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	Mouser p/n:	Mouser p/n (alt):	In Basket	UGS preamp common Qty	réfs	+Left réfs	+Right réfs
Passives:							
0R, 0805	71-CRCW08050000Z0EAC		√	9	R12 R14 R38 R39 R40 R41 R42 R43	R16	R15
100R, 0805	71-CRCW0805-100-E3		√	14	R24 R25 R26 R27 R28 R35 R36 R37 R44 R45 R46 R47 R48 R49		
1K, 0805	754-RG2012P-102-B-T5		√	3	R10 R21 R23		
1K78/0.1%, 0805	667-ERA-6AEB1781V		√	1	R22		
10K, 0805	71-CRCW080510K0FKEB		√	5	R1 R2 R7 R8 R9		
20K, 0805	754-RG2012P-203-B-T5		√	2	R19 R20		
47K5 0,1%, 0805	667-ERA-6AEB4752V		√	2	R3 R4	*(note 10)*	
51K1 0,1%, 0805	667-ERA-6AEB5112V			2	R3 R4	*(note 10)*	
100K, 0805	754-RR0816P-104D		√	4	R29 R30 R31 R32		
604K/0.1%, 0805	667-ERA-6AEB6043V		√	2	R5 R6		
20K trimmer, 4mm top ajust multiturn, smt	652-3214X-1-203E		√	2	RV1 RV2		
470pF (NC)				-	~~C26~~	*(note 1)*	
22nF/300V Film, Y2 p=15mm	80-R413I222050M1M		√	1	C48		
100nF, 0805	80-C0805C104K5R		√	12	C14 C18 C19 C20 C30 C31 C32 C33 C43 C44 C54 C61		
100nF MKS2, p=5mm	MKS2-.1/63/5		√	4	C62 C63 C64 C65	*(note 2)*	
470nF, 0805	77-VJ0805Y474KXQTBC		√	1	C16		
1uF/X7R, 1206	80-C1206C105K5R		√	1	C17		
4.7uF/X7R, 0805	963-TMK212AB7475KG-T		√	3	C34 C35 C55		
10uF/X7R, 1206	80-C1206C106K3R		√	7	C28 C29 C36 C37 C53 C56 C60		
10uF/25V/Tantale, 2917	74-593D106X0035D2TE3		√	2	C24 C25 (~~C57 C58 C59~~)		
100uF/25V/Tantale, 2917	80-T491X107K025AT		√	2	C15 C23		
470uF/35V, SMT 10x13,5	647-UCL1V471MNL1GS		√	3	C50 C51 C52		
Semiconductors:							
MURS160, DO-214 /SMB	625-MURS160-E3		√	2	D1 D2		
BAT60J	511-BAT60JFILM		√	3	D5 D6 D7		
TPS7A4901	595-TPS7A4901DGNR		√	2	U3 U7		
TPS7A3001	595-TPS7A3001DGNR		√	1	U4		
MUSES72320	513-MUSES72320V-TE2		√	1	U1		
MAX4820	700-MAX4820EUP		√	2	U5 U6		
SI8630	634-SI8630AB-B-IS		√	1	U8		
LD2980CM33	511_LD2980CM33	926-P2980AIM5X33NOPB	√	1	U2		
74HC32	771-HC32D652		√	1	U9		

Notes:

1: *Leave unconnected with the 3.3V LDO in U2 - was initially for LDO with bypass cap.*

2: *quantity to reduce by 2 in absence of a second UGS module in M2*

10: *by default 47K5 gives about +/- 16,2V on vcc_muse power rails (to measure on C58 et C59), use 51K1 instead to obtain +/-15,2V if needed*

