Accessories and Part Numbers, cont'd

BNC-5 Mini HR Cable	Part number
BNC-5-25'HR (25 feet / 7.6 meters)	26-260-03
BNC-5-50'HR (50 feet / 15.2 meters)	26-260-04
BNC-5-75'HR (75 feet / 22.9 meters)	26-260-16
BNC-5-100'HR (100 feet / 30.5 meters)	26-260-05
BNC-5-150'HR (150 feet / 45.0 meters)	26-260-12
BNC-5-200'HR (200 feet / 60.0 meters)	26-260-06
BNC-5-250'HR (250 feet / 75.0 meters)	26-260-18

BNC-4 Mini HR Cable	Part number
BNC-4-25'HR (25 feet / 7.6 meters)	26-210-04
BNC-4-50'HR (50 feet / 15.2 meters)	26-210-05
BNC-4-75'HR (75 feet / 22.9 meters)	26-210-06
BNC-4-100'HR (100 feet / 30.5 meters)	26-210-07
BNC-4-150'HR (150 feet / 45.0 meters)	26-210-08
BNC-4-200'HR (200 feet / 60.0 meters)	26-210-09
BNC-4-250'HR (250 feet / 75.0 meters)	26-210-54

S-video Cable	Part number
SVHS 6' (6 feet / 1.8 meters)	26-316-02
SVHS 12' (12 feet / 3.7 meters)	26-316-03
SVHS 20' (20 feet / 6.1 meters)	26-316-01
SVHS 30' (30 feet / 9.1 meters)	26-316-04
SVHS 50' (50 feet / 15.2 meters)	26-316-05
SVHS 75' (75 feet / 22.9 meters)	26-316-06
SVHS 100' (100 feet / 30.4 meters)	26-316-07

Composite Video Cable	Part number
SHR 1-3' (3 feet / 0.9 meters)	26-383-01
SHR 1-6' (6 feet / 1.8 meters)	26-383-12
SHR 1-12' (12 feet / 3.7 meters)	26-383-07
SHR 1-25' (25 feet / 7.6 meters)	26-383-04
SHR 1-50' (50 feet / 15.2 meters)	26-383-05
SHR 1-75' (75 feet / 22.9 meters)	26-383-06
SHR 1-100' (100 feet / 30.5 meters)	26-383-03

Table of Contents

Table of Contents, cont'd

68-254-01 F
Printed in the USA
11 00

General

Power	100VAC to 240VAC, 50/60 Hz, 15 watts, internal, auto-switchable
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	Yes, with optional 1U rack shelf, part #60-190-01
Enclosure type	Metal
Enclosure dimensions	1.75" H x 8.75" W x 9.5" D 4.5 cm H x 22.2 cm W x 24.1 cm D
Shipping weight	5 lbs (2.3 kg)
Vibration	ISTA/NSTA 1A in carton (International/National Safe Transit Association)
Approvals	UL, CE, CUL
MTBF	30,000 hours
Warranty	2 years parts and labor

NOTE *Specifications are subject to change without notice.*

Included Parts

Included parts	Part number
Lancia*xi*	60-213-01
Lancia*xi* label	33-244-01
Lancia*xi* User's Manual	68-254-01

Accessories

Accessories	Part number
Extron 19" 1U Universal Rack Shelf	60-190-01
S-video male to 2 BNC adapter, female, 8"	26-353-02
S-video female to 2 BNC, male (various lengths)	26-353-*xx*
BNC male to RCA female adapter	10-264-01

Cables

BNC-4 Mini HR cable is used for RGBS cable runs, and BNC-5 Mini HR cable is used for RGBHV cable runs. Either type can also be used for composite video, S-video, or RGsB. All Extron BNC cables have male gender connectors on both ends. A plenum version of the BNC-5 Mini HR cable is also available.

