



TSC Troubleshooting Binder

Please send suggestions, errors or omissions to:
tsc@laserquest.com

© Versent Corporation 2010 Unauthorized Use Or Duplication Strictly Prohibited

This Document Is Not To Be Removed From Versent Premises

Index of Section Versions

Section 1 TSC Hotline	Version 2004.04.01
Section 2 Player Pack	Version 2004.04.01
Section 3 HSDU and Dual HSDU Switch	Version 2003.09.01
Section 4 Fog Machines	Version 2002.07.01
Section 5 Headquarters and Replenishers	Version 2002.07.01
Section 6 Charging Rack and Charging Modules	Version 2005.12.01
Section 7 Telex	Version 2002.07.01
Section 8 Score Monitors	Version 2002.07.01
Section 9 Front of House Equipment	Version 2005.12.01
Section 10 Phone System and On-Hold Player	Version 2005.12.01

Table of Contents

Section 1 TSC Hotline	1-1
LQX or POS Will Not Process Customers or Run Games.....	1-1
POS - error message "An error has occurred please contact home office"	1-1
POS - error message "Cannot open MAST*.CDX" and exits to C:\prompt.....	1-1
POS - Exits to C:\prompt after each transaction.....	1-1
POS - will not load, returns to C:\prompt	1-2
LQX system will not energize multiple, properly functioning Packs	1-2
Credit card terminal is not functioning	1-3
Scorecard Printing Problems.....	1-4
LQX system will not print scorecards.....	1-4
Score Monitor is Not Functioning	1-4
Score monitor is a TV with VGA to Video Convertor	1-4
Score monitor is a Hantarex	1-4
Sound System Will Not Play Music or Allow Paging.....	1-5
Music will not play properly or at all.....	1-5
Sound system will not allow paging	1-5
Telephone and Answering System is not Functioning.....	1-6
No dial tone on line 1 or line 2 for all phones	1-6
Section 2 Player Pack	2-1
Power Problems	2-1
No power to entire Player Pack	2-1
No power to HHU.....	2-3
Shoulder PCB heats up and starts smoking.....	2-3
Communication Problems	2-4
"Help Rear Comms".....	2-4
Front Comms flicks to "Fail" intermittently while in diagnostics	2-5
"Help Front Comms"	2-6
Datalink Test Fails - Master Test Mode	2-7
Pack will not energize and/or download properly (LCD displays "Awaiting Command").....	2-9
Tagability Problems	2-10
HHU has constant or frequent Laser lockout.....	2-10
HHU emits laser beam but does not emit infrared.....	2-11
HHU has a faulty or intermittent trigger	2-12
HHU can't be deactivated	2-12
Player Pack (poncho and HHU) can't be deactivated	2-12

Rear PCB can't be deactivated.....	2-13
Front PCB can't be deactivated	2-14
Both Shoulder PCBs can't be deactivated.....	2-15
Single Shoulder PCB can't be deactivated.....	2-16
Shoulder LED Illumination Problems.....	2-18
Both Shoulder PCB's LEDs not illuminating properly	2-18
Single Shoulder PCB's LEDs not illuminating properly	2-19
Intermittent Problems and Error Messages.....	2-21
Intermittent connections.....	2-21
Pack resets constantly	2-22
Pack ends game prematurely "Return to Airlock" "Game Over"	2-22
Pack shuts down, resets, or emits constant beep upon deactivation.....	2-23
LCD displays "Low Battery" frequently	2-24
LCD displays hieroglyphics (#X0--//??)	2-25
LCD displays "Laser Quest"	2-26
1 Pack LCD displays "Help Site Code".....	2-26
All Pack LCDs display "Help Site Code"	2-26
LCD displays "Help Pack ID"	2-27
LCD display not centered	2-27
LCD display missing lines or sections	2-27
LCD display missing one or both side lights	2-27
No sound from HHU.....	2-28
HHU button reader not functioning	2-28
Pack will not vibrate when tagged	2-29
Pack constantly vibrates	2-29
Briefing Pack.....	2-30
LCD displays "Briefing Mode !Wrong Pack!"	2-30
Briefing Mode does not function properly	2-31
See Player Pack troubleshooting for all other Briefing Pack issues.....	2-31
Checklists.....	2-32
Pack PCB Checklist.....	2-32
HHU Checklist.....	2-33
Section 3 HSDU and Dual HSDU Switch	3-1
Power Problems.....	3-1
No power to HSDU (red LED is off).....	3-1
No power to dual HSDU switch (red LED is off)	3-2
Communication Problems	3-3
HSDU test failed	3-3
All Packs will not energize and/or download	3-4

Section 4 Fog Machines	4-1
Power Problems	4-1
No power to fog machine.....	4-1
Fog machine blows fuses	4-1
Operating Problems	4-2
Fog machine will not heat up.....	4-2
Fog machine will not emit fog	4-2
Fog machine will not prime	4-3
Fog machine will not keep fluid in the line, loses its prime.....	4-3
Only a little bit of fluid comes out when priming or fogging	4-4
Fog machine only produces fluid, ready light on remote comes on right away.....	4-4
Section 5 Headquarters and Replenishers	5-1
Power Problems	5-1
No power to single unit	5-1
Operating Problems	5-2
Headquarter quadrants not functioning	5-2
Replenisher unit will not replenish	5-3
Not Found by LQX.....	5-4
One HQ or Rep. unit not found by LQX.....	5-4
All HQ and Rep. units not found by LQX	5-5
Section 6 Charging Rack and Charging Modules.....	6-1
Power Problems	6-1
No power to charging rack.....	6-1
No power to charging module	6-2
Charging rack blows fuses.....	6-3
Charging module(s) blows fuses	6-3
Operating Problems	6-4
Battery will not go onto fast charge.....	6-4
Section 7 Telex	7-1
Power Problems	7-1
No power to Telex belt Pack.....	7-1
Operating Problems	7-2
Telex will receive, but will not transmit.....	7-2
Telex has a lot of static, whether someone is talking or not.....	7-3
Loud screeching noise in earpiece when talking	7-3
Cannot hear or speak into Telex, and batteries are charged	7-4



Section 8 Score Monitors	8-1
Score Monitor is a TV with VGA to Video Convertor	8-1
Monitor display is black (no picture) and power is on.....	8-1
Monitor does not display picture at all, just snow	8-1
Score Monitor is a Hantarex.....	8-2
Monitor display is black (no picture)	8-2
Picture quality, alignment or colour not displayed properly	8-3
Section 9 Front of House Equipment.....	9-1
Members Terminal	9-1
Members Terminal Button Reader not functioning	9-1
Members Terminal monitor not functioning	9-2
Mission Control Button Reader	9-3
Mission Control Button Reader not functioning	9-3
Mission Control Printer	9-4
Will not print scorecards at all.....	9-4
Printer prints blank scorecards	9-5
Printer display reads "parallel IO error"	9-5
Time Delay Safe.....	9-5
Timer is Blank and safe won't open	9-5
Section 10 Phone System and On-Hold Player	10-1
Phone System.....	10-1
No dial tone on line 1 or line 2 for all phones	10-1
On-Hold Player.....	10-1
No power to On-Hold Player.....	10-1
Music will not play while on hold but will over built in speaker	10-2
Music will not play while on hold or over built in speaker	10-2
Music plays over phone extension(s) while hung up	10-3
Audio is distorted while on hold but works over built in speaker	10-3

Section 1 TSC Hotline

LQX or POS Will Not Process Customers or Run Games

POS - error message "An error has occurred please contact home office"

