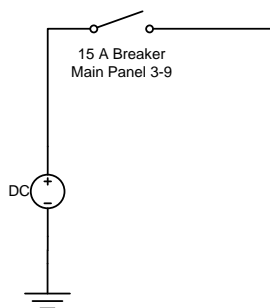
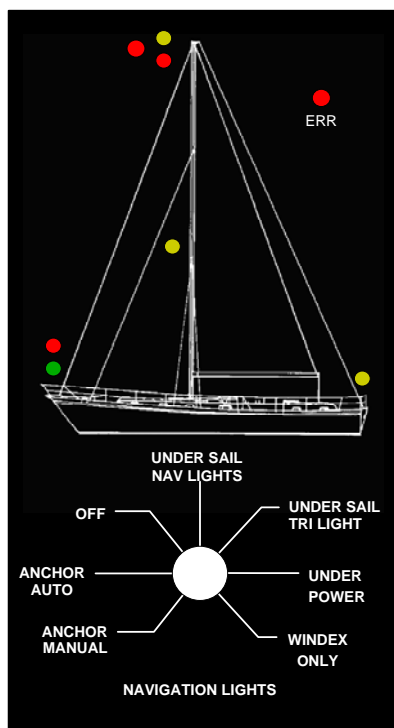


S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

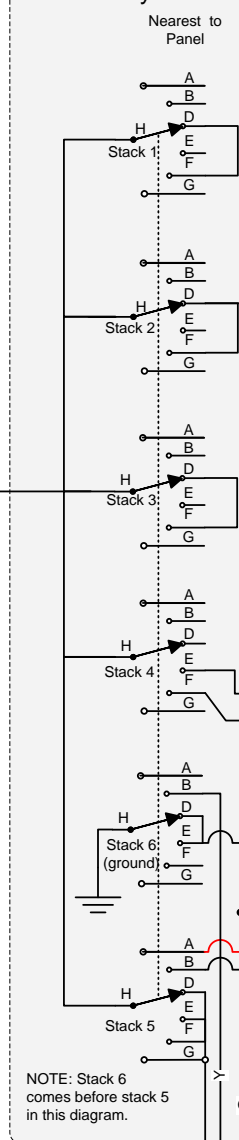
TITLE					PAGE
DC Wiring - High Current Fusebox					1 OF 17
REV.	DESCRIPTION	DATE	BY	DC_WiringSchematic__RevG.vsd	
G		10/21/2009	JMS		



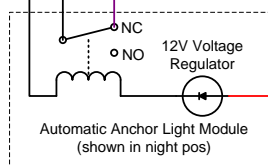
A	Anchor Light (Manual)
B	Anchor Light (Auto)
C	OFF (not shown at rt.)
D	Sailing (Deck Lights)
E	Sailing (TriLight)
F	Motoring/Motorsailing
G	Windex Only
H	center pole



7P6T Rotary Switch



NOTE: Stack 6 comes before stack 5 in this diagram.

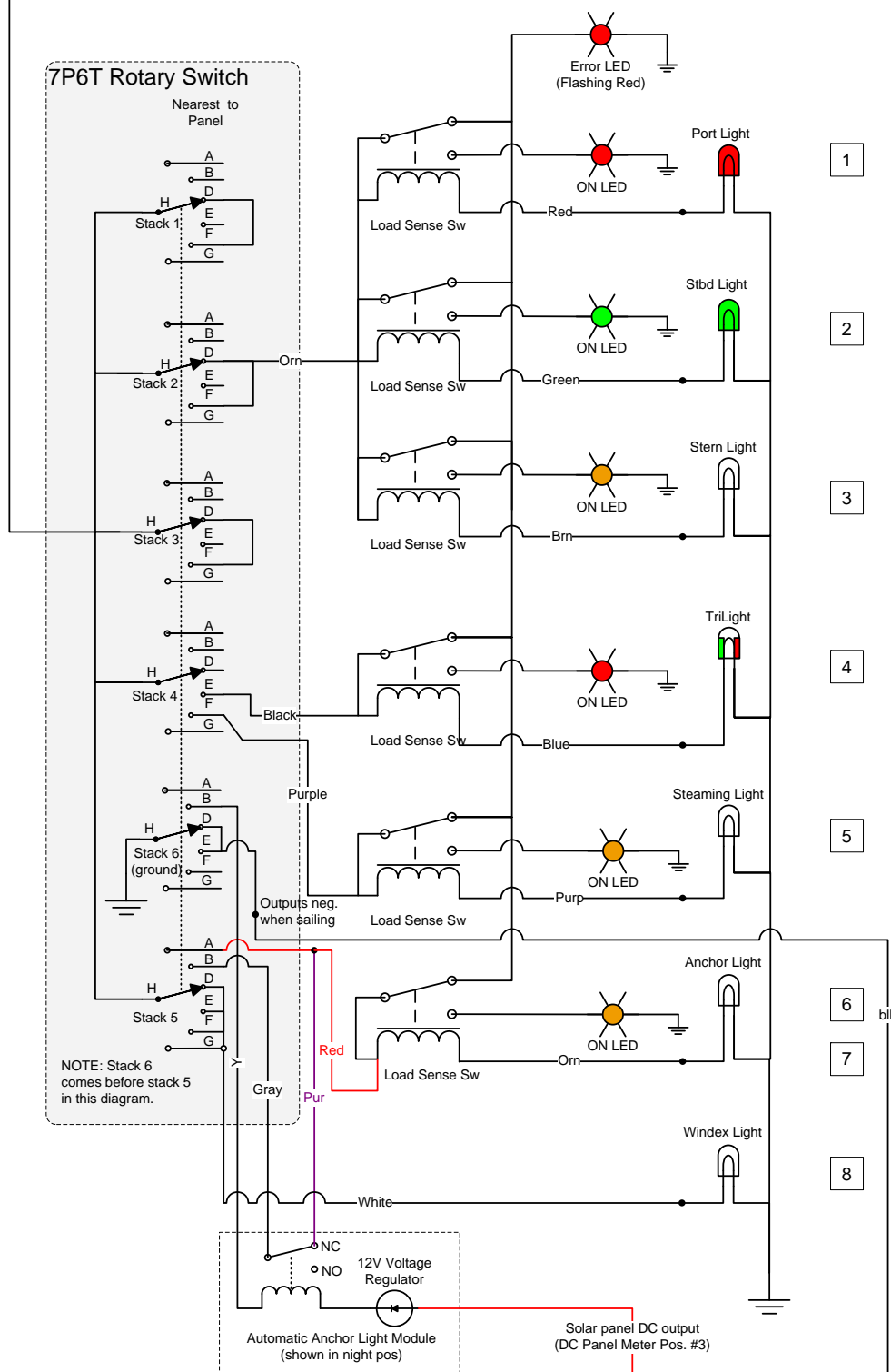


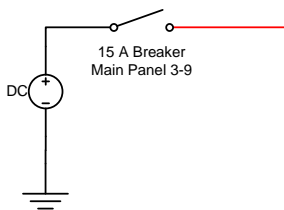
Solar panel DC output
(DC Panel Meter Pos. #3)

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)			
TITLE		PAGE	
DC Wiring - Navigation Lights		2 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Context Switch For Navigation and Running Lights	10/21/2009	JMS

