MIDORI MEADOWS

Owner Manual

ICHIJO
Technological Homes

Owner Manual Table of Contents

Pages

Ichijo Specification Sheet

UTILITIES

WATER	1" Poly Underground Water Service, Individual 3/4" Meter Base
ELECTRICAL	Line Voltage Consumption: 200 amp Underground Electrical Service to Net Meter
	Optional Solar Upgrade: Line Voltage Production: Itek String Inverter connected to Production Meter
	Communications: Comcast - Underground Service Terminated Outside of Building
SEWER	Underground connection directly tied to Sanitary Sewer System
STORM	Perforated Footing Drains tightligned directly to Storm System
	Roof Drains connected to and tightlined directly to Storm System

STRUCTURAL (ENVELOPE)

FOUNDATION	Steel Reinforced Concrete Footings and Walls per approved Structural Plans
WALL	Exterior: 2x6 Framing Optimized Precut Framing System @ 16" o.c., 1/2" OSB, one layer Super Jumbo tex 60 min Tar Paper, windows & doors sealed with 6" Fortiflash window & penetration tape, Exterior Siding
	Interior: 2x4 Framing @ 16" o.c.
FLOOR/CEILING	12" Engineered TJI Joist System, 3/4" Structural Floor Sheathing
ROOF	Sloped: Dimensional 2x12 Framing and/or Engineered Truss System
INSULATION	Wall: R-21 Fiberglass Batt Insulation w/ 1.5" Rigid Foam at Headers
	Flat Ceiling: 2" Closed Cell Spray Foam and Combination R-30 Fiberglass Batt Insulation
	Vaulted Ceiling: R-38 Fiberglass Batt Insulation
	Crawl Space: R-30 Fiberglass Batt Insulation
	No Garage Insulation

EXTERIOR

(see Midori Meadows Finish Schedule for specific Lot # finish details)

SIDING	Hardie factory primed Lap Siding (25 year warranty). Simplicity Metal Bevel Corners.
	Fiber Cement Siding (25 year warranty).
	Clear Western Red Cedar accent siding.
	Exterior Paint: Sherwin Williams
ROOF	IKO 30 year warranty composite shingles, Charcoal Gray, w/ ice and watershield underlayment where applicable in accordance to building code
WINDOW	Wu Kong Windows LTD., PVC Window Sash, U-Factor 0.32 or below, Double Pane Low-E glass with Argon gas, screens (casement windows do not come with screens)
	*Tempered glass in accordance with building codes
EXTERIOR DOOR	Stain-grade Douglas Fir entry doors with Satin Etched insulated glass.
	Wu Kong Windows LTD., PVC Window Sash, U-Factor 0.32 or below, Double Pane Low-E glass with Argon gas, screen door, tempered glass in accordance with building codes
GARAGE DOOR	Wayne Dalton 8000 series 4 section Ranch Panel, top section obscured glass.
	Marantec M55 1/2 HP, 7' Belt Drive Smooth Quiet Operator, two 2-button remote control units & wireless keyless entry WKES, PN#89172 supplied
WATERPROOF DECK	Walkable Roof Deck 65 mil PVC Membrane (if applicable)
ELEVATED DECK WALL	Half Wall: Sided 42" High Half Wall with Prefinished Parapet Metal Cap. Interior Hardie Lap Siding (if applicable)
GUTTER and DOWNSPOUT	Gutter: 5" K-Line Black
	Downspout: 3" Round Black
FLASHING	Pre Painted Metal Flashing
AWNING	Ichijo Proprietary Anodized Aluminum Awnings. (If applicable)
EXTERIOR CONCRETE	4" Exterior Flatwork, Exposed Aggregate Finish, Trowelled Expansion Joints
LANDSCAPING	Landscaping per design specifications

MECHANICAL

WATER HEATING	Rinnai RL75i Tankless Water Heater.
HVAC	Kelvinator Single Stage Natural Gas Forced Air Furnace, 95% AFUE.
	Nest - Generation II Thermostat
	Floor vents in all applications except where necessary to install ceiling vents
VENTILATION	Bathroom, Laundry: Panasonic Whisper ceiling fan units
	Whole House Ventilation Timer
	Range Hood 300 cfm: Whirlpool GXW7330DXS

INTERIOR FINISHES

(see Midori Meadows Finish Schedule for specific Lot # finish details)

CEILINGS	1ST FLOOR: 9 Foot Ceilings
	2ND FLOOR: 8 Foot Ceilings
	2ND FLOOR Common Areas & Master Bedrooms Vaulted Ceilings (varies per plan)
WALL and CEILING FINISH	1/2" Drywall , Orange Peel Texture Finish, with recycle contents & low VOC painting.
	Paint color, walls: Sherwin Williams
	Paint color, Trim: Sherwin Williams
	Paint color, Wet Areas: Sherwin Williams
	Optional Upgrade: Plus accent colors in various rooms
	Garage: 5/8" Type X, Fire Tape Finish, contains recycle contents
	All windows 4-way 90 degree drywall wrap. 1st floor windows only receive MDF sill & apron paint finished
FLOOR	Main Floor: Laminate Flooring, Wanke Cascade, Cascade Laminate Sunriver Chocolate Birch (Lots 7, 12, 13 Misty Birch-Gray) 5-1/2"x48"x8mm Plank.
	2nd Floor: Carpeting, Shaw Fastball #102 Angel Cloud w/ 6lbs rebond pad
	Master Bath: Tierra Sol English Bay II Ceramic Tile 12"x24" West Coast Gray.
	Main Bath, Laundry, Utility: Mannington Benchmark Studio sheet vinyl
INTERIOR DOOR	Ichijo HRD Finished Interior Doors & Door Frames
	HRD Magnetic Door Catch
MILLWORK	Base: 1/2x5" MDF, Paint Finish
	Casing: 1x4" MDF, Paint Finish
	Wall Caps & Half Wall Caps: 1x4-13/16" MDF with 1x4" Apron, Paint Finish
	1st Floor Window Sills: 1x7 MDF with 1x4" Apron, Paint Finish
STAIRWAY	Grabrail: 1"x2" Prefinished Wood Grabrail with satin nickel rail brackets
	Optional: Powder coated steel railing with Ichijo wall & grabrail package
	Carpeting, Shaw Fastball #102 Angel Cloud w/ 6lbs rebond pad
	1x12 primed MDF Skirt Boards painted finish
CABINETS	Kitchen: Ichijo HRD I-Quality Piano Finish Cabinetry: Brown, Cherry, or White (see finish schedule)
	Built In Recycle Center
	Blum Hardware, Full extension soft close drawer guides (not all cabinet doors/drawers can accommodate soft close)
	Pull-out drawer organization systems
	Spice Rack and Cooking Utensil organizers
	Knife safe storage organizing system
	Upper cabinet earthquake safety latches
COUNTERTOPS	Kitchen: MSI Q Quartz 2cm thick with 4cm mitered eased edge "Snow White". Prepared with sink cut-out, single hole kitchen faucet & dishwasher air gap
	Bathrooms: Ichijo HRD Composite Countertops supplied with 4" tall back & side splashes
KITCHEN BACKSPLASH	Kitchen: Tierra Sol Ceramic Tile field tile
	Vanity: Ichijo HRD Cabinetry White
FIREPLACE FINISH	Ceramic surround tile 4"x12" (face)
TUB/SHOWER SURROUND	Master Shower: 7' Height Tile Surround with accent strip. Main bath: fiberglass shower stall.
CLOSET SYSTEMS	Secondary Bedrooms: Ichijo HRD Melamine Finish Organizer Closet System
	Pantry, Understair Closet, Master: Satin Chrome Wire Shelving & organizer system & secondary bedrooms if applicable

PLUMBING FITTINGS & FIXTURES

KITCHEN	Sink: Stainless Steel Undermount 16 gauge Rectangle Single Bowl Sink, model LB-1300
	Faucet: Pfister Zuri GT529-MCC single handle pull-down culinary design, polished chrome
MAIN BATHROOM	Sink(s): Kohler K-2352 Oval Sink white
	Faucet: Pfister Arkitek GT42-LPMC polished chrome single control lever
	Toilet: Kohler K 3989 Highline, Dual Flush
	Tub/Shower valves: Pfister Arkitek G89-8LPMC shower head, mixing valve, & water spout polished chrome
	Tub/Shower: MAAX TSEA Plus #105674 tub/shower combo unit white, **OR** MAAX Exhibit 105512-L/R-000-001 60-32 white (for house types with window in bath location)
MASTER BATHROOM	Sinks: Kohler K-2351 Oval Sink
	Faucet: Pfister Arkitek GT42-LPMC polished chrome single control lever
	Toilet: Kohler K 3989 Highline, Dual Flush
	Shower valve: Pfister Arkitek G98-7LPMC polished chrome shower head & valve
	Shower base: MAAX 105533 5" threshold white
POWDER BATHROOM	Pedestal Sink: GERBER MAXWELL 22-504 PED LAV 20X17
	Faucet: Pfister Arkitek GT42-LPMC polished chrome single control lever
	Toilet: Kohler K 3989 Highline Dual Flush
EXTERIOR	(2) Frost Free Hose Bib
LAUNDRY ROOM	Auto washer box

APPLIANCE

RANGE	Stainless Steel, Freestanding GE model JGB640SEFSS 30" GAS Range
DISHWASHER	Stainless Steel, GE model GDT580SSFSS
MICROWAVE	Stainless Steel, GE 2.2 cu. Ft. model PEB 7226SFSS
	Stainless Steel trim kit model JX7227SFSS
HOOD	Stainless Steel, Whirlpool GXW7330DXS, 300 cfm
DISPOSAL	Whirlpool, GC1000PE, 1/3 HP Continuous Feed Motor
GAS FIREPLACE	Heatilator NDV3933i

ELECTRICAL

LINE VOLTAGE	200 AMP, Main House Breaker. Breakers, Circuits, and All Convenience Receptacles installed on a per code basis. Solar power ready.
USB RECEPTACLES	Located in Kitchen and Master Bedroom
GFI RECEPTACLES	Installed on a per code basis in all wet locations
LOW VOLTAGE	Smoke Detectors: Installed Per Code
	Carbon Monoxide Detector: Installed Per Code
	Comcast: Pre-wired, terminated on exterior of building, Conduit provided.

LIGHTING

EXTERIOR LIGHTS	Wall Sconce: Design Classics #379055 Bronze Cylinder Wall Down Light
	Soffits Over Entry: 6" Can Light with Flush Mount LED Trim, approved for Wet Locations
CAN LIGHTS	6" Flat Ceiling: To include Energy Efficient LED Conversion Kits installed
	6" Sloped Ceiling: To include LED bulbs installed
KITCHEN ISLAND	Pendants: Access Lighting #274436 Spartan Mini-Pendant
	Under cabinet Lighting: Built In Cabinet LED Strip Lighting
DINING	Design Classics #441225 Large Modern Pendant Light with white shade
STORAGE CLOSET/PANTRY	Design Classics #418067 Satin Nickel Flushmount Ceiling Light
LAUNDRY	Design Classics #418067 Satin Nickel Flushmount Ceiling Light
DEN, 2ND BEDROOMS	Design Classics #418067 Satin Nickel Flushmount Ceiling Light
STAIR SCONCE	Design Classics #418035 Satin Nickel Wall Light
MASTER BATHROOM	Design Classics #418016 Vertical Wall Light with cylinder White Glass
	6" Can Light with Flush Mount LED Trim, approved for Wet Locations
MAIN BATHROOM	Design Classics #418016 Vertical Wall Light with cylinder White Glass
POWDER ROOM	Design Classics #418016 Vertical Wall Light with cylinder White Glass

HARDWARE

CABINET PULLS	HRD iSmart Door Knob 120mm
DOOR HARDWARE	Exterior: Schlage Latitude Entry Handleset Brushed Nickel (keyed alike)
	Exterior: Schlage Deadbolt Brushed Nickel (keyed alike)
	Interior: HRD Series Hardware US26 Brushed Nickel Exterior Door Hinges
BATH HARDWARE	Toilet Paper Holder: Sure-Loc #550979 Lugano Series, Brushed Nickel
	Towel Bar: Sure-Loc #550976 30" Lugano Series, Brushed Nickel
	Robe Hook: Sure-Loc #550980 Lugano Series, Brushed Nickel
	Shower Rod: Bright chrome, for 2nd Bath
MIRRORS	Main Bath: 5mm Clear Glass Mirror, Frameless 64-1/2"x40" rectangular
	Master Bath: 5mm Clear Glass Mirror, Frameless 60"x40" rectangular
	Powder Bath: 5mm Clear Glass Mirror, Frameless 20"x36" rectangular
SHOWER ENCLOSURE	Master Bath: Semi-frameless Glass Walls with Frameless Glass Door 76" tall. 2nd Bath tub/shower chrome rod.

INFORMATION ABOUT CLEANERS

Remember to read and follow the manufacturer's instructions and recommended usage when using a household cleaner. They will perform as promised if they are used as directed.

- All-purpose cleaners – Soft Scrub, Scrub Free, Mr. Clean, Top Job, Fantastik, Ajax Liquid, Liquid Comet and Lestoil
- "Soapless" detergents – Spic & Span
- Scouring Powders – Comet, Bon Ami, Ajax
- Scouring Pads (nylon) – Scotch Brite
    - Steel Wool NOT recommended
- For bathrooms – specialty cleaners such as Crew Bathroom Cleaner and Dow Bathroom Cleaner are effective for routine maintenance.
- Commercial cleaners – Aqua Mix or Hilliard's "Assurance" are suitable for heavy cleaning in commercial applications and are available at tile distributers.

INFORMATION ABOUT GROUT

Grout may present a special cleaning problem because it is susceptible to many staining agents. It should be cleaned immediately if subjected to these substances. See **Stain Removal Guide** on previous page for some typical causes of stains as well as the recommended method of removal.

After the counter has been clean and dried, grout joint should be treated with silicone sealer to keep them clean. This should be done at least twice a year for maximum protection. In addition to keeping the gout clean, the grout joint should be in good repair. Scrape out loose, cracked or powdery joints and refill with new grout.

