

PRE-FLIGHT INSTRUCTIONS

1. Be certain that the receiver battery pack has been fully charged. Refer to directions given in the Battery Charging Section of this Instruction Manual.
2. Check to make sure the receiver antenna connector is plugged in.
3. Make certain that all surfaces or controls operate in the proper direction as related to the transmitter controls. A GREAT NUMBER OF MODELS HAVE BEEN CRASHED BECAUSE OF REVERSED CONTROLS.
4. Move each of the trim levers to make certain that they are giving the necessary slight additional deflection in the moving surfaces.
5. Make certain your frequency is clear (Refer to Section 2 of this Instruction Manual).
6. Complete an "antenna off" ground range check in order to gain a relative indication of the airborne range of your model. ("Antenna off" range means the range obtained with the antenna retracted and disengaged in a KPT7C MKIII or KPT7CS MKIII transmitter.) This must be performed in an open area, clear of all obstructions, power lines, metal fences, buildings, etc. Remember to "clear" your frequency before turning on your transmitter. (Refer to Section 2 of this Instruction Manual.)
7. Retract the transmitter antenna; switch on the transmitter and then the receiver. Activate an easily visible control surface (such as the rudder of your model) while you slowly back away from your model. As you back away there may be spots where the control response is somewhat intermittent. This may happen well before maximum "antenna off" range is attained. This is normal and should not be considered as a sign of equipment malfunction. *Be certain, however, that the "antenna off" range exceeds 8 feet if your System is on the 27 MHz frequencies; 25 feet if on the 72 MHz frequencies; 15 feet if on the 53 MHz AM frequencies, and 25 feet on 53 MHz FM.* You should easily achieve the above minimums, if not, do not attempt to operate the model. Recheck the entire installation with particular attention to the airborne wiring and receiver antenna installation. REMEMBER, DO NOT OPERATE THE MODEL UNLESS THE MINIMUM RANGE HAS BEEN OBTAINED.
8. Repeat the "antenna off" test with the engine of the model running through its entire speed range. IT IS IMPERATIVE THAT YOU HAVE ASSISTANCE IN HOLDING THE MODEL WHILE THIS TEST IS BEING MADE. If during the test, the "antenna off" range materially decreases, some part of your model's mechanical system may be causing and creating excessive electrical noise. This may be the result of loose engine mounts, out of balance propellers, etc., creating so much vibration that even the high vibration resistance of the System may be exceeded. Vibration must be kept to a minimum for long System life. Keep in mind that vibration is an enemy of your radio control airborne system and that the safe and long life of your System depends upon minimizing vibration.

WARNING: IF ANY OF THE ABOVE DESCRIBED TESTS DO NOT MEET THE STANDARDS STATED, DO NOT ATTEMPT FLIGHT. DO NOT TAKE ANY CHANCES IF YOU ARE IN DOUBT. ATTEMPTING TO FLY A MODEL WHICH HAS NOT BEEN THOROUGHLY PRE-FLIGHT TESTED MAY RESULT IN AN ACCIDENT CAUSING SERIOUS PHYSICAL INJURY TO YOURSELF AND TO OTHERS AS WELL AS CAUSING SERIOUS PROPERTY DAMAGE.

FIRST FLIGHT

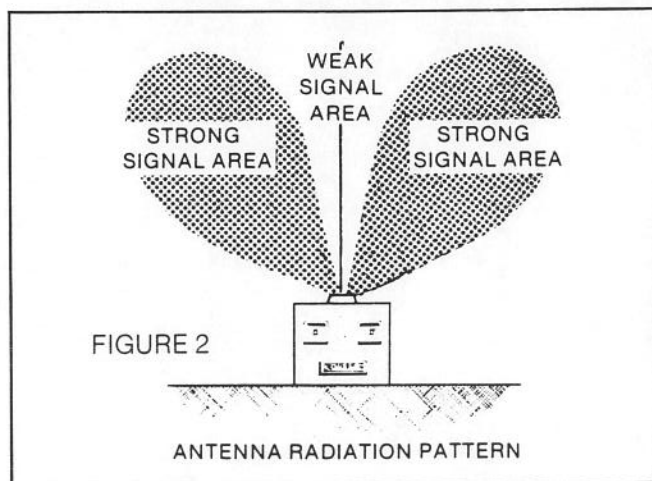
IF YOU HAVE NOT FLOWN A RADIO CONTROLLED MODEL AIRPLANE PREVIOUSLY, ALLOW AN EXPERIENCED, COMPETENT FLYER TO CHECK OUT YOUR AIRCRAFT AND ASSIST YOU.

1. The first flight of a radio controlled model aircraft is usually the most crucial flight. At this point, you should have carefully pre-flight checked the system. Now take the time to make trim adjustments in the air for proper flight. This is

usually referred to as "trimming out" the aircraft.

Most flying clubs have experienced and competent members who can assist in the proper first flight of the aircraft and who are willing to give you the instruction and help necessary to make your entry into R/C flying as trouble-free as possible. It is not difficult to learn the basics of flying but each individual learns at a different pace and it must be remembered that even slow-moving models can demand quick decisions that only experience can provide. The names and addresses of local club members may be obtained at your dealer or from the Academy of Model Aeronautics, 815 Fifteenth Street, N.W., Washington, D.C. 20005.

