TIMBER HARVESTER

Work Smarter, Not Harder

The Fully Hydraulic Remote Control
Portable Band Sawmill

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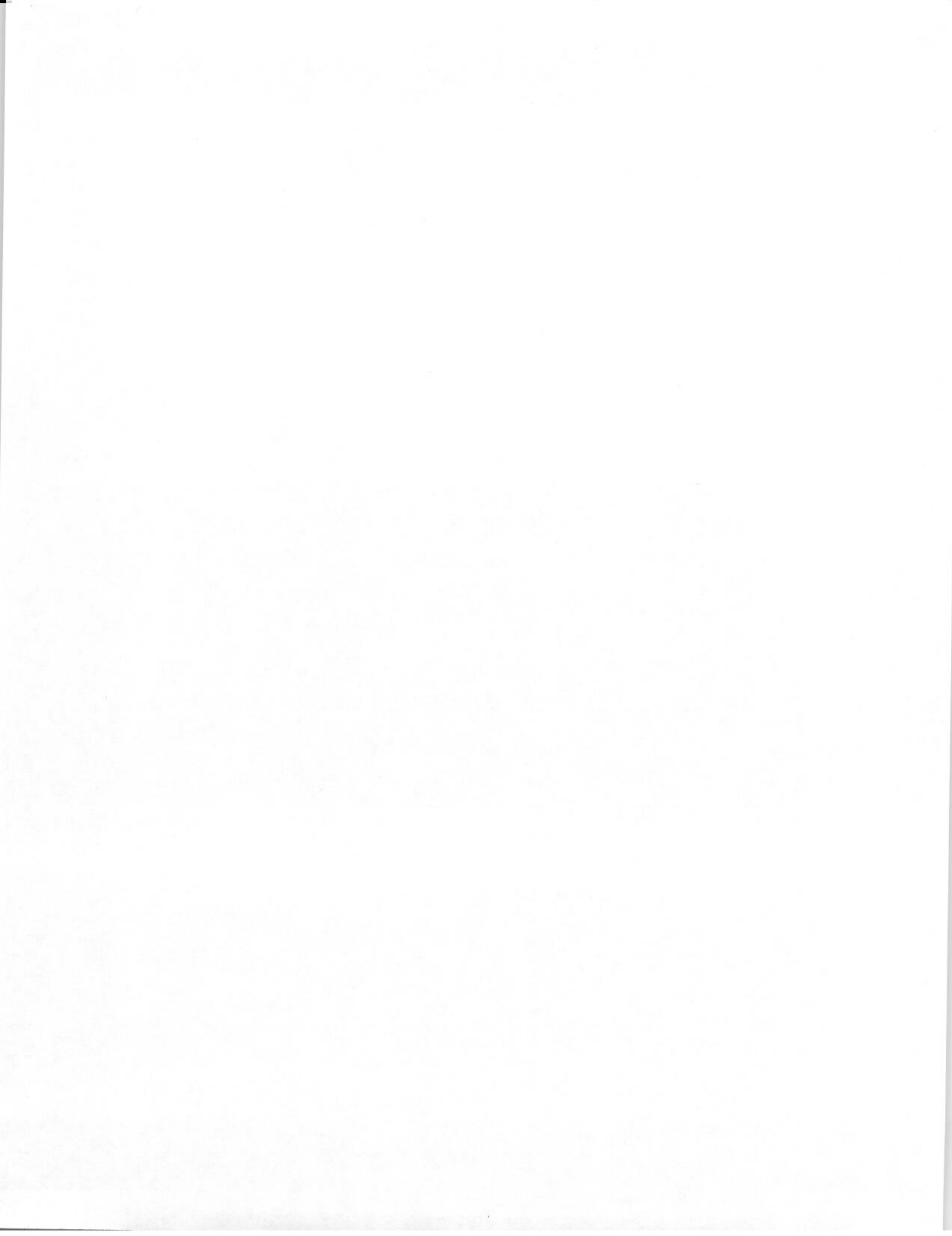
Dear Timber Harvester Smart-Set Owner:

It has come to our attention that a number of our Smart-Set Owners would like more in-depth instructions on the operation of their setworks.

We hope you will find the enclosed upgraded edition more helpful in your understanding and operation of your Timber Harvester Smart-Set.

Thank you for your time, and as always, please feel free to contact us with any other questions you may have.

