Scotsman
Ice Systems

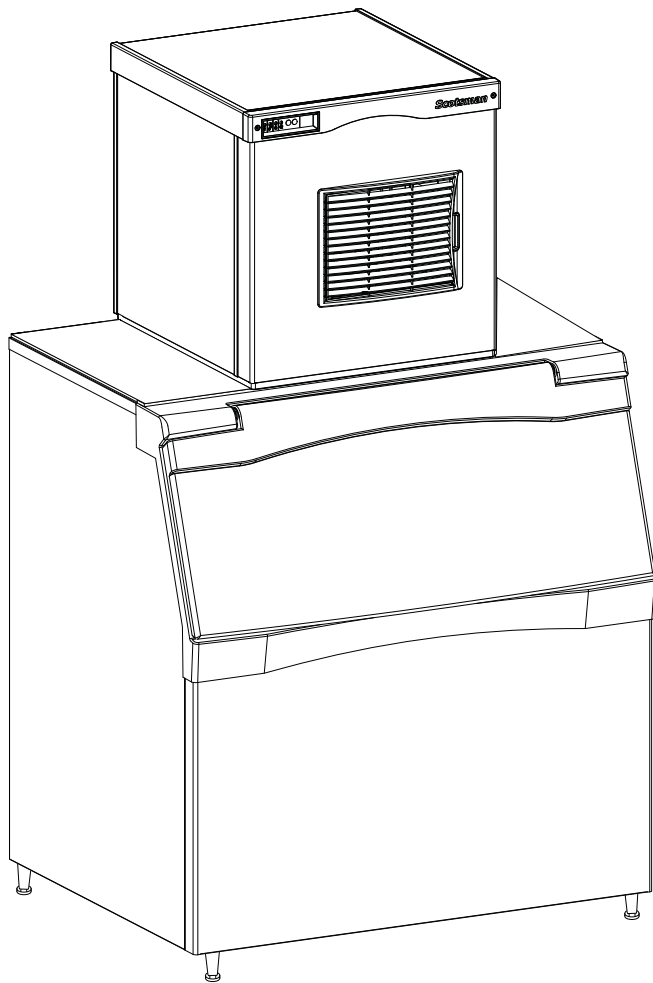# Installation and User's Manual for Modular Flaked & Nugget Ice Machines

Models FB1222, NB0622, NB0922 and NB1322

NB0622, NB0922, FB1222, NB1322
Installation and Use

Introduction

This ice machine is the result of years of experience with flaked and nugget ice machines. The latest in electronics has been coupled with the time tested Scotsman flaked ice system to provide reliable ice making and the features needed by customers. The features include easily accessible air filters, simple conductivity water level sensing, evaporator clearing at shut down, photo-eye sensing bin control and the ability to add options.

Table of Contents

This user and installation manual is organized in three main sections: installation, operation, and maintenance.

Installation:

This machine is designed to be used indoors, in a controlled environment. Operation outside the limits listed here will void the warranty.

Air temperature limits

	Minimum	Maximum
Ice maker	50°F.	100°F.
Remote condenser	-20°F.	120°F.

Water temperature limits

	Minimum	Maximum
All models	40°F.	100°F.

Water pressure limits (potable)

	Minimum	Maximum
All models	20 psi	80 psi

Water pressure limit to water cooled condenser is 150 PSI

Voltage limits

	Minimum	Maximum
115 volt	104	126
208-230 60 Hz	198	253

Minimum conductivity (RO water)

• 10 microSiemens / CM

Water Quality (ice making circuit)

• Potable

The quality of the water supplied to the ice machine will have an impact on the time between cleanings and ultimately on the life of the product. Water can contain impurities either in suspension or in solution. Suspended solids can be filtered out. In solution or dissolved solids cannot be filtered, they must be diluted or treated. Water filters are recommended to remove suspended solids. Some filters have treatment in them for suspended solids.

Check with a water treatment service for a recommendation.

RO water. This machine can be supplied with Reverse Osmosis water, but the water conductivity must be no less than 10 microSiemens/cm.

Potential for Airborne Contamination

Installing an ice machine near a source of yeast or similar material can result in the need for more frequent sanitation cleanings due to the tendency of these materials to contaminate the machine.

Most water filters remove chlorine from the water supply to the machine which contributes to this situation. Testing has shown that using a filter that does not remove chlorine, such as the Scotsman Aqua Patrol, will greatly improve this situation.

Warranty Information

The warranty statement for this product is provided separately from this manual. Refer to it for applicable coverage. In general warranty covers defects in material or workmanship. It does not cover maintenance, corrections to installations, or situations when the machine is operated in circumstances that exceed the limitations printed above.

Location:

While the machine will operate satisfactorily within the listed air and water temperature limits, it will produce more ice when those temperatures are nearer the lower limits. Avoid locations that are hot, dusty, greasy or confined. Air cooled models need plenty of room air to breathe. Air cooled models must have at least six inches of space at the back for air discharge; however, more space will allow better performance.

Airflow

Air flows into the front of the cabinet and out the back. The air filters are on the outside of the front panel and are easily removed for cleaning.
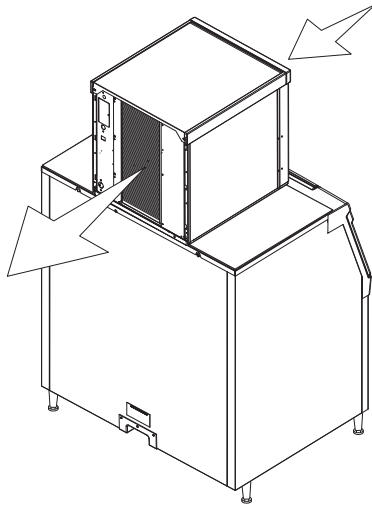
Airflow

Options

Side air flow kits **KPFSA223** or **KPFSA227** are available for air cooled models. A filter kit for the remote condenser is KERCF

Ice is made until it fills the bin enough to either block an infrared light beam inside the base of the machine or reflect ultrasonic waves to a sensor in the base.

Additionally the control system includes an information panel which is visible when the front panel is removed.

Bin compatibility

All models have the same footprint: 22 inches wide by 24 inches deep. Confirm available space when replacing a prior model.

Bin & adapter list:

- B222S or B322S – no adapter needed
- B330P or B530P or B530S – Use KBT27
- B842S – KBT39
- B948S – KBT38 for single unit
- B948S – KBT38-2X for two units side by side
- BH1100, BH1300 and BH1600 upright bins include filler panels to accommodate a 22 inch wide ice machine. No adapter is needed.

BH900: Use baffle kit KBBF1 for these models.

Dispenser compatibility

Only **nugget** ice models may be used with ice dispensers. Flaked ice is not dispensable.

- ID150 – use KBT42 and KDIL-PN-150, includes KVS, KNUGDIV and R629088514
- ID200 – use KBT43 and KNUGDIV and KVS
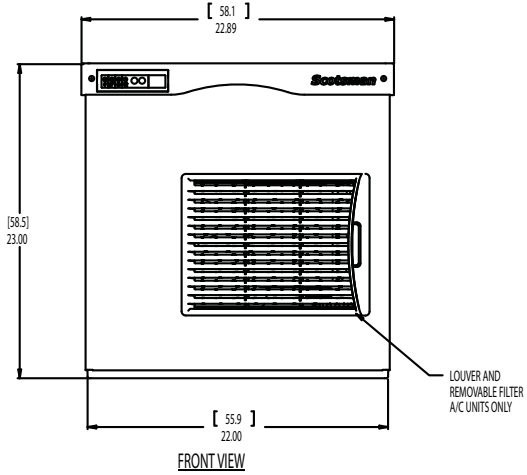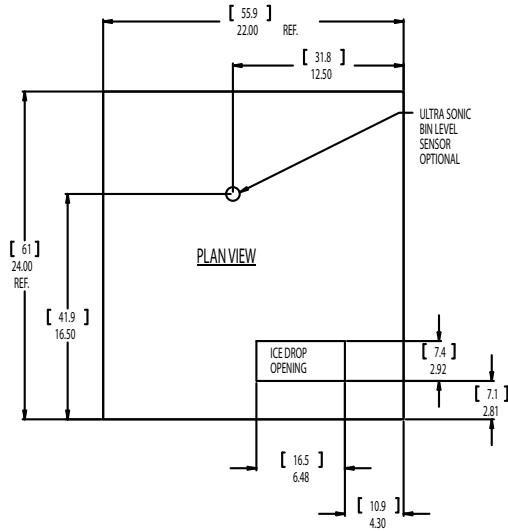- ID250 – use KBT43 and KNUGDIV and KVS

See sales literature for other brand model ice and beverage dispenser applications.
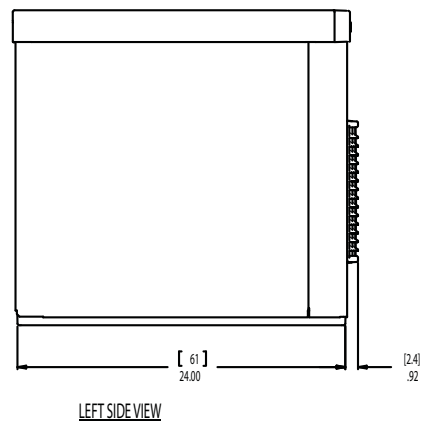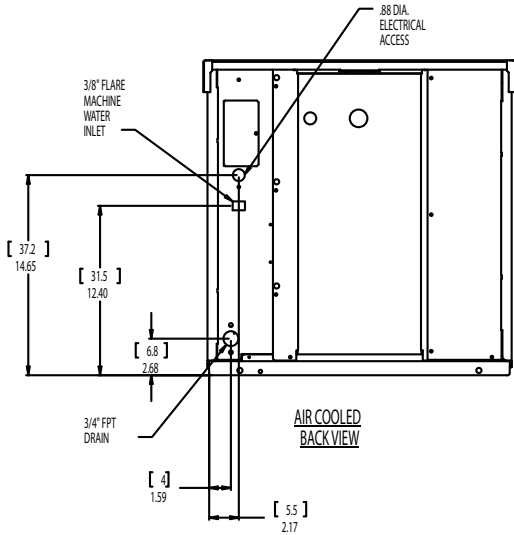
Other Bins & Applications:

Note the drop zone and ultrasonic sensor locations in the illustrations on the next pages.

Scotsman ice systems are designed and manufactured with the highest regard for safety and performance. Scotsman assumes no liability of responsibility of any kind for products manufactured by Scotsman that have been altered in any way, including the use of any part and/or other components not specifically approved by Scotsman.

