

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



Dark Room

Lecture 1

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DARKROOM
DO NOT ENTER

الفصل الأول

What is the dark Room ?

Aims of the lecture:

- what is dark room
- its criteria
- Components & functions
- Safe Light

- **Dark room :**

The place where we are dealing with sensitive radiographic films , as

- Fill & remove Films in Cassettes
- Film Processing



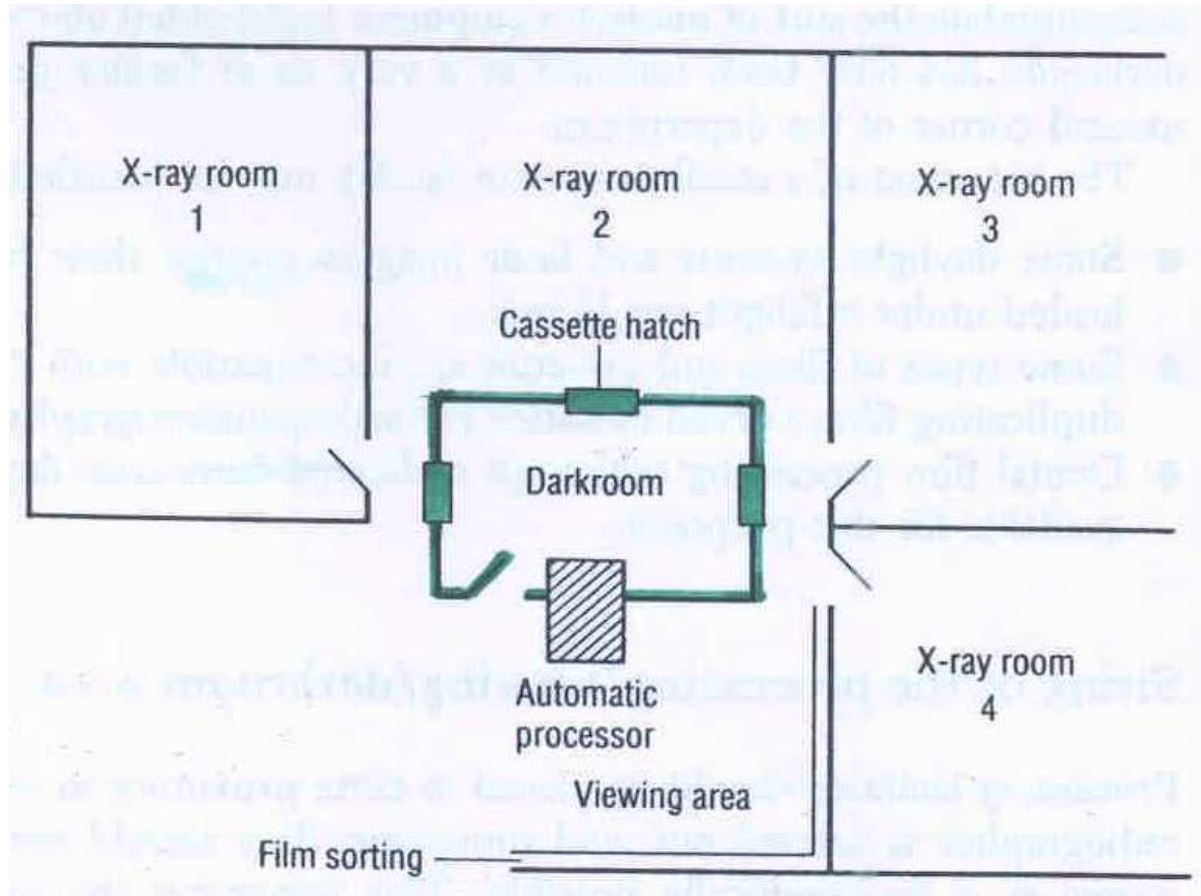
- To dark or semi dark during Processing woks
- Room = It has a components.
- Such like safe هذه المكونات مثل : الاضاءه العادية ، الاضاءه الامنة ، ordinary light ،
- احواض تحميض ، اطارات و ماسكات افلام ، ادوات اخرى

مواصفات الغرفة المظلمة

مكان ، حجم ، مدخل ، مكونات الخ

Location

Central

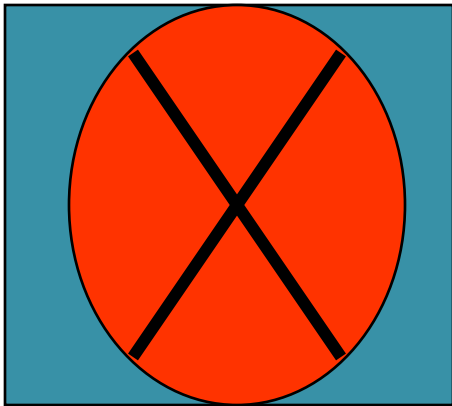


Area

- Minimum floor area of 10 sq meter
- Ceiling height of 2.5 - 3 meter
- Size may be reduced depending upon the department needs

