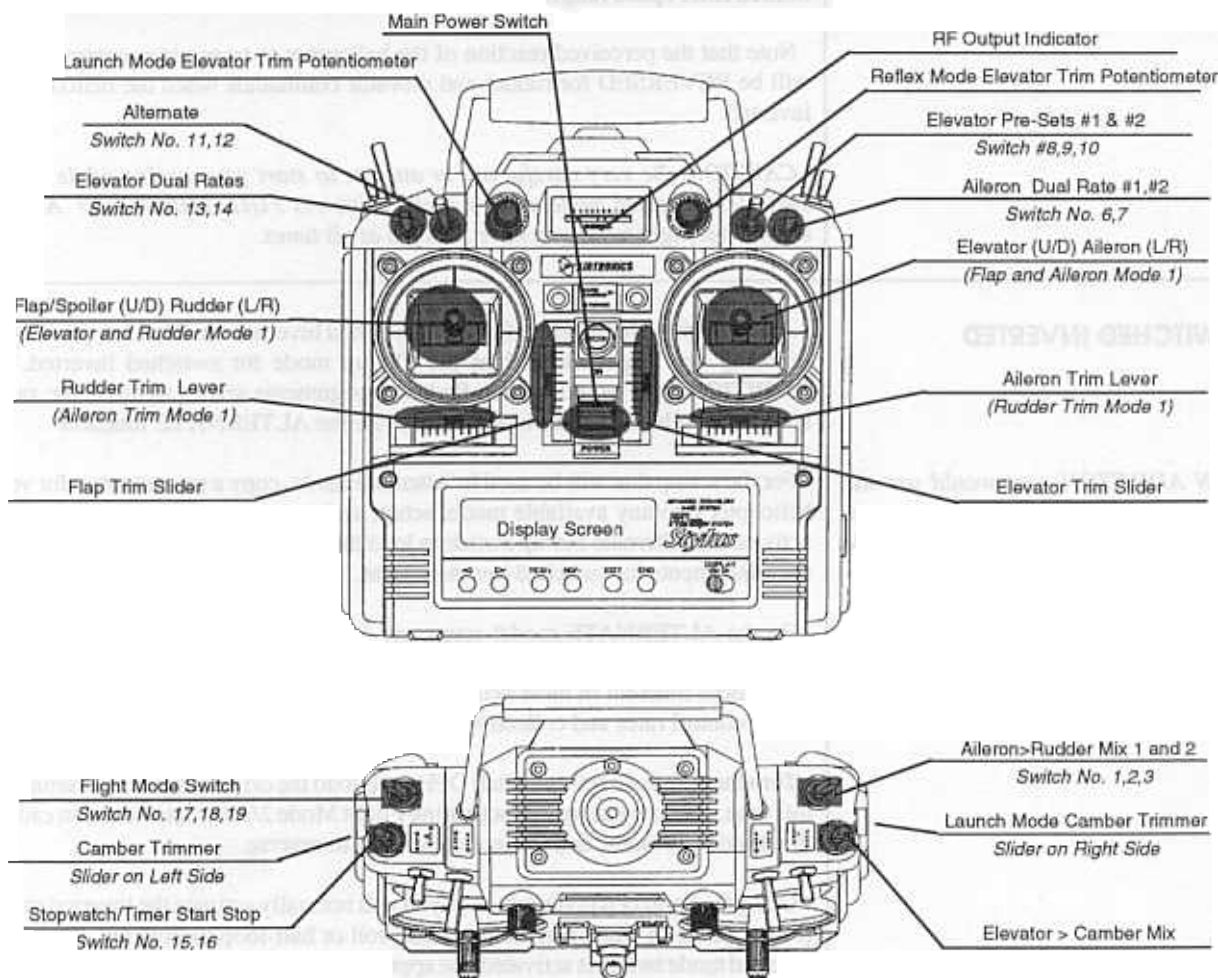


# Stylus User's Manual — SAILPLANE



## Read This!!

Before doing ANY programming for your model, make certain that you have selected the desired model TYPE (AERO, HELI or GLID).

IF YOU CHANGE TYPES, (to Aircraft or Glider) or if you use the Data Reset at any time, the switch assignments will need to be checked. The chart at the right shows the intended 'default' switch assignments. It is recommended that you at least start out with these assignments, as this will make your system consistent with this manual. Later, you may change switch assignments to personalize your setup for your own flying preferences.

NOTE: A "0" default setting means that function is not presently assigned to a switch. To make the function operative you must assign it to a switch or assign it to be always on.

SCREEN ONE .... Default  
LAUNCH ..... 17  
REFL ..... 19  
GEAR ..... 0  
SCREEN TWO  
D/R A1 ..... 7  
A2 ..... 6  
E1 ..... 14  
E2 ..... 13  
SCREEN THREE  
R1 ..... 0  
R2 ..... 0  
ALTERNATE ..... 11  
SCREEN FOUR  
A1>RU1 ..... 1  
A1>RU2 ..... 3  
EL>CB ..... 5  
SCREEN FIVE  
E-PST 1 ..... 8  
E-PST 2 ..... 10  
STW S/S ..... 15  
SCREEN SIX  
C-MI 1 ..... 0  
C-MI 2 ..... 0  
C-MI 3 ..... 0

## RECEIVER CHANNEL ASSIGNMENTS

Receiver Plug No. .... Plug In Servo For:

1	Spoiler
2	L. Aileron
3	Elevator
4	Rudder
5	Gear
6	L. Flap
7	R. Aileron
8	R. Flap
B	Battery - input end of switch harness. NOT FOR SERVO!

This same order  
applies to the servo  
reversing screen  
positions.

Channel assignments apply to both the  
PCM and FM receivers provided with Stylus systems.

# SAILPLANE

## Stylus Menu Summary — Sailplane Menus

MENU SAMPLE	EXPLANATION/ACCESS <i>(Note: positions are left to right, top row, then left to right, bottom row)</i>
	First Position ..... Displays present model type Second Position ..... Designates Integral Timer or Stopwatch Function Third Position ..... Stopwatch/Timer Display, Minutes:Seconds Fourth Position ..... Present Model Name Fifth Position ..... Present Transmitter battery pack voltage
	First Position ..... Servo Centering Second Position ..... Elevator Pre-Sets Adjustment Third Position ..... Trim Memory Fourth Position ..... Dual Rates Adjustment Fifth Position ..... Elevator preset for Launch Sixth Position ..... Camber preset for Launch Seventh Position ..... Flap preset for Launch
	First Position ..... Elevator Preset for Reflex Second Position ..... Camber Preset for Reflex Third Position ..... Ail > Rud Mix for Reflex Fourth Position ..... Elevator Mixers Fifth Position ..... Landing Mode Settings Sixth Position ..... Compensation Mixers
	First Position ..... Ail > Rud Mixers Second Position ..... Elevator >Camber Mixer Third Position ..... Camber Mixing Fourth Position ..... Differential Aileron Fifth Position ..... Landing Gear Sixth Position ..... Model Selection
	First Position ..... Servo End Point Adjustment Second Position ..... Servo Reversing Third Position ..... Switch Assignments Fourth Position ..... V-Tail Option Fifth Position ..... Alternate Setup Function Sixth Position ..... Timer Set Seventh Position ..... Aircraft Type
	First Position ..... Data Copy Second Position ..... Data Reset Third Position ..... Transmitter Modulation Fourth Position ..... Name Assignment
	First Position ..... Fail-Safe Assignment Second Position ..... Transmitter Screen contrast Third Position ..... "Click" or beep volume Fourth Position ..... RAM or ROM card menus
	First Position ..... Mode 1,2 selection Second Position ..... Switch Alarm Third Position ..... Battery Fail Safe

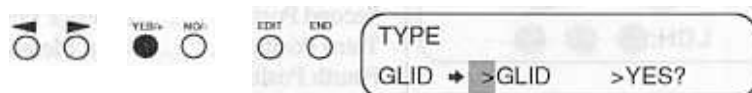
## SAILPLANE

### TO SELECT SAILPLANE SET-UP:

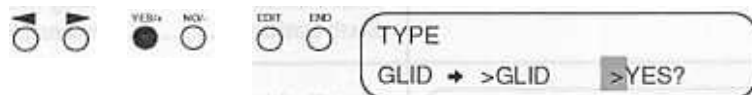
Press EDIT key to arrive at the screen shown below. Press > button to place cursor over TYPE.



Now press the YES/+ button. You will see a screen such as that shown below.



If GLID is not currently displayed to the right of the cursor position, press the YES/+ button or NO/- button until GLID is displayed. (The possible choices are: AERO, for powered aircraft; HELI, for helicopter, or; GLID for sailplanes.) To confirm your selection press the > key to move the cursor to the >YES position, then press the YES/+ key.



Possible choices are:

AERO, for powered aircraft

HELI, for helicopter

GLID, for sailplanes.

### BASIC SAILPLANE FEATURES

In this section you will learn to name and save your aircraft set-up(s), tailor the servo movement and centering for each control and activate and adjust the sailplane mixing functions.

Pressing the END key on the front control panel twice will bring you to the following screen, the INITIAL SCREEN:



This screen tells you several valuable things as stated in the Introduction section of this manual. If you are not familiar with this screen, please refer to that section!

To set up your model, press the EDIT key until you reach this screen:



Press the > key to move the cursor to MODULATION. Press the YES/+ key, and this screen will appear: (See next page)

## SAILPLANE

### BASIC SAILPLANE SETUP ...

*PCM modulation can only be used in conjunction with a P/N 92185 PCM receiver!*

◀ ▶ YES/+ NO/- EDIT END

MODULATION

PCM  
>PPM  
>PPM-INV

This screen allows you to select PPM/FM operation or PCM/FM operation. You can also set PPM/FM Inverted operation for use with other brands of PPM/FM receivers that require this mode.

Press the YES/+ or NO/- key to change the currently displayed choice. *PCM modulation can only be used in conjunction with a P/N 92185 PCM receiver!*

### NAMING THE PRESENT SAILPLANE

*You may use any combination of LETTERS, NUMBERS, Colon (:), Dash (-) or Spaces up to a total of 10 characters.*

When you have set the proper modulation, press the END key to return to the prior screen. Press the > key to place the cursor over the NAME position.

◀ ▶ YES/+ NO/- EDIT END

D-COPY D-RESET  
MODULATION NAME

◀ ▶ YES/+ NO/- EDIT END

D-COPY D-RESET  
MODULATION NAME

With cursor positioned over NAME, press the YES/+ key to reach this screen:

◀ ▶ YES/+ NO/- EDIT END

NAME GLID-A

Press both the YES/+ and NO/- keys at the same time to RESET the present name, if any.

The cursor will now be pointing to the first NAME space. You may use any combination of LETTERS, NUMBERS, Colon (:), Dash (-) or Spaces up to a total of 10 characters. To select the character for the first position, press the YES/+ or NO/- key to move through the available characters. When you reach the desired letter or character, press the > key to move to the next position. Continue until you have completed your present model's name or description, then press END to return to the prior screen.

◀ ▶ YES/+ NO/- EDIT END

NAME PERIGRINE

*You may edit or correct any character or the entire name at any time by repeating this section.*

You are done naming your present aircraft. You may edit or correct any character or the entire name at any time by repeating this section. Press the END key to return to the previous screen.