Scotsman reserves the right to make design changes and/or improvements at any time. Specifications and design are subject to change without notice.
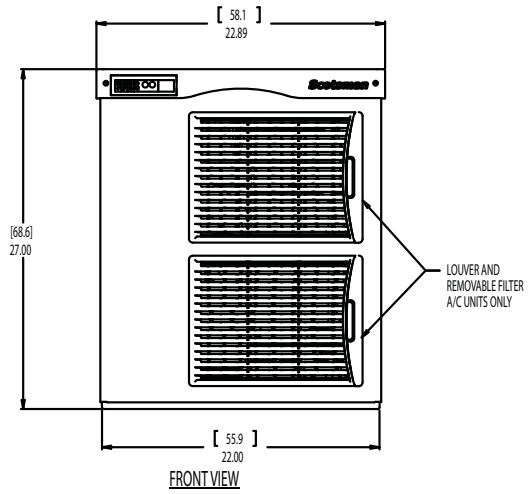
NB0622 Cabinet Layout

[55.9]
22.00 REF.

[31.8]
12.50

ULTRA SONIC
BIN LEVEL
SENSOR
OPTIONAL

PLAN VIEW

[61]
24.00
REF.

[41.9]
16.50

ICE DROP
OPENING

[7.4]
2.92

[7.1]
2.81

[16.5]
6.48

[10.9]
4.30

[58.1]
22.89

[58.5]
23.00

LOUVER AND
REMOVABLE FILTER
A/C UNITS ONLY

[55.9]
22.00
FRONT VIEW

Note: Bin Top Cut-outs for
drop zone should include
ultrasonic sensor location

.88 DIA.
ELECTRICAL
ACCESS

3/8" FLARE
MACHINE
WATER
INLET

[37.2]
14.65

[31.5]
12.40

[6.8]
2.68

3/4" FPT
DRAIN

AIR COOLED
BACK VIEW

[.4]
1.59

[5.5]
2.17

[61]
24.00

[2.4]
.92

LEFT SIDE VIEW

[cm }
In

[55.9]
22.00 REF.

[31.8]
12.50

ULTRA SONIC
BIN LEVEL
SENSOR
OPTIONAL

[61]
24.00
REF.

PLAN VIEW

[41.9]
16.50

ICE DROP
OPENING

[7.4]
2.92

[7.1]
2.81

[16.5]
6.48

[10.9]
4.30

[58.1]
22.89

[68.6]
27.00

LOUVER AND
REMOVABLE FILTER
A/C UNITS ONLY

[55.9]
22.00
FRONT VIEW

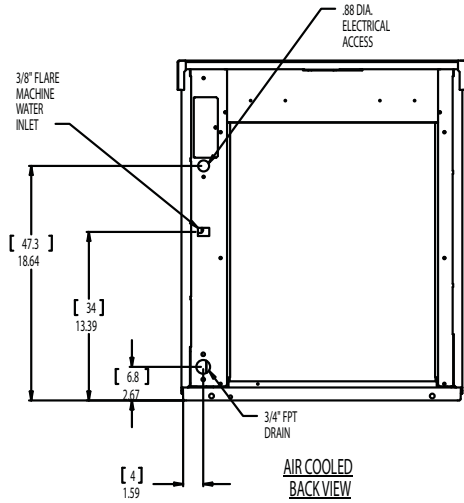Note: Bin Top Cut-outs for drop zone should include ultrasonic sensor location

.88 DIA.
ELECTRICAL
ACCESS

3/8" FLARE
MACHINE
WATER
INLET

[47.3]
18.64

[34]
13.39

[6.8]
2.67

3/4" FPT
DRAIN

[4]
1.59

AIR COOLED
BACK VIEW

[61]
24.00
LEFT SIDE VIEW

[2.3]
.92

[cm }
In
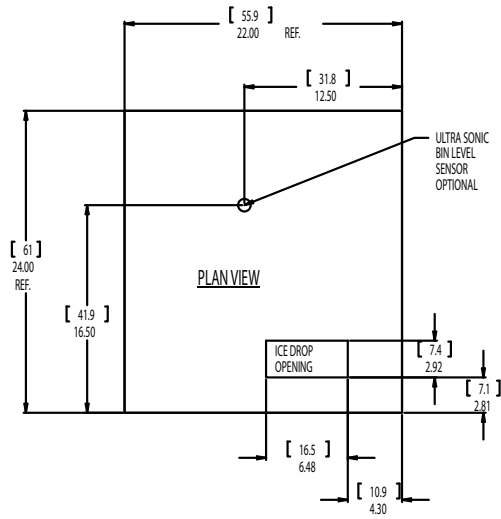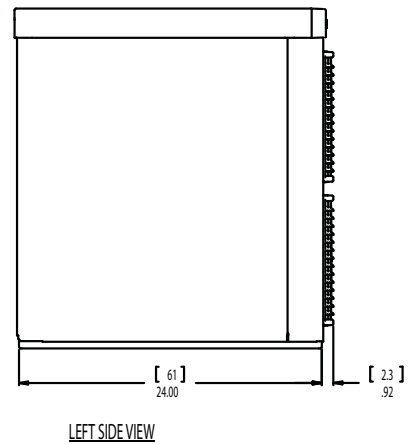
Unpacking & Install Prep

Remove the carton from the skid. Check for hidden freight damage, notify the carrier immediately if any is found. Retain the carton for the carrier's inspection.

The machine is not bolted to the skid. If strapped remove the strap.

Place on Bin or Dispenser

If reusing an existing bin, be sure that the bin is in good shape and that the gasket tape on the top is not torn up. Water leaks, not covered by warranty, could result from a poor sealing surface.

Install the correct adapter, following the directions supplied with that adapter.

Hoist the machine onto the adapter.

Note: The machine is heavy! Use of a mechanical lift is recommended.

Position the machine on the bin or adapter. Secure with straps from the hardware bag packed with the machine, or those supplied with the adapter.

Remove any plastic covering the stainless steel panels.

Note: The standard machine set up includes visible on and off switches. Those can be covered up by changing the bezel in the front panel's trim strip. A cover-up bezel is included with the hardware bag.

Remove any packaging, such as tape or foam blocks, that may be near the gear reducer or ice chute.

Level the bin and ice machine front to back and left to right by using the bin leg levelers.

Panel Removal
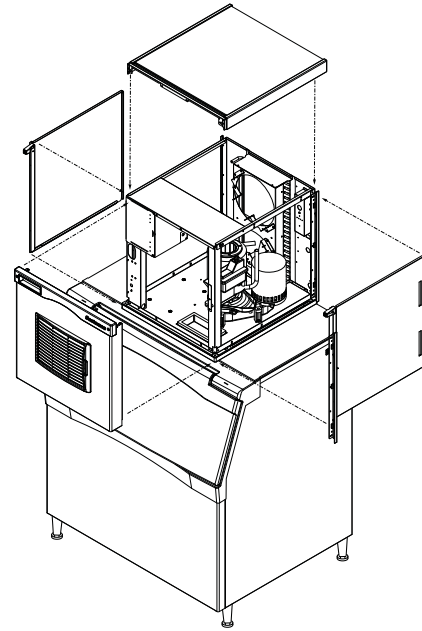
1. Locate and loosen the two screws at the front edge of the top panel.

2. Pull the front panel out at the top until it clears the top panel.

3. Lift the front panel up and off the machine.

4. Remove two screws at the front of the top panel. Lift up the front of the top panel, push the top panel back an inch, then lift to remove.

5. Locate and loosen the screw holding each side panel to the base. Left side panel also has a screw holding it to the control box.

6. Pull the side panel forward to release it from the back panel.

Button Switch Bezel

To change bezels: Remove the front panel, and refer to the instruction label on the inside of the front panel. Push snaps of standard bezel in and pull the bezel out of the front panel trim strip.

Locate other bezel. Push into the trim strip from the front until it snaps into place. Return the front panel to its original position and secure it to the cabinet

Water Supply and Drains

The water supply for ice making must be cold, potable water. There is a single $\frac{3}{8}$" male flare potable water connection on the back panel.

Backflow

The design of the float valve and reservoir prevents potable water backflow by means of a 1" air gap between the reservoir's maximum water level and the float valve water inlet orifice.

Drain

There is one ¾" FPT condensate drain fitting at the back of the cabinet.

Attach Tubing

Connect the potable water supply to the potable water fitting, $\frac{3}{8}$" OD copper tubing or the equivalent is recommended.

Water filtration is recommended. If there is an existing filter, change the cartridge.

Drains - use rigid tubing: Connect the drain tube to the condensate drain fitting. Vent the drain.

Do not Tee ice machine drains into the drain tube from the ice storage bin or dispenser. Back ups could contaminate and / or melt the ice in the bin or dispenser. Be sure to vent the bin drain.

Follow all local and national codes for tubing, traps and air gaps.

Water Inlet

Drain Vent

Condensate Drain

Building Drain
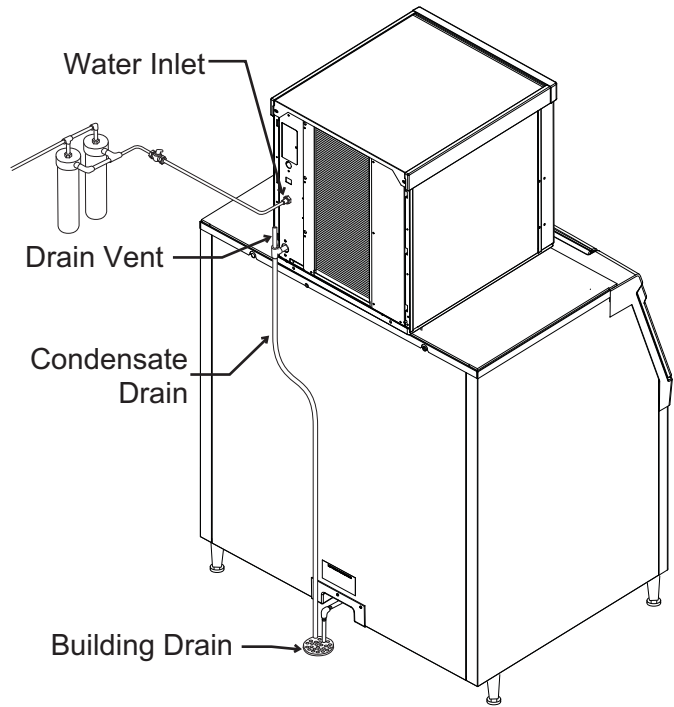
Air Cooled Plumbing

Electrical - All Models

The machine does not include a power cord, one must be field supplied or the machine hard wired to the electrical power supply.

The junction box for the power cord is on the back panel. See detail below.