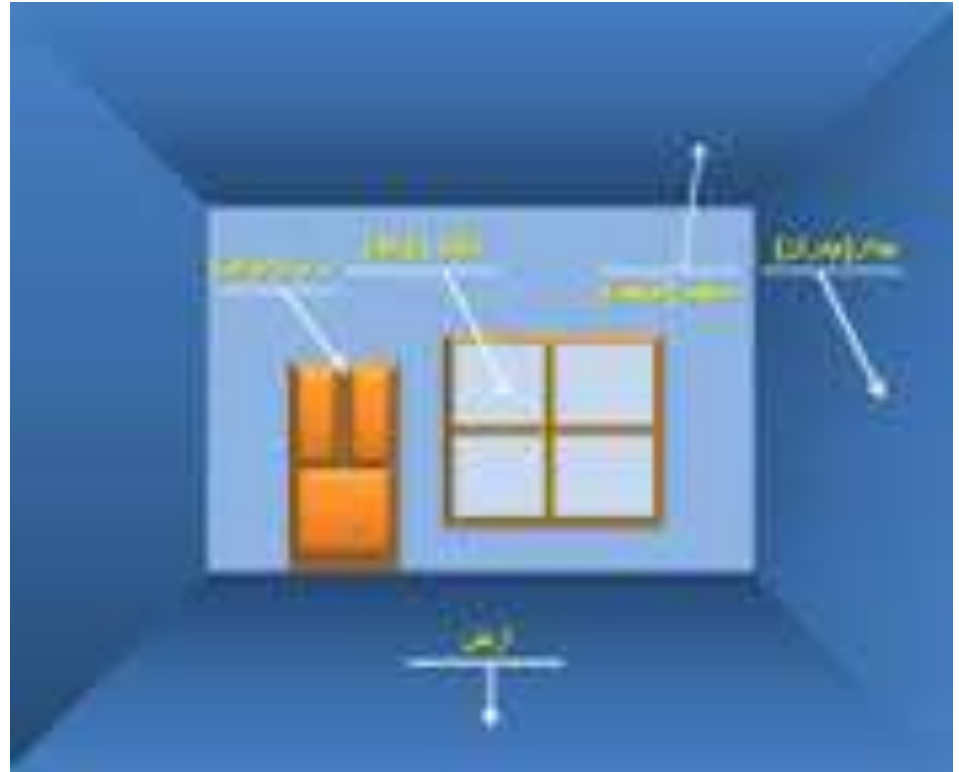
SHAPE

- Elongated better than squared



Components

- WALLS
 - Solid
 - Paints reflex light
 - Easy Clean



■ **CEILING**

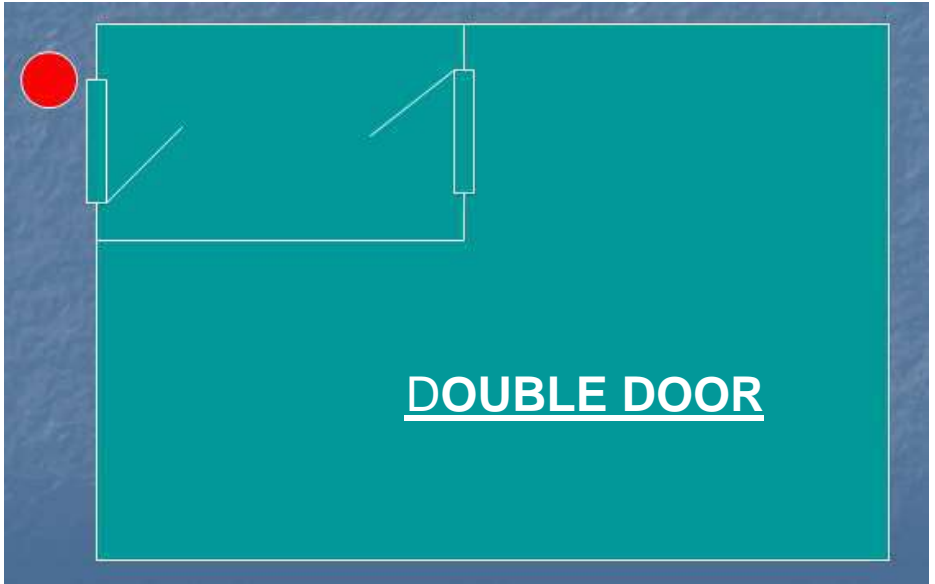
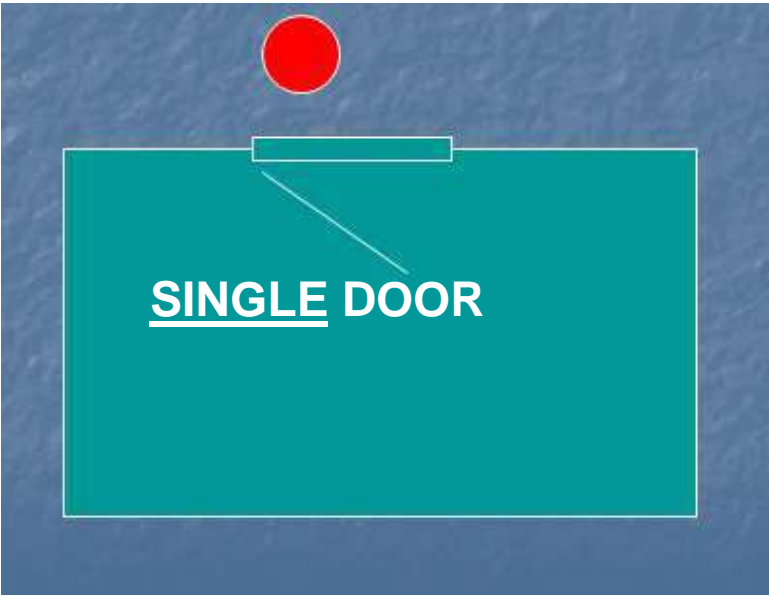
- Enough height , reflect light , no cracks

