

CERERE DE PARTICIPARE

Către **Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35**
(denumirea autorității contractante și adresa completă)

Stimați domni,

Ca urmare a anunțului/invitației de participare/de preselecție apărut în Buletinul achizițiilor publice și/sau Jurnalul Oficial al Uniunii Europene, nr **ocds-b3wdp1-MD-1771328826914** din 17 Februarie 2026, (privind aplicarea procedurii pentru atribuirea contractului COP privind achiziționarea **Servicii de reparație și mentenanță a instalațiilor cu raze X**, noi „**Media Security**”SRL (denumirea/numele ofertantului/candidatului), am luat cunoștință de condițiile și de cerințele expuse în documentația de atribuire și exprimăm prin prezenta interesul de a participa, în calitate de ofertant/candidat, neavând obiecții la documentația de atribuire.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat
„Media Security”SRL
Administrator _____ Victor Gaina

DECLARAȚIE
privind valabilitatea ofertei

Către Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35
(denumirea autorității contractante și adresa completă)

Stimați domni,

Ne angajăm să menținem oferta valabilă, privind achiziționarea **Servicii de reparație și mentenanță a instalațiilor cu raze X**, prin procedura de achiziție **COP ocds-b3wdp1-MD-1771328826914** pentru o durată de 60(sasezeci) zile, (durata în litere și cifre), respectiv până la data de 28.04.2026 (ziua/luna/anul), și ea va rămâne obligatorie pentru noi și poate fi acceptată oricând înainte de expirarea perioadei de valabilitate.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat
„Media Security” SRL
Administrator _____ Victor Gaina

Anexa nr.22 la procedura de achizitii Servicii de mentenanță și reparație a instalațiilor cu raze X [ocds-b3wdp1-MD-1771328826914](#)

| | Denumirea serviciilor | antita a | Preț unitar (fără TVA) | Preț unitar (cu TVA) | Suma fără TVA | Suma cu TVA | Specificația tehnică solicitată de către autoritatea contractantă | Specificația tehnică deplină propusă de ofertant | Termenul/ locul de prestare |
|---|--|----------|------------------------|----------------------|---------------|-------------|---|--|---|
| Lotul: Servicii de reparație și mentenanță a instalațiilor cu raze X | | | | | | | | | |
| 50610000-4 | Servicii de mentenanță și reparație a instalațiilor cu raze X | 1 | 159000,00 | 190800,00 | 159000,00 | 190800,00 | <ol style="list-style-type: none"> Lucrări de mentenanță preventivă și verificare tehnică pentru 11 instalații de model Astrophysics XIS-6545: <ul style="list-style-type: none"> evaluarea stării de funcționare a generatorului de raze X, inclusiv a controllerului aferent, precum și a capacității de imagistică; verificarea completă a funcționării instalațiilor în regim normal de exploatare; ajustarea, după caz, a parametrilor de funcționare conform recomandărilor producătorului; măsurarea nivelului de radiație în interiorul tunelului de scanare și în imediata apropiere a instalațiilor. Lucrări de reparație și înlocuire de componente pentru instalații de model Astrophysics XIS-6545 (după caz, în funcție de | <ol style="list-style-type: none"> Lucrări de mentenanță preventivă și verificare tehnică pentru 11 instalații de model Astrophysics XIS-6545: <ul style="list-style-type: none"> evaluarea stării de funcționare a generatorului de raze X, inclusiv a controllerului aferent, precum și a capacității de imagistică; verificarea completă a funcționării instalațiilor în regim normal de exploatare; ajustarea, după caz, a parametrilor de funcționare conform recomandărilor producătorului; măsurarea nivelului de radiație în interiorul tunelului de scanare și în imediata apropiere a instalațiilor. Lucrări de reparație și înlocuire de componente pentru instalații de model Astrophysics XIS-6545 (după caz, în funcție de constatările din etapa | <p>Până la 20.12.2025; instituțiile penitenciare din diferite locații ale RM (P1-Taracia,P3 - Leova, P4-Cricova, P5 – Cahul, P6- Soroca, P9- Pruncul, P11.- Bălți, P 13 Chișinău, P 15 – Cricova, P17 Rezina, P 18 - Brănești).</p> |

| | | | | | | | | |
|--|--|--|--|--|--|---|--|--|
| | | | | | | <p>constatările din etapa anterioară):</p> <ul style="list-style-type: none"> - înlocuirea mecanismului de rotație al benzii transportoare (rulmenți); - înlocuirea sursei de alimentare a PC-ului, a generatorului și /sau a plăcii de bază; - înlocuirea butoanelor tastaturii, a butoanelor de oprire de urgență și a întrerupătoarelor de tip interlock; - înlocuirea perdelelor de protecție din tunelul de scanare; - înlocuirea monitoarelor de afișare; - înlocuirea senzorilor de detecție amplasați la intrarea, respectiv ieșirea din tunelul de scanare; - înlocuirea releelor de alimentare; - înlocuirea sursei interne de alimentare de rezervă; - înlocuirea cablurilor interne de interconectare deteriorate sau degradate; - reinstalarea și/ sau actualizarea sistemului de operare. | <p>anterioară):</p> <ul style="list-style-type: none"> - înlocuirea mecanismului de rotație al benzii transportoare (rulmenți); - înlocuirea sursei de alimentare a PC-ului, a generatorului și /sau a plăcii de bază; - înlocuirea butoanelor tastaturii, a butoanelor de oprire de urgență și a întrerupătoarelor de tip interlock; - înlocuirea perdelelor de protecție din tunelul de scanare; - înlocuirea monitoarelor de afișare; - înlocuirea senzorilor de detecție amplasați la intrarea, respectiv ieșirea din tunelul de scanare; - înlocuirea releelor de alimentare; - înlocuirea sursei interne de alimentare de rezervă; - înlocuirea cablurilor interne de interconectare deteriorate sau degradate; - reinstalarea și/ sau actualizarea sistemului de operare. | |
|--|--|--|--|--|--|---|--|--|

Semnat:_____Numele, Prenumele:Victor Gaina În calitate de: Administrator_

Ofertantul: „Media Security”SRL

Adresa: _mun.Chisinau.str.Colina Puschin.4

Specificații de preț

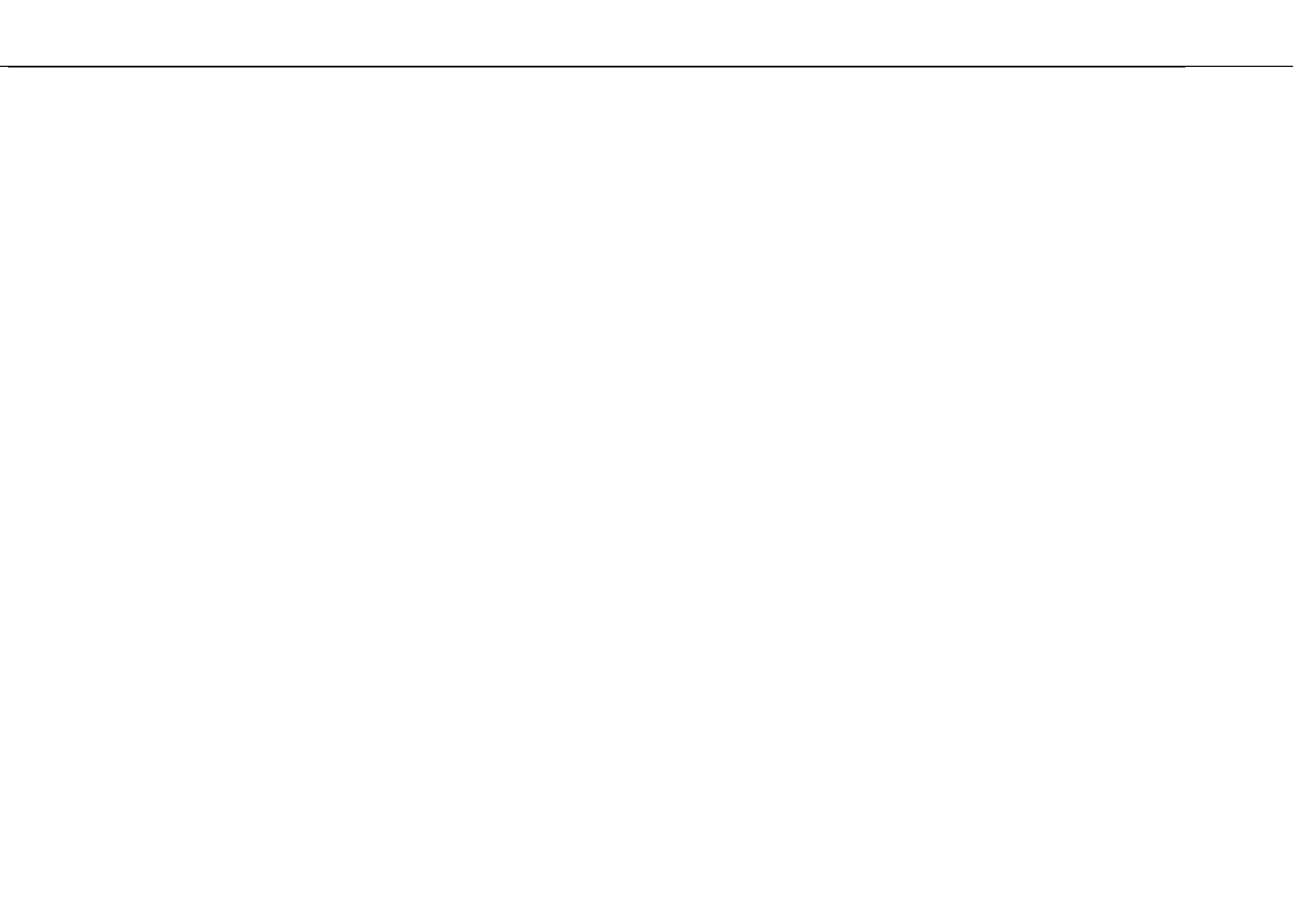
[Acest tabel va fi completat de către ofertant în coloanele 5,6,7,8 și 11 la necesitate, iar de către autoritatea contractantă – în coloanele 1,2,3,4,9,10]

| |
|---|
| Numărul procedurii de achiziție: ocds-b3wdp1-MD-1771328826914 |
| Obiectul achiziției: Servicii de mentenanță și reparație a instalațiilor cu raze X |

| Cod CPV | Denumirea bunurilor | Unitatea de măsură | Cantitatea | Preț unitar (fără TVA) | Preț unitar (cu TVA) | Suma fără TVA | Suma cu TVA | Termenul de livrare | Clasificație bugetară (IBAN) | Discount % |
|------------|---|--------------------|------------|------------------------|----------------------|---------------|-------------|---------------------|------------------------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 50610000-4 | Servicii de mentenanță și reparație a instalațiilor cu raze X | set | 1 | 159000,00 | 190800,00 | 159000,00 | 190800,00 | | | |
| | TOTAL | | | | | 159000,00 | 190800,00 | | | |

Semnat: _____ Numele, Prenumele: Victor Gaina În calitate de: Administrator

Ofertantul: „MEDIA SECURITY” SRL Adresa: mun.Chisinau. str.Colina Puskin.4



DECLARAȚIE DE ELIGIBILITATE

Către Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae
Titulescu 35 (denumirea
autorității/entității contractante și adresa completă)

Stimați domni,

Subsemnatul, reprezentant împuternicit al „Media Security” SRL
(denumirea operatorului economic)

în calitate de ofertant, declar pe propria răspundere, sub sancțiunea excluderii din procedură și sub sancțiunile aplicate faptei de fals în acte publice, că nu mă aflu în una dintre situațiile prevăzute la art. 19 din Legea nr. 131/2015 privind achizițiile publice.

Mă oblig, la solicitarea autorității/entității contractante, în scopul verificării și confirmării declarației, să prezint orice document doveditor de care dispun.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat
„Media Security” SRL
Administrator _____ Victor
Gaina

I.P. "AGENȚIA SERVICII PUBLICE"
Departamentul înregistrare a unităților de drept (DÎUD)

Extras
din Registrul de stat al persoanelor juridice
nr. 201555 din 10.02.2026



Denumirea completă: **Societatea cu Răspundere Limitată "MEDIA SECURITY"**

Denumirea prescurtată: **"MEDIA SECURITY" S.R.L.**

Forma juridică de organizare: **Societate cu răspundere limitată**

Numărul de identificare de stat și codul fiscal: **1006600023985**

Data înregistrării de stat: **22.05.2006**

Sediu: **MD-2005, strada Colina Pușkin 4, mun. Chișinău, Republica Moldova**

Genurile de activitate:

- 1. Alte activități de servicii prestate întreprinderilor, neincluse în alte categorii;**
- 2. Tipărirea ziarelor;**
- 3. Publicitate;**
- 4. Tipărirea altor publicații (cărți, broșuri etc);**
- 5. Activitatea particulară de detectiv sau de pază;**
- 6. Montarea și (sau) reglarea, asistența tehnică a sistemelor automate de semnalizare și de stingere a incendiilor, precum și de protecție a clădirilor împotriva fumului și de înștiințare în caz de incendiu;**
- 7. Activitatea în domeniul televiziunii și radiodifuziunii;**

Capitalul social: **5400 Lei**

Administrator(i): **GAINA VICTOR IDNP 0961107011088**

Asociați:

- 1. GAINA VICTOR (IDNP 0961107011088), partea socială 5400 Lei, ce constituie 100%**

Beneficiari efectivi: **GAINA VICTOR (IDNP 0961107011088)**

Prezentul extras este eliberat în temeiul art. 34 al Legii nr.220/2007 privind înregistrarea de stat a persoanelor juridice și a întreprinzătorilor individuali și confirmă datele din Registrul de stat la data de 10.02.2026

Specialist coordonator

Diana Nasian-Nicolaev

tel. 022-20-7826

Digitally signed by Nasian-Nicolaev Diana

Date: 2026.02.10 08:23:45 EET

Reason: MoldSign Signature

Location: Moldova

MOLDOVA EUROPEANĂ



nr. 5864002/E 00056

20 februarie 2025

CERTIFICAT

Tip Certificat: Cont

Banca comercială „MAIB” S.A., Sucursala Tighina confirmă că MEDIA SECURITY SRL, IDNO 1006600023985 este deținător al următoarelor conturi bancare:

| Cod IBAN | Valuta contului |
|--------------------------|-----------------|
| MD48AG000000022512901602 | MDL |
| MD21AG000000022512901603 | USD |
| MD91AG000000022512901604 | EUR |

Certificatul este eliberat la solicitarea titularului de cont, pentru a fi prezentat la cerere.

Prezentul certificat este eliberat în scop informativ și nu prezintă careva obligațiuni financiare din partea Băncii.


(semnătura)

Profil Irina
Nume, Prenume, funcția
Consilier Relații
Clienți

Astrophysics, Inc.
XIS/VI Imaging Systems
User Manual

Details

| | |
|--------------------------|---|
| Title: | Astrophysics, Inc. XIS/VI General User Manual |
| Purpose: | User information and operation instructions for most models of standard XIS/VI X-ray machines |
| Current Revision: | J |
| Released: | December, 2024 |

Notices

Applicability

This document applies only to these products:

- XIS-5335
- XIS-5335S
- XIS-5335SD
- XIS-5335SM
- XIS-6040
- XIS-6040M
- XIS-6040N
- XIS-6040NM
- XIS-6040SE
- XIS-6545
- XIS-6545DV
- XIS-6545DVS
- XIS-6545N
- 6545VI
- XIS-5878
- XIS-7555R
- XIS-7858
- XIS-7858DVS
- 7858VI
- XIS-100X
- XIS-100XD
- XIS-100XDV
- XIS-100XDX
- XIS-1080
- XIS-1080D
- XIS-1210D

Accuracy

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Change-log

| Rev. | Author | Date | Changes |
|------|--------|---------------|---|
| A | Rob T | First Release | Document first released. |
| B | Rob T | 01/2014 | Added 6545VI and 7858VI |
| C | Rob T | 08/2014 | Appendix and Corrections |
| D | Rob T | 08/2014 | Added 180kV/200kV Cargo Machines |
| E | Rob T | 03/2015 | Added extra info about 200kV Models |
| F | Adam B | 06/2019 | Redid Header Formatting, Changes to App A |
| G | Adam B | 09/2019 | Added EI, Auto Belt Stop, and Auto Logout |
| H | Adam B | 06/2021 | Major Changes, Complete Overhaul |
| I | Adam B | 04/2024 | Added ATRS Section |
| J | Gene K | 12/2014 | Added alternative ATRS layout. |

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1. Conventions

Styles, Abbreviations, and Definitions

1.1. Styles

1.1.1. Special Alerts

NOTE/WARNING

The text in this box is important, but not life-threatening or directly related to the safety of operators and personnel.

CAUTION

Information inside a Caution box is dangerous and poses risk of minor injury.

DANGER

Text inside a Danger box is dangerous and poses risk of significant injury or death.

1.1.2. Notation

| Item | Example | Comments |
|-------------------|--|--|
| Control input | [Ctrl] + [Alt] + [Delete] | Press Ctrl, Alt, and Delete keys together. |
| On-screen buttons | Left-click 'Cancel' to discard all changes. | Single-quotes mark an on-screen button reading 'Cancel.' |
| Substitute terms | The Local Area Connection Properties (LAN properties) window... ↓ The LAN properties window... | (Normal)= shorter term (Bold) = abbreviation |
| Hyperlinks | Normal and followed links | Closing document resets link colors. |

1.1.3. Figures

| Figure Type | To Scale? | Caption Format |
|-----------------|--------------------|------------------------|
| Drawing/Diagram | No, unless noted. | Figure #: Figure Title |
| Photograph | Yes, unless noted. | |

1.2. Abbreviations

Uncommon abbreviations first appear **(bold and parenthesized)**.

Only this section defines common abbreviations (e.g., measurements).

Abbreviation capitalization may vary (e.g., Hi-pen vs. hi-pen).

| Abbreviation | Stands For | Abbreviation | Stands For |
|--------------|-----------------------------------|--------------|------------------------------|
| A | Amps | ID | Identification |
| AC | Alternating Current | KV | Kilovolts |
| AMS | Astrophysics Management System | LAN | Local Area Network |
| AOCP | Advanced Operator Control Panel | LE | Low Energy |
| B/W | Black and White | mA | Milli-Amps |
| C | Celsius | No. | Number |
| Ch. | Characters | OS | Operating System |
| Ctrl | Control | OTP | Operator Training Program |
| DA | Density Alert | PC | Personal Computer |
| DC | Direct Current | PEC | Photoelectric Cell |
| Diag | Diagnostics | PP | Picture Perfect |
| DV | Dual-View | PSU | Power Supply Unit |
| EI | Enhanced Imaging | RGB | Red-Green-Blue |
| E-Stop | Emergency Stop | SA | Screener Assist |
| eV | Electron Volts | TIP | Threat Image Projection |
| F | Fahrenheit | UI | User Interface |
| FCC | Federal Communications Commission | UPS | Uninterruptible Power Supply |
| FDA | Food and Drug Administration | USB | Universal Serial Bus |
| GUI | Graphical User Interface | V | Volts |
| HE | High Energy | VAC | Volts AC |
| Hi-Pen | High Penetration | VI | Virtual Imaging |
| Hz | Hertz | XIS | X-Ray Imaging System |

1.3. Definitions

| Term | Definition |
|-----------------|--|
| Analyst | Any person authorized to review images for possible threats and (if applicable) make screening decisions |
| Bag | A bag or other item scanned by the machine. |
| Civilian | Anyone with bags or items that are being scanned by the machine. |
| Conveyor | The moving belt that travels through the machine scanning tunnel. |
| Decision | An event whether the screener chooses to accept or reject a scanned bag based upon whether they believe a threat was detected within the bag. |
| Field | Any variable entry item in a menu where the user can change the entered information. |
| Filter | A header in a table that sorts all table items according to the header. |
| Frame | The physical skeleton of the machine. |
| Image | A scanned item as displayed to the screener and its associated file. |
| Inspection | The act of viewing, manipulating, and making a decision about a scanned bag. |
| Library | The total of saved images. |
| Machine | The scanner and all its associated workstations and components. |
| Maintenance | All services and other related operations required to keep the machine running optimally. |
| Operator | The person running the machine. |
| Privileges | All access rights required to utilize various functions of the machine. |
| Report | Data that provides a summary of various performance metrics. |
| Results | The data contained within a report. |
| Safety | All functions, procedures, processes, and features that are related to keeping operators and civilians safe while using the machine. |
| Scan | A single item passed through the machine and its associated scan image. |
| Scanned Item | Another name for a bag, also refers to items that are not strictly bags. |
| Scanner | The machine. |
| Screener | Another name for operator. |
| Screening | The process of analyzing and making a decision about a scanned image. |
| Service | Astrophysics department for providing maintenance and help services. |
| Shielding | All parts of the machine dedicated to providing static protection against X-rays. |
| Supervisor | Any employee with extra rights that oversees a team of screeners/operators. |
| Suspect | If a scanned item is believed to contain a threat. |
| Technician | Any employee that is trained and certified to perform detailed and complicated maintenance work on the machine. |
| Troubleshooting | The process of diagnosing problems or faults with the machine. |
| User | Another name for operator/screener, may also refer to supervisors or other people that log into the machine. |
| Views | Various images taken of a scanned item, used primarily when referring to a machine with more than one X-ray source, and thus more than one view. |
| Workstation | Any station with a computer dedicated to either screening, managing, and inspecting scanned items or the machine. |

2. Introduction

System Basics, Requirements, and Specifications

2.1. Overview

2.1.1. Purpose

The standard line of XIS machines produced by Astrophysics Inc. provide a wide range of possible geometries, sizes, and power ratings to fit specific scanning and security needs in a wide range of possible applications.

Larger machines such as the 100X have a higher powered X-ray source to penetrate thicker scan items, and the smaller machines such as the 6040 are good choices for mass-application of small bag scanners.

2.1.2. Theory of Operation

The following operational procedure is common to all XIS machines:

1. The operator, a civilian, or an automatic bag management system loads a bag or other scan item onto the belt.
2. The bag passes into the scanning tunnel, past the lead curtains.
3. The bag passes over a set of photo-sensors that trigger the X-ray source to begin emitting X-rays.
4. When the X-rays pass through the bag, they attenuate based upon the materials through which they pass. These attenuated X-rays are detected by the detector boards opposite the source. (This may happen twice if your machine is a dual-view machine).
5. The scanned items image is immediately shown to the operator at the machine (or to a remote inspection station). The operator then inspects the scanned item using the AOCF and a series of image manipulation functions. The image is also saved to the machines archive, or to an AMS if one is connected.
6. The bag passes out of the scanning tunnel on the other end of the machine.

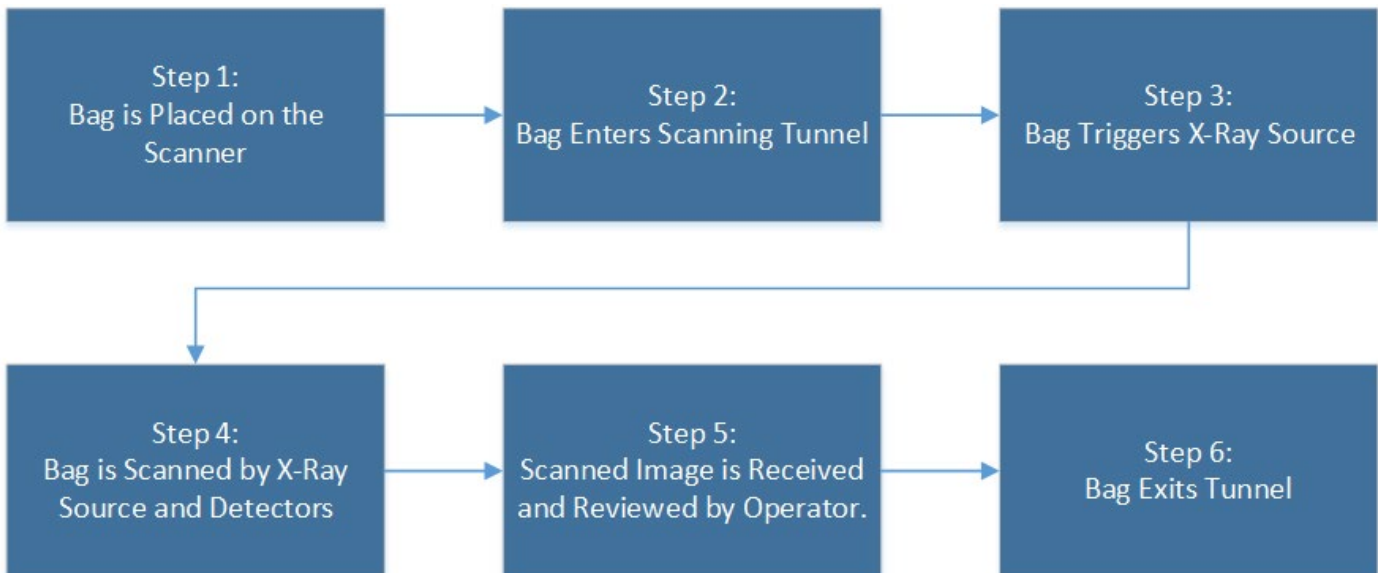


Figure 1: Scanning Operation Procedure

2.1.3. Important Components

2.1.3.1. X-Ray Source

Each X-ray machine is built around an X-ray tube that uses a power supply to generate a continuous potential in a vacuum tube. Electrons are expelled from a cathode source, and strike an anode tungsten target. The resulting energy converts partially into X-rays, which are directed and narrowed by lead plates to strike the detector array.

Each X-ray machine may have a different X-ray source, measured according to the amount and strength of X-rays they produce in eV (Electron Volts). It is sufficient to understand that machines with a higher power rating (such as those on the 100X) produce more powerful X-rays that are meant to scan larger and denser items.

Some machines with a DV in their name are Dual-View machines, meaning that they actually utilize 2 separate X-ray sources that view the tunnel from different angles. This provides 2 separate scans from either side, allowing more effective screening of scanned items.

2.1.3.2. Detector Array

Each machine is equipped with one or two arrays of detector boards that translate the X-rays into the image that the operator views.

The boards utilize a scintillating crystal bonded to a photodiode that light up in various colors when exposed to different attenuated frequencies of X-rays. The photodiode enhances the light and the board translates that light into analog data. That data is interpreted and translated into digital data by the machine, and sent to the PC to be gathered and organized into an image.

Arrays are collections of various amounts of these boards. Some of the smaller machines will have just 10-12 boards, while the larger machines may 15-20 boards.

2.1.3.3. Conveyor Belt

Each of the standard XIS and VI machines utilize a continuous belt for baggage traversal. This belt can be manually started and stopped by the operator and can traverse in both the forward and reverse direction.

Machines can also scan in either direction, depending upon which direction the belt is traveling.

2.1.3.4. Workstation

Each machine has a workstation where the machine operator sits and not only operates the machine but also reviews scanned images.

Some of the smaller machines (5335, 6040, 6545, 5878) may have the workstation integrated into the side of the machine frame. These workstations can flip up when the machine is not in use. However, each machine can also have a separate workstation that can be located either close to the machine or made remote if requested. The larger machines (7858, 100X, 1080, 1210) will always have a separate workstation.





Each workstation is equipped with an AOC (Advanced Operator Control Panel) that has an easy to understand interface and quick access to all image manipulation and machine operation functions.





2.1.3.5. PC





All machines are equipped with a PC that manages the internal workings of the machine, interprets the data from the detector boards, presents the image to the operator, and stores images for later review.

Some machines have multiple PC's, and all remote workstations will have their own PC that communicates with the machines central PC.



2.2. Product List





| Product | Description | Image |
|------------|--|---|
| XIS-5335 | The 5335 is the smallest machine available from Astrophysics, and provides a small frame for compact scanning of small bags and packages. |  |
| XIS-5335S | A version of the 5335 with a more powerful 160kV X-ray generator and an equipped tunnel extension. |  |
| XIS-5335SD | The 5335SD utilizes the generator of the 5335S but places it above the tunnel for different imaging views, and a better monitor than the standard 5335S. |  |
| XIS-5335SM | The 5335SM is the 5335S with a mobility kit installed to allow it to be relocated quickly. |  |

| | | |
|-------------------|---|---|
| <p>XIS-6040</p> | <p>A small baggage scanning machine with a slightly larger tunnel size than the 5335.</p> |  |
| <p>XIS-6040M</p> | <p>A mobile version of the 6040 with heavy duty rollers for quick relocation of the system.</p> |  |
| <p>XIS-6040N</p> | <p>The 6040N offers a more narrow profile than the standard 6040 if space is of particular issue.</p> |  |
| <p>XIS-6040NM</p> | <p>The 6040NM is a mobile version of the 6040N, offering a mobility kit for quick relocation.</p> |  |

| | | |
|--------------------|--|--|
| <p>XIS-6040SE</p> | <p>The 6040SE is the standard 6040 with a heavy duty mobility kit, extended rollers for loading and unloading, tunnel extensions, and a spill resistant and reinforced belt for scanning heavy or messy items.</p> |  |
| <p>XIS-6545</p> | <p>A small-mid size conventional baggage scanner with a 65cm x 45cm tunnel and a narrow profile for scanning mid-size and big bags.</p> |  |
| <p>XIS-6545DV</p> | <p>The 6545DV is a dual-view version of the standard 6545 for enhanced scanning and multiple views.</p> |  |
| <p>XIS-6545DVS</p> | <p>The 6545DVS is a dual-view machine with an enhanced 180kV X-ray source for big or dense scan items.</p> |  |

| | | |
|------------------|--|---|
| <p>XIS-6545N</p> | <p>The 6545N is a more narrow profile version of the standard 6545 for when space is a premium.</p> |  |
| <p>6545VI</p> | <p>The 6545VI upgrades the standard 6545 with a stainless steel frame, transparent tunnel extensions, and upgraded VI software that enhances scanning.</p> |  |
| <p>XIS-5878</p> | <p>The 5878 utilizes the 180kV source of the 6545DVS but with a particularly tall tunnel for items that could not fit into a standard 6545.</p> |  |
| <p>XIS-7555R</p> | <p>The 7555R is medium-large baggage scanner with ruggedized features for operation in hostile or adverse environments.</p> |  |

| | | |
|--------------------|--|--|
| <p>XIS-7858</p> | <p>The 7858 is the largest of the small baggage scanning machines, with a 180kV X-ray source and compact profile.</p> |  |
| <p>XIS-7858DVS</p> | <p>The 7858DVS is a dual-view version of the 7858 for scanning small to medium sized bags in a narrow space.</p> |  |
| <p>7858VI</p> | <p>The 7858VI upgrades the 7858 with a stainless steel frame, a mobile monitor stand, and VI software for better screening capabilities.</p> |  |
| <p>XIS-100X</p> | <p>The 100X is the next step up in machine size. It is a powerful machine designed for oversized baggage, large parcels, and small cargo crates.</p> |  |

| | | |
|-------------------|--|---|
| <p>XIS-100XD</p> | <p>The 100XD is built with a more powerful source angled downward and a lower bed for scanning cargo and crates.</p> |  |
| <p>XIS-100XDV</p> | <p>A standard dual view version of the XIS-100X. Meant for big bags and heavy traffic.</p> |  |
| <p>XIS-100DX</p> | <p>A heavy duty small cargo dual-view version of the 100XD. Meant for thick scan items, big bags, and cargo.</p> |  |
| <p>XIS-1080</p> | <p>The 1080 is a mid-size luggage scanner with a thicker reinforced bed meant for scanning extremely heavy objects up to 440lbs.</p> |  |

| | | |
|------------------|---|--|
| <p>XIS-1080D</p> | <p>A more compact version of the 1080 with a low conveyor and the x-ray tube angled downward from the top of the machine.</p> |  |
| <p>XIS-1210D</p> | <p>The 1210D is the largest conventional baggage scanning machine with a 120 x 100cm opening and low conveyor for oversize objects and cargo.</p> |  |

2.3. Requirements

| Product | Power Requirements | Operating Temp | Storage Temp | Humidity (Non-Condensing) |
|-------------|--|------------------------------|--------------------------------|---------------------------|
| XIS-5335 | 110VAC +/- 10% 50/60Hz, 15A 220VAC +/- 10% 50/60Hz, 10A | 0°C to 40°C 32°F to 104°F | -20°C to 60°C -4°F to 140°F | 95% |
| XIS-5335S | | | | |
| XIS-5335SD | | | | |
| XIS-5335SM | | | | |
| XIS-6040 | | | | |
| XIS-6040M | | | | |
| XIS-6040N | | | | |
| XIS-6040NM | | | | |
| XIS-6040SE | | | | |
| XIS-6545 | | | | |
| XIS-6545N | | | | |
| 6545VI | | | | |
| XIS-5878 | | | | |
| XIS-7858 | | | | |
| 7858VI | | | | |
| XIS-100X | | | | |
| XIS-100XD | | | | |
| XIS-1080 | | | | |
| XIS-1080D | | | | |
| XIS-1210D | | | | |
| XIS-6545DV | 110VAC +/- 10% 50/60Hz, 20A 220VAC +/- 10% 50/60Hz, 15A | -17°C - 49°C 0°F - 120°F | -37°C - 100°C -35°F - 149°F | |
| XIS-6545DVS | | | | |
| XIS-7858DVS | | | | |
| XIS-100XDV | | | | |
| XIS-100XDX | | | | |
| XIS-7555R | | | | |

3. Safety

Safety Features, Precautions, and Hazards

3.1. Safety Hazards

The following safety hazards are common to all XIS/VI machines. Not all hazards are avoidable, but understand potential hazards and take precautions to avoid them.