One common grouting trouble spot is the joint between the tub and the tile wall in the bathroom. As the house or tub settles, the grout may crack and crumble. This can be repaired fairly simply by removing the old grout with a sharp, pointed tool. Take care not to scratch the tile or tub. Dry the joint thoroughly and fill with a flexible caulking compound such as silicone rubber caulking (available at tile distributers or home improvement stores).

REMOVING LOOSE OR DAMAGED TILE

Damaged or broken tiles should be removed or replaced by a skilled tile mechanic or installer only. Is the tile is simply loose; it should be fairly simple to repair. Clean the back and sides of the tile and remove all of the grout and bonding material. Apply fresh mastic and set the tile into place. Allow 24 hours for drying, then grout. If more than one tile is loose, consult a tile professional for the best results.

MACADAM
FLOOR AND DESIGN
A Design Center

HARDWOOD FLOOR CARE AND MAINTENANCE

General Care

- Never wet mop or flood your floor with water or other products. This can severely damage the flooring and will void all warranties. The use of a Swiffer® by Proctor & Gamble or a similar product is highly recommended. Do NOT use oils soaps, liquid or paste wax products or other household cleaners that contain lemon or tung oils.

- BI-WEEKLY: Vacuum or sweep the floor

- MONTHLY: Spot-clean with an appropriate cleaner. Apply the cleaner to a clean dampened sponge and wipe the surface of the hardwood. Follow up with a clean, dry terry cloth towel to dry the surface. Never pour cleaner directly on the floor.

- Immediately blot up spills or spots.

- Sand and water are wood's worst enemies. Place rugs inside every outside entrance of the house, in front of the kitchen sink, in front of kitchen work stations, and dishwasher to protect the floor from water or oily detergent. Use area rugs in highly traveled areas and pivot points (stair landings, room entries, etc.), especially if you have a large family or indoor pets.

- Hardwood floors are prone to dents and scratches and will never be "scratch-free". Protect floors by keeping high-heeled shoes in good condition. Damaged or worn high-heels may expose a metal tip that will certainly damage the surface finish. Keeps pets' nails trimmed and paws clean and free of dirt, gravel, grease, oil and stains.

- Exposure to the sun and it's UV rays accelerates the oxidation and aging of wood and fabrics. This cause the stain and/or wood to fade and/or change color. We recommend that you rearrange rugs and furniture periodically so the floor ages evenly. Use draperies or shades to help block out most of the sun's harmful rays. Samples or models in the showroom may also fade, making an exact match to new flooring impossible. Custom finishing and staining of the interior millwork and/or cabinets should be done from the actual floor to be installed (not a showroom sample) if a color and/or gloss match is desired.

- Maintain relative humidity level in your home between 40% and 60% throughout the year. Hardwood is a living material that reacts to change of relative humidity.

MACADAM
FLOOR DESIGN
A Design Center

STONE COUNTERTOP CARE AND MAINTENANCE

General Care

- Keep stone surfaces clean with mild dish soap or Windex. Never use petroleum-based cleaners, waxes and abrasive cleansing agents like Comet or Ajax.

- Seal stone surfaces periodically. Granite and marble surfaces are porous, even though the highly polished surface has the appearance of being water resistant. Natural stone must be sealed, or "impregnated" in order to protect against staining. It recommended that the surfaces are sealed at least twice annually; more often depending on traffic and use. Some stones, especially light-colored ones require more applications of sealant. NOTE: the stone needs to be resealed when spilled water begins to leave dark spots or condensation rings.

- Remove cooking oils and acids promptly. Sealing the stone protects it against water and any liquids, but only provides a short term barrier to oil, grease and acids. These substances should be removed promptly at the conclusion of entertaining, eating and food preparation.

- Avoid hot grease and oil splatters. Special care should be taken to protect against hot grease splatters and spills around the range area. The combination of oil plus heat breaks down all sealers and leaves stone with a darkened spot. Should such an accident occur, most oil spots can be removed by applying a poultice, direct heat, or darkening the entire surface to blend the spot.

- DO NOT use the stone as a cutting board. Granite is extremely dense and hard and it is very difficult to scratch. However, a sharp knife may spar the surface, leaving it fractured and susceptible to future chipping or cracking.

MACADAM
FLOOR AND DESIGN
A Design Center

CERAMIC TILE CARE AND MAINTENANCE

STEP #1 – IDENTIFY TYPE OF USEAGE OF TILE

There are two basic types of ceramic tile – glazed and unglazed. The other surface which requires care is the grout, the material which is used when installing the tile. Each requires certain routine cleaning and may need heavy-duty cleaning depending on its use and the degree of traffic in the area.

- Glazed tile- most often used on traditional walls, countertops and floors. It has a though, glass-like surface produced by kiln firing at extremely high temperatures. Glazed tile can have a glossy, matte or textured finish.
- Unglazed tile – composed of natural clays which are sometimes mixed with pigments. It can be used on floors, walls, countertops, window sills, fireplaces, swimming pools, etc. It may require more careful attention than glazed tile.

STEP #2 – TILE CARE

Glazed tile walls in a home will maintain their appearance with simple, routine care. Wipe regularly with a damp cloth or sponge, using a non-abrasive household cleaner. Window cleaners such as Windex or Glass Plus are ideal for cleaning glossy tile surfaces.

- Glazed tile floors – vacuum regularly to remove dirt and gritty particles. Follow with a mop or sponge dampened with an approved household cleaner.
- Unglazed tile walls and floors – vacuum regularly to remove dirt and gritty particles. Follow up with a mop or sponge dampened with a solution of water and a "soapless" detergent.
- Bathroom tile (tub, shower, vanity tops, etc.) – clean more thoroughly because of build-up of soap scum, body oils or hard-water stains. Use the usual "clean, damp cloth or sponge" with an all-purpose cleaner, but allow it to stand for about five minutes before rinsing and drying. OTHER RECOMMENDATIONS: solution of equal parts water and white vinegar or a commercial cleaner from a tile distributer.

TIP: How to keep shower walls mildew-free – clean regularly with a tile cleaner of fungicide such a Lysol or ammonia. Dry with a towel after each use and leave curtain door open between showers.

Ichijo Limited Warranty

1 Coverage period

ICHIJO to provide Limited Warranty for 1 year, 2 year and 10 year respectively depending on the building components and elements. (attached hereto as Appendix A)
This Limited Warranty commences on the date of closing, or the date of Home Owner's occupancy whichever occurs first. This Limited Warranty is in effect only if ICHIJO is in receipt of entire contracted/purchase price.

2 Request for warranty services

Warranty inquiries have to be in writing to be considered by ICHIJO. No Limited Warranty work will be performed nor guaranteed until request has been received in writing, unless designated an emergency.

3 Remedy

ICHIJO will, within a reasonable time, examine an alleged defect to determine if it is covered by this Limited Warranty. A defect covered by this Warranty will be repaired, replaced, or replaced with item of like kind, at ICHIJO's expense. Any repair or replacement shall not extend the Warranty term. The total liability of Warranty is limited and shall not exceed the sales price of the home.

4 Right of access

Home Owner to provide ICHIJO access to property to perform its work under this Warranty. Failure to provide such access may relieve ICHIJO of its obligations.

5 Exclusions

1) Damages or losses resulting from accidents; civil commotion; acts of God or Nature – including, but not limited to wind storms, wind driven water, floods, sink holes, hail, lightning, fallen trees, earthquakes, explosions, fire, smoke, water escape, or changes in underground water table.
2) Defects or damages caused by animal droppings, rubbing, eating or infestation.
3) Any condition which does not result in actual physical damage to the Home including, but not limited to un-inhabitability or health risk due to presence or consequence of unacceptable levels of radon gas, formaldehyde, mold, carcinogenic substances, or other pollutants and contaminants, or the presence of hazardous or toxic materials.
4) Any soil erosion/sedimentation or storm water control management systems that are approved by a governing jurisdiction.
5) Expenses a HOME Owner may incur as a consequence of defect or warranty repair

including but not limited to the cost of having to move out while repairs are being made, household appliances, or personal properties.

6) Consequential bodily injury or punitive damages.
7) Any defects, damage, or loss which is caused or aggravated by negligence of Home Owner or anyone other than ICHIJO or its employees, agents, or subcontractors.

6 Any appliance or equipment provided by ICHIJO, including but not limited to water heaters, pumps, stoves, ranges, ovens, garbage disposals, dishwashers, furnaces, air conditioning units, heat pumps, photovoltaic systems and other similar items shall be for the manufacturer's warranties to the Home Owner, and to be registered by Home Owner to uphold manufacturer's specific warranty.

7 Discoloring
Repair or replacement of interior or exterior surface, including driveways and sidewalks, shall be limited to the defective area.

8 Transfer of Ichijo Warranty
One (1) year Materials & Workmanship Warranty will automatically terminate if the property is leased, vacated or sold by original Home Owner.
Only two (2) year System Warranty and ten (10) year Structural Warranty will stay with the home and automatically transfer to the new owner upon change of ownership.

Appendix A

1 Year Materials & Workmanship Warranty

This warranty covers material defects and general workmanship for interior and exterior finishes. Warranty standard and coverage are as follows;

1. Finishes (Drywall, Paint, Carpet, etc.)
   The Warranty provides protection against defects in finishes in the home, including drywall, lath and plaster walls and ceilings, hard-surface flooring, bathtubs, showers and countertops, resilient and finished-wood flooring, trims, interior and exterior painting and carpeting.

2. Nail pops and drywall cracks
   The Warranty provides repair for nail pops and drywall cracks caused by acclimation to the temperature and humidity of the seasons.

3. Roof
   The Warranty covers roof leaks that are caused by rain, normal wear or natural deterioration on a well-maintained roof. The leak caused by buildup of snow, ice, leaves, bird droppings or other build up that prevents rainwater drainage shall not be considered a defect and such water penetration shall not be covered.

4. Doors & Windows
   For proper fit and smooth operation, interior, exterior and garage doors, doorknobs, deadbolts and locksets, wood, plastic and metal windows, glass and glazing; and storm doors, windows and screens are covered.

5. Concrete
   For protection against defects in concrete surfaces, warranty coverage includes concrete basement and attached garage floors, slab-on-grade floors with finish flooring, stoops and steps, and interior concrete work. Small cracks not affecting structural stability are not unusual on the surface of the concrete. Cracks greater than 1/4 inch will be repaired by concrete caulk.

6. Cabinets & Vanities
   To keep kitchens and bathrooms functional, warranty coverage includes defects in kitchen and vanity cabinet doors and drawers, as well as high-pressure laminated kitchen and vanity countertops.

7. Electrical Components
   The Warranty provides coverage against defects in receptacles, fixtures, fuses, ground-fault circuit interrupters (GFCI) and circuit breakers. This excludes light bulbs and batteries.

8. Masonry
   The Warranty coverage includes workmanship on masonry, brick and stone veneer, concrete block basement walls, stucco and cement plaster walls. Due to lime content and porous property, discoloration, efflorescence, chemical reaction or water absorption shall not be covered.

9. Thermal & Moisture Protection
   The Warranty coverage provides protection against defects in waterproofing, moisture control and ventilation in basements, attics and roofs; insulation around living areas; exterior wall caulking, and siding, gutters and downspouts.

10. Mechanical
    The Warranty coverage is provided for plumbing and water supply fixtures such as faucets, valves and water pipes, as well as operation of the heating and cooling system.

11. Site Work
    The warranty includes protection against defects in the grading established by the builder in backfilled areas of the foundation so surface water drains away from the home. There should be no standing water in the yard 48 hours after no rainfall.

2 year System Warranty

This warranty protects a home from defects in the electrical, plumbing and mechanical distribution systems for a full two years.

1. Mechanical (Waste Piping)
   For smooth-flowing pipes, the systems warranty covers repairs to sanitary sewers, fixtures, and waste and drain lines to prevent clogs or poor drainage.

2. Electrical System
   The systems warranty covers wiring and electrical conductors, ensuring that the home's wiring carries its designed load

3. Mechanical (Duct Work)
   To provide a temperature-controlled environment all year long, systems warranty

coverage includes repairs to the home's heating and cooling ductwork if it separates or detaches.

4. Mechanical (Plumbing)
   To keep water flowing in and out of the home, systems warranty coverage includes waste, vent and water pipe leaks and bursts; heating and air conditioning refrigerant line leaks; and water supply and septic tank system operation.

10 year Structural Warranty

Structural defects are defined as physical damage to a home's designated load-bearing elements described below caused by failure that affects their load-bearing function to the extent that the home becomes unsafe, unsanitary or otherwise unlivable.

1. Roof Framing Systems
2. Floor Framing
3. Load-Bearing Walls & Partitions
4. Beams, Girders
5. Columns
6. Footing & Foundation Systems.
7. Window structural and glazing units

Ichijo USA Co., LTD
45 Day Follow Up Form

Home Owner: _____
Community: _____
Address: _____
Phone: _____
E-Mail: _____

This form is used to address any minor defects not found through our quality control measures and the closing walkthrough. We recommend to submit this form between 30 and 60 days to ensure you have appropriate time to live within your home and identify all items that may require repair or adjustment. Please email this form to warranty@ichijousa.com or Fax to: 425-376-0797. A warranty service professional will contact you within three business days of receiving your list to set up a meeting to address all items.

Location	Description of Issue

Ichijo USA Co., LTD
1 Year Warranty Request Form

Home Owner: _____
Community: _____
Address: _____
Phone: _____
E-Mail: _____

This form is used to list any items that you determine to be warranty related. Please include pictures if possible. Please email this form to: warranty@ichijousa.com A warranty service professional will contact you within three business days after receiving your list to set up a meeting to review all items.

Location	Description of Warranty Concern

SQUARE D™
by Schneider Electric

Square D Tripping Breaker Assistance Process for Electrical Contractors

If a homeowner calls with an unwanted tripping arc fault or dual function circuit breaker and you need Square D to help, please FOLLOW THESE 5 SIMPLE STEPS AND COMPLETE THE ATTACHED FORM

- Gather all information and if service call is required, please take the **Tripping Breaker Info Checklist** and the **Homeowner Info Sheet** to the home for the service call.
- There is a trouble shooting guide and frequently asked questions (FAQ's) included after the form for more info and troubleshooting tips.

Step 1: To ensure the breaker that tripped is operating properly, test the breaker: Press the "Push-to-Test" button. If the breaker resets, proceed to Step 2.

