Sharp Projector(s) Network Configuration Operation Manual

For	The

XG-V10WU	XG-V10XU
XG-V10WM	XG-V10XM

Sections:

- 1.) AN-L10T Optional Card Installation
- 2.) Projector Menu Configuration
- 3.) S.A.P.S. Software Configuration

What is a Network?

A network is a group of computers, printers, projectors or other devices that are connected with cables or wirelessly (without cables). Information travels over the cables or through the airwaves, allowing network users to exchange documents and data with each other, print to the same printers, and generally share any hardware or software that is connected to the network. Each computer, printer, or other peripheral device that is connected to the network is called a "NODE". Networks can have tens or thousands of nodes, In reference to the S.A.P.S. software 250 nodes or XG-V10WU/M or XG-V10XU/M projectors can be connected.

The XG-V10W / XU / M projectors are network accessible through the AN-L10T optional 10Base - T Network adapter. This optional card enables the enduser to control and monitor projector operations through an existing LAN Network.

In order to configure the XG-V10W / XU / M projectors to an existing LAN the following must occur:

- 1.) Install AN-L10T Optional LAN Board
- 2.) Configure XG-V10W / XU / M Projector Menu Setup
- 2.) Configure S.A.P.S. Software

Installation of the AN-L10T LAN Card into the Projector

The following explains the installation of the AN-L10T Optional LAN Board into the XG-V10W/XU/M Projectors.





The AN-L10T 10 base-T network adapter board can be installed in the expansion slot on the side of the XG-V10U projector to allow you to use an existing 10 base-T LAN cabling to connect V10's that will be controlled via the SAPS software.

When installing the expansion cards you must do the following:

- 1.) Shut projector Off.
- 2.) Remove the three screws from expansion plate cover. (Refer to Figure A)
- 3.) Remove (4) four screws that secure the RF shield (Refer to **Figure B**)

NOTE: Number 2 - Only needs to be done if expansion slot is used for first time.

- 4.) Remove the cover plate from the optional expansion board that will be installed into the slot.
- 5.) Insert the expansion board into the connector (Refer to Figure C)
- 6.) Secure the expansion cover to the board.

Expansion Board Installation

Expansion Slot Closed (with cover)



Screws that secure Expansion Plate cover (Fig A).

Expansion Slot with RF shield.



These (4) four screws secure shield. (Fig B)

NOTE: The RF Shield only needs to be removed if expansion slot is used for first time.



Projector Menu SetUp for the AN-L10T Optional Expansion Board

The following "Projector Menu" functions need to be set in order to configure the projector to be used with the AN-L10T LAN card.

- 1.) ID Number Setup
- 2.) Optional Board (LAN Board) Setup

1.) To Setup the ID Number, proceed to the Projector menu "Options 2" and toggle down to the Set ID Number using the down arrow button on the projector.

Options				
👌 Lamp Timer				
👌 Lamp Mode	⇒ Õ5			
PRJ Mode	+12			
🔚 Stack Setting				
C Keylock Level	+ 🔂			
Set Inputs	+			
BS-232C → 96	00 bps	-		
Set ID No.	+ 011	ID No.	(0 1 1
😎 Password	+			
A LAN Band	-			

The example we are using is ID # 11 as indicated above

2.) When the LAN board is installed, select Menu Button "OPTIONS 2" from the menu screen. "LAN BOARD" will appear for the option board setting.

G Options	
Eamp Timer	
💍 Lamp Mode	→ 00
PRJ Mode	→[]
🔚 Stack Setting	+8
🔒 Keylock Level	> 🔂
Set Inputs	+
📰 RS-232C 🔺	9600 bps
Set ID No.	+ 011
C Password	+
IAN Board	+

There will be three items to configure thru the "LAN Board" menu option through the "Options 2" Menu.

- 1.) IP Address Set
- 2.) Gateway Set
- 3.) Subnet Mask

🎯 Options		
C Lamp Timer		
Camp Mode	→ Q5:	
- PRJ Mode	+2	
Stack Setting	+8	
🔁 Keylock Level	+ 🔂	
Set Inputs	+	
📰 RS-232C 🔺 🎫	600 bps	
Set ID No.	→ 011	
Password	+	
I LAN Board	+	IP Address Set
		Gateway Set
		Subnet Mask

1.) The first option to be configured is "IP Address Set" When that option is selected, the following menu will appear.

S Options		
& Lamp Timer		
C Lamp Mode	- 00	
PRJ Mode	+	
Stack Setting	+8	
A Keylock Level	+ 🖯	
Set Inputs	+	
RS-232C + 2	600 bps	
Set ID No.	+ 011	
Password	+	
A LAN Board	+	IP Address Set
		Gateway Set
		Subnet Mask
		Language
P Address Set 1 9 2	168 00	01,005

NOTE: The fields following "IP Address Set" will be blank if the LAN Card is used for first time.

