

Ordering ESI 4000 Parts

Parts can be ordered by written order or by phone. When ordering parts, you must order by E-mu part number. The minimum charge for parts orders is \$15.00. Emergency rush orders can usually be sent out the same day if the order is received by 11:00am PST. Parts orders can be placed between the hours of 8:30am and 5:30pm PST, Monday through Friday.

E-mu Customer Service Department: (408) 438-1921

Main PCB

Capacitors

Description	E-mu P/N	Qty
10 μ F 25V Aluminum Radial	CA325	7
47 μ F 16V Aluminum Radial	CA326	3
2200pF 50V Ceramic	CC392	2
100pF 50V Ceramic	CC413	5
680pF 50V Ceramic	CC415	2
3900 pF 50V Ceramic	CC416	2
.01 μ F 50V Ceramic	CC417	43
.047 μ F 50V Ceramic	CC418	3
.1 μ F 50V Ceramic	CC419	27
22pF 50V Ceramic	CC421	6
1000pF 50V Ceramic	CC423	7
4.7pF 50V Ceramic	CC424	2
2.2 μ F 16V Tantalum	CT323	11

Capacitor Locations

Capacitor Location	E-mu Part Number	Capacitor Location	E-mu Part Number
C1-C4	CC423	C5	CC419
C6-C8	CC417	C9	CC419
C10	CC416	C11	CC415
C12	CC421	C13	CC417
C14	CC419	C15, C16	CA325
C17	CC419	C18	CC416
C19	CC415	C20	CC421
C21	CC417	C22, C23	CC419
C24	CC417	C25, C26	CC392
C27	CC417	C28, C29	CC423
C30-C32	CC419	C33	CC413
C34	CA325	C35	CT323
C36, C38	CC413	C37, C39	CC419
C40	CC424	C41	CC418
C42	CC419	C43	CT323
C44, C45	CC413	C46	CA325
C47	CT323	C48	CC424
C49	CA326	C50, C52, C54, C56	CC417
C51, C53, C55	CC419	C57	CA326
C58	CC423	C59	CT323
C60-C62	CC419	C63, C64	CT323
C65, C69	CA325	C66-C68, C70	CC419
C71, C73	CC418	C72, C74-C76	CT323
C77	CA326	C78	CT323
C79, C80, C82-C93, C95-C97	CC417	C81, C94	CC419
C98, C99, C101, C102	CC421	C100, C103, C104, C106	CC417
C107	CA325	C108-C114	CC417
C115-C117	CC419	C118, C119, C121, C123	CC417

Integrated Circuits

Description	E-mu P/N	Quantity
G-chip Sound Engine (2.0)	IC402	1
H-chip Digital Filter (1.5)	IC413	2
SAA7360 16/18-bit ADC	II376	1
AD1860 18-bit Serial DAC	II379	4
82078 Floppy Disk Controller	II382	1
53C80 SCSI Controller	II402	1
79L05 -5V 100mA Regulator	IL338	1
+5V 100mA Regulator	IL339	2
Dual Audio Op Amp	IL361	4
93C46 64 x 16 EEPROM	IM400	1
68306 CPU	IM409	1
256K x 16 80NS DRAM	IM415	1
16MB Memory SIMM	IM439	1
ESI Main Prom LSB (3.01)	IP966	1
ESI Main Prom MSB (3.01)	IP967	
74ACT138 3-8 Demux.	IT426	1
74ACT244 Buff/Drv	IT434	3
74HCT14 Inverted Hex	IT440	1
74HC4052 Mux./Demux.	IT448	3
74HCT299 Shift Register	IT451	2
74HCT393 Ripple Counter	IT452	1
PC400 Opto Isolator	OE303	1

Integrated Circuit Location

IC Location	E-mu Part Number
U1	OE303
U2	IL361
U3	IT448
U4 - U5, U7	IL361
U6, U8	IT448
U9	IP966
U10	IP967
U11	ZX316

IC Location	E-mu Part Number
U12 - U15	II379
U16	II376
U17, U19	IT451
U18	IM415
U20	IP859
U21	IC413
U22	II402
U23	IM409
U24	IT452
U25	II382
U26	IT440
U27	IC402
U28	IM400
U29	IT426
U21, U30	IC413
U31 - U33	IT434

