Generation 3
Owner's Manual
Software Version: OS8.0
US and International Patents Pending
Made in USA

Keypad with backlighting.
Turns on and off with ambient
light monitoring technology.

8 button wireless remote. FCC
approved / 16 billion codes.

Table of Contents:

Thank you for purchasing iTroll G3. Building on the success of the iTroll G1 & G2, we once again reinvented the throttle controller. A <u>partial list</u> of the innovations in this unit:
- FCC approved, eight button, IP68 rated, wireless remote with 16 billion key codes
- Dual resolution, auto ranging "Click Dial"
- Fully illuminated eight button keypad
- HUNT Mode improvements:
  10 Hunt programs / On the fly programming / HUNT Gain
- All new user interface

Safety Precautions when using iTroll
- Always attend iTroll and steering to manage boat's speed & heading.
- READ the owner's manual so you are familiar with iTroll's operation.
- Manage iTroll's cable so it does not present a tripping hazard.
- Make sure occupants of vessel are seated at all times.
- iTroll is only to be used at LOW speeds that are typically used when trolling.
- iTroll is to be used by Adults only!
- When using HUNT Mode, use throttle, time and step settings that will NOT cause Occupants to lose balance or fall overboard.
- Do NOT use iTroll when under the influence of alcohol, prescription drugs or controlled substances.
- Boating safety ultimately falls into the hands of the boat's operator. Use common sense at all times! Take a boating safety course and obey all published safety procedures and suggestions. Always use an ignition switch safety lanyard!
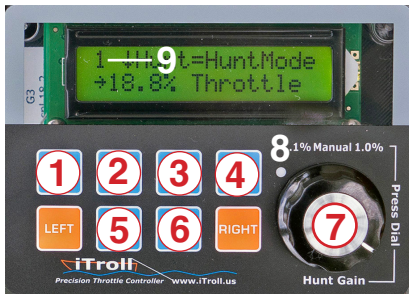
iTroll G3 is the first throttle controller with a lighted keypad! This totally transforms your night or low light fishing experience! In typical iTroll fashion, lighting the keypad wasn't enough. . . .

Modern boats with multiple graphs & other accessories are power hungry! We monitor the ambient lighting conditions and how it is changing so the keypad's lights are on only when necessary to save precious battery capacity.

iTroll's Buttons & Components:
1 - On / Off: Turns iTroll on and off. Also used for other functions.
2 - Hunt: Used with Hunt Mode. Also used for other functions.
3 - Idle / Run: Used to swap between idle, drag and trolling speeds.
4 - Max: Engages maximum throttle. Also used for other functions.
5 - Back / Exit: Exits or reverts to previous function.
6 - Prog / Func: Go to programming screen or secondary function.
7 - Click Dial
8 - Status LED
9 - Indicates what motor iTroll is operating (1 or 2)

Click Dial Safety Clutch:
If the dial is turned at a rapid rate, iTroll G3 limits the amount of throttle change that occurs. Actions that can cause gross dial movement are: Someone falling when holding the dial, or the dial is spun by a hand or arm when someone reaches over the dial to grab something. At iTroll, safety ALWAYS comes first through brilliant engineering!

Features of iTroll G3's RF Remote

Our remote is FCC approved. RF devices are regulated so iTroll is legal to both sell and use. FCC certification is important because it certifies the device does not produce harmful interference that may cause issues with other systems in your boat.

Our remote control ecosystem has 16 BILLION unique codes. There will NEVER be two transmitters with the same code. This insures with 100% certainty that another iTroll transmitter that is close to you will NOT accidently operate your unit.

These are other features that cannot be found in other products:

Transmitter Battery: CR2032

• Multi - touch capability:
  Our remote has eight buttons. It can control more than 8 functions because it can process when more than one button is pressed.

• Pairing confirmation - Allows you to check if a remote is paired to your iTroll:
  To check if a remote is paired to your iTroll:
      1. Start with iTroll OFF.
      2. Press ANY button on the transmitter. If it is paired, iTroll will wake up and confirm the paired status on the screen.

• Battery Level Check:
  If transmitter is PAIRED, the second line of the confirmation screen from above will tell you if the battery is good or needs replacing.

• Transmitter Pairing, Erasing and Sharing - iTroll G3 is a community!
  iTroll G3 has routines in the options menu (Section 14) to both pair and erase remotes. This is done "in the field" and takes little time. This creates a unique opportunity if you have friends with iTroll's that fish on your boat. You can easily pair their remotes so they can control your iTroll during the a trip. After the trip is over, you can erase all paired remotes and re - learn only those that belong to you.

Display Notice
iTroll has prompts on it's display to aid you in operating it.
A DOWN ARROW (↓) in front of a button name means to press that button.
EXAMPLE: ↓Hunt means "Press the Hunt Button"

Section 1: Turning iTroll On

Keypad [ON OFF]

Wireless (I - R) **Then** (HNT)
              HOLD   HOLD

Section 1A: Turning iTroll Off

Keypad

[ON OFF] HOLD for 3 seconds

Wireless - iTroll in MANUAL Mode

(I - R) **+** (HNT) HOLD I - R then HOLD HUNT For 3 seconds

Section 2: Manual Throttle Operation

2.1: Start motor and let it warm up until it idles smoothly, then turn iTroll on.

2.2: TILLER motors: Release tension knob on throttle handle to prevent sticking, place motor at idle speed and engage forward gear.
   REMOTE THROTTLE motors: Put motor in gear and at idle speed.

2.3: Adjust Throttle

Control Head
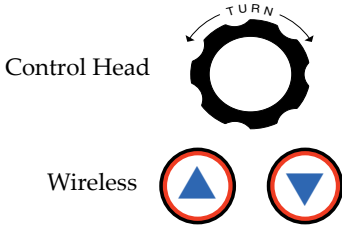
Wireless

2.4: Change Throttle Resolution

iTroll's throttle can be set to change in 1.0% (coarse) or 0.1% (fine) steps. Orange LED on keypad is illuminated when FINE resolution (0.1%) is selected.

