



Installation and Operation Manual



DSC-32/64 ***Dual Satellite Receiver Controller***

Firmware Version, 1.20 and above

Manual Revised 02/10/04

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Wegener "Unity 4000" is a TM of Wegener Communications.

"ABC" is a TM of ABC Radio Network.

"Premiere" is a TM of Premiere Radio Networks.

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INTRODUCTION

Thank you for your purchase of a Broadcast Tools® DSC-32/64, Dual Satellite Receiver Controller (referred to as the DSC-32/64 throughout this manual). We're confident that this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the Broadcast Tools® DSC-32/64, Dual Satellite Receiver Controller.

SAFETY INFORMATION

Only qualified personnel should install Broadcast Tools® products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product or you need assistance, please contact your distributor from whom you purchased this equipment.

If you would like more information about Broadcast Tools® products, you may reach us at:

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**THANK YOU FOR CHOOSING
BROADCAST TOOLS® BRAND PRODUCTS!**



CAUTION!

Broadcast Tools® Products, as with any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.



NOTE:

This manual should be read thoroughly before installation and operation.

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PRODUCT DESCRIPTION

The **DSC-32/64** allows the remote control of any combination of **TWO** StarGuide II and/or III, Wegener Unity 4000 or COM Stream receivers. A front panel encoder control with a 16 x 2 backlit LCD display provides local control and program descriptions, while external control may be in the form of serial, 32 contact closures. Sixty-four, 32 character ASCII string locations are provided for each receiver via serial control. The **DSC-32/64** has been **completely programmed** with the most current service strings. The **DSC-32/64** may be **field programmed** with a NON-DEDICATED computer to switch audio ports, swap audio channels, services, providers, carriers, data rates, etc, on the StarGuide II and/or III satellite receivers. **These features may be available with other makes and models of receivers.**

Features:

- Sixty-four, 32 character ASCII string locations in PC mode per receiver
- Thirty-two, 32 character ASCII string locations in the PC and contact closure mode per receiver
- Control and programming of services, providers, audio ports, audio channel swapping, frequency and data rate selection for the StarGuide II and/or III receivers
- Power and status LED's
- Non-volatile program memory
 - Two - 9600 baud RS-232 receiver serial ports
- Multi-drop RS-232 serial port for control and programming

Applications:

Contact closure and serial control of StarGuide II and III or other Satellite receivers, Contact closure to serial conversion, Contact closure control of EAS systems and/or any equipment allowing control via a RS-232 port.



NOTE:

StarGuide II / III Receiver~ The DSC-32/64 will only control receivers, which have been authorized for the program service(s). Please refer to your receiver manual for instructions on verifying the services authorized. If you have questions about your network service(s), please contact your network provider(s).

! TIP

More than two receivers may be controlled by the DSC-32/64. By purchasing the SDD-8, Serial data (router) director, up to 32 additional receivers may be controlled from one receiver port of the DSC-32/64.

HARDWARE FUNCTION DESCRIPTION

Front Panel:

The DSC-32/64 is a 1-rack unit device (19" w x 1.75" h x 4.5" d). The front panel supports three selection switches, 3 LED indicators, encoder control, LCD contrast control and a backlit 16 x 2 LCD display.

Rear Panel:

The rear panel of the DSC-32/64 contains three 9 - pin D-sub serial connectors, one modular serial connector, pluggable screw terminal, 15 and 25 - pin D-sub remote control connectors, 2.1mm coaxial power jack and an 8-position programming DIP switch.

Switches:

The front panel of the DSC-32/64 is equipped with two pushbutton switches that are used to manually select any one of the two receiver serial ports. The third switch stores the desired program.

LED Indicators:

The front panel of the DSC-32/64 supports one green LED for power. The red "Time Sync" LED which receives time base time from receiver port 1, flashes for 500 ms when the StarGuide II and/or III time matches the programmed time. The time sync relay follows this indicator. The yellow "DATA" LED indicates when data is sent or received on any serial port.

LCD, Encoder and Contrast Control:

The front panel of the DSC-32/64 contains a 16 x 2 backlit LCD display. The top level of the display represents the program description for Receiver port one, while the bottom displays program descriptions for receiver port two. Each level of the display allows for 13 characters of user programmable descriptions. The encoder control allows for program selection. The contrast control is used to adjust the contrast of the LCD display.