## SAILPLANE

### FAIL SAFE

*FAILSAFE is ONLY available when you are using a PCM receiver and transmitting in the PCM Modulation mode. If you are transmitting PPM FM you will not be able to enable the F-SAFE function.*

**NOTE:** If interference is present when Failsafe is not active, in PCM Modulation, the receiver will 'hold' the last command received until the signal is again established.

*To turn off or inhibit one of the Fail-Safe setting, move the cursor to that menu position and press BOTH the YES/+ and NO/- keys at the same time.*

Now press the EDIT key to bring up the menu below. The cursor is over F-SAFE. This menu position allows you to enable or disable the Failsafe function of your Stylus.



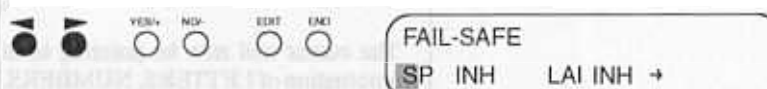
Press the YES/+ key to see this screen:



The arrow at the end of the second menu line indicates there are more screens for this function. Pressing the > Key will take you through all of the screens for the failsafe function, as follows:



The settings for the Fail-Safe menu positions can not be set by the +/- Keys. Instead, you program the desired Failsafe servo position for each by placing the control stick or switch in the desired position; for example, flaps down, slight up elevator, etc. Each control function is set individually. Start with the first Fail-Safe setting, SP (Spoiler). The default setting is INH (inhibit). To assign a Fail-Safe position for the Spoiler servo, position the cursor as shown.



Now position the Spoiler stick on the transmitter to the desired Fail-Safe position. Now press the YES/+ key to set the position in memory.

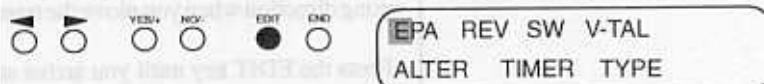


To check your settings (after programming all of your failsafe positions) simply turn the transmitter power switch OFF and check that the controls go to the preset positions. These are the positions the radio will assume if control is temporarily lost due to interference or transmitter problems.

To turn off or inhibit one of the Fail-Safe setting, move the cursor to that menu position and press BOTH the YES/+ and NO/- keys at the same time. Press the END key to return to the previous screen.

## V-TAIL SAILPLANES Servo Connections

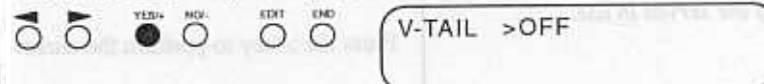
To activate the V-TAIL option, press the EDIT key until this screen shows:



Use the > key to move the cursor to the V-TAL position.



Press the YES/+ key to bring up the V-TAIL screen



Use the YES/+ or NO/- keys to turn V-TAIL ON or OFF.

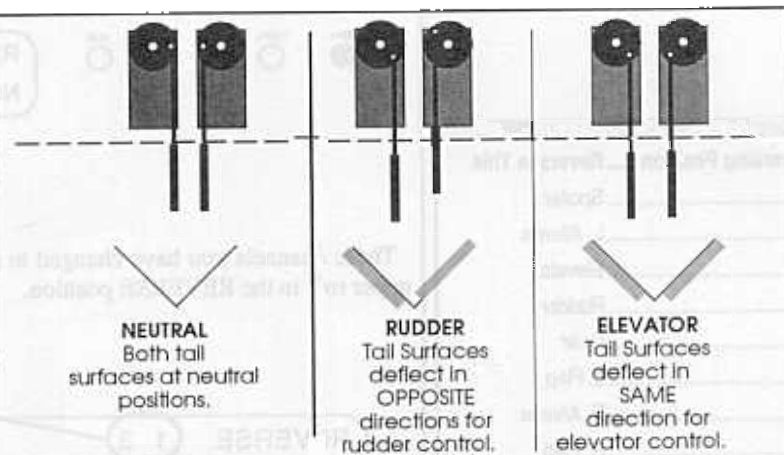
When using V-TAIL mixing, both servos will rotate in the SAME direction when rudder commands are applied. The two servos will rotate in OPPOSITE directions when elevator commands are applied. Electronically reversing either rudder or elevator channels will cause both servos to rotate in the reversed direction.

Be sure to study your control hookups to ensure proper operation. Tail surface control horns will normally be installed either on the bottoms of both control surfaces or on the tops of both surfaces. For proper operation with this type of installation, pushrods will normally be connected to the servos in a symmetrical, NOT identical manner; i.e. both connected to the outside of the servo output arm or both connected to the inside of the servo output arm. This arrangement will cause the tail surfaces to deflect in the SAME direction when elevator is applied, and in OPPOSITE directions when rudder is applied.

If you wish, you may use Aileron-Rudder mixing (covered later) to allow operation of the V-TAIL rudder function with the Aileron stick.

### V-TAIL SERVO HOOKUP

For proper operation with this type of installation, pushrods will normally be connected to the servos in a symmetrical, NOT identical manner; i.e. both connected to the outside of the servo output arm or both connected to the inside of the servo output arm.



If the Elevators respond properly but Rudder is reversed with a V-TAIL setup, (or vice-versa), switch the order in which these two servos are plugged in to the receiver.



## SAILPLANE

### SERVO REVERSING

*Stylus allows you to electronically REVERSE the direction of rotation for each of the servos in use.*

After installing your linkages, check to see if any of the controls move in the wrong direction when you move the transmitter controls. If so, proceed as follows.

Press the EDIT key until you arrive at the following screen:

◀ ▶ YES/+ NO/- EDIT END

EPA REV SW V-TAL  
ALTER TIMER TYPE

Press the > key to position the cursor over the REV position.

◀ ▶ YES/+ NO/- EDIT END

EPA **REV** SW V-TAL  
ALTER TIMER TYPE

Now press the YES/+ key to see the following screen:

◀ ▶ YES/+ NO/- EDIT END

REVERSE  
NORMAL 12345678

The default positions shown have all channels operating in the NORMAL direction, so all channel numbers are in the lower row as shown above.

If, for instance, you wish to change the direction of rotation of the servos operating on channels number 1 and number 3, press < or > keys to position the cursor over the desired channel number(s), then press the YES/+ or NO/- key to change that channel to the REVERSE direction.

◀ ▶ YES/+ NO/- EDIT END

REVERSE  
NORMAL 12345678

◀ ▶ YES/+ NO/- EDIT END

Those channels you have changed to reverse rotation will now appear in the upper row in the REVERSE position.

REVERSE 1 3  
NORMAL 2 45678

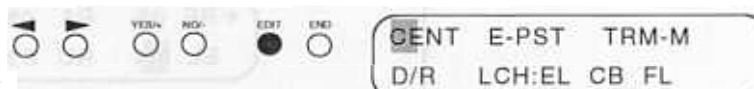
*In this example, Channels 1 and 3 have been set for REVERSE rotation.*

#### Reversing Position ..... Reverses This

- |         |            |
|---------|------------|
| 1 ..... | Spoiler    |
| 2 ..... | L. Aileron |
| 3 ..... | Elevator   |
| 4 ..... | Rudder     |
| 5 ..... | Gear       |
| 6 ..... | L. Flap    |
| 7 ..... | R. Aileron |
| 8 ..... | R. Flap    |

## SETTING CONTROL CENTERING

The Stylus allows you to fine-tune the CENTER or neutral position of all flight control servos. After hooking up your controls and mechanically centering all linkages to the approximate positions, press the EDIT key to arrive at the following screen:



Now press the YES/+ key. You will see this screen:



By pressing the > key (or < key) you can position the cursor over the desired control function. Note the arrow at the far right of the bottom row of this screen; this indicates that there are more cursor positions than presently displayed. If you continue to press the > key past the LF position, you will see the remainder of the CENTER screen positions as shown below.



*It is desirable to adjust the control linkages as close as possible to the correct center positions, then use the CENTER commands to "fine tune" the exact position of the control surface when the transmitter control is in neutral.*

The channels for which electronic centering is available are abbreviated in the CENTER menus as follows:

SP = Spoiler  
LA = Left Aileron  
LF = Left Flap  
RF = Right Flap  
RA = Right Aileron  
EL = Elevator  
RU = Rudder

The value displayed as percentage (%) to the right of each channel abbreviation shows the present centering adjustments. Default position is zero.

### IMPORTANT NOTE:

It is desirable to adjust the control linkages as close as possible to the correct center positions, then use the CENTER commands to "fine tune" the exact position of the control surface when the transmitter control is in neutral.

Using a very large amount of electronic centering adjustments will decrease the total throw available for that channel. In particular, centering adjustments greater than + or - 50% will tend to make the extreme stick position on one end less responsive.



## SAILPLANE

### Setting Control Centering ...

To adjust the centering of any channel, press the > or < key to place the cursor over that channel's position. (For this example we'll adjust the centering of the Elevator servo; so position the cursor over the EL position as shown).

← RF 0% RA 0%  
EL 0% RU 0%

Now, by pressing the YES/+ or NO/- keys you can adjust the centering for the selected channel. The value range possible is from -100% to +100%.

◀ ▶ YES/+ NO/- EDIT END  
← RF 0% RA 0%  
EL -100% to +100%

By positioning the cursor over each channel position for which centering adjustments are desired, then setting the CENTER position with the YES/+ or NO/- keys, set the centering for each channel.

### END POINT ADJUSTMENTS (EPA)

The Stylus allows you to adjust the 'End Points,' or servo travel limits, for all flight channels.

There is no EPA screen for channel 5, which is the Gear channel. This function has a separate menu that allows for throw adjustment which will be described later on.

If you are using two aileron servos on two channels, the EPA for channel 2 will affect the channel 2 aileron servo and the EPA for channel 7 will affect the other aileron servo.

In general, it is best to use as close to 150 percent servo throw as possible. This allows for the best possible resolution and centering of all control surfaces. However, in some cases it is not possible to use full servo movement — such as those instances where short control horns must be used because of aircraft design considerations.

To electronically adjust End Points for servo travel, press the EDIT key to arrive at the following screen:

◀ ▶ YES/+ NO/- EDIT END  
EPA REV SW V-TAL  
ALTER TIMER TYPE

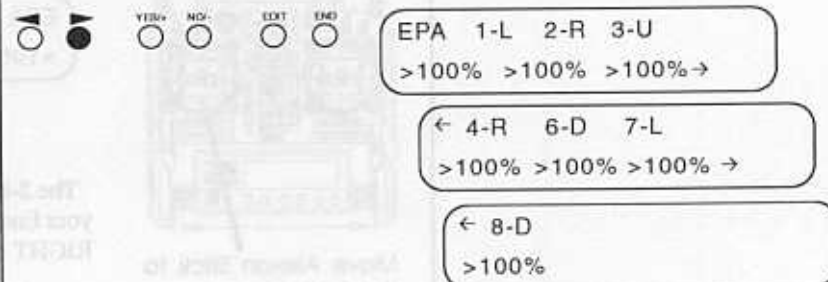
Now press the YES/+ key to see the first EPA screen.

