
Type	Name	Value / Type	Description
	codec	AmicAPAttEncodingMode	Encoding mode

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttEncodingMode			
Type	Name	Value / Type	Description
ENUMERATED	analog	0	Analog
	liner	1	64kbps CVSD
	alaw	2	64kbps A-Law
	ulaw	3	64kbps u-Law
	spdif	4	44.1kHz SPDIF
	mp3with48k	5	48kHz MP3
	mp3with64k	6	64kHz MP3
	mp3with96k	7	96kHz MP3
	mp3with128k	8	128kHz MP3
	mp3with160k	9	160kHz MP3
	mpeg1	10	MPEG 1 Video
	mpeg2	11	MPEG 2 Video
	dv	12	DV Video
	iidc	13	IIDC uncompressed video

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.2 Volume

This message is to get or set audio volume and mute state of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Volume

Name	Operator	Type	Class	Object	Parameter
AmicAPInqVolume	Inq	'000'B	'30'H	'02'H	N/A
AmicAPRptVolume	Rpt	'001'B	'30'H	'02'H	Report
AmicAPSetVolume	Set	'010'B	'30'H	'02'H	Set
AmicAPCnfVolume	Cnf	'011'B	'30'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	volumeLevel	INTEGER(0..31)	Level of volume (0 is min, 31 is max)
	muteState	AmicAPAttMuteState	State(muted or unmuted)

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	volumeLevel	INTEGER(0..31)	Level of volume
	muteState	AmicAPAttMuteState	State(muted or unmuted)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttMuteState			
Type	Name	Value / Type	Description
ENUMERATED	unmute	0	Unmute
	mute	1	Mute

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.3 Mute

This message is to mute an identified sink. There is no Inquire or Report message for audio mute. The volume message is used to Inquire or Report the mute state.

Supported Messages
Class = Amplifier class
Object = Amplifier mute

Name	Operator	Type	Class	Object	Parameter
AmicAPSetMute	Set	'010'B	'30'H	'03'H	Set
AmicAPCnfMute	Cnf	'011'B	'30'H	'03'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	muteState	AmicAPAttMuteState	State(muted or unmated)

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttMuteState			
Type	Name	Value / Type	Description
ENUMERATED	unmute	0	Unmute
	mute	1	Mute

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.4 Fade

This message is to get or set audio fade of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Fade

Name	Operator	Type	Class	Object	Parameter
AmicAPInqFade	Inq	'000'B	'30'H	'04'H	N/A
AmicAPRptFade	Rpt	'001'B	'30'H	'04'H	Report
AmicAPSetFade	Set	'010'B	'30'H	'04'H	Set
AmicAPCnfFade	Cnf	'011'B	'30'H	'04'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	fadeLevel	INTEGER (0..31)	0 is rear, 31 is front

Set Parameter(s)			
Type	Name	Value / Type	Description
	fadeLevel	INTEGER (0..31)	0 is rear, 31 is front

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.5 Balance

This message is to get or set the audio balance of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Balance

Name	Operator	Type	Class	Object	Parameter
AmicAPInqBalance	Inq	'000'B	'30'H	'05'H	N/A
AmicAPRptBalance	Rpt	'001'B	'30'H	'05'H	Report
AmicAPSetBalance	Set	'010'B	'30'H	'05'H	Set
AmicAPCnfBalance	Cnf	'011'B	'30'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	balanceLevel	INTEGER (-15..15)	-15 is left, 15 is right.

Set Parameter(s)			
Type	Name	Value / Type	Description
	balanceLevel	INTEGER (-15..15)	-15 is left, 15 is right.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.6 Chime

This message is to inquire about the status of a chime, or to ring a chime.

Supported Messages
Class = Amplifier class
Object = Amplifier Chime

Name	Operator	Type	Class	Object	Parameter
AmicAPInqChime	Inq	'100'B	'30'H	'06'H	Inquire
AmicAPRptChime	Rpt	'100'B	'30'H	'06'H	Report
AmicAPCmdChime	Cmd	'100'B	'30'H	'06'H	Command
AmicAPCnfChime	Cnf	'011'B	'30'H	'06'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	type	AmicAPAttChime	Type of chime whose status is being requested

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	type	AmicAPAttChime	Type of chime whose status is being reported
	chimeState	BOOLEAN	1=chime active, 0=chime inactive

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	type	AmicAPAttChime	Type of chime
	chimeState	BOOLEAN	1=activate chime, 0=deactivate chime

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttChime			
Type	Name	Value / Type	Description
ENUMERATED	none	0	
	keyInIgnitionMinder	1	
	checkGauges	2	
	securityWarning	3	
	headlampWarning	4	
	activationConfirmation	5	
	seatbeltWarning	6	
	parkBrakeWarning	7	
	turnSignalMinder	8	

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.7 Treble

This message is to get or set the audio treble of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Treble

Name	Operator	Type	Class	Object	Parameter
AmicAPInqTreble	Inq	'000'B	'30'H	'07'H	N/A
AmicAPRptTreble	Rpt	'001'B	'30'H	'07'H	Report
AmicAPSetTreble	Set	'010'B	'30'H	'07'H	Set
AmicAPCnfTreble	Cnf	'011'B	'30'H	'07'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	trebleLevel	INTEGER (0..31)	0 is min., 31 is max.

Set Parameter(s)			
Type	Name	Value / Type	Description
	trebleLevel	INTEGER (0..31)	0 is min., 31 is max..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.8 Midrange

This message is to get or set the audio midrange of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Midrange

Name	Operator	Type	Class	Object	Parameter
AmicAPInqMidrange	Inq	'000'B	'30'H	'08'H	N/A
AmicAPRptMidrange	Rpt	'001'B	'30'H	'08'H	Report
AmicAPSetMidrange	Set	'010'B	'30'H	'08'H	Set
AmicAPCnfMidrange	Cnf	'011'B	'30'H	'08'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	midrangeLevel	INTEGER (0..31)	0 is min., 31 is max..

Set Parameter(s)			
Type	Name	Value / Type	Description
	midrangeLevel	INTEGER (0..31)	0 is min., 31 is max..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.9 Bass

This message is to get or set the audio bass of an identified sink.

Supported Messages
Class = Amplifier class
Object = Amplifier Bass

Name	Operator	Type	Class	Object	Parameter
AmicAPInqBass	Inq	'000'B	'30'H	'09'H	N/A
AmicAPRptBass	Rpt	'001'B	'30'H	'09'H	Report
AmicAPSetBass	Set	'010'B	'30'H	'09'H	Set
AmicAPCnfBass	Cnf	'011'B	'30'H	'09'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	bassLevel	INTEGER (0..31)	0 is min., 31 is max..

Set Parameter(s)			
Type	Name	Value / Type	Description
	bassLevel	INTEGER (0..31)	0 is min., 31 is max..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.10 Restore Equalizer

This message is to get treble, midrange, and bass values of audio equalizer specified in ‘eqNumber’.

Supported Messages
Class = Amplifier class
Object = Amplifier Equalizer

Name	Operator	Type	Class	Object	Parameter
AmicAPInqEqualizer	Inq	'000'B	'30'H	'0A'H	Inquire
AmicAPRptEqualizer	Rpt	'001'B	'30'H	'0A'H	Report
AmicAPCnfEqualizer	Cnf	'011'B	'30'H	'0A'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	eqNumber	INTEGER (0..7)	Equalizer memory number

Report Parameter(s)			
Type	Name	Value / Type	Description
	eqNumber	INTEGER (0..7)	Equalizer memory number
	trebleLevel	INTEGER (0..31)	0 is min., 31 is max..
	midrangeLevel	INTEGER (0..31)	0 is min., 31 is max..
	bassLevel	INTEGER (0..31)	0 is min., 31 is max..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.11 Register Equalizer

This message is to register the current treble, midrange, and bass values into a memory specified in 'eqNumber'.

Supported Messages
Class = Amplifier class
Object = Amplifier Equalizer

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdEqualizerReg	Cmd	'100'B	'30'H	'0B'H	Command
AmicAPCnfEqualizerReg	Cnf	'011'B	'30'H	'0B'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	eqNumber	INTEGER (0..7)	Equalizer memory number

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

9.12 Clear Equalizer

This message is to clear treble, midrange, and bass values of one equalizer memory specified in 'eqNumber'.

Supported Messages
Class = Amplifier class
Object = Amplifier Equalizer

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdEqualizerClr	Cmd	'100'B	'30'H	'0C'H	Command
AmicAPCnfEqualizerClr	Cnf	'011'B	'30'H	'0C'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	eqNumber	INTEGER ((0..7) | 255)	Equalizer memory number, 255 is all clear.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttError	Confirm error status

AmicAPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request successful without error.
	unspecifiedError	1	Error, which impossible to identify.
	notSupported	2	Incoming request not supported.

10 General Player Messages

10.1 Current Player State

This message is to get a current state of the player; stop, play, pause, fast forward, rewind.

Supported Messages
Class = General player class
Object = Current player state

Name	Operator	Type	Class	Object	Parameter
AmicGPInqCurrentPlState	Inq	'000'B	'40'H	'01'H	N/A
AmicGPRptCurrentPlState	Rpt	'001'B	'40'H	'01'H	Report
AmicGPCnfCurrentPlState	Cnf	'011'B	'40'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	currentPlayState	AmicGPAttCurrentPlState	Current status of the player; stop, play, pause, ff, rew.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttCurrentPlState			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Off
	play	1	Play
	stop	2	Stop
	pause	3	Pause
	rewind	4	Rewind
	fastForward	5	Fast forward
	trackUp	6	Track up to the next track
	trackDownCurrent	7	Track down to the beginning of the current track
	trackDownPrevious	8	Track down to the previous track
	repeatTrack	9	Repeat track
	repeatDisk	10	Repeat disk
	randomInDisk	11	Play track at random in the disk
	randomInMagazine	12	Play track at random in the magazine
	scanDisk	13	Scan disk
	forward	14	Forward
	fastRewind	15	Fast rewind
	playOnlyOne	16	Play only one track
	scanDisk	17	Scan disk
	scanMagazine	18	Scan magazine
	scanAllMagazine	19	Scan all magazines
	repeatMagazine	20	Repeat magazine
	repeatAllMagazine	21	Repeat all magazines
	random	22	Random
	shuffle	23	Shuffle
	load	24	Load
	unload	25	Unload
	noDisk	26	No disk in the player
	unknown	27	Unknown status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.2 Stop

This message is to stop the playing of the player. If the current state is “Stop” and “Stop” is sent to the player, the player continues to stop. It depends on implementation where to start of the disk media, when “Play” after “Stop”. Some player may start from the place when it stops, and some may play from the beginning of the media. In this case, the former is the same as “Pause”.