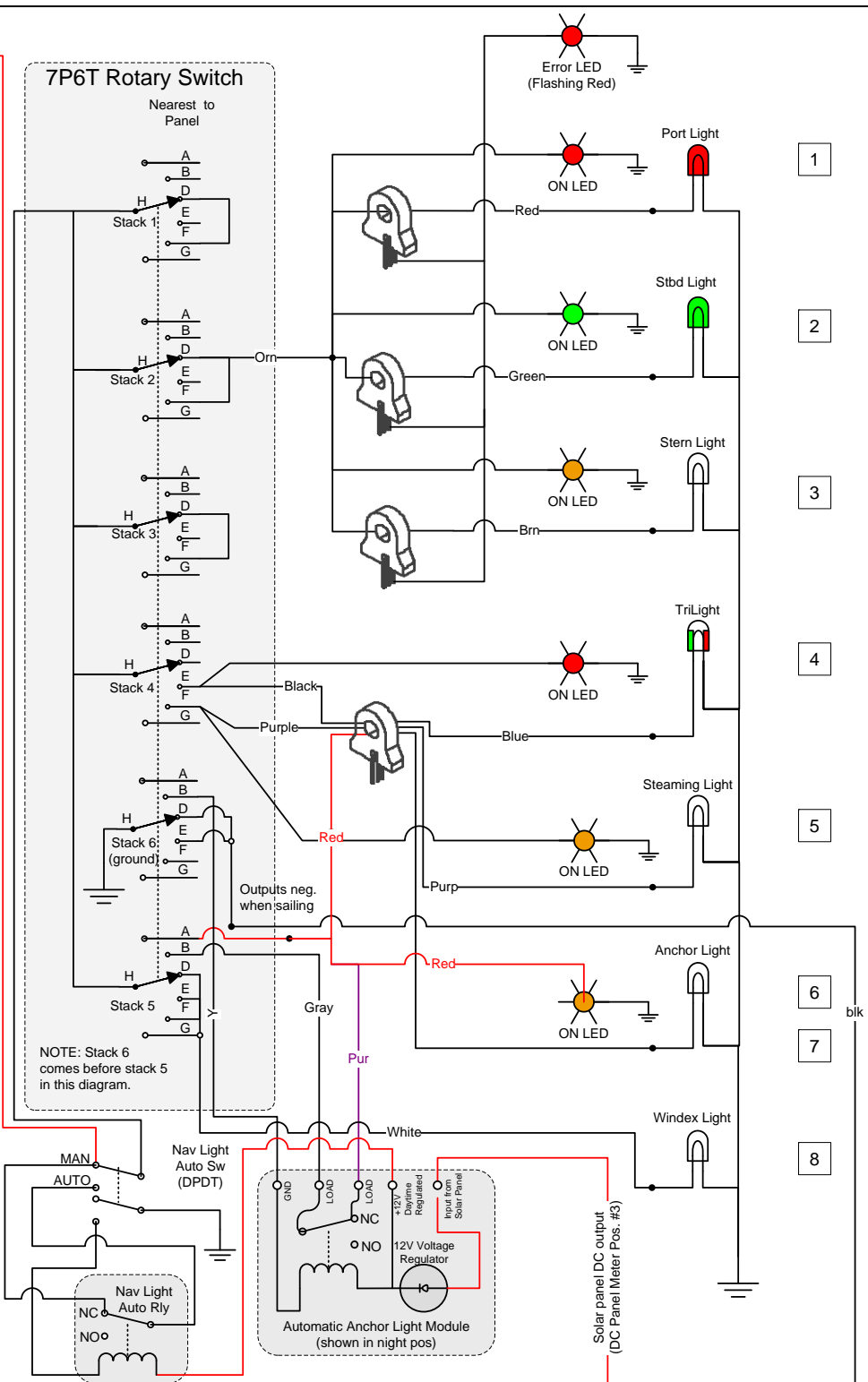
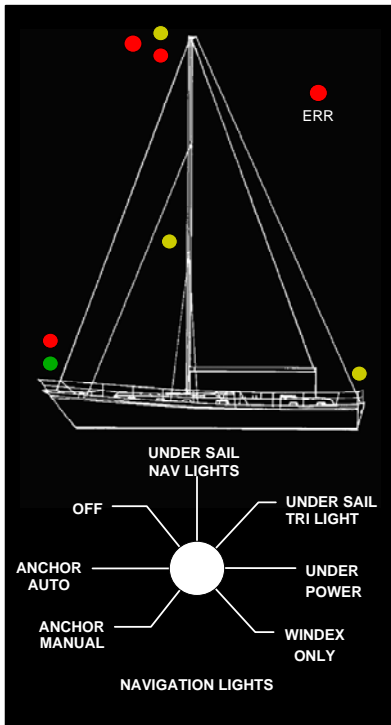


neg. when "sailing" - from Rotary
Nav Lt Sw, Stack 6, Terminals D&E





A	Anchor Light (Manual)
B	Anchor Light (Auto)
C	OFF (not shown at rt.)
D	Sailing (Deck Lights)
E	Sailing (TriLight)
F	Motoring/Motorsailing
G	Windex Only
H	center pole

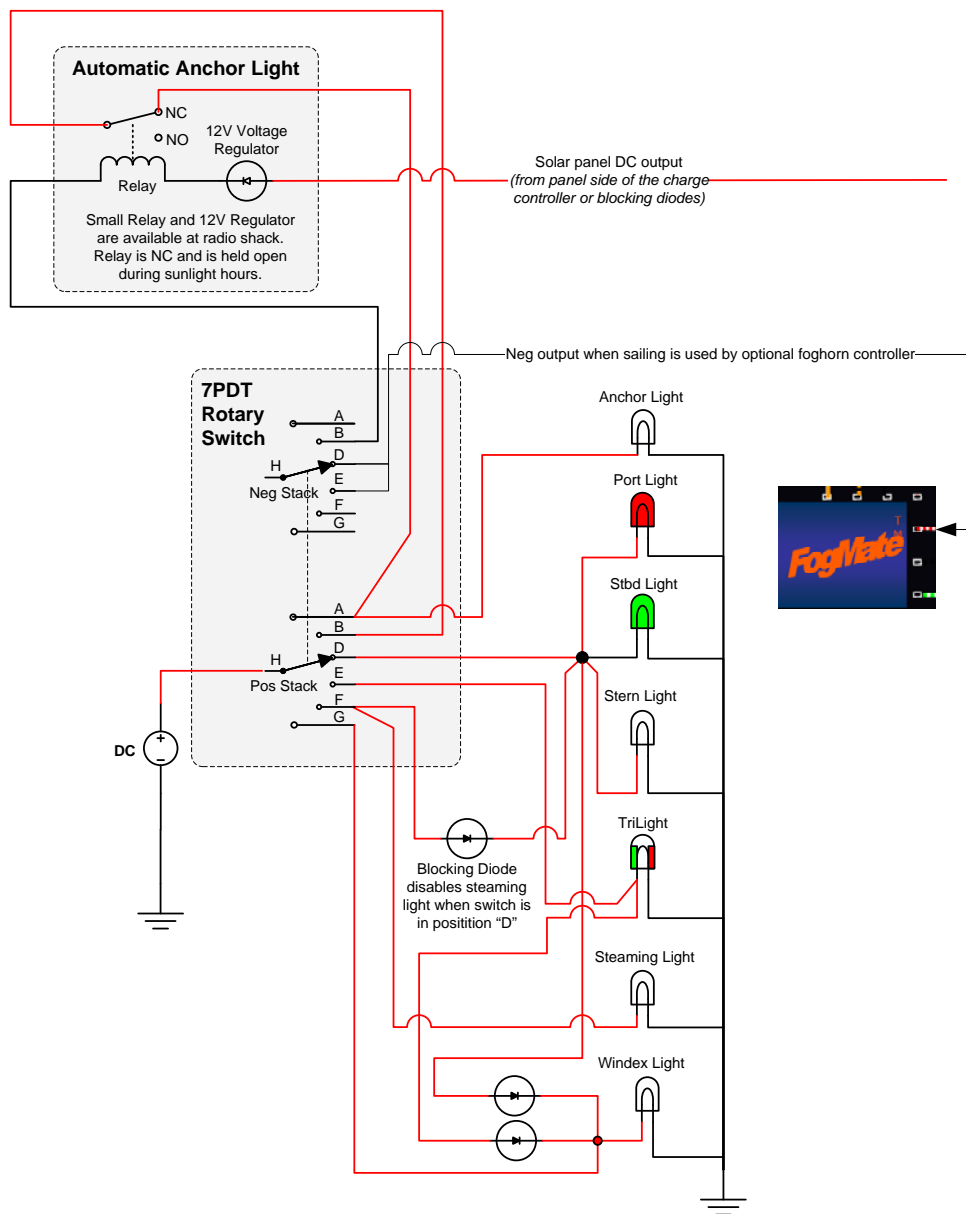
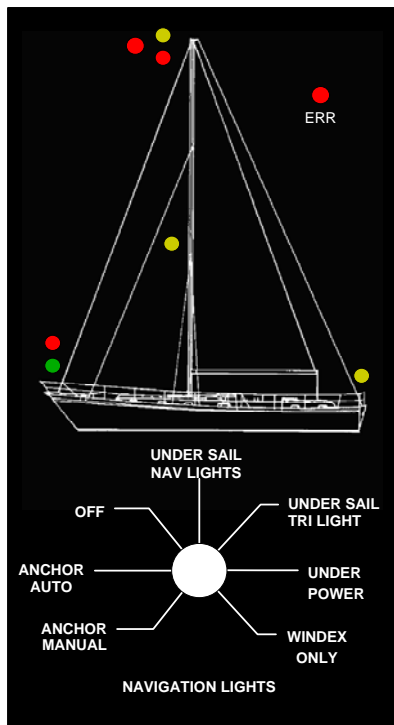


