

SSCOR, INC.

TECHNICAL MANUAL

SSCOR, INC.®

11064 Randall Street • Sun Valley, CA 91352 • USA

Telephone +1-818-504-4054 • 800-434-5211

Fax +1-818-504-6032

www.sscor.com

Email: marketing@sscor.com

**CERTIFIED
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EMC / RFI Caution

CAUTION: Medical Electrical Equipment needs special precautions regarding Electromagnetic Compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in the following tables.

Portable and mobile Radio Frequency (RF) communications equipment can affect Medical Electrical Equipment.

Accessories: DC power cord of a maximum length of 96 inches (2,44 meters) (SSCOR part numbers 80665 and 80965). AC Converter cable of a maximum length of 96 inches (2,44 meters) (SSCOR part numbers 80521-100, 80522-100, and 80531-100). DC Charger and Power supply cable of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80529). Medical grade power cord of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80551). DC Charger cable of a maximum length of 96 inches (2,44 meters) (SSCOR part number 80533).

WARNING: The use of accessories, other than those specified, except those supplied or sold by SSCOR, Incorporated as replacement parts for internal or external components, may result in increased EMISSIONS or decreased IMMUNITY of the SSCOR aspirator.

Guidance and manufacturer's declaration – electromagnetic emissions

SSCOR aspirators are intended for use in the electromagnetic environment specified below. The customer or the user of the SSCOR aspirator should assure it is used in such an environment.

Emissions Test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	SSCOR aspirators use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. SSCOR aspirators are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Complies	

EMC / RFI Caution

Guidance and manufacturer's declaration – electromagnetic emissions

SSCOR aspirators are intended for use in the electromagnetic environment specified below. The customer or the user of the aspirator should assure it is used in such an environment.


Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 seconds	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the aspirator requires continued operation during power mains interruptions, it is recommended that the aspirator be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE U_T is the a.c. mains voltage prior to application of the test level.

EMC / RFI Caution

Guidance and manufacturer's declaration – electromagnetic emissions

SSCOR aspirators are intended for use in the electromagnetic environment specified below. The customer or the user of the SSCOR aspirator should assure it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 GHz	3 V	<p>Portable and mobile RF communications equipment should be used no closer to any part of the aspirator, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = 1,2\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	<p>$d = 1,2\sqrt{P}$ 80MHz to 800 MHz $d = 2,3\sqrt{P}$ 800MHz to 2,5GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> <div style="text-align: right;">  </div>