Resistors

Description	E-mu P/N	Quantity
220/330 x 6 1/8W 2%	RN347	3
1.33K Ω , 1/10W, 1%	RP389	10
2.37K Ω , 1/10W, 1%	RP390	4
2.67K Ω , 1/10W, 1%	RP391	4
10K Ω , 1/10W, 1%	RP392	8
22.1K Ω , 1/10W, 1%	RP399	2
1.50K Ω , 1/10W, 1%	RP413	2
10K Ω , 1/4W, 5%	RR309	1
47 Ω , 1/10W, 5%	RR409	37
150 Ω , 1/10W, 5%	RR410	24
270 Ω , 1/10W, 5%	RR411	30
1K Ω , 1/10W, 5%	RR412	26
27K Ω , 1/10W, 5%	RR413	5
100K Ω , 1/10W, 5%	RR414	13
330K Ω , 1/10W, 5%	RR417	2
0.0 Ω , 1/10W, 5%	RR420	2
3.9K Ω , 1/10W, 5%	RR431	2
4.7K Ω , 1/10W, 5%	RR432	3
10K Ω , 1/10W, 5%	RR434	32
4.7 Ω , 1/10W, 5%	RR439	3
4.3K Ω , 1/10W, 5%	RR442	2
13K Ω , 1/10W, 5%	RR445	1
10 Ω , 1/10W, 5%	RR453	21
22 Ω , 1/2W, 10%	RW307	2

Resistor Locations

Resistor Location	E-mu Part Number	Resistor Location	E-mu Part Number
RN1 - RN3	RN347	R1, R2	RR434
R3, R5, R8	RR411	R4, R6, R9, R10	RR410
R7	RR434	R11, R12, R14	RR412
R13	RR434	R15	RP391
R16	RP389	R17	RR410
R18	RP390	R19	RP389
R20, R21	RP392	R22	RR411

Resistor Location	E-mu Part Number	Resistor Location	E-mu Part Number
R23	RR412	R24	RW307
R25	RR414	R26	RR413
R27, R28	RR411	R29	RR414
R30	RR413	R31	RW307
R32	RR410	R33	RR434
R34	RP391	R35	RP389
R36, R37	RR412	R38	RP390
R39	RP389	R40, R41	RP392
R42	RR411	R43	RR412
R44	RR410	R45	RR412
R46, R49	RP390	R47, R48	RP413
R50, R51	RR412	R52, R53, R56	RR414
R54	RP392	R55	RP391
R57	RR442	R58, R59	RP389
R60, R62	RR410	R61	RP392
R62	RR410	R63	RR411
R64	RR445	R65	RP389
R66	RP399	R67	RR417
R68	RR414	R69	RR432
R70, R71	RP392	R72	RP391
R73, R75	RP389	R74	RR411
R76	RR442	R77, R78	RR410
R79	RP399	R80	RR432
R81	RR417	R82	RP389
R83, R85, R87	RR414	R84	RR431
R86, R89, R92	RR412	R88	RR434
R93, R94, R96-R99	RR410	R95	RR409
R100, R102, R103	RR439	R101	RR410
R104	RR431	R105	RR434
R106, R107	RR420	R108-R111	RR412
R112	RR434	R113	RR410
R114 - R126	RR409	R127	RR434
R128, R129, R131, R132	RR409	R133	RR434
R134	RR410	R135	RR412
R136, R138	RR409	R137	RR432
R139	RR413	R140	RR410

Resistor Location	E-mu Part Number	Resistor Location	E-mu Part Number
R141, R142	RR413	R143, R144	RR414
R145, R147 -R149	RR434	R146	
R150, R151	RR412	R152, R153	RR411
R154-R157	RR409	R158-R160	RR434
R161	RR412	R162	RR409
R163, R166, R168, R169	RR411	R164	RR434
R165, R167, R170	RR409	R171, R173, R174	RR411
R172	RR411	R175	RR409
R176	RR414	R177-R179	RR411
R180	RR412	R182	RR409
R183-R87	RR434	R188, R190	RR412
R189, R191	RR434	R192, R193	RR410
R194-R196, R198, R199	RR411	R197	RR434
R200, R202, R203	RR409	R201, R204, R205, R207	RR411
R206, R208, R209, R212	RR409	R210	RR414
R211, R213-R216	RR434	R217-R237	RR453
R238, R239	RR412	R240	RR434

