STEADYWEB SPLICER
SETUP AND OPERATING INSTRUCTIONS

An ADDENDUM to be used in conjunction with the
STEADYWEB AUTOMATIC TENSION CONTROLLER INSTRUCTION MANUAL

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SECTION 1

DESCRIPTION

1.1 GENERAL DESCRIPTION

The SteadyWeb Splicer is a complete rewind control system. It comes as one unit which contains tension control features and splicer features. The automatic tension controller portion of this unit consists of the same circuit cards and user interface devices found in the SteadyWeb Automatic Tension Controller. We refer you to our existing **SteadyWeb Automatic Tension Controller Instruction Manual** for information relating to the SteadyWeb Splicer's tension control features.

This document contains only the information necessary to understand, set up and operate the splicing functions of the controller. It serves as a separate addendum to the SteadyWeb Automatic Tension Controller Instruction Manual.

NOTE! Before beginning the setup and operating procedures outlined in this instruction addendum you must be familiar with the installation and setup procedures described in the *SteadyWeb Automatic Tension Controller Instruction Manual*.

1.2 DESCRIPTION OF BASIC SPLICING SEQUENCE

The diagram below provides an overall perspective of the sequence that the SteadyWeb Splicer allows you to automate.

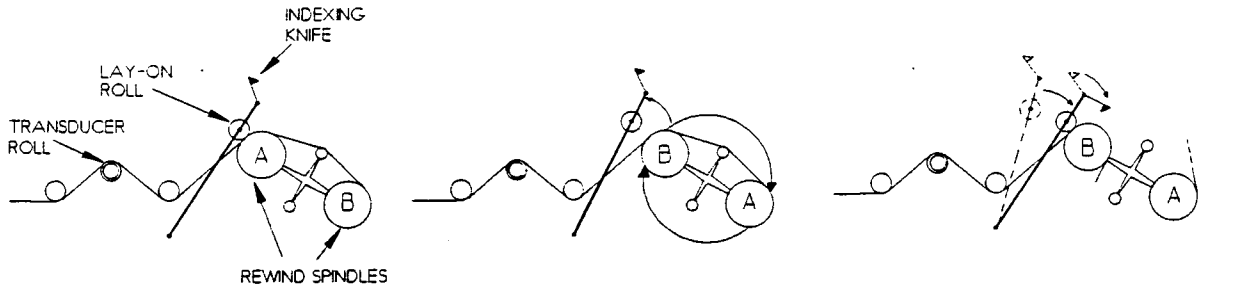


FIGURE A

1) INITIATE TURRET TO SPLICE POSITION WITH THE FOLLOWING EVENTS:

A) LAY-ON ROLL RISES.

B) OPPOSING SPINDLE STARTS IN SPEED MATCH (B)

C) TURRET BEGINS TO ROTATE.

FIGURE B

2) TURRET REACHES SPLICE POSITION

A) SPINDLE "B" RUNNING AT LINE SPEED.

B) SPINDLE "A" UNDER TENSION CONTROL.

FIGURE C

3) KNIFE FIRE INITIATED:

A) LAY-ON ROLL COMES DOWN.

B) KNIFE INDEXES INTO WEB WHEN LAY-ON ROLL GOES BACK INTO POSITION.

C) SPINDLE "A" STOPS.

D) SPINDLE "B" GOES INTO TENSION CONTROL.

E) LAY-ON ROLL REMAINS DOWN AND KNIFE GOES INTO READY POSITION.

***Figure 1* - BASIC SPLICE SEQUENCE**

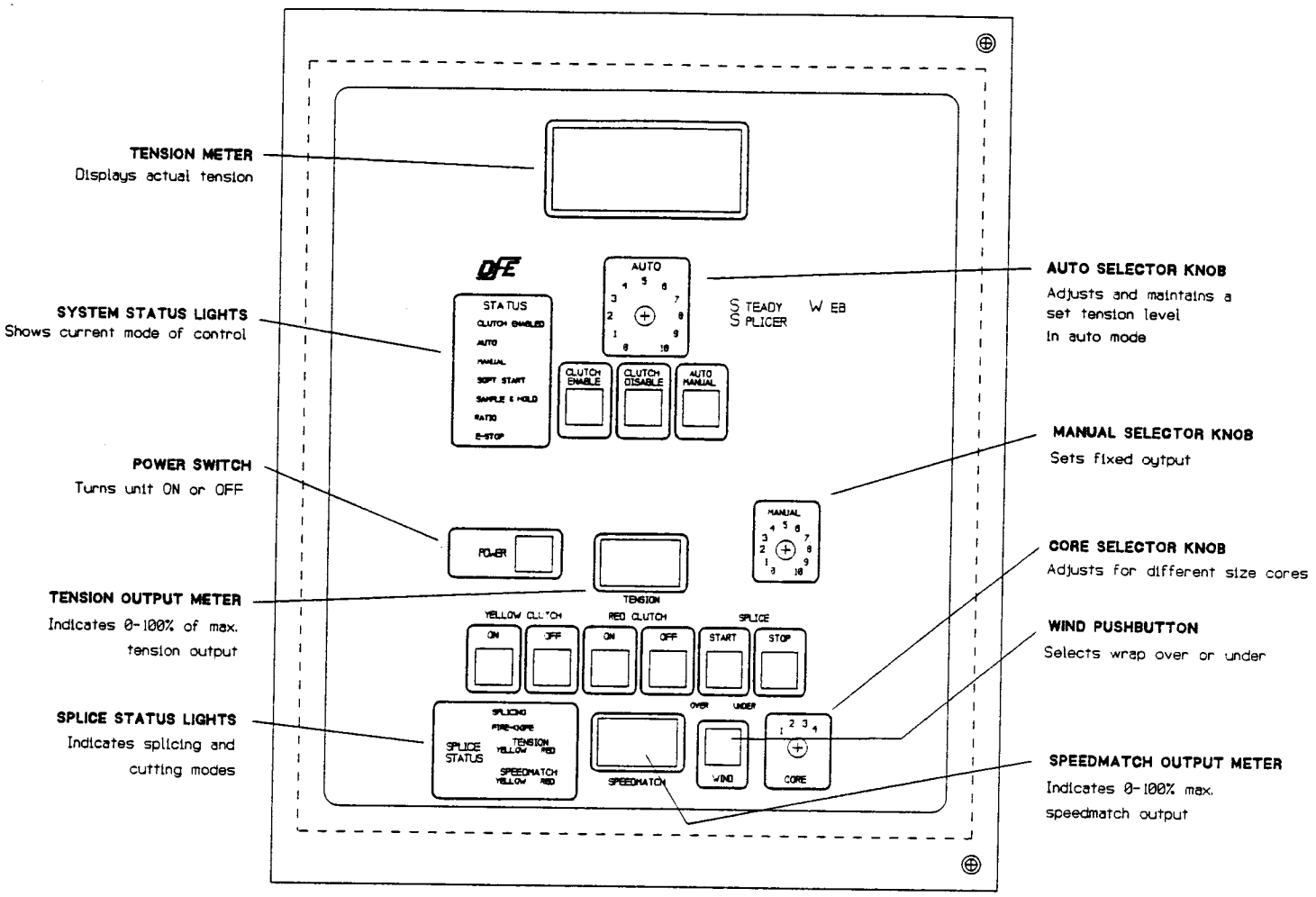


Figure 2 - SPLICER FRONT PANEL

1.3 DESCRIPTION OF SPLICER CONTROLS AND INDICATORS

In addition to the regular SteadyWeb front panel controls, the SteadyWeb Splicer has seven (7) keyboard type switches, one rotary switch, one analog meter and eight lamp indicators. (See Figure 2.) Descriptions of the functions of the additional controls are as follows:

YELLOW CLUTCH ON: A momentary switch that activates the YELLOW clutch. The mode that the clutch assumes (TENSION or SPEED-MATCH) depends on the order in which it is pressed with respect to the RED CLUTCH ON switch. If the YELLOW CLUTCH ON switch is depressed before the RED CLUTCH is turned ON, the mode engaged is TENSION. If the YELLOW CLUTCH ON switch is depressed after the RED CLUTCH ON switch, the mode engaged is SPEEDMATCH.