Control Head
Press Dial

Wireless **RES**

Note: In MANUAL Mode, the Dial and Wireless Remote are auto ranging. When the throttle is decreased below 1%, iTroll automatically switches to fine (0.1%) resolution. The same will occur if you go above 99% throttle. **For safety purposes, when the throttle is in FINE resolution and is not changed for 20 seconds, iTroll will switch to COARSE resolution to provide rapid throttle movement in case you need to avoid other boats or obstacles.**

2.5: Idle / Run Function

Puts throttle at IDLE, push again to resume trolling speed. Used when fighting or netting fish. Keypad LED flashes once per second when at idle.

IDLE RUN   **I - R**   →   **IDLE RUN**   **I - R**
←
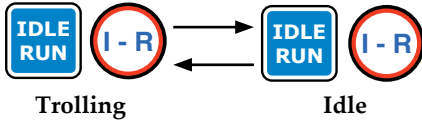
Trolling   **Idle**

Special feature: DRAG Mode - Section 5.2

2.6: MAX Throttle Function

Gradually increases throttle to 100%. Press and HOLD to increase throttle. Release button to return to trolling speed.

MAX   **MAX**

Special feature: SCS - Section 5.1

2.7: Last Idles Recall

Displays the last 3 throttle settings that were used when you pressed the Idle button. This is valuable information as these were speeds where fish were caught!

Control Head   **PROG FUNC**

2.8: Go To HUNT Mode - (Section 3)

Control Head   **HUNT** **x 2**

Wireless   **HNT** **x 1**

2.9: Neutral Safety Feature (remote throttle motors only)
Note: Available only if the optional neutral safety interface is installed in the boat. Moving your boat's gear shifter from in gear to neutral will place iTroll at idle. This feature prevents damage to your gear box as the motor will be at idle speed when it is put back into gear. When shifter is put back in gear, iTroll will return to manual mode.

4

3.1: There are two screens used in HUNT mode

```
0%-10s   15%-0:30
1e   ↓Hunt=START
```

```
10-20%  3.0%  0:20
G0 16.0%  ↑   0:15
```
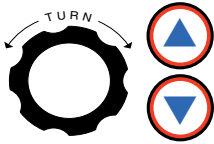
"START" Screen

- Contains the word "START"
- Throttle is at IDLE
- There are 10 HUNT programs in memory. You select which one to use here.
- Programs addresses are letters A through J
- HUNT programs are started / executed here.

"Timer" Screen

Contains timer indicating that a HUNT program is running, the level of HUNT Gain being used, the current throttle, and the arrow shows the direction of the next throttle step. Note: Arrow does NOT appear in "Six Shooter" programs.

3.2: Start screen functions

Select HUNT Program
Addresses are A thru J as shown in Start screen diagram above (3.1)

Start HUNT Mode
iTroll displays Timer Screen

Reprogram HUNT parameters
Reprogramming screens displayed
See Section 10

Exit HUNT Mode
Return to Manual Mode (Section 2)

3.3: Timer screen functions

Jump Hunt Step
Jumps to next throttle step in the HUNT program that is running.

Max Throttle
Press and HOLD to increase to 100%. Release to return to Trolling. See SCS - Section 5.1

Reprogram HUNT parameters
Reprogramming screens displayed
See Section 10

STOP HUNT
Throttle to IDLE, Return to
Start screen

The ability to **change speeds on demand** before HUNT Mode's timer would do so automatically is a powerful tool. If you see fish on your graph, you can estimate when the baits are right on top of them and you can force iTroll to change speeds by going to the next step in the HUNT program.

Section 4: HUNT Gain
See Section 9 for a complete explanation of HUNT Gain

HUNT Gain is a new feature of the iTroll G3. HUNT Gain allows you to "SLIDE" your throttle setting up or down (while on the fly) to account for changes in wind, swell, current, or other factors by up to 7% (in 1% increments). HUNT Gain is so innovative that in most cases it virtually eliminates the need for reprogramming!

4.1: HUNT Gain Operation - Note: A HUNT program must be running (timer is active)

Control Head   Wireless

Then

If adjusting HUNT Gain on the <u>control head</u>, you can exit Gain in one of two ways:
1. Exit by pressing the dial
2. Do nothing. iTroll will resume running the loaded HUNT program 20 seconds after you stop moving the dial. This allows you to see the effect of the Gain that you dialed in.

4.2: HUNT Gain Displays

| 7-17% 3.0% 0:20 |
| -3G 16.0% ↑ 0:15 |

Stepping Program Example
Gain = - 3
Starts at 7%, Steps up to 17% in 3% Steps

| 10-20% 3.0% 0:20 |
| G0 16.0% ↑ 0:15 |

Gain = 0
Starts at 10%, Steps up to 20% in 3% Steps

| 14-24% 3.0% 0:20 |
| G4 17.0% ↑ 0:15 |

Gain = + 4
Starts at 14%, Steps up to 24% in 3% Steps

Section 5: iTroll's Special Functions

5.1: "SCS" - Secondary Cruising Speed: **Works in both MANUAL and HUNT Modes.**
Allows you to set / maintain a higher throttle setting than where the dial is set . . . WITHOUT touching the dial! This allows you to raise your baits when crossing low spots or to use a higher throttle setting to get your boat back on course after being hit by wind gusts or wakes. Without "SCS" you would lose and have to reset your troll speed because dial movement would be required to increase throttle.