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	Mouser p/n:	Mouser p/n (alt):	In Basket	UGS preamp common Qty	réfs	
Relays:						
TXS2-5V	653-G6S-2-DC5	769-TX2-5V	√	13	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13	
connectors:						
UGS_MODULE, UGS/AOP_MODULE	571-826632-6		√	2	M1(M) + optional M2(M)	*(note 3)*
IN1/2_xx, IN3/4_xx, OUT_xx_DUAL, UGS_MODULE, UGS/AOP_MODULE	571-215307-6		√	5	P1 P4 P5 + optional M2(F)	*(note 3)*
RELAY_POWER (header vertical 2pos KK-254 or MTA-100)	538-22-23-2021	571-6404542	√	1	P2	
(crimp housing 2pos KK-254 or MTA-100)	538-22-01-2027		√	1	P2	
ANALOG_POWER (header vertical 5pos KK-254 or MTA-100)	538-22-23-2051	571-6404545	√	1	P3	
(crimp housing 5pos KK-254 or MTA-100)	538-22-01-2057		√	1	P3	
MCU_CONTROL (header vertical 6pos KK-254 or MTA-100)	538-22-23-2061	571-6404546	√	1	P6	
(crimp housing 6pos KK-254 or MTA-100)	538-22-01-2067		√	1	P6	
Crimp terminals 22-30AWG for KK-254	538-08-50-0114		√	15	P2 P3 P6 (13 required+ 2 spares)	
SUB_CTRL	571-215307-2		√	1	P7	
UGS M2 bypass	538-22-28-5023			2	JP1(M) JP2(M)	
UGS M2 bypass	649-68786-202			2	JP1(F) JP2(F)	

Notes:

3: *suggested rule: male connector on IN+, OUT+ side, female connector on IN-, OUT- side; quantity to reduce by 1 in absence of a second UGS module in M2*

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	Mouser p/n:	Mouser p/n (alt):	In Basket	UGS preamp common Qty	réfs	
Options to chose (Mouser basket to update accordingly) :						
Muse IC filtre pass-bas en entrée / low pass input filter:						
a) 2K2	754-RG2012P-222-B-T5			2	R17 R18	*(note 6)*
680pF NPO	81-GRM2165C1H681FA			2	C40 C41	
b) 120R	754-RG2012P-121-B-T5			2	R17 R18	
10nF NPO	81-GRM2195C1H103FA1D			2	C40 C41	
c) 0R	71-CRCW08050000Z0EAC		√	2	R17 R18	
Signal AC/DC link capacitor:						
a) 47uF / Ceramic X7R 2220	810-C5750X7R1C476M		√	2	C38 C39	
b) 10uF / Film, p=15mm	505-MKS410/50/10			6	C3 C4 C8 C9 C46 C47	*(note 7)*
c) 47uF external cap				2	C3 C4	
UGS module power supplies scheme:						
a) BLM21PG221SN1D for on-board +/-16V régulator	81-BLM21P221SG			6	FB1 FB3 FB4 FB5 FB8 FB9	*(note 8)*
4R7/0,5W anti-surge	667-ERJ-P6WJ4R7V			2	R33 R34	
MURS160	625-MURS160-E3			2	D3 D4	
b) BLM21PG221SN1D for external +/-24V low noise psu	81-BLM21P221SG		√	6	FB1 FB3 FB6 FB7 FB8 FB9	
Découplage des bobine des relais / relay coil decoupling:						
a) 100nf / X7R, 1206	80-C1206C104K5R		√	13	C1 C2 C5 C6 C7 C10 C11 C12 C13 C21 C22 C27 C49	*(note 9)*
b) 100uF / X5R, 1206	81-GRM31CR60J107ME9L			13	C1 C2 C5 C6 C7 C10 C11 C12 C13 C21 C22 C27 C49	

Notes:

6: *choose 2K2+680pF as in PASS XP30 or 120R+10nF for less attenuated signal or any other RC (FC about 100KHz) or 0R+NC for filter bypass (default)*

7: *from 1 to 3 through hole caps in parallel for AC signal coupling (high pass filter)*

8: *Add 2 wiring bypass on PCB backside for R33+D3 and R34+D4 (required for +/-24V operation).*
Beads to position according to the power supply scheme - it is recommended to verify the DC voltages before soldering them.

9: *100uF cap have been used with early prototypes in order to obtain clean transitions (free of overshoot) while commuting relays (no audio test comparison carried with 100nF)*

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Revision history:

rev 1:	**30/11/2015**	Initial release
rev 1.1:	**28/01/2016**	Update targeted to power supply noise reduction
rev 1.1a:	**29/01/2016**	Typo correction 4,7uF instead of 47uF
rev 1.2:	**29/07/2020**	Change R29,R30,R31,R32=100K + update for obsolete or unavailable parts

Link to Mouser basket : https://www.mouser.fr/ProjectManager/ProjectDetail.aspx?AccessID=54faf54f2f