If the breaker does NOT reset and the circuit wiring is correct, replace the breaker with another breaker. Return the inoperative breaker to your Square D distributor with the **Required Information** section of the **Tripping Breaker Info Checklist**.

Step 2: Complete the "**Tripping Breaker Info Checklist**." Be sure to complete all "**Required Information**." The "**Extra Information**" may help reduce multiple home visits.

Step 3: Provide the completed "**Tripping Breaker Info Checklist**," next page, to our Technical Support Group either by calling or emailing to:

Email completed form to: breakersupport@schneider-electric.com for fastest response.

You may call us at (888)778-2733 (888-SquareD), options 1, 1, & 1 for additional questions or to discuss your case with our Circuit Breaker Technical Support Group.

Step 4: A Square D case report number will be automatically generated to you once you submit to email address or call. Write case number on the **Checklist** for future calls. Breaker support group will review the case and log it to determine next steps with our engineering group (There may be a delay of 1-2 business days before we may reply to emails)

Step 5: Breaker Support Group will contact you or the person of choice listed on the form below within 2 business days to coordinate our next steps to resolve the issue.

Square D by Schneider Electric
3700 Sixth Street SW
Cedar Rapids, IA 52404
Tel. 888-778-2733 (888-SquareD)

SQUARE D™
by Schneider Electric

Tripping Breaker Information Checklist

Dual Function (GFI & CAFI) or Arc Fault (CAFI)
Complete this for **each circuit with a tripping breakers,** one form for each circuit.
Send completed form to breakersupport@schneider-electric.com. For urgent matters, contact
(888)778-2733 (888-SquareD), option 1, 1 &1

Company Name:
City, St:
Primary Contact and phone number:

REQUIRED Information

Home Address:
Home Contact person and phone number:
Home Builder:
What is happening?

_____

_____

Does the breaker reset after pressing the "Push-to-Test" Button? ☐ Yes ☐ No
Tripping Breaker ☐ QO ☐ HOM ☐ 1Pole ☐ 2Pole ☐ 15A ☐ 20A or Catalog No: _____
Test button color: ☐ Purple ☐ White ☐ Green ☐ Yellow
Result of Time Saver Diagnostics ☐ Instant ☐ 2 seconds ☐ 5 seconds
What does the circuit feed? (Kitchen, Utility, living room, etc.)

_____

_____

EXTRA Information (HELPS identify the issue FASTER)

How often does the breaker trip? _____
When does the trip occur? _____

_____

_____

Circuit Loads on this particular breaker

	Device or Appliance Info (device type, brand, model number)	Status (ON, OFF, Running)
1		
2		
3		
4		
5		
6		

Voltage at load side of breaker: ___Volts Voltage at first device on circuit: ___Volts

Load current at the breaker: __ Amps

Can you measure current on the ground? ___mAmps

Utility Name: _____
Smart meter and type (cellular or Power line carrier):_____

SQUARE D™
by Schneider Electric

Arc Fault (CAFI) and Dual Function (DF) troubleshooting tips.

Product Lines Supported:

QO and Homeline Arc Fault (CAFI) = White Test Button
QO and Homeline Dual Function (GFI & CAFI) = Purple Test Button

How do I determine if the breaker is good or bad?

All Square D GFI, CAFI and DF circuit breakers are equipped with a "Push-to-Test" (PTT) button. The first step is to push the test button. If the breaker trips, there is an excellent chance that removing this breaker will result in another breaker providing the same results. If the breaker does not trip or will not reset when the PTT is push and all the wiring is correct, the breaker is inoperative and should be replaced and returned. Testing the breaker in this manner will not affect the TIME SAVER DIAGNOSTIC function of the breaker's memory.

How do I determine the date code of the breaker?

All Square D CAFI and DF circuit breakers are equipped with a date code on the escutcheon of the device (see photo below). The escutcheon is visible **WITHOUT** removing the dead-front from the Load Center.

How do I determine the cause of tripping on the circuit breaker?

Each CAFI and DF breakers is equipped with an integrated diagnostics feature, "TIME SAVER DIAGNOSTICS," which stores the last trip event for 27 days. It quickly identifies the fault type through the steps listed below:

1. Place circuit breaker in O/OFF position.
2. Firmly press and continue holding white/purple "TEST" button through Step 4.
3. Move the handle to I/ON position.
4. Circuit breaker should trip at one of the following:

Trips instantly (less than one second)	**Fault to Ground** • Arcing to ground • Shared neutral • Grounded neutral • Ground fault
Trips at two seconds	**Arc Fault** • Parallel arc fault • Series arc fault
Trips at five seconds	**Procedure Complete** • No fault • Thermal overload • Short circuit

SQUARE D™
by Schneider Electric

What if the above handle indication trips instantly?

If handle indication trips instantly, the last trip event recorded on the trip is caused on a fault to ground. The most common reason is grounded neutral. Trouble shooting steps are as below:

1. Turn panel power off. Remove the load wires from the breaker (black and white wires going to the outlets), so that you have the breaker in the panel (and the white pigtail wire attached to the neutral bar if it's a pigtail style breaker) with no load wires. Turn panel power back on. At this point the breaker should turn on and trip with the test button. If not, replace the circuit breaker. If it works properly, go to step 2.

2. Turn panel power off. Re-install the load wires. Black and white wires go the terminals on the beaker (Pigtail version and Plug on Neutral version must have white load neutral wire attached to the breaker). White coiled panel neutral wire goes to the neutral bar for Pigtail version. Turn panel power on. Try plugging in something and applying a load. If it does not trip, then circuit breaker could be installed incorrectly.

3. If the breaker trips, no matter what you turn on or plug in, check to see if you have a grounded neutral (bare ground wire touching neutral) in your load wires somewhere, which you can verify in the next step.

4. Turn panel power off. Remove the white load neutral wire from the breaker (not the white coiled panel neutral wire for Pigtail version). Check continuity between the removed white wire and the ground/neutral bar. If you have continuity, then you have a grounded neutral wire. It could be a bare ground wire touching the neutral screw in a junction box or outlet.

5. If you have a grounded neutral, leave the white load wire disconnected from breaker and go to the first junction and disconnect the neutrals and grounds and measure resistance across neutral and ground and see what side of the junction the problem is on. Note: the problem is most likely in the junction itself. If the bare ground is touching the neutral wire or screw check that first before removing any wires. Then proceed to the next junction until you find the problem.

6. Check the operation manual for any appliances connected to the circuit, some devices designed prior to current standards are designed to operate on ground fault protected circuits. If this is the case, discuss with the home moving that device to an area that does not require ground fault protection as defined by the NEC. If this is not practical, the device may to be replaced with another that is designed to operate in areas as defined by the NEC. This may be a difficult conversation with the home owner and our Technical Support Group at (888)778-2733 (888-SquareD) can assist with that conversation.

7. This tripping event may also be indicative of power quality issues. If the breaker trips or more than one breaker has tripped in the panel with little or no load at random times the cause may be due to power fluctuations. As power companies expand their grid or add power through switching with Smart Grids to augment demand in neighbors, slight shifts in the sine wave, may impact the breaker adversely. Please contact our Technical Support Group at (888)778-2733 (888-SquareD) to assist with this condition.

SQUARE D™
by Schneider Electric

What if the handle indication trips at (2) two seconds?

If handle indication trips at (2) two seconds, the last trip event recorded on the trip is caused by an arc fault. Trouble shooting steps are as below:

1. If an arc-fault is suspected, the first diagnostic step should be to determine if the arc fault is in the appliance, its power cord, or if it is in the permanent wiring.

2. Check appliances to narrow the problem down to the appliance or its power cord, first, isolate all appliances by unplugging them. If the CAFI breaker does NOT trip when it is reclosed, then the problem is likely an arc fault in either the appliance or its power cord.

3. A series arc fault will not be detected until a load is connected and energized. The faulty appliance can be identified by connecting one load at a time until the CAFI breaker trips again. Check the last load connected for arcing, insulation problems, shorted or pinched wires.

4. Check permanent wiring. If the AFCI continues to trip after all of the appliances are unplugged, then a potential problem in the permanent circuit can be considered. First, check for arcing, insulation problems, and shorted or pinched wires at outlets, switches, and junction boxes.

5. Some devices connected to circuits may have been designed prior to current standards. These devices or a combination of these devices on a circuit may induce noise on the circuit that causes the breakers to sense a potential unsafe condition. Document all devices connected on the circuit. To determine the firmware level for the breaker(s) installed, verify the date code and advise our Product Support Group.

What if the handle indication trips at (5) five seconds?

If handle indication trips at (5) five seconds, the last trip event recorded on the trip is caused by an overload, short circuit or there is no record of a trip event stored in the breaker. Trouble shooting steps are as below:

1. Verify that you are checking the correct breaker.

2. Verify the date of the last trip event. An automatic reset of the handle indication memory will occur if the circuit breaker has been powered continuously for 27 days.

3. Discuss a possible overload condition with the home owner. An overload trip is caused by a circuit carrying more current than the handle rating of the circuit breaker allows. First check to see if there are high current loads overloading the circuit. Be sure to check all receptacles on the circuit, not only the receptacles in the affected room. Calculate the loads to ensure they don't exceed the circuit breakers carrying capacity. Discuss electrical safety with the home owner.

4. Discuss a possible short circuit occurrence due to a cord-connected device. If a circuit breaker trips instantaneously when a device is plugged in or turned on, remove each device from the circuit sequentially and turn the circuit breaker on. If the circuit breaker does not trip, there is possibly a short circuit in the appliance or its electrical cord.

5. Discuss a possible short circuit occurrence due to permanent wiring. If there does not appear to be a short circuit in one of the plugged-in devices, including the electrical cords, then there may be a short circuit in the permanent wiring. Before checking the circuit, remove all power from the circuit by moving the CAFI or DF handle to the OFF position. Next, unplug all the devices from all receptacles on the circuit and turn off all lights and other loads. Finally, using an ohmmeter at the load center, check the resistance between line and neutral and the line and ground. If either measurement shows low resistance (less than one kilo ohm), there is a short circuit between those conductors (or there are still connected loads). High resistance indicates the likely absence of a short circuit. Discuss electrical safety with the home owner.

6. This indication may also indicate that the trip event memory of the breaker is empty. The breaker remembers the last trip event for 27 days. After 27 consecutive days of no trip occurrence, the last event is overwritten in the memory of the breaker is cleared. Verify that the breaker is one that has tripped. For additional support in this case, call our Technical Support Group at 888)778-2733 (888-SquareD) to assist.

Where can I find additional troubleshooting information on CAFI and DF circuit breaker?

For additional troubleshooting information, please read Data Bulletin 0760DB0204

http://static.schneider-electric.us/docs/Circuit%20Protection/Miniature%20Circuit%20Breakers/Arc%20Fault%20Circuit%20Interrupters-AFCI/0760DB0204.pdf

SQUARE D™
by Schneider Electric

HOME OWNER INFO SHEET

Dear Homeowner,

With a trend of reducing home fires in the US, The National Electrical Code (NEC) requirements for electrical safety continue to expand. Since 1999, the Code has expanded arc fault protection in homes across the US to family rooms, living rooms, bedrooms, dens, home offices, and other similar rooms. In addition, the 2014 NEC requires all new homes be equipped with arc fault protection on all 120V kitchen and laundry areas circuits. Ground fault protection for people is also required for certain applications such as laundry areas and outlets within 6 ft of a sink.

Much like the smoke detector that alarms in your home when the toast gets burned, circuit protection can sometimes seem inconvenient if the breaker trips, but can ensure you and your family are protected at all times.

The electricity in your home is distributed by Square D products. Square D circuit breakers are engineered and designed to help keep you, your family, and your property safe from electrical hazards that were previously undetectable. These hazards can be hidden in:

- Walls
- Plugs and Cords
- Inside of a connected device like vacuums, TVs, appliances, etc.

Square D technology in circuit protection is like the airbags in your car and technology on your smartphone; more advanced and sophisticated than ever before. Much like smart phone firmware upgrades, our breakers also evolve to enhance the compatibility of devices connected to the circuits in your home. Square D is working with your electrical contractor to investigate the cause of circuit breaker tripping your home.

Square D is also working with device and appliance manufacturers to ensure your devices are working safely and as expected. We have updated firmware in our breakers to work around compatibility issues discovered to date. We have also increased the immunity of our breakers to the impact of power quality fluctuations; all to provide a safer, more robust, electrical distribution system in your home.

We understand these issues are an inconvenience to you. In conjunction with electrical contractors and appliance manufacturers engineers, our latest firmware is now available and will be installed in your panel. Square D circuit breakers have and will continue to learn and evolve as the market evolves to offer the most reliable and robust circuit protection available.

For any other questions, please contact our 24 hours Customer Care Center (CCC) at (888)778-2733 (888-SquareD). Please select option 1; another option 1; and a last option 1, to be connected directly to our circuit breaker product specialist.

New Home Owner FAQ 8-1-16

Congratulations on the purchase of your new home. The following is a list of some frequently asked questions we receive on the electrical system of your new home.

Before you call your customer service Rep please check to see if one of the following items may address your issue.

Q: Why did my kitchen, dining room or nook outlets quit working?

A) These outlets are now protected by an AFCI/GFCI combo breaker. If this type of breaker senses Arc fault or ground fault issues on the circuit or on the device or appliance plugged into the circuit, it will trip.

To resume power to the circuit reset the breaker in the panel. If this continues to trip, unplug all devices and/or appliances on the circuit and reset as needed. Plug in your appliances or device. Some appliances and some phone system base holders and chargers that have transformers may affect this circuit.

When bringing in older devices or appliances into your new home, they may not be compliant with the new combination breaker setup. There is a maximum load of 2400watts on each required appliance circuit. So if you have a countertop toaster and/or many items plugged in on one circuit, these may need to be split up on different circuits.

Q: Why did my bathroom outlets quit working?

B) Same as above, but most likely an overload or device that's plugged in is the issue.

Note you have one dedicated 20amp circuit that is interconnected to all bathroom receptacles only.

Reset breaker as required. Maximum of 2400 watts on this circuit, so multiple hair dryers in use may overload the circuit.

Q: Why did my outside weatherproof outlets quit working?

C) This is similar to A & B above. Reset the breaker. Occasionally, there may be an actual GFCI device in the weatherproof receptacle. Reset the device with the push button in the center of the GFCI.

