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SALT	LIQUID	MPH
435	5.4	34
LBS/MILE	GAL/TON	

SPREAD WIDTH	
0%	100%

7 FEB 12:01 PM

Control Point®

**INTRODUCING
CONTROL POINT.
THE WORLD'S
EASIEST TO USE
ICE CONTROL
SYSTEM.**

**DICKEY-john**
CORPORATION



**OKAY,
MAYBE
THE SECOND
EASIEST.**

**We developed all
these advances
with one goal in
mind — to let
drivers concentrate
on driving and clear-
ing the roads.**

**Control Point is the
easiest ice control
system to calibrate
and program
available today.**

**DICKEY-john designs
and builds all of the
electronics for this
ice control system
so you can look
forward to years of
trouble-free service.**



CHAPTER 1 – SYSTEM DESCRIPTION

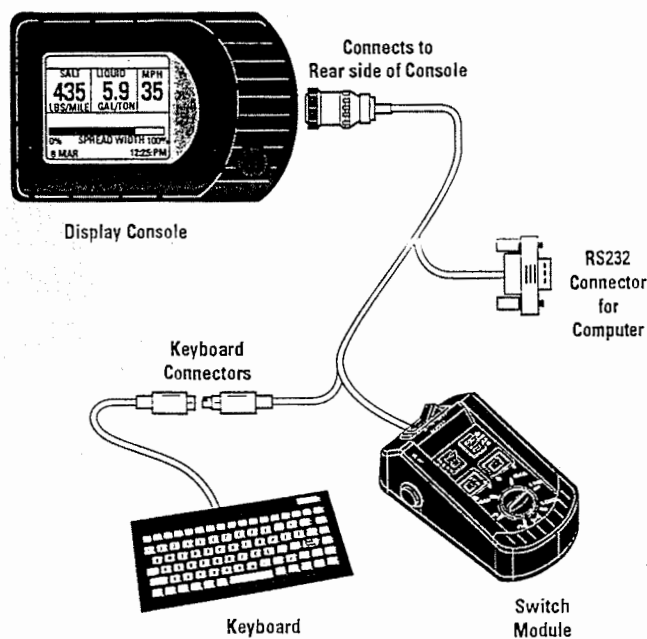
The DICKY-john Control Point™ system uses three-channels (three separate controlled servo loops) on spreader vehicles to simultaneously control the spreading of granular and liquid ice-control materials. Two channels control granular and liquid application rates and the third channel precisely controls spinner speed to maintain even material coverage over the desired spread width. The dispensing rate varies directly with ground speed to ensure accurate product application.

Material can also be spread at a preset “BLAST” application rate. This is normally a very large rate to instantly adjust the target APR (application rate) for covering bridges and intersections with a much heavier amount of material.

GRANULAR CHANNEL CONFIGURATION

The granular channel controls the amount of material dumped onto the spinner plate(s). To do this, the Control Point™ monitors a tachometer style feedback sensor located on the V-box drag chain or tailgate auger. A resultant drive signal adjusts the conveyor mechanism speed to deliver the target application rate (APR) by regulating the hydraulic valve position.

Figure 1. System Components





CHAPTER 2 – OPERATING PROCEDURES

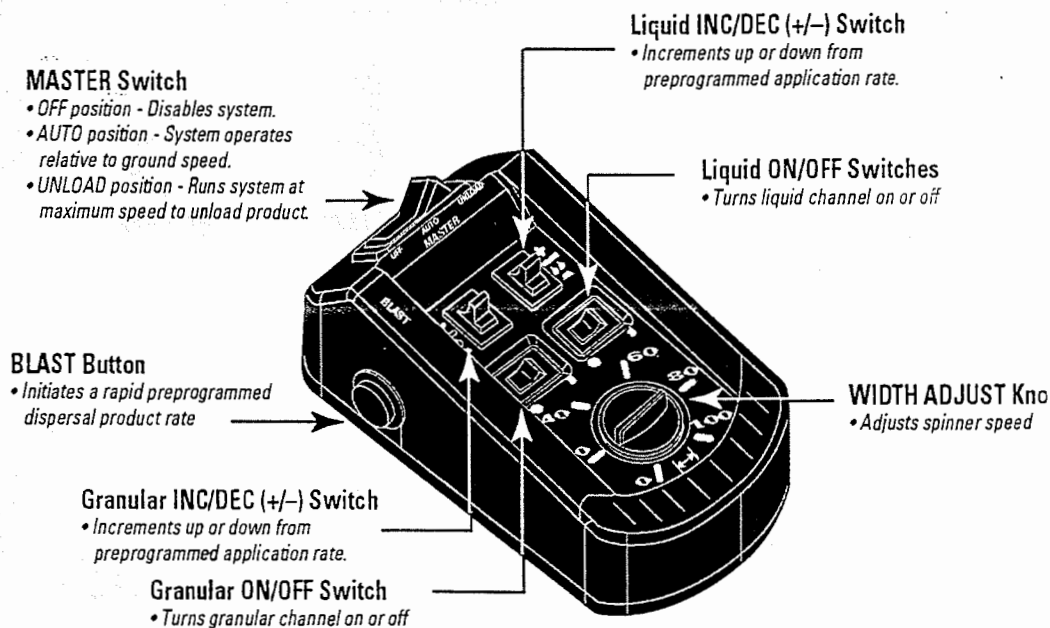
This chapter explains how the operator (driver) of an ice-control vehicle uses the controls on the Switch Module and Console to perform standard operator functions. **Note:** The detachable keyboard (optional) is required to program and calibrate the system as described in the next Chapter.

