# SPARK MODERN FIRES 512/612



**BUILT-IN DIRECT VENT GAS FIREPLACE** 

# **INSTALLATION & OPERATION MANUAL**



### TABLE OF CONTENTS

Important Safety Information	4
Model Descriptions	6
Specifications	7
Clearances	11
Installation Information	14
Venting	16
Final Assembly	20
Lighting & Operation	24
Remote Handset Operation	26
Gas Conversion	33
Maintenance	35
Maintenance Log	36
Replacement Parts List	37
Control Schematic	38
Installation Record	39
Warranty Information	40

WE STRONGLY SUGGEST THAT YOU READ THIS MANUAL THOROUGHLY BEFORE BEGININNG THE INSTALLATION OF THE DIRECT VENT GAS FIREPLACE. ALTHOUGH THE BASIC REQUIREMENTS FOR THE INSTALLATION OF ALL DIRECT VENT GAS FIREPLACES ARE SIMILAR, EACH SPECIFIC PRODUCT HAS ITS OWN UNIQUE SET-UP AND INSTALLATION REQUIREMENTS THAT MUST BE FOLLOWED EXACTLY. PLAN YOUR INSTALLATION IN ADVANCE BY CAREFULLY RE-VIEWING ALL THE INFORMATION CONTAINED IN THIS MANUAL.

## IMPORTANT SAFETY INFORMATION

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1.

A manufactured home (USA only) or mobile home OEM installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 or when such a standard is not applicable, the Standard for Manufactured Home Installations, ANSI/BCSBCS A225.1, or Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA Z240.4.

The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

The installation must provide for adequate ventilation air to the appliance.

This gas appliance must not be connected to a chimney flue serving a separate solid-fuel burning appliance.

The appliance, when installed, must be electrically grounded in accordance with local codes, or, in the absence of local codes, with the National Electrical Code ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22. 1.

The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.

The flow of combustion and ventilation air must not be obstructed. Adequate accessibility clearances must be maintained for servicing and proper operation of this appliance.

Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.

Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at-risk individuals in the house. To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children and other at-risk individuals out of the room and away from hot surfaces.

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

If the barrier becomes damaged, the barrier shall be replaced with the manufacturer's barrier for this appliance.

Clothing or other flammable material should not be placed on or near the appliance.

Any screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.

## IMPORTANT SAFETY INFORMATION

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartments, burners and circulating air passageways of the appliance be kept clean.

WARNING: Do not operate the appliance with the glass door assembly removed, or if the glass is cracked or broken. Replacement of the glass should be done by a qualified service person.

WARNING: Use only glass assembly, P/N 48-510 which includes the glass panel, frame and gasket. Do not use substitute materials. Do not strike or slam the glass front. Do not use abrasive cleaners. Do not clean when hot.

CAUTION: DO NOT OPERATE WITH BROKEN GLASS

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartment, burners and circulating air passageways of the appliance be kept clean.

#### Note:

Periodically conduct a visual check to ensure the pilot and burner flames are as shown (right).





### Vent Installation Note:

When the first piece of Directvent pipe is attached to the starter collar of the fireplace, be sure to inspect both the inside and outside joints to ensure a secure fit with no air gaps. Once it is confirmed there are no gaps, rotate the pipe clockwise to lock it in place. Follow the vent manufacture's installation instructions during vent pipe installation.





# MODEL DESCRIPTIONS

512 VU-THRU

MODEL NO. BI-60-ST

#### 612 VU-THRU

MODEL NO. BI-72-ST



#### CERTIFICATION

This appliance has been certified by OMNI-Test Laboratories, Inc. to ANSI Z21.88-2014/CSA 2.33-2014 Vented Gas Fireplace Heaters and CAN/CGA-2.17-M91 (R2014), Gas-Fired Appliances for Use At High Altitudes.

This SPARK MODERN FIRES Gas Fireplace is approved for installation at elevations up to 2000 feet in the U.S. and 1370 meters (4500 feet) in Canada without change. If your installation is at an elevation greater than these, consult with the local authority having jurisdiction for gas product installations to determine their specific requirements for high altitude installations.

These appliances are approved for installation in the Commonwealth of Massachusetts by the Board of State Examiners of Plumbers and Gas Fitters.