To <u>Set</u> SCS:

| MAX | I - R | **Then** | IDLE RUN | I - R |

Press / hold to
advance throttle

Press to STOP
throttle advance

To <u>Release</u> SCS:
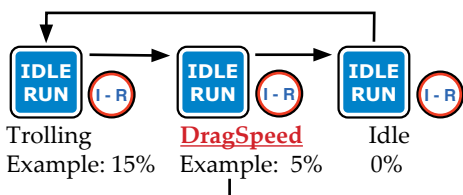
| IDLE RUN | I - R |

Press to release SCS
Trolling throttle resumes

Note: Keep pressing MAX when you press IDLE

5.2: Drag mode is a STANDARD feature of iTroll, but it can be turned on and off to suit your preferences. All iTroll units ship with drag mode OFF. To turn drag mode on or off, see the "OPTIONS MENU" in section 14.

DRAG Mode (when ON), changes the standard function of the Idle / Run button from two stage operation to three stage operation.

DRAG Mode OFF:
Trolling OR Idle

Trolling ⟷ Idle

DRAG MODE ON:

Trolling — Example: 15%   **DragSpeed** — Example: 5%   Idle — 0%
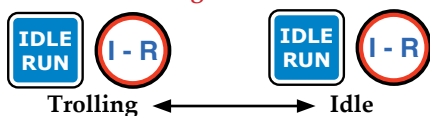
To adjust DRAGSpeed:

Control Head

Wireless

Drag is a throttle setting lower than troll and higher than idle. This allows you to fight fish while using throttle to maintain the boat's heading or to raise the baits to keep them from snagging bottom. When in Drag Mode, the DragSpeed is adjustable per diagram above. When iTroll is in DRAG Mode, Kepad LED flashes TWICE per second.

5.2.1: Finding Stored DragSpeed: Note: DRAG Mode must be On.
In MANUAL mode, when the Max button is pressed, DragSpeed is shown on display.

5.2.2: DRAG Mode Safety:
If trolling speed is LESS than the DragSpeed stored in memory, DRAG Mode will not function when the Idle / Run button is pressed because iTroll will not accelerate the boat when you expect the throttle to be reduced. To make DRAG Mode functional again, raise troll speed higher than DragSpeed (see 5.2.1 to find DragSpeed), press Idle / Run button to enter DRAG Mode and lower it with knob or transmitter.

5.3: Optional Remote Idle / Run switch(es):
You can purchase (at additional cost), sealed touch pads that can be mounted anywhere in your boat. Additionally, you can run multiple pads in different locations! These touch pads work EXACTLY like the Idle / Run switch on iTroll's main key pad. You can mount these pads anywhere you like, at the transom, bow or on the gunnel. See electronics installation manual for wiring instructions.

5.4: DUAL MOTOR Capability:
Optional software upgrade to allow a single iTroll to control two motors. See Section 15.

Section 6: Left and Right Steering Buttons

iTroll can control other manufacturer's steering units (NOT included with iTroll) that link to your kicker motor. Contact the manufacturer of your particular steering unit for instructions on how to interface it with iTroll. Please see iTroll's installation instructions for technical information on steering outputs. A steering unit that we can recommend is the Tailfin by Powrtan. iTroll's steering buttons only operate when iTroll is ON.

Section 7: Integrated Ball (Gimbal) Mount
Compatible with RAM Mount "B" size components (one inch ball).

You can detach the control head of iTroll from the ball mount WITHOUT removing the ball from the RAM arm, which preserves the angles at which your mount is set.
DO NOT "bottom out" any fastener in iTroll's back plate - the holes are only .2 inches deep! Fasteners that go deeper can puncture the base plate. Water can then enter the iTroll. Damage from punctures is NOT covered under warranty!

Section 8: Full Description of HUNT Mode
Programmable Throttle Sequences to maximize your catch!

HUNT Mode is the most revolutionary feature ever put into a throttle controller and it's commonly considered to be "The Deadliest Tool in Fishing"! Prior to iTroll, throttle controllers were only reactionary and had a passive role in the catching experience. An iTroll in HUNT Mode is literally stalking the fish by varying the boat's speed to make the baits look more natural, and is taking an ACTIVE role in your angling success. Varying speed makes your presentations more realistic and is THE answer to any troller's worst nightmare - the "Speed Rut". Many anglers steer in "S" patterns to vary speed, but HUNT Mode achieves greater speed variations while doing it automatically and with robotic precision!

There are multiple reasons why the most successful tournament fishermen and top guides insist on iTroll (reliability, innovation, quality, etc.), but the BIGGEST reason is HUNT Mode! **HUNT Mode makes every angler better because IT CATCHES FISH!**

8.1: HUNT Mode Program Memory:
iTroll G3 stores TEN individual HUNT programs in internal memory. You have HUNT programs for different throttle behaviors and conditions (example: fishing up wind or down wind).

The memory positions are allocated as follows:
Four stepping programs
Two each for cut, bump, and six shooter programs
(4 + 2 + 2 + 2 = 10 total).

Multiple HUNT programs enhances efficiency and convenience. For example, you can have two different bump programs - one with a moderate bump, and the other a more aggressive bump.

HUNT Mode contains four types of throttle sequences:
8.2: STEPPING (Searching) Programs:
These programs have low and high throttle settings that the iTroll steps up and down in the range between them. You set a step size for iTroll to determine how many steps there are between the throttle settings. Stepping programs excel in finding what speed / bait combination works best.

Example: You set a program to vary the boat's throttle from 10% to 20% in 3% steps, with each step being held for 20 seconds.

For this program, the throttle will hit 8 different speeds:
10% - 13% - 16% - 19% - 20% - 17% - 14% - 11% - 10% . . .repeat.

10-20%	3.0%	0:20
G0 16.0%	↑	0:15

Searching programs are the most efficient way to find what baits and speeds are the most productive to fish. In this example, if there are 6 different baits being trolled, 48 bait / speed presentations (6 baits X 8 speeds) are made to the fish every 2 minutes!

8.3: CUT Throttle Programs (Simulates a wounded bait):

Two speed programs where your trolling speed is "CUT" to a slower speed. You set the time parameters as to when the throttle is cut and how long the cut lasts. Time at troll is programmable from 5 seconds to 4 minutes and cut time is set in seconds (1-60).