Supported Messages
Class = General player class
Object = Stop of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdStop	Cmd	'100'B	'40'H	'02'H	N/A
AmicGPCnfStop	Cnf	'011'B	'40'H	'02'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

NOTE A DVD controller which supports GUI operation shall be implemented with user operations of “SELECT”, “UP”, “DOWN”, “RIGHT”, “LEFT”, “ROOT MENU” and so on besides general disk control functions. It is possible to support these control functions as "Input Key Code" defined in the ISO 22902 Text Display messages.

10.3 Play

This message is to start playing of the player sequentially. If the current state is play and “Play” is sending to the player, the player continues to play. In case of playing to a certain track of a certain disk for disk media player, Set of a current track and current disk information is needed before sending “Play”.

Supported Messages
Class = General player class
Object = Play of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdPlay	Cmd	'100'B	'40'H	'03'H	N/A
AmicGPCnfPlay	Cnf	'011'B	'40'H	'03'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.4 Pause

This message is to pause playing of the player. If the current state is pause and “Pause” is sending to the player, the player continues to pause.

Supported Messages
Class = General player class
Object = Pause of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdPause	Cmd	'100'B	'40'H	'04'H	N/A
AmicGPCnfPause	Cnf	'011'B	'40'H	'04'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.5 Fast Forward

This message is to fast-forward of the player. If the current state is fast-forward and “Ff” is send to the player, the player continues to fast-forward.

Supported Messages
Class = General player class
Object = Fast forward of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdFf	Cmd	'100'B	'40'H	'05'H	N/A
AmicGPCnfFf	Cnf	'011'B	'40'H	'05'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.6 Rewind

This message is to rewind of the player. If the current state is rewind and “Rew” is send to the player, the player continues to rewind.

Supported Messages
Class = General player class
Object = Rewind of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdRew	Cmd	'100'B	'40'H	'06'H	N/A
AmicGPCnfRew	Cnf	'011'B	'40'H	'06'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.7 Track Up

This message is to track up to the next track of the media. If the current track is the end of the media, go to the beginning of the media. In case of tape media, “track up” is fast forward to the next track. State of the tape media while track up becomes “fast forward’. Possible to stop “track up” by “Stop”.

Supported Messages
Class = General player class
Object = Track up of the media

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdTrackUp	Cmd	'100'B	'40'H	'07'H	N/A
AmicGPCnfTrackUp	Cnf	'011'B	'40'H	'07'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.8 Track Down to the Current

This message is to track down to the beginning of the current track of the media. In case of tape media, “track up” is rewind to the beginning of the current track. State of the tape media while track down becomes “rewind”. Possible to stop “track down” by “Stop”.

Supported Messages
Class = General player class
Object = Track down (current) of the media

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdTrackDownCurrent	Cmd	'100'B	'40'H	'08'H	N/A
AmicGPCnfTrackDownCurrent	Cnf	'011'B	'40'H	'08'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.9 Track Down to the Previous

This message is to track down to the beginning of the previous track of the media. In case of tape media, “track up” is rewind to the beginning of the previous track. State of the tape media while track down becomes “rewind”. Possible to stop “track down” by “Stop”.

Supported Messages
Class = General player class
Object = Track down (previous) of the media

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdTrackDownPrevious	Cmd	'100'B	'40'H	'09'H	N/A
AmicGPCnfTrackDownPrevious	Cnf	'011'B	'40'H	'09'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.10 Eject

This message is to eject a media in the player. If the current state is not “Stop”, the state goes to “Stop” and eject a media. The eject command may be “Stop” for a player without auto-loading functionality.

Supported Messages
Class = General player class
Object = Eject a media of the player

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdEject	Cmd	'100'B	'40'H	'0A'H	N/A
AmicGPCnfEject	Cnf	'011'B	'40'H	'0A'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.11 Subscription/Notification Status

This message is to get the current subscription or notification status for a particular message.

Supported Messages
Class = General player class
Object = General player SubscribeNotifyStatus

Name	Operator	Type	Class	Object	Parameter
AmicGPInqSubscribeNotifyStatus	Inq	'000'B	‘40’H	'0B'H	Inquire
AmicGPRptSubscribeNotifyStatus	Rpt	'001'B	‘40’H	'0B'H	Report
AmicGPCnfSubscribeNotifyStatus	Cnf	'011'B	‘40’H	'0B'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the General player message whose subscription/notification status is requested.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	subscNotifyItem	INTEGER(0..255)	The Object identifier of the General player message whose subscription/notification status is being reported.
	numOfSuscribers	INTEGER (0..255)	Number of current subscribers for identified subscription for certain data at the same time.
	period	INTEGER (0..255)	This is the predefined subscription period, as reported by the device implementing the subscription. Each unit is 10 ms. “0” means event-driven type subscription. NOTE When an application requires other than the predefined period, it needs to use the “Inquire” message directly.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.12 Subscribe/Notify Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = General player class
Object = General player SubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdSubscribeNotifyCmd	Cmd	'100'B	'40'H	'0C'H	Command
AmicGPCnfSubscribeNotifyCmd	Cnf	'011'B	'40'H	'0C'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the Body message to subscribe or notify..

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

AmicGPAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

10.13 End Subscription/Notification Command

This message is to command the start of subscribing to, or being notified of changes in a particular message.

Supported Messages
Class = General player class
Object = General player EndSubscribeNotifyCmd

Name	Operator	Type	Class	Object	Parameter
AmicGPCmdEndSubscribeNotifyCmd	Cmd	'100'B	'40'H	'0D'H	Command
AmicGPCnfEndSubscribeNotifyCmd	Cnf	'011'B	'40'H	'0D'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	subscNotifyItem	INTEGER(0..255)	The Object identifier of the General player message to end subscription or notification.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicGPAttError	Confirm error status

11 Disk Media Messages

11.1 Repeat Track

This message is to start playing repeatedly a single track to be identified.

Supported Messages
Class = Disk media class
Object = Repeat track

Name	Operator	Type	Class	Object	Parameter
AmicDMCmdRepeatTrack	Cmd	'100'B	'41'H	'01'H	N/A
AmicDMCnfRepeatTrack	Cnf	'011'B	'41'H	'01'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.2 Repeat Disk

This message is to start playing repeatedly a single disk to be identified.

Supported Messages
Class = Disk media class
Object = Repeat disk

Name	Operator	Type	Class	Object	Parameter
AmicDMCmdRepeatDisk	Cmd	'100'B	'41'H	'02'H	N/A
AmicDMCnfRepeatDisk	Cnf	'011'B	'41'H	'02'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.3 Random In Disk

This message is to start playing tracks in an identified disk at random.

Supported Messages
Class = Disk media class
Object = Random In Disk

Name	Operator	Type	Class	Object	Parameter
AmicDMCmdRandomInDisk	Cmd	'100'B	'41'H	'03'H	N/A
AmicDMCnfRandomInDisk	Cnf	'011'B	'41'H	'03'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.4 Random In Magazine

This message is to start playing tracks in a magazine at random.

Supported Messages
Class = Disk media class
Object = Random In Magazine

Name	Operator	Type	Class	Object	Parameter
AmicDMCmdRandomInMagazine	Cmd	'100'B	'41'H	'04'H	N/A
AmicDMCnfRandomInMagazine	Cnf	'011'B	'41'H	'04'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.5 Magazine Information

This message is to get magazine information, which includes number of disks in the magazine.

Supported Messages
Class = Disk media class
Object = Disk media Magazine Info

Name	Operator	Type	Class	Object	Parameter
AmicDMInqMagazineInfo	Inq	'000'B	'41'H	'05'H	N/A
AmicDMRptMagazineInfo	Rpt	'001'B	'41'H	'05'H	Report
AmicDMCnfMagazineInfo	Cnf	'011'B	'41'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	numOfDisk	INTEGER(0..255)	This is the number of disks in the magazine.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.6 Disk Information

This message is to get disk information, which includes disk title, disk artist, disk genre, number of tracks, total disk time, and current disk number.

Supported Messages
Class = Disk media class
Object = Disk media Disk Information

Name	Operator	Type	Class	Object	Parameter
AmicDMInqDiskInfo	Inq	'000'B	'41'H	'06'H	N/A
AmicDMRptDiskInfo	Rpt	'001'B	'41'H	'06'H	Report
AmicDMSetDiskInfo	Set	'010'B	'41'H	'06'H	Set
AmicDMCnfDiskInfo	Cnf	'011'B	'41'H	'06'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	diskInfo	AmicDMAttDiskInfo	The disk information

Set Parameter(s)			
Type	Name	Value / Type	Description
	currentDiskNumber	INTEGER(0..255)	This is the current disk number to be set.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttDiskInfo			
Type	Name	Value / Type	Description
SEQUENCE	currentDiskNumber	INTEGER(0..255)	This is the current disk number in the magazine.
	diskType	AmicDMAttDiskType	This is the type of the disk.
	diskTitle	OCTET STRING(SIZE(32))	This is the title of the disk. It can be “path + filename” or empty.
	diskArtist	OCTET STRING(SIZE(32))	This is the name of the artist
	diskGenre	OCTET STRING(SIZE(32))	This is the genre of the disk (rock, rap, …)
	numOfTrack	INTEGER(0..255)	This is the number of tracks
	totalDiskTime	INTEGER(0..65535)	This is the total disk time (unit: see description)

AmicDMAttDiskType			
Type	Name	Value / Type	Description
ENUMERATED	cdAudio	0	Digital audio CD or MP3 files on CD
	md	1	Mini disk
	silicon	2	Memory media for MP3 files
	dvd	3	Digital video disk

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.7 Track Information

This message is to get track information, which includes track title, track artist, track genre, current track number, current relative time, and current absolute disk time.