◀ ▶ YES/+ NO/- EDIT END  
EPA 1-L 2-R 3-U  
>100% >100% >100% →

*In general, it is best to use as close to 150 percent servo throw as possible. This allows for the best possible resolution and centering of all control surfaces.*

## End Point Adjustments (EPA) ...

Note that there is an arrow pointing to the right at the bottom right corner of the screen. This means that there are more cursor positions than are presently displayed. Pressing the > key repeatedly will 'push' the cursor off this screen and bring up the second and third screens of the EPA menu, as shown below.

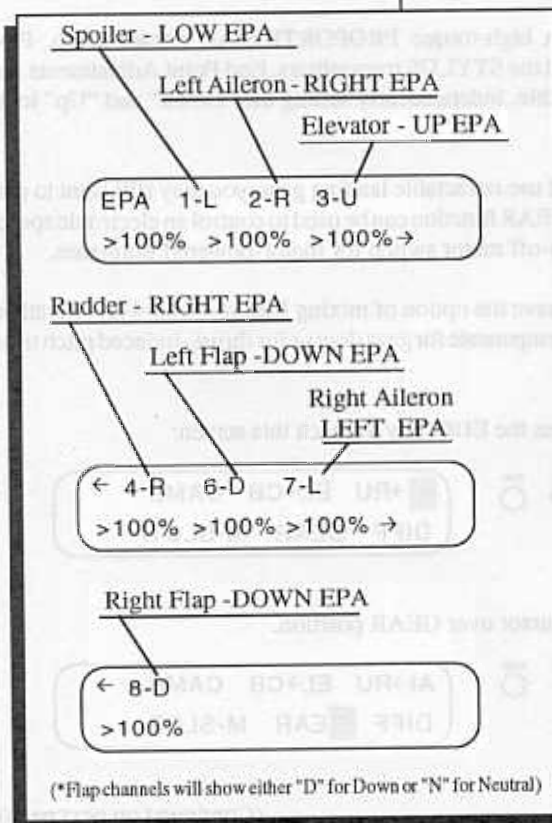


## How To Use The EPA Screens

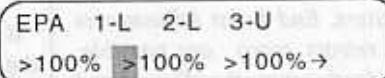
In the EPA screens, the top row shows the seven channels for which EPA adjustments are available AND the current End Point (High, Low, Right or Left) for which the adjustments can be made. The bottom row of data is the present setting for the currently displayed End Point.

The order of functions displayed in the EPA menus is: Spoiler, Left Aileron, Elevator, Rudder, Left Flap, Right Aileron, and Right Flap. (from left to right in the EPA screens).

To set your individual End Points, use the < or > keys to position the cursor over the desired control function's present setting.

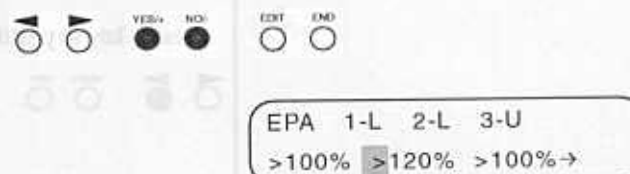


(\*Flap channels will show either "D" for Down or "N" for Neutral)



In this example, we have selected the EPA setting for the second function, Left Aileron. On the top row, the present display shows "2-L," which means you can now make changes in the LEFT travel limit for the Left Aileron servo.

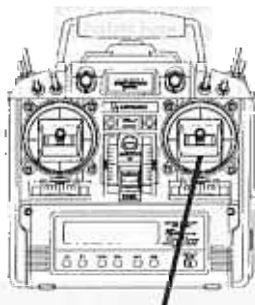
Pressing the YES/+ or NO/- keys will increase or decrease the amount of the left aileron servo's rotation caused by full LEFT deflection of the aileron stick. The range of EPA adjustment is from 0-150%.



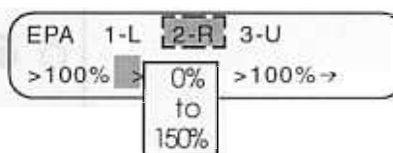
## SAILPLANE

### EPA Screens ...

To set the EPA for RIGHT MOVEMENT of the Aileron function, move the aileron stick to the right. Now the EPA screen will show as follows:



Move Aileron Stick to the right. →



The 2-R now in the second position means that your End Point Adjustment will now apply to the RIGHT extreme of servo travel.

In a similar manner, you can determine which End Point your adjustments will affect by moving the appropriate stick in the direction of the desired End Point adjustment.

### LANDING GEAR ADJUSTMENT OR MOTOR SWITCH

*With this servo and the STYLUS transmitters, End Point Adjustments for the retract servo are possible, independently setting the "Down" and "Up" lock positions.*

*The GEAR function can be used to control an electronic speed controller or electronic on-off motor switch for motor-powered sailplanes.*

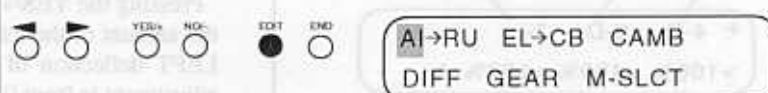
In most cases (in fact, almost all cases in the past) the total servo throw for the landing gear function can not be set by the transmitter, because most retract servos are SWITCHED (non-proportional) servos. With these servos, mechanical adjustment is the only method available to ensure proper operation of the retracts.

Airtronics now offers a high-torque PROPORTIONAL retract servo, P/N 94739. With this servo and the STYLUS transmitters, End Point Adjustments for the retract servo are possible, independently setting the "Down" and "Up" lock positions.

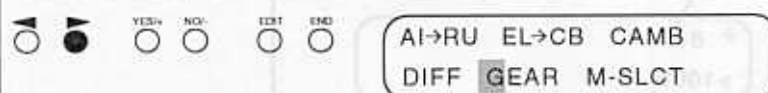
If your sailplane does not use retractable landing gear, you may still want to use the GEAR function. The GEAR function can be used to control an electronic speed controller or electronic on-off motor switch for motor-powered sailplanes.

For either use, you will have the option of mixing Elevator trim with operation of the GEAR function to compensate for gear drag or for thrust-induced pitch trim changes.

To use this function, press the EDIT key to reach this screen:



Press > key to position cursor over GEAR position.



(Continued on next page)

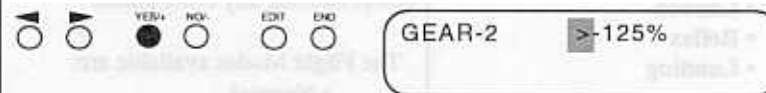
## Landing Gear or Motor Adjustment ...

*Note that you can not make a change in value unless you assign a switch to the Gear function.*

*Remember, you will want GEAR 2 to be set for the gear UP or motor OFF position. This will allow use of the GEAR-EL mixing to adjust elevator trim for the Gear Down or Motor ON positions.*

*Use of the Gear-Elevator mixer is covered later under the Elevator mixer options.*

With the cursor over the GEAR position, press the YES/+ key to see the following screen:

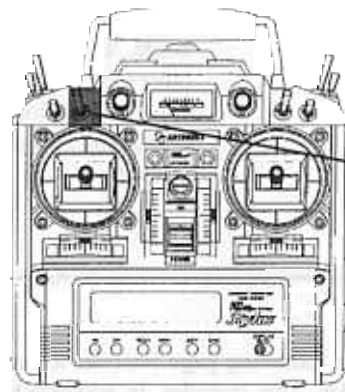


The number after GEAR (in this case GEAR 2) denotes the present position of the GEAR switch - NOT THE SWITCH NUMBER. There are two gear positions, GEAR 1 and GEAR 2. GEAR 2 is the position for landing gear UP, or Motor OFF. Note that you will have to assign the GEAR function to a switch in order to activate the function. The SW number assigned will be for the GEAR 1 position.

To adjust the end point for the landing gear (or motor control) 2 position, press the YES/+ or NO/- key to reach the desired pushrod travel or motor setting for the GEAR 2 position. The range possible is from -150% to +150%.



To set the end point for the landing gear or motor control 1 position, set the switch assigned to the Gear Function to the "ON" position. The Gear display screen will now show GEAR 1, as shown below.



Gear/Motor Default setting is OFF; to use this function you must assign a SW position for GEAR. If you don't plan to use the Alternate function, assign GEAR to the #11,12 switch and turn the ALT switch setting to 0.

Change position of switch to change display from GEAR 1 to GEAR 2.

As for the GEAR 2 position, press the YES/+ or NO/- key to reach the desired gear down position.



Remember, you will want GEAR 2 to be set for the gear UP or motor OFF position. This will allow use of the GEAR-EL mixing to adjust elevator trim for the Gear Down or Motor ON positions.

## SAILPLANE

### FLIGHT MODES

- Normal
- Launch
- Reflex
- Landing

*Whenever the Flap/Spoiler stick is moved below the full up (flaps neutral) position, Stylus switches into the Land mode. This will happen regardless of what flight mode is otherwise active.*

Stylus offers four Flight Modes within each sailplane model setup. These Flight Modes allow you to achieve the best set-up for each phase of flight without compromising any other phase.

The Flight Modes available are:

- Normal
- Launch
- Reflex
- Landing

**"Normal"** ..... When you do not have any other flight mode activated, you are within the "Normal" flight mode. All menus except the specific Reflex and Launch menus affect operation while in the Normal mode.

**Launch** ..... Default switch to activate the Launch flight mode is switch position #17. The Launch mode has menus for adjusting elevator, camber and flap positions for optimum launch trim and response.

**Reflex** ..... Default switch to activate the Reflex flight mode is switch position #19. The Reflex mode has menus for adjusting elevator, camber and Aileron-Rudder mixing for optimum reflex trim and response.

**Landing** ..... Whenever the Flap/Spoiler stick is moved below the full up (flaps neutral) position, Stylus switches into the Landing mode. This will happen regardless of what flight mode is otherwise active. In Landing flight mode, separate menus allow for aileron differential adjustment, crow aileron settings, and an option to switch to high rate aileron-rudder mixing.

### Flight Mode Switches

The following page includes all switches and trimmers that affect the Flight Modes. This includes, in addition to the 3-way Flight Mode selection switch (default switch #17,18,19), the Flap stick, the trim potentiometers on the upper face of the Stylus transmitter, and the trim sliders on both the left and right sides of the transmitter case.

Study this page to familiarize yourself with which switches affect which flight mode.

Also, before each flight make sure that you check the positions of all switches and trimmers before you launch to avoid unexpected responses when you launch or change flight modes.

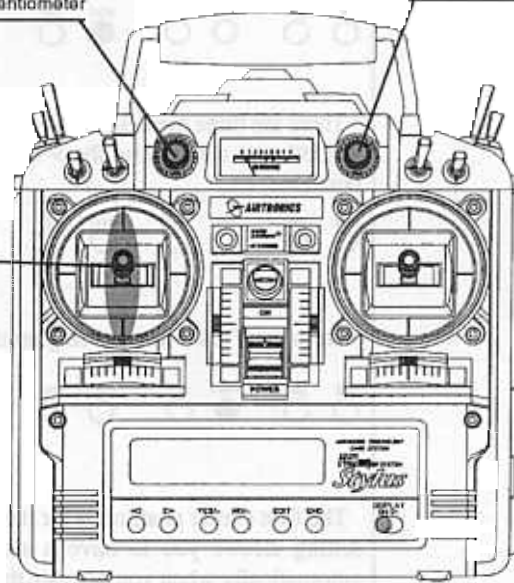
## SAILPLANE

Launch Mode Elevator Trim Potentiometer

Reflex Mode Elevator Trim Potentiometer

Flaps (U/D Mode 2)

ALSO activates Landing Mode when stick is below full up position.