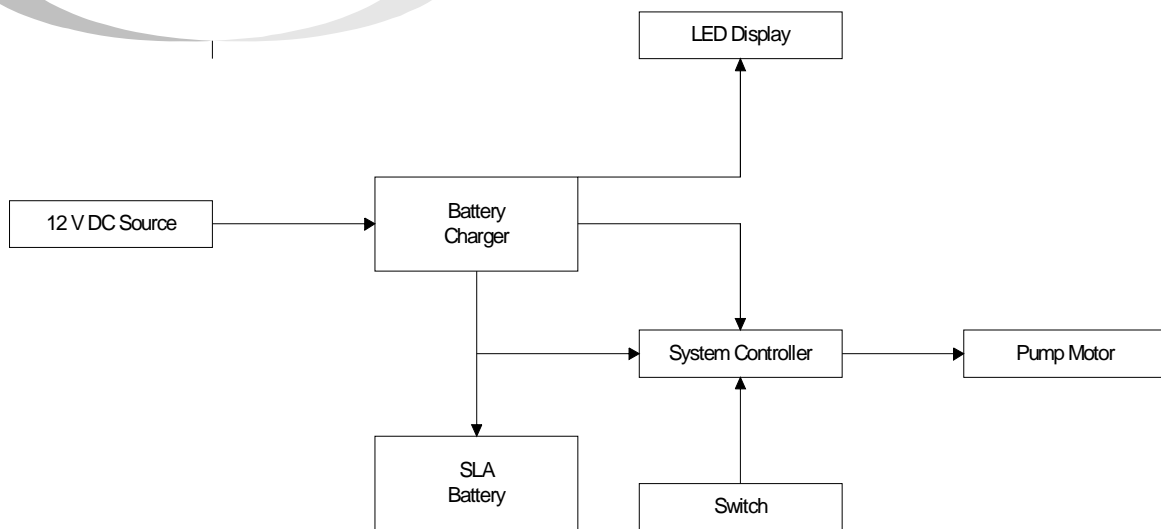
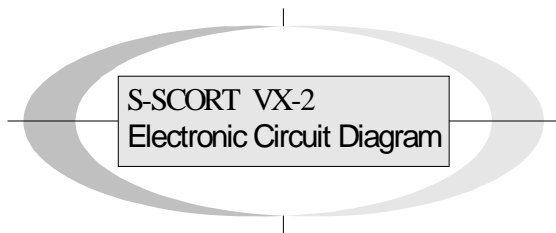
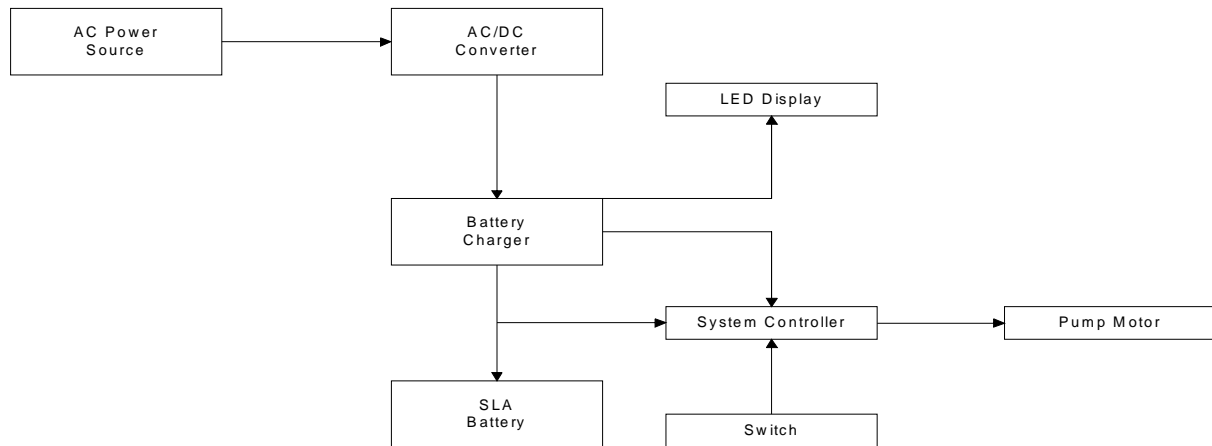
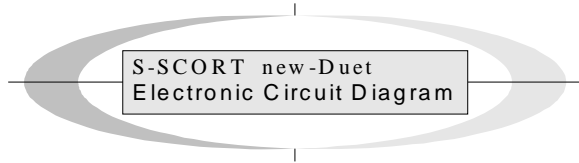
NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the SSCOR aspirator is used exceeds the applicable RF compliance level above, the SSCOR aspirator should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the SSCOR aspirator.