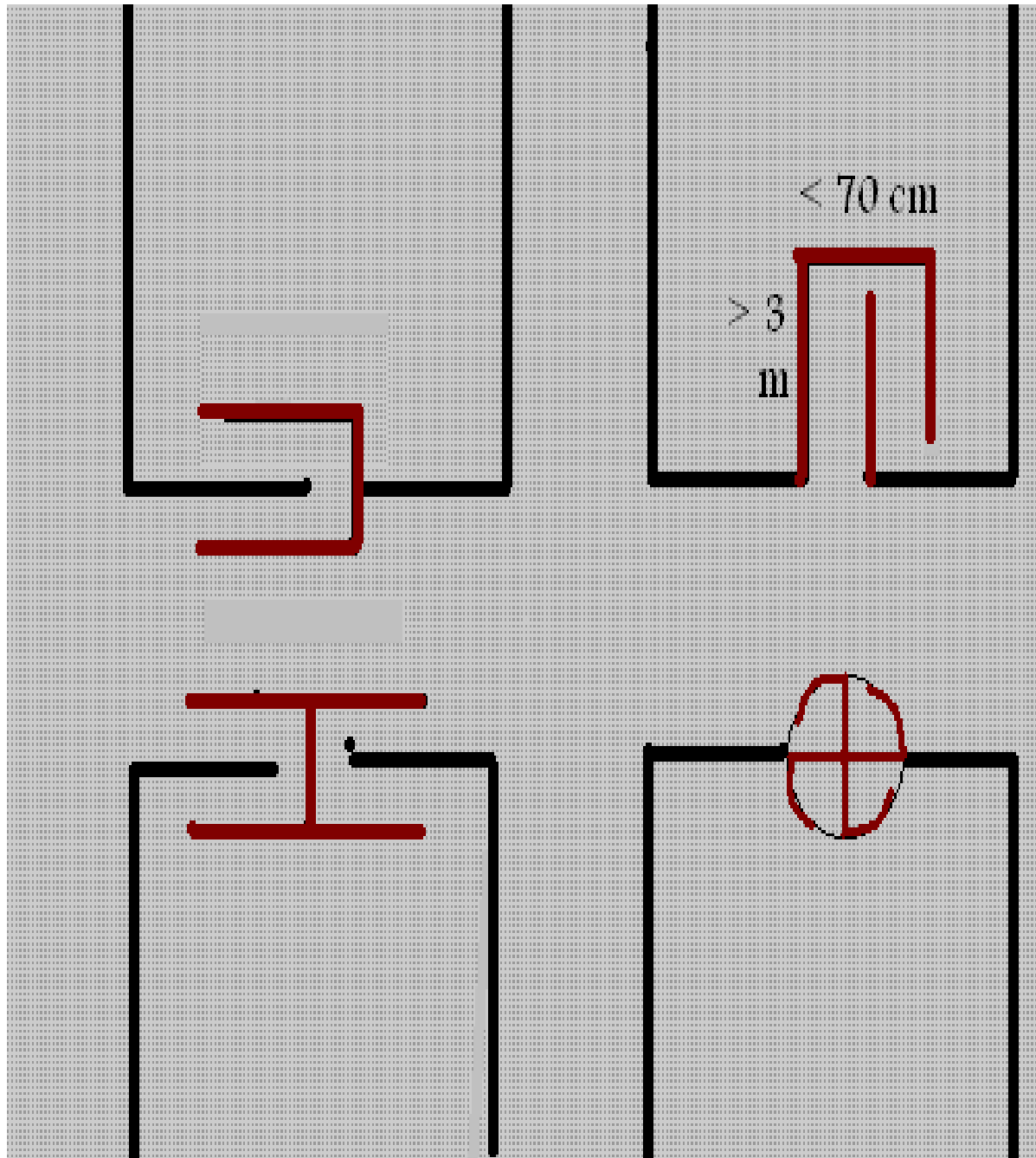
■ **Floor**

- not woody , not cement ,
- Easy clean

TYPE OF ENTRANCE

- SINGLE DOOR SYSTEM
- DOUBLE DOOR SYSTEM
- MAZE TYPE ENTRANCE
- LABYRINTH
- ROTATING DOOR SYSTEM





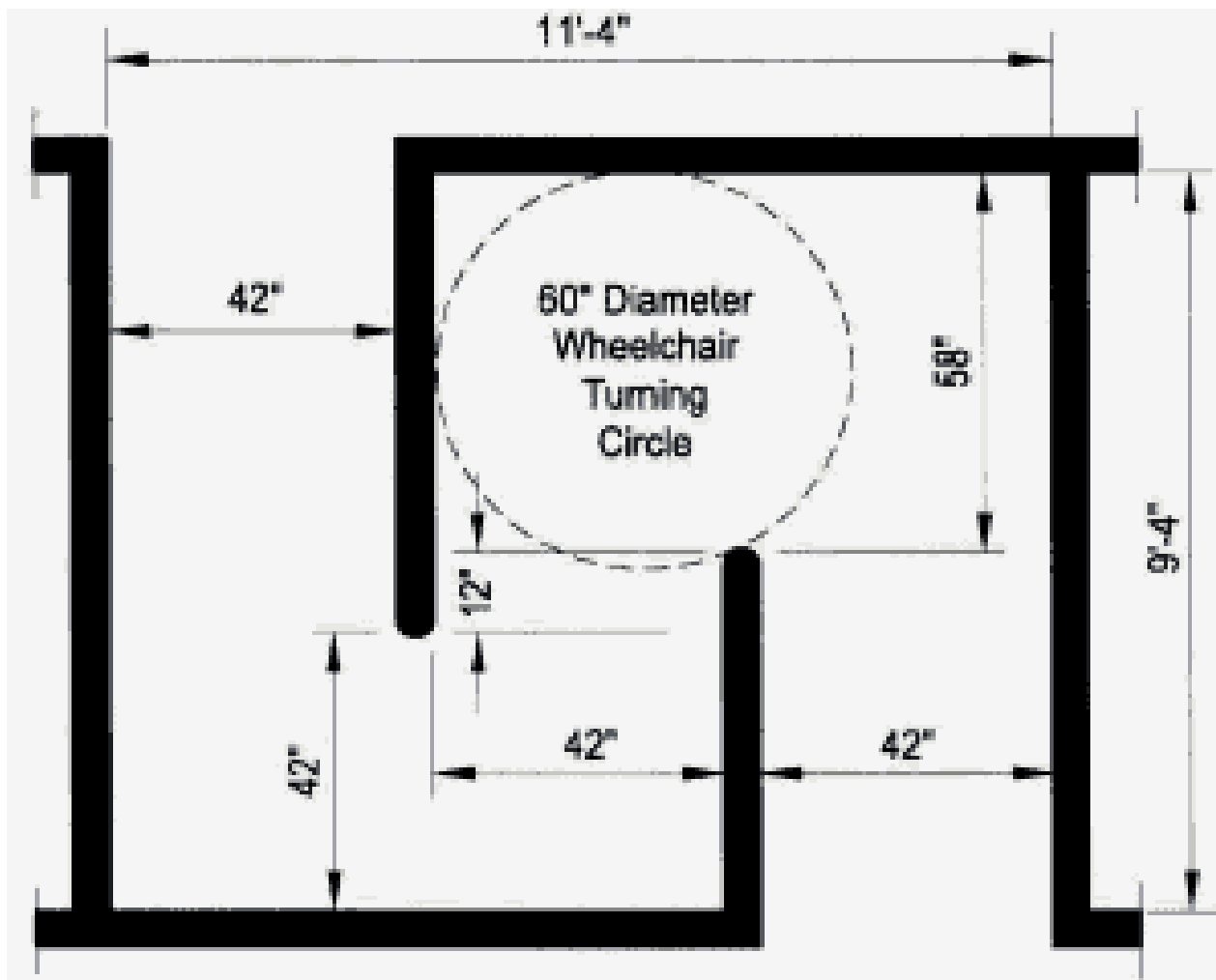
