

TOMAHAWK GAS GUN – SERVICE GUIDE.

Issue 5. November 2008

This service guide covers all build variations of the Tomahawk Gas Gun. The main changes have been to the wiring looms hence 2 versions of the Tomahawk wiring diagram have been shown below. The wiring colours on later guns have been upgraded to the standard colour coding for low voltage equipment.

Spare parts lists are available on request for the Tomahawk guns.

Much of the information in this guide can be applied to the Tomahawk Conversion Kit as the Control Module and associated components are common to both the Gun and Conversion Kit.

Included in this guide:-

Troubleshooter Chart

Tomahawk Operating Instructions. Issue 1

Tomahawk Operating Instructions. Issue 3

Tomahawk Wiring Diagram - issue 2.

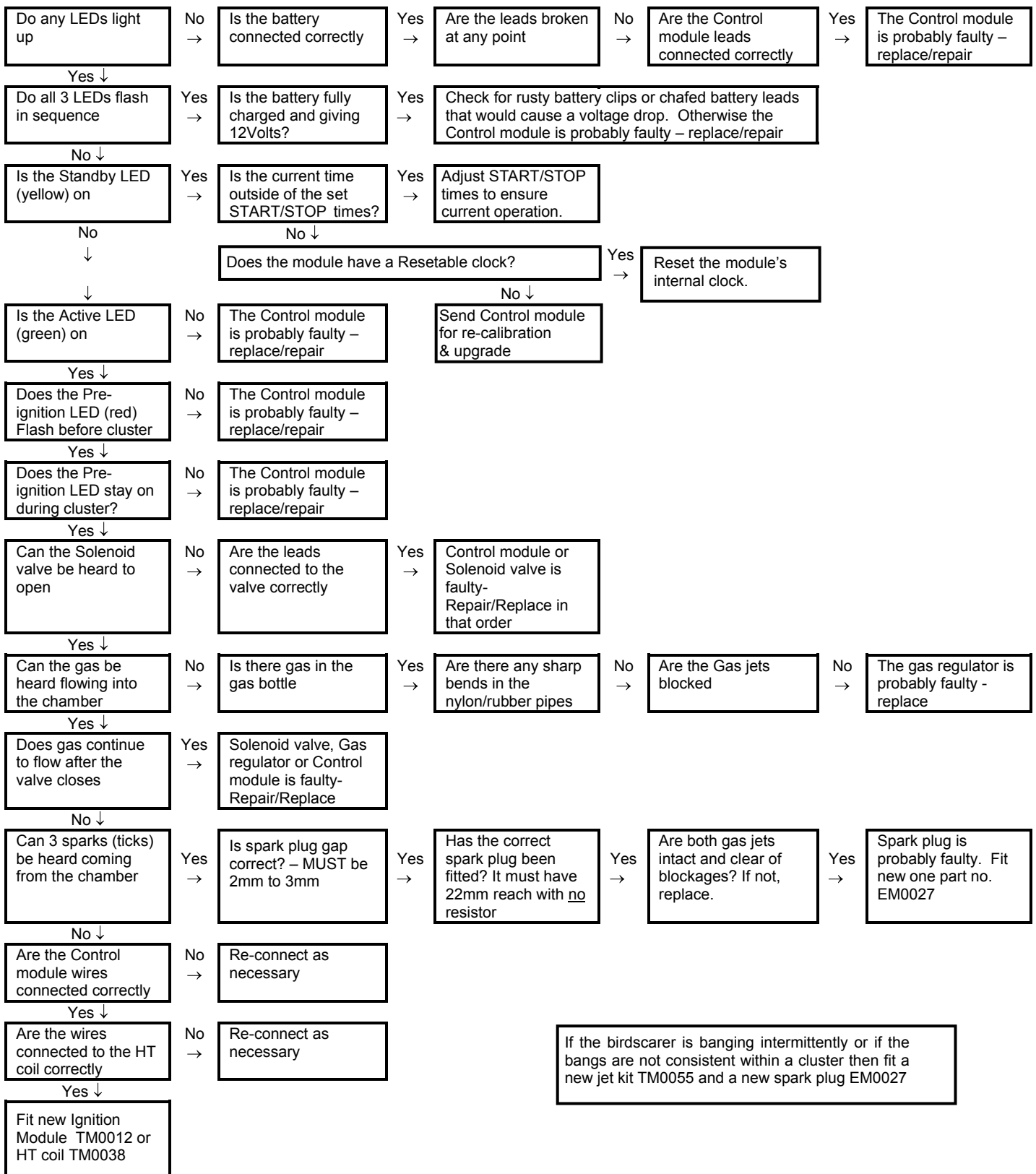
Tomahawk Wiring Diagram - issue 3.