00140					
SOLAS	- DIRECT VENT GA	SFIREPLACES	5	SOLAS – VENT FREE GAS FIREPLACE	
NOT FOR USE WITH SO	LID FUEL	SERIAL NUMBER	SOLA SFIRE S.COM	CALITION	8
SÓLAS FORTYS BI-48-ST EQUIPPED FOR -	BI-48-SSL BI-48-S Natural Gas/Gaz Naturel	SSR	- ÉQUIPÉ POUR	MAY RESULT. KEEP CHILDREN, CLOTHING, FURNITURE, GASOLINE, AND OT	IRNS HER
Input Rating	26,000 BTU/hr	30,000 BTU/hr	Debit Calorifique	LIQUIDS HAVING FLAMMABLE VAPORS AWAY.	
Min. Input Rating	16,000 BTU/hr	19,000 BTU/hr	Puissance Minimum	CAUTION: Do not operate the appliance with the glass removed, cracked, or broken,	
Orifice - DMS	#42 3.00m e / 1.0kDe	#52	L'injector	Replacement of the glass panel(s) should be done by a licensed or qualified service person. See the Ow	ver's
Min. Supply Pressure	5.5'w.c. / 1.4kPa	11.0°w.c. / 2.8kPa	Press. D'Arrivée Min.	Manual.	
Max Supply Pressure	10.0"w.c. / 2.5kPa	13.0°w.c. / 3.3kPa	Press. D'Arrivée Max.	CAUTION: Label all wires prior to disconnection when servicing. Wiring errors can cause	2
For use only wit	th barrier(s) Part No. 11223. Fol	low installation instruct	ions.	improper and dangerous operation. Verify Proper operation after servicing.	
A utiliser uniquement avec	des barrière(s) Référence 1122	23. Suivez les instructio	ons d'installation	Electrical rating – Total input of all components is less than 2.5 amperes.	
SÓLAS SIXTYO BI-60-ST	BI-60-SSL BI-60-S	SR		WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause injury or prop damage. Refer to the owner's information manual provided with this appliance. For assistance or addition	erty al
EQUIPPED FOR -	30 000 BTU/br	34.000 BTU/br	- EQUIPE POUR Debit Calorifique	information, consult a qualified installer, service agency, or the gas supplier.	
Min. Input Rating	21,000 BTU/hr	25,000 BTU/hr	Puissance Minimum	This appliance must be property connected to a venting system in accordance with the manufacturer's in instructions.	tallation
Orifice - DMS	#49	#56	L'injector	Keen humar and control comparimente clean. See installation and operating instructions accompanying	
Manifold Pressure	3.9'w.c. / 1.0kPa	10.0"w.c. / 2.5kPa	Press. A la tubulure	appliance.	
Min. Supply Pressure Max Supply Pressure	5.5 W.c. / 1.4kPa 10.0 W.c. / 2.5kPa	11.0 w.c. / 2.8kPa 13.0 w.c. / 3.3kPa	Press. D'Arrivée Min. Press. D'Arrivée Max	This vented fireplace is not for use with air filters.	
For use only wit	th barrier(s) Part No. 11218. Fol	low installation instruct	ions.		
A utiliser uniquement avec	des barrière(s) Référence 1121	18. Suivez les instructio	ons d'installation	Ce produit a été testé et répertorié OMNI-Test Laboratories conformément au ANSI Z21.88-2014 - CSA 2	2.33-
SÓLAS SEVENTY2 ERL72.5	T DBI-72-SSI DBI-7	2-SSR		2014, CAN/CGA 2.17-M91 (2014), et CSA P.4.1-09. Cet appareil peut être utilisé à des altidudes compris entre 0 et 610m (0 et 2000 pieds) (E LL seulement) eu entre 0 et 1970m (0 et 4500 pieds) / Canada cando	es men/1
EQUIPPED FOR -	Natural Gas/Gaz Naturel	Propane	- ÉQUIPÉ POUR	sans modification. Installez l'appareil selon les codes ou règlements, ou dans l'absence de tels règlement	is, selon
Input Rating	34,000 BTU/hr	40,000 BTU/hr	Debit Calorifique	les codes d'installation, ANSI Z223.1 National Fuel Gas Code, ou CSA-B149.1 en vigueur. Cet appareil l correctement raccordé à un système d'évacuation conformément aux in-structions du fabricant	loit être
Min. Input Rating	27,000 BTU/hr	28,000 BTU/hr	Puissance Minimum	Con concernin nacement a la regionale de concernante de montente de montente de montente de montente.	
Orifice - DMS	#46	#55	L'injector	demeure si les règlements locaux le permettent. Voir la notice de l'utilisateur pour plus de renseignement	s. Cet
Manifold Pressure	3.9°w.c. / 1.0kPa	10.0"w.c. / 2.5kPa	Press. A la tubulure	appareil doit être utilisé uniquement avec les types de gaz indiqués sur la plaque signalétique. Cet appar	sil ne
Min. Supply Pressure	5.5'w.c. / 1.4kPa	11.0°w.c. / 2.8kPa	Press. D'Arrivée Min.	peut pas être utilise avec d'autres gaz saut si une trousse de conversion certitee est tournie.	
For use only with	10.0 w.c. r 2.5kPa th barrier/s) Part No. 11226 Fol	Tatu w.c. ratakea low installation instruct	Press. D Arrivee Max.	Cet appareil peut être encastré 318mm au sein de construction combustible.	
For use only in	des barris (a) Parties 11220. Por		Arra.	Cet appareil peut être installé avec un manteau combustible de pas plus de 305mm de profondeur à un r de 362 au-dessus de l'ouverture du fover.	ninimum
A utiliser uniquement avec	des barriere(s) Reference 1122	26. Survez les instructio	ons d'installation		
MINIMUM CLEARANCES TO COM	PURTIPLE CONSTRUCTION			NE PAS UTILISER AVEC PORTES EN VERRE	
DISTANCES MINIMALES PAR RA	APPORT AUX MATERIAUX INF			HRD-750 - Heat Redistribution Blower Kit peut être utilisé avec cet appareil.	
FIREPLACE SIDES	4" (102mm)	FOYER CÔTE	ÉS	ATTENTION	
FIREPLACE TOP	4" (102mm)	FOYER TOP		AITENTION: L'appareil est chaud lorsqu'il fonctionne. Ne pa	S
FIREPLACE FLOOR*	1/2" (13mm)	FOYER DE C	HAUSSEE*	toucher l'appa-reil. Risque de brûlures graves surveiller les en-fants	
FIREPLACE BACK (SINGLE SIDE)	D) 2" (51mm)	FOYER RETO	DUR (UNIQUE CÔTÉ)	Garder les vêtements, les meubles, l'essence ou autres liquides produ	isant
FIREPLACE BACK (SEE-THRU)	12" (305mm)	FOYER RETO	OUR (VOIR-PAR)	des vapeur inflam-mables loin de l'appareil	i o carre
FIREPLACE FRONT	12" (305mm)	FOYER AVAN		AVEDTIPPENENT: Une installation un stalage une medication une sécondies ou un estadies mel eff	de store
*1/2" non-combust?	'E 1.5' (38mm) ble under firenlage floor must ba	JED ADTOOP	twn 0.37	peut causer des dommages matériels ou des blessures. Voir la notice de l'ublisateur qui accompagne l'aj	opareil.
12 horecompose	ale under meptade noor must ha	werk lactor of holess t	nan u.a.	Pour de l'aide ou des renseignements supplémentaires, consultez un installateur, un technicien agréé ou fournieseur de corr	le
*13mm non-combustible	e sous cheminee plancher doit a	voir facteur R de pas n	noins de 0.37	i du nascu de gaz.	
This product has been certified by (	OMNI-Test Laboratories to ANS	721 88-2014 - CSA 2	33-2014 Vented Gas	ATTENTION: Avant de le faire des reparations, marquez tous les files avant de les	
Fireplace Heaters, and CAN/CGA 2	2.17-M91 (2014), Gas-Fired App	liance For Use At High	Altitudes. This	débtancher. Les erreurs avec le circuit élétronique peuvent causer des fonctionnements dangeureux et	
appliance is equipped only for altitu appliance must be installed in account	ides from 0-2000 feet (0-610m). Intance with local codes, if any: i	In Canada 0-4500 feel if none, follow the Natio	t (0-1370m). This anal Fuel Gas Code	incorrects.	
ANSI Z223.1/NFPA 54, or Natural 0	Gas and Propane Installation Co	odes, CSA-B149.1.	and Fort Gas Good,		
This appliance is for use only with the	he type of gas indicated on the	rating plate. This applia	ance may be installed in	ATTEINTION. Ne pas utiliser l'appareil si le panneau frontal en verre n'est pas en-pla	ae, est
an attermarket, permanently located local codes. See Owner's Manual for	d manufactured home (USA on) or details.	<li>y) or in a mobile home,</li>	, where not prohibited by	S'appresse serves, submits la replacement de permaner avent normane agree. S'apprese que la brilla e et la compariment des commande port nonnes. Vois las instructions d'installatio	n et
This appliance is not field convertib	le for use with other gases, unle	ess a certified conversion	on kit is used.	d'utilisation qui accompagnent l'appareil.	i di
This appliance may be recessed 12	2.5 inches within combustible co	nstruction.		Ne pas utiliser de fitre à air avec ce foyer au gaz évacuation.	
This appliance may be installed with	h a combustible mantle of no ma	ore than 12 inches dee	p at a minimum of 14.25		23
NOT FOR USE WITH OLARS DOC	NPS			FABRIQUÉ PAR:	
NOT FOR USE WITH GLASS DOL	ma.			Progressive Manufacturing Inc.	
HKD-/50 - Heat Redistribution Blo	wer Kit may be used with this ap	opliance.		C LLUB Organ 10A 4 Technology Drive, Suite 5	
				West Lebanon, NH 03784	
		Manufacture	ed by:	Rapport #0361GF006S U.S.A.	
Terred & O.T.	Portand	Processive Manuf	acturing Inc.	1020525 or 2016 set of control of accesses	
Call I I I I III	Orogan USA	4 Technology Dri	ve, Suite 5		
OWN Two Laboratorites, Inc.		West Lebanon, N	NH 03784	SOLASEIRES COM	
Report #0361GF00	06S	U.S.A.		SULASFINES.COM	

Sample Rating Label (affixed to control panel within firebox)

## SPECIFICATIONS

INPUT	512 VU-THRU	612 VU-THRU	
Input Rating BTU/Hr.	ut Rating BTU/Hr. 30,000		
Min. Input BTU/Hr.	Min. Input BTU/Hr. 21,000		
Orifice Size - DMS	#49	#46	
GAS SUPPLY	512 VU-THRU	612 VU-THRU	
Manifold Pressure	3.5" w.c. / 0.9kPa	3.5" w.c. / 0.9kPa	
Min. Supply Pressure	5.5" w.c. / 1.4kPa	5.5" w.c. / 1.4kPa	
Max. Supply Pressure	10.0" w.c. / 2.5kPa	10.0" w.c. / 2.5kPa	

INPUT	512 VU-THRU	612 VU-THRU	
Input Rating BTU/Hr. 34,000		40,000	
Min. Input BTU/Hr. 25,000		28,000	
Orifice Size – DMS	#56	#55	
GAS SUPPLY	512 VU-THRU	612 VU-THRU	
Manifold Pressure	10.0" w.c. / 2.5kPa	10.0" w.c. / 2.5kPa	
Min. Supply Pressure	11.0" w.c. / 2.8kPa	11.0" w.c. / 2.8kPa	
Max. Supply Pressure	13.0" w.c. / 3.3kPa	13.0" w.c. / 3.3kPa	

Efficiency NG/LP	512 VU-THRU	612 VU-THRU
*Typical Installation, Steady State Efficiency - %	69/73.9	72.6/76.4
Steady State Efficiency - %	64.8/70.8	70.4/74.8
Annual Fuel Utilization Efficiency (AFUE) - %	62.8/68.6	68.2/72.5
Canadian p.4 Efficiency - %	64.5/67.7	69.8/72.7

\*Your efficiency will increase with the length of the vent run. The typical installation tested is 5ft vertical and 5ft horizontal.