These weatherproof receptacles are convenience outlets and will be wired off the house "lighting" circuit. Electric barbeques, string trimmers, or any other high draw appliance or device may cause the interior lights to blink or dim or even overload the circuit.

Q: Why did my garage outlets or lights quit working

D) This is the same principle as A, B & C. This is also generally a 120v 15a circuit that feeds all the garage receptacles. This circuit generally has 1800 watt max load so extra garage refer or freezer plugged in on this general use circuit may overload the circuit.

Q: Why did my bedroom outlets or hallway lights quit working?

E) This also is similar to the previous overload or device issues mentioned previously.

These circuits are 120v 15a circuits' 1800 watt max loads. If you're trying to use a spare bedroom as an office or workout room that equipment can easily overload the general lighting circuit. If a spare bedroom is to be used as an office or workout room, you may need to add a dedicated circuit.

When Ironing or vacuuming in the bedrooms or other areas of the home, those appliances can overload a general lighting circuit if all the lights happen to be on also. When you're able to use the bathroom receptacles, they are a good circuit to use.

Q: Why do my lights blink and dim temporarily on occasion?

F) Any medium or high power draw appliance tool or equipment has the potential to cause this especially when first turned on. This temporary draw of power on the circuit can cause this. An A/C unit or heat pump which is on its own dedicated circuit can also cause lights to blink or dim when they first turn on.

Q: Why do my smoke detectors "chirp" or go off?

G) The chirp is an indicator the battery needs to be replaced. If the smoke detectors CO happen to go off for no reason (no smoke present) they may need to be reset. Hold the test button down on one of them until they all go off together. Yes this will be loud. Your home may have had a power interruption, a power spike or similar situation that can throw these out of sync, causing this alarm.

Q: Why did my shower cans quit working or go on and off?

H) These cans are also GFCI protected so if not working, please check and reset the breaker or device as needed. These "enclosed" cans have a 40watt max bulb to keep down heat buildup inside the can. If you replace the bulb with a higher watt bulb, it can overheat and a built-in thermal cut out will turn off the can. When it cools down, it will turn on again then off and so forth.

Q: Why does one or some of my lights not work even after resetting a breaker device?

I) After a bulb has been replaced a few times, the “tab” in the back of the socket may have been bent flat not allowing contact with the bulb.

Q: Why does the top of one of my receptacles not work?

J) If this receptacle is in a room with no overhead light, it should be a “switched” outlet controlled from a wall switch. These “Switched” outlets may also be in a room with overhead lights.

Q: Why does one of my switches not turn anything on?

K) This may be for a roughed in and blanked off paddle fan or light fixture. It may also operate an exterior light or receptacle.

We have found that most of the tripping situations arise from an overloaded circuit or electronic devices plugged in on the AFCI combo circuits. Laptop computer setups cause a large amount of the electronic tripping issues.

General use information.

Kitchens, dining room nook and bathroom receptacles are operated from a 120v 20a circuit. The maximum output on these individual circuits is 2400watts max.

All other areas of the home are on general 120v 15a lighting circuits 1800 watts max.

When purchasing any new appliances such as refrigerator, freezer or washing machine, try to purchase one that is GFCI compliant. There are a lot of brands that are not compliant and they may trip on a correctly wired, working circuit.

Hopefully this will help with some of the common questions that we see. If you are still experiencing electrical issues or problems with your home, please contact your customer service representative.

Midori Meadows Utility Contacts

Once your closing date has been confirmed by our Project Manager during your walkthrough, please take a moment to contact the utility providers to give them your name, address and your closing date to ensure continued service. Thank you!

Electricity/Gas

Puget Sound Energy
1-888-225-5773, customercare@pse.com

Homeowner's Association

The Management Trust
Phone: 425-897-3506

Water/Sewer

Soos Creek
Phone: (253) 630-9900
Fax: (253) 630-5289
customer_service@sooscreek.com

King County
Phone: 206-296-1450
Fax: 206-263-6073

Garbage/Recycling/Food Waste Containers

Republic Services
Phone: 206-682-9735 option 3

Cable/Internet

Comcast
Phone: 1-800-934-6489
www.xfinity.com

Midori Meadows
Emergency Contact List

System	Contractor	Contact
Heating & Hot Water	Bob's Heating and Ventilation	800-840-3346
Ventilation	Bob's Heating and Ventilation	800-840-3346
Plumbing	Yeti Plumbing	360-225-5190
Line Voltage - Service	Puget Sound Energy	888-225-5773
Line Voltage - Electrical	Garner Electric	503-956-8854
Low Voltage - Electrical	Garner Electric	503-956-8854
Internet/Cable	Comcast	800-266-2278
Warranty	Ichijo USA	warranty@ichijousa.com
Roofing and PVC Roof	R & C Roofing/Chinook Roofing	253-922-6902
Solar	NW Wind and Solar	206-788-3804

FIREX®

SIGNALING UL LISTED

Smoke Alarm
User Guide

i4618AC, i4718AC, i5000AC Series

Model: i4618AC

- 120 Volt Smoke Alarm with 9 Volt Battery Back-up
- Front Load Battery
- Test and Hush® Button

⚠ ATTENTION: Please take a few minutes to thoroughly read this user guide which should be saved for future reference and passed on to any subsequent owner.

P/N: 1261-7205-00

What to do When the Alarm Sounds!

Smoke Alarm Procedure

NEVER IGNORE THE SOUND OF THE ALARM!

Smoke alarms are designed to minimize false alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if it is located too close to the cooking area. Large quantities of combustion particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustion particles from the kitchen.

If the alarm sounds, check for fires first. If a fire is discovered, follow these steps. Become thoroughly familiar with these steps and review with all family members:

- Alert small children in the home.
- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- If the air is smoky, stay close to the floor. Breathe shallowly through a cloth, wet if possible.
- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the fire department from your cell phone outside or neighbor's home - not from yours!
- Don't return to your home until the fire officials say that it is all right to do so.

A.C. Wire-in Single and/or Multiple Station (up to 24 Devices) Ionization Smoke Alarm with 9 Volt Battery Back Up and HUSH™ Control to temporarily silence nuisance alarms.

Thank you for purchasing this smoke alarm. It is an important part of your family's home safety plan. You can trust this product to provide the highest quality safety protection. We know you expect nothing less when the lives of your family are at stake. Firex alarms and accessories CAN ONLY BE interconnected with other Kidde and FireX alarms and accessories as well as specified brands and models of interconnect compatible alarms. Connection of Firex products to a non-specified manufacturer's interconnect system, or connection with non-specified equipment from another manufacturer into an existing Firex system could result in nuisance alarming, failure to alarm, or damage to one or all of the devices in the interconnect system. Refer to the User Guide supplied with each Firex product for interconnect compatible models, brands, and devices. Refer to the wiring instructions in section 3 for NFPA initiating device limits.

This alarm detects products of combustion using the ionization technique. It contains 0.9 microcurie of Americium 241, a radioactive material (see Section 9). Distributed under U.S. NRC License No. 32-23858-01E. Manufactured in compliance with U.S. NRC safety criteria in 10 CFR 32.27. The purchaser is exempt from any regulatory requirements. Do not try to repair the smoke alarm yourself. Refer to the instructions in Section 12 for service.

IMPORTANT! READ ALL INSTRUCTIONS BEFORE INSTALLATION AND KEEP THIS USER GUIDE NEAR THE ALARM FOR FUTURE REFERENCE.

CONTENTS OF THIS USER GUIDE

⚠ WARNING! REMOVAL OF THE SMOKE ALARM BATTERY AND DISCONNECTING or LOSS OF A.C. POWER WILL RENDER THE SMOKE ALARM INOPERATIVE.

ELECTRICAL RATING: 120 VAC, 60HZ, 80mA maximum per alarm (maximum 80mA for originating unit with 24 devices interconnected).

1. RECOMMENDED LOCATIONS FOR ALARMS

- Locate the first alarm in the immediate area of the bedrooms. Try to monitor the exit path as the bedrooms are usually farthest from the exit. If more than one sleeping area exists, locate additional alarms in each sleeping area.
- Locate additional alarms to monitor any stairway as stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every sleeping room.
- Locate an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers).
- Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent an alarm not located in that room from waking the sleeper.
- Smoke, heat, and combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- For mobile home installation, select locations carefully to avoid thermal barriers that may form at the ceiling. For more details, see MOBILE HOME INSTALLATION.
- When mounting an alarm on the ceiling, locate it at a minimum of 4" (10 cm) from the side wall (see FIGURE 1).
- When mounting the alarm on the wall, use an inside wall with the top edge of the alarm at a minimum of 4" (10 cm) and a maximum of 12" (30.5 cm) below the ceiling (see FIGURE 1).
- Put smoke alarms at both ends of a bedroom hallway or large room if the hallway or room is more than 30 feet (9.1 m) long.
- Install Smoke Alarms on sloped, peaked or cathedral ceilings at or within 3ft (0.9m) of the highest point (measured horizontally). NFPA 72 states: "Smoke alarms in rooms with ceiling slopes greater than 1 foot in 8 feet (.3m in 2.4 m) horizontally shall be located on the high side of the room." NFPA 72 states: "A row of detectors shall be spaced and located within 3 ft (0.9m) of the peak of the ceiling measured horizontally" (see FIGURE 3).

- Install Smoke Alarms on tray-shaped ceilings (coffered ceilings) on the highest portion of the ceiling or on the sloped portion of the ceiling within 12" (305mm) vertically down from the highest point (see figure 4).

MOBILE HOME INSTALLATION

Modern mobile homes have been designed and built to be energy efficient. Install smoke alarms as recommended above (refer to RECOMMENDED LOCATIONS and FIGURES 1 and 2).

In older mobile homes that are not well insulated compared to present standards, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier which can prevent the smoke from reaching an alarm mounted on the ceiling. In such units, install the smoke alarm on an inside wall with the top edge of the alarm at a minimum of 4" (10 cm) and a maximum of 12" (30.5 cm) below the ceiling (see FIGURE 1).

If you are not sure about the insulation in your mobile home, or if you notice that the outer walls and ceiling are either hot or cold, install the alarm on an inside wall. For minimum protection, install at least one alarm close to the bedrooms. For additional protection, see SINGLE FLOOR PLAN in FIGURE 2.

⚠ WARNING: TEST YOUR SMOKE ALARM OPERATION AFTER MOBILE HOME VEHICLE HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE A WEEK DURING USE.

2. LOCATIONS TO AVOID

- In the garage. Products of combustion are present when you start your automobile.
- Less than 4" (10cm) from the peak of an "A" frame type ceiling.
- In an area where the temperature may fall below 40ºF (4.4˚C) or rise above 100ºF (37.8˚C) , such as garages and unfinished attics.

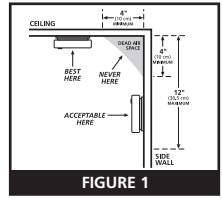


FIGURE 1

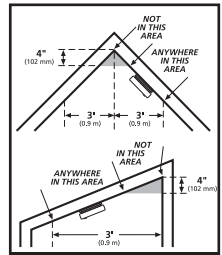


FIGURE 2

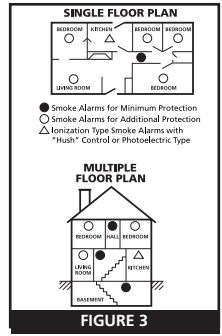


FIGURE 3

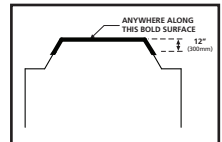


FIGURE 4

- In dusty areas. Dust particles may cause nuisance alarm or failure to alarm.
- In very humid areas (greater than 95% R.H.). Moisture or steam can cause nuisance alarms.
- In insect-infested areas.
- Smoke alarms should not be installed within 3 ft (.9m) of the following: the door to a kitchen, the door to a bathroom containing a tub or shower, forced air supply ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high air flow areas.
- Kitchens. Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature or be a photoelectric type.
- Near fluorescent lights. Electronic "noise" may cause nuisance alarms.
- Smoke alarms are not to be used with detector guards unless the combination (alarm and guard) has been evaluated and found suitable for that purpose..

3. INSTALLATION INSTRUCTIONS

WIRING REQUIREMENTS

- This smoke alarm should be installed on a U.L. listed or recognized junction box. All connections should be made by a qualified electrician and all wiring used shall be in accordance with articles 210 and 300.3(B) of the U.S. National Electrical Code ANSI/NFPA 70, NFPA 72 and/or any other codes having jurisdiction in your area. The multiple station interconnect wiring to the alarms must be run in the same raceway or cable as the AC power wiring. In addition, the resistance of the interconnect wiring shall be a maximum of 10 ohms.
- The appropriate power source is 120 Volt A.C. Single Phase supplied from a non-switchable circuit which is not protected by a ground fault interrupter.

⚠ **WARNING:** This alarm cannot be operated from power derived from a square wave, modified square wave or modified sine wave inverters. These types of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that will damage the alarm.

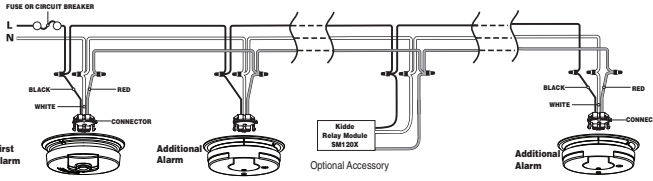
WIRING INSTRUCTIONS FOR A.C. QUICK CONNECT HARNESS

⚠ CAUTION! TURN OFF THE MAIN POWER TO THE CIRCUIT BEFORE WIRING THE ALARM.

- For alarms that are used as single station, DO NOT CONNECT THE RED WIRE TO ANYTHING. Leave the red wire insulating cap in place to make certain that the red wire cannot contact any metal parts or the electrical box.
- When alarms are interconnected, all interconnected units must be powered from a single circuit.