INSTALLATION GUIDELINES

Inspection:

Please examine your DSC-32/64 for any damage that may have been sustained during shipping. If any is noted, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package should contain the DSC-32/64, 9vac @ 500ma wall power transformer, Installation manual, 1 – Female, 25 pin D-sub connector and shell, 1 – Female, 15 pin D-sub connector and shell and 3 – Straight-through male-female serial cables.

Mounting:

Mount the DSC-32/64 where it will be visible, ventilated, close to the receiver(s) and the rear panel should be accessible.

Compiling the Needed Information To Program The DSC-32/64:

1. Have your receiver installed and authorized. Be sure you can manually select the program(s) from the receiver's front panel keyboard and have an audio monitor attached to the correct audio port to verify each program.
2. Request the provider number(s) for the program(s) you will be receiving.
3. Request the service number(s) for the program(s) you will be receiving.
4. Determine what audio port(s) you plan to use.
5. Record this information for later use.

HyperTerminal Setup On Your PC:

TOOL TIP: *This procedure may be used with other makes and models of receiver. This step is required to confirm that the communication program and receiver(s) are configured properly.*

NOTE: *The following instructions are for use with Windows 95/98/ME/NT/XP/2000 HyperTerminal.*

You can start HyperTerminal by clicking **Start**, pointing to **Programs**, pointing to **Accessories**, pointing to **Communications**, clicking **HyperTerminal**, and then double-clicking on the icon labeled **Hypertrm** or **Hypertrm.exe**.

- A new window will open labeled “**CONNECTION DESCRIPTION**”.
- In this window, type a name that describes the connection (We suggest **BTI96**), click the appropriate icon, if desired this is not required, and then click OK.
- A new window will open labeled “**CONNECT TO**”.
- At the “**CONNECT TO**” screen:
 1. Move your cursor to the “**CONNECT USING**” box
 2. Press the down arrow on the right of the box to select the available com port (“Direct to com x”), where “x”, (usually a number from 1 through 4) is an operating com port.
 3. Then click the **OK** button.

! TIP

Take advantage of your program provider(s) and the receiver manual. They are both great resources!

- The **PORT SETTING** window will appear.
- At the **PORT SETTING** window,
 1. Change the **baud rate** to **9600**,
 2. **Flow control** to **NONE**
 3. Then click **OK** button.
- You will have a new window open labeled with the Connection Description you typed in earlier (in our example, BTI96).
- At this window
 1. Click on the word **FILE** at the upper left portion of the menu bar and click on **Properties**.
 - i) Click the **Settings** tab, and then change the
 - (1) **EMULATION** to **ANSI**,
 - (2) Then click the **OK** button.
 2. Click on **FILE**, click **Save**.
 3. Click on **FILE**, click **Exit**.
- Click **Yes**, when asked to disconnect. This will place you back at the HyperTerminal screen
- At the HyperTerminal screen, find the Icon and/or file you named and double click on it.

Testing the Starguide II and/or III Receiver with Your Computer's Serial (Com) Port:

- Step 1. Set your receiver's M & C serial port for 9600,8,N,1 via the receiver's front panel keyboard.
- Step 2. Connect the Male - Female, DB-9 straight-through serial cable between the M & C port on the receiver and your computer's serial (com) port.
- Step 3. On your computer keyboard, type the following command: VER then press the ENTER key.
- Step 4. If the two are communicating, the details of the current receiver's software and other information will be displayed.
- Step 5. If your test was successful, remove the Male - Female, DB-9 straight through serial cable from the computer and receiver; proceed to the section labeled "**Connecting the DSC-32/64 to your computer's serial port**". If your test failed, follow the troubleshooting steps A through F that follow.

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Troubleshooting:

- A. Build a loop-back “TESTER” by purchasing a “FEMALE” 9-pin D-sub solder cup connector (Radio Shack, CompUSA, Local Electronic Store, etc).
- B. Solder a jumper between pins 2 & 3.
- C. Try typing on the keyboard with nothing connected to the computer’s com port. You shouldn’t see any characters. If you do, either the port is being used by another device and/or program or the “ECHO typed characters locally” is checked (ON) in the ASCII settings in HyperTerminal. Turn this OFF (Uncheck) and retest Step C.
- D. Plug the “TESTER” into the com port under test
- E. Try typing on the keyboard; if you’re using the correct com port, each character typed will be displayed.
- F. If this test fails, try changing com ports on the communication program until you find the correct port. When a working com port is found, repeat the above test starting at step 1.



