

# inTOUCH Max Owner's Manual and Installation Guide

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## Overview

The ISIS inTOUCH™ MAX Touch Screen Control is powerful expansion to the ISIS Intelligent Multiplex System. You get complete control of your car accessories through a large, backlit touch screen interface. The large 7" diagonal screen allows you to switch all of the car functions through the ISIS POWERCELLs and inMOTION Cells.

Beyond being an input device, the inTOUCH MAX screen offers expanded diagnostic capabilities beyond the standard inSIGHT diagnostics built into the MASTERCELL. You can monitor your car's electrical system through the large diagnostic window built into the screen plus you can watch critical parameters in real time on a graphical interface.

A secure password is built into the system eliminating the need for keys. Hop in the car, enter your password and it comes alive. inTOUCH MAX is compatible with inLINK and inTOUCH Mobile radio systems for additional secure access options.

The screen can be seamlessly integrated into your dash or center console design, offering a polished OEM look. Your interior can be far simpler and cleaner by eliminating practically all of the switches on the dash. Plus, custom graphics can be loaded on the screen to make a truly unique install. Contact the ISIS Power Technical Support team for more information on graphics customization.

inTOUCH MAX uses a high-durability industrial touch screen which is designed to meet the rigors of the automotive aftermarket.

## System Details

- Serial connectivity to L2 ISIS MASTERCELL
- Screen is powered through MASTERCELL interface cable
- Basic Pre-Programmed Functions
  - Security, Starter and Ignition Functions
  - Lighting- Headlights, 4-ways, Parking Lights & Aux Lighting
  - Windows- Up & Down action for 4 Windows
  - Doors- Poppers, Locks and Trunk Release
  - Auxiliary- 8 extra buttons available for accessories
- Advanced Functions (Contact Technical Support for Info)
  - Seating, Mirrors and Environmental Control
  - Diagnostic and Monitoring Controls

## Kit Includes

- Configured ISIS inTOUCH MAX Touch Screen
- inTOUCH MAX Interface Cable to connect to L2 MASTERCELL
- NOTE: An external switch is required to turn off the screen when not in use. Contact ISIS Power Technical Support for information and recommendations.

## Technical Specifications

- Screen Type: 7" TFT with 262,144 Colors
- Screen Resolution: 800 X 480 in WVGA Format
- Viewing Area: 6.0 in. X 3.6 in.
- Horizontal Viewing Angle: 130 Degrees
- Vertical Viewing Angle: 55 Degrees Top, 65 Degrees Bottom
- Operating Temperature Range: -20° C (-4° F) to 70° C (160° F)

## Warnings

ADDING ANY ELECTRONICS MODULES TO A CAR WILL INCREASE THE DEMAND ON THE BATTERY. CARE MUST BE TAKEN TO MAINTAIN A CHARGE ON THE BATTERY WHEN THE CAR SITS IDLE FOR PERIODS OF TIME. THIS IS ESPECIALLY IMPORTANT WITH GELL-CELL AND AGM BATTERIES. WE RECOMMEND USING OUR inRESERVE BATTERY MANAGEMENT SYSTEM TO PROTECT YOUR VEHICLE. WE ALSO RECOMMEND KEEPING A TRICKLE CHARGER ON THE BATTERY WHEN THE CAR IS NOT IN USE.

ANY DISPLAY SCREEN CAN BE DISTRACTING TO THE DRIVER OF ANY CAR. DO NOT USE ISIS inTOUCH MAX IN A WAY THAT WOULD BE UNSAFE TO YOU OR OTHERS ON THE ROAD. CUSTOMERS ARE RESPONSIBLE FOR UNDERSTANDING THEIR LOCAL LAWS REGARDING SCREENS THAT ARE VISIBLE TO THE DRIVER.

## Installing the Screen

### Installation notes:

- Even though the ISIS inTOUCH Max screen is designed for rugged applications, care must be taken when handling the screen while it is being installed. The screen surface is glass and it will be damaged by impact or contact with sharp objects. Mishandling the screen will void the warranty.
- When installed, the exposed printed circuit board should not contact any other metal objects including foil-lined sound deadening material.
- Electrical components on the circuit boards are sensitive to electrostatic discharge. Always touch the metal mounting flange to discharge any static charge build up before picking up the screen assembly.
- The mounting surface for the screen should be as flat as possible. The screen should not be allowed to flex or be bent when installed.
- No parts of the mounting surface or trim bezel should contact the screen. This will cause problems with areas turning on and off on the screen. Apply 1/16" thick foam tape to the edges of the bezel to cushion the screen and the cover any gaps.