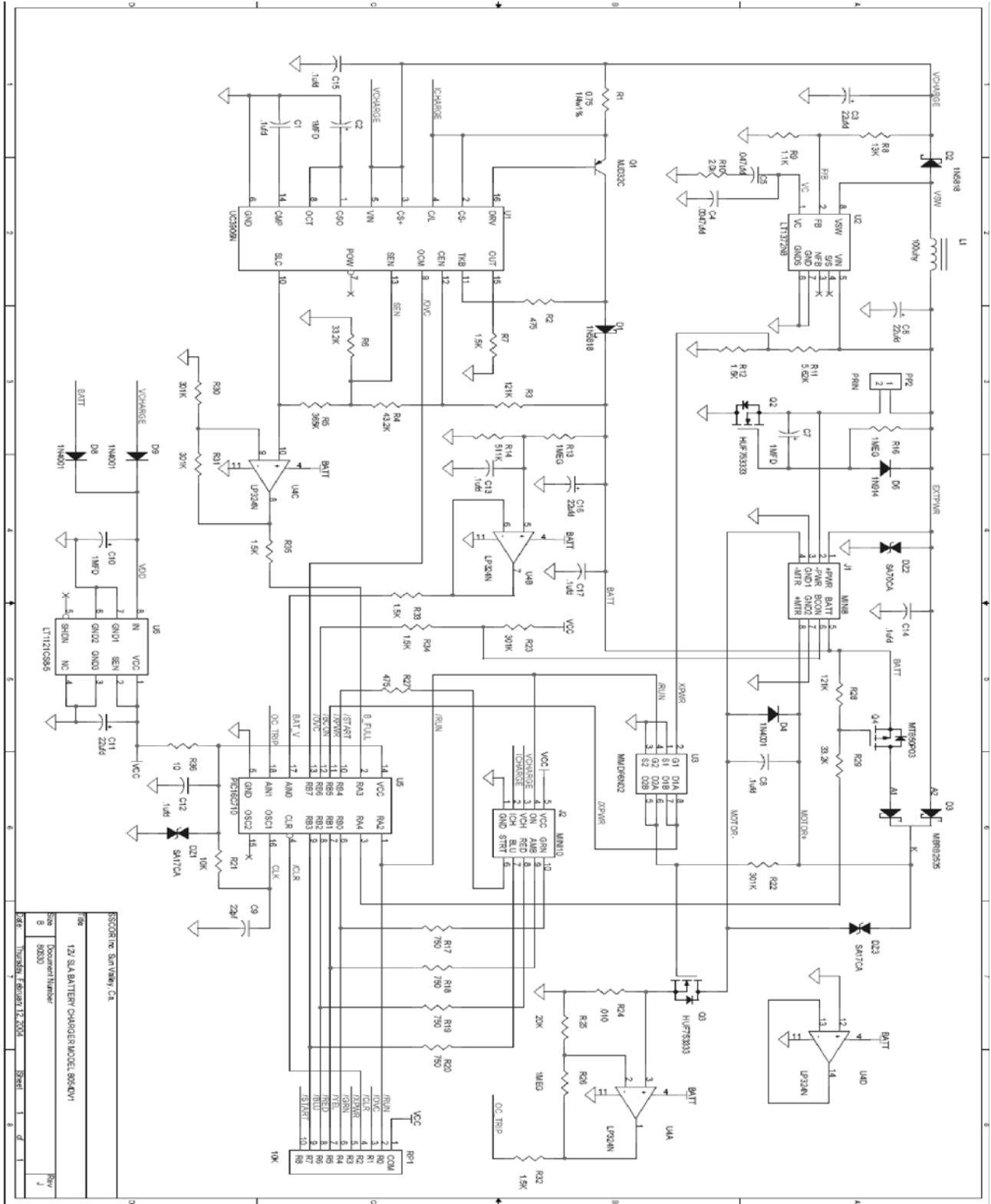
^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V1] V/m.

