

# *Owner's Manual*

***TCS mkII***



*Preamplifier / Theater Correction System*



**Blank Page**

## WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.




The lightning with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of "Dangerous Voltage" within the product's enclosure that maybe of sufficient magnitude to constitute a risk of electrical shock to a person.

## Important Safety Instructions

1. Read these instructions entirely before installing or operating this equipment.
2. Keep these instructions.
3. Heed all warnings.
4. Do not use this equipment near water or allow it to become wet.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat; doing so may damage the unit and present a fire hazard.
7. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. If the provided plug does not fit into your outlet, consult an electrician for replacement of the outlet to one that is polarized. To protect against electrical shock, match the wide blade of the polarized plug to the wide slot in the outlet and fully insert the plug.
8. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit the equipment. Do not use this unit with a damaged cord or plug.
9. Only use attachments/accessories specified by the manufacturer.
10. Unplug this equipment during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel.

1. Always unplug the unit from the electrical outlet before cleaning.
2. Do not use abrasive cleaners. Simply wipe the exterior with a clean soft cloth. A small amount of nonabrasive cleaner may be used on the cloth to remove excessive dirt or fingerprints.

## Cleaning and Maintenance

The >note<  symbol indicates information very useful or essential to daily operation.

## “Note” symbol



---

# Acknowledgments

TCS is manufactured under license from Dolby Laboratories Licensing Corporation, confidential unpublished works 1992-1997. "Dolby", the double-D symbol, and "Pro Logic" are trademarks of Dolby Laboratory.

TCS is manufactured under license from Digital Theater Systems. "DTS" and DTS symbol are trademarks of Digital Theater System.

© 2003 Tact Audio Corporation. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying or other wise, without the prior written consent of the Tact Audio Corporation.

**The information contained in this document is subject to change without notice.**

## Registration

**IMPORTANT!**



Please record your serial number here for future reference. You will need this for future upgrades or should you ever require service on your TCS mkII Multichannel Preamplifier.

**TCS mkII serial number:** \_\_\_\_\_

---

# Table of contents

<b>Safety instructions</b>	<b>4</b>
<b>Acknowledgments/Registration</b>	<b>5</b>
<b>Unpacking the TCS mkII</b>	<b>7</b>
<b>Introduction</b>	<b>8</b>
<b>TCS mkII Connections</b>	<b>10</b>
<b>Remote Control</b>	<b>12</b>
<b>Getting Started</b>	<b>14</b>
<b>Front Panel Display</b>	<b>18</b>
Main Menu	20
Saving Menu Settings	20
SETUP menu	21
LEVEL menu	30
DELAY menu	31
ADLY menu	32
POL menu	33
APOL menu	34
TEST menu	35
LINK menu	36
TRIG menu	37
DISPL menu	38
PLII menu	39
STP menu	40
DRC menu	41
ADC menu	42
AMP menu	43
OUTFS menu	44
LCRO menu	45
LFCRO menu	46
ADDR menu	47
POWER menu	48
LOCK menu	49
OPT menu	50
VER menu	52
<b>TCS mkII Theater Correction Software</b>	<b>53</b>
System Requirements	53
Software Installation	53
Microphone Installation	53
Connect your TCS mkII to your Computer	54
<b>Setup Presets</b>	<b>55</b>
<b>Setup Tutorial</b>	<b>60</b>

# Unpacking the TCS mkII

Carefully remove the TCS mkII and accessory kit from the carton and visually check for shipping damage. Contact both the shipper and Tact Audio immediately if the unit shows any sign of damage from rough handling. All Tact Audio equipment is carefully inspected before leaving our factory.

KEEP THE SHIPPING CARTON AND PACKING MATERIALS for future use or in the unlikely event that the unit needs servicing. If this unit is shipped without the original packing, damage could occur and void the warranty.

## Accessories

You should find the following items in the accessory kit:

- one AC mains cord
- RJ11 data cable
- RJ11-to-RS232 adapter
- 15' RS232 cable
- CD-ROM with RCS software
- Measurement microphone
- remote control
- 2 AAA batteries
- this manual

## Operating voltage

The TCS mkII is designed with an automatic switching power supply. It will operate on **65-265 volts at 50-60hz**. No external settings are required.

The TCS mkII has three operating modes:

- **OFF** AC mains power is cut off, either via the front panel mains switch, or by unplugging the unit from the wall outlet.
- **STANDBY** The unit is powered but all outputs are muted and the display is off. The unit uses very little current and is "idling" or "sleeping". Use the remote control "STANDBY" button to toggle between ON and STANDBY.
- **ON** Everything is powered and ready to go.

# Introduction



Congratulations on your purchase of your TCS mkII. You have now acquired the most advanced Preamplifier and Room Correction System ever developed!

The TCS mkII Theater Correction System is designed to decode Dolby and DTS surround soundtracks while implementing the world renowned Tact Theater Correction for the most remarkable theater experience ever. The TCS mkII offers nine digital and seven analog stereo inputs as well as one microphone input used for theater response measurement. The TCS mkII also provides 10 analog and 10 digital output channels and can decode up to eight channels of digital encoded audio.

The TCS mkII manual will guide you through using the unit's front panel controls and explain how to connect it to your system. In order to enjoy the TCS mkII's full capabilities you will need to install the TCS mkII Theater correction software, perform a room measurement and calculate room correction settings. The correction process itself is detailed in the TCS mkII software online help and it is strongly recommended that you install the software and first review its help file to gain an understanding of the correction process before you operate your TCS mkII.

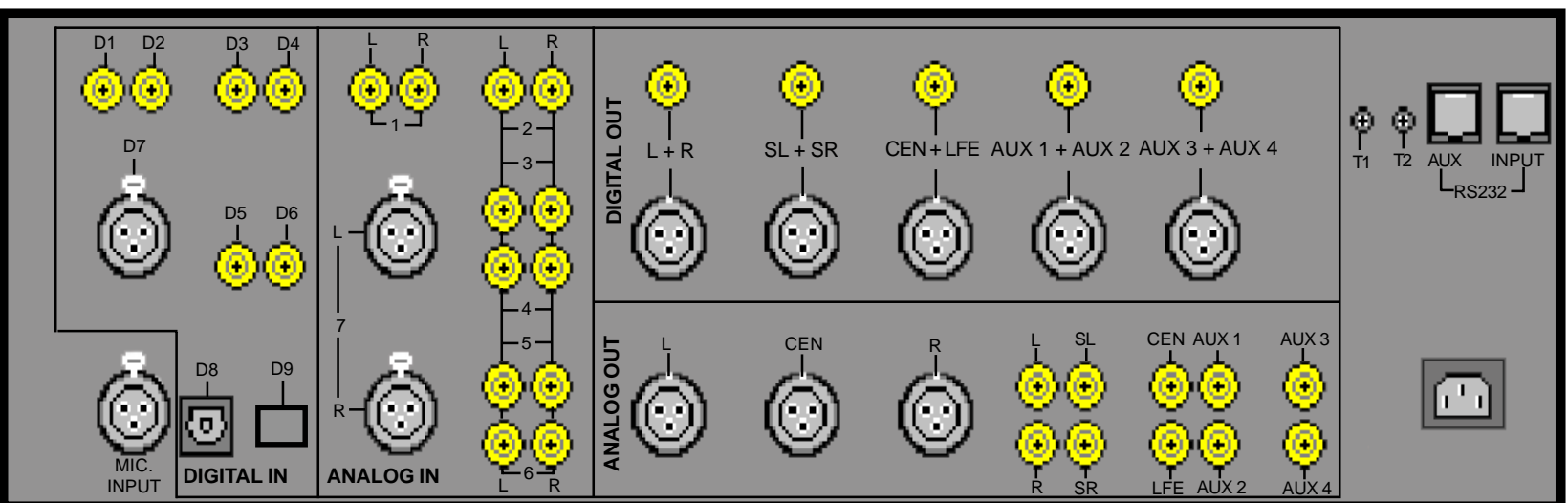
The TCS mkII architecture allows for high flexibility in surround sound loudspeaker configuration. By combining a powerful bass management processor with room correction capabilities the TCS is the ultimate choice for any high-end home theater installation.

To get the most out of your digital theater system, we suggest combining the TCS mkII with Tact digital amplifiers. In this all-digital audio system, the signal stays in the digital realm until it reached the DACs at the amplifier output posts. This maintains the ultimate in signal purity. Please contact us or visit our web site [www.tactaudio.com](http://www.tactaudio.com) for more information.

**TCS mkII highlights:**

- Decoding for Dolby® Digital EX, DTS® ES, Dolby Pro Logic® II, and DTS® neo:6.
- Analog outputs are designed with exceptionally high quality 24 bit digital-to-analog converters. All ten analog outputs are available in RCA-single ended connectors and the Left, Right, and Center outputs are also available in XLR-balanced form.
- Analog inputs are converted to digital signal by high-quality 24 bit analog-to-digital converter. There are 6 RCA-single ended stereo pairs and 1 XLR-balanced stereo pair. These inputs provide for two channel analog source input.
- Proprietary digital input for use with the optional Tact TCS ADC 6. The TCS ADC 6 provides six discrete channel's of analog to digital conversion for integrating your SACD and DVD-Audio components with the TCS mkII.
- All output channels are available in digital format. The TCS mkII provides five digital SPDIF and AES/EBU stereo outputs.
- The Tact Room Correction algorithm can be applied to all surround sound channels. This powerful feature allows you to custom tailor your room response to tame response irregularities caused by the interaction of the room itself. It provides all the necessary tools and software for complete room impulse response measurement and user-defined room correction.
- 10 separate correction presets including bypass. With a single click on the remote control you can switch between bypass and correction for instant A-B comparisons.
- Electronic crossover on the front Left/Right and LFE channels including the subwoofers. You select the cutoff frequency and filter slope, and such is accomplished in the digital domain by TCS software.
- Automatic or manual time alignment with 10 microsecond precision.
- Digital level trimming for each output channel with a resolution of 0.1 dB.
- Master volume control with steps as fine as 0.1 dB.
- Polarity control on all channels.
- Thirty different setup configuration presets with eight predefined and the remaining 22 user programmable.
- Two individually fully programmable 12V/50 mA trigger outputs.
- Tact proprietary Master Volume Control with the unique "TacT WHEEL" displaying the volume level and type of decoding in use.

# TCS mkII Connections



**DIGITAL IN**

There are nine digital inputs.

- **D1 - D6:** SPDIF
- **D7:** AES/EBU
- **D8:** TOSLINK
- **D9:** Proprietary firewire connection for the Tact six channel A/D converter

**DIGITAL OUT**

There are ten digital outputs, five SPDIF and five AES/EBU. Both sets of five outputs mirror the same ten output channels. Different connection formats are provided to accommodate different system connections.

- **L + R:** SPDIF, AES/EBU
- **SL + SR:** SPDIF, AES/EBU
- **CEN + LFE:** SPDIF, AES/EBU
- **AUX 1 + AUX 2:** SPDIF, AES/EBU
- **AUX 3 + AUX 4:** SPDIF, AES/EBU

**ANALOG IN**

There are seven stereo analog inputs.

- **1- 6:** RCA single ended stereo pair
- **7:** XLR balanced stereo pair

**ANALOG OUT**

There are thirteen analog outputs. There are single ended outputs provided for all ten output channels and three balanced connectors are provided for the L, R, and CEN outputs. The balanced outputs mirror the L, R, and CEN single ended outputs and are provided to accommodate different system connections.

- **10 RCA single ended:** L, R, SL, SR, CEN, LFE, AUX1, AUX2, AUX3, AUX4
- **3 XLR balanced:** L, R, CEN

**MIC. INPUT**

TCS mk II comes with a calibrated measurement microphone. During the setup process, the microphone should be connected to the MIC input.

- Pin 1 GND
- Pin 2 SIG
- Pin 3 +9V



**CAUTION:** Before connecting or disconnecting Tact measurement microphone make sure to turn TCS off by using the front panel power switch.

**RS232 I/O**

There are two RS232 connectors.

**INPUT** is used to connect to the PC during the setup process or for a RS232 remote control.

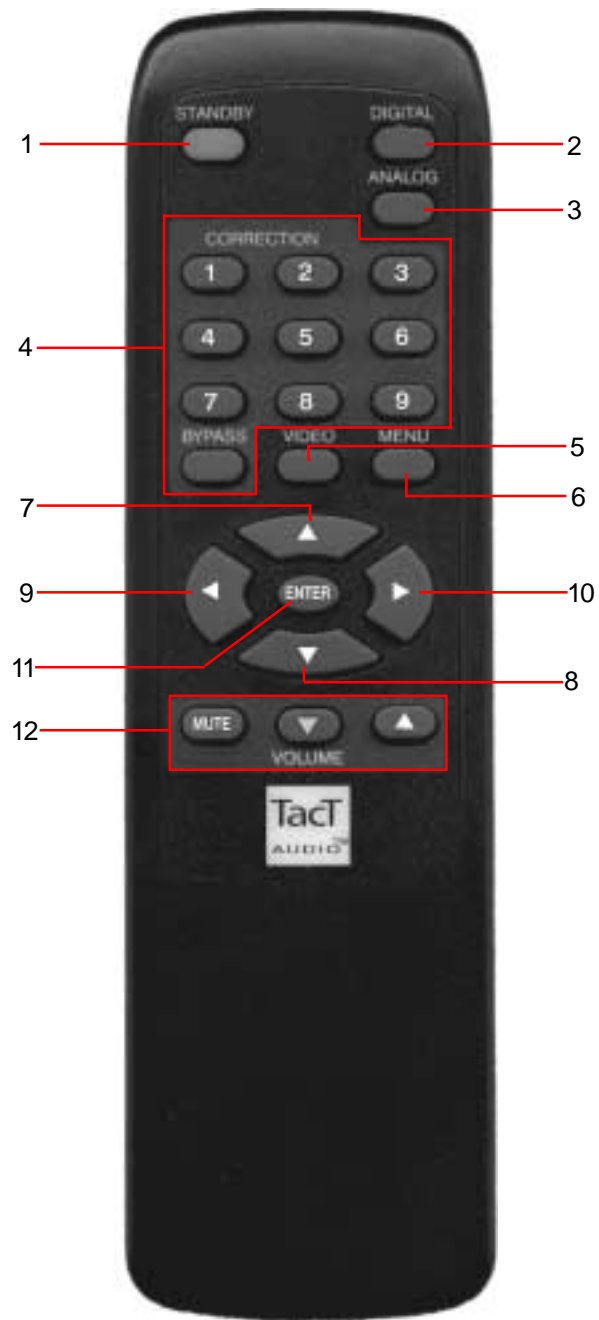
**AUX** is used as the RS232 pass-through to daisy chain a number of Tact products.

**Trigger Outputs**

There are two trigger **T1** and **T2** outputs that provide a +12V/50mA signal for external device triggering.

# Remote Control

The remote control is used to access the front panel display controls and menus.



**1 - STANDBY**

The STANDBY button will turn the TCS mkII ON or it will place it into standby mode. When in standby mode, the unit is placed into a low power “idling” state. The main power line is not disconnected.

**2 - DIGITAL**

The DIGITAL button will scroll sequentially, allowing the selection one of the 9 digital inputs.

**3 - ANALOG**

The ANALOG button will scroll sequentially, allowing the selection one of the 7 analog inputs.

**4 - CORRECTION block**

The CORRECTION block consists of 10 buttons. The buttons are numbered from 1 to 9 and one BYPASS. Pressing the BYPASS button will bypass room correction. Pressing any of the remaining nine buttons will engage the corresponding room correction you have preset.

**5 - MENU**

The MENU button will switch the front panel display from the status screen to the main menu screen. By pressing the MENU button again you will exit the menu that you are currently viewing and eventually will return to the main status screen.

**6. VIDEO**

The VIDEO button is used to enable and disable the remote control. Pressing the VIDEO button will toggle the enable and disable remote control state.