DANGER

All Astrophysics machines are designed with safety in mind. However, not all potential hazards and circumstances are anticipated. To prevent injury or death:

- Read this chapter before operating the machine.
- Obey safety precautions at all times.
- Be aware of possible machine hazards.
- Exercise due caution and sensible practices.
- Enforce any additional protocols as required by site safety practices.

USERS AND SITE STAFF ARE RESPONSIBLE FOR EVERYDAY SAFETY

| Hazard | Description |
|---------------------|--|
| Ionizing Radiation | Radiation emitted for scanning can harm health and certain equipment. |
| Belt Motion | Machine belts can inflict injury on operators or civilians if body parts are caught in the machinery. |
| Electrical Hazards | Each machine draws power that could harm or kill a human being and damage equipment. |
| Heavy Parts | Heavy parts can inflict deadly injury and damage equipment if dropped, overturned, or struck. |
| Unauthorized Access | Negligence/sabotage can impair performance and safety features, creating unpredictable new hazards. |
| Foot Traffic | Scanning machines may have a lot of foot traffic around the machine that may lead to injury for the operator or civilians. |
| Civilian Hazards | Civilians and passersby may interact regularly with many of the XIS machines, and may cause intentional or unintentional damage to the machine or themselves through misuse. |

CAUTION

Not all hazards are listed above:

- Use appropriate caution when operating any machine.
- All personnel require proper PPE at all times.
- Make civilians and passersby aware of hazards.

3.2. Safety Precautions

3.2.1. General Precautions

Adhere to the following general safety precautions to avoid hazards around any Astrophysics machine.

- Operate only as intended.
 - Obey all warning/instruction labels and signs.
 - Only use the system for X-ray security screening.
 - Never bypass/disable safety features. Unauthorized modification creates unpredictable hazards and voids all applicable warranties.
 - Only factory-certified technicians may install, move, or service the system. Use only factory-certified replacement parts.
- Stay alert.
 - Check indicators/monitors often while operating.
 - Always know when the source is radiating.
 - Be ready to interrupt operation if an unsafe situation develops.
- Prevent unsafe operation.
 - Immediately press at least 1 E-stop during emergencies.
 - Press at least 1 E-stop and notify coworkers before entering the X-ray tunnel or any area where sudden operation may cause entrapment/injury.
 - Only release E-stops after resolving all safety concerns.
 - Inspect the system for hazards and fix any problems before startup or operation.
 - Never operate while someone is inside the X-ray tunnel.
 - Never operate with any defective indicators/cameras.
 - Stop operating if continued operation violates any safety precautions.
- Keep the system secure.
 - Keep unauthorized people away from the system.
 - Keep the system logged-out and disabled while unattended.
 - Securely store all system keys while unattended or unused.
 - Use strong passwords, change them regularly, and conceal keyboards while entering passwords or other sensitive information.

DANGER

Screening may reveal serious threats. Plan ahead:

- Prepare simple, clear instructions for handling threatening situations.
- Train all personnel to readily follow those instructions.

3.2.2. Radiation

For radiation safety, always keep exposure as low as achievable considering reasonable precautions.

- Keep shielding intact.
 - Never operate with any defective, missing, or open lead shielding/access panels.
 - Survey the system for excess radiation leakage at least once per year.
- Prevent accidental exposure.
 - Check and clear the X-ray tunnel before operating.
 - Stop operating while any X-ray indicators are malfunctioning.
- Avoid needlessly increasing exposure.
 - Never move closer than needed while the source is radiating.
 - Never stick hands or other body parts inside the tunnel.
 - Never let civilians and passersby near the machine unless necessary for normal operation.
 - Avoid scanning radiation-sensitive materials.
 - Never intentionally scan people/animals.
 - Avoid scanning X-ray (radiographic), photographic, or video film. The system safely scans digital cameras and storage media.

3.2.3. Injury

For personal safety, avoid hazardous parts and behavior.

CAUTION

A UPS can still power electronics after disconnecting mains power.

- Prevent electric shock.
 - Only operate if the system is correctly and reliably grounded.
 - Keep all electronics plugged firmly into outlets/sockets.
 - Never touch damaged electronics (e.g., mains switch, frayed wires, etc.) while powered.
 - Never clean liquid spills while affected electronics are powered.
- Prevent bodily injury.
 - Keep body parts, clothing, and accessories clear of moving parts.
 - Avoid unstable parts of the system, including idler rollers (which rotate freely).
 - Never climb onto any parts of the machine.
 - Never attempt to crawl into the machine.

3.2.4. Damage

For best performance and continued warranty coverage, treat the system with care.

WARNING

Astrophysics machines have no user-serviceable parts. Only factory-certified technicians may service the system.

- Keep the system in good repair.
 - Promptly schedule all required routine maintenance.
 - Follow all inspection/cleaning procedures.
 - Never exceed the system's load, power, or other operating capacities.
 - Keep all access panels securely closed.
 - Stop operating until all damaged parts are repaired.
- Provide a suitable operating environment.
 - Only install and operate systems indoors (The 7555R can be operated outdoors).
 - Protect the system from extreme temperatures (as specified).
 - Keep humidity levels $\leq 95\%$ and prevent condensation.
- Prevent electrical damage.
 - Only connect the system to stable, grounded, and suitably-rated AC power sources.
 - Keep all liquids (drinks, etc.) away from system electronics.
 - Avoid scanning pallets leaking excessive amounts of liquid or open liquid containers (which may spill onto the system).
 - During power outages, safely shut-down the system before its UPS units fully discharge.
- Prevent mechanical damage.
 - Keep the system on stable, level ground with suitably-rated flooring.
 - Avoid crashing forklifts or other heavy machinery into the system.
 - Stop operating if belts are jammed.
 - Control rodents and other pests in the operating area.

3.3. Safety Features

3.3.1. Radiation Features

3.3.1.1. Lead Shielding

Each machine has a significant of protected lead shielding:

- Lead lined tunnel protects nearby personnel from scattered radiation.
- A lead funnel and lead collimators narrow the x-ray beam into a narrow fan much weaker than the full emission of the X-ray source.
- The X-ray source itself is lined with to narrow the amount of X-rays produced to only a specific direction.

3.3.1.2. Lead Curtains

All XIS/VI machines are equipped with lead curtains at each end of the tunnel.

- All curtains are impregnated with lead to prevent scattering of radiation.
- Curtains are offset-layered to provide 100% coverage at the end of each tunnel.
- Tunnel extensions add an extra layer of curtains for extended protection.



Figure 2: Lead Curtains (XIS-6040)

CAUTION

Lead shielding does not prevent 100% of all X-ray exposure and is not guaranteed to block radiation of radioactive substances. Follow safe protocols to keep exposure low.

3.3.2. Electric Safeties

3.3.2.1. Circuit Breakers

Each machine will have a circuit breaker on the side of the machine that will engage to protect the machine from power surges, improper power input, and overcurrent.

- The circuit is **ENGAGED** if the circuit breaker is **UP**.
- The circuit is **DISENGAGED** if the circuit breaker is **DOWN**.



Figure 3: Circuit Breaker (XIS-6040)

3.3.2.2. Surge Protectors

Each machine is equipped with a surge protector that protects all sensitive electronics from excessive current and damage.

- The surge protectors are internal to the machine, and cannot be engaged by the operator.
- The surge protectors do not cut off the flow of electricity, instead they manage the flow of electricity.

3.3.2.3. Uninterruptible Power Supply (UPS)

Each machine is equipped with a UPS that protects sensitive and critical electronics from sudden loss of power.

- The system UPS will only maintain the sensitive electronics and the PC. It DOES NOT allow the machine to operate without main power.
- The UPS will only provide power for about 1 hour.
- The UPS will naturally recharge its battery when mains power is restored.

3.3.3. Physical Safeties

3.3.3.1. Interlock Switches

All machine panels are protected by Interlock switches that, when disengaged, do not allow the machine to operate.

- All panels are protected by interlocks.
- If a panel is removed, it must be returned to the machine before the machine can operate again.



Figure 4: Interlock Switch (XIS-6040)

DANGER

NEVER rely on Interlock Switches in an emergency situation. ALWAYS use an E-Stop.

3.3.3.2. Key-Switch Lock

The AOC (Advanced Operator Control Panel) has a key-switch that locks the machine if not engaged.

- Personnel must always disengage the key-switch if they are not tending the machine.
- Never lose the key for the AOC key-switch.

3.3.3.3. PEC (Photoelectric Cells)

Each machine is equipped with 2 or more pairs of PECs that detect bags as they pass through the machine.

- The X-ray source does not start emitting X-rays until a bag passes the PECs.
- If the PECs are non-operational, they will not indicate to the system and bags will not scan, but the machine will continue to operate.
- If the PECs are triggered in the wrong order, the image will not display in real-time and will only display the image after the bag has left the tunnel.

3.3.3.4. Warning Lights

All XIS machines are equipped with warning lights.

- The **GREEN** light is on when the machine has power.
- The **RED** light is on when the machine is emitting X-Rays.



Figure 5: Warning Lights

3.3.3.5. Warning Labels

Many parts of the machine have warning labels that provide important safety information to personnel and passersby.

DANGER

The warning labels are vitally important and provide critical information to all personnel, staff, and civilians near the machine.

- ALWAYS read all safety and warning labels.
- NEVER remove labels from the machine.
- NEVER cover or hide safety labels.

3.3.4. Software Features

3.3.4.1. Tiered User Access

The system software limits non-administrator users with a configurable access rights hierarchy.

WARNING

The hierarchy guards against mistakes or sabotage, but is NOT a perfect defense. Ensure all users are trained and responsible.

NOTE

Given specific access control rights, users can change access rights for subordinate profiles.

| Screener | Supervisor | Maintenance | Administrator |
|-------------------------|--|-------------|---------------|
| Management Scan Mode | Download Datafiles History Report Individual Results Management Reports Scan Mode TIP Monthly Report TIP Screener Report | All | All |

Some permanent restrictions override access rights to prevent system lockouts or security bypass. Higher-level profiles supersede others.

| Type | Level | Can: | Cannot: |
|---------------|-------|--|---|
| Administrator | 4 | Unrestricted. | |
| Maintenance | 3 | <ul style="list-style-type: none"> Create new users \leq level 3. Promote users to \leq level 3. Demote users (\leq level 3) to level 1. | <ul style="list-style-type: none"> Access level 4 user/report data. Create new level 4 users. Promote users to level 4. |
| Supervisor | 2 | <ul style="list-style-type: none"> Demote level 2 users to level 1. | <ul style="list-style-type: none"> Access \geq level 3 user/report data. Create new users \geq level 2. Promote users. |
| Screener | 1 | | <ul style="list-style-type: none"> Access \geq level 2 user/report data. Create new users \geq level 2. Promote users. |

3.3.4.2. Password Protection

All users require a secure password to access the system.

WARNING





Protect passwords to prevent unauthorized access:

- NEVER tell anyone your password.
 - NEVER write your password down.
 - ALWAYS use passwords that are complex and cannot be guessed easily.
 - ALWAYS create passwords in secret, without anyone else watching.
-

3.3.5. E-Stops (Emergency Stop Buttons)

Each system is equipped with 2-4 E-Stops that can be used in the case of emergencies.

- E-Stops instantly cuts power to the X-ray source.
- E-Stops also instantly stop the motors running the belts.
- The E-Stops bypass software controls and disable circuits directly.

| Action | Instructions | Light Status | |
|---------|---|---|--|
| Press | Push until button clicks and stays pressed. |  |  |
| Release | Twist button clockwise until it pops back. |  |  |

DANGER

In an emergency situation, always use an E-Stop immediately. Never attempt to bypass E-stops or other safeties on any machine.

3.4. Regulatory Compliance

3.4.1. Federal

- U.S. Food and Drug Administration (FDA) performance standards for cabinet X-ray systems 21 CFR 1020.40.
- U.S. Federal Communications Commission (FCC) rules Part 15, Subpart B.
- Canadian ICES-003 Class A digital apparatus.

NOTE

This section lists only commonly-sought compliance. For information about compliance with specific standards, please contact Astrophysics.

3.4.2. Local

Significant variation in radiation safety requirements between local jurisdictions prevents Astrophysics from making any reasonable guarantees about compliance in all jurisdictions. Please consider:

- Some jurisdictions require registering X-ray radiating equipment before use.
- Most jurisdictions require initial and continuing annual radiation safety surveys.
- Owners and operators are responsible for their own compliance with all applicable federal, state, and local laws. Noncompliance may incur substantial penalties.

4. Operation

Controlling the System and Screening Images

4.1. Startup and Shutdown

4.1.1. System Startup

1. Plug the machine into main power. The plug is often located underneath the exit end conveyor bed.
2. Ensure that the circuit breaker is UP.



Figure 6: Circuit Breaker Up

3. Insert the key into the key-switch on the AOCP (Advanced Operator Control Panel). Then turn the key to the ON position.

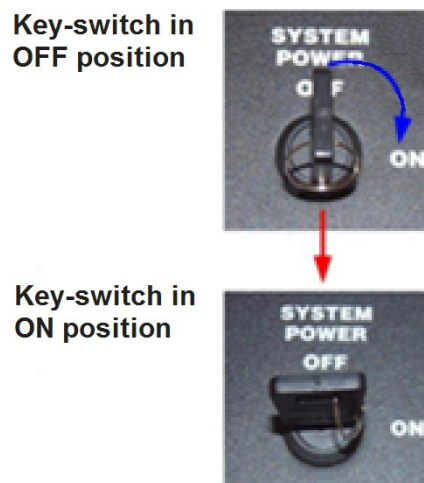


Figure 7: Key-Switch

4. Wait for the Login Screen to appear.

4.1.2. Login and Logout

4.1.2.1. Login Screen


The login screen is displayed immediately upon starting up the machine, and when logged out the machine will default to the login screen.



Figure 8: Login Screen



| No. | Item | Comments |
|-----|-----------------|--|
| 1 | Profile Buttons | Click to pick profile type. Selection colored dark yellow. |
| 2 | Mode Buttons | Click to pick login mode. Selection colored dark yellow. |
| 3 | Name | Shows full name of selected profile. |
| 4 | Profile Menu | Click to pick user profile (by ID) with drop-down menu. |
| 5 | Portrait | Shows portrait of selected profile. |
| 6 | Password Field | Click & type to enter password. |
| 7 | Keypad | Click to input numbers. Use keyboard for other characters. |

4.1.2.2. Login Procedures

1. Pick a profile type using the Profile Buttons.
2. Pick a login mode with the Mode Buttons.
 - 2.1. **Scan Mode** is used for screening images and viewing archived images.
 - 2.2. **Management** is used for profile and system management.
3. Use the dropdown Profile Menu to select from available profiles.
4. Enter the correct password into the Password Field.
5. Press [Enter] on the keyboard or left-click the  key on the onscreen keypad.

4.1.2.3. Logout Procedures

Logging out of Scan Mode:

1. Turn off the belt.
2. Complete all pending screening decisions and close any archive mode views.
3. Press the Logout button on the AOCF.
 - 3.1. On the Alphanumeric AOCF, press the  button.
 - 3.2. On the Icon-Based AOCF, press the  button.

Logging out of Management Mode:

1. Exit out of any menus.
2. Click 'Exit'.

4.1.2.4. Login Faults

| Message | Cause | Remedy |
|---|--|--|
| User name or Password Invalid! | Password typo or wrong profile. | 1. Check spelling and selected profile before 2nd try. 2. Change forgotten passwords instead of guessing. |
| Account Locked | Too many login failures. | 1. Edit profile and unlock it. 2. Wait for lock to expire or contact Astrophysics for help. |
| This Account is Inactive! | Profile disabled from management mode. | Edit profile and set it to active. |
| Password will be expiring soon. Please change it. | Password expires within 7 days. | Log-in to management mode with current password and change it. |
| Password has expired. Please change it. | Password must be changed to continue. | Log-in to management mode with current password and change it. |

4.1.3. System Shutdown

To shut down the XIS/VI machine, perform the following procedure:

1. Complete all logout procedures.
2. Turn the key-switch to the off position.
3. Flip the circuit breaker to the DOWN position to shut power off to the machine.
4. Unplug the machine if necessary.

4.2. Screening

4.2.1. Scan Mode UI

When a screener logs into Scan Mode, they will be taken to Scan Mode screen.

All Astrophysics machines are equipped with 2 screens. On a single view machine, each screen can be used to independently manipulate the image. On a dual view machine, each screen will display one of the two views.

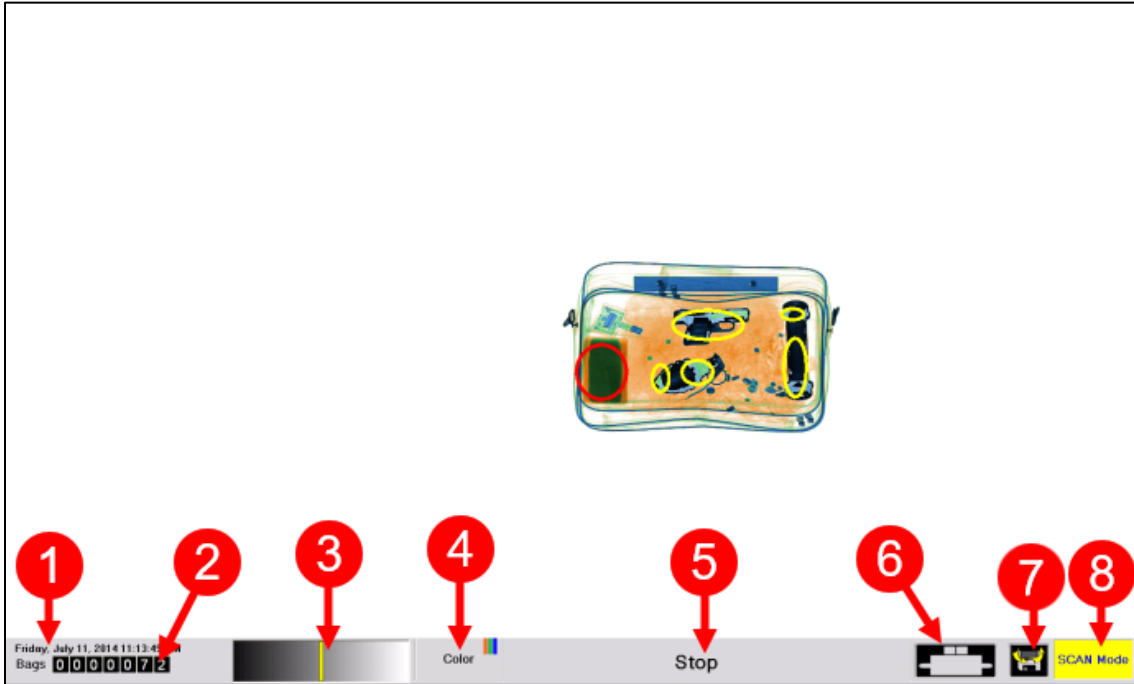


Figure 9: Screen 1 UI

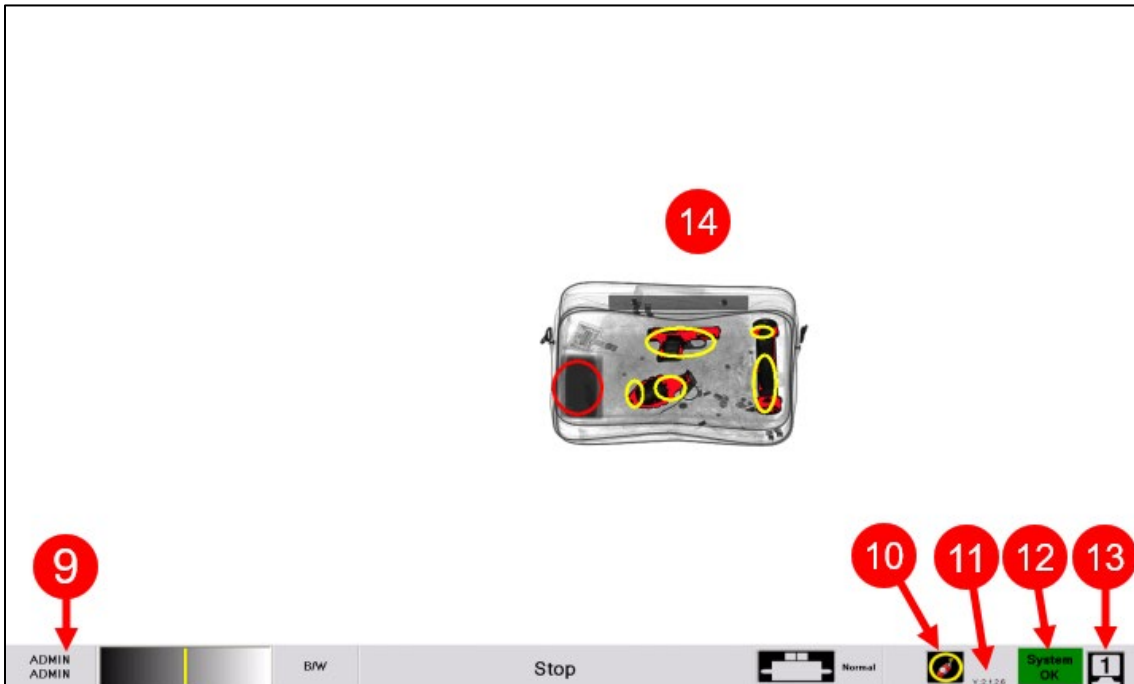



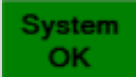



Figure 10: Screen 2 UI

| No. | Name | Function |
|-----|------------------------|--|
| 1 | Date/Time Display | Displays the date and time. |
| 2 | Bag Counter | Counts up, from 000, the number of bags scanned in this session. |
| 3 | Brightness Indicator | The yellow bar shows the current Brightness level, the right side of the bar is brighter and the left side of the bar is darker. |
| 4 | Manipulation Mode | Displays the image manipulation mode active (color, b/w, etc.). |
| 5 | Status Bar | Displays statuses and messages. |
| 6 | Machine Monitor | Yellow boxes will light up on either end of the icon if a bag sits on that side of the machine. In addition, a hazard symbol will be displayed if X-rays are currently being produced.  |
| 7 | Archive Mode Icon | This icon is displayed if automatic image archiving is on. |
| 8 | Mode Monitor | Will display the current view mode (Scan Mode vs Review Mode). |
| 9 | Current Login | Indicates the current login name and login type. |
| 10 | TIP/SA Icon Field | Two icons may be displayed if TIP (Threat Image Projection) or SA (Screener Assist) are active.  TIP Indicator  SA Indicator |
| 11 | Software Version Field | Displays the current software version installed on the current machine. |
| 12 | System Fault Indicator | Displays a Warning message if the system is currently in fault due to errors, interlocks, or E-stops.   |
| 13 | View Indicator | On a machine with multiple monitors, this area on the second screen shows the currently selected monitor. |
| 14 | Display Field | Scanned items will scroll across the screen in this area. |

4.2.2. The AOC (Advanced Operator Control Panel)

All Astrophysics machines are controlled using the AOC. Astrophysics provides two types of AOC for all XIS/VI Machines: Alphanumeric and Icon-Based.

4.2.2.1. Alphanumeric AOC



Figure 11: Alphanumeric AOC

| No. | Name | Function |
|-----|---------------------------|--|
| 1 | E-Stop | This button functions as an E-Stop, similar to those on the machine. |
| 2 | Numberpad | Buttons for inputting numbers and certain letters. |
| 3 | Function Buttons | Buttons that control the machine and various image manipulation functions. |
| 4 | TIP Indicator | When lit, indicates that TIP is active. |
| 5 | Alpha Indicator | When lit, indicates that the Function and Number buttons will input letters instead of numbers or their normal function. |
| 6 | Screener Assist Indicator | When lit, indicates that Screener Assist is active. |
| 7 | L-Indicators | L1 and L3 are inactive. L2 is lit when the AOC loses connection to the PC. |
| 8 | Power Indicator | Lit when the XIS/VI is powered. |
| 9 | X-Ray Indicator | When lit, indicates that X-Rays are currently being produced by the X-ray source. |
| 10 | Suspect Button | Press to send to an optional suspect station for additional inspection. |
| 11 | System Power Key-Switch | Turn vertical to turn the machine off. Turn horizontal to turn the machine on. |
| 12 | Zoom Buttons | These buttons control zoom levels of the active view. |
| 13 | Screen Buttons | These buttons switch between screens when 2 monitors are present. |
| 14 | Brightness Buttons | These buttons control the brightness levels of the active view. |
| 15 | Touchpad | This touchpad controls the screen cursor and acts as a mouse. |
| 16 | Belt-Left Button | Press to start the belt going in the left direction. |
| 17 | Belt-Stop Button | Press to stop the belt. |
| 18 | Belt-Right Button | Press to start the belt going in the right direction. |

| Button | Function | Button | Function |
|-----------------------------|--|-------------------------|--|
| NUM ALPHA | Press to switch between the number pad/function buttons and the letter buttons. | EDGE TRACE H | Press to activate Edge Trace. |
| PRINT D | Press to send the current image to a connected printer. | ORG N | Press to activate Organic Bias. |
| DIAG E | Press to open the Diagnostics menu. | B/W REVERSE O | Press to activate Black/White Reverse mode. |
| SAVE RGB L | Press to save the current image to the Archive. | HIPEN P | Press to activate Hi-Penetration mode. |
| CONT. SCAN T | Press to activate Continuous Scan. | INORG V | Press to activate Inorganic Bias mode. |
| PICTURE PERFECT U | Press to activate Picture Perfect/EI Mode | PSEU W | Press to activate Pseudocolor mode. |
| ENTER | Press to enter or confirm a selection in a type field and to perform other functions. <ul style="list-style-type: none"> In Scan mode, toggle between 6-color and 3-Color Mode. At the login screen, press to exit to the Desktop. | ATOM X | Press to activate Atomic Number selection mode. |
| LOG OUT | Press to log out the currently logged in user. | CBT . | Press to activate Computer Based Training (CBT) mode on. |
| COLOR F | Press to activate color mode. | REVIEW . | Press to activate recent scan review. |
| B/W G | Press to activate Black/White Mode. | ARCHIVE SPACE | Press to activate Archive View mode. |
| BACK-SPACE Z | Press to delete the previously entered number or letter in a typing field. | NORM | Press to return to default zoom or brightness level. |
| LIGHT | Press to brighten the image. | DARK | Press to darken the image. |
| ZOOM IN | Press to zoom in over the cursor position. | ZOOM OUT | Press to zoom out. |
| SCREEN 1 | Press to select screen 1 in a multi screen setup. | SCREEN 2 | Press to select screen 2 in a multi-screen setup. |

