TRILOGY

909

User Manual

THANK YOU

Welcome

Firstly, thank you for purchasing your Trilogy Audio Systems 909 Pre-amplifier, we value your custom.

We strive to design and build world class products that stand the test of time. By reading this manual you can gain clear understanding of its operation and learn to care for it correctly. In turn, it will reward you with a lifetime of outstanding performance.

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Introduction

We prefer that your Trilogy dealer delivers, installs, sets up and explains your 909's operation to you.

However, we still recommend that you read through this manual thoroughly and keep it to hand for reference if you intend using some or all of the 909's complex and rather unique features.

Should any part of this manual or the operation of the 909 not be clear to you, please do not hesitate to contact your Trilogy dealer. If they are not available please contact ourselves directly.

About this manual

Throughout this user manual, the following icons are used:

[enter]   This refers to a physical control on the 909.
RETURN 1   This refers to a physical connection on the 909.

Bal Centre   This indicates information that is presented on the display.

From this point on, any information presented on the left hand pages are pictorial representations of either the front or back views of the 909 or of the display.

Therefore consider the left hand pages as additional information to accompany the written descriptions on the opposite pages.

Unpacking

Be careful when unpacking your Trilogy amplifier, it is heavy. Seek assistance if necessary. Store the packaging safely for future use. It is the ideal method of protecting your amplifier from damage during transport.

Environment

Do not site the amplifier near liquids, or place water-filled containers near the unit. If water does come into contact with the unit there is serious potential for an electric shock or fire hazard. Immediately pull out the mains plug from the wall socket. Contact your dealer to arrange an inspection before further use.

The amplifier is cooled by convection and so needs good circulation of room temperature air under and around it. Do not place it near sources of heat such as radiators or in direct sunlight. Do not enclose in a cupboard. Do not place directly on carpet.

A flat, smooth surface is required. As with all high resolution audio equipment, your amplifier is sensitive to vibration, strong magnetic fields and radio interference. A dedicated high performance equipment platform sited away from other appliances is the optimum location.

Power Supply

The AC input voltage has been set for the country it was purchased in. Check that the label on the rear panel matches your AC supply voltage before plugging in. The AC inlet cable provided should be used. If another cable is used check it is wired correctly. The fuse should be rated at 10 amps.

The wires in the AC input cable supplied are coloured in accordance with the following code:

Green and yellow..............Earth
Blue...............................Neutral
Brown................................Live

The amplifier must be earthed. Do not disconnect the AC earth at any time. If in doubt about any aspect of power supply, consult your Trilogy dealer or a qualified electrician.

A direct connection to a mains outlet is best for your amplifier, avoid adapters. To realise your amplifier's full potential we recommend high quality mains conditioning. See www.Isol-8.co.uk for more on power supply and system solutions from our highly acclaimed sister company.

Designed and manufactured in England

www.trilogyaudio.com

Serial No.

Mains Voltage

A ◯◯ B
C ◯◯ D
E ◯◯ F

TASLink

TASLink

MAINS INLET

50 - 60 Hz ~
Max. 45W

| MAIN 2 | MAIN 1 | SEND 2 | SEND 1 | RETURN 2 | RETURN 1 | 4 | 3 | 2 | 1 |

LEFT
CHANNEL

O U T P U T S   I N P U T S

CE

RIGHT
CHANNEL

THIS PRODUCT MUST BE EARTHED. NO USER SERVICEABLE PARTS INSIDE. REFER TO AUTHORISED PERSONNEL FOR SERVICING.

Connections

It is good practice to complete all interconnections before switching on to avoid any damage to your system's loudspeakers while plugging in.

The IEC inlet provides the unit with power. Connect with the supplied AC input cable. It can be left connected at all times to ensure reliable operation. If not being used for extended periods of time switch off at the mains outlet. See the Comprehensive Operation Guide for timed, sleep and remote switching.

The Pre-Amplifier can accommodate six line level audio inputs. Two are associated with auxiliary loops. If both loop functions are not required RETURN 1 and RETURN 2 can be regarded as inputs 5 and 6. Connect your sources to these inputs via RCA phono cables as required. A separate phono stage will be required for vinyl playback.

Two sets of main line level outputs are provided. Connect MAIN 1 to your power amplifier via RCA phono cables. MAIN 2 is provided for connection to a second power amplifier for applications such as bi-amping. MAIN 2 is not independently buffered or controlled.

Two independent switchable auxiliary loops are provided, SEND 1 and SEND 2 with RETURN 1 and RETURN 2. These can be configured to provide send and returns to and from recording media, AV or multi-room systems independently from the main outputs. They are configured via the front panel controls as detailed in the Comprehensive Operation Guide.

Twin TASLink connectors allow interconnection, control and monitoring of other Trilogy Audio System products via QuietBuss technology. The associated LEDs give status information. The Comprehensive Operation Guide contains further information. TASLink cables are available from your Trilogy dealer in various lengths.

TRILOGY 909

TRILOGY

1 2 3
4 5 6
ESC ENT

SHAFT ENCODER

PWR
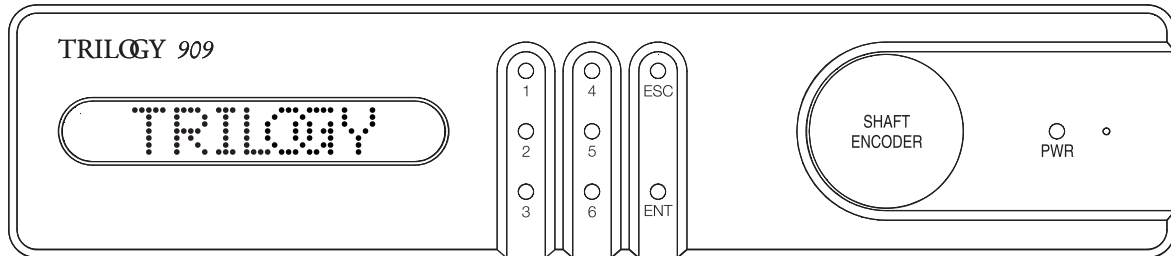
Pin Code
[enter]

00------
Rotate [shaft encoder] to display first Pin Code pair

52------
[enter]

5200----
Rotate [shaft encoder] to display second Pin Code pair

5225----
[enter]

522500
Rotate [shaft encoder] to display third Pin Code pair

522594
[enter]

Warm up...