Very Truly Yours,

Timber Harvester

TIMBER HARVESTER

↑ POWER

D E B A R D K E R →

(1) — POWER

SMART-SETS

1/2" UP **(2)**

| #1 **(3)** | #2 **(4)** | #3 **(5)** | #4 **(6)** |

(16)

THROTTLE FAST **(7)** SLOW

NORMAL **(8)** SHIFT

PROGRAM **(9)** RUN

ADVANCE **(10)**

UP **(11)** DOWN

(12) HOME

SAW OUT **(13)** IN GUIDE

(14) USER

RETURN **(15)**

"WORK SMARTER, NOT HARDER"

SWITCHES

1) Power - Toggle 'Up' turns on power to all non Smart-Set functions (switches # 7,10,11,13,15 & 16). Toggle 'Down' turns off power.

2) 1/2" Up - Push it to raise the blade 1/2" above the last cut.

3-6) #1,#2,#3,#4 - Push them to lower the blade to pre-set Smart-Set settings.

7) Throttle - Toggle 'Fast'- engine speed is at high RPM setting, toggle 'Slow"- speed is at low RPM. *Should Be at Slow Before starting Eng.*

8) Normal Shift -
9) Program Run - Switches 8 and 9 work in conjunction with each other. See the Smart-Set operation for a more detailed description. *#9 should be at Run before starting Eng*

10) Advance - Toggle forward advances the head. It also reads home for the Smart-Set. *should be at off before starting E*

11) Up/Down - Toggle 'Up" raises the blade to the desired height, toggle 'Down" lowers the blade.

12) Home - Push it to manually read home for Smart-Set.

13) Saw Guide - Toggle 'Out', the sawguide runs out, toggle 'In', the sawguide runs in.

14) User - Push it to use one of the two self-programmed settings for the Smart-Set.

15) Return - Push it to return the head.

16) Debarker - Toggle 'Up' activates the debarker, toggle 'Down' de-activates the debarker.

HOME

'Home' is a blade height position read by Smart-Set. Both pre-set and self-program settings run off this reading. 'Home' is read two ways; manually, by pushing the 'Home' button and automatically, by activating the 'Advance' switch. 'Home' position is re-read and changed each time one of these switches is activated, according to blade height changes. 'Home' will not change if blade height is changed while 'Advance' is activated.

For example: the blade height is at 3". The 'Advance' switch is activated. 'Home' is now read at 3". If the blade height is changed now (maybe to 3-1/2"), while 'Advance' is still activated, the 'Home' position will remain at 3". Not until 'Advance' is de-activated (turned off) can 'Home' position be re-read and changed. The 'Home' button will not override the 'Advance' switch.

SMART-SET OPERATION

Switch Settings: Sw #9 - Must be at 'Run" for system to operate.

Pre-set #1: Sw #8 - Toggle at 'Normal'.
Sw #9 - Toggle at 'Run'.

Switch:	#3	#4	#5	#6
Lowers Blade:	4/4	5/4	6/4	8/4

Pre-set #2: Sw #8 - Toggle at 'Shift'.
Sw #9 - Toggle at 'Run'.

Switch:	#3	#4	#5	#6
Lowers Blade:	4/4 & 1/8	5/4 & 1/8	6/4 & 1/8	8/4 & 1/8

(To SET)
Self-Program #1: Sw #8 - Toggle at 'Normal'.
Sw #9 - Toggle at 'Program'.
* (Starts Self-Program #1 setting.)
Sw #11 - Moves blade the desired amount.
Sw #9 - Toggle to 'Run'.
(Ends Self-Program #1 setting.)

(To RUN)
Self-Program #1: Sw #8 - Toggle at 'Normal'.
Sw #9 - Toggle at 'Run'.
Pushing Sw #14 lowers the blade the self-program #1 setting amount.

_____

(To SET)
Self-Program #2: Sw #8 - Toggle at 'Shift'.
Sw #9 - Toggle at 'Program'.
* (Starts Self-Program #2 setting.)
Sw #11 - Moves blade the desired amount.
Sw #9 - Toggle to 'Run'.
(Ends Self-Program #2 setting.)

(To RUN)
Self-Program #2: Sw #8 - Toggle at 'Shift'.
Sw #9 - Toggle at 'Run'.
Pushing Sw #14 lowers the blade the self-program #2 setting amount.

* See Smart-Set Operation. Self-Program for more information.

SMART-SET OPERATION EXAMPLE

To cut 4/4 lumber with Sw #8, toggle at 'Normal' and Sw #9, toggle at 'Run'.