4.2.2.2. Icon-Based AOC

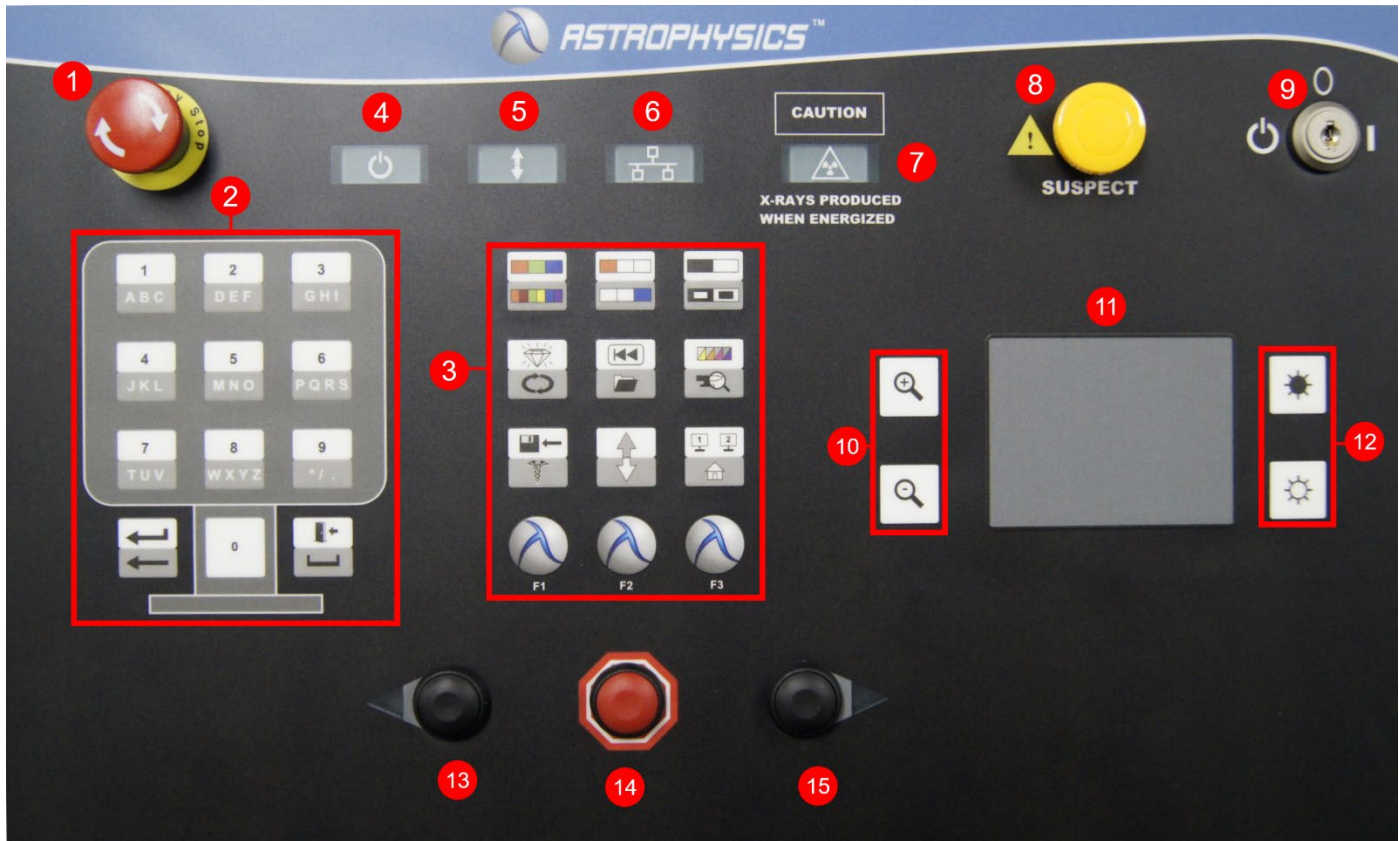




























Figure 12: Icon-Based AOC

| No. | Name | Function |
|-----|----------------------------|---|
| 1 | E-Stop Button | This button functions as an E-Stop, similar to those on the machine. |
| 2 | Alphanumeric Keypad | Buttons for inputting numbers and letters. |
| 3 | Image Manipulation Keys | Press for image manipulation and machine control functions. |
| 4 | Power Indicator | Lights up when the AOC is powered. |
| 5 | Shift Indicator | Lights up when Shift function is active. |
| 6 | Network Indicator | Lights up when the AOC is disconnected from the PC. |
| 7 | X-Ray Indicator | When lit, indicates that X-Rays are currently being produced by the X-ray source. |
| 8 | Suspect Button | Press to send to an optional suspect station for additional inspection. |
| 9 | Power Key-Switch | Turn vertical to turn the machine off. Turn horizontal to turn the machine on. |
| 10 | Zoom Control Buttons | These buttons control zoom levels of the active view. |
| 11 | Touchpad | This touchpad controls the screen cursor and acts as a mouse. |
| 12 | Brightness Control Buttons | These buttons control the brightness levels of the active view. |
| 13 | Belt-Left Button | Press to start the belt going in the left direction. |
| 14 | Belt-Stop Button | Press to stop the belt. |
| 15 | Belt-Right Button | Press to start the belt going in the right direction. |

| Button | Function | Function |
|---|-------------------------|--|
|  | Enter Button | Confirm inputs into typing fields. |
|  | Backspace Button | Delete the last entered character input in typing fields. |
|  | Logout Button | Press to log out of scan mode. |
|  | Space Button | Press to enter a black-space character. |
|  | 3-Color | Press to enable 3-color mode. |
|  | 6-Color | Press to enable 6-color mode. |
|  | Organic Bias | Press to enable organic emphasis mode. |
|  | Inorganic Bias | Press to enable inorganic emphasis mode. |
|  | Black/White | Press to enable black/white mode. |
|  | Black/White Reverse | Press to enable black/white reverse mode. |
|  | Picture Perfect/EI Mode | Press to enable Picture Perfect/EI Mode. |
|  | Continuous Scan | Press to enable continuous scan mode. |
|  | Review | Press to activate recent image review mode. |
|  | Archive View | Press to activate archive view. |
|  | Pseudo-Color | Press to activate pseudo-color |
|  | Hi-Penetration | Press to activate hi-penetration mode |
|  | Save RGB | Press to save the current scan to archive |
|  | Diagnostics | Press to activate diagnostics screen |
|  | Monitor Toggle | Press to toggle between monitors on a multiple monitor system. |
|  | Home Button | Press to reset image manipulation features to default. |
|  | Zoom in Button | Press to zoom in over the current cursor position. |
|  | Zoom Out Button | Press to zoom out |
|  | Darken Button | Press to lower the brightness of the current image |
|  | Lighten Button | Press to raise the brightness of the current image |
|  | Shift Toggle Button | Press to activate shift mode. When Shift Mode is active, all button presses will select the function in Gray. When Shift Mode is inactive, all button presses will select the function in white. |
|  | Function Button(s) | Programmable function buttons. By default, Press F1 to activate Edge Trace function. |

4.2.3. Using the AOC

4.2.3.1. Conveyor Controls

On both versions of the AOC, the belt is controlled through the belt control buttons at the bottom of the AOC.



Figure 13: AOC Conveyor Control Buttons

| No. | Item | Function |
|-----|---------|---|
| 1 | Forward | Moves the conveyor from right-to-left. Scrolls the screen from right-to-left when applicable. |
| 2 | Reverse | Moves the conveyor from left-to-right. Scrolls the screen from left-to-right when applicable. |
| 3 | Stop | Stops the conveyor. Stops screen scrolling when applicable. |

DANGER

The stop conveyor button does not function as an E-Stop.

- NEVER use the conveyour stop button as an E-Stop.
- ALWAYS use an E-Stop in case of emergency.

The arrows adjacent to the forward and reverse buttons are LEDs that will light up to indicate which direction the belt is currently traveling.



Figure 14: Illuminated Button Arrow

When bags are loaded onto the machine, the PEC indicators will light up yellow along the bottom of the screen as shown below to track the bag location.



Figure 15: PEC Indicators

4.2.3.2. Alpha and Shift Functions

Each of the AOCB models contain dual-use buttons. To use both functions, the Alphanumeric AOCB contains an Alpha Mode, and the Icon-Based AOCB contains a Shift Mode button.

Pressing the Shift Function Button or the Alpha Function Button activates the Shift- or Alpha-Mode functions respectively.

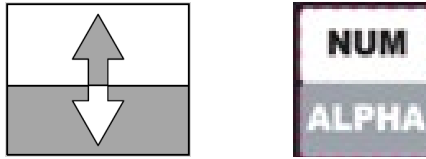


Figure 16: Shift Button (LEFT) and Alpha Button (RIGHT)

- When **DISABLED**, pressing any multiple function button will select the **TOP** function.
- When **ENABLED**, pressing any multiple function button will select the **BOTTOM** function.
- When Shift-Mode or Alpha-Mode are enabled, their respective indicators will be lit.

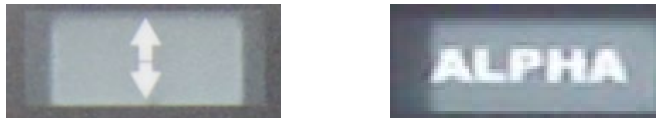






Figure 17: Shift Mode Indicator (LEFT) and Alpha Mode Indicator (RIGHT)

| Icon-Based | Alphanumeric | Status |
|---|---|--|
|  |  | Active when Shift/Alpha-Mode is DISABLED |
|  |  | Active when Shift/Alpha-Mode is ENABLED |

4.2.3.3. AOCB Reset Button

All AOCB's have a small black button located on the back of the unit.

When pressed, it resets the AOCB connection to the PC. If the connectivity indicator lights are flashing, press this button.

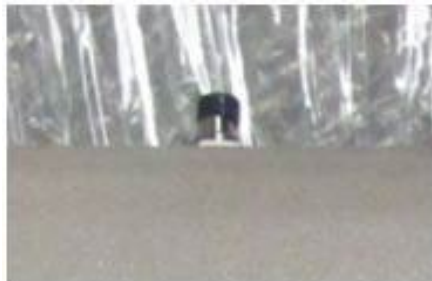
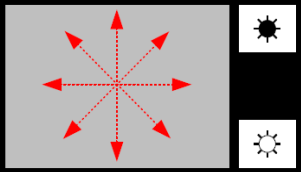
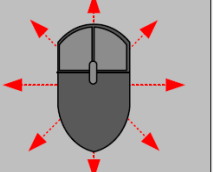
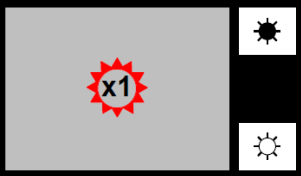
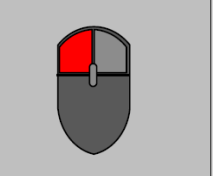
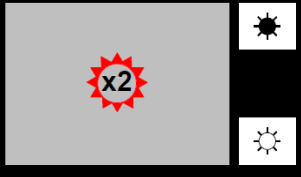
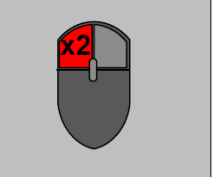

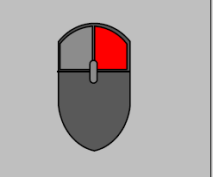
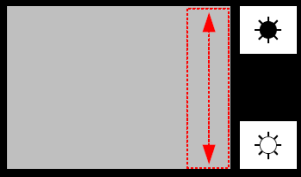
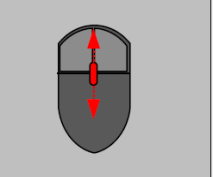
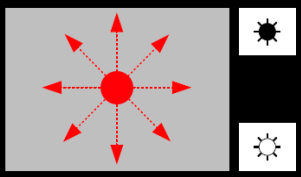
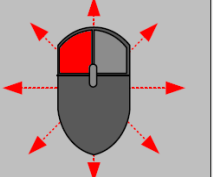


Figure 18: AOCB Reset Button

4.2.3.4. Track Pad

Each AOCF is equipped with a track-pad used for mouse input. Use the track-pad with the following methods.

| Mouse Input | Track-Pad Controls | Example | |
|-----------------|---|--|---|
| Move the Cursor | Drag a finger across the track-pad. |  |  |
| Left-Click | Tap once near the center of the track-pad. |  |  |
| Double-Click | Tap twice near the center of the track-pad in quick succession. |  |  |
| Right-Click | Tap twice near the upper-right corner of the track-pad. |  |  |
| Scroll | Drag a finger up or down along the right-hand edge of the track-pad. |  |  |
| Hold and Drag | Click, hold for 1 second, and drag across the pad to move selections on screen. |  |  |

4.2.3.5. Icon-Based AOCF Alphanumeric Keypad





On the Icon-Based AOCF, the alphanumeric keypad is used to enter digits 0-9.

- To activate the alphanumeric keypad, Shift Mode must be active.
- Press any of the alphanumeric keys to enter a letter.
- Pressing a key repeatedly cycles through the selected letters displayed on the button.
- When cycling through letters, press the [0] button to confirm a letter selection.
- After fully cycling through the letters, the AOCF will cycle through them again in uppercase form.



Figure 19: Typing 'admin' Using the Alphanumeric Keypad

The keypad also features 3 extra functions using the following keypad buttons.

| Button | Function | Function |
|---|------------------|---|
|  | Enter Button | Confirm inputs into typing fields. |
|  | Backspace Button | Delete the last entered character input in typing fields. |
|  | Logout Button | Press to log out of scan mode. |
|  | Space Button | Press to enter a black-space character. |

NOTE

A USB keyboard can also be plugged into one of the USB slots available on the machine if using the Alphanumeric keypad proves frustrating or undesirable.

4.2.4. Image Manipulation Functions

All Astrophysics machines offer a series of image manipulation functions to aid in the screening process.

4.2.4.1. Color Mode

Color modes render materials in different hues based on Z-number for basic material discrimination.

- Each color appears in multiple shades. Darker shades indicate thicker/denser material.
- Air appears white, and impenetrable materials appear black.
- There are 2 separate color modes: 3-Color and 6-Color
- Color identified scanned items by colorizing the contents according to Z-Number.



Figure 20: 3-Color (LEFT) and 6-Color (RIGHT)

| Number | Material Type | 3-Color | 6-Color | Examples | Possible Threats |
|--------|----------------|---------|---------|-------------------|-----------------------------|
| 0-8 | Organic | Orange | Brown | Wood, Oil | C-4, TNT, Semtex |
| 8-10 | Low Inorganic | Orange | Orange | Paper | Cocaine, Heroin |
| 10-12 | High Inorganic | Green | Yellow | Glass | Propellants |
| 12-17 | Light Metals | Green | Green | Aluminum, Silicon | Gunpowder, Trigger Devices |
| 17-29 | Heavy metals | Blue | Blue | Iron, Steel | Guns, Bullets, Knives |
| 29+ | Dense Metals | Blue | Violet | Gold, Silver | High-Value Contraband |
| - | Impenetrable | Black | Black | Lead | Shielding for Above Threats |

On the Alphanumeric AACP:

- Press the [COLOR/F] button with Alpha-Mode OFF.
- To toggle between 3-Color and 6-Color, press the [ENTER] button.

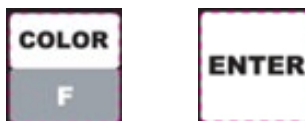


Figure 21: Color Mode Button (Alphanumeric AACP)

On the Icon-Based AACP:

- Press the Color Mode button to select 3-Color.
- Press the Color Mode Button with Shift-Mode Enabled, or press the button twice to select 6-Color.

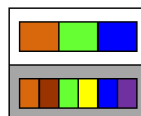


Figure 22: Color Mode Button

4.2.4.2. Black/White & Black/White Reverse Modes

All XIS machines come with two opposing greyscale modes that allow for better differentiation of density and item outlines. These modes are used when attempting to view hard to see or overlapping items, as well as thin items such as wires.

- The standard Black & White mode colors all items darker than the background, air is white. Denser items appear darker shades of black.
- Black & White Reverse mode colors all items lighter than the background, air is black. Denser items appear brighter shades of white.

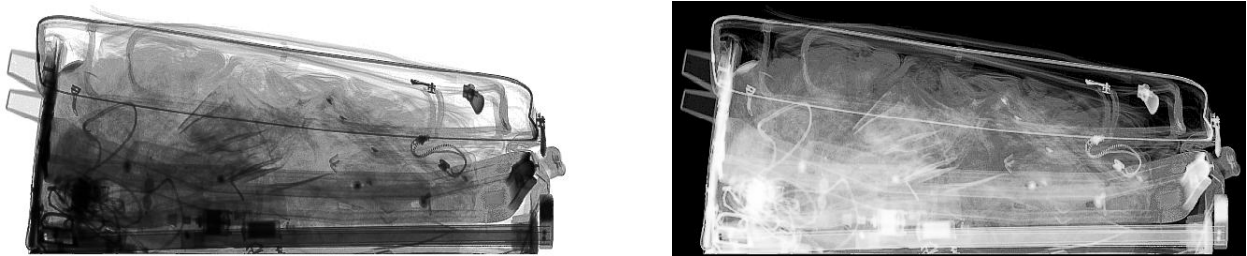


Figure 23: Black/White Mode (LEFT) and Black/White Reverse Mode (RIGHT)

On the Alphanumeric AOC:

- Press the [B/W / G] key to activate Black/White Mode.
- Press the [B/W Reverse / O] button to activate Black/White Reverse Mode.



Figure 24: B/W & B/W Reverse Keys (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Black/White Mode button shown below to activate Black/White Mode.
- Press the Black/White Mode button with Shift Mode active or press the button twice to activate Black/White Reverse Mode.

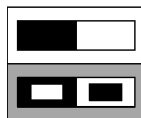


Figure 25: Black/White Mode Button (Icon-Based AOC)

4.2.4.3. Organic/Inorganic Bias

To view scans with a bias toward certain ranges of Z-values, all machines come with two functions that selectively colorize certain parts of the image for highlighting. This is useful for identifying small organic items hidden among a lot of inorganic materials, vice-versa, and mixed materials.

- Organic Bias highlights all items with a low Z-value (mostly organic materials such as woods, plastics, oils, papers, glass, etc.) and colors them orange. All other items are left greyscale.
- Inorganic Bias highlight all items with a high Z-value (metals, silicates, high atomic number elements, etc.) and colors them blue. All other items are left greyscale.
- Empty space is still shown as white, and impenetrable materials are still shown as black.



Figure 26: Organic Bias (LEFT) and Inorganic Bias (RIGHT)

NOTE

Many weapons and dangerous devices can be fashioned from organic materials such as plastics.

On the Alphanumeric AOC:

- Press the [ORG/N] button to activate Organic Bias.
- Press the [INORG/V] button to activate Inorganic Bias.



Figure 27: Organic and Inorganic Bias Buttons (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Organic/Inorganic Bias button shown below to activate Organic Bias.
- Press the Organic/Inorganic button with Shift Mode active, or press the button twice to activate Inorganic Bias.

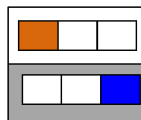


Figure 28: Organic/Inorganic Bias Button (Icon-Based AOC)

4.2.4.4. Brightness Control

The brightness of the screen can affect the appearance of the image. All machines allow the operator to adjust the brightness of the screen to brighten or darken a scanned image.

- Brightness can be adjusted freely with any other image manipulation function active.
- Brightening an image improves the ability to see through dense materials, and highlights items hidden behind other items. However, it makes thin or fine details disappear.



Figure 29: Brightening an Image

- Darkening an image allows the operator to see finer details and thin or small items, but makes dense materials appear completely opaque.

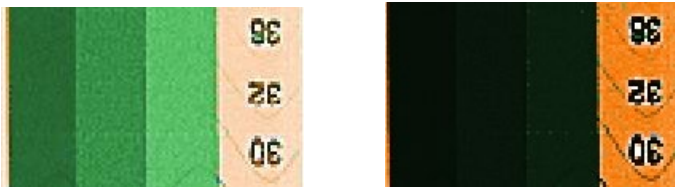


Figure 30: Darkening an Image

On the Alphanumeric AOC:

- Press the [DARK] button to darken the image.
- Press the [LIGHT] button to brighten the image.
- Press the [NORM] button to return the image to the default brightness.



Figure 31: Brightness Control Buttons (Alphanumeric AOC)

On the Icon-Based AOC:

- Pressing the brightness button brightens the screen.
- Pressing the darkness button darkens the screen.



Figure 32: Darkness Button (LEFT) and Brightness Button (RIGHT) (Icon-Based AOC)

4.2.4.5. Pseudo-Color

Pseudo-color colorizes items based on the brightness of the screen, making slight changes in screen brightness different colors.

- This does not colorize based on Z-value, instead on brightness which corresponds to relative density.
- Items of similar material but of different thickness will appear as different colors.
- Items of different materials but of similar density will appear as the same color.
- Adjusting the brightness of the image to reveal or hide items will adjust the colors and relative coloration.

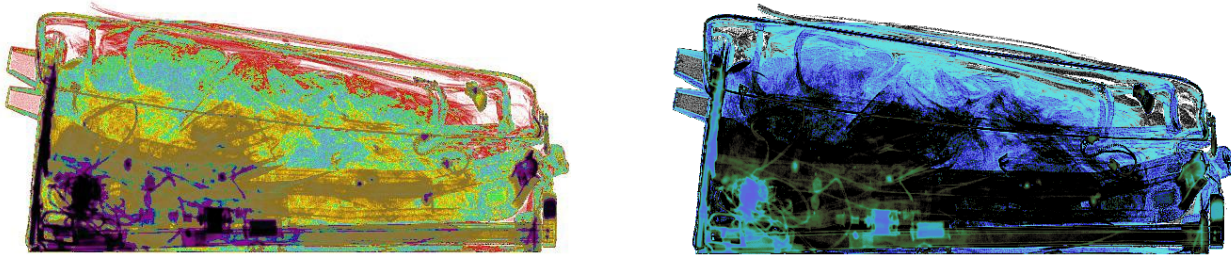


Figure 33: Pseudo-Color with Bright Image (LEFT) and Dark Image (RIGHT)

On the Alphanumeric AOC:

- Press the [PSEU/W] key activate Pseudo-Color.
- Adjusting Brightness does not deactivate Pseudo-Color mode.



Figure 34: Pseudocolor Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Pseudo-Color/Hi-Pen Button with Shift Mode INACTIVE to activate Pseudo-Color Mode.

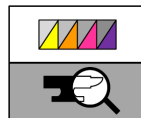


Figure 35: Pseudo-Color/Hi-Pen Button (Icon-Based AOC)

4.2.4.6. Hi-Penetration

Hi-Penetration enhances visibility through dense objects or layered objects without affecting the Brightness of the screen.

- Hi-Penetration can be used with any other image manipulation function.
- Hi-Penetration can be used at any Brightness setting.



Figure 36: Hi-Penetration Off (LEFT) and On (RIGHT)

On the Alphanumeric AOC:

- Press the [HIPEN/P] button to activate Hi-Penetration mode.



Figure 37: Hi-Penetration Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Pseudo-Color/Hi-Pen Button with Shift Mode ACTIVE to activate Hi-Penetration Mode.

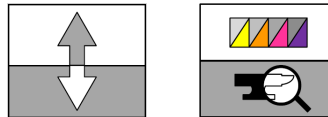


Figure 38: Pseudo-Color/Hi-Penetration Button (Icon-Based AOC)

4.2.4.7. Edge Trace

Edge Trace mode detects object edges within the image and traces them to define more clearly against the background.

- Edge Trace can be used with any other image manipulation mode.
- Edge Trace is based on images that can be seen on screen, and is affected by Brightness levels.

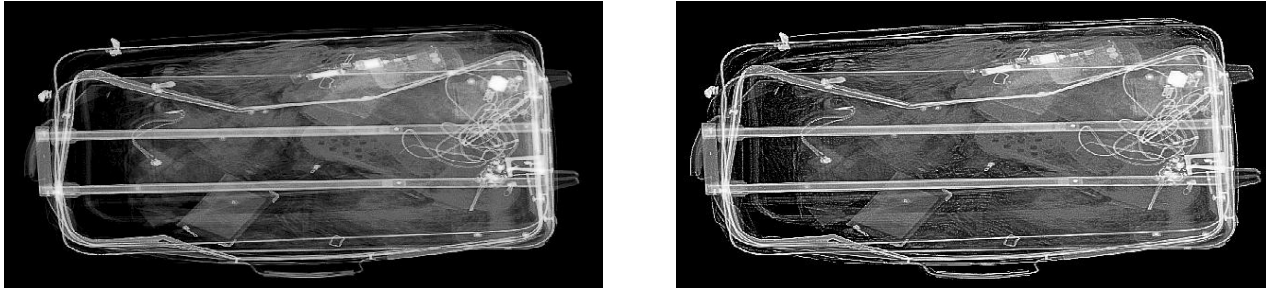


Figure 39: Edge Trace Off (LEFT) and On (RIGHT)

On the Alphanumeric AOC:

- Press the [EDGE TRACE/H] button to activate Edge Trace.



Figure 40: Edge Trace Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the programmable [F1] key to activate Edge Trace.



Figure 41: F1 Button (Icon-Based AOC)

4.2.4.8. PP (Picture Perfect) / EI (Enhanced Imaging) Mode

Picture Perfect mode normalizes and enhances the image to improve the levels of visibility and detail in the image.

EI Mode is an enhanced version of Picture Perfect that is rolling out on most XIS and VI machines. EI Mode performs all of the functions of Picture Perfect, combines the best features of Picture Perfect and normal transmission mode.

- PP/ EI Mode perform a “histogram equalization” to enhance images.
- EI Mode cuts off dead white space in an image.
- For machines with PP, the belt must be stopped while PP is active. EI Mode can be turned on and off while the machine is moving.
- PP/EI Mode cannot be used with Edge Trace or Hi-Penetration modes.



Figure 42: PP/EI Mode Off (LEFT) and On (RIGHT)

On the Alphanumeric AOC:

- Press the [PICTURE PERFECT/U] button to activate Picture Perfect/EI Mode.
- If your machine is equipped with EI Mode, pressing the button again will deactivate it.



Figure 43: PP/EI Mode Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Picture Perfect/Continuous Scan button to activate Picture Perfect/EI Mode.
- If your machine is equipped with EI Mode, pressing the button again will deactivate it.

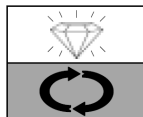


Figure 44: PP/EI Mode / Continuous Scan Button (Icon-Based AOC)

4.2.4.9. Zoom

Zoom magnifies certain parts of the screen to enhance view of that portion for viewing finer details. All XIS/VI machines come with 2 types of zoom.

Zonal Zoom

Zonal Zoom quickly applies 2x Magnification to the screen on various locations.

- Zonal zoom will occupy ~1/4 of the screen.
- The 9-zones center on 9 separate locations, though the view fields of each zone will overlap.

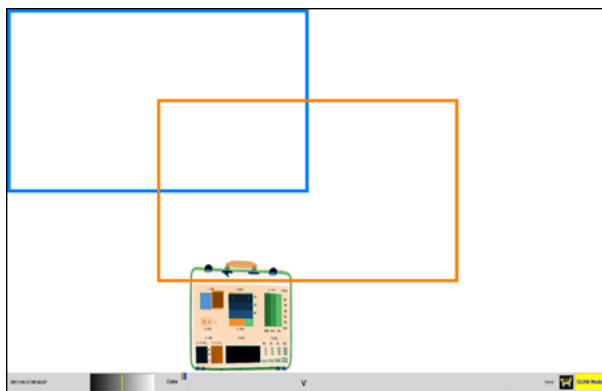


Figure 45: Zonal Zoom

On the Alphanumeric AOCF:

- Press any of the button on the numberpad to zoom to the corresponding section of the image.
- Press the [0/Y] button to return to normal zoom.

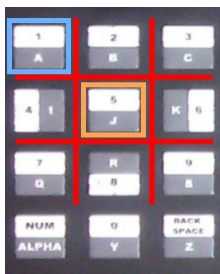


Figure 46: Numberpad (Alphanumeric AOCF)

On the Icon-Based AOCF:

- Press any of the 9 buttons on the Alphanumeric keypad to zoom to the corresponding section of the image.
- Press the [0] button to return to normal zoom.

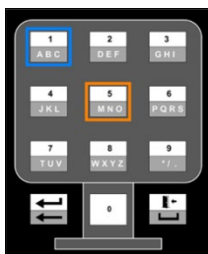


Figure 47: Alphanumeric Keypad (Icon-Based AOCF)

Free/Continuous Zoom

Zoom freely in and out to a maximum of 32x magnification. Zoom in over the cursor on the screen. A secondary display in the top-left corner of the screen shows a blown out view of the image and the currently viewed zoom window.



Figure 48: Zoomed in Image

On the Alphanumeric AOC:

- Press the [ZOOM OUT] button to zoom out of the image, hold to continuously zoom out.
- Press the [ZOOM IN] button to zoom in to the image, hold to continuously zoom in.
- Press the [NORM] button to return to 0x Zoom.



Figure 49: Zoom Control Buttons (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the +Magnification symbol to zoom in, hold to continuously zoom in.
- Press the -Magnification symbol to zoom out, hold to continuously zoom out.

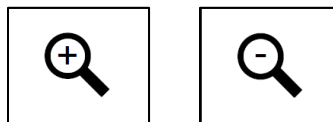


Figure 50: +Magnification Button (LEFT) and -Magnification Button (RIGHT) (Icon-Based AOC)

4.2.5. Scan Mode Management Functions

The following functions are useful for machine management and image management, but are not necessarily related directly to the screening process.

4.2.5.1. Save RGB

When a screener wishes to manually save a copy of the current scan screen for later review or for records, they can use the Save RGB function.

- The image is saved in Bitmap (.bmp) format.
- The image is saved to the Exports folder, and named according to their date and time.
- The image will be saved as shown on the current screen, with any active manipulation functions.
- A "Saved" message will be displayed along the bottom of the screen.

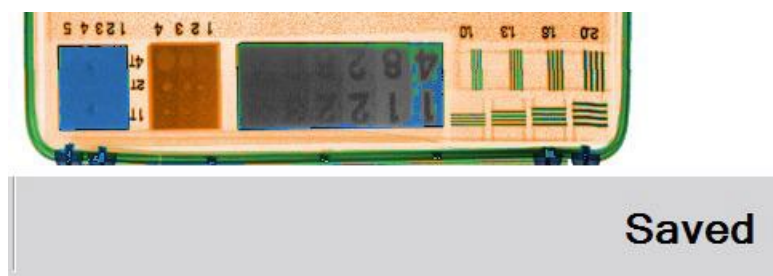


Figure 51: Saved Image Notification

On the Alphanumeric AOC:

- Press the [SAVE RGB/L] button to save the image.



Figure 52: Save RGB Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Save RGB/Diagnostics button to save the image.

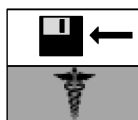


Figure 53: Save RGB / Diagnostics Button (Icon-Based AOC)

4.2.5.2. Continuous Scan

If necessary, operators can bypass the normal scanning procedure of an XIS/VI machine by using the Continuous Scan mode function.

- Continuous Scan ignores the normal PEC requirements.
- Continuous Scan is useful for scanning small or flat items that cannot trigger the PECs like normal.

DANGER

X-Rays are continuously produced during Continuous Scan mode.

- NEVER use Continuous Scan Mode unless absolutely necessary.
- NEVER use Continuous Scan Mode to scan faster.
- ALWAYS disable Continuous Scan Mode when no longer necessary.

While Continuous Scan Mode is active, the PEC indicators will be continuously lit.



Figure 54: PEC Indicators

On the Alphanumeric AOC:

- Press the [CONT. SCAN/T] button to activate Continuous Mode.
- Press the button again to deactivate it.

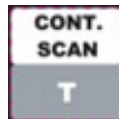


Figure 55: Continuous Scan Mode Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the PP/Continuous Scan Button with Shift-Mode Active to activate Continuous Scan Mode.
- Press the button again with Shift-Mode Active to deactivate Continuous Scan Mode.

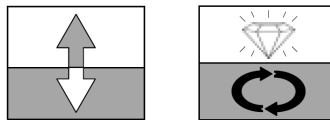


Figure 56: PP/Continuous Scan Mode Button (Icon-Based AOC)

4.2.5.3. Image Review

Image Review function allows users to review images created during the last session.

- Image Review can only be used while the conveyor is stopped.
- Image Review can only review images that have been scanned since the last login.
- Use the conveyor buttons to scroll through images as if they were being scanned again.