The number used above is purely an example.

Your unique PIN Code is detailed in the separate sheet accompanying your 909.

Security

Each 909 comes with its own unique PIN for your security. If the AC input is disconnected for a long period of time you will be prompted for a PIN on power up. Please take precautions to remember your PIN and make sure it cannot fall into the hands of others. Should you not be able to enter the correct PIN, contact your Trilogy dealer.

PIN Code Protection

When the amplifier is first powered, or unplugged for approximately fifteen minutes, the pre-amp requires a security PIN code to be entered. When the display says PIN Code, press [enter] and the display will read 00---- where 00 are the first two digits of the PIN code you are entering. Set these digits correctly with the [shaft encoder], noting you can move backwards through 00 to 99 for speed. Press [enter], adjust the next pair of digits, [enter] to change the last pair then [enter] again to complete PIN code entry.

If the PIN is entered incorrectly, press [enter] at the warning but note after three failures, the unit will be locked out for two minutes before prompting again for PIN entry.

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Powering the Pre-Amp

Once the PIN code has been correctly entered, the pre-amp can be powered using the [power] button. The message Warm up... will be displayed while the circuitry warms up, and any attached power amps warm up if they are controlled from the pre-amp. After forty seconds, the pre-amp is unmuted, the current input and volume are displayed before the menu defaults to the home page.

Turn off by again pressing the [power] button, which includes the ability to abort power up during the warming period. The message Turn off is displayed and this takes a couple of seconds as outputs are muted before valve circuitry is powered down.

This simple on/off operation is the standard setting from the Trilogy factory, but the detailed menus offer the ability to select an intermediate Standby mode, where a simple press of the [power] button while powered places the pre-amp and peripherals in a keep warm mode. This is of particular benefit for equipment such as the 990 power amplifier, which can cycle power to its circuitry to keep warm, while reducing power consumption below standard mute modes. When this mode is enabled, full turn off is achieved by pressing and holding the [power] button.

Quickstart

Having made and checked all appropriate input, output and AC connections, press the [power] button. The unit will remain muted until warm up is completed.

Select an Input from [1] to [6] . The [shaft encoder] will adjust volume.

To explore the control menus use a combination of [shaft encoder], [escape] and [enter] buttons. The display will be your guide. If you get lost, press the [escape] button repeatedly until the originally selected input is displayed.
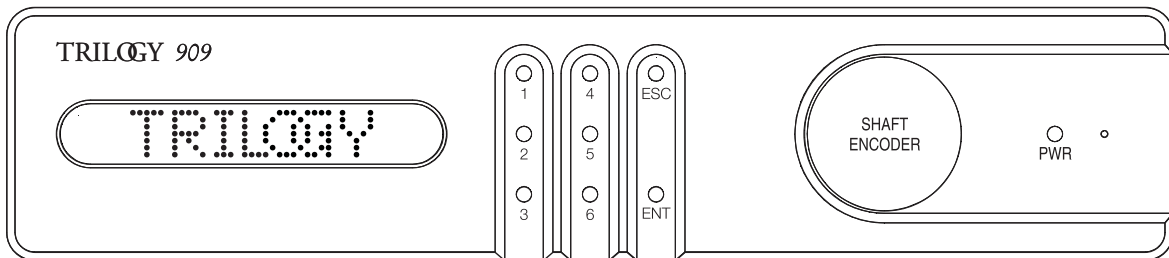
Record Output options
     No output
     Input 1
     Input 2
     Input 3
     Input 4
     Input 5
     Input 6

Balance options
     Mute Right
     Bal <30 .... Bal <1
     Bal Centre
     Bal >1 .... Bal >30
     Mute Left

Brightness options
     Bright Auto
     Bright 1 .... Bright 9

More options
     More   ➜   Time
                  Defaults
                  Names
                  Tools

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Overview

The Trilogy 909 pre-amp offers a nested menu structure to access the large number of options. This is intuitive, using a combination of [enter] / [escape] buttons and the rotary [shaft encoder]. Although the six input select buttons could have been used at some point in the menu structure, this would have been difficult to remember. The six input buttons are only ever used to change the input you listen to, which may also be associated with input level adjustments (trim).

By default, the pre-amp displays what we call the 'Home Page', which is selectable as a blank screen, Trilogy logo, time, input or volume. The home page can be set differently when the pre-amp is off, compared with when it is powered.

Navigating the menu, you will alternate between the [enter] button and rotary [shaft encoder], with [escape] to step back up one level. Because the [shaft encoder] is normally used to adjust the volume from the home page, the first step to access the menus is to press [enter], which shows the record output. This can be changed with the [shaft encoder], or [enter] again to adjust balance. [enter] again for brightness and choose from automatic according to ambient light, or fixed levels 1-9. The next [enter] will display More, which is the route into the detailed menus, which are accessed by turning the [shaft encoder].

The top level menu is circular, so pressing [enter] when More is displayed will return to record output selection. [escape] at any time from these top level settings to return to the home page, and press [escape] from the home page to display the current time. Holding [escape] for several seconds at the home page will display the unit's serial number.

You will find it intuitive, but it is unusual that you advance between top level menus of output, balance, brightness and more using the [enter] button, whereas in the detailed menus found within More, the different menus are selected with the [shaft encoder]. The logic for this is we find it acceptable to select between the small number of high level menus using [enter], and also that each of these top level menus demands the use of the [shaft encoder].