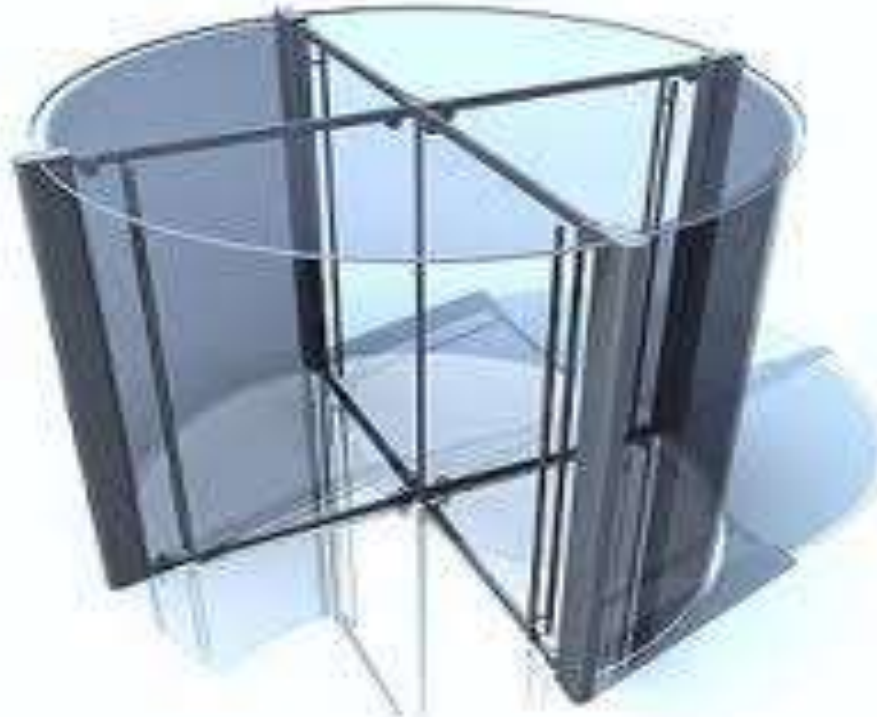


Fig 4. Darkroom Entry Maze
Two-way traffic - without doors

الابواب الدوارة التي تمنع دخول الضوء الى الغرفة المظلمة
Revolving Doors



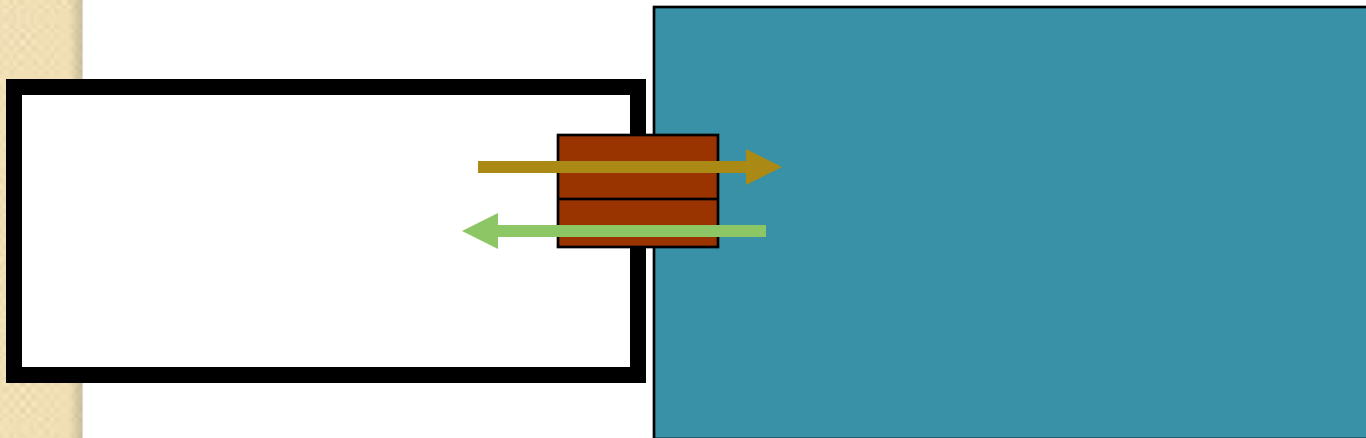
Role of these types of entrance ?

