474903

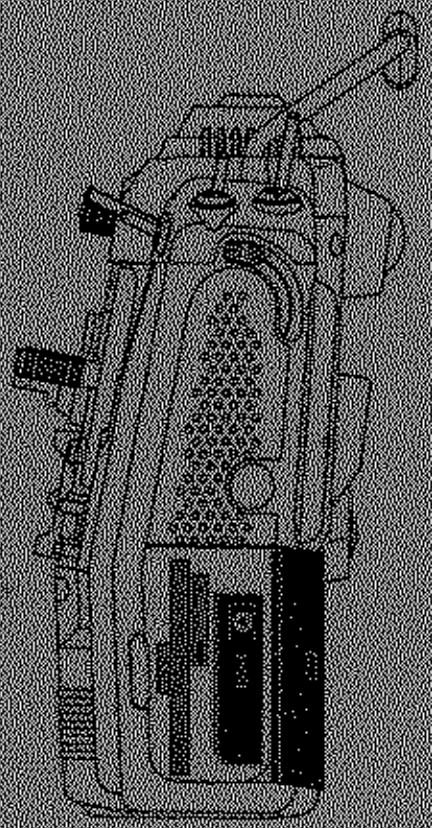
Stylus

Advanced Technology Card System

EXTENDED FEATURE SET CARD FOR POWERED AIRCRAFT ...

"ACRO"

P/N 96811



AIRTRONICS INC

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Basic Description and Special Considerations - READ THIS!

The Stylus ACRO Card is used to install a greatly enhanced set of features for use with fixed wing powered aircraft models. All of the features and functions of the basic Stylus system program for AERO types are retained, and the entire memory and processing power of the Stylus transmitter are used to allow the addition of added functions for the ACRO type. (When the system is initialized with the ACRO card, all four memory positions are allocated to the ACRO type model set-up.)

Because all set-ups are allocated for extended feature set ACRO types, ANY OTHER MODEL SETUP will be erased from the internal memory when you initialize the transmitter with the ACRO card. If you wish to save a present set-up for possible future use or reference, you have two choices: (1), SAVE the set-up to the optional 50-Model Memory Card, or (2), Write down all of the menu settings for the set-up that you wish to save.

Also, if you remove the ACRO card after programming a set-up (but without saving the set-up to the 50-Model Memory Card) and then remove the ACRO card and re-initialize the transmitter for the three-model type program, the set-up you had programmed using the ACRO card will be lost.

For maximum flexibility and convenience when more than one model TYPE is desired, the 50-Model Memory Card is highly recommended. If you intend only to fly with the ACRO extended feature set programs, and only need 4 model memory positions, then leave the card installed in the transmitter at all times.

IMPORTANT NOTE FOR USERS OF THE ORIGINAL AERO FEATURE CARD!

If you are upgrading from the original AERO card to the new version of AERO card (ACRO), or if you EVER change back and forth between the different versions of the AERO card, you MUST TAKE ONE EXTRA STEP to ensure proper system operation.

BEFORE you install the ACRO card you must remove the AERO with power turned off. Then turn on the transmitter. The menu below will display:

INIT ALL DATA? Y
OR RSTART A-AERO

The cursor is over the "Y" position for Initializing all data. Press YES/+ key to initialize the system back to the three-type program. This will purge the AERO card setups from memory, so if you want to save them you will need to either record your setting son paper or save them on the 50-Model card.

Failure to reinitialize the systems when switching from one version of the AERO card to another can cause the Stylus computer system to "crash" and reset to international defaults. This can only be repaired by Airtronics service department.

After reinitializing to the three-type menus you may proceed as follows:

Initializing the ACRO Feature Card

Install the ACRO feature card into the transmitter slot (detailed on Page 5). Turn on the display switch. (No RF will be transmitted). The following menu will be displayed:

THIS IS YOUR LAST CHANCE to avoid erasing any prior programming that you wish to save! This menu asks if you want to initialize all data for the ACRO feature card. IF NOT, turn the transmitter off and remove the card, restart, and save any programming information.

IF YOU WANT TO USE THE ACRO CARD, press the YES/+ key. The system will now initialize all 4 setups for use with the extended feature set ACRO set-ups. If you hear a beep and the display reads "Throttle Stick High," pull the throttle stick to full low position. Leave the card in the transmitter at all times, unless you wish to SAVE your data to the 50-Model Memory card or want to revert to the 3-model type set-ups (which will erase any programming done with the ACRO card).

CAUTION:

As with any delicate electronic device, care needs to be taken to preserve the integrity of the Stylus Cards. At all times the Card must be kept dry and as clean as possible. When not in use, store the card in its case in a safe place. At all times keep the card away from extreme temperatures, moisture, static electricity, magnetic devices and electrical power sources. With proper care your Stylus Card should give you many years of reliable service.

Using the 50-Model Storage Card in conjunction with Extended Feature Card(s)

This section details the procedures for using the 50-Model card along with any of the extended feature cards. Since each of the extended feature cards requires that you initialize the Stylus program for that specific aircraft type (AERO, HELI or GLID) you will want to use the 50-Model card to store any other type of model set-up you wish to retain.

1. Insert the Feature Card into transmitter, initialize, and program the set-up for your aircraft. **LEAVE TRANSMITTER POWER ON!** Remove the card.

2. Insert 50-Model card and use the SAVE function to save the set-up onto the 50-Model Storage Card. **LEAVE TRANSMITTER POWER ON!**

3. Reinsert feature card to fly aircraft.

4. To load another model of the same type as first, select another model set-up and program model #2. LEAVE TRANSMITTER POWER ON!

5. Insert 50-Model card and use the SAVE function to save the set-up #2 onto the 50-Model Storage Card. LEAVE TRANSMITTER POWER ON!

6. Reinsert feature card and select either set-up #1 or #2 to fly aircraft.

7. In a similar manner you can program any number (up to 50) of other set-ups, either using the basic built-in features or any of the extended feature cards, and SAVE them to the 50-model card while the transmitter remains turned on. Then turn the transmitter on with the appropriate feature card installed (or with no cards for a set-up that does not use the extended feature card) and initialize, then WITH POWER STILL ON insert the 50-model card and LOAD the set-up. LEAVE POWER ON and reinsert the feature card (if used) and fly model.

Special Precautions for Safe Handling

Do not remove or insert the 50-Model Card while the "CARD ACCESS" lamp is ON, as this may damage the Card circuits. The Card Access lamp will be on whenever you execute the Save, Load, List, Delete or Initialize functions. It will also be on briefly when you turn on either of the transmitter power switches with a card installed.

Do not touch the card terminals with your hands or with any metal objects, as a static charge could destroy the Card circuits.

Keep the card terminals protected at all times from any dirt, oil or other contamination.

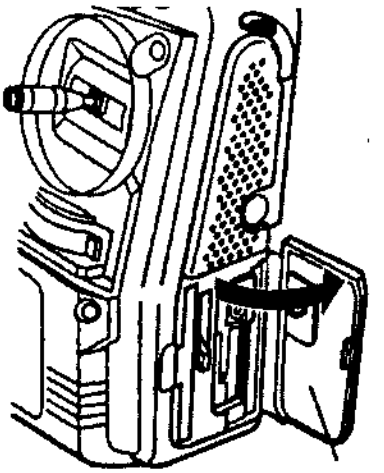
Do not hold the lithium battery used in the 50-model storage card by its contacts or use pliers as this could short out the battery.

SEE APPENDIX E for instructions on changing the 50-model card battery.

Installing Card

The ACRO Card (as with any of the cards designed for use with the Stylus transmitter) is simple to install.

The card slot is located directly in front of the transmitter battery compartment on the Stylus, and is accessed by opening the same door. Simply grasp the front edge of the door and pull it open as shown in the diagram.

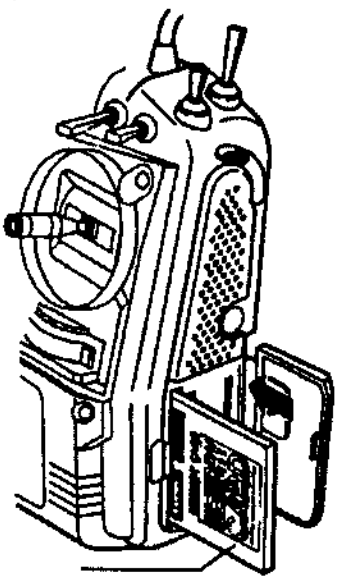


Card Slot access door

The end of the card with the connector block is marked with an arrow. This end is inserted into the card slot. The face of the card (side with the printing on it) must face towards the front of the transmitter, as shown below.

Gently push the card into the slot. DO NOT use excess force as this could damage the card or the connectors. Steady, gentle force while making certain that the card is aligned squarely with the slot will be enough to engage the connectors.

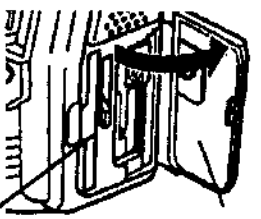
When fully seated, the outer edge of the card will be flush with the surrounding area of the case.



Insert card as shown

REMOVING CARDS:

To remove the card, push the release lever located between the card slot and the transmitter battery compartment upwards; this will disconnect the card and push it outwards far enough to grab with your fingers; then pull it out carefully and store in a safe manner.



Card Release Lever

ACRO Card Primary Menus

Menu Sample

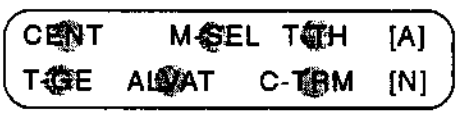
Explanation: *Positions are numbered here starting left to right on top row, then left to right bottom row.*

***NOTE: ALL of the primary menus display the present Model Set-up and Present Flight Mode in the same location on the screen**

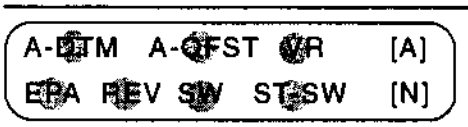
First Position ..... Present Dual Rate Setting (0, 1, 2 or 3) for Aileron, Elevator and Rudder respectively.
Second Position ..... Designates Internal Timer or Stopwatch
Third Position ..... Stopwatch/Timer Display, Minutes:Seconds
Fourth Position ..... Present Model Set-up*
Fifth Position ..... Present Model Name
Sixth Position ..... Transmitter battery pack voltage
Seventh Position ..... Present Flight Mode Selected*

First Position ..... Dual Rates menus
Second Position ..... Exponential/Variable Trace Rate menus
Third Position ..... Pre-Assigned Mixer menus
Fourth Position ..... Trim Memory menus
Fifth Position ..... Snap Roll or Spin menus

First Position ..... Spoileron menus
Second Position ..... Aileron Differential Adjustment menus
Third Position ..... Flap menus
Fourth Position ..... Fun Fly mixing menus
Fifth Position ..... Throttle Curve menus



First Position ..... Servo Centering menus
Second Position ..... Model Selection menus
Third Position ..... Twin Throttle option menus
Fourth Position ..... Twin Landing Gear Options
Fifth Position ..... Ailevator Option (Dual Elev. Channels)
Sixth Position ..... Cross Trim option menus



First Position ..... Automatic Dynamic Trim Memory menus
Second Position ..... Automatic Offset menus
Third Position ..... Variable Resistor Auxiliary menus
Fourth Position ..... End Point Adjustment menus
Fifth Position ..... Servo Reversing menus
Sixth Position ..... Switch Assignments menus
Seventh Position ..... Stick Switch menus

First Position ..... Servo Position menus
Second Position ..... Compensation Mixers menus
Third Position ..... Bi-Directional Mixers menus
Fourth Position ..... Channel Delay menus
Fifth Position ..... Alternate Set-up function menus

First Position ..... Trim Authority menus
Second Position ..... Timer menus
Third Position ..... Data Copy menus
Fourth Position ..... Data Reset menus

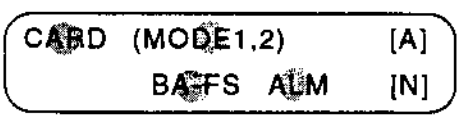
(Continued on next page)

AERO Card Primary Menus — *continued*

Menu Sample

Explanation: *Positions are numbered here starting left to right on top row, then left to right bottom row.*

First Position ..... Modulation type menus
Second Position ..... Model Name menus
Third Position ..... Fail Safe menus
Fourth Position ..... Display Contrast menus
Fifth Position ..... "Click" Audio and Tone menus



First Position ..... Card Operation menus
Second Position ..... Mode Selection menus
Third Position ..... Rec'r Pack Fail Safe menus
Fourth Position ..... Transmitter Alarm menus

NOTE! Some Stylus transmitters have the "Trainer" function enabled. If yours has this function enabled, the eighth primary menu will show the TRAINER menu as shown at left. If this function does not show within your menus and you wish to use it, you may send your transmitter to Airtronics Service Dept. for activation.

About This Manual

This manual is designed to supplement the manual that is included with your Stylus system. All of the menu functions that are ONLY available with the ACRO upgrade card are described in detail in this manual. Menus that have added functions (as compared to the basic system) are also described here.

Those functions that are identical to the basic system functions are fully described in the Stylus Radio System Operating Manual and are generally not repeated here.

If you are already familiar with the basic Stylus system, this manual will describe all additional programming options for using the ACRO upgrade card.

If you are just starting with your Stylus and will be using the ACRO card, please take some time to study the Stylus Radio System Operating Manual and this supplement before you start programming.

Manual Arrangement:

This supplemental manual describes the ACRO Card functions in the ORDER THEY APPEAR within the nine primary menus. This should allow you to simply and quickly find instructions for any specific function.

YOU WILL NOT use the functions in this order; for instance, the first things you need to do are define the channel assignments, servo direction, endpoints and switch assignments.

NOTE:

Your Stylus transmitter offer an alarm feature that warns you when you turn on your transmitter if the throttle stick is not in the LOW position. When this occurs no RF will be transmitted and the display will indicate "TH-STK-HIGH!"

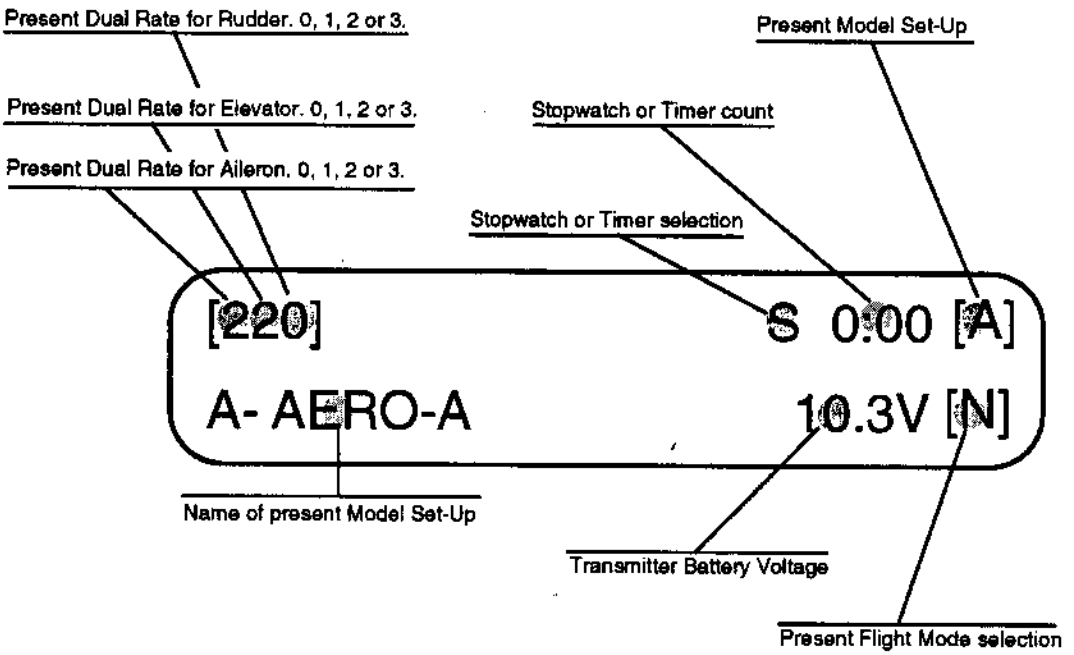
If this occurs, move the throttle stick to the full low position; the alarm will stop and the initial screen will be displayed.

See "Alarm Switch and Stick" section for further information.

Initial Screen

The initial screen (shown above) is displayed when you first turn on the Stylus transmitter unless you last turned it off while within a programming menu, in which case pressing the END key once or twice (depending on where you are in the menus) will display the initial screen.

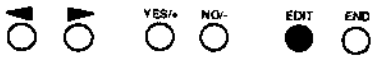
No programming is performed within the initial screen. It displays important information about your current set-up, dual rate, alternate, flight modes, transmitter voltage and timer assignments. The display is explained in detail below:



As you can see, the initial screen displays quite a bit of very useful and important information. Always look at the display to ensure that you are in the desired Model Set-Up, Alternate, and Flight Mode before starting your aircraft's engine. Always check the status of your dual rates before attempting flight. Monitor the battery voltage display between flights during any flying session to ensure that you have enough battery capacity left to allow safe flight.

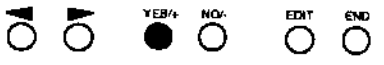
DUAL RATES

Press the Edit key to display the following screen:




```
D/R  EXP/VTR  MIX      [A]
TRIM-M  SNAP-ROLL      [N]
```

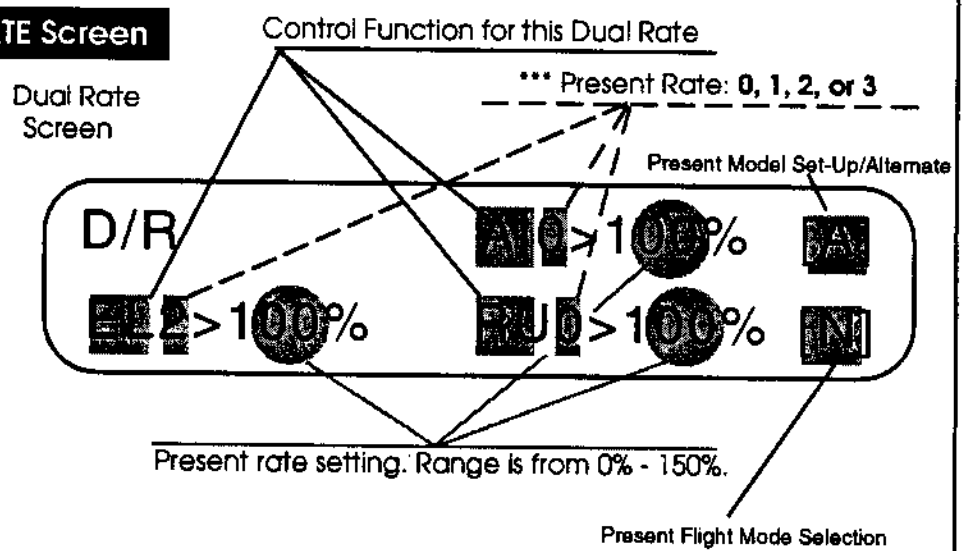
The cursor will be over the D/R position. Press the YES/+ key to bring up the first Dual Rate screen:




```
D/R                AI0>100%  [A]
EL2>100%           RU0>100%  [N]
```

This screen tells you the present Alternate Set-up, Flight Mode and Dual Rate status and, when a Dual Rate switch is set to an ON position, the 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
3 is Dual Rate #3

*Abbrev.	Function	DR #1	DR #2	DR #3
AI	Aileron	7	6	None
EL	Elevator	14	13	None
RU	Rudder	**None	None	None

*Default switch assignments and positions.
**Rudder is not assigned to a switch but can be user set.

NOTE that EACH Flight Mode and Alternate can have its own Dual Rate setting! Always be certain that you have selected the Flight Mode or Alternate for which you wish to program!

Dual Rates ...

You may wish to change the Dual Rate #2 positions above to be OFF (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 3 rates available from a single switch.

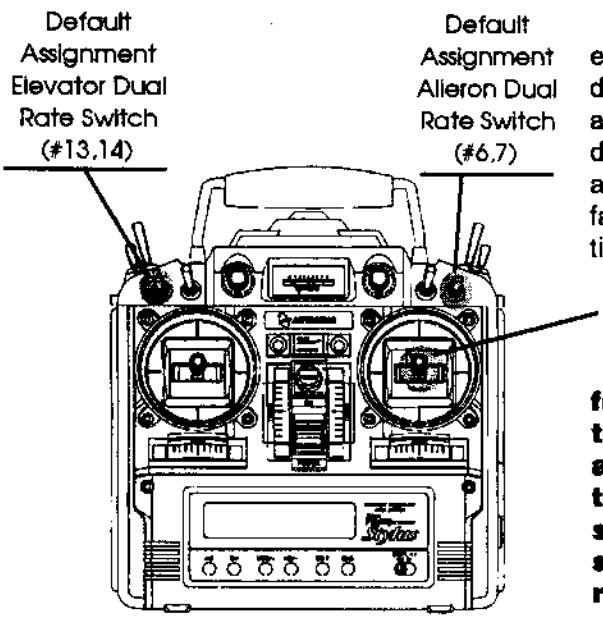
The Dual Rates operate the same with the ACRO Card installed as with the basic Stylus program, EXCEPT that with the ACRO card there are more rates available; Aileron, Elevator and Rudder have THREE Dual Rates plus the "normal" rate available with the ACRO card installed. (as compared to two Dual Rates in the basic program).

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

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 and Flight Mode 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 Exponential and 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 FOUR possible rates available for Aileron, Elevator and Rudder. These rates are (0) Normal, (1) Dual Rate #1, (2) Dual Rate #2, and (3) Dual Rate #3.
- • EACH Flight Mode and Alternate has its own Dual Rate settings.
- •You may assign any of the possible dual rates to cause **reduced** or **increased** throw of that control.
- •Any or all of the Dual Rate positions may be assigned to any switch.
- •Any Dual Rate switch may also activate or deactivate Exponential settings.
- •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.



In the standard default settings, the Aileron and Elevator Dual Rate switches are assigned to the 'standard' locations as shown above. Dual Rate #3 is not assigned to any switch within the default setting. Rudder is not assigned to a switch, and thus cannot have a Dual Rate (or Expo) set unless you change the default switch assignments as explained in a later section of the manual.

IMPORTANT!

ALL DUAL RATES are set INDEPENDENTLY for each direction of stick movement! To set the rate for the present dual rate for RIGHT aileron (for instance), move the aileron control stick to the RIGHT and program the desired rate. Then move the aileron control stick to the LEFT to display and program the rate for LEFT aileron movement.

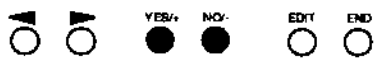
Dual Rates ...

To set a rate for any of the three possible control functions, 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 position to activate Dual Rate #1— note that the number following the abbreviations for these functions has changed to "1"

```
D/R              AI1>100%  [A]
EL1>100%         RU0>100%  [N]
```

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.

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>100%  [A]
EL1    0%        RU0>100%  [N]
       to
     +150%
```

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

```
D/R              AI2>80%   [A]
EL1>80%          RU0>100%  [N]
```

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, for both directions of stick movement.

REMEMBER ...
EACH Flight Mode and EACH Alternate has its own settings for each Dual Rate Function! Always check to ensure that you are programming the desired Flight Mode and Alternate.