Specifications

Video input

Number / signal type	1 S-video, 1 composite video
Connectors	1 4-pin mini-DIN female (S-video) 1 BNC female (composite video)
Nominal level(s)	S-video ..... Y: analog — 0.7V p-p ..... C: analog — 0.3V p-p (burst) Composite ..... analog — 0.7V to 1.0V p-p
Impedance	75 ohms
Return loss	-30dB @ 5 MHz

Video output

Number / signal type	1 RGBHV (non-interlaced)
Connectors	5 BNC female
Nominal level	0.7V p-p
Impedance	75 ohms
Return loss	-30dB @ 5 MHz
DC offset	±0.1V maximum

Sync

Output type	RGBHV, RGBS, RGsB
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Output level	TTL ..... 4.0V to 5.0V p-p
Output impedance	75 ohms
Horizontal output frequency	NTSC 3.58 / 4.43 31.5 kHz PAL / SECAM 31.25 kHz
Vertical output frequency*	NTSC 3.58 / 4.43 60 Hz* PAL / SECAM 50 Hz* **When VGA mode is active, vertical frequency is forced to 60 Hz with any video input.*
Polarity	H & V ..... positive or negative (DIP switch-selectable)
	Compositesync .... negative

Control/remote

Serial control port	RS-232 9-pin female D connector
Baud rate and protocol	9600, 8-bit, 1 stop bit, no parity
RS-232 pin configurations	2 = TX, 3 = RX, 5 = GND
Contact closure	9-pin female D connector
Program control	Extron's control program for Windows Extron's Simple Instruction Set – SIS

Chapter One

Introduction

About the Lancia*xi*

Features

About the Lancia*xi*

The Extron Lancia*xi* video scan line doubler (figure 1) is a high resolution, digital video device that converts interlaced video into non-interlaced video. The Lancia*xi* converts the two field frame into a single non-interlaced frame consisting of 525 lines, producing a brighter, higher resolution picture. The additional lines provide more light output and make the overall image brighter.

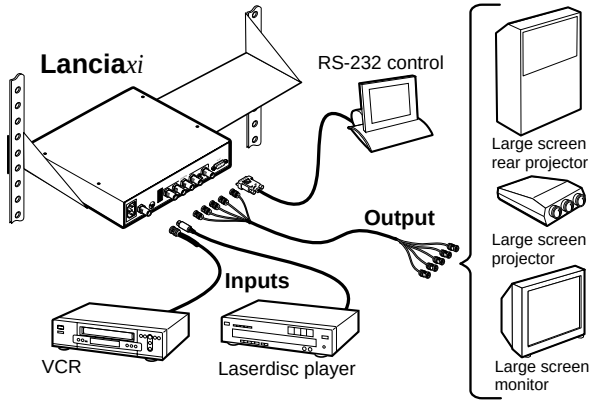


Figure 1 — A typical Lancia*xi* application

The Lancia*xi* has a high quality three-line adaptive comb filter that eliminates most of the chroma noise found in standard composite video signals. In addition, an internal time base corrector (TBC) cleans-up low quality videotape signal noise (common to VHS tape players) for a more stable and sharper image. Motion mode compensation virtually eliminates the jaggies commonly found on video line doublers so that the image is smoother.

The Lancia*xi* includes an internal two input switcher — one S-video input and one composite video input are front panel selectable, remote selectable, and auto-switchable. A quad-standard decoder makes the Lancia*xi* compatible with all international video formats: NTSC 3.58, NTSC 4.43, PAL, and SECAM.

Features

- **Line doubler** — Doubles the resolution of standard video from 525 interlaced lines at 15 kHz to 525 non-interlaced lines at 31.5 kHz for a clearer, brighter output.
- **Demo-mode** — Built-in demo mode allows split screen of video and line doubled video side by side.