- Prevent light to enter the room all over the time
- Avoid work failure by wrong light



Cassette Hatch

- cassette flow way to & from Dark room





Water source

- Enough
- In & out
- Hot & cold
- For cleaning & Processing work .

Electric sources



- Enough sourced
- Uses
 - Light
 - Aireation
 - Heating fluids
 - Automatic processing

Temperature & Aireation

- Avoid over heat & humidity
- Temp 18 : 20 c
- Humidity 40 : 6- %



Dark room Design

- Good separation of Wet & Dry zone
- Good arrangement according to steps of use
- Enough equipments.

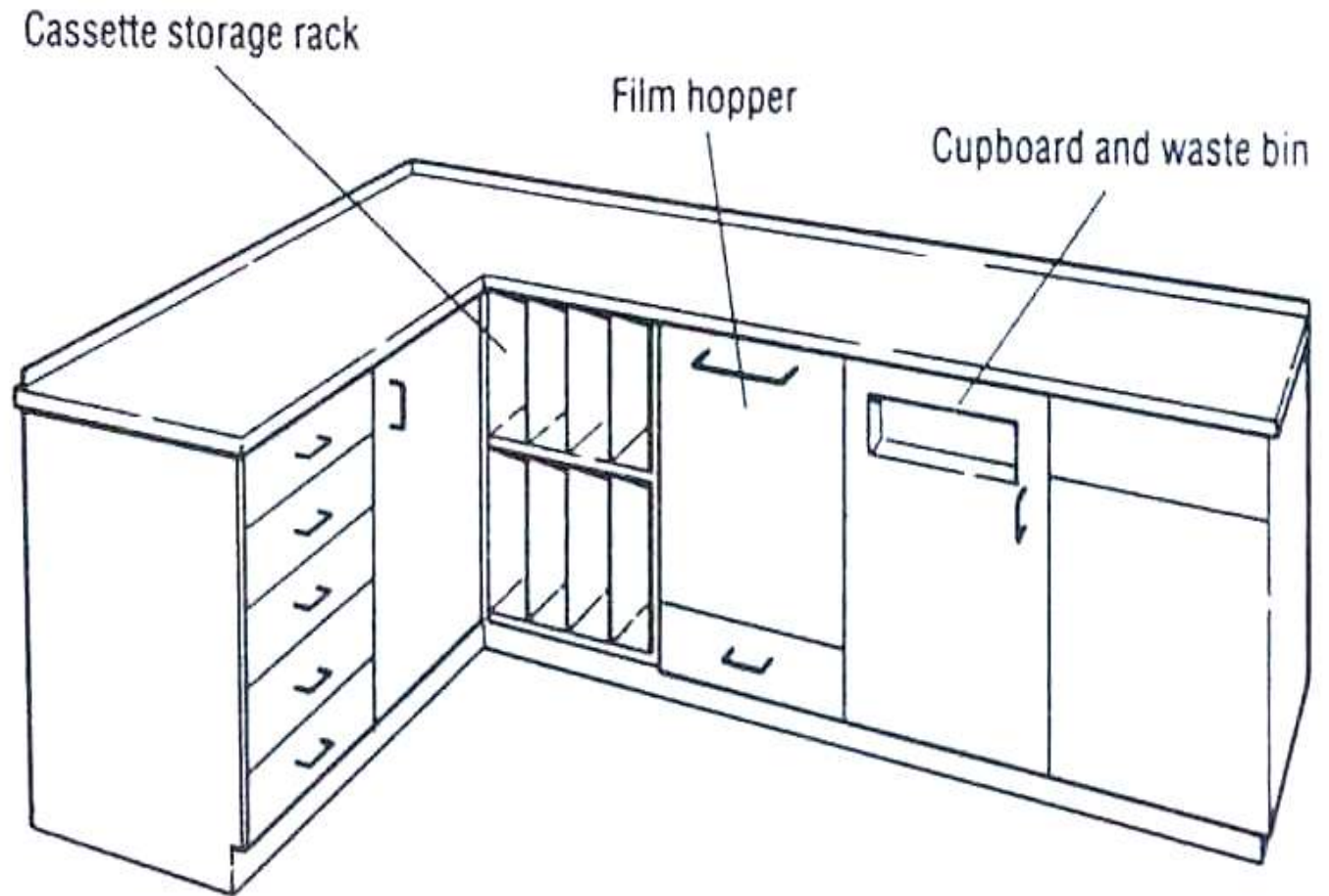


Fig. 12.17 A darkroom dry bench system. (Courtesy of Wardray Products Ltd.)