2. Once again, review Sections 2 and 3 of this Manual.
3. Be certain that the transmitter antenna has been fully extended.
4. Note that the transmitter antenna radiation pattern from the tip of the antenna is very low. FOR THIS REASON DO NOT POINT THE ANTENNA DIRECTLY TOWARD THE AIRCRAFT



DURING FLIGHT. (Figure 2)

5. After each flight, turn off the airborne system and then the transmitter.
6. Collapse the antenna to minimize interference should your transmitter be accidentally left turned on.
7. If the control surfaces (elevator, ailerons, etc.) have been adjusted in flight by use of the trim levers on the transmitter, the control surfaces should be adjusted so that these levers are returned to their neutral position before the next flight.

PRIOR TO EACH SUCCESSIVE FLIGHT

Before each operation or flight of your model you must minimally do the following to insure safe operation of your model:

1. Make certain that your batteries are adequately charged for the next flight.
2. Visually inspect all aspects of your model; in the case of an aircraft, start with the propeller and move to the rudder. Is anything loose? Is everything in alignment?
3. Inspect all moving surfaces carefully to make certain that they are secure.
4. Make certain that you have properly fueled your model.
5. Make certain that you have "cleared" your frequency.
6. Turn on your transmitter and then your airborne unit and move through all functions of your transmitter making certain that all surfaces operate correctly. In other words, check to see that "right movement" of the aileron control stick means "right aileron up," when standing behind the model, and that pulling back on the elevator stick moves the elevators on the aircraft "up," etc.

7. Start your engine and repeat a thorough check-out of all moving surfaces at different speeds of the engine (IT IS IMPERATIVE THAT YOU HAVE ASSISTANCE IN *HOLDING THE MODEL* WHILE THESE TESTS ARE BEING MADE).
8. Perform all other tests recommended by the model kit or engine manufacturer.
9. Extend the antenna completely.

It is a wise precaution to inspect the airborne system after three or four flights, and certainly at the end of your flying session, in order to make certain that all aspects of your airborne installation are in proper working order.

SECTION 7

When You Need Repairs

Please follow these instructions for returning equipment to the factory or to one of the Authorized Service Centers for repair.

1. Write a brief, thorough explanation of difficulties encountered and service required. Enclose the letter and the inspection sheet that was packed with your system in an envelope. Tape the envelope to the back of your transmitter. Although we are at your service to discuss problems by telephone, a written description must always be included with equipment returned for repair.
2. Except for problems confined to individual servos, return the *complete system* even if you suspect only one part is at fault.
3. When returning servos, battery packs, etc., without the transmitter, *please include the serial number of your set in your letter to enable us to determine if your equipment is under warranty.*
4. Completely separate the system from your installation. Do not send the receiver taped in foam, servos mounted on trays, etc.
5. If connecting plugs have been changed or other modifications made which interfere with factory check procedures, such changes will be returned to factory standards at your expense.
6. Fully charge batteries prior to shipment. This not only expedites repair but also provides our technicians with a good check on the condition of your battery packs. Indicate the date you charged the batteries in your letter.
7. Disconnect the receiver battery pack and be sure the transmitter switch is in the "off" position.
8. Carefully pack all components individually with sufficient packing material to avoid shipping damage. It is a good idea to save the original component boxes and foam packing material to return equipment for repair. As an alternate packing method, all components must be individually wrapped in shock absorbent material and packed in a manner that prevents movement in the box.
9. Be sure to include your full return address and zip code inside box as well as outside.
10. INCLUDE A PACKING LIST OF ALL ITEMS RETURNED AND MAKE SURE THEY MATCH THE LIST.
11. Insure the package. You are responsible if the package is lost or damaged.
12. We recommend using United Parcel Service whenever possible to send your equipment to us or to our Authorized Service Centers.
13. IF YOU ARE RETURNING A REPAIR TO THE FACTORY FROM A COUNTRY OUTSIDE THE UNITED STATES, PLEASE BE SURE TO READ THE SEPARATE INSTRUCTIONS INCLUDED WITH THE UNIT.

SECTION 8

Components and Accessories

NOTICE

THE FOLLOWING SPECIAL SECTIONS ARE DEVOTED TO THE VARIOUS KRAFT SYSTEM COMPONENTS. BE CERTAIN TO READ ALL OF THE MATERIAL ON YOUR SYSTEM AND ALL THE SECTIONS (1 THROUGH 8) PERTAINING TO ALL KRAFT SYSTEMS AND COMPONENTS, AS WELL AS THE SEPARATE FUNDAMENTALS AND GUIDELINES FOR INSTALLATION OF YOUR KRAFT SYSTEM.

TRANSMITTERS

All KP7C MKIII and KP7CS MKIII transmitters are formed from heavy gauge vinyl clad aluminum. They incorporate rechargeable 9.6 volt, 550 MAH high rate battery packs, plug-in Radio Frequency (R.F.) modules, plug-in modular encoders, and open gimbal stick assemblies. The KP7C MKIII and the KP7CS MKIII feature a triple use meter that reads R.F. and also transmitter and receiver battery voltage. (See FIGURES 3 and 4.) The battery voltage check meter is explained on page 11.

The Trainer system is standard on the KP7C MKIII and the KP7CS MKIII transmitter. (See page 11.)

When you switch on the transmitter, you will note a movement of the meter indicating that a Radio Frequency (R.F.) is being transmitted. (Note: On a KP7C MKIII or KP7CS MKIII, the R.F. METER IS TO THE RIGHT OF THE DUAL METER.) The R.F. indicator meter provides a relative indication of the transmitter output. IT DOES NOT, HOWEVER, GIVE AN ACCURATE INDICATION AND IS NOT A BASIS FOR COMPARING PERFORMANCE BETWEEN TRANSMITTERS. You should note where the R.F. needle moves AFTER the transmitter battery pack has been completely charged and the antenna fully extended. This reading will be generally changes substantially in the future, it may indicate a drop-off in performance and should be checked by the factory or an authorized repair station.