Flight Mode Switch

3-position Switch No. 17, 18, 19

Launch is #17

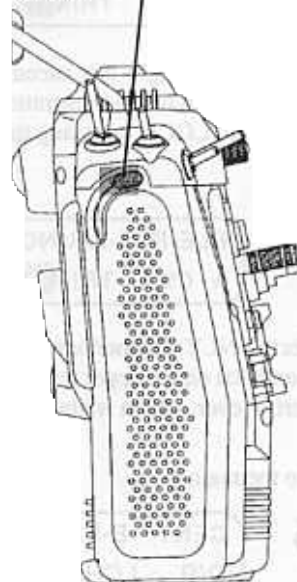
Normal is #18

Reflex is #19

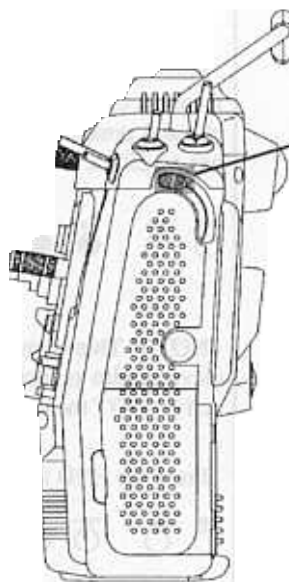


Camber Trimmer

Left Side



Launch Mode Camber Trimmer





## SAILPLANE

### LAUNCH Flight Mode

To access the Launch mode options, press the EDIT key to display this screen:

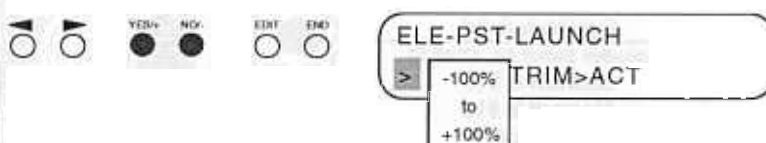


There are three menu items that affect the Launch Mode. These menus are in the shaded oval above. Use the > key to position the cursor over the first of these positions, EL..



The first cursor position is for the Launch Mode elevator pre-set position. This setting allows you to have a small amount of up or down elevator added automatically when you activate the Launch Mode with the Flight Mode Switch. The range is from -100% to +100%.

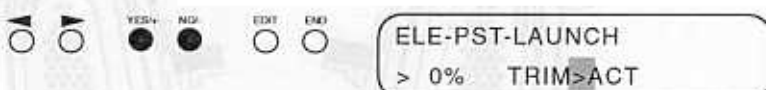
Use the YES/+ or NO/- keys to adjust as desired. Flight testing will be needed to determine the optimum position.



Now use the > key to position the cursor over the TRIM>ACT position.



Pressing the YES/+ or NO/- key will toggle this menu between ACT, meaning the potentiometer on the left front of the transmitter will adjust the elevator position in Launch Mode, and LOCK, meaning the potentiometer has no effect.



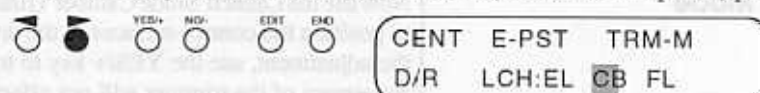
NOTE - This menu setting affects ONLY whether or not the Launch Mode elevator trim potentiometer (round dial on the upper left transmitter face) is active; NOT the elevator stick trim lever, which is always active.

Press the END key to return to the main menu.



## LAUNCH ... Flight Mode

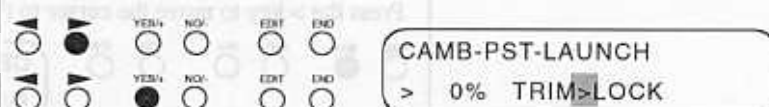
Press the > key to move the cursor to the CB (camber launch preset) position.



Press the YES/+ key to bring up the Camber Launch Preset adjustments:



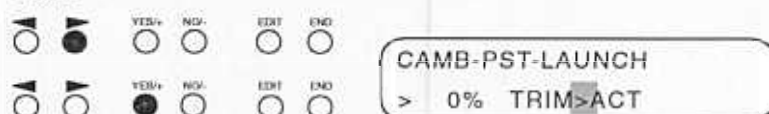
Press the > key to move the cursor to the second position, press the YES/+ key until the screen reads "LOCK."



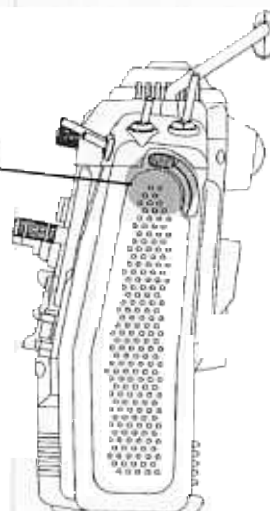
Press the < key to move the cursor back to the first position, and use the YES/+ or NO/- keys until the value reads 0%.



Move the Launch Mode Camber Trimmer on the right side of the transmitter case all the way toward the front of the transmitter. Press the > key to move the cursor to the second position, then press the YES/+ key until the screen reads "ACT."



*Launch Mode Camber Trimmer*

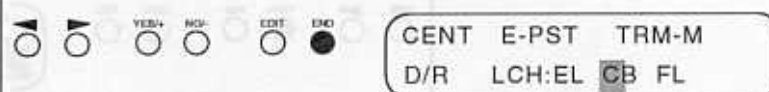


## SAILPLANE

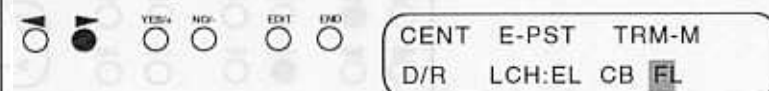
### LAUNCH ... Flight Mode

Activate the Launch Flight Mode using the Flight Mode Switch. (Default is #17). Now use the Launch Mode Camber Trimmer on the left side of the transmitter case to position the control surfaces in the desired configuration. Once satisfied with the adjustment, use the YES/+ key to toggle back to LOCK so that inadvertent movement of the trimmer will not affect the preset position.

Press the END key to return to the main menu.



Press the > key to move the cursor to the FL (flap launch preset) position.



Press the YES/+ key to bring up the Flap Launch Preset options:



This menu allows you to increase or decrease the amount of flap deflection when in the Launch Mode. This adjustment does not affect the camber preset described previously.

## REFLEX Flight Mode

### SAILPLANE

To access the Reflex mode options, press the EDIT key to display this screen:

◀ ▶ YES+ NO- EDIT END

REFL: EL CB AI→RU  
EL-MX LAND C-M IX

There are three menu items that affect the Reflex Mode. These menus are in the shaded oval above. The first item (already selected) is EL, for elevator.

REFL: EL CB AI→RU  
EL-MX LAND C-M IX

Press the YES/+ key to bring up the Reflex Elevator options:

◀ ▶ YES+ NO- EDIT END

ELE-PST-REFLEX  
> 0% TRIM>ACT

This setting allows you to have a small amount of up or down elevator added automatically when you activate the Reflex Mode with the Flight Mode Switch.

Use the YES/+ or NO/- keys to adjust as desired. Flight testing will be needed to determine the optimum position.

◀ ▶ YES+ NO- EDIT END

ELE-PST-LAUNCH  
> -100% to +100% TRIM>ACT

Now use the > key to position the cursor over the TRIM>ACT position.

◀ ▶ YES+ NO- EDIT END

ELE-PST-REFLEX  
> 0% TRIM>ACT

Pressing the YES/+ or NO/- key will toggle this menu between ACT, meaning the potentiometer on the right front of the transmitter will adjust the elevator position in the Reflex Mode, and LOCK, meaning the potentiometer has no effect.

◀ ▶ YES+ NO- EDIT END

ELE-PST-REFLEX  
> 0% TRIM>LOCK

NOTE - This menu setting affects ONLY whether or not the Reflex Mode elevator trim potentiometer (round dial on the upper right transmitter face) is active; NOT the elevator stick trim lever, which is always active.

Press the END key to return to the main menu.

◀ ▶ YES+ NO- EDIT END

REFL: EL CB AI→RU  
EL-MX LAND C-M IX

## SAILPLANE

### REFLEX ... Flight Mode

Press the > key to move the cursor to the CB (camber) position.

☐ ☒ YES+ ☐ NO- ☐ EDIT ☐ END

REFL: EL ☒ CB AI→RU  
EL-MX LAND C-M IX

Press the YES/+ key to bring up the Reflex Camber Preset adjustment.

☐ ☐ YES+ ☒ NO- ☐ EDIT ☐ END

CAMB-PST-REFLEX  
> 0%

This menu allows you to adjust the amount and direction of Camber pre-set in the Reflex mode. Range is from -100% to +100%.

Press the END key to return to the main menu.

☐ ☐ YES+ ☐ NO- ☐ EDIT ☒ END

REFL: EL ☒ CB AI→RU  
EL-MX LAND C-M IX

Press the > key to move the cursor to the AI→RU position.

☐ ☒ YES+ ☐ NO- ☐ EDIT ☐ END

REFL: EL CB ☒ AI→RU  
EL-MX LAND C-M IX

Press the YES/+ key to bring up the Reflex flight mode AI→RU options:

☐ ☐ YES+ ☒ NO- ☐ EDIT ☐ END

(AI→RU)MX-REFLEX  
> 0%

This setting gives you the option of having distinct amount of Aileron/Rudder mixing turned on automatically when you activate the Reflex Mode with the Flight Mode Switch. This amount of Aileron/Rudder mixing will override any other selected amount as long as the Reflex Flight Mode is active. Range available is from 0% to +150%.

All of the settings that are available within the Reflex Mode menus will need to be finalized after in-flight testing with each aircraft.

Press the END key to return to the previous screen.

## LANDING Flight Mode

The **LANDING** Flight Mode is activated whenever you move the Flap control stick below the full "up" position.

Regardless of the settings of any Flight Mode Switches, pulling the Flap/Spoiler control stick downwards will always activate the **LANDING** mode. Returning the Flap stick to the full-up position (flaps neutral) will return the system to whatever Flight Mode is presently activated by the switch settings.

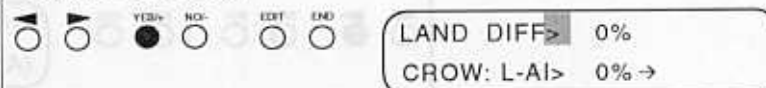
To access the Landing mode options, press the EDIT key to display this screen:



Press the > key to move the cursor to the LAND position.