```
D/R              AI2>60%   [A]
EL1>60%          RU0>60%   [N]
```

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.

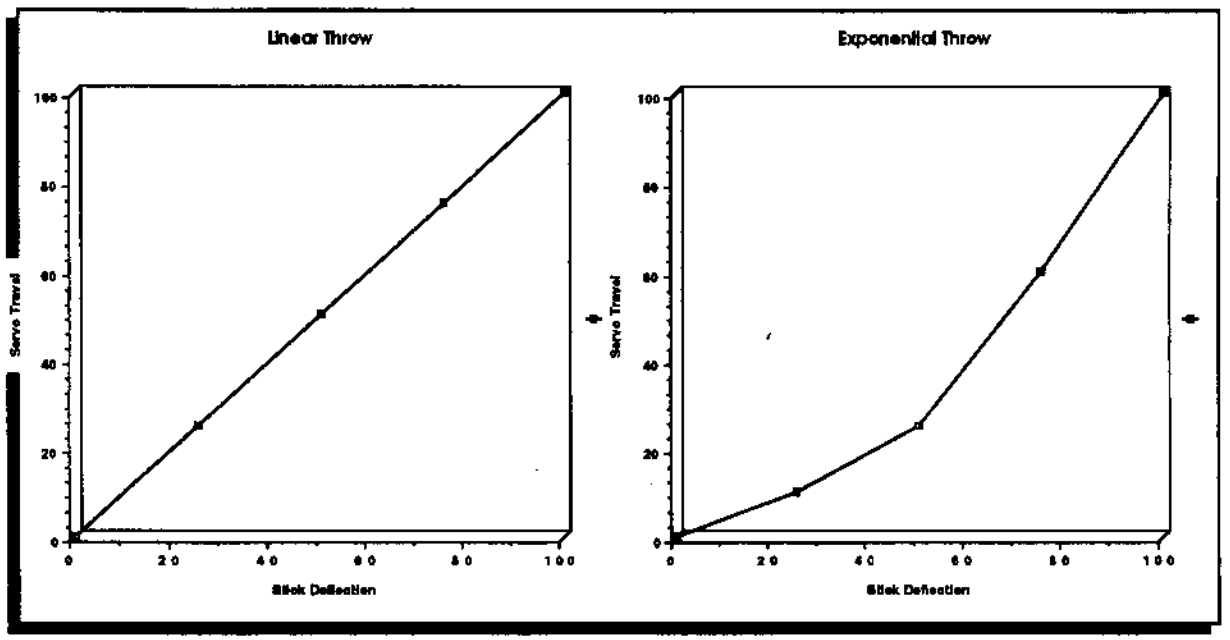
For maximum flexibility in the set-up of your aircraft, you will want to study the instructions for setting EXPONENTIAL, FLIGHT MODES and ALTERNATE SET-UPS before completing switch assignments and rates for the Dual Rate function. You must assign Exponential Throw options to the same switch(es) as your Dual Rates, or you may decide to alter any or all of your control settings with one switch by using the Alternate Mode option.

EXPONENTIAL/ VTR

Stylus with ACRO Card allows the pilot to choose three settings for Exponential Throw for Aileron, Elevator, and Rudder for EACH Flight Mode or Alternate. Also available (ONLY with the ACRO card installed) is an option for "VTR," or Variable Trace Rate, control response. First we'll look at the Exponential option.

Exponential Throw is primarily used to 'soften' or decrease the stick sensitivity of a control around the neutral point. With Exponential disabled, a control function's servo will move in an amount proportional to the amount of stick deflection; i.e. 50% stick deflection will result in 50% servo travel; 75% stick deflection will cause the servo to travel to 75% of its presently set maximum throw.

Exponential settings DO NOT change the amount of servo travel available at 100% control stick deflection; rather they change the amount of servo travel that will occur with stick deflections of less than 100%. The first 25% of stick deflection may be set to result in only 10% of total servo throw, making the control less sensitive around neutral. *See illustration below.*



If you have not used Exponential functions before, you will want to start with a very small amount of Exponential (10% - 20%) to determine whether you like this sort of control response. Exponential is most useful where strong control response is desired at extreme stick positions, but softer response to small stick movement is desired in order to make very accurate, small corrections to flight path.

IMPORTANT!

ALL EXPONENTIAL settings are set INDEPENDENTLY for each direction of stick movement! To set the rate for Expo for the present dual rate for RIGHT aileron (for instance), move the aileron control stick to the RIGHT and program the desired rate. Then move the aileron control stick to the LEFT to display and program the Exponential rate for LEFT aileron movement.

Exponential ...

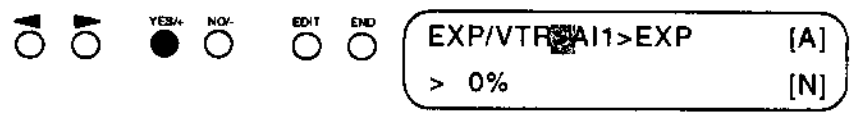
To activate Exponential Throw you must have Dual Rates assigned to a switch. The positions for Exponential #1 and Exponential #2 for each flight control function correspond to the Dual Rates switch position(s) for those functions. In other words, if you have assigned the #7 switch position to turn on Dual Rate #1, then this same switch position will activate Exponential #1 settings for the same control functions within that Flight Mode or Alternate. (Note, however, that you can leave the Dual Rates set at 100% so that switching a Dual Rate switch on will activate Exponential only.)

Press the Edit key to bring up the following screen:

Press the > key to place the cursor over the EXP/VTR position.

Press the YES/+ key.

The first Exponential/VTR screen will appear as shown below:



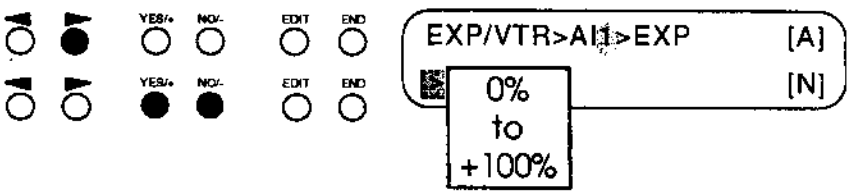
These screens tells you the present Expo/VTR status and, when a Dual Rate/Exponential switch is set to an ON position, the setting for that control function or functions. In this sample menu Aileron Dual Rate #1 is ON and the default setting is for expo (EXP) and is presently at 0%. The possible range for Exponential settings for each function in each Flight Mode or Alternate is from 0% (Linear Throw) to 100% (Maximum Exponential).

To set an Exponential rate for any of the three possible control functions, turn the switch for that function(s) to the Dual Rate 'On' position. Below we'll assume that the Aileron dual rate switch is in the on position — note that the number following the abbreviation "AI" displays "1."

REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for each Exponential Function! Always check to ensure that you are programming the desired Flight Mode and Alternate.

By positioning the cursor over the third cursor position you may now set the amount of Exponential available in Dual Rate #1 position by pressing the YES/+ or NO/- keys, for each direction of stick movement.

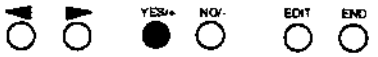


Press the < key to move the cursor to the first menu position and use the YES/+ or NO/- keys to toggle between the AI, EL and RU Dual Rate Settings.

Variable Trace Rate

For any Dual Rate function you can choose between Expo or VTR response types.

The first cursor position in the Exp/VTR screen will show EXP by default when a rate switch is on. To change the response type from Expo to VTR, press the YES/+ key while the cursor is on the second position:

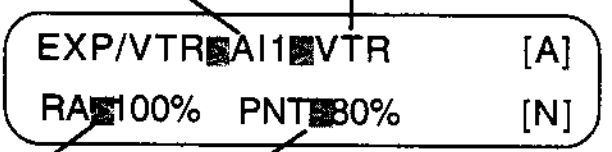


The screen will change to the default screen for VTR. The menu positions are described below:

First position shows which function and which rate are presently active. IN this example the "AI1" display means that the present function is Ailerons, and Rate #1 is presently turned on.) Use YES/+ or NO/- key to change to EL or RU settings.

(Which rate is active - if any - is determined by your present switch position.)

The second position reads VTR, which indicates that VTR has been chosen as the response type for THIS function.



Present RATE of response when stick movement goes beyond the POINT setting. This is adjustable from 0% to 150% The rate for movement BELOW the Point setting is determined by the setting for the associated Dual Rate.

The "POINT" adjustment determines at what point, expressed as a percentage of total stick travel, the rate of response will change from the normal rate to the rate defined within this menu (when THIS dual rate switch is set to the on position). Range is from 5% to 95%.

What Is VTR?

VTR, or Variable Trace Rate, allows you to define two different LINEAR control response rates, with the change in rates occurring at a point in the stick travel that you define. You could think of it as a sort of "Dual Rate" that is turned on or off depending on stick position. VTR is commonly used in two ways; See the examples below and graphs on following page:

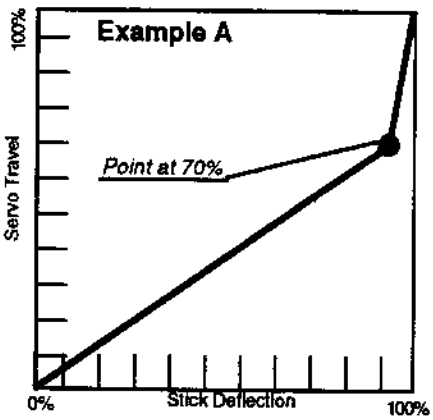
(A) If you set the "Point" fairly high and the "Rate" to achieve maximum desired control deflection, you can have a less sensitive control response for normal maneuvering with the extreme rate "kicking in" only when you reach extreme stick deflection.

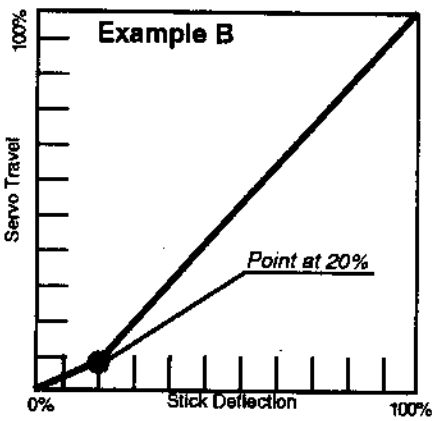
(B) If you set the "Point" fairly low and set the "Rate" for the control response desired for normal maneuvering response, you can achieve a lower rate of response for movement very near the center or "neutral" stick position.

Variable Trace Rate

REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for each VTR Function and each direction of stick movement! Always check to ensure that you are programming the desired Flight Mode, Alternate and direction.

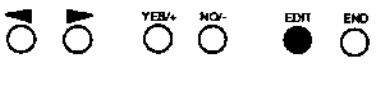




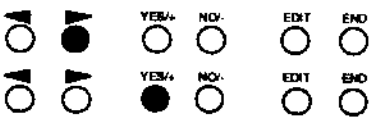
MIX Menus

The MIX menu is used to access a group of pre-defined mixers; it does NOT access all available mixing options for the Stylus. Functions contained within the MIX menu are detailed below.

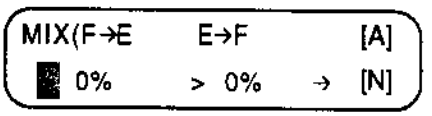
Use the Edit key to display the following menu:



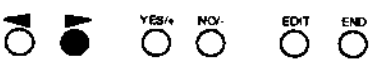
Move the cursor to the MIX position, then press YES/+.

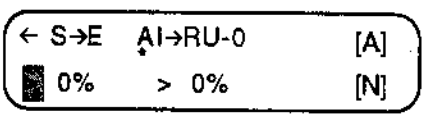


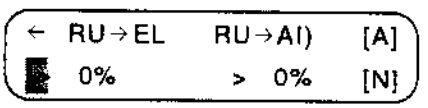
The following screen will now appear:



Continue pressing the > key until the cursor scrolls to the next screens.







These screens allow for adjustment to the following functions:

1. F→E is for Flap-Elevator mixing adjustments. Use this function to cause the Elevator to automatically respond to Flap commands, thus eliminating any unwanted pitching when Flaps are applied.

(Continued on next Page)

MIX Menus

2. E→F is for Elevator-Flap mixing adjustments. Use this function to cause Flaps to deploy when Elevator is used. Normal application would be to have the Flaps deploy downward when "Up" Elevator is applied, and vice-versa, to allow tighter corners. (Note - when the Fun-Fly option is active, this menu is not used; rather, use the E→F mixer menu WITHIN the Fun-Fly menus.)

3. S→E is for Spoiron-Elevator mixing adjustments when the Spoiron is made active (ACT). This mixer is used to re-trim the elevators when the Flap switch is used to activate the spoiron function. This prevents unwanted pitch changes when the spoiron function is activated or deactivated.

4. AI→RU is for Aileron-Rudder mixing adjustments. There are TWO mixers available for this function. This function is used to automatically add rudder response when the Aileron stick is moved, allowing coordinated turns without using the rudder stick. {These 3 functions are IDENTICAL to the Mix Menu functions of the basic Stylus transmitter and are explained in detail in the Stylus Radio System Operating Manual. }

5. RU→EL is for Rudder-Elevator mixing. This is used to cause the Elevator to move when Rudder stick is deflected. Normally used to correct for rudder-induced pitch changes, especially in knife-edge flight.

6. RU→AI is for Rudder-Aileron mixing. This is used to correct for unwanted rolling that occurs with Rudder input when the dihedral of the aircraft causes roll-coupling.

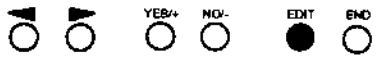
NOTE - The amount of mixing for 5-6 above is set INDEPENDENTLY for each direction of master control stick Movement; e.g. after setting the amount of RU→AI mix to give pure yaw with Left rudder, move the rudder control stick to the right to display and adjust the mix amount with Right Rudder.

You must have a switch assigned or the function turned on all the time (in the SW menus) to activate a mixer.

TRIM MEMORY

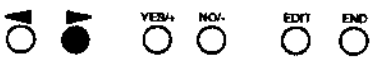
Stylus offers a Trim Memory function for all flight control channels. This function allows the trim levers to be re-set to the center positions while maintaining the trimming information in memory. This is useful because the pilot can then ensure that the trims are in the proper position just by checking 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...

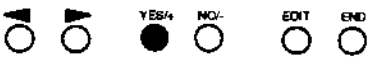



```
 R  EXP/VTR   MIX     [A]
TRIM-M  SNAP-ROLL    [N]
```

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




```
D/R  EXP/VTR   MIX     [A]
 RIM-M  SNAP-ROLL    [N]
```




```
TRIM-MEM   LL          [A]
TH  INH   AI  INH  →   [N]
```

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

```
← EL  INH   RU  INH    [A]
                       [N]
```

To use Auto DTM, you must activate the control functions that you wish to have adjusted by the Auto DTM function.

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 -200% to +200%. This value indicates the present trim location.

To keep trims constant for the Primary set-up and any Alternates, enable the Trim Memory function in BOTH the primary and any alternates (by setting the switch for the alternate(s) to the ON position) before turning off the transmitter and centering the trims.

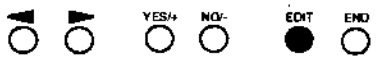
After storing the trim information for all desired channels, TURN OFF the transmitter. Move the trim levers to the neutral positions (center detent) for all channels for which you have stored trim information. When you turn the power back on, the servos should stay in the previously trimmed positions.

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."

SNAP ROLL SWITCH

Stylus allows up to four different Snap Roll programs to be set and stored. Any of these four can be selected as the S-ROLL programs that will occur when the Snap Roll switch is activated. When a S-ROLL switch is turned on the flight controls will assume the positions set. Surface positions CAN be over-ridden by the transmitter sticks even when the Snap Roll switch is held in the on position.

To reach the S-ROLL settings, press the EDIT key until the following screen is displayed:



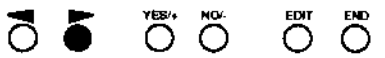

```
D/R  EXP/VTR  MIX     [A]
TRIM-M SNAP-ROLL      [N]
```

REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for the Snap Roll Function! Always check to ensure that you are programming the desired Flight Mode and Alternate.

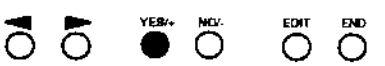
The TYPE of Snap Roll function (Offset or Mixing) is the SAME for each Flight Mode

Press the > key to position the cursor over the S-ROLL position.



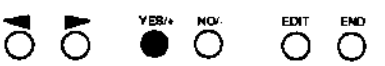

```
D/R  EXP/VTR  MIX     [A]
TRIM-M SNAP-ROLL      [N]
```

Now press the YES/+ key to display the S-ROLL screen. It will probably look like this:




```
SNAP-ROLL             [A]
OFFSET          →     [N]
```

The cursor is over the first position. Press the YES/+ or NO/- keys to toggle the Snap Roll options from Offset to Mixing.




```
SNAP-ROLL             [A]
MIXING          →     [N]
```

These options allow you to determine whether or not the servo positions for the rudder, elevator and ailerons can or can not be changed by stick movement WHILE the Snap-Roll function is active.

1. OFFSET — When the type of Snap Roll function is set to **OFFSET,** the controls will move to the programmed position and will NOT be affected by stick movement while the Snap Roll program is active.

2. MIXING — When the type of Snap Roll function is set to **MIXING,** the controls will move to the programmed position BUT will ALSO respond to stick movements while the Snap Roll program is active.

Surface positions CAN be over-ridden by the transmitter sticks even when the Snap Roll switch is held in the on position IF you select the "Mixing" Option in the Snap Roll menu.

EACH Flight Mode and EACH Alternate has its own settings for the Snap Roll Function! The TYPE of Snap Roll function (Offset or Mixing) is the SAME for each Flight Mode.

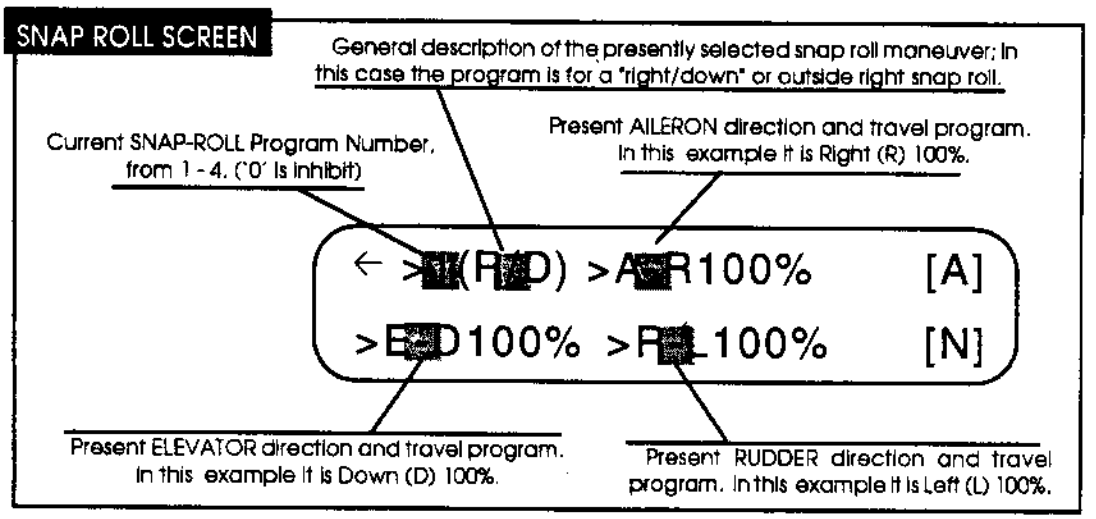
Always check to ensure that you are programming the desired Flight Mode and Alternate.

Snap Roll ...

Having selected the type of Snap-Roll function, press the > key to move to the next Snap-Roll menu screen:

The default screen will show 0, with the "0" indicating that none of the Snap Roll programs is presently selected for Snap Roll "A". This means that nothing will happen when the Snap Roll A switch is turned on. Press the YES/+ key to scroll through the four snap roll program screens.

The display above shows the default settings for Snap Roll Program #1. The screen information can be read and adjusted as explained below:



REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for the Snap Roll Function! Always check to ensure that you are programming the desired Flight Mode and Alternate.

The TYPE of Snap Roll function (Offset or Mixing) is the SAME for each Flight Mode

To change any of the control travel settings, move the cursor to that control position with the > or < keys, then press the YES/+ or NO/- keys to adjust that control's S-ROLL program. The range of throw is from 0% to 150% for each of the three flight controls; Aileron, Elevator and Rudder.

Note that only the AMOUNT of travel is adjustable, not the direction. There are four S-ROLL program screens, which allow you to select from either right or left snap rolls either upright or inverted, as follows:

Program 1 ..... R/D - Outside Right Snap
Program 2 ..... L/D - Left Outside Snap
Program 3 ..... R/U - Right Inside Snap
Program 4 ..... L/U - Left Inside Snap

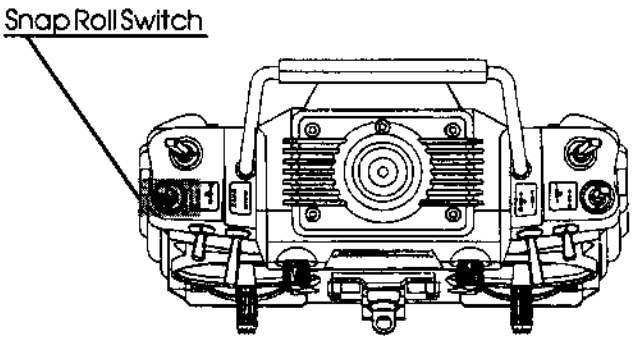
Snap Roll ...

The program (0 through 4) that is presently displayed in the S-ROLL> screen is the program that will be activated when the snap roll switch for the presently displayed snap roll function is turned on in the present Flight Mode and/or alternate. The amount of control input needed must be set according to in-flight testing.

The Snap Roll Switch is factory set to be the #15 switch position. This is the spring-loaded switch on the left side of the Stylus transmitter.

SAFETY REMINDER:

Because there are both Inside (up-elevator) and Outside (down-elevator) S-Roll programs available, it is VERY IMPORTANT that the pilot is always aware of which S-Roll program, if any, is presently active. You do not want to have the model respond in an unexpected manner when the Snap Roll Switch is activated.



You will want to leave this switch assignment set for Snap Roll, so that the function can NOT be accidently left on. Also, see the GEAR part of this section for an explanation of the built in safety-disable feature when using S-Roll and Gear assignments.

Since the control movements are very similar for Snap Rolls and Spins, you can also use the Snap Roll programs and switch to enter and continue in a Spin, either upright or inverted. In this case the throttle will normally be set to idle before the switch is activated. The primary difference between a Spin and a Snap Roll is that the Snap Roll is entered and executed with power on, while a spin is entered from a stalled condition, either upright or inverted.

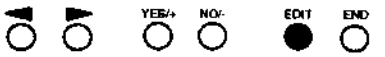
Also, since Stylus Snap Roll functions can be over-ridden or complemented by stick movements (depending on the option you select), you can use the Snap Roll function to input any constant rate command - for instance aileron input for a slow-roll. Set the snap program option to MIXING, program the settings for the other controls to "0%" and set the aileron snap roll setting for the desired roll rate. Now, activating this Snap Roll switch will position the ailerons as programmed while the rudder and elevator will respond to your stick commands.

If you want to have two snap roll options active at the same time (i.e. inside snap with SW#15 and outside snap with SW#16) you can assign an unused Alternate set-up to the SW#16 position and set the Snap Roll SW (switch) for that Alternate set-up to be on in SW#16 position. In this manner, moving the snap switch to the #15 position activates the snap program for the primary set-up, and moving it to the #16 position activates the snap program for that alternate set-up.

SPOIRON OPTION *(DUAL AILERON CHANNELS)*

The Stylus has the ability to control different aircraft Wing types, including conventional single aileron servo, dual aileron servos on individual channels with differential adjustment, and wings with flaperons/spoilerons.

To select the type of control set-up appropriate for your aircraft, press the EDIT key until the following screen appears:

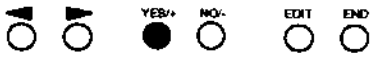



```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

Electronic Differential

It is only possible to electronically adjust differential when using TWO CHANNELS for aileron, with one servo on each side of the wing driving that wing's aileron.

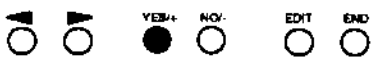
Press YES/+ key to see following screen:




```
SPOIRON  INH         [A]
ST-SW  >100%         [N]
```

The first cursor position reads "INH," meaning that the Spoiron function is inhibited. In this position only the servo(s) plugged into receiver channel 2 will respond to aileron stick movements.

To activate the Spoiron function, press the YES/+ key.




```
SPOIRON  ACT         [A]
ST-SW  >100%    →    [N]
```

The first cursor position will now read ACT, meaning that the Spoiron function is Active and two channels will respond to Aileron (CH 2 and CH 7) and Spoiron inputs. Pressing the YES/+ or NO/- key will toggle this position between ACT and INH, for Inhibit. The INH position allows only one channel for aileron function.

INH, for single-channel aileron operation.

SPOIRON, for two channel operation of ailerons with optional spoileron/ flaperon operation.

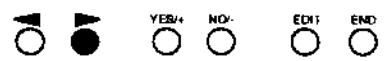
If you do NOT want to use the Spoiron function, leave it turned off in the Switch Assignments menu and ignore the other menu settings in the above screen.

If you want to have the Spoiron function respond to the position of the throttle stick, you must turn ON SPO(AB) located in the SW (switch) menu. IN addition, the TH channel must be assigned and values defined in the ST-SW menu. See operation of Stick Switches.

NOTE!!

The Fun-Fly function also enables two channels for Aileron/Spoiler as well as other advanced mixing functions. Study the following sections on Ailevators, Flap and Fun-Fly functions before deciding on the optimum set-up for your aircraft.

The second position in the Spoiron menu is the S-SW (Stick Switch) adjustment.



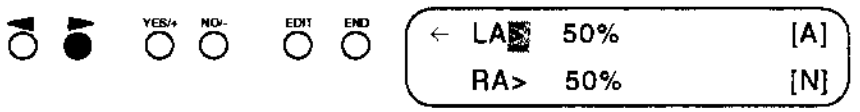

```
SPOIRON  >ACT        [A]
ST-SW  100%     →    [N]
```

SPOIRON OPTION *(DUAL AILERON CHANNELS)*

The S-SW setting determines the point of the Throttle Stick travel at which the Spoiron switch will be active. Above this point, moving the Spoiron switch will have no effect. When the throttle stick is moved to a point below the S-SW setting, the Spoiron switch will become active and the surfaces will move to their programmed position. If you leave the ST-SW setting at 100%, then the Spoiron switch will always be active regardless of the throttle stick position.

Note that with the default switch settings, both the Spoiler/AB and the Flap functions are assigned to switches number 18 and 19. Thus you may see movement of channel 6 (flap) as well as channels 2 and 7 when you activate the switch.

The Spoiron menu screen shows an → indicating that there are more screens available. Press the > key to scroll to the next Spoiron screen.



NOTE that you do not need to have any amount of spoileron action when using the Spoiron function. If you only wish to have two separate channels and receiver outputs for ailerons, then go to the SW menus and set the SPO/AB (Spoiler/AirBrake) function to be OFF.

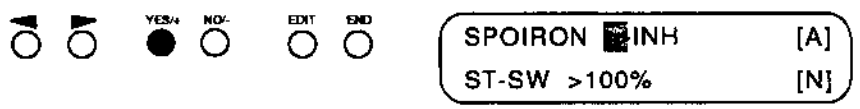
The final two positions in the Spoiron screen are for adjusting the amount and direction of Spoiron deflection that will occur when the Spoiler switch is activated. Range is from -100% to +100%.

NOTE that you do not need to have any amount of spoileron action when using the Spoiron function. If you only wish to have two separate channels and receiver outputs for ailerons, then go to the SW menus and set the SPO/AB (Spoiler/AirBrake) function to be OFF.

When the SPO/AB switch is in the off position or permanently set to be OFF, the LA and RA adjustments above will have no affect on aileron servo movements.

SPOIRON OPTION *(SINGLE AILERON CHANNEL AND SEPARATE SPOILER OR AIRBRAKE FUNCTION)*

If you leave the SPOIRON option set to INH (inhibited) you can use channel 7 as a separate Spoiler or Airbrake function.



In this case, the SW setting selected for SPO/AB will activate the Spoiler or Airbrake function. The amount of deflection of the surface(s) will be controlled by the EPA menu settings for the SPO function.

Although this option does NOT respond to the ST-SW menu within the Spoiron screen, you CAN use a stick-switch to activate the function. To do so, use the ST-SW menus to select the desired stick and points for activation, then use the SW menus to select that stick switch as either the primary or supplementary switch for SPO/AB activation.

SPOIRON OPTION *(DUAL AILERON CHANNELS)*

When the SPO/AB switch is in the off position or permanently set to be OFF, the LA and RA adjustments above will have no affect on aileron servo movements.

If you wish to use dual wing servos to function as both ailerons and Spoilerons or Flaperons, you can use either the Spoiron menus OR the Flap menus and a mixer to achieve this. Below are some notes that will help you decide which to use:

1. Although in practice pilots usually refer to upward-deflecting surfaces as "spoilers" and downward deflecting surfaces as "flaps," EITHER of the Spoiron or Flap functions can be set to cause the ailerons to deflect upwards OR downwards when the Spoiler or Flap function is activated.

2. The Spoiron (Spoiler) function allows you to set ONE amount of surface deflection which is activated by the SPO/AB switch and the Spoiron ST-SW settings.

3. The Spoiron function allows adjustment of each wing servo's spoiler deflection independently, allowing the pilot to trim-out any spoiler-induced rolling by adjusting the individual servo settings in the Spoiron menu. The Flap function adjusts movement of all flap servos as a group.

4. The Flap function has both a pre-set AND a variable amount of surface deflection available.

5. The Flap function has pre-configured mixers for simple flap>elevator and/or elevator>flap mixing.

6. You can use the Spoiron function and still have a separate Flap function even if the Ailevator option is active.

Study these options and the sections on Flaps and Flaperons to decide which option is best for your aircraft.

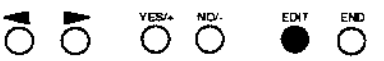
DIFFERENTIAL

Differential (DIFF) 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 when ailerons are applied.

In order to use the electronic differential adjustment, you must use two channels for aileron control. (See Spoiron and Fun-Fly options)

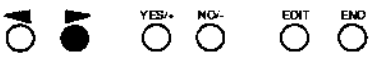
It is only possible to electronically adjust differential when using TWO CHANNELS for aileron, with one servo on each side of the wing driving that wing's aileron.

Press the Edit key to display the following menu:



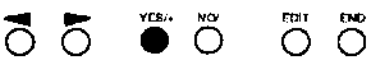

```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

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




```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

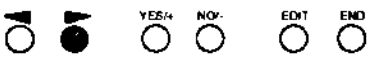
Press the YES/+ key to display the Differential adjustment screen:




```
AI-DIFF>LA>  100%     [A]
NEU>   0% VR>  0%     [N]
```

The first cursor position reads "LA" for LEFT Aileron. ALL of the other settings displayed are for THIS aileron channel. To set the RIGHT Aileron channel press the YES/+ or NO/- key to change the display to read "RA."

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




```
AI-DIFF>LA>  100%     [A]
NEU>   0% VR>  0%     [N]
```

REMEMBER ...

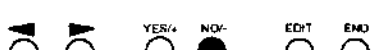
EACH Flight Mode and EACH Alternate has its own settings for Differential!

Always check to ensure that you are programming the desired Flight Mode and Alternate.

This position shows the present DIFF setting for the LEFT aileron channel for ONE direction of stick movement. To change which direction of stick movement you are making adjustments for, move the Aileron control stick in that direction. The display will change to show the present DIFF setting for that direction of aileron deflection. For now move the stick to the LEFT, so we'll be setting the DIFF for left travel of the left aileron servo.

Pressing the YES/+ button or NO/- buttons will adjust the travel of the presently selected servo in the presently selected direction of movement. The display to the right of the cursor (default setting 100%) shows the amount of deflection presently programed. The range is from -100% to +100% of the amount of travel that has been set in the EPA screens for this servo.

Press the NO/- key to change the display to read 50%.




```
AI-DIFF>LA>  50%      [A]
NEU>   0% VR>  0%     [N]
```

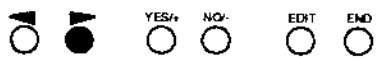
In this example we have reduced the upward (left turn) deflection of the left aileron to 50% of normal throw.

DIFFERENTIAL

Remember, this adjustment only affects the servo movement of the Left Aileron in the LEFT travel direction. If you move the control stick to the Right, the menu will change back to show the DIFF settings for Right travel of the Left Aileron servo.

```
AI-DIFF>LA>  100%      [A]
NEU>   0% VR>  0%      [N]
```

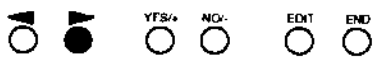
Move the aileron stick to the left to change the menu back to the settings for left travel. Press the > key to move the cursor to the NEU position.




```
AI-DIFF>LA>   50%      [A]
NEU>   0% VR>  0%      [N]
```

This position allows you to adjust the Neutral position (centering) of the left aileron servo. The range of adjustment is from -100% to 100%. Use this function if needed to center the servo in the neutral stick position.

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




```
AI-DIFF>LA>   50%      [A]
NEU>   0% VR>  0%      [N]
```

The VR position allows you to use a Variable Resistor trimmer to change the amount of affect that the DIFF settings will have on servo movement. (You can select which of the dials, sliders or switches are used in the VR menus.)

You can make ALL of the travel and centering adjustments for all Flight Modes while in ONE screen if using the DIFF screen.

The range of VR adjustment is from -20% to +20%. When a VR option for DIFF has been made in the SW menus, moving that trimmer will adjust the amount of differential applied. You will see the change in the DIFF setting in the menus when you operate the VR trimmer. In general, this function is most useful for flight testing; assign the same VR trimmer for both right and left aileron differential, then adjust it during flight until the desired roll response is reached. Note the readings that result (with the VR trimmer in the final position) for both directions of travel for both aileron servos, and then turn off the VR function and manually program those settings for differential.

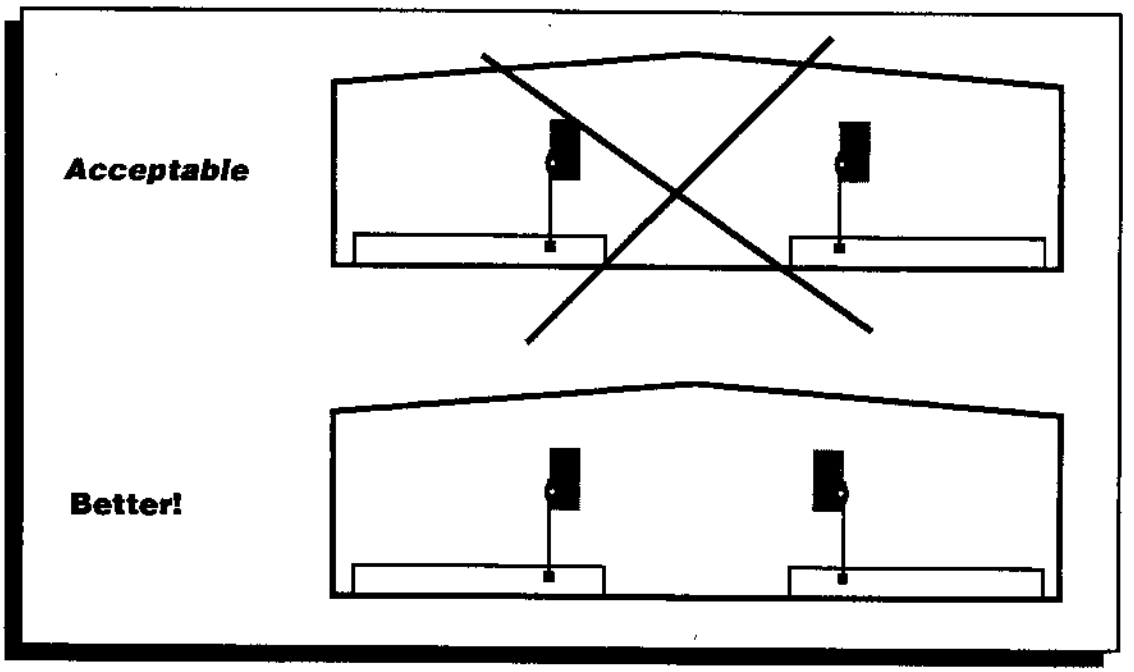
NOTE:
The DIFF screens allow you to do many of the same things that could be done in the EPA and CENT screens. The primary difference is that you can make ALL of the travel and centering adjustments for all Flight Modes while in ONE screen if using the DIFF screen.

Changes made to EPA and CENTERING functions will affect the DIFF settings. It is best to set the EPA and CENTERING functions first, then fine-tune with the DIFF function.

SERVO LINKAGE FOR DUAL-SERVO AILERON OPERATION

When using the Spoiron function to achieve two channels for aileron operation you must take care to install your wing servos and linkages for proper operation.

Both servos will normally rotate in the same direction with the application of aileron stick commands. This means that the aileron (or spoileron or elevon) linkages should be installed so that they are mirror-images of each other, NOT in identical fashion. See diagram.



Optimum installation of aileron linkages!