Appendix A

Specifications, Accessories, and Part Numbers

- **VGA mode** — Conveniently converts video signals to 480 lines of non-interlaced VGA. This VGA output allows you to plug the Lancia*xi* directly into digital display devices for RGBHV signal transmission.
- **Quad-standard decoder** — The Lancia*xi* is compatible with all international video formats including NTSC 3.58, NTSC 4.43, PAL, and SECAM.
- **Motion mode compensation** — With motion mode compensation, the Lancia*xi* virtually eliminate the jaggies commonly found in line doubled video.
- **Picture controls** — Picture controls include color, hue (tint), horizontal shift, and contrast for each input. The Lancia*xi* saves picture control settings for both inputs.
- **RS-232 control** — A rear panel RS-232 serial port provides access for a third-party remote control system.
- **Input sync detection** — In auto-switch mode, the input with a signal present is automatically selected, perfect for the video loop-back feature of the System 8 PLUS and System 10 PLUS switchers.
- **Windows control software** — Extron's Windows-based control software provides a graphic way to set up and control the CD 800 with an on-screen control panel. It allows the operator to remotely select inputs, make picture adjustments, freeze the image, and store settings for future use.
- **Universal compatibility** — Outputs RGBHV, RGBS, or RGsB signals at 31.5 kHz.
- **Output sync polarity** — Sync polarity can be adjusted using rear panel DIP switches (positive or negative H&V) to allow for any projector to recognize the input from the Lancia*xi* versus a standard VGA input and save different convergence, brightness, and contrast settings.
- **Rack mountable** — The Lancia*xi* fits into a 1U high, 1/2 rack width metal enclosure.

- From the Extron Electronics program group, double-click on the Signal Enhancement Products Help icon.

- From within the Windows-based signal enhancement program, click on the Help entry on the task bar.
- From within the Windows-based signal enhancement program, press the F1 key.

Contact Closure Control

The RS-232 connector provides a way to select an input to the Lancia*xi* using a remote contact closure device and indicate the selected input on the contact closure device. Contact closure control uses pins on the RS-232 / Remote connector that are not used by the RS-232 interface. The contact closure pin assignments are shown in the table on page 4-2.

To select a different input number using a contact closure device, momentarily short the pin for the desired input number to logic ground (pin 5). To force one of the two inputs to be always selected, leave the short to logic ground in place. The short overrides front panel input selections.

The tally pins can be used for remote indication of the selected input. Tally #1 or tally #2 indicate the selected input number with a logic low (0 volts). If an input is not selected, the associated tally pin is at logic high (5 volts).

Figure 8 can be used as a guide to design and build indicator circuits for the tally pins. Since there is no voltage source on the RS-232 connector, an external voltage source is required.

Recommended relays		
Manufacturer	General	Low current
Aromat	DS2	TQ
ITT/Panasonic	R-Z-5C	A5W
Omron	G5Y	G6H

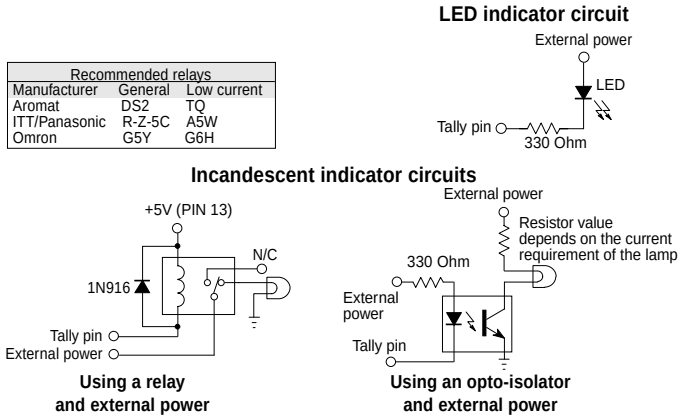


Figure 8 — Remote indicator circuits

Windows-Based Program Control

The Signal Enhancement Control Program is Windows compatible and provides remote control of the following:

- Input selection
- Video adjustments
- Freeze frame control

Installing the software

The program is contained on a single 3.5" diskette and can be run from the floppy drive, or it can be installed and run from the hard drive.

To install the software on the hard drive, run setup.exe from the floppy disk and follow the screen instructions.

By default, the Windows installation creates a C:\S_ENHANC folder and places two icons (Signal Enhancement Products Control Program and Signal Enhancement Products Help) into a group named "Extron Electronics".

Using the software

1. To run the software, double click on the Signal Enhancement Products Control Program icon in the Extron Electronics program group.

2. Click on the comm port that is connected to the Lancia*xi* 's RS-232 port.
3. Extron's Signal Enhancement Products Control Program window (figure 7) displays current input selection (red dot) and control values, as well as the slider controls.