- A maximum of 24 Kidde and/or FireX devices may be interconnected in a multiple station arrangement. The interconnect system should not exceed the NFPA interconnect limit of 12 smoke alarms and/or 18 alarms total (smoke, heat, carbon monoxide, etc.). With 18 alarms interconnected, it is still possible to interconnect up to a total of 6 remote signaling devices and/or relay modules.
- When mixing models which have battery backup (1275, 1276, 1285, i12040, i12040A, i12060, i12060A, i12080, i12080A, i4618, i4618A, i4618AC, i4718A, i4718AC, i5000A, i5000AC, PE120, P12040, Pi2000, Pi2010, KN-COPE-I, KN-SM-FM-I, KN-COSM-IB, KN-COSM-IBA, HD135F, KN-COB-IC, KN-COP-IC, i12010S, i12010SCO, RF-SM-ACDC) with models without battery backup, (1235, i12020, i12020A, KN-COSM-I, SM120X, CO120X, SL177i, SLED177i) be advised that the models without battery backup will not respond during an AC power failure.
- For more information about compatible interconnect units and their functionality in an interconnect system, visit our web site at: www.Kidde.com
- The maximum wire run distance between the first and last unit in an interconnected system is 1000 feet.
- **NOTE:** This alarm is not compatible with Kidde CO-relays and Strobes manufactured before Nov. 1, 2011.
- Figure 5 illustrates interconnection wiring. Improper connection will result in damage to the alarm, failure to operate, or a shock hazard.
- Make certain alarms are wired to a continuous (non-switched) power line. NOTE: Use standard UL listed household wire (as required by local codes) available at all electrical supply stores and most hardware stores.

FIGURE 5 INTERCONNECT WIRING DIAGRAM



WIRES ON ALARM HARNESS	CONNECTED TO
Black	Hot Side of A.C. Line
White	Neutral Side of A.C. Line
Red	Interconnect Lines (Red Wires) of Other Units in the Multiple Station Set up

BATTERY INSTALLATION

See MAINTENANCE (Section 6) for battery installation.

⚠ CAUTION! THIS UNIT WILL NOT FUNCTION WITHOUT A PROPERLY INSTALLED BATTERY, AND IS EQUIPPED WITH A BATTERY LOCKOUT FEATURE WHICH PREVENTS THE BATTERY DOOR FROM CLOSING IF A BATTERY IS NOT INSTALLED CORRECTLY.

MOUNTING INSTRUCTIONS

⚠ CAUTION: THIS UNIT IS SEALED. THE COVER IS NOT REMOVABLE!

1. Remove the trim ring from the back of the alarm by holding the trim ring and twisting the alarm counter-clockwise.

2. After selecting the proper smoke alarm location as described in Section 1 and wiring the AC Quick Connector as described in the WIRING INSTRUCTIONS, attach the trim ring to the electrical box (see Figure 6). To ensure aesthetic alignment of the alarm with the hallway or wall, the "A" line on the mounting bracket must be parallel with the hallway when ceiling mounted, or horizontal when wall mounted.

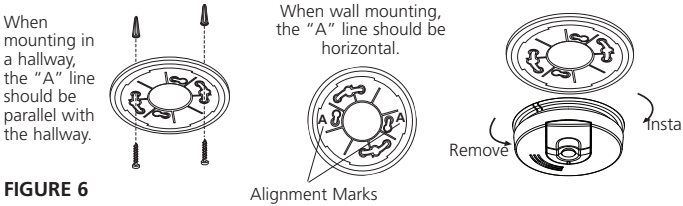


FIGURE 6

3. Pull the AC QUICK CONNECTOR through the center hole in the mounting bracket and secure the bracket, making sure that the mounting screws are positioned in the small ends of the keyholes before tightening the screws.

4. Plug the AC QUICK CONNECTOR into the back of the alarm (see Figure 7), making sure that the locks on the connector snap into place. Then push the excess wire back into the electrical box through the hole in the center of the mounting bracket.

5. Install the alarm on the mounting bracket and rotate the alarm clockwise until the alarm ratchets into place (this ratcheting function allows for aesthetic alignment).

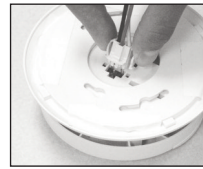


FIGURE 7

NOTE: The alarm will mount to the bracket in 4 positions (every 90 degrees). When wall mounting, make sure the battery box is at the bottom of the unit. (see Figure 5).

6. Pull the Battery Pull Tab completely out of the unit. This will automatically connect the battery.

⚠ CAUTION: Due to the loudness (85 decibels) of the alarm, always stand an arms length away from the unit when testing.

7. Turn on the AC power. The green Power On Indicator should be lit when the alarm is operating from AC power. Confirm unit operation by pressing the Test/Hush button.

8. Test the unit to ensure proper operation by pressing the Test/Hush Button for a minimum of 5 seconds. (All interconnected, battery backed up, alarms should respond).

TAMPER RESIST FEATURES

Smoke Alarm Tamper Resist Feature

This alarm has a tamper resist feature, which helps prevent someone from removing the unit from the mounting bracket. It can be very effective in preventing smoke alarm tampering.

Activate the smoke alarm tamper resist feature by breaking off the four posts in the square holes in the mounting bracket (see Figure 8A). When the posts are broken off, the tamper resist tab on the base is allowed to engage the mounting bracket. Rotate the alarm onto the mounting bracket until you hear the tamper resist tab snap into place, locking the alarm on the mounting bracket. Using the tamper resist feature will help deter children and others from removing the alarm from the bracket. NOTE: To remove the alarm when the tamper resist tab is engaged, press down on the tamper resist tab, and rotate the alarm off the bracket (see Figure 8B).

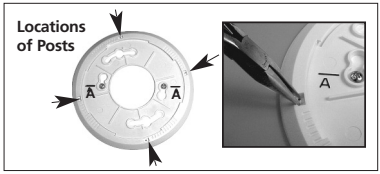


FIGURE 8A

FIGURE 8B

4. OPERATION AND TESTING

OPERATION: The smoke alarm is operating once A.C. power is applied, a fresh battery is installed and testing is complete. When the smoke alarm ionization chamber senses products of combustion, the horn will sound a loud (85db) temporal alarm until the sensing chamber is cleared of smoke particles.

HUSH™ CONTROL: The "HUSH" feature has the capability of temporarily desensitizing the alarm circuit for up to 8 minutes. This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm. The smoke alarm is desensitized by pushing the "TEST/HUSH" button on the smoke alarm cover. If the smoke is not too dense, the alarm will silence immediately. The red LED will illuminate for 1.5 seconds every 8-10 seconds while in hush. This indicates that the alarm is in a temporarily desensitized condition. The smoke alarm will automatically reset after approximately 8 minutes and sound the alarm if particles of combustion are still present. The "HUSH" feature can be used repeatedly until the air has been cleared of the condition causing the alarm. Pushing the Test/Hush button on the alarm will end the hush period.

This alarm has a low battery HUSH feature. If the alarm is sounding a low battery warning chirp, you can silence this chirp for approximately 13 hours by pressing the Test/Hush button.

NOTE: DENSE SMOKE WILL OVERRIDE THE HUSH CONTROL FEATURE AND SOUND A CONTINUOUS ALARM.

⚠ CAUTION: BEFORE USING THE ALARM HUSH FEATURE, IDENTIFY THE SOURCE OF THE SMOKE AND BE CERTAIN A SAFE CONDITION EXISTS.

LED INDICATORS: This smoke alarm is equipped with red and green LED indicators. The green LED (when illuminated) indicates the presence of AC power. The red LED has four modes of operation:

Standby Condition: The red LED will flash every 40 seconds to indicate that the smoke alarm is operating properly.

Alarm Condition: When the alarm senses products of combustion and goes into alarm, the red LED will flash one flash per second. The flashing LED and pulsating alarm will continue until the air is cleared.

WHEN UNITS ARE INTERCONNECTED, only the red LED of the alarm which senses the smoke or is being tested (the originating unit) will flash. All other units in the interconnect system will sound an alarm but their red LED's will NOT be flashing.

Alarm Memory: This smoke alarm is equipped with an alarm memory, which provides a visual indication when an alarm has been activated. The red LED will illuminate for about 1.5 seconds every 16-20 seconds to indicate the memory condition. The memory will remain activated until pushing the Test/Hush Button resets it or will time-out between 11 to 13 hours. In an interconnected installation only the memory of the originating alarm will be activated.

Hush® mode: The red LED will illuminate for 1.5 seconds every 8-10 seconds, indicating the smoke alarm is in the Hush® mode.

TESTING: Test by pushing the Test/Hush button on the cover and hold it down for a minimum of 5 seconds. This will sound the alarm if all the electronic circuitry, horn and battery are working. In an interconnected installation all interconnected alarms should sound when the test feature on any one of the interconnected alarms is activated. If no alarm sounds, check the fuse or circuit breaker supplying power to the alarm circuit. If the alarm still does not sound, the unit has defective batteries or other failure. DO NOT use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a structure fire.

TEST THE ALARM WEEKLY TO ENSURE PROPER OPERATION. Erratic or low sound coming from your alarm may indicate a defective alarm, and it should be returned for service (see Section 12).

5. NUISANCE ALARMS

Smoke alarms are designed to minimize nuisance alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if the alarm is located close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustible products from the kitchen.

Model i4618AC has a "HUSH" feature that is extremely useful in a kitchen area or other areas prone to nuisance alarms. For more information, refer to Section 4 OPERATION AND TESTING.

If the alarm does sound, check for fires first. If a fire is discovered, get out and call the fire department. If no fire is present, check to see if one of the reasons listed in Section 2 may have caused the alarm.

6. MAINTENANCE / TROUBLESHOOTING

ALARM REMOVAL

IF SMOKE ALARM TAMPER RESIST FEATURE HAS BEEN ACTIVATED, REFER TO SMOKE ALARM TAMPER RESIST FEATURE IN SECTION 3 FOR REMOVAL INSTRUCTIONS.

To remove the alarm from the trim ring, rotate the alarm counter clockwise in the direction of the "OFF" arrow on the cover. To disconnect the A.C. power harness, squeeze the locking arms on the sides of the Quick Connector while pulling the connector away from the bottom of the alarm (see Section 3, Figure 7).

BATTERY INSTALLATION AND REMOVAL

To replace or install the battery slide the battery door in the direction indicated on the cover of the alarm. The battery can then be pulled out of the carrier. When installing a new battery into the carrier, make sure that the polarity matches the markings printed on the inside of the battery compartment. Completely slide the battery door to the closed position.

A missing or improperly installed battery will prevent the battery door from closing and result in improper alarm operation.

SLIDE

OPEN

INSERT

This smoke alarm uses a 9V carbon zinc battery (alkaline batteries may also be used). A fresh battery should last for one year under normal operating conditions.

This alarm has a low/missing battery monitor circuit which will cause the alarm to "chirp" approximately every 30-40 seconds for a minimum of seven (7) days when the battery gets low.Replace the battery when this condition occurs.

NOTE: Low/missing battery monitor circuit WILL cause the unit to chirp while replacing the battery. This function will cease once the new battery has been installed. To avoid this "chirp" the unit can be removed from the base and disconnected from the AC power when replacing the battery, but it is not necessary.

USE ONLY THE FOLLOWING 9 VOLT BATTERIES FOR SMOKE ALARM

BATTERY REPLACEMENT.

Carbon-zinc type	EVEREADY 1222; GOLD PEAK 1604P OR 1604S GOLDEN POWER G6F22M
Alkaline type	ENERGIZER 522; DURACELL MN1604 OR MX1604; GOLD PEAK 1604A PANASONIC 6AM6, 6AM-6, 6AM-6PI, 6AM6X, AND 6LR61 (GA)

NOTE: Do not use lithium batteries in this unit.

These batteries can be purchased at your local retailer.

NOTE: WEEKLY TESTING IS REQUIRED!

⚠ **WARNING!** BE SURE TO FOLLOW BATTERY INSTALLATION INSTRUCTIONS PRINTED ON THE BACK OF THE ALARM AND USE ONLY THE BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE SMOKE ALARM.

⚠ **WARNING:** THIS ALARM WILL "CHIRP" IF ABNORMAL OPERATION OF THE SMOKE-SENSING CHAMBER IS DETECTED. THIS CHIRP WILL OCCUR APPROXIMATELY 20 SECONDS AFTER THE RED LED FLASH. REPLACE THE ALARM IF THIS CONDITION OCCURS.

CLEANING YOUR ALARM

YOUR ALARM SHOULD BE CLEANED AT LEAST ONCE A YEAR

To clean your alarm, remove it from the mounting bracket as outlined in the beginning of this section. You can clean the interior of your alarm (sensing chamber) by using compressed air or a vacuum cleaner hose and blowing or vacuuming through the openings around the perimeter of the alarm. The outside of the alarm can be wiped with a damp cloth. After cleaning, reinstall your alarm, verify the green LED is on and test your alarm by using the Test/Hush Button. If cleaning does not restore the alarm to normal operation the alarm should be replaced.

7. LIMITATIONS OF SMOKE ALARMS

⚠ **WARNING: PLEASE READ CAREFULLY AND THOROUGHLY**

- NFPA 72 states: Life safety from fire in residential occupancies is based primarily on early notification to occupants of the need to escape, followed by the appropriate egress actions by those occupants. Fire warning systems for

dwelling units are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue are necessary.

- Leading authorities recommend that both ionization and photoelectric smoke alarms be installed to help insure maximum detection of the various types of fires that can occur within the home. Ionization sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow smoldering fires) sooner than ionization alarms.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- A.C. powered alarms (without battery backup) will not operate if the A.C. power has been cut off, such as by an electrical fire or an open fuse.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.
- If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their lives and property.

8. GOOD SAFETY HABITS

DEVELOP AND PRACTICE A PLAN OF ESCAPE

- Install and maintain Fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency.
- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.

- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.
- Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

WHAT TO DO WHEN THE ALARM SOUNDS

- Alert small children in the home.
- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.
- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the fire department from your cell phone outside or neighbor's home - not from yours!
- Don't return to your home until the fire officials say that it is all right to do so.

There are situations where a smoke alarm may not be effective to protect against fire. For instance:

- Smoking in bed.
- Leaving children unsupervised.

- Cleaning with flammable liquids, such as gasoline.
- Fires where the victim is intimate with a flaming initiated fire; for example, when a person's clothes catch fire while cooking.
- Fires where the smoke is prevented from reaching the detector due to a closed door or other obstruction.
- Incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located detectors

9. NRC INFORMATION

Ionization type smoke alarms use a very small amount of a radioactive element in the sensing chamber to enable detection of visible and invisible combustion products. The radioactive element is safely contained in the chamber and requires no adjustments or maintenance. This smoke alarm meets or exceeds all government standards. It is manufactured and distributed under license from the U.S. Nuclear Regulatory Commission.