#### Step 1: Cut Opening for Viewing Area of Screen

- Find a flat spot in your dash or console. Use dimensions in Figure 2 as a reference to check size of the screen.
- Use Figure 2 as reference to cut opening in mounting surface. Use the dimensions for Viewing Area as your reference.
- Make sure that edges of bezel opening are free of burrs or any other sharp points that could contact the glass screen.
- Apply 1/16" foam tape to the perimeter of the opening in the mounting surface that faces the touch screen. When installed, the touch screen should be contacting the foam tape.

#### Step 2: Locate Mounting Holes for Screen

- Use Figure 2 as a reference for the locations of the mounting holes for the screen. The 4 holes in the corners of the steel mounting plate are the only points that should be used to mount the screen. The holes are sized for a #6-32 screw.

#### Step 3: Connect MASTERCELL cable to the screen

- Plug the small white plug on the MASTERCELL harness into the connector labeled J6 on the back of the screen.
- Use included zip-tie to secure the cable to the mounting square on the back of the touch screen as shown. Movement of the cable should be at a minimum to eliminate stress on this connector.

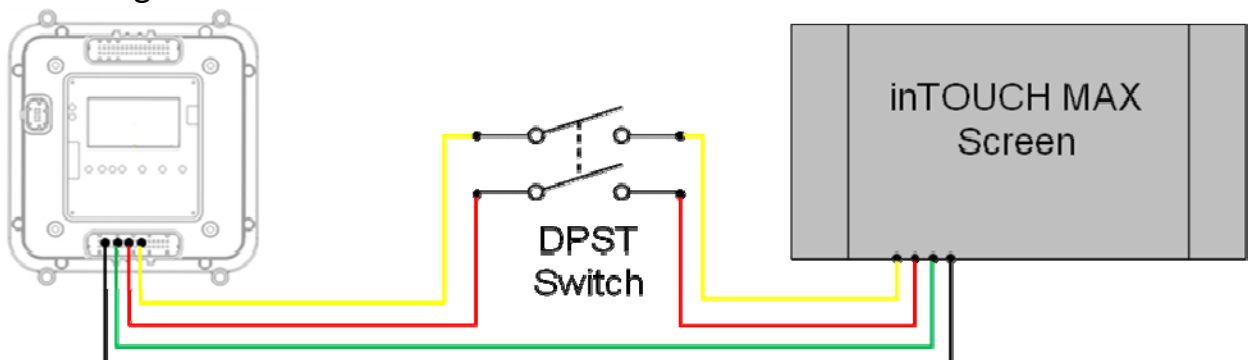
#### Step 4: Mount screen to mounting surface

- Tighten #6-32 nuts onto mounting studs until the screen begins to compress the foam tape. The fit should be snug. Over tightening these nuts will damage the screen.

### Step 5: Install switch for touch screen power

- You need to break the red and yellow wires in the touch screen harness and install a switch to shut off the screen when the car is not in use. Cut these wires in a convenient place and install a latching double-pole, single-throw (DPST) switch in a place where you can easily access it. The switch should be rated for 12-volts, 5-amps. Do not allow the yellow and red wires to contact each other. See Figure 1 for details. Contact ISIS Power Technical Support for help specifying this switch.
- Note: the inTOUCH MAX screen is powered from a special regulated 5-volt source on the MASTERCELL. Do not apply voltage to any of the wires in the harness going to the inTOUCH MAX screen. This will damage the screen and void your warranty.

