PROGRAMMABLE PUSH BUTTON OPTION

( ) 11G510 PPBI ( ) 11G511 PPBII

Silver Series

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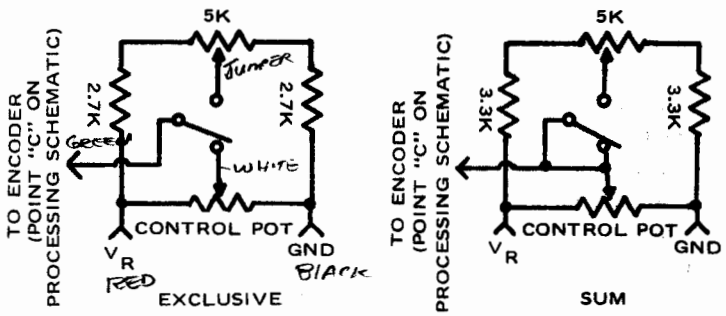
CONSTRUCTION

( ) These instructions are the same for either version of the Programmable Push Button, the "PPBI" version for one channel or the "PPBII" version for two channels. Realize that the "I" version is simply one half of the "II" version; it consists of a PC board that is half the size which contains only one pot instead of two and hooks up to only one channel instead of two.

( ) By reading the circuit description section, determine whether you want to have your PPB wired as "Exclusive" to the stick or the "Sum" of the stick and button. (The PPBII could have both.)

( ) Solder the parts and wires onto the PC board as shown in the overlay drawing. Install 2.7K resistors if you are wiring as "Exclusive" or 3.3K resistors if you are wiring it as the "Sum". Twist the red, black, blue and white wires together to form a four wire cable. (Note--there will be two four wire cables for a PPBII) With a PPBI, you may be furnished either a SPDT push button switch (three terminals) or a DPDT switch (six terminals). It is best to install the pushbutton first. Note the "C", "NO", and "NC" stamped on the side of the switch should correspond to the overlay drawing.



PROGRAMMABLE PUSH BUTTON SCHEMATIC

CIRCUIT

The programmable push button (PPB) impresses a voltage set by an externally accessible 5K pot on any channel input. It can be wired one of two ways. If it is desired that the stick can not affect the programmed servo location, the PPB can be wired in an "Exclusive" manner, so, no matter where the control stick is moved when the button is pushed, it won't affect the servo location. If one wishes to be able to supplement the programmed servo location by moving the stick, it can be wired so the servo location is the "Sum" of both the PPB pot and the control pot.

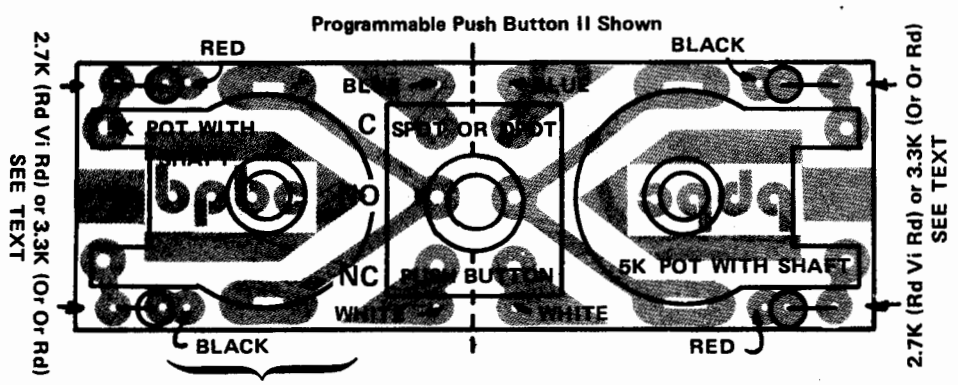
Two formats are available. One that affects only one channel (PPBI) and the other that affects two channels (PPBII) when the button is pushed.

Any channel can be affected except Channel 5, the retract channel.

PARTS LIST

Quantities in [ ] are those included in PPBII.