Supported Messages
Class = Disk media class
Object = Disk media Track Information

Name	Operator	Type	Class	Object	Parameter
AmicDMInqTrackInfo	Inq	'000'B	'41'H	'07'H	N/A
AmicDMRptTrackInfo	Rpt	'001'B	'41'H	'07'H	Report
AmicDMSetTrackInfo	Set	'010'B	'41'H	'07'H	Set
AmicDMCnfTrackInfo	Cnf	'011'B	'41'H	'07'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	trackInfo	AmicDMAttTrackInfo	The track information

Set Parameter(s)			
Type	Name	Value / Type	Description
	currentTrackNumber	INTEGER(0..255)	This is the current track number to be set.
	currentRelativeTime	INTEGER(0..65535)	This is the current relative time in the track to be set.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttTrackInfo			
Type	Name	Value / Type	Description
SEQUENCE	currentTrackNumber	INTEGER(0..255)	This is the current track number.
	trackTitle	OCTET STRING(SIZE(32))	This is the title of the track. It can be "path + filename" or empty.
	trackArtist	OCTET STRING(SIZE(32))	This is the name of the artist
	trackGenre	OCTET STRING(SIZE(32))	This is the genre of the disk (rock, rap, …)
	totalTrackTime	INTEGER(0..65535)	This is the total track time in the track.

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

11.8 Play Time Information

This message is to get the information on the play time in a track and a disk.

Supported Messages
Class = Disk media class
Object = Play Time Information

Name	Operator	Type	Class	Object	Parameter
AmicDMInqPlayTimeInfo	Inq	'000'B	'41'H	'08'H	N/A
AmicDMRptPlayTimeInfo	Rpt	'001'B	'41'H	'08'H	Report
AmicDMCnfPlayTimeInfo	Cnf	'011'B	'41'H	'08'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	trackInfo	AmicDMAttPlayTimeInfo	The play time information

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicDMAttError	Confirm error status

AmicDMAttPlayTimeInfo			
Type	Name	Value / Type	Description
SEQUENCE	currentTrackNumber	INTEGER(0..255)	This is the current track number.
	currentRelativeTime	INTEGER(0..65535)	This is the current relative time in the track
	currentAbsDiskTime	INTEGER(0..65535)	This is the current absolute disk time

AmicDMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

12 Tape Media Messages

12.1 Tape Property

This message is to get or set the tape properties.

Supported Messages
Class = Tape media class
Object = Tape media Property

Name	Operator	Type	Class	Object	Parameter
AmicTMInqTapeProperty	Inq	'000'B	'42'H	'01'H	N/A
AmicTMRptTapeProperty	Rpt	'001'B	'42'H	'01'H	Report
AmicTMSetTapeProperty	Set	'010'B	'42'H	'01'H	Set
AmicTMCnfTapeProperty	Cnf	'011'B	'42'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	tapeProperty	AmicTMAttTapeProperty	The tape property

Set Parameter(s)			
Type	Name	Value / Type	Description
	tapeProperty	AmicTMAttTapeProperty	The tape property

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTMAttError	Confirm error status

AmicTMAttTapeProperty			
Type	Name	Value / Type	Description
SEQUENCE	skipBlankOnOff	BOOLEAN	Skips the blanks on (1) or off (0)
	noiseReduction	AmicTMAttNoiseReduction	Noise reduction type
	tapeType	AmicTMAttTapeType	Tape type

AmicTMAttNoiseReduction			
Type	Name	Value / Type	Description
ENUMERATED	dolbyOff	0	Dolby off
	dolbyB	1	Dolby B
	dolbyC	2	Dolby C

AmicTMAttTapeType			
Type	Name	Value / Type	Description
ENUMERATED	noTape	0	No tape
	ferro	1	Ferro
	chrome	2	Chrome
	metal	3	Metal

AmicTMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

12.2 Time Counter

This message is to get or set the time counter of the tape player.

Supported Messages
Class = Tape media class
Object = Tape media time counter

Name	Operator	Type	Class	Object	Parameter
AmicTMInqTimeCounter	Inq	'000'B	'42'H	'02'H	N/A
AmicTMRptTimeCounter	Rpt	'001'B	'42'H	'02'H	Report
AmicTMSetTimeCounter	Set	'010'B	'42'H	'02'H	Set
AmicTMCnfTimeCounter	Cnf	'011'B	'42'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	timeCounter	AmicTMAttTimeCounter	Hours, Minutes, and Second

Set Parameter(s)			
Type	Name	Value / Type	Description
	timeCounter	AmicTMAttTimeCounter	Hours, Minutes, and Second

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTMAttError	Confirm error status

AmicTMAttTimeCounter			
Type	Name	Value / Type	Description
SEQUENCE	hours	INTEGER(0..23)	Hours
	minutes	INTEGER(0..59)	Minutes
	secs	INTEGER(0..59)	Seconds

AmicTMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

12.3 Tape Direction

This message is to get or set the tape direction; forward or backward.

Supported Messages
Class = Tape media class
Object = Tape media direction

Name	Operator	Type	Class	Object	Parameter
AmicTMInqTapeDirection	Inq	'000'B	'42'H	'03'H	N/A
AmicTMRptTapeDirection	Rpt	'001'B	'42'H	'03'H	Report
AmicTMSetTapeDirection	Set	'010'B	'42'H	'03'H	Set
AmicTMCnfTapeDirection	Cnf	'011'B	'42'H	'03'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	tapeDirection	AmicTMAttTapeDirection	The tape direction

Set Parameter(s)			
Type	Name	Value / Type	Description
	tapeDirection	AmicTMAttTapeDirection	The tape direction

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTMAttError	Confirm error status

AmicTMAttTapeDirection			
Type	Name	Value / Type	Description
ENUMERATED	forward	0	Forward
	backward	1	Backward

AmicTMAttError			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request success
	unspecifiedError	1	Unspecified error happened
	notSupported	2	Request not supported
	noMedia	3	No media; disk or tape in the player
	unreadableMedia	4	The media is unreadable.

13 Tuner Messages

13.1 Wave Band

This message is to get or set the audio tuner Wave Band.

Supported Messages
Class = Tuner class
Object = Tuner Wave Band

Name	Operator	Type	Class	Object	Parameter
AmicTuSetWaveBand	Set	'010'B	'43'H	'01'H	Set
AmicTuInqWaveBand	Inq	'000'B	'43'H	'01'H	N/A
AmicTuRptWaveBand	Rpt	'001'B	'43'H	'01'H	Report
AmicTuCnfWaveBand	Cnf	'011'B	'43'H	'01'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	waveband	AmicTuAttWaveBand	Audio tuner Wave Band list

Report Parameter(s)			
Type	Name	Value / Type	Description
	waveBand	AmicTuAttWaveBand	Audio tuner Wave Band list

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttWaveBand			
Type	Name	Value / Type	Description
BIT STRING	fM1	0	FM tuner 1, Frequency modulation, 87.5-108MHz
	fM2	1	FM tuner 2 if any, Frequency modulation, 87.5-108MHz
	lW	2	Long wave, 150-281kHz
	mW	3	Medium wave, 525-1620kHz
	sW	4	Short wave, 3.85-26.10 MHz
	xM	5	Satellite radio (~20GHz)
	vHF	6	TV (Very High Frequency)
	uHF	7	TV (Ultra High Frequency)

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.2 Current Station Information

This message is to get or set the audio tuner station.

Supported Messages
Class = Tuner class
Object = Tuner Station

Name	Operator	Type	Class	Object	Parameter
AmicTuSetStation	Set	'010'B	'43'H	'02'H	Set
AmicTuInqStationInfo	Inq	'000'B	'43'H	'02'H	N/A
AmicTuRptStationInfo	Rpt	'001'B	'43'H	'02'H	Report
AmicTuCnfStationInfo	Cnf	'011'B	'43'H	'02'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	waveband	AmicTuAttWaveBand	Audio tuner Wave Band list
	frequency	INTEGER(1..65536)	Audio tuner frequency

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	waveBand	AmicTuAttWaveBand	Audio tuner Wave Band list
	frequency	INTEGER(1..65536)	Audio tuner frequency

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttWaveBand			
Type	Name	Value / Type	Description
BIT STRING	fM1	0	FM tuner 1, Frequency modulation, 87.5-108MHz
	fM2	1	FM tuner 2 if any, Frequency modulation, 87.5-108MHz
	lW	2	Long wave, 150-281kHz
	mW	3	Medium wave, 525-1620kHz
	sW	4	Short wave, 3.85-26.10 MHz
	xM	5	Satellite radio (~20GHz)
	vHF	6	TV (Very High Frequency)
	uHF	7	TV (Ultra High Frequency)

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.3 Seek Mode

This message is to get or set the audio tuner Seek Mode.

Supported Messages
Class = Tuner class
Object = Tuner Seek Mode

Name	Operator	Type	Class	Object	Parameter
AmicTuSetSeekMode	Set	'010'B	'43'H	'03'H	Set
AmicTuInqSeekMode	Inq	'000'B	'43'H	'03'H	N/A
AmicTuRptSeekMode	Rpt	'001'B	'43'H	'03'H	Report
AmicTuCnfSeekMode	Cnf	'011'B	'43'H	'03'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	seekMode	AmicTuAttSeekMode	Seek Mode list

Report Parameter(s)			
Type	Name	Value / Type	Description
	seekMode	AmicTuAttSeekMode	Seek Mode list

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttSeekMode			
Type	Name	Value / Type	Description
ENUMERATED	off	0	Seek mode off
	upAuto	1	Automatic up
	upManual	2	Manual up
	upPreset	3	Preset up
	upScanPreset	4	Preset up scan
	upScanFrequency	5	Frequency up scan
	downAuto	6	Automatic down
	downManual	7	Manual down
	downPreset	8	Preset down
	downScanPreset	9	Preset down scan
	downScanFrequency	10	Frequency down scan

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.4 Preset

This message is to get or set the audio tuner Preset.