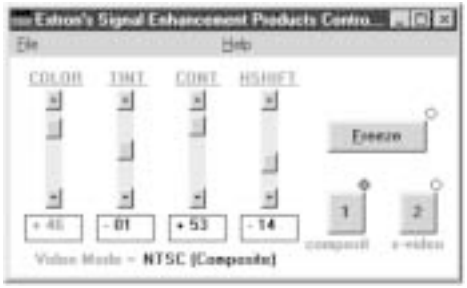


Figure 7 — Signal enhancement program window

Using the help system

For information about program features, you can access the help program in any of the following ways:

Lancia*xi*

Chapter Two

Installation

Installation Overview

To install and set up the Lancia*xi* line doubler for operation, follow these steps:

1. Turn off all of the equipment. Ensure that the video sources (DVD players, laserdisc players, VCRs, satellite receivers, or other devices), the Lancia*xi*, and the output display device are all turned off and disconnected from the power source.
2. Mount the Lancia*xi* . See "Mounting the Lancia*xi* Line Doubler" in this chapter.
3. Attach the cables. See "Rear Panel Cabling" in this chapter.
4. Connect power cords and turn on the display device and the input devices, in that order.
5. Set the rear panel DIP and sync switches. See "Rear Panel Controls" in chapter three.
6. Select an input and adjust the picture controls on the front panel. See "Front Panel Controls and Indicators" in chapter three.

Mounting the Lancia*xi*

1. For optional rack mounting, mount the Lancia*xi* on the left or right side of a 19" 1U Universal Rack Shelf (Extron part #**60-190-01**) (figure 2).

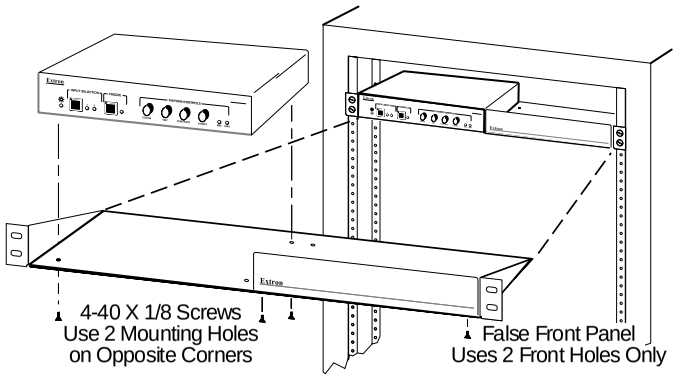


Figure 2 — Rack mounting the Lancia*xi

a. If feet were previously installed on the bottom of the case, remove them.

COMMAND/RESPONSE TABLE

Description	Command ASCII	Command HEX	Response to host	Notes
Input selection				
Select input [x1]	2!	32•21	C2↵	Select input 2
Picture controls				
Freeze on	F	7C	Frz1↵	Freeze (frame) video
Freeze off	f	7E	Frz0↵	Release freeze mode
Set color value to [x2]	[x2] C	[x2] 43	Col [x2]↵	Set color value to [x2]
Increment color value	{C	7B 43	Col [x2]↵	Previous color value +1
Decrement color value	}C	7D 43	Col [x2]↵	Previous color value -1
Set tint value to [x2]	[x2] T	[x2] 54	Tin [x2]↵	Set tint value to [x2]
Increment tint value	{T	7B 54	Tin [x2]↵	Previous tint value +1
Decrement tint value	}T	7D 54	Tin [x2]↵	Previous tint value -1
Set contrast value to [x2]	[x2] ^	[x2] 5E	Con [x2]↵	Set contrast value to [x2]
Increment contrast value	{^	7B 5E	Con [x2]↵	Previous contrast value +1
Decrement contrast value	}^	7D 5E	Con [x2]↵	Previous contrast value -1
Horizontal shift				
Set H shift value to [x6]	[x6] H	[x6] 48	Hph [x6]↵	Set horizontal shift value to [x6]
Increment H shift value	{H	7B 48	Hph [x6]↵	Previous horizontal shift value +1
Decrement H shift value	}H	7D 48	Hph [x6]↵	Previous horizontal shift value -1
Information, part number, and firmware requests				
Information request	I / i	49 / 69	C[x1]•T[x4]•Col[x2]•Tin[x2]•Con[x2]•Hph[x6]•Frz[x3]↵ C2•T1•Col65•Tin70•Con100•Hph39•Frz0↵	Input 2; NTSC 3.58; color — 165; tint —70; contrast — 100; H shift — 39; freeze off
Request for part number	N / n	4E / 6E	N60-213-01↵	60-213-01 = Lancia*xi*
Query software version	Q / q	51 / 71	QVER•[x5]↵	Software version [x5]