DUAL RATE INSTRUCTIONS

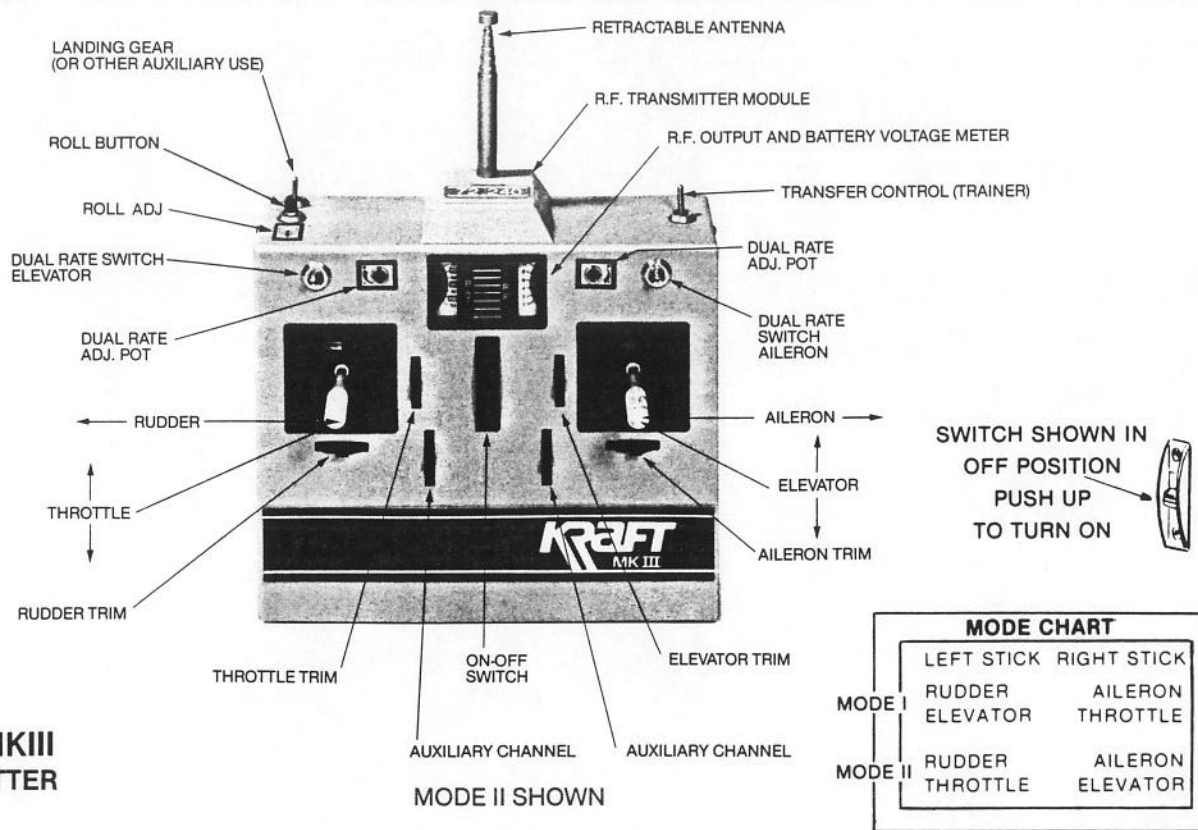
Your Kraft KP7C MKIII and KP7CS MKIII transmitter is built with two dual rate switches installed, one for elevator and one for aileron. Dual rate allows you to reduce the servo travel of selected channels from the transmitter. Located near the dual rate switch is a small access hole which is provided for adjusting the amount of rate reduction in the "low" rate position.

On the KP7C MKIII, when the switch is in the UP position, it selects "full" or normal servo travel. In the DOWN position, the switch selects the variable reduced rate. The amount of reduction is determined by the adjustment potentiometer behind the small access hole near the switch. Use a small screwdriver when adjusting and be careful not to apply a tremendous amount of pressure to the adjustment screw. It should turn easily. The small dot indicates the direction of minimum dual rate adjustment.