Supported Messages
Class = Tuner class
Object = Tuner Preset

Name	Operator	Type	Class	Object	Parameter
AmicTuSetPreset	Set	'010'B	'43'H	'04'H	Set
AmicTuInqPreset	Inq	'000'B	'43'H	'04'H	Inquire
AmicTuRptPreset	Rpt	'001'B	'43'H	'04'H	Report
AmicTuCnfPreset	Cnf	'011'B	'43'H	'04'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	number	INTEGER(1..32)	Preset number
	waveband	AmicTuAttWaveBand	Audio tuner Wave Band list
	frequency	INTEGER(1..65536)	Audio tuner frequency
	rdsName	OCTET STRING(SIZE(16))	RDS name if available

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	waveBand	AmicTuAttWaveBand	Audio tuner Wave Band list
	number	INTEGER(1..32)	Preset number

Report Parameter(s)			
Type	Name	Value / Type	Description
	number	INTEGER(1..32)	Preset number
	waveBand	AmicTuAttWaveBand	Audio tuner Wave Band list
	frequency	INTEGER(1..65536)	Audio tuner frequency
	rdsName	OCTET STRING(SIZE(16))	RDS name if available

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttWaveBand			
Type	Name	Value / Type	Description
BIT STRING	fM1	0	FM tuner 1, Frequency modulation, 87.5-108MHz
	fM2	1	FM tuner 2 if any, Frequency modulation, 87.5-108MHz
	lW	2	Long wave, 150-281kHz
	mW	3	Medium wave, 525-1620kHz
	sW	4	Short wave, 3.85-26.10 MHz
	xM	5	Satellite radio (~20GHz)
	vHF	6	TV (Very High Frequency)
	uHF	7	TV (Ultra High Frequency)

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.5 RDS Data

This message is to get the name of current station with RDS data.

Supported Messages
Class = Tuner class
Object = Tuner RDS data

Name	Operator	Type	Class	Object	Parameter
AmicTuInqRDSData	Inq	'000'B	'43'H	'05'H	N/A
AmicTuRptRDSData	Rpt	'001'B	'43'H	'05'H	Report
AmicTuCnfRDSData	Cnf	'011'B	'43'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	senderName	OCTET STRING(SIZE(16))	Station name

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.6 Data Available

This message is to get list of data which are available.

Supported Messages
Class = Tuner class
Object = Tuner data available

Name	Operator	Type	Class	Object	Parameter
AmicTuInqDataAvailable	Inq	'000'B	'43'H	'06'H	N/A
AmicTuRptDataAvailable	Rpt	'001'B	'43'H	'06'H	Report
AmicTuCnfDataAvailable	Cnf	'011'B	'43'H	'06'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	availableData	AmicTuAttDataAvailable	List of available data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttDataAvailable			
Type	Name	Value / Type	Description
BIT STRING	rDS	0	Radio data system (1=available)
	tA	1	Traffic program (1=available)

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	notuner	3	No available tuner

13.7 Data Accepted

This message is to get or set the accepted data (RDS, TA…).

Supported Messages
Class = Tuner class
Object = Tuner data accepted

Name	Operator	Type	Class	Object	Parameter
AmicTuSetDataAccepted	Set	'010'B	'43'H	'07'H	Set
AmicTuInqDataAccepted	Inq	'000'B	'43'H	'07'H	N/A
AmicTuRptDataAccepted	Rpt	'001'B	'43'H	'07'H	Report
AmicTuCnfDataAccepted	Cnf	'011'B	'43'H	'07'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	acceptedData	AmicTuAttDataAccepted	Accepted data list

Report Parameter(s)			
Type	Name	Value / Type	Description
	acceptedData	AmicTuAttDataAccepted	List of accepted data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttDataAccepted			
Type	Name	Value / Type	Description
BIT STRING	rDSOnOff	0	Accept or not rDS data (1=accept)
	tAOnOff	1	Accept or not TA data (1=accept)

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspeci-fiedError	1	Unspecified error
	notSup-ported	2	Request not supported
	notuner	3	No available tuner

13.8 Automatically Store

This message is to Automatically Store frequency in preset.

Supported Messages
Class = Tuner class
Object = Tuner Auto Store

Name	Operator	Type	Class	Object	Parameter
AmicTuCmdAutoStore	Cmd	'100'B	'43'H	'08'H	N/A
AmicTuCnfAutoStore	Cnf	'011'B	'43'H	'08'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTuAttErrorStatus	Confirm error status

AmicTuAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspeci-fiedError	1	Unspecified error
	notSup-ported	2	Request not supported
	notuner	3	No available tuner

14 Basic Phone Messages

14.1 Phone Mode

This message is to get status of phone's mode.

Supported Messages
Class = Telephone class
Object = Telephone PhoneMode

Name	Operator	Type	Class	Object	Parameter
AmicTeInqPhoneMode	Inq	'000'B	'50'H	'01'H	N/A
AmicTeRptPhoneMode	Rpt	'001'B	'50'H	'01'H	Report
AmicTeCnfPhoneMode	Cnf	'011'B	'50'H	'01'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	phoneMode	AmicTeAttPhoneMode	Phone mode, GSM, CDMA, PDC, etc.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttPhoneMode			
Type	Name	Value / Type	Description
BIT STRING	amps	0	Analog
	cdma800	1	CDMA 800MHz
	cdma19	2	CDMA 1.9GHz
	tdma800	3	TDMA 800MHz
	tdma19	4	TDMA 1.9GHz
	gsm800	5	GSM 800MHz
	gsm18	6	GSM 1.8GHz
	gsm19	7	GSM 1.9GHz
	pdc800	8	PDC (Japanese TDMA) 800MHz
	pdc15	9	PDC (Japanese TDMA) 1.5GHz
	satellite	10	Satellite Cell Phone

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.2 Phone Status

This message is to get phone's status.

Supported Messages
Class = Telephone class
Object = Telephone PhoneStatus

Name	Operator	Type	Class	Object	Parameter
AmicTeInqPhoneStatus	Inq	'000'B	'50'H	'02'H	N/A
AmicTeRptPhoneStatus	Rpt	'001'B	'50'H	'02'H	Report
AmicTeCnfPhoneStatus	Cnf	'011'B	'50'H	'02'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	phoneStatus	AmicTeAttPhoneStatus	Phone status, on, hands free, battery low, call in progress, etc.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttPhoneStatus			
Type	Name	Value / Type	Description
BIT STRING	phoneON	0	1=Phone's power is turned on.
	dockedCradle	1	1=Phone is docked to cradle.
	connectedToPAS	2	1=Phone is connected to Phone Adaptation System.
	handsFree	3	1=Phone is connected to hands-free kit.
	handSet	4	1=Phone is connected to handset.
	serviceAvailable	5	1=Phone is in the service available area.
	callInProgress	6	1=Phone call is in progress.
	speakerMute	7	1=Speaker is muted.
	microphoneEnable	8	1=Microphone is enabled.
	noiseEchoCanceled	9	1=Echo canceller function is enabled.
	batteryLow	10	1=Battery is dead.
	voiceRecognition	11	1=Voice recognition function is enabled.

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.3 Dial

This message is to do an action on dialing.

Supported Messages
Class = Telephone class
Object = Telephone Dial

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdDial	Cmd	'100'B	'50'H	'03'H	Command
AmicTeCnfDial	Cnf	'011'B	'50'H	'03'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	telNumber	AmicTeAttTelNumber	TelNumber attribute

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#"

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.4 Hang Up

This message is to do an action on hanging up. CallId is assigned automatically when receiving call, or making a call.

Supported Messages
Class = Telephone class
Object = Telephone HangUp

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdHangUp	Cmd	'100'B	'50'H	'04'H	Command
AmicTeCnfHangUp	Cnf	'011'B	'50'H	'04'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER (0..255)	Identified Call ID. All “1” (255) means all connected call.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.5 Last Dialed Number

This message is to get the last dialed number.

Supported Messages
Class = Telephone class
Object = Telephone LastDialedNumber

Name	Operator	Type	Class	Object	Parameter
AmicTeInqLastDialedNumber	Inq	'000'B	'50'H	'05'H	N/A
AmicTeRptLastDialedNumber	Rpt	'001'B	'50'H	'05'H	Report
AmicTeCnfLastDialedNumber	Cnf	'011'B	'50'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	telNumber	AmicTeAttTelNumber	TelNumber attribute

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. “*” is Star Key, “#” is Pound Key. Valid keys are 0123456789*#”

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.6 Call State

This message is to get phone's calling state.

Supported Messages
Class = Telephone class
Object = Telephone CallState

Name	Operator	Type	Class	Object	Parameter
AmicTeInqCallState	Inq	'000'B	'50'H	'06'H	Inquire
AmicTeRptCallState	Rpt	'001'B	'50'H	'06'H	Report
AmicTeCnfCallState	Cnf	'011'B	'50'H	'06'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER (0..254)	Identified call ID (255 is not used).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	called	INTEGER(0..254)	Call ID
	callState	AmicTeAttCallState	CallState

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttCallState			
Type	Name	Value / Type	Description
ENUMERATED	idle	0	Phone is idle.
	ringing	1	Phone is ringing.
	active	2	Call is in progress.
	dialing	3	Phone is being dialed.
	disconnecting	4	Call is disconnected.
	onHold	5	Call is on hold.

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.7 Call Duration

This message is to get phone's calling duration information.

Supported Messages
Class = Telephone class
Object = Telephone CallDuration

Name	Operator	Type	Class	Object	Parameter
AmicTeInqCallDuration	Inq	'000'B	'50'H	'07'H	Inquire
AmicTeRptCallDuration	Rpt	'001'B	'50'H	'07'H	Report
AmicTeCnfCallDuration	Cnf	'011'B	'50'H	'07'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER(0..254)	call ID (255 is not used).