YELLOW CLUTCH OFF: A momentary switch that de-activates the YELLOW clutch. If the YELLOW clutch was either the only clutch on and in TENSION, or was in SPEED-MATCH with the RED clutch in TENSION, then this switch will only de-activate the YELLOW clutch. If however, the YELLOW clutch was in TENSION with the RED clutch in SPEED-MATCH, this switch will de-activate the YELLOW clutch and in addition, will shift the TENSION control to the RED clutch.

RED CLUTCH ON: A momentary switch that activates the RED clutch. The mode that the clutch assumes (TENSION or SPEED-MATCH) depends on the order in which it is pressed with respect to the YELLOW CLUTCH ON switch. If the RED CLUTCH ON switch is depressed before the YELLOW CLUTCH is turned ON, the mode engaged is TENSION. If the RED CLUTCH ON switch is depressed after the YELLOW CLUTCH ON switch, the mode engaged is SPEEDMATCH.

RED CLUTCH OFF: A momentary switch that de-activates the RED clutch. If the RED clutch was either the only clutch on and in TENSION, or was in SPEED-MATCH with the YELLOW clutch in TENSION, then this switch will only de-activate the RED clutch. If however, the RED clutch was in TENSION with the YELLOW clutch in SPEED-MATCH, this switch will de-activate the RED clutch and in addition, will shift the TENSION control to the YELLOW clutch.

CLUTCH DISABLE: A momentary switch which turns off all clutches. This switch does not stop turret rotation or the firing of the knife.

SPLICE START: A momentary switch that starts the splicing sequence. The switch turns on the speed match mode of the NON-TENSION clutch if it is not already on. This switch also initiates turret rotation.

SPLICE STOP: A momentary switch that stops the splicing sequence. The switch turns off the speed match mode of the NON-TENSION clutch, while holding the TENSION clutch in the TENSION mode. This switch also stops the turret rotation.

CORE Switch: A four position rotary switch used to select a pair of pre-set time delays and speed-match drive levels to compensate for different core diameters. The time delays are adjusted via RT6, RT7, RT9, and RT11. The speed-match levels are selected via RT1, RT2, RT3, and RT4. All eight adjustments are located on the AUX FRONT PCB.

WIND Switch: An alternate action switch which toggles between OVER and UNDER wind. It selects one each of two different TURRET POSITION and KNIFE LIMIT switches. An indicator light signals which mode is selected.

SPEEDMATCH analog meter: Indicates the relative magnitude of the speedmatch drive signal.

SPLICE STATUS indicator light panel: Consists of six lights. SPLICER indicates splicing mode, and FIRE-KNIFE indicates cutting mode. Both TENSION and SPEEDMATCH lights are in turn split into one each for each clutch. For example, RED TENSION, YELLOW TENSION, RED SPEEDMATCH, YELLOW SPEEDMATCH. The combination of the active lights indicates the present status of the clutches. In addition to the above six lights, there are two more lights located over the WIND push-button to indicate an OVER or an UNDER wind operation.

1.4 FEATURES EXCLUSIVE TO THE STEADYWEB SPLICER

In addition to the circuit cards that are provided with a standard SteadyWeb Control unit, the SteadyWeb Splicer incorporates a splicer sequencing card which controls the sequence of splicing events, an auxiliary front card which contains the necessary push buttons and indicator lamps to operate the clutches and turret, and additional circuit cards specific to various rewind motor configurations.

Automatic control of flying splice operation is provided by a speed regulator which matches the surface speed of the core to the web speed, and a logic circuit which sequences turret rotation and knife operation and transfers automatic tension control to the new core. The machine operator need only press one button to make a flying splice.

The three typical motor configurations that determine which additional circuit cards are included are:

1) Dual motor (90V) with eddy current drives
2) Dual motor (10V) with D.C. drives
3) Single motor (90V) with 1 eddy current drive and 2 shaft clutches

In the first configuration the additional included cards are two (2) V-out cards. In the second case there is a signal isolation PCB for dual D.C. motors. In the third configuration with a single motor rewind a DSLC1 card is used with 1 V-out card. Each of these cards is described in more detail in the following section.

1.5 CIRCUIT CARD DESCRIPTION

For the POWER, CONTROL, FRONT, V-OUT circuit cards refer to the SteadyWeb Instruction Manual. Detailed diagrams of the following cards can be found in Appendix A.

AUX FRONT CARD:
The Auxiliary Front PCB (Figure 4, Page 14) contains six momentary push button switches, two for the yellow Clutch (on/off), two for the Red Clutch (on/off), two for splicing (Start/Stop) and one maintained push button for winding over or under. Also located on the card is a 4 position rotary switch for the selection of up to four different core sizes. Associated with this rotary switch are 8 potentiometers, (2 per position selection) one which trims the speed match signal, the other adjusts a delay to fire the knife after the turret reaches the turret limit switch. Also located on this card is an analog output meter for viewing the speed-match output, and 8 L.E.D.'s for indicating which functions are active or not

SPLICER SEQUENCING CARD:
The Splicer sequencing card (Figure 5, Page 15) controls the main splicing functions of the SteadyWeb Splicer. Located on this card is a +/-15VDC power supply which powers the Aux Front PCB, both V-out PCB's, and itself. The power supply is energized when the main power switch is activated. Also located on this card are two solid state relays rated at 240VAC/4AMPS, one is for rotating the turret, the other for activating a knife solenoid, bell/buzzer or other indicating devices.

This card contains 4 potentiometers. A 24 position terminal block on the card accepts a tachometer interface which is used to link two roll tachometers to the card, and the activation connectors for the knife fire and the turret rotation. Also on the terminal are the contacts for the knife limit and turret LIMIT SWITCHES. Solid state logic circuits on the remainder of the card process and send various signals necessary for the sequencing of events that occur in an automatic splice.

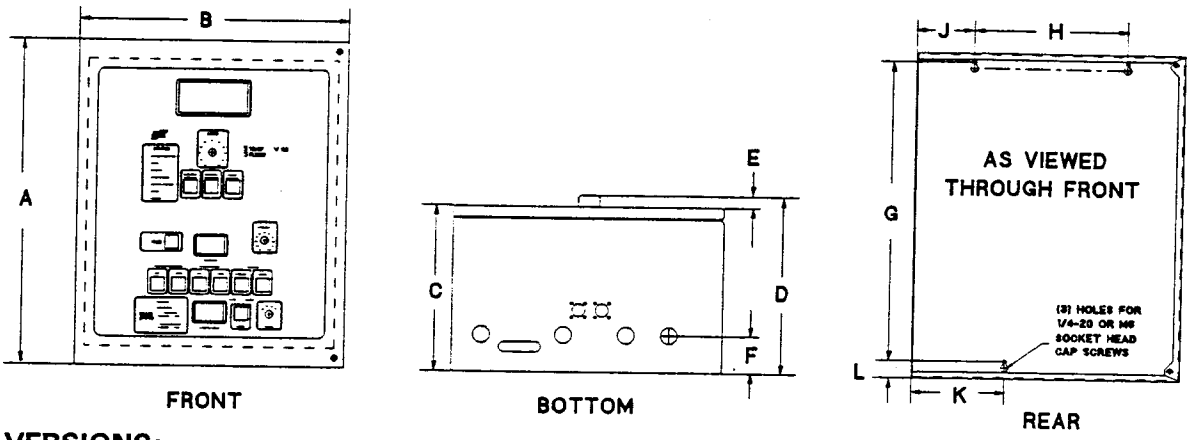
DSLC1 CARD:
The Dual Slip Lock Clutch card (Figure 6, Page 16) is an option card that is only used when the SteadyWeb Splicer is connected or configured to control a single motor splicer with shaft-mounted slip type clutches. The card itself contains a full wave bridge rectifier, two fuses, and five relays, which are used to activate the slip clutches. Also associated with this card, but not contained on it, are two 25 watt or 50 watt rheostats which adjust the amount of slip voltage to the appropriate clutch.