الغرفة المظلمة - الفصل الاول


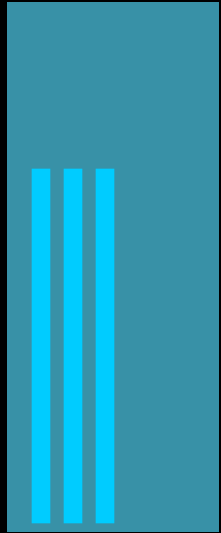
Dark room Equipments

Film Hopper دولااب تخزين الافلام





Cassettes rakes according to size



Manual Processing tanks

– التحميض اليدوى





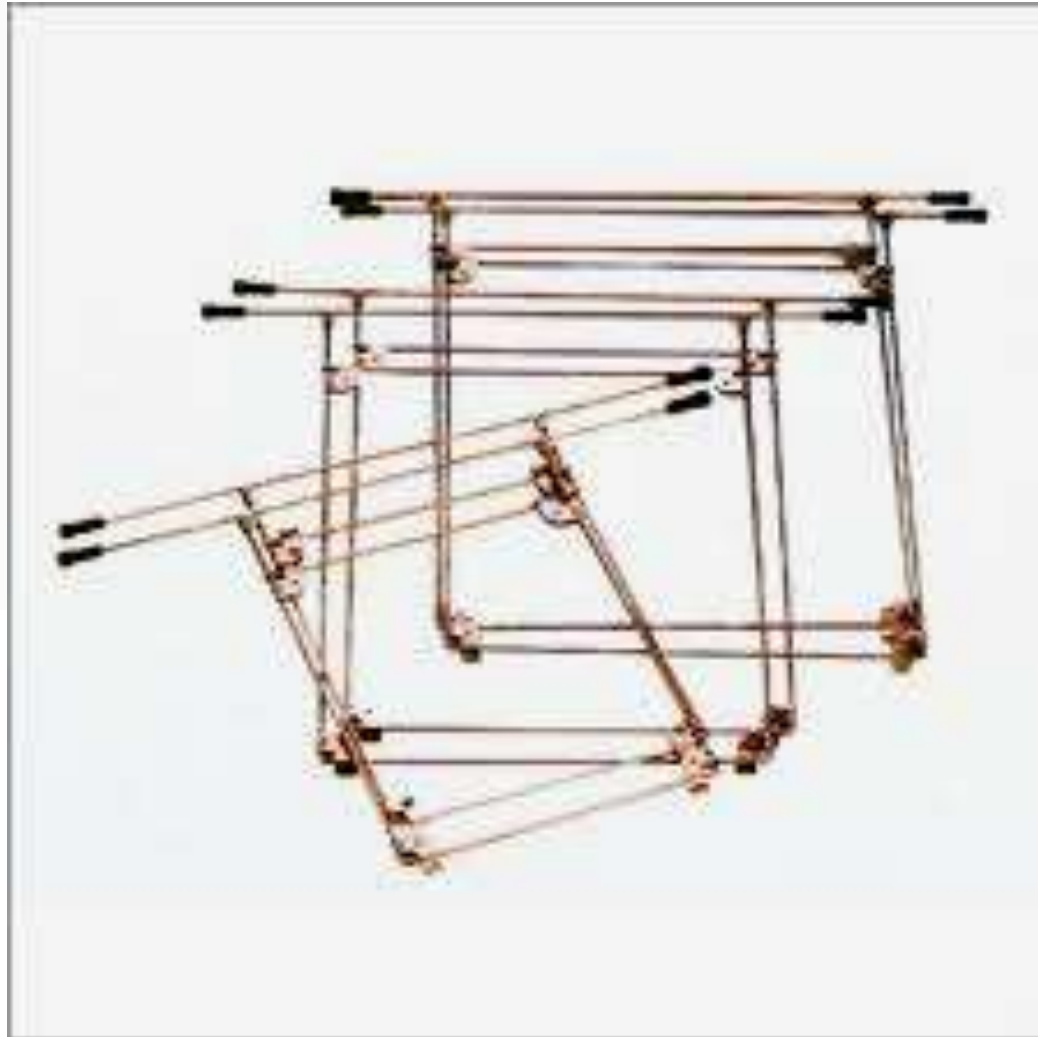
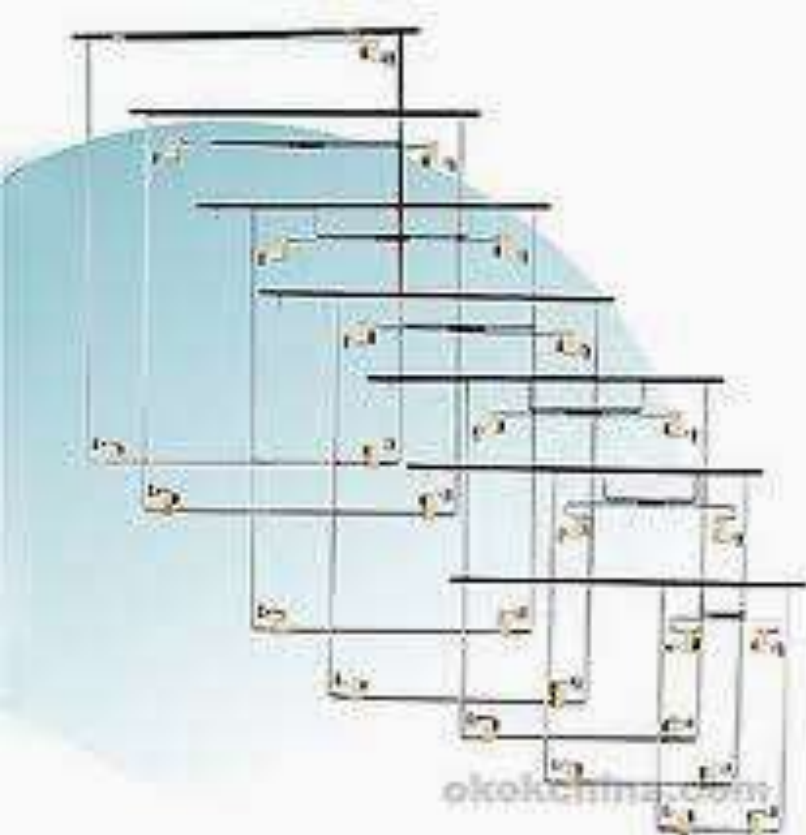