S-SCORT® new-Duet® and VX-2® Electronic Circuit Diagrams



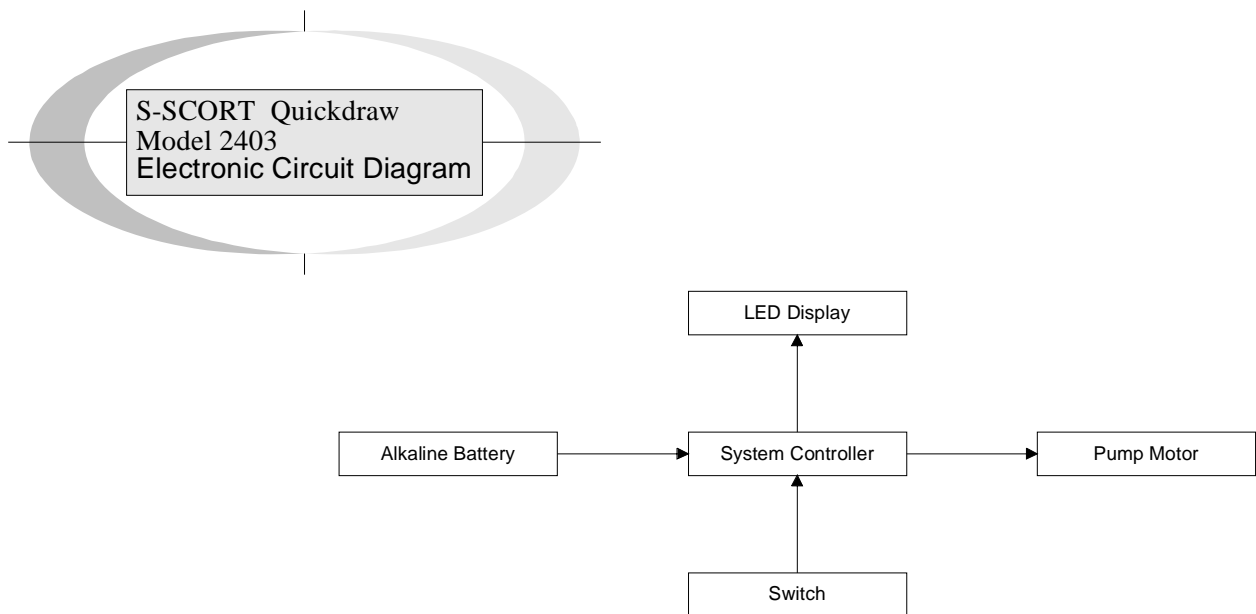
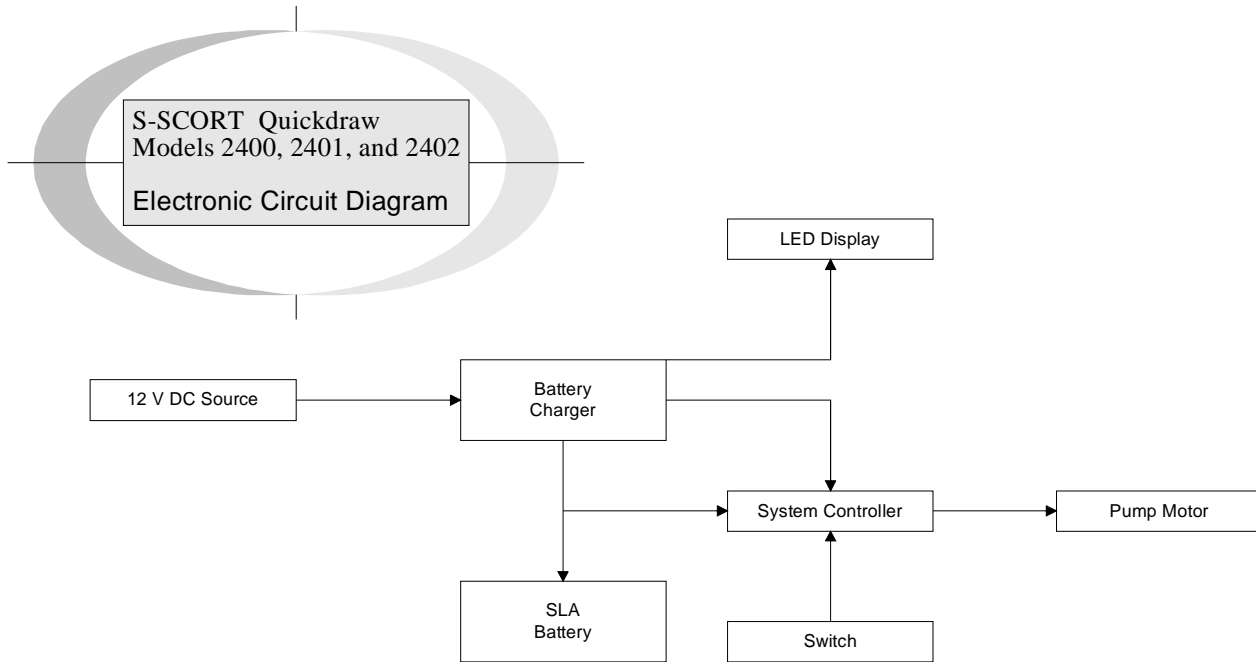
S-SCORT® new-Duet® and VX-2®