10. NFPA REQUIRED PROTECTION

The National Fire Protection Association's Standard 72 provides the following information:

Smoke Detection – Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:

(1) In all sleeping rooms and guest rooms.

(2) Outside of each separate dwelling unit sleeping area, within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along a path of travel.

(3) On every level of a dwelling unit, including basements.

(4) On every level of a residential board and care occupancy(small facility), including basements and excluding crawl spaces and unfinished attics.

(5) In the living area(s) of a guest suite.

(6) In the living area(s) of a residential board and care occupancy(small facility).

Smoke Detection – Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas

separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms. The installation of the smoke alarms in the kitchen, attic (finished or unfinished), or garage is normally not recommended, as these locations occasionally experience conditions that can result in improper operation.

This equipment should be installed in accordance with the National Fire Protection Association's Standard 72 (NFPA, Batterymarch Park, Quincy, MA 02269).

NOTIFY YOUR LOCAL FIRE DEPARTMENT AND INSURANCE COMPANY OF YOUR SMOKE ALARM INSTALLATION.

11. ⚠ CAUTION (AS REQUIRED BY THE CALIFORNIA STATE FIRE MARSHAL)

"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows. A smoke alarm installed in each separate sleeping area (in the vicinity of, but outside of the bedrooms), and heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages."

12. SERVICE AND WARRANTY

If after reviewing this user guide you feel that your smoke alarm is defective in any way, do not tamper with the unit.
Return it for servicing to: KIDDE, 1016 Corporate Park Dr., Mebane, NC 27302. 1-800-880-6788 (See Warranty for in-warranty returns).

FIVE YEAR LIMITED WARRANTY (i4618AC, i4718AC Series)

Kidde warrants to the original purchaser that the enclosed smoke alarm (but not the battery) will be free from defects in material and workmanship or design under normal use and service for a period of five years from the date of purchase. The obligation of Kidde under this warranty is limited to repairing or replacing the smoke alarm or any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the smoke alarm with proof of date of purchase, postage and return postage prepaid, to Warranty Service Department, Kidde, 1016 Corporate Park Dr., Mebane, NC 27302.

This warranty shall not apply to the smoke alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate A.C. or D.C. electrical power.

THE LIABILITY OF KIDDE OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS ARISING FROM THE SALE OF THIS SMOKE ALARM OR UNDER THE TERMS OF THIS LIMITED WARRANTY SHALL NOT IN ANY CASE EXCEED THE COST OF REPLACEMENT OF SMOKE ALARM AND, IN NO CASE, SHALL KIDDE OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS BE LIABLE FOR CONSEQUENTIAL LOSS OR DAMAGES RESULTING FROM THE FAILURE OF THE SMOKE ALARM OR FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE COMPANY'S NEGLIGENCE OR FAULT.

Since some states do not allow limitations on the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

Also, Kidde makes no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

The above warranty may not be altered except in writing signed by both parties hereto.

TEN YEAR LIMITED WARRANTY (i5000AC Series)

Kidde warrants to the original purchaser that the enclosed smoke alarm (but not the battery) will be free from defects in material and workmanship or design under normal use and service for a period of ten years from the date of purchase. The obligation of Kidde under this warranty is limited to repairing or replacing the smoke alarm or any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the smoke alarm with proof of date of purchase, postage and return postage prepaid, to Warranty Service Department, Kidde, 1016 Corporate Park Dr., Mebane, NC 27302.

This warranty shall not apply to the smoke alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate A.C. or D.C. electrical power.

THE LIABILITY OF KIDDE OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS ARISING FROM THE SALE OF THIS SMOKE ALARM OR UNDER THE TERMS OF THIS LIMITED WARRANTY SHALL NOT IN ANY CASE EXCEED THE COST OF REPLACEMENT OF SMOKE ALARM AND, IN NO CASE, SHALL KIDDE OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS BE LIABLE FOR CONSEQUENTIAL LOSS OR DAMAGES RESULTING FROM THE FAILURE OF THE SMOKE ALARM OR FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE COMPANY'S NEGLIGENCE OR FAULT.

Since some states do not allow limitations on the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

Also, Kidde makes no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

The above warranty may not be altered except in writing signed by both parties hereto.

QUESTIONS OR FOR MORE INFORMATION
Call our Consumer Hotline at **1-800-880-6788** or contact us at our website at **www.kidde.com**

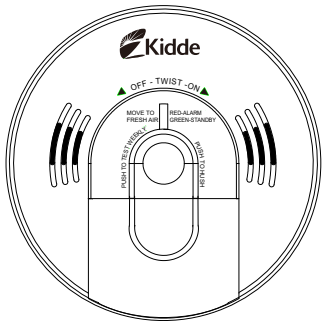
FIREX®

Kidde 1016 Corporate Park Drive, Mebane, NC 27302
Made in China

User Guide for Model KN-COSM-IBA

Combination
Smoke and Carbon Monoxide Alarm

- *120V AC*
- *2 - AA Battery Backup*
- *2-LED Display*
- *Peak Level Memory*
- *Test/Hush® button*
- *Voice Message System*



SIGNALING
UL LISTED

For questions concerning your Smoke and Carbon Monoxide Alarm, please call our Product Support Line at 1-800-880-6788.

For your convenience, write down the following information. If you call our Product Support Line, these are the first questions you will be asked:	
Alarm Model Number *(located on back of the alarm):*	
Date of Manufacture *(located on back of the alarm):*	
Date of Purchase:	
Where Purchased:	

READ AND SAVE THIS USER GUIDE

P/N 2544-7201-01 EN

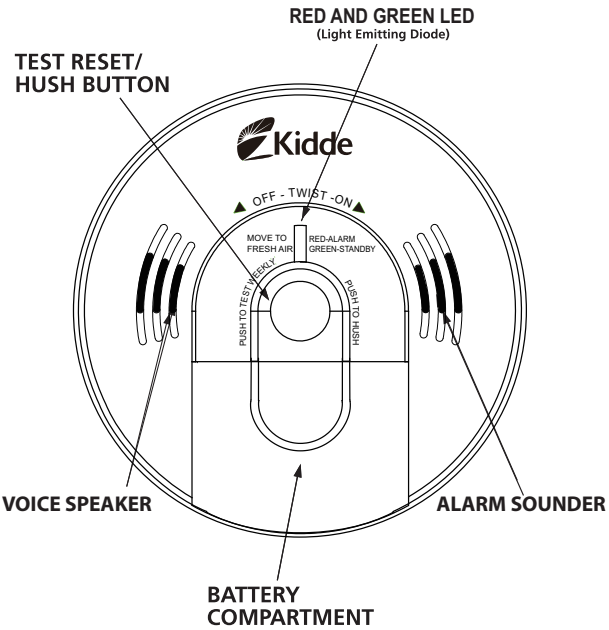
Table of Contents

Introduction

Thank you for purchasing the Kidde Combination Smoke and Carbon Monoxide Alarm model # KN-COSM-IBA. This alarm is suitable as a Single Station and/or Multiple Station (24 devices) alarm. This alarm has a ten-year limited warranty. Please take a few minutes to thoroughly read this user guide, and save for future reference. Teach children how to respond to the alarms, and that they should never play with the unit. Your Kidde Smoke/CO Alarm was designed to detect both smoke and carbon monoxide from any source of combustion in a residential environment. It is not designed for use in a recreational vehicle (RV) or boat. If you have any questions about the operation or installation of your alarm, please call our toll free Product Support Line at 1-800-880-6788. The guide on Page 27 will help you determine the correct location of safety products that will help keep your home a safer place.

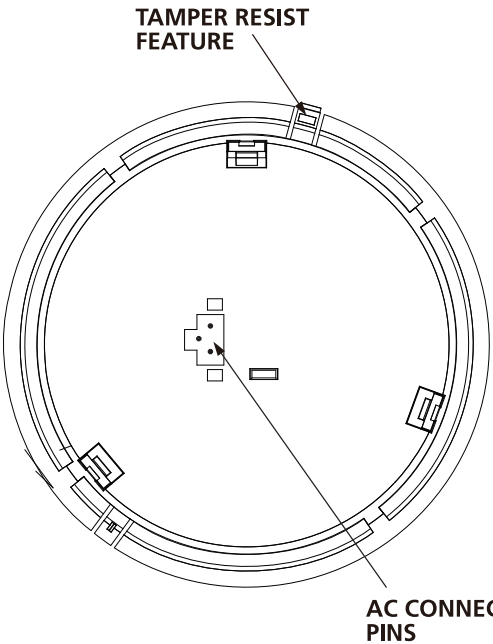
Product View

FRONT



Product View

BACK



Features

- Loud 85 decibel alarm.
- Permanent independent smoke and carbon monoxide sensors.
- **Smoke alarm takes precedence** when **both** smoke and carbon monoxide are present.
- Powered by 120V AC (60 Hz, 45mA max) wire-in connector and two AA battery backup.
- Interconnectable to other Kidde/Nighthawk brand smoke and CO alarms (see page 15 for details).
- Alarm/Voice message warning system that alerts you of the following conditions in the manner described below, thus eliminating any confusion over which alarm is sounding:

  FIRE: The alarm/voice pattern is three long alarm beeps followed by the verbal warning message "FIRE!" This pattern is repeated until the smoke is eliminated. The red LED light will flash while in alarm/voice mode.

  CARBON MONOXIDE: The alarm/voice pattern is four short alarm beeps followed by the verbal warning message "WARNING! CARBON MONOXIDE!". This continues until the unit is reset or the CO is eliminated. While powered by battery only, after four minutes the alarm/voice pattern will sound once every minute. The red Light Emitting Diode (LED) light will flash while in alarm/voice mode.

  LOW BATTERY: When the batteries are low and need replacing the red LED light will flash and the unit will "chirp" one time, followed by the warning message "LOW BATTERY." This cycle will occur once every minute and will continue for at least seven days. Under battery power, the "LOW BATTERY" voice only occurs once every 15 minutes.
- Voice Message System that alerts user to the following conditions:
  - Only for smoke alarm Hush

    System announces "HUSH MODE ACTIVATED" when the unit is first put into HUSH Mode.
  - Only for smoke alarm Hush

System announces "HUSH MODE CANCELLED" when unit resumes normal operation after Hush Mode has been cancelled.

– Only if button is pushed

System announces "CAUTION, CARBON CONOXIDE PREVIOUSLY DETECTED" when the unit has detected CO concentrations of 100 ppm or higher.

– System announces "PUSH TEST BUTTON" when the unit is powered up, reminding user to activate the Test Button.

- End of Life Hush. At end of product life, the button can be pushed to silence the end of life "chirp" for approximately 3 days at a time, for a maximum of 30 days life extension.
- One "chirp" every 30 seconds coupled with a green LED flash twice a second is an indication that the alarm is malfunctioning. If this occurs call the Product Support Line at 1-800-880-6788.
- Test/Reset button performs functions.(See page 14).
- HUSH Control Feature that silences the unit during nuisance alarm situations (see page 15).
- Peak Level Memory Feature which alerts user when the unit has detected CO concentrations of 100 ppm or greater (see page 16).
- Alarm Memory Feature that gives visual indication when an alarm has sensed a hazardous condition.
- Green and red LED lights that indicate normal operation and alarm status (see page 16 and 17 for details).
- Tamper Resist Feature that deters children and others from removing the alarm (see page 17).
- Battery reminder flag that prohibits installation when batteries are not present.

Smoke Alarm

The smoke alarm monitors the air for products of combustion that are produced when something is burning or smoldering. When smoke particles in the smoke sensor reach a specified concentration, the alarm/voice message warning system will sound, and be accompanied by the flashing red LED light. The smoke alarm takes precedence when both smoke and carbon monoxide are present.

⚠ WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

NFPA 72 states: Life safety from fire in residential occupancies is based primarily on early notification to occupants of the need to escape, followed by the appropriate egress actions by those occupants. Fire warning systems for dwelling units are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue are necessary.

- Smoke alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. Ionization sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow smoldering fires) sooner than ionization alarms. Home fires develop in different ways and are often unpredictable. For maximum protection, Kidde recommends that both Ionization and Photoelectric alarms be installed.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.

- If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their lives and property.

Carbon Monoxide (CO) Alarm

The Carbon Monoxide (CO) alarm monitors the air for the presence of CO. It will alarm when there are high levels of CO present, and when there are low levels of CO present over a longer period of time (see page 21 for alarm times). When a CO condition matches either of these situations, the alarm/voice message warning system will sound, and be accompanied by the flashing red LED light. The carbon monoxide sensor uses an electrochemical technology.

⚠CAUTION: This alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

Step 1
Installation Guide:

IMPORTANT: THIS ALARM MUST BE MOUNTED ON A CEILING OR WALL. IT WAS NOT DESIGNED FOR USE AS A TABLETOP DEVICE! INSTALL ONLY AS DETAILED!

A. Recommended Installation Locations:

Kidde Safety recommends the installation of a Smoke/CO Alarm in the following locations. For maximum protection we suggest an alarm be installed on each level of a multilevel home, including every bedroom, hallways, finished attics and basements. Put alarms at both ends of bedroom, hallway or large room if hallway or room is more than 30 ft (9.1m) long. If you have only one alarm, ensure it is placed in the hallway outside of the main sleeping area, or in the main bedroom. Verify the alarm can be heard in all sleeping areas.

Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent an alarm not located in that room from waking the sleeper. Smoke, heat and combustion products rise to the ceiling and spread horizontally. Mounting the alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction. When mounting an alarm on the ceiling, locate it at a minimum of 4" (10cm) from the side wall (see figure 1). If installing the alarm on the wall, use an inside wall with the top edge of the alarm at a minimum of 4" (10cm) and a maximum of 12" (30.5cm) below the ceiling (see figure 1).

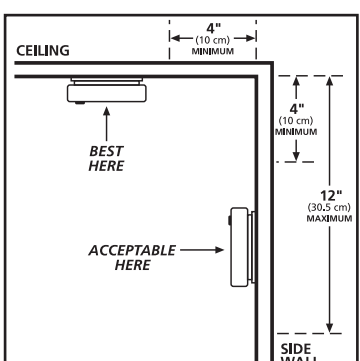


FIGURE 1

Installation Instructions

Sloped Ceiling Installation:

The following information is from the National Fire Protection Association and is listed in Fire Code 72.