**7. UP**

The UP navigational button is used to select menu options and/or change their values.

**8. DOWN**

The DOWN navigational button is used to select menu options and/or change their values.

**9. LEFT**

The LEFT navigational button is used to select menu options and/or change their values.

**10. RIGHT**

The RIGHT navigational button is used to select menu options and/or change their values.

**11. ENTER**

The ENTER button will select the menu option currently marked by the blinking cursor or is used to enter an edited parameter.

**12. VOLUME Block**

The VOLUME block consists of three buttons.

The “MUTE” button will mute/un-mute all enabled channels.

The “UP” button will increase the master volume level

The “DOWN” button will decrease the master volume level.

# Getting Started

The Getting Started section of the manual is intended to provide basic instruction for using the TCS mkII without performing room correction. It will allow you to quickly setup your system and perform basic listening tests.



***IMPORTANT: All listening performed before completing the room correction process should be done with TCS in room correction BYPASS mode.***

## Step 1:

**Connecting The  
TCS mkII to your  
system**

Step one will guide you through connecting the TCS mkII to your system. The TCS mkII audio connections are divided into four main sections: Digital input, Analog input, Analog output, and Digital output.

### Analog and Digital inputs

The TCS mkII supports nine digital and seven stereo analog inputs. Below is a listing of available inputs. Please connect your digital sources (such as DVD and CD players) to the TCS mkII digital inputs and your analog sources (such as tuners and tape-decks etc.) to the TCS mkII analog inputs.

#### Digital inputs:

- 1-6 : SPDIF
- 7: AES/EBU
- 8: TOSLINK
- 9: Proprietary firewire connection for the Tact TCS ADC 6. (**Sold Separately**)

#### Analog inputs:

- 1-6: RCA single ended stereo pair
- 7: XLR balanced stereo pair

**Connecting The  
TCS mkII to your  
system**

### Analog and Digital outputs

The TCS mk II offers a number of different digital and analog output connections. All analog outputs should be connected to the appropriate analog power amplifiers. If you have digital amplifiers, or if you use an external DAC use the appropriate digital outputs. The channel key below explains the output code and channel assignment for the Tact predefined setup presets.

#### Channel Key:

L - left	LFE - LFE
R - right	AUX1 - surround center left
SL - surround left	AUX2 - surround center right
SR - surround right	AUX3 - right subwoofer
CEN - center	AUX4 - left subwoofer

#### Digital Outputs:

- 5 RCA SPDIF: L/R, SL/SR, CEN/LFE, AUX1/AUX2, AUX3/AUX4
- 5 AES/EBU: L/R, SL/SR, CEN/LFE, AUX1/AUX2, AUX3/AUX4

#### Analog Outputs:

- 10 RCA single ended: L, R, SL, SR, CEN, LFE, AUX1, AUX2, AUX3, AUX4
- 3 XLR balanced: L, R, CEN

## Step 2:

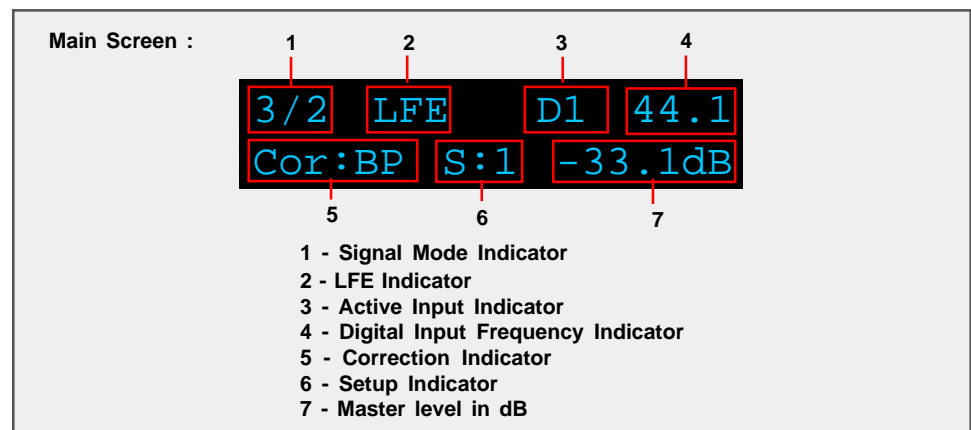
### Power On

Step two will guide you through powering up your TCS mkII and give a brief overview of the Main Status Screen that is displayed when the unit is powered on.

Connect the Power cable supplied with the unit to the TCS mkII and plug it into your power source outlet. Power on the TCS mkII by turning on the master power switch on the back of the unit and then press the main power button found on the front of the unit. The status screen should now be displayed. An example of this screen is shown below.

### Main Status Screen

The main screen displays the current operating status for the TCS mkII and is displayed when the TCS is powered on. Below is a brief description of the Main Status Screen indicators. A detailed explanation of the Main Status Screen can be found in the Main Status Screen section of this manual.



#### 1- Signal Mode Indicator

The TCS mkII will auto-detect the digital signal being sent to the selected input and display the type of digital signal found in the signal mode indicator display.

#### 2 - LFE Indicator

The LFE indicator indicates whether or not a low frequency channel signal is present in the digital signal that is being decoded.

#### 3 - Active Input Indicator

The active input indicator displays the active input selected.

#### 4 - Digital Input Frequency Indicator

This displays the sampling frequency of the selected digital input. The TCS mkII will automatically detect input signal presence and display its' sampling frequency.

#### 5 - Active Correction Indicator

The active correction indicator displays the active correction preset.

#### 6 - Active Setup Indicator

The active setup indicator displays the active setup preset. The TCS mkII has thirty setup presets. The **SETUP** preset defines the unit's output channels, signal routing, and bass management configuration. This feature allows for extremely powerful control over the configuration of the unit. The Setup selection and creation will be explained in full detail later in this manual.

#### 7 - Master level in dB

This displays the master volume level in dB.

## Step 3:

Step three illustrates selecting a SETUP preset. The TCS mkII SETUP preset defines the unit's output channels, signal routing, and bass management configuration. There are a total of thirty preset configurations available. A detailed description of the Setup presets and how to edit them can be found later in this manual.

For the Getting Started section we suggest selecting either the "1. Dolby 1" or "5. Tact 1" setup preset. An explanation of these setups can be found below. Please select the preset that best matches your system's setup.


**1. Dolby 1:** Is designed for 10 output channels or less with small speakers in all positions and an LFE subwoofer. Choose this setting if you have 10 or less small speakers and want all low frequencies below 100 Hz from all channels to be reproduced by the LFE channel only. This setup applies bass management filtering to redirect the low frequencies and high frequencies to the proper output channels.

**5. Tact 1:** Is designed for 10 output channels or less with large speakers in all positions and an LFE subwoofer. Choose this setting if you have 10 or less larger speakers. This setup applies no bass management filtering and will send full range signals to all outputs.

### Open the Setup Menu

Main menu :

Setup menu option

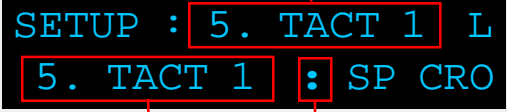


Press the "MENU" remote control button. This will change the TCS mkII display to the Main menu screen. Then use the "LEFT" and "RIGHT" navigational buttons to move the selection cursor to select the "SETUP" option. To enter the menu selection press the "ENTER" button. This will open the SETUP menu.

### Select A Setup Preset

Setup menu :

Active Preset

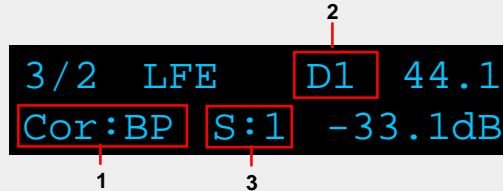


This example illustrates selecting the "5. TACT 1" preset. To select a preset move the selection cursor with the "LEFT" and "RIGHT" remote control buttons to select the ":" preset selector. Use the "UP" and "DOWN" remote control buttons to select "5. TACT 1". The presets will scroll in the Preset section of the setup menu in sequential order. To activate the "5. TACT 1" preset press the "ENTER" button. The preset should now be displayed in the active preset portion of the screen. Press the "MENU" remote control button two times to return to the Main Status Screen.

## Step 4:

Step four illustrates the basic operation of the TCS mkII by briefly explaining how to select an input source, set the correction to “BP” bypass mode, and adjust the master volume. Please remember to set your unit to bypass “BP” correction mode.

Main Screen :



### Set your TCS mkII to correction BYPASS mode (1)

The TCS mk II can be set to bypass mode at any time by pressing the “BYPASS” key found in the CORRECTION block on the remote control. When BYPASS is enabled “BP” will be displayed on the TCS mkII front panel display.

### Selecting an ANALOG or DIGITAL input (2)

To select an input for playback use the “ANALOG” and “DIGITAL” buttons found on the remote control. Select the source that you have connected.

- Press the “DIGITAL” button to scroll sequentially to select one of 9 digital inputs.
- Press the “ANALOG” button to scroll sequentially to select one of 7 analog inputs.

### Setup Preset (3)

The Setup preset should be set to “S:1” or “S:5”. If the setup preset is not set to one of these presets please review **STEP 3**.

### Adjusting the master volume level

To adjust master level use the “UP” and “DOWN” volume buttons found on the remote control or by simply turning the Tact wheel on the TCS mkII front panel. The output can be muted at any time by pressing remote control “MUTE” button.

## Step 5:

You are now ready to play some audio and enjoy your TCS mkII. You now are familiar with the basic functionality of the TCS mkII.

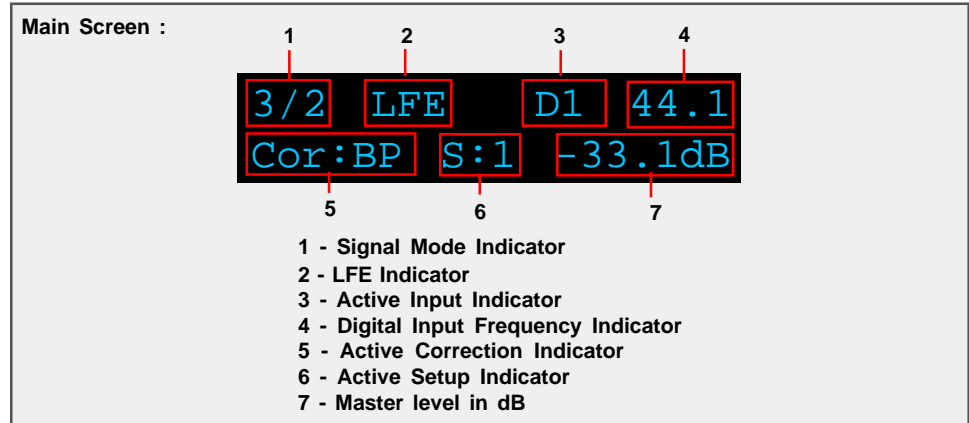
### Discovering More

The TCS mkII is an extremely versatile system that can be used in many different hardware configurations. The getting started section is designed to let you start to get enjoyment from your TCS mkII immediately. This brief section only begins to explore the many features that the TCS mkII is capable of. We suggest that, over time, you become familiar with all of the TCS mkII features discussed in this manual and install the Theatre Correction Software. The Theater Correction software will allow you to take a room measurement and calculate room correction curves for your TCS mkII. The sound of the TCS will become even more accurate after employing the latest version of the world renowned Tact Room Correction. The TCS mkII combines both state of the art hardware and software to bring you the ultimate in multichannel audio reproduction.

# Front Panel Display

The main status screen is displayed when the TCS mkII is powered on. The main screen displays the current operating status for the TCS mkII.

## Main Status Screen



### 1 - Signal Mode Indicator

The TCS mkII will auto detect the digital signal being sent to the selected input and display the type of digital signal in the signal mode indicator display. An explanation of the status labels are listed below. **STEREO** will be displayed when an analog input is selected unless stereo processing “**STP**” has been enabled (Dolby Pro Logic II or DTS Neo:6)

**DTS** - Multichannel dts signal

**STEREO** - Two channel stereo signal

**PLII** - Dolby Pro Logic II processing enabled

**Neo:6** - DTS Neo:6 processing enabled

**6 CH. SACD/DVD-A** - Digital input D9 selected for the Tact TCS ADC 6 (**Sold Separately**)

**Dolby Digital** - signals are represented in the display where the first number represents the number of front channels and the second number represents the number of rear channels present in the decoded signal. This will change according to the source content that you are currently playing. For example “**3/2**” would represent 3 front channels left, center, and right and 2 rear channels left rear, and right rear.

### 2 - LFE Indicator

The LFE indicator indicates whether or not a low frequency channel is present in the signal that is being decoded. When “**LFE**” is displayed the signal being decoded contains a low frequency channel. If “**LFE**” is not displayed there is not a low frequency channel available in the source content that is being decoded.

### **3 - Active Input Indicator**

The active input indicator displays the active input selected. To change the active input press the “**DIGITAL**” or “**ANALOG**” buttons found on your remote control to select the input source you would like to listen to. The “**DIGITAL**” or “**ANALOG**” buttons on your remote control are toggle buttons, and by pressing them multiple times it will toggle through all seven analog and nine digital inputs.

### **4 - Digital Input Frequency Indicator**

The Digital Input Frequency Indicator displays the sampling frequency of the selected digital input. The TCS mkII will automatically detect digital input signal presence and display its sampling frequency.

### **5 - Active Correction Indicator**

The active correction indicator displays the active correction you have selected. To select one of the nine correction presets, or bypass them, press one of the ten buttons located in the block labeled “**CORRECTION**” on the remote control.

### **6 - Active Setup Indicator**

The active setup indicator displays the active setup preset. The TCS mkII has thirty setup presets. The **SETUP** preset defines the unit’s output channels, signal routing, and bass management configuration. These parameters are set by using the controller found in the “**SETUP**” menu for each output channel. This feature allows for maximum control over the configuration of the unit. The Setup selection and creation will be explained in full detail later in the manual.

### **7 - Master level in dB**

This displays the master volume level in dB.

**Main Menu**

The Main menu of the TCS mkII has four pages of general menu selections. Below is an example of these four pages. From these general menu selections all of the TCS mkII features can be accessed and edited. To exit back to the Main Screen press the “**MENU**” button on the remote control until the Main Menu screen appears.

Main menu :

```
SETUP  LEVEL  DELAY
ADLY   POL    APOL->
```

```
<- TEST  LINK  TRIG
    DISPL PLII  STP->
```

```
<-DRC  ADC   AMP
    OUTFS LRCRO LFCRO->
```

```
<- ADDR  POWER  LOCK
    OPT  VER
```

To enter the Menu selection pages press the “**MENU**” button. Use the “**LEFT**” and “**RIGHT**” navigational buttons to highlight an option with the selection cursor and to proceed to a new page. To enter a highlighted option press the “**ENTER**” button. To exit back to the Main Screen press the “**MENU**” button on the remote control until the Main Menu screen appears.



**Saving Menu Settings**

Custom settings that are made to any of the menu selections are saved by placing the TCS mkII into standby mode. If you make changes to any of the menu items and turn the unit off (by using the main power switch on the front of the unit or disconnecting the AC power) before placing the unit into standby mode all settings will be lost. To save your settings place the TCS mkII into standby mode by pressing the red “**STANDBY**” button on the remote control.

## Setup Menu

The Setup menu gives you complete control over the TCS mk II. This menu controls the unit's output channels, signal routing, and bass management configuration. It is necessary to select a setup preset to define the configuration of the TCS mkII. This section will guide you through the Setup menu screens illustrating how to select a preset and edit custom preset configurations. A tutorial illustrating the setup editing process step by step appears later in this manual.