Refer to the dataplate on the machine for minimum circuit ampacity and determine the proper wire size for the application. The dataplate (on the back of the cabinet) also includes the maximum fuse size.

Connect electrical power to wires inside the junction box in the back of the cabinet. Use a strain relief and connect a ground wire to the ground screw.

Remote models power the condenser fan motor from marked leads in the junction box.

Do not use an extension cord. **Follow all local and national codes.**

Model	Dimensions w" x d" x h"	Voltage Volts/Hz/Phase	Condenser Type	Min Circ Ampacity	Max Fuse Size or HACR Type Circuit Breaker
NB0622A-1	same	115/60/1	Air	18.3	25
NB0922A-32	22 x 24 x 27	208-230/60/1	Air	12.5	15
FB1222A-32	same	208-230/60/1	Air	12.5	15
NB1322A-32	same	208-230/60/1	Air	19.1	30
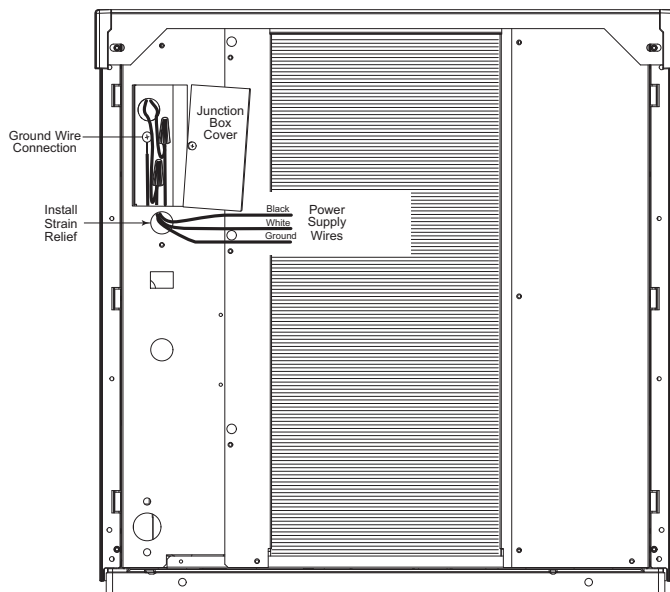
Reference: Electrical Detail

Final Check List

After connections:

1. Wash out the bin. If desired, the interior of the bin could be sanitized.

2. Locate the ice scoop (if supplied) and have it available for use when needed.

Final Check List:

1. Is the unit located indoors in a controlled environment?

2. Is the unit located where it can receive adequate cooling air?

3. Has the correct electrical power been supplied to the machine?

4. Have all the water supply connections been made?

5. Have all the drain connections been made?

6. Has the unit been leveled?

7. Have all unpacking materials and tape been removed?

8. Has the protective covering on the exterior panels been removed?

9. Is the correct bezel installed in the trim strip?

10. Is the water pressure adequate?

11. Have the drain connections been checked for leaks?

12. Has the bin interior been wiped clean or sanitized?

13. Have any water filter cartridges been replaced?

14. Have all required kits and adapters been properly installed?

Control Operation

Use and Operation

Once started, the ice machine will automatically make ice until the bin or dispenser is full of ice. When ice level drops, the ice machine will resume making ice.

Caution: Do not place anything on top of the ice machine, including the ice scoop. Debris and moisture from objects on top of the machine can work their way into the cabinet and cause serious damage. Damage caused by foreign material is not covered by warranty.
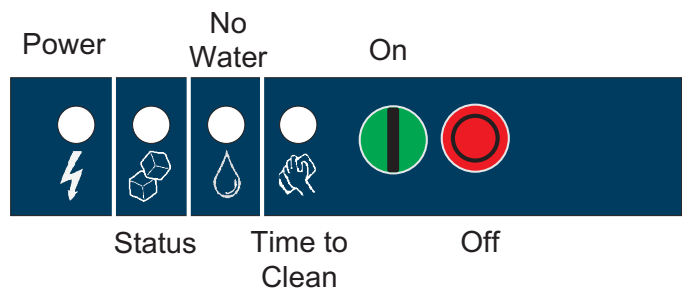
There are four indicator lights at the front of the machine that provide information on the condition of the machine.

Indicator Lights:

- Power
- Status
- Water
- De-scale & Sanitize

Note: If the De-Scale & Sanitize light is ON, following the cleaning process will clear the light for another cleaning time internal.

Two button switches are at the front – On and Off.

To switch the machine OFF, push and release the Off button. The machine will shut off at the end of the next cycle.

To switch the machine ON, push and release the On button. The machine will go through a start up process and then resume ice making.

Initial Start Up and Maintenance

1. Turn the water supply on.

2. Switch the electrical power on. Confirm voltage is correct for the model.

3. Push and release the On button. The machine will start in about two minutes.

4. Soon after starting, air cooled models will begin to blow warm air out the back of the cabinet After about 5 minutes, ice will begin to drop into the bin or dispenser.

5. Check the machine for unusual rattles. Tighten any loose screws, be sure no wires are rubbing moving parts. Check for tubes that rub.

6. Fill out the warranty registration form and either file it on line or mail it.

7. Notify the user of the maintenance requirements and whom to call for service.

Maintenance

This ice machine needs five types of maintenance:

- Air cooled models need their air filters or condenser coils cleaned regularly.
- All models need scale removed from the water system.
- All models require regular sanitization.
- All models require sensor cleaning.
- All models require a top bearing check.

Maintenance Frequency:

Air filters: At least twice a year, but in dusty or greasy air, monthly.

Scale removal. At least twice a year, in some water conditions it might be every 3 months. The yellow De-Scale & Sanitize light will switch on after a set period of time as a reminder. The default time period is 6 months of power up time.

Sanitizing: Every time the scale is removed or as often as needed to maintain a sanitary unit.

Sensor Cleaning: Every time the scale is removed.

Top bearing check: At least twice a year or every time the scale is removed.

Maintenance: Air filters

1. Pull air filter(s) from panel.

2. Wash the dust and grease off the filter(s).

3. Return it(them) to their original position(s).

Do not operate the machine without the filter in place except during cleaning.

Maintenance: Air cooled condenser

If the machine has been operated without a filter the air cooled condenser fins will need to be cleaned.

They are located under the fan blades. The services of a refrigeration technician will be required to clean the condenser.

Maintenance: Exterior Panels

The front and side panels are durable stainless steel. Fingerprints, dust and grease will require cleaning with a good quality stainless steel cleaner

Note: If using a sanitizer or a cleaner that contains chlorine on the panels, after use be sure to wash the panels with clean water to remove chlorine residue.
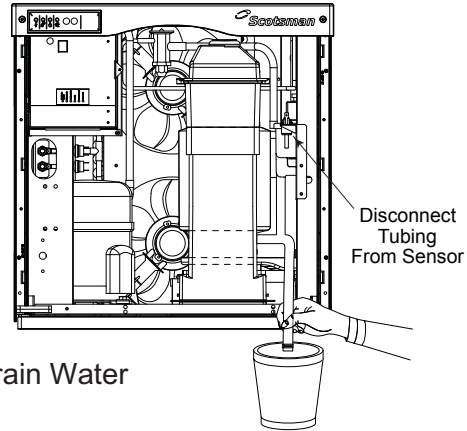
Maintenance: Water filters

If the machine has been connected to water filters, check the cartridges for the date they were replaced or for the pressure on the gauge. Change cartridges if they've been installed more than 6 months or if the pressure drops too much during ice making.
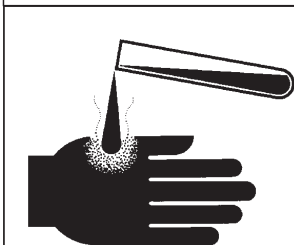
Maintenance: Scale Removal and Sanitation

Note: Following this procedure will reset the de-scale and sanitize light.

1. Remove front panel.

2. Push and release the Off button.

3. Remove ice from bin or dispenser.

4. Turn the water supply to the float valve OFF.

5. Drain the water and evaporator by disconnecting the leg of the hose connected to the water sensor and draining it into the bin. Return the hose to its original position.

6. Remove the water reservoir cover.

7. Mix a solution of 8 ounces of Scotsman Clear One Scale Remover and 3 quarts of 95-115 degree F. potable water.

⚠CAUTION	Ice machine scale remover contains acids. Acids can cause burns. If concentrated cleaner comes in contact with skin, flush with water. If swallowed, do NOT induce vomiting. Give large amounts of water or milk. Call Physician immediately. Keep out of the reach of children.

8. Pour the scale remover solution into the reservoir. Use a small cup for pouring.

9. Push and release the Clean button: the auger drive motor and light are on, C is displayed and the De-scale light blinks. After 20 minutes the compressor will start.

10. Operate the machine and pour the scale remover into the reservoir until it is all gone. Keep the reservoir full. When all the scale remover solution has been used, turn the water supply back on. After 20 minutes of ice making the compressor and auger motor will shut off.

11. Turn the water supply to the ice machine OFF

12. Drain the water reservoir and evaporator by disconnecting the leg of the hose connected to

Drain Water

Disconnect Tubing From Sensor

the water sensor and draining it into the bin or a bucket. Return the hose to its original position. Discard or melt all ice made during the previous step.

13. To sanitize the water system, mix a locally approved sanitizing solution. An example of a sanitizing solution is mixing one ounce of liquid household bleach and two gallons of 95 – 115 degree F. water.

