NO.

BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY
IN
THE ISLAMIC REPUBLIC OF PAKISTAN

JANUARY 2005

JAPAN INTERNATIONAL COOPERATION AGENCY
GRANT AID MANAGEMENT DEPARTMENT

GM
JR
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PREFACE

In response to a request from the Government of Islamic Republic of Pakistan, the Government of Japan decided to conduct a basic design study on the Project for Enhancement of Educational Facilities at the Allama Iqbal Open University and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Pakistan a study team from July 6 to August 4, 2004.

The team held discussions with the officials concerned of the Government of Pakistan, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Pakistan in order to discuss a draft basic design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of Islamic Republic of Pakistan for their close cooperation extended to the teams.

January 2005

Seiji Kojima

Vice President

Japan International Cooperation Agency

January 2005

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Enhancement of Educational Facilities at the Allama Iqbal Open University in the Islamic Republic of Pakistan.

This study was conducted by O.P.C. Corporation, under a contract to JICA, during the period from June 2004 to January 2005. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Pakistan and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

Akemitsu Mochizuki

Chief Consultant,

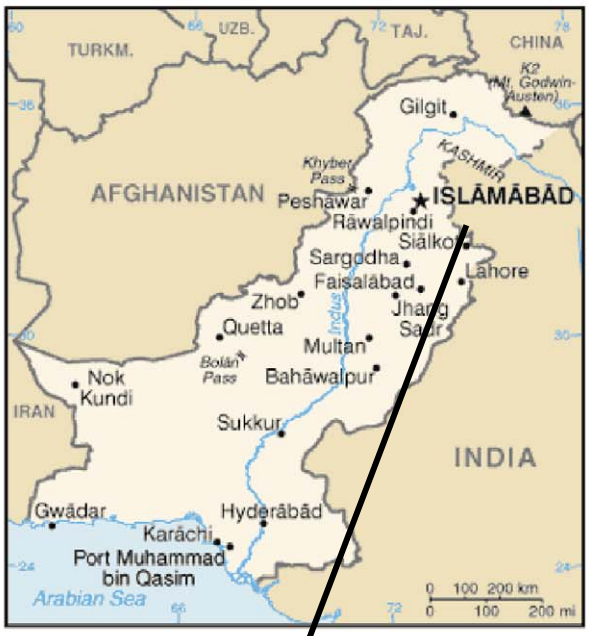
Basic design study team on

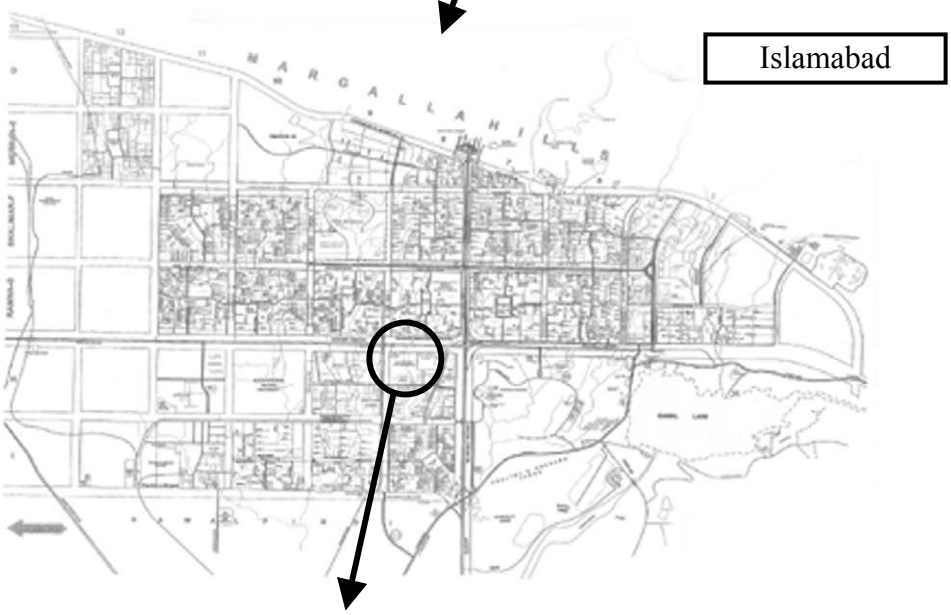
The Project for the Enhancement of Educational Facilities