Possible Causes	Possible Solution
Power surge	From "System Utilities" menu run "Clean Up" once If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

POS - error message "Cannot open MAST*.CDX" and exits to C:\prompt

Possible Causes	Possible Solution
Corrupted indexes	From "System Utilities" menu run "Clean Up" once If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

POS - Exits to C:\prompt after each transaction

Possible Causes	Possible Solution
Corruption	From "System Utilities" menu run "Clean Up" once If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

POS - will not load, returns to C:\prompt

Possible Causes	Possible Solution
Dongle not attached	<p>Power down the POS PC Check that printer port has black dongle attached Detach and reattach the dongle if necessary Power up POS PC</p> <p>If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours</p> <p>This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning</p>

LQX system will not energize multiple, properly functioning Packs

Possible Causes	Possible Solution
Packs are offline	<p>Under the LQX Utilities menu open Pack Availability Make sure the Packs are online</p>
Offline Packs interfering	<p>Make sure all offline Packs have their batteries unplugged, including any Packs being repaired in the Techroom</p>
Batteries are not plugged in	<p>Make sure all Pack batteries are plugged in</p>
Batteries are not charged	<p>Pull the trigger on all Packs and watch displays for illumination to check if there is power going to the Packs</p>
No power to HSDU	<p>Refer to Section 3 "HSDU and Dual HSDU switch" Subsection "Power Problems" Problem "No power to HSDU (red LED is off)"</p>
Packs not communicating with HSDU	<p>Refer to Section 3 "HSDU and Dual HSDU switch" Subsection "Communication Problems" Problem "All Packs will not energize and/or download"</p> <p>If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours</p> <p>This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning</p>

Credit card terminal is not functioning

Possible Causes	Possible Solution
Phone line or power cord disconnected	Make sure the phone line and power cord are securely plugged into the credit card terminal and to the outlets
Power supply has failed	Reset the power to the terminal by unplugging it from the back of the terminal and from the outlet, then plugging both back in
Phone line is down	Bypass credit card terminal to test outside line Unplug your Techroom phone and plug it directly into the phone line for the credit card terminal at Mission Control. If there is a dial tone you have an outside line for the credit card terminal
Credit Card terminal is faulty	Contact the support center for your credit card terminal
If you are unsure or need assistance	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting

Scorecard Printing Problems

LQX system will not print scorecards

Possible Causes	Possible Solution
Printer system problems	<p>Refer to Section 9 "Front of House Equipment" Subsection "Mission Control printer" All problems</p> <p>If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours</p> <p>This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning</p>

Score Monitor is Not Functioning

Score monitor is a TV with VGA to Video Convertor

Possible Causes	Possible Solution
Monitor problems	<p>Refer to Section 8 "Score Monitors" Subsection "Score monitor is a TV with VGA to Video Convertor" All Subsections</p> <p>If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours</p> <p>This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning</p>

Score monitor is a Hantarex

Possible Causes	Possible Solution
Monitor problems	<p>Refer to Section 8 "Score Monitors" Subsection "Score monitor is a Hantarex" All problems</p> <p>If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours</p> <p>This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning</p>

Sound System Will Not Play Music or Allow Paging

Music will not play properly or at all

Possible Causes	Possible Solution
No power to some or all components	Make sure the power is turned ON for all units If nothing will turn on check the breaker for the audio equipment
No CD or unreadable CD in CD player	Make sure that an undamaged CD is in the CD player
Push to talk button is stuck	Talk into microphone without pressing button If it transmits then try to dislodge button If it doesn't transmit then continue
Connections or components faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Sound system will not allow paging

Possible Causes	Possible Solution
No power to some or all components	Make sure the power is turned ON for all units If nothing will turn ON reset the breaker for the audio equipment by turning it OFF then back ON
Connections or components faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Telephone and Answering System is not Functioning

No dial tone on line 1 or line 2 for all phones

Possible Causes	Possible Solution
Incoming lines from service provider are down	Bypass phone switch to test outside line Unplug Techroom phone and plug it directly into line 1, if there is a dial tone you have an outside line for line 1 Plug Techroom phone directly into line 2, if there is a dial tone you have an outside line for line 2 If one or both are not present contact the phone company
Phone switch programming faulty	Contact the TSC Helpdesk during regular business hours for a phone switch programming guide and template
Phone switch faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance setting up phones without phone switch This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Section 2 Player Pack

Power Problems

No power to entire Player Pack

Possible Causes	Possible Solutions
Battery power low or disconnected	Check connections and connectors Phoenix connectors plugged in fully Battery wires secure inside Phoenix connector Test / replace battery
Power cable faulty or disconnected	Test / replace fuse Check connections and connectors Phoenix connectors fully plugged in battery and Front PCB Cracked Phoenix connectors Cable leads to fuse assembly secure Wires secure in proper position inside Phoenix connectors Test / replace power cable
6-Volt cutout faulty or incorrectly inserted	Check connections Wires secure in proper position inside Phoenix connector Test / replace 6-Volt Cutout
Front PCB faulty. (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty or disconnected	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable

No power to entire Player Pack continued

Possible Causes	Possible Solutions
Rainbow cable (HHU) faulty or disconnected	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

No power to HHU

Possible Causes	Possible Solutions
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (Front PCB) faulty or disconnected	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Replace front PCB
Rainbow cable (HHU) faulty or disconnected	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Shoulder PCB heats up and starts smoking

Possible Causes	Possible Solutions
Shoulder cable faulty or crimped backwards	Recrimp the RJ45 connectors ensuring that the wire colour/pin combinations are the same on both ends Test / replace shoulder cable
Shoulder PCB faulty	Replace Shoulder PCB

Communication Problems

"Help Rear Comms"

Possible Causes	Possible Solutions
Rear PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Ensure that PCB switch is set to position "1" (rear) Reset the switch, switch to position 2 and then back to 1 Replace rear PCB
Front to rear cable faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Front and Rear PCBs Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace front to rear cable
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Ensure that PCB switch is set to position "2" (front) Reset the switch: switch to position 1 and then back to 2 Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

"Help Rear Comms" Continued

Possible Causes	Possible Solutions
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Battery power low or connections are intermittent	Check connections and connectors Phoenix connectors plugged in fully Battery wires secure inside Phoenix connector Test / replace battery
Power cable faulty	Test / replace fuse Check connections and connectors Phoenix connectors fully plugged in battery and Front PCB Cracked Phoenix connectors Cable leads to fuse assembly secure Wires secure in proper position inside Phoenix connectors Test / replace power cable

Front Comms flicks to "Fail" intermittently while in diagnostics

Possible Causes	Possible Solutions
Lights in Techroom interfering with IR sensors on Shoulder PCBs	Cover the Shoulder PCBs from all light or unplug them from them from the Front PCB and see if problem continues
Front Comms failure	Refer to Section 2 "Player Pack" Subsection "Communication Problems" Problem "Help Front Comms"

"Help Front Comms"

Possible Causes	Possible Solutions
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Reset the switch: switch to position 1 and then back to 2 Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Also check / switch
left shoulder PCB
after trying all of
the above.
-Moe
Or right - Will

Datalink Test Fails - Master Test Mode

Possible Causes	Possible Solutions
Datalink faulty	Replace Datalink
Datalink cable faulty or disconnected	Check connections and connectors Molex connectors fully plugged in Frayed or loose wires in Molex connectors Replace Datalink cable
Rear PCB Faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Ensure that PCB switch is set to position "1" (rear) Replace rear PCB
Front to rear cable faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Front and Rear PCBs Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace front to rear cable
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty or disconnected	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable

Datalink Test Fails - Master Test Mode Continued

Possible Causes	Possible Solutions
Rainbow cable (HHU) faulty or disconnected	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Check that DIP switches are in the OFF or down position Replace HHU PCB / Laser / IR assembly

Pack will not energize and/or download properly (LCD displays "Awaiting Command")

Possible Causes	Possible Solutions
Pack is offline	Check that the Pack is online on the LQX game computer under: "Utilities" "Pack Availability"
Pack ID is incorrect	Set Pack ID using Master Test key Or reprogram HHU and set Pack #
Offline Packs interfering	Make sure all offline Packs have their batteries unplugged, including any Packs being repaired in the Techroom
Pack fails Datalink test	Refer to Section 2 "Player Pack" Subsection "Communication Problems" Problem "Datalink Test Fails - Master Test Mode"
HHU PCB dip switch 1 is in the wrong position	Make sure DIP switch #1 is in the OFF position Upon Pack reset HHU LCD should display: <div style="text-align: center; border: 1px solid black; padding: 5px;">Laser Quest LQX 6a/L/L H</div>
Datalink faulty	Replace Datalink
Antenna faulty - antenna leads coiled or incorrectly placed in poncho	Check connections and connectors Frayed or loose wires Connector fully plugged into Datalink Position antenna wires in the Poncho correctly
HSDU faulty	Refer to Section 3 "HSDU and Dual HSDU Switch" All subsections and problems

Tagability Problems

HHU has constant or frequent Laser lockout

Possible Causes	Possible Solutions
Connection from Laser / IR unit to HHU PCB	Check connections and connectors Molex connector fully plugged in to HHU PCB Frayed / loose wires from Laser / IR unit to Molex connector
Laser /IR unit faulty	Replace HHU PCB / Laser / IR assembly
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

HHU has constant or frequent Laser lockout Continued

Possible Causes	Possible Solutions
Power cable faulty	Test / replace fuse Check connections and connectors Phoenix connectors fully plugged in battery and Front PCB Cracked Phoenix connectors Cable leads to fuse assembly secure Wires secure, in proper position inside Phoenix connectors Test / replace power cable
Vibrator Motor faulty	Check connections and connectors Connector fully plugged into Front PCB Frayed or loose wires from motor to Front PCB Test / replace vibrator motor

HHU emits laser beam but does not emit infrared

Possible Causes	Possible Solutions
Connection from laser / IR unit to HHU PCB	Check connections and connectors Molex connector fully plugged in to HHU PCB Frayed / loose wires from Laser / IR unit to Molex connector
Laser /IR unit faulty	Replace HHU PCB / Laser / IR assembly
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

HHU has a faulty or intermittent trigger

Possible Causes	Possible Solutions
Connection from trigger to HHU PCB	Check connection and connector Connector plugged in fully on HHU PCB Connector cracked or wires loose
Trigger faulty	Replace trigger

HHU can't be deactivated

Possible Causes	Possible Solutions
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Player Pack (poncho and HHU) can't be deactivated

Possible Causes	Possible Solutions
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Rear PCB can't be deactivated

Possible Causes	Possible Solutions
Infrared sensors on PCB are broken, missing or misaligned	Check that all infrared sensors are intact and properly aligned
Rear PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Ensure that PCB switch is set to position "1" (rear) Replace rear PCB
Front to rear cable faulty	Check connections and connectors RJ45 connectors fully plugged into Front and Rear PCBs Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace front to rear cable
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
(HHU to Pack) faulty Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Front PCB can't be deactivated

Possible Causes	Possible Solutions
Infrared sensors on PCB are broken, missing or misaligned	Check that all infrared sensors are intact and properly aligned
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

Both Shoulder PCBs can't be deactivated

Possible Causes	Possible Solutions
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged into correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Single Shoulder PCB can't be deactivated

Possible Causes	Possible Solutions
Infrared sensors on PCB are broken, missing or misaligned	Check that all infrared sensors are intact and properly aligned
Shoulder PCB faulty	Replace Shoulder PCB
Shoulder cable faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Front PCB and Shoulder PCB Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace shoulder cable
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged into correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

Single Shoulder PCB can't be deactivated Continued

Possible Causes	Possible Solutions
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Shoulder LED Illumination Problems

Both Shoulder PCB's LEDs not illuminating properly

Possible Causes	Possible Solutions
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Both Shoulder PCBs faulty	Replace both Shoulder PCBs

Single Shoulder PCB's LEDs not illuminating properly

Possible Causes	Possible Solutions
Infrared sensors on PCB are broken, missing or misaligned	Check that all infrared sensors are intact and properly aligned
Shoulder PCB faulty	Replace Shoulder PCB
Shoulder cable faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Front PCB and Shoulder PCB Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace shoulder cable
Front PCB faulty (If replacing PCB remedies the problem - see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

Single Shoulder PCB's LEDs not illuminating properly continued

Possible Causes	Possible Solutions
HHU PCB or HHU microprocessor faulty (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Intermittent Problems and Error Messages

Intermittent connections

Possible Causes	Possible Solutions
Battery power low or battery faulty	Check connections and connectors Phoenix connector plugged in fully Battery wires secure inside Phoenix connector Test / replace battery
6-Volt cutout faulty	Check connections Wires secure in proper position inside Phoenix connector Test / replace 6-Volt Cutout
Power cable faulty	Test / replace fuse Check connections and connectors Phoenix connectors fully plugged in battery and Front PCB Cracked Phoenix connectors Cable leads to fuse assembly secure Wires secure in proper position inside Phoenix connectors Test / replace power cable
Rainbow cable (Front PCB) faulty	Check connections and connectors Molex connector fully plugged in to correct spot on Front PCB Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable
Black coiled cable (HHU to Pack) faulty or disconnected	Check connections and connectors RJ45 connectors fully plugged into Pack and HHU Cracked or fogged RJ45 connectors Loose wires in RJ45 connector Test / replace black coiled cable
Rainbow cable (HHU) faulty	Check connections and connectors Molex connector fully plugged in Frayed or loose wires in Molex connector Frayed or loose wires at RJ45 end Test / replace Rainbow cable

Pack resets constantly

Possible Causes	Possible Solutions
Intermittent connections	Refer to Section 2 “Player Pack” Subsection “Intermittent Problems and Error Messages” Problem “Intermittent connections”
Front PCB faulty (If replacing PCB remedies the problem – see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position “2” (front) Replace front PCB
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem – see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Vibrator Motor faulty	Check connections and connectors Connector fully plugged into Front PCB Frayed or loose wires from motor to Front PCB Test / replace vibrator motor

Pack ends game prematurely “Return to Airlock” “Game Over”

Possible Causes	Possible Solutions
Intermittent connections	Refer to Section 2 “Player Pack” Subsection “Intermittent Problems and Error Messages” Problem “Intermittent connections”
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem – see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Pack shuts down, resets, or emits constant beep upon deactivation

Possible Causes	Possible Solutions
Battery faulty or low power	Check connections and connectors Phoenix connector plugged in fully Battery wires secure inside Phoenix connector Test / replace battery
Vibrator Motor faulty	Check connections and connectors Connector fully plugged into Front PCB Frayed or loose wires from motor to Front PCB Test / replace vibrator motor
Front PCB faulty (If replacing PCB remedies the problem – see Pack PCB Checklist to assess faulty PCB)	Check that PCB switch is set to position "2" (front) Replace front PCB
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem – see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Intermittent connections	Refer to Section 2 "Player Pack" Subsection "Intermittent Problems and Error Messages" Problem "Intermittent connections"

LCD displays "Low Battery" frequently

Possible Causes	Possible Solutions
Battery power low or disconnected	Check connections and connectors Phoenix connector plugged in fully Battery wires secure inside Phoenix connector Test / replace battery
Front PCB faulty (If replacing PCB remedies the problem – see Pack PCB Checklist to assess faulty PCB)	Replace front PCB
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Intermittent connections	Refer to Section 2 "Player Pack" Subsection "Intermittent Problems and Error Messages" Problem "Intermittent connections"

LCD displays hieroglyphics (#X0--//???)