S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - Navigation Lights 2		3 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Context Switch For Navigation and Running Lights	10/21/2009	JMS



A	Anchor Light (Manual)
B	Anchor Light (Auto)
C	OFF (not shown at rt.)
D	Sailing (Deck Lights)
E	Sailing (TriLight)
F	Motoring/Motorsailing
G	Windex Only
H	center pole



7PDT Rotary Switch

- 7 pole double throw is minimum rotary switch
- A Positive and a Negative stack are required.
- Not all poles shown. Pole C is OFF.
- A switch with more poles can be used, e.g. 8PDT or 11PDT which will eliminate the need for blocking diodes. I.e. the Steaming light and the Windex light can have their own stack.
- If a "windex" position is not desired, a 6PDT switch will suffice.
- The amp rating of the switch should match the amp draw of largest load (usually the deck light combination), or an relay can be used to enable the higher load lights. Incandescent Nav lights can draw 1 to 2 amps each depending on wiring and wattage. The combination of ports/stbd/stern/steaming can be as much as 8 amps, so a 10 amp @ 12V rating would be just right.

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

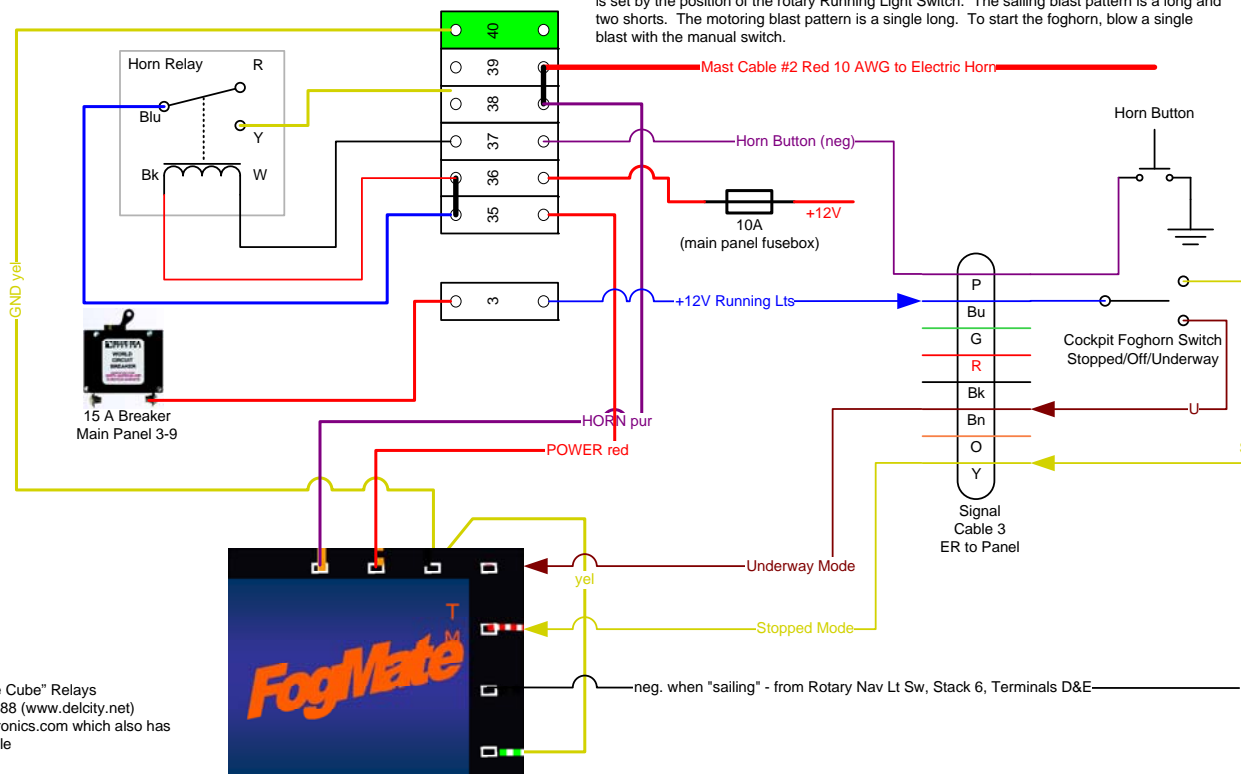
TITLE		PAGE	
DC Wiring - Navigation Lights (Alternate Design)		4 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Context Switch For Navigation and Running Lights	10/21/2009	JMS

HORN AND FOGHORN

HORN AND FOGHORN

The horn is sounded manually by grounding the Horn Relay coil from the Horn Button push switch in the cockpit. It operates at all times. The Horn Relay is an automotive "ice cube" relay. See note below.

The foghorn is enabled by setting the Cockpit Foghorn Switch to Underway or Stopped (anchored). Running Lights must be switched on for the foghorn to function. The blast pattern is set by the position of the rotary Running Light Switch. The sailing blast pattern is a long and two shorts. The motoring blast pattern is a single long. To start the foghorn, blow a single blast with the manual switch.



NOTE:
Automotive "Ice Cube" Relays
Del City p/n73988 (www.delcity.net)
or from allelectronics.com which also has
sockets available

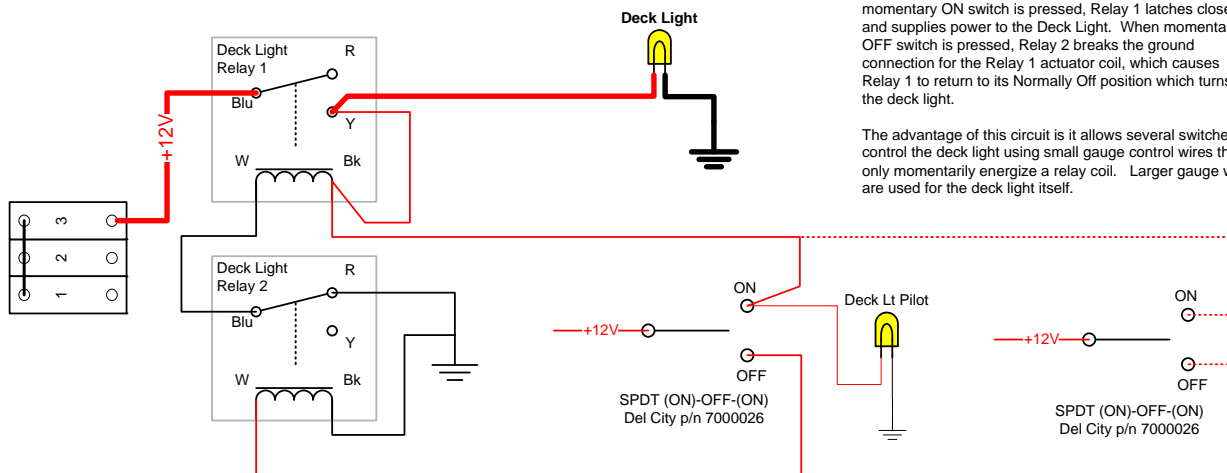
Fogmate available at www.fogmate.com

DECK LIGHT

DECK LIGHT ON/OFF SWITCHES

The schematic shows the OFF position. When a momentary ON switch is pressed, Relay 1 latches closed and supplies power to the Deck Light. When momentary OFF switch is pressed, Relay 2 breaks the ground connection for the Relay 1 actuator coil, which causes Relay 1 to return to its Normally Off position which turns off the deck light.