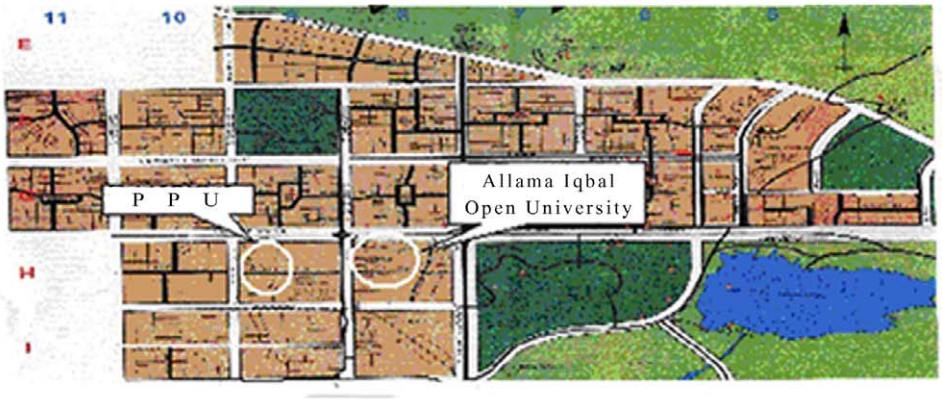
at Allama Iqbal Open University

O.P.C. Corporation

Location Map







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ABBREVIATIONS

AIOU	Allama Iqbal Open University
BAPCP	Bureau of Academic Planning & Course Production
B.Ed.	Bachelor of Education
CBR	Central Board of Revenue
CT	Certificate of Teaching
DFID	Department for International Development UK
EAD	Economic Affairs Division
ESR	Education Sector Reform
HEC	Higher Education Commission
IET	Institute of Educational Technology
M.Ed.	Master of Education
MECDC	Multimedia Electronic Courseware Design Centre
NWFP	North-western Frontier Province
PBC	Pakistan Broadcasting Corporation
PPU	Print Production Unit
PRSP	Poverty Reduction Strategy Papers
PTV	Pakistan Television
SSC	Secondary School Education

SUMMARY

The Islamic Republic of Pakistan (hereinafter referred to as Pakistan) shares its borders with India, Afghanistan, Iran and China, and its southern shoreline faces the Indian Ocean. Pakistan has a population of 148,720 thousand (2004) in 7.96 million square kilometres of land. It consists of four provinces namely NWFP, Balochistan, Sindh and Punjab, and the Federal Capital, and the capital is Islamabad. The climates vary from area to area and the Koppen Climate Classification categorizes them as dry climates and moist mid-latitude climates.

The main industrial sector of Pakistan is agriculture, accounting for 42.1% of its total employed labour force and it is the largest source of foreign exchange earnings. Recently, however, manufacturing has been considered as an important industrial base and it grew by 13.4% in 2003-04. This massive growth was underpinned by the growth in large-scale manufacturing corresponding to 68% of overall manufacturing. Although the GDP growth rate surpassed the target of 5.3%, and reached 6.4% (July 2003 – June 2004), the GDP per capita is $492, which is still low compared to Pakistan's neighbouring countries (India: $543 and Sri Lanka: $917 (2003)).

The government of Pakistan has been implementing several strategies for poverty alleviation, high economic growth and structural reforms of multiple sectors. As for poverty alleviation, the government is especially concerned about problems in education. In the education sector, the master plan, known as the Education Sector Reform (ESR), aims at enhancing the quality of education at all levels. It promotes attendance at school and changes the contents of classes. However, there are still problems to solve such as the low adult literacy rate (43%)(2002), low school attendance (approx.40% in secondary education)(2002), the high dropout rate (54%)(1999-00), the gap between genders on

primary enrolment (64:36)(2003) and unqualified teachers (44%)(1998). The prominent gap among provinces is also a problem to be improved.

Allama Iqbal Open University (AIOU), whose head office is in Islamabad, is the first higher education facility employing distance education in Pakistan and provides educational opportunities at a variety of levels. Although AIOU implemented a project to enhance the quality of the equipment in its facilities with the assistance from "Japan's Grant Aid" fund in 1996, it has been failing to meet the needs of the recently increasing amount of students'. As the enhancement of AIOU's distance education programmes will take a part in solving Pakistan's problems as mentioned above, the government of Pakistan designed "the Project for the Enhancement of Educational Facilities at Allama Iqbal Open University" and requested financial assistant from Japan.

The enhancement of AIOU's programmes shall contribute to the solving of Pakistan's education problems. In response to this request, the Japan International Cooperation Agency (JICA) sent a study team to Pakistan from July 6 to August 4, 2004. The team held discussions with the Government of Pakistan officials concerned and examined the feasibility and rationale of the project. The study team also conducted a field study at the study area. After the team returned to Japan, they made a draft basic design and went back to Pakistan from November 22 to December 3, 2004 in order to discuss it. As a result, the basic design became concrete with the agreement of the Government of Pakistan.