Please contact our Sales Office for spare parts information and prices on 01233 712948 or Fax on 01233 713804

Notes.

Always follow the 'Tomahawk Operating Instructions' that are supplied with the machine. Always make sure there are no gas leaks before connecting the battery. If gas flows into the combustion chamber continuously then the solenoid valve (Part No. MN0001A) or the Gas Regulator (Part No. MN0002) is probably faulty and should be replaced.

If the gun fires intermittently or inconsistently then check that the spark plug gap is set between 2mm and 3mm and that the correct plug is fitted. If the inconsistency continues then fit a new gas jet kit part no. TM0055.

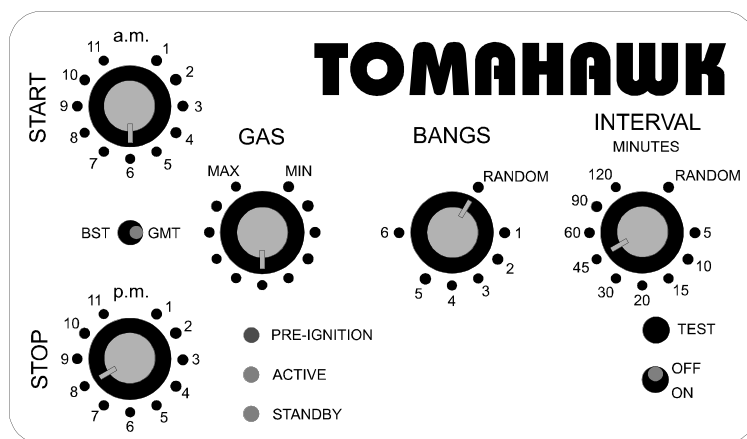


TOMAHAWK BIRDSCARER

TESTING & OPERATING INSTRUCTIONS (iss1)

WARNING

**PROPANE GAS IS HIGHLY FLAMMABLE.
NEVER TEST OR USE THE BIRDSCARER IN OR NEAR BUILDINGS,
HEDGES, HAYSTACKS, DRY CROPS OR ANYTHING FLAMMABLE.**



1.0 Features Summary.

- 1.1 The Tomahawk Birdscaring gun has an internal clock to control its daily start and stop times. It does not have a light sensor so varying light conditions do not have to be considered when positioning the gun.
- 1.2 The gun incorporates a battery housing to allow the use of a 7Ah sealed battery (Part No. 980100). If this option is used then the large crocodile clips must be removed from the battery leads.
- 1.3 The control module will automatically detect a low battery and will flash all 3 LED's in sequence until the module is switched off. The gun will not operate using a battery below the low battery level.

2.0 Initial Set-up and Test.

- 2.1 Attach the front and rear leg assemblies using the M6 screws provided. Install the spark plug (2 - 3 mm or 1/8" gap) in the rear of the birdscarer and connect the HT lead.
- 2.2 Release the 2 clamps and remove the transparent cover.
- 2.3 Ensure that the module is switched off and then connect a 12V battery noting Brown (or Red) for positive and Blue (or Black) for negative. (N.B. If you are using an optional 7Ah Sealed battery you must remove the large crocodile clips provided). **DO NOT CONNECT GAS AT THIS STAGE.**
- 2.4 Ensure that during the winter months the BST/GMT switch is set to GMT (Greenwich Mean Time) and during the summer months it is set to BST (British Summer Time).
- 2.5 Set the 'GAS' Control to the mid-point.
- 2.6 Set the 'BANGS' Control to 1.
- 2.7 Set the 'INTERVAL' Control to 5.
- 2.8 Set the 'START' time Control to 1am. and the 'STOP' time Control to 11pm.
- 2.9 Switch on the module. The module will go into a single bang cluster immediately. The 'Pre-Ignition' LED (red) will flash for approximately 10 seconds as a warning and then stay on for the duration of the cluster. The Solenoid Valve will operate followed by 3 sparks in the combustion chamber. The Module will then go into an 'Interval' denoted by the 'Active' LED (green) alone.
- 2.10 Switch off the module, DISCONNECT the battery and connect the gas. Open up the gas bottle handwheel, check for and rectify any leaks.
- 2.11 Point the barrel away from buildings, people etc. **PUT ON EAR DEFENDERS.** Connect the battery.
- 2.12 Switch on the module. The unit will go into a cluster immediately and produce a single bang.
- 2.13 If the bang is not satisfactory then adjust the GAS control on the module. Press the TEST button to simulate restarting the gun.
- 2.14 The Tomahawk is now ready to be set-up for normal operation.