Although the Stylus WITH the ACRO card can individually reverse the direction of the Aileron/Flaperon servos, it's still desirable to install the servos and linkages to be as shown above. This will allow operation without the ACRO card or with a single aileron channel if you should wish to change in the future.

You may either install both aileron pushrods on the inside of their servo output arms, or install both aileron pushrods on the outside of the servo output arms. Direction of operation may then be controlled by reversing the aileron operation with the transmitter's reversing function.

FLAPS

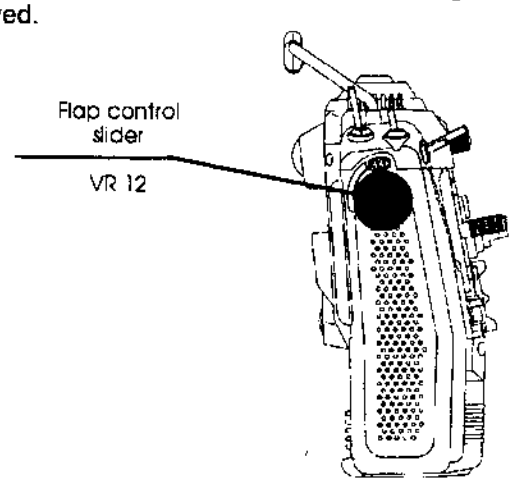
The Stylus allows extreme flexibility in the set-up and operation of the Flap function. There are three separate systems for determining the amount of Flap function that will be realized when the Flap switches are activated:

•The End Point, or total throw available in either direction, is set in the EPA screen. This determines total throw available regardless of which flap switch is used. The Flap control slider on the left side of the transmitter face will determine how much of the presently available Flap is activated, and which direction the Flap moves, **in the Flap 1 Switch position.** When the Flap slider is moved to the extreme top or bottom position, the flap throw will be the total amount available *as determined by the present End Point setting for the respective directions).* For instance, if the Flap control slider is turned half-way towards the + position, then half of the presently set Flap throw in the + direction will be enacted when the Flap switch is activated.

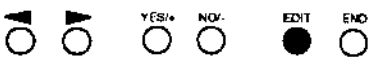
• The Flap menu has a setting for Flap 2 Switch position. This is a pre-set (by you) amount of flap deflection and does not change when the Flap control slider is moved.

The Flap control slider on the left side of the transmitter face will determine how much of the presently available Flap is activated, and which direction the Flap moves, ***in the Flap 1 Switch position.***

The Flap menu has a setting for Flap 2 Switch position. This is a pre-set (by you) amount of flap deflection and does not change when the Flap control slider is moved.

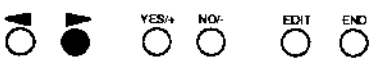


To set the movement of the Flaps, press the EDIT key to reach this screen:



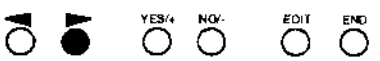

```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

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




```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

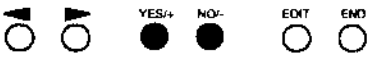
Press the YES/+ key to bring up the Flap menu

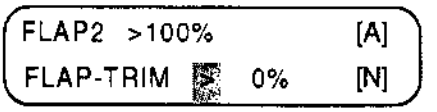



```
FLAP2 >100%          [A]
FLAP-TRIM  >  0%
```

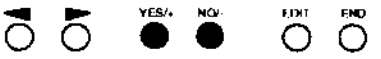
Flaps ...

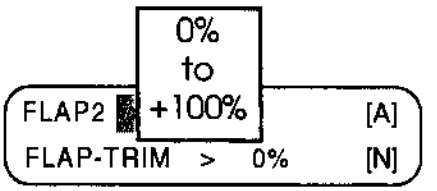
With the cursor over the FLAP-TRIM position, press the YES/+ OR NO/- key to adjust FLAP-TRIM. (Flap neutral position) Range is from -100 to +100.





Now move the cursor back to the FLAP 2 position and use the YES/+ or NO/- keys to adjust the Flap 2 setting. The range available is from 0% to 100% and will determine how much flap is deployed when the FLAP 2 switch is activated.



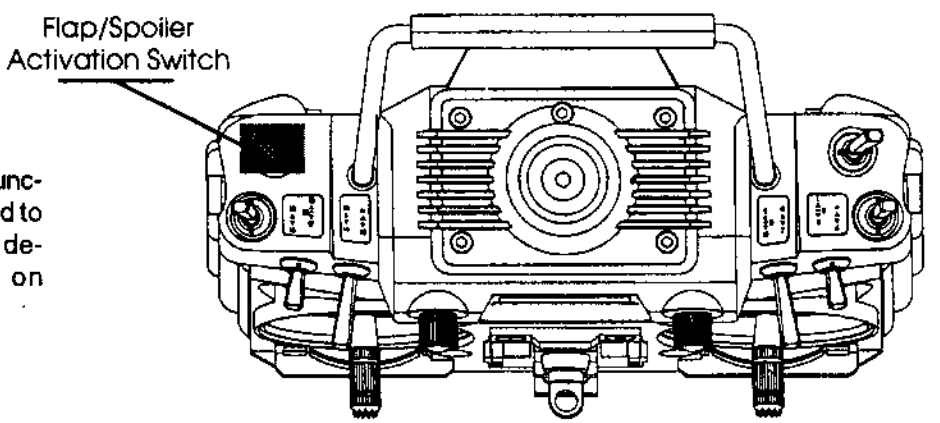


NOTE: When using standard, separate flap and aileron servos, the FLAP settings and adjustments will affect only the Channel 6 FLAP servo.

In mechanical terms, the difference between FLAPERONS and SPOILERONS is that Flaps deploy in a downward direction, while Spoilers deploy in an upward direction. Flaps create both lift and drag; Spoilers create only drag.

In terms of the Stylus program, the Spoilers (Channel 7 servo) have only one pre-set position that is activated by moving the assigned switch to an "on" position AND moving the throttle below the ST-SW position. The Flaps have both a pre-set position and a proportional slider control, and operate when the Spoiler ST-SW is above the defined position or de-activated.

The amount and direction of Flap or Spoiler deployment are now set, and can be activated by flipping the Flap Switch located on the upper left top of the transmitter. Flap 1 is the #18 position, Flap 2 is #19. (This same switch activates any Spoiler settings that have been programmed if you leave the default switch assignments).



Note that the Flap Function can be reassigned to a different switch if desired. See section on Switch Assignments

If you wish to have Flap travel possible in one direction only, set the End Point for the opposite direction at 0%; (The position of the Flap Control Slider (VR12) controls the High and Low EPA settings); now the Flap surfaces will only move in one direction regardless of the Flap slider position.

Flaps ... The options for Flaps, Flaperons, Spoilerons and Spoilers give you a great deal of flexibility in setting up your aircraft. Following are some notes that will help you to decide how to set up your model.

FLAPS - as separate control surfaces

Either one or two servos (with a Y-Harness) can be connected to the channel 6 receiver output. Only settings made to the FLAP menus will affect servo movement. Preset movement is set in the Flap 2 menu and controlled by the Flap 2 switch, , variable movement is set in Flap 1 menu and controlled by the Flap Slider when Flap Switch is in position 1.

FLAPERONS - Ailerons that also respond to Flap control inputs.

Must use two aileron servos and two channels, receiver outputs #2 and #7, and set the SPOIRON menu to ACT. **To have variable control of the amount of Flap action (downward deflection of both aileron surfaces) you will need to use one of the C-Mixers, with Flap as master and Spoiler as Slave channels.** The amount of mixing is set in the C-Mix menus, while the amount of Flaperon deployment can now be set with the Flap 1 and Flap 2 menus. In Flap 1, the Flap slider will control the amount of Flaperon deployed; in Flap 2 the pre-set amount of flap will be deployed. Note that you can use this set-up even if you are also using separate flap surfaces plugged into receiver channel 6.

SPOILERS - as separate control surfaces

Either one or two servos (with a Y-Harness) can be connected to the channel 7 receiver output. Only settings made to the SPOILER menus will affect servo movement. Preset movement is set in the Spoiler menu and controlled by the Spoiler switch and the ST-SW. The spoilers are deployed when the Switch is set to an on position AND the throttle stick is below the ST-SW setting.

SPOILERONS - Ailerons that also respond to Spoiler control inputs.

Must use two aileron servos and two channels, receiver outputs #2 and #7, and set the SPOIRON menu to ACT. The amount of Spoileron that will be deployed is set in the Spoiler menu. The Spoiler function is activated when the Switch is set to an on position AND the throttle stick is below the ST-SW setting; the amount of Spoileron deployment is the same in either Flap Switch position. (Note that you can use this set-up even if you are also using separate flap surfaces plugged into receiver channel 6.)

Other variables that may affect how you set up your model include:

Using the E→F mixer allows you to set the FLAP to respond WITH movement of the Elevator stick. There is no pre-set mixer to allow the Spoilers to respond with elevator movement.

The F→E mixer allows you to set the ELEVATOR to respond to FLAP commands. Although you can also use the S→E mixer to set the ELEVATOR to respond to SPOILER commands, remember that the amount of Spoiler movement is pre-set and therefore the amount of Elevator mixing will also be pre-set. With the F→E mixer the amount of elevator mixing will respond to either the pre-set flap position or the variable flap slider position.

NOTE that you must assign a switch in order to activate either the E→F mixer or F→E mixer, or else set them to be always on.

When the SPOIRON function is set to ACT, the centering and EPA menus for the SP function will affect ONE of the two aileron channels; the centering and EPA menus for AI will affect the other aileron channel.

When the SPOIRON function is set to INH, the centering and EPA menus for the SP function will affect ONLY the Spoiler channel.

The FLAP menus for EPA and Centering will affect ONLY the #6 channel regardless of the selection in the SPOIRON menu.

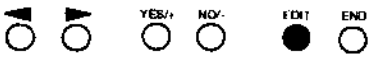
FUN FLY

The Fun-Fly function enables a group of channel assignments and mixers as described below.

Channel Assignments when Fun-Fly is activated:

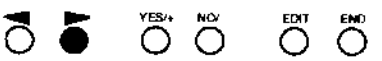
Channel #2 is Left Aileron/Spoileron
Channel #6 is Right Aileron/Spoileron
Channel #3 is Left Elevator
Channel #7 is Right Elevator

Press the Edit key to display the following menu:



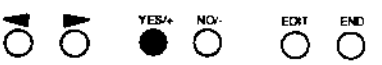

```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

Press the > key to place the cursor over the FUN-FLY position.



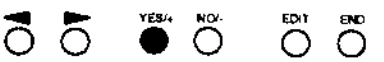

```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

Now press the YES/+ key to display the Fun-Fly menu:



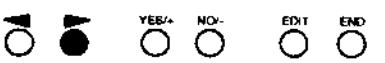

```
FUN-FLY INH          [A]
                     [N]
```

The default setting is INH, for inhibit. Press the YES/+ key to activate the Fun-Fly menus:




```
FUN-FLY ACT          [A]
(EL→FL)DN>  50%   →  [N]
```

(Continue pressing the > key to scroll through the remaining Fun-Fly menus)




```
←SP(LA)>  50%        [A]
 SP(RA)>  50%    →   [N]
```

```
←ST-SW>INH           [A]
 (SP→EL)>   0%   →   [N]
```

```
←(AI→LE) >  0%       [A]
 (AI→RE) >  0%       [N]
```

Elev→Flap (Fun Fly)

The first menu option when the Fun-Fly mode is active is the EL→Flap mixer. In this mix, the elevator stick is the "master" control input and Flaps are the slaved channel. The amount of Flap response to elevator stick movement is individually adjustable for "up" or "down" elevator input.

NOTE! This mixer will affect Flaperon response ONLY, and will have no affect if the throttle stick is below the point that activates Spoiler response, regardless of the position of the Spoiler/AB switch. In addition, you must assign a switch to the E>F mixer or set it to be ON (in the SW menus) in order for the (Fun-Fly) EL→Flap mixer to operate.

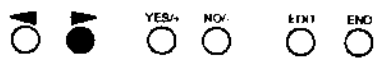
Elev→Flap (Fun Fly)

When the throttle stick is ABOVE the Spoiler SSW position (as defined in the Fun-Fly Spoiler menus), the EL>FL mixer adjusts the Flaperon/Spoileron servos response to movement of the elevator stick.

NOTE: To reverse the direction of the Flaperon/Spoileron servo movement in response to elevator stick movement, assign and activate the "Flaperon" switch. (This function is not assigned to a switch in the default SW settings).

To adjust the EL→FL mixer, move the cursor to the EL→FL>UP or DN position.

You must assign a switch to the E>F mixer or set it to be ON (in the SW menus) in order for the (Fun-Fly) EL→Flap mixer to operate.



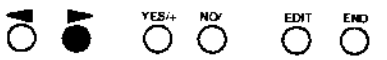

```
FUN-FLY >ACT          [A]
(EL→FL)DN  50%    → [N]
```

The display now reads "DN," which means the adjustments you make will affect the amount of Flap response that occurs when you input a down elevator command with the elevator stick. To make adjustments of the Flap response to UP elevator commands, move the elevator stick downward ("Up-elevator direction) and the menu display will change to "UP."

The default mix setting is 50%. The range available is from 0% to 100%.

SPOILER (Fun Fly)

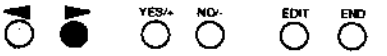
When the Fun-Fly mode is active, you must use the Spoiler menu within the Fun-Fly menus for Spoileron/Flaperon settings. The default SW assignments are: Spoiler is ON in either switch position #18 or #19.




```
←SP(LA)> 50%          [A]
 SP(RA)> 50%      → [N]
```

The first two Spoiler menu cursor position (above) determines the amount of LEFT and RIGHT Aileron deployment when the Spoiler function is activated. The range available is from -100% to 100%; the amount of deflection is determined by the value set, while the direction of response is determined by the sign (+ or -). Use the YES/+ or NO/- keys to adjust the throw. (You will need to have the throttle stick fully down and the Spoiler switch - SPO (AB) in the SW menu - in the ON position to see the aileron servos response to Spoiler settings) Normally both ailerons will be set to respond the same amount to Spoiler operation, but you can adjust the settings if any unwanted rolling occurs with Spoiler deployment.

Use the > key to move to the ST-SW position.



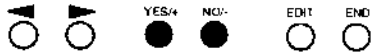

```
←ST-SW  INH           [A]
 (SP→EL)>   0%    → [N]
```

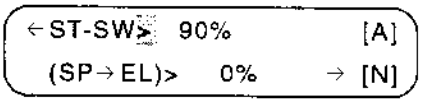
This menu determines at what point the Spoiler function will be activated. IF the assigned Spoiler switch is in the ON position, then moving the throttle stick below this setting activates the Spoilers. At all times moving the throttle stick below the ST-SW setting for Spoilers de-activates the Flap function, and moving it above the ST-SW position activates the Flap function, as driven by the Elevator> Flap mixer.

Spoiler ... (Fun Fly)

Use the YES/+ or NO/- keys to adjust the ST-SW setting as desired. The range available is from 0% (full down throttle stick) to 100% (full up throttle stick).

If you adjust the ST-SW setting to 100%, then the Spoiler function will always be active and the EL→FL mix will be unavailable.

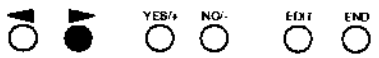


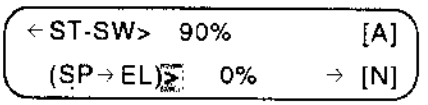


SP→EL (Fun Fly)

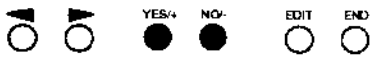
The SP→EL mix allows a specific amount of elevator deflection to occur whenever the spoilers are activated, to prevent unwanted pitch trim changes.

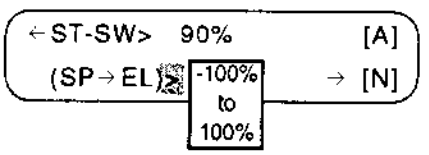
To access the SP→EL mix menu, use the > key to move to the SP→EL mix position.





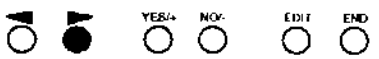
Use the YES/+ or NO/- key to adjust the amount and direction of elevator movement. The range available is from -100% to 100%.

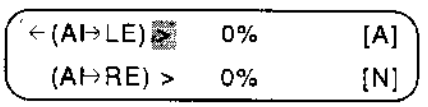




AI→Elevators (Fun Fly)

Press the > key to move to the final Fun Fly menus:



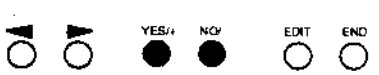


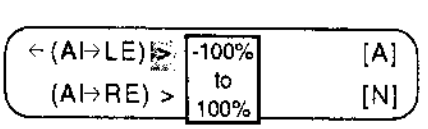
The AI→LE menu allows for mixing of Aileron with the Left Elevator servo. This will cause the elevator servo(s) to move when the aileron stick is deflected, as well as when the elevator stick is moved. This setup is scale on some aircraft such as modern military fighters, and is also used for additional roll response on some sport planes. (Often referred to as "Taileron" control).

NOTE: You must assign the Ailvator function to a switch or to be always on (in the SW assignments menus) for this function to operate.

NOTE: The elevator halves should respond to Aileron input in the same direction as the Ailerons; i.e. right aileron should cause the Right elevator to go UP and the left elevator to go DOWN.

With the cursor on the AI→LE position, use the YES/+ or NO/- key to adjust the amount and direction of Left Elevator servo response to Aileron stick movement. The range available is from -100% to 100%.





Now use the > key to move the cursor to the AI→RE cursor position, then use the YES/+ or NO/- key to adjust the amount and direction of Right Elevator servo response to Aileron stick movement.

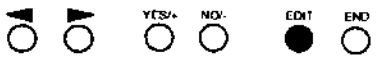
THROTTLE CURVES

RESPONSE IDLE-UPS TRIM OPTIONS

Many modern engines used in radio controlled aircraft have non-linear throttle response. Typically this is manifested in throttle response that is extremely sensitive to small throttle barrel movements near idle, and very non-sensitive to throttle barrel movement near the full open position. This makes it difficult for the pilot to make smooth power adjustments during take-off, approach and landing maneuvers as well as during spin entry or at the top of a stall turn.

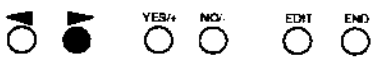
No matter how (or why) you want to have your engine respond to throttle stick movement, with the Stylus and ACRO card you can tailor the throttle response to your liking. You can also program two idle-up functions and select whether the Throttle trim lever is active or inactive. (You must assign a switch in the SW menus to activate either Idle-Up function)

Press the EDIT key to display the following screen:




```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

Press the > key to move the cursor to the TH-CURVE position.

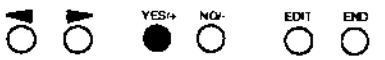



```
SPOIRN   DIFF  FLAP  [A]
FUN-FLY  TH-CURVE    [N]
```

REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for each Throttle Curve, Idle-Up and Trim Option! Always check to ensure that you are programming the desired Flight Mode and Alternate.

Press the YES/+ key to bring up the first TH-CURVE screen.




```
TH-CURVE                [A]
PL>  0%   >  0%   →     [N]
```

The first cursor position displays "PL." This designates Point Low, of the point with the throttle stick in the full low position. Pressing the YES/+ or NO/- keys will scroll through the seven positions:

PL .... Low Throttle Stick Position ..... Default 0%, fixed
P1 ..... Throttle Stick Position 1
P2 ..... Throttle Stick Position 2
P3 ..... Throttle Stick Position 3 ..... Default 50%, adjustable
P4 ..... Throttle Stick Position 4
P5 ..... Throttle Stick Position 5
PH .... High Throttle Stick Position ..... Default 100%, fixed

As you can see, there are seven individual throttle stick positions for which you can set the throttle servo position (for each Flight Mode). This obviously allows for much more customizing of throttle response than the typical system where only the extreme limits and centering are adjustable.

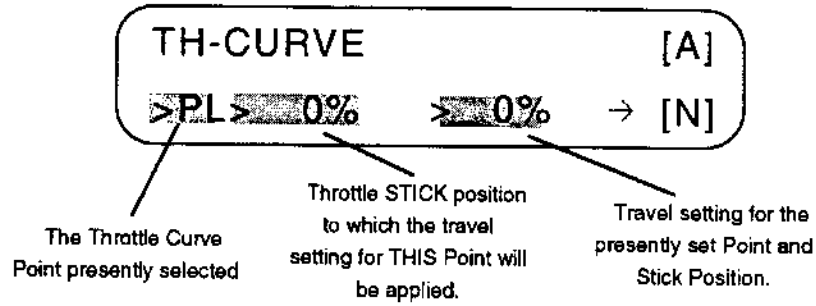
In the above listing, the terms "Fixed" refer to the Throttle Stick position. Full low throttle is always 0% stick position, and full high throttle is always 100% stick movement.

(Continued next page)

THROTTLE CURVES

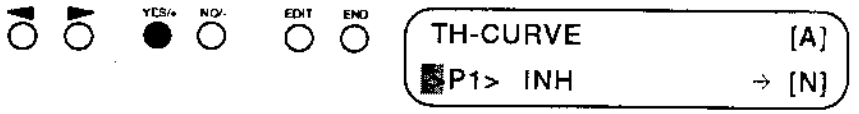
RESPONSE
IDLE-UPS
TRIM OPTIONS

Reading the TH-CURVE screens



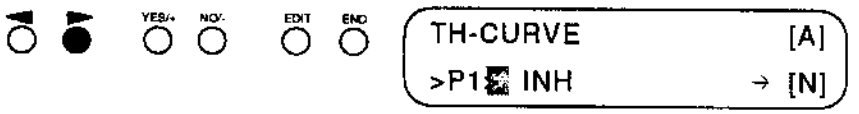
The first option, "PL," will always have a stick POSITION setting of 0% which can not be varied. However, the TRAVEL setting can be adjusted as you wish. It's normally best to set the low throttle position with the EPA menu and leave the PL position setting at 0%.

With the cursor on the first position, press the YES/+ key one time to change to P1 (point one).

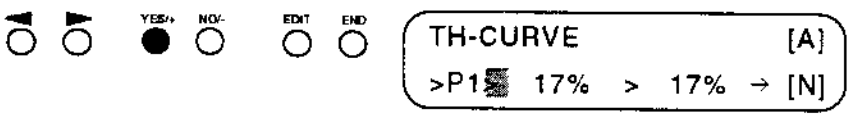


REMEMBER ...
EACH Flight Mode and EACH Alternate has its own settings for each Throttle Curve, Idle-Up and Trim Option! Always check to ensure that you are programming the desired Flight Mode and Alternate.

Press the > key to move the cursor to the Throttle Stick Position location.



All of the Throttle Curve points except for PL, P3 and PH are inhibited by default. To activate and set the Throttle STICK POSITION for a point, you must move the THROTTLE STICK to the position for which you wish to program a throttle servo position. For now, move the stick approximately 1/3 of the way from idle to mid-stick. Press the YES/+ key.



The P1 position now reads 17%.

You can change the Point setting by moving the Throttle Stick and pressing the YES/+ key again. Points can be moved at any time.

To reset the points to "INH" for inhibited, select the point and press both the YES/+ and NO/- keys at the same time.

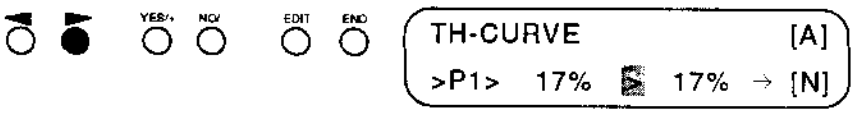
(Continued next page)

THROTTLE CURVES

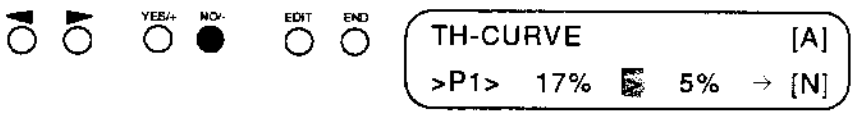
RESPONSE
IDLE-UPS
TRIM OPTIONS

Note that when you activated P1, the next screen position (shaded below) changed to read 17%. When first activated the Throttle Curve points will relate to a linear throttle response; i.e. if the Stick Position is set at 20%, then the Travel Setting will show 20% of the full throttle setting as programmed in the EPA menus.

Press the > key to move the cursor to the Travel Setting position.



To make the throttle response less sensitive to stick movement at low throttle settings, use the NO/- key to change the Travel Setting for this point to 5%.



REMEMBER ...
EACH Flight Mode and EACH Alternate has its own settings for each Throttle Curve, Idle-Up and Trim Option! Always check to ensure that you are programming the desired Flight Mode and Alternate.

With this setting, the first 17% of Throttle Stick movement will only cause 5% of the total throttle servo travel. Turn on the receiver and watch how the throttle responds. Note that the servo movements are very small when the stick is moved in the range from 0% to the P1 position (17% up from idle), then the response increases when you pass the 17% stick position.

In the same manner you can program any of the other Throttle Curve points as desired. Simply select the Point you wish to program, position the stick to define the location of that point, activate or set the point, then move to the Travel Setting position and adjust the servo response.

Obviously, the optimum Throttle Curve program will be different for each engine and pilot. Thus you will need to experiment with the settings while your engine is running and safely restrained to achieve the desired results.

BE CAREFUL at all times to ensure that you know what point your are programming and which Flight Mode or Alternate you are adjusting!

For linear throttle servo response, leave all TH-CURVE settings at their default values.

IDLE-UPS

Press the > key until the display scrolls to the next screen.

This is the screen where the Idle-Up 1 function is set. Note that the first line in the above menu reads "ID-UP1 (ON)". Yours should read "ID-UP1 (OFF)" because the Idle-Up functions are not turned on in the default SW menu settings. To use either or both of the Idle-Up functions, go to the SW menus and assign switch positions to the Idle Ups you wish to use; turn the function on to see the affects of your programming. For now, turn Idle-Up 1 to the ON position to program this function.

THROTTLE CURVES

RESPONSE IDLE-UPS TRIM OPTIONS

The Idle-Up functions have many possible uses. In basic terms, an Idle-Up allows you to change the idle setting for the present Throttle Curve by flipping a switch. The resulting idle speed can be EITHER lower than, or higher than, the normal idle speed with idle-ups inactive.

Some uses for Idle-Up functions include:

1. As a switch activated "kill" switch mechanism.

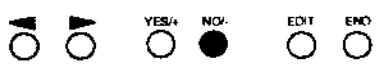
2. To decrease the idle setting for specific maneuvers such as landings or spin entry.

3. To increase the idle setting for specific maneuvers such as stall turns.

For example purposes we'll use option #2 above and program a lower idle setting for Idle-Up1. (In this case it might be a desirable to use the Gear Down switch position to activate the Idle-Up, so that you only need to flip one switch to activate both functions.

REMEMBER ...
EACH Flight Mode and EACH Alternate has its own settings for each Throttle Curve, Idle-Up and Trim Option! Always check to ensure that you are programming the desired Flight Mode and Alternate.

Use the NO/- key to adjust the first cursor position to -20%. (The range is from -50% to +50%).




```
←ID-UP1 (ON)                [A]
> -20% VR( ) >  0%  → [N]
```

With the Idle-Up 1 switch in the ON position you will see the throttle servo move to a lower setting than the normal idle position. (In this example, that is. The Idle-Up function can either raise or lower the idle throttle position depending on the settings in the above screen). When the Idle-Up 1 switch is turned OFF, the throttle servo returns to the normal idle position.

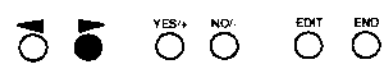
The next screen position, shaded below, shows the VR option settings. At present the screen shows that no VR function is active for this Idle-Up. If you wish to have a VR (Variable Resistor) trimmer to use in conjunction with Idle-Up 1, go to the VR menus and select a VR option for ID-UP1. For now let's use VR10, which is the round dial on the left front of the transmitter.

```
←ID-UP1 (ON)                [A]
> -20% VR( ) >  0%  → [N]
```

Now return to the ID-UP screen in the TH--CURVE menus and the display will show that VR10 has been selected as a trimmer for this Idle-Up.

```
←ID-UP1 (ON)                [A]
> -20% VR(10) >  0%  → [N]
```

Press the > key to move the cursor to the VR rate position.



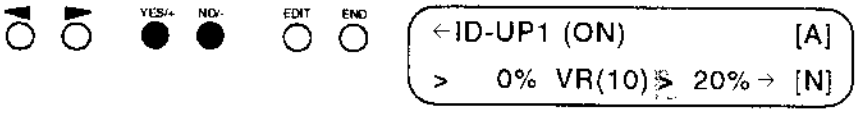

```
←ID-UP1 (ON)                [A]
> -20% VR(10) >  0%  → [N]
```

(Continued on next page)

THROTTLE CURVES

RESPONSE
IDLE-UPS
TRIM OPTIONS

Now use the YES/+ or NO/- keys to set an amount of VR trimmer adjustment available for ID-UP1. The range is from 0% to +20%



With the VR10 dial in the center (0) position, the trimmer has no affect on the amount of idle-up presently programmed. As you move the trimmer clockwise it adds to, and counterclockwise it subtracts from, the amount of idle-up you have set. You can see the affects of the trimmer by watching the far left screen display; it will change the idle-up setting as you move the VR dial. In this manner you can fine tune the idle-up speed for current conditions.

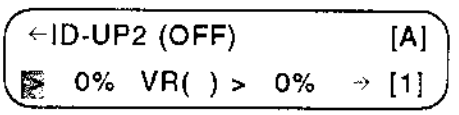
REMEMBER ...

EACH Flight Mode and EACH Alternate has its own settings for each Throttle Curve, Idle-Up and Trim Option! Always check to ensure that you are programming the desired Flight Mode and Alternate.

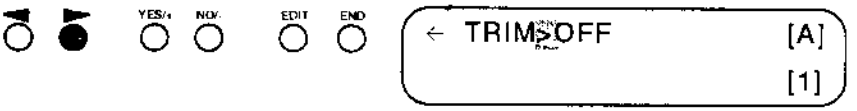
Press the > key until the next screen appears.

Idle-Up2 works in the exact same way as Idle-Up1, except you will assign a separate switch to activate it. All menus function the same as for ID-UP1.

If (and only if) you activate a Flight Mode other than normal, you'll see an arrow indicating another screen, as below.



Press the > key until the next screen displays.



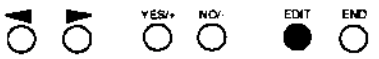
Using the YES/+ or NO/- keys in this screen allows you to select whether the Throttle Trim Lever is active or inactive ("on" or "off") for each Flight Mode when either Idle-Up is activated. When set to OFF, the Throttle Trim Lever has no effect WHILE an Idle-Up is turned on. The Idle-Up's VR Trimmer, if used, will be active regardless of this setting.

You can set the Throttle Trim to be either On or Off separately for EACH FLIGHT MODE. The trim status is the same for both Idle-Up functions within a Flight Mode.

The Throttle Trim Lever is ALWAYS active when Normal Flight Mode is selected, regardless of whether an idle-up is active.

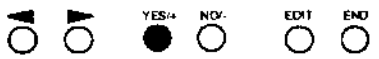
CONTROL CENTERING

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:



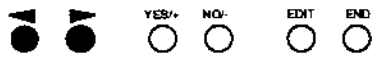

```
CENT    M-SEL  T-TH   [A]
T-GE    ALVAT  C-TRM  [N]
```

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




```
CENTER  TH  0%      [A]
AI  0%      EL  0% →  [N]
```

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 EL position, you will see the remainder of the CENTER screen positions as shown below.