### Enter the Setup Menu

Main menu :

```

SETUP  LEVEL  DELAY
ADLY   POL    APOL->
  
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "SETUP" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Setup main menu screen.

### The Setup Menu

The Setup Menu displays the active setup preset, allows for preset selection, and gives access to the Speaker setup and Crossover menus for all ten output channels. Below is an example of the main Setup Menu display.

Setup menu :

```

SETUP : 5. TACT 1 L
5. TACT 1 : SP CRO
  
```

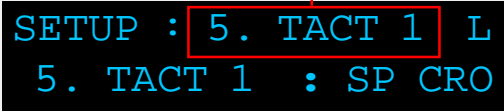
Setup Menu display.

**Setup Indicator**

The Setup indicator displays the preset configuration that is currently loaded in the TCS mkII. One Setup preset is always active as it defines the configuration of the TCS mkII. This is not a selectable option.

Setup menu :

Setup Indicator



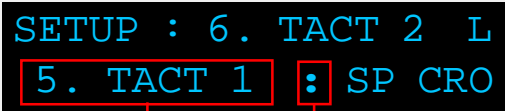
The screenshot shows a black display with cyan text. The top line reads 'SETUP : 5. TACT 1 L'. The second line reads '5. TACT 1 : SP CRO'. A red box highlights '5. TACT 1' in the top line, and a red line points from the label 'Setup Indicator' above to this box.

In this example preset "5. TACT 1" is the active Setup preset.

**Preset Selector**

The TCS mkII offers thirty setup presets to provide thirty different configuration selections. There are eight predefined and twenty-two user programmable presets to choose from. There is always a setup preset active to define the output configuration of the TCS mkII. You will need to create custom definitions for presets nine through thirty before they can be used as a custom user configurations.

Setup menu :



The screenshot shows a black display with cyan text. The top line reads 'SETUP : 6. TACT 2 L'. The second line reads '5. TACT 1 : SP CRO'. Red boxes highlight '5. TACT 1' and the colon ':' in the second line. Red lines point from labels 'Preset' and 'Selector' below to these boxes.

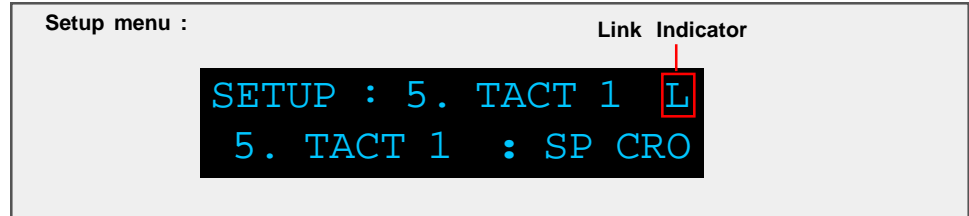
Preset                  Selector

In this example preset "5. TACT 1" has been selected by scrolling with the preset selector. To make your selection active press the "ENTER" button. Once active, the selected preset will appear in the Setup Indicator section

**Select A Setup Preset**

This example illustrates selecting the "5. TACT 1" preset. To select a preset move the selection cursor with the "LEFT" and "RIGHT" remote control buttons to select the ":" preset selector. Use the "UP" and "DOWN" remote control buttons to select "5. TACT 1". The presets will scroll in the **Preset** section of the setup menu in sequential order. To activate the "5. TACT 1" preset press the "ENTER" button. After you have made your selection the Main Status screen should display "S:5" in the Setup Indicator section.

## Preset Link



The TCS mkII allows for any one of the thirty Setup configuration presets to be linked to a Correction preset. This allows for both a Setup configuration and Correction preset to be activated with a press of a correction preset button. To link a Setup preset to a Correction preset you must enter the **LINK** menu from the main menu section. This is explained later in the Link section of the manual.

Speaker Setup  
(SP) Menu

The Speaker Setup menu gives complete control over the unit's output channels, signal routing, and bass management configuration. In order to fully configure the TCS mkII from the front panel you will only have to understand two concepts, **OUTPUT Channels** and **AUDIO Channels**. After understanding the difference between these two concepts you will be able to configure your TCS to match almost any surround system configuration.

**OUTPUT Channels:**

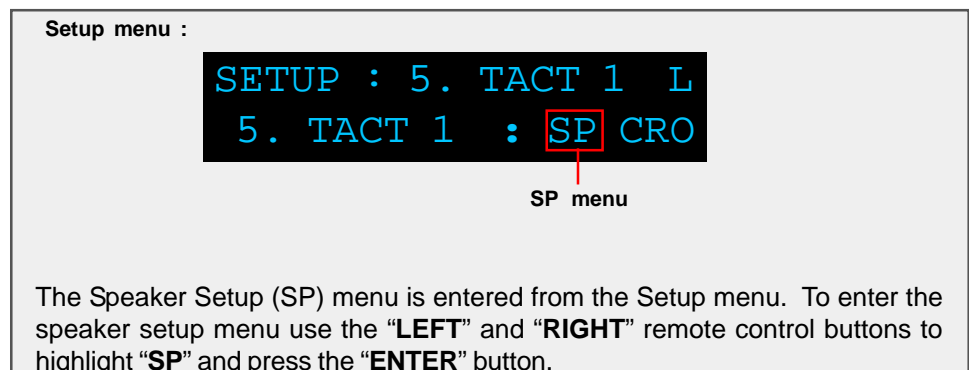
The TCS has ten output channels. These are the physical output connectors found on the back of the unit. You will find that there are different types of connections available for these outputs but that there are only a total of ten available output channels.

- **10 output channels: L, R, SL, SR, CEN, LFE, AUX 1, AUX 2, AUX 3, AUX 4**

**AUDIO Channels:**

The TCS can playback up to eight decoded audio channels. These are the audio channels found in your playback source content. This content could be as simple as a stereo signal from a CD or as complex as a DVD that contains a DTS ES soundtrack that contains eight discrete channels.

- **8 audio channels: L, R, SL, SR, CEN, LFE, SCL, SCR**

Enter The Speaker  
Setup(SP) Menu

The Speaker Setup (SP) menu is entered from the Setup menu. To enter the speaker setup menu use the "**LEFT**" and "**RIGHT**" remote control buttons to highlight "**SP**" and press the "**ENTER**" button.

## Front Panel Display

### Output Channels ON/OFF

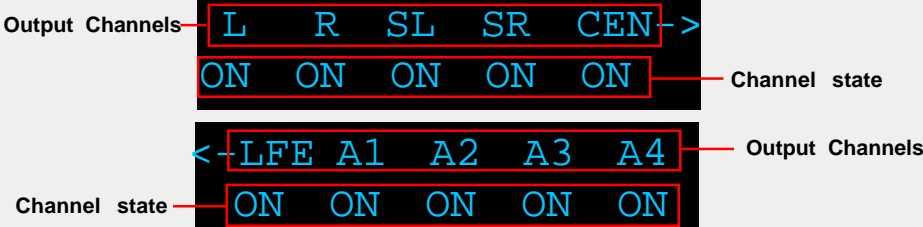
The Speaker menu allows you to turn each of the ten output channels of the TCS mkII on or off. When a channel is set to “OFF” there will be no output heard from the corresponding output jack on the back of the TCS mkII even if the source material contains a signal for this channel.

To select an output channel use the “LEFT” and “RIGHT” remote control buttons to move the selection cursor to the channel that you want to turn on or off. There are two front panel display pages that display all ten output channels. Then use the “UP” and “DOWN” remote control buttons to toggle between the “ON” and “OFF” selections in the channel state section.

### Output Channel Settings

Below are examples of common settings for different output configurations.

SP menu :

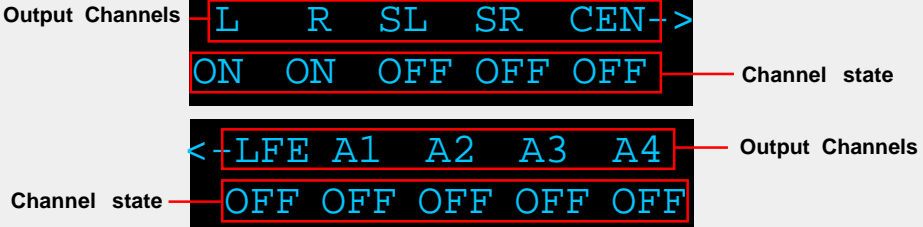


Output Channels: L R SL SR CEN ->  
ON ON ON ON ON Channel state

<- LFE A1 A2 A3 A4 Output Channels  
Channel state: ON ON ON ON ON

**10 channel output:**  
This example displays the settings for ten output channels. The L, R, SL, SR, CEN, LFE, A1, A2, A3, A4 channels are set to ON for a total of ten output channels.

SP menu :

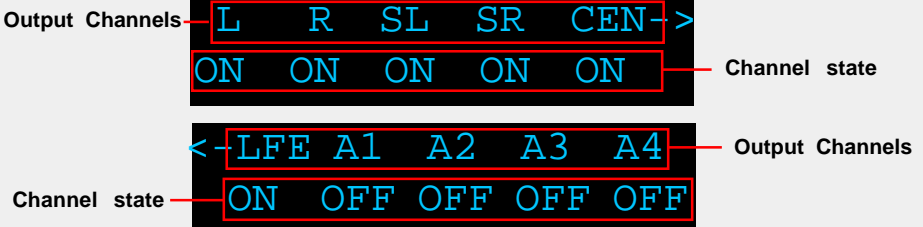


Output Channels: L R SL SR CEN ->  
ON ON OFF OFF OFF Channel state

<- LFE A1 A2 A3 A4 Output Channels  
Channel state: OFF OFF OFF OFF OFF

**2 channel output (stereo):**  
This example displays the settings for two output channels. The L and R channels are set to ON and the SL, SR, CEN, LFE, A, A2, A3, A4 channels are set to OFF for a total of two output channels.

SP menu :



Output Channels: L R SL SR CEN ->  
ON ON ON ON ON Channel state

<- LFE A1 A2 A3 A4 Output Channels  
Channel state: ON OFF OFF OFF OFF

**6 channel output (5.1):**  
This example displays the settings for six output channels. The L, R, SL, SR, CEN, LFE channels are set to ON and the A1, A2, A3, A4 channels are set to OFF for a total of six output channels.

**Audio Channel Mixer**

The TCS mk II decodes up to eight audio channels (LEFT, RIGHT, SL, SR, CEN, LFE, SCL, SCR). Audio channels are the playback content from your source material. Each audio channel can be controlled with the TCS mkII audio channel mixer. The Audio Channel mixer is used to set the audio channel level, output channel, and bass management settings.

Each Output channel can contain all or part of each audio channel that is decoded by the TCS. For example you may have small speakers and may want to send all of the low frequency audio from all channels to the LFE output to your subwoofer and send your other speakers only the high frequency signals. The Audio Channel mixer allows for this level of control for each of the ten TCS mk II outputs.

**Enter The Audio Channel Mixer**

SP menu :

Output Channels

L R SL SR CEN ->  
ON ON ON ON ON

<- LFE A1 A2 A3 A4 -> Output Channels  
ON ON ON ON ON

To select an Output channel use the “LEFT” and “RIGHT” remote control buttons to move the selection cursor to the output channel you would like to edit. Press the “ENTER” button to open the **Audio Channel Mixer** menu screen for the selected output.

**The Audio Channel Mixer**

After selecting the output channel the Audio Channel mixer for the selected output will open.

LFE Audio Channel Mixer :

TCS mk II Output      Audio Channel

LFE : LEFT      CRO

0.0 dB      OFF ->

Audio Channel Level      Audio Channel Crossover

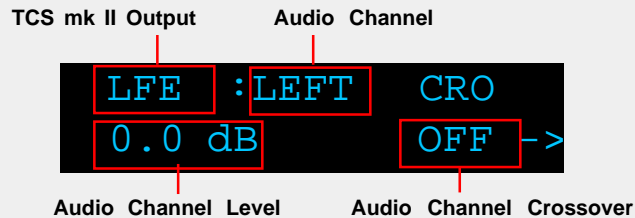
In this example the LFE output LEFT audio channel mixer is displayed. This mixer screen would be used to send the LEFT audio channel signal to the LFE output channel. From this screen you can turn the LEFT audio channel off or on, set the level in dB, and apply a highpass or lowpass crossover for sending it to the LFE output.

**Audio Channel Mixer**

There are eight audio channel mixers for each of the ten TCS mkII outputs. Each of the eight audio channels can be assigned and combined to output from any of the 10 output channels of the TCS mkII. Use the "LEFT" and "RIGHT" remote control buttons to scroll through each of the eight audio channels available for the selected TCS mkII output channel. The eight audio channel mixers are displayed over eight front panel display pages.

Below is an example of the eight audio channel mixer screens available for the LFE output channel. This set of eight audio channel mixers is available for each of the ten TCS mkII outputs. Below is a key defining each output abbreviation.

LFE Audio Channel Mixer :



LFE :LEFT CRO  
0.0 dB OFF ->

<-LFE :CEN CRO  
0.0 dB OFF ->

<-LFE :RIGHT CRO  
0.0 dB OFF ->

<-LFE :LFE CRO  
0.0 dB OFF ->

<-LFE :SL CRO  
0.0 dB OFF ->

<-LFE :SCL CRO  
0.0 dB OFF ->

<-LFE :SR CRO  
0.0 dB OFF ->

<-LFE :SCR CRO  
0.0 dB OFF

**Audio channel key:**

- LEFT - left audio channel
- RIGHT - right audio channel
- SL - surround left audio channel
- SR - surround right audio channel

- CEN - center audio channel
- LFE - LFE audio channel
- A1 - surround center left audio ch.
- A2 - surround center right audio ch.

**Audio Channel Mixer Level**

**Set An Audio Channel Level**

**Audio Channel Level:**

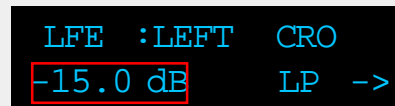
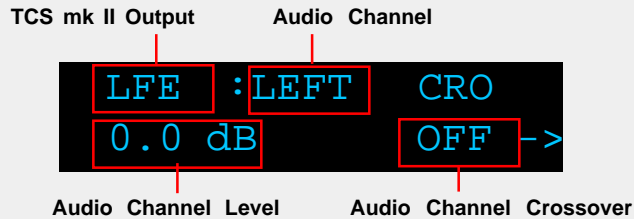
Each audio channel has a level that is set in dB. This defines the volume of the selected audio channel that you want to appear at the selected Output of the TCS mkII.

**For example:** You may want to send all of the eight audio channels to the LFE output channel of the TCS mkII. This would allow for all low frequencies to be handled from the LFE output for the subwoofer instead of using the seven main speakers. The example below illustrates setting the level for each of the LFE audio channels.

**Level setting LFE TCS output:**

Below is an example of the eight audio channel mixer screens available for the LFE output channel. The levels for the Left, Right, Center, Surround L, Surround R, Surround Center L, and Surround Center R audio channels are set to -15dB. This will send output from each audio channel at -15dB to the LFE output subwoofer. The LFE audio channel is set to -5dB. The decrease in dB is suggested so as not to overdrive the LFE channel after summing all audio channels.

LFE Audio Channel Mixer :



To select an audio channel use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the audio channel you would like to edit. The audio channel level indicator displays the level for the audio channel displayed by the Audio Channel indicator. This parameter allows you to turn the audio channel off or define its volume level in dB. This sets the level that the audio channel will appear at the selected TCS mk II output. Press the "ENTER" button to toggle the audio channel on or off selection. The display will show "OFF" for no output and "x.xx dB" when on. To change the volume level use the "UP" and "Down" remote control buttons to scroll through the settings in .01 dB steps.

Front Panel Display

Audio Channel Mixer Crossover



Set An Audio Channel Crossover

A highpass or lowpass crossover is available for each audio channel. This parameter allows for a highpass or lowpass crossover to be set for the selected audio channel at the selected Output of the TCS mkII.

**For example:** You may want to send all of the eight audio channels to the LFE output channel of the TCS mkII. This would allow for all low frequencies to be handled from the LFE output for the subwoofer instead of using the seven main speakers. The example below illustrates the crossover “CRO” settings for each of the LFE audio channels.

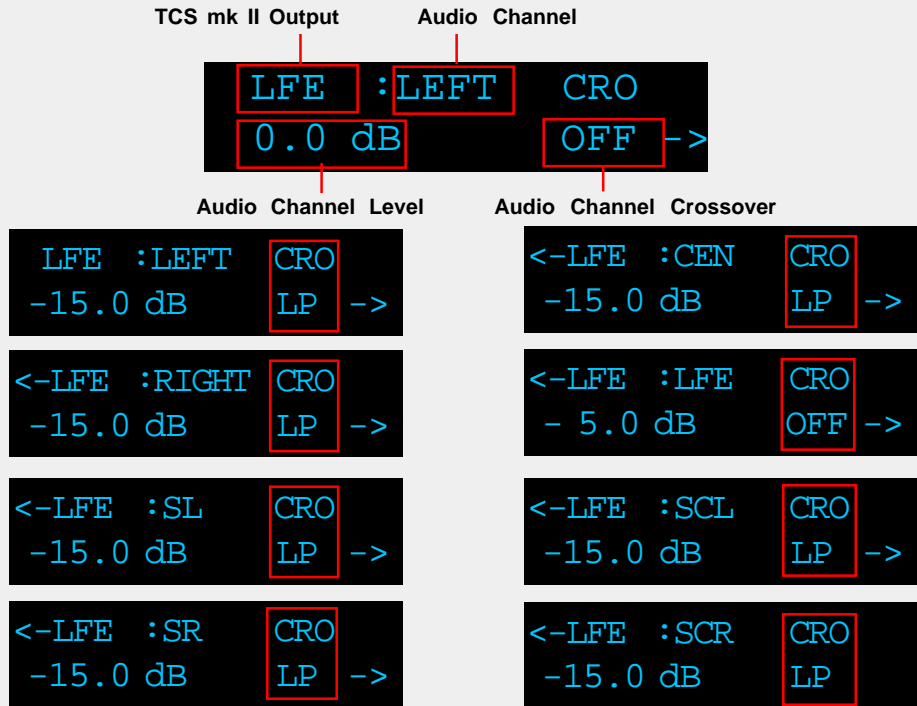
**NOTE: Bass management (LP and HP crossovers) applied from the Setup menu should only be used when the unit is in theater correction BYPASS mode “CRO:BP”.**

**NOTE: When using ROOM CORRECTION use the audio channel mixer to route the audio channel signals to the desired output channels and set their levels only. The theater correction software will then be used to set crossover points with a much greater frequency range for the LFE, AUX3, and AUX4 output channels and allow for correction curves with bass roll off for all other channels. This provides for more powerful bass management from the Tact Theater correction processor.**

**Crossover setting LFE TCS output:**

Below are the eight audio channel mixer screens available for the LFE output channel. The crossovers for the Left, Right, Center, Surround L, Surround R, Surround Center L, and Surround Center R channels are set to LP(lowpass filter) to have the low frequencies from these audio channels to be sent to the LFE output subwoofer. The LFE audio channel is set to OFF so that no filtering is applied to this channel.

LFE Audio Channel Mixer :



To assign a crossover setting use the “UP” and “Down” remote control buttons to scroll through the OFF, LP or HP options.

**CRO Menu**

The CRO menu sets the crossover point (frequency) for the highpass and lowpass filters that are applied in the Audio Channel Mixer menu. The crossover point can be set from 50Hz to 150Hz in 5Hz steps. Crossover points can be set independently for each of the eight audio channels.



**NOTE: Bass management (LP and HP crossovers) applied from the Setup menu should only be used when the unit is in theater correction BYPASS mode “CRO:BP”.**

**NOTE: When using ROOM CORRECTION use the audio channel mixer to route the audio channel signals to the desired output channels and set their levels only. The theater correction software will then be used to set crossover points with a much greater frequency range for the LFE, AUX3, and AUX4 output channels and allow for correction curves with bass roll off for all other channels. This provides for more powerful bass management from the Tact Theater correction processor.**

**Enter The CRO Menu**

Setup menu :