Figure 1: Schematic for DPST Switch to Control Screen Power



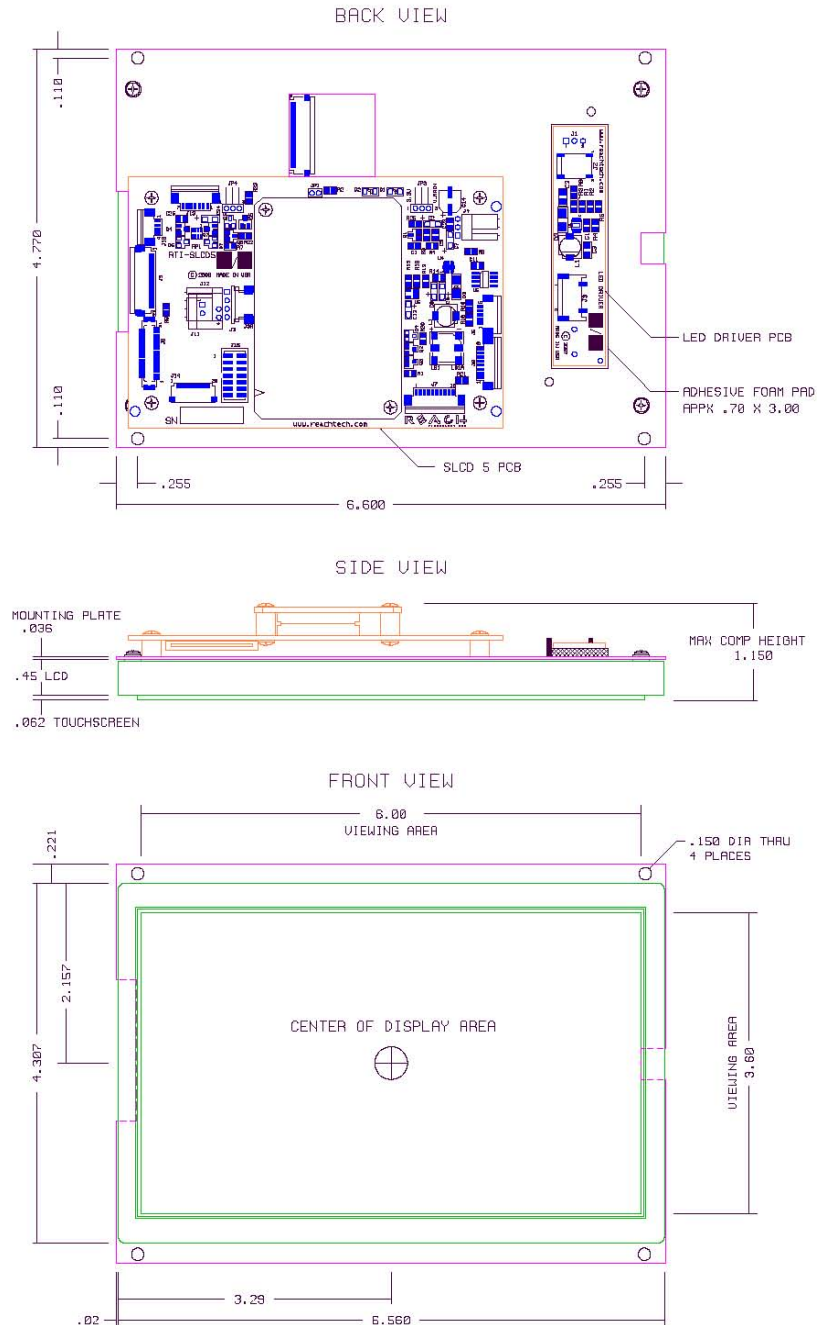
Note: Wire locations in Figure 1 do not represent the actual location of the wires in the MASTERCELL connector nor on the touch screen.

Step 6: Connect the touch screen to the MASTERCELL

- Plug the MASTERCELL plug into the B connector on the MASTERCELL.
- NOTE: If you are adding inTOUCH MAX to an existing system, your screen will ship with a cable that does not have the B MASTERCELL connector on it. You need to connect these wires into your existing connector. Use the chart below to properly plug the wires into the B MASTERCELL connector. Remove the existing wires in these cavities on the connector. Contact ISIS Power Technical Support for help doing this.

Wire Color	Cavity ID on B Connector
Black	30
Red	28
Green	12
Yellow	27

Figure 2: Screen Dimensions



## Applying Power and Unlocking the Screen

Step1: Apply power to the ISIS system and make sure that the power switch that you installed for the touch screen is on.

- The screen takes about 5 seconds to boot up.
- The first screen that you see is the ISIS Splash Screen. See figure 3

Figure 3: ISIS inTOUCH MAX Splash Screen



### Step 2: Unlock the System

- Press the **ISIS** Logo in the center of the splash screen. This brings you to the security keypad. See Figure 4.
- The default password for your screen is 111111.
- Press the **ISIS** button in the lower left of the keypad.
- Press 111111
- Press the **END** button in the lower right of the screen.
- You have 5 seconds to enter the password and hit **END** after you press the **ISIS** button.
- You can change the default password. See the Advanced Functions section.