```
CENTER   TH  0%      [A]
AI  0%   EL  0% →    [N]
```

```
←RU 0%   FL  0%      [A]
 SP 0%   AX  0%      [N]
```

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.

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

TH = Throttle
AI = Aileron*
EL = Elevator
RU = Rudder
FL = Flap
SP = Spoiler *(OR second aileron if Spoiron is ACT)
AX = Auxiliary Channel

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

NOTE - when the Fun-Fly option is Active, the CENTER menus are:

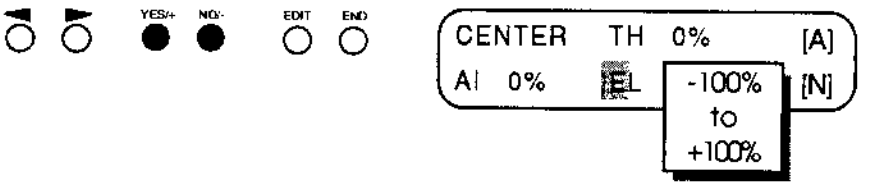
TH = Throttle
LA = Left Aileron
LE = Left Elevator
RU = Rudder
RA = Right Aileron
RE = Right Elevator
AX = Auxiliary Channel*

(If TWN-TH is active - for twin throttle channels - then the AX setting will be replaced by "RT" for "Right Throttle, and the TH will display "LT" for Left Throttle).

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).

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%.



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.

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.

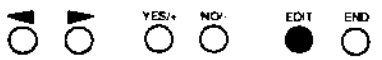
Using a very large amount of electronic centering adjustments will decrease the total throw available for that channel. In particular, centering adjustments greater than + or - 50% will tend to make the extreme stick position on one end less responsive.

M-SELECT

Stylus has built in memory to store four Model set-ups. To use or modify one of the Model Set-ups you must first SELECT that set-up and load it as the presently active Model. This is done through the M-SELECT function.

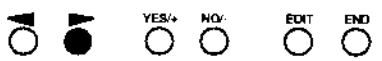
When the ACRO card is installed and initialized, ALL four of the model set-ups will be for the same type of aircraft; i.e. all will be extended feature set fixed wing aircraft set-ups.

To select a specific Model, press the EDIT key until the screen below is displayed:



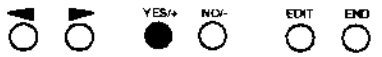

```
CENT    M-SEL T-TH   [A]
T-GE  ALVAT   C-TRM  [N]
```

Assume that you want to select a second Model to use as an ACRO set-up. Press the > key to move the cursor to the M-SELECT position:



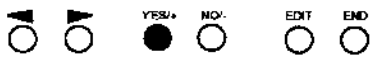

```
CENT    M-SEL T-TH   [A]
T-GE  ALVAT   C-TRM  [N]
```

Press the YES/+ key to bring up the M-SELECT screen.




```
M-SEL    A-AERO-A      [A]
>A:A-AERO-A      Y?    [N]
```

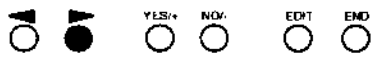
"A-AERO-A" on the top line shows the name of the presently loaded model. The cursor will be at the first position on the second line of the menu. Pressing the YES/+ key will select the second model:




```
M-SEL    A-AERO-A      [A]
>A:A-AERO-B      Y?    [N]
```

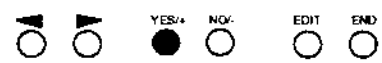
(Pressing the YES/+ or NO/- keys will move you up or down through the list of available Model Set-ups.)

At this point AERO-A is still loaded, as shown by the top menu line. To change to Model number two (B) - or any other model you have selected - press the > key to move the cursor to the "Y?" position:




```
M-SEL    A-AERO-A      [A]
>A:A-AERO-B      Y?    [N]
```

Now press the YES/+ key to Select and Load the "A-AERO-B" model. The top line of the menu will change to reflect that "A-AERO-B" is the presently active Model set-up.



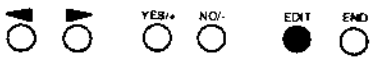

```
M-SEL  (A-AERO-B)    [A]
>A:A-AERO-B      Y?  [N]
```

TWIN THROTTLES

Stylus allows the use of two receiver channels for throttle. This is useful for models of twin-engine aircraft. When the TWN-TH function is ON, receiver channels #1 and #8 both respond to throttle stick movements. With the ACRO card installed, there is also an optional Throttle-Hold function available.

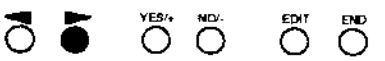
To activate the T-TH function, press the Edit key to display this screen:

With the ACRO card installed, there is also an optional Throttle-Hold function available.



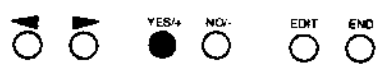

```
CENT    M-SEL  T-TH   [A]
T-GE    ALVAT  C-TRM  [N]
```

Use the > key to move the cursor to the T-TH position.



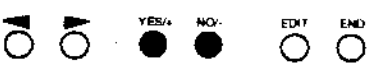

```
CENT    M-SEL  TH     [A]
T-GE    ALVAT  C-TRM  [N]
```

No w press the YES/+ key to display the T-TH screen:




```
TWIN-TH  OFF          [A]
 TH-HOLD>     0%   → [N]
```

Press the YES/+ or NO/- keys to toggle the TWIN-TH function on or off.




```
TWIN-TH  ON           [A]
 TH-HOLD>     0%   → [N]
```

When the TWN-TH function is ON, you can tailor the servo movements for each throttle servo independently using the Centering, EPA and REV menus. The servo hooked to the receiver output #1 responds to menus for LT (Left Throttle) or #1 channels. The servo hooked to the receiver output #8 responds to menus for RT (Right Throttle) or #8 channels. This will allow simple, electronic adjustment to ensure that the throttle response and power output are as nearly identical as possible between the left and right engines.

It is possible to mix Rudder and Throttle so that the Throttle servos will respond to Rudder stick movement (for taxi maneuvers, etc.) To slave both engines to rudder, use TWO C-Mix functions; one will slave left throttle to rudder, the other will slave right throttle to rudder. Use only one travel direction for each mixer so that - for instance - left rudder increases throttle to the right engine. Assign both C-Mix functions to the same switch position. Rudder will be the master control and the individual throttle channels will be the slaved controls.

NOTE - When The Twin Throttle option is active, the Throttle Curve screens allow separate Throttle Curves for each Throttle channel.

CAUTION - it is possible to cause binding if the total of Throttle stick input and rudder-induced throttle mixing exceeds the upper limit of the carb barrel movement! Limit use of the above type of mixing to throttle movements below half-throttle; when ready to take off, turn these C-Mixers off, or use a Stick Switch to turn the mixers off at high power settings.

Twin Throttles ... THROTTLE HOLD

The second position in the Twin-Throttle menu is for "Throttle Hold." This menu allows you to set a pre-determined position that the "held" throttle servo will move to whenever the Throttle Hold switch is activated. (You will have to assign a switch position for this function).

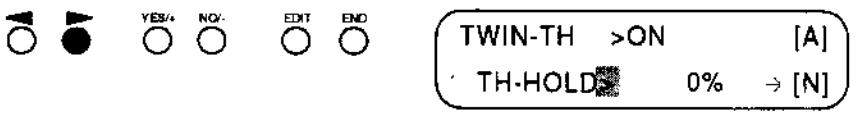
There are two reasons that you might wish to use the TH-HOLD function. First, when starting the engines on a multi-engine aircraft, you can use this function to keep one engine at idle while you start, warm-up and adjust the other engine. In this case, with the Hold function set to hold the RIGHT ENGINE, you would start and adjust the RIGHT engine first, with the TH-HOLD switch turned OFF. Then activate the TH-HOLD switch, which will cause the right throttle to move to the position set in the TH-HOLD menu. Now you can start and adjust the LEFT engine, and moving the throttle stick will affect ONLY the LEFT engine's servo position. Move the Throttle stick to the idle position and turn off TH-HOLD to resume normal dual-throttle response to throttle stick movement.

The other use for the TH-HOLD function is to simulate single-engine flight by activating TH-HOLD at a safe altitude. This will drive the "held" engine to the hold position and allow testing of single-engine performance without resorting to actually turning an engine off. In this case, you should lower the power setting to idle (or fairly low power) before activating TH-HOLD, to minimize the onset of asymmetrical thrust conditions.

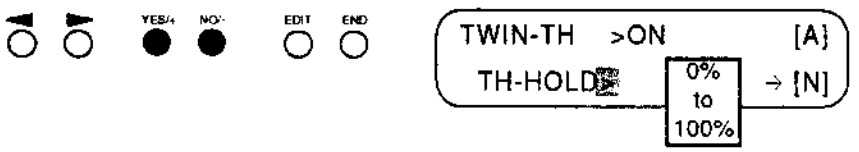
This single-engine testing should only be attempted by skilled pilots, and you will want to be certain that the TH-HOLD setting is high enough to ensure that the "held" engine will continue to operate.

You must assign a switch to the TH-HOLD function within the SW menus in order to operate THROTTLE HOLD

Use the > key to move the cursor to the TH-HOLD position.

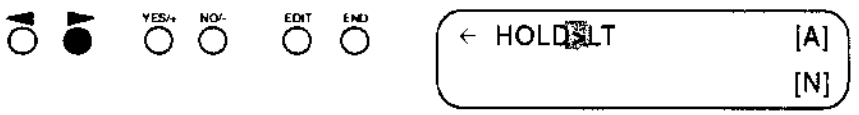


Press the YES/+ or NO/- keys to adjust the position that the "held" throttle will move to whenever the Throttle Hold switch is activated. Range available is from 0% (low throttle) to 100% (full throttle).



Actual field-adjustment will be necessary to arrive at the optimum setting for TH-HOLD. Normally the TH-HOLD setting will be adjusted to give a slightly fast idle that will keep the engine warmed up.

Now press the > key to move to the final T-TH screen.



Use the YES/+ or NO/- key to toggle between "LT" (left throttle) and "RT" (right throttle). Whichever you select will be the throttle channel that will respond to the Throttle Hold function when the throttle hold switch is activated.

TWIN GEAR

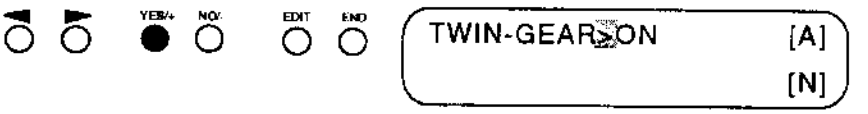
Stylus with ACRO card allows advanced landing gear function options with two independently adjustable gear channels. To access the Twin Gear function, press the EDIT key to display the following screen:

Press the > key to move the cursor to the T-GE position.

Press the YES/+ key to bring up the T-GE screen.

You must assign a switch to the GEAR function within the SW menus in order to operate Twin Gear.

The default setting for the Twin Gear function is OFF, meaning only channel 5 is assigned to the Gear (retracts) function. Press the YES/+ key to turn the Twin Gear function ON.



With the Twin Gear function turned ON, you have two channels that will respond to movement of the Gear Switch. Receiver Channel 8 is Right gear, and Receiver Channel 5 is Left gear. (You can also use the channels for both main gear on one channel and a tailwheel on the other channel).

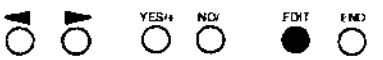
With the Twin Gear function turned ON you have available the following adjustments:

1. End Point Adjustment (travel) for the Right Gear.
2. End Point Adjustment (travel) for the Left Gear.
3. Servo Reversing for either servo.
4. Ability to select Delays for the right and left (or main and tail/main and nose) landing gears independently. This allows for simple programming of scale-like sequential retracting landing gear systems.

ALVAT
Ailvator function for DUAL ELEVATOR CHANNELS

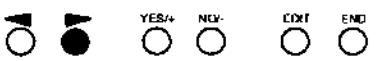
Stylus with ACRO card allows the user to select two independently adjustable channels for Elevators. This allows independent adjustment of the Centering and Travel of each elevator half, as well as advanced mixing functions for Ailvator (also called Taileron) control.

To access the Ailvator function, press the EDIT key to display the following screen:



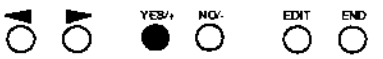

```
CENT    M-SEL  T-TH   [A]
T-GE    ALVAT  C-TRM  [N]
```

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



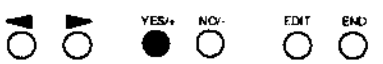

```
CENT    M-SEL  T-TH   [A]
T-GE   ALVAT   C-TRM  [N]
```

Press the YES/+ key to bring up the ALVAT screen.




```
AILVATOR INH            [A]
                        [N]
```

The Ailvator function is inhibited by default. Press the YES/+ key to change it to ACT (active). NOTE that you can not activate the Ailvator function IF the twin gear option is turned on.




```
AILVATOR ACT            [A]
 LE>   0%  RE>   0%     [N]
```

You now have dual elevator channels, operating as follows:

Left Elevator – Receiver channel 3
Right Elevator – Receiver channel 8

Each elevator half now has its own channel. The EPA, CEN and C-Mix menus will allow operations to trim the LE (left elevator) and RE (right elevator) independently.

YOU MUST assign a switch for the Ailvator function (or set it to be ON) in the switch (SW) menus in order to use the aileron>elevator mix. This is NOT necessary to use dual elevator channels without the taileron function.

The lower menus in the Ailvator screen are used to allow the elevator servos to also respond to Aileron stick movement. (Ailevator or Taileron response such as is common on many modern military jets).

To use the Ailvator function for roll control set the LE and RE positions above to give the approximate starting amount of roll input. The range available is from -100% to +100%. The elevator response to aileron input should be the same as the actual aileron surfaces; i.e. with left aileron input the left aileron and the left elevator should deflect upwards.

YOU MUST assign a switch for the Ailvator function (or set it to be ON) in the switch (SW) menus in order to use the aileron>elevator mix.

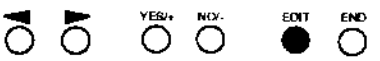
Start with small taileron inputs and adjust through careful flight testing.

CROSS TRIMS

Some pilots prefer to "cross," or transpose the position of, the right hand and left hand trim levers. This means that the vertical trim lever next to the throttle stick becomes the elevator function trim, and the vertical trim lever next to the elevator stick becomes the throttle function trim. Likewise, the horizontal trim levers can be "crossed" so that the lever nearest the rudder stick trims Aileron and vice versa.

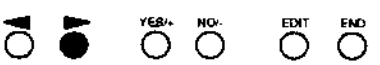
Stylus gives you the option of either "normal" or cross trim setups for either or both of these pairs of trim levers.

To access the Cross Trim function press the Edit key to display this menu:



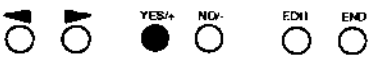

```
CENT     M-SEL  T-TH   [A]
T-GE     ALVAT  C-TRM   [N]
```

Press the > key to move the cursor to the CROSS-TRM position.




```
CENT     M-SEL  T-TH   [A]
T-GE     ALVAT  C-TRM   [N]
```

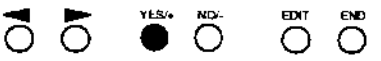
Press the YES/+ key to access the CROSS-TRM function.




```
CROSS-TRM              [A]
 T-E>OFF   A-R>OFF     [N]
```

The first cursor position is to activate the Cross Trim function for Throttle and Elevator.

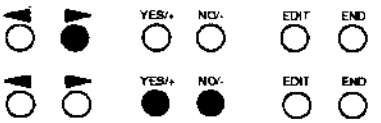
Press the YES/+ or NO/- keys to turn the CROSS-TRM function for Throttle and Elevator ON.




```
CROSS-TRM              [A]
 T-E>ON    A-R>OFF     [N]
```

The trims for Throttle and Elevator are now "crossed."

To cross the trims for Aileron and Rudder, use the > key to move the cursor to the second menu position and use the YES/+ or NO/- keys to toggle the function ON or OFF.




```
CROSS-TRM              [A]
 T-E>ON    A-R>OFF     [N]
                       ON
```

AUTOMATIC DYNAMIC TRIM MEMORY

(A-DTM)

Automatic Dynamic Trim Memory (A-DTM) is an advanced function that can be used in conjunction with the Flight Mode* options.

*In the ACRO configuration, the Flight Modes are used to allow activation of Automatic Dynamic Trim Memory and/or Automatic Offset functions. A switch position can be assigned within the SW settings for up to four flight modes in addition to the Normal Flight Mode; Flight Mode 1, 2, 3, and 4.

To activate Automatic Dynamic Trim Memory, press the EDIT key to display the following menu:

Press the YES/+ key to display the A-DTM screen:

Press the YES/+ key to ac tivate the A-DTM function:

NOTE! In order for the A-DTM function to operate, you must first go to the Trim Memory menus and ACTIVATE Trim Memory for those controls that you want to have respond to the A-DTM function. A switch must also be assigned for each desired Flight Mode.

You can choose between INH, ACT1 and ACT 2 by pressing the YES/+ key. They operate as follows:

INH All trim levers cause trim change in all Flight Modes.

ACT1 Trim changes in the Normal Flight Mode affects ONLY the Normal Flight Model; Trim movement in ANY other Flight Mode affects ALL Flight Modes EXCEPT Normal.

ACT2 Trim changes while in ANY flight mode affect ONLY THAT FLIGHT MODE without affecting any other flight mode.

Once activated, the A-DTM function is transparent to the pilot. Simply activate a Flight Mode (for instance, "Flight Mode 1") and trim the aircraft for straight and level flight. Then switch to another Flight Mode and re-position the trim levers as desired.

NOTE - when you change Flight Modes, the servos affected by the A-DTM function will return to the stored neutral positions regardless of the trim lever position at that time.

This function might be used to trim "up" elevator and right rudder as needed for a smooth climb from take-off, while allowing your normal flight trim (in another Flight Mode) to remain unchanged.

If desired, you can manually re-center the trim sliders after turning the transmitter off. NONE of the flight modes will be affected by this; when you turn the transmitter back on the trims will remain where they were for each Flight Mode.

AUTOMATIC OFFSETS

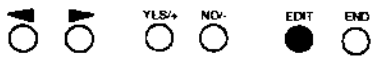
(A-OFST)

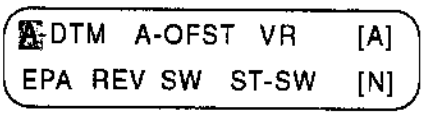
Automatic Offset is an advanced function that can be used in conjunction with the Flight Mode* options. When activated, Automatic Offsets allows you to assign flight control surface offsets while in any flight mode WITHOUT affecting any other flight mode.

*In the ACRO configuration, the Flight Modes are used to allow activation of Automatic Dynamic Trim Memory and/or Automatic Offset functions. A switch position can be assigned within the SW settings for up to four flight modes, Flight Modes 1, 2, 3 and 4, in addition to the Normal Flight Mode.

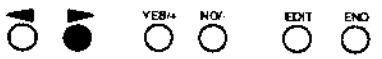
You will also need to assign a switch position to activate the A-OFST function.

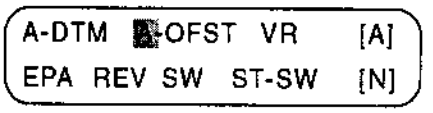
To activate Automatic Offsets, press the EDIT key to display the following menu:



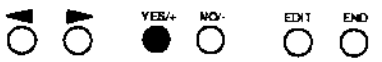


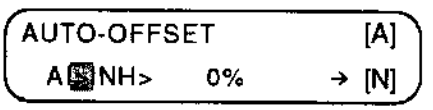
Press the > key to move the cursor to the A-OFST position.



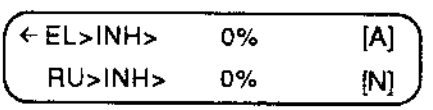


Press the YES/+ key to display the A-OFST screen:

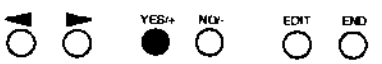


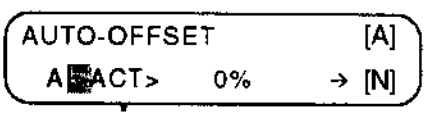


Press the > or < keys to move to the second A-OFST screen and back.



The first menu screen has one cursor position, presently reading "AI>INH" to show that the A-OFST function is inhibited for Aileron. To enable A-OFST for Aileron, press the YES/+ key.





The display will now read "ACT," as shown above. NOTE THAT YOU MUST ACTIVATE EACH CONTROL - **IN EACH FLIGHT MODE** - that you wish to enable for A-OFST. At this point we have enabled the A-OFST functions for Aileron only, and only in the present flight mode. To activate A-OFST for Aileron in either of the other flight modes, move the Flight Mode switch to select another flight mode. The display will change back to INH. Press the YES/+ key to enable A-OFST for Aileron in the newly selected flight mode.

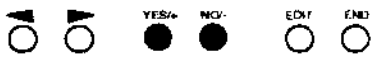
Automatic OFFSETS ...

Once activated in the A-OFST menus, the A-OFST function is ready to use. Activate a Flight Mode. While the aircraft is in flight, hold the control sticks to achieve the desired aircraft attitude. With the sticks held in this position, activate the A-OFST switch. The system will memorize and store the stick position WHEN YOU ACTIVATE the A-OFST switch, and the menu for that function will display the value stored for that flight mode. A "beep" will sound when the sticks are released.

For instance, the below menu example shows that - for this flight mode - there is an offset of 10% stored for the Aileron control.

```
AUTO-OFFSET              [A]
 AI>ACT>     10%      → [1]
```

To RESET an offset amount, move the cursor to the value position for that offset and press both the YES/+ and NO/- keys at the same time. Remember, this will only clear the value for one function in one flight mode - to reset the function for any other flight modes select that flight mode switch position and repeat the above process.




```
AUTO-OFFSET              [A]
 AI>ACT      0%       → [1]
```

NOTE - when you change Flight Modes, the servos affected by the A-OFST function will return to the original positions. To store offset(s) amounts for a different flight mode, hold the control sticks as desired and again activate the A-OFST switch.

Any OFST adjustments made in one Flight Mode will ONLY affect that Flight Mode and not the others.

IMPORTANT - The Auto Offset function causes the assigned control surfaces to move **by the amount you set, in the direction you set, WHENEVER you activate that Flight Mode.** This occurs REGARDLESS of the position your control sticks are in at that time. For instance, if you have programmed an A-OFST amount of 10% Up Elevator for Flight Mode 1, then the elevator will move 10% in the "up" direction if the stick is at neutral, or 10% FURTHER in the "up" direction if you are already holding some up-elevator when another Flight Mode switch is activated. You can think of the A-OFST function as moving the center, or neutral, point, of the servo.

This function can be used along with the A-DTM function or as a stand-alone function. The amount of offset available is 100% of stick throw in either direction.

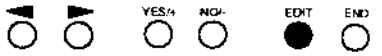
CAUTION: Since the A-OFST function can affect the entire amount of surface throw, you should always be aware of any offset amounts you have programmed!

VARIABLE RESISTOR TRIMMER ASSIGNMENTS

(VR)

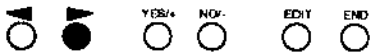
Stylus with the extended feature set card installed allows the pilot to select the Variable Resistor Trimmer assignments for the AUX, Flap , L-Differential, R-Differential, Idle-Up1 and Idle-Up2 functions. This lets you select the VR switch type and location that best suits your needs and preferences.

To use the Variable Resistor Trimmer assignments, press the Edit key to display the following menu:



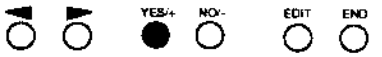

```
A-DTM  A-OFST  VR      [A]
EPA  REV SW  ST-SW     [N]
```

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



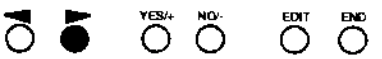

```
A-DTM  A-OFST  VR      [A]
EPA  REV SW  ST-SW     [N]
```

Press the YES/+ key to display the VR menus:




```
VR                     [A]
  AUX>11  FLAP>12  →   [N]
```

Press the > key repeatedly to scroll through the remaining two menu screens as shown below.




```
← L-DIFF> 0            [A]
  R-DIFF> 0            →[N]
```

```
← ID-UP1> 0            [A]
  ID-UP2> 0            [N]
```

The abbreviations in the VR screens are translated as follows:

Aux ..... Auxiliary Function
Flap ..... Flap or Flaperon Function
L-DIFF ..... Left Aileron Differential
R-DIFF ..... Right Aileron Differential
ID-UP1 ..... Idle-Up 1 Function
ID-UP2 ..... Idle-Up 2 Function

Each of these functions allow the use of a Variable Resistor Trimmer to allow in-flight fine tuning of the settings for each function.

In the default settings, only the Flap and AUX channels have VR trimmers already assigned; VR11 for AUX and VR12 for Flap. These are the sliders on the right and left sides of the transmitter, respectively.

VARIABLE RESISTOR TRIMMER ASSIGNMENTS

(VR)

The available variable rate trimmer switch assignments and their locations are:

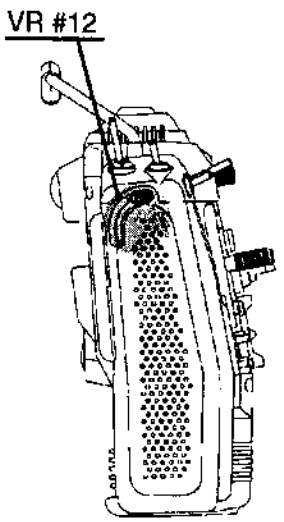
0	**Off**
9	**Right Rotary Trimmer**
10	**Left Rotary Trimmer**
11	**Right Side Slider**
12	**Left Side Slider**

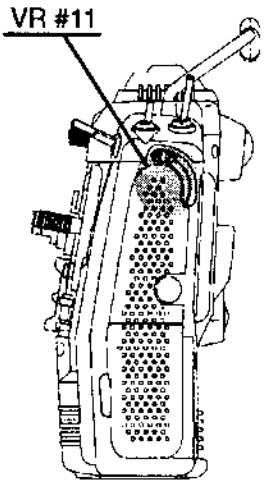
To change the AUX or Flap VR assignments, or to assign a VR trimmer for use with one of the other functions, use the > or < key to move the cursor to the desired function's menu position, and change the Variable Resistor trimmer switch assignments using the YES/+ or NO/- keys as desired.

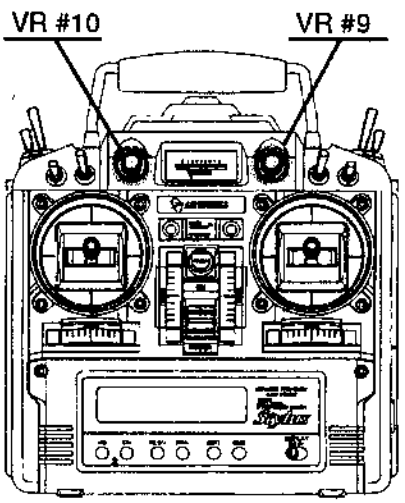
Note that you will also need to use the AUX, FLAP, L-Diff, R-Diff, ID-UP1 or ID-UP2 menus and SW settings to adjust control response and to activate the functions.

See the sections on the appropriate functions for more specific information on how the VR trimmers are used and how much trimming effect that can be set to provide.

If you assign a VR trimmer to any function you should ALWAYS CHECK the position of that VR trimmer to ensure that it is set to the proper position before flying.







END POINT ADJUSTMENTS (EPA)

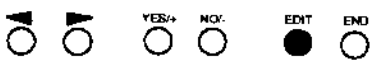
Stylus allows you to adjust the 'End Points,' or servo travel limits, for all flight channels.

In general, it is best to use as close to 100 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, or with fixed-length control horns such as a throttle arm.

Also, on most aircraft it will be optimum to keep the control response of all primary flight controls the same on both directions of travel. For instance, most pilots are more comfortable if the aircraft response to left rudder input is the same as for right rudder input. Thus it is desirable to have approximately the same amount of EPA on both sides of the neutral position; i.e. if left rudder EPA is at 95% the right rudder EPA should be 95% or as close as possible.

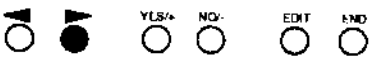
To electronically adjust End Points for servo travel, press the EDIT key to arrive at the following screen:

In general, it is best to use as close to 100 percent servo throw as possible. This allows for the best possible resolution and centering of all control surfaces.



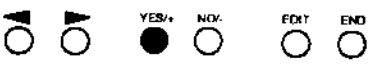

```
A-DTM  A-OFST  VR     [A]
EPA  REV SW  ST-SW    [N]
```

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



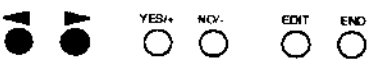

```
A-DTM  A-OFST  VR     [A]
EPA  REV SW  ST-SW    [N]
```

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




```
EPA   TH-L    AI-L      [A]
      100%   >100% →    [N]
```

Use the < and > keys to navigate between the EPA screens.