```

SETUP : 5. TACT 1 L
5. TACT 1 : SP CRO
    
```

CRO Menu

The Crossover (CRO) menu is entered from the Setup menu. To enter the crossover menu use the “LEFT” and “RIGHT” remote control buttons to highlight “CRO” and press the “ENTER” button.

**Set A Crossover Frequency**

CRO menu :

Output Channels

```

L R SL SR ->
80 80 80 80 Hz
    
```

Crossover Frequency

Output Channels

```

CEN LFE A1 A2
<-80 80 80 80 Hz
    
```

Crossover Frequency

To select an Output Channel use the “LEFT” and “RIGHT” remote control buttons to select the channel then use the “UP” and “Down” buttons to scroll through the frequency values in 5Hz steps.

## Level Menu



The level menu controls the system output channel balancing. You can adjust the systems output balance by changing the attenuation for any of the ten output channels. An independent set of audio channel level settings can be set for each of the ten room correction presets. If you find that there is no need to balance the system level, these screens should be set to all zeroes (maximum signal level is at 0.0 dB).

**NOTE: These settings are automatically adjusted in theater correction mode. We strongly recommend that you only adjust these settings for correction bypass mode - this will allow you to match the settings with correction mode for A/B comparison.**

Enter The  
LEVEL Menu

Main menu :

```
SETUP  LEVEL  DELAY
ADLY   POL    APOL->
```

Press the menu button on the remote control to open the main menu screen. Select the "LEVEL" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Level display screen.

Set The  
Channel Level

LEVEL menu :

```
Output Channels      Active Correction Preset
LEFT  RIGHT  CR:1
0.0   0.0   dB ->
Output Level
```

```
LEFT  RIGHT  CR:1
0.0   0.0   dB ->
```

```
<-SURL  SURR  CR:1
0.0     0.0  dB ->
```

```
<- CEN   LFE  CR:1
0.0     0.0  dB ->
```

```
<- AUX1  AUX2 CR:1
0.0     0.0  dB ->
```

```
AUX3   AUX4  CR:1
<- 0.0   0.0  dB
```

To select an output channel to edit use the "LEFT" and "RIGHT" remote control buttons to select the output channel then use the "UP" and "Down" buttons to scroll through the settings in .1 dB steps. To select a different correction preset press one of the ten correction preset buttons to activate the correction preset for editing.

## Delay Menu

The Delay menu is used to time align the system loudspeakers. Delay times can be adjusted on all ten channels in increments of about 10 microseconds (0.00 TO 42.65 MSEC). An independent set of audio channel delay settings can be set for each of the ten room correction presets.



**NOTE: These settings are automatically adjusted in theater correction mode. We strongly recommend that you only adjust these settings for correction bypass mode - this will allow you to match the settings with correction mode for A/B comparison.**

Enter The  
DELAY Menu

Main menu :

```

SETUP  LEVEL  DELAY
ADLY   POL    APOL->
    
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "DELAY" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Delay display screen.

Set The  
Channel Delay

DELAY menu :

Output Channels		Active Correction Preset
LEFT	RIGHT	CR:1
0.00	0.00	msec->
Output Delay Time		

```

LEFT  RIGHT  CR:1
0.00  0.00  msec->
    
```

```

<-SURL  SURR  CR:1
0.00    0.00 msec->
    
```

```

<- CEN   LFE  CR:1
0.00    0.00 msec->
    
```

```

<-AUX1  AUX2  CR:1
0.00    0.00 msec->
    
```

```

AUX3    AUX4  CR:1
<- 0.00  0.00 msec
    
```

To select an output channel to edit use the "LEFT" and "RIGHT" remote control buttons to select the channel then use the "UP" and "Down" buttons to scroll through the settings in .01 msec steps. To edit a different correction preset press one of the ten correction preset buttons to activate a new preset for editing.

## ADLY menu



Enter The  
ADLY Menu

The Absolute Delay menu provides delay that is applied globally to all ten output channels . An independent delay setting can be set for each of the ten room correction presets.

**NOTE: The purpose of this option is to more closely match the movie dialog to the displayed picture, as some video processors introduce a slight delay in delivering the video because of video processing time requirements.**

Main menu :

```
SETUP  LEVEL  DELAY
ADLY   POL    APOL->
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "ADLY" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Absolute Delay display screen.

Set The  
Absolute  
Delay

ADLY menu :

Active Correction Preset

```
COR1:Absolute Delay
0.00 msec
```

Output Delay Time

To edit the absolute delay use the "UP" and "DOWN" remote control buttons to change the delay setting in increments of .01 ms. To edit a different correction preset press one of the ten correction preset buttons to activate the correction preset for editing.

## POL Menu

The polarity menu allows for individual phase control for all ten output channels . An independent set of polarity settings can be set for each of the ten room correction presets. When “POL+” is selected for a channel, the output signal is in phase with the input signal. When “POL-“ is selected, the output signal is out of phase – shifted 180 degrees with respect to the input signal.

### Enter The POL Menu

Main menu :

```

SETUP  LEVEL  DELAY
ADLY   POL    APOL->
    
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “POL” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Polarity display screen.

### Set The Channel Polarity

POL menu :

Output Channels		Active	Correction Preset
LEFT	RIGHT	CR:1	
POL+	POL+		->
Output Level			

```

LEFT  RIGHT  CR:1
POL+  POL+   ->
    
```

```

<-SURR  SURR  CR:1
POL+    POL+  ->
    
```

```

<-CEN   LFE  CR:1
POL+    POL+  ->
    
```

```

<-AUX1  AUX2  CR:1
POL+    POL+  ->
    
```

```

AUX3    AUX4  CR:1
<-POL+  POL+
    
```

To select an output channel use the “LEFT” and “RIGHT” remote control buttons to select the channel then use the “UP” and “DOWN” buttons to toggle the POL+ and POL- selections. To edit a different correction preset press one of the ten correction preset buttons to activate the correction preset for editing.



## TEST menu

The test menu provides a basic system check by producing a white noise signal to verify signal presence independently on all ten output channels.

### Enter The TEST Menu

Main menu :

```
<- TEST LINK TRIG
DISPL PLII STP->
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “TEST” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Test display screen.

### Playing A Test Tone

TEST menu :

```
Channel Test ->
L R SL SR CEN
```

Output Channels

```
<- Channel Test
LFE A1 A2 A3 A4
```

Output Channels

To test an output channel use the “LEFT” and “RIGHT” remote control buttons to select a channel and then press and hold down the “ENTER” button. This will produce white noise at the output of a selected channel while the “ENTER” button is held.

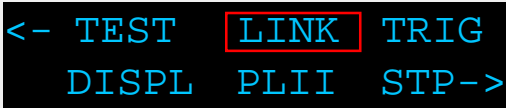
## LINK menu

The TCS mkII allows for any one of the thirty Setup configuration presets to be linked (assigned) to a Correction preset. This allows for both a Setup configuration and Correction preset to be activated with a press of a correction preset button.

**For example:** You can link Setup preset “5” to Room Correction preset “1”. Now when Room Correction “1” is selected it will automatically activate Setup preset “5” no matter what Setup preset was previously set.

### Enter the Link Menu

Main menu :

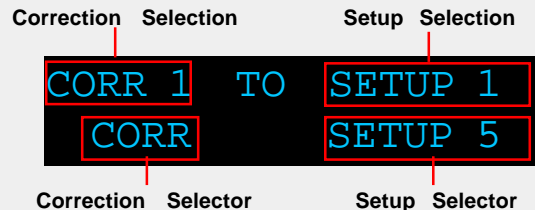


```
<- TEST LINK TRIG
DISPL PLII STP->
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “LINK” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Link display screen.

### Create a Link

Link menu :



```
Correction Selection      Setup Selection
CORR 1 TO SETUP 1
CORR SETUP 5
Correction Selector      Setup Selector
```

#### Link a preset example: Link Correction 1 to Setup 5

This example will illustrate how to link Room Correction preset 1 to Setup preset 5. When finished, whenever Room Correction preset 1 is selected Setup 5 will be activated.

Use the “LEFT” and “RIGHT” remote control buttons to select “CORR” and use the “UP” and “Down” buttons to select “CORR 1”. This is the Room Correction preset selector. The nine available correction presets will scroll in sequential order. The correction preset selected will be displayed in the correction selection.

Now use the “LEFT” and “RIGHT” remote control buttons to select “SETUP” and use the “UP” and “Down” buttons to select “SETUP 5”. This is the Setup preset selector. There are 30 setup presets and “--” (no link) that will scroll in sequential order.

When you have found the “SETUP 5” preset press the “ENTER” button to activate your selection. The active selection will be displayed in the Setup Selection section.

**NOTE:** To have no link for the correction preset select the “--” selection. While selecting a preset it will be displayed in the Setup Selector window.



## TRIG menu

The Trigger menu allows you to assign events on the TCS mkII that will produce a 12 volt signal at each of the two trigger outputs. Event triggers can be assigned to any of the ten correction presets, or "XXX" - always on, and "---" - off.

**For example:** You can set a trigger to activate when you select your favorite room correction preset used for watching movies. This would allow for a projection screen with a trigger input to lower automatically when the correction preset is selected.

### Enter The TRIG Menu

Main menu :

```
<- TEST LINK TRIG
DISPL PLII STP->
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "TRIG" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Trigger display screen.

### Set A Trigger

TRIG menu :

Active Trigger Setting

```
T1: XXX T2: ---
XXX ---
```

Trigger Selector

To assign an event to a trigger use the "LEFT" and "RIGHT" remote control buttons to select trigger output "T1" or "T2" then use the "UP" and "Down" buttons to scroll through the trigger event options. When you have found the event that you want to assign press the "ENTER" button to activate your selection.

## DISPL menu

The Display menu is used to enable or disable the front panel display time-out option. When the display time-out is activated **“ON”**, the display will turn off after approximately 10 seconds of inactivity from the remote or the Tact volume wheel. If the display time-out is set to **“OFF”**, the display will always remain lit.

### Enter The DISPL Menu

Main menu :



```
<- TEST LINK TRIG
DISPL PLII STP->
```

Press the **“MENU”** button on the remote control to open the main menu screen. Select the **“DISPL”** menu option using the **“LEFT”** and **“RIGHT”** navigational buttons and press the **“ENTER”** button to open the Display menu screen.

### Setting A DISPL Timeout

DISPL menu :



Active Timeout Setting

```
Display Timeout: OFF
OFF ON
```

Timeout Selector

To set the display timeout mode use the **“LEFT”** and **“RIGHT”** remote control buttons to select the **“ON”** or **“OFF”** options and press the **“ENTER”** button to activate the selected option.

## PLII menu

The PLII menu is used to select the type of Dolby Pro Logic® II processing you would like apply when Dolby Pro Logic® II processing is enabled from the “STP” menu option. The TCS mkII offers Dolby Pro Logic® II Music, Movie, Matrix, and Music Panorama modes. These modes offer different channel mixing and processing designed to work best with various types of two channel content. Select the mode that best matches your content or yields the best multichannel sound from your two channel source material.



**Note: Pro Logic® II processing is not enabled from this menu. To enable the Pro Logic® II processing you must turn it on from the “STP” menu option.**

### Enter The PLII Menu

Main menu :

```

<- TEST   LINK   TRIG
   DISPL   PLII   STP->
    
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “PLII” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the PLII display screen.

### Setting The PLII Mode

PLII menu :

```

Active PLII Mode
PLII Mode: Music
PL Mu Mv Mtx MuP
    
```

PLII Mode Selections

PL - Pro Logic  
 Mu - Music  
 Mv - Movie  
 Mtx - Matrix  
 MuP - Music Panorama

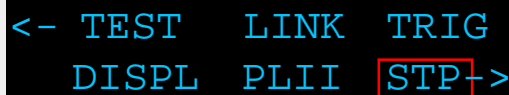
To set the PLII processing mode use the “LEFT” and “RIGHT” remote control buttons to select the mode then press the “ENTER” button to activate your selection. The active PLII mode is displayed in the active PLII mode section of the screen.