PC Board Schematic

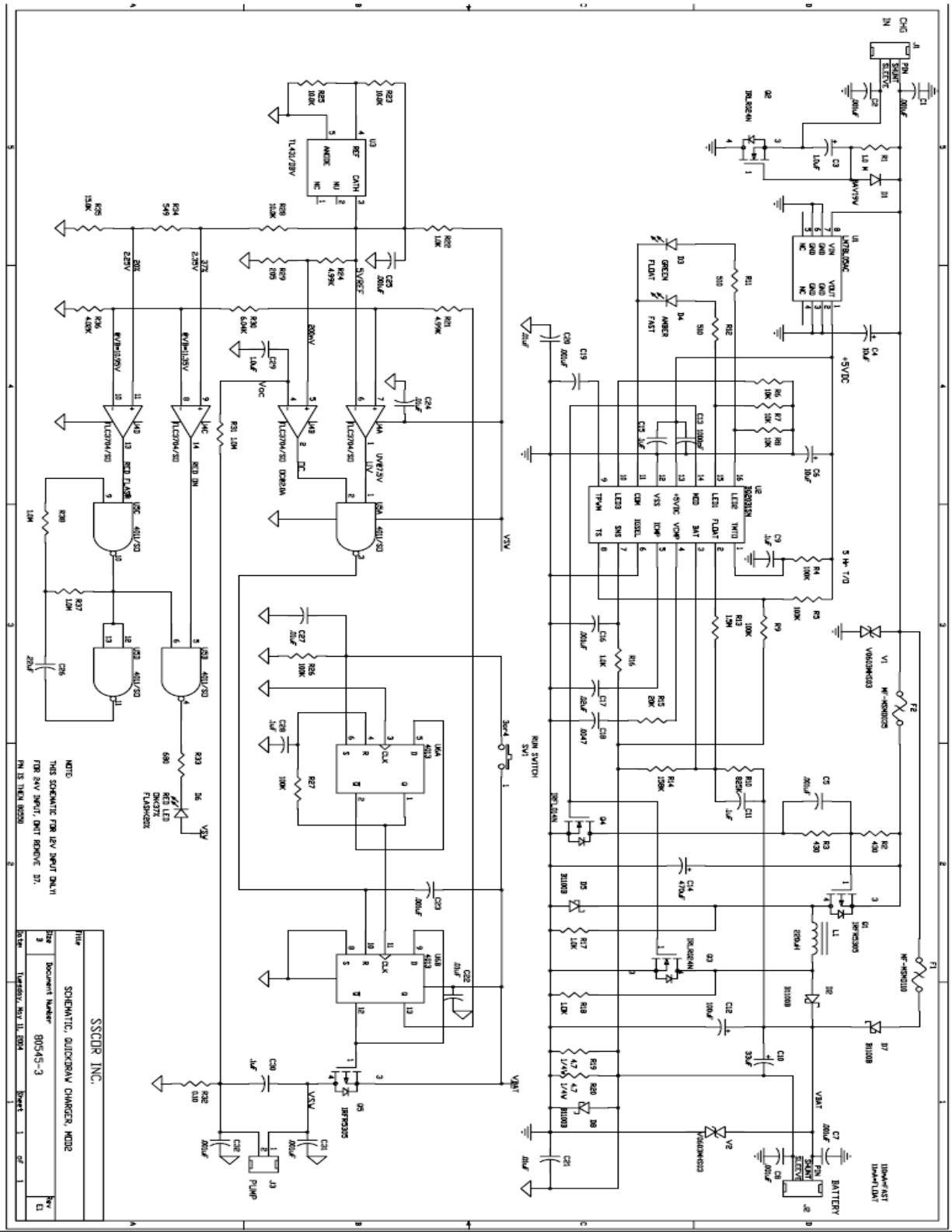


REV	1	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	2	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	3	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	4	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	5	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	6	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	7	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	8	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	9	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	10	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	11	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	12	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	13	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	14	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	15	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	16	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	17	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	18	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	19	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	20	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	21	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	22	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	23	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	24	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	25	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	26	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	27	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	28	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	29	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	30	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	31	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	32	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	33	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	34	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	35	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	36	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	37	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	38	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	39	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	40	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	41	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	42	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	43	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	44	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	45	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	46	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	47	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	48	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	49	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	50	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	51	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	52	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	53	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	54	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	55	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	56	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	57	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	58	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	59	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	60	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	61	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	62	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	63	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	64	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	65	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	66	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	67	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	68	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	69	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	70	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	71	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	72	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	73	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	74	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	75	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	76	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	77	131 S.A. BATTERY CHARGER MODEL 805-0V1
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REV	79	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	80	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	81	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	82	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	83	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	84	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	85	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	86	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	87	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	88	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	89	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	90	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	91	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	92	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	93	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	94	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	95	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	96	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	97	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	98	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	99	131 S.A. BATTERY CHARGER MODEL 805-0V1
REV	100	131 S.A. BATTERY CHARGER MODEL 805-0V1