Possible Causes	Possible Solutions
Improper HHU reset	Reset HHU by Unplugging black coiled RJ45 cable Waiting 2 seconds Then reconnecting
Ribbon cable from LCD to HHU PCB loose	Inspect cable for pinches or loose wires Unplug and reconnect cable to HHU PCB
LCD faulty	Replace LCD
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly
Intermittent connections	Refer to Section 2 "Player Pack" Subsection "Intermittent Problems and Error Messages" Problem "Intermittent connections"

LCD displays "Laser Quest"

Possible Causes	Possible Solutions
Front Comms failure	Refer to Section 2 "Player Pack" Subsection "Communication Problems" Problem "Help Front Comms"
Rear Comms failure	Refer to Section 2 "Player Pack" Subsection "Communication Problems" Problem "Help Rear Comms"
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

1 Pack LCD displays "Help Site Code"

Possible Causes	Possible Solutions
HHU MPU programming faulty	Reprogram HHU and set Pack #
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

All Pack LCDs display "Help Site Code"

Possible Causes	Possible Solutions
LQX configuration problem	Contact the TSC Helpdesk or use the Hotline if after business hours This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

LCD displays "Help Pack ID"

Possible Causes	Possible Solutions
HHU MPU programming faulty	Assign Pack ID using Master Test key Or reprogram HHU and set Pack #
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser /IR assembly

LCD display not centered

Possible Causes	Possible Solutions
HHU PCB dip switch #2 is in the wrong position	Make sure dip switch #2 is in the OFF position
LCD faulty	Replace LCD
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

LCD display missing lines or sections

Possible Causes	Possible Solutions
LCD faulty	Replace LCD

LCD display missing one or both side lights

Possible Causes	Possible Solutions
LCD faulty	Replace LCD

No sound from HHU

Possible Causes	Possible Solutions
Speaker faulty	Check connections and connectors Connector fully plugged into HHU PCB Loose or frayed wires from speaker to connector Replace speaker
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

HHU button reader not functioning

Possible Causes	Possible Solutions
Activation button on activator faulty	Try another activator
Button reader dirty or oxidized	Clean surface using isopropyl alcohol and swab or nylon brush Blow off using air compressor Lightly buff surface using fiberglass pencil (only if oxidized) Blow off using air compressor
Button reader faulty	Replace button reader
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Pack will not vibrate when tagged

Possible Causes	Possible Solutions
Vibrator motor faulty	Test/replace vibrator motor
Front PCB faulty (If replacing PCB remedies the problem – see Pack PCB Checklist to assess faulty PCB)	Replace Front PCB
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Pack constantly vibrates

Possible Causes	Possible Solutions
6-Volt cutout faulty or incorrectly inserted	Check connections Wires secure in proper position inside Phoenix connector Test / replace 6-Volt Cutout
Battery power low	Test / replace battery
Vibrator motor faulty	Test/replace vibrator motor
Front PCB faulty (If replacing PCB remedies the problem – see Pack PCB Checklist to assess faulty PCB)	Replace Front PCB
HHU PCB or HHU microprocessor faulty. (If replacing HHU PCB remedies the problem - see HHU Checklist to assess faulty HHU)	Check seating of MPU in PCB Replace HHU PCB / Laser / IR assembly

Briefing Pack

LCD displays “Briefing Mode !Wrong Pack!”

Possible Causes	Possible Solutions
Pack PCBs are not recognized as Briefing Pack PCBs	* <i>Important - Regular Pack PCBs will not work in the Briefing Pack. Briefing Pack PCBs can be identified by a “BRF” sticker and a circuit jumper labeled “SW1 RN4”</i>
Pack PCB(s) inside Briefing Pack are not Briefing Pack PCB(s)	Ensure both Pack PCBs are Briefing Pack PCBs See description above
Briefing Pack PCBs faulty programming	Reprogram Briefing Pack PCBs using Briefing Program instructions
HHU DIP Switches set incorrectly	Ensure all DIP switches on Briefing HHU PCB are down (OFF)
HHU faulty programming	Reprogram HHU using Briefing Program instructions If it does not work, ensure all DIP switches are down (OFF) on a spare HHU PCB and reprogram it as a Briefing HHU PCB and test. If that works then send damaged Briefing HHU PCB in for repair
Cables and Connectors in Pack faulty	Substitute Briefing Pack PCBs and Briefing HHU with spare Pack PCBs and working HHU, then run full diagnostics on Pack to ensure HHU can communicate with Front and Rear PCB
Briefing Pack PCB(s) faulty	Since Centres do not have spare Briefing Pack PCBs contact the TSC Helpdesk for further troubleshooting instructions

Briefing Mode does not function properly

Possible Causes	Possible Solutions
	<p>* Note - any HHU PCB can be programmed as a Briefing HHU PCB, however the Briefing HHU PCB is labeled with a "BRF" at most Centres</p>
Button reader dirty or oxidized	Clean surface using isopropyl alcohol and swab or nylon brush Blow off using air compressor Lightly buff surface using fiberglass pencil (only if oxidized) Blow off using air compressor
Button reader faulty	Replace button reader
HHU DIP Switches set incorrectly	Ensure all DIP switches on Briefing HHU PCB are down (OFF)
HHU faulty programming	Reprogram HHU using Briefing Program instructions If it does not work, ensure all DIP switches are down (OFF) on a spare HHU PCB and reprogram it as a Briefing HHU PCB and test. If that works then send damaged Briefing HHU PCB in for repair

See Player Pack troubleshooting for all other Briefing Pack issues

Checklists

Pack PCB Checklist

Follow these action steps in order to determine problem(s) with Pack PCBs. Install PCB in a functioning Pack to troubleshoot. Install into Front Housing with DIP switch set on “Front” and perform Front Comms test in diagnostics. If test is OK in front mode, install into Rear Housing with DIP switch set on “Rear” and perform Rear Comms test in diagnostics.

Problem Items	Actions Taken
Proper Front / Rear switch selected	Switch is to be set to position 2 for “Front” and 1 for “Rear” Reset the switch by switching to opposite position and then back
PCB locked up	Reset PCB by pressing the blue button on PCB while power is present
MPU inserted in socket correctly	Inspect MPU seating and reinsert if necessary
MPU Socket loose or faulty	Apply light lateral pressure on MPU in socket. Check to see if Front Comms changes from pass to fail. If so, tag PCB and send for repair
MPU software programming faulty	Reprogram microprocessor
PCB connectors faulty or dirty	Inspect and clean all connectors on PCB (RJ45 and Molex)
MPU contacts faulty or dirty	Clean MPU contacts and blow off using air compressor
PCB components faulty or damaged	Inspect PCB for broken, missing or misaligned components (LEDs, IR sensors, connectors, electronics) If there are broken or missing components, tag PCB and send for repair
Faulty MPU	Replace MPU

Once the above tasks have been performed (front and rear mode), test the PCB IR sensors by putting this Pack and another Pack in demo mode. Fire an IR onto the PCB. If the PCB will not register the IR, tag PCB (including MPU) and send in for repair.