SIGNAL ISOLATION CARD:
The Signal Isolation Card (Figure 7, Page 16) is an option card and is only used when the SteadyWeb Splicer is connected or configured to control two D.C. motors. The card contains an isolated +/-15VDC power supply, an isolation integrated circuit, test points, cable connectors, terminal blocks, and a fuse; it is very simple to use. There are no adjustments. The isolated voltage applied at the input is the same at the output.

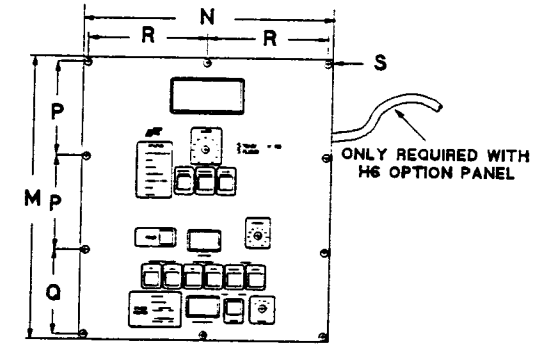
1.6 DIMENSIONS

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
inch	17.00	14.00	8.65	9.24	0.187	1.94	15.62	8.00	3.00	4.88	0.92	15.00	13.00	5.00	15.62	6.25	0.152 DIA.	1.61	0.67	0.46
mm	432	356	220	235	5	49	397	203	76	124	23	381	330	127	397	159	3.86	41	17	12

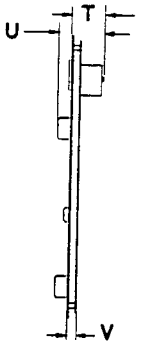
STANDARD ENCLOSURE:



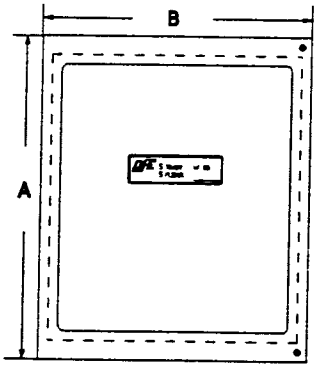
CC & H6 VERSIONS:



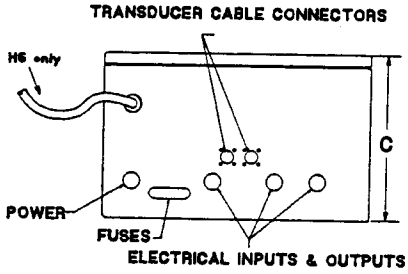
FRONT PANEL OPERATOR DEVICE (H-6 ONLY)



SIDE OF FRONT PANEL (H-6 ONLY)



FRONT OF BASE



BOTTOM OF BASE

See standard enclosure (REAR) diagram above for mounting hole dimensions

Figure 3 - DIMENSIONS OF STD, H6, & CC VERSIONS

1.7 SPECIFICATIONS

POWER INPUT	Version 15V Version 15D	115/230 Volts 50/60 Hz single phase @ 5 Amp 115/230 Volts 50/60 Hz single phase @ 1 Amp
OUTPUT	Version 15V Version 15D	90 Volts, 45 VDC, 24VDC @ 4 Amp 0-10VDC @ 5 mA
TRANSDUCER POWER SUPPLY		5 Volts DC regulated 10 Volts Extended Range
TRANSDUCER SIGNAL		500 millivolts DC per Pair at rated load 1 Volt for Extended Range
TRANSDUCER CABLE MATING CONNECTORS		Amphenol MS3106A-10SL-3S
ZERO (TARE) RANGE		95% of transducer rating, minimum
CALIBRATION RANGE		25:1
TEMPERATURE RANGE		32 TO 104°F (0 TO 40°C)
MAX OUTPUT ADJUSTABLE RANGE		0-100%
MIN OUTPUT ADJUSTABLE RANGE		0-20% of Max..
TAPER TENSION RANGE		0 to 100%
TENSION METER		Analog, 2%, 1ma, 48 Ohm
ENCLOSURE		Steel, NEMA 1, powder resin painted
WEIGHT		35 lbs.
SYSTEM ACCURACY		1 - 3% Typical
MANUAL MODE OUTPUT RANGE		0-100% of Rated OUTPUT VOLTAGE
OUTPUT MULTIPLIER RANGE		10:1
OUTPUT DIVIDER RANGE		1:10

1.8 VISUAL DESCRIPTIONS OF STEADYWEB SPLICER CONFIGURATIONS

Because there are three types of motor configuration and three types of enclosure option available for the SteadyWeb Splicer unit, there are nine total controller configurations possible for a given Splicer. Please refer back to section 3 of the SteadyWeb manual for a description of the H6 and CC enclosure types. The figures which correspond to each possible Splicer configuration are listed in the following chart.

	Standard Enclosure	H6 Enclosure	CC Enclosure
Dual motor (90V) with eddy current drives	Appendix C Figure 9	Appendix C Figure 10	Appendix C Figure 11
Dual motor (10V) with D.C. drives			
Single motor (90V) with 1 eddy current drive and 2 shaft clutches			

SECTION 2

SET-UP AND CALIBRATION

2.1 SPLICER CONTROLLER SETUP (DUAL AND SINGLE MOTOR REWINDS)

NOTE! This procedure assumes that the tension control portion of the system has been calibrated and tuned for proper operation. Do not begin the setup of splicer functions until the tension control function has been calibrated and tuned for proper operation.

2.2 TACHOMETER SIGNAL CALIBRATION

The SteadyWeb Splicer controller has inputs for both line speed tachometer signal and for roll speed tachometer signal(s). The interface for line speed tachometer is located on the power board and is marked J208. A tachometer interface board (723-0101 DC or 723-0078 pulse) is required in order to trim the tachometer signal to the proper level. The line speed interface board is plugged into J208 while the roll speed tachometer interface (same part numbers as for line speed) is located on the splicer sequencer board at J5. Only one interface board is required even though you may be interfacing to a dual motor splicing rewind. Each board is able to interface two tachometer signals, both must be of the same type, DC or pulse.

In order for the speed match function of the controller to operate properly, the tachometer signals must be set for a maximum of 10 volts DC at full machine speed.

This is accomplished by removing all web material from your machine, running the machine at full speed, and setting the span adjust potentiometer (RT601 for the pulse tach board, or RT701 for the DC tach board) for 10 VDC at TP701 (TP601 for pulse tach) using TP703 (TP603 for pulse) as common. If it is not practical to run the machine at full speed, you may run the machine at partial speed and calculate the interface board output. To accomplish this set the machine at a fixed known speed and divide the actual speed by the maximum speed (actual speed/maximum speed) and multiply by 10. If for example the machine has a maximum speed of 1000 feet per minute and the actual speed is 250 feet per minute the result would be (250/1000)10 = 2.5 VDC. In this case the span adjust should be set so that TP701 (TP601 for pulse tach) is 2.5 volts DC with respect to common.

The roll tach signals are adjusted similarly to the line speed tach signals above. The same type interface board used to adjust the roll tach signals is also used for the line speed. The Red rewind shaft should be run at a fixed speed (in the manual tension set mode) using the smallest core that the machine uses for rewind purposes. Using a hand tachometer verify the speed of the core (line speed not RPM), divide this speed by the maximum line speed and multiply by 10. Adjust RT702 (RT602 for pulse tachometer) for the correct output at TP702 (TP602 for pulse tach) again using TP703 (TP603 for pulse tach) as common. The procedure for the Yellow shaft is the same except that the span adjust is RT701 (RT601 for pulse tach) and the test point used is TP701. Using the 1000 FPM machine above, the core speed found with the hand tachometer would be divided by the 1000 FPM as above and multiplied by 10 to arrive at the proper output voltage. Remember that each rewind shaft must be individually checked for speed and adjusted for output in a dual motor rewind.