To access the detailed menus, More should be displayed then turn the [shaft encoder] to select between time, defaults, names and tools. If you have enabled menu lock in the defaults (disabled by default), on turning the [shaft encoder] you will be prompted to enter the four digit menu PIN code provided with your pre-amp. This is a different number to the six digit PIN entered when power is applied.

More → Time → Sleep

Timers

Time Set

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More → Time → Sleep → Sleep Off

Sleep 0:01 .... Sleep 2:00

More / Time

This includes setting the current time and sleep time similar to that found on an alarm clock, putting the pre-amp to sleep after an adjustable number of minutes. On and off timers are provided for every day, plus global on/off timers that apply every day. Individual timers can be disabled and only some timers used if required. For example, turn on Saturday morning and turn off Sunday evening. Press [enter] to access Sleep, then select other time options if required.

More / Time / Sleep

Pressing the [enter] button when Sleep is displayed, will allow the user to set a sleep timer to turn the pre-amp off automatically after a set time. However during this countdown period the front panel button, an external remote or one of the timers might switch the pre-amp off first.

The default value displayed is Off, but using the [shaft encoder], the time can be adjusted from 0:01 (one minute until sleep) to 2:00 (two hours until sleep) in one minute steps. Once set as required, [escape] from this menu or leave the display timeout to return to the homepage if enabled. When the unit goes to sleep, by default it will switch off both the pre-amp and any TASLink attached peripherals.

If display timeout is not enabled and you stay on the sleep display, you will see a live countdown. If you wish to disable the sleep timer, set it to Off.

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More → Time → Timers → Mon ><:00 #

Mon ><:00 ▪

Tue ><:00 #

Tue ><:00 ▪

Wed ><:00 #

Wed ><:00 ▪

Thu ><:00 #

Thu ><:00 ▪

Fri ><:00 #

Fri ><:00 ▪

Sat ><:00 #

Sat ><:00 ▪

Sun ><:00 #

Sun ><:00 ▪

All ><:00 #

All ><:00 ▪

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More / Time / Timers

Timers are provided to allow automatic on/off switching customised to your daily routine, like a modern central heating controller. This facility may be useful simply to bring your audio equipment to optimum temperature before listening, to minimise power wasted overnight in maintaining temperature, or to provide wake-up music like an alarm clock.

[enter] from Timers to show the 'on timer' for Monday, designated with the filled square top right of the display. The day will be flashing. Turning the [shaft encoder] to the right shows the off timer for Monday with an empty square bottom right, then on/off for every day with the addition of 'all on' and 'all off' timers which will work every day.

The timer hours are adjustable 00 to 23, minutes are 00 to 59 as expected. We deliberately prevented the [shaft encoder] 'wrapping round', eg 23 hours to 00 hours. Before 00 hours, there is an additional setting of >< hours which disables that timer. Trilogy 909 pre-amps are shipped with all timers disabled and minutes set to 00, that is ><:00.

To adjust a timer, select the timer of interest with the [shaft encoder] and press [enter]. This allows hours to be changed, including disabling with a setting of ><. Press [enter] to edit the minutes or [escape] back to selecting the different days on/off. It will be clear what you are changing with the [shaft encoder] as the display will be flashing.

We have included what we hope is a useful feature. After editing timer minutes, pressing [enter] moves to the next timer – press [enter] to edit that. This speeds setting as you are likely to edit an off timer when you have edited that day's on timer. However if you edit the minutes on one timer and do not want to edit the next timer, simply press [enter] then choose another timer, or [escape] again to leave the timer menu.

The timers were designed with flexibility in mind. Day timers do not have to be used in on/off pairs, so you could have your system switch on Saturday morning and keep warm until Sunday evening, just using Saturday on and Sunday off timers. Similarly, each day could turn on at different times, but the All off timer would switch off the system at the same time every day.

When the unit switches off, it will switch off both the pre-amp and any TASLink attached peripherals.

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More → Time → Time Set → Day HH:MM

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More / Time / Time Set

An internal clock allows the pre-amp to operate its on/off timers and display the current time if required. The clock must be set by the user but, once the time is set, it keeps time even when there is no mains power applied. This clock offers the same accuracy as typical quartz units that are not locked to a time reference such as the internet or a radio signal. As for similar devices, the clock may need adjusting occasionally.

To adjust or set the clock for the first time, press [enter] at the Time Set menu. The day and time will be displayed with the day flashing. Use the [shaft encoder] to adjust the day, [enter] to make the hours flash and adjust (always 24 hour clock), then [enter] again to adjust minutes. [enter] will cycle back to adjusting the day. Although seconds are not displayed, internally they are reset to zero if the time is adjusted.

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More → Defaults → Menu Lock
                  Volume
                  Input
                  Film in
                  Output
                  Balance
                  Display
                  Warm Mode
                  External

More → Defaults → Menu Lock → Unlocked
                              Locked

More / Defaults

A wide range of default values can be set in this menu, including startup input and output selection, startup volume and settings to integrate a surround system. Display parameters such as home page, timeout and brightness, language, and whether volume is displayed in decibels or 0..99. Settings for external equipment using TASLink communications, and new facilities as they are developed. Where direct access to a setting such as input or brightness is available, these menus change the startup default but not the current settings. For items like language or display in dB, both the default and current setting are changed. [enter] for the first default setting Menu Lock where the PIN code request for detailed menus can be enabled.

More / Defaults / Menu Lock

All of the detailed menus beyond More can be protected by a PIN code. Whether this is enabled is set here, pressing [enter] at Menu Lock allows Unlocked or Locked with the [shaft encoder].