Example: You set a program to troll at 15% throttle for 25 seconds, then cut the throttle to idle (0%) for 10 seconds before returning to 15% and repeating the pattern:
For this program, the throttle will behave as follows:
15% - 25 seconds - 0% - ten seconds - repeat.
Bait behavior in cut programs can be customized by how large / small the cut is and how long the throttle stays cut.

> 0%-10s   15%-0:25
> 1e 0.0%   ↑   0.04

8.4: BUMP Throttle Programs (Simulates a fleeing bait):

Two speed programs where your trolling speed is "BUMPED" to a higher speed. You set the time parameters as to when the throttle is bumped and how long the bump lasts. Time at troll is from 5 seconds to 4 minutes and bump time is set in seconds (1-60).

Example: You set a program to troll at 15% throttle for 25 seconds, then bump the throttle to 20% for 10 seconds before returning to 15% and repeating the pattern:
For this program, the throttle will behave as follows:
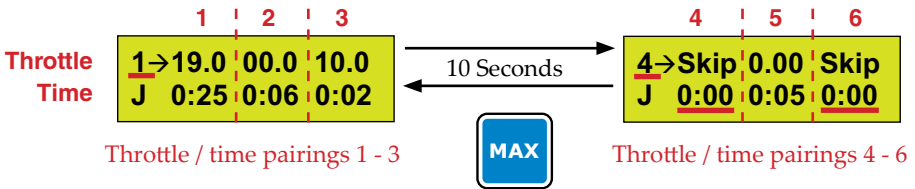15% - 25 seconds - 20% - ten seconds - repeat.
Bait behavior in bump programs can be customized by how large / small the bump is and how long the throttle stays bumped.

> 15%-0:25   20%-10s
> 1G 15%   ↑   0.04

8.5: SIX SHOOTER Throttle Programs:

Lets you set between 2 and 6 throttle steps with independent time settings. This allows you unprecedented freedom to make double cut or bump programs, a cut with a twitch, or anything your imagination can think of!

8.5.1: Six Shooter programs scroll between two start screens:

	1	2	3		4	5	6
Throttle	1→19.0	00.0	10.0		4→Skip	0.00	Skip
Time	J 0:25	0:06	0:02		J 0:00	0:05	0:00

10 Seconds

MAX

Throttle / time pairings 1 - 3   To force screen change   Throttle / time pairings 4 - 6

In the six shooter start screens, the throttle and time pairings are vertically stacked. The four throttle / time pairings shown above represent a cut program with a throttle twitch in the cut.

Starting with the left screen, HUNT will run Pair 1 (troll at 19.0% for 25 seconds), then Pair 2 (cut to idle (0.0%) for 6 seconds), then Pair 3 (10.0% twitch for 2 seconds, then Pair 5 (cut to idle for 5 seconds), and then return to Pair 1.

8.5.2: Note that pairs 4 and 6 have time parameters of ZERO and therefore, the throttle speeds in those pairs show that they are being skipped. <mark>The key point being made here is that you control which pairs are VALID by making their time setting GREATER THAN ZERO. Setting a pair's time setting to zero (0) makes that pair INVALID. Note that iTroll will not allow you to set the time of pairs 1 and 2 to zero as you need at least two throttle and time pairs to make a HUNT program.</mark>

8.5.3: Six Shooter Timer Screen:

The top line shows which throttle / time pair is next (in this case - Pair 2) and the throttle and time settings of that pair.

```
Next2  0.0%  0:06
G0  19.0%    0:15
```

The bottom line shows the HUNT Gain (in this case zero), the current throttle setting and how much time until a throttle change.

Tips from iTroll's designer on mastering the ULTIMATE power of Hunt Mode:

Stepping programs (seen on iTroll display as A, B, C & D):
• Make your Hunt programs stop at different speeds on the way up than on the way down for MAXIMUM speed variety! Subtract your MinSpeed setting from your Max-Speed setting. If the difference is an EVEN number, use ODD steps and vice - versa. See 6.2 for an example.

   When Hunt finds a speed that the fish prefer (example: 18%), DON'T go to manual throttle and static troll at 18%! Reprogram your Hunt parameters to bracket 18% so when the fish's speed preference changes (it always will), you will notice the pattern where strikes occur! A sample program that brackets 18% might be (15-21%, 3%, 20 Sec). This Hunt program will cover these speeds: 15% - 18% - 21%.

• Cut and Bump programs (seen on iTroll display as e, f, G & H):
You can vary your presentation by varying the degree and duration of your cut or bump speeds. Put a bait in the water and try a moderate cut or bump (5%) for 10 - 15 seconds vs. a larger cut or bump (10 - 15%) for 1 - 4 seconds.

• Six Shooter programs (seen on iTroll display as I & J):
For simplicity, the default programs are two speed programs. We suggest that once you get familiar with programming, slowly add to the number of speeds a program contains to keep things simple. The six shooter programs provide unbelievable results once you master them!

Section 9: Full Description of HUNT Gain
HUNT Mode gets taken to the NEXT LEVEL!

Note: This section refers to "BASE" HUNT Parameters - these are the parameters that are stored in iTroll's memory banks. When you increase or decrease Gain, it adds or subtracts throttle from the base parameters, but does NOT permanently alter them.

HUNT Gain "SLIDES" the throttle settings of a HUNT program up or down to adjust for changes in wind, current or swell. A quote from one of our beta testers Brian S:

"The new Gain feature for Hunt Mode takes a game changing feature of the iTroll and adds a whole new level of convenience to the performance of the unit, particularly in varying weather conditions.

Did the wind just pick up and slow your troll too much? Simply use Gain to "step up" your favorite program to account for that breeze.