# NOTE: The maximum achievable steady state efficiency can vary depending on how the fireplace is installed and operated.

- It is recommended that the pilot flame be turned off if the appliance will not be in use for an extended period of time.
- This appliance is equipped for use with the fuel type indicated on the rating plate. Field conversion is only permitted with a conversion kit supplied by SPARK MODERN FIRES.

## SPECIFICATIONS



	512 VU-THRU	612 VU-THRU	
Dimension "A" 29" (737mm)		29" (737mm)	
Dimension "B"	73.625" (1,870mm)	87.625" (2,226mm)	
Dimension "C"	59.25" (1,505")	73.25" (1,861mm)	
Dimension "D"	12.75" (324mm)	12.75" (324mm)	
Dimension "E"	2.70" (69mm)	2.70" (69mm)	
Dimension "F"	11.30" (287mm)	11.30" (287mm)	
Dimension "G"	7.95" (202mm)	7.95" (202mm)	
Dimension "H"	8.125" (206mm)	8.125" (206mm)	
*Dimension "J"	3.25" (83mm)	3.25" (83mm)	
*Dimension "K"	30.25" (768.5mm)	30.25" (768.5mm)	
Dimension "L"	11.50" (292mm)	11.50" (292mm)	
Dimension "M"	23.875" (606.5mm)	23.875" (606.5mm)	
Dimension "N"	12" (305mm)	12" (305mm)	

\*The Horizontal and Vertical vent centerline dimensions' account for the use of a 45-degree elbow.

The gas fireplace is shipped with a 3/8" tube OD (female) connection. The gas supply piping should have a separate gas shutoff valve and a 1/8" NPT plugged tapping upstream of the valve. The stove and its main control valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa). The stove must be isolated from the gas supply piping system by closing the main control valve during any pressure testing of the gas supply system at test pressures equal to or greater than 1/2 psi (3.5 kPa). After the gas supply has been connected, use a commercial gas leak detector or apply a soapy water solution to all the fittings to check for gas leaks. Never use a flame to test for leaks.

## CLEARANCES



The image above shows a typical installation.

- All framing, finishing, and construction materials that fall within 4" (102mm) of either the sides or top of the fireplace must be non-combustible and ½" below the unit.
- Any materials that cover the front face or rear face of the fireplace must be non-combustible. Allow clearance for removal of fireplace trim, screen, and glass.
- The fireplace must be secured to the framing studs using the nailing flanges as shown above. Use 2 screws or nails per nailing flange to secure the fireplace.
- The sheet metal face of this fireplace must be covered by a non-combustible material, it may not be left exposed.
- The floor the fireplace immediately rests on must be constructed of non-combustible material with an R factor of at least .37, with a minimum thickness of ½" (13mm).

### CLEARANCES



Sometimes it is necessary to frame the location you will be installing the fireplace before the fireplace is onsite, the above image shows an example of how to frame the wall before the fireplace is moved into position.

- All framing, finishing, and construction materials that fall within 4" (102mm) of either the sides or top of the fireplace must be non-combustible. (shown with a dashed line in the image above)
- Note that the vent starter collar sits slightly above the top surface of the fireplace can, there must be clearance to allow the fireplace with starter collar to slide into place.
- The floor the fireplace immediately rests on must be constructed of non-combustible material with an R factor of at least .37, with a minimum thickness of ½" (13mm).
- This framing guide is just an example of the many ways in which a SPARK MODERN FIRES Fireplace can be installed. You may need to customize this framing design to allow for things such as doors, windows, countertops, structural frame members or local code requirements.
- Dimension "B" for your model can be found on page 8.

## CLEARANCES



#### WARNING

Follow these instructions carefully to ensure safe installation.

Failure to follow instructions exactly can create a fire hazard.

- The combustible area above the facing must not protrude more than <sup>3</sup>/<sub>4</sub> (19mm) from the facing; if it does, it is considered a mantel and must meet the mantel requirements on the following page.
- When selecting non-combustible materials for use in the installation, take note of the material's propensity to absorb and conduct heat. Materials such as metal, stone, and ceramics may transmit heat more readily than other building materials.
- Only non-combustible materials (i.e. brick, tile, slate, steel, or other man made materials with a UL fire rating of Zero) may be used in the construction and installation of this fireplace. Any material must be fastened to surrounding framing. NOT to the face of the fireplace.

#### ATTENTION:

Before proceeding with your installation, determine if you plan to use either the Power Vent kit (PV-800HZ) or the Heat Redistribution Kit (HRD-750). Read the manual for these optional components before proceeding with your installation, as your installation requirements and procedure may change.

#### WARNING

Read all instructions completely and thoroughly before attempting installation. Failure to do so could result in serious injury, property damage, or loss of life. Operation of improperly installed or maintained venting system could result in serious injury, property damage, or loss of life.

#### NOTE:

Any electrical wiring, gas plumbing, or vent installation required by the appliance must be done prior to final finishing. The unit shall be test burned on high for at least 30 minutes prior to final finishing to confirm proper operation. Failure to test the appliance before final finishing may require significant and costly reconstruction

### INSTALLATION PRECAUTIONS:

Consult local building codes before beginning the installation. The installer must make sure to select the proper vent system for installation. Before installing the vent kit, the installer must read this fireplace manual and vent kit instructions. Only a qualified, licensed, installer/service person shall install the venting system. The installer must follow the following safety rules:

- Wear gloves and safety glasses for protection.
- Use extreme caution when using ladders or when on rooftops.
- Be aware of electrical wiring locations in walls and ceilings.

The following actions will void the warranty on your fireplace:

- Installation of any damaged venting component.
- Unauthorized modification of the venting system.
- Installation of any component part not manufactured or approved by SPARK MODERN FIRES Contemporary Fires.
- Installation other than permitted by these instructions.

#### NOTICE

Failure to follow these instructions will void the warranty.

State of Massachusetts:

The installation must be completed by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

#### REQUIREMENTS FOR THE COMMONWEALTH OF MASSACHUSETTS

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts. If this appliance is installed in a dwelling, building or structure used in whole or in part for residential purposes and the installation includes a horizontal vent termination that is less than seven (7) feet above the finished grade in the area of the venting, including but not limited to decks and porches, a hard-wired carbon monoxide detector with an alarm and battery back-up must be installed on the floor level of the dwelling, building or structure where the appliance is to be installed.

Additionally, a hard-wired or battery operated carbon monoxide detector with an alarm must be installed on each additional level of the dwelling, building or structure served by the appliance. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard-wired carbon monoxide detectors.

In the event that the horizontally vented appliance is installed in a crawl space or attic, the hardwired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that this requirement cannot be met at the time of completion of the installation of the appliance, the owner shall have a period of thirty (30) days to comply with the requirement. However, during said thirty (30) day period, a battery operated carbon monoxide detector with alarm must be installed.

Each carbon monoxide detector as required in accordance with the above provisions must comply with NFPA 720 and be ANSI/UL 2034 and IAS certified.

In addition, when the vent termination is less than seven (7) feet above finished grade a metal or plastic identification plate must be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal. The sign shall read, in print size no less than one-half (1/2) inch in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS".

A COPY OF THESE INSTRUCTIONS PLUS ALL VENTING INSTRUCTIONS WHICH IN-CLUDE PARTS LISTS, AND/OR ALL VENTING DESIGN INSTRUCTIONS MUST REMAIN WITH THE STOVE AT THE COMPLETION OF THE INSTALLATION.

ATTENTION INSTALLERS: Mark below which venting system was used in the installation. These instructions must remain with the SPARK MODERN FIRES Gas Fireplace Installation & Operation Manual.

O Simpson DuraVent GS/PRO®	O Selkirk Direct-Temp®	O Security Secure Vent™
O AmeriVent Direct™	O Metal Fab Direct Vent	O ICC Direct Vent

#### WARNING

This fireplace must be vented to the outside. The venting system must NEVER be attached to a chimney serving a separate solid fuel burning appliance. Each gas appliance must use a separate vent system. Do not use common vent systems.