More   →   Defaults   →   Volume Trim   →   Input X   →   Trim -20 .... Trim +20

More   →   Defaults   →   Volume   →   Start   →   Mute
    Dim 4
    Dim 3
    Dim 2
    Dim 1
    -65.0dB .... -26.0dB

More   →   Defaults   →   Volume   →   Max   →   Mute
    Dim 4
    Dim 3
    Dim 2
    Dim 1
    -65.0dB .... -26.0dB

More   →   Defaults   →   Volume   →   Film   →   Mute
    Dim 4
    Dim 3
    Dim 2
    Dim 1
    -65.0dB .... -26.0dB

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More / Defaults / Volume

If you press [enter] when you get to the defaults volume menu, you will see `Trim`. Rotate the [shaft encoder] to see alternatives `Start`, `Max` and `Film`. In order these are,

`Trim`   volume offset for the selected input, to equalise levels between sources.
Each step is 0.5dB.

`Start`   default volume level every time the pre-amp is turned on, unless the default input is set to be a film input, for example from a surround processor.

`Max`   maximum volume level that can be achieved for all inputs except any designated film input. This is useful when you don't trust others with your speakers! It is possible to increase the effective volume beyond this setting by adjusting the input trim. If the maximum setting is reduced below the startup setting, when [escape] is pressed the startup level is automatically lowered to match.

`Film`   nominally unity gain for surround systems where an input has a fixed volume level and all adjustments are made on the surround processor. The audio performance of the Trilogy 909 pre-amp benefits from the lack of closed loop control of the pre-amp gain, hence the gain will vary depending on the valves. This setting allows fine tuning of the unity gain, or adjustment to a value which is not unity.

With `Trim`, `Start`, `Max` or `Film` displayed, press [enter] to view and change the setting with the [shaft encoder]. Note that when you press [enter] to adjust all but trim, the pre-amp volume will change to the setting which you want to edit, so you can audition the level correctly. For `Max` in particular we recommend caution. Press [escape] to leave the menu and the new value is saved.

You will not be able to edit the `Film` setting unless you have a film input defined (see more/defaults/film in) and that input is selected. If you have a film input selected, you will not be able to edit `Start` or `Max` which do not apply to the film mode.

Factory defaults for these volume settings are

`Trim`   0   all inputs

`Start`   -60dB   (12 when display is set to use 0..99, not dB)

`Max`   -26dB   (61)

`Film`   -26dB   (61)

More → Defaults → Input → No input
                          Input 1
                          Input 2
                          Input 3
                          Input 4
                          Input 5
                          Input 6

More → Defaults → Film in → No film
                           Input 1
                           Input 2
                           Input 3
                           Input 4
                           Input 5
                           Input 6

More → Defaults → Output → No output
                          Input 1
                          Input 2
                          Input 3
                          Input 4
                          Input 5
                          Input 6

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More / Defaults / Input

With Input showing, press [enter] to see the input that is selected every time the pre-amp is turned on with the [power] button, timers or externally via TASLink. Options are the six inputs or No input selected at power on. The default startup volume will also be selected at power on, unless that input is designated as the film input typically connected to a surround sound processor. In that case the default film volume is used. Hence menus associated with default input are defaults / volume and defaults / film in. Factory default is input 1 selected at power on. Changes to this setting will only be evident next time the pre-amp is turned on.

More / Defaults / Film in

If an input is designated here as the 'film input', it has its own setting for volume which over-rides the volume control and the volume is automatically changed to that setting when the film input is selected. This level is set in defaults / volume / film. When listening to a 'normal' stereo input after the film input, volume is restored to the default startup volume set in defaults / volume / start.

No Film is the factory setting for this parameter. To change this, press [enter] when Film in is displayed, then use the [shaft encoder] to select the film input. To avoid the volume jumping between the stereo and film volume settings as you pass over the currently selected input, changing this setting has no direct effect. Once an input is assigned as the film input, it must be deselected if already selected, then selected to enter the film mode.

More / Defaults / Output

The default output is selected when power is applied to the pre-amp. The pre-amp does not have to be turned on. This operation is quite deliberate. Whether the pre-amp is on or off, it was felt important to maintain the currently selected record source so a recording can continue. The record output is maintained in all standby or off modes, dependant only on mains power being available. This setting differs from the default input which is selected every time the pre-amp is turned on – the default output is only selected when mains is connected. Although applied at different times to the default input, changes are made in the same way, with options of No output or any of the six inputs.

More → Defaults → Balance → Bal <30 .... Bal <1

Bal Centre

Bal >1 .... Bal >30

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More → Defaults → Display → Home On → Blank

Logo

Time

Volume

Input

Home off → Blank

Logo

Time

Timeout → Off

30 secs

60 secs

90 secs

Bright → Bright Auto

Bright 1....Bright 9

More / Defaults / Balance

Default balance is similar to default startup volume as it is applied every time the pre-amp is turned on. Default balance is not used in film mode and can only be auditioned if the selected input is not designated as the film input. Similar to adjusting default volumes, when default balance is adjusted the pre-amp follows changes for proper auditioning.

Factory default balance is Bal Centre which will be displayed when you press [enter] from Balance. Adjust balance using the [shaft encoder] from the greatest left bias <30 to a right bias of >30. The default balance can not be adjusted to fully mute left or right speakers, a feature which is only available on the 'live' balance control to check for faults. For those interested in dB, each step is 0.5dB where the volume adjustment permits – if the volume is near minimum or maximum levels, the balance control will be limited in the range it can achieve.

Although volume can be displayed in dB or 0..99, balance is displayed as a number only.

More / Defaults / Display

Press [enter] then use the [shaft encoder] to see the display options

Home On	What the display shows at idle when the pre-amp is on, e.g. time or input
Home Off	What is displayed when the amp is off
Timeout	After using a menu this dictates the time taken to return to the home display
Bright	Display brightness can be changed 'live', but this is the startup setting
dB or 0..99	Volume can be displayed in decibels (dB) or as a range 0..99
Language	The pre-amp hardware permits foreign language support in the future

With any of the above displayed, press [enter] to see the current setting and make changes.