HHU Checklist

Follow these action steps in order to determine problem(s) with HHU PCBs. Use HHU in conjunction with an operating Poncho for troubleshooting purposes. Go through all Pack diagnostic steps to ensure HHU is fully tested.

Problem Items	Actions Taken
HHU will not power up	Inspect and test HHU Rainbow cable using electronic tester & adapter
Rear Comms problems	Inspect MPU seating in socket and reinsert if necessary (8a only)
Front Comms problems	Clean MPU contacts and blow off using air compressor (8a only)
HSDU communication problems	Reprogram HHU
Problems with both shoulder PCBs	Replace HHU MPU (8a only)
Problems with single shoulder PCB	Inspect and clean all connectors on PCB
Laser Lockout problems	Inspect for broken, missing or misaligned PCB components (LEDs, IR sensors, connectors, electronics)
Button reader problems	Tag HHU PCB including MPU and Laser / IR unit, and send in for repair
No sound	
LCD problems	
Pack not processing infrared	
Pack resets shuts down	
Game ends prematurely	
Pack will not download scores	
Pack will not emit IR with tested Laser / IR unit	

Once these tasks have been performed, test the HHU IR sensors by putting this Pack and another Pack in demo mode. Fire an IR onto HHU sensors. If the HHU PCB will not register the IR, tag HHU PCB (including MPU and Laser / IR unit) and send in for repair.

Section 3 HSDU and Dual HSDU Switch

Power Problems

No power to HSDU (red LED is off)

Possible Causes	Possible Solutions
Electrical circuit turned off or defective	Reset HSDU circuit breaker: Switch OFF and back ON Ensure that HSDU is plugged into outlet Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
HSDU fuse is blown	Test / replace fuse (use 500 milliamp fuse only)
HSDU power cord loose or faulty	Unplug power cord from outlet before opening Inspect and test HSDU power cord end Inspect and test power cord connector in HSDU
HSDU PCB faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance switching out the HSDU PCB This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

No power to dual HSDU switch (red LED is off)

Possible Causes	Possible Solutions
	<p>* Note - if no power to Dual HSDU switch, no error message will be present on LQX. System will revert to use the Airlock HSDU only and games can still be run and downloaded.</p>
Electrical circuit turned off or defective	Reset HSDU switch circuit breaker: Switch OFF and back ON Ensure that HSDU switch is plugged into outlet Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
HSDU switch fuse is blown	Test / replace fuse (500 milliamp only)
HSDU switch power cord loose or faulty	Unplug power cord from outlet before opening Inspect and test HSDU switch power cord end Inspect and test power cord connector in HSDU
HSDU switch PCB faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance switching out the HSDU switch PCB This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Communication Problems

HSDU test failed

Possible Causes	Possible Solutions
	<p>* Important - Reboot LQX after each solution to run HSDU test</p> <p>* Note - Under Dual HSDU setup - "HSDU test failed" is for Arena HSDU, "Airlock HSDU test failed" is a problem with both or just Airlock HSDU</p>
No power to HSDU	Refer to Section 3 "HSDU and Dual HSDU Switch" Subsection "Power Problems" Problem "No power to HSDU"
Offline Packs interfering	Make sure all offline Packs have their batteries unplugged, including any Packs being repaired in the Techroom
One Pack locked on transmit and jamming HSDU (Needle on meter all the way to the right)	Check for yellow LED illuminated on Rear PCB of all Packs If you find one unplug the battery and replace Rear PCB Check for Error messages on LCD of all Packs and reset them Make sure offline Packs have batteries unplugged
HSDU Lockup	Turn HSDU circuit breaker OFF for 1 minute then turn back ON
Connector on LQX PC / HSDU comm. port loose or faulty	Check connector on back of computer labeled HSDU
HSDU PCB faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance replacing HSDU PCB
Serial port in game computer faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance switching the LQX with the Office computer
	This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

All Packs will not energize and/or download

Possible Causes	Possible Solutions
No power to HSDU	Refer to Section 3 "HSDU and Dual HSDU Switch" Subsection "Power Problems" Problem "No power to HSDU"
Offline Packs interfering	Make sure all offline Packs have their batteries unplugged, including any Packs being repaired in the Techroom
One Pack locked on transmit and jamming HSDU (Needle on meter all the way to the right)	Check for yellow LED illuminated on Rear PCB of all Packs If you find one unplug the battery and replace Rear PCB Check for Error messages on LCD of all Packs and reset them Make sure offline Packs have batteries unplugged
HSDU needle is bouncing properly. Packs have no amber LEDs and are not reading "Awaiting Command"	All Pack batteries are discharged Pull the trigger on all Packs and watch displays for illumination to check if there is power to each Packs
HSDU antenna faulty or not upright	Check antenna connection to HSDU PCB Make sure antennae is upright on the wall If disconnected, Contact TSC Bring one or two Packs as close to HSDU as possible and try to energize - if successful, Contact TSC
Connector on LQX PC / HSDU comm. port loose or faulty	Check connector on back of computer labeled HSDU
HSDU PCB faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance replacing HSDU PCB
Serial port in game computer faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance switching the LQX with the Office computer
	This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Section 4 Fog Machines

Power Problems

No power to fog machine

Possible Causes	Possible Solutions
Electrical circuit turned off or defective	Reset foggers circuit breaker: Switch OFF and back ON Ensure that fogger is plugged into outlet Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
Fogger fuse is blown	Test / replace fuse FM88 and FM1000 (10 amp fuse only) Mistifier (10 amp for heater) (2 amp for pump)
Cable in fog room (from fogger to outlet) faulty or disconnected	Check connections and connectors (RJ12) or (XLR) connectors fully plugged in Cracked or fogged RJ12 connectors If problem is the cable in the fog room Contact TSC Helpdesk for assistance
Remote is faulty	Replace with spare remote
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Fog machine blows fuses

Possible Causes	Possible Solutions
Incorrect fuse type used	FM88 and FM1000 (10 amp only) Mistifiers (10 amp for heater) (2 amp for pump)
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Operating Problems

Fog machine will not heat up

Possible Causes	Possible Solutions
No power to fog machine	Refer to Section 4 "Fog Machines" Subsection "Power Problems" Problem "No power to fog machine"
Fuse for heating block blown (Mistifier)	Test / replace fuse (10 amp fuse only)
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Fog machine will not emit fog

Possible Causes	Possible Solutions
No power to fog machine	Refer to Section 4 "Fog Machines" Subsection "Power Problems" Problem "No power to fog machine "
Fog Machine has not heated up (ready light on remote not ON)	Fog machines may take 15 minutes to 20 minutes to heat up
Cable in fog room (from fogger to outlet) faulty or disconnected	Check connections and connectors (RJ12) or (XLR) connectors fully plugged in Cracked or fogged RJ12 connectors If problem is the cable in the fog room contact TSC Helpdesk for assistance
Remote is faulty	Replace with spare remote
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Fog machine will not prime

Possible Causes	Possible Solutions
No power to fog machine	Refer to Section 4 "Fog Machines" Subsection "Power Problems" Problem "No power to fog machine "
Hose is not immersed in fog fluid	Make sure hose has enough length to reach the bottom of the barrel Make sure there is enough fluid in the barrel
Blockages in tube	Inspect the tube that goes from the fog barrel to the fog machine If there are blockages Contact TSC Helpdesk for return authorization
Blockages in Check Valve / Filter assembly	Remove any debris from the end of the Check Valve / Filter assembly
Prime switch faulty	Contact TSC Helpdesk for return authorization
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Fog machine will not keep fluid in the line, looses its prime

