Smart Console™
Elite series
Installation Guide

For

Smart Console™ E96

Index

Congratulations! You have just purchased the world's most ergonomically advanced console. Your *Smart Console™* should provide you with many years of trouble free operation, however it is important for you to properly install and configure your console prior to operation.

This document contains instructions for assembly, connection and configuration of your *Smart Console™*. If you experience any problems or need any assistance please contact your local distributor or you can contact *SmartAV* technical support in Australia via telephone on: +61 2 9648 6744 or via email on talktous@smartav.net

Before you start opening boxes – Preparation

Let us go through what is needed before installation can be completed.

All the Elite series *Smart Consoles™* are comprised of two parts: a control surface (also referred to as 'the console') and a rack-mounted computer. A series of cables connect these to each other. Ideally the rack-mounted computer will be located in your machine room and three units of rack space should be allocated to it. From there, a second Ethernet connection is required from the rack-mounted computer to your mix engine or to the local area network (LAN) your mix engine is connected to. Both the control surface and the rack-mounted computer will require mains power.

The *Smart Console™* Elite 96 (or E96) is designed to be a free standing mixing surface and correct space should be allocated in your studio for it. Please refer to Plate 5 that details the dimensions of the console. For stability it is necessary the E96 be bolted to the floor through the four threaded holes in the end pieces.

Note that four strong people will be needed to lift and move the console.

Note also that there will need to be sufficient clearance at the back of the console to allow the rear bolster to be opened so that modules may be added and removed. The clearance must also allow room for rear connecting cables and ventilation. All these factors should be considered when considering the location for your console.

Unpacking

The following items should be included in your shipment:

- The control surface (unpopulated – that is without modules)
- The rack computer
- The *Arc™ Scribble Strip scanner*
- A marker pen for the *Scribble Strip*
- An optional monitor arm
- Two wooden lifting handles
- Two power cables
- One five-metre network cable
- One shorter cross-over network cable
- One five-metre VGA cable
- One five-metre RCA
- The DVI dongle
- Manuals
- Software (including backup disks of the Microsoft Windows XP install disk, *SmartAV* install disk, and a drivers disk)
- Various modules depending on the particular console configuration ordered

Initial Assembly

Start by positioning your control surface and attaching it to your studio floor. Moving the console from its packing crate into your studio is achieved by using the two specially constructed wooden lifting handles. Please refer to Plates 3 and 4 that demonstrate the method for inserting the handles. Note the notched part of the handles should be oriented toward the rear of the console. Both handles should be used simultaneously by four people lifting the console carefully so as to keep it flat.

Please observe all safety and lifting precautions to prevent injuries!

Next, secure the rack computer into suitable rack mountings in your machine room, ensuring there is adequate space for ventilation and cooling.

Unpack the modules, but at this stage resist the temptation to fit any of them into the console.

The assembly of the mouldings and metalwork of this console is an intricate exercise that should only be performed by trained factory personnel. Any attempts to disassemble the unit will immediately VOID YOUR WARRANTY.

Initial Connections

Now the control surface is securely positioned and the rack-mounted computer is bolted into location it is time to start connecting the various cables.

Begin with the mains power for each unit. Lift the kidney shaped panel on the right-hand side of your E96 to expose various cables used in connecting it up. Look for an IEC socket. This is where the mains power connects to your console. Run an IEC lead up between the inner panel and the cast aluminium leg and connect it to the IEC socket. Secondly, connect an IEC lead to the rack PC (see Plate 1 Pointer B).

Now run the supplied five-metre VGA cable up the inside of the right leg and connect it to the VGA socket located in the same area as the IEC socket. The other end of the VGA cable connects to the VGA port on the rack (indicated by Pointer D on Plate 1). Connect the DVI dongle shown in Plate 9 to the DVI socket directly above the connector indicated by Pointer D on Plate 1. This should NEVER be removed.