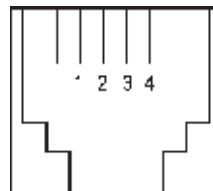
NOTE:

If you find that a failure is traced to the receiver and ALL receiver troubleshooting has failed, you may consider contacting the receiver manufacturer.

Connecting The DSC-32/64 To Your Computer’s Serial (Com) Port:

The pin-out of the adapter and connectors are shown below.

RJ-11 Adapter Pin	S-9 or S Female Adapter “Computer”	DSC-32/64 (Point of view)
4	3, Yellow	RS-232 Receive
3	2, Green	RS-232 Transmit
2	5, Red	Ground



Modular Jack Pin Numbers

DB-9 Female “Computer”

- Pin – 2, Transmit
- Pin – 3, Receive
- Pin – 5, Ground

DB-9 Male “Port 1 & 2”

- Pin – 2, Receive
- Pin – 3, Transmit
- Pin – 5, Ground

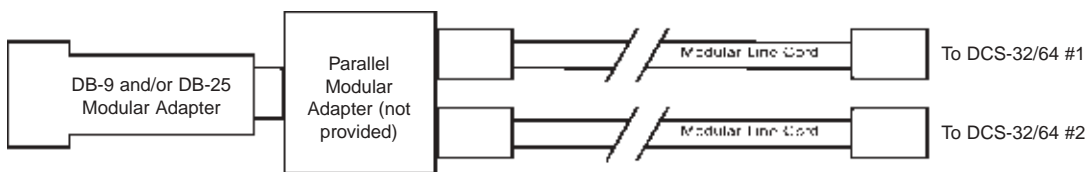
Connect one end of the cable to J8 “Computer” jack on the DSC-32/64 and the other end to the tested PC’s com port.

! TIP

With some communication programs, any change made to the program settings requires you to save the changes, exit the program and restart the program.

Connecting Two or More DSC-32/64's to a Single Computer's Serial Port:

Multiple DSC-32/64's may be cascaded to operate from the same serial port. The first step is to assign ID's (Page 15) to each DSC-32/64. One suggestion is to assign ID 1 to the first unit and ID 2 to the second unit. The second step is to parallel the serial ports of the DSC-32/64. This is accomplished by purchasing a duplex adapter from Radio Shack (Part # 279-357, 1 to 2 jack or duplex adapter). Plug the male end of the duplex modular adapter into the supplied (S 9) female DB-9 D-Sub to RJ-11 modular adapter. The final step is to attach the supplied modular line cords into each of the duplex modular adapter receptacles and the other ends into each of the DSC-32/64 modular receptacles. See the diagram below.



HyperTerminal should still be active.

Type * then the ID (0 – 7) number, followed by M (M=Menu).

Example: *0M

The display should look like the menu below.

Broadcast Tools, Inc DSC-32/64 V1.20 Dual Satellite Controller

Sync Relay Is Enabled for 00:00. Time Acquisition from Recvr is Enabled.

- 1 - Clear Receiver 1 Data and Labels
- 2 - Modify Variable Strings for Recvr Port 1
- 3 - Modify Label Strings for Recvr Port 1
- 4 - Clear Receiver 2 Data and Labels
- 5 - Modify Variable Strings for Recvr Port 2
- 6 - Modify Label Strings for Recvr Port 2
- 7 - Disable Time Sync Relay
- 8 - Set Relay Sync Time
- 9 - Disable Time Acquisition from Recvr 1
- A - Display/Set Time
- B - Set Time Sync Correction (now 00:00)
- D - Load Default Satellite Settings

Enter command Q to quit:

NOTE:

Three or more DSC-32/64's may be daisy chained by using the above description and a Radio Shack 279-410, 1 to 5-jack modular adapter.

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INSTALLATION

PROGRAMMING

The **DSC-32/64** has been **completely programmed** with the most current service strings. The **DSC-32/64** may be **field programmed** with a non-dedicated computer to switch audio ports, swap audio channels, services, providers, carriers, data rates, etc, on the StarGuide II and/or III satellite receivers. The DSC-32/64 may be used to control other receivers.

- **Selection 1** on the main menu clears all Receiver 1 Data and Labels
- **Selection 4** on the main menu clears all Receiver 2 Data and Labels

The above two selections are useful if you're using the DSC-32/64 with receivers other than the StarGuide II and/or III and need different control strings.