This project aims at improving AIOU's distance education programme, through enhancing its equipment for production and development of educational materials, equipment for printing, audiovisual equipment and the soft component. The quality and quantity of the educational materials AIOU produces shall meet the increasing students' demand and its

regional campuses/regional centres shall provide good study environments for students in rural areas.

The equipment procured by this project shall be necessary for AIOU's distance education courses. It is designed by the study on the existing equipment, the installation places, the ability of the operation and maintenance and absence of funds from other donors.
The details of the enhancement of the equipment are as follows.

(1) The equipment for the production and development of educational materials is required to increase quantity and improve the quality of the production. The existing equipment can no longer meet these demands. To improve this situation, according to AIOU's plans and goals on the production and development of educational materials, the equipment shall be enhanced, providing digital equipment. Digital equipment is superior to the analogue equipment AIOU possess, in terms of the quality of the images and sound, production period and cost, durability and the delivery cost. Also AIOU has been implementing the "OLIVE" project (Open Learning Institute of Virtual Education), the national pilot plan, which develops Internet related educational materials such as interactive lessons and e-learning with its Multimedia Electronic Courseware Design Centre (hereinafter referred to as MECDC). Enhancing the educational materials can provide interactive lessons even in rural areas.

(2) Although printed materials such as textbooks are the major media of the distance education courses, the existing equipment is no longer able to meet the increasing students' needs in terms of both quality and quantity. To improve this current situation, for the Print Production Unit (hereinafter referred to as PPU), which produces printed materials at AIOU, this project shall enhance the equipment for printing and implement the soft component as well. The quantity of the printed

materials shall be 0.87 billion pages per year whereas it is currently 0.14 billion. The quality of the printed materials shall contain illustrations, photographs and charts for the better understanding of their contents.

(3) AIOU is required to improve the gap among regions, which is one of the main problems in the educational sector. In the light of the situation, it is necessary to enhance the facilities at the 9 regional campuses and 23 regional centres. The enhancement of the equipment in these 32 regional campuses and regional centres aims at the improvement of the study environments for the students. When installing the audiovisual equipment for these facilities in this project, the social convention in Pakistan in terms of gender issues shall be carefully considered.

(4) The soft component for PPU aims at enhancing the quality control of the printed materials. After the implementation of the soft component, the operators at PPU should remain the sustainable maintenance of the equipment and achieve the quota set by this project.

The details of this project in each facility are as follows.

- Equipment for the production and development of educational materials

1) Equipment for the production of educational materials

Television Production Studio System, Cut to Cut Editing System, Non-Linear Editing, Digital Electronic Field Production System, Digital Audio Recording System, Digital Video → VHS Duplicator, Presentation Equipment (for Auditorium), Digital Camera, Measurement Tools, Medium and Power Supply.

2) Equipment for the development of educational materials]

Server Room, Digital Video Class Room, Digital Video Editing, Software, CD/DVD Publication Studio and Video Conferencing Equipment.

- Equipment for printing

Editing Equipment, Plate Making Equipment, Printing Equipment, Book Making Equipment, Forklift, Hand Lift, Waste Solution Treatment System and Automatic Voltage Regulator.

- Audiovisual equipment

Television Sets, Television Antenna, Headphone System, AC Power Consent Plate, and CD/DVD players.

- Soft Component

The soft component aims at enhancing the quality control of the printed materials. The appropriate operation and maintenance of equipment are expected from the trained operators. A Japanese consultant shall send two engineers as trainers and they shall carry out technical training for the operators at PPU in order to achieve the quota, the high quality and the continuity.

Section	Period	Trainers
Editing and Plate Making	Approximately 1.0 month	Japanese Engineer (1)
Printing and Book Making	Approximately 1.0 month	Japanese Engineer (1)

When this project is implemented as the “Japan’s Grant Aid” project, the expense is estimated to be 809 million yen (Japan: 796 million yen and Pakistan: 13 million yen). The period necessary for this project is expected to be approximately three months for its implementation design and approximately 8 months for the procurement and instalment of the equipment.

The implementation of this project shall contribute to the following direct effects, and the evaluation of these effects should be implemented after 2009-10, three years after the equipment starts to operate.

- AIOU shall be able to provide the adequate quantity of educational materials for the students and increase the number of courses (2003-04: 1,138 courses, 2009-10: 1,500 courses (target)). The quality of the education on the distance education programmes with multimedia and audiovisual materials shall be improved and increase the issue of certificates, diplomas and degrees (2003-04: 90,636, 2009-10: 190,000 (target)).
- Providing opportunities for education for impoverished and vulnerable groups and people in rural areas, the educational gap between genders and among regions shall be decreased.