Figure 4: ISIS inTOUCH MAX Security Screen



## Function Screens

The inTOUCH MAX Screen has several different menus of vehicle functions. They are all accessible from the main menu. This is the first screen that appears after you enter your password. Figure 5 shows the main menu.

Figure 5: inTOUCH MAX Main Menu Screen



Figures 6 through 13 show the functions on the sub-menu screens. Please contact ISIS Power Technical Support for specific configurations of these screens. Please note that screens noted with an (\*) are advanced screens and involve custom integration. Contact ISIS Power Technical Support for information.

Figure 6: Ignition Screen

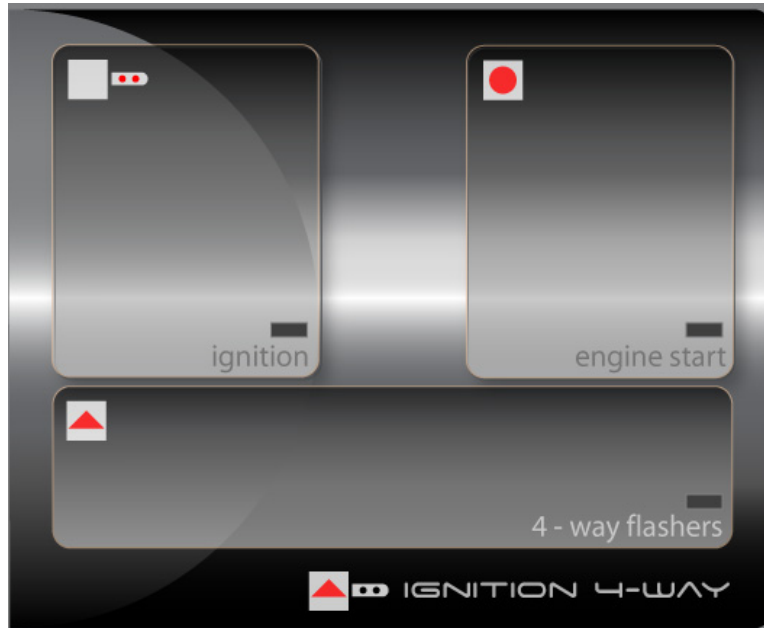


Figure 7: Lights Screen



Figure 8: Environment Screen

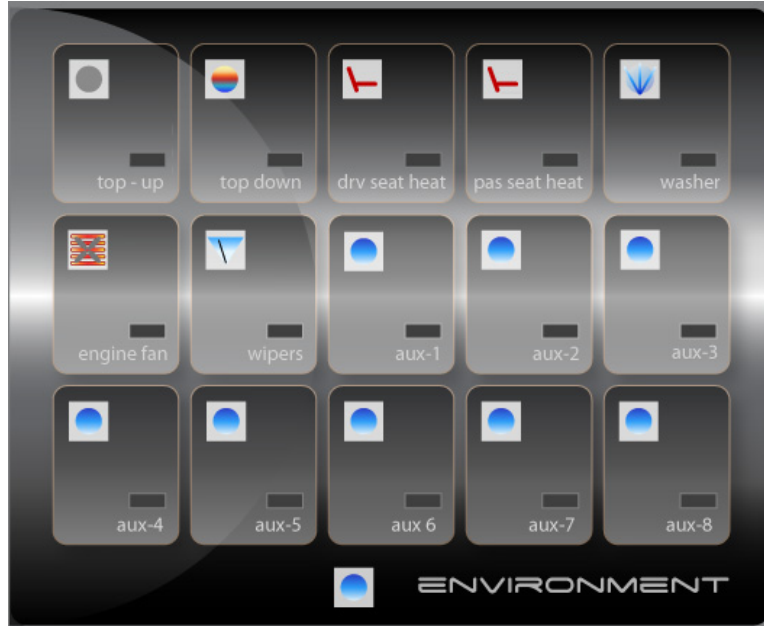


Figure 9: Seating Screen\*

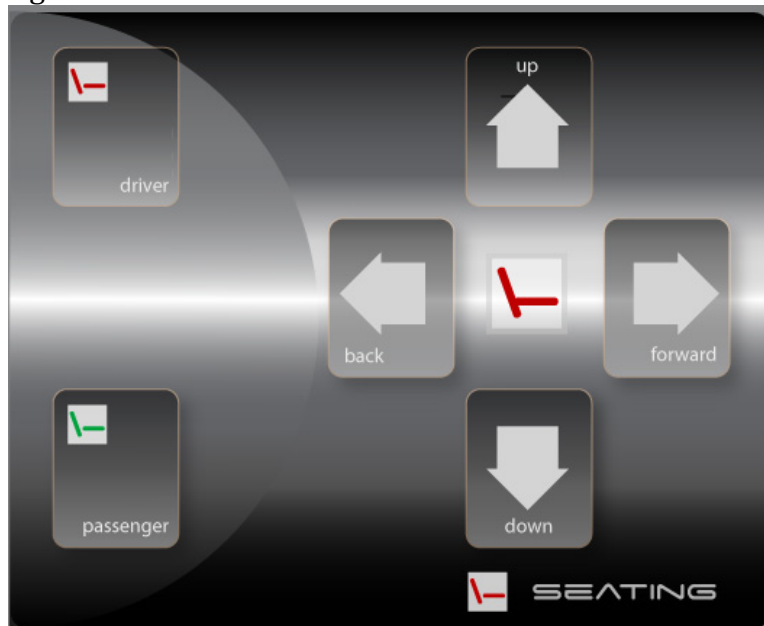


Figure 10: Locks Screen



Figure 11: Windows Screen

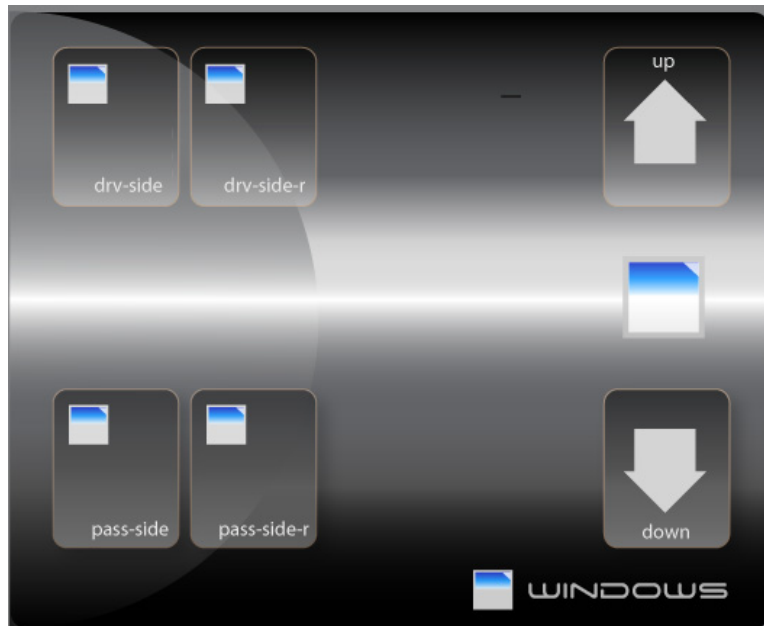


Figure 12: Mirrors Screen\*

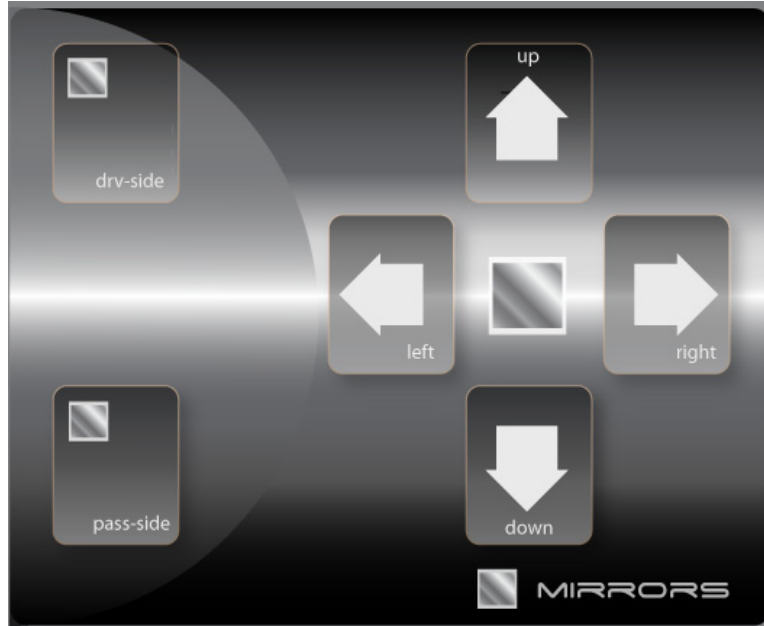
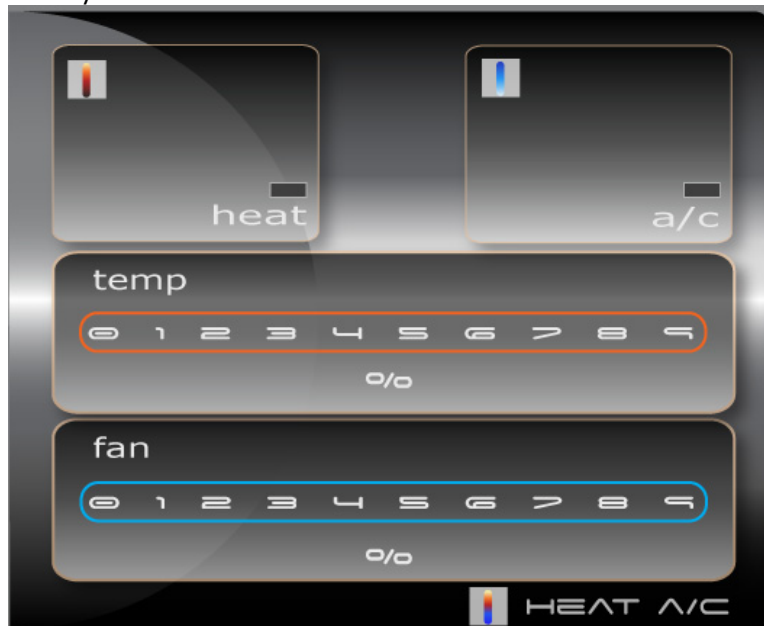