- **Selection 2** is used to modify or program the StarGuide II and/or III variable strings for Receiver 1.
- **Selection 5** is used to modify or program the StarGuide II and/or III variable strings for Receiver 2.

The screen sample below displays the first 16 string locations. To program location 01, type 01. Follow the prompts for entering character strings. You are limited to 32 characters per location. We have provided a list of the programming strings below. You may change the default strings to suit your requirements.

Memorize Strings for Rcvr Port x

01. "SP C,S,2\13AM C,0\13"
02. "SP C,S,3\13AM C,0\13"
03. "SP C,S,4\13AM C,0\13"
04. "SP C,S,5\13AM C,0\13"
05. "SP C,S,6\13AM C,0\13"
06. "SP C,S,7\13AM C,0\13"
07. "SP C,S,8\13AM C,0\13"
08. "SP C,S,11\13AM C,0\13"
09. "SP C,S,12\13AM C,0\13"
10. "SP C,S,14\13AM C,0\13"
11. "SP C,S,15\13AM C,0\13"
12. "SP C,S,16\13AM C,0\13"
13. "SP C,S,17\13AM C,0\13"
14. "SP C,S,18\13AM C,0\13"
15. "SP C,S,19\13AM C,0\13"
16. "SP C,S,21\13AM C,0\13"

Enter 2 digit String Number, P for next page, or Q:

StarGuide II / III Programming Examples:

The following appears on your screen:

```

01. "SP C,S,2\13AM C,0\13"
   ^  ^^^^  ^  ^^^  ^  _____ Carriage Return (press the
Enter key twice)
| | | | | | | | _____ Audio mode code
| | | | | | | | _____ Output port A through F
| | | | | | | | _____ Space
| | | | | | | | _____ Audio mode command **
| | | | | | | | _____ Carriage Return (press the
Enter key once)
| | | | | _____ Service or provider Code
| | | | _____ (S) Service or (P) Provider
Command **
| | | _____ Output port A through F
| | | _____ Space
| | | _____ Setting Port Command **
| | | _____ Memory Location
    
```

** Refer to the receiver's operation manual for additional commands.

STRING:

"SP A,P,3\13SP A,S,8\13AM A,0\13"

"SP C,S,18\13AM C,0\13"

"SP A,S,5\13"

"SCM 1103700,7680000\13"

NOTE:

Port, provider, service and audio mode command string.

Port, service and audio mode command string.

Port and service command string.

Frequency & Data Rate string.



NOTE:

The carriage return is entered by typing a backslash (\) followed by the enter key. The carriage return will appear as \13 on screen. You are required to press the enter key a second time to complete the command.

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PROGRAMMING

Remote Control Pin-Out and Command String Defaults for Both Receiver Ports:

<u>Loc:</u>	<u>String:</u>	<u>Description:</u>	<u>Remote Control:</u>
01	SP C,S,2\13AM C,0\13	DATS 00/01	J4-1
02	SP C,S,3\13AM C,0\13	DATS 09-0/09-1	J4-2
03	SP C,S,4\13AM C,0\13	DATS 06-1/09-1	J4-3
04	SP C,S,5\13AM C,0\13	DATS 14/15	J4-4
05	SP C,S,6\13AM C,0\13	MARKET/MISC	J4-5
06	SP C,S,7\13AM C,0\13	STEREO 1	J4-6
07	SP C,S,8\13AM C,0\13	CH.41/CH.42	J4-7
08	SP C,S,11\13AM C,0\13	CNN-E/NEWSLINK	J4-8
09	SP C,S,12\13AM C,0\13	CNN-W/NEWSLINK	J4-9
10	SP C,S,14\13AM C,0\13	DATS 07/08	J4-10
11	SP C,S,15\13AM C,0\13	MBS-E/NWSEVNTS	J4-11
12	SP C,S,16\13AM C,0\13	MBS-W/NWSEVNTS	J4-12
13	SP C,S,17\13AM C,0\13	NBC-E/NWSEVNTS	J4-13
14	SP C,S,18\13AM C,0\13	NBC-W/NWSEVNTS	J4-14
15	SP C,S,19\13AM C,0\13	CH.45/CH.46	J4-15
16	SP C,S,21\13AM C,0\13	FOXRN/MISC 2	J4-16
17	SP C,S,22\13AM C,0\13	CH.43/CH.44	J4-17
18	SP C,S,24\13AM C,0\13	CBS-E=36/CH.39	J4-18
19	SP C,S,25\13AM C,0\13	CBS-C=37/CH.39	J4-19
20	SP C,S,26\13AM C,0\13	CBS-W=38/CH.39	J4-20
21	SP C,S,27\13AM C,0\13	CH.40/BLOCKED	J5-1
22	SP C,S,2\13AM C,3\13	DATS 01/00 (Swap)	J5-2
23	SP C,S,3\13AM C,3\13	DATS 09-1/09-0 (Swap)	J5-3
24	SP C,S,4\13AM C,3\13	DATS 09-1/06-1 (Swap)	J5-4
25	SP C,S,5\13AM C,3\13	DATS 15/14 (Swap)	J5-5
26	SP A,S,8\13	Premiere One	J5-6
27	SP A,S,5\13	Premiere Two	J5-7
28	SP A,S,19\13	Premiere Three	J5-8
29	SP A,S,21\13	Premiere Four	J5-9
30	SP A,S,20\13	Premiere Five	J5-10
31	SP A,S,16\13	Premiere Six	J5-11
32	Open		J5-12