E01 — Invalid input channel number (out of range)

E06 — Auto-switch active (DIP switch 1 in enable position)

E10 — Invalid command

E13 — Invalid value (out of range)

Timeout

Pauses of 10 seconds or longer between command ASCII characters result in a timeout. The command operation is aborted with no other indication.

Using the command/response table

The command / response table is on the next page. Lower case letters are allowed in the command field only as indicated. Symbols used throughout the table represent variables in the command / response fields. Command and response examples are shown throughout the table. The ASCII to HEX conversion table below is for use with the command / response table.

Symbol definitions

↵	=	CR / LF (carriage return / line feed) (0x0D 0A)	
•	=	space	
X1	=	Input number	1 or 2
X2	=	Color / tint / contrast value	1 - 127
X3	=	Freeze mode state	0 (off) or 1 (on)
X4	=	Input type	0 = no input 1 = NTSC 3.58 2 = PAL 3 = NTSC 4.43 4 = SECAM
X5	=	Firmware version	*x.xx*
X6	=	Horizontal shift value	1 - 63

ASCII to HEX Conversion Table

Space	20	!	21	"	22	#	23	$	24	%	25	&	26	'	27
(	28	)	29	*	2A	+	2B	,	2C	-	2D		2E	/	2F
Ø	30	1	31	2	32	3	33	4	34	5	35	6	36	7	37
8	38	9	39	:	3A	;	3B	<	3C	=	3D	>	3E	?	3F
@	40	A	41	B	42	C	43	D	44	E	45	F	46	G	47
H	48	I	49	J	4A	K	4B	L	4C	M	4D	N	4E	O	4F
P	50	Q	51	R	52	S	53	T	54	U	55	V	56	W	57
X	58	Y	59	Z	5A	[	5B	\	5C	]	5D	^	5E	_	5F
`	60	a	61	b	62	c	63	d	64	e	65	f	66	g	67
h	68	i	69	j	6A	k	6B	l	6C	m	6D	n	6E	o	6F
p	70	q	71	r	72	s	73	t	74	u	75	v	76	w	77
x	78	y	79	z	7A	{	7B	|	7C	}	7D	~	7E	DEL	7F

Esc	1B	CR	ØD
LF	ØA		

b. Mount the Lancia*xi* on the rack shelf, using two 4-40 x 1 / 8 screws in opposite (diagonal) corners to secure the case to the shelf.

2. If desired, attach a false front panel, or a second ½-rack-width device to the other side of the shelf.

3. Attach the rack shelf to the rack using four 10-32 x ¾" bolts and four #10 beveled dress washers.

Rear Panel Cabling

All connectors are on the rear panel. Figure 3 shows the cable connections on the rear panel of the Lancia*xi* line doubler.

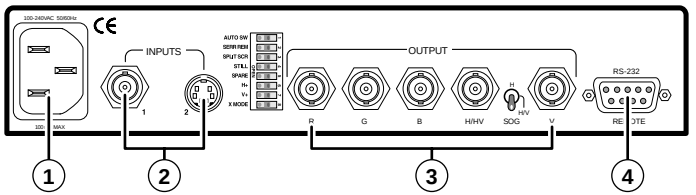


Figure 3 — Rear panel cabling

Power connection

(1) **AC power connector** — Plug a standard IEC power cord into this connector to connect the Lancia*xi* to a 100 to 240VAC, 50 Hz or 60 Hz power source.

Signal input and output connections

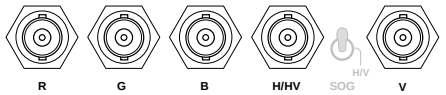
(2) **Input connectors**

Input 1, composite video connector — Connect a composite video device to this BNC connector.