Other Components

Description	E-mu P/N	Quantity
SMD914 Switching Diode	DD316	8
Transient Suppressing Zener Diode	DD324	3
1.0A Diode	DD326	1
2N3906 PNP Transistor	QQ308	5
3904 NPN Transistor	QQ309	8
750Ω @ 100MHz Ferrite Inductor	ZI306	1
65Ω @ 100MHz Inductor	ZI319	3
60V, 1.0A Polyswitch Fuse	ZF309	1
24MHz Parallel 18pF Crystal	ZX315	1
45.1584MHz Crystal Oscillator	ZX316	1
16MHz Parallel 18pF Crystal	ZX318	1

Other Component Locations

Component Location	E-mu Part Number
D1, D3	DD316
D2, D4, D5	DD324
D6-D9, D11, D12	DD316
D10	DD326
Q1, Q4, Q9-Q11	QQ308
Q2, Q3, Q5-Q8, Q12, Q13	QQ309
FS2	ZF309
L1, L3-L8	ZI319
L2	ZI306
Y1	ZX315
Y2	ZX318

Connectors

Description	E-mu P/N	Quantity
1/4" Phone Jack, Closed Ring	JA309	6
PROM Socket	JC349	2
Triform 5-pin DIN Jack (MIDI)	J1327	1
Prom Socket	JC357	1
8-pin SIP Socket	JC358	3

Description	E-mu P/N	Quantity
72-pin SIMM Socket	JC361	2
4-pin Locking Power Header	JP380	1
1 x 16 Power Header	JP400	1
20-pin Dual Row Ribbon Header	JR317	1
50-pin Dual Row Ribbon Header	JR327	2
34-pin Dual Row Header	JR338	1
3-pin Locking Header	JR360	2

Connector Locations

Connector Location	E-mu Part Number
CN1	J1327
CN2	AB141
CN3	JR327
CN4	JP380
CN5, CN6	JR360
CN7	JR327
CN8	JC361
CN9	JR338
CN10	JC361
CN12	JP400
CN13	JR317
J1-J6	JA309
RN1-RN3	JC358
U9, U10	JC349
U20	JC357

Miscellaneous

Description	E-mu P/N	Quantity
4-40 Kepf Nut	HN304	1
4-40 x 3/8 Phillips Screw	HS302	1
Header Shunt	JR334	4

Front Panel

Capacitors

Description	E-mu P/N	Quantity
.1µF 50V Ceramic Axial	CC363	1
470pF 50V Ceramic Axial	CC367	2

Capacitor Locations

Capacitor Location	E-mu Part Number
C1	CC363
C2-C3	CC367

Integrated Circuits

Description	E-mu P/N	Quantity
74HCT244 Octal Buffer	IT360	1
74HCT374 Octal Flip-flop	IT362	2

Integrated Circuit Locations

IC Location	E-mu Part Number
U1-U2	IT362
U3	IT360

Resistors

Description	E-mu P/N	Quantity
Volume Pot, 50KΩ Linear	RC327	1
10KΩ 1/4W 5%	RR309	10
270Ω 1/4W 5%	RR347	12

Resistor Locations

Resistor Location	E-mu Part Number
R1	RC327
R2-R12	RR347
R13-R22	RR309
R23	RR347

Other Components

Description	E-mu P/N	Quantity
1N914 Sigal Diode	DD301	4
Red LED	LP320	9
Green LED	LP324	2
LCD 20 x 24 LED Backlit View	LP330	1
Rotary Encoder	SW335	1
Momentary SPST Switch Without Cap	SW340	31

Component Locations

Component Location	E-mu Part Number
D1-D9	LP320
D10, D12-D14	DD301
D11, D15	LP324

Connectors

Description	E-mu P/N	Quantity
1/4" Stereo Phone Jack	JA317	1
3-pin Locking Header	JR372	2

Connector Locations

Connector Location	E-mu Part Number
CN3, CN4	JR372
J1	JA317

Cables

Description	E-mu P/N	Quantity
Front Panel Cable	AC362	1
Encoder Interface Cable	AC369	1
Front Panel Interface Cable	AC370	1
LCD to LED Backlight Cable	AC416	1