J4 Pin 21, Receiver port select: High = Receiver port 1 / Low = Receiver port 2

J4 Pins 22,23,24 Digital ground.

J4 Pin 25, Chassis ground.

J5 Pins 13,14,15 Digital ground.

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PROGRAMMING

Remote Control Pin-Out And Command String Defaults For Both Receiver Ports: Continued

Modifying Label Strings:

- Selection 3 is used to modify the labels that are displayed on the top LCD display for Receiver 1.
- Selection 6 is used to modify the labels that are displayed on the bottom LCD display for Receiver 2.

The screen below displays the first 16 locations. To program location 01, type 01. Follow the prompts for entering descriptions. You are limited to 13 characters per location. We have provided a list of descriptions below. You may change the default descriptions suit your requirements.

Memorize Labels for Rcvr Port 1

01. "DAT 00/01"
02. "DAT 09-0/09-1"
03. "DAT 06-1/09-1"
04. "DAT 14/15"
05. "MARKET/MISC"
06. "STEREO 1"
07. "CH.41/CH.42"
08. "CNN-E/NEWSLNK"
09. "CNN-W/NEWSLNK"
10. "DAT 07/08"
11. "MBS-E/NWSEVTS"
12. "MBS-W/NWSEVTS"
13. "NBC-E/NWSEVTS"
14. "NBC-W/NWSEVTS"
15. "CH.45/CH.46"
16. "FOXRN/MISC 2"

Enter 2 digit String Number, P for next page, or Q:

Miscellaneous Menu Commands:

Several features of the DSC-32/64 can be configured using the remaining commands on the menu.

NOTE: Do not use the “Time Sync function” until further notice.

The unit can be configured to pulse a relay once an hour for time synchronization purposes. The time sync relay will close for approximately 500 milliseconds starting at the time you configure:

Menu function 7 enables the time sync relay function (if disabled) or disables it (if enabled).

Menu function 8 controls the minute and second time that the relay will fire. To set the time, enter “8” and then enter the 24 hour time as 4 digits.

EXAMPLE: To sync at 58 minutes and 30 seconds after each hour, enter 5830.

The DSC-32/64 can be configured to set its internal clock from receiver 1. It can also correct the time it receives from that receiver by a fixed amount.

NOTE: If time acquisition is configured, all menu functions will be disabled during the interval while time is being acquired.

Menu function 9 enables time acquisition from receiver 1 if it was disabled, or disables it if it was enabled.

Menu function B configures the time correction factor to be applied to the time received from receiver 1. Select menu function B to enter the correction value.

NOTE: The following section details the precise steps needed to compute the value to be entered. It must be followed exactly!

If you have changed the memory location settings (strings or labels), you can restore them to the factory defaults:

Menu function D requests that all memory location settings (strings and labels) be restored to factory default values:

Enter function D. You will be prompted to enter **YES**. Enter it in **CAPITAL LETTERS** (no carriage return required). If you decide not to restore to factory defaults, enter just a carriage return.

CAUTION! Entering “YES” to option D will erase all custom variable strings and label settings and replace them with the factory defaults.