Did the wind die off making your troll too fast? Use Gain again to "step down" your program so that your troll slows enough to get back into that perfect, varied speed range that fish can't resist.

Thanks to Gain, Hunt mode from iTroll is now infinitely customizable in whatever conditions mother nature can throw at you."

9.1: Accessing Hunt Gain - See Section 4.1:
Note: Gain is available ONLY when a Hunt program is running. The best way to confirm this is the presence of a timer in the bottom right corner of the display.

9.2: Instant Throttle Feedback:
When Gain is changed, the throttle will change on a one on one basis with the amount of gain: If you increase gain by plus or minus two, the throttle will go up or down 2%. This allows you to see, in real time, how the change affects your boat control.

9.3: Increasing Gain:
In ALL HUNT programs, gain can increase the base parameters in 1% increments to Max Gain of 7%. Example: Base throttle settings of 10 - 20% with 7% gain = 17 - 27%.

9.4: Decreasing Gain:
The amount of negative Gain that is available may be limited if the LOWEST throttle setting of a HUNT program is 6% OR LESS. Each type of HUNT program (Stepping, Cut, Bump, and Six Shooter) processes the negative gain limit differently.

9.4.1: Decreasing Gain - Stepping Programs:
If the MinSpeed value equals zero, Gain cannot be decreased further.

0-15% 3.0% 0:20	5-20% 3.0% 0:20	12-27% 3.0% 0:20
-5G 12.0% ↑ 0:15	G0 14.0% ↑ 0:15	G7 15.0% ↑ 0:15

Gain = -5	Gain = 0	Gain = +7
Gain will not go lower because Min Throttle = 0		

9.4.2: Decreasing Gain - Cut & Bump Programs:
Note: Cut & Bump programs have only TWO throttle settings. If the LOWEST throttle value of a program becomes zero, further reductions in gain will result in lowering ONLY the upper throttle setting. The HUNT program is undergoing COMPRESSION which makes it even MORE powerful! Gain decreases will stop if the upper throttle equals 1%.

9.4.3: Decreasing Gain - Cut Compression Example
CutSpeed = 0%, TrollSpeed = 8%. We troll at 8%, and <u>cut to idle (0%) because it provides the most rapid boat slowing on the cut</u>. These settings are working well in the calm conditions that we are experiencing.

0%-8s 8%-0:20
G0 0.0% ↑ 0:04

Gain = 0

The wind picks up, is at our backs, and we are trolling too fast. We use Gain compression to DECREASE our TrollSpeed to maintain our target GPS speed while still cutting to idle.

```
0%-8s     2%-0:20
-6G 0.0%  ↑  0:04
```

Wind is in our face, we increase gain. If compression occurred, it's reversed to become expansion. If Gain becomes positive, BOTH the CutSpeed and TrollSpeed are increased to add additional power to maintain directional control of the boat.

```
7%-8s    15%-0:20
G7 0.0%  ↑   0:04
```

9.4.4: Decreasing Gain - Bump Compression Example
TrollSpeed = 5%, BumpSpeed = 12%. In this example, we troll at 5%, and Bump to 12%. These settings are working well in the calm conditions that we are experiencing.

```
5%-0:20   12%-3s
G0 5.0%  ↑   0:04
```

Wind picks up, is at our backs, and suddenly we are trolling too fast. We use Gain compression to DECREASE our TrollSpeed to maintain our target GPS speed. If we use Gain values of negative 6 or 7, our TrollSpeed will be 0% and our BumpSpeed will be either 5% or 6%.

```
0%-0:20    5%-3s
-7G 5.0%  ↑  0:04
```

Wind is in our face, we increase Gain. If compression occurred, it's reversed to become expansion. If Gain becomes postive, BOTH the Troll and Bump Speeds are increased to add additional power so we can maintain directional control of the boat.

```
12%-0:20   19%-3s
G7 12.0%  ↑   0:04
```

9.4.5: Decreasing Gain - Six Shooter Programs
Gain has no limits and can be set as low as -7%. Be aware that if you have one or more throttle settings that are 7% or below, excessive negative Gain can make your Six Shooter program appear to do nothing if you use Gain to reduce all your throttle settings to 0%.

Pro Tip - Hunt Gain Offset to enhance slow trolling programs
If you use slow trolling techniques, you may benefit from "offsetting" your HUNT programs for more versatility. Stepping programs are featured in this example:
Example 1 - No Offset.   Programmed Throttle Values

```
0-5%  2.0%    0:20      3-8%  2.0%    0:20      10-15% 2.0% 0:20
-3G  0.0%  ↑  0:15      G0 3.0%  ↑   0:15      G7 10.0% ↑   0:15
```

Gain cannot be decreased below minus three (-3) because the MinSpeed value has become zero. There are 4 points of leftover Gain that are not utilized.

Example 2: Offset your programmed throttle values by adding the leftover 4 points of gain to them so you will be able to access Gain values from -7 to +7:

3% + 4% = 7%
8% + 4% = 12%

```
7-12%  2.0%    0:20
G0 7.0%  ↑     0:15
```

You can create the exact same throttle ranges as above, but with more power at the top end to troll in wind or swell!

```
0-5% 2.0%    0:20      3-8%  2.0%    0:20      14-19% 2.0% 0:20
-7G  0.0%  ↑ 0:15      -4G 3.0%  ↑  0:15      G7 14.0% ↑  0:15
```

10.1: Accessing HUNT reprogramming

Pressing the PROG / HUNT button twice when either the HUNT "START" or "TIMER" screens are displayed will access the reprogramming procedure. See Sections 3.2 and 3.3.

10.2: User interface - Stepping Throttle Programs

The first level of screens that appear show the value of each of the four parameters of a stepping program. You scroll between the screens by turning the click dial.