Miscellaneous

Description	E-mu P/N	Quantity
Black, Elliptical Switch Cap Preprinted "0"	AM105-00	1
Black, Elliptical Switch Cap Preprinted "1"	AM105-01	1
Black, Elliptical Switch Cap Preprinted "2"	AM105-02	1
Black, Elliptical Switch Cap Preprinted "3"	AM105-03	1
Black, Elliptical Switch Cap Preprinted "4"	AM105-04	1
Black, Elliptical Switch Cap Preprinted "5"	AM105-05	1
Black, Elliptical Switch Cap Preprinted "6"	AM105-06	1
Black, Elliptical Switch Cap Preprinted "7"	AM105-07	1
Black, Elliptical Switch Cap Preprinted "8"	AM105-08	1
Black, Elliptical Switch Cap Preprinted "9"	AM105-09	1
20 Character x 4 LCD	AP440	1
Volume Pot Mounting Bracket	EM459	1
Front Panel Mounting Plate	EM527	1
Arrow Switch Cap	EP417	4
Black, Elliptical Switch Cap	EP418	17
Front Panel Bezel	EP491	1
Volume Pot Nut	HN313	1
6-32 x 1/4 Self Tap Screw	HS393	1
#4 x 1/4 Phil. Plastiloc Screw	HS401	8
4-40 x 3/8 Phil. Plastiloc Screw	HS431	10
2-56 x 3/16 Phillips Screw	HS457	4
6-32 x 1/4 Phillips Thread Form (Black)	HS474	7
2-56 x 3/16 Hex Standoff	HS475	4
LED Standoff	HS458	11
#4 Flat Nylon Washer	HW443	1

*Turbo Option***Capacitors**

Description	E-mu P/N	Quantity
470µF 25V Aluminum Radial	CA330	1
680pF 50V Ceramic	CC415	6
3900pF 50V Ceramic	CC416	6
0.01µF 50V Ceramic	CC417	17
0.1µF 50V Ceramic	CC419	22
22pF 50V Ceramic	CC421	2
4700pF 50V Ceramic	CC425	1
10µF 16V Ceramic	CT326	9
47µF 16V Ceramic	CT327	2

Capacitor Locations

Capacitor Location	E-mu Part Number
C1, C3, C4, C6	CC417
C2	CC419
C5	C5327
C7	CC419
C8	CT326
C9	C5327
C10	CC425
C11	CC417
C12, C13	CC419
C15, C16, C18, C23, C24	CC417
C17, C19-C21, C25, C25	CC419
C22	CA330
C23, C24	CC417
C25, C26	CC419
C27-C32	CT326
C33-C35	CC416
C36-C38	CC415
C39-C41	CC417
C42-C44	CC419
C45-C47	CC417
C48-C50	CC415
C51-C53	CC416
C54	CC421

Capacitor Location	E-mu Part Number
C55-C58, C60, C61	CC419
C59	CC421
C62	CC417
C65-C67	CC419
C68, C69	C5326

Integrated Circuits

Description	E-mu P/N	Quantity
Emu 8000 CMOS	IC405	1
Digital Audio Receiver	II372	1
AV9170	II401	1
Dual 18-bit DAC	II404	3
Dual Audio Op Amp	IL361	6
±5V Converter	IL368	1
256K x 4 80NS DRAM	IM418	1
ESI Turbo Op Program	IP952	1

Integrated Circuit Locations

IC Location	E-mu Part Number
U1	IC405
U2	II401
U3	IL368
U4	II372
U6	IM418
U7	IP952
U8-U10	II404
U11-U16	IL361

Resistors

Description	E-mu P/N	Quantity
1.33K Ω , 1/10W 1%	RP389	12
2.37K Ω , 1/10W 1%	RP390	6
2.67K Ω , 1/10W 1%	RP391	6
10K Ω , 1/10W 1%	RP392	6
9.09K Ω , 1/4W 1%	RP410	6
3.01K Ω , 1/10W 1%	RP415	6
47 Ω , 1/10W 5%	RR409	20
150 Ω , 1/10W 5%	RR410	6
270 Ω , 1/10W 5%	RR411	5
1K Ω , 1/10W 5%	RR412	14
100 Ω , 1/10W 5%	RR422	1
10K Ω , 1/10W 5%	RR434	5
30K Ω , 1/10Q 5%	RR437	6
4.7 Ω , 1/10W 5%	RR439	1
390 Ω , 1/10W 5%	RR450	1
75 Ω , 1/10W 5%	RR456	2
22 Ω , 1/2W 10%	RW307	2