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Computer Burst Mode Commands:

Serial commands sent to the DSC-32 other than by the menu are referred to as “burst mode commands.” All burst mode commands start with an asterisk (“*”), followed by the ASCII unit number (as set in the DIP switches) and end with a carriage-return <cr> (PC Keyboard ENTER key - ASCII hex 0D). Error trapping is provided. The response is <EEE>. The following notational conventions are used here:

- u - Unit ID (“0” – “7”)
- n - Receiver Number (“1” or “2”)
 - xx - Memory (channel) number
- mm - Minutes (“00” – “59”)
- ss - Seconds (“00” – “59”)
- ccc... - Zero or more ASCII characters (special characters should be preceded by back-slash (\))

All examples are for unit zero except where noted.

<u>COMMANDS</u>	<u>EXAMPLES</u>	<u>MEANING</u>
*uCnxx<cr>	*0C203<cr>	Forces data in location (03) out receiver port 2 (2).
*uCPnccc...<cr>	*0CP1SP A,S,5<cr><cr>	Passes through the serial string from the computer port to receiver port 1.
*uCR<cr>	*0CR<cr>	Request for time. Response format: TIME mmSS<cr><lf>
*uCSmmss<cr>	*0CS1140<cr>	Set Time (11:40) Note: This example sets the time on unit 0.
*uD<cr>	*0D<cr>	Dump configuration for file capture. Capture this on your terminal program. It can be uploaded to any DSC-32/64 to restore your current settings.
*uSCnxxccc...<cr>	*0SC101SP A,S,8<cr><cr>	Store in location 01 for receiver port 1 the serial string ”SP A,S,8\13” Maximum string length, 32 characters.
*uSDnxxccc...<cr>	*0SD212RUSH<cr>	Store in display description location 12, receiver port 2 “RUSH”. Maximum length, 13 characters.
*uM	*0M	Brings up the menu for interactive configuration.
*uU<cr>	*0U<cr>	Reply with product type and firmware version, followed by a carriage return and line feed. Example: DSC-32/64 V1.13

FRONT PANEL OPERATION

Receiver selection switches and Encoder control:

Press the push button (RECEIVER 1 or 2) of the receiver you require to change. The cursor on the LCD display will begin to flash. Twist the encoder knob for either the location number or until you see the desired program. Press the “STORE” button to store your selection. The LCD display will now display your selected program. We suggest that you monitor the audio output of the receiver to verify that the program did indeed change.

NOTE 1: We have changed the front panel “PORT” designators to “RECEIVER”.

NOTE 2: If either receiver button is pressed and no selection is made within 30 seconds, the display reverts back to the last selected program.

NOTE 3: To display the time and firmware version number on the LCD. Press the “STORE” button once or twice to view the required information. Be sure that no receiver has been selected.

Configuration “DIP” switches

The rear panel of the **DSC-32/64** contains an 8 – position “DIP” switch. The grid below will help in configuring the **DSC-32/64**.

NOTE: * *and BOLD denotes default.*

<u>Unit ID</u>	<u>SW1-1</u>	<u>SW1-2</u>	<u>SW1-3</u>
ID-0 *	OFF	OFF	OFF
ID-1	ON	OFF	OFF
ID-2	OFF	ON	OFF
ID-3	ON	ON	OFF
ID-4	OFF	OFF	ON
ID-5	ON	OFF	ON
ID-6	OFF	ON	ON
ID-7	ON	ON	ON

<u>Baud Rate</u>	<u>SW1-4</u>	<u>SW1-5</u>	<u>SW1-6 to 8</u>
2400	ON	OFF	Future Use
9600 *	OFF	OFF	
19200	ON	ON	
38400	OFF	ON	

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PROGRAMMING

FRONT PANEL OPERATION

LED Indicators:

The front panel of the DSC-32/64 supports one green LED for power. The red “Time Sync” LED which receives its time base from receiver port 1, flashes for 500 ms when the StarGuide II and/or III time matches the programmed time. The time sync relay follows this indicator. The yellow “DATA” LED indicates when data is sent or received on any serial port. The indicator will flash slowly when **INVALID** or **NO** time data is received.

Contrast Control:

Use a small “green” screwdriver to adjust this control for optimum LCD viewing.

LCD Backlighting:

To increase the LCD backlighting, follow the next steps. Remove power. Remove the top cover of the DSC-32/64. Locate JP8 (near the LCD display). Insert the supplied jumper and reinstall the top cover. Apply power.