Install Smoke Alarms on sloped, peaked or cathedral ceilings at, or within 3 ft (0.9m) of the highest point (measured horizontally). NFPA 72 states "Smoke alarms in rooms with ceiling slopes greater than 1 ft to 8 ft (.3 m-2.4 m) horizontally shall be located on the high side of the room".

NFPA 72 states "A row of alarms shall be spaced and located within 3 ft (0.9 m) of the peak of the ceiling measured horizontally" (see figure 2).

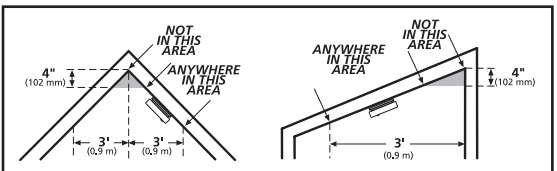


FIGURE 2

Mobile Homes:

Modern mobile homes have been designed and built to be energy efficient. Install Smoke/CO alarms as recommended above (refer to Recommended Installation Instructions and figure 1). In older mobile homes that are not well insulated, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may cause a thermal barrier, which can prevent smoke from reaching an alarm mounted on the ceiling. In such mobile homes install your Smoke/CO Alarm on an inside wall with the top edge of the alarm at a minimum of 4 inches (10cm) and a maximum of 12 inches (30.5cm) below the ceiling (see figure 2). If you are not sure about the insulation in your mobile home, or if you notice that the outer walls and ceiling are either hot or cold, install your alarm on an inside wall **ONLY!**

Installation Instructions

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

WARNING - This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards.

B. Where Not to Install:

Do not install in garages, kitchens, furnace rooms or bathrooms! INSTALL AT LEAST 5 FEET AWAY FROM ANY FUEL BURNING APPLIANCE.

Do not install within 3 ft (.9m) of the following: The door to a kitchen, or a bathroom that contains a tub or shower, forced air supply ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high air areas. Avoid excessively dusty, dirty or greasy areas. Dust, grease or household chemicals can contaminate the alarm's sensors, causing it to not operate properly.

Place the alarm where drapes or other objects will not block the sensor. Smoke and CO must be able to reach the sensors to accurately detect these conditions. Do not install in peaks of vaulted ceilings, "A" frame ceilings or gabled roofs. Keep out of damp and humid areas.

Install at least one (1) foot away from fluorescent lights, electronic noise may cause nuisance alarms. Do not place in direct sunlight and keep out of insect infested areas. Extreme temperatures will effect the sensitivity of the Smoke/CO Alarm. Do not install in areas where the temperature is colder than 40 degrees Fahrenheit (4.4˚ Celsius) or hotter than 100 degrees Fahrenheit (37.8˚ Celsius), such as garages and unfinished attics. Do not install in areas where the relative humidity (RH) is above 85%. Place away from doors and windows that open to the outside.

Step 2
Wiring Instructions:

⚠ WIRING REQUIREMENTS

- This smoke alarm should be installed on a U.L. listed or recognized junction box. All connections should be made by a qualified electrician and all wiring used shall be in accordance with articles 210 and 300.3(B) of the U.S. National Electrical Code ANSI/NFPA 70, NFPA 72 and/or any other codes having jurisdiction in your area. The multiple station interconnect wiring to the alarms must be run in the same raceway or cable as the AC power wiring. In addition, the resistance of the interconnect wiring shall be a maximum of 10 ohms.
- The appropriate power source is 120 Volt AC Single Phase supplied from a non-switchable circuit, which is not protected by a ground fault interrupter.
- Smoke alarms are not to be used with detector guards unless the combination (alarm and detector guard) have been evaluated and found suitable for that purpose.
- ⚠ **WARNING:** The alarm cannot be operated from power derived from a square wave, modified square wave or modified sine wave, inverter. These types of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that will damage the alarm.

⚠ WIRING INSTRUCTIONS FOR AC QUICK CONNECT HARNESS

CAUTION! TURN OFF THE MAIN POWER TO THE CIRCUIT BEFORE WIRING THE ALARM.

- For alarms that are used as single station, DO NOT CONNECT THE RED WIRE TO ANYTHING. Leave the red wire insulating cap in place to make certain that the red wire cannot contact any metal parts or the electrical box.
- When alarms are interconnected, all interconnected units must be powered from a single circuit.

Installation Instructions

- A maximum of 24 Kidde Safety devices may be interconnected in a multiple station arrangement. The interconnect system should not exceed the NFPA interconnect limit of 12 smoke alarms and/or 18 alarms total (smoke, CO, Smoke/ CO Combination, heat, etc.). This Smoke/CO combination alarm must be counted as a smoke alarm when determining the number of units on an interconnect line. With 18 alarms interconnected, it is still possible to interconnect up to a total of 6 remote signaling devices and /or relay modules (see page 15 for details on interconnecting Kidde devices).
- The maximum wire run distance between the first and last unit in an interconnected system is 1000 feet.
- Figure 3 illustrates interconnection wiring. Improper connection will result in damage to the alarm, failure to operate, or a shock hazard.
- Make certain alarms are wired to a continuous (non-switched) power line. NOTE: Use standard UL Listed household wire (as required by local codes) available at all electrical supply stores and most hardware stores.

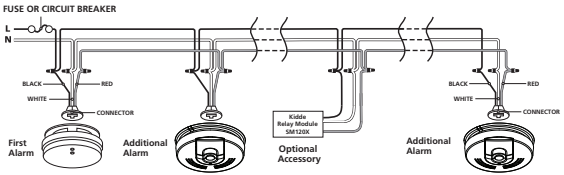


FIGURE 3 Interconnect Wiring Diagram

WIRES ON ALARM HARNESS	CONNECTED TO
Black	Hot Side of AC Line
White	Neutral Side of AC Line
Red	Interconnect Lines (Red Wires) of Other Units in the Multiple Station Set up

Step 3
Mounting Instructions:

⚠ CAUTION: YOUR SMOKE/CO ALARM IS SEALED AND THE COVER IS NOT REMOVABLE!

1. To help identify the date to replace the unit, write the "Replace by" date (10 years from initial power up) in permanent marker in the space provided on the side of the alarm. See Alarm Replacement section for additional information.
2. Remove the mounting bracket from the back of the alarm by holding the mounting bracket and twisting the alarm in the direction indicated by the "OFF"arrow on the alarm cover.
3. After selecting the proper location for your Smoke/CO Alarm, as described on Pages 8-10, and wiring the AC QUICK CONNECT harness as described in the WIRING INSTRUCTIONS (NOTE: AC power should be turned off at this stage), attach the mounting bracket to the electrical box. To ensure aesthetic alignment of the alarm with the hallway, or wall, the "A" line on the mounting bracket must be parallel with the hallway when ceiling mounted, or horizontal when wall mounted.
4. Pull the AC QUICK CONNECTOR through the center hole in the mounting bracket and secure the bracket, making sure that the mounting screws are positioned in the small ends of the keyholes before tightening the screws.

FIGURE 4
Installing AC Quick Connect

5. Remove the cardboard square from the connector pins and plug the AC QUICK CONNECTOR into the back of the alarm (see figure 4), making sure that the locks on the connector snap into place. Then push the excess wire back into the electrical box through the hole in the center of the mounting bracket.
6. Install the alarm on the mounting bracket and rotate the alarm in the direction of the "ON" arrow on the cover until the alarm ratchets into place (this ratcheting function allows for aesthetic alignment). Note: The alarm will mount to the bracket in 4 positions (every 90 degrees).

7. Turn on the AC power. The green AC Power On Indicator should be lit when the alarm is operating from AC power.
8. Two labels are included with your alarm. They have important information on what to do in case of an alarm. Add the phone number of your emergency service provider (Fire Department or 911) in the space provided. Place one label next to the alarm after it is mounted, and one label near a fresh air source such as a door or window.
9. Remove the red cardboard from the battery compartment, install batteries, close battery door.

Step 4
Testing the Alarm

⚠ CAUTION: Due to the loudness (85 decibels) of the alarm, always stand an arms length away from the unit when testing.

After installation, TEST THE UNIT'S ELECTRONICS by pressing and releasing the test/reset button. You will then hear the following sequence of "beeps" and verbal warnings:

Three long beeps.

Verbal warning: "FIRE!"

Three long beeps.

Four quick beeps.

Verbal warning: "WARNING! CARBON MONOXIDE"

Four quick beeps

Single beep to reset

Weekly testing is required! If at anytime it does not perform as described, verify power is connected correctly and that the battery doesn't need replacing. Clean dust and other buildup off the unit. If it still doesn't operate properly call the Product Support Line at 1-800-880-6788.

Interconnect Feature

Your Combination Smoke/CO Alarm is interconnectable to other multiple station Kidde, Nighthawk and Kidde/Fyrnetics products:

- When compatible smoke alarms and heat alarms are interconnected to your Smoke/CO Alarm, they will only respond to a smoke related event.

Operating Instructions

- When mixing compatible models with battery backup with models without battery backup, be advised that the models without battery backup will not respond during an AC power failure.
- This unit is only approved to interconnect with other Kidde/Nighthawk products. It is NOT approved to interconnect with any other brand of detection product.
- This alarm is interconnect compatible with the following alarms and accessories:

  –Smoke alarms: 1235, 1275, 1276, 1285, i12020, i12020A, i12040, i12040A, i12060, i12060A, i4618, i4618A, KN-SMFM-I, RF-SM-ACDC, PE120, P12040, Pi2000, Pi2010, KN-COSM-I, KN-COSM-IB,

  Kidde/Firex: i4618, i4618A

  – Heat alarm: HD135F
  – CO alarms: KN-COB-IC, KN-COP-IC, KN-COPE-I
  – Relay modules: SM120X, CO120X
  – Strobe Light: SL177i, SLED177i
- For more information about compatible interconnect units and their functionality in an interconnect system, visit our web site at www.kidde.com.

Smoke HUSH Control Feature

The HUSH feature has the capability of temporarily desensitizing the smoke alarm circuit for approximately 9 minutes. This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm. When the unit is in alarm,You can put your Smoke/CO Alarm in HUSH mode by pushing the test/reset button. If the smoke is not too dense, the alarm will silence immediately, the unit will verbally announce "HUSH MODE ACTIVATED", and the green LED will flash every 2 seconds for approximately 9 minutes. This indicates that the smoke alarm is in a temporarily desensitized condition. Your Smoke/CO Alarm will automatically reset after approximately 9 minutes. When the unit returns to normal operation after being in HUSH mode, it will verbally announce "HUSH MODE CANCELLED", and sound the alarm if smoke is still present. The HUSH feature can be used repeatedly until the air has been cleared of the condition causing the alarm. While the unit is in HUSH mode, pushing the test/reset button on the alarm will also end the HUSH period.

NOTE: DENSE SMOKE WILL OVERRIDE THE HUSH CONTROL FEATURE AND SOUND A CONTINUOUS ALARM.

Operating Instructions

⚠ CAUTION: BEFORE USING THE ALARM HUSH FEATURE, IDENTIFY THE SOURCE OF THE SMOKE AND BE CERTAIN A SAFE CONDITION EXISTS.

Reset Feature

If the the Smoke/CO Alarm is sounding a CO alarm, pressing the test/reset button will silence the alarm.

If the CO condition that caused the alert continues, the alarm will reactivate within 200 seconds (follow the action plan on page 20).

CO Peak Level Memory

If the green LED is blinking once every 10 seconds, the unit has detected a hazardous CO condition. If the CO sensor has detected a CO level of 100 PPM or higher since last reset, it will be recorded by the Peak Level Memory function. To access the Peak Level Memory press the test/reset button. If a reading of 100 PPM or higher has been recorded, the unit will announce "Caution,Carbon Monoxide Previously Detected." If you've been away from home this feature allows you to check if there was a CO reading of 100, or higher, during your absence. Pushing the test/reset button resets the memory. It's also reset when the power is removed. Note: the green LED blinking portion of CO Peak Level Memory is disabled when the unit is on battery power only.

LED Indicator Operation

Red LED

The red LED will flash as described below under the following conditions:

--During smoke or CO alarm, with every beep

--During testing (same as alarm)

--Low battery, single flash with chirp

--End of product life, double flash every 30 seconds with chirp

--Unit error mode, single flash with chirp every 30 seconds

--Unit error mode, a Fault Code is flashed every 30 seconds (can be observed and reported to customer service for troubleshooting).

Operating Instructions

Green LED

The green LED will flash as described below under the following conditions:

- Standby Condition (powered by AC and battery backup): The LED will be constantly on.
- Standby Condition (powered by only battery backup): The LED will flash every 60 seconds..
- Alarm Memory Condition: The LED will flash every second during alarm. When the alarm condition goes away, the originating alarm unit will flash the LED every 16 seconds until the test/reset button is pressed, thus resetting the alarm.
- CO Peak Memory (10 second flash rate), AC powered only. Indicates CO greater than 100PPM was detected. Press Test button to announce Peak message and clear Peak Memory.
- Initiating Alarm condition (1 second flash rate), indicates the unit initiated an alarm.
- Trouble Fault/Error mode (1/2 second flash rate), AC powered only. Helps owner locate the mysterious chirping unit
- HUSH MODE Condition: The LED will flash every 2 seconds while the alarm is in HUSH mode.

Tamper Resist Feature

To make your smoke/CO alarm tamper resistant, a tamper resist feature has been provided. Activate the tamper resist feature by breaking off the four posts in the square holes in the trim ring (see figure 5A). When the posts are broken off, the tamper resist tab on the base is allowed to engage the mounting bracket. Rotate the alarm onto the mounting bracket until you hear the tamper resist tab snap into place, locking the alarm on the mounting bracket. Using the tamper resist feature will help deter children and others from removing the alarm from bracket. NOTE: To remove the alarm when the tamper resist tab is

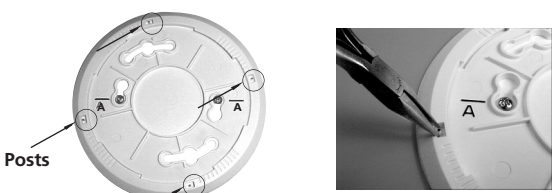


FIGURE 5A

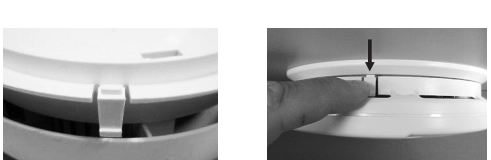


FIGURE 5B

engaged, press down on the tamper resist tab, and rotate the alarm off of the bracket (see figure 5B).