Depending upon programming, the operator can view three or four different screens of data. The OPERATE screen is the home screen for monitoring spreader operation; the remaining screens are supportive – MATERIAL SELECT/MANUAL SPEED, CURRENT TOTALS, and SEASON TOTALS. The MATERIAL/MANUAL SPEED SELECT screen is only accessible if the system is stationary (no ground speed).

PREPARING FOR OPERATION

Perform the following procedures only after the system is installed, properly programmed and calibrated. Practice the following procedures with the vehicle stationary to gain familiarity with the operating controls and screens before applying product.

Figure 3. Switch Module Controls and Definitions





STARTING THE SYSTEM

1. Verify the MASTER Switch on the Switch Module is in the OFF position (See Figure 3).

If the Master Switch is in the AUTO position during power up, a warning message with audible alarm occurs until the switch is turned OFF (See Figure 4).

2. Turn on the ignition switch.

If the Console was on when the ignition was last turned off, the display comes on with the ignition switch. A screen briefly shows the DICKY-john logo followed by the OPERATE screen (See Figure 6).

If the console does not power on, the console button was used to properly power down the unit. Proceed to Step 3.

3. Briefly press the Console button (less than a second) to apply power to the Console (See Figure 5).

Figure 5. Console Showing Functional Items

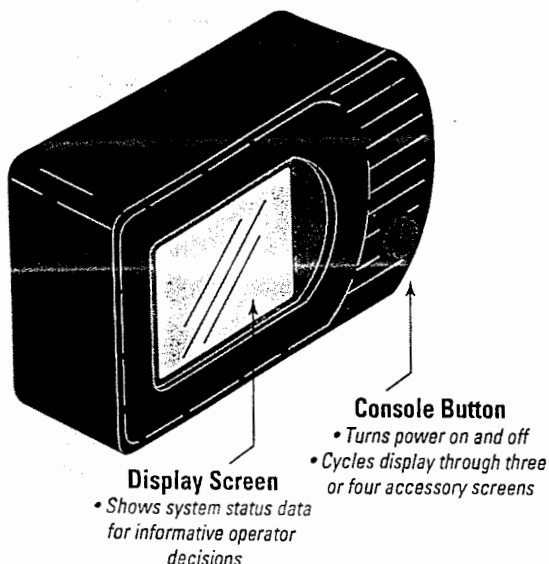
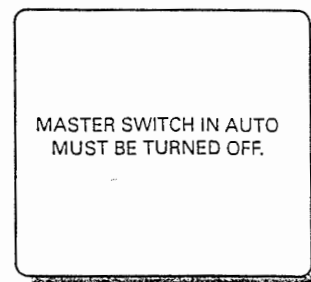


Figure 4. Master Switch Warning Message



If the button is held too long, a beep sounds indicating the Operate screen is skipped and an accessory screen appears instead (This screen described later). If the beep is heard, turn the console off as indicated in Step 4 and start again.

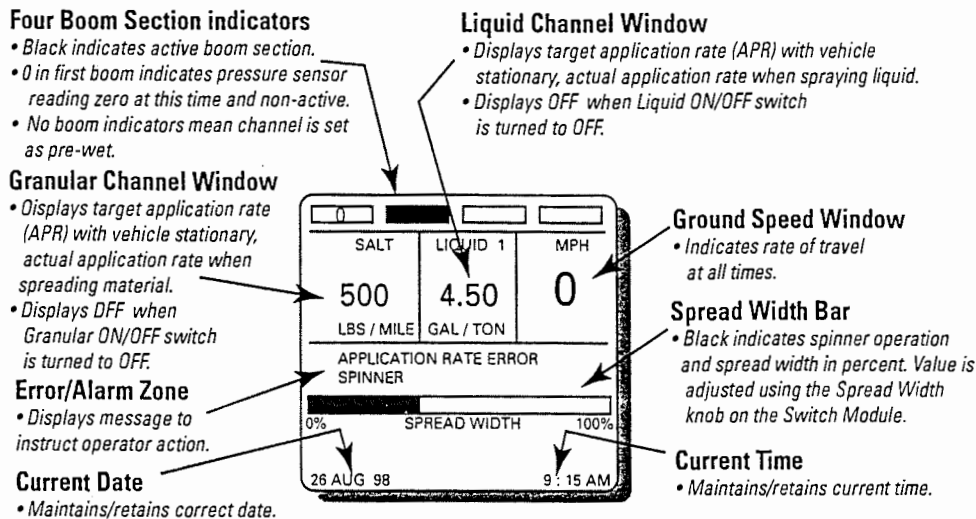
During start-up (power up), the Console automatically closes all system actuators and performs self-tests, including system configuration and application data. If an error occurs at power up or during operation, an appropriate error message displays with recovery information.