(For Example Only)

NOTE: **The IP Address used is an example ONLY**. This information is obtained through the IT / MIS Department.

The **IP Address** is a unique string of numbers that identifies a computer on the network. These numbers are usually shown in groups separated by periods,like this: 123.123.23.2. All resources on the Internet must have an IP address --or else they're not on the Internet at all.

2.) The second option to be configured is "Gateway Set" when that option is selected, the following menu will appear.

-O-Lamp timer	, An	
C Lamp Mode	+ :40	
PRJ Mode	+	
a Stack Setting	+9	
A Keylock Level	+ 🔂	
Set Inputs	+	
ERS-232C -> ES	600 bps	
Set ID No.	→ 011	
C Password	+	
🛷 LAN Board	*	IP Address Set
		Gateway Set
		Subnet Mask
		- Long to a source of the sour

NOTE: The fields following "Gateway Set" will be blank if the LAN Card is used for first time.

(For Example Only)

A **Gateway** is a network point that acts as an entrance to another network. On the network, a node or stopping point can be either a gateway node or a host (end-point) node. Both the computers of Internet users and the computers that serve pages to users are host nodes. The computers that control traffic within your company's network or at your local Internet service provider (ISP) are gateway nodes.

NOTE: **The "Gateway Set" address used is an example ONLY**. This information is obtained through the IT / MIS Department.

3.) The third option to be configured is "Subnet Mask" When that option is selected, the following menu will appear.

C Lamp Timer		
C Lamp Mode	 ⇒ 00; 	
PRJ Mode	+2	
a Stack Setting	+8	
Reylock Level	+ 🔂	
Set Inputs	+	
E RS-232C -> 9	600 bps	
Set ID No.	→ 011	
C Password	*	
🗢 LAN Board	→	IP Address Set
		Gateway Set
		Subnet Mask

NOTE: The fields following "SubNet Mask" will be blank if the LAN Card is used for first time.

(For Example Only)

NOTE: **The "Subnet Mask" address used is an example ONLY**. This information is obtained through the IT / MIS Department.

A **"Subnet Mask"** is a portion of a network that shares a common address component. On most networks, subnets are defined as all devices whose IP addresses have the same prefix. For example, all devices with IP addresses that start with 100.100.100. would be part of the same subnet Dividing a network into subnets is useful for both security and performance reasons. IP networks are divided using a subnet mask.

NOTE: IP Address, Gatway Set, Subnet Mask addresses must be obtained from IT / MIS Department.

NOTE: When the LAN board is installed the RS232C input control is disabled.

NOTE: On the XG-V10W/XU/M modified projectors the "Aux" connection becomes an input for RS232.

S.A.P.S Software V1.41 Network Configuration

The steps below show how to configure the S.A.P.S. software for an existing Network.

Launch the SAPS software, depending on how the software was originally configured, the menu when launched will be for either "Single" projector mode or "Multiple" projector mode. The projector mode will be indicated at the top left portion of the SAPS software. (Refer to Figure 1)

Single Control				
<u>File</u> <u>Mode</u> <u>Option</u> <u>Control</u> Op	ition <u>H</u> elp			
Upen				
Projector Setting Operation Mode Setting	ICT Input3 PICT Fine Sync Input4 P	PICT Input5 PICT Audio	Options	
Scan Setting 😽		Lens		
Save Control Setting Load Control Setting	IFF	Focus	Keystone	
Save Gamma Data Load Gamma Data	nput3 Black Screen	() <u>> >></u> < <<		-96 [
E <u>x</u> it	Freeze			
_ Input1 / 2 / 3 Gamma	Auto Sync		-127 🗍 🤟	96 :
STANDARD	Auto Sync	V-SIZE		
STANDARD				
		Reset	Reset	C Reset
		>		
			Receive	
4				

(Figure 1)

If the projector is in "Single" projector mode, you must change to "Multiple" projector mode. Through this menu also select "Use ID Number" This can be accomplished through the "File" menu option "Operation Mode Setting". **(Refer to Figure 2)**

ctor Operation Mode ector Operation Mode
ector Operation Mode
Imber
12003 0
D Number
ID Number

(Figure 2)

Identify the "Multiple Projector Operation Mode" setting and the "Use ID Numbers" option. Once the "Projector Operation Mode " setting has been changed the SAPS program screen will change. (Refer to Figure 3)