NEVER IGNORE THE SOUND OF THE ALARM!

Determining what type of alarm has sounded is easy with your Combination Smoke/CO Alarm. The voice message warning system will inform you of the type of situation occurring. Refer to the Features section on pages 4-7 for a detailed description of each alarm pattern.

What To Do If The Alarm Sounds

When the smoke alarm sounds:

Smoke alarms are designed to minimize false alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if located too close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non recirculating type) will also help remove these combustible products from the kitchen.

What To Do If The Alarm Sounds

If the alarm sounds, check for fires first. If a fire is discovered follow these steps. Become thoroughly familiar with these items, and review with all family members!

- Alert small children in the home.
- Leave immediately using one of your planned escape routes (see page 26). Every second counts, don't stop to get dressed or pick up valuables.
- Before opening inside doors look for smoke seeping in around the edges, and feel with the back of your hand. If the door is hot use your second exit. If you feel it's safe, open the door very slowly and be prepared to close immediately if smoke and heat rush in.
- If the escape route requires you to go through smoke, crawl low under the smoke where the air is clearer.
- Go to your predetermined meeting place. When two people have arrived one should leave to call 911 from a neighbor's home, and the other should stay to perform a head count.
- **Do not reenter under any circumstance until fire officials give the go ahead.**
- There are situations where a smoke alarm may not be effective to protect against fire as stated in the NFPA Standard 72. For instance:
    a) smoking in bed
    b) leaving children unsupervised
    c) cleaning with flammable liquids, such as gasoline

The CO sensor meets the alarm response time requirements of UL standard 2034. Standard alarm times are as follows:

At 70 PPM, the unit must alarm within 60-240 minutes.

At 150 PPM, the unit must alarm within 10-50 minutes.

At 400 PPM, the unit must alarm within 4-15 minutes.

This carbon monoxide alarm is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect any other gas.

Fire Departments, most utility companies and HVAC contractors will perform CO inspections, some may charge for this service. It's advisable to inquire about any applicable fees prior to having the service performed. Kidde Safety will not pay for, or reimburse, the owner or user of this product, for any repair or dispatch calls related to the alarm sounding.

What To Do If The Alarm Sounds

When the carbon monoxide alarm sounds:

WARNING - Actuation of your CO Alarm indicates the presence of Carbon Monoxide (CO) which can kill you.

If alarm signal sounds:

1) Operate the test/reset button

2) Call your emergency services (Fire Dept. or 911)

PHONE NUMBER

3) Immediately move to fresh air - outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises has been aired out, and your alarm remains in its normal condition.

4) After following steps 1-3, if your alarm reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer's instructions, or contact the manufacturer's directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

PHONE NUMBER

Never restart the source of a CO problem until it has been fixed. NEVER IGNORE THE ALARM!

Battery Replacement

Alarm Removal

IF TAMPER RESIST FEATURE HAS BEEN ACTIVATED, REFER TO TAMPER RESIST FEATURE DESCRIPTION ON PAGE 17 FOR REMOVAL INSTRUCTIONS.

Remove the alarm from the mounting bracket by rotating the alarm in the direction of the "OFF" arrow on the cover.

Battery Replacement

If any form of battery failure is detected the red LED light will flash and the unit will "chirp" one time, followed by the warning message "LOW BATTERY". This cycle will occur once every minute, and will continue for at least seven days. On battery power, the "LOW BATTERY" voice occurs once every 15 minutes.

If the red LED light flashes along with a chirp every 30 seconds, and is not followed by the voice message "LOW BATTERY" as described above, and if the green LED flashes twice per second (AC power only) your unit has malfunctioned. Call our toll free Product Support Line at 1-800-880-6788 for instructions on how to return the unit.

BATTERY INSTALLATION AND REMOVAL

To replace or install the batteries slide the battery door in the direction indicated on the cover of the alarm. When installing new batteries into the carrier, make sure that the polarity matches the markings printed on the inside of the battery compartment, press the battery reminder finger down into the battery compartment and install the battery (see Figure 6). Completely slide the battery door to the closed position. A missing or improperly installed battery will prevent the battery door from closing and result in improper alarm operation.

FIGURE 6

SLIDE

OPEN

INSERT

Battery Replacement

Replace batteries with one of the following approved brands: Duracell MN1500, MX1500, Energizer E91, Gold Peak 15A or Golden Power GLR6A . These batteries can be purchased at your local retailer.

⚠ **WARNING!** Use only the batteries specified. Use of different batteries may have a detrimental effect on the Smoke/CO alarm. A good safety measure is to replace the batteries twice a year, at the same time. A good safety measure is to replace the batteries twice a year, at the same time you change your clocks for daylight saving time.

End of Life Notification

Ten (10) years after unit is first powered, this alarm will beep two times every 30 seconds to indicate it is time to replace the alarm.

REPLACE IMMEDIATELY! IT WILL NOT DETECT CO IN THIS CONDITION.

End of Life Hush can be activated by pushing the test button to silence the End of Life chirp for approximately 3 days at a time for a maximum of 30 day life extension.

General Maintenance

To keep your Smoke/CO Alarm in good working order, please follow these simple steps:

- Verify the unit's alarm and LED lights operation by pushing the test/reset button once a week.
- Remove the unit from mounting bracket and vacuum the alarm cover and vents with a soft brush attachment once a month to remove dust and dirt. REINSTALL IMMEDIATELY AFTER CLEANING AND THEN TEST USING THE TEST/RESET BUTTON!
- Never use detergents or other solvents to clean the unit.
- Avoid spraying air fresheners, hair spray, or other aerosols near the Smoke/CO Alarm.

Do not paint the unit. Paint will seal the vents and interfere with the sensor's ability to detect smoke and CO. Never attempt to disassemble the unit or clean inside. This action will void your warranty.

Move the Smoke/CO Alarm and place in another location prior to performing any of the following:

- Staining or stripping wood floors or furniture
- Painting
- Wall papering
- Using adhesives

Storing the unit in a plastic bag during any of the above projects will protect the sensors from damage. Do not place near a diaper pail.

⚠ **WARNING:** Reinstall the Smoke/CO Alarm as soon as possible to assure continuous protection.

When household cleaning supplies or similar contaminates are used, the area must be well ventilated. The following substances can effect the CO sensor and may cause false readings and damage to the sensor:

Methane, propane, iso-butane, iso-propanol, ethyl acetate, hydrogen sulfide, sulfide dioxides, alcohol based products, paints, thinner, solvents, adhesives, hair spray, after shave, perfume, and some cleaning agents.

Carbon Monoxide Safety Information

General CO Information

Carbon monoxide (CO) is a colorless, odorless, and tasteless poison gas that can be fatal when inhaled. CO inhibits the blood's capacity to carry oxygen.

Possible Sources

CO can be produced when burning any fossil fuel: gasoline, propane, natural gas, oil and wood. It can be produced by any fuel-burning appliance that is malfunctioning, improperly installed, or not ventilated correctly. Possible sources include furnaces, gas ranges/stoves, gas clothes dryers, water heaters, portable fuel burning space heaters, fireplaces, wood-burning stoves and certain swimming pool heaters. Blocked chimneys or flues, back drafting and changes in air pressure, corroded or disconnected vent pipes, and a loose or cracked furnace exchanger can also cause CO. Vehicles and other combustion engines running in an attached garage and using a charcoal/gas grill or hibachi in an enclosed area are all possible sources of CO.

The following conditions can result in transient CO situations: Excessive spillage or reverse venting of fuel-burning appliances caused by outdoor ambient conditions such as: Wind direction and/or velocity, including high gusts of wind, heavy air in the vent pipes (cold/humid air with extended periods between cycles), negative pressure differential resulting from the use of exhaust fans, simultaneous operation of several fuel-burning appliances competing for limited internal air, vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters, obstructions in, or unconventional, vent pipe designs which can amplify the above situations, extended operation of unvented fuel-burning devices (range, oven, fireplace, etc.), temperature inversions which can trap exhaust gasses near the ground, car idling in an open or closed attached garage, or near a home.

Carbon Monoxide Safety Information

CO Safety Tips

Every year have the heating system, vents, chimney and flue inspected and cleaned by a qualified technician. Always install appliances according to manufacturer's instructions and adhere to local building codes. Most appliances should be installed by professionals and inspected after installation. Regularly examine vents and chimneys for improper connections, visible rust, or stains, and check for cracks in furnace heat exchangers. Verify the color of flame on pilot lights and burners is blue. A yellow or orange flame is a sign that the fuel is not burning completely. Teach all household members what the alarm sounds like and how to respond.

Symptoms of CO Poisoning

Initial carbon monoxide poisoning symptoms are similar to the flu with no fever and can include dizziness, severe headaches, nausea, vomiting and disorientation. Everyone is susceptible but experts agree that unborn babies, pregnant women, senior citizens and people with heart or respiratory problems are especially vulnerable. If symptoms of carbon monoxide poisoning are experienced seek medical attention immediately. CO poisoning can be determined by a carboxyhemoglobin test.

The following symptoms are related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

1. **Mild Exposure:** Slight headache, nausea,vomiting, fatigue (often described as "Flu-like" symptoms).
2. **Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
3. **Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.

The above levels of exposure relate to healthy adults. Levels differ for those at high risk. Exposure to high levels of carbon monoxide can be fatal or cause permanent damage and disabilities. Many cases of reported carbon monoxide poisoning indicate that while victims are aware they are not well, they

become so disoriented they are unable to save themselves by either exiting the building, or calling for assistance. Also, young children and household pets may be the first effected. Familiarization with the effects of each level is important.

Fire Safety Information

Escape Plan

Familiarize everyone with the sound of the smoke alarm and train them to leave the home when they hear it. Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do. Know two ways out of every room (door & window) and identify a meeting place outside the home where everyone will gather once they have exited the residence. When two people have reached the meeting place, one should leave to call 911 while the second person stays to account for additional family members.

Establish a rule that once you're out, you never reenter under any circumstance!

Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

Fire Prevention

Never smoke in bed, or leave cooking food unattended. Teach children never to play with matches or lighters!

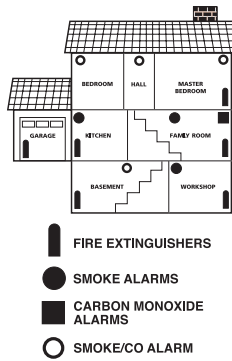
Train everyone in the home to recognize the alarm pattern, voice message warning and to leave the home using their escape plan when it's heard.

Know how to do "Stop, Drop and Roll" if clothes catch on fire, and how to crawl low under smoke. Install and maintain fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency. Second level and higher occupied rooms with windows, should have an escape ladder.

Industry Safety Standards

NFPA (National Fire Protection Association)

For your information, the National Fire Protection Association's Standard 72, reads as follows:



Smoke Detection. Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station smoke alarms shall be installed as follows: (1) In all sleeping rooms Exception: Smoke alarms shall not be required in sleeping rooms in existing one- and two-family dwelling units. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements Exception: In existing one- and two-family dwelling units, approved smoke alarms powered by batteries are permitted.

Smoke Detection - Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms. The installation of smoke alarms in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.

California State Fire Marshall

Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A smoke alarm installed in each separate sleeping area (in the vicinity, but outside the bedrooms), heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages.

Industry Safety Standards

Consumer Product Safety Commission

The Consumer Product Safety Commission (CPSC) recommends the use of at least one CO Alarm per household, located near the sleeping area.

NRC

Ionization type smoke alarms use a very small amount of a radioactive element in the sensing chamber to enable detection of visible and invisible combustion products. The radioactive element is safely contained in the chamber and requires no adjustments or maintenance. This smoke alarm meets or exceeds all government standards. It is manufactured and distributed under license from the U.S. Nuclear Regulatory Commission.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help

Warranty and Service Information

Limited Warranty

TEN YEAR LIMITED WARRANTY

KIDDE warrants that the enclosed alarm (but not the battery) will be free from defects in material and workmanship or design under normal use and service for a period of ten years from the date of purchase. The obligation of KIDDE under this warranty is limited to repairing or replacing the alarm or any part which we find to be defective in material, workmanship or design, free of charge, upon sending the alarm with proof of date of purchase, postage and return postage prepaid, to Warranty Service Department, KIDDE, 1016 Corporate Park Dr., Mebane, NC 27302.

This warranty shall not apply to the alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate AC or DC power. Any implied warranties arising out of this sale, including but not limited to the implied warranties of description,merchantability and fitness for a particular purpose, are limited in duration to the above warranty period. In no event shall the Manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The Manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from gas leakage, fire or explosion.

Since some states do not allow limitations of the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

Also, KIDDE makes no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

Warranty and Service Information

The above warranty may not be altered except in writing signed by both parties hereto.

Your Kidde Combination Smoke & CO Alarm is not a substitute for property, fire, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility. Consult your insurance agent.

Removal of the front cover will void the warranty.

This alarm is not intended to alert hearing impaired individuals.

During the specified warranty period Kidde Products will repair or replace, at its discretion any defective Kidde Combination Smoke & CO Alarms that are returned in a postage paid package to the following address: Kidde Products Attn: Warranty Returns, 1016 Corporate Park Dr., Mebane, NC 27302, USA. Please include your name, address and phone number along with a brief description of what is wrong with the unit. For further assistance please call our toll free Product Support Line at 1-800-880-6788. Damage from neglect, abuse or failure to adhere to any of the enclosed instructions will result in termination of the warranty, and the unit will not be replaced or repaired.

Our internet address is www.kidde.com.

QUESTIONS OR FOR MORE INFORMATION
Call our Product Support Line at **1-800-880-6788** or contact us at our website at **www.kidde.com**

Kidde 1016 Corporate Park Drive, Mebane, NC 27302

Custom Assembled in China with U.S. and Foreign Components