14. Pour the sanitizing solution into the reservoir.

15. Push and release the On button.

16. Switch the water supply to the ice machine on.

17. Operate the machine for 20 minutes.

18. Push and release the Off button.

19. Wash the reservoir cover in the remaining sanitizing solution.

20. Return the reservoir cover to its normal position.

21. Melt or discard all ice made during the sanitizing process.

22. Wash the inside of the ice storage bin with the sanitizing solution.

23. Push and release the On button.

24. Return the front panel to its original position and secure with the original screws.
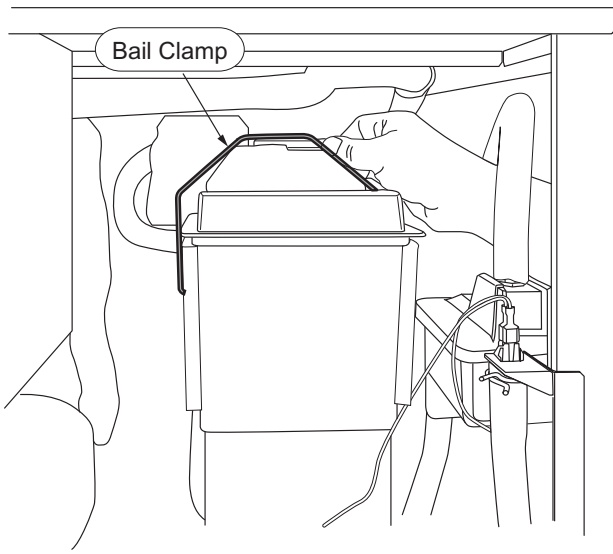
Maintenance: Check Top Bearing

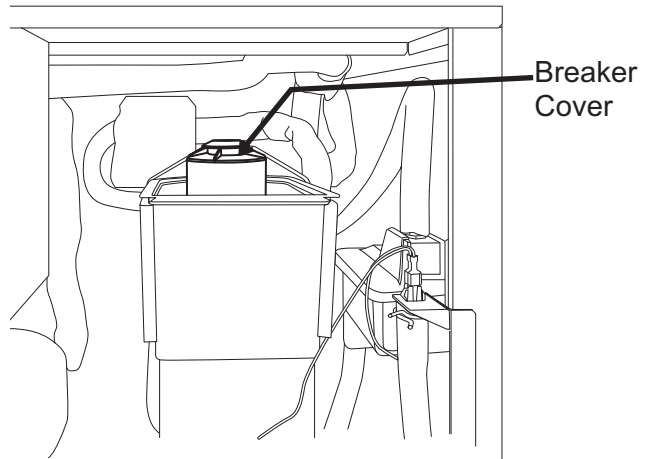This task should only be done by a qualified service technician

The bearing in the breaker should be checked at least two times per year.
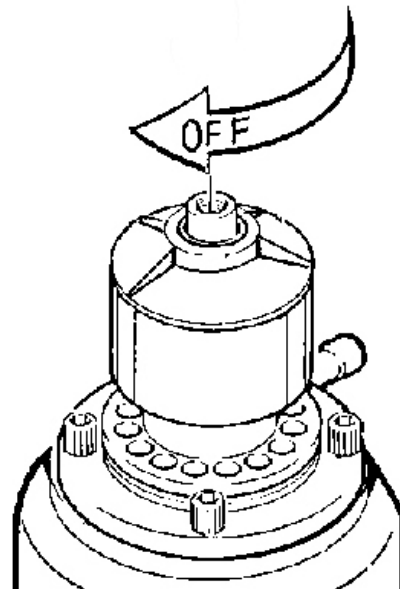
Check the bearing by:

1. Removing the bail clamp and ice chute cover

Bail Clamp

2. Unscrewing the ice sweep

Breaker Cover

3. Removing the water shed & unscrewing the breaker cover (left hand threads).

OFF

Inspect the top of the bearing. When new the grease is white, over time some gray will appear over the rollers, that is normal. Add grease to replace the gray grease or if gaps between rollers are visible. If grease is watery, all gray or rust is visible, have the bearing replaced. See the next page for more information.

Note: When checking the top bearing, always inspect the drip pan for water seal leaks. If water is present in the drip pan, service the water seal and check the gear reducer's lubricant. See the next page.

Bearing Service

This task should only be done by a qualified service technician

If the grease is uniformly white, no further action is needed. If very gray, rusty, wet or has any embedded metal, have the bearing replaced.
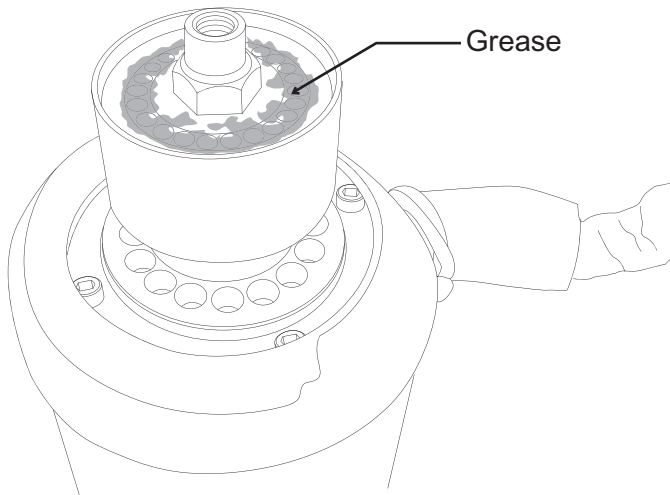
Grease

If the bearing only needs grease, or to confirm the quality of the grease low in the bearing, inject grease into the lower part of the bearing using Scotsman grease needle pn 02-3559-01 and Scotsman bearing grease cartridge, pn A36808-001. Be sure to inject grease evenly and thoroughly.

Bearing

Needle, pn 02-3559-01
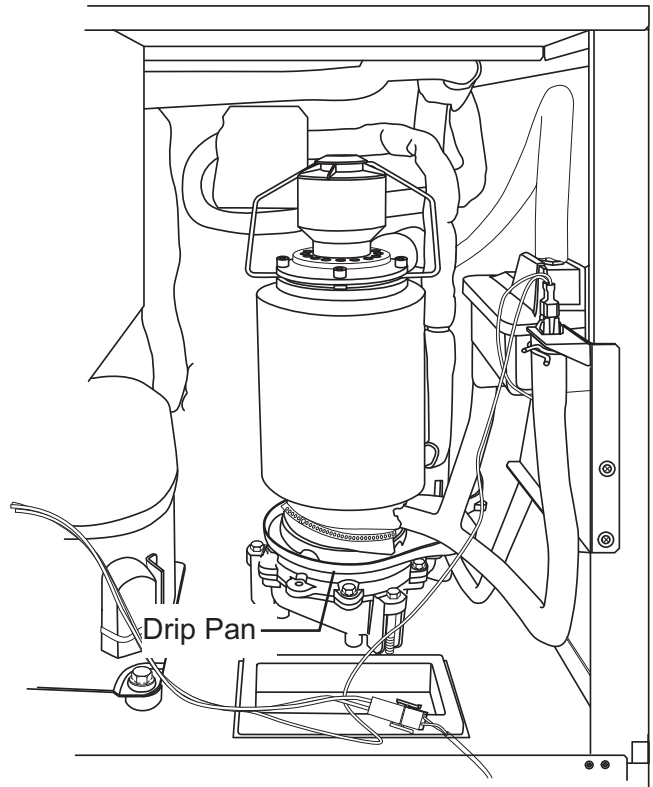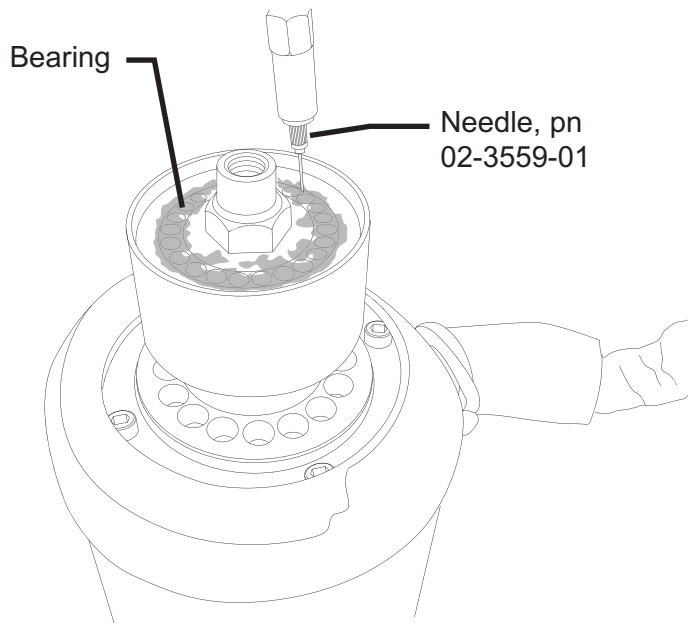
Drip Pan

Check Drip Pan For Water

Change De-Scale Notification Interval

This feature is accessible only from standby (Status Light Off).

1. Press and hold Clean button for 3 seconds.

This starts the Time to Clean Adjustment State and displays the current time to clean setting.

2. Press the clean button repeatedly to cycle through the 4 possible settings:
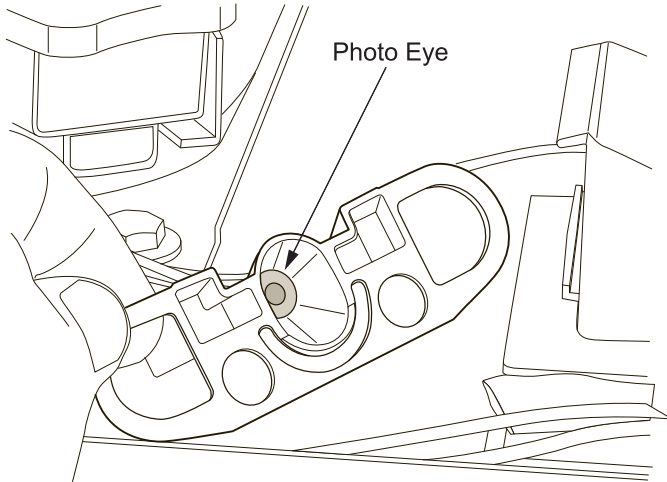
- 1 year
- 0 (disabled)
- 4 months
- 6 months(default)

3. Push Off to confirm the selection.
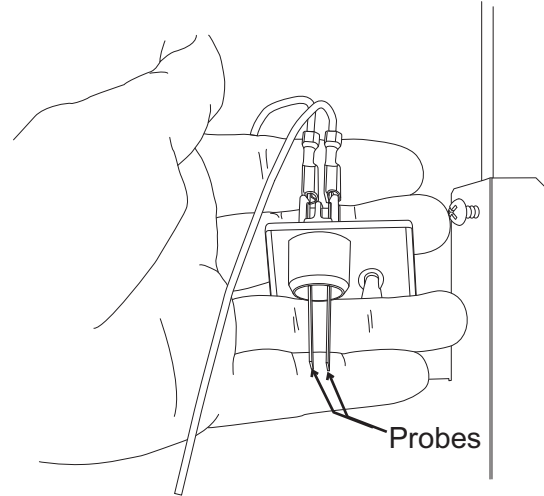
Maintenance: Sensors

The control that senses bin full and empty is a photo-electric eye, therefore it must be kept clean so it can "see". At least twice a year, remove the ice level sensors from the base of the ice chute, and wipe the inside clean, as illustrated.

The ice machine senses water by a probe located near the water reservoir. At least twice a year, the probe should be wiped clean of mineral build-up.

Photo Eye

Probes

1. Remove front panel.

2. Pull photo eye holders forward to release them.

3. Wipe clean as needed. Do not scratch the photo-eye portion.

4. Return the eye holders to their normal positions and return the front panel to its original position.

Note: Eye holders must be mounted properly. They snap into a centered position and are properly located when the wires are routed to the back and the left eye is the one with 2 wires at the connector.