1) Manually find zero or top of the cant.
2) Push Sw #12 'Home".
3) Push Sw #3 'Smart-Set #1 - Blade lowers 1".
4) Activate Sw #10 'Advance' - Head advances. As blade and dragbacks exit cant, de-activate Sw #10.
5) Push Sw #2 '1/2" Up' - Blade raises 1/2".
6) Push and hold Sw #15 'Return' - Head begins to return, dragbacks engage 4/4 board and drags it back. Caution should be taken to drag the board back carefully. When the blade is back beyond the cant, release Sw #15.
7) To cut next 4/4 board, repeat steps #3 - #6.

SMART-SET OPERATION SELF-PROGRAM
SET-UP AND OPERATION EXAMPLE

To <u>set</u> the Self-Program to the desired amounts:

Example: A 1/2" amount is desired.
(Self-Program #1) Set Sw #8 toggle at 'Normal' setting. Set Sw #9 toggle at 'Program' setting. The blade pointer is at 8". With Sw #11, raise the blade pointer to 8-1/2". Move Sw #9 toggle to 'Run'. Setting is complete.

Example: A second, 3" amount is desired.
(Self-Program #2) Set Sw #8 toggle at 'Shift' setting. Set Sw #9 toggle at 'Program' setting. The blade pointer is at 8-1/2". With Sw #11, lower the blade pointer to 5-1/2". Move Sw #9 toggle to 'Run'. Second
setting is complete.

To <u>run</u> the Self-Program: push Sw #14 'User'. Blade will lower to the self-programmed amounts.

Example: To access 1/2" amount as in the Self-Program #1 example above: Set Sw #8 toggle at 'Normal' setting. Set Sw #9 toggle at 'Run' setting. Push Sw #14 'User". Blade will lower 1/2".

Example: To access 3" amount as in the Self-Program #2 example above: Set Sw #8 toggle at 'Shift' setting. Set Sw #9 toggle at 'Run' setting. Push Sw #14 'User'. Blade will lower 3".

These settings can be changed as often as desired and to any amount desired.

SMART-SETS by TIMBER HARVESTER

#1 SWITCH TO "RUN" BEFORE STARTING

#2 SWITCH TO "NORMAL" FOR SETS AS SHOWN

#3 SWITCH TO "SELECT" TO ADD 1/8" OVER SETS SHOWN

#4 BLADE "UP/DOWN" TO START CUTTING POSITION

#5 SWITCH TO "ADV" TO CUT AND TO SET "HOME" FOR SETS, WHEN CUT IS DONE, SHUT "ADV" OFF.

"REMEMBER" WHEN YOU SWITCH TO "ADV" THE "HOME" POSITION IS AUTOMATICALLY SET, AND YOUR SETS ARE BASED OFF OF THIS.

#6 PUSH "UP 1/2" BUTTON

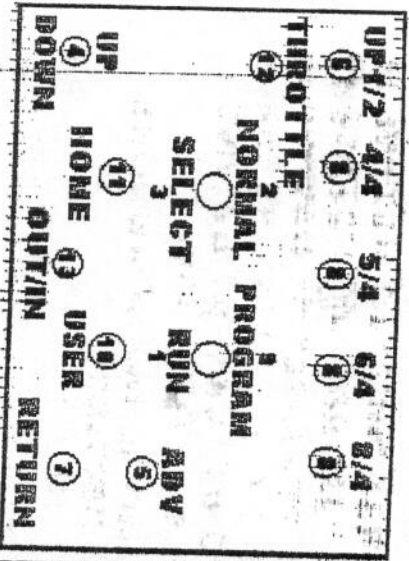**#7** PUSH "RETURN" BUTTON AND DRAG BOARD BACK CAREFULLY.

"IF" YOU ARE UNABLE TO DRAG BACK YOUR LAST CUT, DO NOT USE "UP 1/2" BUTTON, RAISE THE BLADE AS HIGH AS YOU NEED, PUSH "RETURN"