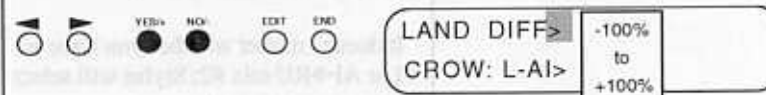


Press the YES/+ key.

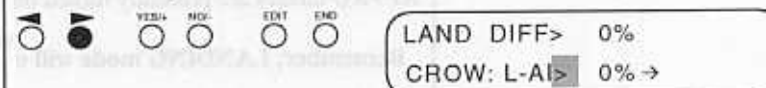


The cursor is over the LAND DIFF position. This setting determines the amount of aileron differential active while in the Landing mode.

Use the YES/+ or NO/- keys to set the amount and direction of differential aileron throw. Range available is from -100% to +100%.



Press the > key to move the cursor to the CROW: L-AI position.

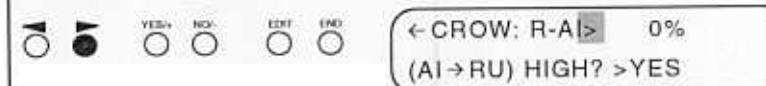


This menu allows you to set the amount of "Crow" response that the left aileron will have when the flaps are lowered. Normally, Crow is set up to have both ailerons move slightly up as flaps are lowered to increase the drag of the plane and slow it down for landing.

Use the YES/+ or NO/- keys to set the direction and amount of Crow, from -100% to +100%.



An arrow on the bottom left indicates another screen; press the > key until the second screen appears.

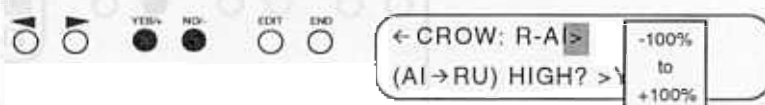




## SAILPLANE

### LANDING ... Flight Mode

As with the previous menu, use the YES/+ or NO/- keys to set the direction and amount of Crow, from -100% to +100%, for the Right Aileron.



Flight testing will determine whether one aileron needs more or less Crow to avoid unwanted banking.

Press the > key to move the cursor to the (AI→RU) HIGH?>YES position.



The (AI→RU) HIGH?> position allows you to select whether the AI→RU mixing automatically switches to the higher of the two AI→RU mixes presently programmed. If this menu is set to YES, the higher rate of mix will be active whenever you activate the LANDING Flight Mode. Otherwise (if this menu option is set to NO), the AI→RU mix which is presently turned on with a switch (if any) will remain active.

It doesn't matter whether you have set more mixing to occur with AI→RU mix #1 or AI→RU mix #2; Stylus will select whichever one has the greater amount of mixing programmed.

Also, if YES is set for this menu option, it will make no difference if any of the AI→RU mixers are presently turned on by a switch position or not.

**Remember, LANDING mode will override ANY other flight mode.**

In other words, regardless of the settings of any Flight Mode Switches, pulling the Flap/Spoiler control stick downwards will always activate the LANDING mode. Returning the Flap stick to the full-up position (flaps neutral) will return the system to whatever Flight Mode is presently activated by the switch settings.

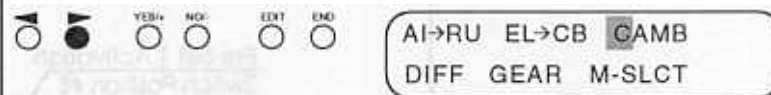
## CAMBER

Stylus allows the sailplane pilot to independently define the amount of camber response mixed into each of the aileron and flap servos. This allows you to fine-tune the amount of response each surface has to camber inputs so the entire trailing edge of the wing will move the same amount when camber is used.

To access the camber settings, press the EDIT key to display the following:



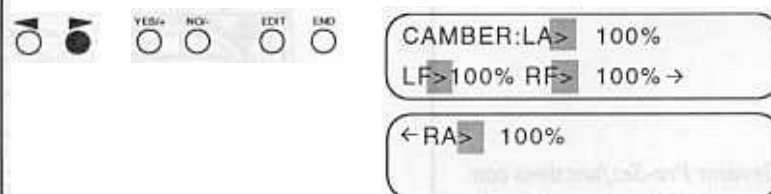
Press the > key to move the cursor to the CAMB position.



Press the YES/+ key to display the first CAMB menu.



Press the > three times key to move the cursor to the second menu screen.



The four cursor positions, shaded above, allow setting the camber response for the trailing edge control surface's servos. The abbreviations are:

LA	Left Aileron
LF	Left Flap
RF	Right Flap
RA	Right Aileron

For each AILERON servo, the camber setting can be from -100% to +100%, allowing you to define the direction and amount of aileron response to Camber commands.

For each FLAP servo, the amount of Camber response can be set from 0% to 100%.

## SAILPLANE

### ELEVATOR PRE-SET TRIM

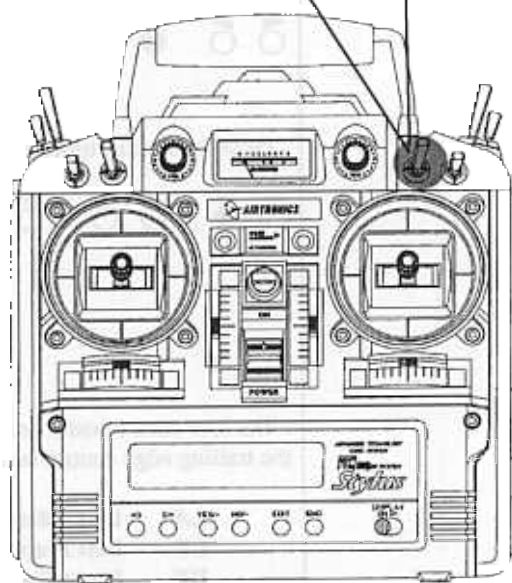
Stylus allows the sailplane pilot to select three elevator trim states during flight in the NORMAL Flight Mode. The first elevator trim state is the trim as set with the elevator stick trim lever with both Elevator Pre-Sets turned off.

To allow selection of differing elevator trim states without changing the elevator stick trim lever position, Stylus has two selectable ELEVATOR PRE-SETs available. Pre-Set 1 is activate in the #8 switch position, Pre-Set 2 is activated by setting the #8,9,10 switch to the #10 position. (These functions can be reassigned to different switches if desired, see 'Switch Assignment' section.)

Using these functions, you can select from three elevator trim positions while in the NORMAL flight mode, without disturbing the trim for the other flight modes.

Pre-Set 1 Activation  
Switch Position #8

Pre-Set 2 Activation  
Switch Position #10



*The Elevator Pre-Set functions can be reassigned to different switches if desired, see 'Switch Assignment' section.*

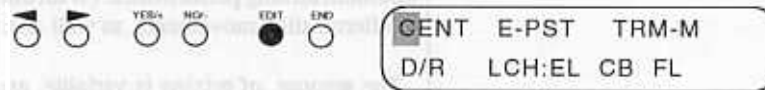
**NOTE:** To see the effects of adjustments made to either Elevator Pre-Set menu, you **MUST** set the Flight Mode switch to be in the NORMAL flight mode (default switch position #18) **AND** make sure that the Flap/Spoiler stick is in the full up - or flaps neutral - position. Elevator Pre-Set settings have no effect on the Reflex, Launch and Land flight modes, since these modes each have their own elevator trim settings in their respective menus.

(Continued on next Page)

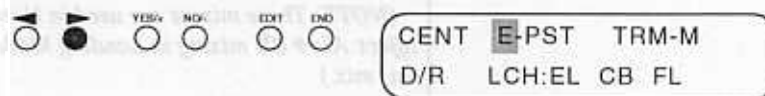
## Elevator Pre-Set Trim ...

*Pre-Set #1 ALWAYS has priority over Pre-Set #2. If both Pre-Sets are in the ON position, no matter which was activated first, Pre-Set #1 will be active.*

To program the Elevator Pre-Sets, press the EDIT key to reach this screen:



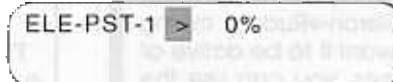
Press the > key to position the cursor over the E-PST position.



Press the EDIT key to see the E-PST screen:



The '0' to the left of the cursor position indicates that neither Elevator Pre-Set switch is presently set to the ON position. To program the Elevator Pre-Set #1, turn switch #8,9,10 to the #8 position. The display will change as follows:



You can now set the elevator trim for ELE-PST 1 by pressing the YES/+ or NO/- keys. Actual flight testing will be required to find the optimum setting.



In the same manner, turn switch #8,9,10 to the #10 position, to program Elevator Pre-Set #2 for surface deflection status.

Regardless of which elevator pre-set is active, the elevator stick's trim lever is always active.

Pre-Set #1 ALWAYS has priority over Pre-Set #2. If both Pre-Set switches are in the ON position, no matter which was activated first, Pre-Set #1 will be active.

Always be certain which elevator trim is activated before launching your sailplane!

**Always be certain which elevator trim is activated before launching your sailplane!**

## SAILPLANE

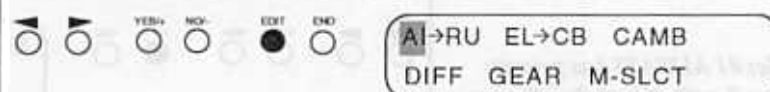
### AILERON → RUDDER MIX

Stylus allows the sailplane pilot to couple aileron and rudder response to achieve optimum turning performance. (With this mix active the rudder servo will respond to aileron stick movements, as well as to rudder stick movement.)

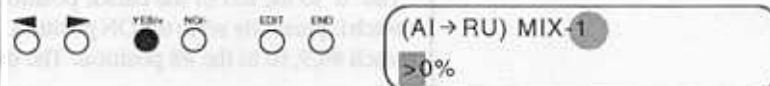
The amount of mixing is variable, and is programmed through the AI → RU screen. Two mixers are available for Aileron → Rudder mix; Mix 1 is set for switch position #1, Mix 2 is set for switch position #3 in the default switch assignments.

(NOTE: These mixers are used in Normal Mode and Launch Modes, and also affect AI → RU mixing in Landing Mode; the Reflex Mode has its own menu for this mix.)

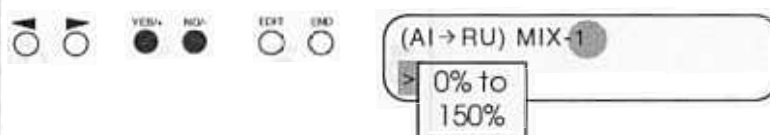
To use Aileron → Rudder mixing, press the EDIT key to reach this screen:



Press the YES/+ key to display the following screen:



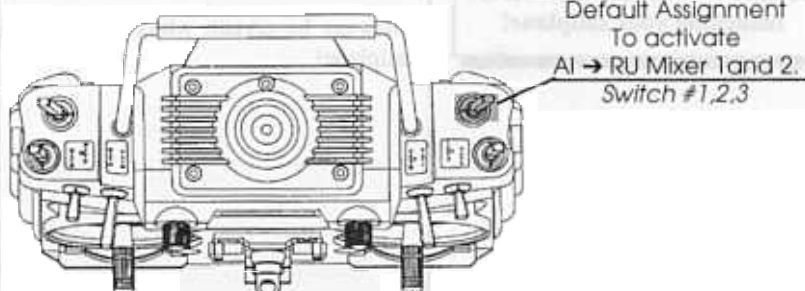
The #1 on the top row (circled above) indicates that mixer #1 is active; if '0' is displayed, turn the #1,2,3 switch to the #1 position. This will change the menu display to show "MIX-1" is the active mix. You can now press the YES/+ or NO/- keys to adjust the amount of Aileron - Rudder mixing in Mix 1.