NOTE

While Review Mode is active, the conveyor cannot be controlled.

On the Alphanumeric AOC:

- Press the [REVIEW/-] button to activate Review Mode.
- Press the button again to deactivate Review Mode.



Figure 57: Review Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Review/Archive button activate Review Mode.
- Press the button again to deactivate Review Mode.

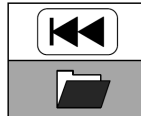


Figure 58: Review/Archive Button (Icon-Based AOC)

4.2.5.4. Image Archive

Image Archive function allows screeners to review all images saved to the machine or to a central server.

- Image Archive can only be used while the conveyor is stopped.
- An AMS (Astrophysics Management System) server is required for Archive functionality.
- If multiple machines are connected to the same AMS, any machine can review images from any other machine on the network.
- Decisions cannot be made on old images.

When Image Archive is activated, the Archive GUI appears:

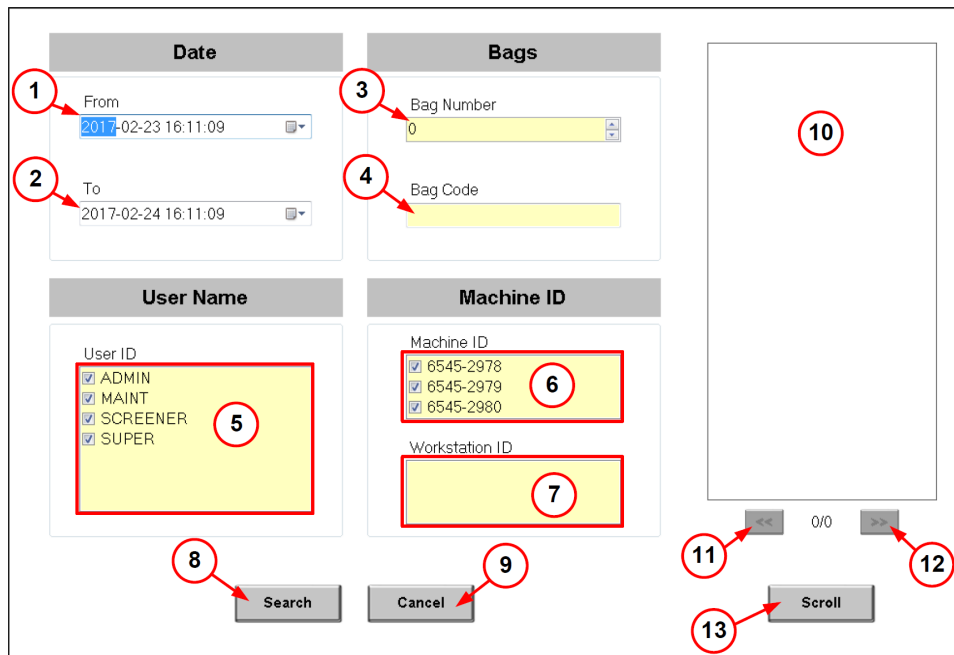


Figure 59: Image Archive GUI

| No. | Item | Description |
|-----|----------------------|---|
| 1 | Beginning Date Field | Select date/time that the image search will start from. |
| 2 | End Date Field | Select date/time that the image search will end at. |
| 3 | Bag Number Field | Type to narrow search to images matching the specified bag number. |
| 4 | Bag Code Field | Type to narrow search to images matching the specified unique tracking number. |
| 5 | User Name Filter | Select from available ID's to narrow search to images scanned by specified users. |
| 6 | Machine Filter | Select from available ID's to narrow search to images scanned at specified machines. |
| 7 | Workstation Filter | Select from available ID's to narrow search to images reviewed at specified workstations. |
| 8 | Search Button | Click to execute search. |
| 9 | Cancel Button | Click to cancel image archive and return to the Scan Mode screen. |
| 10 | Results Field | Results of the search appear here. Click on an image to select it. Image appear in groups of 10 with a scroll bar to scroll through displayed images. |
| 11 | Previous Pane Button | Click to display the preceding page of search results. |
| 12 | Next Pane Button | Click to display the next page of search results. |
| 13 | Scroll Button | Click to make the selected image scroll across the screen as if it were being scanned. |

Image Preview

When an image is selected from the search results, that image is displayed in an image preview pop-up window. It also contains a toolbar that can adjust Brightness Contrast, and view the image in B/W and B/W Reverse.

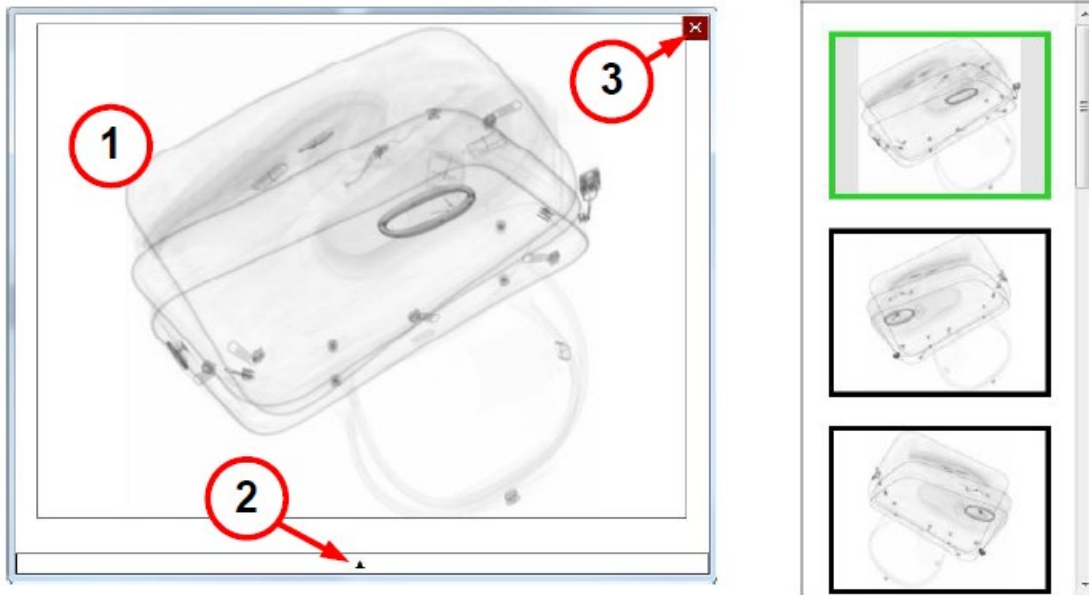


Figure 60: Image Preview Window



Figure 61: Image Preview Toolbar

| No. | Item | Description |
|-----|----------------|---|
| 1 | Preview Window | The selected image is displayed here. |
| 2 | Toolbar Button | Click here to open the Preview toolbar. |
| 3 | Close Button | Click here to close the Image Preview window. |

On the Alphanumeric AOC:

- Press the [ARCHIVE/SPACE] button to open Archive Mode.

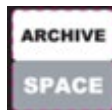


Figure 62: Archive Button (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Review/Archive button with Shift Mode ACTIVE to activate Archive Mode.

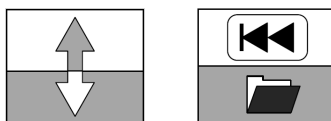


Figure 63: Review/Archive Button (Icon-Based AOC)

4.2.5.5. Diagnostics

All Astrophysics machines come with on-board real-time diagnostics accessible directly from the scan mode screen with a button on the AOCF.

NOTE

Diagnostics details will be discussed on pg.106

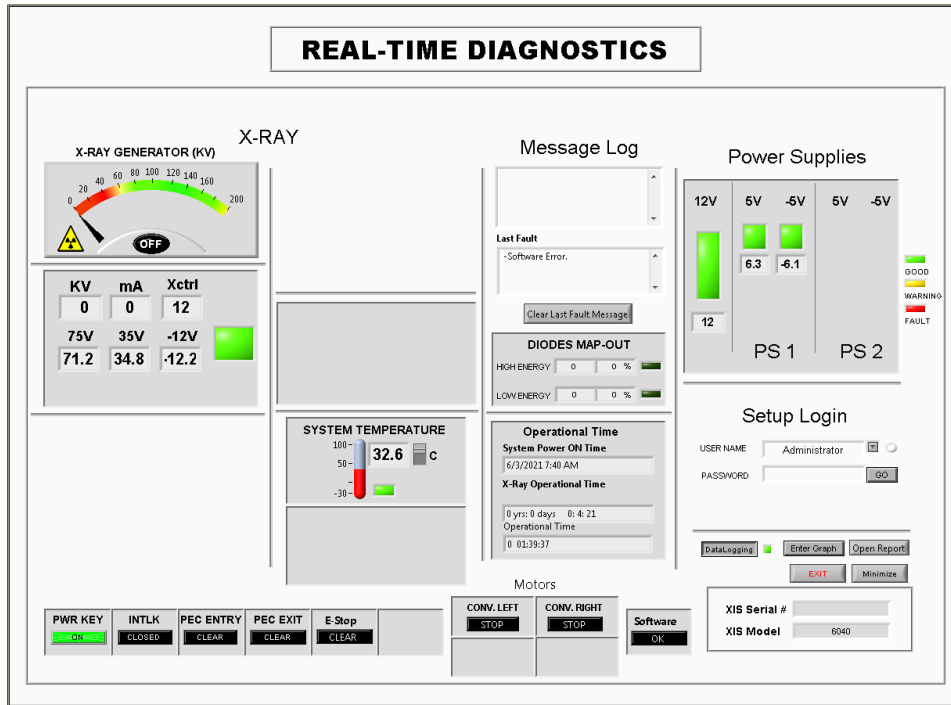


Figure 64: Diagnostics Screen

On the Alphanumeric AOCF:

- Press the [DIAG/E] button to open Diagnostics Mode.



Figure 65: Diagnostics Button (Alphanumeric AOCF)

On the Icon-Based AOCF:

- Press the Save RGB/Diagnostics button with Shift Mode ACTIVE to activate Diagnostics.

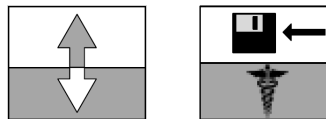


Figure 66: Opening Diagnostics (Icon-Based AOCF)

4.2.5.6. Monitor Toggling

Many machines are equipped with multiple monitors for better screening procedures.

- In a single-view machine, the monitors display the same image with separate image manipulation functions. Each view displays different primary image processing functions.

| Monitor 1 | Monitor 2 |
|--------------------|-----------------------|
| 3-Color | Black & White |
| 6-Color | Black & White Reverse |
| Organic Emphasis | Pseudo-Color |
| Inorganic Emphasis | |

- In a dual-view machine, the monitors each display separate views of the scanned image.
- Machines cannot move between monitors freely, the operator must use the Monitor Toggle function switch between the monitors.
- The selected monitor is displayed on the right-hand side of the scanning taskbar on the second monitor. If there is only one screen, this icon will not be shown.



Figure 67: Selected Monitor Display

On the Alphanumeric AOC:

- Press the [SCREEN 1] button to switch to the first monitor. If the first monitor is already selected, this does nothing.
- Press the [SCREEN 2] button to switch to the second monitor. If the second monitor is already selected, this does nothing.



Figure 68: Screen Buttons (Alphanumeric AOC)

On the Icon-Based AOC:

- Press the Screen Toggle/Home button to switch between the screens.

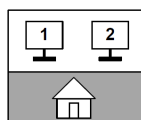


Figure 69: Monitor Toggling (Icon-Based AOC)

4.2.5.7. Home Function

During screening, an operator may manipulate the image in a number of ways, having multiple manipulation functions active. The operator may use the Home function to return all settings to their machine configured default values quickly.

- The Home Function values are technician configured in a machine settings file, they cannot be amended by operators or screeners.
- The default values are as follows:
 - 3-Color Mode
 - 1x Zoom
 - Standard Brightness
 - Edge Trace OFF
 - Hi-Pen OFF
 - Picture Perfect/EI Mode OFF

On the Alphanumeric AOC:

The Alphanumeric AOC does not have a Home function.

On the Icon-Based AOC:

- Press the Screen Toggle/Home button with Shift Mode Active to activate Home function.

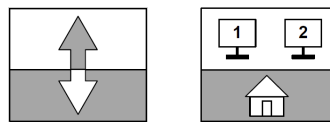


Figure 70: Home Function (Icon-Based AOC)

5. Management

Configure Users, Settings, Reports, & Download Files to USB

5.1. Widgets

The following widgets are universal controls found throughout Management Software.

5.1.1. Table Column Filters

Column filters sort the contents of lists or reports.

- Columns sort in standard or reverse (alphabetical, chronological, numeric, etc.) order.
- Left-click a heading to toggle sort order. Sorting a column overrides all other columns.

| ID Code | First Name | Last Name | Job Position | Home Phone | Edit | Delete |
|---------|------------|-----------|--------------|------------|------|--------|
|---------|------------|-----------|--------------|------------|------|--------|

Figure 71: Sortable Column Headings

5.1.2. Calendar Widgets

Calendar Widgets appear as shown below, and open with the current date pre-selected.

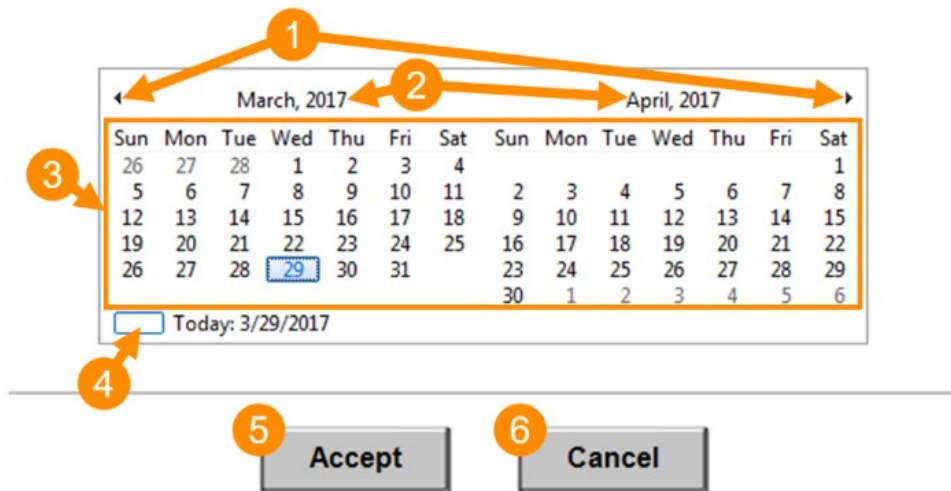


Figure 72: Calendar Widget GUI

| No. | Item | Function/Description |
|-----|-----------------------|--|
| 1 | Next/Previous Buttons | Click to show 1 earlier/later period at current level. |
| 2 | Header | Click to increase 1 level. Defines each period. |
| 3 | Body | Click to decrease 1 level. At level 1, picks date. |
| 4 | Today Button | Click to reset pick to current date. |
| 5 | Accept Button | Click to save picked date and close widget. |
| 6 | Cancel Button | Click to close widget without saving. |

Date pickers have 4 levels. Pick dates from Level 1, and skip over longer periods of time with Levels 2-4.

| Level | Header | Body | Comments |
|-------|-----------|---------|--------------------------------------|
| 1 | Months | Days | Pick a day to select it. |
| 2 | Years | Months | Pick a month to show it at level 1. |
| 3 | Decades | Years | Pick a year to show it at level 2. |
| 4 | Centuries | Decades | Pick a decade to show it at level 3. |

5.1.3. Drop-down Menu

Drop-down menus support picking from a collapsible set of preset options.

- Tap/left-click the down-arrow icon on the right-hand side to expand the menu.
- Tap/left-click an option to pick it and collapse the menu. Options are mutually-exclusive.

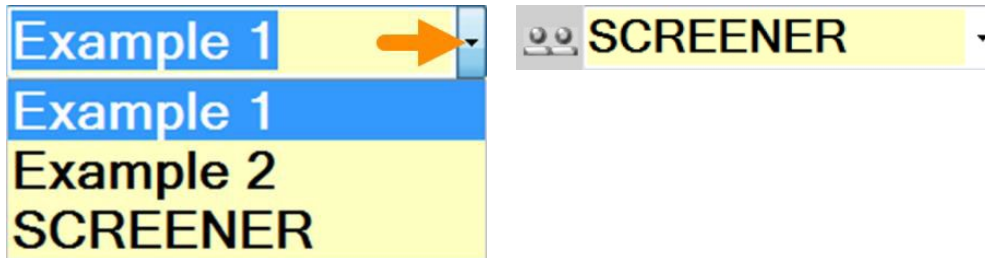


Figure 73: Drop-down Menu

5.1.4. Radio Buttons

Radio buttons support a fixed set of options requiring exactly 1 choice.

- Tapping/left-clicking a radio button selects it, as shown in Figure 46 with Female selected.
- Selecting any radio button deselects all others in the same set.



Figure 74: Radio Buttons (Female Selected)

5.1.5. Scroll Bars

Scroll bars support panning sections of the screen when data exceeds the available space. Vertical/horizontal variants appear as-needed.

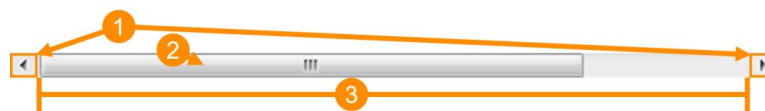


Figure 75: Scroll Bar GUI

| No. | Item | Function/Description |
|-----|----------------|---|
| 1 | Scroll Buttons | Click to scroll incrementally. Click & Hold to scroll continuously. |
| 2 | Scroll Handles | Click & Drag to scroll. Shows relative position of visible content. |
| 3 | Scroll Channel | Shows scroll direction and limits. |

5.1.6. Selection Fields

Selection fields support picking multiple items from a set of available options.

NOTE

- The “inactive” field always exists on the left-hand side.
 - Transfer buttons point from source to destination.
 - Field titles vary, with widget functions defined in-context.
-

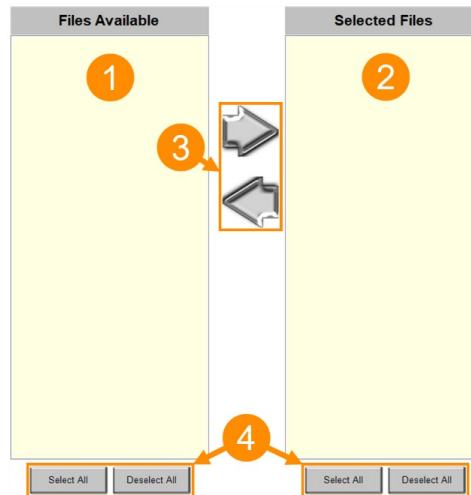


Figure 76: Selection Field GUI

| No. | Item | Function/Description |
|-----|----------------------|--|
| 1 | Inactive Field | Context action ignores listed items. |
| 2 | Active Field | Context action affects listed items. |
| 3 | Transfer Buttons | Click to move selected items to destination field. |
| 4 | Quick-select Buttons | Click to instantly select/deselect all field contents. |

Only selected items can move between fields.

- Tapping/left-clicking an item highlights it.
- Tapping/left-clicking a highlighted item toggles it between selected/deselected (ticked/un-ticked).
- Selection persists independently of highlighting, as shown in Figure 49.



Figure 77: Highlighting and Selection

5.1.7. Tick-boxes

Tick-boxes support selecting or toggling listed items.

- Tapping/left-clicking a tick-box toggles it between ticked/un-ticked.
- Ticked means do and un-ticked means do not .

NOTE

Carefully read each tick-box label to know its function. For example, if Figure 50 read Disable OS Access , ticking/un-ticking the box would have the opposite effects.



Figure 78: Tick Box States, Unticked (LEFT) and Ticked (RIGHT)

5.1.7.1. Tick-box Filters

Tick-box filters support showing/hiding listed content, as shown below.

- Ticking a box shows the listed content.
- Un-ticking a box hides the listed content.

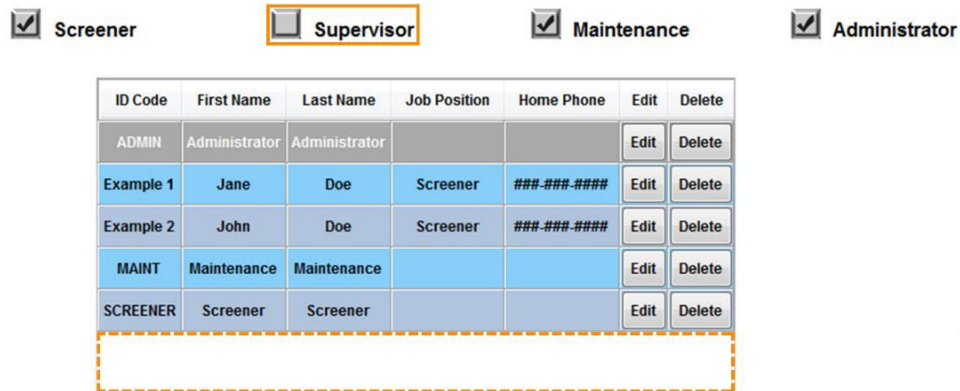


Figure 79: Supervisor Entry hidden

5.2. Management Menus

5.2.1. Main Management Menu

When an operator chooses Management Mode from the Login screen, they are brought to the Main Management Screen.

- All menus are available from the Main Management Screen.
- Some options will be unavailable for Screeners and Supervisors. If so, they will be grey and unselectable.

NOTE

Every management feature needs additional access rights.

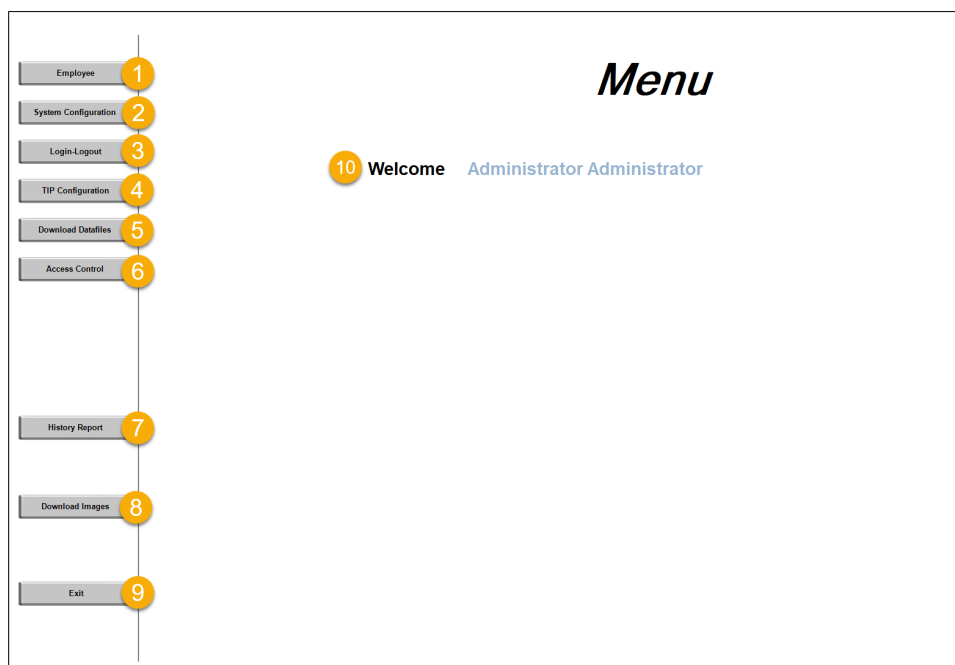


Figure 80: Main Management Menu

| No. | Item | Function/Description |
|-----|-----------------------------|--|
| 1 | Employee Button | Click to open employee's record screen. |
| 2 | System Configuration Button | Click to open system configuration screen. |
| 3 | Login-Logout Button | Click to view login-logout report. |
| 4 | TIP Configuration Button | Click to view TIP management features. |
| 5 | Download Datafiles | Click to download files to USB storage devices |
| 6 | Access Control Button | Click to open access control screen. |
| 7 | History Report Button | Click to view history report. |
| 8 | Download Images Button | Click to open download images screen. |
| 9 | Exit Button | Click to log-out of management mode. |
| 10 | Greeting | Shows full name of active profile. |

5.2.2. Employee Menu

5.2.2.1. Employee Records Screen

The employee's record screen provides access to all user profiles management features.

- Access the Employee's Record screen by pressing the "Employee" button on the main menu. The operator will be brought to the Employee Records Screen.
- All user profiles registered for this machine will be displayed here.

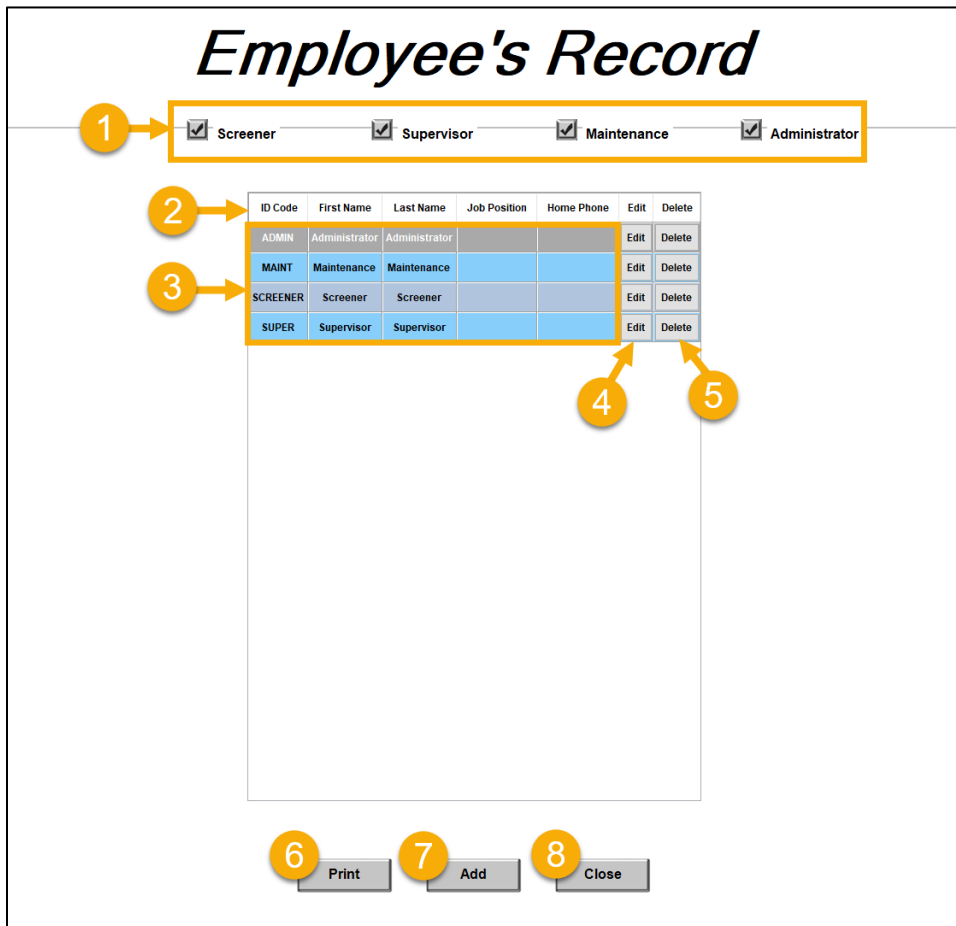


Figure 81: Employee Records Screen

| No. | Item | Function/Description |
|-----|------------------|--|
| 1 | Profile Filter | Tick-box filter shows/hides profiles. Auto-hides restricted profiles. |
| 2 | Profile Headings | Click to sort by listed property. |
| 3 | Profile List | Shows all visible profiles. Click to open employee's history screen for listed profile. |
| 4 | Edit Button | Click to edit listed profile. |
| 5 | Delete Button | Click to delete listed profile. |
| 6 | Print Button | Click to print the screen. Requires installed printer. |
| 7 | Add Button | Click to create new profile. |
| 8 | Close Button | Click to return to management screen. |

Sorting Profiles

On the Employee's Record Screen, all records are indexed by several key properties that can be sorted.

| Heading | Meaning |
|--------------|---------------------------|
| ID Code | User's unique ID code. |
| First Name | User's given name. |
| Last Name | User's family name. |
| Job Position | User's job title. |
| Home Phone | Users' home phone number. |

Deleting Profiles

To permanently delete a user profile:

1. On the employee's record screen, find the target profile in the profile list.
2. Tap/left-click 'Delete' in the same row as the target profile.

WARNING

- Deleted profiles cannot be restored.
 - Carefully check the confirmation message for the correct profile.
 - Consider editing and deactivating the profile to temporarily disable it.
-

3. Tap/left-click 'Yes' to permanently delete the target profile.

NOTE

For service reasons, users cannot delete the default Administrator profile.

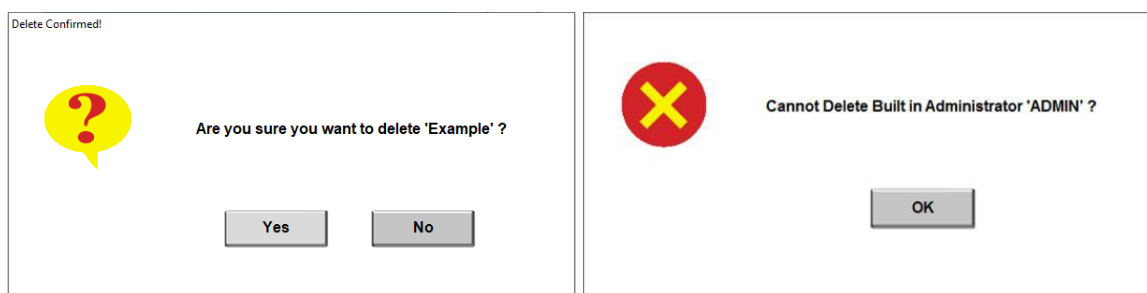


Figure 82: Profile Deletion messages, Confirmation (LEFT) and Error (RIGHT)

5.2.2.2. Employee History Screen

Click on any of the profile ID codes to be taken to the Employee History Screen.