#### INSTALLATION PLANNING

The 512 VU-THRU, and 612 VU-THRU use 4x6 Direct-vent pipe.

There are two basic types of direct-vent installation:

- Horizontal Termination
- Vertical Termination

It is important to select the proper length of vent pipe for the type of termination you choose, taking into consideration wall thicknesses.

#### FOR HORIZONTAL TERMINATION

Select the amount of vertical rise desired. All horizontal run of venting must have ¼" rise for every 12" of horizontal run.

WARNING

Never run the vent pipe level or downward. This may cause excessive temperatures which could cause a fire.

#### FOR VERTICAL TERMINATION

Measure the distance from the Horizontal Vent Center Line (see diagram on page 8). Add the ceiling thickness, the vertical rise in an attic or second story, and allow for sufficient vent height above the roofline.

#### NOTE:

You may use two 45 elbows in place of a 90 elbow. You must follow rise to run ratios when using 45 elbows. The appliance is approved for use with three 90 elbows maximum of a combination of 90 and 45 elbows up to a maximum of 270 .

For two-story applications, firestops are required at each floor level. If an offset is needed in the attic, additional pipe and elbows will be required.

It is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust. Certain limitations apply to vent configurations and must be strictly followed.

#### INSTALLING A VENT SYSTEM IN AN OUTSIDE CHASE

A chase is a vertical box like structure built to enclose venting that runs along the outside of a building. A chase is required for such venting.

#### NOTICE

Treatment of firestops and construction of the chase may vary from building type to building type. These instructions are not substitutes for local building code requirements.

#### NOTICE

When installing in a chase, you should insulate the chase as you would the outside walls of your home. This is especially important in cold climates. Insulation should be considered a combustible material. Maintain proper clearances to combustibles.



		Canadian Installations <sup>1</sup>	U.S. Installations <sup>2</sup>
A =	Clearance above grade, veranda, porch,	12 inches (30 cm)	12 inches (30 cm)
	deck or balcony		
В=	Clearance to window or door that may be	12 inches (30 cm)	9 inches (23 cm)
	opened		
C =	Clearance to a permanently closed window	See Footnotes 5 & 6	See Footnote 5
D =	Vertical clearance to a ventilated soffit lo-	See Footnotes 5 & 6	See Footnote 5
	cated above the terminal within a horizont-		
	al distance of 2 feet (61 cm) from the cen-		
	terline of the terminal		
E =	Clearance to unventilated soffit	See Footnotes 5 & 6	See Footnote 5
F =	Clearance to outside corner	See Footnotes 5 & 6	See Footnote 5
G =	Clearance to inside corner	See Footnotes 5 & 6	See Footnote 5
H =	Clearance to each side of centerline ex-	3 feet (91 cm) within a height of 15 feet	See Footnote 5
	tended above meter/regulator assembly	(4.5 m) above the regulator/meter assembly	
=	Clearance to service regulator vent outlet	3 feet (91 cm)	See Footnote 5
J=	Clearance to non-mechanical air supply in-	12 inches (30 cm)	9 inches (23 cm)
	let to building or the combustion air inlet to		
	any other appliance		
K=	Clearance to a mechanical air supply inlet	6 feet (1.83 m)	3 feet (91 cm) above if within 10 feet (3 m)
	64M - 1958		horizontally
L =	Clearance above paved sidewalk or paved	7 feet (2.12 m)	See Footnote 5
	driveway located on public property		
M =	Clearance under veranda, porch, deck or	12 inches (30 cm) See Footnote 4	See Footnote 5
	balcony		

Footnotes

1 In accordance with the current CSA B419.1, Natural Gas and Propane Installation Code

2 In accordance with the current ANSI Z223.1 / NFPA 54, National Fuel Gas Code

3 A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

4 Permitted only if veranda, porch, deck or balcony is fully open on a minimum of two sides below the floor.

 $\,5\,$  Clearance in accordance with local installation codes and the requirements of the gas supplier.

6 Dégagement conforme aux codes d'installation locaux et aux exigences du fournisseur de gaz.

Install a Simpson Duravent (Or equivalent) wall thimble, part number 46DVA-WT (not supplied by SPARK MODERN FIRES), where the pipe passes through a wall to retain any insulation in the wall and to maintain proper clearances. If the wall being penetrated is constructed of non-combustible material only (i.e., Masonry block or concrete), the wall thimble is not required; and a hole with zero clearance is acceptable (6 %" hole).

NOTICE:

Venting terminals shall not be recessed into a wall or siding.

This SPARK MODERN FIRES Gas Fireplace has been tested and listed for installation with 4" X 6 5/8" M&G DuraVent GS/Pro®, Selkirk Direct-Temp®, Security Secure Vent™, AmeriVent Direct™, Metal Fab Direct Vent and ICC EXCELDirect venting components. Although you may use the pipe components (straight pipe, elbows, etc.) from any of the listed manufacturers, you may only use the vent terminations (caps) listed in the chart on the following page. For installations where a snorkel is needed, please note that only three snorkels are approved for use. Please plan your installation accordingly.

For all specific venting installation requirements, follow the installation instructions included by the venting manufacturer with the venting system components you have chosen.

#### PLEASE NOTE:

- It is assumed that the installation will include at least one 90° elbow. Up to three additional 90° elbows (or equivalent 45° elbows) may also be used. The total venting may not exceed 30 feet of vertical rise and/or 12 feet horizontal run. Refer to the venting charts on pages 16 for specific details while you plan your installation. Note: The number of elbows impacts the maximum allowable horizontal vent run.
- There should be a 1 1/2" overlap of the vent and combustion air tubes, when telescopic joints are used.
- The location of the vent termination must meet the requirements of the current edition of ANSI Z223.1/NFPA 54, National Fuel Gas Code or CAN B419.1, Natural Gas and Propane Installation Code and the requirements shown on page 14 of this manual.

APPROVED VENT TERMINATIONS	M&G DURAVENT GS/PRO	SELKIRK DIRECT- TEMP	SECURITY SECURE VENT	AMP AMERIVENT DIRECT	METAL FAB DIRECT VENT	ICC EXCELDIRECT
VERTICAL CAP	46DVAVCH	1604802	SV4CGC	4DVC	4DVT	TM4VT
HORIZONTAL CAP	46DVAHC 46DVAHRCS 46DVAHSC	1604804	SV4GHC	4DVHC	4DHT	TM4HT TM4DHT
SNORKEL	N/A	1604836	N/A	4D36C	N/A	TMST36

Just as with any other vented device, vertical vent rise creates draft (negative pressure) in the firebox as the exhaust gases heat up. If this draft becomes excessive, it can affect the performance or appearance of the fire. The SPARK MODERN FIRES Gas Fireplace includes an integrated air restrictor that can used to balance the draft in the fireplace to the optimal level for installations where excessive draft might occur. The SPARK MODERN FIRES Gas Fireplace will ship from the factory with the air restrictor set to the #1 position. If the licensed fireplace installer determines that draft reduction is necessary, loosen the fastener on the dial and make small adjustments from #1 to #4 until a satisfactory result has been achieved.

The air restrictor dial is located on the flue side of the firebox when viewed from the front. To access, remove the lower air screen and side panels. Once satisfied with the air restrictor adjustment, secure its position by tightening all hardware.



#### SPARK MODERN FIRES flue restrictor kit, part #11317





Some vent configurations may create excess draft within the fireplace. Excess draft can cause issues such as a rapid, or "nervous" flame picture, undesirable flame color, or pilot lifting which may prevent the fireplace from staying lit. In these circumstances it may be necessary to install the flue restrictor kit part #11317 in the venting system. It is permissible to install this restrictor at the vent cap should the venting system already be installed. Secure the restrictor plate with the included #10 sheet metal screws.

Vent chart for 512 VU-THRU and 612 VU-THRU.



Power vent runs of up to 110ft with (6) 90 elbows are permitted when using the SPARK MODERN FIRES power vent kit PV-800HZ. Refer to power vent instructions for additional power vent installation and operation information.

Use this worksheet to determine the equivalent horizontal run for use with the vent charts on the next page. The information contained within this worksheet may also be useful during installation or in the event that you need technical assistance from SPARK MODERN FIRES.