#8 PUSH EITHER SET BUTTON FOR THICKNESS OF NEXT CUT REPEAT #'S 5,6,&7

YOU HAVE THE CHOICE OF TWO ADDITIONAL "SETS" THAT YOU CAN CHANGE ANY TIME YOU WANT, READ STEP #9 CAREFULLY.
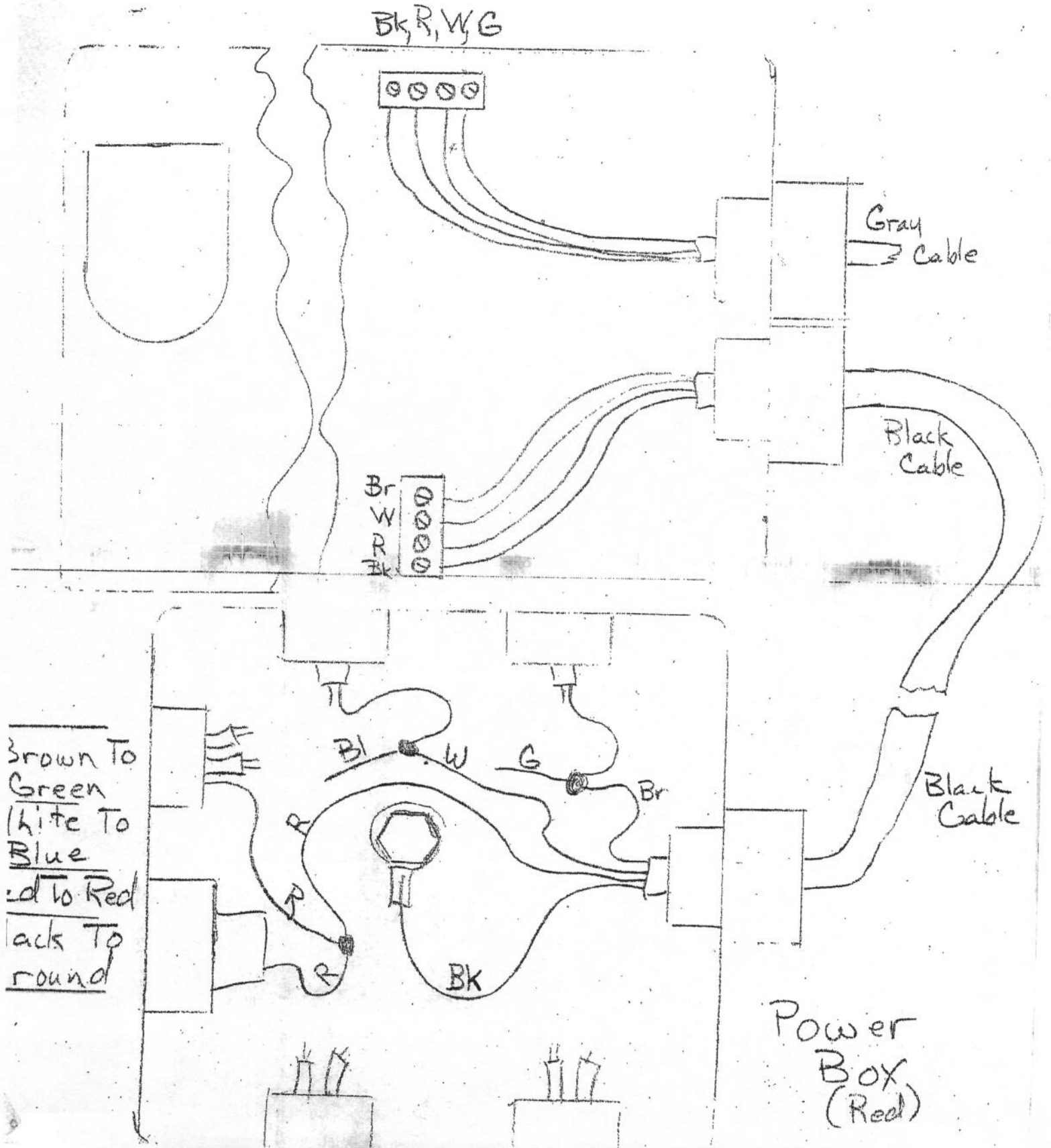
#9 SWITCH TO "NORMAL", SWITCH TO "PROGRAM", RAISE OR LOWER BLADE FOR 1ST. CHOICE, NOW SWITCH TO "RUN", SWITCH TO "SELECT", SWITCH TO "PROGRAM", RAISE OR LOWER BLADE FOR 2ND. CHOICE, NOW SWITCH TO "RUN", NOW FOLLOW STEP'S #4,5,6,&7. NOW CHOOSE "NORMAL" CHOICE OR "SELECT" CHOICE FOR YOUR NEXT CUT, PUSH "USER" BUTTON ONLY, FOLLOW STEP'S #5,6,&7.