The advantage of this circuit is it allows several switches to control the deck light using small gauge control wires that only momentarily energize a relay coil. Larger gauge wires are used for the deck light itself.

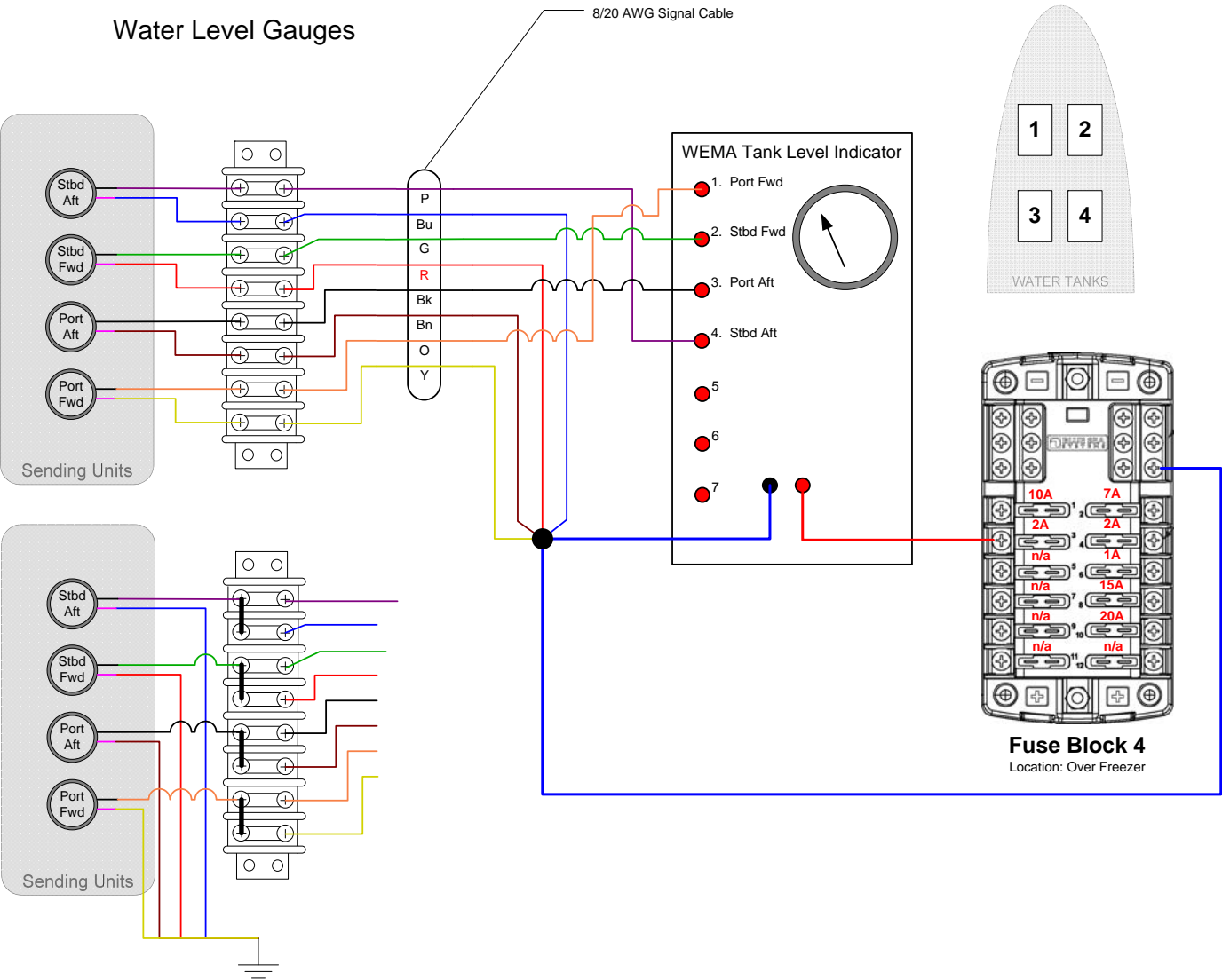


NOTE:
Automotive "Ice Cube" Relays
Del City p/n73988 (www.delcity.net)
or from allelectronics.com which also has
sockets available

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - Horn, Foghorn & Deck Light		5 OF 17	
REV.	DESCRIPTION	DATE	BY
G	added Fogmate and Horn Relay	10/21/2009	JMS

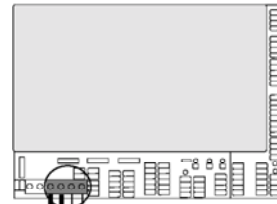
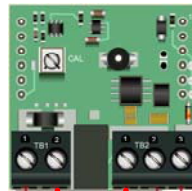
Water Level Gauges



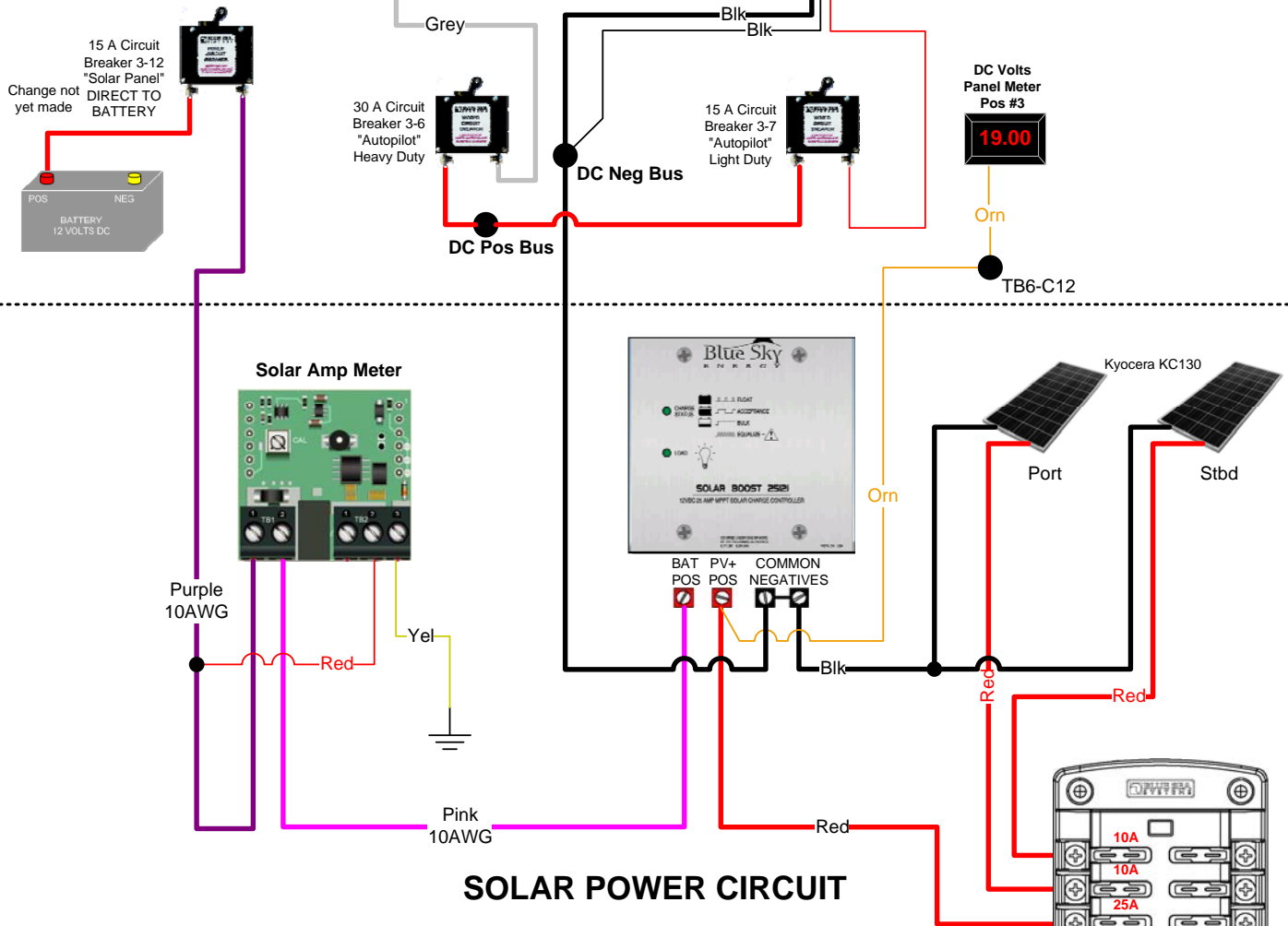
S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)			
TITLE		PAGE	
DC Wiring - Water and Fuel Gauges		6 OF 17	
REV.	DESCRIPTION	DATE	BY
G		10/21/2009	JMS