The options for Home On are a blank screen, the Trilogy logo, time of day, volume or input name. It is not logical for the pre-amp to display volume or input when it is switched off, so Home Off does not offer these options. Factory settings for these home pages are blank when the pre-amp is off and time when turned on. Note that the blank display shows a single dot to the left when the pre-amp is off to indicate the unit is powered, as the main power LED is not illuminated. This is a required safety feature.

Timeout can be set to off (disabled), 30, 60 or 90 seconds. This is the time to return to the home display from menus.

Default Bright can be Bright Auto, depending on ambient light, or a fixed setting of Bright 1 (dim) to Bright 9.

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More	→	Defaults	→	Display	→	dB or 0...99	→	Vol dB
								Vol 0...99
				Language	→	English 01		
						Not fitted		

More	→	Defaults	→	Warm Mode	→	Warm off
						Warm on

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More	→	Defaults	→	External	→	Bus power	→	Pwr on
								Pwr off
						Bus remote	→	Not used
								In on
								In warm
								Out on
								Out warm
						High speed	→	Hi off
								Hi on

When the ⎓⎓ ⎓⎓ ⎓⎓⎓⎓⎓ volume option is set to decibels, maximum volume is 0.0dB. Lower volumes are shown as a negative value, e.g. -10.0dB is 10dB below the maximum possible level. This mode will suit those with a technical interest, but might be confusing as the displayed number gets larger as the volume is lowered. The alternative is 0 to 99 where 99 is the maximum level.

The pre-amp has been designed to accept foreign language support in the future. Press [enter] to access this setting, and use the [shaft encoder] to select the Language. Note: Language will only allow English at this time.

More / Defaults / Warm Mode

By default, warm mode is off. When enabled, a short press of the [power] button turns the pre-amp on, a short-press puts it into warm mode, a long press from on or warm will turn the equipment off. For the 909 pre-amp alone, warm mode simply mutes the amplifier and is not of great benefit. This facility is really intended for use with equipment such as the 990 power amp that has a true 'keep warm' mode. When connected via TASLink, placing the 909 pre-amp in warm mode will maintain a steady temperature for the 990 power amp heatsink.

More / Defaults / External

This menu allows changes to TASLink settings for bus power, bus remote GPI and high speed data. We suggest you read the TASLink overview before changing these settings.

Bus power   Bus power can be turned on or off. It is on by default.
The bus must be powered by the pre-amp or another Trilogy power source for the low speed bus to operate

Bus remote   The bus remote line is one pin of the TASLink connector and is used to turn on Trilogy, or other manufacturer's, equipment that is not equipped with the TASLink low speed bus. Alternatively, the bus remote line can be an input to the 909 pre-amp to allow turn-on from other systems. Options are,

Not used	Factory default
In on	Input with <2.5V turn off and >7.5V turn on
In warm	Input as above with additional 2.5V-7.5V keep warm
Out on	Output nominal 10V when pre-amp is on
Out warm	Output nominal 10V when pre-amp is on or warm
	Requires defaults/warm mode to be enabled

High speed   By default the high speed data is off. This is used for external displays and multi-room control systems.

More ➜ Names ➜ Inputs
                          External

More ➜ Names ➜ Inputs ➜ 1Input 1 ➜ Input 1
                                    2Input 2 ➜ Input 2
                                    3Input 3 ➜ Input 3
                                    4Input 4 ➜ Input 4
                                    5Input 5 ➜ Input 5
                                    6Input 6 ➜ Input 6

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More / Names

Inputs are named here. Where Trilogy peripherals are installed on TASLink and can be named, this is also done in these menus. [enter] for Inputs, to name the six inputs. The option to give names to TASLink devices relies on suitable devices being connected.

More / Names / Inputs

The pre-amp leaves the factory with input names set to Input 1, Input 2 etc. These names can be edited, for example to show the equipment type such as CD or Tuner. Names are limited to ten characters, but it is possible that not all characters will fit on the display. We use variable width fonts on the display to improve the look, meaning a capital "B" is much wider than a lower case "i". Using variable width fonts actually increases the number of characters available on the display but it does mean the characters available depends on what you want to display.

With Inputs showing, press [enter] and the display will show the input number and name of the first input, 1Input 1, where the first character will be flashing. At this stage you can select which input name to edit with the [shaft encoder]. When the desired input is displayed, press [enter] again and the first number will disappear to show the input name as it will appear in normal operation, Input 1.

Again the first character is flashing, but now it is flashing on the first character of the name which can be edited using the [shaft encoder]. Pressing [enter] moves to the second character, and so on through all ten possible characters before returning to the first character. Each flashing character can be changed with the [shaft encoder]. There is no delete function, so simply set that character to a space which is found by turning the [shaft encoder] fully anticlockwise. Because it would be impossible to see a flashing, blank space, if you are editing a character that is a space, a dot flashes at the top of that position.

Ten characters are allowed, even if they do not all fit onto the display. If you change characters near the beginning of the name, you may find end characters come into view, but if they are out of view during editing they will not be seen during normal operation. We could have scrolled the display for you to edit end characters otherwise off the display, but our method means you will not waste time editing a long name only to find it does not fit in normal use!

Pressing [enter] to cycle through the characters applies even when the characters are off the end of the display. You may need to press [enter] a few times without seeing a flashing character before returning to the first character flashing.

More ➝ Names ➝ External ➝ 01....24.

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More / Names / External

Shipped from the factory, equipment such as the Trilogy 990 power amp will turn on and off, following the 909 pre-amp if connected over TASLink. There is no need to name devices that are controlled over the TASLink low speed bus, but naming allows their status to be checked through the display of the 909 pre-amp. This status includes running temperature and fault messages. Naming devices also allows their serial number to be checked remotely.