( )	1		PC Board
( )	1		DPDT or SPDT Push Button with hdw.
( )	1		Chrome Bezel
( )	1	[2]	5K Pot with Shaft
( )	2	[4]	2.7K 1/4W Resistors (red, violet, red)
( )	2	[4]	3.3K 1/4W Resistors (orange, orange, red)
( )	12"	[24"]	Red, Black, White, and Blue Wire
( )	3"		3/32" Heat Shrink Tube
( )	18"		Solder
( )	1		Drill Template
( )	2		Small Nylon Ties



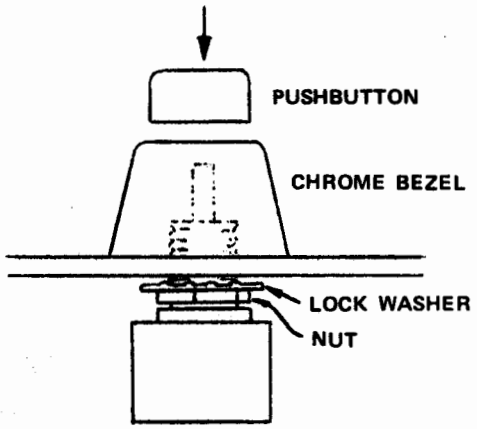
Programmable Push Button I Consists of One Half of PPBII

PROGRAMMABLE PUSH BUTTON OVERLAY

( ) Determine the desired location for the PPB on the transmitter case and, using the enclosed pressure sensitive drill template, center punch for and drill out the appropriate holes. Realize that for a PPBI, you will drill two holes; for a PPBII, you will drill three holes. Remove any burrs and shavings from the transmitter.

( ) Mount the unit in the case using the nut, lockwasher, and chrome bezel furnished--tighten with a pair of pliers, protecting the chrome bezel with a rag or piece of leather. Push the plastic push button onto the smaller actuating shaft coming out of the switch--most of it should go down inside the bezel and only a small portion will be exposed.

( ) Wiring of the PPB is done at the stick control pot.



Tighten bezel with a pliers and rag or leather to protect it.

( ) Remove the four screws that hold the stick which contains the control pot for the channel that you want the button to affect. Pull out the stick so you can get to the pot wires.

( ) Remove the red wire from the pot that comes from the encoder board. Take the insulation sleeving off the wire. Cut the exposed, soldered-to, 1/8" or so of wire off the end of the red wire and strip about 3/16" of the insulation off the wire, exposing new, unsoldered-to wire.

( ) Strip 3/16" of the insulation off the end of the red wire coming from the PPB and twist it together with the red wire you were just working with. Tin the two wires together.

( ) Slip a 1/2" long piece of 3/32" heat shrink tube over the pair of red wires and then solder the pair back to the pot terminal. Slip the heat shrink tube over the connection. (If you are wiring to the control pots for Channel 1, elevator, or Channel 4, throttle, the heat shrink isn't necessary.

( ) Repeat this procedure for the black wire going to the control pot and the black wire coming from the PPB.

( ) How you perform the next step depends on whether you are wiring the PPB for "Exclusive" or "Sum" operation.

( ) If you are wiring the PPB for "Sum" operation, perform the same operation that you did for the red and black wires for the blue wire coming from the PPB and the third color wire coming from the encoder (depending on the channel it will be either brown, orange, yellow, green, purple, or grey.) The white wire remains unused in this application--leave it in the cable in case you want to change the wiring later. (Make sure there is no exposed wire that could inadvertently short out to anything.)

( ) If you are wiring the PPB for "Exclusive" operation, remove the third color wire from the pot (it will be either brown, orange, yellow, green, purple, or grey).

( ) Using insulation sleeving, solder the white wire from the PPB to the unoccupied pot terminal.

( ) Solder the blue wire from the PPB to the third color wire going to the encoder; cover this connection with either heat shrink or insulation sleeving.