Report Parameter(s)			
Type	Name	Value / Type	Description
	callId	INTEGER(0..254)	Call ID.
	callTimes	SEQUENCE OF INTEGER(0..65535)	Calling duration time. Unit is second.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.8 Answer Incoming Call

This message is to allocate a call ID for an incoming call when the call is accepted.

Supported Messages
Class = Telephone class
Object = Phone AnswerIncomingCall

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdAnswerIncomingCall	Cmd	'100'B	'50'H	'08'H	Command
AmicTeCnfAnswerIncomingCall	Cnf	'011'B	'50'H	'08'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER(0..254)	The number is assigned when the call is received.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.9 Caller Info

This message is to get caller's information.

Supported Messages
Class = Telephone class
Object = Telephone CallerInfo

Name	Operator	Type	Class	Object	Parameter
AmicTeInqCallerInfo	Inq	'000'B	'50'H	'09'H	Inquire
AmicTeRptCallerInfo	Rpt	'001'B	'50'H	'09'H	Report
AmicTeCnfCallerInfo	Cnf	'011'B	'50'H	'09'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER (0..254)	call ID (255 is not used).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	callId	INTEGER (0..254)	Call ID.
	callNum	AmicTeAttTelNumber	Telephone Number.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#"

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.10 Active Call Action

This message is to do an action; hold and resume, on calling.

Supported Messages
Class = Telephone class
Object = Telephone ActiveCallAction

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdActiveCallAction	Cmd	'100'B	'50'H	'0A'H	Command
AmicTeCnfActiveCallAction	Cnf	'011'B	'50'H	'0A'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	callAction	AmicTeAttAction	Action attribute
	called	INTEGER (0..254)	call ID (255 is not used).

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttAction			
Type	Name	Value / Type	Description
ENUMERATED	hold	0	Call is being on hold.
	resume	1	Call is being resumed.

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.11 Restore Factory Settings

This message is to do an action on restoring factory settings.

Supported Messages
Class = Telephone class
Object = Phone RestoreFactorySettings

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdRestoreFactorySettings	Cmd	'100'B	'50'H	'0B'H	N/A
AmicTeCnfRestoreFactorySettings	Cnf	'011'B	'50'H	'0B'H	Confirm

Parameter Definition

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.12 Line State

This message is to get phone's current line state, free, no-line, busy.

Supported Messages
Class = Telephone class
Object = Telephone LineState

Name	Operator	Type	Class	Object	Parameter
AmicTeInqLineState	Inq	'000'B	'50'H	'0C'H	N/A
AmicTeRptLineState	Rpt	'001'B	'50'H	'0C'H	Report
AmicTeCnfLineState	Cnf	'011'B	'50'H	'0C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	lineState	AmicTeAttLineState	LineState attribute, free, no line, busy, etc.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttLineState			
Type	Name	Value / Type	Description
ENUMERATED	lineFree	0	There is available line.
	noLine	1	There is no available line, or out of service(Phone is not in service area.)
	connectedLineOrBusy	2	Line is already connected or busy.
	systemBusy	3	Phone is in service area, but there is no available line.

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.13 Send DTMF

This message is to do an action on sending DTMF.

Supported Messages
Class = Telephone class
Object = Telephone SendDTMF

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdSendDTMF	Cmd	'100'B	'50'H	'0D'H	Command
AmicTeCnfSendDTMF	Cnf	'011'B	'50'H	'0D'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dTMFLength	INTEGER(1..32)	DTMF length
	dTMFSign	OCTET STRING(SIZE(1..32))	NULL should be added at the end of DTMF. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#ABCD

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.14 Power Supply

This message is to get phone's power supply information.

Supported Messages
Class = Telephone class
Object = Telephone PowerSupply

Name	Operator	Type	Class	Object	Parameter
AmicTeInqPowerSupply	Inq	'000'B	'50'H	'0E'H	N/A
AmicTeRptPowerSupply	Rpt	'001'B	'50'H	'0E'H	Report
AmicTeCnfPowerSupply	Cnf	'011'B	'50'H	'0E'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	charge	INTEGER(0..255)	The charge of battery. 0 means empty, 255 means full.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.15 Phone Date

This message is to get or set phone date information.

Supported Messages
Class = Telephone class
Object = Telephone PhoneDate

Name	Operator	Type	Class	Object	Parameter
AmicTeSetPhoneDate	Set	'010'B	'50'H	'0F'H	Set
AmicTeInqPhoneDate	Inq	'000'B	'50'H	'0F'H	Inquire
AmicTeRptPhoneDate	Rpt	'001'B	'50'H	'0F'H	Report
AmicTeCnfPhoneDate	Cnf	'011'B	'50'H	'0F'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	year	INTEGER (0..1023)	The date of making call. Offset +2000, (Year 2000 to 3022), and all “1” (1023) means “Not Available”.
	month	INTEGER ((1..12) | 255)	The date of making call. All “1” (255) means “Not Available”.
	day	INTEGER ((1..31) | 255)	The date of making call. All “1” (255) means “Not Available”.

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	callId	INTEGER (0..254)	call ID (255 is not used).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	callId	INTEGER (0..254)	call ID
	year	INTEGER (0..1023)	The date of making call. Offset +2000, (Year 2000 to 3022), and all “1” (1023) means “Not Available”.
	month	INTEGER ((1..12) | 255)	The date of making call. All “1” (255) means “Not Available”.
	day	INTEGER ((1..31) | 255)	The date of making call. All “1” (255) means “Not Available”.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.16 Phone Time

This message is to get or set phone time information.

Supported Messages
Class = Telephone class
Object = Telephone PhoneTime

Name	Operator	Type	Class	Object	Parameter
AmicTeSetPhoneTime	Set	'010'B	'50'H	'10'H	Set
AmicTeInqPhoneTime	Inq	'000'B	'50'H	'10'H	Inquire
AmicTeRptPhoneTime	Rpt	'001'B	'50'H	'10'H	Report
AmicTeCnfPhoneTime	Cnf	'011'B	'50'H	'10'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	hour	INTEGER ((0..23) | 255)	The starting time of making call. All “1” (255) means “Not Available”.
	minute	INTEGER ((0..59) | 255)	The starting time of making call. All “1” (255) means “Not Available”.
	second	INTEGER ((0..59) | 255)	The starting time of making call. All “1” (255) means “Not Available”.

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	callId	INTEGER (0..254)	call ID (255 is not used).

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	callId	INTEGER (0..254)	call ID (255 is not used).
	hour	INTEGER ((0..23) | 255)	The starting time of making call. All “1” (255) means “Not Available”.
	Minute	INTEGER ((0..59) | 255)	The starting time of making call. All “1” (255) means “Not Available”.
	Second	INTEGER ((0..59) | 255)	The starting time of making call. All “1” (255) means “Not Available”.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.17 Phone Ring Volume

This message is to get or set phone's ring volume information.

Supported Messages
Class = Telephone class
Object = Telephone PhoneRingVolume

Name	Operator	Type	Class	Object	Parameter
AmicTeSetPhoneRingVolume	Set	'010'B	'50'H	'11'H	Set
AmicTeInqPhoneRingVolume	Inq	'000'B	'50'H	'11'H	N/A
AmicTeRptPhoneRingVolume	Rpt	'001'B	'50'H	'11'H	Report
AmicTeCnfPhoneRingVolume	Cnf	'011'B	'50'H	'11'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	ringVolume	INTEGER(0..255)	Volume value. 0 means minimum, 255 means maximum.

Report Parameter(s)			
Type	Name	Value / Type	Description
	ringVolume	INTEGER(0..255)	Volume value. 0 means minimum, 255 means maximum.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.18 Phone Book

This message is to get or set phone book information. The phone book information consists of name and tel number.

Supported Messages
Class = Telephone class
Object = Telephone PhoneBook

Name	Operator	Type	Class	Object	Parameter
AmicTeSetPhoneBook	Set	'010'B	'50'H	'12'H	Set
AmicTeInqPhoneBook	Inq	'000'B	'50'H	'12'H	Inquire
AmicTeRptPhoneBook	Rpt	'001'B	'50'H	'12'H	Report
AmicTeCnfPhoneBook	Cnf	'011'B	'50'H	'12'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	phoneBookId	INTEGER (0..62)	Phone book's ID.
	entryId	INTEGER (0..1022)	ID number for phone book entries.
	name	OCTET STRING (SIZE(32))	Name
	telNumber	AmicTeAttTelNumber	Telephone Number

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	phoneBookId	INTEGER (0..62)	Phone book's ID.

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	phoneBookId	INTEGER (0..62)	Phone book's ID.
	entryId	INTEGER (0..1022)	ID number for phone book entries.
	name	OCTET STRING(SIZE(32))	Name
	telNumber	AmicTeAttTelNumber	Telephone Number

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#"

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.19 Search Phone Book

This message is to do an action on searching phone book from name.

Supported Messages
Class = Telephone class
Object = Telephone SearchPB

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdSearchPB	Cmd	'100'B	'50'H	'13'H	Command
AmicTeRptSearchPB	Rpt	'001'B	'50'H	'13'H	Report
AmicTeCnfSearchPB	Cnf	'011'B	'50'H	'13'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	searchText	OCTET STRING(SIZE(32))	Text to be searched
	phoneBookId	INTEGER(0..63)	Phone book's ID. (Search in a specific Phone Book, or in all phone books when ID=63.)

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	searchedNumber	INTEGER (0..64449)	Number of Phone Book entries
	searchResult	SEQUENCE OF AmicTeAttPhoneBook	Phone book information.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttPhoneBook			
Type	Name	Value / Type	Description
SEQUENCE	phoneBookId	INTEGER (0..62)	It identifies each phone book.
	entryId	INTEGER (0..1022)	It identifies each phone book entries.
	availability	INTEGER (0..1)	0 is empty, 1 is available
	name	OCTET STRING (SIZE(32))	Person's name. The last character is NULL code if the number of characters is not 32.
	telNumber	AmicTeAttTelNumber	Telephone number

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#"

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

14.20 Delete Phone Book

This message is to delete phone book information.