1: Min Speed

```
Min Speed= 17.0%
↓Dial to Change
```

2: Max Speed

```
Max Speed= 25.0%
↓Dial to Change
```

3: Step Size

```
Step Size= 3.0%
↓Dial to Change
```

4: StepTime

```
Step Time=  0:20
↓Dial to Change
```
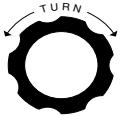
Turn Dial to Select Screen

HELPFUL TIP: If you intend to change more than one parameter, start with the lowest **screen number** first.

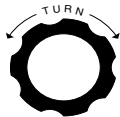**To change a parameter, Press Dial when it's screen is displayed.**

BACK EXIT Exit programming mode

```
↓Dial=Set    17.0%
Min Speed    22.0%
```
← Old Value

Typical Programming Screen

Turn Dial to change new value

BACK EXIT

Exit this screen Parameter NOT changed Go back one level

Press Dial to set new parameter. If parameters 1 - 3 were just set, iTroll goes back one level. If Step Time was set (parameter 4), iTroll exits programming mode.

10.3: User interface - CUT Throttle Programs

The reprogramming procedure for Cut programs is identical to Stepping programs with the exception that there are different parameters displayed in the screens:

1: Cut Speed

```
Cut Speed=  0.0%
↓Dial to Change
```

2: Cut Time

```
Cut Time=  0:08
↓Dial to Change
```

3: Troll Speed

```
Troll Spd=  8.0%
↓Dial to Change
```

4: Troll Time

```
Troll Time=  0:20
↓Dial to Change
```

10.4: User interface - BUMP Throttle Programs
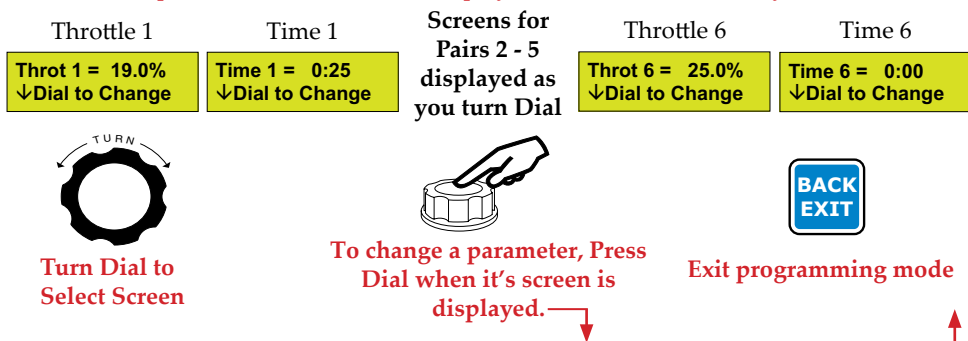
The reprogramming procedure for BUMP programs is identical to Stepping programs with the exception that there are different parameters displayed in the screens:

1: Troll Speed

```
Troll Spd=  5.0%
↓Dial to Change
```

2: Troll Time

```
Troll Time=  0:20
↓Dial to Change
```

3: Bump Speed

```
Bump Spd= 12.0%
↓Dial to Change
```

4: Bump Time

```
Bump Time=  0:03
↓Dial to Change
```

10.5: **User interface - SIX SHOOTER Throttle Programs**
DON'T be intimidated by these programs! They are not as complicated as they appear. They can be programmed to run anywhere from 2 to 6 throttle settings. Our beta testers said they never used more than 4 at one time. So why did we make them have 6? Having six throttles allows you to skip / activate different throttles to easily customize a program. **See Sec. 8.5, 8.5.1, and 8.5.2 for instructions on skipping throttle settings.**
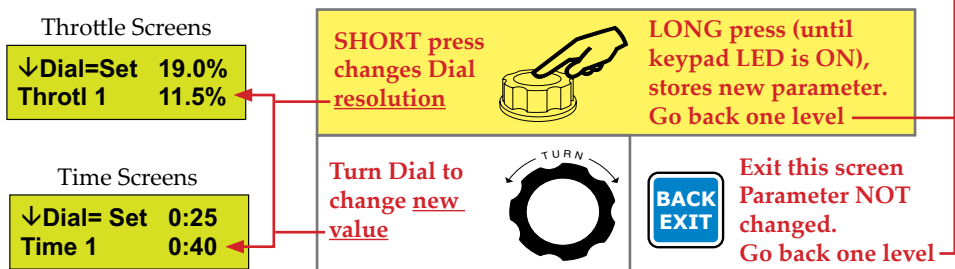
10.5.1: SIX SHOOTER programs have 6 Throttle and 6 Time parameter screens. For each throttle / time pair, the throttle screen is displayed first and is followed by the time screen:

Throttle 1	Time 1	**Screens for Pairs 2 - 5 displayed as you turn Dial**	Throttle 6	Time 6
Throt 1 = 19.0% ↓Dial to Change	Time 1 = 0:25 ↓Dial to Change		Throt 6 = 25.0% ↓Dial to Change	Time 6 = 0:00 ↓Dial to Change

Turn Dial to Select Screen

To change a parameter, Press Dial when it's screen is displayed.

BACK EXIT

Exit programming mode

10.6: **User interface - SIX SHOOTER Programming Screens**
Differs from other programs in that the click dial is dual resolution:
- Throttle can be set to change in 1% or 0.1% increments per dial "click"
- Time can be set to change in 1 or 5 second increments per dial "click"

Throttle Screens

↓Dial=Set   19.0%
Throtl 1   11.5%

SHORT press changes Dial resolution

LONG press (until keypad LED is ON), stores new parameter. Go back one level

Time Screens

↓Dial= Set   0:25
Time 1   0:40

Turn Dial to change new value

BACK EXIT

Exit this screen Parameter NOT changed. Go back one level

Section 11: Tips on using Six Shooter HUNT Programs

Let's take the example program from Section 8.5.1 and change all time settings to positive numbers. Note: This is an example, choose throttle setting that work for your boat and angling methods. The screens would then look like this:

1→19.0 00.0 10.0	4→15.0 0.00 25.0
J 0:25 0:06 0:02	J 0:02 0:05 0:15

Six Shooters can run 2 to 6 throttle settings. A throttle with a time set to zero is skipped.
Let's change time settings to convert this program into many types of throttle behaviors.

