

TECHNICAL NOTES FOR ENGINEERS & ASSISTANT ENGINEERS

THE SSL CONSOLE & SUMMING MIXERS:

- The SSL AWS900 console is a 24 channel analogue desk expanded to 40 channels with a 16 channel SSL X-Panda- plus we've added a 12 input X-Rack & a 12 input tube Fat Bustard for a total of over 72 inputs.
- The AWS900 has 4 band sweepable EQs (40hz – 22k; E & G switchable) & HPF, 2 stereo cues, 4 mono aux sends, 4 stereo F/X returns, 8 track busses, 2 foldbacks, 2 assignable stereo busses (Record & Mix), 2 dynamics/gates, a stereo buss compressor, dual master faders, analogue automation & Total Recall.
- The AWS900 also offers complete control of Pro Tools including transport, machine control, automation, editing, faders, pan, aux sends, & all plug-ins/VSI via the TFT screen in the master section of the console. It is a tactile surface for all digital controls at the push of the blue 'FOCUS' switch.
- The SSL X-Panda has 8 mono & 4 stereo inputs with balanced inserts, faders, pan, level, solo/cut, 2 mono aux sends, and a stereo cue. (NOTE: Avid outs 25-32 are normaLED via the *alternate inputs* of the Panda.)
- The X-Rack has 12 line inputs with balanced inserts, pan, level, solo/cut, & 2 assignable stereo busses (Rec & Mix) via the Master Module. We've also added 4 dynamics (2-E & 2-G series). It also has Total Recall.
- The Thermionic Culture Fat Bustard is a tube sub-mixer with 12 inputs, 2 aux ins, Pultec style EQ (Boost & Cut @ 10k & 50 Hz), & Mid/Side capabilities. An 'Attitude' pot drives the tube output stage for color.
- The Dangerous Liaison can be utilized for additional stereo buss summing & multiple stereo inserts.

By utilizing these summing options you have a total of roughly 70 inputs available for large mixes.

Avid outs 1-24 are half-normaLED to channels 1-24 on the SSL AWS

Avid outs 25-40 are half-normaLED to the 16 input channels of the X-Panda (Note- 1-8 are via the 'Alt' inputs).

Suggestion: return your tracks here by assigning your tracks to Pro Tools outs 25-40.

PATCHBAYS: ALL TT PATCHBAYS ARE WIRED OUTS OVER INS

- There are a total of 13 Switchcraft patchbays in the room. 10 are TT bays wired outs over ins. All connections are available for the console, outboard, side-chains, keys, & other externals while the 3 remaining bays are tie-lines including 16 booth tie-lines, 16 TRS tie-lines, 16 XLR-Male tie-lines, and 16 XLR-Female tie-lines for connecting anything from personal gear brought in, to instruments, to mics for recording in the Control Room.
- There are two SGI Guitar feeds in the control room (yellow interfaces on back racks). One feeds the booth and one feeds the downstairs guitar amps. This allows a guitar/bass player to sit in the CR while feeding amps in either location.

THE CONSOLE, PRO TOOLS, & THE AUXILLARY DAW STATION:

- There are 2 available computers- the G5 for the SSL console & Pro Tools 10HDX- and the rolling DAW station. The large, HD LED screen in front of the console is connected to the main G5 computer with Pro Tools 10HDX, Logic 9, & the SSL AWS software. There is an extender available if you wish to use the cinema display off to the side instead- just ask.

The rolling Mac Mini workstation is separate & is used as a digital 'Final Mix' station. This Mac Mini has a second installation of Pro Tools (v9HD) so you can record your analog final mixes thru the Burl B2 ADC into the Mac Mini at a sample-rate of your choice (if your Pro Tools session was recorded at 44.1k for instance, this allows you to record your final mix at 196k for example).

MONITORING:

- The control room was designed & tuned to provide accurate monitoring. The room is completely flat across the frequency spectrum with an RT60 reflection time of 0.36 seconds. We designed the control room slightly drier than the typical RT60 of 0.5 seconds.
- We recommend you listen to some of your mixes or other music to familiarize yourself with the control room characteristics.
- There are 5 monitoring choices in the CR as well as 3 available connections on the Coleman speaker selector for outside engineers to incorporate personal monitors if they so choose. Please ask for assistance.
- Three monitoring options are located in front of the console: the 3-way Barefoot MM35s (active), the Yamaha NS10s- which are powered by a B&K EX442 twin mono-block amp with 200w per side- and a mono Tivoli radio with a 3" speaker. Behind the mixer on the equipment racks is a pair of original Genelec 1030A (active) and a mono Avantone Mix Cube is available as well (a second one is available if you prefer stereo).
- The monitors are selected as follows: SSL console 'mini A' feeds the Coleman switcher in the left-hand face-up rack. The Coleman switches as follows & is marked accordingly:

- 1 - Barefoot MM35s
 - 2 - Genelec 1030As
 - 3 - Avantone Mono Cube
 - 4 - open
 - 5 - open
 - 6 - open
- SSL console 'mini B' feeds the NS10s
SSL 'ALT 5.1' feeds the Tivoli radio (mono)

NOTE: The TC Electronic **BMC2** monitor controller on the G5 is normaled to **EXT B-1** on the console. By selecting EXT B-1 (it is labeled 'BMC2') on the console and pressing SPD/F on the BMC2, you can monitor playback from the Denon F650; By pressing TosLink on the BMC2, you can monitor anything out of the G5 computer (iTunes, etc). This digital TosLink output is superior to using the headphone out as it utilizes a higher quality DAC.