Resistor Locations

Resistor Location	E-mu Part Number	Resistor Location	E-mu Part Number
R1-R3	RR409	R4, R5	RR411
R6, R7	RW307	R8	RR412
R9, R10	RR411	R12	RR450
R13	RR422	R14	RR456
R15-R28, R30-R32	RR409	R33-R38	RP389
R39-R41	RP391	R42-R47	RP390
R48-R50	RP391	R51-R56	RP389
R57, R59, R61	RP410	R58, R60, R62	RR437
R63, R65, R67, R69, R71, R73	RP415	R64, R66, R68, R70, R72, R74	RP392
R75, R77, R79	RP410	R76, R78, R80	RR437
R81-R92	RR412	R93-R98	RR410
R99-R103	RR434	R104	RR439

Resistor Location	E-mu Part Number	Resistor Location	E-mu Part Number
R105	RR456	R106	RR412
R107	RR411		

Other Components

Description	E-mu P/N	Quantity
1N5819 Diode	DD326	1
PNP 2N3906 Transistor	QQ308	4
NPN 3904 Transistor	QQ309	10
Polyswitch 1A 60V Fuse	ZF309	1
65Ω Inducer @ 100mHz	ZI319	1
AES Digital Audio	ZT320	1

Other Component Locations

Component Location	E-mu Part Number
Q1-Q3, Q5, Q7-Q12	QQ309
Q4, Q6, Q13, Q14	QQ308
L1	ZI319
T1	ZT320

Connectors

Description	E-mu P/N	Quantity
Audio Jack Connector	JA309	3
PLCC-4 Socket	JC357	1
Dual RCA I/O Connector	J1334	1
50-pin Dual Row Header	JR327	2
3 Position Locking Header	JR360	1

Connector Locations

Connector Location	E-mu Part Number
J1-J3	JA309
CN1	JR327
CN2	JI334
CN3	JR360
U7	JC357

Miscellaneous

Description	E-mu P/N	Quantity
SCSI Expansion Bracket	EM479	1
S/PDIF Extra Output Bracket	EM547	1
3/8-32 Nut	HN135	3
4-40 x 1/4 Phillips Screw	HS352	4
4-20 x 3/8 Phillips Screw	HS431	1
2 x 25 x 3 Ribbon Cable	AC384	1

*Final Assembly***Cables**

Description	E-mu P/N	Quantity
Headphone Cable	AC355	1
Internal SCSI Cable	AC368	1
LCD Ribbon Cable (1 x 14)	AC371	1
Main PCB Power Supply Cable	AC372	1
Floppy Drive Power Cable	AC373	1
Floppy Drive Data Cable (2 x 17)	AC378	1
AC-Power Supply Cable Assy.	AC379	1
Internal SCSI Cable	AC412	1
Volume Pot Cable	AC387	1
AC Power Cable	AC413	1
16" Headphone Cable	AC418	1
SCSI Cable (Int./Ext.)	AC419	1
DC Power Cable	AC420	1

Miscellaneous

Description	E-mu P/N	Quantity
LCD Lens	AM130	1
Port Cover Plate	EM482	1
Power Supply Cover	EM489	1
Chassis Top	EM490	1
Chassis Bottom	EM491	1
Rack Flange "Ears" (Black)	EM492-02	1
Power Button Extension	EP419	1
Power Button	EP422	1
Data Knob	HK334	1
Volume Knob	HK341	1
6-32 Nut	HN121	1
3/8-32 Nut	HN135	6
4-40 x 1/4 Phillips Screw	HS352	6
6-32 x 1/4 Phillips Screw	HS353	8
6-32 x 1/4 Phillips Screw (Black)	HS386	7
6-32 x 1/4 Phillips Self Tap Screw	HS393	4
4-40 x 3/8 Phillips Plastiloc Screw	HS431	2
M3 x 6mm Screw (Black)	HS441	4
8-32 x 3/8 Phillips Screw (Black)	HS454	4
Screw	HS459	6
M3 x 6mm Screw	HS463	4
3.5 inch High Density Floppy Drive	ZM355	1
3.5 inch 270Mb SyQuest Drive	ZM360	1
3.5 inch 100MB Zip Disk Drive	ZM374	1
Foot With Push Rivet	ZR346	4
15W 100-250VAC Power Supply	ZV311	1
44W/64W 20-264 VAC Power Supply	ZV315	1
Standard Disk Set	AS607	1
ESI 4000 Operations Manual	FI580	1