NOTE: Make sure projectors have different I.D. numbers (refer to ID # Setup on page 4)

Multiple Control File Mode Dation Control Dation Help				>
All Projector				
Power ON OFF	AV Mute	ON	OFF	
	Black Screen	ON	OFF	
	Mute	ON	OFF	Í.
Group Projector				
Power ON OFF	Volume	+	*	
Input Mode RGB1 RGB2 RGB3	AV Mute	ON	OFF	
Video1 Video2 Video3	Black Screen	ON	OFF	
Consum Lint	Mute	ON	OFF	
Power No Group		Input Mod	a [\	Vol Refresh All
				Refresh
				ADV CTL
All Projector List				
Power Projector ID Port Group	Input Lam	p Status	Vol	Info Refresh All
				Refresh
				ADV CIL

(Figure 3)

Note: The projector must be in multiple projector mode in order to access the "Control Options" menu to continue with the network configuration involving the SAPS software. In Single Projector mode the Network control options menu items are inactive. (Refer to Figure 4) "Single Projector Control" is for RS232 connection.



(Figure 4)

Once the "Multiple Control" mode has been identified we can now proceed to the "Projector Setting " menu option under the "File" menu. (Refer to Figure 5)

Multiple Control Eile Mode Option Control C)ption <u>H</u> e	lp								
Projector Setting	-									
Operation Mode Setting Scan Setting	OFF		,	AV Mute	Γ	ON		F		
Save Control Setting			E	Black Scre	en 📘	ON		F		
Load Control Setting	-		ħ	Mute		ON	OF	F		
Save Gamma Data Load Gamma Data	OFF		· · · · · · · · · · · · · · · · · · ·	/olume		+	1 -			_
Exit	GB2	RGB3	1 /	AV Mute	Ē	ON] OF	' F		
Video1	Video2	Video3] =	Black Scre	en 🗌	ON		F		
Crearus Lint			ħ	Mute		ON	OF	F		
Power No Group					1	Input M	ode	Vol	T	Refresh All Refresh ADV CTL
All Projector List										
Power Projector	ID	Port Gr	oup	Input I	Lamp	Status	Vol		nfo	Refresh All Refresh ADV CTL
									Þ	

Figure 5

From the "Projector Setting" Mode we identify the "ID" Number which will be used by the projector. (Refer to Figure 6)

This "ID" number is selected and inputted on the Projector from the projector menu under "Options 2" (Refer to ID number Setup on page 4). This "ID" number is an additional option to help the enduser / customer to better identify, monitor and control Sharp projectors which are attached to a Network.

Identify "Port" as LAN and Input the IP address. (Refer to Figure 6)

NOTE: IP address must be obtained from you IT / MIS Department

Projector Set	ting	×
ID 11	Port LAN	•
Port Status -		E
Speed		÷
IP Address	192.168.001.005	
Use Projec	tor	
Projector XC	3∨10W	-
E Backed Up	, By	
ок	Cancel	Apply

Figure 6

Under the "Projector" item select the proper projector XG-V10W / XU / M. Finally place a check in the "Use Projector" box.

After confirming / adjusting the "Projector Setting" menu the "Apply" button will become active (Not ghosted) click the "apply" button and then the "OK" button and your projector's ID number and the port idendified will appear under the "All Projector List". **(Refer to Figure 7)**

SMultiple Control	<u>1</u> elp				×
Power ON OFF	T	AV Mute	ON 1	OFF 1	
		Black Screen		OFF	
		Black Screen		OFF	
		Mute		OFF	
Group Projector	1	982 F		1	
Power ON OFF		Volume	+	-	
Input Mode RGB1 RGB2	RGB3	AV Mute		OFF	
Video1Video2	Video3	Black Screen		OFF	
Over up Liet		Mute	ON	OFF	
Power No Group			Innut Mode	Vol	Refresh All
			inpor mode	101	Refresh
					ADV CTL
All Projector List					- Defrech All
Power Projector ID	Port Group	Input Lamp	Status V	/ol Info	Retresh All
SLE	LAN				ADV CTL
4					F

Figure 7

Proceed to the "Control Options" menu of the "Multiple Control" window There are four items which we will be interacting with on this menu option.