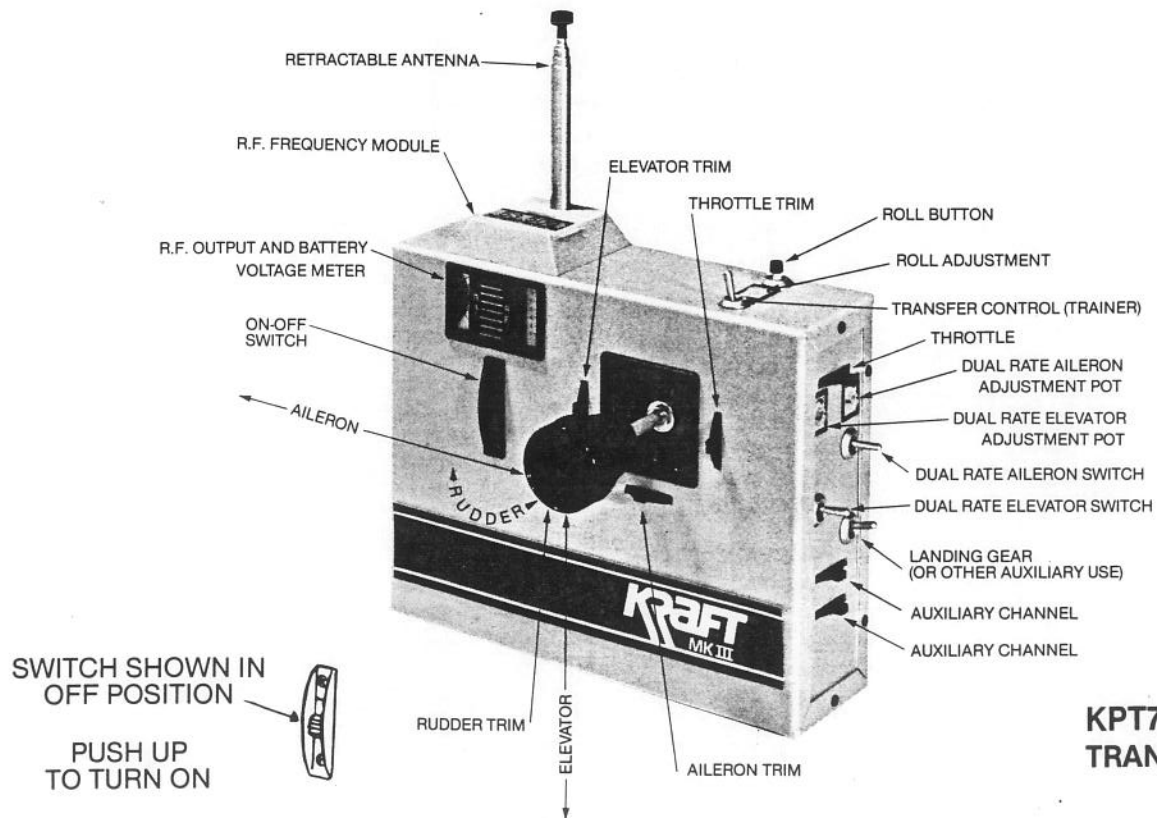
The KP7CS MKIII dual rate switches and adjustments are similar to the KP7C MKIII except that the switches operate back and forth rather than up and down.

To set the dual rate, turn on the entire system; transmitter, receiver and servos. Set the dual rate switches to full UP position. Operate the dual rate channel to be adjusted over its full control stick deflection and observe the corresponding servo movement.

Now switch the dual rate to the DOWN position and operate the same control. You should see less servo travel than before for the same control movement. If not, check to see that you operated the correct switch. Otherwise, the adjustment may be set to full travel (no travel reduction). Assuming this is the case, insert a small screwdriver into the adjustment hole next to the switch and rotate the control counterclockwise in the direction of the small dot until, with the control stick held to full deflection, some servo movement is seen from full travel. Continued rotation will cause servo travel to be reduced as much as 50%.



**KPT7C MKIII
TRANSMITTER**
FIGURE 3



**KPT7CS MKIII
TRANSMITTER**
FIGURE 4

Operating the dual rate switch to UP position now will return servo travel to its normal full movement.

You may set the reduced travel adjustment anywhere within its range, and when the dual rate switch is set to its reduced (or DOWN) position, servo travel on that channel is reduced to the preset amount.

Be certain that you pay careful attention to the position of rate switches, especially during take-off and landing. Improper or unexpected rate switch settings could prevent sufficient control, resulting in a crash and/or injury to yourself or others.

ROLL BUTTON INSTRUCTIONS

The roll button may be adjusted in a manner similar to dual rate. Depress the button while the system is energized and adjust the potentiometer located next to the roll button to provide the correct amount of aileron throw in the roll direction you desire. This potentiometer may be adjusted to provide either a left or right roll when the button is depressed.

SERVO REVERSING INSTRUCTIONS

The KPT7C MKIII and KPT7CS MKIII transmitters feature internal servo reversing switches. The reversing switches make it possible to select the direction of movement of the primary transmitter control function: Aileron, Elevator, Rudder, and Throttle. Consequently, servo installation is greatly simplified and the direction of the servo rotation becomes unimportant, eliminating the need for selection and multiple servo spares.

To perform servo reversing, check to insure that the transmitter is OFF, then remove the four black sheet metal screws from the back of the transmitter. Slide the transmitter back to the rear and put it aside. Locate the servo reversing switches on the encoder printed circuit assembly, (Figure 4A). A diagram on the inside of the transmitter back identifies each switch by its function. Using a non-metallic tool such as a tuning wand, move the switch in such a direction to obtain the desired reversal. You may want to energize the system to check your servo throws, but insure that you de-energize the transmitter prior to making any reversal adjustments. Following adjustments, replace the transmitter back in the same way it was removed, being careful to position it so that the foam tape on the transmitter back is closest to the bottom of the transmitter. The foam tape prevents the encoder plugs from working loose.