```
←EL-U  RU-R  GE-2      [A]
>100%  >100%  >100%→   [N]
```

```
←FL-H  SP-U  AX-L      [A]
>100%  >100%  >100%→   [N]
```

The above EPA screens are what you will see in the default settings. The actual EPA screens that will display depend on which optional functions have been activated, as explained on the following page.

END POINT ADJUSTMENTS (EPA)

EPA (Channels) Defaults:

EPA Pos.	*Abbrev.*	*Function*
1	TH	Throttle
2	AI	Aileron
3	EL	Elevator
4	RU	Rudder
5	GE	Gear
6	FL	Flap
7	SP	Spoiler
8	AX	Aux

EPA/Channels SPOIRN Active

EPA Pos.	*Abbrev.*	*Function*
1	TH	Throttle
2	L-AI	LEFT Aileron
3	EL	Elevator
4	RU	Rudder
5	GE	Gear
6	FL	Flap
7	R-AI	RIGHT Aileron
8	AX	Aux

EPA/Channels ALVAT Active

EPA Pos.	*Abbrev.*	*Function*
1	TH	Throttle
2	AI	Aileron
3	L-EL	LEFT Elevator
4	RU	Rudder
5	GE	Gear
6	FL	Flap
7	SP	Spoiler
8	R-EL	RIGHT Elevator

EPA/Channels ALVAT *AND* SPOIRN Active

EPA Pos.	*Abbrev.*	*Function*
1	TH	Throttle
2	L-AI	LEFT Aileron
3	L-EL	LEFT Elevator
4	RU	Rudder
5	GE	Gear
6	FL	Flap
7	R-AI	RIGHT Aileron
8	R-EL	RIGHT Elevator

EPA/Channels FUN FLY active

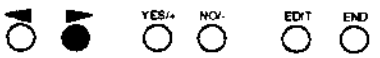
EPA Pos.	*Abbrev.*	*Function*
1	TH	Throttle
2	L-AI	LEFT Aileron
3	R-AI	RIGHT Aileron
4	L-EL	LEFT Elevator
5	R-EL	RIGHT Elevator
6	RU	Rudder
7	GE	Gear
8	AX	Aux

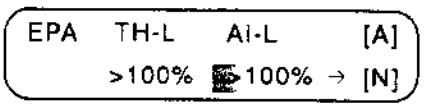
NOTE: - The difference between using (A) ALVAT and SPOIRN vs. (B) Fun Fly, is that (A) has flap while (B) has Aux as the non-primary channel. Also of course the menus for Fun Fly have EL>FL mix, Spoiler settings, SP> EL mix and Aileron to Elevator (left and right elev) mixer settings within the Fun-Fly screens.

How To Use The EPA Screens

In the EPA screens, the top row shows the six 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.

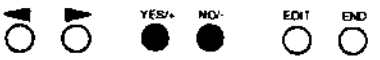
To set your individual End Points, use the < or > keys to position the cursor over the desired control function's present setting.

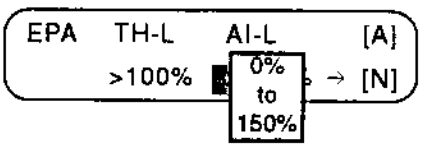




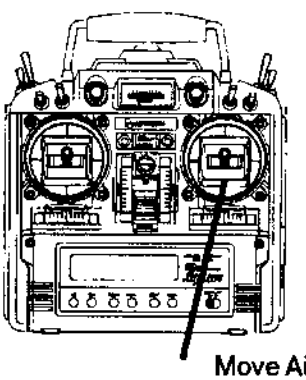
In this example, we have selected the EPA setting for the second function, Aileron. On the top row, the present display shows "AI-L," which means you can now make changes in the LEFT travel limit for the Aileron servo(s).

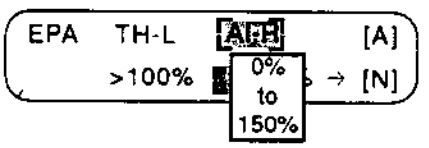
Pressing the YES/+ or NO/- keys will increase or decrease the amount of servo rotation caused by full LEFT deflection of the aileron stick. The range of EPA adjustment is from 0-150%.





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:

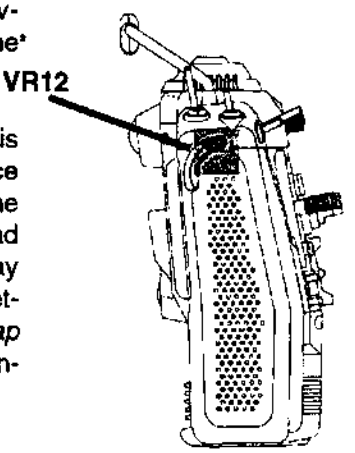




The **AI-R** now in the second position means that your End Point Adjustment will now apply to the RIGHT extreme of servo travel.

Move Aileron Stick to the right.

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.



You must have Flap 1 assigned to a switch or tunrned ON in the SW menus in order for the left side slider V12 to operate.

The FLAP End Point Adjustment' position, is set by moving the slider on the left upper face of the transmitter to determine which end of the flap throw is being adjusted. The display will read either FL-H or FL-L depending on which way the control set, for HIGH or LOW Flap EPA setting, respectively. *(Other menus also affect flap deployment).* The Aux function is likewise controlled by the slider on the Right side.

Servo Reversing

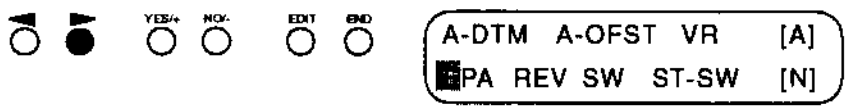
Stylus allows you to electronically REVERSE the direction of rotation for each of the servos in use. This allows you to hook up your control linkages and pushrods in the most mechanically desirable manner, without regard to the direction of servo movement.

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.

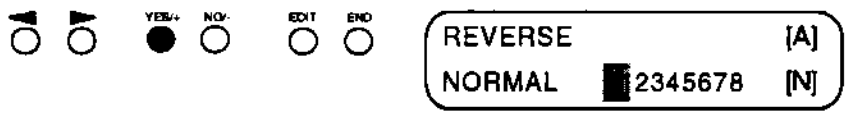
Stylus allows you to electronically REVERSE the direction of rotation for each of the servos in use.

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

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

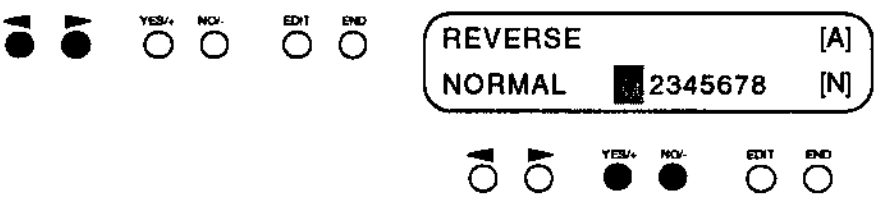


Now press the YES/+ key to see the REV screen.

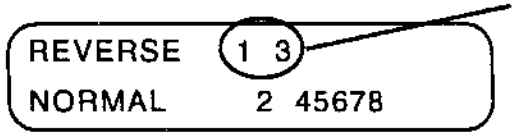


The default positions shown have all channels operating in the NORMAL direction, so all channel numbers are in the lower row as shown above.

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.



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



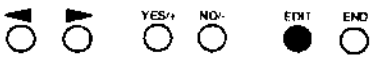
In this example, Channels 1 and 3 have been set for REVERSE rotation.

NOTE: The reversing positions correspond to the receiver channel output assignments for any function. The specific control that will be reversed for a given REV menu position will depend on what options you have activated.

SWITCH ASSIGNMENTS

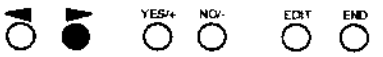
A very useful feature of Stylus is the ability to assign functions to switches however you prefer, rather than forcing you to adapt to one particular switch layout. With the ACRO card installed, you can also assign logical operators to further customize the SW functions.

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




```
A-DTM  A-OFST  VR      [A]
EPA  REV  SW  ST-SW    [N]
```

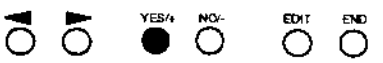
Press the > key to place the cursor over the SW position.



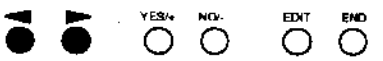

```
A-DTM  A-OFST  VR      [A]
EPA  REV  SW  ST-SW    [N]
```

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, or to SS1 through SS10 for stick-switches.

Now press the YES/+ key to see the first SW screen. There are a total of NINE 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.




```
SW  S-ROLL  F→E        [A]
E→F  SPO(AB)       →   [N]
```




```
←AI-DR (1 2 3 )        [A]
 EL-DR (1 2 3 )    →   [N]
```

```
←RU-DR (1 2 3 )        [A]
 F-MODE (1 2 3 4 )  →   [N]
```

```
←C-MIX (1 2 3 4 5      [A]
 6 7 8 9 10)       →   [N]
```

```
←B-MIX (1  2  3)       [A]
 FL (1  2)  TH-HOLD →  [N]
```

```
←START  STOP  AUX      [A]
 A-OFST  GEAR      →   [N]
```

```
←CH-DELAY (1  2  3  4  [A]
 5)  AI→RU (1  2)  →   [N]
```

```
←RU→EL  RU→AI  INC     [A]
DEC  FLAPERON      →   [N]
```

```
←AILVATOR  ID-UP(      [A]
1  2)  TRAINER         [N]
```

To assign or change a switch for each function listed you move the cursor to that function and press the YES/+ key. This will bring up one or more SW options for that function. At each cursor location 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, or to SS1 through SS10 for stick-switches.

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.

Switch Assignment Chart (Default Settings)

Below are the normal default settings for all of the Switch Assignments. Remember that many functions will not operate until you assign and activate a switch setting for that function.

You may wish to make several copies of this sheet and use it to write down all of your SW settings for each model set-up. NOTE that using the DATA RESET function will NOT return the SW settings to the below status; only removing the ACRO card and then re-initializing will return all SW settings to default status. Reinitializing will also erase all programming you have set.

SW Settings for (Your Model Set-up Name) _____

Function	Default	Your Setting
S-Roll	15	
F>E	1	
E>F	3	
SPO (AB)	18 or 19	
AI DR1	7	
AI DR 2	6	
AI DR 3	0	
EL DR1	14	
EL DR 2	13	
EL DR3	0	
RU DR1	0	
RU DR 2	0	
RU-DR 3	0	
F-Mode 1	0	
F-Mode 2	0	
F-Mode 3	0	
F-Mode 4	0	
C-Mix 1	0	
C-Mix 2	0	
C-Mix 3	0	
C-Mix 4	0	
C-Mix 5	0	
C-Mix 6	0	
C-Mix 7	0	
C-Mix 8	0	
C-Mix 9	0	
C-Mix 10	0	

Function	Default	Your Setting
B mix 1	0	
B-Mix 2	0	
B-Mix 3	0	
FL1	18	
FL2	19	
TH Hold	0	
Start	0	
Stop	0	
Aux	0	
A-Offset	0	
Gear	4	
CH-DLY 1	0	
CH-DLY 2	0	
CH-DLY 3	0	
CH-DLY 4	0	
CH-DLY 5	0	
AI>RU 1	10	
AI > RU2	8	
RU > EL	0	
RU > AI	0	
INC+	0	
DEC-	0	
Flaperon	0	
Ailvator	0	
ID-UP 1	0	
ID-UP 2	0	
TRAINER	0	

Switch Assignment

To assign or change a SW assignment, move the cursor to the function and press the YES/+ key.


```
SW   S-ROLL  F→E      [A]
E→F  SPO(AB)      →   [N]
```

The SW assignment menu for that function will appear.

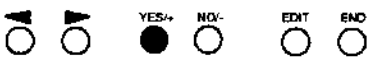
```
SW  S-ROLL            [A]
    15  > ---         [N]
```

The top line shows that we are in the SW menus and that the current function is for S-ROLL, which is presently OFF. (If you move the spring-loaded switch to the #15 position, the display will change to "ON.")

You can use the YES/+ or NO/- keys to change the SW assignment in the first position on the bottom menu line, which is the present SW setting to activate this function.

If you move the cursor to the second position and press the YES/+ key, you can choose from the logical operators that are available. (See below)

```
SW  S-ROLL            [A]
>   15  ---           [N]
```




```
SW  S-ROLL            [A]
>   15  OR      0     [N]
```

The Logical Operators available and their function are :

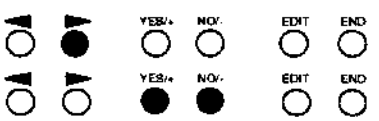
Operator ..... Description

AND ..... Use to make a switch active only when it AND another switch condition are active.

OR ..... Use to activate a function with one switch position OR another switch position.

SW# ..... Allows another named switch to turn function ON. The second and third switch become secondary switches that act identical to the first. Any of the 3 switches ALONE will turn the function ON, but ALL 3 switches must be set to the "off" position to turn the function OFF.

Now move the cursor to the third position and define the optional or supporting switch assignment using the YES/+ or NO/- keys.



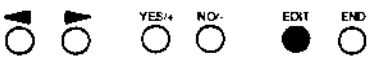

```
SW  S-ROLL            [A]
>   15  > OR  16      [N]
```

Here we have made it possible to activate S-ROLL with EITHER the #15 OR the #16 switch position.

STICK SWITCHES (ST-SW)

Stylus with the extended feature set card installed offers, in addition to the regular switches, the option of having a control stick position act as a switch. Any position on the Elevator, Aileron, Rudder or Throttle stick can be programmed as a Stick Switch point. This ST-SW can be used as the sole activation switch for a function (for instance, 90% aileron stick throw could activate a higher dual rate setting), or as a secondary switch - for example, you could activate your Flap switch as you enter downwind at moderate speed, and then have the flaps activate when you reduce the power below a specified point when you turn on final. In either case, the ST-SW allows you to concentrate on flying rather than flipping a switch during times of high pilot workload.

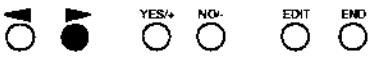
To use the ST-Switch function, press the Edit key to display the following screen:




```
A-DTM  A-OFST  VR     [A]
EPA  REV SW  ST-SW    [N]
```

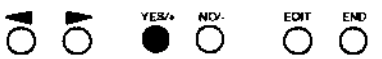
The ST-SW function allows you to concentrate on flying rather than flipping a switch during times of high pilot workload.

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




```
A-DTM  A-OFST  VR     [A]
EPA  REV SW  ST-SW    [N]
```

Now press the YES/+ key to see the first ST-SW screen. (There are two ST-SW screens as seen below. To move from one screen to another press the > or < keys to move the cursor past the arrow positions.




```
STICK-SW>1  CH>TH     [A]
PNT  50%ST    0%→     [N]
```

```
←ON>L       (OFF)     [A]
                      [N]
```

Explanation of Stick Switch Display

This position shows which of the ten ST-Switches is presently selected. Use the YES/+ or NO/- keys to select ST-SW #1 through #10.

This position shows which of the control sticks is being assigned a ST-SW position. Use the YES/+ or NO/- keys to choose from AI, EL, TH, or RU stick.

This position shows where the ST-SW activation point occurs as a percentage of stick travel. Move the control stick to the desired ST-SW position and press the YES/+ key to set this point.

This display position shows where, in terms of percentage of travel, the selected control stick is PRESENTLY set. As you move the control stick this menu will change.

Use the YES/+ or NO/- keys to select whether the switch is on with one stick direction or the other; i.e here the display shows the switch will be ON when the TH stick is moved BELOW the PNT position.

This position displays the present status of this ST-SW function; in this case, the ST-SW is off.

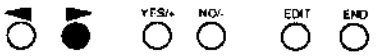
```
STICK-SW>1  CH>TH     [A]
PNT  0%ST     0%→     [N]
```

```
←ON>L       (OFF)     [A]
                      [N]
```

STICK-SW ...

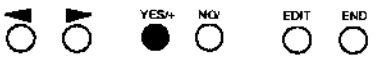
As described in the preceding box "Explanation of Stick Switch Display," select which ST-SW (1 through 10) you wish to program. Move the cursor to the second position and select which control stick you want to have activate the ST-SW. (In this example we'll use ST-SW #1 and the TH, or throttle, stick.)

Now move the cursor to the PNT position:




```
STICK-SW>1   CH>TH      [A]
PNT   0%ST    0%→       [N]
```

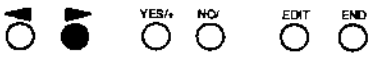
This position allows you to define at which POINT in stick travel the ST-SW will be activated. Move the stick (in this example we've selected the throttle stick) to the desired position. Press the YES/+ key.




```
STICK-SW>1   CH>TH      [A]
PNT   30%ST   30%→      [N]
```

The PNT display will register the stick position as the POINT for this stick switch; in this case we've set the Point at 30% of throttle stick travel.

Press the > key to move to the next screen.




```
←ONL      (OFF)       [A]
                      [N]
```

The first cursor position determines on which SIDE of the point the switch will be ON. It presently reads "L," meaning a stick position below the point will turn the switch ON. If you press the YES/+ or NO/- key you can change this to "H," meaning a stick position above the point will turn the switch ON. (For the other sticks the options are UP or DOWN, and LEFT or RIGHT)

If you move the throttle stick below 30%, the last menu reading will change to "ON". This position shows the current status of this ST-SW.

```
←ON>L     (ON)        [A]
                      [N]
```

NOTE: So far all we have done is to assign a stick position - in this case any throttle stick position below 30% - to act as a switch, ST-SW#1. At present the switch has not been assigned to activate any actual function.

To use this stick switch, you must return to the SW menus and assign SS1 (Stick Switch #1). The Stick Switches can be either primary or secondary switches. To use this SS1 as a secondary switch for flaps, go to the SW setting for Flap 2, presently SW #19. Leave the primary switch set to 19 and move the cursor to the middle position. Press the YES/+ key to select "AND" as the logical operator. Press the > key to move to the secondary SW position and press the YES/+ key to set this SW to "SS1."

Now, when you activate the Flap 2 switch while the throttle stick is above 30%, the flaps will NOT deploy. When you reduce the throttle setting to below 30%, you will have fulfilled the "SW19 AND SS1" conditions and the flaps will deploy as specified in the Flap 2 menus. Moving the throttle above 30% OR moving the SW19 to an off position will cause the flaps to return to neutral.

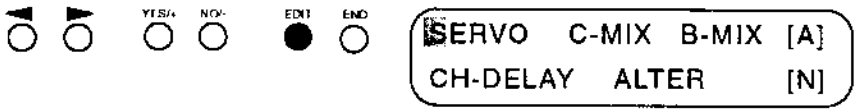
SERVO MENUS

Servo Movement Analysis Screens

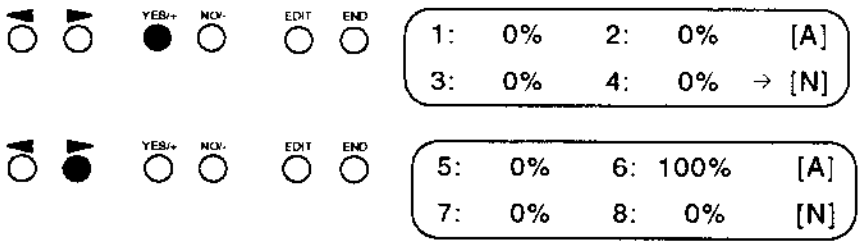
There are times when it is desirable to know which receiver channels are responding to a stick, switch or mixer inputs WITHOUT having the actual aircraft set up and operating. Examples would be when your receiver battery is recharging or you want to conserve receiver battery power, or when you are not sure if you have a programming error or a problem with a specific connector or servo.

For this reason, the Stylus with ACRO card incudes a SERVO menu to show the absolute output signals for each of the eight receiver channels.

To access the SERVO screens, press the EDIT key to display the following screen:



The cursor will be over the SERVO position; press the YES/+ key.



Each receiver output, channel 1 through channel 8, is displayed at its present command position. The exact reading you see will depend on the position of all control sticks, trimmers, switches, and A-OFST and A-DTM registers.

The order of the servo outputs will match the channel output and reversing assignments for your present set-up. This will of course depend on what options you have chosen, such as Spoiron, Ailvator, T-TH, T-GE, Fun-Fly and so on.

When you move any stick, trimmer or switch you can view these screens to see what command is being output to any servo that is set to respond to that stick, trimmer or switch. This includes any secondary channels that are programmed to respond as slaves to any C-Mix or B-Mix function.

COMPENSATION MIXERS

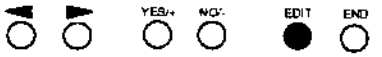
Each of these mixers can be assigned to a switch or can be set to remain active or inactive at all times.

Stylus has with the ACRO card installed offers TEN Compensation Mixers to handle advanced mixing needs. Each of the ten mixers can be assigned to a switch or can be set to remain active or inactive at all times. C-Mixers #6 through #10 are multi-point mixers.

The C-Mix basic functions are generally identical with or without the ACRO card installed. However, when using the ACRO card there are several ADDITIONAL options available for each C-Mix and some new types of C-Mixers.

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. (There are already pre-configured mixers in the MIX menu to perform this mix, but it's used here as a simple to understand example!)

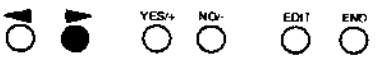
To set up such a mix, press the EDIT key until the following screen appears:




```
SERVO   C-MIX  B-MIX  [A]
CH-DELAY ALTER        [N]
```

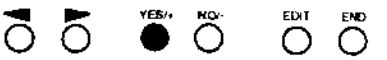
SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

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




```
SERVO  C-MIX  B-MIX  [A]
CH-DELAY ALTER       [N]
```

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




```
C-MIX1 L  >   0%      [A]
MAS>TH1   SLA>RU1→    [N]
```

C-MIX SCREEN 1 (For C-Mix 1 through C-Mix 5)

Presently selected mixer - #1 through #5. Select which with YES/+ or NO/- key.

Travel Direction Indicator - U or D, L or R, H or L, depending on which way you move the MASTER function's stick or switch.

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

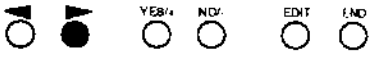
```
C-MIX>1  L  >   0%      [A]
MAS>TH1   SLA>RU1→      [N]
```

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.

Compensation Mixers ...

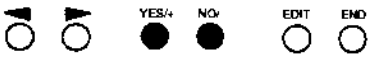
Usually the first thing you'll want to set is the MASTER and SLAVE channels. Press the > or < key to position the cursor over the MAS> position.




```
C-MIX>1 L  >    0%     [A]
MAS>TH1    SLA>RU1→    [N]
```

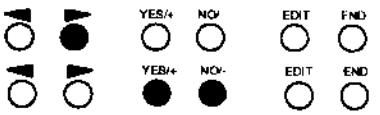
Now press the YES/+ or NO/- keys to cycle through the channels available until you reach the desired MASTER channel. In this example we want the rudder to automatically respond when we move the aileron stick, so Aileron must be the MASTER channel.

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.




```
C-MIX>1 L  >    0%     [A]
MAS>AI1    SLA>RU1→    [N]
```

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




```
C-MIX>1 L  >    0%     [A]
MAS>AI1    SLA>RU1→    [N]
```

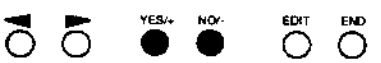
Remember, the MASTER channel is the channel that will drive both its own servo(s) AND the slave channel's servo when the Master channel's transmitter control is moved. The SLAVE channel's servo(s) will respond to the Master channel's transmitter control AS WELL AS responding normally to its own transmitter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

SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

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 L> 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 if 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 mixing for L (left aileron stick movement) at 15%. If the rudder moves opposite the direction desired, simply change the value to -15%. This will give the same amount of mixing, but in the opposite direction.



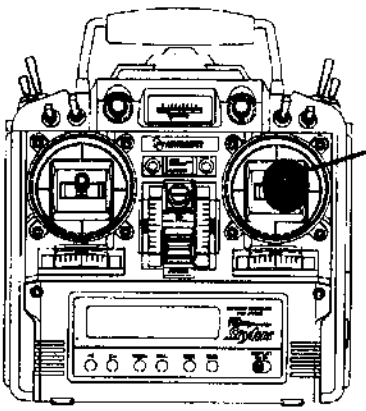