3.0 Normal Operation.

- 3.1 Ensure that the battery and gas are connected correctly.
- 3.2 Leave the GAS control set to the tested position.
- 3.3 Set the 'BANGS' Control to the desired number of bangs in each cluster. (Note that 'RANDOM' will give any number of bangs between 1 and 6).
- 3.4 Set the 'INTERVAL' Control to the desired time delay between each cluster of bangs. (Note that 'RANDOM' will give any of the interval delays from 5 to 45 minutes, these time delays are approximate).
- 3.5 Set the 'START' and 'STOP' controls to the desired times and check that the GMT/BST switch is in the correct position.
- 3.6 Switch on the module. If the current time is between your set start and stop times then the Tomahawk will go into its first firing cluster and will then continue to operate according to the settings on the module. If the current time is not between your set start and stop times then the 'STANDBY' LED (Yellow) will light and remain lit until the set start time is reached.
- 3.7 Replace the transparent cover.

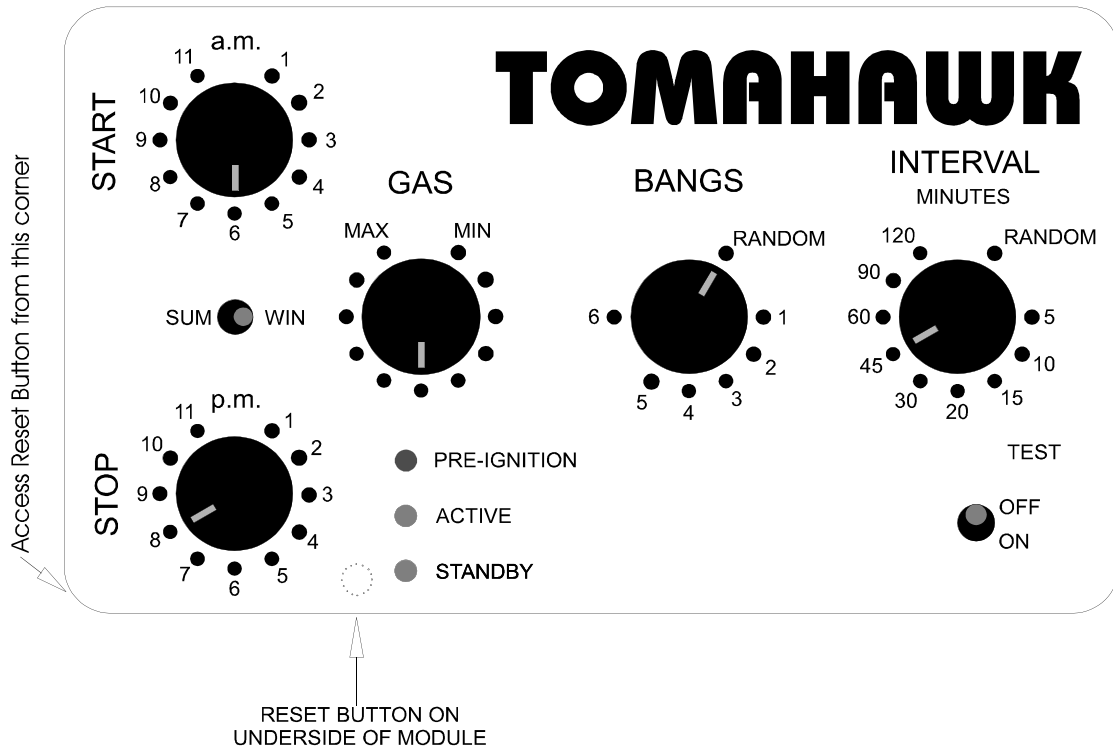
IMPORTANT: The birdscarer has negative earth so be sure to keep the positive battery clip and terminal away from the body of the machine.

TOMAHAWK BIRDSCARER

TESTING & OPERATING INSTRUCTIONS (iss3)

WARNING
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HEDGES, HAYSTACKS, DRY CROPS OR ANYTHING FLAMMABLE.