CONNECTING THE DSC-32/64 TO YOUR EQUIPMENT

Receiver Port 1:

Connect one end of the supplied serial cable into the jack on the DSC-32/64 labeled **J2 “PORT 1”** and the other end into the “M&C” connector on the rear of the StarGuide II and/or III receiver.

Receiver Port 2:

Connect one end of the supplied serial cable into the jack on the DSC-32/64 labeled **J3 “PORT 2”** and the other end into the “M&C” connector on the rear of the StarGuide II/III receiver.

Refer to your StarGuide II and/or III users manual for the proper setting of the M & C port to 9600,8,N,1.

! TIP

More than two receivers may be controlled by the DSC-32/64. By purchasing the SDD-8, Serial data (router) director, up to 32 additional receivers may be control from one receiver port of the DSC-32/64.

CONNECTING THE DSC-32/64 TO YOUR EQUIPMENT

Remote Control:

These functions are available via the two connectors labeled J4 & J5 “CONTROL 1 - 20 & CONTROL 21 - 32”. The pin-out is available on page 12. The DSC-32/64 is supplied with mating connectors and shells.

NOTE: To select memory locations for receiver port 2, you are required to bring Pin 21 LOW on J4.

NOTE: The Time Sync Relay is a feature that is not used at this time.

ABC Network String Examples:

SP A,P,1\enterSP A,S,19\enterAM A,0\enterenter (String for ABC NY, WOR 1/WOR 2, with normal audio)

SP A,P,2\enterSP A,S,18\enterAM A,0\enterenter (String for ABC News, ESPN East, with normal audio)

SP A,P,1\enterSP A,S,19\enterAM A,3\enterenter (String for ABC NY, WOR 2/WOR 1, with reversed audio)

Use the “AM” Command to control audio flow. Examples are given below:

- AM C, 0\enter enter Leaves Audio on Port C normal
- AM C, 1\enter enter Puts the Program on the “LEFT” Channel to Both output channels of Port C
- AM C, 2\enter enter Puts the Program on the “RIGHT” Channel to Both output channels of Port C
- AM C, 3\enter enter Swaps the Left and Right Channels on Port C

Please check with your NETWORK to verify that they support the “AM” (Audio Mode) command. Note: We offer three handy solutions for wiring up the audio and relays on the StarGuide II & III receivers: 1.) COP; 2.) COA-15, and 3.) COA-37. Please check our website for more information at www.broadcasttools.com.

! TIP

Visit our website at www.broadcasttools.com for the latest information on StarGuide Receiver network codes.

SPECIFICATIONS

Logic / MEMORY:	Microprocessor, Non-Volatile memory.
J-4, "Control 1-20" Input Connector:	25 pin Male D-sub, mating connector/shell supplied. Inputs, CMOS, TTL compatible, 5 volt logic, active low. NOTE: Conforms to the DSC-20 wiring.
J-5, "Control 21-32" Input Connector:	15 pin Male D-sub, mating connector/shell supplied. CMOS/TTL compatible, 5-volt logic, active low.
J-7, Power Connector:	2.1mm, coaxial 9 volt AC, 500 ma. w/ Green LED. Wall transformer supplied.
J-1, "Computer" Connector:	RJ-11, (6P4C). Cable NOT supplied.
J-8, "Computer" Connector:	DB-9, Female. Cable supplied.
J-2, "Port-1:"	DB-9, Male. Cable supplied.
J-3, "Port-2:"	DB-9, Male. Cable supplied.
Data Rate, "Computer" Port:	9600- 8N1, RS-232c. ANSI, no flow control.
Date Rate, "Recvr 1 & 2" Ports:	9600-8N1, RS-232c. No flow control.
Time Sync Relay:	1–SPDT & 1–SPST. 50vdc/500ma. Screw terminals.
Size:	19" X 1.75" X 4.50" (WHD)
Weight:	3.0 lb.

WEBSITE:

Visit our web site for product updates and additional information



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Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time it is shipped by Broadcast Tools if the item is properly installed, used and maintained.

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If Broadcast Tools is notified, in writing, of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer’s acquisition of the item, and if the item is returned to Broadcast Tools in accordance with Broadcast Tools’ instructions for confirmation by inspection of the defect (which at Broadcast Tools’ election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify, Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

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