AUTOPILOT HEAVY DUTY POWER CIRCUIT

Autopilot Amp Meter



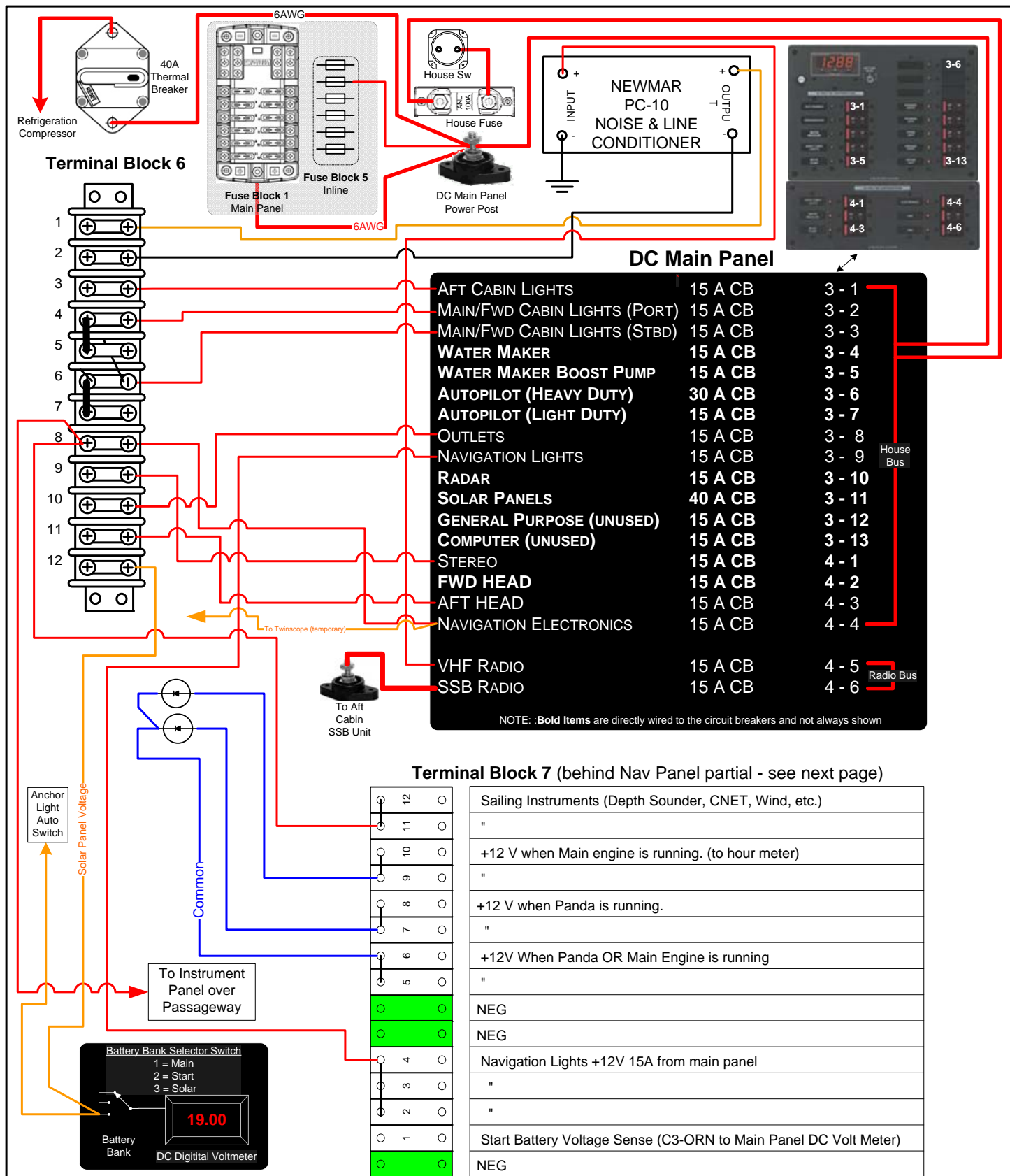
Pilot Computer



SOLAR POWER CIRCUIT

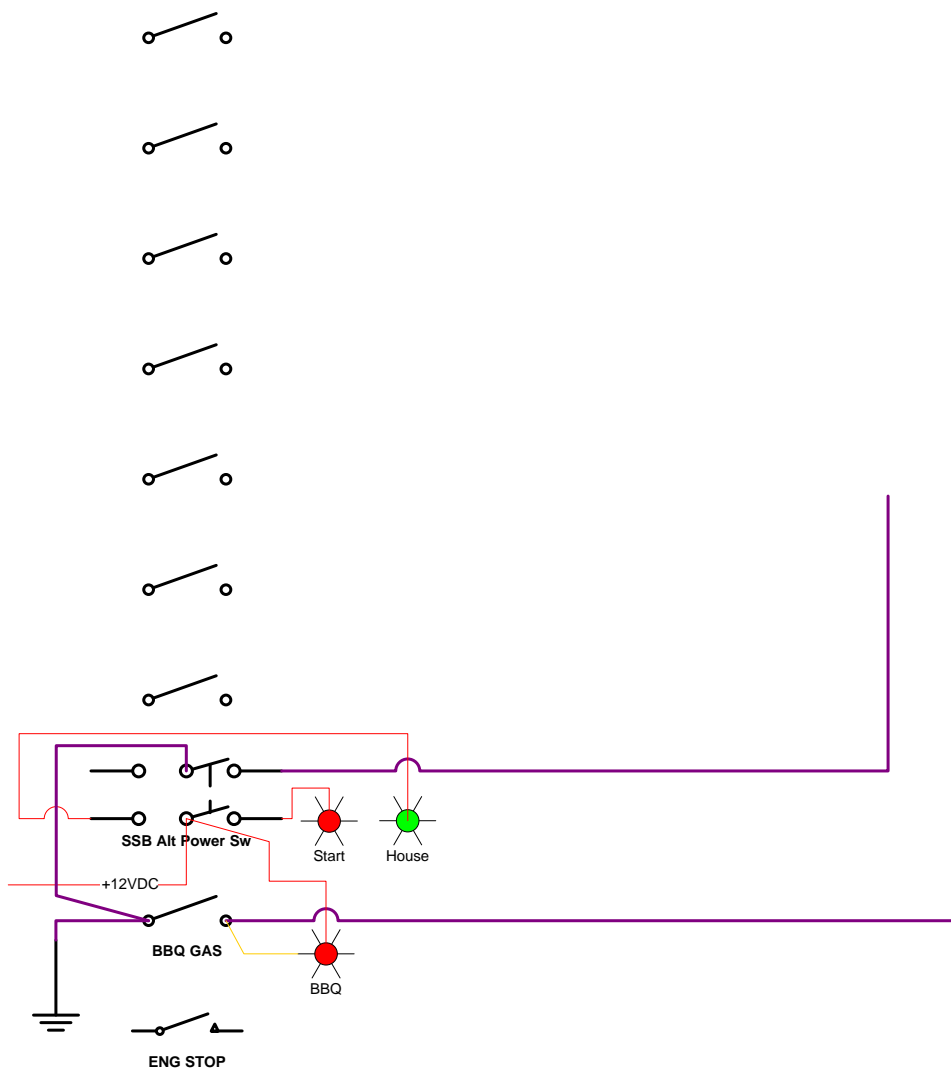
S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - AutoPilot & Solar Power Wiring		7 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Date! DCA-20PC Panel Meters Connections	10/21/2009	JMS