Figure 13: Heat & A/C Screen\*



## Advanced Functions

### Introduction

The ISIS inTOUCH MAX screen gets you powerful control of your ISIS system. Press the Tools button in the lower right corner of the screen to access these functions. Press the **CLR** button on the bottom left part of the screen to load the tools menu. All of the tools functions are controlled from the keypad on the left side of the screen. All of the commands start by pressing the **ISIS** button in the lower left part of the keypad. From there you enter a sequence of numbers followed by the **END** button. You can display the tools menu at any time by pressing the **CLR** button below the keypad and you can exit the tools screen by pressing on the **ISIS** logo at the bottom of the screen. This will take you back to the main menu.

### Taking Inventory of your ISIS System.

Like the inSIGHT display on a standard MASTERCELL, the inTOUCH MAX screen lets you see all of the cells connected to your ISIS network. Follow these instructions to get your system inventory.

Press **ISIS**

Press 01

Press **END**

The screen will display all of the ISIS cells connected to the MASTERCELL.

### Getting Individual Cell Statistics

Once you have your system inventory, you can drill down into a specific cell to get its operating information. Follow these instructions to get your system inventory.

Press **ISIS**

Type in 02

Type in the identification number of the cell that you want to check. This is the number in front of the cell listed in the inventory screen

Press **END**

The screen will display all of the important information for a cell in your ISIS network.

For example, if you wanted to get the statistics for the first POWERCELL on your network, you would press:

`ISIS 02 2 END`

### Changing the security PIN

The default security password for inTOUCH MAX is 111111. Follow these instructions to change your password.

Press `ISIS`

Type in 03

Type your new password. This must be exactly 6 characters.

Press `END`

For example, to change the password to 123456, you would type:

`ISIS 03 123456 END`

You will get a confirmation message on the screen after you successfully change your password.

### Setting the Brightness of the Touch Screen Backlight

You may change the brightness of the backlight on the touch screen. There are 9 different levels. Follow these instructions to change the default brightness of your backlight.

Press `ISIS`

Type in 04

Type in a number between 1 and 9. 1 is the dimmest and 9 is the brightest setting.

Press `END`

For example, to change backlight to the highest setting, you would type:

`ISIS 04 9 END`

For example, to change backlight to the lowest setting, you would type:

`ISIS 04 1 END`

## Setting the Brightness of the Touch Screen Backlight for Night Driving

You may change the brightness of the backlight on the touch screen for night driving. The screen knows when your parking lights are turned on and will dim the screen assuming that it is dark outside. There are 9 different levels. Follow these instructions to change the default brightness of your backlight.

Press **ISIS**

Type in 05

Type in a number between 1 and 9. 1 is the dimmest and 9 is the brightest setting.