AI → RU Mix number is set for the #3 switch position. Turn the switch to the #3 position to set the mixing amount for mixer #2 in the same manner.

The range available in either mixer is from 0% to 150%.

NOTE: the rudder stick has full over-ride ability over the AI → RU Mix, and works normally whether or not mixing is active; except that the rudder responds to either aileron and/or rudder stick application when AI → RU Mix is active.



If you only desire one mixer for Aileron → Rudder mixing and want it to be active at all times, you can use the SWITCH ASSIGNMENT screen to assign the mixer to be always on.

This will allow the pilot to use the switch for other purposes as desired.

See the section on Switch Assignments.

**ELEVATOR MIXERS**

- Camber>Elevator
- Spoiler>Elevator
- Flap>Elevator
- Gear>Elevator

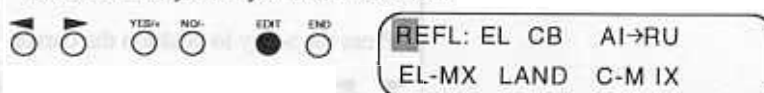
Stylus allows mixing elevator with various other control functions that may affect pitch trim. These mixing functions are always available and are not assigned to switches. If you do not wish to use one or more of these mixing functions, simply leave the mix setting at 0% for that function(s).

The Mixers available in this menu are:

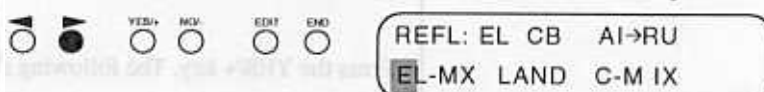
(CB→ EL)      *Camber>Elevator*  
 (SP→ EL)      *Spoiler>Elevator*  
 (FL→ EL)      *Flap>Elevator*  
 (GE→ EL)      *Gear>Elevator*

Since programming is the same for these four mixers, we'll just look at the third one, Flap→ Elevator mixing.

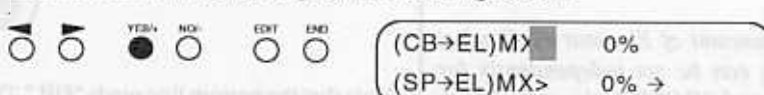
Press EDIT key until you see this screen:



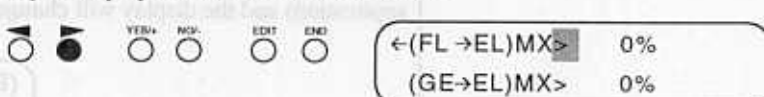
Press the > key until the cursor is positioned over the EL-MX position.



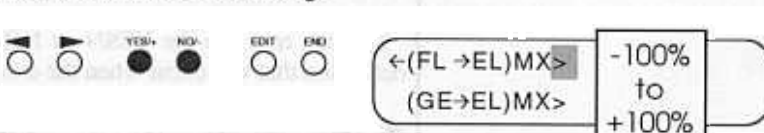
Press the YES/+ key to display the following screen:



The arrow at the right end of the bottom row indicates more items; press the > key to display the second of these screens.



With the cursor in the FL→EL position, press the YES/+ or NO/- keys to adjust the amount of FL→EL mixing.



The range of adjustment possible is from -100% to +100%. Thus, you can program both the amount and the direction of elevator deflection that will occur when flaps are deployed.

The elevator stick will remain active when any Elevator mixing is used, and inputs to the elevator control stick will override mixing inputs. In-flight testing will be necessary to determine the optimum amount of Elevator mixing to use for each function.

The remaining EL-MX functions are set in the same manner.



## SAILPLANE

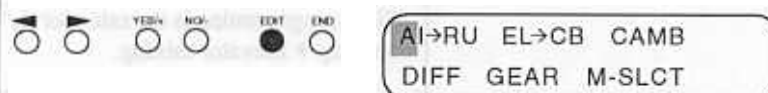
### ELEVATOR → CAMBER MIXING

Stylus allows individual mixing of camber with deflection of elevator. The ailerons/flaps can be programmed to deploy with elevator deflection to improve thermalling performance and quicken turning response at high speed.

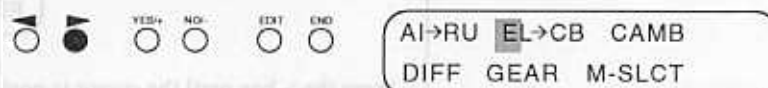
When this mix is used the trailing edge will drop with up-elevator application and raise (reflex) with down-elevator application.

The Elevator → Camber mixing default switch setting is #5.

To use Elevator → Camber mixing, press the EDIT key to reach this screen:



Press the > key to position the cursor over the EL→CB position.



Press the YES/+ key. The following screen will appear:

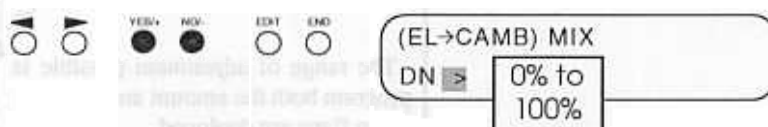


*The amount of Elevator → Camber mixing can be set independently for "UP" and "DOWN" elevator deflection.*

Note that the bottom line reads "UP." This indicates that you are presently setting the mix for UP elevator deflection. To make adjustments for mixing with DOWN elevator, move the transmitter's elevator control stick upwards (down elevator application) and the display will change to read "DN."



You can now use the YES/+ or NO/- keys to adjust the amount of camber deflection that will occur when the elevator stick is moved in either direction.



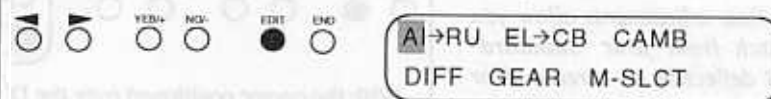
The range available is from 0% to 100% for each of the (UP and DOWN) elevator directions. Flight testing will be needed to determine optimum settings.

**AILERON DIFFERENTIAL**

Stylus allows electronic adjustment of aileron differential to ensure the proper turning response. "Differential" refers to the ratio of up-to-down movement of each aileron. Many aircraft need more movement from the upward deflecting aileron than from the downward deflecting aileron in order to eliminate unwanted yaw with application of aileron. (It is also possible to program the downward-deflecting aileron to have more travel if desired, by changing the value from "+" to "-".

(NOTE - There is a separate differential setting available for the Landing mode, in the Landing Mode menu.)

To adjust aileron differential, press the EDIT key to reach this screen:



Press the > key to place the cursor over the DIFF position.



Press the YES/+ key. The following screen will appear:



Now simply press the YES/+ or NO/- key to set the amount of differential.



In the above example the differential has been set to +50 percent. This means that the downward-deflecting aileron will move half as far as the upward-deflecting aileron. The final adjustment will be determined by actual flight testing.

The range of adjustment available is from -100% to +100%.

Differential is not switch-assignable, and is on whenever the AIL-DIFFERENTIAL screen setting is programmed to other than 0%.

Note that on many high-performance sailplanes it will be necessary to experiment with various Differential settings in conjunction with Aileron-Rudder mixing to achieve the desired turning performance. This experimenting can be done most efficiently by using the Alternate Setup function to compare various settings.

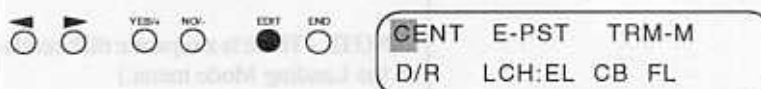
## SAILPLANE

### DUAL RATES

Dual Rate adjustments allow you to switch from your 'standard' control deflection to a reduced or increased amount of throw by simply flipping a switch.

Dual Rate adjustments allow you to switch from your 'standard' control deflection to a reduced or increased amount of throw by simply flipping a switch. The actual speed of signal processing and servo movement are not affected by the Dual Rate settings, only the amount of total servo throw available.

Stylus allows Dual Rate settings for Aileron, Elevator and Rudder. To access the Dual Rate settings, press the Edit key to reach this screen:



Press the > key to move the cursor to the D/R position.

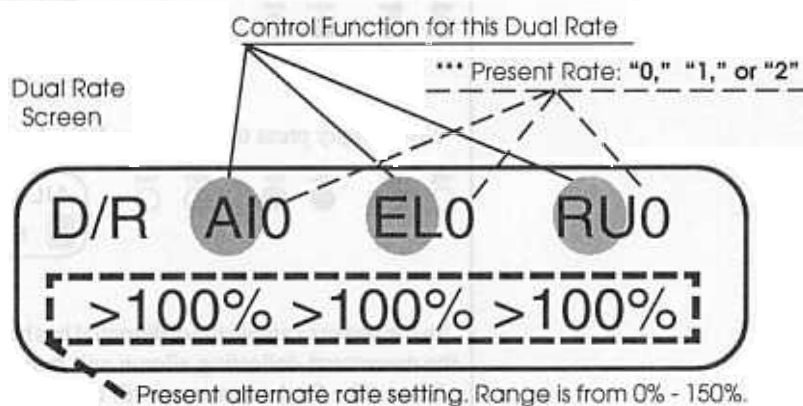


With the cursor positioned over the D/R position, press the YES/+ key. The Dual Rate screen will appear as shown below:



This screen tells you the present rate status and, when a Dual Rate switch is set to an ON position, the alternate rate for that control function that is presently set in the program. See diagram below.

### The DUAL RATE Screen



\*\*\* Present Rate Display Explanation:  
0 is Normal  
1 is Dual Rate #1  
2 is Dual Rate #2

Abbrev.	Function	DR #1	DR #2
AI	Aileron	7	6
EL	Elevator	14	13
RU	Rudder	**None	None

\*Default switch assignments and positions.

\*\*Rudder is not assigned to a switch but can be user set.

You may wish to change the Dual Rate #2 positions above to be OFF<sup>2</sup> (in the Switches menus) or assign the Dual Rate for a function or functions to a 3-position switch so that you can activate any of the 3 rates available from a single switch.

(Continued on next Page)

## Dual Rates ...

It is important to understand that the term "Dual Rate" is used because it is an old and familiar description. It does NOT, however, provide a very complete description of the many options possible when using the Dual Rate functions of the Stylus.