```
C-MIX>1 L  15%     [A]
MAS>AI1    SLA>RU1→    [N]
```

With L 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 ...

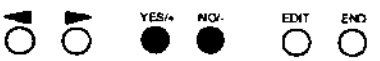
To program mixing for both directions of Master stick movement you must set both L and R. To change from L to R for programming, simply move the transmitter control for the MASTER channel. (In this example the Aileron stick). Note that when you move the left, "L" is displayed in the mixing screen, and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

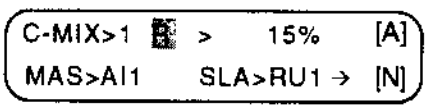


Move the Aileron stick to the right and "R" will be displayed in the mixing screen.

Note that to use a C-Mix function you must assign and activate a switch or set the C-Mix to be always ON from within the SW menus.

Now you can set the mixing for R 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.

Note that to use a C-Mix function you must assign and activate a switch or set the C-Mix to be always ON from within the SW menus.

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

Mixing Notes

SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

Because each direction of mixing can be set individually, you can change both the AMOUNT and DIRECTION of the slave channel's response to movement of the master channel's control. By changing the value from + to - for both R and L you will reverse the slave channel's response to the master channel BUT NOT to it's own transmitter control. An example of this type of mixing would be in an airplane with too much dihedral where a "yaw only" response from rudder is desired. To mix out undesired rolling with application of rudder, the Rudder channel is set as Master and Aileron is set as slave. Travel direction T1 and T2 are then set to give aileron movement OPPOSITE the direction of rudder movement whenever rudder is applied. (i.e. right rudder causes left aileron and vice-versa). Aileron response to movement of the Aileron stick is unaffected.

There are times where the desired deflection of the Slave channel is the same regardless of Master control movement. An example of this would be using a Compensation Mixer to fix an aircraft that "pulls" towards the top in both knife edge attitudes. In this case rudder would be the Master channel and Elevator would be Slave. By setting one of the L or R settings to +10 and the other to -10 (as determined by observing servo movement) you can set the mixing to cause Down elevator with the application of either Right OR Left rudder. In this case you may wish to assign the mixer to a switch (See Switch Assignments section) so that rudder corrections during landing won't change elevator trim.

(The above examples of mixing would normally be done in the MIX menus for AI>RU, RU>EL and RU>AI mix UNLESS you want to take advantage of the advanced functions covered on the following pages that are only available in the C-MIX functions)

Compensation Mixers ...

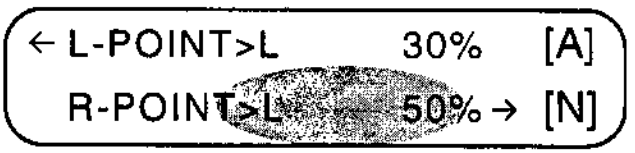
The arrow to the right of the SLAV> channel position indicates that there are more settings than can be displayed in the present screen. Press the > key to move the cursor past the arrow and the next screen will appear.

The display will show "L-POINT" and "R-POINT" if the Master control moves left and right, or H and L points (High and Low), or U and D points for elevator.

The "Points" can work in two different ways. If the value set for each menu position is in a direction that corresponds with the SAME direction as the Master control stick movement (first menu below, i.e. L-Point>L and R-Point>R), then the value entered will represent the amount of Master stick travel that will occur BEFORE mixing STARTS to occur.

If you set the values for the two points as shown above, mixing with LEFT travel of the master control will START after the stick reaches 30% of left travel or 50% of right travel. In between these points no mixing will occur. The amount of mix is determined by the settings in the first c-mix screen.

If a value is set so that the point display is on the OPPOSITE direction, as in the menu below where the bottom line reads "R-POINT>L," then the mix will act as if the Master control stick is offset to that point in the opposite direction.



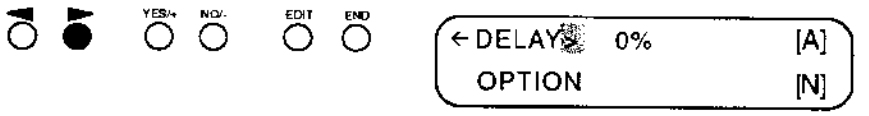
If the R-POINT is set as shown above, activating the C-Mix switch will cause the SLAVE control to offset as if the Master stick was moved 50% towards the LEFT, when the stick is at neutral. From that point (50% left movement of the Master control stick) to full left stick, the rate AND amount of mix will act according to the C-mix setting for Left travel of the Master Stick.

From that point (50% left movement of the Master control stick) to full RIGHT stick, the rate AND amount of mix will act according to the C-mix setting for RIGHT travel of the Master Stick.

As with any advanced function, proceed with caution and make certain that you have achieved the control response desired. Optimum settings will be determined by actual flight testing.

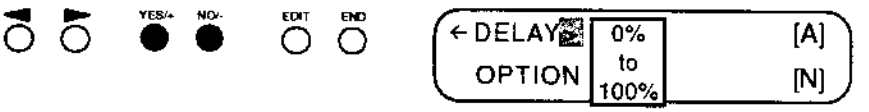
Compensation Mixers ...

The arrow to the right of the Points screen position indicates that there are more screens. Press the > key to move the cursor past the arrow and the next screen will appear.



The DELAY setting allows the user to program a time-delay for the response of the slaved function. This will slow the servo's response time to mixer inputs. The amount of mix remains unchanged.

To set a delay, use the YES/+ or NO/- keys to adjust the amount of delay, from 0% (no delay) to 100% (Approximately 10 seconds for full slave servo travel).



NOTE: Slave servo response to its own control stick or switch is NOT affected by this delay setting.

Move the cursor to the Option position:

Press the YES/+ key to display the menus for the mixer Options:

SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

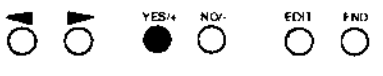
The C-Mix options menus allow for very sophisticated variable "trimming" of the C-Mix. Using these option you can add or subtract from a C-mix output based on the movement of ANY of the variable resistor sticks, trims or trimmers. The first setting (shaded above) is where you choose which stick or trimmer will act as the Variable Resistor (VR) control for the C-Mix. The range is from 0-12 as follows:

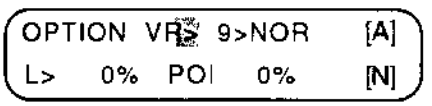
	MODE II	MODE I
0	No Trimmer	No Trimmer
1	Throttle Stick	Elevator Stick
2	Throttle Trim	Elevator Trim
3	Aileron Stick	Aileron Stick
4	Aileron Trim	Aileron Trim
5	Elevator Stick	Throttle Stick
6	Elevator Trim	Throttle Trim
7	Rudder Stick	Rudder Stick
8	Rudder Trim	Rudder Trim
9	Right Potentiometer	Right Potentiometer
10	Left Potentiometer	Left Potentiometer
11	Right side Slider	Right side Slider
12	Left side Slider	Left side Slider

Compensation Mixers ...

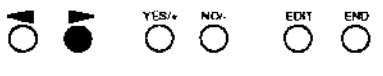
The C-Mix options are an extremely flexible and powerful group of functions that generally allow any mixing operation you can imagine. For purposes of this explanation we'll use an extremely simple operation, assigning the potentiometer on the right side of the face of the transmitter as our VR trimmer. You might use such a set-up while testing to determine how much mixing your aircraft needs for optimum trim, OR to allow adding to or subtracting from a trim for specific maneuvers.

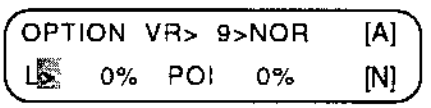
Press the YES/+ key to change the VR position to "9."





Press the > key twice to move the cursor to the L position in the menu.



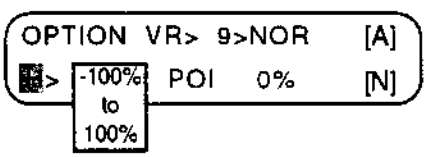


This position is where you set the amount of mixer trim for the "L" direction of trimmer control movement. "L" is the following direction of VR movement:

Downwards deflection of a control stick, trim lever or slider
Rightwards deflection of a control stick or trim slider
Counter-clockwise movement of a potentiometer

The range available for this value is from -100% to 100%. The value set will be combined with the values set in the C-mix main menu for EACH direction of master stick movement; the AMOUNT of this value added to your c-mix settings will vary from NONE, when the VR trimmer is centered, to the FULL amount when the VR trimmer is moved to full throw in the L direction.

The amount of trimming is variable at independent rates for trimmer control travel in either direction. Move the trimmer in the opposite direction (compared to above directions for "L" movement) to change the menu display to "H."



Again, the range available for "H" is from -100% to +100%.

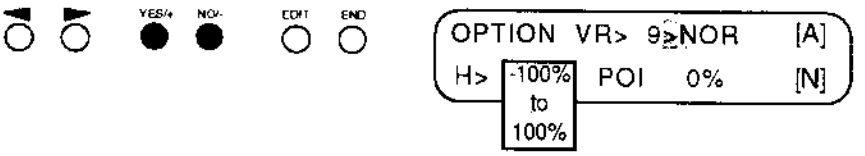
Let's assume we have a c-mix setting for this mixer of -50% for left rudder and +25% for right rudder. (A mix where rudder is master, and elevator responds in the up-elevator direction, at different amounts, for either direction of rudder stick movement.)

Set the VR option for L to 25% and for H to -25% for this example. Now, if we hold full right rudder while the VR trim is centered the elevator will move 25% up. If we move the trimmer fully counter clockwise (L direction) we add the +25 from the mixer setting and the +25 from the VR setting - resulting in +50% mix with full right rudder. Full left rudder will combine the -50% from the mixer setting with the +25% from the VR menu, resulting in -25% mixing with full left rudder.

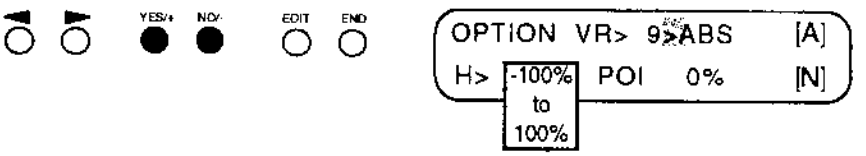
Moving the VR trimmer fully clockwise (H-direction) will result in: Full right rudder results in +25% from c-mix setting plus -25 from VR setting = no mixing. Full left rudder combines -50% from the c-mix setting plus -25 from VR setting = 75% total mixing. (Remember, partial movement of the VR trimmer results in a proportional amount of adjustment to the settings in the C-mix screen).

Compensation Mixers ...

You have an option to change the way in which the C-mix setting and the VR settings are combined. Move the cursor to the NOR position.



Press the YES/+ or NO/- key to change the display to "ABS."



Let's still assume we have a C-mix setting for this mixer of -50% for left rudder and +25% for right rudder. (Same as before).

Leave the VR option for L at 25% and for H at -25% for this example.

The ABS option stands for "Absolute Value." Rather than combining the values from the C-mix menus with the values in the VR menus, (including their signs, + or -), with ABS selected the trimmer either ADDS or SUBTRACTS the amount programmed in the VR screens to or from the C-Mix settings. Whether it adds or subtracts the value depends on the SIGN (+ or -) in the VR menu.

Study the C-mix options carefully and make certain that the control surfaces respond as intended when the C-mix and VR trimmers are operated.

Example: If we hold full right rudder while the VR trim is centered the elevator will move 25% up. If we move the trimmer fully counter clockwise (L direction) we add the +25 from the mixer setting and the +25 from the VR setting - resulting in +50% mix with full right rudder. Full left rudder will add the +25% from the VR menu with the -50% from the mixer setting , resulting in -75% mixing with full left rudder.

Moving the VR trimmer fully clockwise (H-direction) will result in: Full right rudder results in +25% from c-mix setting MINUS (-)25 from VR setting = no mixing. Full left rudder combines -50% from the c-mix setting LESS -25 from VR setting = -25% total mixing. (Remember, partial movement of the VR trimmer results in a proportional amount of adjustment to the settings in the C-mix screen).

The final position in the Options menu is the "POI," or "point" setting. The adjustment lets you choose the position of the VR trimmer that will act as the zero point; i.e. the point at which the VR trimmer doesn't affect the mixing settings. By default it is at 0%, meaning the center position of the stick or trimmer. If you want to have finer control in one direction than the other, you can offset the neutral point to any position you desire.

Use the > key to move the cursor to the POI position. Now move the control that is assigned as the VR trimmer for this C-mix to the desired POINT position. Press the YES/+ key. This is now the center, or no-trim position, for this VR trimmer. The display will show the position you have chosen. (You can also adjust this setting with the YES/+ or NO/- keys).

Compensation Mixers ...

MULTI-POINT MIXERS

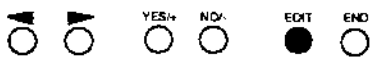
C-Mix #6 through C-MIX #10

The preceding pages cover the entire process of programming the "standard" C-MIX functions and options in the Stylus with ACRO card. That information covers C-Mix #1 through C-Mix #5.

The remaining C-Mixers, #6 through #10, are a special kind of C-Mixer known as a "Multi-Point" mixer. With these Multi-Point C-mix programs you have complete control over both the amount of slave channel output, but the specific points of master stick movement at which programmed mixing occurs.

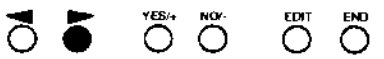
Stylus has with the ACRO card installed offers TEN Compensation Mixers to handle advanced mixing needs. Each of the ten mixers can be assigned to a switch or can be set to remain active or inactive at all times. C-Mixers #6 through #10 are multi-point mixers.

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



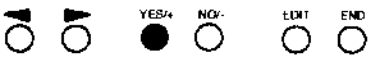

```
SERVO  C-MIX  B-MIX  [A]
CH-DELAY  ALTER      [N]
```

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



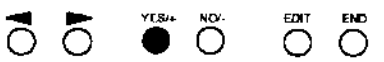

```
SERVO  C-MIX  B-MIX  [A]
CH-DELAY  ALTER      [N]
```

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




```
C-MIX1 L  >   0%     [A]
MAS>TH1   SLA>RU1→   [N]
```

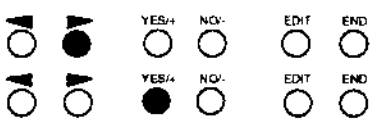
Press the YES/+ key to change to C-MIX #6.




```
C-MIX-C> 6           [A]
MAS>TH1   SLA>AX  →  [N]
```

Note that the top line changes from C-MIX> (number) to C-MIX-C> (number). This is to help you to recognize that these are special function C-Mixers.

Use the > key and YES/+ key to change the MAS and SLA channels to TH1 and AX.




```
C-MIX-C> 6           [A]
MAS>TH1   SLA>AX  →  [N]
```

SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

We'll set up a sample mixer as if we are programming a function to operate a remote needle valve based on throttle stick position.

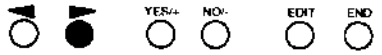
(Continued on next page)

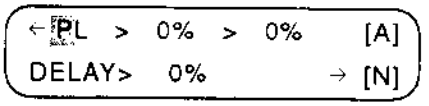
Compensation Mixers ...

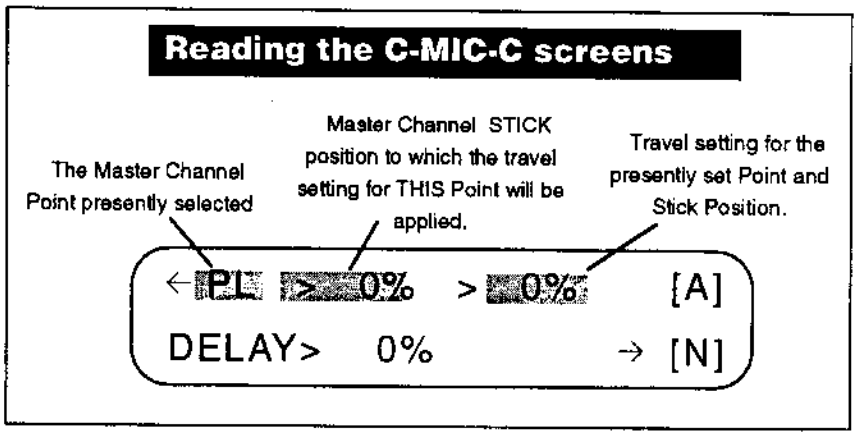
MULTI-POINT MIXERS

C-Mix #6 through C-MIX #10

Press the > key to scroll to the next C-Mix screen.







The first cursor position presently reads "PL" for Point Low. (If the Master channel was Aileron or Rudder it would read "PR," for Point Right). PL means the lowest stick position for which we wish to set a mixing value.

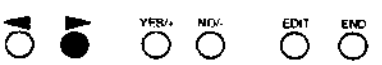
Pressing the YES/+ key or NO/- key allows you to scroll through the range of points:

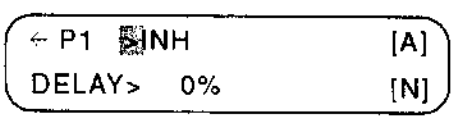
Point	Description	Stick Position, Default
PL	Point Low	0%
P1	Inhibited	
P2	Inhibited	
P3	Center Point	50%
P4	Inhibited	
P5	Inhibited	
PH	Point High	100%

For this example assume we need 0% mix to lean the engine at idle setting. So we'll leave the PL settings alone.

However, we want to have the remote mixture control lean the engine at a setting just above idle and from there to the mid-throttle setting. So we need to have mixing at the 10% and 50% throttle stick positions.

Set the Point to read P1, then press the > key to move to the next cursor position.



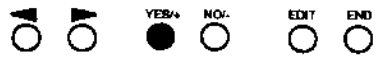


Compensation Mixers ...

MULTI-POINT MIXERS

C-Mix #6 through C-MIX #10

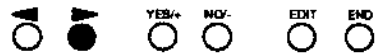
The P1 position shows "INH" since the point is inhibited by default. We'll want to define a mixing point at about 10% throttle stick. Move the throttle stick to about 10% up from the idle position and press the YES/+ key.




```
← P1 ▓ 10%  > 0%   [A]
DELAY>  0%         [N]
```

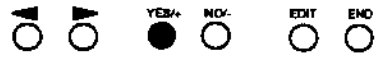
The P1 position indicator now reads 10%, meaning that the mix we set in this screen will take place at 10% stick position. (This can now be adjusted with the YES/+ and NO/- keys as desired).

Press the > key to move the cursor to the next position where we set the amount of mixing.




```
← P1  > 10% ▓ 0%   [A]
DELAY>  0%         [N]
```

Use the YES/+ key to set a mixing AMOUNT for P1 of 10%. (The range available is from -75%% to +75%).




```
← P1  > 10% ▓ 10%  [A]
DELAY>  0%         [N]
```

We now have NO mix at idle, but a small amount of mix at the 10% stick position. As it stands now, the Aux servo will move from neutral (at low stick) to 10% mix at the 10% stick position, then slowly back to neutral at the 50% stick position. Why? Because the next active point is P3, the mid-stick position point by default, and its mixing value is still at the default setting of zero. Remember, a multi-point can have ANY AMOUNT of mixer output at ANY stick or switch position!

By selecting C-Mix point POSITIONS and setting mixing values as follows:

Point	Stick Position	Mixing
PL	0%	0%
P1	10%	10%
P2	40%	5%
P3	Center Point	0%
P4	Inhibited	
P5	Inhibited	
PH	Point High	100%

We can allow the Aux channel to have no movement at idle, move to 10% lean mix at 10% stick position, move at a slower rate to 5% lean at the 40% stick position, then from 40% to 50% stick position move back to neutral. Since this is a MIX, you can still adjust the actual needle position at full throttle using the AUX slider.

You could also program any point to be rich or lean mixture regardless of its location relative to any of the other points.

Actual model operation will be necessary to achieve optimum mix.

Compensation Mixers ...

MULTI-POINT MIXERS

C-Mix #6 through C-MIX #10

Use the > key to move the cursor to the DELAY position.

You can set a Delay value of from 0% (no delay) to 100% (Approximately 10 seconds transit time).

Use the YES/+ key to set a value of 50% for Delay.

Now when you move the Throttle stick in either direction (in this example) the Aux servo will respond at a much slower rate. The Aux servo will still respond at its normal rate as will the throttle servo.

There are many different applications where a multi-point C-Mix might be the best solution to a trim problem for a scale operation.

This concludes the sections on C-MIX functions. As you can tell, Stylus with the ACRO card offers unequalled power and flexibility in the use of programmable mixers. Study this section carefully to decide which type of mixer, C-Mixer or multi-point mixer will best suit your needs and your aircraft.

SEE APPENDIX "D" FOR Master and Slave Channel options with various aircraft configurations!

BI-DIRECTIONAL MIXERS

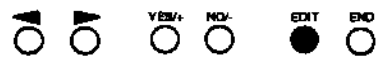
Stylus provides three Bi-Directional Mixers for advanced, user-assigned mixing functions. Bi-Directional mixing means that two channels are mixed so that inputs to either channel cause servo movements for both channels. The most common use of these mixers are for combined-function control surfaces; i.e. Elevons (ailerons also serve as elevators, as in flying wing setups), Tailerons (elevators also provide roll commands as per full-size F-16), Ruddervators (V-Tail setup with two surfaces acting as both elevators and rudders) and so on.

Besides being far simpler to adjust electronically than mechanically, using a B-MIX function for these type of control setups is also far easier to install and service, saves weight, and eliminates control hookup slop inherent in sliding tray or other mechanical installations.

Besides being far simpler to adjust electronically than mechanically, using a B-MIX function for these type of control setups is also far easier to install and service, saves weight, and eliminates control hookup slop inherent in sliding tray or other mechanical installations.

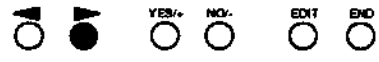
Since Bi-Directional Mixing is normally used to establish primary flight control setups, these mixers are usually set to be ON at all times; however the B-MIX functions can be assigned to a switch. At any rate, no mixing will occur unless you have set the B-MIX to be on (in the SW menus) or assigned it to a switch that has been activated.

To access the B-Mix functions press the Edit key to display this screen:



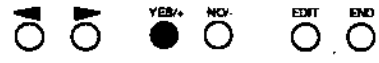

```
SERVO   C-MIX  B-MIX  [A]
CH-DELAY  ALTER      [N]
```

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




```
SERVO   C-MIX  B-MIX  [A]
CH-DELAY  ALTER      [N]
```

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




```
B-MIX 1  CH-A>INH      [A]
         CH-B>INH →    [N]
```

The first cursor position (shaded above) displays either 1, 2, or 3 to designate which of the three B-MIX programs is presently displayed. To change from one B-Mix to another press the YES/+ or NO/- keys.

The CH-A and CH-B positions will show INH for "inhibit" in the default mode. These positions are where you program which flight channels you wish to mix together for this B-Mix. Channels that can be assigned to either CH-A or CH-B, for normal aircraft configurations, are:

NOTE: The CH-A and CH-B options will change depending on what aircraft configurations are presently active.

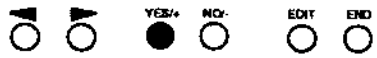
THR	Throttle
AIL	Aileron
ELE	Elevator
RUD	Rudder
FLA	Flaps
GEA	Gear
SPO	Spoiler
AUX	Auxiliary

Bi-Directional Mixers ...

Due to the nature of Bi-Directional mixers it makes no difference which control function is assigned to Channel A or Channel B; both channels will respond to their own control stick or switch AS WELL AS to the control stick or switch for the mixed channel.

For demonstration purposes let's assume you want to set up a B-MIX for Elevons on a flying wing type aircraft. This means that the two control surfaces on the trailing edge of the wing will act as both ailerons for roll control and elevators for pitch control.

Use the > key to position the cursor over the CH-A position, then press YES/+ key to assign ELE to CH-A. Now press the > key to move to the CH-B position and use the YES/+ ket to set CH-B for AIL.




```
B-MIX>1   CH-A>ELE      [A]
          CH-B AIL→     [N]
```

Now move the Aileron or Elevator stick; note that both channels' servo(s) respond to movement of either channel's stick.

NOTE: When using a B-MIX function the rotation of the servos must be checked before making control linkage hookups. For example, in the above mix for Elevons note that you must make your control hookups in IDENTICAL fashion for the right and left control surfaces. (Both servo linkages must be on either the inside or outside of the servo output arm - this is opposite of the hookup used with two aileron channels.)

B-MIX — Centering

The CENTER menus will affect only the servo(s) normally assigned to a receiver channel when a B-MIX is active. In the above example, the CEN menu for Aileron will affect ONLY the servo plugged into receiver output #2 (the normal aileron channel) while the CEN menu for Elevator affects only the servo plugged into receiver channel #3, elevator.

This allows for electronic adjustments to center each of the elevon surfaces independently.

B-MIX — End Point Adjustments

The EPA menus for BOTH channels assigned to a B-Mix will affect ALL servos involved in the B-Mix function. In the above example, the EPA menu for Aileron will affect the response of BOTH channels when responding to Aileron stick inputs; the EPA menu for Elevator will affect the response of BOTH channels when responding to Elevator stick inputs.

Total servo throw available for each function used in a B-MIX will be somewhat reduced (as compared to non-mixed functions).

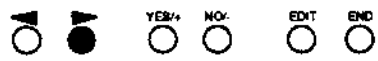
NOTE: Any MIX or C-MIX that affects one of the channels assigned to a B-MIX will affect ALL servos assigned to that B-MIX.

A switch must be assigned to the B-MIX functions, or the B-MIX must be set to "on," in the SW menu before the mixer will work.

Bi-Directional Mixers ...

When the ACRO card is installed the B-Mix functions can be further adjusted to yield the exact control response desired for each of the control functions being mixed.

While in the B-Mix screen, press the > key to scroll to the next window.




```
← CH-A-GAIN 75%      [A]
  CH-B-GAIN> 75%     [N]
```

This screen allows you to adjust the "gain" level for both of the channels you have assigned to this B-Mix function.

The first cursor position is for adjusting Channel A Gain, the second position is for adjusting the Channel B Gain. Default setting is 75% for both of the channels.

The "gain" settings determine the amount of relative authority that will be assigned to the functions that are assigned to the mixer channels. Turning the gain setting down for one channel will decrease the amount of response of all servos in response to THAT channel's control stick or switch movement.
Turning the gain setting up for one channel will increase the amount of response of all servos in response to THAT channel's control stick or switch movement.

The gain for either channel can be set from 100% (maximum response) to 0% (no response).

For instance, in our example we have set Channel A as Elevator and Channel B as Aileron, for an elevon response. In this example, if we set the Channel A gain to 100% and the Channel B gain to 50%, then the servos will both respond with twice as much movement when the Elevator (channel A) stick is moved than when the Aileron stick is moved.

Note that if both gain settings are set to 100%, the servos will run out of available travel when one stick is moved to it's limit, leaving no room for further movement in response to the second control stick's movements. It is usually best to adjust the gain settings so that maximum deflection of one of the control sticks still leaves some available control response for movement of the other control stick.

Also note that the EPA settings will affect the amount of total servo travel available for either of the control sticks.

CHANNEL DELAY

(CH-DELA)

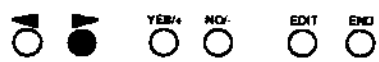
Stylus with ACRO card installed offers an extremely versatile group of options for assigning delays to various servo operations. These "delay" options allow you to extend the amount of time taken for the servo to move to its new location and/or return to it's former location. Note that the delay does NOT affect when the servo STARTS to respond to stick or switch movement, nor does it affect the total travel of the servo.

There are several obvious uses for channel delays; slowing landing gear retraction and extension for a more realistic look, allowing a slower flap deployment to minimize the pitch trim changes, and so on.

To use the Channel Delay options, press the Edit key to arrive at the following screen:


```
SERVO   C-MIX  B-MIX  [A]
CH-DELAY  ALTER        [N]
```

Press the > key to move the cursor to the CH-DELAY position:




```
SERVO   C-MIX  B-MIX  [A]
CH-DELAY  ALTER        [N]
```

Press the YES/+ key to display the first CH-DELAY screen:


```
CH-DELA 1   CH>INH     [A]
SYMMETRY>YES    →      [N]
```

Channels that can be assigned a CH-DELAY are:

THR	Throttle
AIL	Aileron
ELE	Elevator
RUD	Rudder
FLA	Flaps
GEA	Gear
SPO	Spoiler
AUX	Auxiliary

Note that before you can use a CH-DELAY function you must first assign a switch for that delay from within the SW menus, or set the delay to be always on.

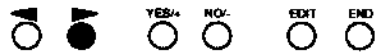
The first cursor position in the CH-DELAY menu is the indicator for which of the five CH-DELAY is presently displayed. In the sample menus it is set to "1" for channel delay #1.

Use the YES/+ or NO/- keys to scroll between the five available CH-DELAYS. For this example let's leave it on CH-DELAY 1.

Channel Delay ...

(CH-DELA)

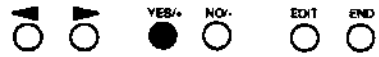
Press the > key to move the cursor to the CH position:




```
CH-DELA>1    CH INH    [A]
SYMMETRY>YES      →    [N]
```

The CH position is where you assign which function you wish to use this CH-DELAY for. Use the YES/+ or NO/- keys to move through the functions for which delays are available, as listed on the previous page.

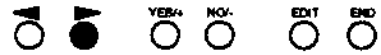
Press the YES/+ key to change the CH assignment to GEA, for Gear:




```
CH-DELA>1    CH GEA    [A]
SYMMETRY>YES      →    [N]
```

Now the programming we set for this CH-DELAY will affect the GEAR, or retract, function. (Normally you will assign the delay be always ON for this type of function, but if you have assigned a switch setting for this delay, make sure it is turned on.)

The remaining three cursor positions must be used together to get the type and amount of delay desired. The SYMMETRY position can be set to YES or NO, by pressing the YES/+ or NO/- key. What this means is explained below. (Press the > key to scroll to the second CH-DELAY screen as shown below):




```
←TIME-A    0%        [A]
 TIME-B    0%        [N]
           to
           100%
```

The Time-A and Time-B cursor positions can be set from 0% (no delay) to 100% (approximately 10 seconds delay) as desired, using the YES/+ and NO/- keys. The way these setting affect servo movement depends on the choice for SYMMETRY, either YES or NO, in the prior screen.

IF SYMMETRY IS SET TO **YES**, then:

- Time-A ..... Controls the speed of servo operation when the servo is moving AWAY FROM the servo CENTER (stick neutral) towards either end-point position.
- Time-B ..... Controls the speed of servo operation when the servo is moving TOWARDS the servo CENTER position from any position other than center.

IF SYMMETRY IS SET TO **NO**, then:

- Time-A ..... Controls the speed of servo operation when the servo is moving in ONE direction, without affecting travel in the other direction (regardless of whether the servo is moving from or towards center).
- Time-B ..... Controls the speed of servo operation when the servo is moving in THE OPPOSITE direction, without affecting travel in the other direction (regardless of whether the servo is moving from or towards center).

With little effort, you can adjust any control to have the amount and type of delay that best suits your tastes. Flip the GEAR switch to try your settings for this CH-DELAY program.

ALTERNATE

The ALTERNATE function is one of the more 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:

In order to use the ALTERNATE function, you must first assign it to a switch. The SW assignments for THIS FUNCTION are in the second menu screen as shown on the following page.

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, gear down, high rate for flight controls and removal or addition of exponential characteristics on flight controls — all by flipping a single switch.

In order to use an ALTERNATE function, you must first assign it to a switch. There are THREE ALTERNATE set-ups available when using the ACRO card.

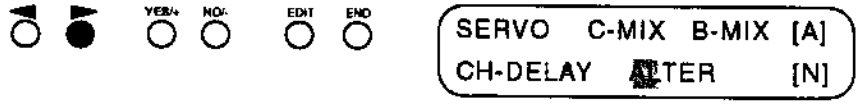
Next you need to have an ALTERNATE setup that is compatible to your standard setup. The recommended manner to achieve this is to start with a completely tested Model setup, then use the DATA COPY function to copy this setup to a new Model Setup that will be assigned as the Alternate setup.

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

Press EDIT key until the following screen appears:

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

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



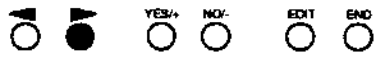
Press the YES/+ key to display the Alternate screen.

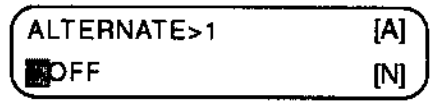
The first cursor position indicates which of the two Alternate Set-ups is presently selected for programming. Use the YES/+ or NO/- keys to select Alternate #1, Alternate #2, or Alternate #3. NOTE that you must have a switch assigned to activate either of these Alternate Set-ups, from within the next screen of the the Alternate displays.

Alternate ...

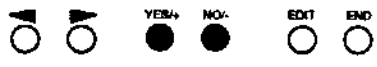
For now, leave Alternate Set-up number one selected.

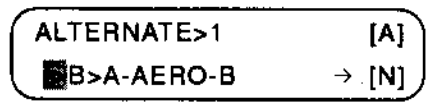
Press the > key to move the cursor to the next position:





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 A-AERO-B, has been selected as the present Alternate Model. (In actual use, the model designator of A,B,C, or D will always be displayed, but the characters after that will be whatever name you have assigned to the corresponding set-up. It is probably a good idea to name the Alternate set-up to help you recognize when you are working on the Alternate vs. the original set-up menus.)

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

The Alternate function will NOT activate if you select an incompatible model; i.e. different wing or tail type, or different Modulation type.

SPECIAL NOTES

To program changes for the setup that you have selected as your Alternate, first use the switch that you have assigned to activate that (Alternate) Model, then make any adjustments desired.

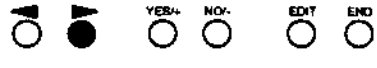
When using the ACRO card, Stylus will warn you by sounding a tone if you turn the transmitter on while either of the Alternate Set-up is activated. To silence the warning tone, turn the Alternate Set-up switch to the off position.

REMINDER:

It is strongly recommended that you first set all of the parameters for your original set-up, including receiver channel assignments, centering, servo reversing, switch assignments, mixers and so on before attempting to assign an Alternate set-up. AFTER you have a suitable set-up programmed, then COPY that set-up into another position and use that copy as a starting point for your Alternate set-up.

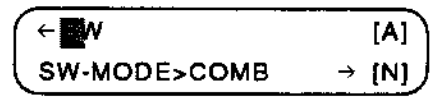
This will ensure that you start with a known compatible set-up for your Alternate set-up. The Alternate function will NOT activate if you select an incompatible model; i.e. different wing or tail type, or different Modulation type.

Press the > key to move to the next Alternate screen.

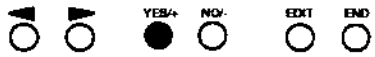


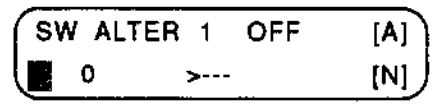
(Continued on next Page)

Alternate ...

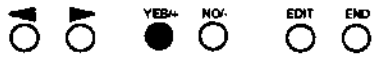


Press the YES/+ key to bring up the SW options for this Alternate Set-Up function.





By default the SW for Alternates are set to 11, as the menu shows. Use the YES+ key to select whatever SW you prefer.



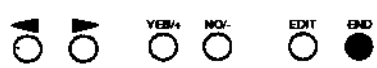
Unless you have switch #11/12 in the #12 position, the menu will read OFF and the Model Set-up Indicator at the far right will remain at [A], indicating Model Set-Up "A" is presently active. (You can also use the logical operators and secondary switch assignments if desired - they work exactly the same as explained earlier in the SW menus).

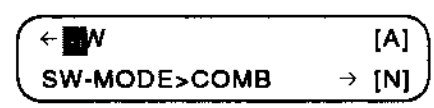
Move the #11/12 switch to the #12 position. The menu will display as shown below:

NOTE that two of the menu items, in shaded oval above, change when you turn the Alternate function On. First, the status indicator changes from OFF to ON. Second, the Present Setup display changes from upper-case [A] to lower-case [b]. ALL alternates will display in this location in lower-case letters! Also, the alternate model selected (if any) will display in ALL MENUS throughout the programming screens.

Whenever you have an Alternate Set-up enabled you must ALWAYS check when making programming changes to ensure that you are programming for the intended model set-up! To change which model set-up you are programming, simply move the Alternate switch to load that set-up before making programming changes.

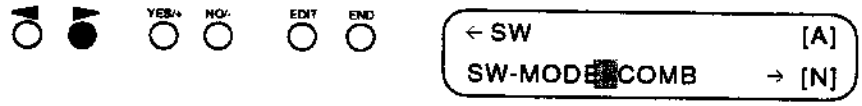
Press END to return to the previous menu.





Alternate ...

Press the > key to scroll to the next cursor position.



The SW Mode option allows you to select whether the SW assignments are always the same between the primary set-up and any Alternate Set-ups, or whether the SW assignments can be set differently between the primary set-up and any Alternate Set-ups.

In the default setting the display reads "COMB". With COMB selected, SW assignments are always the same between the primary set-up and any Alternate Set-ups.

If you press the YES/+ or NO/- key the display will change to SEPA, for Separate. With this selection your SW assignments can be set differently between the primary set-up and any Alternate Set-ups.

Normally it's best to leave the SW settings combined (COMB) at least until you are very comfortable with the aircraft and programs.

Press the > key again to show the final Alternate screen.

This screen allows selection of COMB (for combined) or SEPA (for Separate) for each primary stick function.

For each function, if COMB is selected, then the TRIM functions will apply equally to ALL Primary Model Set-Ups and Alternate Set-Ups.

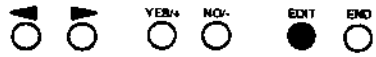
For each function, if SEPA is selected, then the TRIM functions will apply ONLY to the Primary Model Set-Ups or Alternate Set-Ups active at the time the trim lever is moved.

Again, it's generally best to leave all trim functions set to COMB (combined) at least until you are very comfortable with the aircraft and programs.

TRIM AUTHORITY

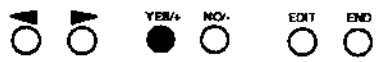
Stylus with ACRO card installed allows you to adjust the amount of servo movement that will occur in response to movement of the primary control trim sliders. Trim Authority is independently selectable for each of the trimmers - Throttle, Aileron, Elevator and Rudder.

To adjust the Trim Authority settings, press the Edit key until the following menu is displayed:




```
TRIM-AUTH   TIMER      [A]
D-COPY  D-RESET        [N]
```

The cursor is over the TRIM-AUTH position. Press the YES/+ key:

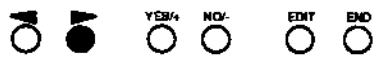



```
TRIM-AUTHORITY         [A]
TH 100%  AI>100% →     [N]
```

(Press the > or < keys to move between the two Trim-Auth screens.)

