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G68 RS232 Interface

The RS232 interface for the G68 can be operated from any terminal which operates at 9600 baud with 1 start bit, 1 stop bit and 0 parity. Commands take the form of two ASCII characters and in some cases, followed by a signed argument ('nn' below). All commands are echoed by the G68. **A carriage return character will execute the command** and backspace is also implemented. Once a command is executed, the G68 will return 20 characters.

The following table lists the commands available and shows examples of the messages returned. These messages will always correspond to those displayed on the front panel.

Source Commands

CD	Selects CD source	CD	Trifield	65
RD	Selects Radio	Radio	Music	65
DV	Selects DVD	DVD	Cinema	65
AX	Selects Aux	Aux	Discrete	65
DC	Selects Disc	Disc	Music	65
TA	Selects Tape	Tape	Music	65
TV	Selects TV	TV	TV Logic	65
CB	Selects Cable	Cable	Pro Logic	65
SA	Selects Satellite	Sat	Trifield	65
V1	Selects VCR1	VCR1	Pro Logic	65
V2	Selects VCR2	VCR2	Pro Logic	65
GA	Selects Game	Game	THX Cinema	65

COnn Select Copy Source¹ Copy Cable

Volume Commands

VP	Volume +	CD	Trifield	66
VM	Volume -	CD	Trifield	64
VNnn	Go to Volume (1-99)	CD	Trifield	87
MU	Mute			



General Commands

SB	Standby	Standby		
mr	Menu Right	CD	Centre	+0dB
ml	Menu Left	CD	Balance	<0>
mp	Menu Up	CD	Balance	<1
mm	Menu Down	CD	Balance	1>
PNnn	Go to Preset	CD	Trifield	65
DS	Go to next Preset	CD	Trifield	

Additional Commands – Correspond to MSR+ Keys

PL	Play	ME	Menu
ST	Stop	RT	Return
PS	Pause	TM	Top Menu
RP	Repeat	NP	Next Page
NE	Next	PP	Previous Page
PR	Previous	MP	Menu Up
DI	Display	MM	Menu Down
SR	Store	ML	Menu Left
CL	Clear	MR	Menu Right
DP	Decimal Point	cl	Function Clear
FF	Fast Forward	sr	Function Store
FB	Fast Back	di	Function Display
N0 – N9	Number Keys	mu	Function Mute
OP	Open	ds	Function DSP
MO	Mono	ff	Function Fast Forward
SL	Slow	fb	Function Fast Back
AU	Audio	vp	Function Volume Up
SU	Subtitle On/Off	vm	Function Volume Down
su	Subtitle choice	RC	Record
rp	AB Repeat	BA	Band
AB	AB Repeat	AN	Angle
PH	Phase	OS	OSD
TB	T (MSR3)	RE	Red Buton
#B	# button	GR	Green Button
CH	Chapter (MSR3)	YE	Yellow Button
SE	Setup	BL	Blue Button



1. Copy Source Argument

CO0 = CD	CO8 = DVD
CO1 = Radio	CO9 = VCR1
CO2 = Aux	CO10 = VCR2
CO3 = TV	CO11 = Game
CO4 = Tape	CO12 = Source
CO5 = Sat	CO13 = Mute
CO6 = Disc	CO14 = Off
CO7 = Cable	

2. Go to Preset Argument

PN0 = Direct	PN14 = Discrete
PN1 = Music	PN15 = Cinema
PN2 = Trifield	PN16 = PLIIx Mus6
PN3 = Ambisonics	PN17 = PLIIx Mov6
PN4 = Super	PN18 = THX
PN5 = Stereo	PN19 = THX EX
PN6 = Music Logic	PN20 = THX Ultra II Cinema
PN9 = Mono	PN21 = THX Music
PN10 = TV Logic	
PN11 = PLIIx Music	PN24 – 33 select User defined Presets
PN12 = PLIIx Movie	
PN13 = PLIIx THX	

Check Status Commands

The following commands will return the equivalent strings from the G68:

- CS01 = Current Surround Mode and volume number (0 to 99)
- CS02 = Current Surround Mode and volume on dB scale (-86 to +12)
- CS03 = Current digital stream (PCM etc)
- CS04 = Tuning info (only when current source uses internal tuner)
- CS05 = FIFO diagnostics
- CS06 = DSP decode diagnostics
- CS07 = Set-up diagnostics
- CS08 = Source diagnostics
- CS71 = Zone 2 diagnostics
- CS72 = Zone 3 diagnostics



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Check Status commands cont.

CS75 = Zone 2 Status

CS76 = Zone 3 Status

Zone Commands

Zone 2 is controlled using the copy command "CO".

CO0 = CD	CO1 = Radio
CO2 = Aux	CO3 = TV
CO4 = Tape	CO5 = Sat
CO6 = Disc	CO7 = Cable
CO8 = DVD	CO9 = VCR1
CO10 = VCR2	CO11 = Game
CO12 = Source	CO13 = Mute
CO14 = Standby	CO15 = Last valid

00, 01, 02... etc. may be used in place of the single-character arguments 1,2,3... etc.

Where applicable, Zone 2 volume can be set using "VCxx", where xx is a decimal number from 1 to 99. Alternatively, "vp" (volume plus) and "vm" (volume minus) can be used to increase or decrease Zone 2 volume.