Press **END**

For example, to change backlight to the highest setting, you would type:

**ISIS 05 9 END**

For example, to change backlight to the lowest setting, you would type:

**ISIS 05 1 END**

## Setting the Volume of the Confirmation Beep

Every time you press a button on the touch screen, there is an audible beep. This helps you to confirm that you pressed a button. You may change the volume of this beep. There are 9 different levels. Follow these instructions to change the volume of the confirmation beep.

Press **ISIS**

Type in 06

Type in a number between 1 and 9. 1 is the quietest and 9 is the loudest setting.

Press **END**

For example, to change volume to the highest setting, you would type:

**ISIS 06 9 END**

For example, to change volume to the lowest setting, you would type:

**ISIS 06 1 END**

## Training a New Key Fob to the MASTERCELL

If you add inLINK to your MASTERCELL or need to add a new inLINK key Fob, you must train it through the inTOUCH MAX tools screen. Follow these instructions to train a new inLINK key fob to your system.

Press **ISIS**

Type in 07

Press **END**

Press the star (\*) button on the inLINK key fob. You will hear a beep from the touch screen. Press star (\*) button on the key fob a second time. You will hear a second beep. You must press the star (\*) button on the key fob twice within 10 seconds from hitting the **END** button on the touch screen. You will get a confirmation message on the touch screen telling you that the key fob was trained to the system.

## Showing Event History

The ISIS MASTERCELL has an internal error log that records events when certain system parameters go out of specification. In most cases, ISIS technical support may ask you to check the error log when they are helping you troubleshoot your system. The error log records voltages and temperatures that fall out of the required limits. There are 8 different events that can be stored in the error log. Any new events push the oldest event out of the system's memory.

Follow these instructions to display the error log.

Press **ISIS**

Type in 08

Press **END**

The display will scroll through the 8 open windows for errors. If there are no errors in a window, the display will read "Entry is Empty". Press the **END** button to stop displaying the error entries.

## Enabling / Disabling Security

You can turn on and off the ISIS security functions through the inTOUCH MAX screen in case you lose your inLINK key fob or your mobile device for inTOUCH Mobile.

You must have your password to make this work.

Follow these instructions to enable security.

Press **ISIS**

Type in 09

Type your password.

Type in 1. This number is the command to enable security.

Press **END**

For example, if your password was 123456, you would type:

**ISIS 09 123456 1 END**

Follow these instructions to disable security.

Press **ISIS**

Type in 09

Type your password.

Type in 0. This number is the command to disable security.

Press **END**

For example, if your password was 123456, you would type:

**ISIS 09 123456 0 END**

## Internal Oscilloscope Setup

ISIS inTOUCH MAX allows you to monitor the voltage measured on the analogue inputs on the MASTERCELL and display the values graphically on an oscilloscope screen. You can use this as a diagnostic tool to test parts of your car. There are 16 different analogue inputs that can be connected to a 0 to 50 volt reference. Do not exceed 50-volts on any of these inputs.

The following table lists the input number for the oscilloscope, the MASTERCELL input number and the color of the wire in the standard harness.

Volt Meter Number	MASTERCELL Input Number	Wire Color
1	33	Light Blue- Yellow
2	34	Light Blue-Green
3	35	Tan-Black
4	36	Tan-Red
5	37	Tan-Blue
6	38	Tan-Orange
7	39	Tan-Green
8	40	Brown-Black
9	41	Brown-Red
10	42	Brown-Blue
11	43	Brown-Yellow
12	44	Brown-Green
13	45	Violet-Black
14	46	Violet-Red
15	47	Violet-Blue
16	48	Violet-Orange

Follow these instructions to enable the volt meter function.

Press **ISIS**

Type in 10

Press **END**

The screen will display the ISIS Scope Setup screen.

Press inside the Max-Volts box and type in the maximum voltage that you expect to measure. This sets the maximum value of the vertical axis on the oscilloscope.



#### INTELLIGENT MULTIPLEX SYSTEM

Press inside the Sample Rate box and type in the time-base for the horizontal axis. This number is in milliseconds and can range from 10 to 1000. Each pixel on the oscilloscope in the horizontal axis corresponds to the sample rate in milliseconds. Press inside the A/D Channel box and type in the number of the analogue input that you want to monitor on the screen. This number can be between 1 and 16. Press the **END** button then press **RUN**.

The screen will display the voltage measured on the analogue input graphically. To stop the oscilloscope, press the **END** button.