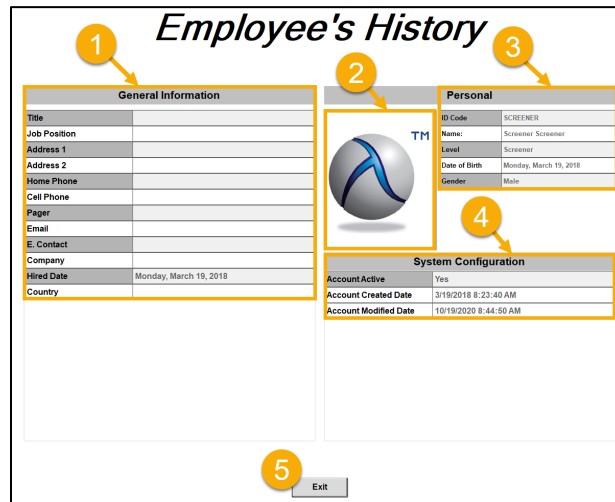


Figure 83: Employee History Screen

| No. | Item | Function/Description |
|-----|-------------------------------|-------------------------------------|
| 1 | General Information Elements | User's contact information. |
| 2 | Profile Portrait | User's portrait. |
| 3 | Personal Elements | User's personal information. |
| 4 | System Configuration Elements | User's account status. |
| 5 | Exit Buttons | Click to return to previous screen. |

Profile Detail Definitions

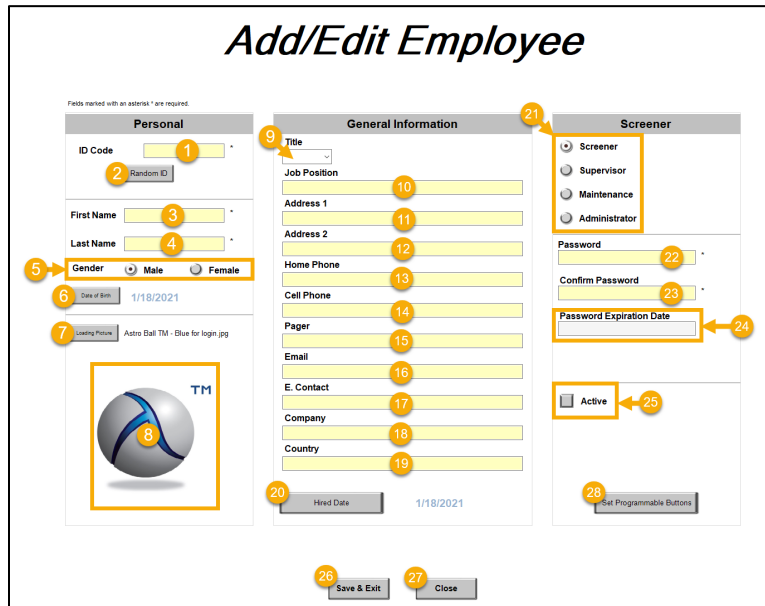
| General Information | Meaning |
|---------------------|---------------------------------------|
| Title | User's personal title. |
| Job Position | User's job title. |
| Address 1 | User's street address. |
| Address 2 | User's regional address. |
| Home Phone | User's home phone number. |
| Cell Phone | User's mobile phone number. |
| Pager | User's pager number. |
| Email | User's e-mail address. |
| E. Contact | User's emergency contact information. |
| Company | User's employer. |
| Country | User's nationality. |

| Personal Information | Meaning |
|----------------------|------------------------|
| ID Code | User's unique ID code. |
| Name | User's full name. |
| Level | User's profile type. |
| Date of Birth | User's birth date. |
| Gender | User's physical sex. |

| System Configuration | Meaning |
|----------------------|-----------------------------------|
| Account Active | User's profile activation status. |
| Account Created Date | Date/time of profile creation. |
| Account Modified | Date/time of latest profile edit. |

5.2.2.3. Adding/Editing Employee Information

When the operator clicks “Edit” on an employee profile, or clicks the “Add” button on the Employee Records Screen, they will be taken the Add/Edit Employee Screen.



The screenshot shows the 'Add/Edit Employee' form with the following fields and buttons highlighted with numbered callouts:

- 1: ID Code Field
- 2: Random ID Button
- 3: First Name Field
- 4: Last Name Field
- 5: Gender Button (Male/Female)
- 6: Date of Birth Buttons
- 7: Loading Picture Button
- 8: Profile Portrait
- 9: Title Field
- 10: Job Position Field
- 11: Address 1 Field
- 12: Address 2 Field
- 13: Home Phone Field
- 14: Cell Phone Field
- 15: Pager Field
- 16: Email Field
- 17: E. Contact Field
- 18: Company Field
- 19: Country Field
- 20: Hired Date Button
- 21: Profile Type Buttons (Screener, Supervisor, Maintenance, Administrator)
- 22: Password Field
- 23: Confirm Password Field
- 24: Expiration Date Field
- 25: Active Tick-box
- 26: Save & Exit Button
- 27: Close Button
- 28: Set Programmable Buttons

Figure 84: Add/Edit Employee Screen

| No. | Item | Req. | Function/Description | Max Ch. |
|-------|--------------------------|------|---|---------|
| 1 | ID Code Field* | Yes | Click & type to enter permanent ID. | 9 |
| 2 | Random ID Button | No | Click to generate random 4-digit ID code. | 4 |
| 3-4 | First Name Field* | Yes | Click & type to enter user's name. | 30 |
| 5 | Gender Button | No | Click & type to pick user's physical sex. | - |
| 6 | Date of Birth Buttons | No | Click & type to pick user's birthday. | - |
| 7 | Loading Picture Button | No | Click to pick user's portrait image. | - |
| 8 | Profile Portrait | No | Previews user's portrait image. | - |
| 9 | Title Field | No | Click to pick user's personal title. | - |
| 10 | Job Position Field | No | Click & type to enter user's job title. | 50 |
| 11-12 | Address Field | No | Click & type to enter user's address. | 200 |
| 13 | Home Phone Field | No | Click & type to enter user's home phone number. | 20 |
| 14 | Cell Phone Field | No | Click & type to enter user's mobile phone number. | 20 |
| 15 | Page Field | No | Click & type to enter user's pager number. | 20 |
| 16 | Email Field | No | Click & type to enter user's e-mail address. | 254 |
| 17 | E. Contact Field | No | Click & type to enter user's emergency contact details. | 1000 |
| 18 | Company Field | No | Click & type to enter user's employer. | 50 |
| 19 | Country Field | No | Click & type to enter user's nationality. | 20 |
| 20 | Hired Date Button | No | Click to pick user's hire date. | - |
| 21 | Profile Type Buttons | No | Click to pick user's profile type. | - |
| 22-23 | Password Field* | Yes | Click & type to enter new password. | 1000 |
| 24 | Expiration Date Field* | Yes | Shows calculated time when current password expires. | - |
| 25 | Active Tick-box | No | Tick this box to mark the employee record as active. | - |
| 26 | Save & Exit Button | No | Click to return to employee's record screen after saving. | - |
| 27 | Close Button | No | Click to return to employee's record screen without saving. | - |
| 28 | Set Programmable Buttons | No | Click to set programmable buttons for the user. | - |

Picking Portraits

Clicking the “Loading Picture” button on the Add/Edit Employee screen will open a Windows File Explorer window to select the portrait image.

- Using the Windows Explorer Window is not part of Astrophysics software.
- Portraits selected must be (.bmp, .gif, or .jpg files </= 4MB).
- The portrait window is 220px x 272px. Use an image of that size to prevent stretching/compressing.

Errors

Tapping/left-clicking ‘Save & Exit’ with invalid entries in any required fields returns an error message listing detected problems.

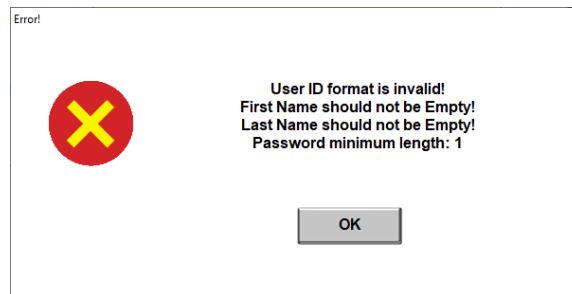


Figure 85: Required Field Errors

Invalid fields turn Red and return to normal once corrected.



Figure 86: Missing ID Code Fixed

| Message | Cause | Remedy |
|--|--|---|
| User ID format is invalid! | ID entry blank/used. | Add unused ID entry. Left-click Random ID. |
| First Name should be Empty! | First name entry blank. | Add a first name entry. |
| Last Name should be Empty! | Last name entry blank. | Add a last name entry. |
| Password minimum length: 1 | Password entry blank. | Add a password entry. |
| Password and Confirm password are not matched. Please check your typing! | Password/Confirm Password entries different. | Carefully re-type password, avoiding typos. |

5.2.3. System Configuration Menu

If the Operator clicks the “System Configuration” button from the Main Management Screen, they will be taken to the System Configuration Menu.

The System Configuration Menu can be used to perform the following procedures:

- Enabling or disabling OS Access by operators.
- Enable the machine to bypass faults for scanning (USED ONLY FOR MACHINE TESTING AND TROUBLESHOOTING)
- Change machine information and default language.
- Set password expiration time.
- Enable/Disable various optional software features.
- Enable/Disable image archive.
- Change Download Directory (Will Disable Images Files Through Software)
- Backup the image database.
- Clear the Image Archive. (Cannot be Restored)
- Delete Logs (Cannot be Restored)

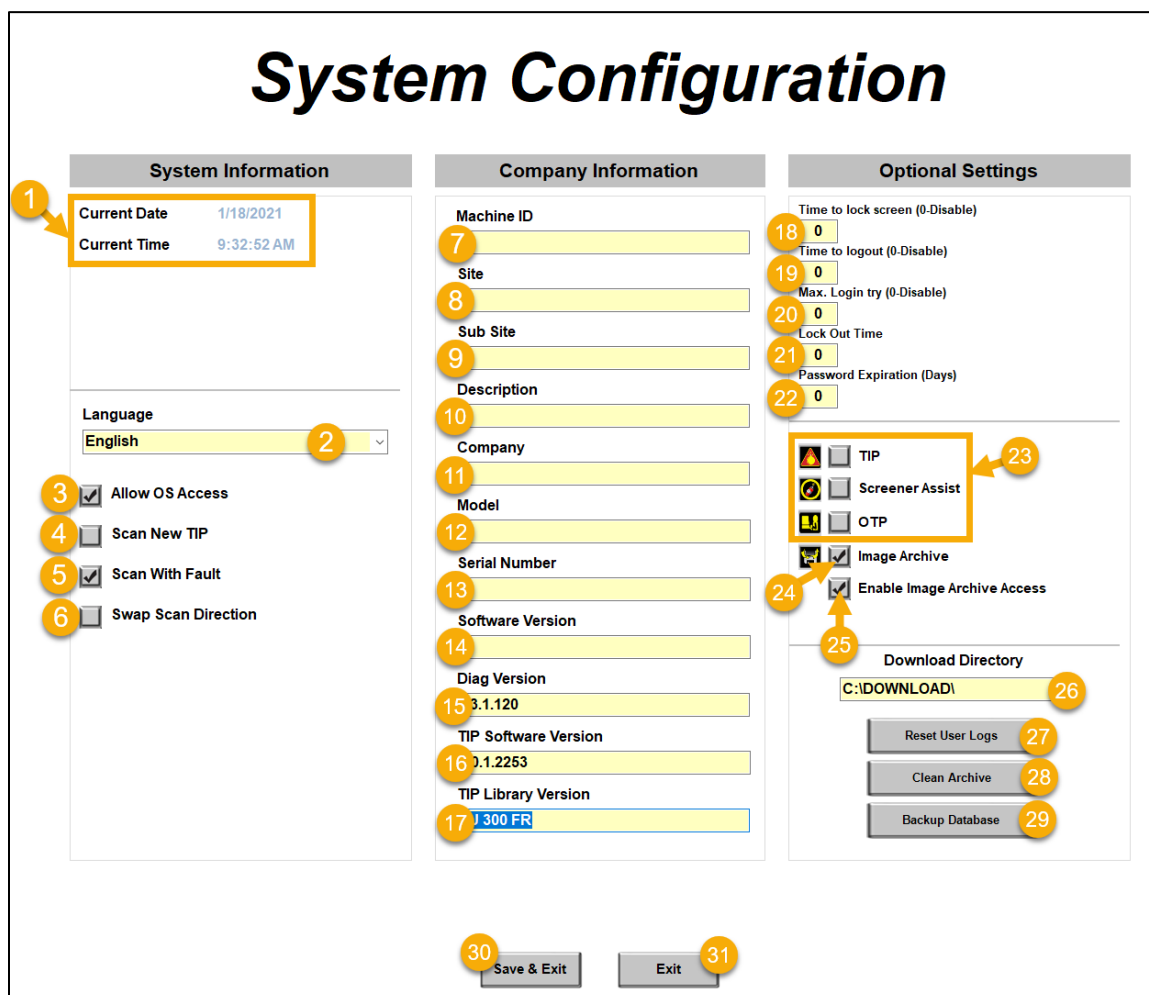


Figure 87: System Configuration Menu

| No. | Item | Function/Description |
|-----|---------------------------------------|--|
| 1 | Current Date/Time | Shows date/time set on system PC. |
| 2 | Language Menu | Click to pick localization with drop-down menu. English default; other languages provided as-ordered. |
| 3 | Allow OS Access Tick-box | Tick to allow users to access the desktop. |
| 4 | Scan New TIP Tick-box | Permanently disabled. |
| 5 | Scan With Fault Tick-box | Tick to enable the machine to scan even while faulted. |
| 6 | Swap Scan Direction Tick-box | Tick to swap the scan direction to the reverse direction. |
| 7 | Machine ID Field | Shows machine ID (used for networking). |
| 8 | Site Field | Click and type to enter system location. |
| 9 | Sub Site Field | Click and type to enter extra location data. |
| 10 | Description Field | Click and type to enter miscellaneous notes. |
| 11 | Company Field | Click and type to enter system owner. |
| 12 | Model Field | Shows system model number. |
| 13 | Serial Number Field | Shows system serial number. |
| 14 | Software Version Field | Shows installed software version. |
| 15 | Diag Version Field | Shows installed diagnostics version. |
| 16 | TIP Software Version Field | Shows installed TIP software version. |
| 17 | TIP Library Version Field | Shows installed TIP library version. |
| 18 | Time to lock screen (0-Disable) Field | Click and type to enter value. >0= delay (minutes) before idling locks screen. 0= feature disabled. |
| 19 | Time to logout (0-Disable) Field | Click and type to enter value. >0= delay (minutes) before idling triggers logout. 0= feature disabled. |
| 20 | Max. Login try (0-Disable) Field | Click and type to enter value. >0= consecutive login failures to lock profile. 0= feature disabled. |
| 21 | Lock Out Time Field | Click and type to enter value. >0= profile lock duration (minutes). |
| 22 | Password Expiration (Days) Field | Click and type to enter value. >0= period (days) after which passwords expire. 0= feature disabled. |
| 23 | Optional Software Tick-boxes | Optional software unavailable. |
| 24 | Image Archive Tick-box | Tick to enable automatic archiving. |
| 25 | Enable Image Archive Access Tick-box | Tick to enable Archive Review in Scan Mode. |
| 26 | Download Directory Field | Click and type to enter full path where report copies created with Download buttons are saved. |
| 27 | Reset User Logs Button | Click to permanently delete existing report data. |
| 28 | Clean Archive Button | Click to permanently delete existing archive images. |
| 29 | Backup Database | Click to backup database. |
| 30 | Save & Exit Button | Click to return to management screen after saving. |
| 31 | Exit Button | Click to return to management screen without saving. |

5.2.4. TIP (Threat Image Projection) Configuration

5.2.4.1. TIP Configuration Menu

If an operator clicks the "TIP Configuration" button on the Main Management Menu, they will be taken to the TIP Configuration Screen.

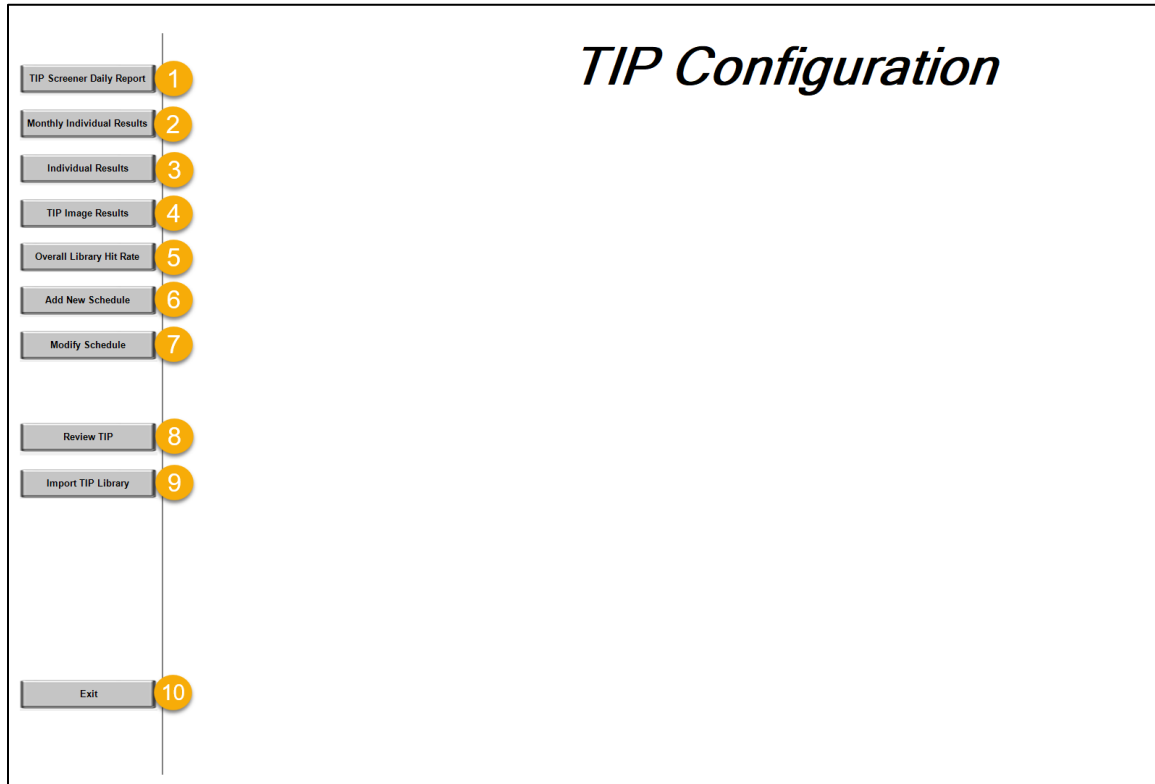


Figure 88: TIP Configuration Menu

| No. | Item | Function/Description |
|-----|-----------------------------------|--|
| 1 | TIP Screener Daily Report Button | Click to view daily summary report. |
| 2 | Monthly Individual Results Button | Click to view monthly individual results report. |
| 3 | Individual Results Button | Click to view individual results report. |
| 4 | TIP Image Results Button | Click to view TIP image results report. |
| 5 | Overall Library Hit Rate Button | Click to view overall library hit rate report. |
| 6 | Add New Schedule Button | Click to view open threat image library screen. |
| 7 | Modify Schedule Button | Click to open TIP schedule screen. |
| 8 | Review TIP Button | Click to open review TIP screen. |
| 9 | Import TIP Library Button | Click to import a new TIP library. |
| 10 | Exit Button | Click to return to management screen. |

5.2.4.2. Add New TIP Schedules

When an operator clicks the “Add New Schedule” button from the Tip Configuration Screen, they will be taken to Threat Image Library Screen.

- Only systems with an AMS can utilize multiple TIP Libraries through the TIP Library Version Menu.
- Different machines on the same AMS network may use different TIP libraries at the same time.

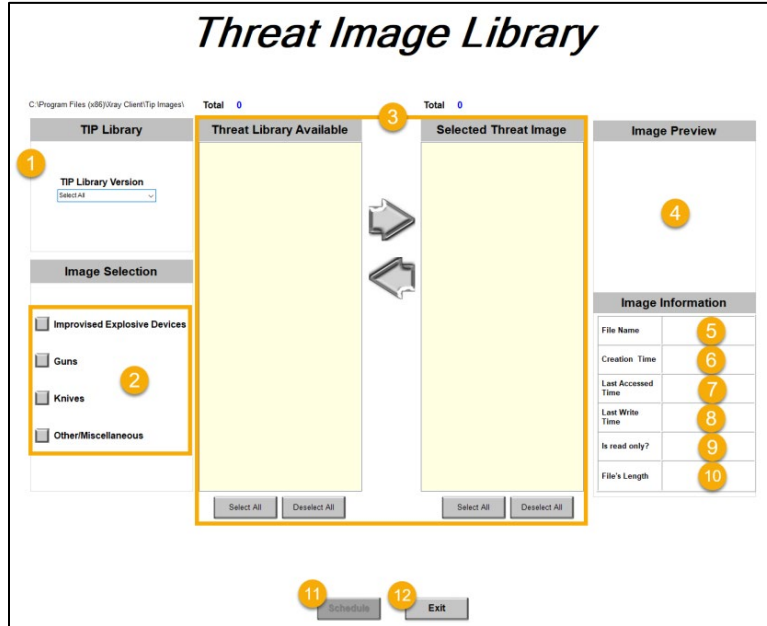


Figure 89: Threat Image Library Screen

| No. | Item | Function/Description |
|-----|--------------------------|--|
| 1 | TIP Library Version Menu | Click to pick sources library with drop-down menu. |
| 2 | TIP Category Filter | Tick-box filter shows/hides TIP images by category. |
| 3 | Image Selection Fields | Threat Library Available= listed images excluded from schedule. Selected Threat Image= listed image included in schedule. |
| 4 | Image Preview Fields | Shows preview of highlighted TIP image. |
| 5 | File Name Field | Shows full name of highlighted image file. |
| 6 | Creation Time Field | Shows when highlighted image was created. |
| 7 | Last Accessed Time Field | Shows when highlighted image was last reviewed. |
| 8 | Last Write Time Field | Shows when highlighted image was last edited. |
| 9 | Is read only? Field | Shows if highlighted image is read-only (no-editing). |
| 10 | File's Length Field | Shows highlighted image file-size in bytes. |
| 11 | Schedule Button | Click to proceed to TIP parameters screen. |
| 12 | Exit Button | Click to return to TIP configuration screen without saving. |

TIP Schedule Parameters Screen

When the operator clicks the Schedule button, the operator will be taken to the TIP Schedule Parameters screen.

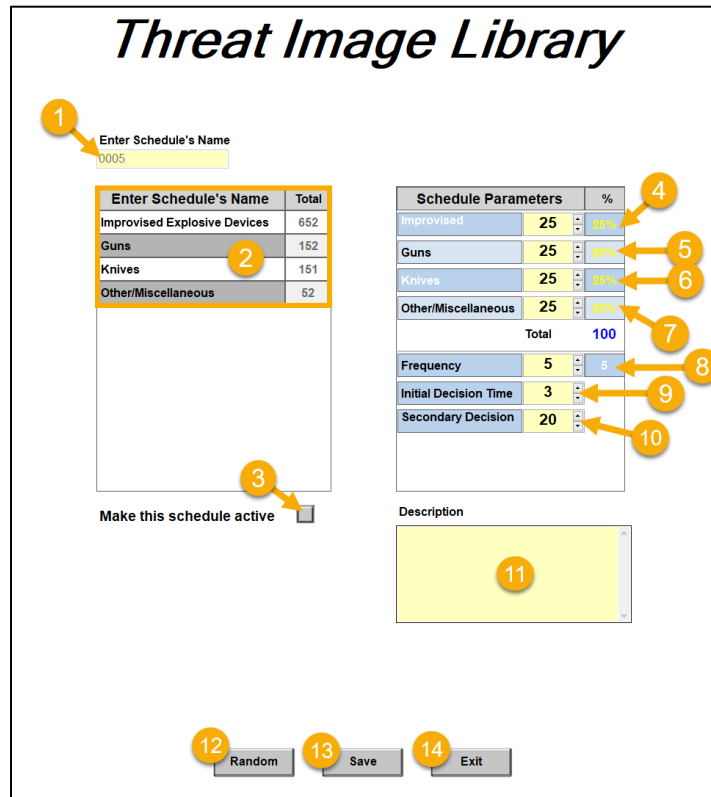


Figure 90: TIP Schedule Parameters Screen

| No. | Item | Function/Description |
|-----|-------------------------------|---|
| 1 | Schedule Name Field | Click & type to enter custom name for schedule. |
| 2 | Schedule Contents Fields | Shows the total schedule images by category. |
| 3 | Active Tick-box | Ticked= schedule is active. Un-ticked= schedule is inactive. |
| 4 | IED Percentage Field | Click & type to enter percentage of TIP projections picked from IED images. Arrows increment by 1%. |
| 5 | Gun Percentage Field | Click & type to enter percentage of TIP projections picked from gun images. Arrows increment by 1%. |
| 6 | Knife Percentage Field | Click & type to enter percentage of TIP projections picked from knives images. Arrow increment by 1%. |
| 7 | Other Percentage Field | Click & type to enter percentage of TIP projections picked from other images. Arrows increment by 1%. |
| 8 | Frequency Field | Click & type to enter percentage of TIP projection for each scan. Arrows increment by 1%. |
| 9 | Initial Decision Time Field | Click & type to enter duration (seconds) screeners have to make a decision before the TIP counts as "missed." |
| 10 | Secondary Decision Time Field | Click & type to enter one-time extra duration (seconds) screener have to make a decision after pressing [STOP]. |
| 11 | Description Field | Click & type to enter custom description for the schedule. |
| 12 | Random Button | Click to reset all TIP category percentages to 25%. |
| 13 | Save Button | Click to save all changes and return to the TIP configuration screen. |
| 14 | Exit Button | Click to to return to the TIP configuration screen without saving. |

Category Percentages

- Category percentages must total 100%. Attempting to schedule invalid totals returns an error.
- The current category percentage total appears below the 4 individual values.
 - Totals >100% appear red.
 - Total >100% appear orange.
- If no images from a category exist in the schedule, that category locks to 0%.

Projection Frequency

Projection frequency determines the percentage change of TIP projection for each new X-ray image.

- If TIP will be used during live screening, Astrophysics recommends setting frequency $\leq 10\%$.
- Category percentages only apply once a TIP projection occurs.

Decision Times

Screeners have a limited time to respond to TIP projections.

- Set initial decision time ≤ 10 seconds. If the image scrolls off-screen before the timer expires, it still counts as a miss.
- Decision times must not exceed any shorter screening time-limited imposed on screeners.
- Secondary decision time only applies if the screener taps/left-click 'Stop' before the initial timer expires.
- Tapping/left-clicking 'Forward' after tapping/left-clicking 'Stop' but before secondary decision time expires triggers a "miss" if there is a TIP present in the image.

Editing Factors

- Users CANNOT change schedule names or add/remove images once saved.
- Users CAN edit all category, frequency, and decision time parameters.
- Users CAN edit schedule description.

5.2.4.3. Modify TIP Schedules

When the operator clicks the “Modify Schedule” button on the TIP Configuration Screen, they will be taken to the TIP Schedule Screen.

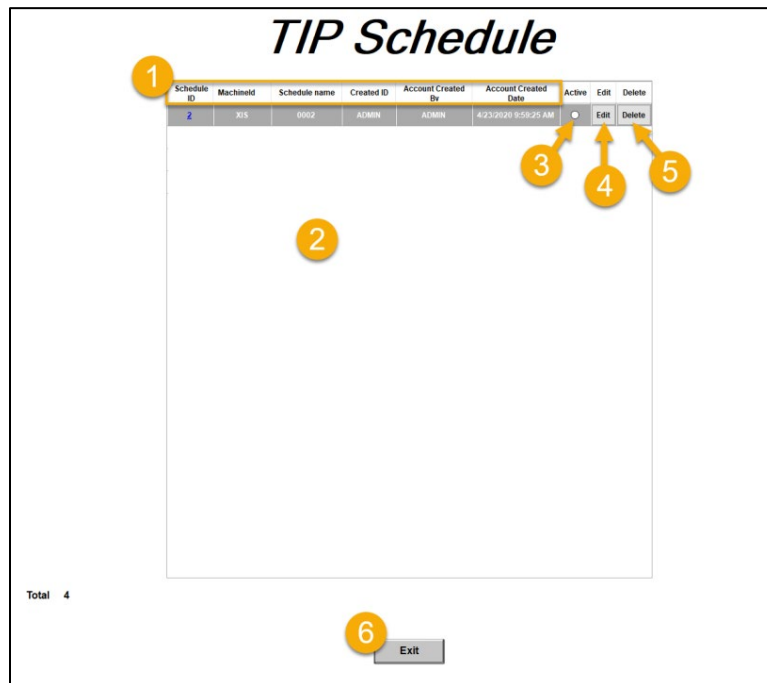


Figure 91: TIP Schedule Screen

| No. | Item | Function/Description |
|-----|-------------------|---|
| 1 | Schedule Headings | Click to sort by listed property. |
| 2 | Schedule List | Shows all saved schedules. Click ID to open TIP schedule summary screen for listed schedule. |
| 3 | Active Marker | Tick to make the schedule Active. |
| 4 | Edit Button | Click to edit listed schedule. When clicked, the operator is taken to the TIP Schedule Parameters Screen (pg.85). |
| 5 | Delete Button | Click to delete listed schedule. Schedule cannot be deleted if it is Active. |
| 6 | Exit Button | Click to return to TIP configuration screen. |

| Heading | Meaning |
|----------------------|---------------------------------|
| Schedule ID | Unique schedule ID. |
| Machine ID | XIS ID where schedule applies. |
| Schedule name | Custom schedule name. |
| Created ID | Profile ID of schedule creator. |
| Account Created By | Given name of schedule creator. |
| Account Created Date | Schedule creation date/time |

WARNING

Deleted TIP Schedules cannot be restored!

5.2.4.4. TIP Schedule Summary

From the TIP Configuration Screen, if an operator clicks the Schedule ID of a specific TIP schedule, they will be taken to the TIP Schedule Summary Screen.