S-SCORT® Quickdraw® Electronic Circuit Diagrams

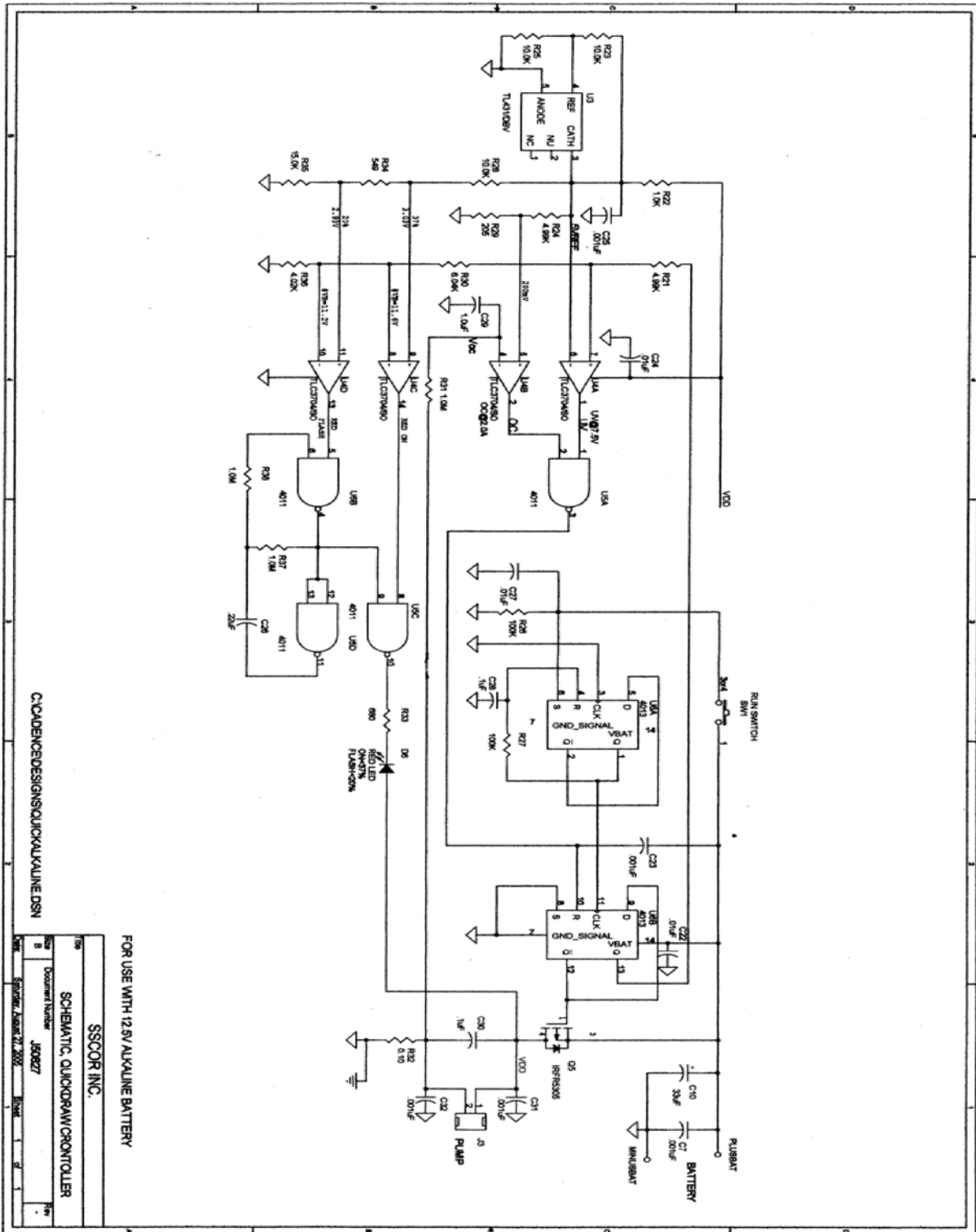


S-SCORT® Quickdraw® Models 2400, 2401, & 2402 PC Board Schematic

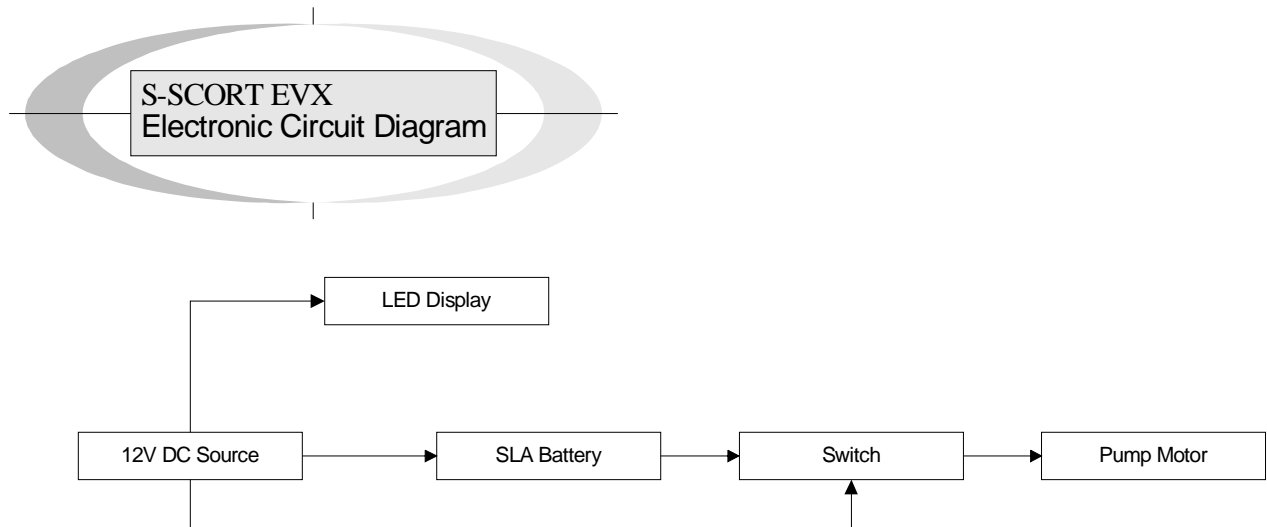


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Author	Lambert, Rev. 11, 2004

S-SCORT® Quickdraw® Model 2403 PC Board Schematic



S-SCORT® EVX™
Electronic Circuit Diagram



Information for Additional Schematics

For schematics of other components, please see the manufacturers' website.

<http://www.parker.com/ead/cm2.asp?cmid=10295>

<http://www.pennmotion.com/>

<http://www.skynetusa.com/>

or contact SSCOR Inc. for more information.