2.3 SPEED MATCH ADJUSTMENT

To facilitate ease of setup it is suggested that the four (4) multiturn potentiometers on the sequencer board and the eight (8) multiturn potentiometers on the front panel auxiliary board be preset approximately to the listed settings. Because these are twenty five (25) turn potentiometers it is not possible to accurately preset them.

Sequencer board potentiometers should be set as follows:
(CW = clockwise; CCW = Counterclockwise)

RT 1 50%
RT 2 CCW
RT 3 50%
RT 4 CCW.

Front panel pots RT1-RT4 should all be set fully to CW (clockwise--100% of rotation) RT6, RT7, RT9, and RT11 should be set fully CCW (counter-clockwise). In order to set the multiturn pots at 50% first set the pots fully CCW by rotating the adjuster 25 full turns CCW. On completion of this the pots should be rotated approximately 12.5 turns clockwise, this will place them close to the 50% position. To set the pots fully CW rotate adjuster 25 full turns CW.

Connect a DC voltmeter (digital if possible) between TP25 (+) and TP2 (-) of the splicer sequencer board. With the machine idle (no tachometer signals) voltage should be 0. Set the front panel CORE switch to position one (smallest core) and run the machine (with no web material) at a speed approximately 50% of maximum. Start the RED rewind shaft (press the RED CLUTCH ON button) in the manual tension mode, depress the YELLOW CLUTCH ON button thus placing the yellow shaft in the speed match mode. Adjust RT3 so that the yellow shaft (with smallest core mounted) matches the machine line speed as closely as possible. Depress the YELLOW CLUTCH OFF button. Again depress the YELLOW CLUTCH START and check the shaft speed compared to the machine line speed, this should continue to match. Increase the line speed and verify that the YELLOW shaft speed increases to match. Decrease the speed to about 25% of max line speed and again verify the speed match. With the machine again running at 50% max speed adjust RT2 so that the YELLOW shaft is running approximately 10 FPM faster than the machine line speed. Press the YELLOW CLUTCH STOP button. Depress the SPLICE START button, the turret should rotate from the RED to the YELLOW rewind position and the YELLOW shaft should start in the speed match mode. When the turret reaches the end of it's rotation the knife (automatic) will fire and the RED and YELLOW clutches will change state (RED clutch will be off, YELLOW clutch will be in tension control). Press the RED CLUTCH ON button, the Red shaft should start in speed match. Verify that the shaft is indeed running at approximately 10 FPM faster than the line speed (matching the speed of the Yellow shaft) and that the speed change is linear as speed is increased and decreased. Stop both rewind clutches by depressing the YELLOW CLUTCH OFF and the RED CLUTCH OFF buttons.

Select the second core size (number 2) on the front panel CORE selector switch and install the next larger core to be used on the press. Adjust RT-3 counter clockwise until core speed is about 10 FPM greater than line speed. Repeat this process using RT-2 and RT-1 until all core sizes (up to 4 total) have been set to match line speed as above.

2.4 VERIFY SPLICING SEQUENCE

Rotate the turret far enough to place the YELLOW shaft in the rewind position.

With no web, start rewind motors. Set controller to manual tension mode and press the clutch start button for the YELLOW shaft, the tension LED for the YELLOW clutch should now light. Increase the manual set point until the YELLOW shaft begins to turn.

Press the SPLICE START button, the RED clutch speed match LED should light, the turret begin to rotate, and the splicing LED should light. The turret should continue to rotate until the turret limit switch is tripped (RED shaft should be in rewind position). When the turret limit switch is tripped the turret should stop rotating, the FIRE-KNIFE LED should light and if a normal automatic knife is being used, the knife should fire. As the knife fires, it will trip the knife limit switch which will turn off the FIRE-KNIFE LED and cause the YELLOW clutch to turn off and the RED clutch to transfer from speed match to tension mode (note change in LEDs). Pressing SPLICE START again will repeat the above but with YELLOW clutch in speed match mode transferring to tension mode on completion of the knife limit closure.

2.5 ADDITIONAL SETUP PROCEDURE FOR SINGLE MOTOR CONFIGURATION

The following steps should be taken only when your rewind stand has a single motor turret with one eddy current drive and two shaft clutches. A single motor turret rewind requires additional setup to control the slip clutches during splice as well as the eddy current clutch for speed match/tension control.

1. Connect a volt meter between sequencer board TP23 and common (sequencer board TP2). Adjust RT1 (sequencer board) so that the voltage at TP23 is +1 volt DC.

2. The slip clutch splice voltage is controlled by two large rheostats marked RED and YELLOW mounted in the bottom of the enclosure. Set each of the rheostats to the 60% clockwise position (estimated).

3. With a large roll (preferably maximum, full roll size) winding on the yellow shaft, rotate the turret into the splice position (red core in winding position) and start the red shaft in speed match. As the red shaft starts in speed match observe the yellow shaft (full roll) and adjust the yellow rheostat higher or lower as needed to maintain full roll tension as closely as possible to running tension.

4. Reset the red rheostat as closely as possible to the setting of the yellow rheostat. Repeat the above step with the red shaft at full roll and the yellow shaft at speed match adjusting the red rheostat for best tension maintenance.

SECTION 3

OPERATING DESCRIPTION

3.1 OPERATING INSTRUCTIONS

Perform the first four (4) steps shown in bold below to complete a splice sequence. The first three steps need only to be performed when starting up the controller.

A. Turn controller POWER on.

B. Select YELLOW or RED clutch.

C. Initiate SPLICE START.

NOTE! Operator performs the SPLICE START step each time a splice is desired.

OPTIONAL: Initiate SPLICE STOP. This action discontinues the SPLICE START mode and may be performed anytime after SPLICE START has been initiated. Use this step when you wish to pause or otherwise interrupt the splice sequence.

To reactivate the splice sequence, simply depress the SPLICE START button once again.

NOTE! THE REMAINING SPLICE EVENTS ARE PERFORMED AUTOMATICALLY BY THE CONTROLLER. DEPRESS THE SPLICE STOP BUTTON IF YOU NEED TO INTERRUPT THE SPLICE SEQUENCE.

3.2 DESCRIPTION OF SPLICE SEQUENCE OPERATING EVENTS

The chart below describes the events that occur in each part of the rewind splicing system when the operator performs a specific action:

Dual-motor splice sequence

OPERATOR ACTION	RED CLUTCH	YELLOW CLUTCH	TURRET	KNIFE
Rewinding on Red	Tension	Off	Stationary	Off
Start Splice	Tension	Speedmatch	Rotating	Off
Stop splice (if used)	Tension	Off	Stops	Off
(Re)start splice	Tension	Speedmatch	Rotating	Off
	Tension	Speedmatch	Hits limit Begins time delay	Off
	Tension	Speedmatch	Delay ends Turret stops	Fires
	Tension	Speedmatch	Stationary	Hits limit switch Knife retracts
Rewinding on Yellow	Off	Tension	Stationary	Off
Start Splice	Speedmatch	Tension	Rotating	Off

Note: Cycle repeats as with Red-to-Yellow splice sequence, but with Red and Yellow events reversed