1. Shut off the water supply.

2. Remove front panel.

3. Remove the hose from the water sensor, use a hose clamp pliers for this.

4. Loosen mounting screw and release the water sensor from the frame of the unit.

5. Wipe probes clean,

What to do before calling for service

Normal Operation:

Ice

The machine will make either flaked or nugget ice, depending upon the model. The ice will be produced continuously until the bin is full. It is normal for a few drops of water to occasionally fall with the ice.

Heat

Air cooled models will generate heat, and it will be discharged into the room.

Noise

The ice machine will make noise when it is in ice making mode. The compressor and gear reducer will produce sound. Air cooled models will add fan noise. Some ice making noise could also occur.

These noises are all normal for this machine.

Reasons the machine might shut itself off:

- Lack of water.
- Does not make ice
- Auger motor overload
- High discharge pressure.
- Low refrigeration system pressure.

- Controller self test failure.

Check the following:

1. Has the water supply to the ice machine or building been shut off? If yes, the ice machine will automatically restart within minutes after water begins to flow to it.

2. Has power been shut off to the ice machine? If yes, the ice machine will automatically restart when power is restored.

Machine Beeps:

If the machine has detected a condition requiring a shut down, it will blink the Status Light and emit a a beep once every second. To stop the beep, push Off or reset the machine.

To Manually Reset the machine.

- Push and release the Off button.
- Push and release the On button.

To Shut the Machine Off:

Push and hold the Off button for 3 seconds or until the machine stops.

		Indicator Lights & Their Meanings			
		Power	**Status**	**Water**	**De-Scale & Sanitize**
Light Actions	**Steady Green**	Normal	Normal	-	-
	Blinking Green	Self Test Failure	Switching on or off. When Smart-Board used, machine attention recommended.	-	-
	Blinking Red	-	Diagnostic shut down	Lack of water	-
	Yellow	-	-	-	Time to descale and sanitize
	Blinking Yellow	-	-	-	In Cleaning Mode
	Light Off	No power	Switched to Off	Normal	Normal
	All Blinking	Unit is remotely locked out - check with leasing company			

NB0622, NB0922, FB1222, NB1322
Information Display

Introduction to the Information Display

Removal of the front panel provides access to the Information Display at the bottom of the control.

This section of the manual provides an explanation of the use and capabilities of that display.

Information Display

Table of Contents

NB0622, NB0922, FB1222, NB1322
Information Display

Use of Information Display and Buttons:

Scroll Up Button — Select Button — Escape Button — Display Area — Scroll Down Button — Enter Button — USB Connection
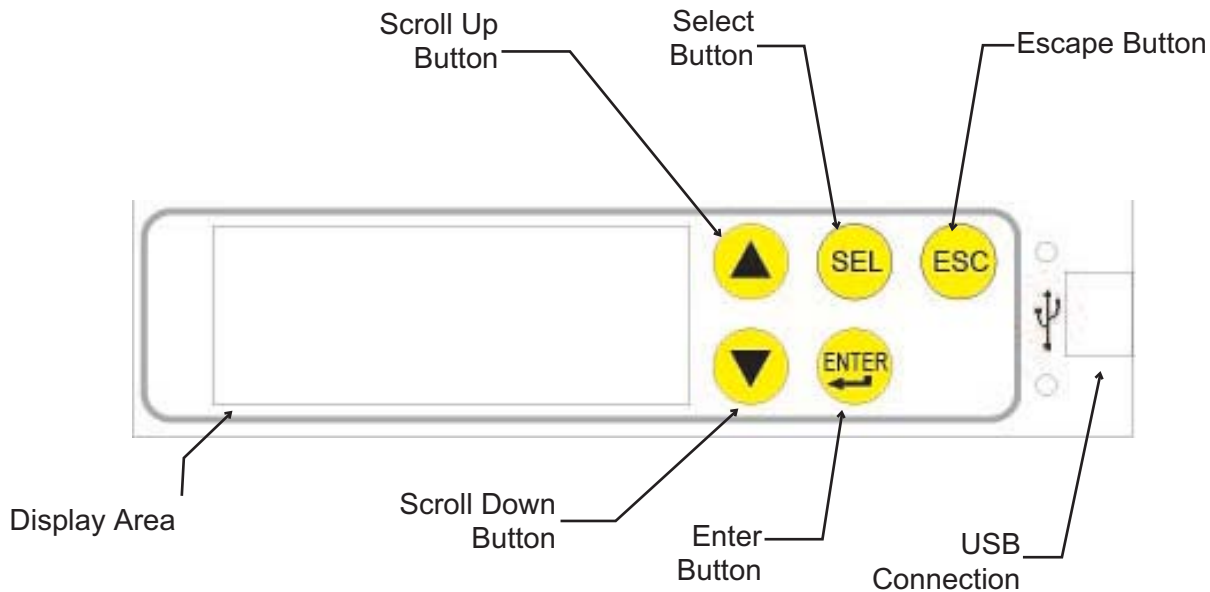
Scroll Up: Changes the display to a menu item higher on the menu list or goes up one number on a setting

Scroll Down: Changes the display to a menu item lower on the menu list or goes down one number on a setting

Select Button: Use to make changes to settings.

Enter Button: Changes display to a sub menu list.

Escape Button: Changes display to the main menu.

Communication Features:

The control can communicate information in three ways:

- Display: The two line display is controlled by the buttons on the front.
- USB: There is a USB connection on the front. It can be used by a laptop or other PC type computer to read, download or log data. Scotsman software is required.
- There is an Ethernet connection for use on a network.

Other Features:

7 Day Programmable Ice Level Control is available. Instructions for programing are included in these instructions.

NB0622, NB0922, FB1222, NB1322
Information Display

Information types include Warnings and Data

Data available by scrolling through the menus:

- Warning
- Power Interrupts
- Time to Clean
- Button Lock
- Time to Clean Interval
- Time Since Last Cleaning
- Compressor Runtime
- Pwr Up Time

- Bin Level
- Bin Level Setting
- Freeze Timer (in 00:00 format)
- Relay Voltage
- Board Voltage
- Auger Motor Current
- Falling Ice Count
- Bin Stat

Warnings - will appear in display only after malfunction. Status light will blink green until warning conditions clear.

- Self-Test Failure
- No Ice Pending
- No Ice Strikeout
- Auger High Load Pending
- Auger High Load Strikeout

- No Water
- Refrigeration Pressure Too High/Low
- No Ice Warning
- Auger Load Warning

Menu Groups: Push and release the down arrow key to scroll down to the next line in the display or group.

Date - preset

Time - preset to Central Time

Warnings

Base Faults

Adv (advanced) Faults

Status

Cleaning

Performance

Test Cubers only

Timers

Revision

Setup

PGM Bin Level

Network Configuration

Date: 12-20-2010
Time: 03:33:10PM

Warnings
Base Faults

Adv Faults
Status

Cleaning
Performance

Test
Timers

Revision
Setup

Setup
PGM Bin Level

PGM Bin Level
Network Config

NB0622, NB0922, FB1222, NB1322
Information Display

Menu Tree

Date and Time Preset

Warnings
- Self-Test Failure
- No Ice Pending
- No Ice Strikeout
- Auger High Load Pending
- Auger High Load Strikeout
- No Water
- Refrigeration Pressure Too High/Low
- No Ice Warning
- Auger Load Warning

Base Faults
- Fault code 1:
- Fault code 2:
- Fault code 3:
- Fault code 4 :
- Fault code 5 :
- Fault code 6 :
- Fault code 7 :
- Fault code 8 :
- Fault code 9 :
- Fault code 10 :

Adv Faults descriptions of faults
- Self-Test Failure
- No Ice Pending
- No Ice Strikeout
- Auger High Load Pending
- Auger High Load Strikeout
- No Water
- Refrigeration Pressure Too High/Low

Status
- Warranty Start
- Relay Voltage
- Board Voltage
- Auger Motor Current
- Auger Motor Trip Current
- Auger Motor Strikes
- Ice Making Sensed
- Ice Making Strikes
- Freeze Timer
- Ultrasonic Bin Level
- Ultrasonic Bin Level Setpoint
- Power Interrupt Counter
- Bin Stat Input

Cleaning
- Cleaning Interval (hrs of power time)
Next Cleaning Due
- Last Cleaning Performed

Performance
- % Runtime Calculation

Timers
- Compressor Run Time
- Compressor Run Time Resettable
- Power Up Time
- Power Up Time Resettable

Revision
- Smart Board SW
- Controller SW
- KVS SW
- Smart Board HW
- Controller HW
- Ethernet SW

Setup
- Current Date
- Current Time (12:00:00 am format)
- Machine Model Number
- Machine Serial Number
- Machine Manufacturer
- Equipment Name
- Date of Manufacture
- Contact Name
- Contact Phone Number
- Audible Alert
- Clear current log file
- Clear fault history
- Logging Rate
- Auger Current Warning Value
- Ice Detect Warning Value

PGM Bin Level*
- Bin Level Ctrl
- Set Bin Level Ctrl On Off
- Monday time 1
- Monday level 1
- Monday time 2
- Monday level 2
- Monday time 3
- Monday level 3
- Monday time 4
- Monday level 4
- Tuesday time 1
- Tuesday level 1
- Tuesday time 2
- Tuesday level 2
- Tuesday time 3
- Tuesday level 3
- Tuesday time 4
- Tuesday level 4
- Wednesday time 1
- Wednesday level 1
- Wednesday time 2
- Wednesday level 2
- Wednesday time 3
- Wednesday level 3
- Wednesday time 4
- Wednesday level 4
- Thursday time 1
- Thursday level 1
- Thursday time 2
- Thursday level 2
- Thursday time 3
- Thursday level 3
- Thursday time 4
- Thursday level 4
- Friday time 1
- Friday level 1
- Friday time 2
- Friday level 2
- Friday time 3
- Friday level 3
- Friday time 4
- Friday level 4
- Saturday time 1
- Saturday level 1
- Saturday time 2
- Saturday level 2
- Saturday time 3
- Saturday level 3
- Saturday time 4
- Saturday level 4
- Sunday time 1
- Sunday level 1
- Sunday time 2
- Sunday level 2
- Sunday time 3
- Sunday level 3
- Sunday time 4
- Sunday level 4

Network Configuration
- IP Address   Read
- Subnet Mask   Read
- Default Gateway
- DNS   Read
- DHCP Enable
- Update IP Address
- Update Subnet Mask
- Update Default Gateway
- Update DNS
- Update DHCP

Update Network On Next Power Cycle

NB0622, NB0922, FB1222, NB1322
Information Display

Group Screens

Within each group are several screens of either information or settings, like times, that can be changed.