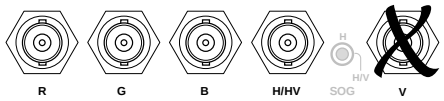
Input 2, S-video connector — Connect an S-video device to this 4-pin mini DIN connector.

(3) **Output connectors**

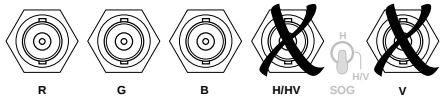
RGBHV video connection — For RGBHV video, connect the display to all five BNC connectors. Ensure the H / HV / SOG switch is in the H position (see "Rear Panel Controls" in chapter four).



RGBS video connection — For RGBS video, connect the display to the following four BNC connectors. Ensure the H / HV / SOG switch is in the HV position (see "Rear Panel Controls" in chapter four).

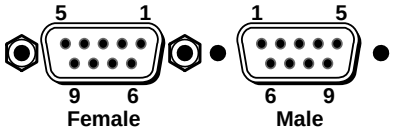


RGsB video connection — For RGsB video, connect the display to the following three BNC connectors. Ensure the H / HV / SOG switch is in the SOG position (see "Rear Panel Controls" in chapter four).



RS-232 connection

④ **RS-232/Remote connector** — Connect a host device, such as a computer or touch control panel, or a remote contact closure device to the Lancia*xi* via this 9-pin D connector for remote control using the Simple Instruction Set™ (SIS) or the Extron graphical control program for Windows.



See chapter four, "Remote Control" for definitions of the SIS commands, details on how to install and use the control software, and information on how to make a remote contact closure device.

Lancia*xi*-initiated messages

When a local event, such as a front panel operation or error condition, occurs, the Lancia*xi* responds by sending a message to the host. The Lancia*xi*-initiated messages are listed below:

(C) Copyright 1998, Extron Electronics Lanciaxi, V*x.xx* ↵
The Lancia*xi* issues the copyright message when it first powers on. V*x.xx* is the firmware version number.

Reconfig ↵
The Lancia*xi* initiates this message when there is a change of the selected input or any picture control setting.

Factory Defaults Reset on Channel #1 ↵

Factory Defaults Reset on Channel #2 ↵
Reported if the Freeze button is pressed during power up.

RS-232 - Overrun ↵

RS-232 - Noise ↵

RS-232 - Framing ↵

RS-232 - Overflow ↵
These Lancia*xi*-initiated message indicate an RS-232 communication error. Possible causes include an RS-232 connection or baud rate problem.

RAM Test Failed ↵

ROM Checksum Failed ↵

Serial EEPROM Checksum failed ↵

6811 EEPROM Checksum failed ↵

New 6811 Installed ↵

New Serial EEPROM Installed ↵

Invalid Jumpers - Unknown - *xxxx* ↵
If an error occurs during power-up, the Lancia*xi* initiates one or more of the messages listed above. Call the Extron customer support hotline.

Error responses

When the Lancia*xi* receives a valid SIS command, it executes the command and sends a response to the host device. If the Lancia*xi* is unable to execute the command because the command is invalid or it contains invalid parameters, the Lancia*xi* returns an error response to the host. The error response codes are:

The Lancia*xi* line doubler's rear panel RS-232/Remote connector (figure 6) can be connected to the serial port output of a host device, such as a computer or control system, or to a remote contact closure device. Remote communications with the Lancia*xi* are via Extron's Simple Instruction Set, Extron's Windows-based control program, or pin-programmed in the case of a contact closure device.