Single-motor splice sequence

OPERATOR ACTION	EDDY-CURRENT CLUTCH	RED CLUTCH	YELLOW CLUTCH	TURRET	KNIFE
Rewinding on Red	Tension	Locked	Off	Stationary	Off
Start Splice	Speedmatch	Slipping	Locked	Rotating	Off
Stop splice (if used)	Tension	Locked	Off	Stops	Off
(Re)start splice	Speedmatch	Slipping	Locked	Rotating	Off
	Speedmatch	Slipping	Locked	Hits limit switch, Begins time delay	Off
	Speedmatch	Slipping	Locked	Delay ends, Turret stops	Fires
	Speedmatch	Slipping	Locked	Rotates, then stops	Hits limit switch, Knife retracts
Rewinding on Yellow	Tension	Off	Locked	Stationary	Off
Start Splice	Speedmatch	Locked	Slipping	Rotating	Off

Note: Cycle repeats as with Red-to-Yellow splice sequence, but with Red and Yellow events reversed

SECTION 4

MAINTENANCE

4.1 CONTROLLER MAINTENANCE

Your SteadyWeb Splicer controller has been designed to perform maintenance-free and trouble-free for many years of service. If you are using the SteadyWeb Splicer in an environment with a high level of dust or debris, the unit may need to be cleaned periodically. This should be done with a soft cloth, warm water and a very mild detergent in order not to damage the finish on your enclosure. If more detailed maintenance is required than cleaning the enclosure of your SteadyWeb unit, please consult with the Technical Service Department at DFE. Phone 603-332-6150or fax 603-332-3758. E-mail: dfe@ttlc.net.

SECTION 5

TROUBLESHOOTING

5.1 TROUBLESHOOTING

Most problems are caused by incorrect installation and misapplication of the equipment. It is very important to be sure these factors are correct before making any changes to potentiometer and switch settings.

If you have any problems with the tension control or splicer functions on your SteadyWeb Splicer Controller, please call Technical Service at 603-332-6150 or fax 603-332-3758.
E-mail: dfe@ttlc.net.

DFE's experienced technicians are responsible to ensure that you are satisfied with your DFE equipment. They will be pleased to assist you.