There is an RCA cable that needs to be connected between the console and the rack. It should also run up the right leg of the console, so one end of the supplied five-metre cable connects to the RCA socket located under the kidney-shaped panel. Connect the other end of this cable to the RCA socket marked 'AV' on the back of your rack. Pointer E in Plate 1 indicates this socket.

Next connect the supplied five-metre network cable to the socket marked by Pointer F in Plate 1. Note there are two network sockets on the rack and it is important to connect the correct one to the control surface. The other end of the network cable should be connected to the network hub inside the console. Again run this cable up the right leg of the console and look under the kidney-shaped panel for the network hub. Connect the network cable to any spare socket on the hub.

If the supplied network cable is not long enough then ensure the cable used is a Category 5 cable suitable for 100 Mb/s data speeds. It is important that the console and the rack must be directly connected with a straight-through type network cable and not connected via a LAN.

Later when you wish to scan images from the *Scribble Strip,* position the *Scribble Strip Scanner* on the *Arc™.* The *Scanner* has two spring-loaded wheels at the bottom and one at the top. Position the bottom wheels against the black strip running along the lower edge of the *Arc™* and gently push the *Scanner* upwards while tilting the top of the *Scanner* firmly downwards onto the *Arc™*. When the

top wheel is aligned with the black strip on the upper edge of the *Arc™* there will be a click and the *Scanner* is now in place.

Connect the cable emerging from the *Scanner* to the console – there is a 4-Pin DIN socket for this under the back of the console near where the right-hand end of the *Arc™* joins the body of the console.

Now connect an Ethernet cable from the remaining network socket on the rack (see Pointer C on Plate 1) to your mix engine or to your LAN where your mix engine is also connected. If you connect directly between the rack and your mix engine you will need to use the supplied crossover cable. A straight-through network cable should be used if connecting the console to a LAN.

Physical Configuration Guide

It is now time to start populating the console with the modules. However, let us first look at the different types of modules and note the various legal positions they may occupy in the console.

Running horizontally through the middle of the chassis of every *Smart Console™* Elite is a black medal ridge referred to as the Backplane. (See Plate 2)
It is festooned with connectors and separates the console into top and bottom halves. Modules that are designed for the top half can never be positioned in the bottom half and similarly modules for the lower part can never be fitted into the upper section. Upper modules can be identified by their different profile and the fact that they are longer than the lower modules.

One of the first things you will do (but not yet) is attach the Vacuum Fluorescent Display (VFD) modules directly to the top of this back plane. The central strip contains both these VFD modules with their rectangular dot-matrix display known as the *Scribble Strip Display* and other parts of the strip that are blank.

All modules used with the *Smart Console™* Elite are designed to fit vertically aligned with either a *Scribble Strip Display* section or a non-*Scribble Strip Display* section, depending on their function. For example, a *Fader* module can only be fitted below a *Scribble Strip Display* section but not below a non-*Scribble Strip Display* section.

Every E96 has sixteen module bays, eight above the VFD modules and eight below.

Every console must have an *Expert Panel* and a *Monitor Panel* fitted as a pair above and below a non-*Scribble Strip Display* part of the VFD modules. Every

console must have an Upper *Active Panel* and a Lower *Active Panel* also fitted as a pair above and below a non-*Scribble Strip Display* part of the VFD modules.

There are two positions of non-*Scribble Strip Display* area on any Elite series console. Generally the upper and lower *Active Panels* are fitted to align with the right most of these positions, however some users, such as left-handed engineers, may prefer it fitted in the left-most position.

Now let us turn our attention to the bays above and below the *Scribble Strip Display* areas of the VFD modules. There are two module bays above each *Scribble Strip Display* and two module bays below. The bays above can either house a pair of *EQ/AUX* Modules or a double width module such as the upper part of the *Post* Module or a pair of blanking panels if this bay is unused.