Supported Messages
Class = Telephone class
Object = Telephone DeletePB

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdDeletePB	Cmd	'100'B	'50'H	'14'H	Command
AmicTeCnfDeletePB	Cnf	'011'B	'50'H	'14'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	phoneBookId	INTEGER(0..63)	Phone book ID. All "1" (63) means all Phone Books.
	entryId	INTEGER(0..1023)	Entry number to be deleted. All "1" (1023) means all entries.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTeAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15 Advanced Phone Messages

15.1 Enable Phone

This message is to Enable Phone.

Supported Messages
Class = Advanced phone class
Object = Telephone Enable Phone

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdEnablePhone	Cmd	'100'B	‘51’H	'01'H	Command
AmicAPCnfEnablePhone	Cnf	'011'B	‘51’H	'01'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	codeType	AmicAPAttLockType	Type of code to be used
	codeValue	OCTET STRING(SIZE(20))	Code value, which is PIN/PUK

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttLockType			
Type	Name	Value / Type	Description
ENUMERATED	undef	0	Default
	pin	1	(Personal Identification Number) This is a personal code identifying the user of the phone. It is linked to a simcard and is mandatory to use the phone.
	pin2	2	This is a code needed to access some advanced functions of the phone (for example, limit the outgoing calls with a restricted list of phone numbers)
	puk	3	(personal unblocking key) When you type three times a wrong pin code, your phone gets blocked and you need to type your puk code to deblock it.
	puk2	4	equivalent of puk for pin2
	lockCode	5	Code to unlock the phone
	keyPad-LockCode	6	Code to unlock the keypad
	barring-Password	7	Password needed to lock or unlock calls or query current barring status.

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.2 Change User Code

This message is to Change User Code Value.

Supported Messages
Class = Advanced phone class
Object = Telephone Change User Code

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdChangeUserCode	Cmd	'100'B	'51'H	'02'H	Command
AmicAPCnfChangeUserCode	Cnf	'011'B	'51'H	'02'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	code	AmicAPAttLockType	Name of code to be changed
	currentValue	OCTET STRING(SIZE(20))	Code current Value
	newValue	OCTET STRING(SIZE(20))	Code new Value

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttLockType			
Type	Name	Value / Type	Description
ENUMERATED	undef	0	Default
	pin	1	(Personal Identification Number) This is a personal code identifying the user of the phone. It is linked to a simcard and is mandatory to use the phone.
	pin2	2	This is a code needed to access some advanced functions of the phone (for example, limit the outgoing calls with a restricted list of phone numbers)
	puk	3	(personal unblocking key) When you type three times a wrong pin code, your phone gets blocked and you need to type your puk code to deblock it.
	puk2	4	equivalent of puk for pin2
	lockCode	5	Code to unlock the phone
	keyPad-LockCode	6	Code to unlock the keypad
	barring-Password	7	Password needed to lock or unlock calls or query current barring status.

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.3 Network Operator Selection

This message is to Set Network Op Selection.

Supported Messages
Class = Advanced phone class
Object = Telephone Net Op Selection

Name	Operator	Type	Class	Object	Parameter
AmicAPSetNetOpSelection	Set	'010'B	‘51’H	'03'H	Set
AmicAPInqNetOpSelection	Inq	'000'B	‘51’H	'03'H	N/A
AmicAPRptNetOpSelection	Rpt	'001'B	‘51’H	'03'H	Report
AmicAPCnfNetOpSelection	Cnf	'011'B	‘51’H	'03'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	autoManual	BOOLEAN	0 is auto, 1 is manual

Report Parameter(s)			
Type	Name	Value / Type	Description
	autoManual	BOOLEAN	For roaming conditions it is necessary to switch on manual operator selection, 0 is Automatic, 1 is Manual

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.4 Network Operator

This message is to Set the Network Operator, it is necessary to switch on manual operator selection for roaming conditions.

Supported Messages
Class = Advanced phone class
Object = Telephone Net Op

Name	Operator	Type	Class	Object	Parameter
AmicAPSetNetOp	Set	'010'B	‘51’H	'04'H	Set
AmicAPInqNetOp	Inq	'000'B	‘51’H	'04'H	Inquire
AmicAPRptNetOp	Rpt	'001'B	‘51’H	'04'H	Report
AmicAPCnfNetOp	Cnf	'011'B	‘51’H	'04'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	netId	INTEGER (0..255)	Used to identify the call (255=unavailable)
	netOperators	SEQUENCE OF AmicAPAttNetOperators-(SIZE(1..255))	description of the state of one network providers

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	netId	INTEGER (0..255)	Used to identify the call (255=unavailable)

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	netId	INTEGER (0..255)	Used to identify the call (255=unavailable)
	netOperators	SEQUENCE OF AmicAPAttNet-Operators(SIZE(1..255))	description of the state of one network providers

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttNetOperators			
Type	Name	Value / Type	Description
SEQUENCE	selected	AmicAPAttSelected OPTIONAL	List of state of network providers.
	netCode	OCTET STRING(SIZE(0..7)) OPTIONAL	Code of network provider
	netName	OCTET STRING(SIZE(0..7)) OPTIONAL	Name of network provider

AmicAPAttSelected			
Type	Name	Value / Type	Description
ENUMERATED	unknown	0	Unknown network provider
	available	1	Network providers is available
	selected	2	Network providers is selected
	forbidden	3	Network providers access is forbidden

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.5 Register State

This message is to get the status of registration in the network.

Supported Messages
Class = Advanced phone class
Object = Telephone RegisterState

Name	Operator	Type	Class	Object	Parameter
AmicAPInqRegisterState	Inq	'000'B	'51'H	'05'H	N/A
AmicAPRptRegisterState	Rpt	'001'B	'51'H	'05'H	Report
AmicAPCnfRegisterState	Cnf	'011'B	'51'H	'05'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	registerState	AmicAPAttRegisterState	list of status of registration in the network Register State

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttRegisterState			
Type	Name	Value / Type	Description
ENUMERATED	notRegisteredAndNotSearching	0	Not registered And Not Searching
	registered	1	Registered
	notRegisteredAndSearching	2	Not registered And Searching
	registeredDenied	3	Registered denied
	registeredAndRoaming	4	Registered and roaming
	registeredAndRoaming-Alternative	5	Registered and roaming alternative

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.6 Calling Line Identification Restriction

This message is to get or set the Calling Line Identification Restriction.

Supported Messages
Class = Advanced phone class
Object = Telephone CLIR

Name	Operator	Type	Class	Object	Parameter
AmicAPSetCLIR	Set	'010'B	‘51’H	'06'H	Set
AmicAPInqCLIR	Inq	'000'B	‘51’H	'06'H	Inquire
AmicAPRptCLIR	Rpt	'001'B	‘51’H	'06'H	Report
AmicAPCnfCLIR	Cnf	'011'B	‘51’H	'06'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dataId	INTEGER (0..255)	Used to identify the call (255=unavailable)
	cLIRData	SEQUENCE OF AmicAPAttCLIRData(SIZE(1..255))	Calling Line Identity Restriction Data

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	dataId	INTEGER (0..255)	Used to identify the call (255=unavailable)

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dataId	INTEGER (0..255)	Used to identify the call (255=unavailable)
	cLIRData	SEQUENCE OF AmicAPAttCLIRData(SIZE(1..255))	Calling Line Identification Restriction Data

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttCLIRData			
Type	Name	Value / Type	Description
SEQUENCE	netStatus	AmicAPAttNetStatus OPTIONAL	Calling Line Identity Restriction Network Status
	outgoingCall	AmicAPAttOutgoingCall OPTIONAL	Calling Line Identity Restriction Outgoing Call

AmicAPAttNetStatus			
Type	Name	Value / Type	Description
ENUMERATED	unknown	0	Unknown
	cLIRNotProvisioned	1	Not Provisioned
	cLIRProvisioned	2	Provisioned
	cLIRTempModePresentation-Restricted	3	Temp Mode Presentation Restricted
	cLIRTempModePresentation-Allowed	4	Temp Mode Presentation Allowed

AmicAPAttOutgoingCall			
Type	Name	Value / Type	Description
ENUMERATED	accordingToCLIRServices	0	according To CLIR Services
	cLIRInvocation	1	CLIR Invocation
	cLIRSuppression	2	CLIR Suppression

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.7 Signal Quality

This message is to Get Signal Quality.

Supported Messages
Class = Advanced phone class
Object = Telephone Signal Quality

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSignalQuality	Inq	'000'B	‘51’H	'07'H	N/A
AmicAPRptSignalQuality	Rpt	'001'B	‘51’H	'07'H	Report
AmicAPCnfSignalQuality	Cnf	'011'B	‘51’H	'07'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	strength	INTEGER(0..63)	0 = no reception
	bitErrorRate	INTEGER(0..63)	0 = no error, 63 is 100% error.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.8 Serial Number

This message is to Get Serial Number of the telephone and SIM.

Supported Messages
Class = Advanced phone class
Object = Telephone Serial Number

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSerialNumber	Inq	'000'B	'51'H	'08'H	N/A
AmicAPRptSerialNumber	Rpt	'001'B	'51'H	'08'H	Report
AmicAPCnfSerialNumber	Cnf	'011'B	'51'H	'08'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	serialNumber	OCTET STRING (SIZE(0..63))	Serial number of the telephone
	sIMSerial	OCTET STRING (SIZE(0..63))	Serial number of the SIM

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.9 Dial GSM Call Id Return

This message is to provide Caller Id after a AmicTeCmdDial message.

Supported Messages
Class = Telephone class
Object = Telephone Dial GSM Call Id Return

Name	Operator	Type	Class	Object	Parameter
AmicTeCmdDialGSMCallIdReturn	Cmd	'100'B	'50'H	'09'H	Command
AmicAPCnfDialGSMCallIdReturn	Cnf	'011'B	'50'H	'09'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	called	INTEGER(0..255)	call ID

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicTeAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.10 SIM Card Information

This message is to get SIM Card Info.