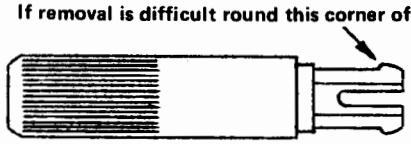
( ) If you are installing a PPBII, now repeat the last few steps for the other four wire cable coming from the PPB, hooking it up to the other channel that you want to be actuated by the PPB.

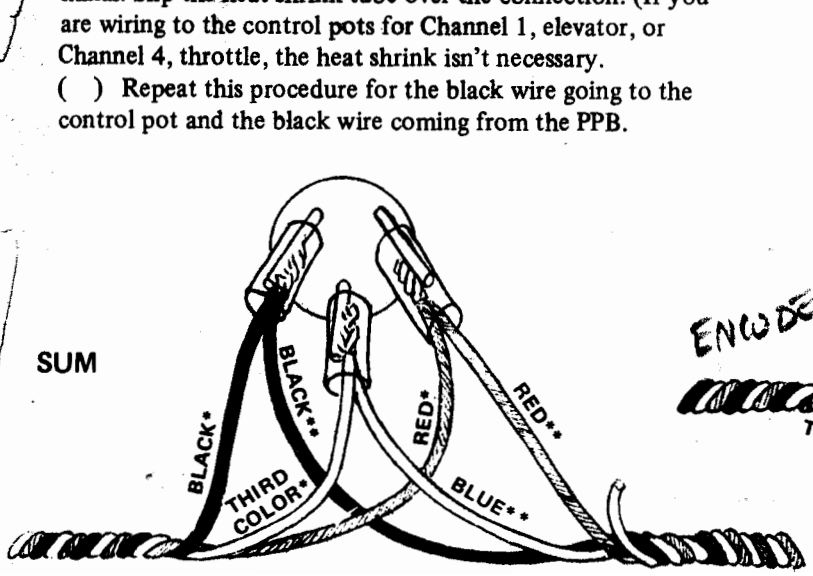
( ) Neaten up all your cabeling; a couple of nylon ties are furnished to help.

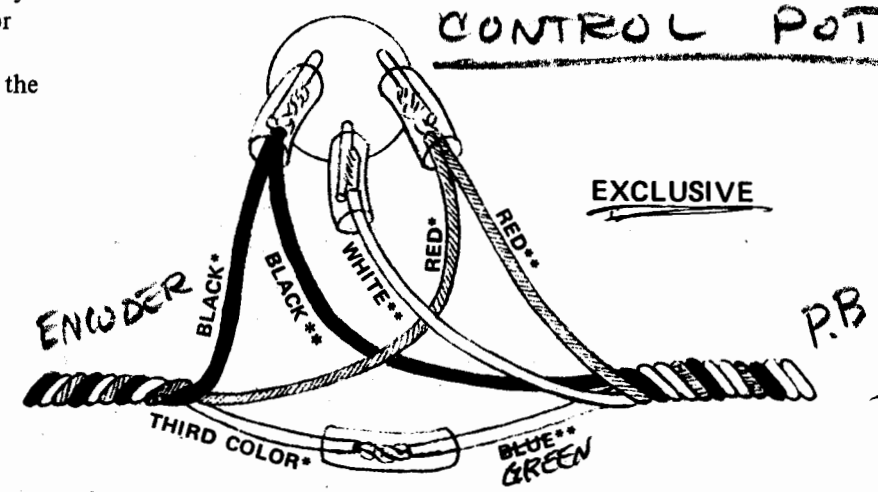
( ) Reinstall the stick (s) in the case.

( ) Your PBB should now be operational. You should be able to adjust the servo position when the push button is depressed over the whole range of travel by turning the pot adjustment shaft which protrudes out of the case. The shaft is removable so that once you have determined the right programming, it can be taken out to prevent anyone tampering with it. Note: If the shaft is too difficult to remove easily, with sandpaper, gently round off the sharp edge on the shaft which holds it in. Also, a bit of lubrication can be applied to the end of the shaft.

If removal is difficult round this corner off.







* = FROM ENCODER

** = FROM PPB