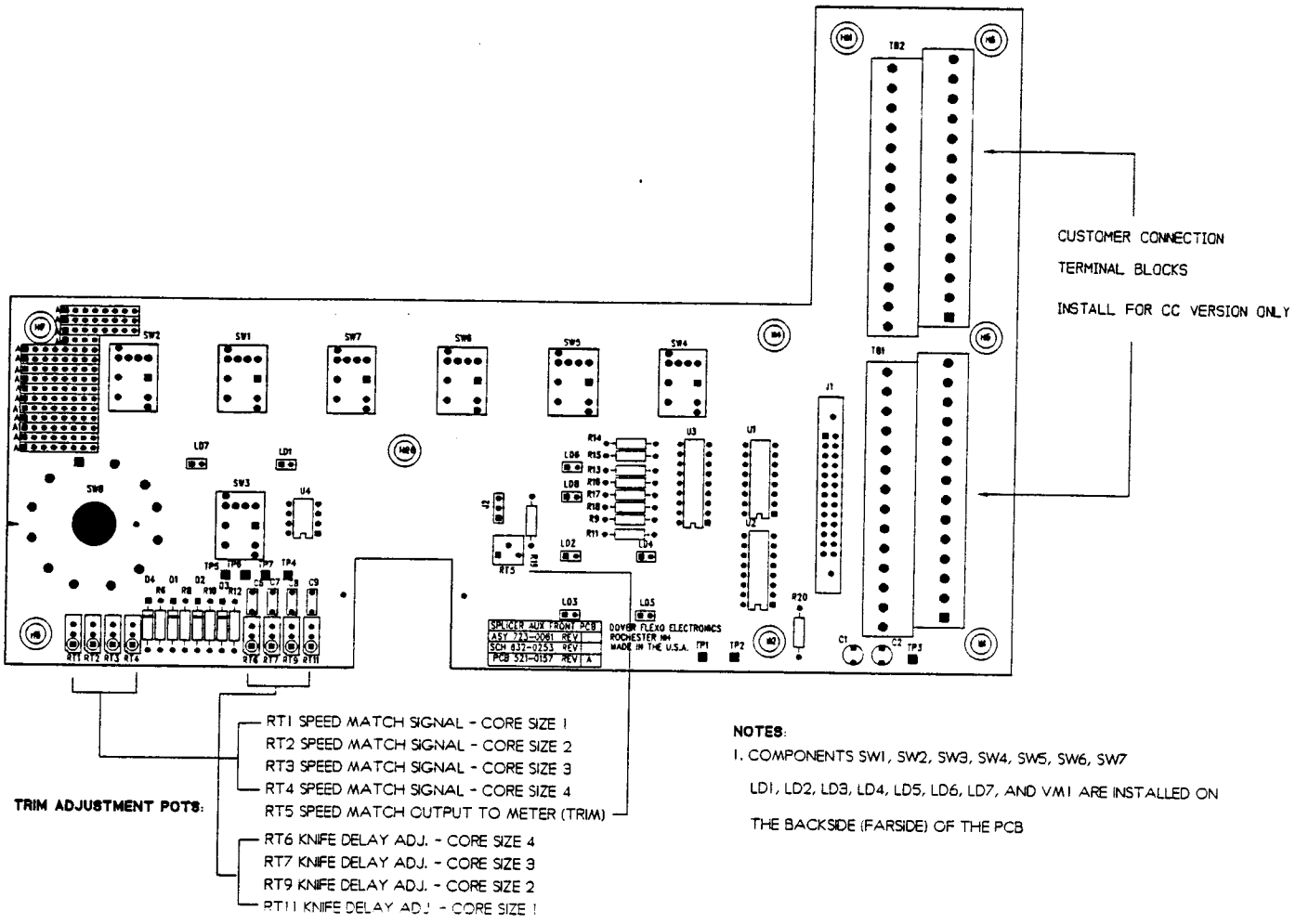


Figure 4 **- AUX FRONT CARD**

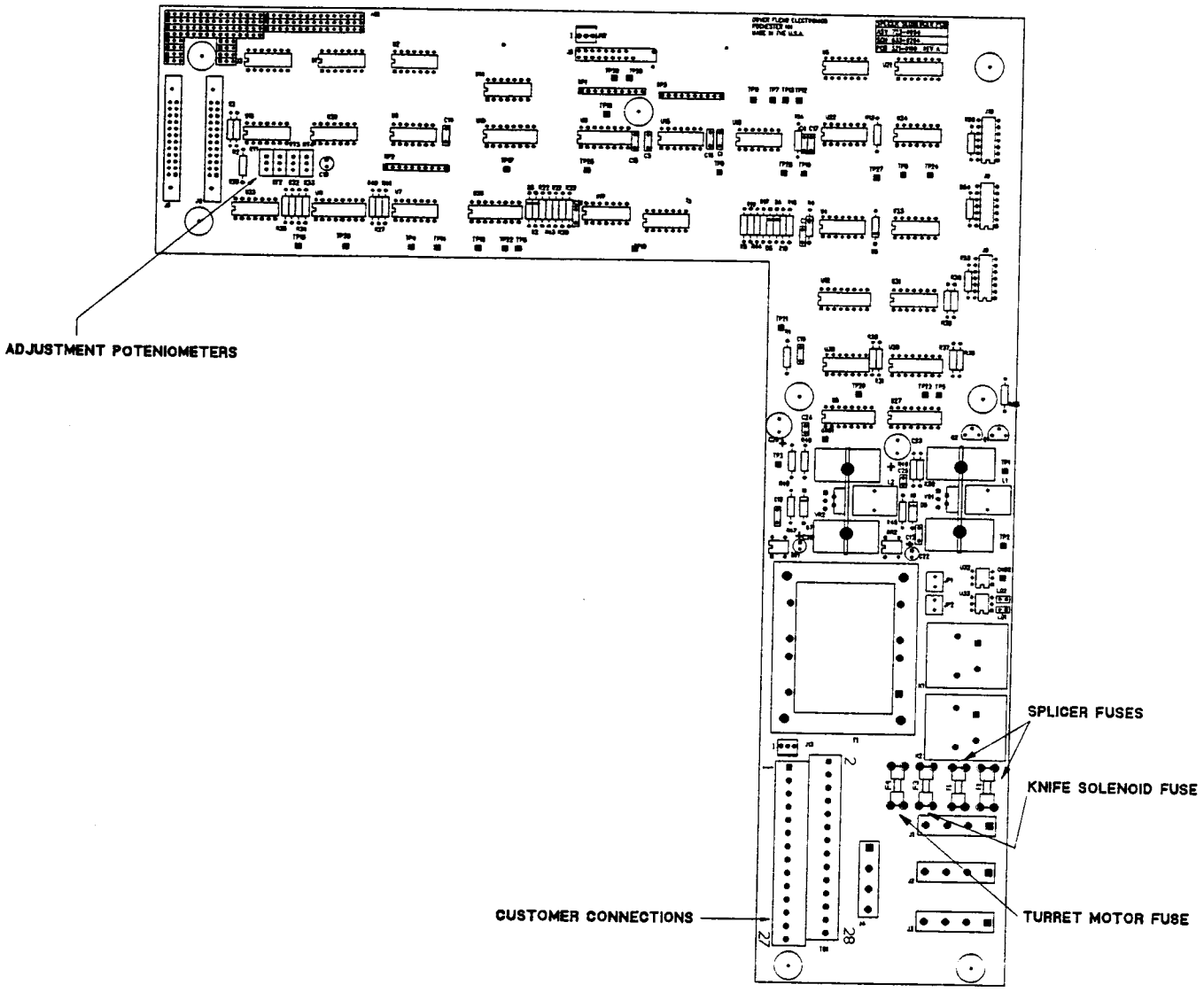


Figure 5 - **SPLICER SEQUENCING CARD**

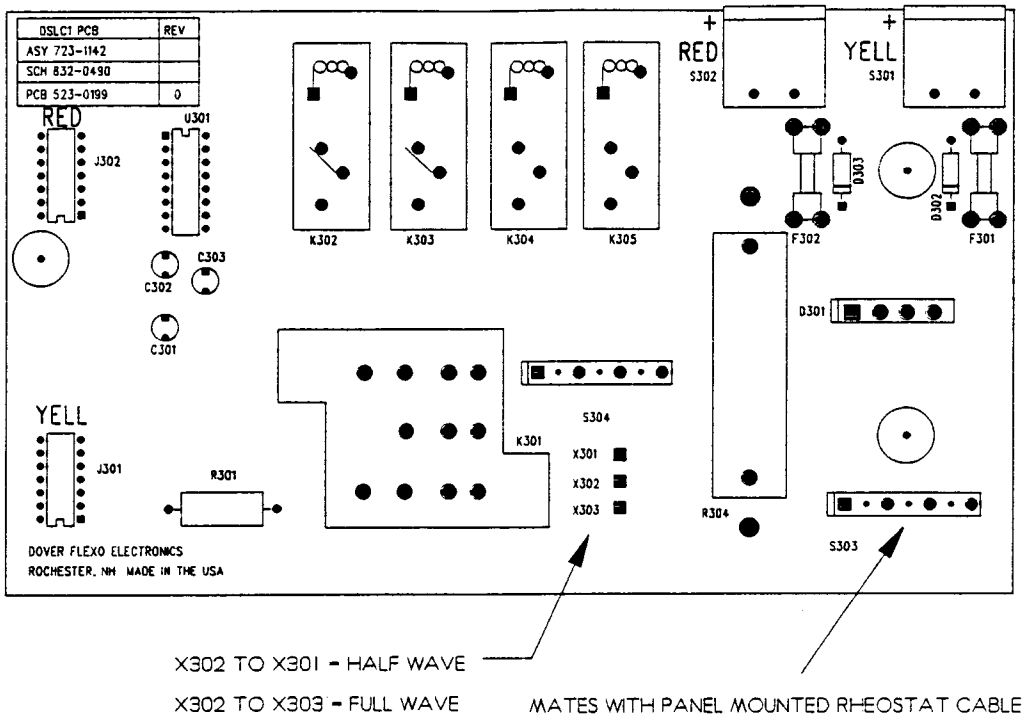


Figure 6 **- DSC1 CARD**

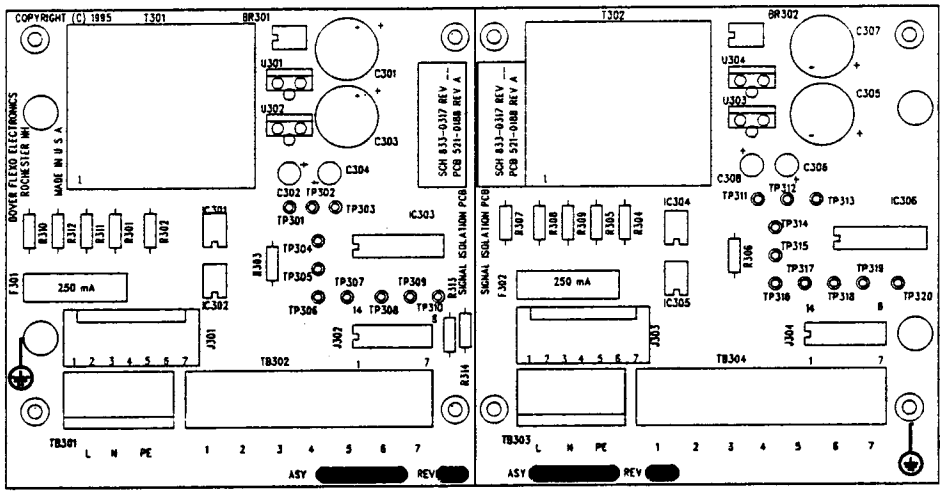


Figure 7 **- SIGNAL ISOLATION CARD**