The bays below can either house a pair of *Fader* Modules or a double width module such as the lower part of the *Post* Module or a pair of blanking panels if this bay is unused. The *Post* Module is an optional extra and not necessary for the operation of a console. If a *Post* Module is fitted the upper and lower parts for it must be fitted above and below one another.

Similarly, the *Fader* Modules must be fitted with *EQ/AUX* Modules directly above them. Furthermore both the *Fader* Modules and the *EQ/AUX* Modules must be fitted adjacently in pairs. This is also true for the blanking panels.

Now it is time to begin populating the console with the modules. Initially when the fit of the modules will be tight but this gradually loosen over time. Great care must be taken when fitting the modules to ensure the top surfaces are not damaged.

When the console is shipped it will have the cover strip in place on top of the Backplane. This cover strip has some clusters of magnetic feet attached to it so the magnets at the bottom of the feet hold the cover strip in place. Remove the cover strip by sliding one end of it out from under the cowling and lifting the rest of it up (see Plate 8). Now attach the VFD modules directly to the top of the back plane. Replace the cover strip before inserting the rest of the modules.

So now insert the rest of the modules making sure to observe the legal positioning rules described above. Because *Smart Console ™* is a modular hot-swappable product there will by definition be small gaps between the modules. When fitting the modules it should be done so the modules but-up against the cover strip of the backplane and each other.

The technique for inserting a module is as follows:

Open the rear and front bolsters by grasping the ends of them and lifting them upwards. Then unlatch them before allowing them to swivel downwards and away from the body of the console.

Each module has a handle-end and a connector-end. Position the module in the bay so the connector-end slides in first while the handle-end is still raised slightly (see Plate 6). Next lower the handle-end of the module so it is flush with the base of the bay and, while keeping downward pressure on the connector-end, push the module into place with the handle (see Plate 7). The modules will only click into place if the switch under the handles is lifted. Once the module is seated make sure the switch is pushed back down to ensure it is secured. Removing the modules is the reverse procedure – lift the switch first before pulling out the module.

In the case that the console is not fully populated please install blanking-panels that have been provided to complete the surface.

Powering Up

The correct order for powering up the parts of your *Smart Console™* for the first time is as follows:

First, switch on the rack PC using the switch indicated by Pointer A in Plate 1. The E96 has no rear power switch. On the right-hand end of the *Arc™* press the silver start button. Each module correctly installed in the console should shortly begin to flash the Light Emitting Diode (or LED) in the upper left corner. The *Arc™* should also flash the top-left-most LED (not including VU meters) in all four segments. If any modules do not flash their top-left-most LED then re-seat them in the chassis of the console.

Next, the rack PC will automatically boot. Assuming all connections have been made correctly then the control surface will go into its default state where all the top-left-most LEDs will cease flashing. The screen on the Upper *Active Panel* should also illuminate.

Congratulations! You are now ready to configure your mix engine to operate with the *Smart Console™*. Please refer to the details for your particular engine that have been included separately.

Plate 1: Rear of rack showing connection points.

Plate 2: Backplane of an unpopulated console.