"WORK SMARTER, NOT HARDER"

THROTTLE 12	NORMAL 2	PROGRAM 3	
UP 1/2	4/4	5/4	6/4 8/4
⑥	⑧	⑧	⑧ ⑧
UP ④	SELECT 3	RUN 1	ADV
DOWN	HOME ⑪		⑤
	⑪	USER ⑩	RETURN
	OUT/IN		⑦

3-15-00

Encoder Box (Black)

Bk, R, W, G

Gray Cable

Black Cable

Br
W
R
Bk

Bl   W   G   Br

R

R

R

Bk

Brown To Green
White To Blue
Red To Red
Black To Ground

Black Cable

Power Box (Red)

SMART-SETS

TH/Bl

UP

Down

TH/G

*0

Home

P/B

TH
W/Bk   Saw Guide   TH
W

4

User

P/B

TH/0

Return

P/B

* 0   TH/R/Bk

Throttle

TH/Bk

Normal

Shift

2

Program

Run

3

Advance

R

Bump
Up
P/B

9

4/4

P/B

5

1

5/4

P/B

6

6/4

P/B

7

8/4

P/B

8

Set Works Wire

Remote Box Wire

R

Power Sw

R   R

TH
G/Bk

TH
0/Bk

Fuse

R   R

* 0 9 8 7 6 5 4 3 2 1

G
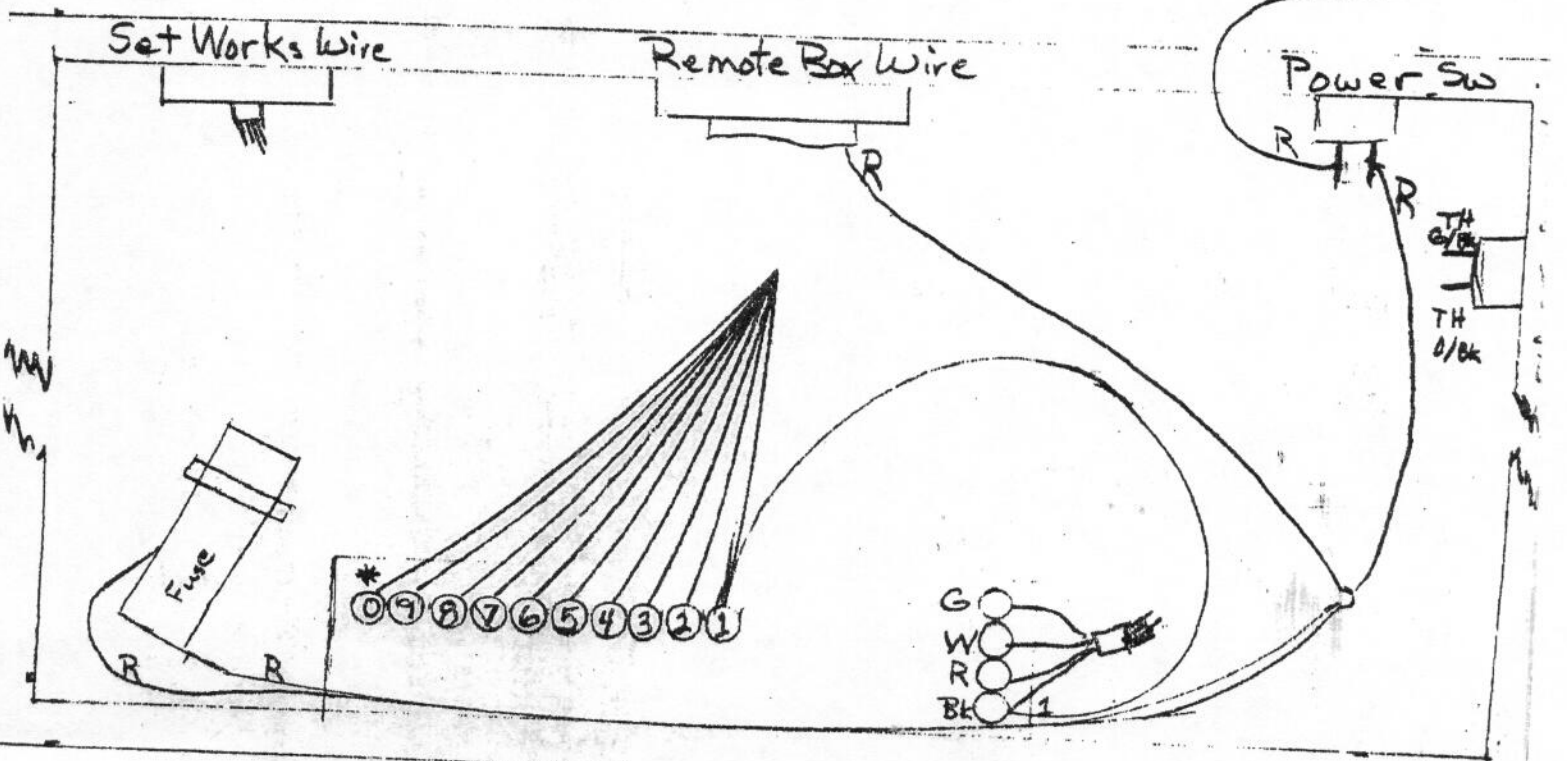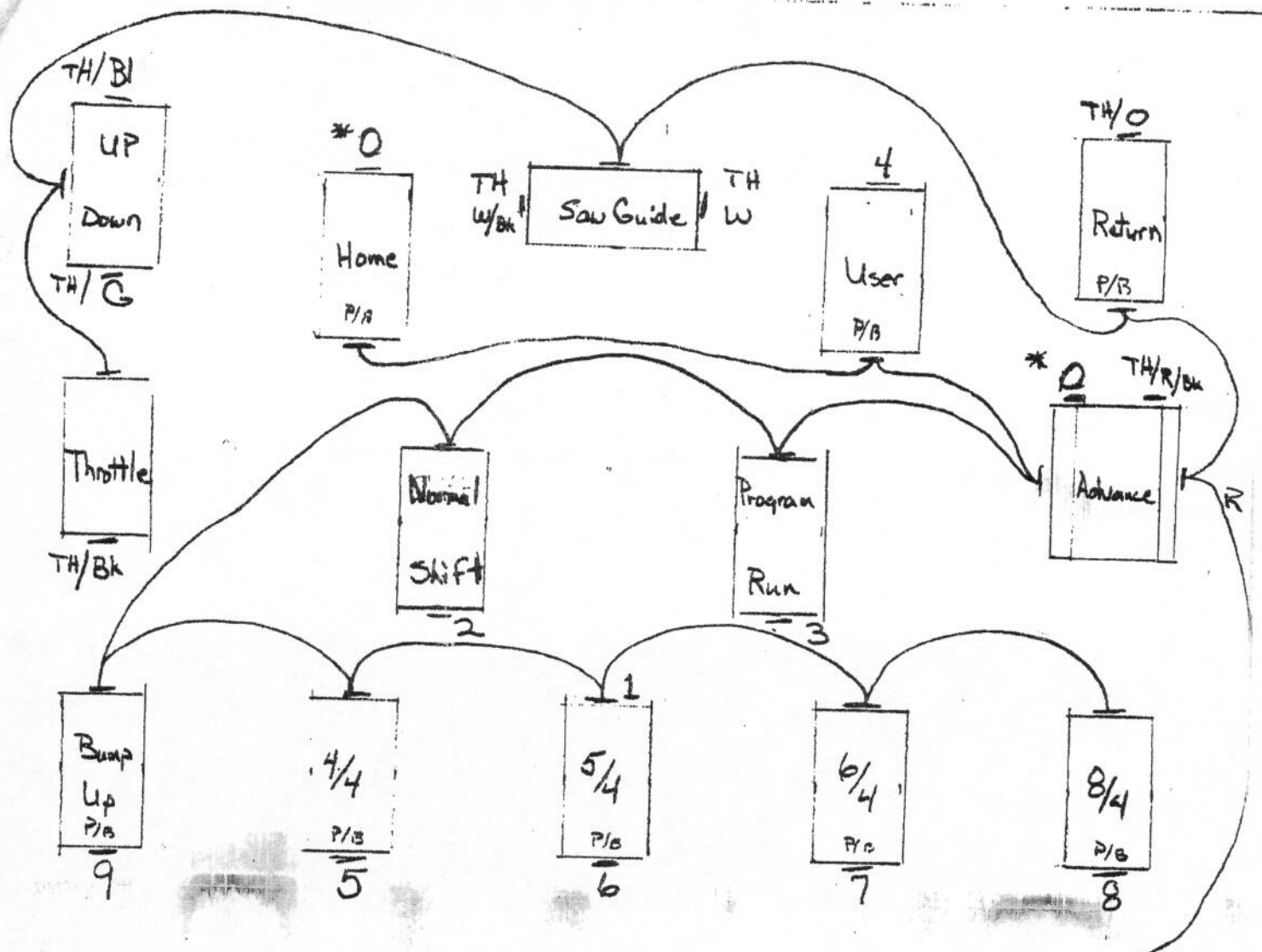W
R
Bk   1