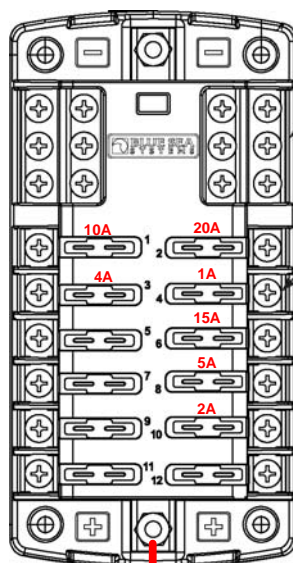
S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - Main Electrical Panel Connections		8 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Terminal Block 6 Connections to DC Main Panel	10/21/2009	JMS



S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)				
TITLE			PAGE	
DC Wiring - Main Nav Panel			9 OF 17	
REV.	DESCRIPTION		DATE	BY
G	Terminal Block 6 Connections to DC Main Panel		10/21/2009	JMS

	Horn Power
	+12V for Cellular Repeater Power Supply (to Aux 1 Switch)



+12V DC to Cockpit Control Panel
+12V DC to Pin 11 on Water Heater Select Relay
Diesel Heater
NavPanel Supply (LEDs & meters, Strobe Light power)
Handheld VHF Charger



Main Panel
3-12
General
Purpose

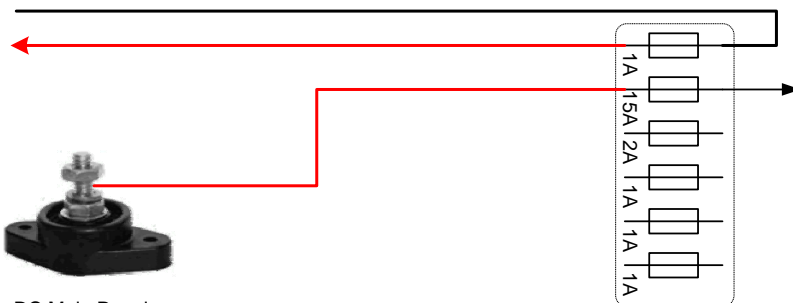
6AWG

Fuse Block 1
ATO
Main Panel

NOTE:

Change FB1 thusly:

- Move Diesel Heater to inline FB
- Move DC Main Panel Bus to 30A OPB
- Move Refrigerator to Direct Bus
- Add distribution post for DC MainPanel Bus



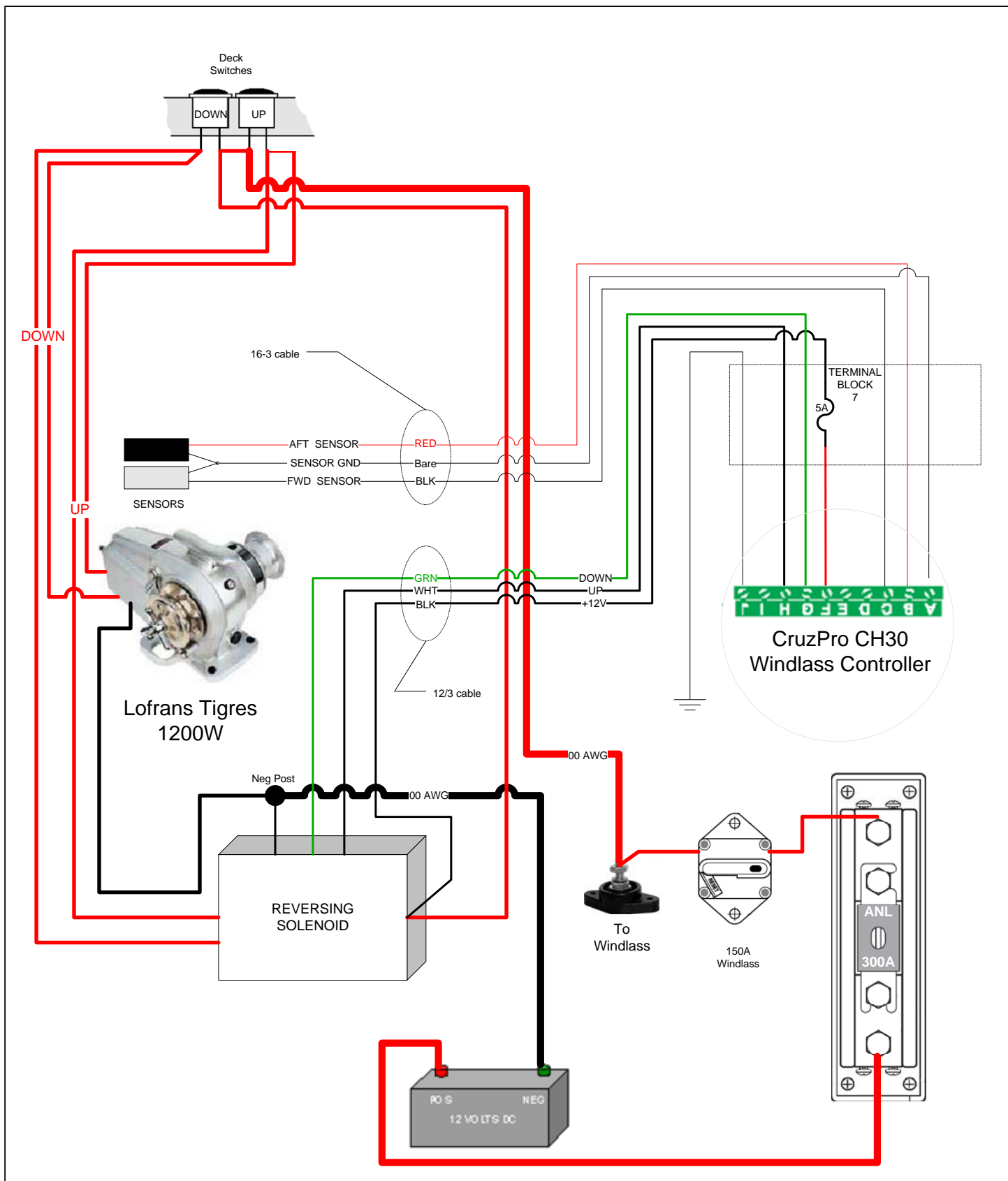
DC Main Panel
Power Post

Fuse Block 5
Inline ATO
Main Panel
(overhead)

AC1-3 Anchor Controller +12V – 1A
To Wallas Diesel Heater – 15A – <u>Must be direct to Battery</u>

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)			
TITLE		PAGE	
DC Wiring - Fuse Blocks 1 and 5		10 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Fuse Blocks	10/21/2009	JMS

○	40	○	Fogmate Ground
○	39	○	To CNET Reboot Switch – provides neg to Cetrek Multi on Nav Panel
○	38	○	Horn Power - To Horn via Mast Cable #1 Red 10AWG
○	37	○	Horn Power - To Fogmate & To Horn Relay (yel)
○	36	○	From Horn Button (neg)
○	35	○	Horn Power (fused 10A at Fuse Block 1)
○	34	○	"
○	33	○	Bilge Cycle Counter (Red 16 AWG) to Bilge Pump Controller (White 18 AWG)
○	32	○	Solar Amp Meter terminal TB1-2 to Trace C40 BAT POS post (Pink 12AWG)
○	31	○	Solar Amp Meter terminal TB1-1 to "Solar Panel" 25A Circuit Breaker 3-12 (Purple 12AWG)
○	30	○	Solar Amp Meter terminal TB2-1 DC Pos (Red 18AWG)
○	29	○	A/P Amp Meter terminal TB1-1 to Pilot Computer Heavy Duty Supply Pos (Red 12AWG)
○	28	○	A/P Amp Meter terminal TB2-2 to "Autopilot" 30A Circuit Breaker 3-6 (Grey 12AWG)
○	27	○	NEG - (AC3-Yel to CH30-J Ground)
○	26	○	+12V (Fused 5A) from Anchor Windlass OPB via Anc.Lkr (AC1-3 Black) (AC3-Red to CH30-F)
○	25	○	UP (AC1-1 white) (AC3-Purple to CH30-H)
○	24	○	DOWN (AC1-2 green) (AC3-Green to CH30-G)
○	23	○	SENSOR GND (AC2 bare) (AC3-Brown to CH30-A)
○	22	○	FWD SENSOR (AC2 red) (AC3-Blue to CH30-C)
○	21	○	AFT SENSOR (AC2 black) (AC3-Black to CH30-B)
○	20	○	Link 10 #7 – Low Voltage Alarm (Purple) (goes to ground when activated)
○	19	○	Link 10 #5 - +12V DC Meter Power (Red) (fused direct from main bus)
○	18	○	Link 10 #4 & DC Digital Meter- Main Batt Voltage Sense (Blue)
○	17	○	"
○	16	○	Link 10 #3 & DC Digital Meter- Shunt Sense Lead Battery Side (Orn)
○	15	○	"
○	14	○	Link 10 #2 & DC Digital Meter- Shunt Sense Lead Load Side (Grn)
○	13	○	"
○	12	○	Link 10 #1 & DC Digital Meter - DC Meter Neg (Blk)
○	11	○	+12V from "Navigation Electronics" OPD to SR161 AIS +12V
○	10	○	" to VHF Smart Splitter +12V
○	9	○	AIS / Splitter Neg
○	8	○	+12 V when Main engine is running. (connects hour meter & C3-RED from eng room)
○	7	○	" (connects to TB7-6 below via blocking diode). Connects to Eng Stop Switch.
○	6	○	+12 V when Panda is running.
○	5	○	" (connects to TB7-6 below via blocking diode)
○	4	○	+12V When Panda OR Main Engine is running
○	3	○	Engine Stop (connect to neg)
○	2	○	NEG
○	1	○	NEG
○	0	○	Navigation Lights +12V 15A from main panel
○	0	○	" to C3-BLU (+12V to Fogmate Mode Switch in Cockpit)
○	0	○	"
○	0	○	Start Battery Voltage Sense (C3-ORN to Main Panel DC Volt Meter)
○	0	○	NEG