```
←EL>100%   RU>50%      [A]
                       [N]
```

Let's say we want to decrease the sensitivity of the Aileron trim. Press the > key to move the cursor to the AI position:




```
TRIM-AUTHORITY         [A]
TH>100%  A 100% →      [N]
```

Now use the YES/+ or NO/- keys to change the Trim Authority setting. In this example set the Aileron Trim Authority to 50%. Now, moving the Aileron trim lever (in either direction) will cause half (50%) as much movement of the aileron servo(s).

The range available is from 0% (no trim lever response) to 100%.

NOTES:
For initial flights it is best to leave the trim authority at 100% to allow for maximum ability to trim your aircraft.

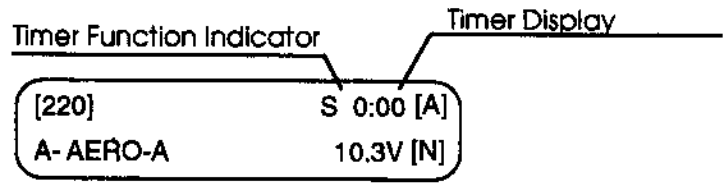
Be cautious in selecting very low Trim Authority settings. You are better off with slightly more trim than needed than to find you don't have enough! Set the trim authority for a fairly "soft" trim after test flights, usually around 50% is very comfortable.

THROTTLE:
The trim lever for the throttle function is self-limiting at throttle stick settings above idle. Trim lever movements at full LOW throttle are adjusted with the Trim-Authority settings. At full HIGH throttle, the trim is not active; between low and high throttle stick settings the trim lever's effect is progressively reduced. (This is done so that you don't have to worry about limiting top end power or binding of the throttle linkage at full power regardless of trim lever settings).

STOPWATCH FUNCTION

Stylus offers a built-in timer and allows the pilot to use a stopwatch function in either elapsed-time mode or in countdown mode.

The Stopwatch and Timer displays are shown in the initial screen of all aircraft types, as below:

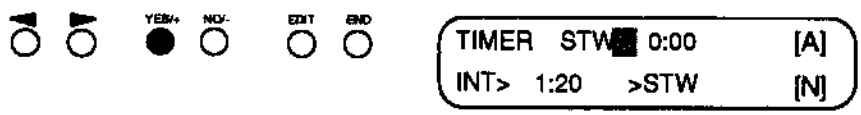


The Timer Function Indicator will read either "S," indicating the Stopwatch/ Timer function, or "I," indicating Integral Timer function. The Timer Display reads the time for whichever function is presently selected as shown by the Timer Function Indicator.

To use the timer or stopwatch functions, press EDIT to arrive at the following screen:

Press the > key to move the cursor to TIMER.

Press the YES/+ key to access the TIMER STW program screen.



The cursor is positioned over the STW, or STOPWATCH position. If you want to use the STW as a timer (for example, to measure flight duration) you will set the STW function to 00:00 as shown. Then, when you activate the stopwatch function by pressing the assigned switch, the timer display will count up to a maximum of 59 minutes, 59 seconds. Pressing the STW switch a second time will cause the timing to stop.

You can also set the STW function to work as a countdown stopwatch. To do this, set the cursor to the STW position as shown above. Then use the YES/+ key to increase the STW setting, in 10-second increments, up to a maximum of 59 minutes and 50 seconds. For now, set the STW timer to 1 minute, 30 seconds as shown:

(Continued on next Page)

Stopwatch Function...

Now press the END key to return to the Initial Screen display that will normally be displayed when you are in flight.

Note that the Stopwatch display in the initial screen shows the 1:30 setting you just set.

Now activate the stopwatch function by pressing the assigned switch. (If no switch is presently assigned, see the SWITCH ASSIGNMENTS section.

The Initial Screen display will start to count down in one-second increments. When the remaining time reaches 10 seconds, a short audio tone will sound, and will repeat in one-second intervals. When the timer reaches zero, the audio tone will sound one final long tone.

Tone sounds at one-sec. intervals starting at 10 seconds remaining.

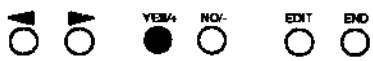
You can stop, then re-start the countdown timer whenever desired by pressing the assigned switch each time you wish to either start or stop the countdown. After the Stopwatch reaches zero, if the function is not deactivated, it will continue to act as a timer counting upwards in one-second intervals.

If no switch is assigned, you can start and stop the countdown timer by pressing the YES/+ key. You can reset the countdown timer to the original time by pressing the YES/+ and NO/- keys simultaneously.

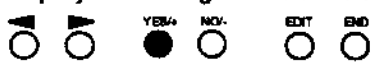
INTEGRAL TIMER

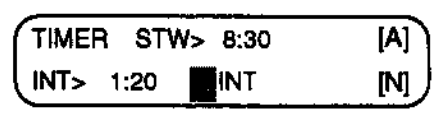
The Integral Timer function of Stylus is activated each time the transmitter power switch is turned on, and continues to time up to 99 hours and 59 minutes at all times when the transmitter is turned on. This timer will give an excellent indication of how many hours of actual use your Stylus transmitter has accrued. Or, you may wish to re-set the timer to zero at certain intervals — for instance, each time you charge the transmitter battery pack.

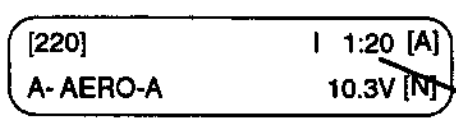
To change the Initial Screen timer display to show the Integral Timer, access the Timer Function:



Now move the cursor to the last position and press the YES/+ key. The display will change from STW to INT.

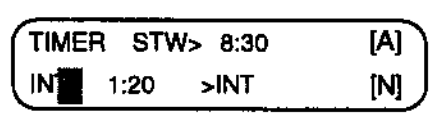




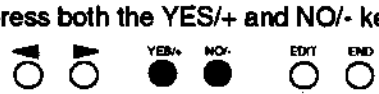


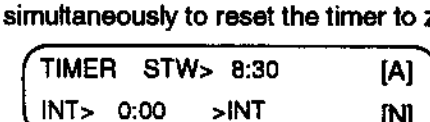
Integral Timer display in the Initial Screen indicates 1 hour and 20 minutes of elapsed time.

To reset the Integral Timer, return to the TIMER menu and position the cursor over the INT> button :



Now press both the YES/+ and NO/- keys simultaneously to reset the timer to zero.





DATA COPY

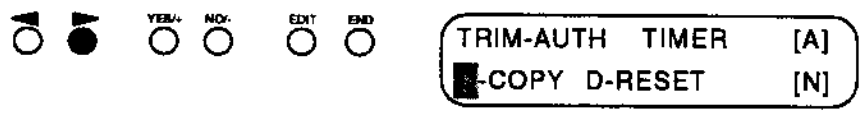
A valuable feature of the Stylus is the Data Copy function. With this function the entire set of control parameters for one aircraft can be 'copied' from one Model set-up into another. (For instance, if you have your aircraft program in Model 1 and nothing in Model 2, you can copy the Model 1 program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

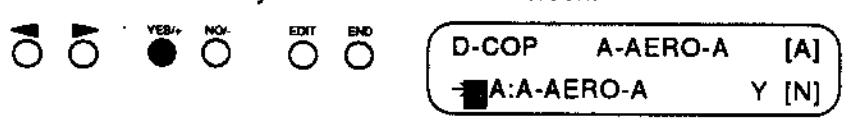
Having copied your control set-up, you can now use M-SELECT to load the Model 2 program, and then make control changes to that set-up. This allows you to experiment with different control options without changing your original parameters.

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

Press the > key to move the cursor to the D-COPY position:



Press the YES/+ key to see the D-COPY screen.



The top line of the screen shows the PRESENTLY LOADED model name; in this case "A-AERO-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 S-AERO-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.

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

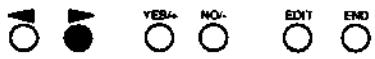
Above, the destination has been set to A-AERO-B. MAKE CERTAIN that this Model set-up is not one you wish to save, because when you copy the A-AERO-A set-up into A-AERO-B, all data that was in A-AERO-B is REPLACED with the A-AERO-A data! At this point A-AERO-B is still intact, so if you wish to change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

(Continued on next Page)

Data Copy ...

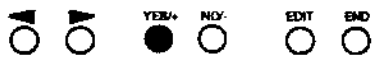
Having selected both the desired data source (A-AERO-A) AND the desired data destination (in this example, A-AERO-B) you can now proceed to confirm the D-COPY function.

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




```
D-COP     A-AERO-A     [A]
→>B:A-AERO-B           [N]
```

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




```
D-COP     A-AERO-A     [A]
→>B:A-AERO-B           [N]
```

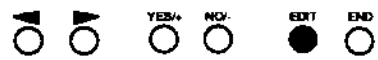
The screen will change to the following screen to inform you that the process has been completed, and that Model A and Model B now have the same data (in this case, A-AERO-A).

```
D-COPY COMPLETED       [A]
 A:B A-AERO-A        Y [N]
```

DATA RESET

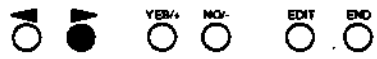
If you want to 'undo' all of your programed parameters at one time, you can use the Data Reset function. This function will 'Reset' all settings except the SW assignments to the factory default settings.

Press the Edit key to display the following screen:




```
TRIM-AUTH   TIMER      [A]
,D-COPY  D-RESET       [N]
```

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




```
TRIM-AUTH   TIMER      [A]
-COPY  D-RESET         [N]
```

NOTE!
Using the Data Reset function will cause the Stylus to reset the switch assignments. It does NOT reset them to default positions!

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

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

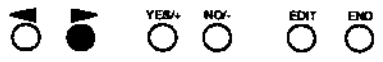

```
ATA-RESET              [A]
>A:A-AERO-A         Y  [N]
```

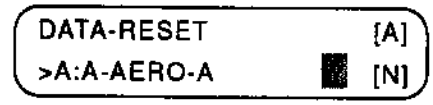
The first cursor position shows the current MODEL (MODEL-A here) that will be RESET if you continue. Press the YES/+ or NO/- to change this Model if desired.

The bottom line shows the name of the setup denoted by the selected Model No. (In this case A-AERO-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.

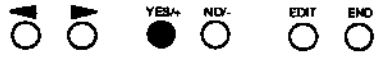
Data Reset ...

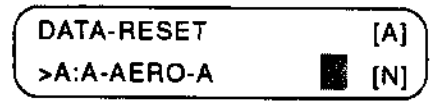




Now press the YES/+ key to confirm that you wish to Reset the data for this Model.

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





Note that the bottom line now displays A-AERO-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.

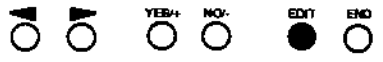
ALL OTHER Models in memory are unaffected by the DATA-RESET function, only the selected Model setup is affected.

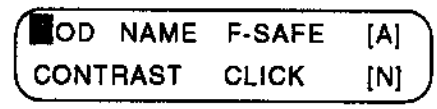
MODULATION

PCM
PPM
PPM-INV

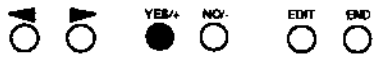
Stylus allows you to transmit three different types of signal; PCM, PPM (FM) or PPM-INV (FM).

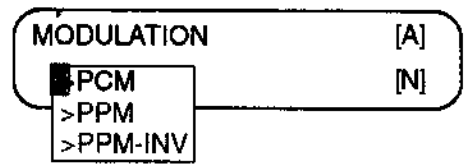
To set the desired type of Modulation, press the EDIT key until you reach this screen:





Press the YES/+ key, and this screen will appear:





PCM modulation can only be used if you are using a Stylus PCM receiver, Part Number 92185

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.

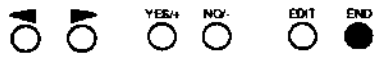
Press the YES/+ or NO/- key to change the currently displayed choice. *PCM modulation can only be used in conjunction with a P/N 92185 PCM receiver!*

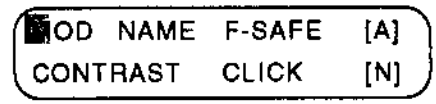
NOTE: Your receiver will only respond to one of the three available modulation types! Be sure that you set the transmitter to the appropriate modulation type for the receiver being used!

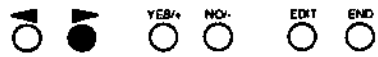
Note also that you MUST use the Stylus PCM receiver (P/N 92185) in order to take advantage of the Failsafe function.

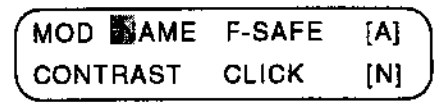
NAMING THE PRESENT AIRPLANE

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.



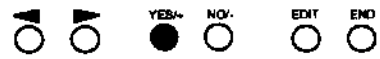






You may use any combination of LETTERS, NUMBERS, Colon (:), Dash (-) or Spaces up to a total of 10 characters.

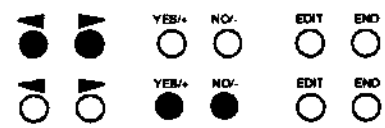
With cursor positioned over NAME, press the YES/+ key to reach this screen:



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 scroll 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.

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.

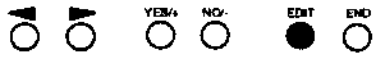
Keep in mind that the name you chose can help in keeping multiple aircraft or multiple set-ups for one aircraft organized.

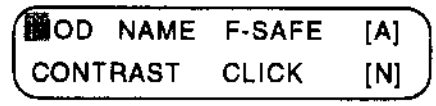
For example, if you had an Alternate Set-up programmed for the airplane above you might name it "ExtraAlt1" or "ExtraAlt2".

. If you use different frequencies on your aircraft and switch transmitter modules to match the receivers, you may wish to append the channel number to the name for each plane, i.e. "Extra-24," "Ultimate56" and so on.

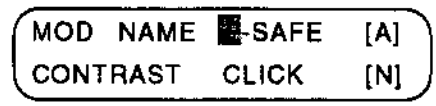
FAIL SAFE

Press the EDIT key to bring up the menu below.





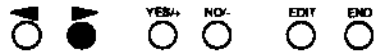
Press the > key to move the cursor to the F-SAFE position.

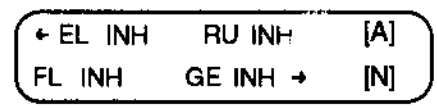


FAILSAFE is ONLY available when you are using a PCM receiver and transmitting in the PCM Modulation mode. If you are transmitting PPM FM you will not be able to enable the F-SAFE function.

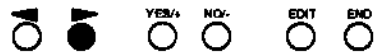
Press the YES/+ key to see this screen:

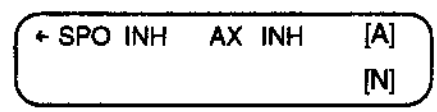
The arrow at the end of the second menu line indicates there are more screens for this function. Pressing the > Key will take you through all of the screens for the failsafe function, as follows:





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

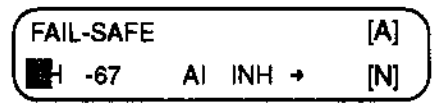




The settings for the Fail-Safe menu positions can NOT be set by the +/- Keys. Instead, you program the desired Failsafe servo position for each by placing the control stick or switch in the desired position; for example, low throttle, slight up elevator, etc. Each control function is set individually.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

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

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.



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.

(Continued on next Page)

FAIL SAFE

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.

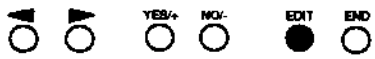
NOTE: The exact channels displayed and available for Fail-Safe assignments in the Fail-Safe screens will depend on the wing type, tail type, T-GE, T-TH and other options you have selected.

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 Fail-safe is not active, in PCM Modulation, the receiver will 'hold' the last command received until the signal is again established.

CONTRAST

The CONTRAST of the Stylus Liquid Crystal Display can be adjusted for user preference. To adjust the contrast, press the EDIT key until you see the following screen:

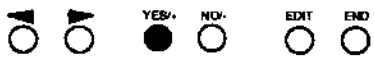



```
MOD NAME  F-SAFE  [A]
CONTRAST  CLICK   [N]
```

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


```
MOD NAME  F-SAFE  [A]
CONTRAST  CLICK   [N]
```

Press the YES/+ key to see the CONTRAST program screen.




```
LCD-CONTRAST      [A]
   50%            [N]
```

The present, default setting for contrast is 100%. Maximum contrast setting is 100%; the contrast setting can be decreased to 0% by pressing the NO/- key. At the 0% setting you will barely see the menus - not a recommended setting! Pressing both the YES/+ and NO/- keys simultaneously will 'clear' the setting back to the default setting.

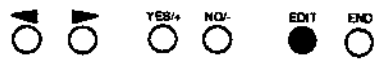
NOTE: If you inadvertently turn the contrast all the way off and can't read the screens, and don't know for sure what screen you are on, proceed as follows: Press the End key several times to return you to the initial screen. Press the Edit key SEVEN times. Press the > key THREE times. Press the YES/+ key. You are now in the Contrast screen. Hold the YES/+ key down until the display contrast is set.

'CLICK' Transmitter Audio

The Stylus normally is set to emit an audio tone whenever the programming cursor is moved, when screens are changed, when values are changed, for stick alarms and when the stopwatch function is started or stopped or reaches the final ten seconds of count-down.

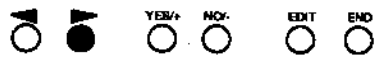
It is possible to disable the 'click,' or audio tone, using software settings. When the tone is disabled, ONLY the stopwatch countdown and stick/switch alarms will still cause an audio tone to be emitted.

To set the 'Click' function, press the EDIT key until the following screen is displayed:



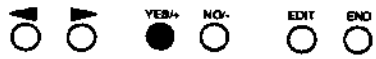

```
MOD NAME  F-SAFE  [A]
CONTRAST  CLICK   [N]
```

Press the > key to until the cursor is over the CLICK function:




```
MOD NAME  F-SAFE  [A]
CONTRAST  CLICK   [N]
```

Now, press the YES/+ key to bring up the menu for the CLICK function:

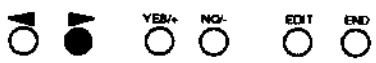



```
CLICK   ON          [A]
 PITCH  > 50%   Y   [N]
```

Press the YES/+ key or the NO/- key to change the present setting. The Click function is either set to be ON or OFF.

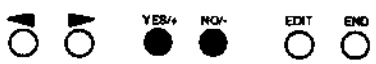

```
CLICK   OFF         [A]
 PITCH  > 50%   Y   [N]
```

Press the > key to until the cursor is over the PITCH function:




```
CLICK   >ON         [A]
 PITCH   50%   Y   [N]
```

The PITCH menu allows you to set the pitch (tone) of the audio click. Press the YES/+ and NO/- keys to adjust the Pitch setting to your liking.




```
CLICK   >ON         [A]
 PITCH   50%   Y   [N]
```

The range available is from 0% to 100%. Most people can not hear the click at 90% pitch or above.

CARD

The CARD function is ONLY used with the 50-Model card, for storing or retrieving model set-ups to that card. This group of functions is completely described in the manual that comes with the 50-model card and is not repeated here.

(Mode1,2)

The (Mode1,2) menu allows you to make the necessary software changes to allow switching from Mode 2 to Mode 1 operation. This process is fully described in the Stylus Radio System Operating Manual

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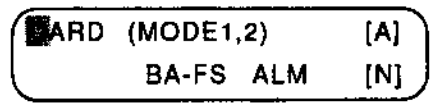
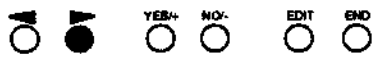
BATTERY FAIL SAFE (Receiver Pack)

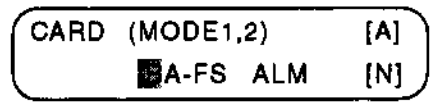
Stylus offers a Fail Safe function to warn you of a low voltage condition in your receiver's battery pack. This function is only operable when using the PCM receiver (P/N 92185).

To activate the Battery Fail Safe function press the EDIT key until the following menu is displayed:



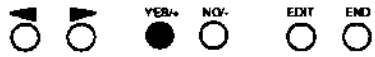
Press the > Key to move the cursor to the BA-F-SAFE position.





IT IS RECOMMENDED THAT YOU LAND IMMEDIATELY if the receiver failsafe warns of low voltage conditions!

Press the YES/+ key to display the BA-F-SAFE menu.



There is only one cursor position in this menu. The default setting is INH, meaning that the Battery Fail Safe function is inhibited and will not function. To activate the Battery Fail Safe function press the YES/+ key.

IMPORTANT NOTE: The BA-F-SAFE feature will NOT PROVIDE ANY WARNING if you are using a 5-cell (6-volt) battery pack! The voltage threshold is too low to provide any useful warning for 6-volt receiver packs.

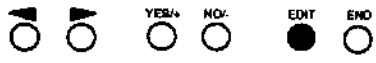
The display will change to "ACT," indicating that the BA-F-SAFE function is now Active. (Pressing either the YES/+ or NO/- key will toggle the function between the "INH" and "ACT" settings.)

When the BA-F-SAFE is set to "ACT," the PCM receiver will monitor the receiver pack voltage to warn you when it reaches the target level, approximately 4.7 volts. When the airborne battery hits this voltage, the throttle servo will move to a low throttle position for one second, and then return to normal. This cycling of the throttle will occur about once each minute until you land and recharge the battery. IT IS RECOMMENDED THAT YOU LAND IMMEDIATELY if the receiver failsafe warns of low voltage conditions!

ALARM Switch & Stick

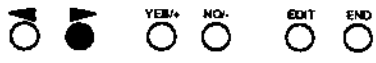
Stylus offers an "Alarm" function to warn you if you turn your transmitter on while an Alternate set-up switch is activated, and another to warn if you turn the transmitter on while the Throttle stick is in any position other than full-low throttle.

To activate the Alarm function press the EDIT key until the following menu is displayed:



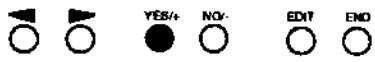

```
CARD  (MODE1,2)        [A]
      BA-FS  ALM       [N]
```

Press the > Key to move the cursor to the ALM position.




```
CARD  (MODE1,2)        [A]
      BA-FS  ALM       [N]
```

Press the YES/+ key to display the ALARM menu.