Possible Causes	Possible Solutions
Check Valve / filter assembly is missing from bottom of line	Ensure that the check valve is attached to the end of the hose
Holes in the hose	Contact TSC Helpdesk for return authorization
Pump or internal components faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Only a little bit of fluid comes out when priming or fogging

Possible Causes	Possible Solutions
Debris in nozzle or in internal components	Perform fog machine maintenance
Hose is not fully immersed in fog fluid	Make sure hose has enough length to reach the bottom of the barrel Make sure there is enough fluid in the barrel
Blockages in tube	Inspect the tube that goes from the fog barrel to the fog machine If there are any blockages contact TSC for return authorization
Blockages in Check Valve / Filter assembly	Remove any debris from the end of the Check Valve / Filter assembly
Fog machine faulty	Contact TSC Helpdesk for return authorization This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Fog machine only produces fluid, ready light on remote comes on right away

Possible Causes	Possible Solutions
Thermal cutout faulty or disconnected	Contact TSC Helpdesk for assistance This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Section 5 Headquarters and Replenishers

Power Problems

No power to single unit

Possible Causes	Possible Solutions
Electrical circuit turned off or defective	Reset HQ or Replenisher circuit breaker: Switch OFF then back ON Ensure that unit is plugged into outlet
Power cord loose or faulty	Check power cord Replace if defective
Blown fuse on UPU PCB	Test / replace fuse (500 milliamp fuse only)
UPU PCB faulty	Switch UPU PCB into another unit and test: Contact TSC Helpdesk for proper settings If faulty – tag UPU PCB and send in for repair This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Operating Problems

Headquarter quadrants not functioning

Possible Causes	Possible Solutions
No power to unit	Refer to Section 5 "Headquarters and Replenishers" Subsection "Power Problems" Problem "No power to single unit"
No power to all quadrants	Check power cord from UPU housing to all quadrants Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
Power cable from quadrant to quadrant loose or faulty	Check power connections at each quadrant
UPU PCB lockup	Reset Headquarter circuit breaker: Switch OFF then back ON Reset UPU PCB using blue reset button while power is ON
Data connectors on UPU PCB loose or faulty	Check quadrant data connectors on UPU PCB
UPU PCB DIP switch settings incorrect	Contact TSC Helpdesk to confirm settings
UPU PCB faulty	Switch UPU PCB into another unit and test: Contact TSC Helpdesk for proper settings If faulty – tag UPU PCB and send in for repair
	This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Replenisher unit will not replenish

Possible Causes	Possible Solutions
No power to unit	Refer to Section 5 "Headquarters and Replenishers" Subsection "Power Problems" Problem "No power to single unit"
IR strip emitters dirty or faulty	Inspect and clean IR emitters on strip If damaged, contact TSC helpdesk for replacement code
Connection from IR strip to UPU PCB faulty	Inspect IR strip data cable Inspect IR strip connector on UPU PCB
UPU PCB lockup	Reset Headquarter circuit breaker: Switch OFF then back ON Reset UPU PCB using blue reset button while power is ON
UPU PCB DIP switch settings incorrect	Contact TSC Helpdesk to confirm settings
UPU PCB faulty	Switch UPU PCB into another unit and test: Contact TSC Helpdesk for proper settings If faulty – tag UPU PCB and send in for repair
	This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Not Found by LQX

One HQ or Rep. unit not found by LQX

Possible Causes	Possible Solutions
No power to unit	Refer to Section 5 "Headquarters and Replenishers" Subsection "Power Problems" Problem "No power to single unit"
Data cable connection loose or faulty	Check Data Convertor connector on UPU PCB
UPU PCB lockup	Reset Headquarter circuit breaker: Switch OFF then back ON Reset UPU PCB using blue reset button while power is ON
UPU PCB DIP switch settings incorrect	Contact TSC Helpdesk to confirm settings
UPU PCB faulty	Switch UPU PCB into another unit and test: Contact TSC Helpdesk for proper settings If faulty – tag UPU PCB and send in for repair
Data cable faulty	Contact TSC Helpdesk to perform continuity test This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

All HQ and Rep. units not found by LQX

Possible Causes	Possible Solutions
No power to HQ and Rep. circuit(s).	Check Airlock power switch (es) Reset HQ and Rep. circuit breaker: Switch OFF then back ON
No power to Data Converter	Check red power indicator LED on data converter Test / Replace PCB fuse (500 milliamp fuse only) Ensure that Data Converter is plugged into outlet
Connector on game computer / Data comm. port loose or faulty	Check data connector on back of computer
Data Convertor PCB faulty	Contact TSC Helpdesk for assistance replacing PCB
Serial card in game computer faulty	Contact TSC Helpdesk for assistance replacing serial card This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Section 6 Charging Rack and Charging Modules

Power Problems

No power to charging rack

Possible Causes	Possible Solutions
Unit is turned OFF	Power switch located at lower front right
Electrical circuit turned off or defective	Reset charging rack circuit breaker: Switch OFF then back ON Ensure that charging unit is plugged into outlet Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
Power usage on circuit breaker too high, breaker resets	Check that only 1 charging rack is on each circuit breaker Contact TSC Helpdesk for assistance troubleshooting
Fuse is blown (Back of charging rack)	Test / replace fuse at the back of the charging rack Use 2 amp fuse only
Power cord loose or faulty	Check power cord Contact TSC Helpdesk for assistance troubleshooting
ON / OFF switch faulty	Contact TSC Helpdesk for assistance troubleshooting
Charging rack faulty	Contact TSC Helpdesk for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

No power to charging module

Possible Causes	Possible Solutions
Fuse is blown (Front of module)	Test / replace fuse IF "Type 18" is labeled on the bottom right corner of silver plate Use 7 amp fuse only IF "Type 18" is not labeled on the bottom right corner of silver plate Use 5 amp fuse for the fuse holder on front of module Use 2 amp fuse for the fuse holder on back of module
Power cable from charging rack to charging module faulty (inside charging rack)	Unplug charging rack's power cord when working inside Check connections and connectors Phoenix connector fully plugged into back of module Frayed or loose wires in Phoenix connector Plug in a power cable from a working module and turn on power to charging rack to test cable If power cable faulty Contact TSC
Charging module faulty	Unplug charging rack's power cord when working inside Replace charging module

Charging rack blows fuses

Possible Causes	Possible Solutions
Wrong fuse type	Back of charging rack uses 2 amp fuses only
Electrical outlet defective	Plug in a known working charging rack to test outlet If outlet defective, contact TSC Helpdesk for assistance troubleshooting
Power cord loose or faulty	Check power cord Contact TSC Helpdesk for assistance troubleshooting
Charging rack faulty	Contact TSC Helpdesk for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Charging module(s) blows fuses

Possible Causes	Possible Solutions
Wrong fuse type	Fuse for charging modules: IF "Type 18" is labeled on the bottom right corner of silver plate Use 7 amp fuse only IF "Type 18" is not labeled on the bottom right corner of silver plate Use 5 amp fuse for the fuse holder on front of module Use 2 amp fuse for the fuse holder on back of module
Charging module faulty	Replace charging module
Power cable from charging Rack to charging module faulty (inside Charging Rack)	Unplug charging rack's power cord before removing module(s) Check connections and connectors Phoenix connector fully plugged into back of module Frayed or loose wires in Phoenix connector Plug in a power cable from a working module and turn on power to charging rack to test cable
Charging rack faulty	Contact TSC Helpdesk for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Operating Problems