SMART SETS DIAGNOSTICS CODES FOR UNITS
WITH SERIAL # 30031 AND LATER

LED DISPLAY
(UPPER LEFT CORNER OF ENCODER BOX)

SWITCH	NORMAL	SHIFT
4/4	0	4
5/4	1	5
6/4	2	6
8/4	3	7
User	8	9
Bump up	b	
Home	H	
Time out	T	
Program	P	

In program mode, activating the "User" switch causes the LED display to flash the letter "P" three times and then display a number between 0 and 9.

This represents the number of ticks currently programmed. To make changes in thickness of cut, refer to the Auto Setworks User Calibration Instructions.

TIMBER HARVESTER SMARTSETS
DIAGNOSTIC DISPLAYS

LED DISPLAY

FLASHES RED WHEN DOWN FUNCTION IS ENABLED

FLASHES RED WHEN UP FUNCTION IS ENABLED

GREEN LED, LIT WHEN POWER ON SHOWS PROCESSOR OK

FLASHES RED WHEN HEAD MOVING UP OR DOWN SHOWS THAT ENCODER IS OK

Main Board IN BLACK ENCODER BOX

10A 125V C069-1.0
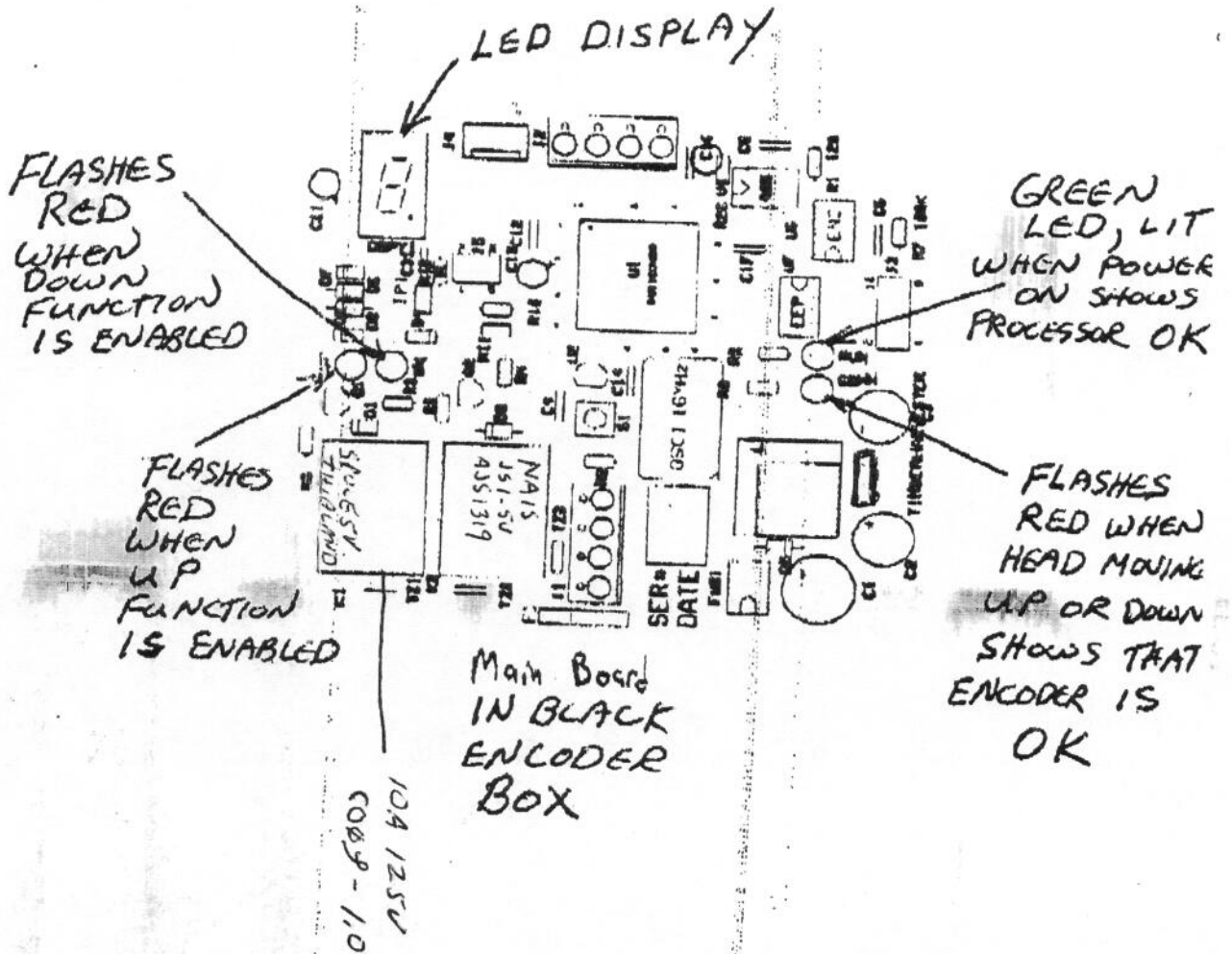
1/2" UP KEEPS

Auto setworks user calibration instructions.
This allows the manual adjustment for the number of ticks (ENCODER
COUNTS) the system uses to stop the mill head accurately.

The greater the number of ticks, the LIGHTER the machine will cut.
The lesser the number of ticks, the HEAVER the machine will cut.

One tick is approximately twelve thousands of an inch. (0.012)

EXAMPLE:

If your mill is cutting too heavy, you will need to follow the instructions
below to INCREASE the number of ticks.

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1. Set (PROGRAM/RUN) switch to program.
2. Press the (USER) button.
3. The system is now in user calibration mode.
4. Follow one of the next two steps to adjust mill head.

INCREASE TICKS:

Press the (4/4) button to increase the number of ticks by one tick.
NOTE: The mill head will go up for one half a second (1/2sec) to let you
know it is working.

DECREASE TICKS:

Press the (5/4) button to decrease the number of ticks by one tick.
NOTE: The mill head will go down for one half a second (1/2sec) to let
you know it is working.

5. When finished, set (PROGRAM/RUN) switch to run, and wait five
   seconds.
6. Now make a cut using one of the auto-set positions and check for
   accuracy. You may repeat steps 1 - 5 as many times as necessary.