Appendix B: Electrical Connections-Splicer Sequence Card

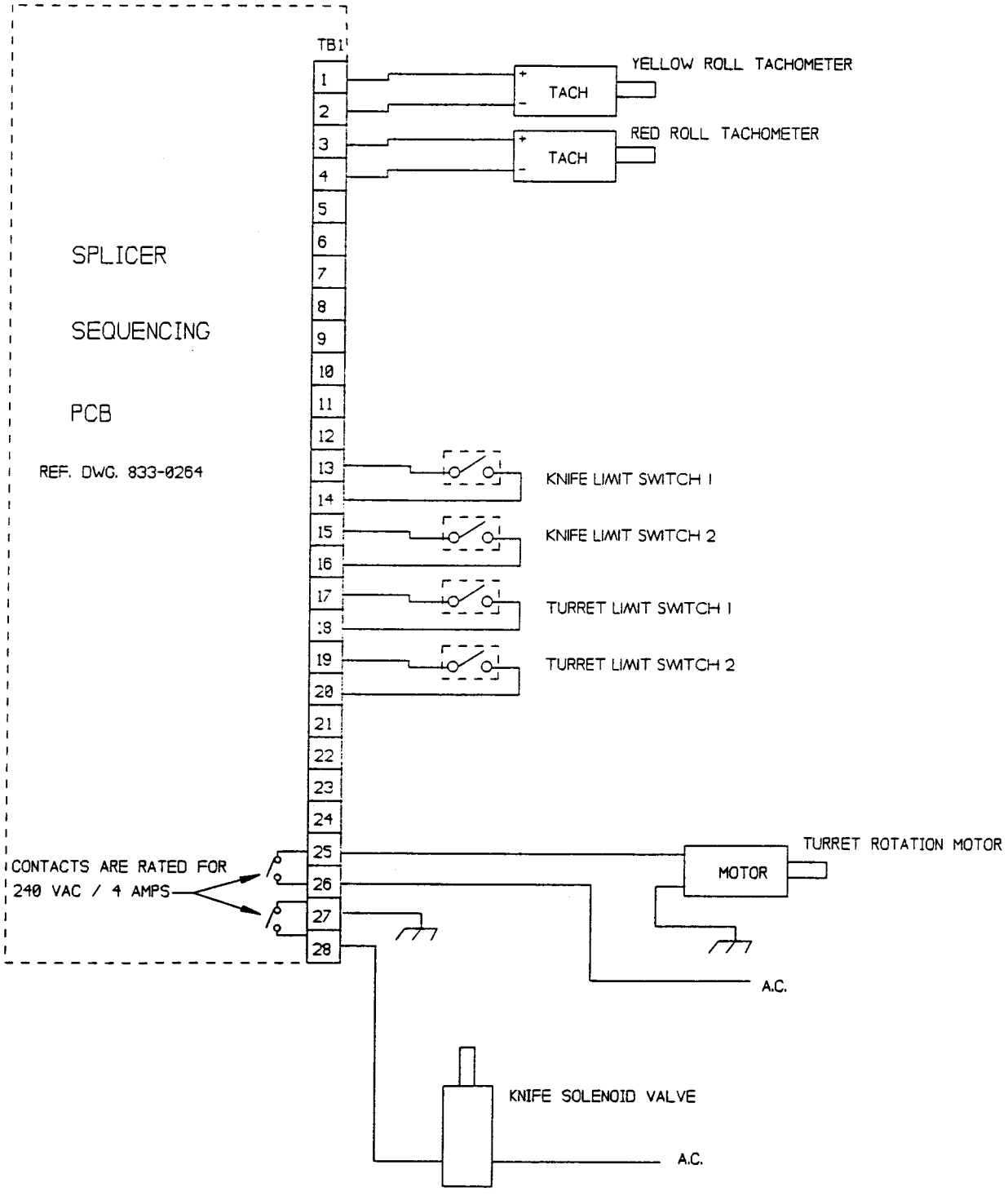
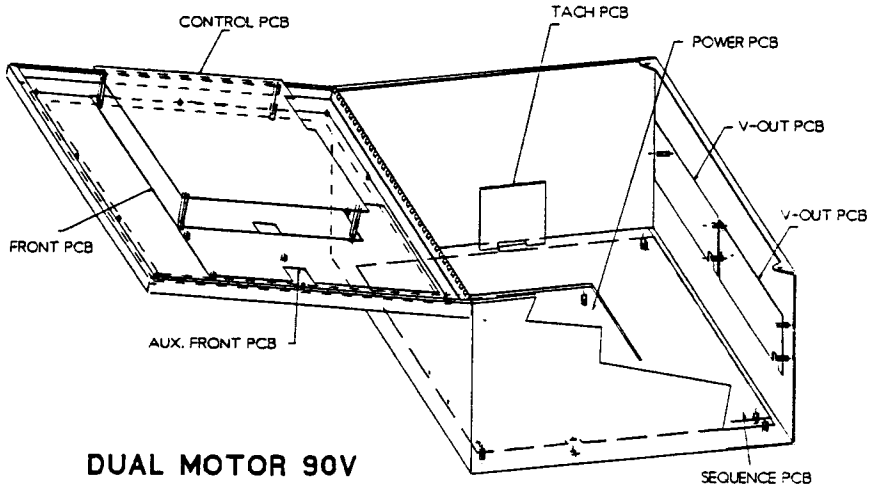
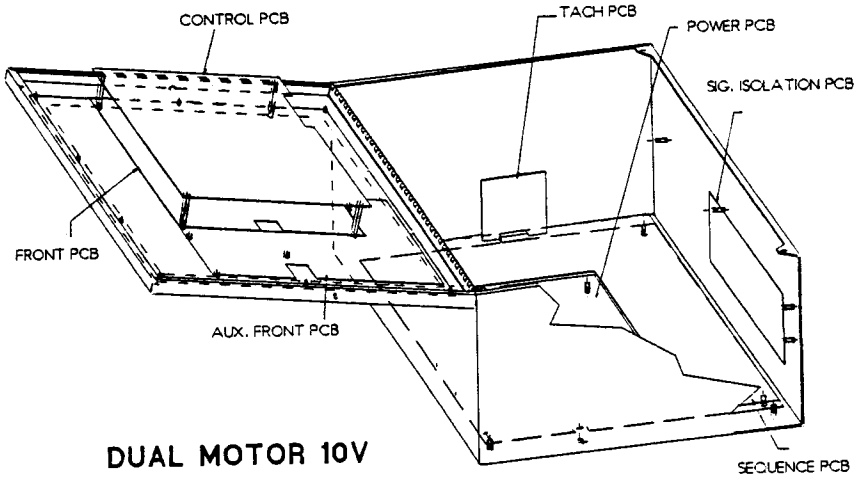


Figure 8 **- SPLICER SEQUENCE CARD CONNECTIONS**





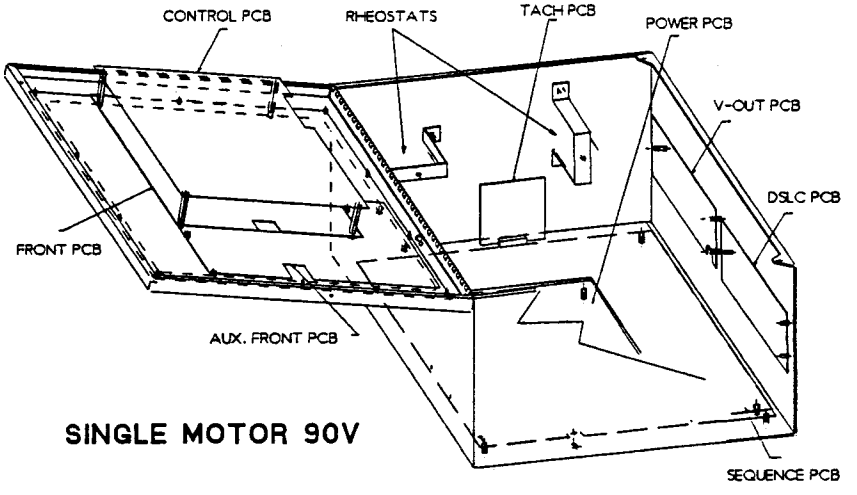
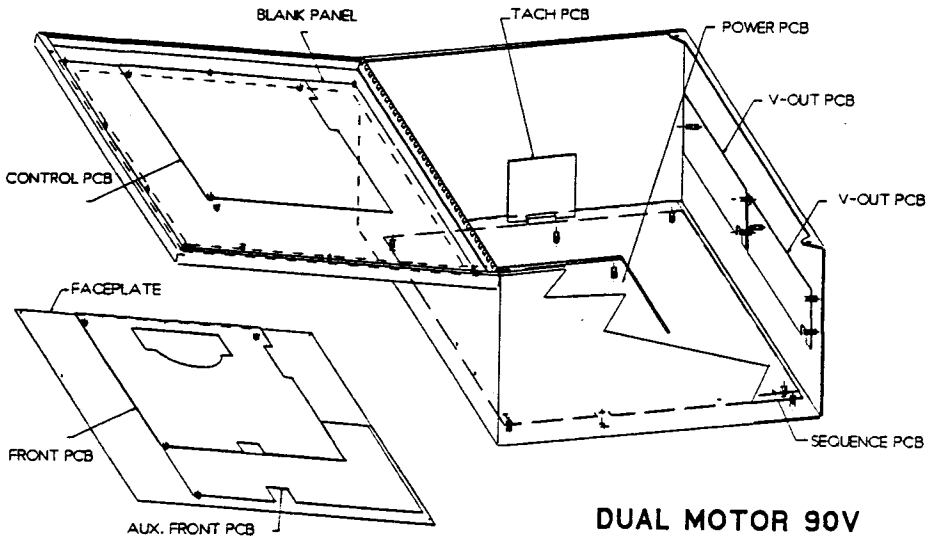
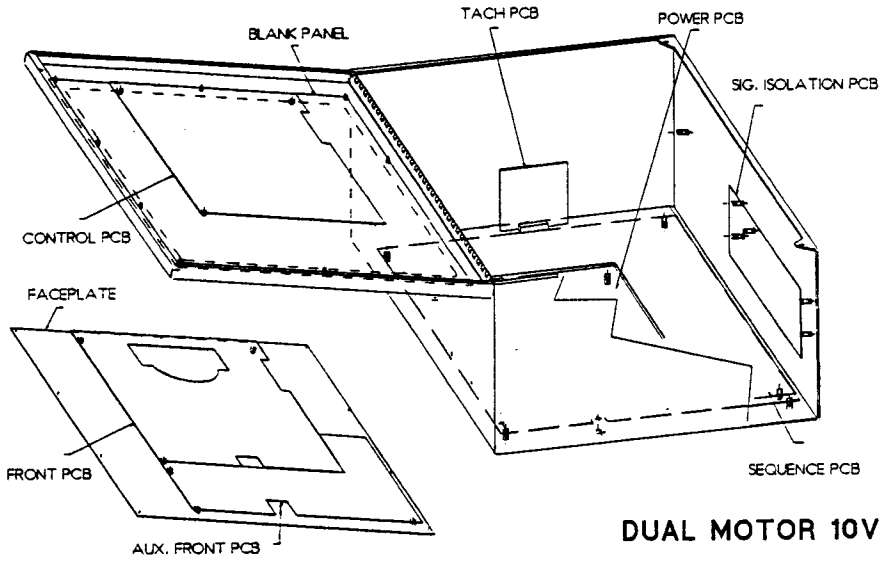