 Projector / Unique Name E-Mail Address Book Send E-mail Setting Sender setting
Real Multiple Control
File Mode Option Control Option Help
Projector Timer Control
All Projector Password Power C Projector/Unique Name
<u>G</u> roup Setting
Group Projector <u>E</u> -mail Address Book Send E-mail Setting Sender Setting
Input Mode RC Error Log Viewer
Vic <u>C</u> onfiguration
Figure 8

8)

1.) The first item "Projector / Unique name" is not specifically necessary for configuring the XG-V10 projector to an existing network, it does however offer another opportunity to further help with the process of identifying a projector within a LAN while also assisting the Network / Projector Administrator with projector identification by adding a "Projector Name". (Refer to Figure 9)

Projector Name & Unique Name	×
D:11 LAN	•
Projector Name	
Unique Name	
Password	
Save Password	
OK Cancel Appl	/
Figure 9	

NOTE: The "Unique Name" field is optional, and does not appear on the "All Projector List".

When the Projector Name option appears, you will notice that the "ID" number and the port connection type is already identified. The SAPS software is reading the information previously identified through the "Projector Setting" from the "File" menu option. (Refer to Figure 6)

For this example we are going to call our unit "Sharp's Unit". After entering the projector name, depress the apply button which at this time will become active. Then depress the "OK" button. Your unit now has a "Projector Name". This name can be anything to help the Administrator identify the projector and or placement of the Unit. For example, the projector could have been called "3rdFl ConRm" or " Cafeteria" depending on the physical layout and or number of projectors involved. **(Refer to Figure 10)**

NOTE: the "Projector Name" field is limited to 12 Characters Maximum.

NOTE: the SAPS software can control up to 250 individual or grouped projectors. Please refer to your SAPS operation manual for further details on grouping projectors.

Projector Name & Unique Name	×
ID: 11 LAN	-
Projector Name	
Sharp's Unit	
Unique Name	
Password	
OK Cancel Apply	/

Figure 10

After a "Projector / Unique Name" has been completed the changes will be reflected in the All projector List" on the bottom of the "Multiple Projector" screen. (Refer to Figure 11)

Power	Projector	ID	Port	Group	Input	Lamp	Status	Vol	Info	Refresh Al
	Sharp's Unit	11	LAN		10					Refresh
										ADV CTL
										AUY
							Ť.		F	

Figure 11

2.) The next item to configure is the "E-mail Address Book" These addresses are the e-mail address's for who ever is going to receive "Projector Condition" (sending periodic e-mail messages on projector status) and "Projector Error" e-mail messages (Notifying that errors have occurred) Individuals can be within the corporate network or have access to email. (Refer to Figure 12)

No Name	E-mail Address
1 Paul	Paul@test.network.net
2 Johnny	Johnny@test.network.net
3	
4 5	
6	
7	
8	
9	
10 11	
12	
13	
14	
15	
16	
me	E-mail Address

Figure 12

NOTE: Email address must be entire address even if individual is local. (Refer to Figure 12)

3.) One of the major advantages of using the SAPS software with the Networked V10 is status and diagnostics of the projector(s).

The E-mail function e-mails your projector failure problems while also giving the E-mail recipients an overall status report. The Status report timing, when E-mail is sent out and what faults or projector errors will be E-mailed immediately. (Refer to Figure 13)

🛃 Send E-mail Settir	ng				
C Not Send E-mail					
F Error Occurrence	<u>6</u>				1
Optional Timing	Next E-mail s	ending time:	Sep/20/2001	10:00 PM	
Every day	-	10	• : 00	▼ PM	-
Additional Attached Pick up the error Temp Fan	d Information — or —	I Lamp I Comr) nunication		
Control Se	rtting Data				

Figure 13

4.) The last item under the "Control Option" menu is "Sender Setting". (Refer to Figure 14) The SAPS software makes it possible to automatically send an e-mail message containing information concerning errors to a pre set e-mail address should projector errors be detected.

The "E-mail Server (SMTP Server) line is where the actual IP address of your mail server is placed. *(Contact your IT / MIS group for the proper Server IP address)*

The "Sender E-mail Address" is the Administrators e-mail address as defined by the Network Administrator . (your E-mail address on the company Server)

The "Sender Name" is your name.

Sender Setting
E-mail Server(SMTP Server)
Sender E-mail Address
Sender Name
Sender Information
OK
Figure 14

"Sender Infromation" allows you to add your general comments to any e-mail sent out.

This concludes the S.A.P.S section on Network Setup. Assuming that all the information is correct and all the following steps were followed, the last item is to Scan the network for the existing projector(s) which was just setup.