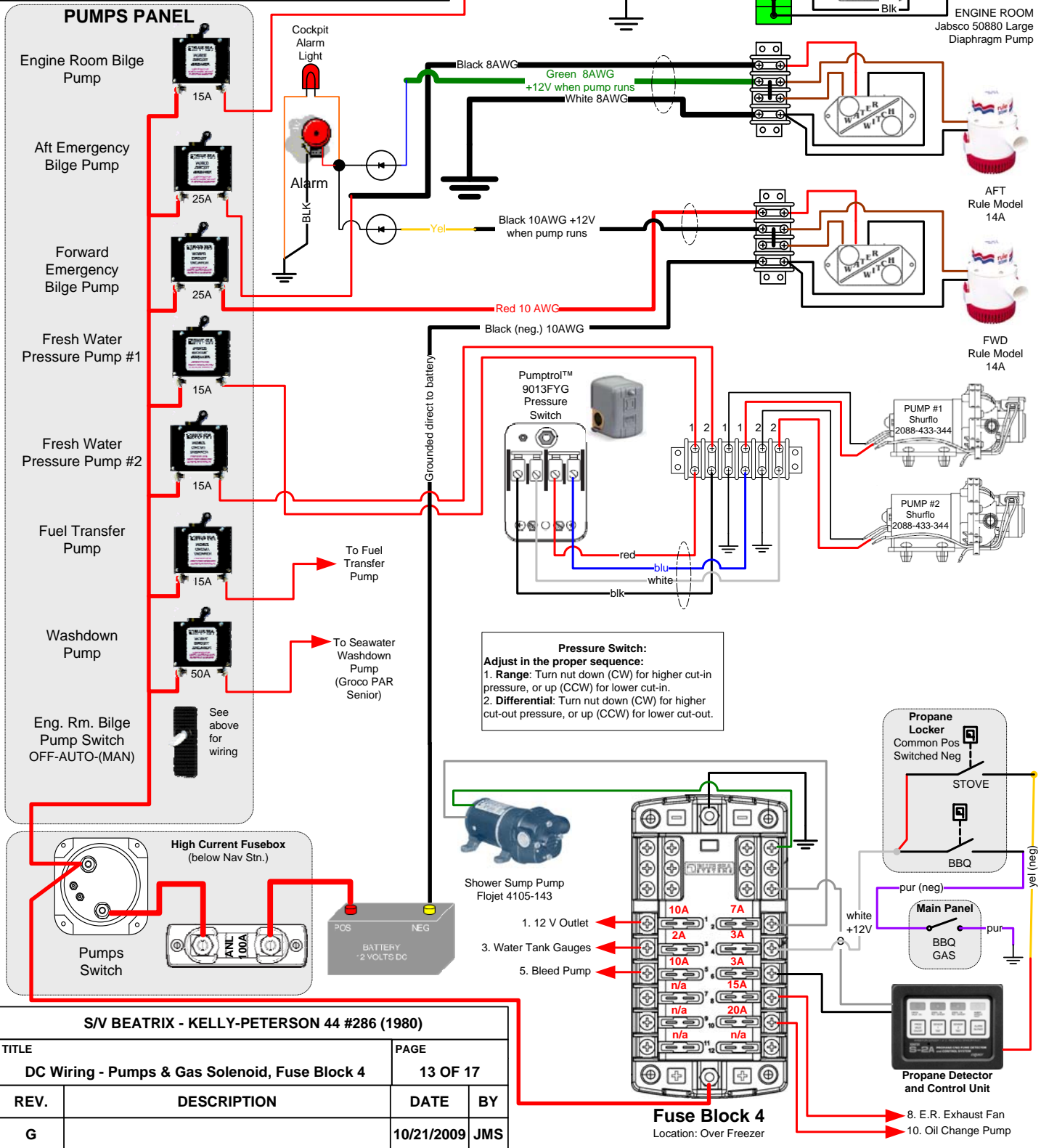


S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE					PAGE
DC Wiring - Anchor Windlass Controls					12 OF 17
REV.	DESCRIPTION	DATE	BY	DC_WiringSchematic__RevG.vsd	
A		10/21/2009	JMS	Scale: n/a	

NOTES:

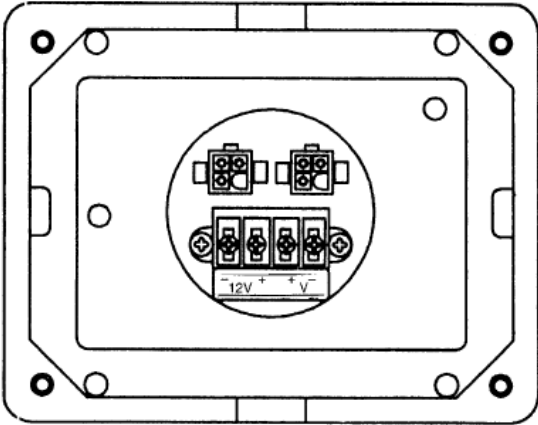
1. The wires to the ER bilge pump are triplex 12 or 10 gauge. Triplex in this gauge is only available in white/black/green. This is normally an AC wire but is used in this instance for DC.
2. The color coding and unusual connections (e.g. green 8AWG to blue 18AWG) and both black hot and black ground on the forward pump are artifacts of working with existing wiring. The heavy green wire to the aft pump (now used for the alarm) was originally for a manual override of the "float" switch before I decided to eliminate the manual override on the emergency pumps.
3. The design of the system is that the emergency bilge pumps are always "on" and alarmed and do not have a manual override. To test the pumps turn the breaker off and on and it should run for a few seconds. Test the Water Witch once a week. (Failure on these units is about 0.25% and usually early in their lifetime).





Propane Detector and Control Unit

Overall Wiring Diagram



Terminal Strip Connections

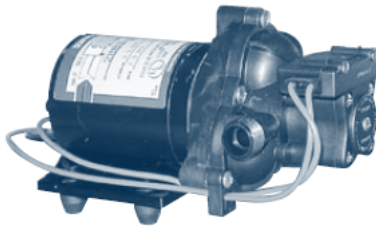
- = Module Ground (Negative)
- +12VDC = Module Positive
- +12VDC = Solenoid Valve Positive
- V = Solenoid Valve Negative

Figure 6

RIBBON CABLE:
BLACK = MODULE POS +12VDC
WHITE = MODULE GROUND (NEG)
BROWN = ALARM NEGATIVE
RED = SOLENOID NEGATIVE

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)			
TITLE		PAGE	
DC Wiring - Propane Detector		14 OF 17	
REV.	DESCRIPTION	DATE	BY
G		10/21/2009	JMS

SHURFLO



2088 Series

1.6 - 3.8 GPM SHURFLO WATER SYSTEM PUMPS

The Shurflo 2088 series water system pumps feature three independent pumping chambers, a 40 psi pressure switch, will run dry without damage and are able to lift water up to 12 feet! They are available in 12 and 24 vdc in flows up to 3.8 GPM. [See page 138](#) for service parts. An accumulator tank is recommended ([see page 18](#)).