Α.	FUEL TYPE O NATURAL	GAS	O LP GAS (PR	OPANE)
В.	TOTAL VERTICAL VENT RISE (MEASUF THE BACK OF THE FIREPLACE TO THE HORIZONTAL VENT CAPS) OR TO THE FEET	RED FROM HOR E HORIZONTAL E FLANGE ON TI	IZONTAL CENT CENTERLINE O HE CAP (FOR VE	ERLINE OF VENT OPENING ON OF THE VENT CAP (FOR ERTICAL CAPS):
C.	TOTAL HORIZONTAL VENT RUN (MEA FLANGE ON THE CAP (FOR HORIZON <sup></sup> (FOR VERTICAL CAPS)):	.SURED FROM T TAL CAPS) OR T FEET	HE VENT STAR	TER ON THE FIREPLACE TO THE AL CENTERLINE OF THE CAP
<u>NC</u> VE BC ML	DTE: THE VERTICAL VENT RISE AND HOR NT CAP RELATIVE TO THE VENT OPENIN DTH A VERTICAL RISE AND HORIZONTAL UST BE COUNTED.	IZONTAL VENT I IG ON THE FIREI RUN. SNORKEI	<u>RUN ARE THE OI PLACE. VENT PI</u> . CAPS HAVE BU	FFSETS IN THE LOCATIONS OF PE THAT RUNS AT 45° HAVE IILT-IN VERTICAL RISE THAT
D.	TOTAL NUMBER OF 90° ELBOWS:	NOTE: S	NORKELS COUN	NT AS 2-90° ELBOWS
E.	TOTAL NUMBER OF 45° ELBOWS:			
<u>НС</u> С. D. E. F. G. H.	<ul> <li>DRIZONTAL VENT RUN EQUIVALENT CA</li> <li>Total horizontal vent run (actual):</li> <li>90 Elbows needed:</li> <li>45 Elbows needed:</li> <li>Total 90 Elbows equivalent:</li> <li>90 Elbows in excess or 2:</li> <li>Additional horiz. feet (equivalent):</li> <li>Horizontal vent run (equivalent):</li> </ul>	LCULATOR D+(Ex½) F-2 Gx3 C+H	    	
TE	RMINATION (CAP) TYPE: O HORIZON	ΓAL	O VERTICAL	O SNORKEL
VE	.NT BRAND:			
0	Simpson DuraVent GS/PRO®	O Selkirk Dir	ect-Temp®	O Security Secure Vent™
0	AmeriVent Direct™	O Metal Fab	Direct Vent	O ICC Direct Vent
VE	NT CAP MODEL NO: NO	DTE: SEE APPR	OVED VENT CAP	PS ON THE PREVIOUS PAGE.
WA	AS THE FIREPLACE INSTALLED WITH A	SPARK MODER	N FIRES POWEF	R VENT? (CIRCLE ONE) Y N

### FINAL ASSEMBLY

#### SCREEN REMOVAL:

1. Lift up on the lower air panel to remove it from the fireplace opening.



2. Remove the left and right side panels by lifting up and toward you.



 The fireplace screen is held in place by 3 self-tensioning latches along its top edge (4 latches on the 612). Release these latches to remove the screen.





5. Lift the screen up so that the bottom of the screen clears the bottom of the fireplace opening.



6. Angle the screen toward you from the bottom to remove.

To reinstall the screen, reverse these steps. Remember to confirm the latches are in their "home" position any time you are installing or removing the screen.



#### NOTICE

If this screen is removed for servicing this appliance it must be replaced prior to operating the appliance.

### FINAL ASSEMBLY

### FINAL ASSEMBLYGLASS REMOVAL:

 With the screen removed, loosen the <sup>1</sup>/<sub>4</sub>-20 bolts along the top edge of the glass frame using a 7/16 socket.





- 2. Confirm that the Screen latches are in their "home" position. (see image
- 3. Lift the glass frame assembly up so that the bottom of the glass frame assembly clears the bottom of the fireplace opening.



#### NOTICE

Do not attempt to operate the fireplace without the screen or glass frame assembly in place. Doing so could lead to injury, property damage, or loss of life. 4. Angle the glass assembly toward you from the bottom to remove.



Refer to the next page for instructions on burner media placement.

### **GLASS INSTALLATION:**

1. Insert the glass frame assembly into the fireplace by angling the top of the glass in and up into the fireplace.



- 2. Lift the glass frame assembly up so that the bottom of the glass frame assembly clears the bottom of the fireplace opening.
- 3. Slide the glass frame into the glass frame retainer along the bottom of the firebox opening.
- 4. Install the ¼-20 bolts along the top edge of the glass frame assembly and tighten using a 7/16 socket.

### FINAL ASSEMBLY

### PLACING THE BURNER GLASS MEDIA

The burner glass media poly-bag that you set aside when you unpacked the fireplace contains the correct amount of glass material to cover the burner. DO NOT add any additional media to the media supplied with your fireplace. The entire contents of the bag should be evenly distributed over the burner tray.

- 1. Locate the burner in the fireplace. Refer to the adjacent illustration.
- 5. Carefully clip one corner of the poly-bag to form a pouring spout. The opening should be large enough to allow the glass media to flow but not so large that you can't control the flow.
- 6. You will notice that the burner surface is designed with turned-up edges that form a tray to hold the glass media.
- 7. Starting at one end, pour the glass media onto the burner tray, keeping the pouring spout on the poly-bag toward the center of the burner to avoid spillage of glass pieces over the sides of the burner. See the adjacent illustrations.
- 8. Once you have poured all of the glass burner media into the burner tray, carefully smooth the glass pieces out so they have a uniform depth over the entire surface of the burner. When the burner glass media is properly placed, it should look like the adjacent illustrations.

Note: If a few pieces of glass escape over the edges of the burner tray during installation, it is not a problem. They will simply land in the area below the burner and will do no harm.



# LIGHTING & OPERATION

# WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

When lighting this appliance, follow these instructions exactly.

A. This appliance is equipped with an ignition device that automatically lights the pilot. Do not try to light the pilot by hand.

B. BEFORE OPERATING THE BURNER SYSTEM, smell around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

#### WHAT TO DO IF YOU SMELL GAS

- Do not try to light the appliance.
- Do not touch any electric switch; do not use any telephone in your building.
- Immediately call your gas supplier from a neighbor's telephone. Follow the gas supplier's instructions
- If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to operate the gas controls. Never use tools. If a knob will not push in or turn by hand, don't try to re-pair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system which has been under water.

#### **OPERATING INSTRUCTIONS**

- 1. STOP! Read the safety information above on this label.
- 9. This appliance is equipped with an ignition device that automatically lights the pilot. Do not try to light the pilot by hand.
- 10. Using the Remote Handset, or the optional Wall Switch, push the "OFF" (\*) button until you hear an audible signal to insure the appliance is off.
- 11. Wait five (5) minutes to clear out any gas. Then smell for gas including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, proceed to step 5.
- 12. Using either the Remote Handset, or the optional Wall Switch, simultaneously press the "ON" <sup>(</sup><sup>(</sup>)</sup> and "High Flame" <sup>↑</sup> buttons. An audible signal confirms the start sequence has begun.
- 13. Continuing beeps confirm the ignition is in process. Once lighting the pilot flame should appear as shown in Fig.2. Once the pilot is confirmed, the main burner ignites on high.
- NOTE: If the pilot does not stay lit after several tries, proceed to step 9.
- 14. Use the flame height adjustment buttons on either the Remote Handset or the optional Wall Switch to adjust the flame. Press the ↓ button twice to decrease the flame height to its lowest setting, press the ↑ button twice to increase flame height to the highest setting. Pressing the ↑ or ↓ button once will modulate the flame to intermediate settings. The Remote Handset can also be used to control the appliance thermostatically.
- 15. Press and hold the 4 button on the Remote Handset or optional Wall Switch to set the appliance to Pilot flame only.
- **16.** If the appliance will not operate, follow the instructions "TO TURN OFF GAS TO THE APPLIANCE" and call your gas service technician or gas supplier.