Battery will not go onto fast charge

Possible Causes	Possible Solutions
Battery faulty	Put a known working battery on fast charge in that module to test if battery is faulty
Battery wires loose or faulty	Check connections and connectors Wires secure inside Phoenix connector Frayed or pinched wires from battery to Phoenix connector Damaged Phoenix connector
Charging module faulty	Unplug charging rack's power cord before removing module(s) Check for cracked Phoenix connector on charging module Check for hairline cracks in the solder contact between Phoenix connector and PCB Replace charging module

Section 7 Telex

Power Problems

No power to Telex belt Pack

Possible Causes	Possible Solutions
Power is OFF	Turn belt Pack ON
Batteries inserted improperly into battery sled	Make sure the batteries are inserted properly into battery sled
Battery sled is inserted incorrectly in Telex belt Pack or not making full contact with the terminals	Make sure that the contacts are not bent out of shape Make sure the contacts from the sled line up with the terminals inside the Telex unit
Batteries are dead	Swap with a freshly charged set of batteries
Rechargeable batteries have reached the end of their life and are no longer usable	Replace batteries with non-rechargeable (alkaline) batteries If problem goes away, your rechargeable batteries need to be replaced
Battery sled faulty	Swap with a known working battery sled
Telex belt Pack faulty	Tag belt Pack and send in for repair

Operating Problems

Telex will receive, but will not transmit

Possible Causes	Possible Solutions
Batteries low on power	Replace with freshly charged batteries
Antenna coiled or out of place	Make sure antenna hang freely from belt Pack and are not coiled, tied together or tucked inside belt pouch
Belt Pack not enabled on base station	Ensure buttons 1-4 on base station are engaged
Rechargeable batteries have reached the end of their life and are no longer usable	Replace batteries with non-rechargeable (alkaline) batteries If problem goes away, your rechargeable batteries need to be replaced
Push to talk button faulty	Make sure green light comes on when push to talk button is pressed
Break in a wire, either in leash or headset	Swap with a working headset If problem goes away: test faulty headset on another belt Pack Tag fault headset and send in for repair
Telex belt Pack faulty	Tag belt Pack and send for repair

Telex has a lot of static, whether someone is talking or not

Possible Causes	Possible Solutions
Batteries low on power	Replace with freshly charged batteries
Antenna coiled or out of place	Make sure antenna hang freely from belt Pack and are not coiled, tied together or tucked inside belt pouch
Rechargeable batteries have reached the end of their life and are no longer usable	Replace batteries with non-rechargeable (alkaline) batteries If problem goes away, your rechargeable batteries need to be replaced
Telex may be operating in "Electret" mode	Remove battery sled Check for switch marked "D" and "E" Move to position "D"
Break in a wire, either in leash or headset	Swap with a working headset If problem goes away: test faulty headset on another belt Pack Tag faulty headset and send in for repair
Telex unit faulty	Tag belt Pack and send for repair

Loud screeching noise in earpiece when talking

Possible Causes	Possible Solutions
Telex belt Pack volume set too high creating feedback	Turn the volume on all belt Packs and base station all the way down Then slowly turn them up until you can hear everyone comfortably If you cannot hear yourself comfortably on a belt Pack Telex belt Pack mic gain will need to be adjusted
Telex belt Pack mic gain is set too low requiring volume to be set to high to hear.	Turn the volume to a level until you can hear everyone comfortably Turn the mic gain up or down, using a nylon screwdriver, until you can hear yourself comfortably Do not use a metal screwdriver as you could short out the unit
Break in a wire, either in leash or headset	Swap with a working headset If problem goes away: test faulty headset on another belt Pack Tag faulty headset and send in for repair
Telex belt Pack faulty	Tag belt Pack and send for repair

Cannot hear or speak into Telex, and batteries are charged

Possible Causes	Possible Solutions
Batteries inserted in sled incorrectly	Make sure the batteries are inserted in the sled according to the diagram on the sled
Battery sled is inserted incorrectly in Telex belt Pack or not making full contact with the terminals	Make sure that the contacts are not bent out of shape Make sure the contacts from the sled line up with the terminals inside the Telex unit
No power to belt Pack	Turn OFF belt Pack then turn it ON and watch for red LED to flicker Make sure green light comes on when push to talk button is pressed Refer to Section 7 "Telex" Subsection "Power Problems" Problem "No power to belt Pack"
Break in a wire, either in leash or headset	Swap with a known working headset to test
Telex belt Pack faulty	Tag belt Pack and send for repair

Section 8 Score Monitors

Score Monitor is a TV with VGA to Video Convertor

Monitor display is black (no picture) and power is on

Possible Causes	Possible Solutions
VGA to Video Convertor is turned OFF or not powered up	Ensure that Convertor is turned ON (ON indicator light is green) Ensure that the unit is powered up (ready light is ON (red))
TV input is not set to Video 1	Ensure that TV input is set to Video 1
Video Cable from Convertor to TV is disconnected	Check Cable and reconnect if necessary
VGA cable from LQX PC to Convertor is faulty or disconnected	On the back of the LQX PC switch the LQX monitor connector with the Score monitor connector Check if Score monitor picture comes up on LQX monitor If it does Contact the TSC Helpdesk for further instructions If it does not continue
TV faulty	Swap with off-air TV
VGA to Video Convertor faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting
VGA card in LQX PC faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Monitor does not display picture at all, just snow

Possible Causes	Possible Solutions
TV input not set to Video 1	Ensure that TV input is set to Video 1 If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours

Score Monitor is a Hantarex

Monitor display is black (no picture)

Possible Causes	Possible Solutions
LQX PC is OFF	Ensure that LQX PC is ON and LQX software is running
Hantarex is OFF	Power switch is located around the left side, at the back, just above the power cord
VGA connections on back of Hantarex and / or LQX PC loose	Power down LQX PC Disconnect and reconnect both connectors (monitor and PC end)
Setting on back of Hantarex are out of whack	Contrast and Brightness may be all the way down
VGA cable from computer to Hantarex faulty	On the back of the LQX PC switch the LQX monitor connector with the Score monitor connector Check if Score monitor picture comes up on LQX monitor If it does contact the TSC for further instructions If it does not continue
Hantarex faulty	Check back of office and or Office monitor Has 2 removable cables (1 power and 1 VGA) Monitor can be used for this step If only 1 removable cable (power) monitor cannot be used go onto next possible cause Plug in Office monitor at the Hantarex end If it works Contact the TSC Helpdesk for further instructions If it does not work continue
VGA card in LQX PC faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Picture quality, alignment or colour not displayed properly

Possible Causes	Possible Solutions
VGA connections on back of Hantarex and / or LQX PC loose	Power down LQX PC Disconnect and Reconnect both connectors (monitor and PC end)
Settings on back of Hantarex are out of whack	Contrast and Brightness may be all the way down Both "TEXT" buttons are out for proper colour "SIZE" button is out for full screen view Use "H. PHASE" to adjust horizontal positioning
VGA cable from computer to Hantarex faulty	On the back of the LQX PC switch the LQX monitor connector with the Score monitor connector Check if Score monitor picture comes up on LQX monitor If it does Contact the TSC Helpdesk for further instructions If it does not continue
Hantarex faulty	Check back of Office monitor Has 2 removable cables (1 power and 1 VGA) Monitor can be used for this step If only 1 removable cable (power) monitor cannot be used go onto next possible cause Plug in Office monitor at the Hantarex end If it works Contact the TSC Helpdesk for further instructions If it does not work continue
VGA card in LQX PC faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Section 9 Front of House Equipment