Items worth noting regarding the SSL AWS:

The AWS900 was completely upgraded by SSL in England in August of 2011 including hardware, software (v4.13), replacement of the TFT screen & all new version 2 faders (25)- and includes the latest software upgrades of AFADA Automation & SNAP Total Recall.

The 2 foldbacks are a quick way to set-up headphone cues from the stereo busses with out using the stereo cue **sends. This is quite useful if you're in the middle of a mix & need to do an overdub.**

Logictivity is the SSL computer software. You can store all of the console & project information IN YOUR PRO TOOLS SESSION FOLDER including any instances of Total Recall you have saved on the console, channel assignments, groups/links, all of your mix automation passes you've saved on the SSL, as well as notes, names, etc. It is important you use it. (NOTE: you must save your SSL session data to the G5 computer prior to any re-start or before turning the console off for any reason.)

TOTAL RECALL (TR): The SSL & the X-Rack have their own internal recall system (TR). For all other outboard we have printed recall sheets.

The **Fat Bustard** is a tube sub-mixer with 12 inputs, 2 aux inputs & a stereo buss. We would urge you to look at the manual & familiarize yourself with its capabilities. It has 3 additional features beyond just summing; it has a built in 'Attitude' for driving the tube stage; it has 2 Pultec (passive) EQs (boost & attenuate)- one at 10k & one at 50hz; and it has the ability to apply M/S in a variable manner with clever shelving capabilities. Don't be afraid to push it hard as that's when it's at its best.

Regarding the SSL DAW control, Total Recall, Analog Fader Automation, & Logictivity: they are very easy to use and add enormous functionality to your session; we have manuals you can borrow and we can help show you things as you go- just ask. You may also download the SSL manuals from the Solid State Logic website directly.

The **Dangerous Liaison** can be used for a number of things (located in the left-hand bay); for one thing it can allow the engineer to insert any pieces of gear (up to six at any one time) in a chain- but also to be able to swap them in the signal path. This allows you to insert a stereo buss compressor & EQ, for instance, into your final mix chain and then swap the order at the touch of a button. All of the Liaison patch points except number six (it's on the front of the unit) are available on the patchbay.

Some technical notes:

- We have tech support & take good care of the gear. Please take care of it & alert us to any issues.
- The studio is wired utilizing a 'Star Ground' technique so the noise floor is extremely low.
- The SSL console & all of the equipment are powered via an isolated AC power panel with 70 Amps & dedicated circuits that are load-balanced utilizing toroidal transformers on the neutral.
- There is a TC Electronics LM7 digital scope/monitor on the console bridge. This provides real-time analysis of your signals & mix including a phase correlator, lissajous scope, 31 band RTA, and metering. It is fed digitally at all times for analysis by the engineer.

Final mentions:

- We have 3 Avid I/Os totaling 48 A/Ds & 48 D/As (or 48 ins & outs). Only Pro Tools inputs 1-24 are available on the patchbay as we expect that to be sufficient; we of course provide all 48 outputs.
- Avid outs 1-24 are HALF-normaled to the SSL AWS channel inputs. This means you can patch the 'Protools Outs' without interrupting the channel input. This is very useful when needing mults or to create a separate sub-mix without interrupting the AWS console. Same with 25-40 to the X-Panda.
- Many engineers recording digitally record levels very 'hot' and a common issue is digital levels that are too high to be optimized at analog line levels. For this reason- we have 12 channels of custom Keats H-pad attenuators which can be patched at the D/A (Avid) output in order to 'wind down' the analog signal level. These are passive silver buss-wire pads of the highest quality using a resistor based H-pad circuit. They also create opportunities to manipulate gain structure between pieces of hardware for great results while mixing or even tracking.
- The SSL does have 5.1 monitoring if you need it & there are insertion points for a Dolby encoding system should you need it; just let us know in advance- but please know we do not provide the additional monitors nor the Dolby system. We can however coordinate rental.
- And lastly – although we have a lot of gear & microphones, we can certainly rent any items you feel you need that we do not already have – just let us know.

We hope you enjoy working in the studio and please tell us immediately when something needs attention. Much of the gear is older than we are – and it's only natural that it needs maintenance at times.

If you have questions about the studio or would like to discuss anything, please call us @ 917-353-1863.

Thank you,
The Garden