To allow TASLink communication, each device controlled via low speed bus needs a unique ID number. From the factory no ID number is set on such equipment as the 990 power amp.

This menu intelligently combines the assignment of ID numbers and the naming process.

When first run with new equipment, pressing [enter] on this menu will display

`01.`

where 01 is the ID number and the dot means no device has responded. Use the [shaft encoder] to select ID 02, 03 etc. to a maximum of 24.

We suggest you use contiguous ID numbers starting from 01, as unit 01 is the first status that is fetched in that menu. With 01 (or other) displayed, low speed bus units should have their front panel LEDS mostly off with a short flash on. This indicates the button is temporarily not used for on/off and can be used to 'grab' an ID number from the pre-amp. If you need to switch off the devices during this time, for example due to excessive audio levels, use the pre-amp power button to switch off both the 909 pre-amp and connected devices.

A two second press of the power button of equipment such as the 990 power amp, will cause that device's LED to change from an occasional flash to rapid flashing, to indicate it has taken the current ID. With multiple devices, it is possible to move between ID numbers 01,02 etc. using the [shaft encoder] and device LEDs will change their flashing to indicate which is being addressed. Grabbing an ID number where that ID number is used elsewhere, will cause the original device is automatically reset to having no ID number, just as it leaves the factory.

Once a device has an ID number, it will return with the factory name e.g. `01990` and names can be edited in the same way as input naming. Press [enter] and `990` will be displayed with the first character flashing. Edit the name, using [enter] to advance through the characters and [escape] to save. There will be a short delay showing `01.` again while the name is written and read back over the TASLink low speed bus.

More	→	Tools	→	Ext status
				Bus status
				Version
				Bond
				Unbond
				IR Code
				Factory

More	→	Tools	→	Ext status	→	01. ....24.

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More	→	Tools	→	Bus status	→	Pwr	→	9.8V
						Pwr	→	0.00A
						Rem	→	0.0V
						Rem	→	0.00A

More	→	Tools	→	Version	→	This 909	→	Vx.xx
						Display	→	Disp x.xx
						External	→	01. ....24.

More / Tools

Tools offers detailed system information – TASLink peripheral status, a 'health check' for the TASLink bus itself, and a check of software versions in the pre-amp and peripherals. Tools also allows presets to be returned to the factory default and TASLink equipped peripherals to be 'security bonded' to the preamp.

More / Tools / Ext status

For intelligent TASLink devices that have been named (above), their status can be checked using this menu. The pre-amp will first look for unit ID 01 and advance from there until it finds a unit which can report its status. At the maximum, ID 24, the status check wraps round to ID 01.

Unit status and name alternate on the display. To advance from one unit ID to the next, press [enter].

The Trilogy PRC remote has a dedicated status button which starts at ID 01, particularly useful for returning to the first attached unit after checking the status of the last unit without waiting for the system to cycle.

More / Tools / Bus status

This menu displays in turn, TASLink bus power voltage and current, followed by bus remote voltage and current. You may be asked to use these tools as part of telephone support.

More / Tools / Version

It is common practice to update software over a period of time. However, Trilogy do not believe this should happen regularly and are against automatic updates via a computer as this does carry risks. Although typically a dealer tool, options for software version are

```
This 909
Display
External
```

The first two will display the versions of the two main controllers in the pre-amp, although any TASLink connected display will show its own local software version. The external option will display the serial number / version of equipment that has been named – similar in operation to ext status.

More   →   Tools   →   Bond

More   →   Tools   →   Unbond

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More   →   Tools   →   IR Code   →   IR 0000

More / Tools / Bond

To protect your investment in Trilogy equipment, this facility allows many Trilogy peripherals to be security bonded to the 909 pre-amp. The Trilogy 990 power amp is one example that, once bonded, can not be turned on with its local power button or via TASLink other than with the original bonding 909 pre-amp. With target peripherals connected to TASLink, press [enter] and the message Done will be displayed. To prove bonding has been successful, power off equipment such as 990 power amps, either with their front panel buttons or via the 909 pre-amp. Then attempt to power peripherals with their front panel buttons which should not work if bonding has been successful.

Please note there is deliberately no indication which 909 pre-amp is bonded to different power amplifiers etc. This is a security issue.

More / Tools / Unbond

When reconfiguring your system or moving some units to a different location, there may be a need for bonded equipment to be unbonded. Even Trilogy dealers are unable to undo security bonding and only the original 909 pre-amp can unbond those items which it has previously secured. After pressing [enter] and receiving the message 'Done', front panel buttons should be used, like bonding above, to test whether equipment can be turned on locally. In this case, it should now be possible to power peripheral equipment via their local front panel buttons.

More / Tools / IR Code

Although Trilogy offer a very attractive PRC Infra Red remote control, some users will want to use programmable remotes to cover different types of AV equipment. Although some programmable remotes are very capable, experience shows that some can be complicated to setup. The standard factory setting for the 909 pre-amp is Philips' RC5 remote control standard with a system code of 16 (10 hex). Remote numbers 1-6 are the six input buttons, 7 is [escape] and 9 is [enter]. Digit 0 opens external status, program up and down navigate the menu in a similar way to the [shaft encoder], while volume up and down are as expected – menu and volume are separate functions, unlike the front panel [shaft encoder]. Mute on/off is standard, while Time is the button used for Teletext in television systems.

To aid fault finding with your remote control, the IR Code page shows a four digit hexadecimal number for the IR code received. When nothing is received it shows IR 0000. If it continues to show this despite you sending Infra Red commands, then those commands are not Philips RC5.

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More → Tools → Factory → Restore?