11.1: **Cut Program** - Time for throttles 3 to 6 = Zero.

1→19.0 00.0 Skip	4→Skip Skip Skip
J 0:25 0:06 0:00	J 0:00 0:00 0:00

Trolls at 19% for 25 seconds, Cuts to idle for 6 seconds. Repeat.

11.2: Bump Program - Time for throttles 2 to 5 = Zero.

1→19.0 Skip Skip	4→Skip Skip 25.0
J 0:25 0:00 0:00	J 0:00 0:00 0:15

Trolls at 19% for 25 seconds, Bumps to 25% for 15 seconds. Repeat

11.3: Double Cut Program - Time for Throttles 3 and 6 = Zero, change throttle 4 time to 20 seconds.

1→19.0 00.0 Skip	4→15.0 0.00 Skip
J 0:25 0:06 0:00	J 0:20 0:05 0:00

Trolls at 19% for 25 seconds, Cuts to idle for 6 seconds, Trolls at 15% for 20 seconds, Cuts to idle for 5 seconds. Repeat

11.4: Cut with a Twitch Program - Time for throttles 4 and 6 = Zero.

1→19.0 00.0 10.0	4→Skip 0.00 Skip
J 0:25 0:06 0:02	J 0:00 0:05 0:00

Trolls at 19% for 25 sec., Cuts to idle for 6 sec., Twitches at 10% for 2 sec., Cuts to idle for 5 sec. Repeat

Time for throttles 3 and 6 = Zero to make your twitch higher.

1→19.0 00.0 Skip	4→15.0 0.00 Skip
J 0:25 0:06 0:00	J 0:02 0:05 0:00

Same as previous, but now the Twitch is at 15%.

11.5: Z Program - Cut with acceleration then Troll: Time for throttles 3 to 5 = Zero.

1→19.0 00.0 Skip	4→Skip Skip 25.0
J 0:25 0:06 0:00	J 0:00 0:00 0:15

Trolls at 19% for 25 seconds, Cuts to idle for 6 sec., Trolls at 25% for 15 seconds. Repeat

Section 12: Hunt Mode Safety Limits

Note: As stated in the safety precautions on page 2, iTroll is intended to be used to achieve low speeds when trolling. To insure this, iTroll has safety limits to cap the amount of throttle available when in HUNT Mode. Usually, the factory default limits are sufficient for most anglers. However, it is your responsibility to determine how much throttle is available in HUNT Mode - especially if your iTroll is hooked to a main (larger HP) motor, or if you go against our recommendation to not let children operate the iTroll. There are two limits:

12.1: Hunt Low Limit (HLL):
This sets a ceiling on the lowest throttle value of a HUNT program.

12.2: Hunt High Limit (HHL):
This sets a ceiling on the maximum throttle value in HUNT Mode. This is your ultimate safety limit!

The default limits from the factory are:
    Hunt Low Limit = 50% of the Master Throttle Limit (see Options Menu - Section 14)
    Hunt High Limit = 65% of the Master Throttle Limit (see Options Menu - Section 14)

Section 13: Changing HUNT Mode Low and High Limits

To change Hunt Low and High Limits:
1. iTroll MUST be in HUNT Mode (see Sec. 2.8)
2. You must be in reprogramming mode (see Sec. 10) and be at a reprogramming screen where you can change a throttle setting.
3.

PROG FUNC **Hold for 5 Seconds**

4. Screen to set low limit appears, turn Dial to change throttle value on screen, press Dial to store new Low Limit value.
5. Screen to set high limit appears, turn Dial to change throttle value on screen, press Dial to store new High Limit value.
6. You will be returned to programming mode where the new limits are applied to ALL HUNT programs in your iTroll.
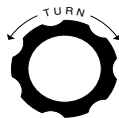
Section 14: Options Menu

14.1: To access options menu - Start with iTroll OFF

PROG FUNC **Hold for 5 Seconds**

14.2: First level of screens - Turn dial to scroll between menu items

TURN

1. DRAG Mode On or Off
2. Set Master Throttle Safety Limit
3. Add RF Remote
4. Erase all remotes
5. View unit's configuration menu

Press Dial to select one of the RED items

BACK EXIT Exit options menu, iTroll to OFF

14.3: Selection screen instructions

1 & 2: Turn dial to change a value, then push dial if you wish to store value.
3: Screens will tell you when to press left and right remote buttons on the remote you are pairing to your iTroll.
4: All transmitters will be erased.

Note: Pressing the back button will return you to **14.2** (above).

Section 15: Optional Dual Motor Control

15.1: Dual Motor Mode is a software upgrade that is in every iTroll. When dual motor enabled, iTroll can control two motors on the same boat. These motors can be a kicker and a main or a pair of mains on a boat with twin outboards or inboards. Note: Servo motor / linkage installation is required on throttle of second motor to allow iTroll to control it. These parts do require an additional purchase.

If an iTroll is Dual Motor enabled, it has separate Hunt Parameters, servo travel, servo rotation and master throttle limits for EACH motor.

15.2: Selecting which motor iTroll will operate (Dual motor enabled units).
When you turn iTroll on, it remembers the last motor it was operating. If you don't want to change motors, do nothing and iTroll will go to manual mode as normal. To change the motor that iTroll operates:

After power on, the second screen that appears will tell you to push the dial to change motors. If you press the dial, a new screen appears that instructs you to turn the dial to select a motor, then to STORE the selection by pressing the dial. iTroll then goes to manual mode controlling the motor that you just selected.