Control Module



1.0 Initial Setup

- 1.1 Attach the front and rear leg assemblies using the M6 screws provided. Install the spark plug (2-3mm or 1/8" gap) in the rear of the birdscarer and connect the HT lead to it.
- 1.2 The Tomahawk birdscarer uses liquid propane (LP) to produce an explosion in its combustion chamber. The propane is supplied from a gas bottle but it must be supplied via a regulator at the correct pressure of 1bar (14psi) which should be attached to the orange rubber hose.
- 1.3 Release the 2 cover clamps and remove the transparent cover.
- 1.4 Ensure that the module is switched off and then connect a 12-Volt battery of at least 6Ah capacity noting Red lead for positive and Black lead for negative. (N.B. If you are using an optional 7Ah Sealed battery you must remove the large crocodile clips provided). **DO NOT CONNECT GAS AT THIS STAGE.**
- 1.5 The Tomahawk birdscarer has it's own internal electronic clock to control it's daily start and stop times. This clock is usually factory set to GMT so before you can use the birdscarer it needs to be reset to your local time zone. For this purpose you use the START control, STOP control, BST/GMT switch and the Reset button which is located on the underside of the Control Module almost directly below the STANDBY LED. This Reset Button can be accessed from the lower left hand corner of the Control Module, this access can be made easier if the Control Module mounting screws are either loosened or removed entirely. Use the START control as if it were the hour hand on a clock but set it exactly to the hour. Use the STOP control as if it were the minute hand of a clock but set it to the nearest five minutes. Use the BST/GMT(SUM/WIN) switch to set the clock to p.m. or a.m.. Use the following procedure:-
 - a. If the current time is a.m. (morning) then switch the BST/GMT(SUM/WIN) switch to GMT(WIN) or if it is p.m. (afternoon/evening) then switch it to BST(SUM).
 - b. Turn the START control to the current hour, e.g. if it is 5:47 then turn it to the 5 position.
 - c. Turn the STOP control to the current nearest five minute graduation, e.g. if it is 5.47 then turn it to the 9 position as if it were the minute hand.
Now hold in the Reset button, switch the Control Module ON and wait for the green and yellow LEDs to start flashing alternately. Release the Reset button and switch the Control Module OFF again. The internal electronic clock is now set to the current time and will keep this time even when the 12-Volt battery is disconnected. Occasionally environmental conditions such as electric storms or static charges can corrupt the internal clock, in this event the clock can be reset using the above procedure.
- 1.6 The birdscarer incorporates a battery housing to allow the use of a 7Ah sealed battery (Part No. EM0031). If this option is used then the large crocodile clips must be removed from the battery leads.
- 1.7 The control module will automatically detect a low battery and will flash all 3 LED's in sequence until the module is switched off. The gun will not operate using a battery below the low battery level.

2.0 Testing

- 2.1 Ensure that during the winter months the BST/GMT(SUM/WIN) switch is set to GMT(WIN) and during the summer months it is set to BST(SUM).
- 2.2 Set the 'GAS' control to the mid-point.
- 2.3 Set the 'BANGS' control to 1.
- 2.4 Set the 'INTERVAL' control to 5.
- 2.5 Set the 'START' time control to 1am. and the 'STOP' time control to 11pm.
- 2.6 Switch on the module. The module will go into a single bang cluster immediately. The 'Pre-Ignition' LED (red) will flash for approximately 10 seconds as a warning and then stay on for the duration of the cluster. The Solenoid Valve will operate followed by 3 sparks at the spark plug in the combustion chamber. The module will then go into an 'Interval' denoted by the 'Active' LED (green) alone.
- 2.7 Switch off the module, DISCONNECT the battery and connect the gas. Open up the gas bottle tap, check for and rectify any leaks.
- 2.8 Point the barrel away from buildings, people etc. **PUT ON EAR DEFENDERS.** Connect the battery.
- 2.9 Switch on the module. The unit will go into a cluster immediately and produce a single bang.
- 2.10 If the bang is not satisfactory then adjust the GAS control on the module. Switch the module OFF and ON again to restart the gun.
- 2.11 The Tomahawk is now ready to be set-up for normal operation.