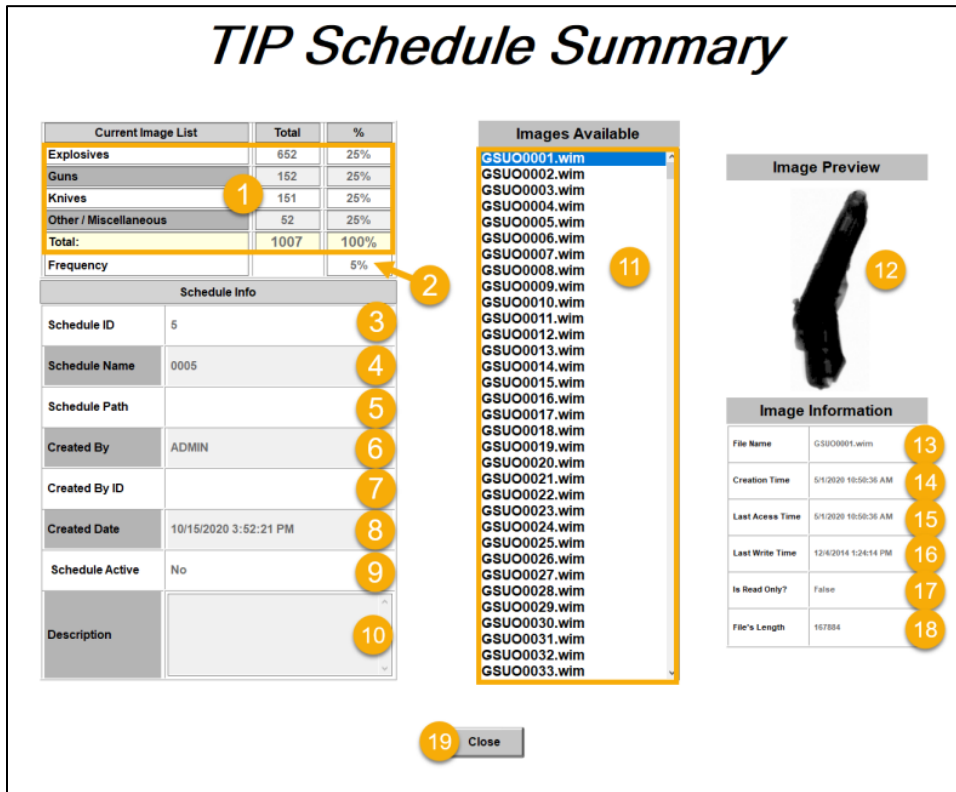


Figure 92: TIP Schedule Summary

| No. | Item | Function/Description |
|-----|------------------------|--|
| 1 | Image Fields | Lists scheduled images by category and percentage setting. |
| 2 | Frequency Field | Shows schedule TIP projection frequency setting. |
| 3 | Schedule ID Field | Shows the schedule ID. |
| 4 | Schedule Name Field | Shows the schedule name. |
| 5 | Schedule Path Field | Currently unused. |
| 6 | Created By Field | Shows profile name of schedule creator. |
| 7 | Created By ID Field | Shows profile ID of schedule ID. |
| 8 | Created Date Field | Shows the schedule creation date/time. |
| 9 | Schedule Active Field | Shows schedule activation status. |
| 10 | Description Field | Shows custom schedule description. |
| 11 | Images Available Field | Lists all scheduled images. |
| 12 | Image Preview Field | Shows preview of highlighted image. |
| 13 | File Name Field | Shows file name of highlighted image. |
| 14 | Creation Time Field | Shows creation date/time of highlighted image. |
| 15 | Last Access Time Field | Shows when highlighted image was last reviewed. |
| 16 | Last Write Time Field | Shows when highlighted image was last edited. |
| 17 | Is Read Only? Field | Shows if highlighted image is read-only (no editing). |
| 18 | File's Length Field | Shows highlighted image file-size in KB. |
| 19 | Close Button | Click to return to the TIP schedule screen. |

5.2.4.5. Review TIP

When an operator clicks “Review TIP” from the TIP Configuration Screen, they are taken to the Review TIP Screen.

- This screen cannot be used to edit TIP Images.
- All fields on this screen are only for display.

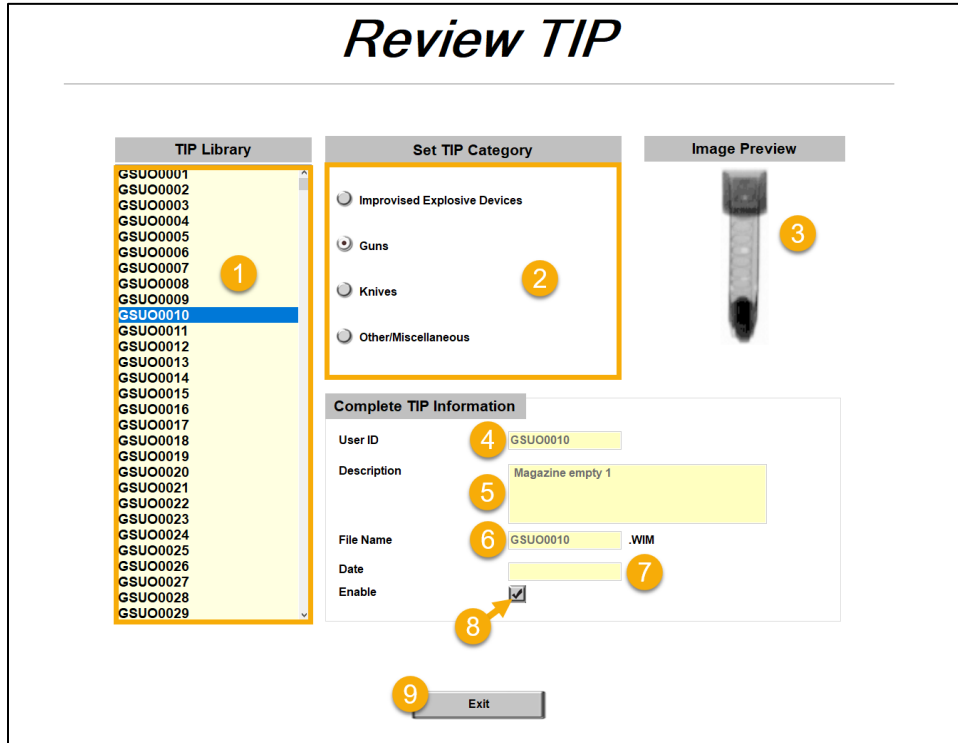


Figure 93: Review TIP Screen

| No. | Item | Function/Description |
|-----|---------------------|--|
| 1 | TIP library Field | Lists all visible images in the TIP library. |
| 2 | TIP Category Filter | Click to show TIP images by 1 category at a time. |
| 3 | Image Preview Field | Shows preview of highlighted image. |
| 4 | User ID Field | Shows file ID of highlighted image. |
| 5 | Description | Shows description of highlighted image. |
| 6 | File Name Field | Shows file-name of highlighted image. |
| 7 | Date Field | Display creation date/time of highlighted image. |
| 8 | Enable Tick-box | Tick to enable the selected image in your TIP Library. |
| 9 | Exit Button | Click to return to TIP Configuration Screen. |

5.2.4.6. Import TIP Libraries

The following is the procedure for installing a new TIP Library:

1. Insert a USB storage drive containing the new TIP library into any USB port on the system.
2. Click the "Import TIP Library" button from the TIP Configuration Screen to open the Windows 'Browse for Folder' window.

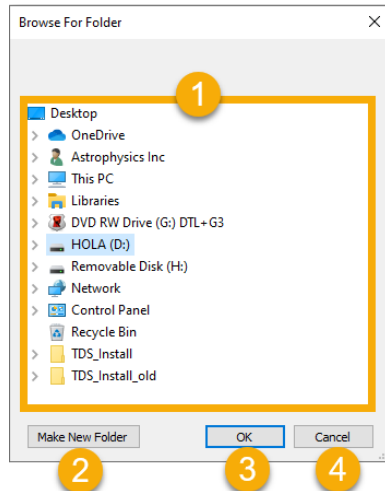


Figure 94: Windows Browse for Folder Window

| No. | Item | Function/Description |
|-----|------------------------|---|
| 1 | Directory Tree | Shows PC directory structure. Click ">" to expand directory (shows contents). |
| 2 | Make New Folder Button | Click to create new folder. |
| 3 | OK Button | Click to import selected TIP library file. |
| 4 | Cancel Button | Click to close window without importing. |

NOTE

Installing a new TIP Library deletes all current Libraries and Schedules. The operator MUST create a new Library before exiting TIP Configuration.

3. Navigate through the Windows file structure to find the new TIP Library folder.
4. Click on the TIP Library folder to select it, and then click 'OK'.
5. Click 'Yes' on the confirmation message.
6. Wait for the progress bar to finish.
7. Click 'OK' at the installation confirmation message.

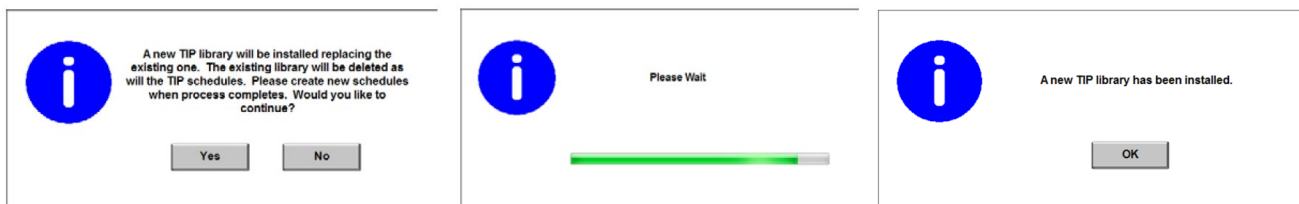


Figure 95: Installing TIP Library Procedure Messages

5.2.4.7. TIP Screener Daily Report

When the operator clicks the “TIP Screener Daily Report” button, they are taken to the Daily Summary Report screen.

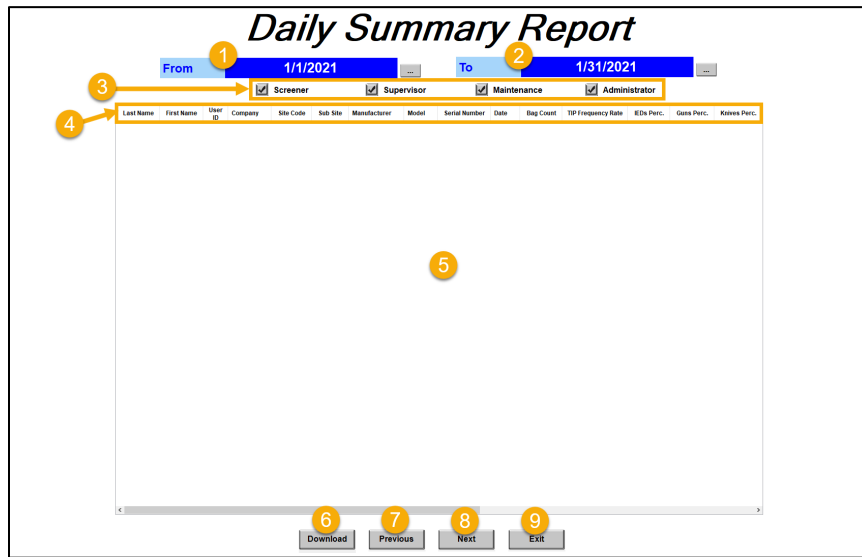


Figure 96: Daily Summary Report Screen

| No. | Item | Function/Description |
|-----|-----------------|---|
| 1 | From Date Field | Earliest date for listed results. Click '...' to open date-picker. |
| 2 | To Date Field | Latest date for listed results. Click '...' to open date-picker. |
| 3 | Profile Filter | Tick-box filter shows/hides profiles. Auto-hides restricted profiles. |
| 4 | Report Headings | Click to sort by listed property. |
| 5 | Results List | Shows results. ID code hyperlinks to employee's history screen. |
| 6 | Download Button | Click to copy shown report data to download directory. |
| 7 | Previous Button | Click to add report data for day before. |
| 8 | Next Button | Click to add report data for following day. |
| 9 | Exit Button | Click to return to TIP configuration screen. |

| Heading | Function/Description | Heading | Function/Description |
|--------------------|----------------------------------|-------------------------------|---|
| Last Name | Last name of profile in report | Guns Perc. | Percentage of 'Gun' Projections |
| First Name | First name of profile in report | Knives Perc. | Percentage of 'Knives' Projections |
| User ID | ID of profile in report | Others Perc. | Percentage of 'Other' Projections |
| Company | Employer of profile in report | TIPs Presented | Total number of projections. |
| Site Code | Site code of system in report | Hits | Number of projections caught. |
| Sub Site | Sub site of system in report | Misses | Number of projections screener missed. |
| Manufacturer | Manufacturer of system in report | False Alarms | Number of times screener tap the Suspect button with no projection. |
| Model | Model of system in report | Percentage Hit | Percentage of hit responses. |
| Date | Date/time when results occurred. | Percentage Miss | Percentage of miss responses. |
| Bag Count | Total number of scans in report | Probability None TIP Event | Percentage of false alarm responses. |
| TIP Frequency Rate | Frequency of schedule in report | Avg. Resp Hit | Average hit rate of profile in report |
| IEDs Perc. | Percentage of 'IED' Projections | Avg. Resp None TIP Event | Average false alarm rate of profile in report |

5.2.4.8. Monthly Individual Results Report

When the operator clicks “Monthly Individual Results”, they are taken to the Monthly Individual Results screen.

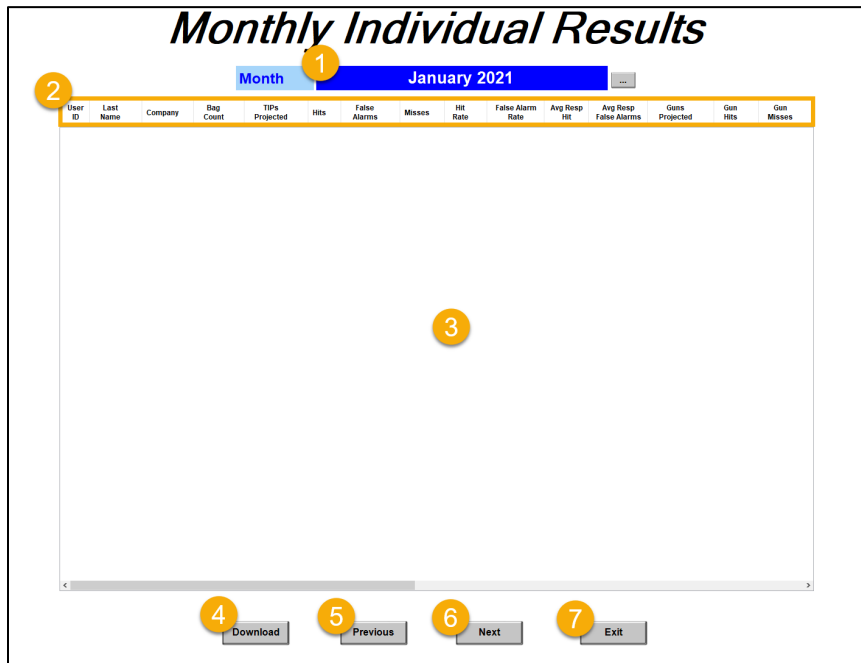


Figure 97: Monthly Individual

| No. | Item | Function/Description |
|-----|-----------------|---|
| 1 | Date Field | Month for listed results. Click “...” to open date-picker. |
| 2 | Report Headings | Click to sort by listed property. |
| 3 | Results List | Shows results. ID code hyperlinks to employee’s history screen. |
| 4 | Download Button | Click to copy shown report data to download directory. |
| 5 | Previous Button | Click to show report data for preceding month. |
| 6 | Next Button | Click to show report data for following month. |
| 7 | Exit Button | Click to return to TIP configuration screen. |

| Heading | Function/Description | Heading | Function/Description |
|-------------------|--|-----------------------|---------------------------------------|
| User ID | ID of profile responsible for results. | Gun Hits | Total number of Guns caught. |
| Last Name | Family name of profile in report. | Gun Misses | Total number of Guns missed. |
| Company | Employer of profile in report. | Gun Detection Rate | Percentage of Guns caught. |
| TIPs Projected | Total number of projections. | Explosive Projected | Total number of ‘IED’ Projections. |
| Hits | Number of projections caught. | Knives Projected | Total number of “Knives’ Projections. |
| False Alarm | Number of False Alarms by Screener | Knives Hit | Total number of Knives caught. |
| Misses | Number of projections missed. | Knives Missed | Total number of Knives missed. |
| Hit Rate | Percentage of hit responses. | Knives Detection Rate | Percentage of Knives caught. |
| False Alarm Rate | Percentage of false alarm responses. | Others Projected | Total number of ‘Other’ Projections |
| Avg. Hit | Average hit rate of profile in report. | Others Hit | Total number of Others caught. |
| Avg. False Alarms | Average false alarm rate in report. | Others Missed | Total number of Others missed. |
| Guns Projected | Total number of ‘Gun’ Projections | Others Detection Rate | Percentage of Others caught. |

5.2.4.9. Individual Results Report

When the operator clicks the “Individual Results” button, they will be taken to the Individual Results Screen.

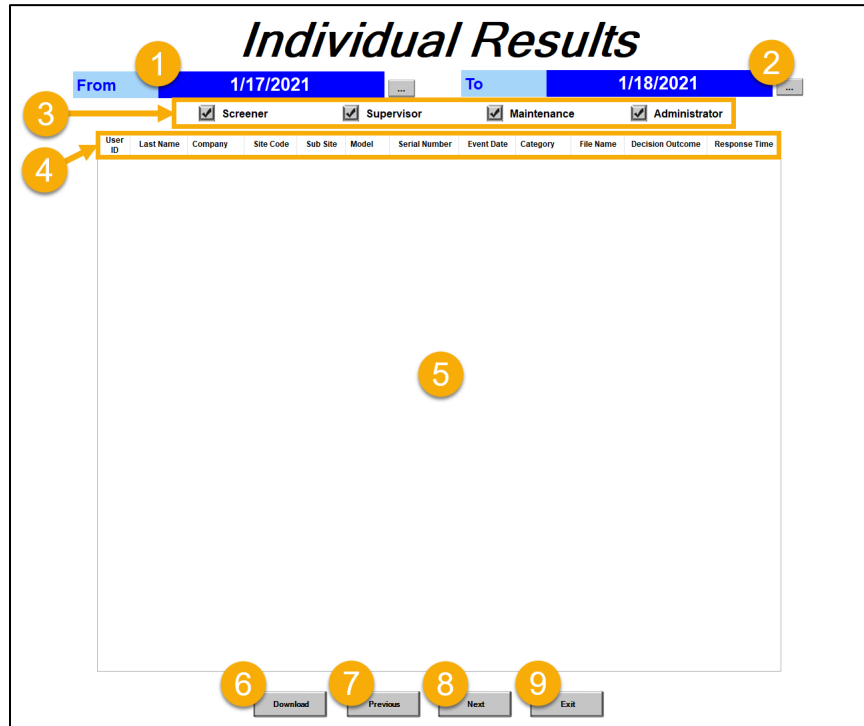


Figure 98: Individual Results Screen

| No. | Item | Function/Description |
|-----|-----------------|---|
| 1 | From Date Field | Earliest date for listed results. Click ‘...’ to open date-picker. |
| 2 | To Date Field | Latest date for listed results. Click ‘...’ to open date-picker. |
| 3 | Profile Filter | Tick-box filter shows/hides profiles. Auto-hides restricted profiles. |
| 4 | Report Headings | Click to sort by listed property. |
| 5 | Event Lists | Shows events. ID code hyperlinks to employee’s history screen. |
| 6 | Download Button | Click to copy shown report data to download directory. |
| 7 | Previous Button | Click to add report data for day before. |
| 8 | Next Button | Click to add report data for following day. |
| 9 | Exit Button | Click to return to TIP configuration screen. |

| Item | Function/Description |
|------------------|--|
| User ID | ID of profile responding to TIP event. |
| Last Name | Family name of profile responding to TIP event. |
| Company | Employer of profile responding to TIP event. |
| Site Code | Site code of system triggering TIP event. |
| Model | Model of system triggering TIP event. |
| Serial Number | Serial number of system triggering TIP event. |
| Event Date | Date when TIP event occurred. |
| Category | Category of image projected. |
| File Name | File name of image projected. |
| Decision Outcome | Screener response to projected image. |
| Response Time | Duration before screener responded to projected image. |

5.2.4.10. TIP Image Results Report

When the operator clicks the “TIP Image Results” button, they will be taken to the TIP Image Results Screen.

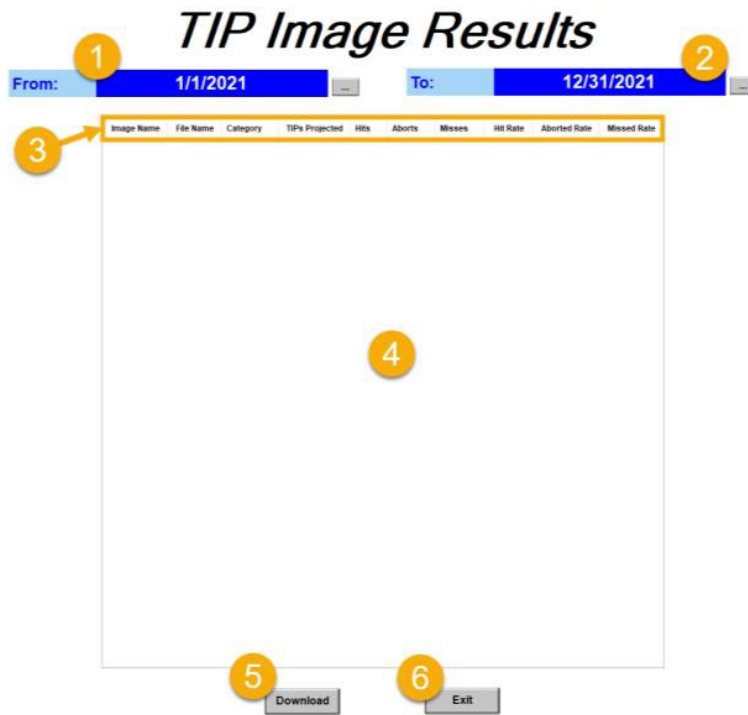


Figure 99: TIP Image Results Screen

| No. | Item | Function/Description |
|-----|-----------------|--|
| 1 | From Date Field | Earliest date for listed results. Click ‘...’ to open date-picker. |
| 2 | To Date Field | Latest date for listed results. Click ‘...’ to open date-picker. |
| 3 | Report Headings | Click to sort by listed property. |
| 4 | Results List | Shows results. |
| 5 | Download Button | Click to copy shown report data to download directory. |
| 6 | Exit Button | Click to return to TIP configuration screen. |

| Item | Function/Description |
|----------------|---|
| Image Name | Name of TIP image. |
| File Name | File-name of TIP image. |
| Category | Category of TIP image. |
| TIPs Projected | Total number of times image has been projected. |
| Hits | Total number of times screeners caught image. |
| Aborts | Total number of times image failed to project. |
| Misses | Total number of times screeners missed image. |
| Hit Rate | Percentage of times screeners caught image. |
| Aborted Rate | Percentage of times image failed to project. |
| Missed Rate | Percentage of times screeners missed image. |

5.2.4.11. Overall Library Hit Rate Report

When the operator clicks the “Overall Library Hit Rate” button, they are taken to the Overall Library Hit Rate Screen.

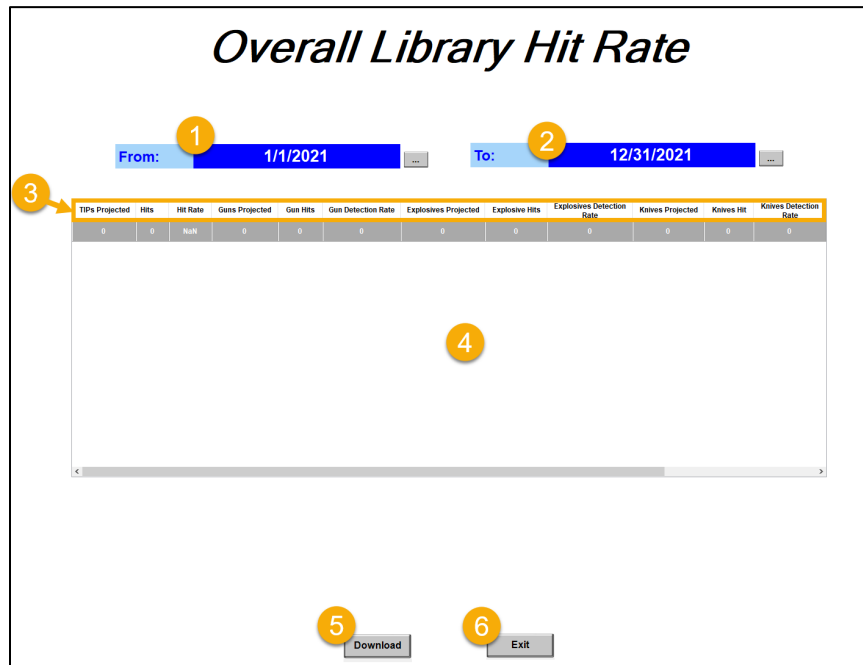


Figure 100: Overall Library Hit Rate Screen

| No. | Item | Function/Description |
|-----|-----------------|--|
| 1 | From Date Field | Earliest date for listed results. Click '...' to open date-picker. |
| 2 | To Date Field | Latest date for listed results. Click '...' to open date-picker. |
| 3 | Report Headings | Click to sort by listed property. |
| 4 | Results List | Shows results. |
| 5 | Download Button | Click to copy shown report data to download directory. |
| 6 | Exit Button | Click to return to TIP configuration screen. |

| Item | Function/Description |
|----------------------|---|
| TIPs Projected | Total number of projection from library. |
| Hits | Total number of projections screeners caught. |
| Hit Rate | Percentage of projections screeners caught. |
| Guns Projected | Total number of Gun projections from library. |
| Gun Hits | Total number of Guns screeners caught. |
| Gun Detection Rate | Percentage of Guns screeners caught. |
| Explosives Projected | Total number of IED projections from library. |
| Explosive Hits | Total number of IEDs screeners caught. |
| Knives Projected | Total number of Knife projections from library. |
| Knives Hit | Total number of Knives screener caught. |

5.2.5. Access Control

When an operator clicks the “Access Control” button from the Main Management Screen, they are taken to the Access Control Screen.

- Access Control can change the access privileges of profile types, not individual profiles.
- By default, only Maintenance and Administrators have the ability to change Access privileges.
- To change access, select a profile type and move all desired functions into the “Access Granted” field.
- Be sure to save all changes before exiting Access Control.

CAUTION

Be careful who is given the ‘Access Control’ privilege. Doing so allows them to access this screen and change other privileges.

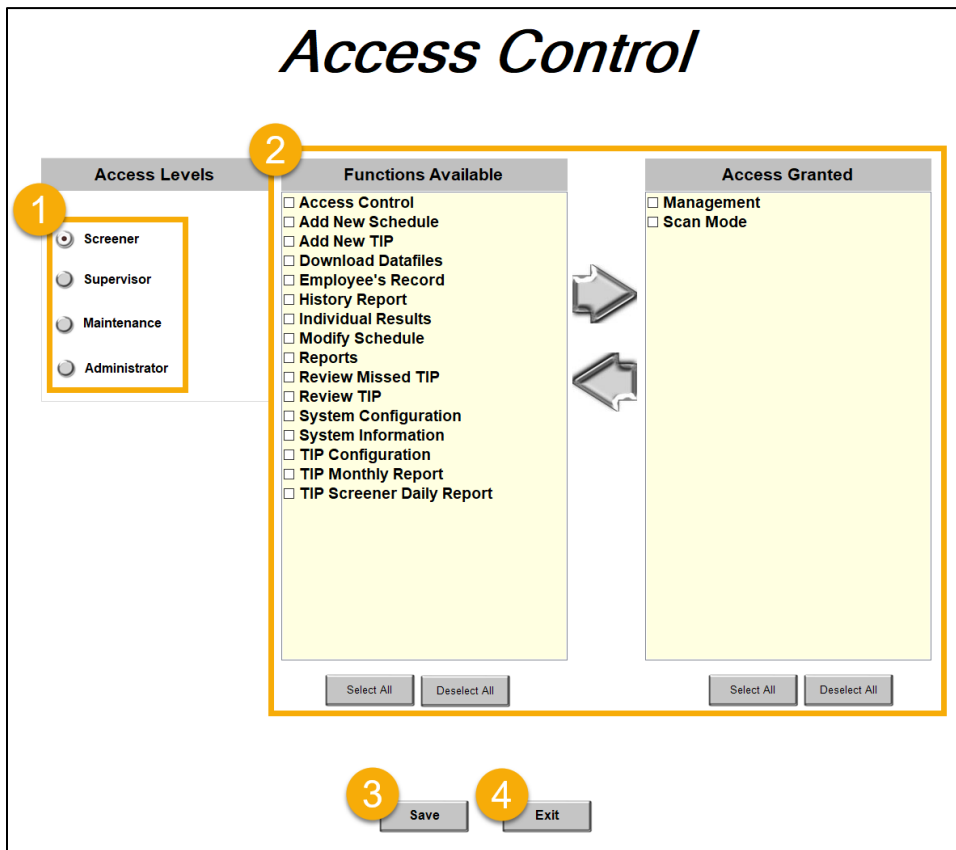


Figure 101: Access Control Screen

| No. | Item | Function/Description |
|-----|-----------------------|--|
| 1 | Profile Type Buttons | Click to pick profile type to modify. |
| 2 | Access Control Fields | Functions Available= profile type is denied listed rights. Access Granted= listed rights given to profile type. |
| 3 | Save Button | Click to save all changes. |
| 4 | Exit Button | Click to return to management screen. |

List of Privileges

NOTE

Privileges marked with an asterisk (*), require the 'Management' privilege to work.

| Privilege | If Granted |
|---------------------------|--|
| Access Control* | Can change granted access rights. |
| Add New Schedule | Can modify TIP schedule. |
| Add New TIP | Permanently disabled. |
| Download Datafiles | Can download files to USB. |
| Employee's Record* | Can add/edit/delete user profiles. |
| History Report* | Can view and download history report. |
| Individual Results | Shows individual result report. |
| Management | Can log-in to management mode. |
| Modify Schedule | TIP unavailable. |
| Reports* | Can view and download login-logout report. |
| Review Missed TIP | Can review missed TIP. |
| Review TIP | Can review tip. |
| Scan Mode | Can log-in to scan mode. |
| System Configuration* | Can change system settings. |
| TIP Configuration | Can configure TIP. |
| TIP Monthly Report | Can review TIP monthly report. |
| TIP Screener Daily Report | Can review TIP screener daily report. |

Default Privileges

| Screener | Supervisor | Maintenance | Administrator |
|-------------------------|--|-------------|---------------|
| Management Scan Mode | Download Datafiles History Report Individual Results Management Reports Scan Mode | All | All |

5.2.6. Reports

5.2.6.1. Login/Logout Report

When the operator clicks on the "Login/Logout" button on the Main Management Screen, they are brought to the Login-Logout Screen.