Model	Max. GPM	Volts	Open Flow Amps	Inlet / Outlet	Dimensions (H x W x L)
SF 8050-204-033	1.6	12 vdc	2.4	1/2" MPT & 1/2" Barb	4.08" x 4.5" x 8.38"
SF 2088-423-344	2.8	12 vdc	3.1	1/2" MPT & 1/2" Barb	4.6" x 5" x 8.9"
SF 2088-573-354	2.8	24 vdc	1.7	1/2" MPT & 1/2" Barb	4.4" x 5" x 8.7"
SF 2088-433-344	3.3	12 vdc	3.5	1/2" MPT & 1/2" Barb	4.4" x 5" x 8.6"
SF 2088-574-734	3.6	24 vdc	3.0	1/2" MPT & 1/2" Barb	4.5" x 5" x 9.9"
SF 2088-414-934	3.8	12 vdc	4.5	1/2" MPT & 1/2" Barb	4.4" x 5" x 9.9"

3.3 GPM FLOJET 4105 SERIES SHOWER PUMP

The Flojet 4105 shower and grey water pump will lift water up to 10 feet and will not be damaged by running dry. It can be operated with a manual on/off switch or automatic level control ([see page 30](#)) and comes standard with 1/2" barbed ports. However, 3/4" barbed port fittings ([page 58](#)) and suction strainers ([page 59](#)) are available separately. [See page 138](#) for service parts.

Model Number	Volts	Amps at 10 psi	Max GPM	Inlet/Outlet Ports	Dimensions (H x W x L)
FJ 04105-143	12 vdc	3.6	3.3	1/2" Barb	3 3/4" x 6 1/3" x 8 1/4"

3.8 - 5.0 GPM, 12-24-32 VDC, BILGE AND BAITWELL

If compact size and low cost is important, these Jabsco and Flojet diaphragm bilge pumps are right for you! They will self-prime to 10 feet, run dry without damage, and come complete with a 3/4" suction strainer. Both brands will also function as a continuous duty baitwell pump. [See page 138](#) and [139](#) for service parts.

Model	Brand	Volts	Amps at 10 PSI	Flow GPM	Dimensions (H x W x L)	Port Size
JA 31705-0092	Jabsco	12 vdc	6	3.8	4 1/16" x 4 1/8" x 7 1/4"	3/4" Barb
JA 31705-0094	Jabsco	24 vdc	3	3.8	4 1/16" x 4 1/8" x 7 1/4"	3/4" Barb
FJ 04125-114	Flojet	12 vdc	8	5.0	3.9" x 6.3" x 9.9"	3/4" Barb

3.7 GPH JABSCO 50880 SERIES SHOWER PUMP

Jabsco's 50880 series shower and grey water pump features a unique, 360° rotating head for flexible installation. This pump self-primers up to six feet and will run dry without damage. No-clog, filterless design means easy maintenance. Complies with USCG 183.410 and ISO 8846 Marine (Ignition Protection).

Model Number	Volts	Amp Draw	Max GPM	Inlet/Outlet Ports	Dimensions (H x W x L)
50880-1000	12 vdc	15A	3.7	3/4" Barb	4.4" x 5.9" x 11.7"

S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - Pump Specs		15 OF 17	
REV.	DESCRIPTION	DATE	BY
G		10/21/2009	JMS

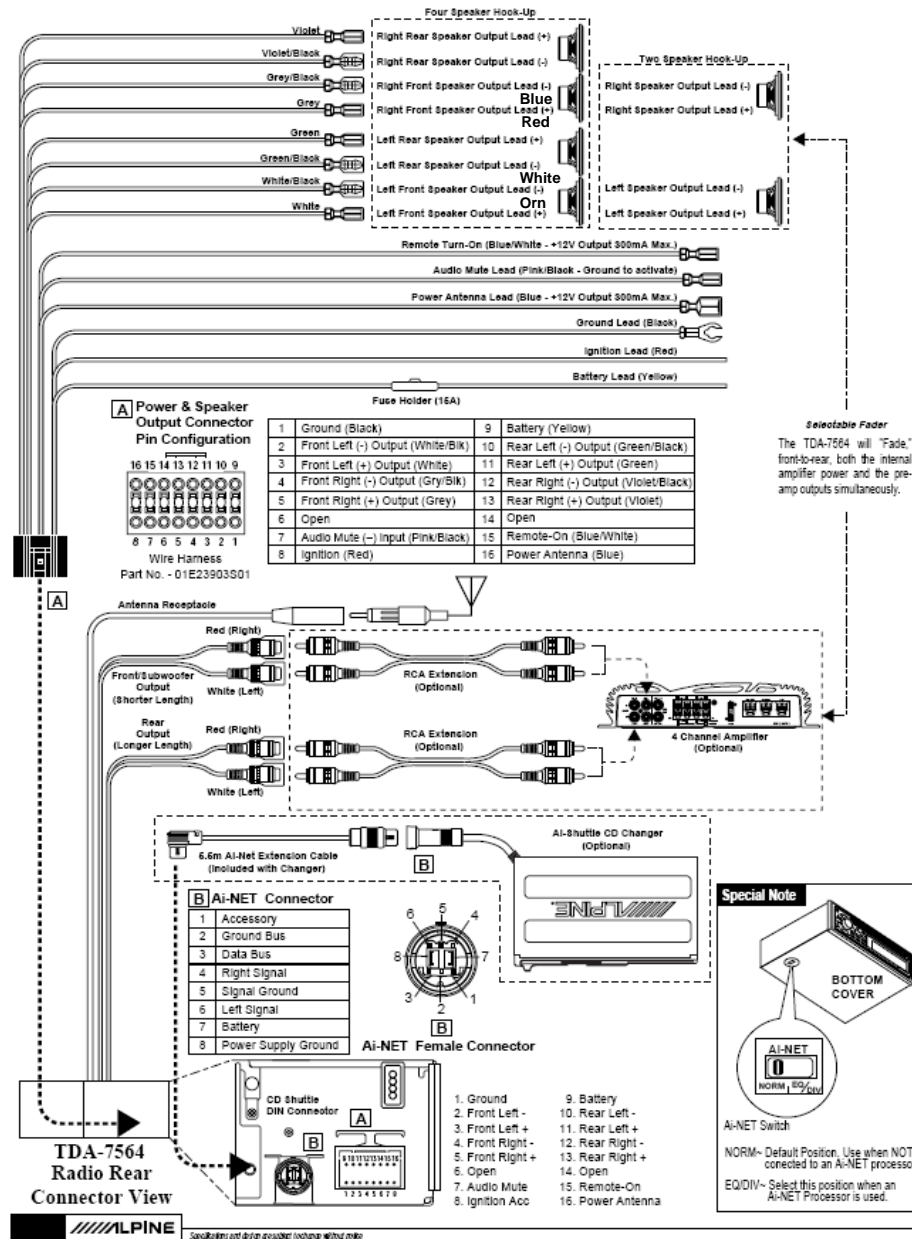
S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)			
TITLE DC Wiring - Link 10			PAGE 16 OF 17
REV.	DESCRIPTION		DATE BY
G	e-Meter Installation		10/21/2009 JMS

TDA-7564

In-Dash Cassette/Receiver/Ai-Shuttle Controller

To Cabin Speakers (Gray Jacketed Cable)

Left Front (+) Orange
Left Front (-) White
Right Front (+) Red
Right Front (-) Blue



S/V BEATRIX - KELLY-PETERSON 44 #286 (1980)

TITLE		PAGE	
DC Wiring - Stereo		17 OF 17	
REV.	DESCRIPTION	DATE	BY
G	Speaker re-wiring	10/21/2009	JMS