## STP menu

The Stereo Processing menu is used to enable DTS® Neo:6 or Dolby® Pro Logic® II processing. DTS® Neo:6 provides up to six channels of matrix decoding from stereo matrix material and expands stereo non-matrix recordings into six channels. Dolby® Pro Logic® II provides up to five channels of matrix decoding from stereo matrix material and expands stereo non-matrix recordings into five channels. Only one processing mode can be enabled at a time. For example if you have selected Dolby Pro Logic® II to “ON” and then select DTS® Neo:6 to “ON” Dolby® Pro Logic® II will be automatically set to “OFF”.

### Enter The STP Menu

Main menu :

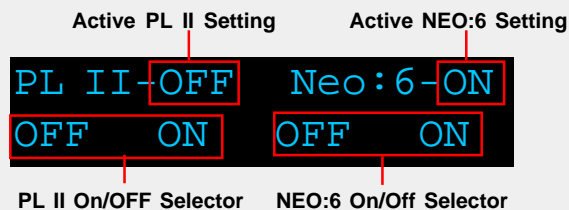


```
<- TEST LINK TRIG
DISPL PLII STP->
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “STP” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Stereo Processing display screen.

### Setting The STP State

STP menu :



	Active PL II Setting		Active NEO:6 Setting
	PL II - OFF		Neo:6 - ON
	OFF ON		OFF ON
	PL II On/OFF Selector		NEO:6 On/Off Selector

To assign Stereo Processing use the “LEFT” and “RIGHT” remote control buttons to select an “ON” or “OFF” option for PL II or Neo:6 then press the “ENTER” button to activate your selection. The active processing selection will show in the main display screen after being selected.

## DRC menu

The DRC menu enables or disables the Dynamic Range Compression available in Dolby Digital source material. Some Dolby Digital DVD and CDs have DRC encoded audio tracks that will respond to the DRC option when enabled. If the DRC menu is set to **HALF** or **FULL** the dynamic levels in the source material will be limited. The **"HALF"** setting will apply 50% of the **"FULL"** compression setting. If set to **"OFF"** the system will playback source material at its full dynamic range.

**For example:** You may want to set the DRC control to **"FULL"** for late night movie viewing. By setting the DRC control to **"FULL"** the volume level of loud content such as explosions will be compressed to the volume level of the softer content such as the dialog.

### Enter The DRC Menu

Main menu :

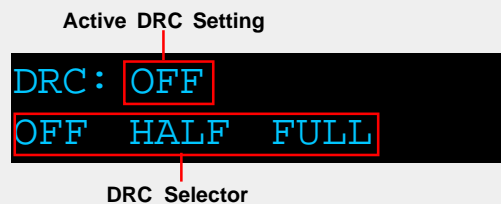


<- **DRC** ADC AMP  
OUTFS LRCRO LFCRO->

Press the **"MENU"** button on the remote control to open the main menu screen. Select the **"DRC"** menu option using the **"LEFT"** and **"RIGHT"** navigational buttons and press the **"ENTER"** button to open the Dynamic Range Compression display screen.

### Set The DRC Mode

DRC menu :



Active DRC Setting  
DRC : **OFF**  
OFF HALF FULL  
DRC Selector

To select a DRC setting use the **"LEFT"** and **"RIGHT"** remote control buttons to select the **"OFF"**, **"HALF"**, or **"FULL"** selection and then press the **"ENTER"** button to activate your selection. The active state is displayed in the active DRC settings section.

## ADC menu

The TCS mkII is equipped with a state of the art Analog to Digital Converter . To further enhance the converter’s performance, the system offers independent “**NORMAL**” (-6dB) or “**HIGH**” (0dB) selectable gain values for the ADC input stage for each of the seven analog inputs.

**NORMAL**: -6dB in reference to 0.0dB. Input sensitivity: 2.2 volt.

**HIGH** : 0dB in reference to 0.0dB. Input sensitivity: 4.4 volt.

### Enter The ADC Menu

Main menu :

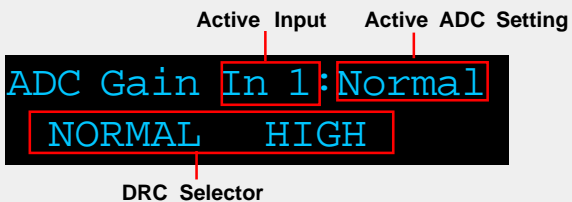


```
<-DRC  ADC  AMP
      OUTFS LRCRO LFCRO->
```

Press the “**MENU**” button on the remote control to open the main menu screen. Select the “**ADC**” menu option using the “**LEFT**” and “**RIGHT**” navigational buttons and press the “**ENTER**” button to open the Analog to Digital Converter display screen.

### Set The ADC Mode

ADC menu :



```
Active Input  Active ADC Setting
ADC Gain In 1: Normal
  NORMAL  HIGH
DRC Selector
```

To select a gain setting use the “**LEFT**” and “**RIGHT**” remote control buttons to select the “**NORMAL**” or “**HIGH**” selection and then press the “**ENTER**” button to activate your selection. To select a different input press the “**ANALOG**” button on the remote control to scroll through the seven analog inputs.

## AMP menu



Enter The AMP Menu

Set The AMP Mode

The AMP menu allows the TCS mkII to be set to interface with the Tact M2150 and S2150 digital amplifiers. With the TCS mkII you can control multiple digital amplifiers. The default amplifier setting for all outputs is “Disabled”.

**NOTE:** The amplifier settings are stored as part of the active “SETUP” preset. Any changes made to the “AMP” settings will be retained for the active “SETUP” preset. This gives a total of 30 different AMP configurations that can be stored. If you create a new setup you will need to set the AMP configuration to match your amplifiers that are connected.

**NOTE:** When a Tact digital amplifier is controlled by the TCS mkII, all of the amplifiers front panel and IR controls are disabled. Use the RS232 port and/or daisy chain to link the components.

**CAUTION:** The AMP setting should only be set to ENABLED if you have Tact amplifiers connected to the TCS mkII. When the AMP option is set to ENABLED both the analog and digital output will send a full level signal regardless of the TCS mkII master volume setting. If you do not have Tact amplifiers connected to your system you will not be able to control the output level from the TCS mkII volume control. The output is sent at its maximum level and can result in damage to your speakers.

Main menu :

```
<-DRC  ADC  AMP
      OUTFS LRCRO LFCRO->
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “AMP” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Amplifier display screen.

AMP menu :

```

Digital Output
L  R  SL  SR  CEN->
En En En En En
Active Amplifier Setting

Digital Output
<-LFE A1  A2  A3  A4
En En En En En
Active Amplifier Setting
```

To change the AMP menu settings use the “LEFT” and “RIGHT” remote control buttons to select the output channel you would like to edit. Then press the “ENTER” button to toggle the “En” and “Dis” settings.

## OUTFS menu

The TCS mkII is equipped with a sample rate converter for each digital output. Each output can independently be set to 44.1, 48, 88, 96 and 192 kHz sampling frequencies.

### Enter The OUTFS Menu

Main menu :

```
<-DRC  ADC  AMP  
OUTFS LRCRO LFCRO->
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "OUTFS" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the OUTFS display screen.

### Set The OUTFS

OUTFS menu :

Digital Output	Active Output	Sample Frequency
Left/Right	:96.0 K	
44	48	88 96 192

Sample Frequency Selection

```
Left/Right :96.0 K  
44 48 88 96 192
```

```
Sur L/R :96.0 K  
44 48 88 96 192
```

```
Cen/LFE :96.0 K  
44 48 88 96 192
```

```
AUX1/AUX2 :96.0 K  
44 48 88 96 192
```

```
AUX3/AUX4 :96.0 K  
44 48 88 96 192
```

To select the a digital output to edit use the "UP" and "DOWN" remote control buttons to scroll through the output selections. To select a sampling frequency use the "LEFT" and "RIGHT" buttons and press the "ENTER" button to activate your selection.

## LRCRO menu



The Left/Right Crossover menu offers five crossover selections for use with the Left and Right output channels while in correction bypass mode. This will set the crossover point for the Left and AUX3(left sub) output channels and the Right and AUX4(right sub) output channels. The Left/Right bypass crossover filters are user programmable from the Crossover screen in the Theatre Correction Software. Crossovers in correction mode are implemented into the correction filter via the Theater Correction Software.

**NOTE: These settings are automatically adjusted in theater correction mode. We strongly recommend that you only adjust these settings for correction bypass mode - this will allow you to match the settings with correction mode for A/B comparison.**

### Enter The LRCRO Menu

Main menu :

Press the “MENU” button on the remote control to open the main menu screen. Select the “LRCRO” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the Left/Right Crossover display screen.

### Set The LRCRO

LRCRO menu :

To select a crossover use the “UP” and “DOWN” remote control buttons. To activate your selection press the “ENTER” button. The active crossover will be displayed in the active crossover section of the screen and an asterisk is displayed after the active crossover in the selection list.

## LFCRO menu



Enter The  
LFCRO Menu

Set The  
LFCRO

The LFE Crossover menu offers five crossover selections for the LFE output channel for use when in correction bypass mode only. The LFE bypass crossover filters are user programmable from the Crossover screen in the Theatre Correction Software. Crossovers in correction mode are implemented into the correction filter via the Theater Correction Software.

**NOTE: These settings are automatically adjusted in theater correction mode. We strongly recommend that you only adjust these settings for correction bypass mode - this will allow you to match the settings with correction mode for A/B comparison.**

Main menu :

```
<-DRC  ADC  AMP
      OUTFS LRCRO LFCRO->
```

Press the “MENU” button on the remote control to open the main menu screen. Select the “LFCRO” menu option using the “LEFT” and “RIGHT” navigational buttons and press the “ENTER” button to open the LFE Crossover display screen.

LFCRO menu :

```
Active Crossover
LRCRO: None
1. None *
Crossover Selector      Active indicator
```


To select a crossover use the “UP” and “DOWN” remote control buttons. To activate your selection press the “ENTER” button. The active crossover will be displayed in the active crossover section of the screen and an asterisk is displayed after the active crossover in the selection list.

## ADDR menu

The Address menu allows for setting the TCS system's exclusive address. A unique system address is needed to communicate with external devices such as your computer running the TCS software.

### Enter The ADDR Menu

Main menu :



```

<- ADDR POWER LOCK
  OPT VER
  
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "ADDR" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Address display screen.

### Set The TCS ADDR

ADDR menu :



```

Active Address
RS232 Address: 1
Address: 1
Address Selector
  
```

To change the system device address value use the "UP" and "DOWN" navigational buttons to select the desired system address and then press the "ENTER" button to select it. The active address will be displayed in the active address section of the screen. The TCS mkII is shipped with the default address set at 1.



**NOTE:** If you change the device address make sure that you select the appropriate device address in the TCS mkII Theater Correction software.

## POWER menu

The Power menu allows the user to decide what power state the TCS mkII will be in after pressing the front power button. The TCS mkII can be set to power up fully or to start in standby mode.

### Enter The POWER Menu

Main menu :

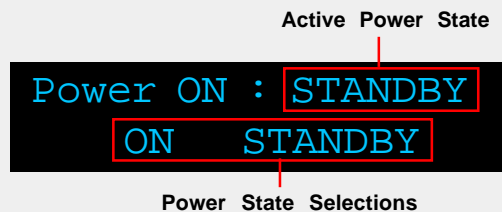


```
<- ADDR  POWER  LOCK
      OPT  VER
```

Press the **"MENU"** button on the remote control to open the main menu screen. Select the **"POWER"** menu option using the **"LEFT"** and **"RIGHT"** navigational buttons and press the **"ENTER"** button to open the Power display screen.

### Set The Power State

POWER menu :



```
Active Power State
Power ON : STANDBY
ON  STANDBY
Power State Selections
```


To change the power on state use the **"LEFT"** and **"RIGHT"** navigational buttons to select the desired setting **"ON"** or **"STANDBY"** and then press the **"ENTER"** button to select it. The active power state will be displayed in the active power state section of the screen.

## LOCK menu

The Lock menu allows a lock to be set to prevent entering any of the TCS mk II editing menus without unlocking them with the lock code. By default the TCS mk II is unlocked and all menus can be accessed without entering the lock code. When the unit is locked, the only menu option that can be entered is the **"LOCK"** menu to unlock the unit. Once the lock code is entered you will be able to use the TCS mk II menus until the the lock code is entered again.

### Enter The LOCK Menu

Main menu :

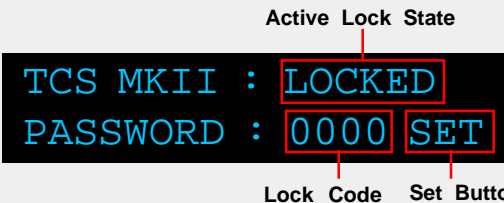


<- ADDR POWER **LOCK**  
OPT VER

Press the **"MENU"** button on the remote control to open the main menu screen. Select the **"LOCK"** menu option using the **"LEFT"** and **"RIGHT"** navigational buttons and press the **"ENTER"** button to open the Lock display screen.

### Set The LOCK Code

LOCK menu :



Active Lock State  
TCS MKII : **LOCKED**  
PASSWORD : **0000** **SET**  
Lock Code Set Button

To lock or unlock the TCS mk II enter the lock code **"1-2-3-4"** by using the **"LEFT"** and **"RIGHT"** remote control buttons to highlight each digit and use the **"UP"** and **"DOWN"** buttons to select the desired number from 0 to 9 . Once the code is entered select the **"SET"** option and press the **"ENTER"** button to unlock or lock the TCS mkII menus. The active lock state will be displayed in the active lock state portion of the screen.

## OPT menu



The Option menu allows for setting the TCS mk II volume wheel sensitivity, maximum volume level, and increased output gain.

### Max Level:

The **“Max Level”** option controls the systems maximum signal level. For example, if this option is set to -3.0 dB, the volume control can not go above -3.0 dB.

### Wheel:

The **“Wheel”** option sets the “TacT Wheel” volume control sensitivity. The wheel sensitivity can be set to between **“1”** and **“10”** or to **“OFF”** to disable the Wheel for volume control. The lower the setting the slower the volume increases and the higher the setting the faster the volume increases with each turn of the Wheel.

### Gain:

The **“Gain”** option allows for an increase in the overall volume level of the TCS. There are four gain settings that are available: 0dB, 6dB, 12dB, and 18dB. The method for which the gain will be applied is determined by the **“ENABLED”** or **“DISABLED”** amplifier setting in the **“AMP”** menu.

### Disabled Amplifiers:

When one or more outputs have their amplifier setting set to disabled, all increased gain for these outputs will be applied at the TCS mkII outputs. The TCS mkII will increase its overall gain by the amount set in the **“Gain”** setting. For example if **“0dB”** is selected the TCS will output +0dB at maximum volume, if **“18dB”** is selected the TCS mkII will output +18dB at maximum volume.

### Enabled Amplifiers:

When one or more outputs have their amplifier setting set to **“ENABLED”** all increased gain for these outputs will be applied at the 2150's output. The TCS mk II will output a full level signal no matter what the TCS mkII volume is set to. The 2150 amplifier will increase its overall gain by the amount set in the **“Gain”** setting on the TCS mkII. The TCS mkII's volume display will reflect the change in dB but all increased gain will be applied at the amplifiers. For example if **“0dB”** is selected, the TCS will output at full level and the 2150 will output at +0dB at maximum volume, if **“18dB”** is selected the TCS will output at full level and the 2150 will output at +18dB at maximum volume.