Figure 9 **- STD VERSION CHASSIS CONFIGURATIONS**





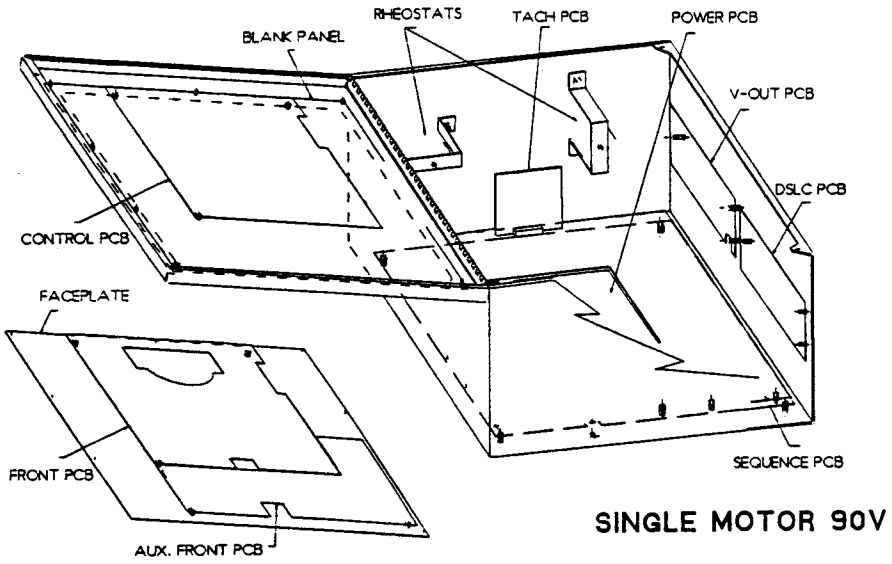
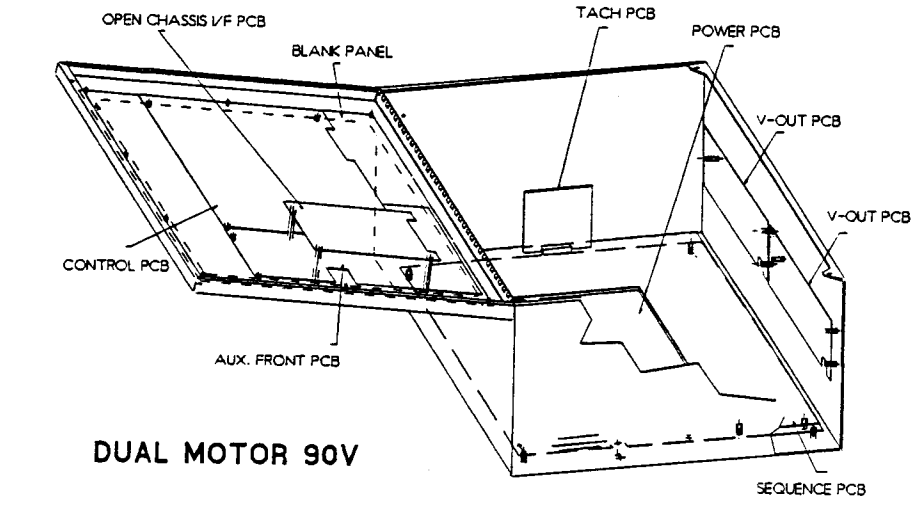
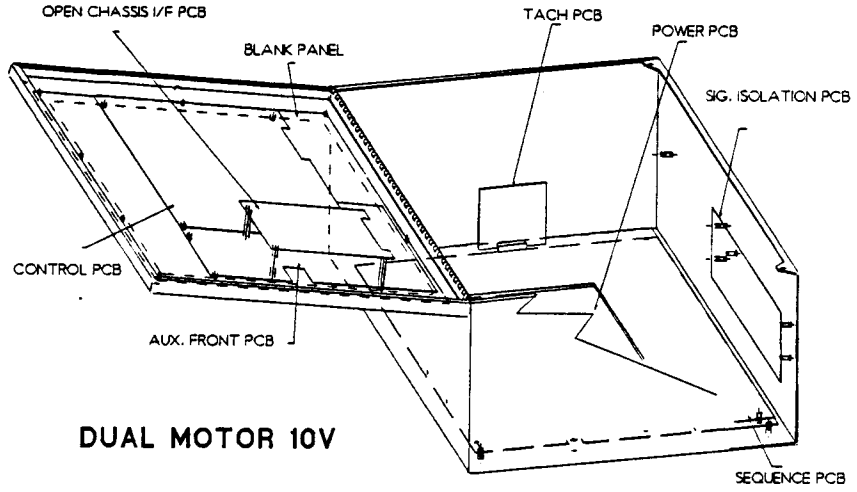


Figure 10 **- H6 CHASSIS CONFIGURATIONS**





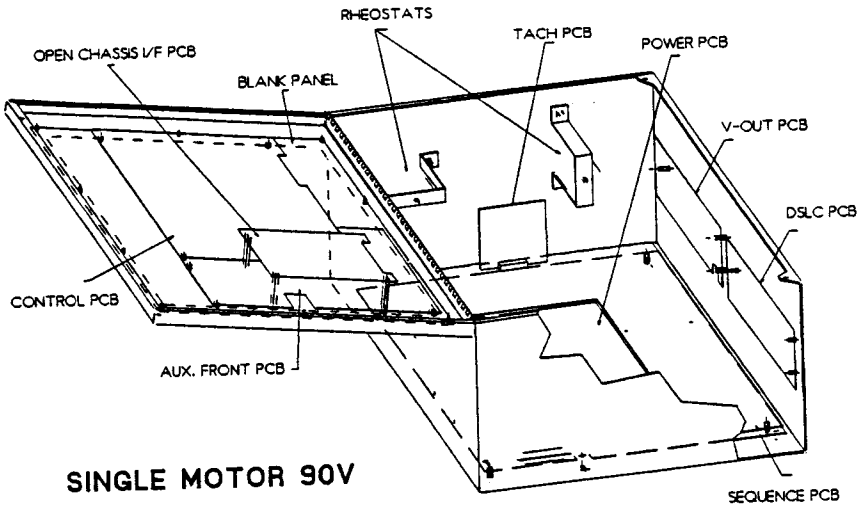


Figure 11 **- CC CHASSIS CONFIGURATIONS**