4. Turn the Console off by pressing and holding the Console button until a beep sounds and the text on the screen disappears (approx. 3 seconds) and then release.

Power is removed when the screen goes dark. To restart, repeat Step 3.



Figure 6. Divisions of the OPERATE Screen



OBSERVING THE OPERATE SCREEN DIVISIONS

1. Study the OPERATE screen layout (See Figure 6).

Three windows across the upper portion display Granular, Liquid, and true (actual) Ground Speed data. Directly above, status of the booms graphically display. Below the windows, error messages appear briefly for system errors along with an audible alarm. In the lower third, the Spread Width Bar graphically indicates percentage of spinner activity via a black bar. At the bottom, the current date and time display.

2. At the Switch Module, turn the Granular and Liquid ON/OFF switches off, then back on again (See Figure 3).

Notice, the window for each product reads OFF and then returns to the material and target (APR) values again.

Ground speed is independent of product application and therefore displays only when the vehicle is moving.

Product application begins with vehicle motion if the Master Switch is in the AUTO position. The **actual** APRs display in roughly twice the size of the **target** APRs (See Figure 7).

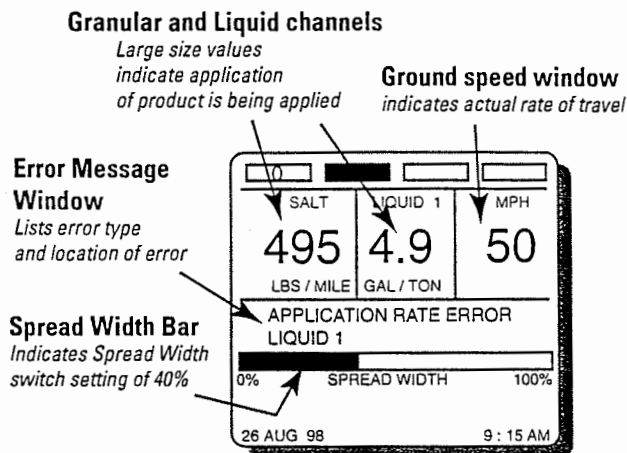
3. Change the target rate of either product channel by pressing the respective "INC/DEC +/-" switch on the Switch Module.

The value increments/decrements as a beep is heard for each inc/dec step. If the switch is held, the value repeats until reaching a preset limit. If changed while the vehicle is moving, the new **target** APR displays for approximately two seconds, then reverts to the **actual** APRs.

OPERATOR'S MANUAL



Figure 7. OPERATE Screen Showing Product Application



4. Rotate the WIDTH ADJUST knob on the Switch Module while observing the SPREAD WIDTH bar on the display.

The rotational speed of the spinner changes with the knob setting. The horizontal bar graphically represents the position of the SPREAD WIDTH knob. The bar is at the 100% position when the knob is fully clockwise, corresponding to maximum spinner speed. The operator determines the correct setting by observing the spread pattern. The bar is hollow until the spinner is operating.

5. Note the date and time across the bottom edge of the screen.
6. Observe the boom graphics across the top of the screen.

All boom sections appear as rectangle blocks during anti-ice operation. Each section is hollow until activated.

7. Observe the area for alarm messages.

Alarm messages appear (flashing) in the middle of the screen, above the SPREAD WIDTH bar (See Figure 7).



USING THE BLAST BUTTON

Pressing the red BLAST button (on the left side of the Switch Module) causes material to dispense at a higher, programmed rate. The BLAST button performs several functions, depending upon programming options.

1. **With the Operate screen displaying, press the Blast button on the side of the Switch Module.**

When the Blast button is pressed, the Operate screen displays **BLAST ON** above the **SPREAD WIDTH** bar.

This either initiates a **timed** blast cycle (programmed length) or **momentary** (blasts only with the button pressed). A timed blast period can be terminated early by activating the BLAST button a second time. Blasting can be initiated with the MASTER Switch in **AUTO** or **OFF**.

With a timed blast cycle, a programmed minimum ground speed establishes the material flow rate until that speed is exceeded by the actual ground speed.

MASTER SWITCH IN THE UNLOAD POSITION

The **UNLOAD** position of the MASTER Switch is used to quickly remove material from the truck.

Warning: If the spinner is programmed to operate during **UNLOAD**, be sure that no one is in the vicinity before performing this procedure to avoid possible injury!

1. **Back up to the appropriate location and momentarily press UNLOAD.**

The actuators open fully for those channels turned on from the switch module.

2. **To stop the unload operation, move the MASTER switch to the OFF position.**