### Enter The OPT Menu

Main menu :

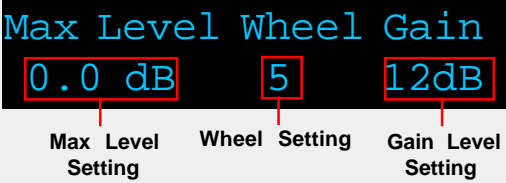


```
<- ADDR POWER LOCK
OPT VER
```

Press the **"MENU"** button on the remote control to open the main menu screen. Select the **"OPT"** menu option using the **"LEFT"** and **"RIGHT"** navigational buttons and press the **"ENTER"** button to open the OPT display screen.

### Setting The OPT Settings

OPT menu :



```
Max Level Wheel Gain
0.0 dB 5 12dB
```

Max Level Setting      Wheel Setting      Gain Level Setting

To edit the **"Max Level"** setting use the **"LEFT"** and **"RIGHT"** remote control buttons to select the **"Max Level"** selector and use the **"UP"** and **"DOWN"** buttons to select the desired output level setting in dB.

To edit the **"Wheel"** sensitivity setting use the **"LEFT"** and **"RIGHT"** remote control buttons to select the **"Wheel"** selector and use the **"UP"** and **"DOWN"** buttons to select the desired wheel sensitivity setting in increments of 1 through 10, and OFF to disable the wheel for volume control.

To edit the **"Gain"** setting use the **"LEFT"** and **"RIGHT"** remote control buttons to select the **"Gain"** selector and use the **"UP"** and **"DOWN"** buttons to select the desired gain level setting 0dB, 6dB, 12dB, and 18dB.

## Front Panel Display

### VER menu

The Version screen displays the product name and the version of the firmware currently installed on the TCS mkII.

#### Enter The VER Display

Main menu :




```
<- ADDR POWER LOCK
OPT VER
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "VER" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Version display screen.

#### The VER Display

Version display:



```
TCS Model
TCS MKII
Version: 012803 V1.0
Firmware Version
```

To exit the Info screen press the "MENU" button to return to the TCS mkII main menu.

# TCS mkII Theater Correction Software

The TCS mkII employs some of the most advanced audio software ever developed. In order to use the Tact Theater Correction System, you have to install the supplied software on your computer. Complete instructions for using the room correction software can be found in the online help available in the software.

## System requirements

**Your computer system must meet the following requirements:**

- An IBM compatible PC with Pentium 100 MHz, 64 MB Ram & 100 MB free hard disk space or better
- Microsoft Windows 98, ME, 2000 or XP
- Operating system regional setting must be set to "English(United States)"
- Microsoft Windows-compatible graphics-card and monitor with screen resolution 800x600 or better
- CD-ROM drive
- Microsoft windows compatible 2- or 3- button mouse
- Standard RS-232 serial port with DB-9 connectors

## Software Installation

Follow the steps below to install the TCS mkII Theater Correction Software:

- 1 - Start windows and insert the Tact software CD into your CD-ROM drive.
- 2 - Double-click on the "**My Computer**" icon on the desktop.
- 3 - Double-click on the CD icon to launch the CD browser.
- 4 - Double-click on "**Install TCS mkII vx.x.exe**" and follow the instructions.

After the installation you will have the option to launch the TCS mkII software. If you would like to launch the program at this time when prompted, select "**Launch Tact-TCS mkII**" and the software will start. You should now see the TCS mkII Theater Correction System main-screen.

## Start The Room Correction software

To start the software go to the Windows "**Start**" menu, select "**Programs**" then "**TACT Audio**" and click on the "**TCS mkII**" icon. You should now see the Tact-TCS mkII Theater Correction System main screen.

## Microphone Installation

All Tact measurement microphones are individually calibrated to perform with the highest accuracy and come with a unique calibration file. This file needs to be installed before you perform the correction process. The microphone can be enabled or disabled by clicking on the "mic:" display window found on the main screen with your left mouse button to toggle its setting.

- 1 - Insert the Tact software disc into the computer's CD-ROM drive.
- 2 - Start the Tact-TCS mkII Correction System Software on your computer.
- 3 - Select "**File**" from the menu selection at the top of the main software screen.
- 4 - Select "**Microphone**" and a new window will open.
- 5 - Select your CD-Rom drive in the "**Look-in**" menu, you should now see a file in the larger window below.
- 6 - Select the "**Micxxxxx.mic**" file. The number in the file name should match the serial number of the mic that came with your Tact-TCS mkII.
- 7 - The software installation will confirm with the "**Mic installation complete**" message.
- 8 - After you have installed your mic the mic serial number should be displayed in the "**Microphone**" section at the top of the main page. If it is not please close the software and then restart it to register the microphone file with the software.

### Connect your TCS mkII to your Computer

Your TCS mkII must be connected to your computer's serial port in order for it to communicate with your computer and to run the theater correction process. Please follow the steps below to connect your TCS mkII to your computer.

- 1 - Make sure that your TCS mkII is turned off using the master power switch on the back of the unit.
- 2 - Connect the RS 232 "**Input**" jack on the back of the TCS mkII to your computer's serial port using the supplied cables and adapters. Your computer must have a standard RS 232 serial port with a DB 9 connector.
- 3 - Turn on your TCS mkII.
- 4 - If your computer is not on, turn it on and start the Tact-TCS mkII Theater Correction System Software.
- 5 - Select the "**Com**" button on the main software screen to open the communication window.
- 6 - Under the Operating Mode select "**Connect**".
- 7 - Under the COM Port section select "**COM1**". If you receive an "**invalid port number**" message please try selecting each of the port selections until you do not receive this message. If you receive this message on all COM ports you may not have a COM port installed on your computer. Please refer to your computer manufacture's documentation for help to install a COM port.
- 8 - To verify that TCS mkII is properly connected to the host computer click on the "**Start**" button to perform the communication test. If everything is functioning properly you should see the results below. Press the "**Stop**" button after about 15 seconds to stop the test.

Rx Buf should display "**0**".  
Count should have counted in increments of "**1**".  
Err Count should be "**0**".

If the results are as above select the "**Close**" button to close the communication window. Your TCS mkII is now connected to your computer.

If the results are not as above please go back to step number **6** and select another COM port. Then repeat step **7**.



**NOTE: If you are still are not passing the communication test you may not have a COM port installed on your computer or you may have another device such as a modem or hand held PC that may be sharing the COM port on your computer. If you have a Tact amplifier attached it may be set to the same address. The TCS mkII requires a valid COM port that is not being used by any other devices.**



**NOTE: You will only have to select the communication port once. The next time you run the TCS mkII correction software it will remember your settings.**

# Setup Presets

The TCS mkII offers thirty setup presets to provide thirty different configuration selections. There are eight predefined and twenty two user programmable presets to choose from.

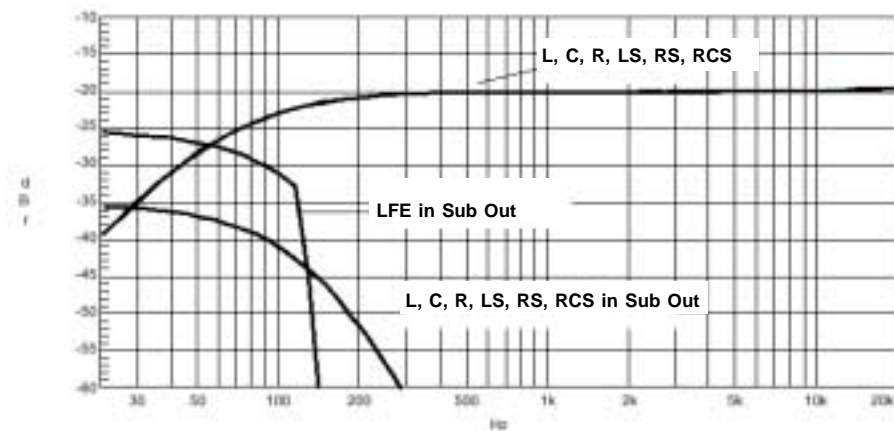
The eight predefined presets are detailed in this section. They are split into two categories “**Dolby**” and “**Tact**”.

The **Dolby** presets apply bass management filtering to the audio channels to filter both high and low frequencies. This is the traditional method of filtering the bass with the internal decoder as used by most home theater decoders.

The **Tact** presets do not apply bass management filtering and are designed to work in conjunction with the Tact Theater Correction software. If you select one of the four predefined Tact setup presets without assigning a correction preset that contains crossover assignments and correction curves that contain bass roll off there will be no bass management applied to the decoded signals. The bass management that is applied with the Tact Theater Correction software is more powerful than the filters provided within the TCS mkII’s processing decoder. It is highly recommended that you use the TCS mkII in this manner to create a more stunning theater experience. We highly recommend that you only use the internal decoders for bass filtering when performing A/B comparisons after performing theater correction.

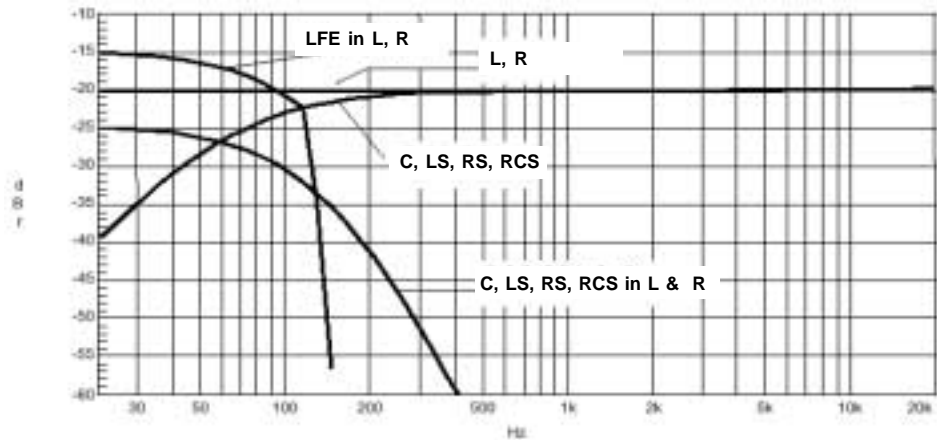
## 1. Dolby 1 (SSS1)

In this configuration all main channels are filtered at 100Hz and all frequencies below 100 Hz are sent to the LFE subwoofer. Dolby refers to this output configuration as SSS1. This preset should be selected if you have smaller speakers and would like all lower frequencies handled by the LFE subwoofer. The TCS frequency response in SSS1 output configuration is shown below.



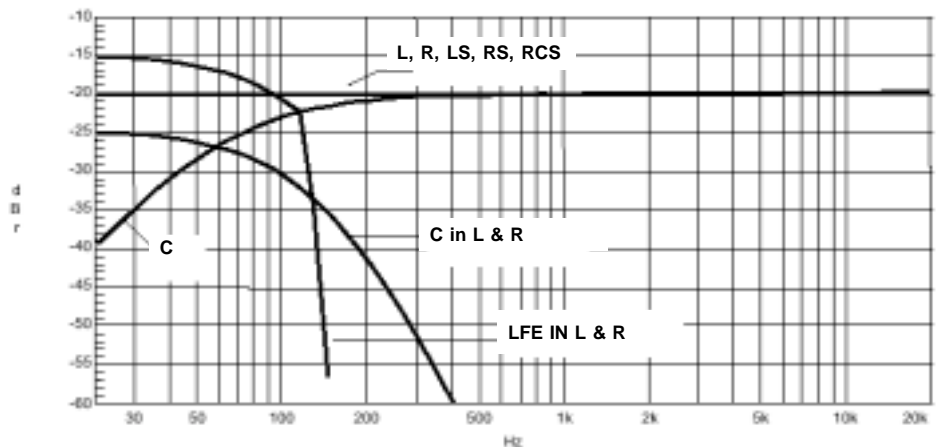
## 2. Dolby 2 (LSS0)

In this configuration the Left and Right channels are not filtered, the center and surround channels are filtered at 100 Hz and the LFE subwoofer is set to OFF. Dolby refers to this output configuration as LSS0. Select this preset if your system contains two large main front speakers with both small center and surrounds without an LFE subwoofer. All low frequencies will be filtered to the front left and right speakers. The TCS frequency response in LSS0 output configuration is shown in below.



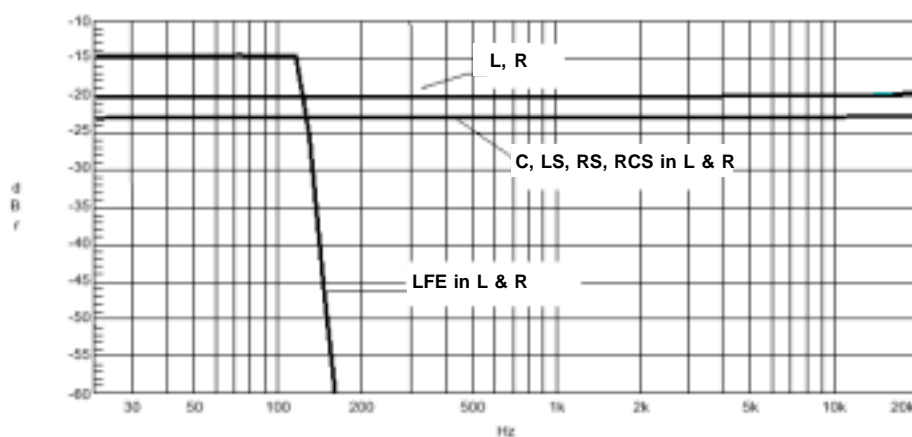
## 3. Dolby 3 (LSL0)

In this configuration the Left and Right channel are not filtered, the center channel is filtered at 100Hz, and the surround channels are not filtered and the subwoofer is set to OFF. Dolby refers to this output configuration as LSL0. Select this preset if you have large right and left front speakers and surround speakers, a small center channel and no LFE subwoofer. The center channel low frequencies and the LFE channel are filtered to the front left and right speakers. The TCS frequency response in LSL0 output configuration is shown below.



## 4. Dolby 4 (L000)

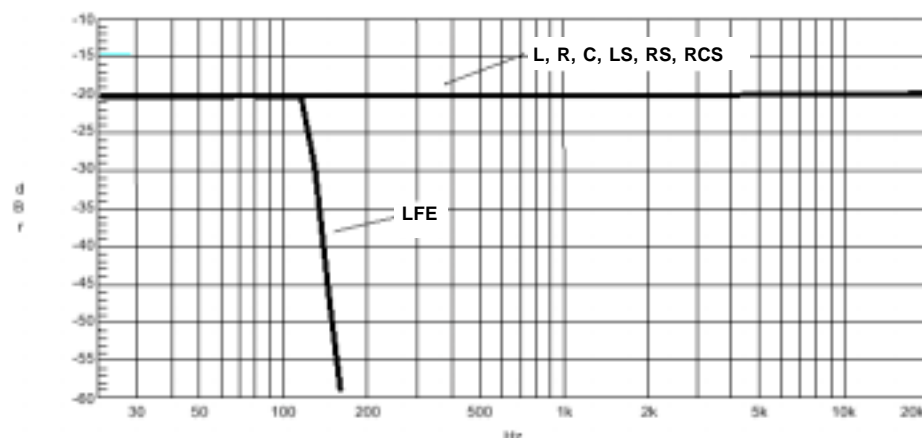
In this configuration the Left and Right channels are not filtered, and the Center, Surround channels, and the LFE subwoofer are set to OFF. Dolby refers to this output configuration as L000. Select this preset if you have large left and right front speakers only and would like to have all channels filtered to the front left and right channels. TCS frequency response in L000 output configuration is shown in below.



## 1. Tact 1 (LLL1)

The Tact 1 setup configuration is designed for a system with large speakers in all positions with an LFE subwoofer.

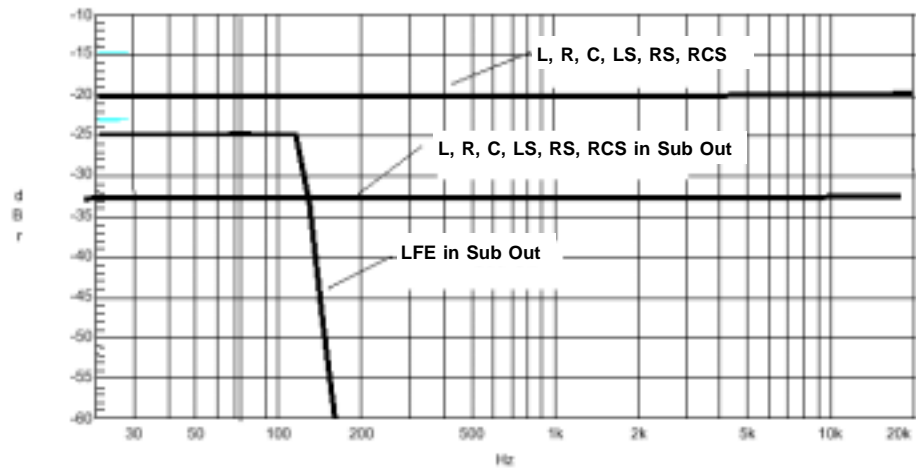
The “Tact 1” output configuration does not apply any bass management filtering to the signals coming out from the surround decoder. All signals coming out from the surround sound decoder are full range with their maximum levels. This setup is designed to be used with either the TCS theater correction processing (for bass management) or in theater correction bypass mode if your system has large speakers in all positions and does not require any bass management..



## 2. Tact 2 (SSS1)

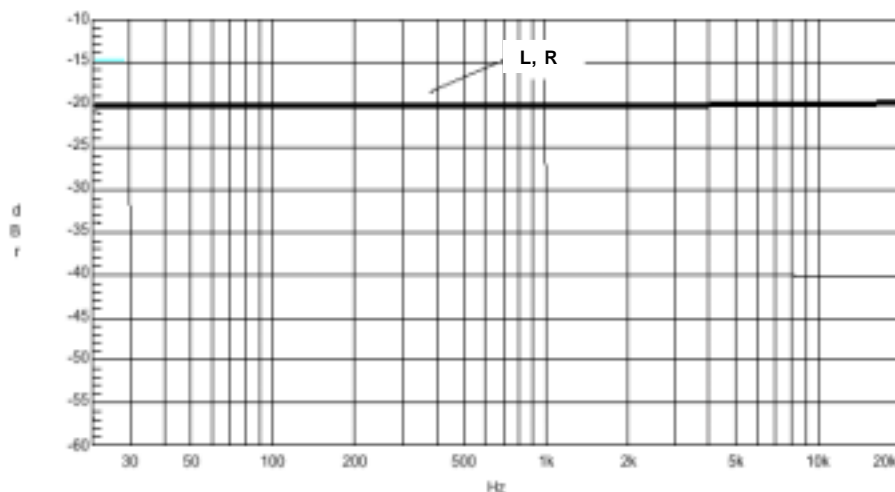
The Tact 2 setup configuration is designed for a system with small speakers in all positions with an LFE subwoofer. In this configuration the setup preset is set to send all main channels a full range signal, and the LFE subwoofer is sent a full range signal from all audio channels. This setup is designed to be used with the TCS theater correction processing. All necessary filtering should be implemented using TCS mkII theater correction processor.

The “Tact 2” output configuration does not apply any filtering to signals coming out from the surround decoder. However, in this configuration all main channels are directed to the subwoofer output with -15.0 dB of attenuation. This setup is very similar to Dolby output configuration 1 after theater correction with crossover points is applied.



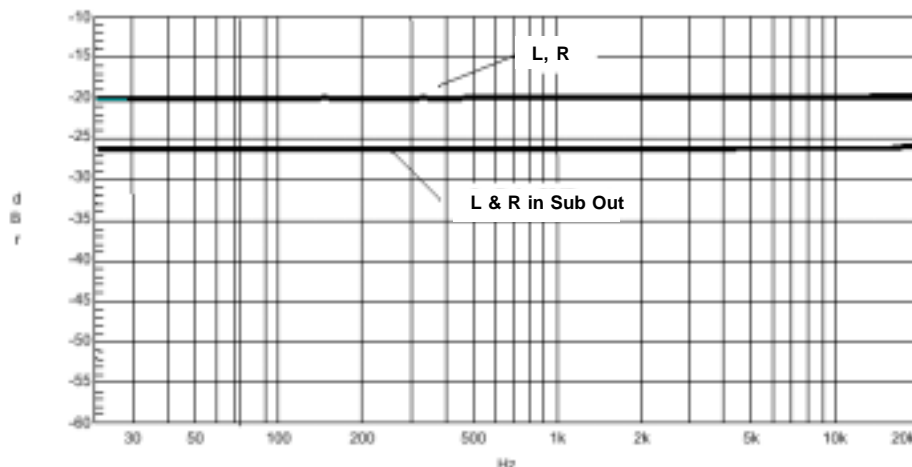
## Tact 3 Configuration (STEREO)

The Tact 3 setup configuration is designed for a system with Left and Right speakers only. The Surround, Center, Surround Center, and SUB outputs are set to OFF. The Tact 3 output configuration is designed for stereo output and it should be used only with the TCS mkII theater correction processor. All necessary filtering should be implemented using TCS mkII theater correction processor. In this configuration only Left and Right channel are output with 0.0 dB of attenuation and with full range. TCS frequency response in Tact 3 output configuration is shown below.



## Tact 4 Configuration (STEREO)

The Tact 4 setup configuration is designed for a system with Left, Right, and LFE Subwoofer speakers only. The Surround, Center, and Surround Center channels are set to OFF. The Tact 4 setup configuration is designed for stereo output and it should be used only with the TCS mkII room correction processor. All necessary filtering should be implemented using TCS mkII theater correction processor. In this configuration the Left and Right channels are output with 0.0 dB of attenuation and with full range. The Left and Right channel are also attenuated by  $-6.0$  dB and passed to the LFE Subwoofer output. TCS frequency response for the Tact 4 setup configuration is shown below.



# Setup Tutorial

To help give a complete understanding of the Setup menu option for the TCS mkII we have created a tutorial to demonstrate how to configure a TCS mkII setup. This tutorial will illustrate creating an eight channel setup that will send all low frequency signals to the LFE channel subwoofer and filter the high frequency signals to the seven main channel speakers. This setup would be commonly known as setting your main speakers to small so that they will not reproduce the low frequencies found in the source content thereby directing all low frequencies to the LFE output. After reviewing the tutorial we hope that you will have a complete understanding of the Setup options and will be able to apply the concepts demonstrated in the tutorial to your own system setups.



**NOTE: If you plan to use theater correction we suggest that you not perform the instructions for setting crossovers for any of the output channels. Please use the TCS mkII Theater Correction software to set the crossover points and correction curves with bass roll off for bass management. In this type of setup you would use the audio channel mixer to route all audio channels and set their level. The theater correction software then is used to set the crossover points and correction curves with bass roll off for more powerful bass management by using the Tact Theater correction processor.**

## Open the setup menu:

Main menu :