Section 16: Servo IPA (Idle Point Adjustment)

16.1 Idle point adjustment
CAUTION: Never perform this adjustment when the motor is running!
Note: This is usually a ONE TIME adjustment when you initially install your iTroll.
iTroll G3 has the ability to adjust the idle position of the servo. This allows you to take up the "slack" in the cable or rod that pulls on your motor's throttle. If you have excessive slack, there will be a dead spot at idle until the servo moves enough to remove the slack. When adjusted properly, at IDLE the throttle should be FULLY closed and have started to open between 1% and 1.5% throttle as indicated on iTroll's screen.

DON'T be overly aggressive with this adjustment. If you have the throttle opening at .5%, there is a chance that when it is hot, parts in the motor can expand and the throttle will not be fully closed at 0% throttle.

16.2 Change idle point - MOTOR OFF!
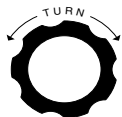1. Turn iTroll ON, wait until you can put the unit into IDLE by pressing **IDLE RUN**

2. When unit is at IDLE (see upper left corner of screen):

Hold for 10 Seconds
Release when IPA screen appears

Turn dial to change IPA value.
Values can range from 0% - 10%
in 0.5% steps

PRESS dial to set new idle point.
This is you new servo arm position at 0% throttle

Section 17: Accessing the Digital Padlock

17.1: iTroll's digital padlock allows the unlock codes for protected features and the Dual Motor software upgrade to be entered. There are features that are protected behind the padlock so they cannot be accidently changed. An example of this is servo rotation. If it was accidently reversed, idle would suddenly become full throttle - a dangerous situation.

17.2: To access padlock - Start with iTroll OFF **BACK EXIT** ### Hold for 3 Seconds

17.3: Entering values into padlock
Note: Combination numbers range from 0 to 250. When entering them, "88" is entered as "88", NOT as 8 then 8. A combination has <u>four numbers</u> that need to be entered. The padlock tells you which of the four numbers you need to enter by displaying "Lock 1, 2, 3, or 4"

17.4: Turn dial so the number on the display matches the first number in the unlock combination you are using. Press dial to store.

17.5: Repeat step 17.4 to enter remaining numbers in the unlock combination.

17.6: If successful in unlocking feature, you will see a confirmation screen or you will be taken to a screen to change a setting in your iTroll. If you see the message "Invalid Combo", repeat 17.4 and 17.5.

Section 18: Features accessed through Digital Padlock

18.1: Dual Motor Software Upgrade: Unlocks the ability to run a second motor. Every iTroll has a unique code. If you would like to purchase the code, call (909) 971-0000.

18.2: Programmable Servo Travel & Rotation

> **Servo travel AND rotation are typically set upon initial installation of iTroll and does NOT need changing unless the iTroll is moved to a different motor.**
>
> Changing servo travel and / or rotation on an existing installation can jam the servo and possibly bend linkage parts because you are changing the starting point and throw of the servo motor.
>
> If you are 100% sure that you want to change an existing installation, remove servo arm from servo so that there is NO connection to the motor when iTroll re-zeros the servo when you turn it on after changing rotation and / or travel.

Combination to access servo rotation and travel menus: 3 - 8 - 33 - 88.
For both settings, turn dial to make selection, press dial to store it.

Note: Previously set (Old) value is shown in upper right corner of screens.

Menu to set servo travel appears first: Menu to set servo rotation appears next:
   S = 90 degrees   L = 135 degrees   FWD   REV

18.3: Neutral Safety Interface Recognition
IMPORTANT: This feature is only for motors with remotely mount T-HANDLE shift and throttle controls that have our <u>optional</u> Neutral Safety Interface installed.
Combination to turn on or off: 5 - 5 - 5 - 5.
After combination is entered, display reads NS = 0 to confirm off, NS = 1 to confirm ON.

18.4: Disable Hunt Limits (Hunt Low Limit and Hunt High Limit)
IMPORTANT: YOU assume all responsibility for disabling these limits. When limits are disabled, your low limit is 80% and your high limit is 90%.
Combination to turn on or off: 10 - 10 - 90 - 64.
After combination is entered, display reads HLLHHLen = 0 to confirm off, HLLHHLen = 1 to confirm ON.

iTroll Limited Warranty

Innova Design & Distributing, Inc. (Innova) warrants iTroll to be free from manufacturing defects under normal use and conditions for two (2) years from date of original user purchase. Innova, at its sole discretion, will either repair the product or replace the product, provided the manufacturing defect is verified along with proof of purchase. To obtain warranty service call 1-909-971-0000.

This warranty is void if the product is:
A) Damaged through negligence, misuse, abuse or accident.
B) Modified, repaired, or tampered with by anyone other than Innova.
C) Units on which the serial number has been defaced, modified or removed.

This warranty does NOT cover:
A) Damage due to improper installation.
B) Fire, smoke, or heat damage.
C) Damage or improper operation of unit caused by customer abuse, misuse, negligence, or failure to follow correct installation procedures as provided with product.
D) Costs of shipping of the product to and from Innova for warranty service

This warranty is non-transferable and applies only to the original purchaser and does not extend to subsequent owners of the product. Any applicable implied warranties, including the warranty of merchantability, are limited in duration to a period of the expressed warranty as provided herein beginning with the date of original purchase at retail and no warranties, whether expressed or implied, shall apply to the product thereafter. Innova makes no warranty as to the fitness of the product for any particular purpose or use. The extent of Innova's liability under this limited warranty is the repair or replacement provided above and, in no event , shall Innova's liability exceed the purchase price paid by the purchaser of the product. Under no circumstances shall Innova be liable for any loss, direct, indirect, incidental, special, or consequential damage arising out of or in connection with the use of this product.

INNOVA
Design & Distributing, Inc.
9064 Pulsar Ct. Unit C
Corona, CA 92883
Ph: 909.971.0000

Web: www.iTroll.us
email: iTroll4Fishing@iTroll.us