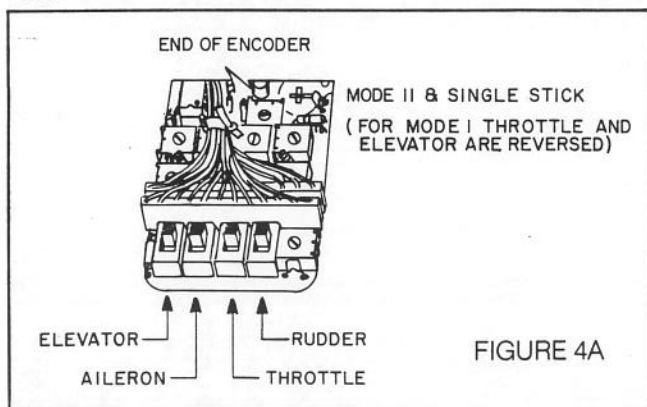


FIGURE 4A

RETRACTABLE ANTENNA

IT IS VERY IMPORTANT TO BE CERTAIN THAT THE ANTENNA IS ENGAGED AND FULLY EXTENDED BEFORE FLYING, otherwise R.F. radiation will be severely reduced and loss of control may result. To engage the antenna, pull the body of the antenna outward and turn the main section in a counterclockwise direction until firm pressure is felt against the treads. DO NOT OVERTIGHTEN THE ANTENNA. When the antenna is retracted into the case, it is completely disconnected and R.F. radiation is very low. This eliminates possible interference with other radio control systems, should the switch be left on accidentally.

STICK LENGTH ADJUSTMENT

(KPT7C MKIII only)

To adjust the stick length, simply loosen the 4-40 Allen head set screw on the bottom side of the stick tip, set the desired length, then tighten the set screw. The stick can be adjusted a total of 13/32".

TRANSMITTER RADIO FREQUENCY MODULES

Enhanced flexibility is present in all KP7C MKIII and KP7CS MKIII transmitters as they use changeable radio frequency (R.F.) modules. The modules allow you to change the operating frequency of your transmitter with ease.

NOTE: FM MODULES CAN ONLY BE INSTALLED IN KPT7C MKIII, KPT7CS MKIII, OR SIGNATURE SERIES '76 OR LATER.

CAUTION: IT IS CRUCIAL THAT THE RECEIVER BE ON THE SAME FREQUENCY THAT THE TRANSMITTER IS ON. FOR EX-

CHANGING TRANSMITTER R.F. MODULES

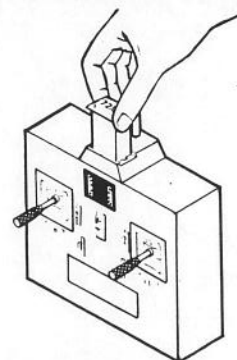


FIGURE 5

AMPLE, IF THE TRANSMITTER MODULE IS OPERATING ON 72.240 MHZ, THE RECEIVER MUST ALSO BE ON 72.240 MHZ.

FAILURE TO OBSERVE THIS CAUTION COULD RESULT IN SOMEONE ELSE CONTROLLING YOUR MODEL AND YOU HAVING NO CONTROL OVER IT. SERIOUS PHYSICAL HARM TO YOURSELF, TO OTHERS, OR PROPERTY DAMAGE MAY RESULT. DOUBLE CHECK AGAIN TO BE CERTAIN THAT THE TRANSMITTER AND RECEIVER FREQUENCY MODULES ARE THE SAME AND THAT THE MODULES ARE INSTALLED CORRECTLY.

CHANGING TRANSMITTER R.F. MODULES

1. Pull the R.F. module out of the antenna post assembly by using thumb and index fingers (Fig. 5).
2. Insert new module and press down firmly making sure it is seated properly in its housing, i.e., no gap between the module flange and the housing.
3. Change transmitter frequency flags to new operating frequency.
4. Make sure the receiver is on the same operating frequency.

RECEIVERS

The KPR7C and KPR7S receivers employ low current drain I.C. decoders. The KPR7C also uses a solid state crystal filter I.F. front end which provides selectivity for rejection of strong adjacent channel interference.

The KPR8D is a very advanced dual conversion receiver. By eliminating the image response common to all single conversion receivers, it may perform reliably in some area where other receivers may not.

The KPR7F FM receiver is designed to be used with the FM transmitter R.F. modules. It employs newly developed integrated circuitry in the R.F. section to provide greater sensitivity and noise rejection.

RECEIVER BLOCK PLUGS

The block plug diagrams (Fig. 6, 7, 8, and 9) show the approximate position on the plug for each channel.

FIGURE 6

KPR-7C

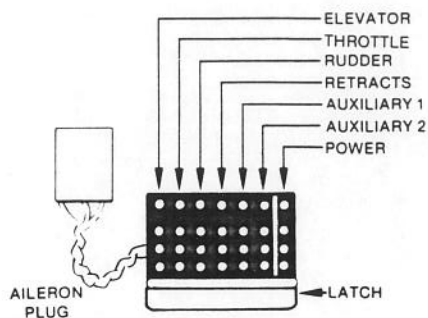
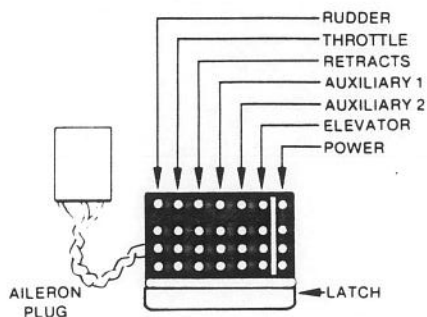


FIGURE 7

KPR-7FM

MODE II
(FOR MODE I THROTTLE AND
ELEVATOR ARE REVERSED)