Plate 3: Inserting wooden lifting handles

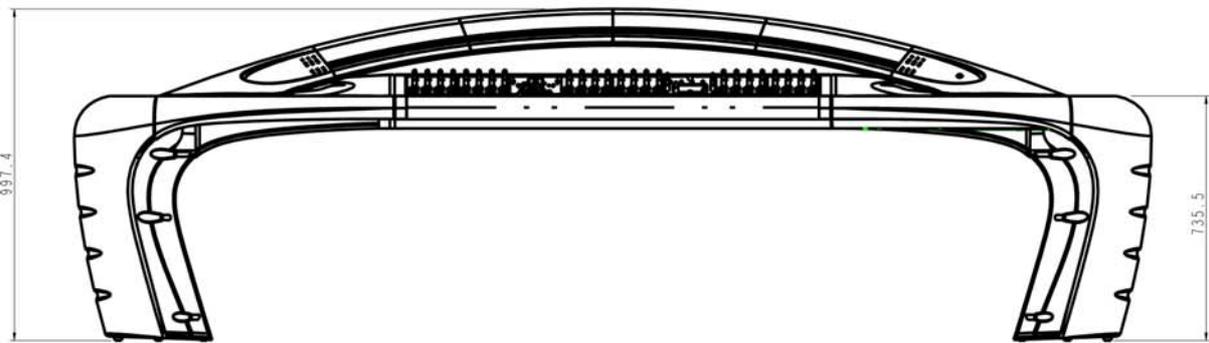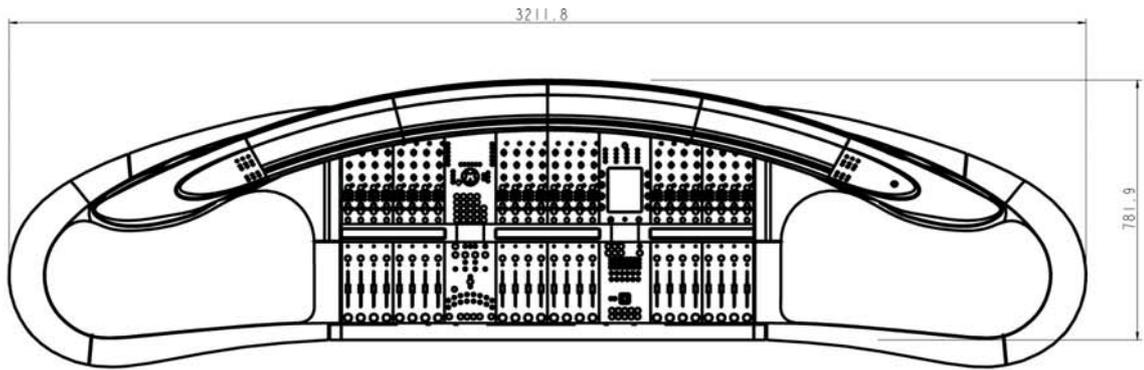**Plate 4:** Lifting the E96 by the wooden lifting handles

TOP VIEW

FRONT VIEW

RIGHT HAND SIDE VIEW
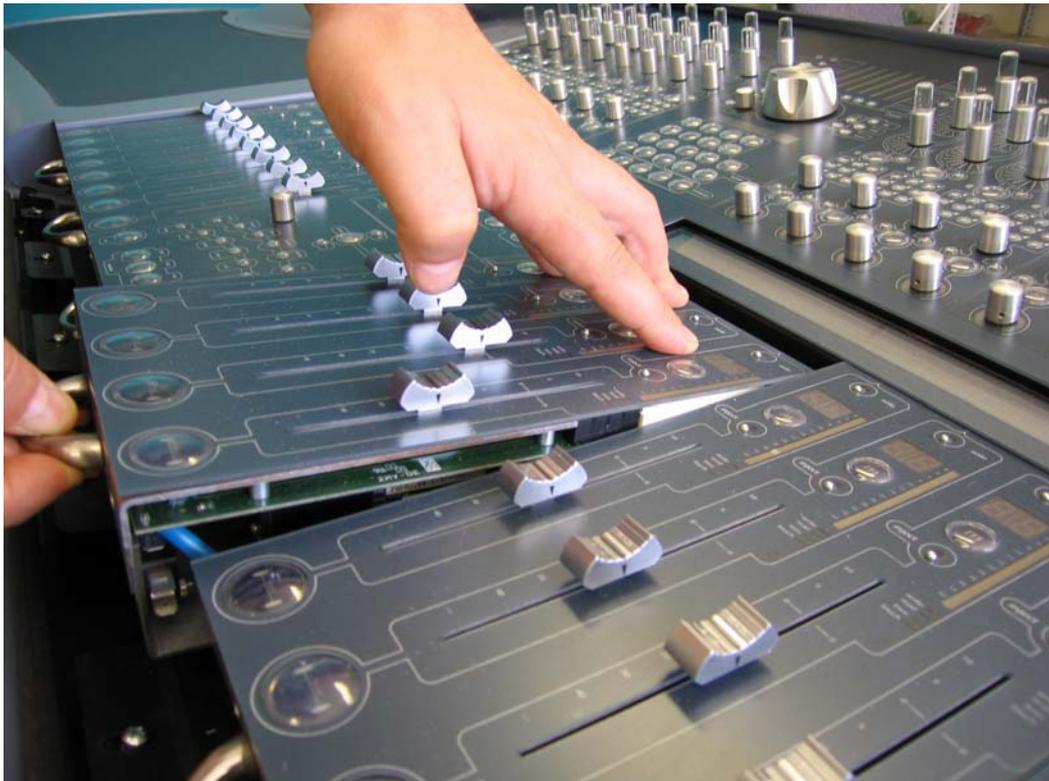
Plate 5: E96 dimensions