Members Terminal

Members Terminal Button Reader not functioning

Possible Causes	Possible Solutions
Button Reader dirty or oxidized	Clean surface using isopropyl alcohol and swab or brush Blow off using air compressor Lightly buff surface using fiberglass pencil if oxidization present Blow off using air compressor
LQX PC Serial Port not properly initialized	Re-boot LQX computer
Button Reader disconnected from Button Reader PCB	Check connections and connectors Molex connector fully plugged into PCB Frayed, loose or broken wires from button reader to connector
Button Reader faulty	Replace Button Reader
Connection between Button Reader and LQX PC port faulty	Ensure proper connection on back of LQX PC
Button Reader PCB faulty	Contact TSC Helpdesk for assistance testing and / or replacing Members Terminal Button Reader PCB
Serial Card in LQX PC faulty	Contact TSC Helpdesk for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Members Terminal monitor not functioning

Possible Causes	Possible Solutions
Electrical circuit turned off or defective	Reset Members monitor circuit breaker: Switch OFF then back ON Ensure that monitor is plugged into outlet Test outlet by plugging a Tech room night light in to confirm outlet is live: Do not use a load bearing item such as drill or fogger Switch to another outlet if dead
Loose connection from LQX PC to monitor	Check connections at monitor and back of LQX PC Disconnect and reconnect connectors
Monitor faulty	On the back of the LQX PC switch the LQX monitor connector with the Members monitor connector Check if Members monitor picture comes up on LQX monitor If it does contact the TSC Helpdesk for further assistance If it does not continue
VGA card in LQX PC faulty	Contact TSC Helpdesk for further assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Mission Control Button Reader

Mission Control Button Reader not functioning

Possible Causes	Possible Solutions
Button Reader dirty or oxidized	Clean surface using isopropyl alcohol and swab or brush Blow off using air compressor Lightly buff surface using fiberglass pencil if oxidization present Blow off using air compressor
LQX PC Serial Port not properly initialized	Re-boot LQX PC
Button Reader disconnected from Button Reader PCB	Check connections and connectors Molex connector fully plugged into PCB Frayed, loose or broken wires from Button Reader to connector
Connection between Button Reader and LQX PC port faulty	Ensure proper connection on back of LQX PC
Button Reader faulty	Swap with spare Button Reader assembly
Serial Card in LQX PC faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Mission Control Printer

Will not print scorecards at all

Possible Causes	Possible Solutions
Unfinished print jobs in the printer manager	Switch to Program Manager Open Print Manager Delete all print jobs Exit back to the LQX
Default printer set incorrectly in control panel	Switch to Program Manager Open Control Panel Open Printers Check that printer displayed in "Default Printer" matches the one you are using at Mission Control Do not mistake HP4P with HP4Plus: These are 2 different printers
Smart Switch Faulty	Bypass Smart switch: Power down LQX Unplug printer cable (cable 1) from LQX Unplug printer cable (cable 2) from smart switch (the cable that doesn't have another cable plugged in across from it on Smart Switch) Plug printer cable (cable 2) directly into printer port on back of LQX
Printer or LQX faulty	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Printer prints blank scorecards

Possible Causes	Possible Solutions
Toner cartridge empty	Tilt the toner cartridge left and right a couple of times and try again Replace toner cartridge Make sure to remove plastic strip as per toner cartridge instructions
Fuser is in the printer is broken	Contact TSC Helpdesk or use the Hotline if after business hours for assistance troubleshooting This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

Printer display reads "parallel IO error"

Possible Causes	Possible Solutions
Computer shut down and rebooted while printer left ON	Turn off printer wait a few seconds and turn it back on HP 5 and above – press Go button If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours

Time Delay Safe

Timer is Blank and safe won't open

Possible Causes	Possible Solutions
No Power to Safe	Unplug power cord and plug back in If that doesn't work power down the POS and LQX PC then locate and reset the breaker for the safe If problem persists or you require assistance please contact the TSC Helpdesk or use the Hotline if after business hours

Section 10 Phone System and On-Hold Player

Phone System

No dial tone on line 1 or line 2 for all phones

Possible Causes	Possible Solution
Incoming lines from service provider are down	Bypass phone switch to test outside line Unplug Techroom phone and plug it directly into line 1, if there is a dial tone you have an outside line for line 1 Plug Techroom phone directly into line 2, if there is a dial tone you have an outside line for line 2 If one or both are not present contact the phone company
Phone switch programming faulty	Contact the TSC Helpdesk during regular business hours for a phone switch programming guide and template
Phone switch faulty	Contact the TSC Helpdesk or use the Hotline if after business hours for assistance setting up phones without phone switch This problem <u>must</u> be reported to the TSC Helpdesk no later than 9:00am (local time) next business morning

On-Hold Player

No power to On-Hold Player

Possible Causes	Possible Solution
Volume knob turned OFF	Ensure volume knob is turned ON
AC Power Adapter unplugged or faulty	Ensure Power Adapter is plugged into an outlet and power jack on On-Hold Player Purchase new AC Adapter with following specifications INPUT: 110V AC 60Hz OUTPUT: 12V DC (at least 350mA) <i>* Important - new AC adapter must have at least 350mA. The replacement can have more than 350mA but not less. Try to match as close as possible</i>
On-Hold Player Faulty	Contact the TSC Helpdesk during regular business hours for replacement and instructions

Music will not play while on hold but will over built in speaker

Possible Causes	Possible Solution
Volume to low	Gradually increase volume while you place yourself on hold
Audio not coming from On-Hold Player output jack	Plug headphones into On-Hold Player to ensure audio is coming out of audio jack
Audio cable disconnected or faulty	Ensure audio cable is connected to "EXT Music" jack on Phone Switch and O/P jack on On-Hold Player Replace audio cable Analog system - purchase new cable locally. 1/8" mono phone jack to 1/8" mono phone jack (bring cable with you) Digital system - contact TSC Helpdesk during regular business hours for replacement
Phone Switch faulty	Contact the TSC Helpdesk during regular business hours for replacement

Music will not play while on hold or over built in speaker

Possible Causes	Possible Solution
No Power	Refer to Section 10 "Phone System and On-Hold Player" Subsection "On-Hold Player" Problem "No power to On-Hold Player"
Volume to low or OFF	Gradually increase volume while you place yourself on hold with the speaker button on the On-Hold Player ON
On-Hold Player faulty	Contact the TSC Helpdesk during regular business hours for replacement and instructions

Music plays over phone extension(s) while hung up

Possible Causes	Possible Solution
BGM button on phone ON	Locate and switch OFF BGM button on phone (if present)
BGM mode on phone enabled	Switch OFF BGM mode on phone Analog phone - lift receiver, dial 750#, replace receiver Digital phone - while receiver is on hook dial 1

Audio is distorted while on hold but works over built in speaker

Possible Causes	Possible Solution
Volume too high	Gradually decrease volume while you place yourself on hold
On-Hold Player audio output jack faulty	Plug headphones into On-Hold Player to ensure audio coming out of audio jack is not distorted
Audio cable disconnected or faulty	Ensure audio cable is fully inserted into "EXT Music" jack on Phone Switch and O/P jack on On-Hold Player Replace audio cable Analog system - purchase new cable locally. 1/8" mono phone jack to 1/8" mono phone jack (bring cable with you) Digital system - contact TSC Helpdesk during regular business hours for replacement
Phone Switch faulty	Contact the TSC Helpdesk during regular business hours for replacement