KPR-7S

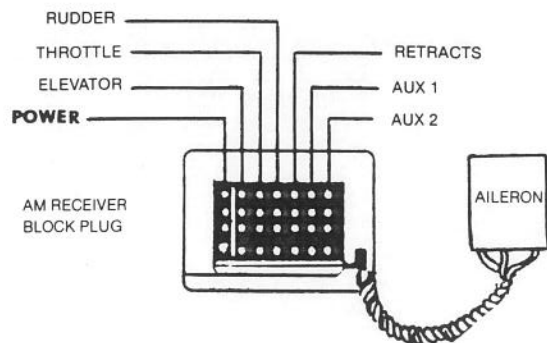
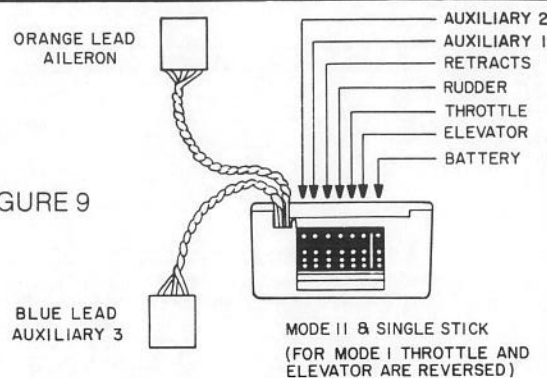


FIGURE 8

FIGURE 9



CHANGING RECEIVER R.F. MODULES

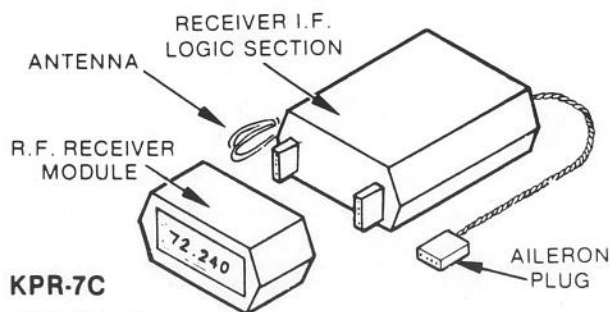
(KPR-7C only)

Enhanced flexibility is present in the KPR-7C receiver as it uses changeable radio frequency (R.F.) modules. The modules allow you to change the operating frequency of your receiver with ease.

IT IS CRUCIAL THAT THE SAME FREQUENCY MODULE BE PLACED IN THE RECEIVER AS IS IN THE TRANSMITTER; FOR EXAMPLE, IF THE TRANSMITTER MODULE IS OPERATING ON 72.240 MHZ, THE RECEIVER MODULE MUST ALSO BE ON 72.240 MHZ.

FAILURE TO OBSERVE THIS CAUTION COULD RESULT IN SOMEONE ELSE CONTROLLING YOUR MODEL AND YOU HAVING NO CONTROL OVER IT. SERIOUS PHYSICAL HARM TO YOURSELF, TO OTHERS OR PROPERTY DAMAGE MAY RESULT. DOUBLE CHECK AGAIN TO BE CERTAIN THAT THE TRANSMITTER AND RECEIVER FREQUENCY MODULES ARE THE SAME AND THAT THE MODULES ARE INSTALLED CORRECTLY.

1. Be sure that there is no power going into the receiver. The switch should be OFF or the receiver disconnected from the battery pack.
2. Gently pull the R.F. module off the receiver and then plug another module on (Fig. 10).



KPR-7C

FIGURE 10

3. The module should be seated firmly on the receiver with no gap between the module and the receiver case.
4. Check and be sure the transmitter is on the same operating frequency as the module you have just installed on the receiver.

Figure 11 shows a typical receiver hook-up.

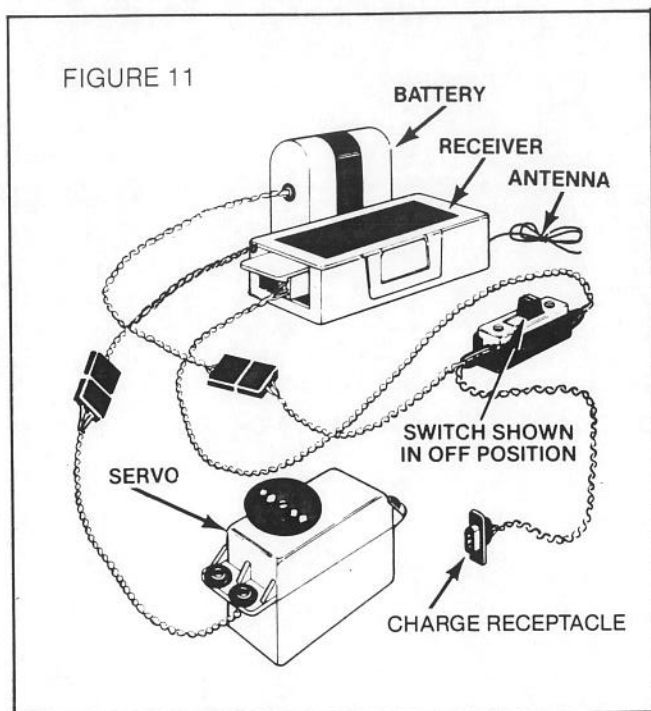
SERVOs

All servos use an integrated circuit amplifier that incorporates a bridge type output.

For greater installation flexibility, the KP7C MKIII and KPT7CS MKIII transmitters feature reversing switches to make it possible

to select the direction of movement of the primary transmitter control functions. Therefore, all Mark III systems are supplied with servos that rotate in the same direction.