Date and Time Groups: No submenus are available.

Warnings: Press and release the Enter button to see information on current Warnings.

```
Warnings
Base Faults
```

Press and release ESC to return to the prior menu.

Base Faults: Press and release the Down arrow to underline the B in Base Faults, then the Enter button to see in the display:

```
No Warnings
```

Most recent failure (labeled 0) and how long ago it occurred (in hours), then press and release the down arrow to see:

```
Warnings
Base Faults
```

Second to most recent failure (labeled 1) and how long ago it occurred (in hours), then press and release the down arrow to see the third, fourth, fifth, and so on up to ninth where the list ends.

If there are no errors, the screen will display End of Errors.

```
End of Errors
```

Note: Base Faults are cleared when the controller's are cleared.

Press and release the escape button to return to the main menu tree.

Press and release the down arrow key to underline the A in Advanced Faults.

```
Base Faults
Adv Faults
```

Advanced Faults: Press and release the Enter button to see in the display:

Most recent failure and the exact time it occurred. Pressing and releasing the down arrow cycles through the other failures back to the oldest.

If there are no Advanced Faults or at the end of the list the display shows fault que end.

```
fault que end
```

Note: Advanced Faults are not cleared by the controller, instead they are cleared using the Clear Fault History screen in Setup.

At the end of the list the display will show directions to go back to the main menu.

```
up arrow = back
esc = main menu
```

Press and release the escape button to return to the main menu tree.

Advance Fault Definitions - Flaker or Nugget

Self-Test Failure

The controller checks for proper operation at power up. If the check shows a problem, this warning or fault will be displayed.

No Ice Pending

The controller monitors ice making using the photo eyes. If falling ice is not sensed by the photo-eyes, and if it is NOT the third consecutive time it has occurred, this warning or fault will be displayed.

No Ice Strikeout

If the controller fails to sense ice for a third consecutive time, this warning or fault will be displayed and the machine will be shut down.

Auger High Load Pending

The controller monitors the current used by the auger drive motor. If the current exceeds the limit, and if it is NOT the third consecutive time that it has, this warning or fault will be displayed.

Auger High Load Strikeout

If the auger motor draws too much current for a third consecutive time, this warning or fault will be displayed and the unit will be shut down.

No Water

If the water level sensor is dry or the water is too pure, this warning or fault will be displayed, and the unit will be shut off.

Refrigeration Pressure Too High/Low

There are two pressure switches on the machine, if either one opens due to an over or under pressure condition, the controller will display this fault or warning.

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Information Display

Status List

Press and release the down arrow to underline the S in Status.
Press and release the Enter button to see:

Warranty Start: The display will show the warranty start date after 24 hours of run time. Press and release the Down arrow to see:

Relay Voltage: Voltage supplied to the relays. Press and release the Down arrow key to see:

Board Voltage: Voltage supplied to operate the controller. Press and release the Down arrow key to see:

Auger Motor Current: Current draw of the auger drive motor. Press and release the Down arrow key to see:

Auger Motor Trip Current: Maximum allowed amp draw. Press and release the Down arrow key to see:

Auger Motor Strikes: Number of times auger motor has currently exceeded the amp draw setpoint. Press and release the Down arrow key to see:

Ice Making Sensed: Has the controller sensed ice making? Press and release the Down arrow key to see:

Ice Making Strikes: Number of times the controller has not sensed ice falling in the chute. Press and release the Down arrow key to see:

Freeze Timer: Current compressor on time in minutes. Press and release the Down arrow key to see:

KVS Level: Distance in inches the ice level control system has measured from the sensor to the top of the ice. Press and release the Down arrow key to see:

KVS Level Setpoint: Distance in inches the ice level system will maintain as a maximum ice level. Press and release the Down arrow key to see:

Power Interrupt Counter: Number of times power has been interrupted to the machine. Press and release the Down arrow key to see:

Bin Stat Input: Shows Closed if no bin thermostat is attached or if one is attached and is Closed. Shows open only if there is a bin thermostat attached and it is open, which stops ice making. When done with Status, press and release the ESC button.

```
Adv Faults
Status
```

```
Warranty Start:
Starts at 24HRS
```

```
Relay Voltage:
240 VAC
```

```
Board Voltage:
14 VAC
```

```
Auger Mot Current
1.8 Amps AC
```

```
Aug Mot Trip Curr
3.0 Amps AC
```

```
Auger Mot Strikes
0
```

```
Ice Making Sensed
Yes
```

```
Ice Making Strikes
0
```

```
Freeze Timer:
00:00
```

```
KVS Level
00:00
```

```
KVS Level Setpoint
0
```

```
Pwr Interrupts
0
```

```
Bin Stat
Open
```

Cleaning

Push and release the Down arrow to put the line under the C in Cleaning. Then push and release the Enter button to see.

```
Status:
Cleaning
```

The Clean Interval. Then press and release the Down arrow to see:

```
Clean Interval:
6 Months
```

The Next Clean Due in x HRS. Then press and release the Down arrow to see:

```
Next Clean Due
in 5 Months
```

Last Clean: x HR Ago.

```
Last Clean:
6 Hours Ago
```

Then press and release the Down arrow and then press and release the ESC button.

Push and release the Down arrow to put the line under the P in Performance.

```
Cleaning
Performance
```

Performance: Push and release the Enter button to see:

Percent run time. Then press and release the Down arrow to see:

```
Percent run time
0.00%
```

When done with Performance, press and release the ESC button.

Push and release the Down arrow to put the line under the T in Timers. Then press and release the Enter button to see:

```
Performance
Timers
```

Timers. Push and release the Enter button to see

Compressor run time. Then press and release the Down arrow to see:

```
Compressor Run:
HR
```

Compressor run resettable. Press the Down arrow to go to the next line or *Optional* Press SEL to enter reset mode.

```
Comp Resettable:
0HR
```

Press Enter to reset compressor run time to 0. Suggested if compressor is replaced.

```
Press enter to
clear counter
```

Press the Down arrow to go to Power up time. Then press and release the Down arrow to see:

```
Pwr Up Time:
HR
```

Power on resettable. Press the Down arrow to go to the next line or *Optional* Press SEL to enter reset mode.

Press Enter to reset Power on time to 0.

```
Pwr Resettable:
HR
```

When done with Timers, press and release the ESC button.

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Information Display

Revision

Push and release the Down arrow to put the line under the R in Revision. Then push and release the Enter button to see:

```
Timers
Revision
```

Revision. <u>SW Rev</u> number.

Then press and release the Down arrow to see:

```
Smart-Board SW R
3
```

<u>Controller SW</u> (software rev number) Then press and release the Down arrow to see:

```
Controller SW
1
```

<u>US Bin Level software</u> revision. Then press and release the Down arrow to see:

```
KVS SW
140
```

<u>Hardware Rev</u>

Then press and release the Down arrow to see:

```
Smart-Board HW R
2
```

<u>Controller HW</u> (hardware rev number).

When done with Revisions, press and release the ESC button.

```
Controller HW
1
```

Push and release the Down arrow to put the line under the S in Setup.

```
Revision
Setup
```

Then push and release the Enter button to see:

Setup:

View the Date or change it.

<u>To Set Day, Month and Year</u>

Press SEL key to get to Setup screen

```
Set Date:
Date: 12-21-2010
```

Push and release the SEL key to move to another underlined number.

Push and release the Up or Down arrow key to change the marked character.

Push and release the Select key to move to the next character, repeat prior step to change the character.

When done, push and release the Enter key.

Then press and release the Down arrow to view the time or change it.:

<u>To Set Time</u>

Press SEL key to get to Setup screen

```
Set Time:
Date: 02:07:51PM
```

Push and release the SEL key to move the underline to another number.

Push and release the Up or Down arrow key to change the marked character.

Push and release the Select key to move to the next character, repeat prior step to change the character.

When done, push and release the Enter key.

Then press and release the Down arrow to view the

Model number.

Model Number

Then press and release the Down arrow to view the

Serial number

Serial Number

Then press and release the Down arrow to view the

Manufacturer

| Manufacturer
Scotsman Ice |
| --- |

Then press and release the Down arrow to view the

Equipment Name

| Equipment Name
Ice Machine |
| --- |

Then press and release the Down arrow to view the

Manufacture date

Manufacture Date

Then press and release the Down arrow to view the

Contact name *Optional - change contact*

Contact Name

Then press and release the Down arrow to view the

Contact phone number. *Optional - change contact phone number*

Contact Phone Nu

Then press and release the Down arrow to view the

Audible Alert.

| Audible Alert
On |
| --- |

Optional: Press SEL to switch the audible alert on or off. The default in this model is ON.

Then press and release the Down arrow to view the. Then press and release the Down arrow to view the screen to clear the current log file.

| Clear current
log file |
| --- |

Optional: Press SEL to clear the log file.

| Press Select to
clear log |
| --- |

Then press and release the Down arrow to view the Clear Fault History file. Then press and release the Down arrow to view the

| Clear Fault
History |
| --- |

Optional: Press SEL to clear the fault history.

| Press Select to
clear fault code |
| --- |

Logging rate. Then press and release the Down arrow to view the logging rate. Default is data recorded every 30 seconds.

| Logging Rate
30 Seconds |
| --- |

Note: Changing the logging rate is not recommended.

Auger Warning - Press and release the Down arrow to view the

Ice Detect Warning - Press and release the Down arrow to view the

```
Auger warning
setpoint
```

```
Ice Detect
warning setpoint
```

Any of the above can be modified by changing the settings as noted below. The warning set points can be adjusted to match local conditions, so that when they change the Smart-Board provides a notice of the change.

To Change Setup Settings:

From a specific Setup Menu Item, press SEL key to get to Setup screen. Push and release the SEL key to move the underline to another number.

Push and release the Up or Down arrow key to change the marked character.

Push and release the Select key to move to the next character, repeat prior step to change the character.

When done, push and release the Enter key.

Example 1: Change Contact Phone Number

Push the Down arrow key until Setup is visible and the S is underlined. Press Enter.

```
Revision
Setup
```

Repeatedly push and release the Down key until the Contact Phone Number appears. Press SEL key to get to the Setup screen

```
Set Contact Phon
1800SCOTSMAN
```

Push and release the SEL key to move the underline to the number you wish to change. Push and release the Up or Down arrow key to change the marked character.

Push and release the Select key to move to the next character, repeat prior step to change the character.

When done, push and release the Enter key.