#### TO TURN OFF GAS TO THE APPLIANCE

- To turn off gas to the appliance, push and release the "OFF" <sup>(b)</sup> button on either the Remote Handset or the optional Wall Switch. An audible signal will confirm.
- 17. TO TURN OFF THE GAS SUPPLY TO THE APPLIANCE, close the shut-off valve on the gas supply line to the appliance.







**FIG. 2** 

# LIGHTING & OPERATION

### **OPERATING YOUR FIREPLACE FOR THE FIRST TIME**

When operating your new fireplace for the first time, some vapors may be released due to the curing compounds used in the manufacture of the appliance. They may cause a slight odor and could cause the flames to be the full height of the firebox, or even slightly higher, for the first few hours of operation. It is also possible that these vapors could set off and smoke detection alarms in the immediate vicinity. These vapors are quite normal on new appliances. We recommend opening a window to vent the room during the burn off period. After a few hours use, the vapors will have disappeared and the flames will be at their normal height.

### FLAME SUPERVISION DEVICE

For your safety, this appliance is fitted with a flame supervision device which will shut-off the gas supply if, for any reason, the pilot flame goes out. This device incorporates a fixed probe, which senses the heat from the pilot flame. If the probe is cool, the device will prevent any gas flow unless manually lighting the pilot. See full lighting instructions. Periodically check the pilot and burner flames, comparing them to figure 2 on the preceding page, and the image at the bottom of this page.

# LIGHTING, OPERATION, AND RATING INFORMATION

The Lighting, Operation and Rating information is located on a plate on the RH side of the firebox.



DO NOT ATTEMPT TO TOUCH THE DATA PLATE WHILE THE FIREPLACE IS STILL HOT! Let the fireplace cool first before touching it.

To access the plate, remove the surround and grab the plate and slide it up to read it. There is important information on both sides of the plate.

#### SERVICING

If any attention is required for your appliance, contact your dealer quoting the model number. It will be helpful if the appliance's serial number can also be quoted. This number is on the rating plate, which is located under the burner. The replacement parts are shown at the end of this manual. Please always quote the part number and description when requesting spare parts.

#### FIREPLACE CONTROL DEVICES

There are two ways to control your fireplace.

- 1. Thermostatic Remote Control (M46-507)
- 2. Optional Wall Switch (M46-505)

The Thermostatic Remote Control can be programmed to function automatically—see pages 26-31.

The Wall Switch (optional) can be used to turn the flame on, off, and to increase or decrease the flame height—see M46-505 —Wall Switch Kit.

# NOTE: The remote control in the AUTO mode will override the optional wall switch.





Programmable Thermostatic Remote Control (M46-507)

Wall Switch (M46-505) (optional)



#### SPARK MODERN FIRES REMOTE HANDSET

Please note the images of the remote handset on pages 26-31 of this manual depict the Maxitrol GV60 Remote Control, although the profile of the remote depicted is different from the one included with your fireplace, the buttons and operation of the remote is the same.

Follow the instructions in the manual using these guidelines:

- The large flame button (as seen in the manual's images is equivalent to the up arrow on your remote 1
- The small flame button & as seen in the manual is equivalent to the down arrow on your

remote 🎚



GV60 Remote Control shown in this Manual



GV60 Remote Control supplied with your fireplace

#### SPARK MODERN FIRES REMOTE HANDSET PAIRING

- Press and hold the Reset button on the Receiver mounted within your fireplace. Initially you will hear a short beep, continue to hold the Reset button until you hear a second longer beep.
- Press the down arrow on your remote **↓**.
- You will hear 2 beeps from the Receiver confirming that your remote is now paired.



#### HOW TO TURN YOUR FIREPLACE OFF (INCLUDING PILOT)

Familiarize yourself with each of these methods before operating your fireplace.

**Handset and Wall Switch:** Press and hold the OFF button for a second (either on the handset or the wall switch).

If the flames are on, they go down and you hear the valve motor wind down. You hear a clunk and a beep indicating that the valve has received the signal from the remote control.



Programmable Thermostatic Remote Control



Wall Switch (optional)

### HOW TO ENSURE YOUR FIREPLACE CANNOT BE TURNED ON INADVERTENTLY

You can use the following method to ensure that your fireplace will not turn on when you don't want it on.

First, ensure your replace is turned off—including the pilot—and cold BEFORE going ahead.

- Close the shut-off valve on the gas supply line to the appliance.
- Remove all batteries from the receiver as well as the battery from the handset.

#### Automatic Shut-Off (in certain conditions)

Your fireplace's remote control is equipped with an automatic shut-off mechanism which is activated in certain conditions. See page 31 in the *Remote Control Operation* section for a description of this feature.

**NOTE: Before using the remote control system for the first time**, the receiver and the handset are synchronized at the factory. See the section *SPARK MODERN FIRES Remote Handset Pairing Set-up* on page 25 of this manual if the receiver and handset lose synchronization.

**IMPORTANT:** BEFORE YOU BEGIN, please note that on this system, the settings of time, temperature and automatic ON/OFF can only be programmed when the function display is flashing. Be patient when programming as it can take a few seconds to set.



Note: In the TEMP or TIMER modes, the remote handset senses the room temperature and adjusts the flame accordingly.

To communicate, the handset should be within 15 feet (4.5 meters) of the fireplace.

#### Do not leave the handset on the hearth, mantel, or on top of the fireplace.

#### TO TURN ON APPLIANCE

CAUTION

When pilot ignition is confirmed, motor turns automatically to maximum flame height.

• On the valve, turn MAN knob on the ON, full counterclockwise position.



- Simultaneously press the OFF and (large flame) buttons until a short beep confirms the start sequence has begun; release buttons.
- Continuing beeps confirm the ignition is in process.
- Once pilot ignition is confirmed, there is main gas flow.
- After main burner ignition the handset will automatically go into manual (MAN) control mode.



Handset Overview

### TO TURN OFF APPLIANCE



Press OFF button.

When the pilot is off, it will take 2 minutes before it can be lit again.

#### STANDBY MODE (Pilot Flame)

Press and hold (small flame) to set appliance at pilot flame

#### FLAME HEIGHT ADJUSTMENT



 In standby mode: Press and hold 
 (large flame) button to increase flame height.



- Press and hold (small flame) button to decrease flame height or to set the appliance at pilot flame.
- For fine adjustment tap the (large flame) or flame) buttons.

### Express Low and High Fire



Double-click (small flame) button. "LO" will be displayed. NOTE: Flame goes to high fire first before going to designated low fire.



Double-click (large flame) button. Flame automatically goes to high fire. "HI" will be displayed.

### SETTING °C/24-HOUR OR °F/12-HOUR



- In MAN mode, press OFF
- and (small flame) buttons until display changes from Farenheit/12-hour clock to Celsius/24-hour clock and vice versa.

### SETTING THE TIME



- The time display will flash after either:
- Press (large flame) button to set the hour.
- Press & (small flame) button to set the minute.
- Press OFF or simply wait to return to MAN mode.

#### MODES OF OPERATION



• Briefly pressing the SET button changes the mode of operation in the following order:



NOTE: Manual mode can also be reached by pressing either the ⚠ (large flame) or the ໖ (small flame) buttons.



• MAN - Manual Mode - Manual Flame Height Adjustment.



\* TEMP - Daytime Tempera-

ture Mode (Appliance must be in standby mode; pilot ignited) - The room temperature is measured and compared to the set temperature. The flame height is then automatically adjusted to achieve the Daytime Set Temperature.



**D TEMP** Daytime Temperature Mode (Appliance must be in standby mode; pilot ignited) - The room temperature is measured and compared to the set temperature. The flame height is then automatically adjusted to achieve the Daytime Set Temperature.



TIMER - Timer Mode (Appliance

must be in standby mode; pilot ignited) -The timers P1 and P2 (Program 1, Program 2) each can be programmed to go ON and OFF at specific times. For instructions see Timer Programming Mode.

**NOTE:** The display shows the set temperature every 30 seconds.

#### SETTING THE ON / OFF TEMPERATURES

### SETTING THE "DAYTIME" TEMPERATURE

**Default Settings:** ★ TEMP (sun), 23°C / 74°F



 Briefly press SET button to scroll to TEMP (sun) mode. Hold the SET button until the TEMP flashes.