Procedure for testing Smart-Sets Computerized setworks.

1. Put "program/run" button in run position.
2. Put "normal/shift" button in normal position.
3. Raise sawhead to EXACTLY 12 inches.
4. Advance sawhead forward approximately 12 inches.
5. Push "home" button and hold for at least 3 seconds.
6. Push " 1/2 up" button. Sawhead should raise to 12-1/2".
7. Push "4/4" button, sawhead should drop to 10-15/16".
8. Push "5/4" button, sawhead should drop to 10-11/16".
9. Push "6/4" button, sawhead should drop to 10-7/16".
10. Push "8/4" button, sawhead should drop to 9-15/16".
11. Push "1/2 up" button. Sawhead should raise to 12-1/2".
12. Now move "normal/shift" button to shift position.
13. Push "4/4" button, sawhead should drop to 10-13/16".
14. Push "5/4" button, sawhead should drop to 10-9/16".
15. Push "6/4" button, sawhead should drop to 10-5/16".
16. Push "8/4" button, sawhead should drop to 9-13/16".
17. Push "1/2 up" button, sawhead should raise to 12-1/2".

If all of these system checks work properly the Smart-Sets are OK. Any thick/thin boards are the result of operator not properly setting "home" while sawing.

If all these system checks works properly, but Smart-Sets don't work while sawing, the advance switch is probably defective and not registering "home" to the computer.

If Smart-Sets stop working while you are sawing, but work again after you shut down engine and restart it later, the advance switch is defective.

If #5 through #10 work and #12 through # 16 don't work, the "normal/shift" switch is defective.
If # 6 does not work, but #7-10 does work, the "1/2 up" button is defective.
If #7 & #13 don't work the "4/4" button is defective.
If # 8 & #14 don't work the "5/4" button is defective.
If # 9 & #15 don't work the "6/4" button is defective.
If # 10 & #16 don't work the "8/4" button is defective.
If you are unable to change the setting of the "user" button, the "program/run" button is defective.
If you raise sawhead to 15", push the "home" button and hold for 3 seconds, then push the "1/2 up" button and sawhead does not go up to 15-1/2", the "home" button is defective.