To Set the 7 Day Programmable Ice Level

There are four times and levels available for each day of the week.

```
Setup
PGM Bin Level
```

Use Up or Down Arrow keys to scroll to **PGM Bin Level** screen. When the P in PGM is underlined, press and release the Enter key.

```
Bin Level Ct
Off
```

Bin Level Ctrl is on the screen. If it reads Off, push and release the down arrow button to begin programming.

If Bin Level Ctrl is On, push and release the SEL button. From On, push the Down arrow key to turn Off. The control must be set to OFF to adjust bin level. Push Enter and Down to get to the first programming menu.

```
Bin Level Ct
On
```
```
Set Bin Level Ct
Off
```

Monday Time 1 will show on the screen. Press and release the SEL key to begin setting Monday Time 1. **Set Monday Time** appears in the display.

```
Monday Time 1
01:30 AM
```

Change Monday Time 1: 12:00 AM might be displayed. To adjust, push the SEL button to position the underline mark under the character to be changed. Push and release the up or down arrow key to change the number or letter one time. Repeat pushing the SEL button to move the underline and repeat pressing the up and down arrow buttons to change the time.

```
Set Monday Time
12:00 AM
```
```
Monday Time 1
02:30 AM
```

Push Enter once to change the screen back to Monday Time 1. Push Down once to get to the level reading.

```
Monday Level 1
9 inches
```

Change Monday Level 1: Monday Level 1 is in the display. Push SEL once to display Set Monday Level 1. Rotate the knob one click at a time until the desired level appears. <u>A delay is normal</u>.


```
Set Monday Level
14 inches
```

Note: smaller numbers = higher ice level.

Push Enter one time to set the level. "Off" means the switch is set for maximum ice level.

```
Monday Time 2
11:00 AM
```

Push the Down arrow to go to **Monday Time 2**, and set that time using SEL and arrow buttons as in Change Monday Time 1 above. Push Enter once to set it and change back to Monday Time 2. Push the down arrow button to go to Monday Level 2 and change that level using the SEL button and the knob as in Change Monday Level 1 above. Push Enter to set that level.

```
Monday Level 2
9 inches
```
```
Set Monday Level
14 inches
```

Repeat for all time and level settings.

```
Setup
PGM Bin Level
```

When done, push ESC to return to the PGM Bin Level screen. When the P in PGM is underlined, press and release Enter.

```
Bin Level Ct
Off
```

Bin Level Ctrl will show on the screen. Push and release the SEL button. Push and release up arrow key to change the setting from Off to On.

```
Set Bin Level Ct
On
```

Push and release Enter and ESC when done.

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Information Display

This table shows the default times and levels, which can be changed using the instructions on the previous page.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time 1	12 AM	12 AM	12 AM	12 AM	12 AM	12 AM	12 AM
Level 1	9	9	9	9	9	9	9
Time 2	5 AM	5 AM	5 AM	5 AM	5 AM	5 AM	5 AM
Level 2	9	9	9	9	9	9	9
Time 3	12 PM	12 PM	12 PM	12 PM	12 PM	12 PM	12 PM
Level 3	9	9	9	9	9	9	9
Time 4	5 PM	5 PM	5 PM	5 PM	5 PM	5 PM	5 PM
Level 4	12	12	12	12	12	12	12

Example: Unit on a tall bin (44" or more). Adjusted to low ice levels during the week, high ice levels during the weekend. Off = highest ice level.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time 1	1:00 AM	1:00 AM	1:00 AM	1:00 AM	1:00 AM	1:00 AM	1:00 AM
Level 1	32	32	32	32	32	Off	Off
Time 2	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM
Level 2	32	32	32	32	32	Off	14
Time 3	3:00 PM	3:00 PM	3:00 PM	3:00 PM	3:00 PM	3:00 PM	3:00 PM
Level 3	32	32	32	32	32	Off	32
Time 4	7:00 PM	7:00 PM	7:00 PM	7:00 PM	7:00 PM	7:00 PM	7:00 PM
Level 4	32	32	32	32	Off	Off	32

Note: Units on dispensers or short bins should not set their level other than 9 or Off - setting too low will result in no ice.

Record your settings here for future reference:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time 1							
Level 1							
Time 2							
Level 2							
Time 3							
Level 3							
Time 4							
Level 4							

Network Configuration

Used only when connected to a network. There is an Ethernet connector on the back of the Information Display board. If desired, route a network cable thru the cabinet and connect your network to it.

To view or change the Network Configuration, use the up and down arrow keys to display Network Configuration. When the N in Network is underlined, press and release the Enter key.

```
PGM Bin Level
Network Configu
```

The IP address (if connected to a network) will be displayed. If not connected, Please Wait will be displayed for an extended time.

```
IP Address
```

Press the down arrow key to see the Subnet Mask

```
Subnet Mask
```

Press the down arrow key to see the Default Gateway

```
Default Gateway
```

Press the down arrow key to see the DNS

```
DNS
```

Press the down arrow key to see DHCP Enable

```
DHCP Enable
```

Press the down arrow key to see the Update IP Address screen. Press the SEL key to access it.

```
Update IP Address
```

Press the up or down arrow key to change the first (underlined) number. Press the SEL key to move the underline to the next number, then press the up or down key to change that number. Repeat as needed to change the numbers. When done, press the Enter key.

```
Set Update IP Ad
```

Repeat the same process to change the other network parameters, if needed.

Once desired network parameters have been manually configured, turn on **"Update Network on Next Power Cycle". After the power to the machine has been cycled, the new parameters will take affect.**

Supplied Software

Description:

Scotsman Prodigy Tech Tool is a software program designed to access the Prodigy ice machine's Information Display control. It can read and display the data in the controller. The data is converted to chart form and can then be saved and / or printed. It is on the CD-ROM and must be installed onto the PC that will be used to connect through the USB port. Use is optional.

Installation and Use

Requirements:

- Windows XP or Vista or Windows 7
- 40 MB disk space minimum. More will be needed if data logging is used.
- Desktop or Laptop PC with a USB port.
- Live ice machine (to install USB driver)

Software Installation:

Pre-installation: USB cable UNPLUGGED from the the PC.

1. Insert the CD into the computer's CD-ROM drive.

2. Follow the program installation instructions. At the finish, do NOT start the application.

- The installation will place 2 icons on the desktop, Prodigy Charting and Scotsman Prodigy.
- The installation will also set up a Scotsman Prodigy section under Programs (Start > All Programs > Scotsman Prodigy).

3. After the installation is complete, remove the CD-ROM from the drive.

4. Power up the unit and plug the USB connector into the PC and the USB port.

5. The PC will automatically find and begin the process to install the driver.

6. Select all default settings for installing the device driver.

7. Installation is now complete.
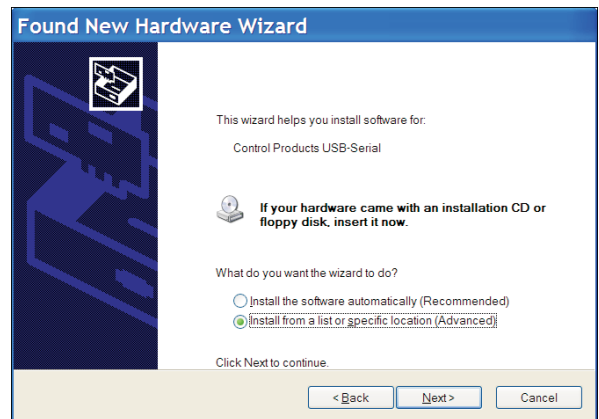
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Software Use:

With the unit powered and connected to the computer's USB port, Open Scotsman Prodigy:

Start, All Programs, Scotsman Prodigy, Prodigy

Click on **Get File**. The software will automatically begin to download the information. Once that is complete either click on **Chart Data** or select a new log file to review. If selecting a log file for this machine, be sure Nugget is checked.
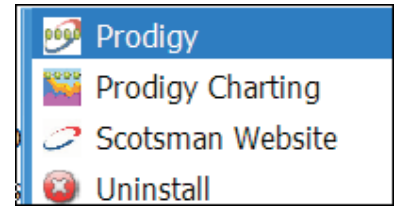
When you click on **Chart Data**, the Column Selection dialog box will appear. You can select any chart you want to review. The default is all of them. Click on **OK** to go to the next step.

The software will display the Charting information box. You may have to expand it to see the Chart Type selection area on the right.
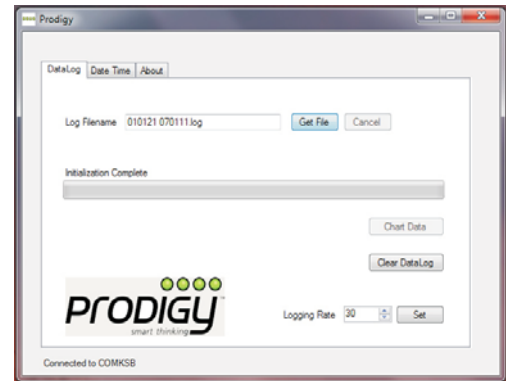
Use the Chart Type box to display the list of available charts.

Which one of these to use depends upon what the machine situation is. For example, if the machine is down, displaying code 2, indicating an auger motor over amp condition, it would be useful to check auger motor current. Checking the Base Faults or Advanced Faults is another way to understand what occurred and when.
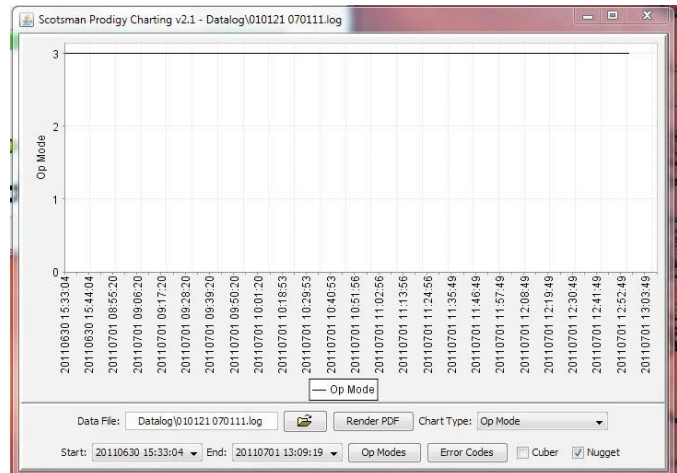
Another example is a complaint of low capacity. The chart on Power up time should show if the machine is on all the time. Then a look at the freeze timer chart will show how often it is cycling. The two will provide a good idea of the machine's ability to produce ice.

At any time clicking on the **Render PDF** button will generate all the charts in PDF format so they can be saved. Once saved they can be printed or emailed.