```
SETUP  LEVEL  DELAY
ADLY   POL    APOL->
```

Press the "MENU" button on the remote control to open the main menu screen. Select the "SETUP" menu option using the "LEFT" and "RIGHT" navigational buttons and press the "ENTER" button to open the Setup main menu screen.

## Select a user preset to edit:

Setup menu :

```
SETUP : 9. USER 1
9. USER 1 : SP CRO
```

Preset

Selector

Move the selection cursor with the "LEFT" and "RIGHT" remote control buttons to select the ":" preset selector. Use the "UP" and "DOWN" remote control buttons to scroll in sequential order to select the "9. USER 1" preset. Press the "ENTER" button to activate the "9. USER 1" preset. The "9. USER 1" preset should now appear at the top of the Setup menu screen.

### Open the Speaker Setup (SP) menu:

Setup menu :

```

SETUP : 9. TACT 1 L
9. TACT 1 : SP CRO
  
```

SP menu

To enter the speaker setup menu use the “LEFT” and “RIGHT” remote control buttons to highlight “SP” and press the “ENTER” button.

### Set the TCS mkII output channels:

SP menu :

```

Output Channels L R SL SR CEN->
ON ON ON ON ON Channel state
<-LFE A1 A2 A3 A4 Output Channels
Channel state ON ON ON OFF OFF
  
```

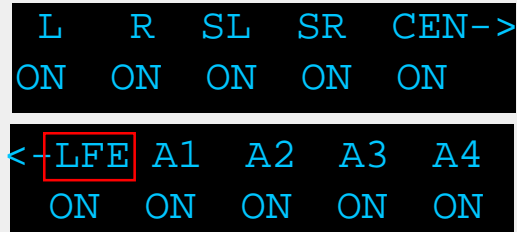
For our tutorial we want to set the L, R, SL, SR, CEN, LFE, A1, A2 channels to ON. The A3 and A4 channels should be set to OFF. Following the instructions below match the Output Channel states shown above in the SP menu.

To select an output channel use the “LEFT” and “RIGHT” remote control buttons to move the selection cursor to the channel that you want to turn on or off. Then use the “UP” and “DOWN” remote control buttons to toggle between the “ON” and “OFF” selections in the channel state section.

### Open the LFE Audio Channel Mixer:

For our tutorial we will start with the LFE audio channel mixer. For this type of setup it is the channel that will require the most modifications to be made.

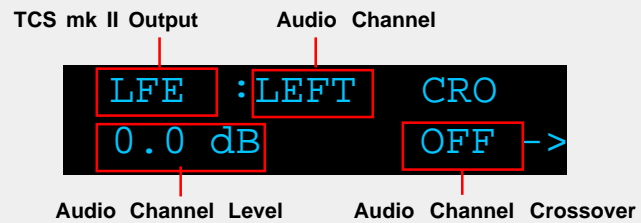
SP menu :



Use the “LEFT” and “RIGHT” remote control buttons to move the selection cursor to the **LFE** output channel. Press the “ENTER” button. The screen should now display the **LFE Audio Channel Mixer** menu screen.

### LFE Audio Channel Mixer:

LFE Audio Channel Mixer :



In this example the LFE output Audio Channel mixer for the LEFT audio channel is displayed. From this screen you can turn the LEFT audio channel off or on, set its level in dB, and apply a highpass or lowpass crossover.

### Audio Channel Level setting for LFE TCS output:

Each audio channel has a level that is set in dB. This defines the amount of the selected audio channel that you want to appear at the selected Output of the TCS mkII. For our tutorial we want to send all of the eight audio channels to the LFE TCS mkII output channel.

#### Level Settings LFE Channel TCS output:

Below are the eight audio channel mixer screens available for the LFE output channel. The levels for the Left, Right, Center, Surround L, Surround R, Surround Center L, and Surround Center R audio channels need to be set to -15dB. This will send a signal from each audio channel at -15dB to the TCS mkII LFE output channel. The LFE audio channel should be set to -5dB as only a small amount of attenuation is needed for this audio channel to output from the TCS mkII LFE output channel as normal. Please follow the instructions below to match the settings in the screens below to match your unit

```
LFE :LEFT  CRO
-15.0 dB  LP  ->
```

```
LFE :CEN   CRO
-15.0 dB  LP  ->
```

```
LFE :RIGHT CRO
-15.0 dB  LP  ->
```

```
LFE :LFE   CRO
- 5.0 dB  OFF ->
```

```
LFE :SL    CRO
-15.0 dB  LP  ->
```

```
LFE :SCL   CRO
-15.0 dB  LP  ->
```

```
LFE :SR    CRO
-15.0 dB  LP  ->
```

```
<-LFE :SCR  CRO
-15.0 dB  LP
```

Use the “LEFT” and “RIGHT” remote control buttons to move the selection cursor to the level selector shown above. Press the “ENTER” button to toggle the audio channel ON. The display will show “OFF” for no output and “x.xxdB” when on. To change the volume level use the “UP” and “Down” remote control buttons scroll through the settings in .01 dB steps. Please repeat these steps to set the desired level for each of the audio channels for the LFE output.

### Audio Channel Crossover setting for LFE TCS output:

Each audio channel has a highpass or lowpass crossover. This parameter is the bass manager control for the TCS mkII. The setting allows for a highpass or lowpass crossover to be set for the selected audio channel for the selected Output of the TCS mkII. For this example we want to send all of the eight audio channels to the LFE channel TCS mkII output to have all low frequencies handled from the output for the subwoofer instead of using the seven main speakers.



**NOTE: If you plan to use theater correction we suggest that you skip this step and set the crossover point for the LFE channel using the TCS mkII Theater Correction software. In this type of setup you would use the audio channel mixer to route all audio channels and set their level. The theater correction software then is used to set the crossover points and correction curves with bass roll off for more powerful bass management by using the Tact Theater correction processor.**

#### Crossover setting LFE TCS output:

Below are the eight audio channel mixer screens available for the LFE output channel. The crossovers for the Left, Right, Center, Surround L, Surround R, Surround Center L, and Surround Center R channels are set to LP(lowpass filter) to have only the low frequencies from these audio channels sent to the TCS mkII LFE output channel. The LFE audio channel is set to OFF as we do not want any filtering on this channel so it will output as normal. Please follow the instructions below to match your settings to the screens above.

LFE :LEFT CRO -15.0 dB LP ->	LFE :CEN CRO -15.0 dB LP ->
LFE :RIGHT CRO -15.0 dB LP ->	LFE :LFE CRO - 5.0 dB OFF ->
LFE :SL CRO -15.0 dB LP ->	LFE :SCL CRO -15.0 dB LP ->
LFE :SR CRO -15.0 dB LP ->	<-LFE :SCR CRO -15.0 dB LP

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the crossover selector shown above. To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting. Please repeat these steps to set the desired crossover setting for each channel for each of the audio channels for the LFE output.

**Audio Mixer setting for the LEFT TCS output:**

SP menu :