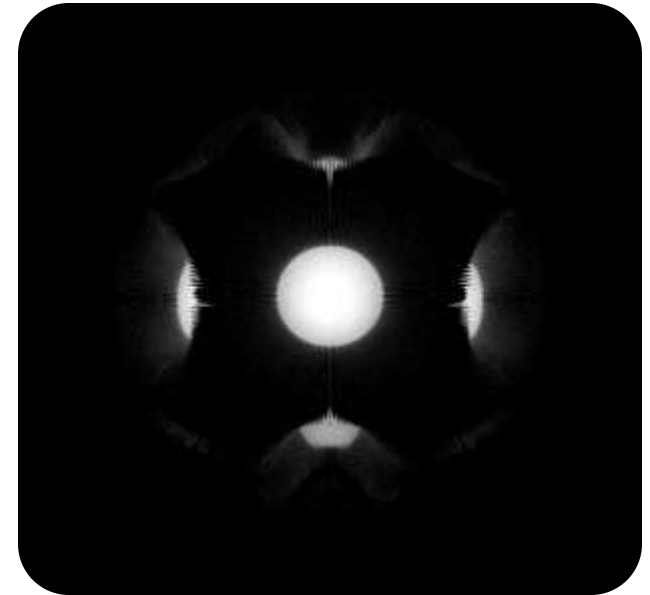
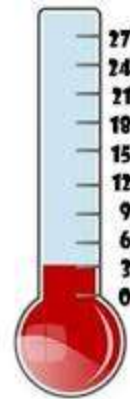


الغرفة المظلمة - الفصل الاول

→ Film Hangers or Holding frames:

1- Channel hanger	2- Tension Hanger or Clips Fastener
U shape	Square with clips
<ul style="list-style-type: none">-Difficult to clean-Film bowing during use-Fracture of moving part . = Loss function-Borders of it covering film edges → non processed edges	<ul style="list-style-type: none">-Need more experience-- Film injury by sharp clips
	الغرفة المظلمة - الفصل الاول





Other equipments :

- Dental film Holders
- Timer
- Thermometer
- Light system

Dark Room Light



1- Ordinary Light *الضوء العادى*

- *For works other than dealing with films.*
- *Enough for area.*
- *Light On design, not to be accidentally*

Safe Light

- 2 Types :