## Internal Volt Meter Setup

ISIS inTOUCH MAX allows you to monitor the voltage measured on the analogue inputs on the MASTERCELL. You can use this as a diagnostic tool to test parts of your car. There are 16 different analogue inputs that can be connected to a 0 to 50 volt reference. Do not apply more than 50-volts to any of these inputs. The following table lists the input number for the volt meter, the MASTERCELL input number and the color of the wire in the standard harness.

Volt Meter Number	MASTERCELL Input Number	Wire Color
1	33	Light Blue- Yellow
2	34	Light Blue-Green
3	35	Tan-Black
4	36	Tan-Red
5	37	Tan-Blue
6	38	Tan-Orange
7	39	Tan-Green
8	40	Brown-Black
9	41	Brown-Red
10	42	Brown-Blue
11	43	Brown-Yellow
12	44	Brown-Green
13	45	Violet-Black
14	46	Violet-Red
15	47	Violet-Blue
16	48	Violet-Orange

Follow these instructions to enable the volt meter function.

Press **ISIS**

Type in 11

Press **END**

The screen will display 4 different boxes labeled Channel 1 through Channel 4.

Press a box, type in the input number that you want to monitor then press end. You can do this for any of the 4 available boxes. Once you are ready, press the **RUN** button. The voltage measured on the MASTERCELL input wire will be displayed on the boxes on the screen. Press the **END** button to stop this function.

## Monitoring Motor Currents from inMOTION

If you have an inMOTION cell in your ISIS network, you can monitor the current flowing to each output. Follow the instructions in the “Taking Inventory of your ISIS System” section and get the identification number for the inMOTION cell. Follow these instructions to display the output current values for inMOTION.

Press **ISIS**

Type in 12

Press **END**

Press the Cell to Monitor box and enter the number for the inMOTION cell from the System Inventory Screen.

Press **END** then press **RUN**.

The screen will display the measured current for all 5 of the output nodes on inMOTION.

To stop this function, press the **END** button.

## Monitoring the ISIS inLINK Transmission

As an advanced function, the inTOUCH MAX touch screen can monitor the transmissions from the inLINK key fob. Follow these instructions to monitor the inLINK transmissions.

Press **ISIS**

Type in 13

Press **END**

When you press a button on the inLINK key fob, the message information will be displayed on the screen.

To stop this function, press the **END** button.

## Monitoring the ISIS Switch Inputs

As an advanced function, the inTOUCH MAX touch screen can monitor the button presses from inputs to the MASTERCELL. Follow these instructions to monitor button presses.

Press **ISIS**

Type in 14

Press **END**

When you turn on a MASTERCELL input, the message information will be displayed on the screen.

To stop this function, press the **END** button.

## Warranty Information

### Warranty for ISIS<sup>TM</sup> Intelligent Multiplex System<sup>TM</sup>

Infinitybox, LLC (“Infinitybox”) warrants against any defects in materials and workmanship to the Product’s ISIS<sup>TM</sup> modules, wiring harnesses and accessory modules for a period of one (1) year from the first date of purchase. Subject to the terms of this warranty described below, Infinitybox will replace any such defective Product that is returned to Infinitybox within the one (1) year period from initial purchase. Replacement of any defective part or Product will not extend the applicable warranty period.

The warranty does not apply to: (i) any Product that is not installed in compliance with the applicable Product documentation; (ii) any defect in, or failure of, the Product resulting from an accident, shock, negligence, water immersion or misuse; (iii) any Product that has been modified, adjusted, repaired, or disassembled by any party other than Infinitybox; or (iv) any defect other than in materials and workmanship.

This warranty covers only the original purchaser of Product purchased from an Infinitybox authorized dealer in the United States. In order to receive warranty service, purchaser must provide Infinitybox with a copy of the receipt stating the dealer name, product purchased and date of purchase. Products found to be defective during the warranty period will be replaced (with a product deemed to be equivalent or better) at the discretion of Infinitybox.

Infinitybox’s sole liability for any defective Product is limited solely to the replacement of Product pursuant to this warranty. Infinitybox reserves the right to replace any repairable parts with new or refurbished parts.

INFINITYBOX DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, SUCH AS WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. IN NO EVENT SHALL INFINITYBOX BE LIABLE FOR ANY PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LIABILITY FOR LOSS OF USE, LOSS OF PROFITS, LOSS OF PRODUCT OR BUSINESS INTERRUPTION HOWEVER THE SAME MAY BE CAUSED, INCLUDING NEGLIGENCE.



## Contact Information

The ISIS™ Intelligent Multiplex System is a product of  
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