Chart Definitions

- Op Mode = The mode the controller was in at the time shown
- Error Code = The codes, if any, of any diagnostic codes.
- Warning = The codes, if any, of any warnings. Same codes as diagnostic
- Pwr Interrupts = Number of electrical power interruptions to the machine
- Time to Clean = 0 = no, 1=yes
- Button Lock = 0 = no, 1 = yes
- Time to Clean Interval = Time set between Cleaning light activations, in hours.
- Compressor Run = Time compressor has been operating
- Pwr Up Time = Time power connected to machine.
- Bin Level = Ice level measured by the ice level control
- Bin Setpoint = Set point of the ice level control
- Freeze Timer = time in seconds that the compressor operated before bin full
- Board Voltage = approximation of AC voltage to the control board from the transformer
- Relay Voltage = AC load voltage determined by controller. 115 or 230.
- Auger Motor Current = amp draw of the auger motor x10
- Ice Making Sensed = 0 = not sensed, 1 = sensed
- Bin Stat = Bin thermostat, when used. 0 open, 1 closed.
- RLO = SmartLock option. 0 not locked, 1 locked
- Ice Dispensed - not used
- Water Dispensed - not used
- Compressor = 0 off, 1 on
- Auger = auger motor. 0 off, 1 on
- Bin Eyes Blocked = 0=no, 1=yes
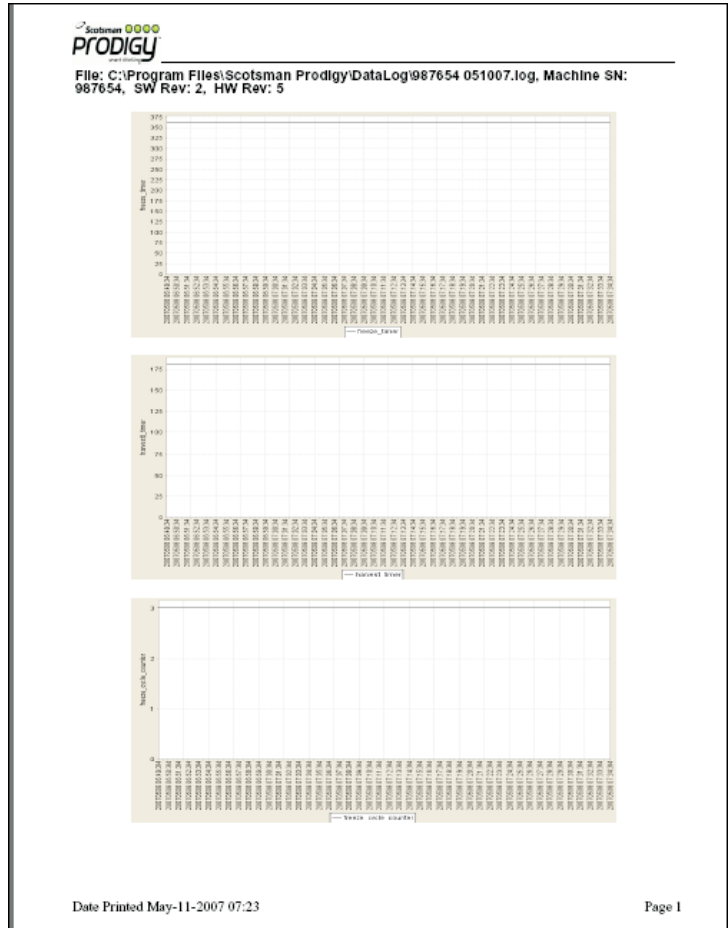
Example of generated PDF file

Error Codes

1 = Sump water max fill time error
2 = Max freeze time pending error
3 = Max freeze time error
4 = Max harvest time error
5 = Max harvest time pending error
6 = Min freeze time pending error
7 = Min freeze time error
10 = High discharge temperature error
11 = Discharge temperature sensor error
12 = Sump temperature sensor error

OK

Error Code Display

Op Modes

0 = Power restart stat
1 = Flush level adjustment state
2 = Immediate off state
3 = Off state
4 = Freeze state
5 = Harvest State
6 = Restart refrigeration state
7 = Bin full state
8 = Clean state
9 = Error shutdown state
10 = Error restart state
11 = Scotsman test state
12 = fault code view state
13 = Ice melt down state
14 = Remote lock out state
15 = Water fill test state
16 = Voltage shutdown state
17 = Time to clean adjustment state
26 = EEPROM check sum error state

OK

Op Mode Display

Access through Ethernet

1. After installation, connection to a network, and power up, scroll down to locate IP Address.

2. Enter that IP address into an internet browser like Internet Explorer or Firefox.

3. A Prodigy logo screen will appear. After a few seconds it will update and show a screen similar to the one here. Login as an observer or administrator using the password.

4. As an Observer, several actions are available at this screen:

- Controller Snapshot
- AFB Config File
- Key Pad Lock Status
- Time To Clean Setting
- Flush Level Setting
- Bin Level Scheduling
- Change Password

Controller Snapshot lists the current status of many aspects of the controller.

AFB Configuration File lists the current status of many aspects of the information display and the controller.

Key Pad Lock Status lists if the key pad of the controller is locked or not.

Time to clean setting. Lists the number of months of power up time the unit must accumulate before the De-Scale / Sanitize light is switched on.

Flush Level Setting lists the Purge level the controller is set to use.

Bin Level Scheduling. Only applies to units that have the ice level control installed. Lists the times and levels that have been set.

Logging in as an Administrator allows additional actions:

Key Pad Lock or Unlock. Lists if the controller is locked or not and can be changed by selection and submitting.

Adjust the Clean Notice. Lists the number of months of power up time the unit must accumulate before the De-Scale / Sanitize light is switched on. Selecting a different interval and submitting will change that number.

Adjust the Purge or Flush level. Lists and allows change of the amount of water purged per cycle.

Start or stop the machine. Allows the machine to be started or stopped remotely.
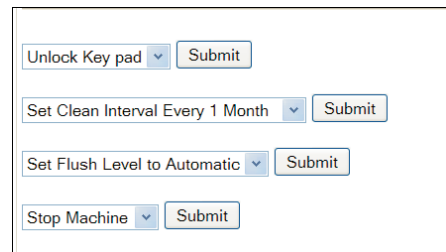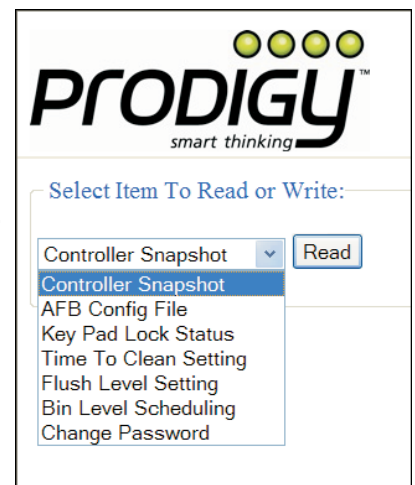
Appendix

NAFEM Protocol. See the NAFEM website, www.nafem.org, for more information.

NAFEM CERTIFICATE OF COMPLIANCE

MANDATORY REQUIREMENTS

Company Name   Scotsman Ice Systems

Product Category   Ice Machine   Model Number   12-2945

☒ IEEE 802.3 Section 14 – 10 BASE T
☒ IEEE 802.3 Ethernet or IEEE 802.11b
☒ RFC 826 [ARP]
☒ RFC 791 Internet Protocol version 4.0 [IPv4]
☒ RFC 792 [ICMP]
☒ RFC 768 User Datagram Protocol [UDP]
☒ RFC 951 BOOTP or DHCP *Client*
☒ RFC 1350 Trivial File Transfer Protocol [TFTP] *Client*

☒ Asset Management Enterprise: Identification
☒ RFC 1157 [SNMPv1] *Agent*
☒ RFC 1156 [SMI]
☒ RFC 1213 [MIB-II]
☒ NAFEM Units of Measure*1
☒ NAFEM Textual Convention *1
☒ NAFEM Traps *2
☒ CODES AND MESSAGES*2
☒ Clock/Calendar Enterprise: Time

*1 Only required if Optional NAFEM enterprise groups selected require these items   *2 Only required if Traps are used for notification

OTHER REQUIREMENTS:

Administration Enterprise Group
☒ Identification
☒ Network
☒ Community Table   [Instance(s) 5]
☐ Notify Messages
☐ Notify Message Acknowledgement

Bulk Transfer Enterprise Group
☐ Storage Media Types Table   [Instance(s)   ]
☒ File Items Table   [Instance(s) 30]
☒ File Transfer
☐ Notify Messages
☐ Notify Message Acknowledgement

Clock/Calendar Enterprise Group
☒ Time
☐ Daylight
☐ Scheduler

Inventory Management Enterprise Group
☐ Configuration Table
☐ Data Table   [Instance(s)   ]
☐ Storage Table
☐ Log Configuration Table
☐ Log History Table   [Instance(s)   ]
☐ Notify Messages
☐ Notify Message Acknowledgement

Utility Management Enterprise Group
☐ Configuration Table
☐ Data Table   [Instance(s)   ]
☐ Alarm Table
☐ Log Configuration Table   [Instance(s)   ]
☐ Log History Table
☐ Notify Messages
☐ Notify Message Acknowledgement

Maintenance Enterprise Group
☐ Process Item Configuration Table
☐ Process Data Table   Instance(s)   ]
☐ Process Item Alarm Table
☐ Scheduled Item Configuration   Instance(s)   ]
☐ Scheduled Item Data Table
☐ Unscheduled Item Configuration   Instance(s)   ]
☐ Unscheduled Data Table
☐ Log Configuration Table   Instance(s)   ]
☐ Log History Table
☐ Notify Messages
☐ Notify Message Acknowledgement

Notification Enterprise Group
☐ Hosts Table   [Instance(s)   ]
☐ Event Log

Asset Management Enterprise Group
☒ Identification
☒ Component   Instance(s) 20]
Identification Table

Monitor Enterprise Group
☒ Configuration Table
☒ Data Table   [Instance(s) 16]
☐ Alarm Table
☐ Log Configuration Table
☐ Log History Table   [Instance(s)   ]
☐ Notify Messages
☐ Notify Message Acknowledgement

Security Enterprise Group
☐ System
☐ User Table   [Instance(s)   ]
☐ Access Table   [Instance(s)   ]
☐ Logging Parameters Table   [Instance(s)   ]
☐ Protection Parameters Table   [Instance(s)   ]
☐ Event Log

NAFEM – 161 NORTH CLARK STREET, SUITE 2020, CHICAGO, IL 60601 – 312.821.0201

SCOTSMAN ICE SYSTEMS

775 Corporate Woods Parkway

Vernon Hills, IL 60061

800-726-8762

www.scotsman-ice.com