Plate 6: Inserting modules A.

Plate 7: Inserting modules B.

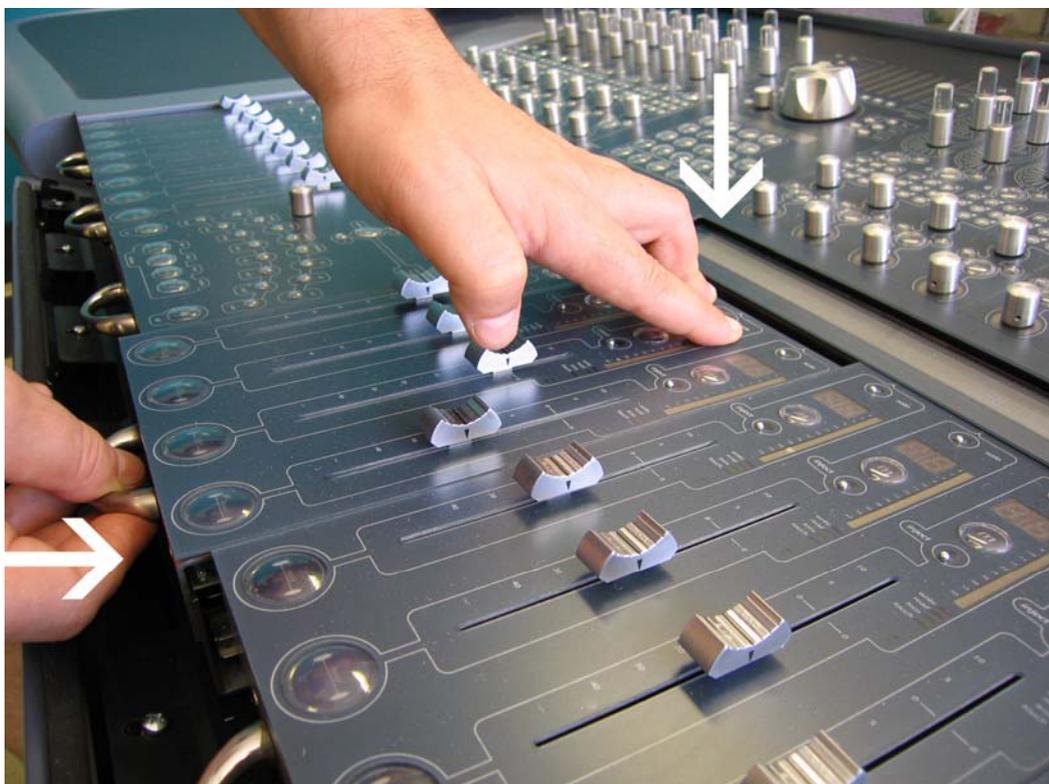**Plate 8:** The cover strip slides under the cowling of the E96

Plate 9: The DVI dongle