SETTING THE "NIGHTTIME SETBACK"

 Briefly press SET button to scroll to TEMP <u>TEMP</u> (moon) mode. Hold the SET button until the TEMP flashes.



Press (large flame) button to increase the Hytime Set Temperature.



┨╝╴ᢆ᠁

)

1 \$35pm

0

0

 Press (large flame) button to increase ) Nighttime Setback Temperature.



Press (small flame) button to decrease Daytime Set Temperature.



 Press (small flame) button to decrease ) Nighttime Setback Temperature.



• Press OFF or simply wait to complete programming.



 Press OFF or simply wait to complete programming.

### Tip

Set the different parameters when they are flashing.

#### SETTING PROGRAM TIMERS

- You can program two periods of time between 12:00 am and 11:50 pm in each 24-hour cycle.
- The Programs P1 and P2 must be set in the following order during a 24-hour cycle: P1 , P1 ), P2 \* and P2 ).
- The icon indicates the beginning of the period (ON) and the icon indicates the end of the period (OFF).
- If  $P1 \neq = P1$ ,  $P2 \neq = P2$  the programming is cancelled.
- To keep the fireplace ON all night, set P2 ) at 11:50 am and P1 → at 12:00 am.

#### Default settings:

Program 1: P1 6:00 am P1 8:00 am Program 2: P2 11:50 pm P2 11:50 pm

 Briefly press SET button to scroll to TIMER mode.





6:00

### SETTING P1 ON TIME

- Hold the SET button until
   P1 \* (sun) is displayed and the time flashes.
- Press (large flame) button to set the hour.



• Press (small flame) button to set the minutes.



 Briefly press SET button o scroll to TIMER P1 (moon) while the time flashes.

B:DD<sup>am</sup> TINER

۵

6:00<sup>at</sup>

)

) <sup>6:00\*</sup>

- Press (large flame) button to set the hour.
- Press (small flame) button to set the minutes.

#### SETTING P2 ON TIME

- Briefly press SET to scroll to TIMER mode
   P2 \* (sun) while the time flashes.
- Follow the instructions given to set P1 ON time.

#### SETTING P2 OFF TIME

- Briefly press SET to scroll to TIMER mode
   P2 ) (moon) while the time flashes.
- Follow the instructions given to set P1 OFF time.

Press OFF button to save these settings. The timers are programmed. See the diagram on programming sequences on the following page.



6:00 a.m.—P1 +\$\$ Start time	8:00 a.m.— End time	P1 D	4:00 p.m.—P2 - C Start time	10:00 p.m End time	-P2 D 6:00 a.m Start time	_P1 -
Set Temp	- 74°F	Set Temp )40°	°F Set T	°emp ¦∴ 74°F	Set Temp 🔰 40°F	

#### AUTOMATIC TURN DOWN

- No communication. If there is no communication between the receiver and the handset for a period of 6 hours, the appliance goes into pilot mode.
- No change in flame height. If there is no change in flame height for a period of 6 hours, the appliance goes into pilot mode.

**NOTE:** In **TEMP** or **TIMER** modes, the flame height will vary according to room temperature. The appliance will continue to work normally. However, if the room temperature remains the same for 6 hours, the appliance will go into pilot mode.

#### AUTOMATIC SHUT OFF

• Low batteries in the receiver. With low

battery power in the receiver the system shuts off completely.

NOTE: This does not apply when the power supply is interrupted.

No change in pilot. The appliance shuts off completely when it is continually in pilot position—without any change—for a period of 5 days.

#### LOW BATTERY INDICATION

CAUTION

**DO NOT USE** a screwdriver or other metallic object to remove the batteries from the battery box or the handset! This could cause a short circuit.

**Remote handset:** The battery icon will show when the battery needs to be replaced. Replace with one 3 "AAA" alkaline batteries.

**Receiver:** Three short 'beeps' will sound when the motor turns when the batteries need to be replaced. Replace with four 1.5 V **alkaline** batteries.

#### HANDSET / RECEIVER MATCH

The remote control handset and receiver are program- med to function together. In case of a replacement of the handset or the receiver, you will need to reset the receiver to allow them to function together. Contact your dealer for details.

# GAS CONVERSION

These appliances are field convertible between Propane to Natural gas when a SPARK MODERN FIRES gas conversion kit is used. Gas conversions must be performed by a qualified service technician.

PART #	DESCRIPTION	SPARK MODERN FIRES CONVERSION KIT CONTENTS				
60BI-LPC	512 LP CONVERSION KIT	#27 PILOT ORIFICE	#56 LP BURNER ORIFICE – 2PCS		#8 SCREW – 2PCS	
60BI-NGC	512 NG CONVERSION KIT	#35 PILOT ORIFICE	#49 NG BURNER ORIFICE – 2PCS	NG COLLAR – 2PCS	#8 SCREW – 2PCS	
72BI-LPC	612 LP CONVERSION KIT	#27 PILOT ORIFICE	#55 LP BURNER ORIFICE – 2PCS		#8 SCREW – 2PCS	
72BI-NGC	612 NG CONVERSION KIT	#35 PILOT ORIFICE	#46 NG BURNER ORIFICE – 2PCS	NG COLLAR – 2PCS	#8 SCREW – 2PCS	

Before servicing the appliance, shut off gas and electrical power to the unit. To access the burner(s), follow the screen and glass removal procedure shown on pages 20 and 21.

- The burner(s) are retained by #10 sheet metal screws, using a 5/16" nut driver, remove these screws. (8 screws in the 512; 12 screws in the 612).
- 2. The 512 VU-THRU and 612 U-THRU have a burner link that aligns the burners, remove the (2) #10 sheet metal screws.
- 3. Lift off the pilot hood.
- 4. The Pilot assembly is retained by (2) #10 sheet metal screws.
- 5. After removing the screws retaining the pilot assembly, lift the pilot assembly into the firebox.
- 6. Using a 10mm wrench, remove the pilot gas line to swap the orifice.
- 7. Once the pilot gas line is tight, reinstall the pilot assembly making sure the gasket is intact.









### GAS CONVERSION

- 8. When converting from Propane to Natural Gas, slide the NG Collar over the Burner inlet tube and use a ¼" nut driver to secure with a #8 sheet metal screw.
- 9. When converting from Natural Gas to Propane, remove the NG Collar from the burner inlet tube.
- 10. Using a 9/16" deep socket, replace the burner orifice(s) in the firebox with those provided in the conversion kit.
- 11. Reinstall the burner(s) in the fireplace. Reinstall the burner link if required.
- 12. Using a flat screw driver, remove the Pressure Conversion Plug and set it to NG or LP accordingly.

#### **Gas Flow Adjustment**

- 1. Install a gas pressure gage on the outlet pressure tap on the valve.
- 2. Light the fireplace using the remote handset.
- 3. With the fireplace on high, set the maximum pressure by adjusting the small flat screw set within the Pressure Conversion Plug. Refer to chart below for high pressure settings. (it may be necessary to lift the valve control bracket up out of the fireplace to access the pressure tap and minimum rate orifice)
- 4. double tap the down arrow to set the fireplace to low. "Lo" will momentarily appear on the display.
- 5. The minimum rate can be set by adjusting the minimum rate orifice. Refer to the chart below for Low pressure settings.
- 6. Close the pressure tap(s) by turning the screws clockwise. Check all connections/pressure taps for leaks.







LP position

MODEL	HIGH PRESSURE (NG)	LOW PRESSURE (NG)	HIGH PRESSURE (LPG)	LOW PRESSURE (LPG)
512 VU-THRU	3.9" w.c. / 1.0kPa	1.9" w.c. / 0.47kPa	10.0" w.c. / 2.5kPa	4.7" w.c. / 1.17kPa
612 VU-THRU	3.9" w.c. / 1.0kPa	2.2" w.c. / 0.55kPa	10.0" w.c. / 2.5kPa	4.7" w.c. / 1.17kPa

### MAINTENANCE

### ANNUAL MAINTENANCE

A qualified service agency should conduct an annual inspection and maintenance of your SPARK MODERN FIRES Gas Fireplace including the overall installation and venting to keep it running safely. The following procedures should be per-formed only by a qualified service person. The gas supply should be turned off and the stove should be completely cool whenever a maintenance procedure is performed. All parts of the appliance that are removed for servicing must be replaced prior to operation.

This appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive dust or lint from carpeting, bedding materials, pets, etc. It is imperative that control compartments and circulating air passageways of this appliance be kept clean.

#### **CLEANING THE BURNER AND FIREBOX**

During the annual inspection and maintenance appointment, the service person should clean the burner and firebox. To gain access to the firebox and burner, follow the instructions beginning on page 18 of this manual.

#### DO NOT USE A VACUUM CLEANER TO CLEAN THE GLASS BURNER MEDIA.

A vacuum cleaner may be used to clean the metal parts of the firebox. Leave the glass burner media in place. <u>Use a soft brush to clean the burner glass media</u>. If the burner media does need to be removed, carefully scoop it off the burner and avoid dropping glass pieces in the air gaps around the burner. Follow the instructions on page 22 of this manual when replacing the burner media on the burner top.

#### AIR FLOW

The SPARK MODERN FIRES Gas Fireplace utilizes a convection air heat exchange system to maximize heat delivered from the fireplace. It is important that air flows freely through the convection air system and out the air grills. Do not place objects against the fireplace that will block the convection air inlet flow or in front of any air outlet.

### CLEANING THE GLASS AND GLOSS BLACK ENAMEL PANELS

After allowing the Fireplace to cool, use an ammonia-free glass cleaner and a soft, clean cloth to clean the Enamel Panels at the rear and side of the firebox. It is recommended that the Glass Enamel Panels be cleaned at least annually to avoid discoloration. More frequent cleaning may be required if contaminants are present in the gas supply or general atmosphere.

# WARNING: Never clean the Glass or Enamel Panels while they are hot. Do not use abrasive cleaners or cleaners containing ammonia.

**NOTE:** It is recommended that a Micro-fiber cleaning cloth be used to clean the glass and enamel panels.

### MAINTENANCE LOG

We strongly recommend that you keep a log of the regular maintenance that is performed on your fireplace. We have provided the forms below to make it easy. Simply ask your qualified service per-son to fill out one of the maintenance record forms below, each time the fireplace is serviced. This will help insure that all of the required maintenance procedures have been completed, at least annually. Regular maintenance will help keep the fireplace functioning in a safe and reliable manner. Additional forms are available from your installer or service person when needed.

Date of Service Serviced By Service Performed Clean Burner & Firebox Clean Control Area Clean Convection Air System	Date of Service Serviced By Service Performed Clean Burner & Firebox Clean Control Area Clean Convection Air System
<ul> <li>Clean Convection Air System</li> <li>Leak Test Gas Connections</li> <li>Other</li> </ul>	<ul> <li>Clean Convection Air System</li> <li>Leak Test Gas Connections</li> <li>Other</li> </ul>

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
🗆 Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	□ Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	□ Other

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
□ Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	□ Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
□ Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	$\Box$ Other

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
🗆 Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	🗆 Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	□ Other

# MAINTENANCE LOG CONT.

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
Clean Burner & Firebox	Clean Burner & Firebox
Clean Control Area	Clean Control Area
Clean Convection Air System	Clean Convection Air System
Leak Test Gas Connections	Leak Test Gas Connections
□ Other	□ Other

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
🗆 Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	□ Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
□ Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	□ Other
<ul> <li>Clean Convection Air System</li> <li>Leak Test Gas Connections</li> <li>Other</li> </ul>	<ul> <li>Clean Convection Air System</li> <li>Leak Test Gas Connections</li> <li>Other</li> </ul>

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
🗆 Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	□ Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	□ Other

Date of Service	Date of Service
Serviced By	Serviced By
Service Performed	Service Performed
🗆 Clean Burner & Firebox	🗆 Clean Burner & Firebox
□ Clean Control Area	□ Clean Control Area
□ Clean Convection Air System	□ Clean Convection Air System
□ Leak Test Gas Connections	□ Leak Test Gas Connections
□ Other	□ Other

# REPLACEMENT PARTS LIST

#### GENERAL REPLACEMENT PARTS

PART NAME	P/N	PART NAME	P/N
Natural Gas (NG) Pilot Assy.	BI-401	TC Line Red	M46-701
Propane (LP) Pilot Assy.	BI-402	TC Line Yellow	M46-702
Receiver Module (Maxitrol)	M46-504	Thermocouple Interrupter Block	M46-703
Wall Switch Panel (Optional)	M46-505	8-Wire Connecting Cable	M46-704
Remote Handset (Maxitrol)	M46-507	Gas Valve (Maxitrol)	M46-515
Module for Additional Function	36-560	Replacement Blower	36-531

### **512 VU-THRU - REPLACEMENT PARTS**

PART NAME	P/N	PART NAME	P/N
Burner Orifice (NG)	NGBI-60	Firebox Enamel Panel - End	60BI-201
Burner Orifice (LP)	LPBI-60	Burner Module (NG) (2 req.)	60BI-301
Burner Glass Media (Clear/Mixed)	60BI-200	Burner Module (LP) (2 req.)	60BI-302
Burner Conversion Kit (NG)	60BI-NGC	Burner Conversion Kit (LP)	60BI-LPC

#### 612 VU-THRU - REPLACEMENT PARTS

PART NAME	P/N	PART NAME	P/N
Burner Orifice (NG)	NGBI-72	Firebox Enamel Panel - Center	72BI-201
Burner Orifice (LP)	LPBI-72	Burner Module (NG) (2 req.)	72BI-301
Burner Glass Media (Clear/Mixed)	72BI-200	Burner Module (LP) (2 req.)	72BI-302
Burner Conversion Kit (NG)	72BI-NGC	Burner Conversion Kit (LP)	72BI-LPC

# CONTROL SCHEMATIC



**Caution:** Label all wires prior to disconnection when servicing the controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

For replacement parts and customer service contact your SPARK MODERN FIRES dealer or:

#### **SPARK MODERN FIRES**

99B Greenwood Ave Bethel, CT 06801 (T) 203-791-2725

Info@sparkfires.com

### INSTALLATION RECORD

The installer should complete the form below that describes the details of the installation. Having this written record of installation information available will greatly expedite trouble-shooting should any problem arise with your stove. The installer should keep a duplicate of this form for their records.

Date Purchased:				
Dealer:				
Date Installed:				
Installer:				
Fireplace Model: (circle one)	512	612		
Serial Number:	in. WC			
Fuel: (circle one)	Natural Gas (NG) Propane (LP)		Propane (LP)	
Inlet Pressure (after installation):				
Manifold Pressure (after Installation):	High Fire: in. WC		VC	
	Low Fire:	in. W	IC	
Altitude: (feet above sea level)				
Was the stove de-rated? (circle one)		Yes	No	
If the stove was de-rated, to what orifice size?				
Other installation notes:				

#### WARRANTY INFORMATION KEEP THIS FOR WARRANTY

Model	
Serial No	
Date Purchased	

Always specify model and serial numbers when communicating with the factory.

#### LIMITED LIFETIME WARRANTY

The following components are warranted for life to the original owner, subject to proof of purchase: Firebox, Combustion Chamber, and Steel Burner.

#### BASIC WARRANTY

Spark Modern Fires warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by Spark Modern Fires in the appliance are found to be effective in materials or workmanship, Spark Modern Fires will, at its option, replace or repair the defective components at no charge to the original owner. Spark Modern Fires will also pay for reasonable labor cost incurred in replacing or repairing such components for a period of two years from date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance is not installed by a qualified installer in accordance with installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damaged by accident, neglect, misuse, abuse, alterations, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Spark Modern Fires does not assume for it any other obligations or liabilities in connection with sale or use of the appliance. In states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional right not covered in the Limited Lifetime Warranty. Spark Modern Fires reserves the right to investigate any and all claims against this Warranty and decide upon method of settlement. For information about this warranty, contact:

Spark Modern Fires 99B Greenwood Ave Bethel, CT 06801 203-791-2725 info@sparkfires.com

Rev. 11/2016

### **RECORD YOUR PRODUCT INFORMATION**

Model #:\_\_\_\_\_ Serial #\_\_\_\_\_

Date Purchased:\_\_\_\_\_ Date Installed\_\_\_\_\_



V1/11/1/2016