NB. Once a Zone output is muted, sound can be restored only by selecting a source for that zone. In other words there is no "un-mute" command for the zone outputs.

Zone 3 is controlled using the zone command "ZN":

ZN0 = CD	ZN1 = Radio
ZN2 = Aux	ZN3 = TV
ZN4 = Tape	ZN5 = Sat
ZN6 = Disc	ZN7 = Cable
ZN8 = DVD	ZN9 = VCR1
ZN10 = VCR2	ZN11 = Game
ZN12 = Source	ZN13 = Mute
ZN14 = Standby	ZN15 = Last valid

01,02,03... etc. may be used in place of the single-character arguments 1,2,3... etc.

Where applicable, Zone 3 volume can be set using "VZxx", where xx is a decimal number from 1 to 99.



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G68 RS232 Menu Commands

These commands are in addition to the existing menu commands, ml, mr, mm, mp.

The command string 'APnxx' will set the value of menu nn (a hexadecimal number) to value xx (also hexadecimal, two's complement). The accompanying table lists the acceptable values for nn & xx.

e.g. AP0000 sets the preset to Direct.

Some menus work in half unit steps

e.g.

AP0102 ... sets the treble to +1dB.

AP0103 ... sets the treble to +1.5dB

Entering invalid numbers will return an 'error' message.

Menus are not always available for adjustment, an error message will be returned if the menu cannot be adjusted e.g. trying to adjust the Centre delay in Direct mode, AP0A03, will return an error.

Some adjustments will require the user to take note of what DSP mode the unit is in, the right hand column in the table shows the special cases where this is true e.g. trying to adjust the rear delay could be either, AP0604, AP1004 or AP2C04 depending on whether the product is in Music mode, Logic mode or 5.1 mode.

Reading current status.

The current status of the menus can also be read. The command string APnnT will test the value of menu 'nn', where nn is a number from the table as before. The product will then return a string on RS232 (no front panel display) indicating the menu being tested and the value. Menus that have an on/off setting will return '00' for off and '01' for on e.g. AP0204 ... sets the Bass to +2dB. AP02T ... asks for current status of the Bass menu, the product returns "TM0204"

If an invalid menu number is used the product will return 'Error' as before.



Menu	Hex	Steps	Min.	hex	Max.	hex	Restrictions
Preset	00	1	0	00	see above	-	
Treble	01	0.5dB	-10dB	EC	+10dB	14	
Bass	02	0.5dB	-5dB	F6	+5dB	0A	
Phase	03	-	Off	00	On	01	
LR balance	04	-	10L	F6	10R	0A	
Lipsync	1D	0.5ms	0ms	00	30ms	3C	
Rear level	05	-	30R	E2	10F	0A	
Centre level	09	0.5dB	-3dB	FA	3dB	06	
Centre delay	0A	0.5ms	-2.5ms	FB	5ms	0A	
Centre EQ	0B	-	0	00	3	03	
Rear delay	06	0.5ms	0ms	00	30ms	3C	Music modes only
Rear delay	2C	0.5ms	0ms	00	15ms	1E	5.1 modes only
Rear delay	44	0.5ms	10ms	14	25ms	32	PLII(x) movie & PLII(x) THX
Rear filter	07	-	0	00	3	03	Music modes only
Rear filter	12	-	0	00	3	03	Ambisonics only
Side level	19	1dB	-30dB	E2	+10dB	0A	Music modes only
Side delay	1A	0.5ms	0ms	00	30ms	3C	Music modes only
Side delay	2D	0.5ms	0ms	00	15ms	1E	5.1 modes only
Side delay	45	0.5ms	10ms	14	25ms	32	PLII movie & PLII THX
Side filter	16	-	0	00	3	03	Ambisonics only
Side filter	1B	-	0	00	3	03	Music modes only
Axis control	3C	1dB	-2	FE	+3	03	If any DSP speakers
HS out	37	-	Off	00	On	01	
Width	0E	0.1	0	00	1.5	0F	Trifield only
Width	0F	0.1	0	00	1.0	0A	Super Stereo only
PLII Width	40	-	0	00	7	07	PLI(x) Music only
Dimension	3D	-	0	00	6	06	PLII(x) Music only
Panorama	3E	-	Off	00	On	01	PLII(x) Music only
Prologic legacy	3F	-	Off	00	On	01	PLII(x) Movie & PLII(x) THX
Auto THX-EX	3A	-	Off	00	On	01	THX, Ultrall & THX Music only
Party mode	28	-	Off	00	On	01	Mono only
Academy filter	13	-	Off	00	On	01	Mono only
No. of surrounds	1E	-	0	00	2	02	Music modes only
No. of surrounds	43	-	0	00	2	02	Logic modes only
No. of surrounds	24	-	0	00	2	02	5.1 modes only
LFE level	4A	dB	-18dB	01	+10dB	1D	5.1 modes only
Compression	29	-	0	00	5	05	Dolby Digital only
Contrast	2E	-	0	00	15	0F	861 only
Brightness	2F	-	0	00	15	0F	
Position	11	-	M	00	A	06	Ambisonics only
OSD position	0C	-	0	00	3	03	861 only
Roll	14	-	0	00	3	03	TV logic only
Yaw	15	-	0	00	3	03	TV logic only
Mono input	0D	-	0	00	3	03	Mono only