The "Scan Setting" once again is under the "File" menu of the "Multiple Control" screen of the S.A.P.S. software. (*Refer to Figure 5* for detailed screen image on **page 10**)

喝 Multiple Control	
File Mode Option Control	Option <u>H</u> elp
Öpen	
<u>P</u> rojector Setting Operation Mode Setting Scan Setting	OFF
Save Control Setting Load Control Setting	
Save Gamma Data	

Once identifying the "Scan Setting" menu option, the following screen appears. Depending on your projector setup and port configuration you must select what com ports to scan if any. For this example there are no other projectors connected so, no communication ports (com) need to be selected. If the LAN address is not already in the system please input the IP address under the LAN line item. Once the LAN address is entered depress the "Add" button and the IP address will appear under the "IP Address", check the box next to the IP address which indicated that is a current projector and we want the unit scanned for Status. (Refer to Figure 15)

COM Port		- Warning
Port	Speed	Redundant
COM 1	9600 bps -	1
COM 2	9600 bps	
🗖 СОМ З	9600 bps	
COM 4	9600 bps	
🗖 сом 5	9600 bps	
🗖 СОМ 6	9600 bps	
COM 7	9600 bps	
🗖 СОМ 8	9600 bps	
🗖 СОМ 9	9600 bps	
COM10	9600 bps 🚽	j L
Transmission Spee	d	
IP Address	Add	Į
192.168.001.00	05 Delete	
		· ·
		OKCancer

Figure 15

Once the "SCAN" button is depressed on the bottom right of the scan setting screen the following window will appear indicating the "Control PC" which is where the S.A.P.S. software is installed is scanning the network for connected projectors by the IP address. (Refer to Figure 16)

lessage	;	>
Now Ga	thering Data	2
ID: 11 1	92.168.001.00)5
Gregg's	unit	
	[]]	
	Can	cel

Figure 16

If the network scan was successful the following window will appear on the "Multiple Control" screen under the "All projector List". (Refer to Figure 17)

Power	Projector	ID	Port	Group	Input	Lamp	Status	Vol	Info	Refresh Al
Ď	Sharp's Unit	11	LAN	532	RGB1	189	Normal	7	1024×76	Refresh
										ADV CTL
										1
1									1	

Figure 17)

The green circle and the information indicated informs the SAPS administrator the unit is on and communicating. Please refer to the SAPS software manual for further information on these fields.

If the projector is not detected with the scan setting the following screen will appear under the "All projector List". **(Refer to Figure 18)**

ower	Projector	ID	Port	Group	Input	Lamp	Status	Vol	Info	Refresh All
7	96 1	11	LAN	50	10 A		Comm	S. 58		Refresh
			N							ADV/CTL
			45							
									100	

Figure 18

At this point verify connection and "S.A.P.S." menu options and contact your IT / MIS department for assistance or **Call 1-888 GO-Sharp (1-888-467-4277) Option 2.**

Definition of Network Terms

A **static IP** is a number (in the form of a dotted quad, i.e.. - 192.168.001.005) that is assigned to a computer by an Internet Service Provider (ISP) or by a Companies IT/MIS (Information Technology / Management Information Systems) Department, to be its permanent address on the Internet. Computers use IP addresses to locate and talk to each other on the Internet, much the same way people use phone numbers to locate and talk to one another on the telephone. It would be simple if every computer that connects to the Internet could have its own static IP number, but when the Internet was first conceived, the architects didn't foresee the need for an unlimited number of IP addresses. Consequently, there are not enough IP numbers to go around.

Dynamic IP address

Is a temporary IP address, which many Internet service providers use to limit the number of static IP addresses they allocate, and economize on the remaining number of IP addresses they possess by temporarily assigning an IP address to a requesting Dynamic Host Configuration Protocol (DHCP) computer from a pool of IP addresses.

Requesting DHCP computers receive a dynamic IP address (think temporary phone number) for the duration of that Internet session or for some other specified amount of time. Once the user disconnects from the Internet, their dynamic IP address goes back into the IP address pool so it can be assigned to another user. Even if the user reconnects immediately, odds are they will not be assigned the same IP address from the pool. To keep our telephone analogy going, using a dynamic IP address is similar to using a pay phone. Unless there is a reason to receive a call, the user does not care what number he or she is calling from.

Dynamic Host Configuration Protocol (DHCP) is a communications protocol that lets network administrators manage centrally and automate the assignment of Internet Protocol (IP) addresses in an organization's network. Using the Internet Protocol, each machine that can connect to the Internet needs a unique IP address. When an organization sets up its computer users with a connection to the Internet, an IP address must be assigned to each machine. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.

A **gateway** is a network point that acts as an entrance to another network. On the Internet, a node or stopping point can be either a gateway node or a host (end-point) node. Both the computers of Internet users and the computers that serve pages to users are host nodes. The computers that control traffic within your company's network or at your local Internet service provider (ISP) are gateway nodes.

A **mask** is used to determine what subnet an IP address belongs to. An IP address has two components, the network address and the host address.

Subnetting enables the network administrator to further divide the host part of the address into two or more subnets.