3.0 Normal Operation.

- 3.1 Ensure that the battery and gas are connected correctly.
- 3.2 Leave the GAS control set to the tested position.
- 3.3 Set the 'BANGS' Control to the desired number of bangs in each cluster. (Note that 'RANDOM' will

- give any number of bangs between 1 and 6).
- 3.4 Set the 'INTERVAL' Control to the desired time delay between each cluster of bangs. (Note that 'RANDOM' will give any of the interval delays from 5 to 45 minutes, these time delays are approximate).
- 3.5 Set the 'START' and 'STOP' controls to the desired times and check that the WIN/SUM switch is in the correct position.
- 3.6 Switch on the module. If the current time is between your set START and STOP times then the Tomahawk will go into its first firing cluster and will then continue to operate according to the settings on the module. If the current time is not between your set START and STOP times then the 'STANDBY' LED (Yellow) will light and remain lit until the set start time is reached.
- 3.7 Replace the transparent cover.

IMPORTANT: The birdscarer has negative earth so be sure to keep the positive (red wire), battery clip and terminal away from the body of the machine otherwise a short circuit will occur.

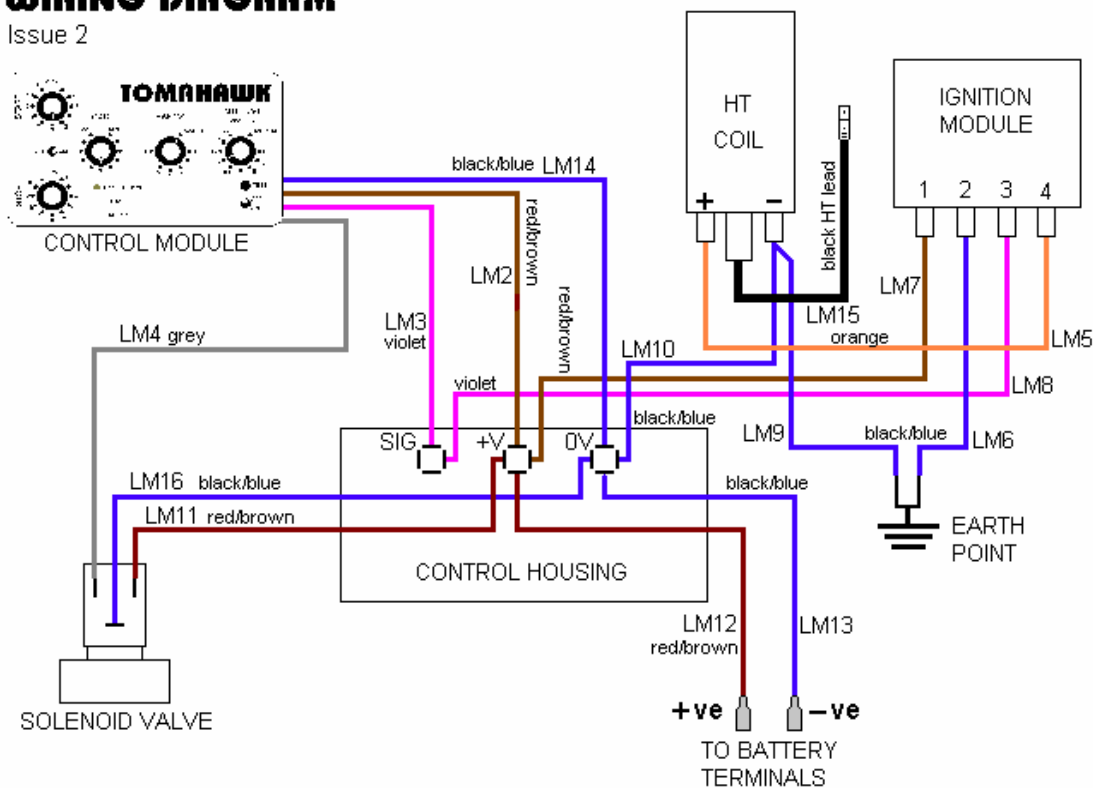
Tips on using your Tomahawk Birdscarer

If possible, position the birdscarer upwind and the barrel pointing at right angles to the wind direction, the spread of the sound is affected more by the wind direction than by the direction in which the barrel points.

Your birdscarer will have a longer term effect the fewer bangs you have in each cluster and the less frequent the clusters, so unless the pest problem is only short term, keep the number of BANGS set to 2 or 3 and the INTERVAL to 30 minutes or longer. This will also make your 12-Volt battery and propane bottle last longer before they need to be recharged or refilled respectively.

**TOMAHAWK GAS GUN
WIRING DIAGRAM**

Issue 2



TOMAHAWK GAS GUN WIRING DIAGRAM

Issue 3