FIGURE 11



SERVO CENTERING INSTRUCTIONS

(KPS-11 and KPS-12 servos only)

The KPS-11 and KPS-12 servo mechanics feature a centering device which permits the neutral to be adjusted with the unit fully assembled. The centering shaft can be seen inside the output shaft. **IT IS VERY IMPORTANT THAT THIS CENTERING SHAFT NOT BE MOVED WHEN INSTALLING OUTPUT ARMS AND WHEELS.** If the servo shifts neutral due to over tightening or improper threading, it will be necessary to recenter the servo as follows:

Turn the transmitter and receiver on being sure the transmitter trims are at center position, plug the servo into a neutralizing channel, such as elevator, and remove the output wheel or arm from the servo output to be recentered. With a small screwdriver, carefully turn the centering shaft until the servo is again properly centered. The output wheel or arm may now be replaced.

RECEIVER BATTERY PACKS

All receiver battery packs employ high rate heavy-duty cells. The capacity of these batteries is as follows:

KB-4E	550 MAH
KB-4S	450 MAH
KB-4M	450 MAH
KB-4F	1000 MAH
KB-4L	225 MAH

After the initial charge, subsequent charge time should be *one hour* with the charger set in the "HI" position, then switch the charger to the "LO" position for 8 more hours. If the batteries have been taken off charge for two or three days prior to a flying session, they should be charged for a period of *one hour in the "HI" position*, immediately prior to use. This will insure that the batteries are kept in peak condition. When in doubt, return to the initial 4 hour charge time.

NOTE: If the system was supplied with a KB-4L 225 MAH battery pack, it should only be charged in the "LO" position for a period

not to exceed four hours. Otherwise the battery pack cells could be permanently damaged.

SWITCH HARNESS AND CHARGE RECEPTACLE

The switch harness uses a double-pole double throw, positive locking slide switch wired to Kraft connectors and charge receptacle. The switch is in the OFF position when moved to the side where the connector goes to the receiver (Fig. 11).

BATTERY VOLTAGE CHECK METER

The transmitter battery voltage is automatically indicated every time the transmitter switch is turned on.

To check receiver battery voltage, proceed as follows:

1. Be sure both transmitter and receiver switches are in the OFF position.
2. Insert unmarked plug of battery test cable (P/N 200-134) into switch harness charge receptacle. (Fig. 12)
3. Insert other end of battery test cable (identified by a short length of heat shrink tubing near the plug) into the transmitter receptacle located on the left hand corner of the transmitter bottom.
4. Receiver battery voltage is automatically indicated on the lower voltage scale of the transmitter meter.

NOTE: Battery voltage checking of both the transmitter and receiver are accomplished under designed in load. *Normal operating voltages* are 9.6 volts for the transmitter battery and 4.8 volts for the receiver. If voltage readings are lower than the normal operating voltage readings, do not use the system to operate a model.

WARNING: OPERATING THE SYSTEM WITH THE BATTERIES NOT FULLY CHARGED MAY RESULT IN THE MODEL BECOMING UNREASONABLY DANGEROUS TO FLY OR OPERATE AND THEREBY, THE MODEL MAY GO OUT OF CONTROL CAUSING POTENTIAL PERSONAL INJURY TO YOURSELF OR OTHERS, OR PROPERTY DAMAGE.

TRAINER SYSTEM

For trainer operation, transmitters need not be on the same frequency and may have 5 to 7 channels. Mode I is compatible only with another Mode 1 transmitter. Mode II is compatible with Mode II and also with single stick transmitters.

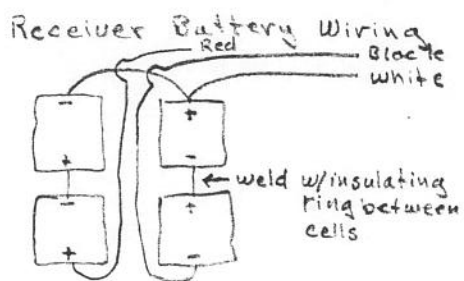
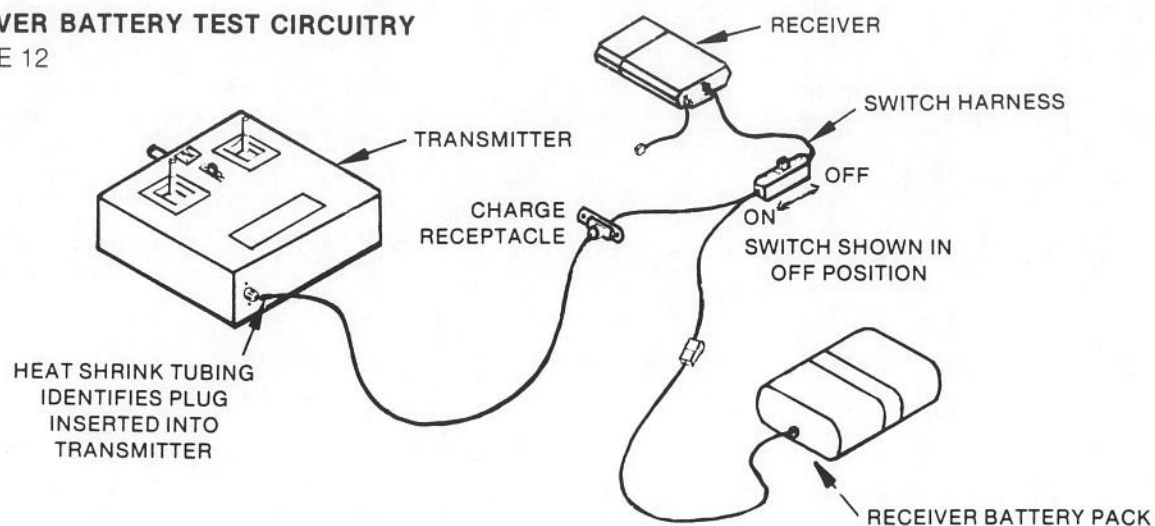
The receiver in the aircraft to be flown must be matched to the master or instructor's transmitter. The transmitter interconnect cable determines which transmitter is to be used as the master. The end of the interconnect cable marked with the black ring is plugged into the slave or student transmitter. Remove or retract and disengage the antenna on the slave transmitter. Both transmitters must be switched ON. When the master transmitter control toggle switch is held toward the front of the transmitter case, it transfers control to the slave transmitter. Releasing the toggle switch transfers control back to the master transmitter.