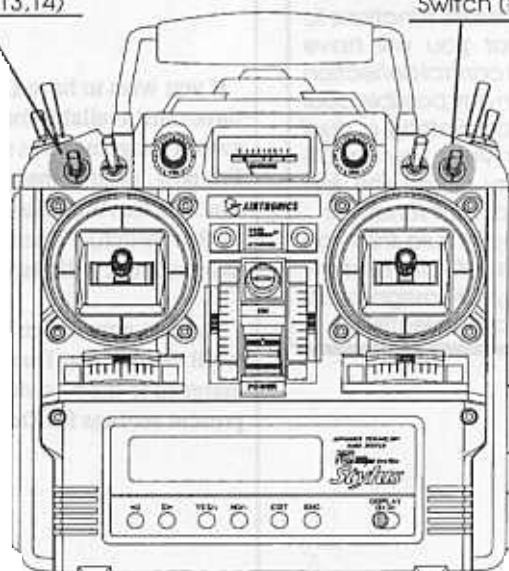
The Dual Rate screens, used with the Switch assignment options, offer far more flexibility than traditional 'dual rate' switches. It is almost impossible to list all of the options possible with the Stylus's Dual Rate functions; you should study this portion of the manual along with the sections covering Switch Assignments to arrive at the optimum use of these functions on your specific aircraft. Here are some important pointers about the Dual Rate functions of the Stylus:

- There are THREE possible rates available for each of the three controls: Aileron, Elevator and Rudder. These rates are (0) Normal, (1) Dual Rate #1, and (2) Dual Rate #2.
- You may assign any of the possible rates (Normal, Dual Rate #1 and Dual Rate #2) to cause **reduced** or **increased** throw of that control.
- Any or all of the Dual Rate positions may be assigned to any switch.
- If you activate the switches for BOTH Dual Rate #1 and Dual Rate #2 at the same time, regardless of which is activated first, Dual Rate #1 will be active.

*The Dual Rate screens, used with the Switch assignment options, offer far more flexibility than traditional 'dual rate' switches.*

Default Assignment  
Elevator Dual Rate  
Switch (#13,14)

Default Assignment  
Aileron Dual Rate  
Switch (#6,7)



In the standard default settings, the Aileron and Elevator Dual Rate switches are assigned to the 'standard' locations as shown above. Rudder is not assigned to a switch, and thus cannot have a Dual Rate set unless you change the default switch assignments as explained in a later section of the manual.

## SAILPLANE

### Dual Rates ...

To set an alternate rate for any of the three possible control function, turn the switch for that function to the Dual rate 'On' position. Below we'll assume that the Aileron and Elevator dual rate switches are both in the on position — note that the number following the abbreviations for these functions has changed to "1."

AI and EL display Dual Rate #1 is activated. →

D/R AI1 EL1 RU0  
 >100% >100% >100%

By positioning the cursor over the Aileron and/or Elevator positions you may now set the amount of control response available in Dual Rate #1 position by pressing the YES/+ or NO/- keys.



D/R AI1 EL1 RU0

> 0% 100% >100%  
 to  
 +150%

Here we have set the Dual Rate #1 to be 80% of the "Normal" throw for both the Aileron and Elevator channels. The possible range is from 0% of normal to 150%. (Note that you can not increase servo deflection if you already have set the servo throw to its maximum possible settings in the End Point Adjustment menus.)

D/R AI1 EL1 RU0  
 > 80% > 80% >100%

#### CAUTION:

Proceed with care when setting dual rate functions to ensure that you will have adequate control deflection available in any possible dual rate position. Setting a dual rate to a very low or 0% setting may cause the loss of control of that function!

Always make sure that you are aware of the present status of any rate assignments that you have selected.

If you wish to have Dual Rates available for all channels, and/or want to have three rates available for the flight control functions, you will need to change some switch assignments as shown in the "Switch Assignments" section of this manual. For now, assume that you have assigned switch #6 to activate the Dual Rate #1 function for Aileron and Elevator. (You may also assign Dual Rate #1 for Rudder to this switch). When you set the switch to the "On" position, both controls assigned to it will display the number "1" in the Dual Rate Screen.

You can now assign Dual Rate #2 positions to the #7 switch. In this example we'll assume that Dual Rate #2 for Aileron, Elevator and Rudder have all been assigned to the #7 switch position. When this switch is set to #7, you will see the present settings for Dual Rate #2, as shown below.

D/R AI2 EL2 RU2  
 > 60% > 60% >60%

In the example above we have set the Dual Rate #2 functions to provide 60% of the "Normal" servo throw for all three control surface functions. The range available is from 0% to 150% of the present "Normal" setting.

## TRIM MEMORY

*By always having the trim levers centered for ALL aircraft stored in transmitter memory the pilot can change from one model's program to another without having to worry about trim positions for each model.*

Stylus offers a Trim Memory function for all flight control channels. This function allows the trim levers to be re-set to the center positions while maintaining the trimming information in memory. This is useful because the pilot can then ensure that the trims are in the proper position just by checking that the trim levers are all centered. Also, by always having the trim levers centered for ALL aircraft stored in transmitter memory the pilot can change from one model's program to another without having to worry about trim positions for each model.

Trim Memory is used after flight testing and trimming the aircraft. When trimming is complete, program Trim Memory as follows: press the Edit key to reach this screen...



Press the > key to position cursor over TRIM-M, then press YES/+ key to display the TRIM-M screen.



Additional screen; press > or < keys to move between screens.

← EL INH RU INH

The cursor will be over the ALL position. This position will store trim information for ALL channels if desired, by pressing the YES/+ key when the cursor is over ALL.

To store memory information for selected channels ONLY, press the > or < keys to position the cursor over the desired channel indicator, then press the YES/+ key. Move to the next channel indicator and repeat until desired channels' trim information is stored. Note that as you press the YES/+ key, the trim value for each selected channel will change from zero to a value from -100% to +200%. This value indicates the present trim location.

After storing the trim information for all desired channels, TURN OFF the transmitter. Move the trim levers to the neutral positions (within 1-2 notches from center) for all channels for which you have stored trim information. When you turn the power back on, the servos should stay in the previously trimmed positions.

To inhibit a value stored in any function's trim memory, position the cursor over that function in TRIM-M and press both the YES/+ and NO/- keys simultaneously so that it reads "INH."



## SAILPLANE

### SWITCH ASSIGNMENTS

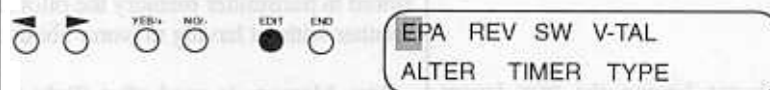
At each cursor location (designated by ">") you can change the switch assignment number that follows to any switch number from 1 to 19, or '0' for inhibit, or 'On' to turn the function on at all times.

### Switch Assignment Chart

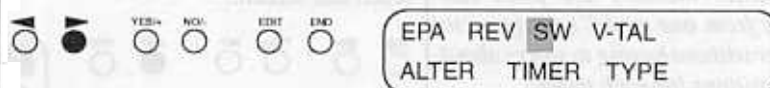
Write Your SW Choice In Below Lines:		
SCREEN ONE	Default	Set
Launch .....	17	
REFL .....	19	
Gear .....	0	
SCREEN TWO		
D/R A1 .....	7	
A2 .....	6	
E1 .....	14	
E2 .....	13	
SCREEN THREE		
R1 .....	0	
R2 .....	0	
ALTERNATE .....	11	
SCREEN FOUR		
AI>RU 1 .....	1	
AI>RU2 .....	3	
EL>CB .....	5	
SCREEN FIVE		
E-PST 1 .....	8	
E-PST 2 .....	10	
STW S/S .....	15	
SCREEN SIX		
C-MI 1 .....	0	
C-MI 2 .....	0	
C-MI 3 .....	0	

A very useful feature of Stylus is the ability to assign functions to switches however you prefer, rather than forcing you to adapt to one particular switch layout.

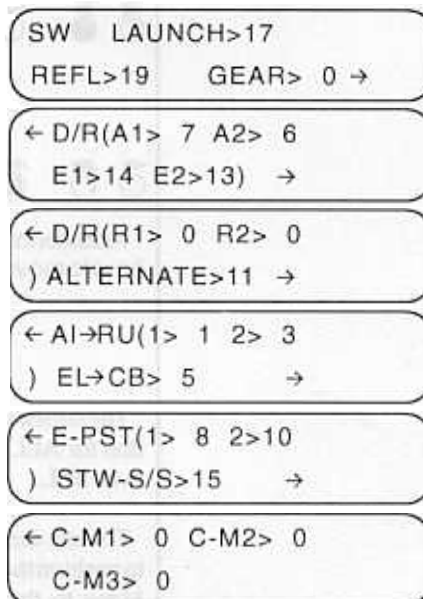
To observe or change switch assignments, press the Edit key to reach this screen:



Press the > key to place the cursor over the SW position.



Now press the YES/+ key to see the first SW screen. There are a total of six Switch Assignment screens as seen below. To move from one screen to another press the > or < keys to move the cursor past the arrow positions.



At each cursor location (designated by ">") you can change the switch assignment number that follows to any switch number from 1 through 19, or '0' for inhibit, or 'On' to turn the function on at all times.

Note that more than one function may be assigned to a single switch. This can be useful in the case of similar functions, such as dual rates for Aileron, Elevator and Rudder all being assigned to a single switch. However, to avoid accidentally enacting a function, extreme care must be used when assigning switches. It is suggested that you keep a list of all switch assignments for each model in the transmitter's memory.

Also, it is a good idea to assign similar functions to the same switch from one aircraft to the next. Always be aware of which functions are active at any time before starting or flying your aircraft.

## DATA COPY

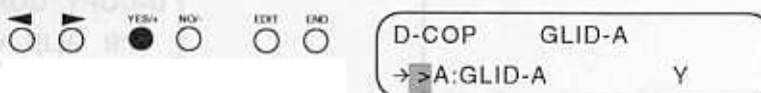
A valuable feature of the Stylus is the Data Copy function. With this function the entire set of control parameters for one aircraft can be 'copied' from one Model set-up into another. (For instance, if you have your aircraft program in Model 1 and nothing in Model 2, you can copy the Model 1 program into Model 2 with the Data Copy function).

Having copied your control set-up, you can now use M-SELECT to load the Model 2 program, and then make control changes to that set-up. This allows you to experiment with different control options without changing your original parameters (in this example, still stored as Model 1).

To use the Data Copy function, press the Edit key to reach this screen:



The cursor is already positioned over the D-COPY position, so now press the YES/+ key to see the D-COPY screen.



The top line of the screen shows the PRESENTLY LOADED model; in this case "GLID-A" This is the model that can presently be copied INTO another model set-up.

The second line shows the data destination, or which Model (1 through 4) the presently loaded data will be copied INTO. It is presently set as GLID-A, which is the same as the source model. Pressing the YES/+ or NO/- keys allow you to set the DESTINATION for the data being copied.

You can select ANY of the three other available setups for a destination, regardless of the model type presently set for that setup.



Above, the destination has been set to GLID-B. MAKE CERTAIN that this Model set-up is not one you wish to save, because when you copy the GLID-A set-up into GLID-B, all data that was in GLID-B is REPLACED with the GLID-A data! At this point GLID-B is still intact, so if you wish to change the destination for the copied data, do so before proceeding.