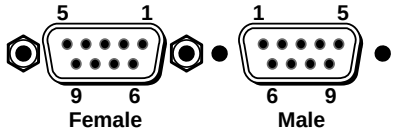


Figure 6 — RS-232/Remote connector pinout

The RS-232 protocol of the rear panel RS-232/Remote connector is 9600 baud, 1 stop bit, no parity, and no flow control. When the Lancia*xi* receives an RS-232 communication, the front panel Min LED blinks once, then the Max LED blinks. (In Executive mode, the LEDs are on and do not blink.) The connector has the following pin assignments:

Pin	RS-232	Contact closure	Function
1	—	—	Not used
2	TX	—	Transmit data (-)
3	RX	—	Receive data (+)
4	—	—	Not used
5	Gnd	Gnd	Signal ground
6	—	In#1	Input #1
7	—	In#2	Input #2
8	—	T#1	Tally #1
9	—	T#2	Tally #2

Simple Instruction Set Control

Host-to-interface communications

SIS commands consist of one or more characters per field. No special characters are required to begin or end a command character sequence. When a command is valid, the Lancia*xi* executes the command and sends a response to the host device. All responses from the Lancia*xi* to the host end with a carriage return and a line feed (CR/LF = ↵), which signals the end of the response character string. A string is one or more characters.

Chapter Three

Operation

Front Panel Controls and Indicators

Figure 4 shows the controls and indicators on the front panel of the Lancia*xi* line doubler.

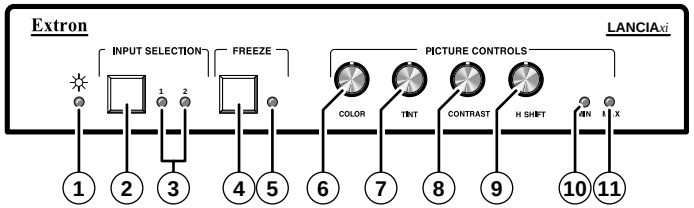


Figure 4 — Front panel controls and indicators

1. **Power LED** — The Power LED lights to indicate power is on. If AC voltage is available, power is on. When power is first applied, all front panel LEDs flash to indicate that the power up sequence was accomplished satisfactorily.
2. **Input Selection button** — Pushing the Input Selection button toggles between input 1 (composite video) and input 2 (S-video).
3. **Input 1 and Input 2 LEDs** — These LEDs indicate the selected input.
4. **Freeze button** — Pushing the Freeze button toggles between freeze frame or motion mode.
5. **Freeze LED** — The Freeze LED indicates that the Lancia*xi* is in freeze frame mode. While this LED is lit, the video output is a single frame of video. Press the freeze button to return to motion mode.
6. **Color adjustment** — Color intensity adjustment control.
7. **Tint adjustment** — Tint (hue) adjustment control.
8. **Contrast adjustment** — Contrast and brightness control.
9. **H Shift adjustment** — Horizontal centering control.

NOTE

1. *The picture control adjustments (Color, Tint, Contrast, and H Shift) have no mechanical limits. When the minimum or maximum limit is reached the Min or Max LED blinks.*
2. *The Min and Max LEDs both blink once when a picture control adjustment is turned through the default value.*

Chapter Four

Remote Control

Simple Instruction Set Control

Windows-Based Program Control

Contact Closure Control

If the image is not displayed correctly

1. If the picture bends or flags at the top of the screen, change the position of the serration pulse removal DIP switch.
2. If the output image looks too green, the Lancia*xi* may be set to sync on green (the H / HV / SOG switch set to SOG).
3. If the picture hangs off the edge of the screen, adjust the H Shift control.
4. If the picture jitters while displaying still video (such as text or line drawings), set the right side of the Still Mode DIP switch down.

   If displaying moving video (such as a movie), set the left side of the Still Mode DIP switch down.
5. Readjust the picture controls after replacing a video source.
6. If the image still does not display properly, call the Extron customer support hotline.

If the image does not respond to picture controls

1. The Lancia*xi* is in executive mode. Set the left side of the Executive Mode DIP switch down.

3. *To reset the picture control adjustments to their default values, press and hold the Freeze button during power-up. The values for the current input are reset to the factory default settings.*
4. *The picture control adjustments increase or decrease a value that is stored in nonvolatile memory. The memory stores two sets of four values, one set for each input. Each set includes the current values for the four picture control adjustments.*

(10) **Min LED** — Blinks to indicate that the minimum limit has been reached for the picture control being adjusted.

(11) **Max LED** — Blinks to indicate that the maximum limit has been reached for the picture control being adjusted.