Supported Messages
Class = Advanced phone class
Object = Telephone SimCardInfo

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSimCardInfo	Inq	'000'B	'51'H	'0A'H	N/A
AmicAPRptSimCardInfo	Rpt	'001'B	'51'H	'0A'H	Report
AmicAPCnfSimCardInfo	Cnf	'011'B	'51'H	'0A'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	cardInfo	SEQUENCE OF AmicAPAttSimCardInfo(SIZE(1..255))	SIM Card Information

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttSimCardInfo			
Type	Name	Value / Type	Description
SEQUENCE	simCardSerialNumber	OCTET STRING(SIZE(0..63))	Serial number of the SIM, 0=not available
	simCardNumber	INTEGER(1..8)	SIM Card Number when we have several SIM in the system
	isPlugged	BOOLEAN	0 = unplugged

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.11 Advice Of Charge

This message is to Get Advice Of Charge.

Supported Messages
Class = Advanced phone class
Object = Telephone Advice Of Charge

Name	Operator	Type	Class	Object	Parameter
AmicAPInqAdviceOfCharge	Inq	'000'B	'51'H	'0B'H	N/A
AmicAPRptAdviceOfCharge	Rpt	'001'B	'51'H	'0B'H	Report
AmicAPCnfAdviceOfCharge	Cnf	'011'B	'51'H	'0B'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	account	INTEGER OPTIONAL	Accumulated charge
	maximum	INTEGER OPTIONAL	Maximum charge value
	perUnit	INTEGER OPTIONAL	Charge per minute
	currency	OCTET STRING(SIZE(0..6)) OPTIONAL	Account currency

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.12 Short Message Service Show List

This message is to get SMS Show List.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Show List

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSShowList	Inq	'000'B	'51'H	'0C'H	Inquire
AmicAPRptSMSShowList	Rpt	'001'B	'51'H	'0C'H	Report
AmicAPCnfSMSShowList	Cnf	'011'B	'51'H	'0C'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	sMSIndex	INTEGER(0..65535)	SMS index

Report Parameter(s)			
Type	Name	Value / Type	Description
	sMSDescription	SEQUENCE OF AmicAPAttSMSDescription(SIZE(1..65 535))	SMS Show List

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttSMSDescription			
Type	Name	Value / Type	Description
SEQUENCE	index	INTEGER(0..65535)	SMS index
	attribut	AmicAPAttAttributSMS OPTIONAL	a list of state about SMS (not Read…)
	date	OCTET STRING(SIZE(8)) OPTIONAL	date, DDMMYYYY
	time	OCTET STRING(SIZE(6)) OPTIONAL	time, HHMMSS
	name	OCTET STRING(SIZE(0..40)) OPTIONAL	name

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.13 Short Message Service Show Details

This message is to get Details of SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Show Details

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSShowDetails	Inq	'000'B	‘51’H	'0D'H	Inquire
AmicAPRptSMSShowDetails	Rpt	'001'B	‘51’H	'0D'H	Report
AmicAPCnfSMSShowDetails	Cnf	'011'B	‘51’H	'0D'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	sMSIndex	INTEGER(0..65535)	SMS index

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sMSIndex	INTEGER(0..65535)	SMS index
	number	OCTET STRING(SIZE(0..40))	Phone number of the SMS service center
	name	OCTET STRING(SIZE(0..50))	SMS name
	telNumber	OCTET STRING(SIZE(0..40))	Telephone Number
	text	OCTET STRING(SIZE(0..160))	SMS Text

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.14 Send Short Message Service

This message is to Send SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone Send SMS

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdSendSMS	Cmd	'100'B	'51'H	'0E'H	Command
AmicAPCnfSendSMS	Cnf	'011'B	'51'H	'0E'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	AmicAPAttTelNumber	Telephone Number
	number	OCTET STRING(SIZE(0..40))	Phone number of the SMS service center
	text	OCTET STRING(SIZE(0..160))	SMS text
	storeIt	BOOLEAN	0 = Do not store message
	replyPath	BOOLEAN	Answer via same SMSCNumber
	validPeriod	OCTET STRING	Time period to fetch message. Otherwise the message will expire.
	msgConversion	AmicAPAttMsgConversion	Message Conversion
	requestDelivery Report	BOOLEAN	0 = Do not request report

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key "#" is Pound Key. Valid keys are 0123456789*#

AmicAPAttMsgConversion			
Type	Name	Value / Type	Description
ENUMERATED	none	0	None
	Fax	1	Fax
	x400	2	x400
	paging	3	Paging
	email	4	Email
	speech	5	Speech

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.15 Send Short Message Service From Storage

This message is to Send SMS From Storage.

Supported Messages
Class = Advanced phone class
Object = Telephone Send SMS From Storage

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdSendSMSFromStorage	Cmd	'100'B	'51'H	'0F'H	Command
AmicAPCnfSendSMSFromStorage	Cnf	'011'B	'51'H	'0F'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sMSIndex	INTEGER(0..65535)	SMS index
	telNumber	AmicAPAttTelNumber	Telephone Number
	number	OCTET STRING(SIZE(0..40))	Phone number of the SMS service center
	replyPath	BOOLEAN	Answer via same SMSCNumber
	validPeriod	OCTET STRING	Time period to fetch message. Otherwise the message will expire.
	msgConversion	AmicAPAttMsgConversion	Message Conversion
	requestDeliveryReport	BOOLEAN	0 = Do not request report

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key "#" is Pound Key. Valid keys are 0123456789*#

AmicAPAttMsgConversion			
Type	Name	Value / Type	Description
ENUMERATED	none	0	none
	fax	1	fax
	x400	2	x400
	paging	3	paging
	email	4	email
	speech	5	speech

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.16 Store Short Message Service

This message is to Store SMS. This SMS could be sent again later with SendSMSFromStorage messages.

Supported Messages
Class = Advanced phone class
Object = Telephone Store SMS

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdStoreSMS	Cmd	'100'B	‘51’H	'10'H	Command
AmicAPCnfStoreSMS	Cnf	'011'B	‘51’H	'10'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sMSIndex	INTEGER(0..65535)	SMS index
	text	OCTET STRING(SIZE(0..160))	SMS text

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.17 New Short Message Service

This message is to get new SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMSNew

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSNew	Inq	'000'B	‘51’H	'11'H	Inquire
AmicAPRptSMSNew	Rpt	'001'B	‘51’H	'11'H	Report
AmicAPCnfSMSNew	Cnf	'011'B	‘51’H	'11'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	indexNew	INTEGER(0..65535)	New SMS index

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	indexNew	INTEGER(0..65535)	New SMS index
	smsIndex	SEQUENCE OF INTEGER(0..65535)	SMS index

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.18 Short Message Service Attribute

This message is to get SMS Attribute.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Attrib

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSAttrib	Inq	'000'B	‘51’H	'12'H	Inquire
AmicAPRptSMSAttrib	Rpt	'001'B	‘51’H	'12'H	Report
AmicAPCnfSMSAttrib	Cnf	'011'B	‘51’H	'12'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	sIMIndex	INTEGER(0..65535)	Index on the SIM card

Report Parameter(s)			
Type	Name	Value / Type	Description
	sMSAttribute	AmicAPAttAttributSMS	List of state about SMS

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttAttributSMS			
Type	Name	Value / Type	Description
ENUMERATED	notRead	0	not Read
	read	1	Read
	notSent	2	not Sent
	sent	3	Sent
	all	4	all SMS

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.19 Delete Short Message Service

This message is to Delete SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Delete

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdSMSDelete	Cmd	'100'B	‘51’H	'13'H	Command
AmicAPCnfSMSDelete	Cnf	'011'B	‘51’H	'13'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	sMSIndex	INTEGER(0..65535)	SMS index

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.20 Clear Short Msg Service Cell Broadcast

This message is to Clear Settings of SMS Cell Broadcast.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Cell Broadcast Clear

Name	Operator	Type	Class	Object	Parameter
AmicAPSetSMSCBClear	Set	'010'B	‘51’H	'14'H	Set
AmicAPCnfSMSCBClear	Cnf	'011'B	‘51’H	'14'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	argId	INTEGER(0..3)	Argument to be set, 0=all
	storeDevice	INTEGER OPTIONAL	store Device
	firstBookedMessage	INTEGER(0..255) OPTIONAL	first Booked Message
	lastBookedMessage	INTEGER(0..255) OPTIONAL	last Booked Message

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.21 Receive Short Msg Service Cell Broadcast

This message is to get a SMS CB message.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Cell Broadcast Receive

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSCBReceive	Inq	'000'B	‘51’H	'15'H	Inquire
AmicAPRptSMSCBReceive	Rpt	'001'B	‘51’H	'15'H	Report
AmicAPCnfSMSCBReceive	Cnf	'011'B	‘51’H	'15'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	argId	INTEGER(0..5)	Requested arguments, 0=all

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	argId	INTEGER(0..5)	Requested argument, which valid arguments, 0=all
	cBLabel	INTEGER(0..65535) OPTIONAL	Internal label of the cell broadcast message
	messageID	INTEGER(0..65535) OPTIONAL	ID of booked message
	formatDCS	INTEGER(0..65535) OPTIONAL	Format of booked message
	page	INTEGER(1..51) OPTIONAL	Internal label of the cell broadcast message
	data	OCTET STRING OPTIONAL	Content of received message

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.22 Short Msg Service Cell Broadcast Settings

This message is to get SMS Cell Broadcast Settings.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Cell Broadcast Settings

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSCBSettings	Inq	'000'B	'51'H	'16'H	Inquire
AmicAPRptSMSCBSettings	Rpt	'001'B	'51'H	'16'H	Report
AmicAPCnfSMSCBSettings	Cnf	'011'B	'51'H	'16'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	telId	AmicTeAttTelNumber	Telephone number

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	telId	AmicTeAttTelNumber	Telephone number
	store-Device	INTEGER OPTIONAL	store Device
	first-Booked-Message	INTEGER(0..255) OPTIONAL	Start of range of booked messages
	last-Booked-Message	INTEGER(0..255) OPTIONAL	End of range of booked messages
	format-DCS	INTEGER(0..65535) OPTIONAL	Format of booked message

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key "#" is Pound Key. Valid keys are 0123456789*#