In flight, the aircraft should be trimmed for its neutral performance with the master transmitter. The trims on the slave transmitter should then be matched to the master transmitter to prevent the student from having to contend with an "out of trim" aircraft.

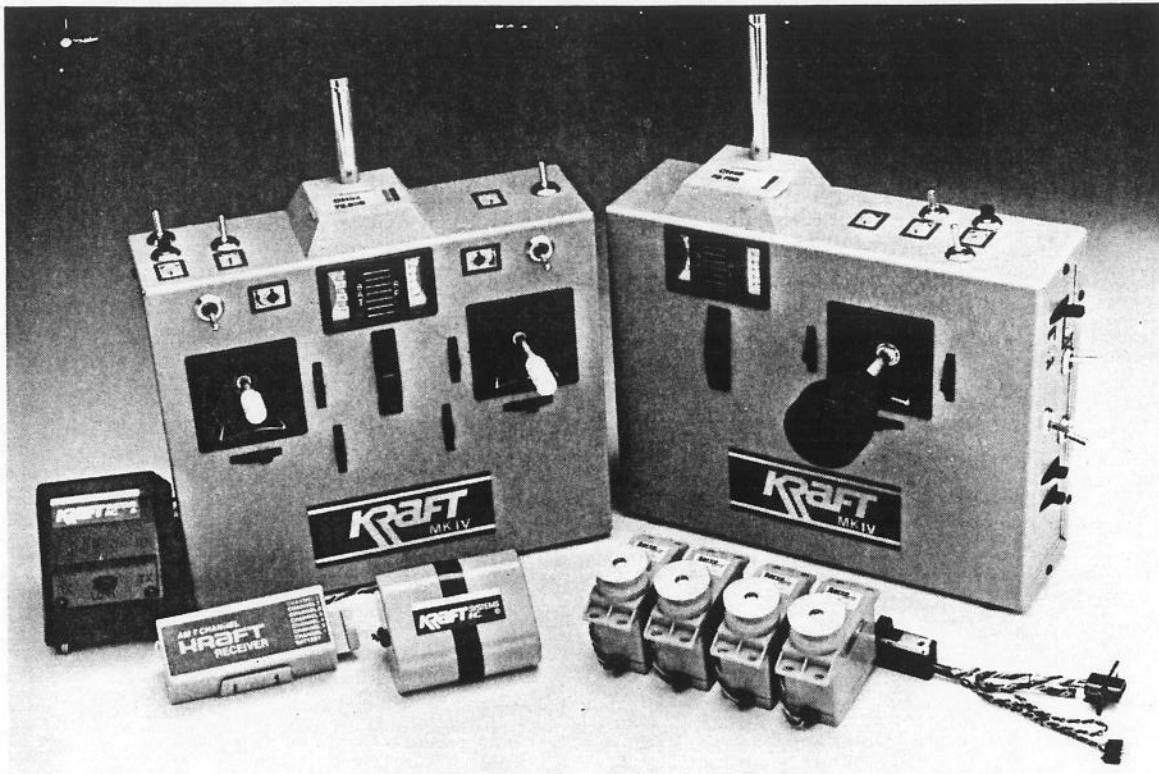
IT IS IMPERATIVE THAT ONLY AN EXPERIENCED PILOT HELP WITH THE TRAINING OF THE STUDENT ON A SLAVE TRANSMITTER.

The trainer transmitter interconnect cable is available from your dealer or the factory. (P/N 200-030).

RECEIVER BATTERY TEST CIRCUITRY
FIGURE 12



Batteries
Sanyo 1.2V
550mA
Quick chargeable
@ 180mA
Size Dia 7/8"
Length 1"



Rudder-Aileron Coupler

Your KPT-7C MKIV transmitter is built with a coupler circuit that will couple the rudder servo action to the aileron control stick action. The amount of rudder-aileron coupling is controlled by the potentiometer located to the right of the roll button on the top of the transmitter. When rudder-aileron coupling is desired, the switch to the right of the roll button should be positioned towards the front of the transmitter. For initial setup, energize the system and observe the rudder servo while moving the aileron control stick to one extreme or the other. Make sure that the rudder surface moves in the same direction as that commanded for aileron control, i.e., right aileron and right rudder. Insert a small screwdriver into the recess of the rudder coupling pot and rotate the potentiometer in such a direction as to achieve the desired rudder movement on your model. When rudder and aileron are coupled, you obtain coordinated control movement for turns, and you do not need as much rudder control as when used alone. You may have to readjust the coupling control after the initial flight to achieve the desired results.

The rudder stick still has control even when in the coupled mode and you can override the coupling if desired.

Throttle Throw Adjust

The throttle adjust potentiometer, which is located to the left of the Master Trainer Switch, is used to adjust the total throw of the throttle servo. It affects both high and low throttle settings. Energize the system and use the throttle control stick, throttle trim and throttle adjust pot in conjunction with the throttle arm adjustments to obtain the proper high and low throttle throw.