For RC5 commands to be valid for the 909 pre-amp, the first two digits should be `D0` or `F0` – the numbers alternate for each key press. Out of interest, the first two digits will be `C0/E0` for RC5 television control. For the possible commands, the last two digits are then,

`00`	External status
`01.....06`	Input 1 …… Input 6
`07`	Escape
`09`	Enter
`0C`	Power
`0D`	Mute
`10`	Volume up
`11`	Volume down
`20`	Menu up
`21`	Menu down
`3C`	Time

To leave the IR code display, you must use the front panel [escape] button, or wait for timeout. You can not escape with infra red escape.

More / Tools / Factory

Selecting `Factory`, will prompt you with `Restore?` To check whether you are really sure you want to reset. If you press [enter], this will return all values to standard, detailed in Appendix B. To abort, press [escape].

TASLink Overview

TASLink is Trilogy's proprietary bus system offering power and data to remote displays, and also data to other Trilogy audio products to synchronise power on/off and provide error information. TASLink has a bus remote line (GPI) allowing equipment from other manufacturers to be powered on/off by the 909 pre-amp, or allow the 909 to be turned on by another system.

Standard Cat5 or Cat5e cables are used, the same as used for computer networks with RJ45 plug terminations. Do not however cross-plug computer networks and TASLink, as damage may result. It should be noted that Cat5/RJ45 cables are not unique to computer networks and are often used for telephony and other control systems. The cross-plugging issue is not unique to Trilogy products and Trilogy can take no responsibility for damage caused by failure to follow this instruction.

By using standard Cat5 wiring, users can take advantage of any structured wiring in their buildings.

Bus power

Nominally 10 Volts, bus power is used for external interfaces such as displays. The number of devices connected to the bus should be discussed with your dealer, as larger systems may require a small additional power supply. Even without displays, power is used by a number of audio devices that have internal optical isolators. Bus power should not be connected to non-Trilogy equipment.

Bus remote on

This is a 10 Volt remote control signal for Trilogy equipment to power up, by starting their turn on procedure. Usually output by the pre-amp and optically isolated in power amps, the pre-amp can be set to receive this signal instead so a different system can deliver the main power-on signal.

High speed bus

This is a balanced data bus used for devices that require regular and fast communication with the pre-amp. An example of this is an external display that needs to update many times a second when adjusting volume. This bus uses industry standard transceivers to offer best performance over long cable length, but the message format is unique to Trilogy. This bus normally operates continuously, but can be disabled in the master if there are no devices that need it. Where TASLink loops through a device that does not use the high speed bus, bus signals are looped locally between connectors and kept well away from audio.

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Low speed (quiet) bus

This quiet bus is proprietary to Trilogy, both electrically and in the messages that are sent. Developed to serve audio devices that do not require fast updates, there are three optically isolated signals (LSS/LSW/LSD) which allow the microcontroller in the audio device to turn off during normal use. The master can briefly enable the microcontroller in the audio device to power up/down, or the audio device can alert the master to a fault which has automatically woken it from sleep. This bus operates infrequently and at 1/100 the frequency of the fast bus. In normal operation the quiet bus will be completely silent.

Rear Panel LEDs

The use of the rear panel LEDs may change over time. Currently, they are used to indicate,

LED A   Bus power on
LED B   Bus remote on
LED C   Bus LSS
LED D   Bus LSW
LED E   Local LSD
LED F   Bus LSD

Diagnostics using LEDs C – F are possible, as part of Trilogy dealer training. You may be asked to look at these LEDs as part of any telephone support.

Front Panel Warning LEDs

Dots to the right of the front panel display are used to indicate problems. The centre right LED will flash if TASLink attached equipment capable of error reporting has a problem. Use more / tools / ext status to check which unit has a problem. When looking at individual unit status, this LED will continue to flash for any units that would produce this warning when on other menu screens.

The top two LEDs on the right will flash if the current drawn on TASLink bus power has exceeded the maximum allowable, 500mA for more than one second or 1000mA for more than half a second.

Similarly, the bottom two right-hand LEDs will flash if the current drawn on the TASLink remote line has exceeded the specification, which is the same as the bus power line. Bus power and remote overcurrent will result in that output being switched off and mains power must be removed from the pre-amp to clear either of these faults.

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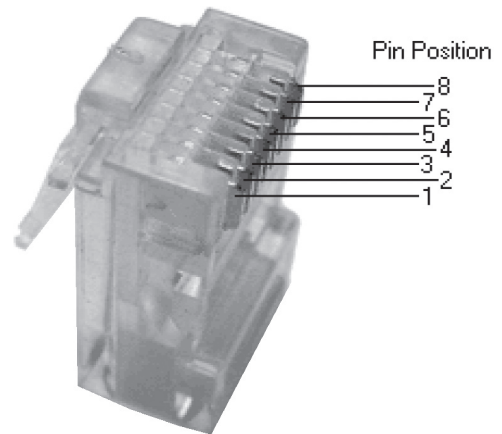## Appendix A

TASLink Pinout

RJ45		FUNCTION
2	Orange/white	BUS POWER
1	White/orange	0V
6	Green/white	LSW
3	White/green	LSS
4	Blue/white	DATA+
5	White/blue	DATA-
8	Brown/white	BUS REMOTE
7	White/brown	LSD

Pin Position

8
7
6
5
4
3
2
1

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Appendix B

Default Settings

More	Time	Sleep	Sleep Off		
More	Time	Timers	All disabled		
More	Defaults	Menu Lock	Unlocked		
More	Defaults	Volume	Trim	Input X	Trim 00
More	Defaults	Volume	Start	-60.0dB	
More	Defaults	Volume	Max	-26.0dB	
More	Defaults	Volume	Film	-26.0dB	
More	Defaults	Input	Input 1		
More	Defaults	Film in	No film		
More	Defaults	Output	No output		
More	Defaults	Balance	Bal Centre		
More	Defaults	Display	Home On	Time	
More	Defaults	Display	Home Off	Blank	
More	Defaults	Display	Timeout	60 secs	
More	Defaults	Display	Bright	Bright Auto	
More	Defaults	Display	dB or 0..99	Vol dB	
More	Defaults	Display	Language	English 01	
More	Names	Inputs	1Input 1	Input 1	
More	Names	Inputs	2Input 2	Input 2	
More	Names	Inputs	3Input 3	Input 3	
More	Names	Inputs	4Input 4	Input 4	
More	Names	Inputs	5Input 5	Input 5	
More	Names	Inputs	5Input 6	Input 6	
More	Names	External	Not set		