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.23 Binary Show List

This message is to get a list of all Binary SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Binary Show List

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSBinaryShowList	Inq	'000'B	'51'H	'17'H	Inquire
AmicAPRptSMSBinaryShowList	Rpt	'001'B	'51'H	'17'H	Report
AmicAPCnfSMSBinaryShowList	Cnf	'011'B	'51'H	'17'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	telId	AmicTeAttTelNumber	Telephone number

Report Parameter(s)			
Type	Name	Value / Type	Description
	sMSDescription	SEQUENCE OF AmicAPAttSMSDescription(SIZE(1..65535))	SMS Description

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttSMSDescription			
Type	Name	Value / Type	Description
SEQUENCE	index	INTEGER(0..65535)	SMS index
	attribut	AmicAPAttAttributSMS OPTIONAL	a list of state about SMS (not Read…)
	date	OCTET STRING(SIZE(8)) OPTIONAL	date, DDMMYYYY
	time	OCTET STRING(SIZE(6)) OPTIONAL	time, HHMMSS
	name	OCTET STRING(SIZE(0..40)) OPTIONAL	name

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.24 Binary Show Details

This message is to get Details of SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Binary Show Details

Name	Operator	Type	Class	Object	Parameter
AmicAPInqSMSBinaryShowDetails	Inq	'000'B	'51'H	'18'H	Inquire
AmicAPRptSMSBinaryShowDetails	Rpt	'001'B	'51'H	'18'H	Report
AmicAPCnfSMSBinaryShowDetails	Cnf	'011'B	'51'H	'18'H	Confirm

Parameter Definition

Inquire Parameter(s)			
Type	Name	Value / Type	Description
	msgIndex	INTEGER(0..65535)	Message index

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	sMFIndex	INTEGER(0..65535)	SMS index
	number	OCTET STRING(SIZE(0..40))	Phone number of SMS service center
	name	OCTET STRING(SIZE(0..50))	Name
	telNumber	AmicAPAttTelNumber	Phone number
	sMSData	OCTET STRING(SIZE(6..164))	All sent binary data including header according to GSM definition (GSM 03.40.). Valid keys are from 0123456789*#

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key "#" is Pound Key. Valid keys are 0123456789*#

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.25 Binary Send

This message is to Send Binary SMS.

Supported Messages
Class = Advanced phone class
Object = Telephone SMS Binary Send

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdSMSBinarySend	Cmd	'100'B	‘51’H	'19'H	Command
AmicAPCnfSMSBinarySend	Cnf	'011'B	‘51’H	'19'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	number	OCTET STRING(SIZE(0..40))	Phone number of SMS service center
	sMSData	OCTET STRING(SIZE(6..164))	All sent binary data including header according to GSM definition (GSM 03.40.)Valid keys are 0123456789*#

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.26 Multi Party Call

This message is to set the Multi Party Call.

Supported Messages
Class = Advanced phone class
Object = Telephone Multi Party Call

Name	Operator	Type	Class	Object	Parameter
AmicAPSetMultiPartyCall	Set	'010'B	‘51’H	'2A'H	Set
AmicAPRptMultiPartyCall	Rpt	'001'B	‘51’H	'2A'H	Report
AmicAPCnfMultiPartyCall	Cnf	'011'B	‘51’H	'2A'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	mpId	AmicTeAttTelNumber	Telephone number

Report Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	mpID	AmicTeAttTelNumber	Telephone number
	mpParameters	SEQUENCE OF AmicAPAttMpParameters (SIZE(1..255))	Multi party parameters

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key "#" is Pound Key. Valid keys are 0123456789*#

AmicAPAttMpParameters			
Type	Name	Value / Type	Description
SEQUENCE	ready	BOOLEAN OPTIONAL	No = 0
	telNumber	AmicTeAttTelNumber OPTIONAL	Telephone number
	state	AmicTeAttState OPTIONAL	Phone State list: Hold, Active, Waiting…

AmicTeAttState			
Type	Name	Value / Type	Description
ENUMERATED	Hold	0	
	Active	1	
	Waiting	2	

AmicTeAttTelNumber			
Type	Name	Value / Type	Description
SEQUENCE	telNumber	OCTET STRING(SIZE(32))	Telephone number, NULL should be added at the end of numbers. "*" is Star Key, "#" is Pound Key. Valid keys are 0123456789*#"

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.27 Multi Party Action

This message is to do an action on Multi Party Action.

Supported Messages
Class = Advanced phone class
Object = Telephone MultiPartyPAction

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdMultiPartyAction	Cmd	'100'B	'51'H	'2B'H	Command
AmicAPCnfMMultiPartyAction	Cnf	'011'B	'51'H	'2B'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	callAction	AmicAPAttMpActions	List of action about the current multi party call

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttMpActions			
Type	Name	Value / Type	Description
ENUMERATED	releaseActiveCallAcceptHeldCall	0	The active call is released and the held call becomes active.
	releaseActiveCallAcceptWaiting Call	1	The active call is released and the waiting call becomes active.
	swap	2	The active call is put on hold and the held call becomes active.
	callHoldAcceptWaitingCall	3	The active call is put on hold and the waiting call becomes active.
	releaseAllCallsExceptWaitingCall	4	All calls (the active and the held) are released. The waiting call remains waiting.
	releaseAllCallsAcceptWaitingCall	5	All calls (the active and the held) are released. The waiting call is accepted.
	explicitCallTranfert	6	Connect (join) the held and active call, and disconnect the subscriber from both calls.

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.28 Conference Call

This message is to get status on members.

Supported Messages
Class = Advanced phone class
Object = Telephone CC Conference Call

Name	Operator	Type	Class	Object	Parameter
AmicAPInqConferenceCall	Inq	'000'B	‘51’H	'2C'H	N/A
AmicAPRptConferenceCall	Rpt	'001'B	‘51’H	'2C'H	Report
AmicAPCnfConferenceCall	Cnf	'011'B	‘51’H	'2C'H	Confirm

Parameter Definition

Report Parameter(s)			
Type	Name	Value / Type	Description
	activeIds	BIT STRING(SIZE(6))	0 = all inactive, 111111=all active

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.29 Conference Call Split

This message is to place all active calls of a conference on hold except the call that shall remain active.

Supported Messages
Class = Advanced phone class
Object = Telephone CC Split

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdCCSplit	Cmd	'100'B	‘51’H	'2D'H	Command
AmicAPCnfCCSplit	Cnf	'011'B	‘51’H	'2D'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	activeId	INTEGER(1..255)	Id of the call that shall remain active.

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.30 Conference Call Join

This message is to add a held call to an active call.

Supported Messages
Class = Advanced phone class
Object = Telephone CC Join

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdCCJoin	Cmd	'100'B	‘51’H	'2E'H	Command
AmicAPCnfCCJoin	Cnf	'011'B	‘51’H	'2E'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	activeId	INTEGER(1..255)	Id of the call that shall be put from held to active

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

15.31 Trigger Waiting Call Alert

This message is to switch on/off waiting call signaling.

Supported Messages
Class = Advanced phone class
Object = Telephone Trigger Waiting Call Alert

Name	Operator	Type	Class	Object	Parameter
AmicAPCmdTriggerWaitingCallAlert	Cmd	'100'B	‘51’H	'2F'H	Command
AmicAPCnfTriggerWaitingCallAlert	Cnf	'011'B	‘51’H	'2F'H	Confirm

Parameter Definition

Command Parameter(s)			
Type	Name	Value / Type	Description
	onOff	BOOLEAN	Off = 0, On=1

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicAPAttErrorStatus	Confirm error status

AmicAPAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported

16 Text Display Messages

16.1 Display Text

This message is to set a text string in a buffer. Each string has ID to save data into a buffer on the remote text display device.

Supported Messages
Class = Text display class
Object = Display text

Name	Operator	Type	Class	Object	Parameter
AmicTDSetDispText	Set	'010'B	'31'H	'01'H	Set
AmicTDCmdDispText	Cmd	'100'B	'31'H	'01'H	Command
AmicTDCnfDispText	Cnf	'011'B	'31'H	'01'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	stringed	INTEGER (0..255)	Character string ID
	charEncoding	AmicTDAttCharEncoding	Encoding
	textLength	INTEGER(0..255)	String length (Byte)
	textString	OCTET STRING (0..255)	Display text

Command Parameter(s)			
Type	Name	Value / Type	Description
SEQUENCE	dispCommand	AmicTDAttDispText	Display command
	stringId	INTEGER (0..255)	Character string ID

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTDAttErrorStatus	Confirm error status

AmicTDAttCharEncoding			
Type	Name	Value / Type	Description
ENUMERATED	aSCII7	0	7 bit ASCII
	aSCII8	1	8 bit ASCII
	uTF16	2	2 byte UNICODE
	jIS	3	Japanese Industrial Standard

AmicTDAttDispText			
Type	Name	Value / Type	Description
ENUMERATED	dispOn	0	Display on
	dispOff	1	Display off
	clearBuf	2	Clear text data in a buffer

AmicTDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

16.2 Input Key Code

This message is to set a input key code sent from a HMI device, such as a remoter controller), key board, to a target. A code is defined as UTF-16 (RFC2781). Cursor movement is described as simple arrows; ←, ↑, →, and ↓. A single code is sent at one time as a single key input.

Supported Messages
Class = Text display class
Object = Input Key Code

Name	Operator	Type	Class	Object	Parameter
AmicTDSetInputKeyCode	Set	'010'B	'31'H	'02'H	Set
AmicTDCnfInputKeyCode	Cnf	'011'B	'31'H	'02'H	Confirm

Parameter Definition

Set Parameter(s)			
Type	Name	Value / Type	Description
	keyCode	OCTET STRING (SIZE(2))	Input key code

Confirm Parameter			
Type	Name	Value / Type	Description
	errorStatus	AmicTDAttErrorStatus	Confirm error status

AmicTDAttErrorStatus			
Type	Name	Value / Type	Description
ENUMERATED	noError	0	Request completed
	unspecifiedError	1	Unspecified error
	notSupported	2	Request not supported
	noBuffer	3	No buffer

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