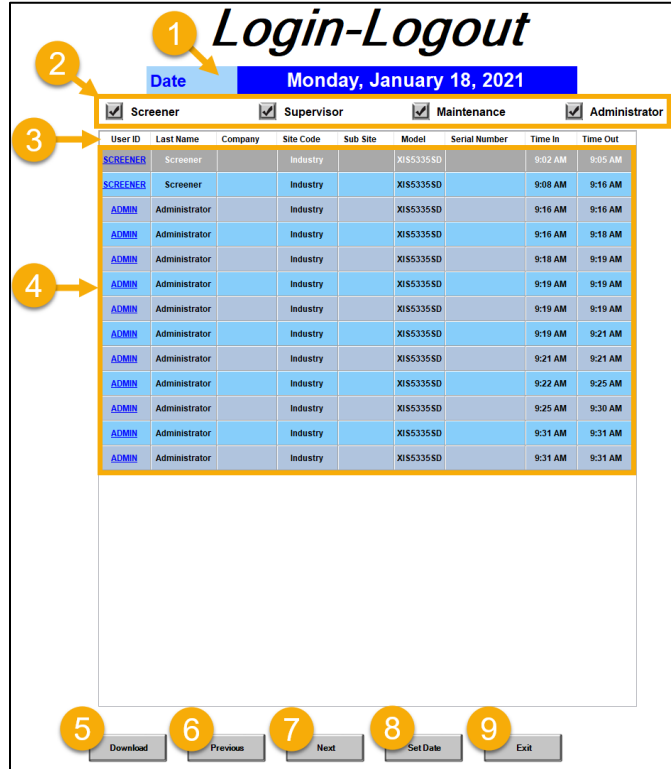


Figure 102: Login-Logout Report

| No. | Item | Function/Description |
|-----|-----------------|---|
| 1 | Date Heading | Shows day, month, and year when events occurred. |
| 2 | Profile Filter | Tick-box filter shows/hides profiles. Auto-hides restricted profiles. |
| 3 | Report Headings | Click to sort by listed property. |
| 4 | Event List | Shows events. ID code hyperlinks to employee's history screen. |
| 5 | Download Button | Click to copy shown report data to download directory. |
| 6 | Previous Button | Click to show report data for day before. |
| 7 | Next Button | Click to show report data for following day. |
| 8 | Set Date Button | Click to pick report date with date-picker widget. |
| 9 | Exit Button | Click to return to management screen. |

| Heading | Meaning |
|---------------|--|
| User ID | ID of profile that logged-in. |
| Last Name | Family name of profile that logged-in. |
| Company | Employer of profile that logged-in. |
| Site Code | Location of machine that logged-in. |
| Sub Site | Extra location data of machine that logged-in. |
| Model | Model of machine that logged-in. |
| Serial Number | Serial number of machine that logged-in. |
| Time In | Time when user logged-in. |
| Time Out | Time when user logged-out. |

5.2.6.2. History Report

When the operator clicks on the “History Report” button, they are brought to the History Report Screen.

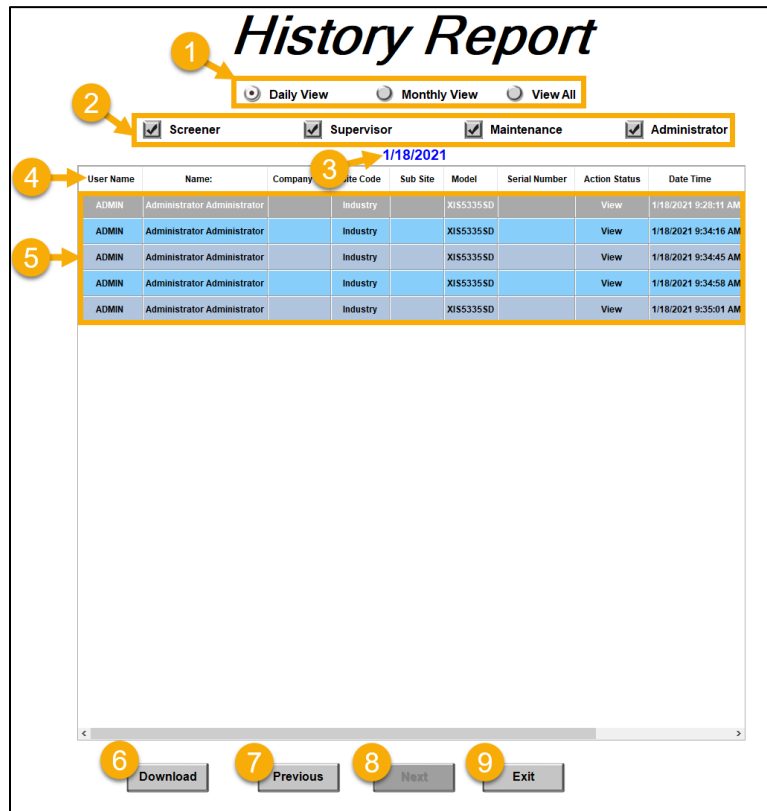


Figure 103: History Report Screen

| No. | Item | Function/Description |
|-----|-------------------|---|
| 1 | View Mode Buttons | Click to pick how to subdivide and show report data. |
| 2 | Profile Filter | Tick-box filter shows/hides profiles. Auto-hides restricted profiles. |
| 3 | Date Heading | Shows day, month, and year when events occurred. |
| 4 | Report Headings | Click to sort by listed property. |
| 5 | Event List | Shows events. ID code hyperlinks to employee’s history screen. |
| 6 | Download Button | Click to copy shown report data to download directory. |
| 7 | Previous Button | Click to show report data for day/month before. |
| 8 | Next Button | Click to show report data for following day/month. |
| 9 | Exit Button | Click to return to management screen. |

| Heading | Meaning |
|---------------|--|
| User Name | ID of profile that viewed report. |
| Name | Full name of profile that viewed report. |
| Company | Employer of profile that viewed report. |
| Site Code | Location of machine that viewed report. |
| Sub Site | Extra location data of machine that viewed report. |
| Model | Model of machine that viewed report. |
| Serial Number | Serial number of machine that viewed report. |
| Action Status | Explains report was viewed. |
| Date Time | Date and time when report was viewed. |
| Report Type | Name of report viewed. |
| Level | Profile type used to view report. |

5.2.7. Downloading Data

5.2.7.1. Download Datafiles

When an operator clicks the "Download Datafiles" button on the Main Management Screen, they are brought to the Download Datafiles Screen.

- This screen is used for downloading multiple reports at the same time.
- Each report can also be downloaded from the individual reports screen.
- All downloads go to the Downloads folder, set in System Configuration (see pg.81)

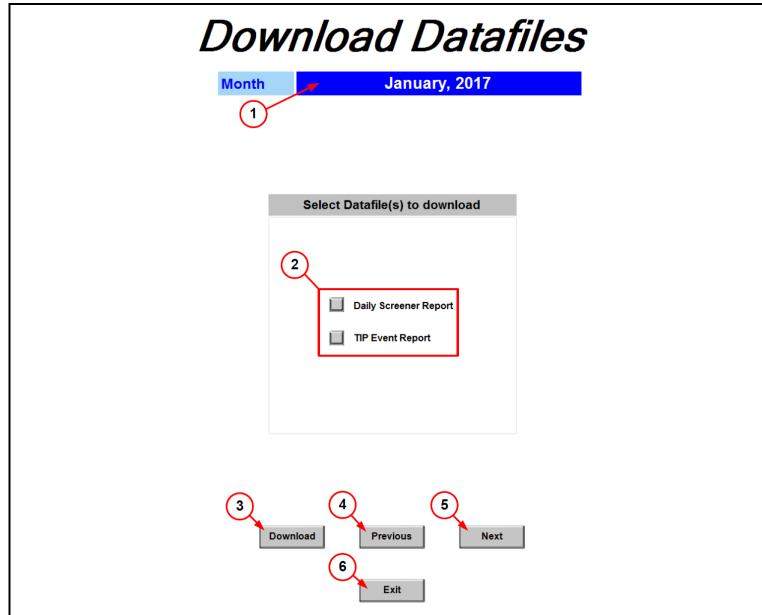


Figure 104: Download Datafiles Screen

| No. | Item | Function |
|-----|-----------------------------|---|
| 1 | Selected Month Display | Displays the month from which the listed reports are downloaded. |
| 2 | Report Selection Tick-boxes | Tick each box to select the corresponding report for download |
| 3 | Download Button | Click to create copies of the selected reports in the download directory. |
| 4 | Previous Button | Displays the reports for the previous month. |
| 5 | Next Button | Displays the reports for the next month. |
| 6 | Exit Button | Left-click to return to the management screen. |

5.2.7.2. Download Images

When an operator clicks the “Download Images” button from the Main Management Screen, they are brought to the Download Images Screen.

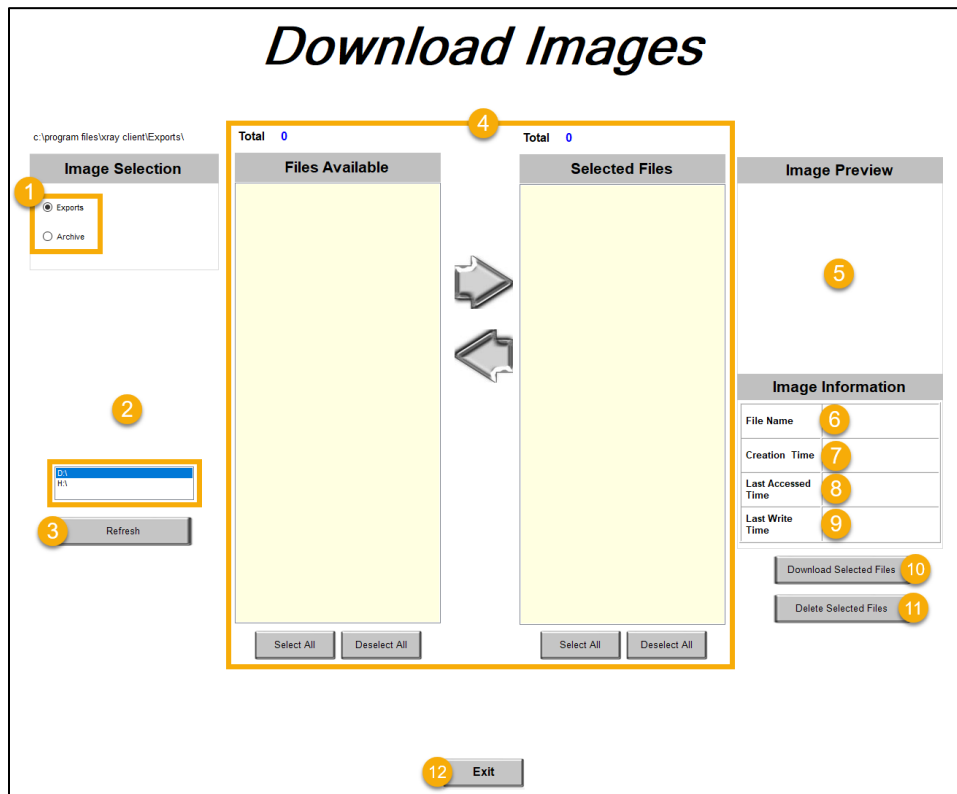


Figure 105: Download Images Screen

| No. | Item | Function/Description |
|-----|--------------------------------|--|
| 1 | Folder Buttons | Click to pick folder to download from: Archive = Images saved through automatic archiving. Exports = Images saved using the Save RGB function. |
| 2 | Device Menu | Click to pick target USB device. Auto-selects if only 1 device. |
| 3 | Refresh Button | Click to search for compatible USB devices. |
| 4 | File Selection Fields | Files Available = listed files not queued for download. Selected Files = listed files queued for download. |
| 5 | Image Preview Field | Shows preview of highlighted image file. |
| 6 | File Name Field | Shows full name of highlighted image file. |
| 7 | Creation Time Field | Shows when highlighted image was created. |
| 8 | Last Accessed Time Field | Shows when highlighted image was last reviewed. |
| 9 | Last Write Time Field | Shows when highlighted image was last edited. |
| 10 | Download Selected Files Button | Click to download queued files to target device. |
| 11 | Delete Selected Files Button | Click to permanently delete queued files. |
| 12 | Exit Button | Click to return to management screen. |

Downloading Images

1. Plug the target USB drive into a USB port on the machine.
2. Select all images that you wish to download by moving them into the “Selected Files” field.
3. Select the proper drive in the Device Menu field. Click ‘Refresh’ or un-plug and re-plug in the device if it does not appear.
4. Click “Download Selected Files”
5. Wait for the download progress bar to complete.

Download Images

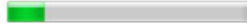


Figure 106: Download Images Progress Bar

6. Click “OK” to confirm the completion of the procedure.



Figure 107: Download Completion Message

CAUTION

Be careful when deleting images.

- Images cannot be recovered once deleted.
- Images in the Archive cannot be deleted using this menu.

6. Services

Maintenance, Services, & Diagnostics

6.1. Services

6.1.1. Contact Service

Customers can contact Astrophysics Service Department at any time. Remote Technical Support is available 24/7, and on-site assistance can be scheduled with turnarounds as fast as a few days.

| | |
|---------------------------|--|
| Mailing Address: | Astrophysics, Inc. 21481 Ferrero Parkway City of Industry, CA 91789 |
| Office Telephone: | (909) 598-5488 |
| Service Telephone: | (909) 461-1111 |
| Fax: | (909) 589-5546 |
| Company Website: | www.astrophysicsinc.com |
| E-mail Address: | service@astrophysicsinc.com |

To help facilitate faster service, please have the following information available when requesting assistance:

- The model and serial number(s) of the affected product(s).

NOTE

The Serial Number is located under the exit conveyor next to the AC power cord connection.

- Descriptions of the problem, any displayed error messages, and events leading up to the problem.
- Contact information, including:
 - Caller's name (or alternate call-back contact).
 - Company or organization's name.
 - Preferred call-back telephone number.
 - Preferred return-contact e-mail address.
 - Appropriate shipping (non-P.O. box) address.

6.1.2. Warranty

PER THE TERMS OF THE SALES CONTRACT, ASTROPHYSICS MACHINES ARE WARRANTED TO BE FREE OF DEFECTS FOR THE WARRANTY PERIOD. UNDER THE PARTS WARRANTY, ASTROPHYSICS, INC. (ASTROPHYSICS) WILL REPLACE DEFECTIVE PARTS THAT ARE RETURNED FREIGHT PRE-PAID TO ASTROPHYSICS WITHIN THE WARRANTY PERIOD. ASTROPHYSICS SHALL NOT BE LIABLE FOR OTHER CONSEQUENTIAL, ECONOMIC, OR CONTINGENT DAMAGES. THE PARTS WARRANTY DOES NOT APPLY TO ANY PARTS OR MATERIAL THAT IS DAMAGED AS A RESULT OF ACCIDENT, MISUSE, NEGLIGENCE, IMPROPER INSTALLATION, OR OPERATION IN A MANNER NOT SET FORTH BY THIS DOCUMENT.

FAILURE TO COMPLY WITH WARNING, CAUTION, OR DANGER NOTICES VOIDS ALL APPLICABLE WARRANTIES AND ABSOLVES ASTROPHYSICS OF ALL POTENTIAL LIABILITY FOR INJURY OR DAMAGES INCURRED AS CONSEQUENCES OF NON-COMPLIANCE. ASTROPHYSICS SHALL NOT BE LIABLE FOR INJURY OR DAMAGES RESULTING FROM USE OF ITS PRODUCTS FOR PURPOSES NOT EXPLICITLY ENDORSED BY APPLICABLE USER DOCUMENTATION.

6.1.3. Other Services

- Onsite and Factory Operator Training Course
- Onsite and Factory Maintenance and Troubleshooting Courses
- Time and Material (Cost) Service
- Radiation Survey Service
- Software Maintenance Update Agreements
- Preventive Maintenance Agreements

NOTE

For further information on the above services please call the Astrophysics Customer Service Department.

6.2. Maintenance

6.2.1. Diagnostics Screen

The Astrophysics Real-Time Diagnostics Screen allows operators to quickly assess the health of the machine, ensure proper operation, and gather errors and messages with a simple button press.

DANGER

Diagnostics is presented as a troubleshooting tool.

- NEVER attempt to modify the machine unless directed to do so by a technician.
- NEVER ignore faults or errors presented in Diagnostics unless directed to do so by a technician.
- ALWAYS report errors or faults to a supervisor.
- ALWAYS report any errors or faults to Astrophysics Service if directed to do so.

When an operator accesses Diagnostics (see pg. 67), they are presented with the Real-Time Diagnostics Screen.

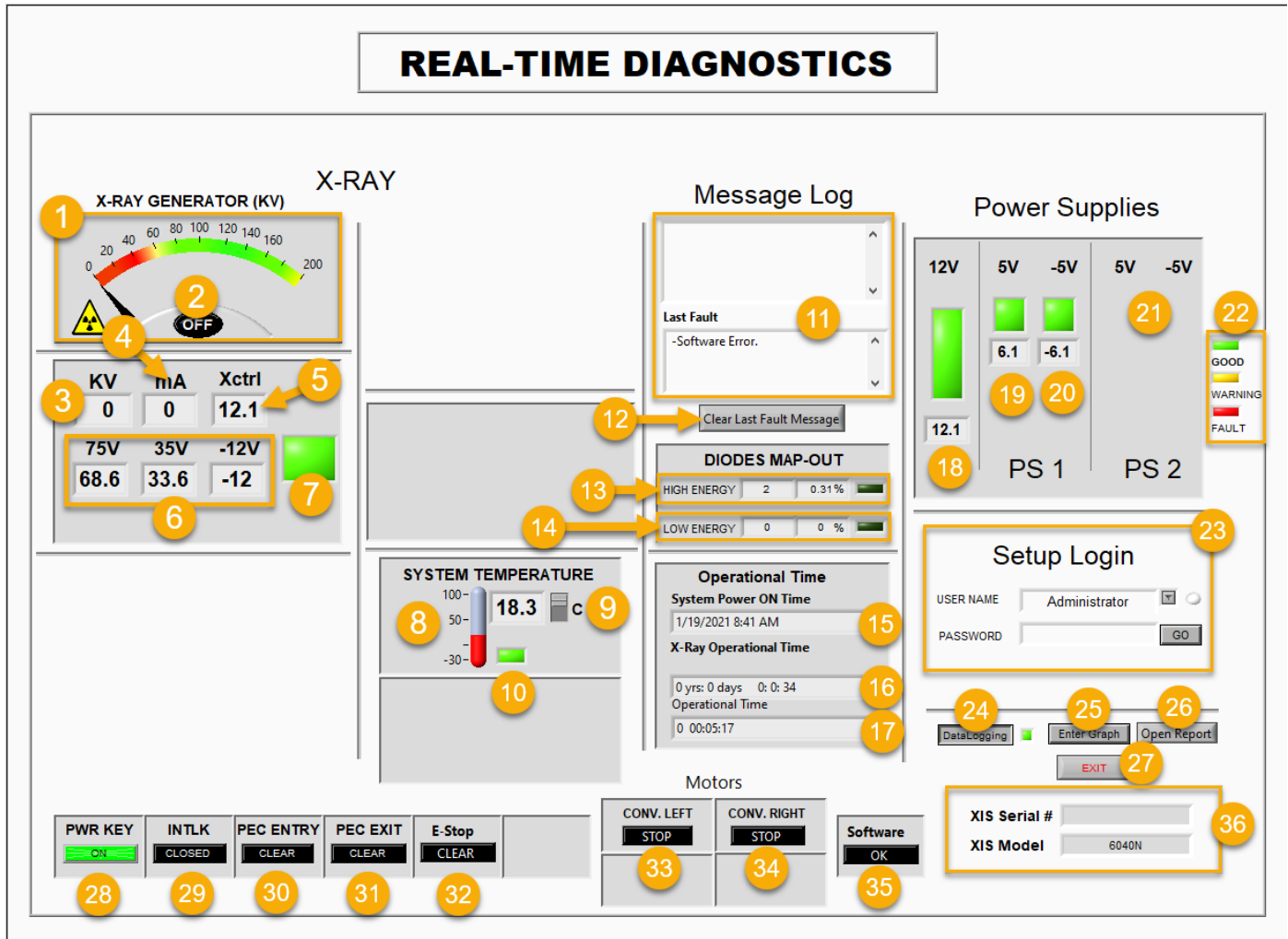


Figure 108: Real-Time Diagnostics Screen

| No. | Item | Function/Description |
|-----|---------------------------------|--|
| 1 | Source Voltage Meter | Needle shows current source kV output. |
| 2 | Source Power Indicator | OFF = source not radiating. ON = source radiating. |
| 3 | Source kV Indicator | Shows current source kV output. |
| 4 | Source mA Indicator | Shows current source mA output. |
| 5 | Source PSU Indicator | Shows source power supply voltage (V). |
| 6 | Power Supplies Indicator | Shows the control board power supply voltages (V). |
| 7 | Source Fault Indicator | Shows source fault status (see legend). |
| 8 | Thermometer | Shows internal system temperature. |
| 9 | Thermometer Scale Toggle | Click to toggle between C and F scales. |
| 10 | Temperature Fault Indicator | Shows temperature fault status (see legend). |
| 11 | Fault Message Log | Shows system error messages. |
| 12 | Clear Last Fault Message Button | Click to erase fault messages and log data. |
| 13 | High-energy Diode Tracker | Shows number/percentage of HE diodes disabled in runtime. Replaces detectors as-needed to keep total $\leq 2\%$. |
| 14 | Low-energy Diode Tracker | Shows number/percentage of LE diodes disabled in runtime. Replace detectors as-needed to keep total $\leq 2\%$. |
| 15 | Startup Tracker | Shows date/time of most recent system startup. |
| 16 | X-ray On Tracker | Shows total accumulated system "X-ray on" time. |
| 17 | System On Tracker | Shows total accumulated system "system on" time. |
| 18 | 12V PSU Indicator | Shows output/fault status of 12V power supply (see legend). |
| 19 | +5V PSU Indicator | Shows output/fault status of +5V power supply (see legend). |
| 20 | -5V PSU Indicator | Shows output/fault status of -5V power supply (see legend). |
| 21 | PSU 2 Diagnostics | Identical readout to #20-22 for dual-view $\pm 5V$ power supplies. |
| 22 | Fault Legend | Green = operating within normal limits. Yellow = approaching fault status; maintenance suggested. Red = fault; service required. |
| 23 | Setup Login GUI | Technician-only login for advance technical diagnostics. |
| 24 | Data Logging Button/Indicator | Click to toggle report/graph data collection on (green) or off (red). |
| 25 | Enter Graph Button | Click to show graph of long-term X-ray and PSU voltage data (requires active data logging). |
| 26 | Open Report Button | Click to show record of machine uptime (requires active data logging). |
| 27 | Exit Button | Click to kills diagnostics program until system restart. |
| 28 | Power Key-switch Indicator | On = system power key-switch set to "On" position. Off = system power key-switch set to "Off" position. |
| 29 | Interlock Indicator | Closed = all interlocks closed and working normally. Open = interlock fault detected; operation disabled. |
| 30 | Entry PEC Indicator | Clear = PEC unblocked and working normally. Blocked = PEC blocked by detected object. |
| 31 | Exit PEC Indicator | Clear = PEC unblocked and working normally. Blocked = PEC blocked by detected object. |
| 32 | E-stop Indicator | Clear = no E-stops pressed. Detected = E-stop(s) pressed; operation disabled. |
| 33 | Conveyor Left Indicator | Stop = conveyor stopped. Left = conveyor running right-to-left. |
| 34 | Conveyor Right Indicator | Stop = conveyor stopped. Right = conveyor running left-to-right. |
| 35 | Software Indicator | OK = software working normally. Error = software fault detected. |
| 36 | System Identifiers | Shows system serial and model numbers. |

Diagnostics Error List

| Message | Cause | Remedy |
|---|--|-------------------------------------|
| XRAY KV FAULT | Source kV feedback fault. | Contact Service. |
| XRAY MA FAUT | Source mA feedback fault. | Contact Service. |
| XRAY CONTROLLER POWER SUPPLY FAULT | X-ray controller failed. | Contact Service. |
| +5VDC PS1'S MALFUNCTION | +5V power supply failed. | Contact Service. |
| -5VDC PS1'S MALFUNCTION | -5V power supply failed. | Contact Service. |
| SYSTEM12VDC POWER SUPPLY'S MALFUNCTION | 12V power supply failed. | Contact Service. |
| UPS FAULT | UPS failed. | Contact Service. |
| E-STOP IS PRESSED PLEASE RELEASE TO CONTINUE | ≥ E-stop pressed. | Check and reset all E-Stops. |
| INTERLOCK IS OPENED | ≥ 1 access panel open/missing. | Close and secure all access panels. |
| TEMPERATURE EXTREME DETECTED | System operating beyond temperature tolerances. | Contact Service. |
| SOFTWARE ERROR | XIS software malfunction. | Contact Service. |
| X-RAY GENERATOR'S/CONTROLLER'S MALFUNCTION (KV/MA IS UNDER MIN OR OVER MAX) | ≥ 1 source has failed and no X-rays are generated. System may show a scrolling black screen. | Contact Service. |

6.2.2. Troubleshooting Procedure

1. Check all tunnel indicators.
2. Check Diagnostics for warning messages.
3. Refer below for common fixes.

CAUTION

Use caution when performing troubleshooting:

- NEVER modify or bypass safeties.
- NEVER modify the machine unless directed to do so by a technician.
- ALWAYS pay attention to faults or errors.
- ALWAYS contact Astrophysics Service if there is an issue that cannot be resolved through procedures outlined here.

Startup/Shutdown

| Problem | Cause | Remedy |
|------------------------|---|---|
| Scanner Does Not Start | Main Power Disconnected | Reconnect Main Power Cable |
| | Circuit Breaker is Open | Flip the Circuit Breaker |
| | UPS is OFF | Press the UPS Reset Button |
| | Electrical Component Failure | Contact Service |
| Scanner UPS is Beeping | Main Power Failure | Press the UPS Reset Button and Wait for Power to Return |
| | Main Power Cable Disconnected | Reconnect Cable |
| | Circuit Breaker was Tripped | Cycle the Circuit Breaker Onn and Off |
| | Main Power Cable or Circuit Breaker Failure | Contact Service |

Scan Cycle

| Problem | Cause | Remedy |
|---|-------------------------------|--|
| Scan Cycle Won't Start | E-Stop pressed/Interlock Open | Check all safeties and reset |
| | System Fault Detected | Check Diagnostics, Contact Service if Necessary |
| System Stalls When Cycle is Interrupted | System Fault Detected | Check Diagnostics, Contact Service if Necessary |
| No Image Shown | Imaging System Fault | Check Diagnostics, Contact Service if Necessary |
| | Component Failure | Contact Service |
| Low-Quality mage | Bad Normalization | Log Out and Log Back in, then Re-Scan |
| | Anomalous Performance | Restart the System and Rescan, Contact Service if it Continues |
| | Component Failure | Contact Service |

6.2.3. Maintenance Schedule

Operator Maintenance Schedule

Operators and users should adhere to the following maintenance schedule to maintain long-term health of the system.

DANGER

Always engage an E-Stop before putting an body parts inside or entering the tunnel of any XIS machine.

| Frequency | Cause | Remedy |
|-----------|---|--|
| Daily | Clean conveyor. | <ol style="list-style-type: none"> 1. Quickly inspect conveyor system and tunnel. 2. Remove any dust, debris, or blockages. 3. Note any damage or wear. |
| | Check diagnostics. | <ol style="list-style-type: none"> 1. Open the diagnostics screen. 2. Check for errors or warning. |
| Weekly | Test E-stop | <ol style="list-style-type: none"> 1. Press 1 E-stop and confirm it works correctly. 2. Recover from the E-stop. 3. Repeat until all E-stops are tested individually. |
| | Inspect conveyor/tunnel for damage or wear. | <ol style="list-style-type: none"> 1. Closely inspect rollers and conveyor bed. 2. Note any damage or wear. |
| Monthly | Inspect electronics for damage or wear. | <ol style="list-style-type: none"> 1. Closely inspect mains power cable, MC/B, and other external ports. 2. Note any damage or wear. |

Technician Maintenance

At least once a year, customers should schedule maintenance with Astrophysics to perform the following maintenance actions.

CAUTION

Only technicians may perform scheduled maintenance.

| Cause | Remedy |
|------------------------|---|
| Component-level checks | Test major internal/external electronic components for proper function. |
| Frame checks | Inspect frame, panels, hinges, etc. for proper function. |
| Conveyor checks | Inspect rollers, chains, etc. for proper function. |
| Safety checks | Test E-stops, indicators, etc. for proper function. |
| Imaging checks | Test imaging system for proper function. |
| Storage checks | Test electronic storage for proper function. |
| Radiation survey | Test system X-ray emissions for safe leakage rates. |

7. Options

Optional Hardware and Software

7.1. Optional Hardware

7.1.1. Remote Workstation

A remote workstation operates the same as the normal workstation attached to the machine. It functions identically to a normal screening station, but with a few additions.

- All remote workstations are equipped with a separate UPS that maintains the workstation PC apart from the machine.
- All remote workstations come with a steel table provided by Astrophysics.
- All machines larger than the 6545 model automatically come with a remote workstation.
- Remote workstations are generally located near the machine, but can be located anywhere that can connect to the same network.

7.1.2. Footmat

Systems can be equipped with a footmat that functions exactly as an interlock.

- Operators must be standing on the footmat to operate the machine.
- Footmats require a special fitting to be installed onto the machine to power the footmat.
- If the operator is not standing on the footmat, an Interlock fault will be displayed and the machine will become inoperable. If the error is not corrected, the system will log out the user according to a configurable timeout.

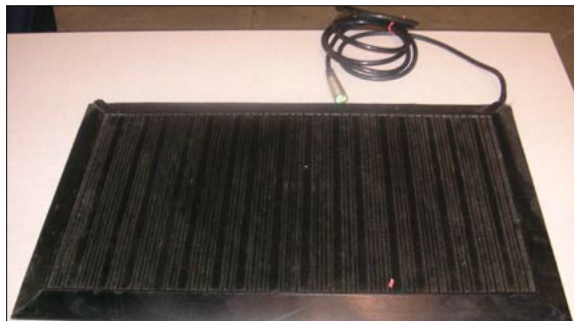


Figure 109: Footmat

CAUTION

Do not attempt to place heavy items on the footmat or bypass any other safeties.

WARNING

The footmat may be damaged by sharp objects such as table legs or chair legs. Do not place sharp or pointed objects on the footmat.

7.1.3. AMS (Astrophysics Management System)

The AMS is Astrophysics server setup that performs a variety of functions:

- Allows multiple machines to operate on the same network.
- Allows multiple workstations to operate on the same network.
- Enables the use of Suspect Workstations and Supervisor Workstations.
- The AMS allows Automatic Archiving function on all machines.

NOTE

Operation of the AMS is explained in the Astrophysics Management System (AMS) User Manual that will be provided to the customer if an AMS is ordered.



Figure 110: AMS

7.1.4. Suspect Workstation

A suspect workstation is a separate remote workstation to be used for searching suspected articles.

- Installing the Suspect Workstation requires an AMS to be installed to facilitate the machine network.
- When a Suspect Workstation is installed, screeners can press the Suspect Button on the AOCB to send an image to the Suspect Workstation for further view.

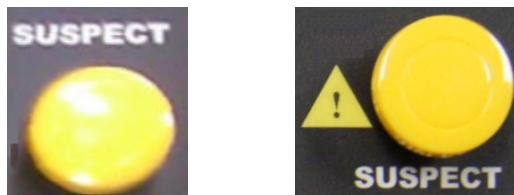


Figure 111: Suspect Buttons, Alphanumeric AOCB (LEFT) and Icon-Based (RIGHT)

Suspect Workstation UI

The Suspect Workstation GUI appears similar to the standard screening workstation UI with a few key differences.