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Cleaning

Dust the unit regularly with a soft cloth or soft brush. For more stubborn marks make sure the unit is switched off and disconnected from the power supply. Use a slightly damp cloth with a very small amount of mild detergent such as washing up liquid. Do not use a wet cloth. Be careful when using cleaning or polishing agents. Never use abrasives or alcohol based agents, they will harm the surface finish. Do not allow the unit to become wet when cleaning.

Servicing

Your Trilogy amplifier uses thermionic valves or vacuum tubes for amplification. They are the key component in realising your amplifiers very high performance. Valves have a finite lifespan and will need replacing during the lifetime of the amplifier. This lifespan depends on how long and how hard they are used. In typical use, small signal valves can last for 5000 hours. Frequent switching on and off reduces valve life.

Please bear in mind that some failures can occur early on in a valve's working life, usually due to mechanical stresses that can occur during shipping. This is not a reflection on the amplifiers design but is an inherent characteristic of all valves, and is impossible to predict even during the amplifiers factory burn in period. The good news is considerate circuit design and modern manufacturing methods mean that valves are now typically very reliable once established in service.

It is good practice to replace the valves your amplifier periodically to prevent sudden loss of a signal path. Your Trilogy amplifier uses readily available and inexpensive valves should replacement be needed. If you are in any doubt your Trilogy dealer will help you assess whether your valves need replacing.

If your amplifier exhibits noticeable loss of performance, extreme sensitivity to vibration or becomes excessively noisy then new valves should be fitted by your authorised Trilogy dealer.

There are no user serviceable parts inside. Do not open or attempt to repair the unit. Refer to your authorised Trilogy dealer for servicing.

Declarations

This product is guaranteed against defects in material and workmanship for 3 years from the date of purchase.
This Guarantee excludes valves which are guaranteed for 6 months from date of purchase.
The Guarantee is not transferable and is offered to the original purchaser only.
This guarantee does not limit your statutory rights within the country of purchase.

Failure to comply with any of the above instructions during installation or operation will render the manufacturers warranty null and void.

Marking by the "CE" symbol indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

This amplifier has been tested to ensure that its operation is not adversely affected by normal background levels of radio frequency interference, and that it does not itself generate excessive amounts of radio frequency energy.

If your amplifier exhibits sensitivity to nearby radio frequency devices or is suspected of affecting another device, increase the distance between them. If the problem persists, consult your Trilogy dealer.

Glossary

Enter   used to select next level of menu structure

Escape   used to select previous level of menu structure

Shaft Encoder   The rotary knob, used for volume control and data entry.

Send   An output taken before the volume control for recording or AV loops.

Return   An input back from the recording equipment or AV loops.

Main   The final output to connect to the power amplifier's input.

TASLink   Trilogy Audio Systems' proprietary Link between products.

GPI   General Purpose Interface.   A control voltage on TASLink that can
                    be used as an input or output for connection to non Trilogy equipment.

Bus   An interface where many devices share the same electrical connection.

RJ45   A standard latching connector chosen for TASLink.

Cat5(e)   A standard 4 pair data cable chosen for TASLink.

909 Specifications

Size	424*428*99 (W*D*H)
Size (including connectors)	424*446*99 (W*D*H)
Size (packaged)	590*610*250 (W*D*H)
Weight	7.5Kg
Weight (packaged)	10Kg
Standby power consumption	4 Watts
Maximum power consumption	35 Watts
Inputs	6 RCA "phono" sockets
Input impedance	Greater than 50K Ohms
Main outputs	2 RCA "phono" sockets
Send (tape) outputs	2 RCA "phono" sockets
Output Impedance (Main)	1K5 Ohms
Frequency response	10Hz - 30KHz +/-0.5dB
Gain (Inputs to Send outputs)	0dB
Gain (Inputs to Main outputs)	26dB (+/-1dB)
Film Gain (Inputs to Main outputs)	0dB (+/-1dB)
Distortion	Less than 0.1% A weighted at 1V output
Phase	Phase correct (non inverting)

Specification subject to change.

Returns

Should it be necessary for your 909 to be serviced, please send it in the original packaging to your dealer.

If this is not possible please contact us directly and request a Return Authorisation Number. Please mark this number in the space provided on the outer packaging.

Please do not send products back to us without this number as we will not accept liability for the product.

If a product is not returned to us in its original packaging, after servicing we will return it, in Trilogy packaging and a nominal charge will be made.

Whilst the information given in this document is correct at the time of printing, small production changes in the course of our Company's policy of improvement through continued research and development might not necessarily be indicated in the specification.

If clarification of any point or specification is required, please refer to your Trilogy dealer.

We welcome your feedback, whether positive or negative, to help us further refine our products.

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Or email;	user@trilogyaudio.com
Please visit our web site;	www.trilogyaudio.com

Acknowledgements

Nearly three years in design and development, this current range of Trilogy products are un-paralleled in their performance, aesthetics and system architecture.

Only when a product is technically near perfect, blended with real passion and soul, is it possible for this level of overall performance to be achieved.

A great many people have worked tirelessly to help achieve this goal, and I would like to take this opportunity to thank Emeka Chigbu, Simon Dart, Cliff Orman, Chris Sims and Simon Quill for their dedication to this project.