1- Direct 2- Indirect

- No absolute safe light

- **Red or orange**but not blue



Direct Safe Light الضوء الامن المباشر

- On wall of ceiling
- > 15 watt
- > 1 m distance from films

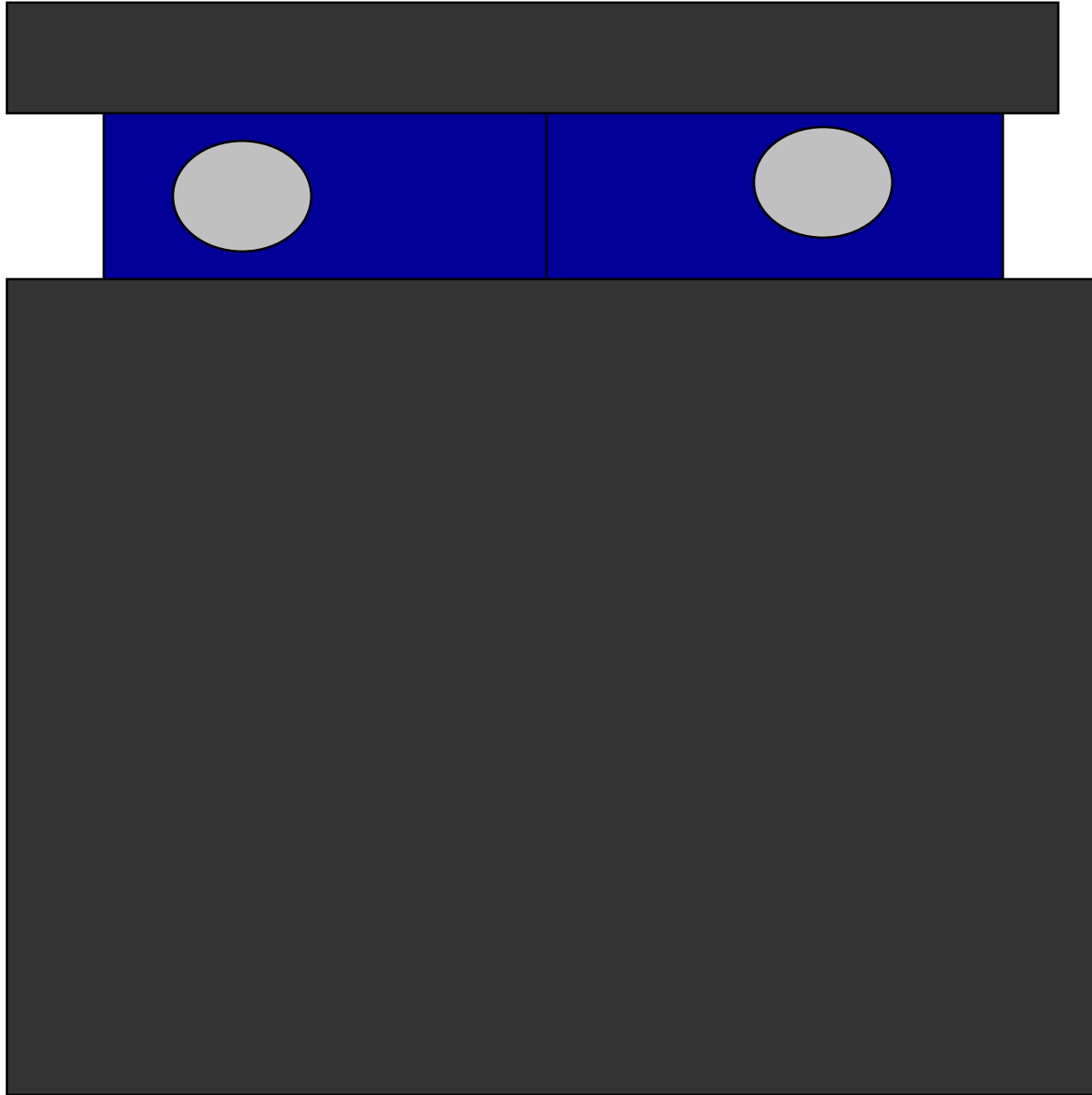


Indirect Safe Light الضوء الغير مباشر

- < 25 watt
- Directed upward & reflected
- Height 2.5 , 3.5 m

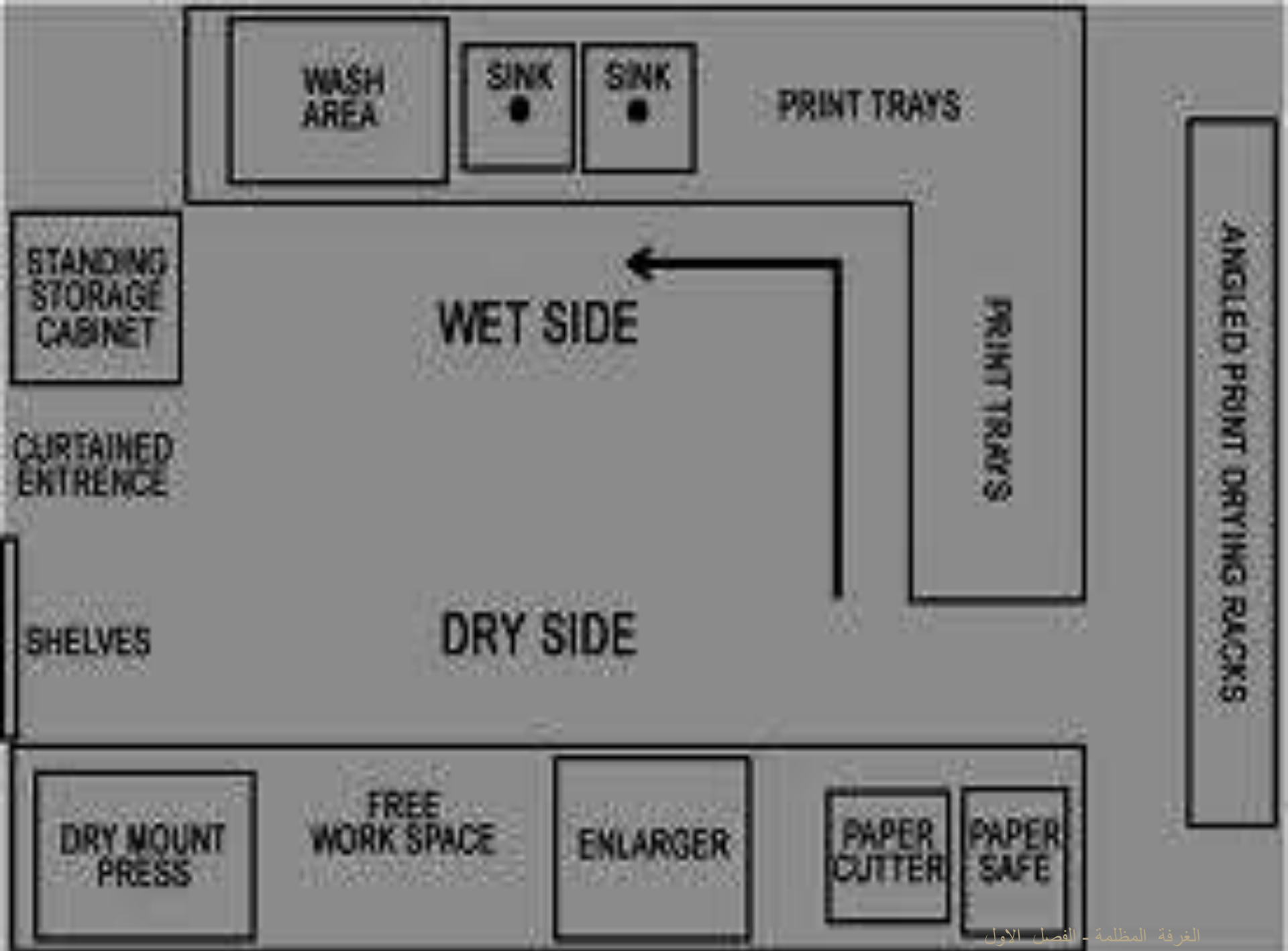
SAFE LIGHT NEED repeated safety test

اختبار الضوء الامن Testing Safelight



2 mA – 50 KV

Move / 0.5 min





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DO NOT ENTER

Now you can enter It

THANK YOU

Dr. Ahmad Mokhtar Abodahab
Nov 2020