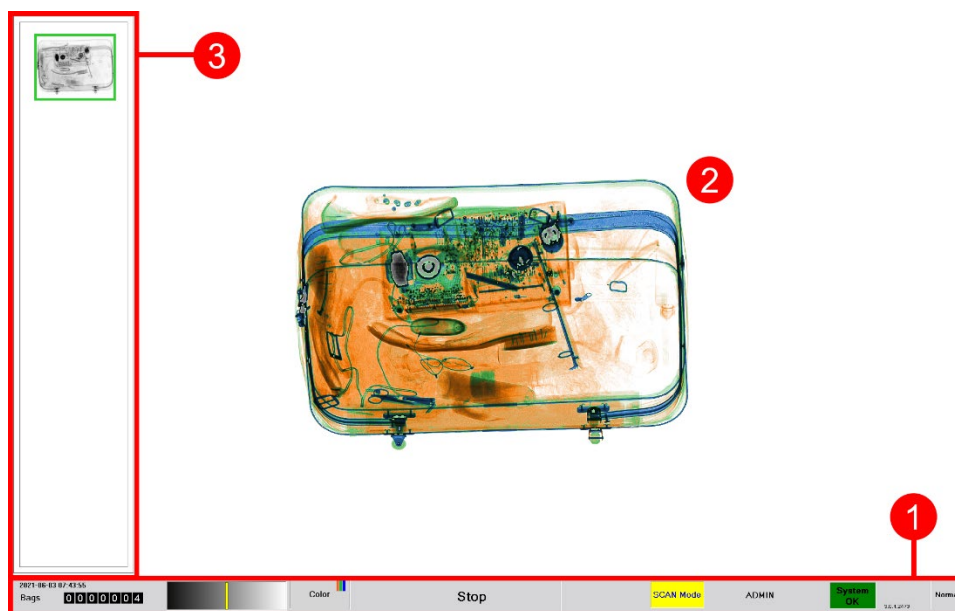


Figure 112: Suspect Workstation UI

| No. | Item | Function/Description |
|-----|-----------------------|---|
| 1 | Workstation Taskbar | This is the standard Screen 1 Taskbar for a screener workstation (see pg.42) |
| 2 | View Area | Suspected images are displayed here and scroll across the screen as they do on a standard screener workstation. |
| 3 | Incoming Images Field | Images sent by the screener workstation are seen here. Click on an image to scroll it on the screen. When a decision is made or another image is chosen, images disappear from this area. |

Suspect Workstation AOC

All Suspect Workstations are equipped with a modified Icon-Based AOC.

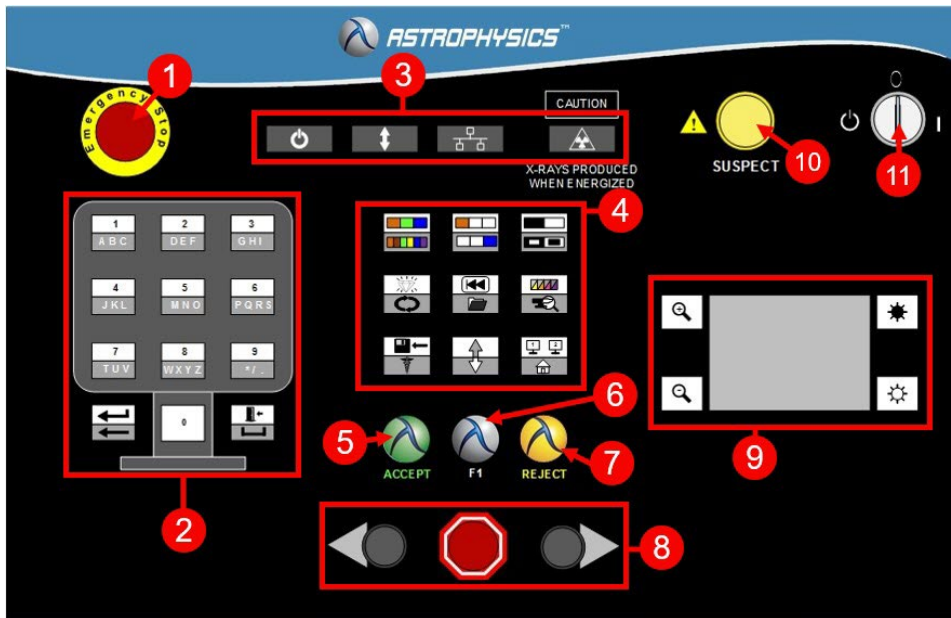


Figure 113: Suspect Workstation AOC

| No. | Item | Function/Description |
|-----|---------------------|---|
| 1 | E-Stop | Identical to the standard Icon-Based AOC |
| 2 | Alphanumeric Keypad | Identical to the standard Icon-Based AOC |
| 3 | Indicators | Identical to the standard Icon-Based AOC |
| 4 | Function Buttons | Identical to the standard Icon-Based AOC |
| 5 | Accept Button | Press this button to accept a suspect bag, marking it as safe. |
| 6 | Programmable Button | This button can be programmed for a variety of functions (see pg.), non-functional by default. |
| 7 | Reject Button | Press this button to reject a bag, prompting further inspection or other actions according to the site procedures. |
| 8 | Conveyor Controls | Identical to the standard Icon-Based AOC |
| 9 | Trackpad | Identical to the standard Icon-Based AOC |
| 10 | Suspect Button | Press this button when a suspected TIP image is projected on screen. This button is non-functional if TIP is not enabled. |
| 11 | Key-Switch | Identical to the standard Icon-Based AOC |

7.1.5. Supervisor Workstation

An XIS/VI machine network can also be equipped with a supervisor workstation that can perform the following functions.

- **Monitor** other stations, viewing all of their activities as they happen.
- **Control** other stations, operating them as if the supervisor were at that workstation.
- Supervisor Workstations can also access Management as normal.

Using the Supervisor Station

When a supervisor logs into their Supervisor Station, they are taken to a blank Supervising Screen.

- Click the "Supervisor" button in the top-left, and a dropdown menu will appear.
- Click "Control" to control other stations on the network.
- Click "Monitor" to monitor other stations on the network.

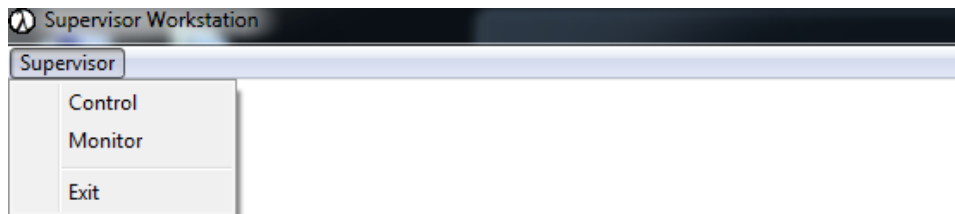


Figure 114: Supervisor Workstation Supervising Menu

- When one function is chosen, a pop-up window will appear to select from a list of network machines to Control or Monitor.
- Click a machine name and click OK to select that machine.

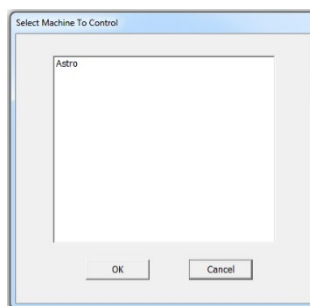


Figure 115: Control/Monitor Machine Selection Pop-Up Window

- When the supervisor chooses a machine to Monitor, they will be immediately shown the current screen view of that machine.
- When the supervisor chooses a machine to Control, they will be taken to the Login screen for that machine.

7.1.6. ATRS (Automatic Tray Return System)

Astrophysics offers potential integration with various configurations of ATRS's. An ATRS allows for the rapid scanning of small item trays without the need for personnel or the public to replace the used trays.

Trays allow for:

- Rapid scanning of variable sized items through the uniformity offered of standard trays.
- Scanning of small items that may not normally be able to trigger a scan.
- Scanning of items with straps or other features that may get caught in the moving parts of the machine.
- Easy handling of visitors' personal items by site staff.

However, for high-volume locations, the effort and time required to reset trays for use at the entry side of the scanner is prohibitive. An ATRS allows for such high-volume (e.g. airports, banks, secure locations) locations to manage the return of trays with minimal effort by site staff.

7.1.6.1. ATRS Layout

The ATRS's offered by Astrophysics are configurable. Through an assembly of standard conveyor shapes, Astrophysics can craft an ATRS layout which matches nearly any use-case as defined by the customer. Each module in the ATRS is completely self-contained and modular, able to integrate with any other module.

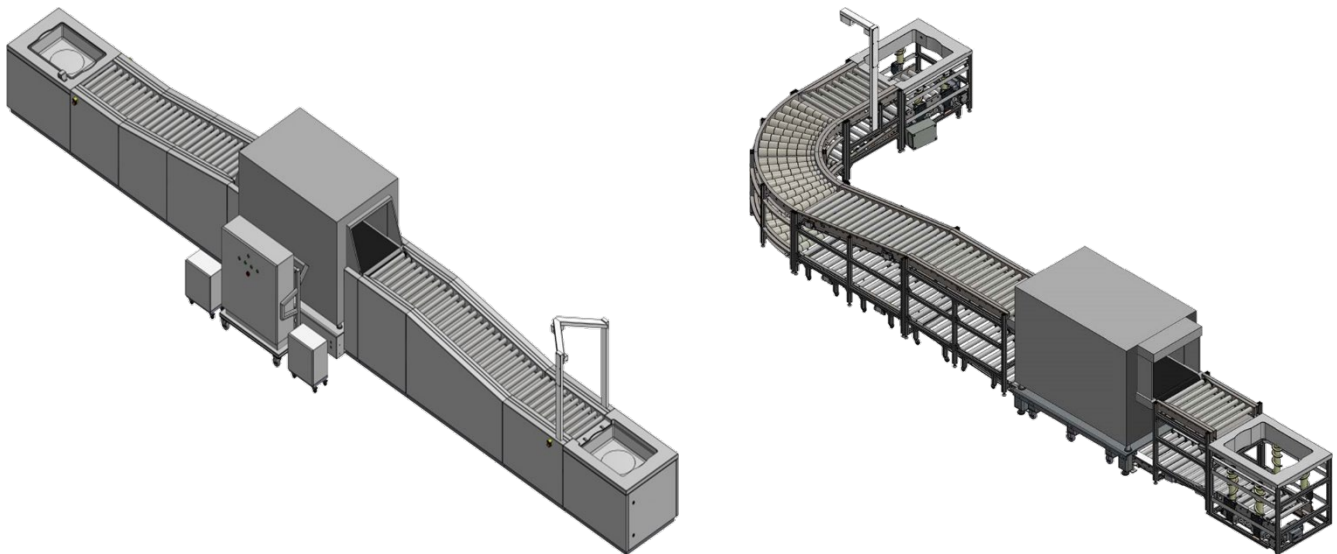


Figure 116: Sample ATRS Layouts

7.1.6.2. ATRS Operation

1. Visitor takes tray from the Tray Stacker Module (featured on the right-hand side of the Figure 116).
2. The visitor places personal items to be scanned inside the tray.
3. The tray passes into the scanner and is scanned.
4. The tray exits the scanner and traverses down the upper conveyor line.
5. The visitor reclaims their items from the tray.
6. The tray reaches the end of the upper conveyor line and passes onto the Tray Recirculation Module (featured as the module closest to the top of the image in Figure 116).
7. The Tray Recirculation Module lowers the tray to the lower conveyor line.
8. The tray travels along the lower conveyor line back the Tray Stacker Module.
9. The Tray Stacker Module reclaims the tray and lifts it back up to be used by the next visitor.

7.1.6.3. ATRS Integration

Within the layout of the ATRS, the XIS is placed on a special X-ray module that lifts the scanner, so the conveyor bed is level with the upper ATRS conveyor line. This also allows the lower ATRS conveyor line to pass underneath the scanner and complete the circuit.

The sample layout above also includes an ETRM (Empty Tray Recognition Module) that prevents trays that haven't been emptied from recirculating to the start of the ATRS circuit. This module is optional.

The ATRS is entirely controlled by a PLC (Programmable Logic Controller) which maintains constant operation. The ATRS only integrates with the XIS in 2 ways:

- When the Operator starts and stops the belt of the XIS, the ATRS conveyor circuit also starts and stops.
- The ATRS includes E-stops placed along the conveyor, both on the public side and the non-public side. The number and location of E-stops will vary based on the design and layout of any specific ATRS deployment.

7.1.6.4. ATRS Specifications

| Specification | Value |
|-----------------------------|-------------------------------------|
| Operating Temperature | 0°C–45°C (32°F–113°F) |
| Relative Humidity Tolerance | Up to 95%, non-condensing |
| Control Voltage | 24VDC |
| Amperage | 15A (at max load) |
| Power Consumption | ~3.0kW per hour (at 13A continuous) |

7.2. Optional Software

7.2.1. TIP (Threat Image Projection)

TIP randomly inserts (projects) fake threats into scan images for training and evaluation purposes. It pulls threats from a vast library of images created from actual scans of real threats.

The TIP indicator will be displayed at the bottom of the

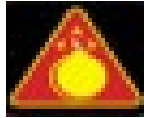


Figure 117: TIP Indicator

DANGER

TIP is intended ONLY as a training and evaluation tool.

- The presence of a fake threat does not suggest an image contains no REAL threat.
- Carefully re-examine each image after any TIP event, and manually search items if needed to guarantee no threats are present.

7.2.1.1. TIP Libraries and Schedules

TIP operates on 2 core resources: the TIP library and TIP schedule(s).

- The “library” refers to the entire collection of threat images available for projection into scan images. Each library includes 1,000+ images picked for optimal compatibility with specific XIS models, and the most common types of items types of items scanned.
- The “schedule” refers to a user-configurable definition of projection frequency, threat types by category, and specific images available for projection. Schedules also define the amount of time screeners have to identify and respond to TIPs.
 - Users can create and save multiple schedules, but only 1 schedule can be active.

TIP Categories

TIP contains 4 categories of possible threats to display:

| Category | Examples |
|---------------------|---|
| Guns | Pistols, rifles, shotguns, ammunition, gun parts, etc. |
| Knives | Switchblades, fixed-blade knives, machetes, etc. |
| Explosives | IEDs, bombs, grenades, etc. |
| Other/Miscellaneous | Blunt weapons, pointed objects, tools, incendiary devices, etc. |

7.2.1.2. TIP Events

A TIP event occurs whenever screener interact with the TIP system:

| Category | Comments |
|-------------|---|
| Hit | Screener notices the TIP and taps/left-clicks 'Suspect' before the decision time expires. |
| Miss | Screener fails to notice the TIP before the decision timer expires. |
| False Alarm | Screener taps/left-clicks the Suspect button when no TIP exists in the image. |
| Abort | The TIP system attempted to project a threat that was too big to fit inside the scanned item. |

For example, if no projection occurs and the screener does not tap/left-click 'Suspect,' no TIP event occurs. However, if the screener DOES tap/left-click 'Suspect,' a "false" alarm" occurs.

DANGER

Closely examine false alarm events! If no TIP was projected, any apparent threats may be real!

7.2.1.3. Using TIP

1. Enable TIP in the system configuration menu.
2. Operation continues normally until a TIP projection occurs.
 - 2.1. TIP does not affect system scanning capabilities or control schemes.
 - 2.2. Press the Suspect Button when any threat appears in an image to check for projected TIPs.
3. After any TIP event occurs, a warning banner appears on-screen explaining the event:

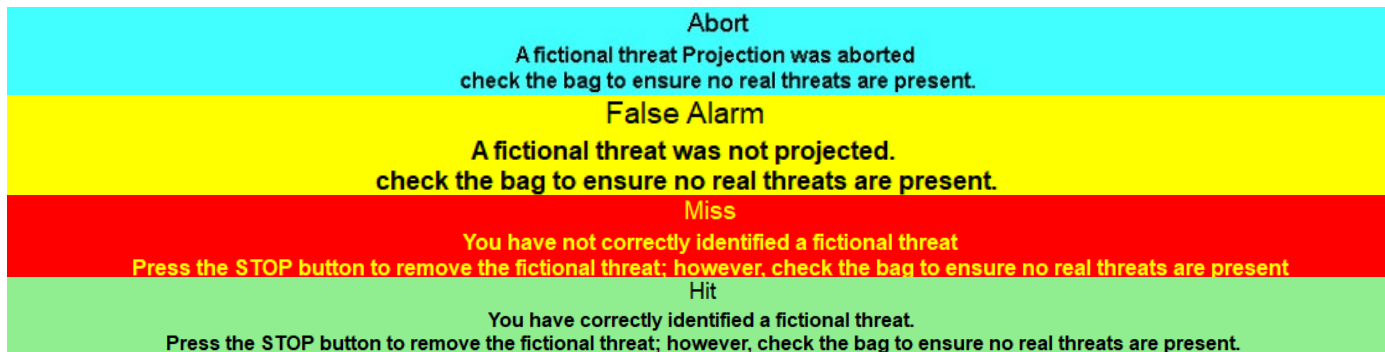


Figure 118: Various TIP Event Responses

- 3.1. For miss and hit events, the system indicates the TIP and removes it from the image.
- 3.2. Re-search the image for possible REAL threats before continuing.
4. After clearing the TIP event, the process repeats from step 1.

7.2.2. SA (Screener Assist)

Screener Assist flags certain potential threats within each scan range with various colored ellipses.

- SA can be enabled or disabled through System Configuration.
- When SA is active, it will display an icon on the taskbar of the Scan Mode UI.



Figure 119: SA Active Icon

- SA will flag certain items with ellipses of various colors depending upon the material.

| Ellipse Color | Threat Type |
|---------------|--|
| Red | Common explosive or narcotics. |
| Yellow | High-density material (Requires Density Alert) |
| Purple | Flammable liquids. |

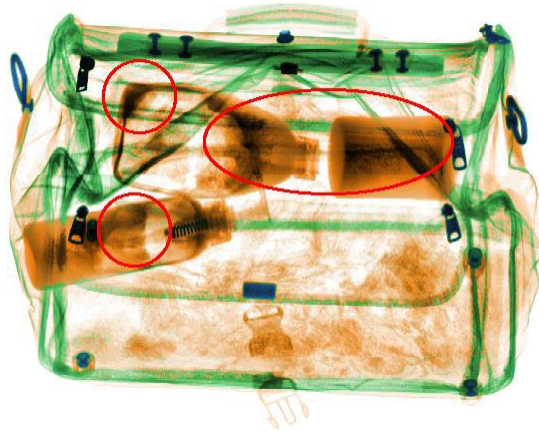


Figure 120: Items Flagged by SA

WARNING

- SA augments user awareness; it does NOT replace it. Thoroughly inspect every X-ray image while screening for threats.
 - SA ignores trace amounts of potentially threatening materials to avoid oversensitivity. Compact threats may escape notice; NEVER rely solely on SA.
-

7.2.3. DA (Density Alert)

DA flags high-density items and impenetrable materials.

- Dense items can either be shielding or dangerous thick metals.
- DA can be enabled or disabled through the System Configuration
- DA only detects high density items, not other suspect items.
- DA has two methods of alert:
 - Pixel Highlighting: DA will replace black or very dark pixels of impenetrable or flagged dense materials with bright red pixels.



Figure 121: DA Pixel Highlighting

- Drawing Ellipses: DA will draw yellow ellipses around suspected areas of high density. This is very similar to SA. (REQUIRES SA TO BE ENABLED)
- DA can be configured to stop the conveyor and/or sound an audio alarm when triggered.

7.2.4. OTP (Operator Training Program)

OTP emulates the screening operation of the XIS system without the need to scan items. The program operates by continuously scrolling and looping images from a designated library.

NOTE

Images will continuously loop until stopped by the Screener.

Using OTP

1. Enable OTP in the system configuration menu.
2. Direct the conveyor controls to the right or left to start.
 - 2.1. Images can be scrolled forward or in reverse.
3. Screening operations continue normally.
 - 3.1. OTP does not affect control schemes.
 - 3.2. Scanning is disabled while OTP is active.

NOTE

TIP does not accumulate statistics while OTP is active.

END OF DOCUMENT

REPUBLICA



MOLDOVA

AGENȚIA NAȚIONALĂ DE REGLEMENTARE A ACTIVITĂȚILOR NUCLEARE ȘI RADIOLOGICE

MD-2068, mun. Chișinău, str. Alecu Russo, 1
tel/fax: (+373 22) 31 11 37, e-mail: agentia.nucleara@anran.gov.md

AUTORIZAȚIA RADIOLOGICĂ

Seria A

Nr. 1583

Denumirea, forma juridică de
organizare, adresa juridică a
titularului

Societatea cu Răspundere Limitată
"MEDIA SECURITY"
MD-2005, mun. Chișinău, str. Colina Pușkin, 4

Codul fiscal/Codul IDNO

1006600023985

Genul de activitate nucleară sau
radiologică pentru care se eliberează

Importul/exportul și furnizarea
surselor generatoare de radiații ionizante

Limitele de activități și condițiile

Importul/exportul și furnizarea instalațiilor roentgen
pentru scanarea bagajelor de la producătorul: "VMI
"Security" Ltd", "Astrophysics Inc" și modelele :
XIS-6040-6634, X-Ray XIS-6040-6635, X-Ray, XIS-
6040-6636, X-Ray, XIS-6040-6637, X-Ray, XIS-6040-
6638, X-Ray; VMI SPECTRUM Scies X-Ray Scan-
6040 C, NR. 26.21.003610503710100101; VMI
SPECTRUM Series X-Ray Scan- 6040 C. nr. P VMI
19818 cu prezența certificatului de conformitate, eliberat
de un organism notificat și publicat în Jurnalul Oficial al
Comunității Europene

Prenumele, numele persoanei
responsabile de radioprotecție

Victor Găină

Numărul permisului de exercitare

Data emiteri

05.11.2025

Data expirării

05.11.2030

**Conducător,
inspector principal de stat
în domeniul activităților nucleare și radiologice**

Artur HURMUZACHE

(semnătura)



Anexă

la autorizația radiologică

Seria A

Nr. 1583

Titular al autorizației radiologice:

Societatea cu Răspundere Limitată "MEDIA SECURITY"
MD-2005, mun. Chișinău, str. Colina Pușkin, 4
De facto: MD-2001, mun. Chișinău, bd. Dimitrie Cantemir, 5/4

Limite de activități și condiții:

Importul/exportul și furnizarea instalațiilor roentgen pentru scanarea bagajelor de la producătorul: "VMI, Security" " Ltd", "Astrophysics Inc" și modelele : " XIS-6040-6634,X-Ray XIS-6040-6635, X-Ray,XIS-6040-6636,X-Ray, XIS-6040-6637, X-Ray, XIS-6040-6638,X-Ray; VMI SPECTRUM Scies X-Ray Scan- 6040 C,NR. 26.21.003610503710100101;VMI SPECTRUM Series X-Ray Scan- 6040 C. nr. P VMI 19818 cu respectarea prevederilor legislației în vigoare din domeniul radioprotecției și securității radiologice. Respectarea prevederilor art. 9 și art. 27 al Legii nr. 132 din 08.09.2012 privind desfășurarea în siguranță a activităților nucleare.

Prezentarea anuală Agenției Naționale de Reglementare a Activităților Nucleare și Radiologice, până la 31 decembrie, a informației referitor la importul/exportul și furnizare, în conformitate cu pct. 10 alin. 3) al Hotărârii Guvernului nr. 1017 din 01.09.2008 cu privire la Registrul național al surselor de radiații ionizante și al persoanelor fizice și persoanelor juridice autorizate.

Livrarea instalațiilor roentgen se va efectua numai către beneficiari autorizați de ANRANR, în conformitate cu art. 27 c) al Legii nr. 132 din 08.06.2012 privind desfășurarea în siguranță a activităților nucleare și radiologice.

Identificarea subdiviziunii în care se desfășoară activitățile nucleare și radiologice (unitatea, secția etc.):

DECLARAȚIE

Confirmare privind existența, în cadrul întreprinderii, a personalului calificat și atestat

Către Administrația Națională a Penitenciarelor

Stimați domni, Media Security S.R.L. confirmă în cazul desemnării în calitate de câștigătoare la licitația nr. [ocds-b3wdp1-MD-1771328826914](#), asigurarea cu personalul calificat și instruit în procesul de Servicii de mentenanță și reparație a instalațiilor cu raze X.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)

DECLARAȚIE

Confirmare privind deținerea instrumentelor specializate

Către Administrația Națională a Penitenciarelor

Stimați domni, Media Security S.R.L. confirma în cazul desemnării în calitate de câștigătoare la licitația nr.

[ocds-b3wdp1-MD-1771328826914](https://www.onda.ro/actualitate/justitie/licitatie-penitenciare-2026-02-19), asigurarea cu instrumente specializate de masurare a radialiilor ionizate necesare pentru realizarea operatiunilor de mentenanta si reparatie a echipamentelor de model Astrophysics XIX-6545 :

| Producator | Model | |
|--------------|------------|---|
| ATOMTEX | AT1121 | https://www.atomtex-usa.com/product/at1121-x-ray-and-gamma-radiation-survey-meter/ |
| FLUKE | 451B | https://www.flukebiomedical.com/products/radiation-survey-meters/451b-ion-chamber-survey-meter-beta-slide |
| FNIRSI | GC-01 | https://www.fnirsi.com/products/gc-01?srsIid=AfmBOoq-oAg-IVszGVIB6USAxMz0_AVFJLj-1IW7W4v2nz_EAeUJirVa |
| Polimaster | PM1401K-3P | https://polimaster.com/products/riid/pm1401k-3p/#specifications |
| Ludlum | 9DP | https://ludlums.com/products/all-products/product/model-9dp |
| Thermofisher | RadEye PRD | https://www.thermofisher.com/order/catalog/product/425067126 |
| MIRION | RDS-32 | https://www.mirion.com/products/technologies/health-physics-radiation-safety-instruments/portable-radiation-measurement/handheld-health-physics-instruments/rds-32-radiation-survey-meters |
| | | |

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)

DECLARAȚIE
privind garanția lucrărilor și pieselor înlocuite

Către **Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35**

(denumirea autorității contractante și adresa completă)

Stimați domni,

În procedura privind achiziționarea „Serviciilor de mentenanță și reparație a instalațiilor cu raze X”, (conform clarificărilor din data de 20.02.2026 Mtender ID ocds-b3wdp1-1771328826914) SRL „Media Security” administrator Victor Gaina, declară despre faptul, că lucrările efectuate și piesele înlocuite vor fi acoperite de garanție pe o durată de cel puțin 12 luni.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)

DECLARAȚIE
privind contravaloarea lucrărilor de mentenanță si reparație

Către **Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35**

(denumirea autorității contractante și adresa completă)

Stimați domni,

În procedura privind achiziționarea „Serviciilor de mentenanță si reparație a instalațiilor cu raze X”, (conform clarificărilor din data de 20.02.2026) Mtender ID ocde-b3wdp1-1771328826914, SRL „Media Security” administrator Victor Gaina declară sub proprie răspundere despre faptul, că contravaloarea lucrărilor de mentenanță si reparație va include atât manopera, cât și costul pieselor de schimb și materialelor consumabile puse la dispoziție de prestator.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)

DECLARAȚIE
privind întocmirea și prezentarea rapoartelor detaliate

Către **Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35**

(denumirea autorității contractante și adresa completă)

Stimați domni,

În procedura privind achiziționarea „Serviciilor de mentenanță și reparație a instalațiilor cu raze X”, Mtender ID ocds-b3wdp1-1771328826914, SRL „Media Security” administrator Victor Gaina, se angajează să întocmească și să prezinte beneficiarului final rapoarte detaliate la fiecare intervenție, care vor include descrierea lucrărilor efectuate, piesele înlocuite (în baza unui acord prealabil), parametrii tehnici verificați și concluziile de rigoare. Copiile rapoartelor vor fi expediate inclusiv în adresa autorității contractante.

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)



ASTROPHYSICS™

Company Authorization Letter

February 17, 2020

Astrophysics Inc, the exclusive manufacturer of X-Ray Inspection Systems (XIS), authorized dealer of Walkthrough Metal Detectors (WT), and authorized reseller and service provider for (CEIA) Walkthrough and Hand Held Metal Detectors, hereby confirms that "**Media Security**", is authorized to represent Astrophysics Inc in all projects or tenders including Chisinau new penitentiary in the Republic of Moldova.

"**Media Security**" is exclusively authorized to represent Astrophysics Inc in Chisinau new penitentiary project and,

1. Participate in bid, project, or tender and engage in the sale of Astrophysics products
2. To supply, install, train, provide maintenance, after sales support and spare parts

On behalf of Astrophysics Inc. in the Republic of Moldova.

This authorization letter shall take into effect immediately from date of issuance.

If you have any question please do not hesitate to contact me at:
wabihaidar@astrophysicsme.com

Kindest Regards,


Wadih Abi Haidar
Director of Sales





Certificate of Product Quality, Origin and Manufacture


Astrophysics Inc., a Delaware Corporation also registered in the State of California, certifies that the following product(s) listed below were manufactured, inspected, and tested per documented quality procedures. They are in compliance with U.S. FDA standard 21CFR 1020.40 at date of manufacture. Astrophysics retains objective data verifying the compliance to this standard. These products are genuine Astrophysics products, manufactured, warranted, and supported by:

Astrophysics Inc.
21481 Ferrero Parkway,
City of Industry, California, 91789-5733
United States of America
Telephone (USA) 909-598-5488
Fax (USA) 909-598-5546
Email Support@AstrophysicsInc.Com

Astrophysics Model: XIS-6040
Serial Number(s): ASTXD160SM6614

Astrophysics Model: XIS-6040SE
Serial Number(s): ASTXD160SMN282

Specific details of product configuration and warranty information are described in the associated sales order. All Astrophysics products are uniquely labeled and serialized for identification and product tracking purposes.


Quality Manager

1/6/2025
Date



DECLARAȚIE
privind prezentarea

Către **Administrația Națională a Penitenciarelor, mun. Chișinău, str. Nicolae Titulescu 35**

(denumirea autorității contractante și adresa completă)

Stimați domni,

În procedura privind achiziționarea „Serviciilor de mentenanță și reparație a instalațiilor cu raze X”, Mtender ID ocds-b3wdp1-1771328826914, SRL „Media Security” administrator Victor Gaina, se angajează să întocmească și să prezinte autorității contractante, la finalizarea lucrărilor, o Notă informativă generală cu indicarea stării de funcționare a fiecărei instalații în parte, deficiențele constatate și măsurile de remediere aplicate, inclusiv propunerile motivate privind piesele de schimb critice și lucrările de mentenanță/ reparații considerate necesare a fi efectuate, în scopul menținerii funcționalității și siguranței în exploatare a întregului parc de echipamente. Nota informativă va fi însoțită obligatoriu de Nomenclatorul prețurilor pentru serviciile de mentenanță și reparație, inclusiv pentru piesele de schimb originale (sau compatibile, dar certificate de producătorul de echipament).

Data completării 23.02.2026

Cu stimă,

Ofertant/candidat

SRL „Media Security” _____

Administrator V. Gaina

(semnătura autorizată)