```

L   R   SL  SR  CEN->
ON  ON  ON  ON  ON

<-LFE A1  A2  A3  A4
   ON  ON  ON  ON  ON

```

Press the 'MENU' button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "L" output channel. Press the "ENTER" button. The screen should now display the "LEFT" **Audio Channel Mixer** menu screen.

**LEFT Channel TCS output:**

Below are the eight audio channel mixer screens available for the TCS mkII LEFT output channel. All audio channels except for the LEFT are set to off as we only want the LEFT audio channel appearing at the LEFT TCS mkII output. The LEFT audio channel also has a highpass filter enabled so that only high frequencies from the LEFT audio channel are passed to the LEFT TCS mkII output. Please follow the instructions below to match your settings to the screens below.

<pre> LEFT :LEFT  CRO 0.0 dB    HP  -&gt; </pre>	LEFT	<pre> LEFT :CEN  CRO Off        OFF -&gt; </pre>
<pre> LEFT :RIGHT CRO Off        OFF -&gt; </pre>		<pre> LEFT :LFE  CRO Off        OFF -&gt; </pre>
<pre> LEFT :SL    CRO Off        OFF -&gt; </pre>		<pre> LEFT :SCL  CRO Off        OFF -&gt; </pre>
<pre> LEFT :SR    CRO Off        OFF -&gt; </pre>		<pre> &lt;-LEFT :SCR CRO Off        OFF </pre>

**Set the LEFT channel level:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector. Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xx dB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

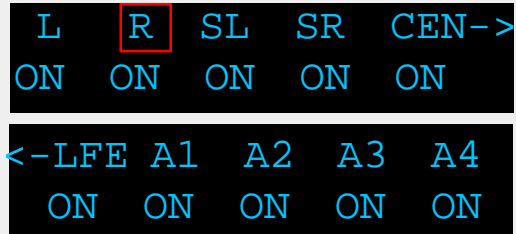
**Set the LEFT channel crossover:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector. To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the **LEFT** output.

### Audio Mixer setting for the RIGHT TCS output:

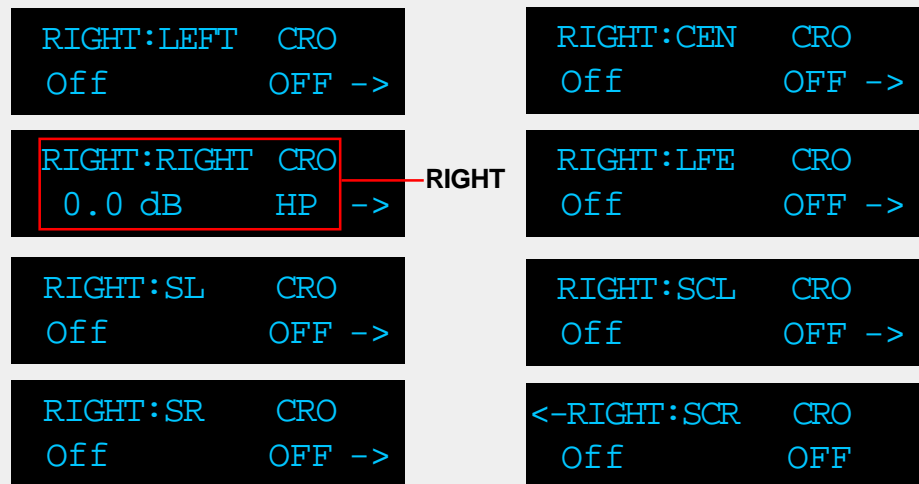
SP menu :



Press the 'MENU' button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "R" output channel. Press the "ENTER" button. The screen should now display the "RIGHT" Audio Channel Mixer menu screen.

### RIGHT Channel TCS output:

Below are the eight audio channel mixer screens available for the TCS mkII RIGHT output channel. All audio channels except for the RIGHT are set to off as we only want the RIGHT audio channel appearing at the RIGHT TCS mkII output. The RIGHT audio channel also has a highpass filter enabled so that only high frequencies from the RIGHT audio channel are passed to the RIGHT TCS mkII output. Please follow the instructions below to match your settings to the screens below.



#### Set the RIGHT channel level:

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector . Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xxdB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

#### Set the RIGHT channel crossover:

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector . To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the RIGHT output.

**Audio Mixer setting for the SURROUND LEFT TCS output:**

SP menu :

```

L   R   SL  SR  CEN->
ON  ON  ON  ON  ON

<-LFE A1  A2  A3  A4
   ON  ON  ON  ON  ON

```

Press the 'MENU' button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "SL" output channel. Press the "ENTER" button. The screen should now display the "SURROUND LEFT" Audio Channel Mixer menu screen.

**SURROUND LEFT (SL) Channel TCS output:**

Below are the eight audio channel mixer screens available for the TCS mkII SL output channel. All audio channels except for the SL are set to off as we only want the SL audio channel appearing at the SL TCS mkII output. The SL audio channel also has a highpass filter enabled so that only high frequencies from the SL audio channel are passed to the SL TCS mkII output. Please follow the instructions below to match your settings to the screens below.

SL :LEFT CRO Off OFF ->	SL :CEN CRO Off OFF ->
SL :RIGHT CRO Off OFF ->	SL :LFE CRO Off OFF ->
SL :SL CRO 0.0 dB HP ->	SL :SCL CRO Off OFF ->
SL :SR CRO Off OFF ->	<-SL :SCR CRO Off OFF

**Set the SURROUND LEFT channel level:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector. Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xxdB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

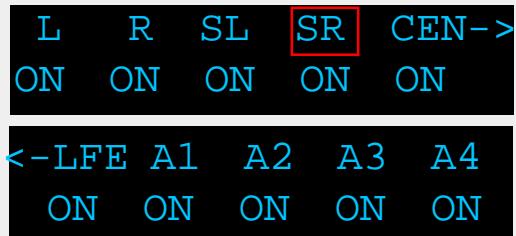
**Set the SURROUND LEFT channel crossover:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector. To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the SURROUND LEFT output.

### Audio Mixer setting for the SURROUND RIGHT TCS output:

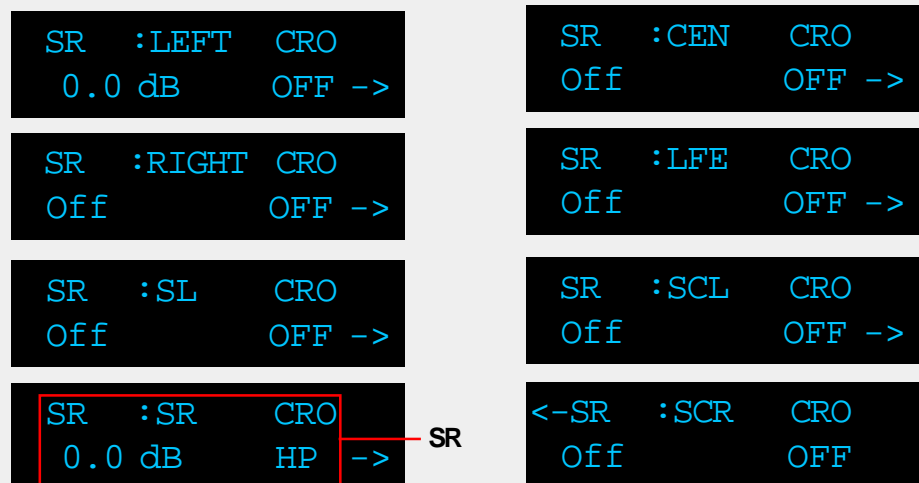
SP menu :



Press the 'MENU' button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "SR" output channel. Press the "ENTER" button. The screen should now display the "SURROUND RIGHT" Audio Channel Mixer menu screen.

#### SURROUND RIGHT (SR) Channel TCS output:

Below are the eight audio channel mixer screens available for the TCS mkII SR output channel. All audio channels except for the SR are set to off as we only want the SR audio channel appearing at the SR TCS mkII output. The SR audio channel also has a highpass filter enabled so that only high frequencies from the SR audio channel are passed to the SR TCS mkII output. Please follow the instructions below to match your settings to the screens below.



#### Set the SURROUND RIGHT channel level:

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector . Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xxdB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

#### Set the SURROUND RIGHT channel crossover:

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector . To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the SURROUND RIGHT output.

**Audio Mixer setting for the CENTER TCS output:**

SP menu :

```

L   R   SL  SR  CEN->
ON  ON  ON  ON  ON

<-LFE A1  A2  A3  A4
   ON  ON  ON  ON  ON

```

Press the 'MENU' button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "CEN" output channel. Press the "ENTER" button. The screen should now display the "CENTER" Audio Channel Mixer menu screen.

**CENTER (CEN) Channel TCS output:**

Below are the eight audio channel mixer screens available for the TCS mkII CEN output channel. All audio channels except for the CEN are set to off as we only want the CEN audio channel appearing at the CEN TCS mkII output. The CEN audio channel also has a highpass filter enabled so that only high frequencies from the CEN audio channel are passed to the CEN TCS mkII output. Please follow the instructions below to match your settings to the screens below.

```

CEN :LEFT  CRO
Off      OFF ->

```

CEN

```

CEN :CEN  CRO
0.0 dB  HP ->

```

```

CEN :RIGHT CRO
Off      OFF ->

```

```

CEN :LFE  CRO
Off      OFF ->

```

```

CEN :SL   CRO
Off      OFF ->

```

```

CEN :SCL  CRO
Off      OFF ->

```

```

CEN :SR   CRO
Off      OFF ->

```

```

<-CEN :SCR  CRO
Off      OFF

```

**Set the CENTER channel level:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector. Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xx dB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

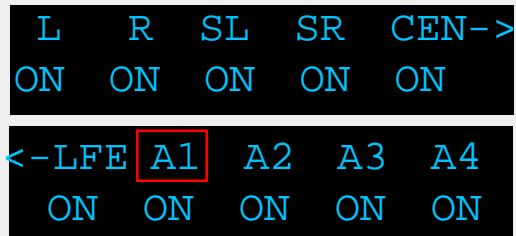
**Set the CENTER channel crossover:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector. To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the **CENTER** output.

**Audio Mixer setting for the SUR. CENTER LEFT TCS output:**

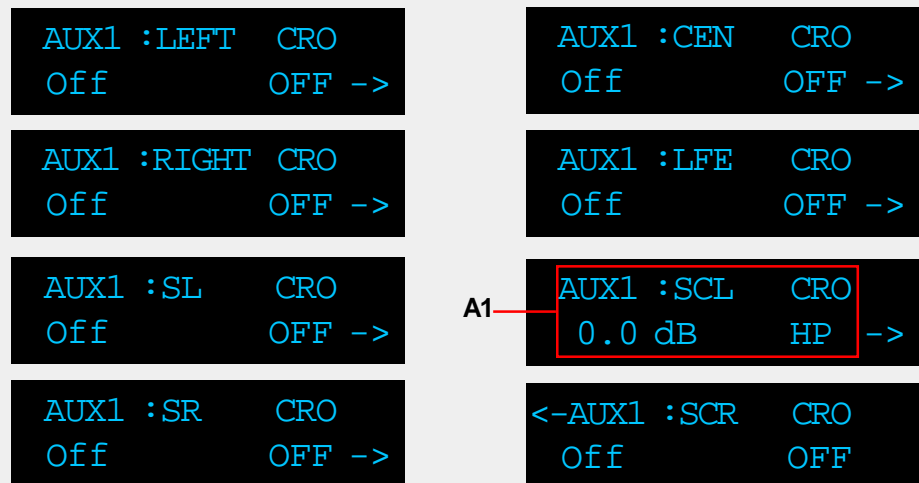
SP menu :



Press the ‘MENU’ button to return to the SP menu. Use the ‘LEFT’ and ‘RIGHT’ remote control buttons to move the selection cursor to the ‘A1’ output channel. Press the ‘ENTER’ button. The screen should now display the ‘A1’ **Audio Channel Mixer** menu screen.

**SURROUND CENTER LEFT (A1) Channel TCS output:**

Below are the eight audio channel mixer screens available for the TCS mkII A1 output channel. All audio channels except for the A1 are set to off as we only want the A1 audio channel appearing at the A1 TCS mkII output. The A1 audio channel also has a highpass filter enabled so that only high frequencies from the A1 audio channel are passed to the A1 TCS mkII output. Please follow the instructions below to match your settings to the screens below.



**Set the SUR. CENTER LEFT channel level:**

Use the ‘LEFT’ and ‘RIGHT’ remote control buttons to move the selection cursor to the level selector . Press the ‘ENTER’ button to toggle the audio channel ON. The display will show ‘OFF’ for no output and ‘x.xxdB’ when on. Then use the ‘UP’ and ‘Down’ remote control buttons to set the level to 0.0 dB.

**Set the SUR. CENTER LEFT channel crossover:**

Use the ‘LEFT’ and ‘RIGHT’ remote control buttons to move the selection cursor to the CRO selector . To change the CRO setting use the ‘UP’ and ‘Down’ remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the **SUR. CENTER LEFT** output.

**Audio Mixer setting for the SUR. CENTER RIGHT TCS output:**

SP menu :

```

L   R   SL  SR  CEN->
ON  ON  ON  ON  ON

<-LFE A1  A2  A3  A4
   ON  ON  ON  ON  ON

```

Press the "MENU" button to return to the SP menu. Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the "A2" output channel. Press the "ENTER" button. The screen should now display the "A2" **Audio Channel Mixer** menu screen.

**SURROUND CENTER RIGHT (A2) Channel TCS output:**

Below are the eight audio channel mixer screens available for the TCS mkII A2 output channel. All audio channels except for the A2 are set to off as we only want the A2 audio channel appearing at the A2 TCS mkII output. The A2 audio channel also has a highpass filter enabled so that only high frequencies from the A2 audio channel are passed to the A2 TCS mkII output. Please follow the instructions below to match your settings to the screens below.

AUX2 :LEFT CRO Off OFF ->	AUX2 :CEN CRO Off OFF ->
AUX2 :RIGHT CRO Off OFF ->	AUX2 :LFE CRO Off OFF ->
AUX2 :SL CRO Off OFF ->	AUX2 :SCL CRO Off OFF ->
AUX2 :SR CRO Off OFF ->	A2 <-AUX2 :SCR CRO 0.0 dB HP

**Set the SUR. CENTER RIGHT channel level:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the level selector . Press the "ENTER" button to toggle the audio channel ON. The display will show "OFF" for no output and "x.xxdB" when on. Then use the "UP" and "Down" remote control buttons to set the level to 0.0 dB.

**Set the SUR. CENTER RIGHT channel crossover:**

Use the "LEFT" and "RIGHT" remote control buttons to move the selection cursor to the CRO selector . To change the CRO setting use the "UP" and "Down" remote control buttons to scroll to the desired setting.

Please repeat these steps to set the desired level and crossover setting for each channel for each of the audio channels for the **SUR. CENTER RIGHT** output.

### TCS output channel crossover frequencies:

Enter the CRO menu:

Setup menu :

```
SETUP : 9. USER 1 L
9. USER 1 : SP CRO
```

CRO Menu

The Crossover (CRO) menu is entered from the Setup menu. Press the “MENU” button two times to return to the Setup Menu. Then enter the crossover menu by using the “LEFT” and “RIGHT” remote control buttons to highlight “CRO” and press the “ENTER” button.

Set the crossover frequencies:

CRO menu :

Output Channels

```
L R SL SR ->
80 80 80 80 Hz
```

Crossover Frequency

Output Channels

```
CEN LFE A1 A2
<-80 80 80 80 Hz
```

Crossover Frequency

To select an Output Channel use the “LEFT” and “RIGHT” remote control buttons to select the channel then use the “UP” and “Down” buttons to scroll through the frequency values in 5Hz steps. The CRO menu sets the crossover point (frequency) for the highpass and lowpass filters that are applied in the Audio Channel Mixer menu. The crossover point can be set from 50Hz to 150Hz in 5Hz steps. For this tutorial we recommend setting the crossover points for all channels to 80Hz. Please use the operating instructions above to set each of the eight audio channels to 80Hz.

## Return to the Main Status Screen for audio playback.

You have now created a TCS mkII Setup preset. It is now time to return to the main status screen of the TCS mkII to play back an audio source with your new setup configuration.

Main Screen :

```
3/2  LFE    D1  44.1
Cor:BP  S:9  -33.1dB
```

To exit the SP menu press the MENU button three times to return to the Main Status screen. It should look similar to the screen above. The setup preset indicator should display "S:9". This is the preset that was just created in the tutorial.

## TCS mkII basic functionality.

Main Screen :

```
3/2  LFE    D1  44.1
Cor:BP  S:9  -33.1dB
```

2

1

### Set your TCS mkII to correction BYPASS mode (1)

The TCS mk II can be set to bypass mode at any time by pressing the "BYPASS" key found in the CORRECTION block on the remote control. When BYPASS is enabled "BP" will be displayed on the TCS mkII front panel display.

### Selecting an ANALOG or DIGITAL input (2)

To select an input for playback use the "ANALOG" and "DIGITAL" buttons found on the remote control. Select the source that you have connected.

- Press the "DIGITAL" button to scroll sequentially to select one of 9 digital inputs.
- Press the "ANALOG" button to scroll sequentially to select one of 7 analog inputs.

### Adjusting the master volume level

To adjust master level use the "UP" and "DOWN" volume buttons found on the remote control or by simply turning the Tact wheel on the TCS mkII front panel. The output can be muted at any time by pressing remote control "MUTE" button.

## Tact Audio, Inc.

201 Gates Road Unit G, Little Ferry – New Jersey 07643, USA

Phone: +1 201 440 9300 – Fax: +1 201 440 5580 – Email: [info@tactaudio.com](mailto:info@tactaudio.com)

***[www.tactaudio.com](http://www.tactaudio.com)***