(Continued on next Page)

*Having copied your control set-up, you can now use M-SELECT to load the Model 2 program, and then make control changes to that set-up. This allows you to experiment with different control options without changing your original parameters.*

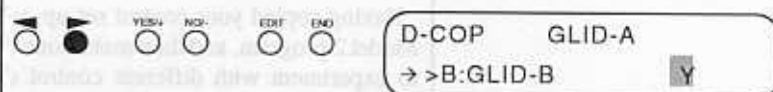
*MAKE CERTAIN that this Model set-up is not one you wish to save, because when you copy the GLID-A set-up into GLID-B, all data that was in GLID-B is REPLACED with the GLID-A data!*

## SAILPLANE

### Data Copy ...

Having selected both the desired data source (GLID-A) AND the desired data destination (in this example, GLID-B) you can now proceed to confirm the D-COPY function.

Press the > key to place the cursor over the >Y position as shown.



Press the YES/+ key to confirm your D-COPY selection.

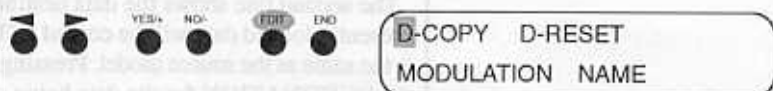


The screen will change to the following screen to inform you that the process has been completed, and that Model A and Model B now have the same data (in this case, GLID-A).

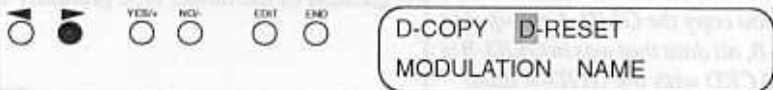
D-COPY COMPLETED  
A:B GLID-A

### DATA RESET

Press the Edit key to display the following screen:



Press the > key to place the cursor over the D-RESET position.



Now press the YES/+ key to display the D-RESET screen:



The first cursor position shows the current MODEL (MODEL-A here) that will be RESET if you continue. Press the YES/+ or NO/- to change this Model if desired.

(Continued on next Page)

#### NOTE!

Using the Data Reset function will cause the Stylus to reset the switch assignments.

Always check switch assignments whenever loading a new model, changing model type or after using the Date Reset function.

## Data Reset ...

Along with the Model No. displayed on the top line, the bottom line shows the name of the setup denoted by the selected Model No. (In this case GLID-A).

When you are certain that the selected Model setup is the one you wish to reset, press the > key to position the cursor over the >YES position.



*ALL OTHER Models in memory are unaffected by the DATA-RESET function, only the selected Model setup is affected.*

Now press the YES/+ key to confirm that you wish to Reset the data for this Model.



Note that the bottom line now displays GLID-A — the default name for this Model setup. (This will replace any name you had assigned to this setup.) The data has now been reset to factory default settings.

ALL OTHER Models in memory are unaffected by the DATA-RESET function, only the selected Model setup is affected.

## ALTERNATE SETUP

*The ALTERNATE SETUP function is one of the most powerful functions of the Stylus. This function allows the pilot to switch from one Model Setup to another Model Setup DURING FLIGHT!*

The ALTERNATE SETUP function is one of the most powerful functions of the Stylus. This function allows the pilot to switch from one Model Setup to another (compatible) Model Setup DURING FLIGHT! There are two particularly helpful uses for this function:

1. A pilot may Copy the current setup and make adjustments to the copied data, then can switch IN FLIGHT between the two Model Setups. In this manner a comparison can be made easily, during a single flight, allowing the pilot to choose which control set-up is most comfortable. Also, trying a new control setup in this manner allows the pilot to instantly change back to a known setup by simply flipping one switch.
2. A pilot may change ANY or ALL flight control parameters with a single switch for greatly differing flight conditions. For instance, the Alternate settings might include landing trim for elevators, high rate for flight controls and removal or addition of selected mixer(s) — all by flipping a single switch.

In order to use the ALTERNATE SETUP function, you must first assign it to a switch. (See Switch Assignments section).

Next you need to have an ALTERNATE SETUP that is compatible to your standard setup. The recommended manner to achieve this is to start with a completely tested Model setup, then use the DATA COPY function to copy this setup to a new Model Setup that will be assigned as the Alternate setup.

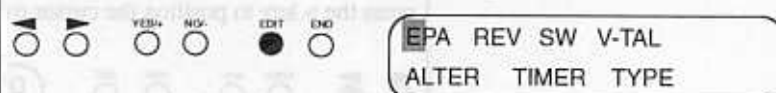
(Continued on next Page)

## SAILPLANE

### Alternate ...

Having assigned a switch and determined a suitable Alternate Model setup, you may program your Alternate.

Press EDIT key until the following screen appears:



Press the > key to move the cursor to the ALTER position.



Press the YES/+ key to display the Alternate screen.



The cursor location's display will read OFF, meaning that no Alternate Model is presently selected. By pressing the YES/+ or NO/- keys you can scroll through the four Models in memory to choose the desired Alternate Model.



In the above example the bottom line shows that Model B, named GLID-B, has been selected as the present Alternate Model.

NOTE that it is possible to select an incompatible set-up as the Alternate setup; i.e. you can select a HELI Model setup as an alternate for your sailplane. However, in this case the Alternate function will be ignored even if you do turn the Alternate setup switch on.

Make certain that you know which mode (normal or Alternate) you have selected at all times!

To make changes to the setup that you have selected as your Alternate, use the switch you have assigned to activate the Alternate Set-up to load that (Alternate) Model into memory, (in other words, turn the Alternate Set-up Switch ON) then make any adjustments desired, then turn the switch to OFF position to re-load the primary Model.

*Make certain that you know which mode (normal or Alternate) you have selected at all times!*

## COMPENSATION MIXERS

Each of these mixers can be assigned to a switch or can be set to remain active or inactive at all times.

You must either assign a switch or turn a Compensation Mixer to be always "ON" in order for it to operate.

Stylus has three Compensation Mixers available in Sailplane mode to handle advanced mixing needs. Each of these mixers can be assigned to a switch or can be set to remain active or inactive at all times.

The purpose of the Compensation Mixer is to allow one transmitter control input to affect two flight functions. A common use would be to mix aileron and rudder to achieve coordinated turns without moving the rudder stick. We'll use this as an example, even though pre-configured mixers are available for this type of mix.

To set up such a mix, press the EDIT key until the following screen appears:



Press the > key to position the cursor over the C-MIX position.



Now press the YES/+ key to see the initial C-MIX screen.



## C-MIX SCREEN

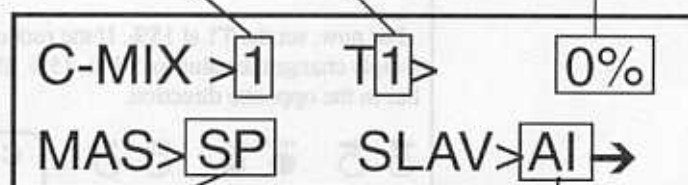
Presently selected mixer - #1, #2 or #3. Select which with YES/+ or NO/- key.

Throw Direction Indicator - either 1 or 2 depending on which way you move the MASTER function's stick or switch.

Amount SLAVE will respond to MASTER control inputs (Mixing Amount)

Channels available as either MASTER or SLAVE are:

SP ..... Spoiler  
AI ..... Aileron  
EL ..... Elevator  
RU ..... Rudder  
FL ..... Flaps  
GE ..... Gear  
CB ..... Camber



**MASTER Channel:** Channel that will 'drive' the presently selected SLAVE channel's servo, in addition to its own, when mixing is active.

**SLAVE Channel:** Channel that will respond to the transmitter control function set as MASTER, in addition to its own, when mixing is active.

(Continued on next Page)



## SAILPLANE

### Compensation Mixers ...

*MASTER channel is the channel that will drive both its own servo(s) AND the slave channel's servo when the Master channel's transmitter control is moved. The SLAVE channel's servo(s) will respond to the Master channel's transmitter control AS WELL AS responding normally to its own transmitter control.*

Usually the first thing you'll want to set is the MASTER and SLAVE channels. Press the > or < key to position the cursor over the MAS> position.



Now press the YES/+ or NO/- keys to cycle through the channels available until you reach the desired MASTER channel. In this example we want the rudder to automatically respond when we move the aileron stick, so Aileron must be the MASTER channel.

Now move the cursor to the SLAV> position, then use the YES/+ or NO/- keys to select Rudder as the SLAVE channel.



Remember, the MASTER channel is the channel that will drive both its own servo(s) AND the slave channel's servo when the Master channel's transmitter control is moved. The SLAVE channel's servo(s) will respond to the Master channel's transmitter control AS WELL AS responding normally to its own transmitter control.

Having selected the Master and Slave channels, the next step is to set the amount of mixing and the direction of the Slave channel's response to the Master channel's transmitter control.

Position the cursor over the T1> cursor position using the < or > keys. By pressing the YES/+ or NO/- keys you can set the amount of Slave servo movement (rudder) that will occur with movement of the Master control. (In this case aileron.) The range of adjustment available is from -150% to +150% — in other words, the full range of servo travel is available for mixing. NOTE that you can have more control movement set than the servo is able to accommodate if the total of mixing and EPA for that servo exceed 150%.

For now, set the T1 at 15%. If the rudder moves opposite the direction desired, simply change the value for T1 to -15%. This will give the same amount of mixing, but in the opposite direction.



With T1 set at 15% you now have 15% mixing of rudder with aileron in ONE direction; i.e. left Aileron stick will now give left aileron response PLUS left rudder response, but right Aileron stick will not cause rudder movement.

(Continued on next page)



## Compensation Mixers ...

To program mixing for both directions of Master stick movement you must set both T1 and T2. To change from T1 to T2 for programming, simply move the transmitter control for the MASTER channel. (In this example the Aileron stick). Note that when you move the control in one direction T1 is displayed in the mixing screen, and when you move the control in the opposite direction T2 is displayed.



Move the Aileron stick to the right and T2 will be displayed in the mixing screen.

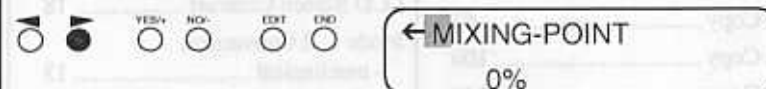
Now you can set the mixing for T2 by pressing the YES/+ or NO/- keys.



At this point you will have automatic rudder response along with aileron response whenever you move the Aileron stick on the transmitter. The rudder servo will still respond normally to movement of the transmitter's rudder stick.

Optimum amounts of mixing must be determined by in-flight testing.

The arrow to the right of the SLAV> channel position indicates that there are more settings than can be displayed in the present screen. Press the > key to move the cursor past the arrow and the next screen will appear.



The MIXING-POINT setting is an advanced mixer function. It is set by moving the Master transmitter control to a desired point and then pressing the YES/+ key. The display will read whatever amount of transmitter control deflection you had when the key was pushed.

The Mixing Point function SHIFTS the point at which the mixing RATE "neutral" is located. For instance, assume you have set Rudder as Master and Aileron as Slave, and have set twice as much mixing (aileron response) for right rudder stick movement as for left rudder stick movement. Now, hold the rudder stick about 1/2 towards the right stick limit and press the YES/+ button in the mixing point menu. The menu will now show a value around 50%. Now, the Aileron response to rudder stick movement will be the same rate for the first 1/2 of rudder stick movement to the right as to the left; only rudder stick movements to the right of MORE THAN 50% will cause the higher mixing rate for right rudder to activate.