```
ALARM  SW-ALM  ACT      [A]
       TH-STK-ALM  ACT  [N]
```

There are two settings in the Alarm menu; the first cursor position is for the Switch Alarm function, which will warn you with a tone if you turn the transmitter on while an Alternate Set-up switch is on. Turn the Alternate switch off to silence the alarm.

The second cursor position is the Throttle Stick Alarm option. This alarm sounds a warning tone if you turn the transmitter on while the Throttle stick is in any position other than full-low throttle. Move the throttle stick to the idle position to turn the alarm off.

The default, and generally recommended setting, is for both of these alarm functions to be "ACT," for Active.

If you wish, you can turn off either of these functions by pressing the YES/+ or NO/- keys while the cursor is over the desired function.

Appendix "A" – Specific Examples of Stylus Programming

STYLUS ACRO CARD - Procedure to Obtain Individual Twin Throttle Adjustments with a three Position Switch for Channels #1 and #8 Servos.

Select SW and zero out all unwanted switches then assign C-Mix 1 to switch #3. Assign C-MIX 2 to switch #2, and TH-HOLD to switch #1. Place throttle trim lever in center position. Select TWIN-TH and turn "ON" with Yes/+ key. Set TH-HOLD at 25%. Select C-MIX 1 and set MAS>TH, SLA>LT. Push throttle stick to high position and set H> -100%. Move stick to low and set L>-100%. Then move the cursor to H-point and set at -50% and the L-point at -50%. These values must be the same since they set the idle-up. Select C-MIX 2 and set MAS>TH, SLA>RT. Set H>0% and L>0%. C-MIX 1 controls the channel #1 left throttle. C-MIX 2 controls the channel #8 right throttle.

When the throttle hold selection switch is in the #1 position only the channel #1 left throttle servo will respond to the throttle stick. When the selection switch is in the #2 position, both servos will respond to the throttle stick. When the selection switch is in the #3 position, only the channel #8 right throttle servo will respond. Use Center Adjust to set throttle hold positions for left and right throttles. Use EPA's for both servos to set high and low throttle positions.

If you want the ability to advance one throttle and retard the other when steering with the rudder on the ground, use Rudder to Throttle mixing. Assign the switch for C-MIX 3 to S-SW1 and the mixer to the left throttle. Assign C-MIX4 to S-SW1 and the mixer to right throttle. Put in appropriate values with correct polarity. Set S-SW1 to approximately 58% low throttle to prevent killing of engine below half throttle.

STYLUS ACRO CARD - Procedure for Use of TX Control Stick(s) to Activate a Specific Function

Example: Auxiliary channel servo #8 is to be activated by throttle stick position at a specific point.

Select SW screen and move cursor to AUX by using arrow key.

Assign AUX switch to SS1 by using Yes/+ key. Hit "'END" twice. Use arrow key to select ST-SW, and hit Yes/+ key. Use Yes/+ or No/- keys to make the top line read STICK-SW>1 CH>TH. Use arrow key to select PNT. Position throttle stick at approximately one half and hit the Yes/+ key. Channel #8 (AUX) servo now will operate when the throttle stick reaches half throttle. (*Note: Any channel and any control stick can be made to respond in a similar manner.)*

STYLUS ACRO CARD - Procedure to Obtain Split Rudder Capability for Nemesis Pylon Racer with Outputs on Channels #6 and #8

Place Left Slider Lever (VR 12) all the way up. Select SPOIRON and make it ACTive to obtain two aileron channels (#2 and #7). Set the value at 0%.

Select VR and make AUX>12 FLAP>12. Select SW and C-MIX(1). Hold Yes/+ key to turn C-MIX1 "ON" all the time. Do the same for CMIX2, C-MIX3 and C-MIX4. Scroll through to FL(1) and turn it "ON" all the time.

Select C-MIX1 and set MAS>RU and SLA>FL, with L>-100% and R>0% by pushing rudder stick left and right. Select OPTION on the C- MIX 1 screen and make it read VR>12 NOR with H>0%. Push the left slider down and set L>-100%.

Select C-MIX2 and set MAS>RU and SLA>AX with L>0% and R>+100%. Select OPTION as done above for C-MIX1 With VR>12 NOR but set L>+100% with left slider lever down and H>0% with slider UP.

Select CENTER and set FL at +75% and AUX at -75%.

Appendix "A"

Set Rudder Trim control (VR8) to center position and select C-MIX3. Set MAS/RU and SWFL. Set L-Point L+100% and R-Point L at +100%. Move cursor and select OPTION. Set VR>8>NOR and with Rudder Trim fully left H>50%. Push Rudder Trim fully right and L is 0%.

Select C-MIX4 and set MAS/RU and SL/AX. Make all other settings as in C-MIX3 except H>0% and L>50% with trim lever fully left and right.

Select EPA and set FL-H at 50% and FL-L at 50% by moving left slider lever up and down. Set AX-H at 75% and AX-L at 75% in the same way.

The pushrods for Ch #6 and Ch #8 servos cross to obtain straight line operation for split rudder control. With slider all the way up each half of the rudder deflects normally. With the left slider lever pushed all the way down both halves of the rudder will deflect outward. One side will react to a right rudder command and the other to a left rudder command. The rudder trim lever operates each half of the rudder independently.

STYLUS ACRO CARD - Procedure for use of Switch Logic

The Stylus transmitter has the capability to assign any of its switches to accomplish a specific function. It also has the logic capability to make a combination of switches be required to be turned on together (AND) or to be used so that either switch (OR) activates a function.

Logic Example: Snap Roll switch #15 can only operate when the Landing Gear switch is in the #5 position, i.e., gear up position. (Gear down in default is #4 position). This is a built in example of an "AND" function, i.e., it takes the Gear switch in #5 and Snap roll switch in either #15/#16 position in order for snap roll to operate.

All Function switches as well as Stick switches have the capability for AND/OR logic.

STYLUS ACRO CARD - Procedure to Obtain 3 Position Switch Controlled Flaperons and Spollerons

First select SPOIRON and use Yes/+ key to make it ACTive to obtain two Aileron servos. Next zero out all switches!! Then assign SPO(AB) to switch #17; Assign C-Mix1 if not otherwise used to switch #19; Assign SW FLAP 2 to switch #19.

Place Left Slider Lever in down position. Select C-MIX>1 and set MAS>FL and SLA>SP. Then set D>+150% as a starting point. Use END and EDIT keys to select SPO and make it read SPOILER>ACT by pushing Yes/+ key. Place 3 position switch in #17 position. Then adjust spoiler throw percent using Yes/+ key. Hit END key and move cursor to FLAP. Place 3 position switch in #19 position. Adjust FLAP2 to 100%. Hit END key and use EDIT key to select CENTER. Place 3 position switch in #18 position and adjust servo centers for Al and SP. Select DIFF and set differential as desired. Use EPA Al-L and Al-it to set aileron servo end points. Use CMIX1 "D" to adjust amount of Flap Deflection when Flap switch is #19 position. Select SPO and adjust amount of spoiler deflection when Flap switch is #17 position.

Appendix "A"

STYLUS ACRO CARD - Procedure to Obtain Switch Operated Flaperons with Aileron Outputs on Channels #2 and #6 and Separate Elevator Outputs on Channels #3 and #7.

Select FUN-FLY. Push Yes/+ key to make it ACTive and obtain two aileron channels. Zero out all mixing in FUN-FLY. Push END key, then use EDIT key to select SW. Zero out all switches not in use. Scroll through all items and select C-MX (1). Assign it to a two position switch. Push END key and select C-MX (2) using Yes/+ key. Assign C- MX (2) to the same switch. Push End key. Use Edit and arrow keys to select VR. Push Yes/+ key and make VR read AUX>12 FLAP>0. Hit END key and use EDIT key to select C-MIX. Push Yes/+ key to obtain C-MIX>1. Use arrow and Yes/+ keys to make it read MAS>AX and SLA>LA. Turn switch for C-MIX on and place the left slider lever in the upper position. Move cursor to H and make H> read 80% as a starting point. Move cursor back to C-MIX 1. Use Yes/+ key to change it to read C-MIX2. Move cursor and set MAS>AX and SLA>RA. Set H> at 80%. When assigned switch is turned ON the flaperons will deploy. If both comp. Mixers are turned ON all the time instead of being assigned to a switch, the left slider lever will provide proportional flaperons.

STYLUS ACRO CARD - Procedure to Obtain Proportional Flaps/Spoilers with Left Slider Lever.

First select SPOIRON and make it ACTive by using Yes/+ key to obtain two aileron servos in channels #2 and #7; then set S-SW>0% using No/- key. Next move cursor to SPO and make ACTive. Use EDIT key to select VR and make it read VR AUX>12 FLAP>0.

Select SW. Scroll through all items and select C-Mix (1) or other unused compensation mixer, use Yes/+ key held down to turn it ON all the time.

Select C-Mix. Move cursor to MAS and make it read MAS>AX SLA>AI. Next set left Slider Lever at the low position and make L>100% as a starting point. Move Slider lever to High position and set H>1 00%.

Select CENTER and use Yes/+ or No/- keys to adjust aileron centers. Use EPA to adjust aileron servo throws. Adjust Flap and Spoiler throws using C-Mix 1 L and H percents. Note that channel #8 servo will also follow the movement of the slider lever since we are using the AUX channel.

STYLUS ACRO CARD - Procedure for use of AUTO-OFFSET (A-OFST) Function

The A-OFST function can be used to automatically save into memory the trim positions of your control sticks while you are flying. A switch must be assigned for the A-OFST function. If desired A-OFST can be used in conjunction with the Flight Mode Switch function.

First select SW, scroll through to AUTO-OFFSET and assign a 2 position switch. Then select the A-OFST screen and ACTivate specific servo functions by pressing the Yes/+ key.

Example: You take off and your model is so out of trim that you have to hold right aileron to keep the wings level. You then, momentarily flip on the switch assigned to the AUTO-OFFSET function and the offset position of the aileron stick is memorized. You then continue to fly without having to hold the aileron stick off center. At the completion of the flight if you want to delete the AUTO-OFFSET trim from a specific servo press the Yes/+ and No/- keys si-

multaneously.

STYLUS ACRO CARD - Procedure to Obtain Separate Receiver Channels for Dual Elevator and Aileron Servos

ELEVATORS

Select AILVAT screen: Hit Yes/+ key. Make it read AILVATORY > ACT by Yes/+ key. The EPA for left elevator operates RX channel #3 servo. EPA for right elevator operates RX channel #8 servo. The elevator trim function operates both servos simultaneously. Center function has independent control of left or right elevator.

AILERONS

Select SPOIRON function: Hit Yes/+ key. Make it read ACT by using Yes/+ key. Plug Aileron servos into receiver channels #2 and #6. Hit END and select DIFF. Use Yes/+ key to set desired Aileron differential. (A *rule of thumb is twice as much up aileron as down.)* Use EDIT function to select EPA. The EPA for left aileron operates channel #2 servo. EPA for right aileron operates channel #6 servo. Aileron trim operates both servos. Center function has independent control of left or right aileron.

STYLUS ACRO CARD - Procedure to Obtain Proportional Operation of Channel #8 (Aux) Servo

FIRST: Zero out all switches that are not used! Select VR screen and hit Yes/+ key. Use Yes/+ key to make VR AUX 12. Hit End key and move the cursor to SW and Hit Yes/+ key. Use arrow key to scroll through items until you come to AUX, then hit Yes/+ key. Ensure that SW AUX > 0, i.e., not assigned to a switch or ON. Hit End key twice. Select EPA screen. Move cursor to AX. Set AX-H and AX-L by moving left slider pot to Max and Min positions. Hit End then Edit keys to select Center screen. With slider pot in center position, place cursor over AX and use Yes/+ or No/- keys to adjust center of servo as desired.

If you want Channel #6 (FLAP) servo to also be operated by the left slider pot perform the following adjustments. Select VR screen. Place cursor on VR and hit Yes/+ key. Use Yes/+ or No/- key to make VR FLAP > 12. Hit End key and select SW screen. Scroll through items and select FL (12). Hit Yes/+ key and make SW FLAP 1>0N and SW FLAP 2>0. Hit End key twice and select EPA. Move cursor to FL-H and with slider at High position adjust throw using Yes/+ or No/keys. Adjust FL- L with slider pot at Low position. Hit End and Edit keys to select Center screen. Select FL and adjust servo center.

STYLUS ACRO CARD - Procedure to Obtain 3 position Flaps that Respond to the Position of the Throttle Stick. (Flaps come down as throttle is decreased and vice versa.)

Select SW screen using EDIT key and Arrow key. Hit Yes/+ key. Use arrow key to select FL (12). Hit Yes/+ key to select SWFLAP1. Use Yes/+ key to make it read SS1. Hit END key and move cursor to FL(2). Hit Yes/+ key to obtain SWFLAP2. Use Yes/+ key to make it read SS2. Hit END key twice then

move cursor to ST-SW. Hit Yes/+ key. Assign Stick - SW1 and SW2 to CH>TH. Move cursor to PNT and set throttle stick at approximately 65% then hit Yes key. Move cursor back to Stick-SW and hit No/- key to select SW>1. Move cursor to PNT and position throttle stick at approx. 40% and hit Yes/+ key. If Flap servo reverses itself when throttle stick is moved, move cursor right to the next screen put the throttle stick full down and hit Yes/+ key. The flap servo will now respond to throttle stick position as it is advanced or retarded.

Note: Use servo REV to reverse the channel 6 flap servo direction if necessary. FLAP2 on FLAP screen determines one flap servo position. Set it initially at 100%. Flap-trim is also a factor.

STYLUS ACRO CARD - Procedure for use of Stick Switches (ST- SW) to Operate another Channel.

Any of the Stylus transmitters control sticks can be selected to operate another channel with operation occurring at a specific point.

EXAMPLE: Throttle stick when placed at a specified point activates the AUX channel #8 servo.

First select the SW screen and scroll through the items to AUX. Push the Yes/+ key until you obtain stick switch SS1 which is now assigned to operate the AUX channel. Next select ST-SW screen. Use Yes/+ key to select Stick-SW1. Use the cursor to select the channel you want to control another channels function. In this example we chose Throttle. Set the Point (PNT) where you want the channel to be activated by positioning the throttle stick at the selected point and pressing the Yes/+ key. Move cursor to ON>H or ON>L. Use Yes/+ or No/- key to set ON point.

Note: You have a choice of six stick switches that can be set to perform specific functions.

STYLUS ACRO CARD - Procedure for use of AI - EL Switch Function

The AI>EL is only used with the FUN-FLY mode so that you can either turn it on all the time or have it switch or stick switch assigned.

Example: Select SW and scroll through to AI-EL. Assign it to switch #11. Press the END key and select the FUN-FLY screen. ACTivate FUN-FLY by pressing the Yes/+ key. Turn on switch #11. Aileron stick movement also is coupled to the two elevator servos by the percent you select at (AI>LE) and (AI > RE).

STYLUS ACRO CARD - Procedure for use of Automatic Trim Memory (A-DTM) Function.

A-DTM will memorize trim settings made in any of the three flight modes, i.e., Takeoff, Cruise, and Landing when switching back and forth. A 3 position switch must be assigned for this function to operate.

First center all of your trim levers. Then select the TRIM-M screen. If you want all trims to be placed in memory press the Yes/+ key for ALL. If you want to select specific trims to be saved, position the cursor over the desired function and press the Yes/+ key. Pressing both the Yes/+ and No/- keys together

inhibits a specific function.

Next select the A-DTM screen and press the Yes/+ key to make it ACTive. This will then write the trim changes to memory during the three flight modes. Select SW and scroll through all of the items until you come to TKO, CRUISE, LANDING. Assign a 3 position switch that is not used for any other function.

Example: You have the 3 position Flight Mode Switch in the Takeoff position and trims are set as required. Takeoff is complete and you switch to Cruise Flight Mode and adjust your trims. Now set up for landing and make the necessary trim adjustments. Since A-DTM is active as you switch back and forth through each Flight Mode, trims are saved for that specific model and no retrimming is necessary next time. At the completion of the flight, turn off your transmitter and center your trim levers.

STYLUS ACRO CARD - Use of INC/+ and DEC/- Function

The INC+ or DEC- function must have a switch #16 and #15 assigned to it in order to function outside of the menu screens. Once assigned the function can be used to rapidly increase or decrease any selected function's percent or switch assignment, while making a set up.

Select SW and scroll through until you reach INC+ and DEC-. Use the Yes/+ key to assign spring loaded switch #16 to INC+ and switch #15 to DEC-. Ensure that no other function is assigned to those switch numbers. Next Select any screen that you want to change such as EPA or GEAR. Use switch #15 or #16 to rapidly change the percent. For safety it's recommended that the INC+/DEC- function be disabled by canceling the switch assignment, prior to flight of any model.

STYLUS ACRO CARD - Procedure to Obtain Channel Delay

EXAMPLE: Landing gear servo, channel #5 should retract at fairly slow scale speed but come down faster.

Select SW screen and hit Yes/+ key. Use arrow key and move cursor to CH-DLY. Hit Yes/+ key to select SW CH-DLY1. Hold Yes/+ key until it reads "ON", then hit End key *(NOTE: Make sure you have "Gear" assigned to a switch; default is SW #4).*

Select CH-DELAY screen using EDIT key. Move cursor to CH-DELAY and hit Yes/+ key. Assign CH-DELA1 to CH>GEA and make symmetry read "NO" by using No/- key. Move cursor to TIME-A and set it at approximately 60% for the UP time. Set TIME-B using the Yes/+ key to approximately 40% for LG DOWN time. Adjust times as necessary for your particular model to achieve realistic retract cycle. *(Note: Any channel can be selected for delay. They can be assigned to any switch, stick switch, or turned on all the time.)*

STYLUS ACRO CARD - Procedure to obtain Two Aileron Servos and 3-Position Switch Activated Flaps

AILERONS

1. Select "SPOIRON": Push Yes/+ key to make it ACTive. Hit "END". Aileron outputs are on receiver channels #2 and #7.
2. Select "DIFF": Push Yes/+ key or No/- key to set aileron differential if

desired.

FLAPS

1. Select "FLAP": Push No/- or Yes/+ key to set FLAP2 to 65% as a starting point. "FLAP-TRIM" can be set later.

2. Select "SW": Zero Out all Unwanted Switches!! Assign AI, EL and RU Dual Rates and Gear switches as desired. Assign FL1 to switch #19. Hit "END" and select FL2. Assign FL2 to #17, hit "END" key, and select "AUX". You can assign AUX channel #8 servo to a switch for Bomb Drop, or any other function. Hit "END".

3. Select VR screen: Make FLAP>10. VR 10 pot sets the flap servo PSN. Start with the initial setting of fully clockwise. Use EPA to set servo throws for Throttle, Aileron, Elevator, Rudder, Flap and AUX channels. Use "CENTER" to adjust FLAP channel #6 servo and channel #8 AUX as necessary. Use servo "REVERSE" if flap action is reversed.

STYLUS ACRO CARD - Procedure to obtain Aileron to Rudder Mix (AI - RU).

Select SW. Use arrow key to scroll to AI - RU (1 or 2). Assign an unused switch to 1. Hit End key. Use EDIT key to select MIX. Scroll through items to AI>RU -1. Turn assigned SW ON then use Yes/+ key to assign a value in percent. When switch is in the ON position the rudder servo will follow aileron commands.

STYLUS ACRO CARD - Procedure on How to Obtain Two Separate Aileron Servos and Flap Servo(s).

Configuration #1 - Proportional AUX Servo

Select SPOIRON: Push Yes/+ key to make it ACTive. Hit END. Aileron outputs are on receiver channels #2 and #7. Select DIFF. Push Yes/+ key or No/- key to set aileron differential if desired.

Select VR screen: Hit Yes/+ key and set VR AX>12. Make sure FLAP is 0. All switches not in use should be zeroed out. Hit End key and select EPA. Move cursor to AX. Set AX-L with left slider pot lever down and AX-H with the lever up, using the Yes/+ or No/- keys. The left slider pot lever which is proportional now controls the channel #8 servo for flaps or other requirements.

Configuration #2 - Switch Activated 3 Position Flaps

Select Spoiron as in configuration #1.

Select SW: Zero out all unwanted switch functions! Use cursor to select FL (1 2) function. Hit Yes/+ key and assign SW FLAP 1 to switch #19. Hit END key. Move cursor to (2) and hit Yes/+ key. Assign SW FLAP 2 to switch #17. Hit End key. Use EDIT key to select FLAP. Hit Yes/+ key and set FLAP 2 to 100% as a starting value. Select VR screen. Use Yes/+ or No/- keys to set VR AUX>0 and FLAP>9. Turn VR9 pot fully clockwise. VR9 now controls one side of servo throw. FLAP 2 controls the other side and FL Center can be used to adjust the center. Switch #17, #18 and #19 activates channel #6 servo for three position flaps.

Appendix "A"

Configuration #3 - Three Position Switch Activates Flaps for Channels #6 (Flap) and #8 (Aux)

Use same set up procedures as in configuration #2.

Select C-Mix screen; (C-Mix >1. Use arrow key to make MAS > FL and SLA>AX.

Hit arrow key and set N and D mixing points at 100%.

Use arrow key to return to C-Mix 1 screen. Move 3 position flap switch to #17 position. Turn VR9 potentiometer fully ccw and set D to approximately 120%. Use END and EDIT to select SW. Use arrow key to select C-Mix 1. Use Yes/+ key to turn it ON. Hit END key twice. Use arrow key to select VR. Set VR AUX>10. Hit END key. Turn VR9 and VR10 fully CW. Switch #17, #18, #19 now operate channel #6 and #8 servos. Fine tune throws using VR9 and 10 potentiometers, EPA's, Flap2 Center adjust, and C-Mix 1 D on C-MIX screen. Reverse channel #6 or #8 as necessary.

STYLUS ACRO CARD - Procedure on How to Trim Out Rudder Induced Rolling and/or Pitching.

Select MIX: Push Yes/+ key to make it ACTive. Select RU>EL. Move the rudder stick RIGHT. Input the desired amount AND direction of mixing (elevator response) you want to occur with Right rudder input. Move rudder stick left, set amount for mix with left rudder. Flight testing will be required, usually in knife edge.

Move to RU>AI mix. Move rudder to RIGHT. Set amount AND direction of mix desired for pure yaw response to right rudder. Repeat for left rudder. Flight testing will be required to reach optimum mix.

Appendix "B"

Aircraft Configuration

Receiver Output Channel	Normal/or Spoiron	Fun Fly	Twin Throttle	Twin Gear	Ailvat	Ailvat AND Spoiron
8	Auxiliary Channel	Auxiliary Channel	Right Throttle Servo	Right Gear Servo	Right Elevator Servo	Right Elevator Servo
7	Spoiler Servo/ (Right Ail II Spoileron Active)	Right Elevator Servo	Spoiler Servo (Right Ail II Spoileron Active)	Spoiler Servo (Right Ail II Spoileron Active)	Spoiler Servo	Right Aileron Servo
6	Flap Servo	Right Aileron Servo	Flap Servo	Flap Servo	Flap Servo	Flap Servo
5	Gear Servo	Gear Servo	Gear Servo	Left Gear Servo	Gear Servo	Gear Servo
4	Rudder Servo	Rudder Servo	Rudder Servo	Rudder Servo	Rudder Servo	Rudder Servo
3	Elevator Servo	Left Elevator Servo	Elevator Servo	Elevator Servo	Left Elevator Servo	Left Elevator Servo
2	Aileron Servo/ (Left Ail II Spoileron Active)	Left Aileron Servo	Aileron Servo (Left Ail II Spoileron Active)	Aileron Servo (Left Ail II Spoileron Active)	Aileron Servo	Left Aileron Servo
1	Throttle Servo	Throttle Servo	Left Throttle Servo	Throttle Servo	Throttle Servo	Throttle Servo

These channel output assignments are valid when using either the PCM or the FM type of Stylus Receivers.

Appendix "C"

TRAINER Function

The ACRO card includes software for an advanced Trainer function. NOTE that most Stylus transmitters do NOT have the trainer function activated within the basic software. In this case, the trainer function will not be displayed in any menus regardless of whether or not the ACRO card is installed.

If your transmitter has had the Trainer function activated, the seventh primary menu will display as follows:

If the Trainer function has NOT been activated, the same menu will appear as follows:

In this case, if you wish to use the Trainer function, you will need to return your transmitter to Airtronics Service Department to have this function activated.

When activated, the Stylus Trainer system offers unique options. Most radio systems require that the instructor pilot holds a spring-loaded trainer switch in the "on" position so that the student can have control of all aircraft functions. When the instructor wants to regain control of the aircraft he must first release the switch.

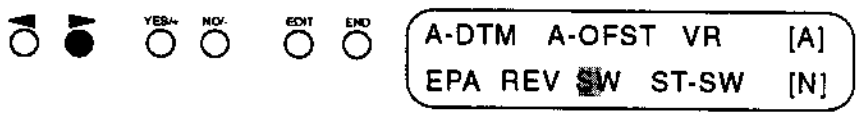
With the Stylus system, if the student gets into trouble, all the instructor needs to do (if the "switchless" trainer option is used) is to move the sticks on the master transmitter! This boths save time in emergencies, and also keeps the instructor's finger from tiring or slipping off a switch.

If you prefer, you can select a switch to operate the Trainer function in the conventional manner.

In order to use the Trainer function you must EITHER have a specific switch assigned in the SW menus, or turn the function ON to operate in the switchless mode.

To assign a switch, press the edit key until the following screen appears:

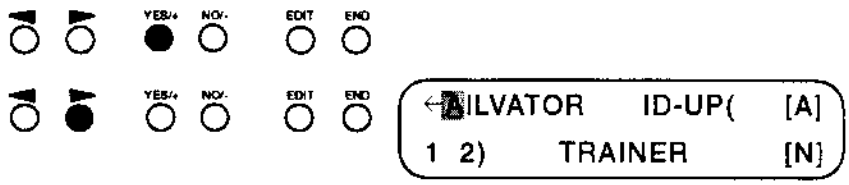
Press the > key to move the cursor to the SW position.



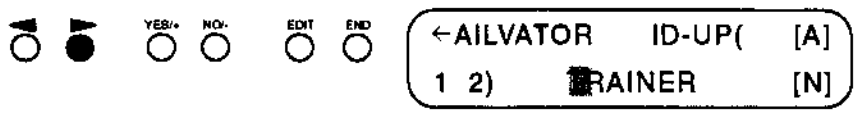
Appendix "C"

TRAINER Function

Press the YES/+ key to bring up the first SW screen, then press the > key until you move the cursor to the following screen:

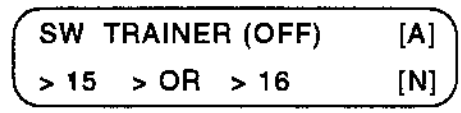


Press the > key to move the cursor to the Trainer position:



Press the YES/+ key to bring up the Trainer SW screen:

If you wish to operate the Trainer function in a conventional manner, using the spring-loaded switch #15-16, set the first cursor position to 15 using the YES/+ key, then press the > key to mov e to the center position and press the YES/+ key until it reads "OR." Then press the > key to mov e to the final SW position and use the YES/+ key to set that position to 16.



With these settings, the spring-loaded switch #15-16 will activate the Trainer function when moved in EITHER direction.

If you prefer to operate the Trainer function in "Switchless" mode (as described on previous page), press the YES/+ key to change the first SW menu position to ON, as below.

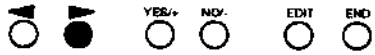
Press the END key twice to return to the intial screen, then press the EDIT key to display the following screen:

(Continued on next Page)

Appendix "C"

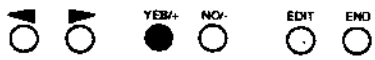
TRAINER ...

Press the > key to you move the cursor to Trainer position:




```
MOD  NAME  F-SAFE  [A]
CONT TRAINER CLK   [N]
```

Press the YES/+ key to bring up the Trainer screen.




```
TRAINER   MASTER  [A]
THRO-STK  > MASTER [N]
```

NOTE that BOTH the Master and the Slave Stylus transmitters must be set for the SAME TYPE of aircraft and same aircraft configuration in order for the Trainer function to operate correctly.

The first menu position allows you to select the transmitter to be either the Master or the Slave. (One must be set to Master, the other must be set to Slave). Use the YES/+ key to toggle between the master and slave choices.

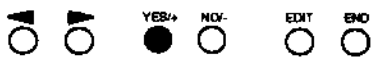
NOTE that BOTH the Master and the Slave Stylus transmitters must be set for the SAME TYPE of aircraft and same aircraft configuration in order for the Trainer function to operate correctly. (See Appendix "B" for aircraft configurations).

Plug the Master/Trainer cable, P/N 97104, into the port on the back of both the Master and Slave transmitters.

If you want the Master transmitter to be the only one able to operate the throttle function, leave the default settings as shown below.

```
TRAINER   > MASTER  [A]
THRO-STK  MASTER    [N]
```

If you prefer to have the SLAVE transmitter be the only one able to operate the throttle function, use the > key to move to the second cursor position and press the YES/+ key to change the setting as shown below.




```
TRAINER   > MASTER  [A]
THRO-STK  SLAVE     [N]
```

In this configuration, ONLY the SLAVE transmitter will be able to operate the Throttle function. Movement of the throttle stick on the master transmitter will NOT operate the throttle.

NOTE that either of the Stylus transmitters can be selected as the Master or the Slave. **HOWEVER, THE MASTER TRANSMITTER MUST BE ON THE SAME FREQUENCY (R/C Channel) AS THE RECEIVER IN THE AIRCRAFT!**

Once you have programmed both the Master and Slave transmitters for trainer operation, you are ready to proceed. MAKE CERTAIN that the Master/Trainer cable is plugged in to both transmitters securely, then turn the RF switch ON on the Master transmitter (only!). Prior to starting or flying the model, make sure that all control surfaces and the throttle move in the proper directions when the control sticks are deflected on both transmitters.

Appendix "C"

TRAINER ...

CAUTION!

The Master/Trainer cable MUST remain plugged in to the SLAVE transmitter at all times when it is plugged in to the MASTER transmitter. If the cable is inadvertantly removed from the slave transmitter during operation, the RF output of the master transmitter will be turned OFF!! (The master transmitter will act as if the DSC cable were plugged in, which automatically turns off the RF output.)

Appendix "D" – C-MIX MASTER Channel Selection Options

Aircraft Type > Selection Order	Normal	Fun Fly	Fun Fly Twin Throttle	Twin Throttle Twin Gear	Twin Throttle, Twin Gear,Alvator	Calculation Used
1	TH1	TH1	TH1	TH1	TH1	Throttle Stick
2	TH3	TH3	TH3	TH3	TH3	Throttle Curve, Trim, Idle-Up, Delay
3	AI1	AI1	AI1	AI1	AI1	Aileron Stick, Delay
4	AI2	AI2	AI2	AI2	AI2	Aileron Stick, Delay, D/R, EXP/VTR
5	AI3	AI3	AI3	AI3	AI3	Aileron Stick, Delay, D/R, EXP/VTR, EPA, DIFF, Offset, Trim
6	EL1	EL1	EL1	EL1	EL1	Elevator Stick, Delay
7	EL2	EL2	EL2	EL2	EL2	Elevator Stick, Delay, D/R, EXP/VTR
8	EL3	EL3	EL3	EL3	EL3	Elevator Stick, Delay, D/R, EXP/VTR, EPA, Offset, Trim
9	RU1	RU1	RU1	RU1	RU1	Rudder Stick, Delay
10	RU2	RU2	RU2	RU2	RU2	Rudder Stick, Delay, D/R, EXPO/VTR
11	RU3	RU3	RU3	RU3	RU3	Rudder Stick, Delay, D/R, EXPO/VTR, EPA, Offset, Trim
12	GE	GE	GE	GE	GE	Gear Switch, Delay
13	FL1	-	-	FL1	FL1	Flap, Delay
14	FL3	-	-	FL3	FL3	Flap, Delay, EPA, Flap Trimmer
15	SP	SP	SP	-	SP	Spoiler, Delay
16	AX	AX	-	-	-	Aux, Delay

TH3 - with Twin Throttle, outputs the LEFT throttle function.
AI3 - with Fun Fly and Spoiron, outputs the LEFT aileron function.
EL3 - with Funb-Fly and Ailvator, outputs the LEFT elevator function.

The variables used in determining the amount of MASTER signal that will be used to drive the SLAVE channel is selectable as per the above chart. To drive a mix where ONLY the throttle stick movement and throttle delay settings affect the slave channel, select **TH1** as master. To drive a mixx that ALSO takes into account the TH-Curves, trim lever positions, and Idle-Up position, select **TH3** as master.

Appendix "D" – C-MIX SLAVE Channel Selection Options

Aircraft Type > Selection Order	Normal	Fun Fly	Fun Fly Twin Throttle	Twin Throttle	Twin Gear	Twin Throttle Twin Gear	Ailvator	Channel/Operation Affected
1	TH	TH	LT	LT	TH	LT	TH	Throttle **or Left Throttle**
2	AI1	LA1	LA1	AI1	AI1	AI1	AI1	Ailerons **or Left Aileron**
3	AI2	AI2	AI2	AI2	AI2	AI2	AI2	Aileron, D/R, EXP/VTR, EPA, Diff, Offset, Trim
4	EL1	LE1	LE1	EL1	EL1	EL1	EL1	Elevator **or Left Elevator**
5	EL2	EL2	EL2	EL2	EL2	EL2	EL2	Elevator, D/R, EXP/VTR, EPA, Offset, Trim
6	RU1	RU1	RU1	RU1	RU1	RU1	RU1	Rudder
7	RU2	RU2	RU2	RU2	RU2	RU2	RU2	Rudder, D/R, EXP/VTR, EPA, Offset, Trim
8	GE	GE	GE	GE	LG	LG	GE	Gear **or Left Gear**
9	FL	-	-	FL	FL	FL	FL	Flaps
10	SP	-	-	SP	SP	-	SP	Spoiler
11	AX	AX	-	-	-	-	-	Auxiliary
12	-	RA1	RA1	-	-	-	-	Right Aileron
13	RE1	RE1	-	-	-	-	RE1	Right Elevator
14	-	-	-	-	RG	RG	-	Right Gear
15	-	-	RT	RT	-	RT	-	Right Throttle

AI1 for Spoiron will be input into BOTH left and right Aileron.

AI2 for Fun Fly & Spoiron will be input into BOTH left and right Aileron.

EL2 for Fun Fly & Ailvator will be input into BOTH left and right Elevator.

The SLAVE channel affected by Master input is selectable as per the above chart. To use a mix where ONLY the LEFT aileron is affected by the Master channel, select AI1 as slave. To use a mix where ONLY the RIGHT aileron is affected by the Master channel, select RA1 as slave. To use a mix where BOTH ailerons are affected by the Master channel, select AI2 as slave. (When using a configuration with dual channels assigned for ailerons).

Appendix "E" Procedure for Lithium Battery Replacement in 50 Model Memory Card When a FEATURE Card is Installed in the Transmitter.

1. Turn TX Display "ON" with the Feature card inserted.
2. Remove Feature Card with the Display Screen "ON".
3. Insert the 50 Model Memory Card into the TX.
4. Turn the Display "OFF".
5. Hold down the "EDIT" key and turn the Display "ON", and then release the "EDIT" Key.
6. The Display will indicate: Initialize all data ? or Restart S-Aero-A (Heli or Glider). Now push the "YES?+" key.
7. The Display will indicate: "All LOAD ?" Push the "YES/+" key to load data into TX.
8. The Display will indicate: "Load Complete, all save ? Yes". DO NOT TURN OFF THE DISPLAY, and do not Push ANY keys!
9. Remove the 50 Model Memory Card and Change the Lithium battery following the instructions on page 3 and 4 of the 50 Model Memory Card Manual. Reinsert the card.
10. Now push the "YES/+" key to save all data back on to the 50 Model Memory Card. The display will indicate: " ALL SAVE COMPLETED".
11. After you save the Data, remove the 50 Model Memory Card that now has the data reloaded into the Card, and turn "OFF" the Display.
12. Insert the Feature Card, turn "ON" the Display and push the "YES/+" key to initialize the Feature Card.
13. Use the "EDIT" key to select "CARD" from the menu and push the "YES/+" key. Move the cursor to "LOAD", then insert the 50 Model Memory Card and push the "YES/+" key. Now follow the steps on page 9 of the 50 Model Memory Card Manual to load your models into the TX. You can now remove the 50 Model Memory Card, and reinsert your Feature Card, and turn the Display "OFF".

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