NOTE

1. *There is no indication that a picture control adjustment is at its limit unless its adjustment knob is being turned.*
2. *When the Lancia*xi* is in executive mode (see "Rear Panel Controls") the picture controls are disabled and the Min and Max LEDs both light.*
3. *If a picture control is not available for the video type in use (such the Tint control when the input type is PAL), the Min and Max LEDs blink continuously when the unavailable control knob is turned.*

Rear Panel Controls

Figure 5 shows the controls on the rear panel of the Lancia*xi* line doubler.

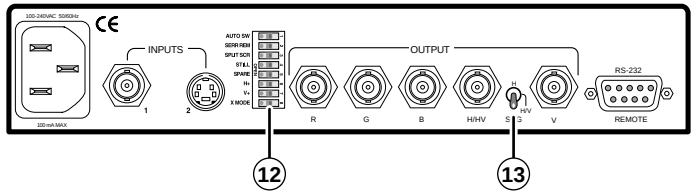


Figure 5 — Rear panel controls

(12) **DIP switches** — The functions of the DIP switches follow. The DIP switches are numbered 1 through 8 from top to bottom.

Set the DIP switches, located on the rear panel of the Lancia*xi*, as required. The right side of the switch module is the enable position.

AUTO SW (auto switch mode) —

Disabled — Use manual input selection via the front panel Input Selection button or through the RS-232 connector.

Enabled — The input with a video signal present is selected automatically. If video is present on both inputs, input 2 is selected.

SERR REM (serration pulse removal) —

Disabled — Serration pulses are passed along with the vertical sync pulse.

Enabled — Serration pulses are removed from the output vertical sync pulse.

SPLIT SCR (split screen) —

Disabled — Split screen is disabled.

Enabled — Split screen (demo mode) displays the selected interlaced video on the left side of the screen and the line doubled video on the right half of the screen.

STILL (still mode) —

Disabled — Selects motion compensation mode, which optimizes motion video such as from DVD and laserdisc players.

Enabled — Selects still mode, which enhances still video such as text, for easier reading.

VGA (VGA mode) —

Disabled — The number of horizontal output lines is twice the number of input lines per screen scan. For NTSC, the number of horizontal lines, normally 262.5, doubles to 525. For PAL, the number of horizontal lines, normally 312.5, doubles to 625.

Enabled — The active vertical resolution becomes 480 non-interlaced horizontal lines, regardless of input.

H+ (horizontal sync polarity pulse) —

Disabled — The horizontal sync polarity will be negative.

Enabled — The horizontal sync polarity will be positive.

V+ (vertical sync polarity pulse) —

Disabled — The vertical sync polarity will be negative.

Enabled — The vertical sync polarity will be positive.

X MODE (executive mode) —

Disabled — All front panel operations are enabled.

Enabled — Front panel picture control adjustments (Color, Tint, Contrast, and H Shift) are locked out. The front panel Min and Max LEDs light together to indicate that executive mode is enabled.

⑬ **H/HV/SOG switch** — This switch selects the sync signal that is output on the output H BNC.

H position — Horizontal sync only is output on the H BNC. Vertical sync is output on the V BNC. Use this switch position for RGBHV video.

HV position — Composite (horizontal and vertical) sync is output on the H BNC. Use this switch position for RGBS video.

SOG position — Sync is on the green signal and is not output on the H BNC. Use this switch position for RGsB video.

Operation

Plug in all system components and turn on the input devices (DVD player, laserdisc player, DSS receiver, etc.) and the output device. Set the input devices to output video in accordance with their own operating instructions. The image should appear on the screen.

For each input, adjust the picture controls (Color, Tint, Contrast, and H Shift) for the best possible image.

Troubleshooting

If the image does not appear

1. Ensure that all devices are plugged in and powered on. The Lancia*xi* is receiving power if the front panel power LED is lit.
2. Ensure that an active input is selected on the Lancia*xi*.
3. Ensure that the H / HV / SOG switch is in the correct position for the video output.
4. Ensure that the horizontal and vertical sync DIP switches are in the correct position.
5. Check the cabling and make corrections as necessary.
6. Call the Extron customer support hotline if necessary.