The project shall contribute to the improvement of the education sector for poverty alleviation and high economic growth and match Pakistan’s national projects. AIOU will be able to operate and maintain the equipment enhanced by this project, as the soft component shall be implemented for technical training. AIOU also will be able to bear the operation and maintenance costs. No environmental problem shall be considered with this project. Therefore this project shall be approved by “Japan’s Grant Aid” project.

To implement this project more effectively, the following points shall be considered and solved.

- Tax exemption from the equipment procured by Japanese suppliers
- Improvement and enhancement of the management system of educational material production
- Thorough maintenance of the enhanced facilities
- Increase and enhancement of teacher training course
- Training of the employees for educational material production

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Chapter 1 Background of the project

Chapter 1 Background of the Project

Allama Iqbal Open University (hereinafter referred to as AIOU) was established in 1974 as the first higher educational institution implementing distance education in the Islamic Republic of Pakistan (hereinafter referred to as Pakistan). AIOU has approximately 0.51 million students enrolled (2003-04) and the number has been increasing (see the table 1.1).

Table-1.1 Enrolment and Course Trend

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Student Enrolment		308,522	310,890	357,595	335,025	399,560	512,635
Growth Rate			101%	115%	94%	119%	128%
Course Enrolment	664,322	907,676	807,063	957,334	972,882	1,087,041	1,413,474
Growth Rate		137%	88%	120%	102%	112%	130%
Course		428	636	723	772	850	898
Growth Rate			148%	169%	180%	198%	209%

Source: AIOU Annual Report 2003-04

130,000 students have enrolled in the elementary and secondary teacher education courses and 110,000 in the secondary school certificate programme, technical and agricultural courses, which correspond to 38% and 28% of the whole students respectively. Many of those who have enrolled in the latter courses had previously dropped out of education. The courses at AIOU range from Technical Courses to distance education Ph.D. programmes using printed material, radio, television and so on (see the table 1.2).

Figure-1.1 AIOU's Distance Education Programme

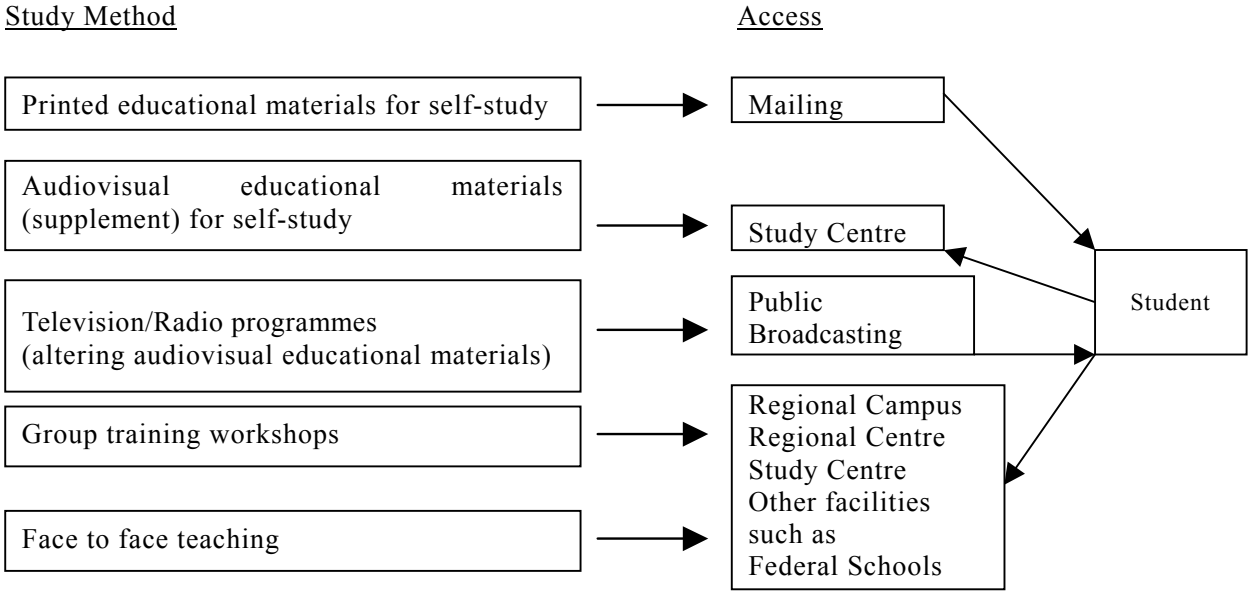
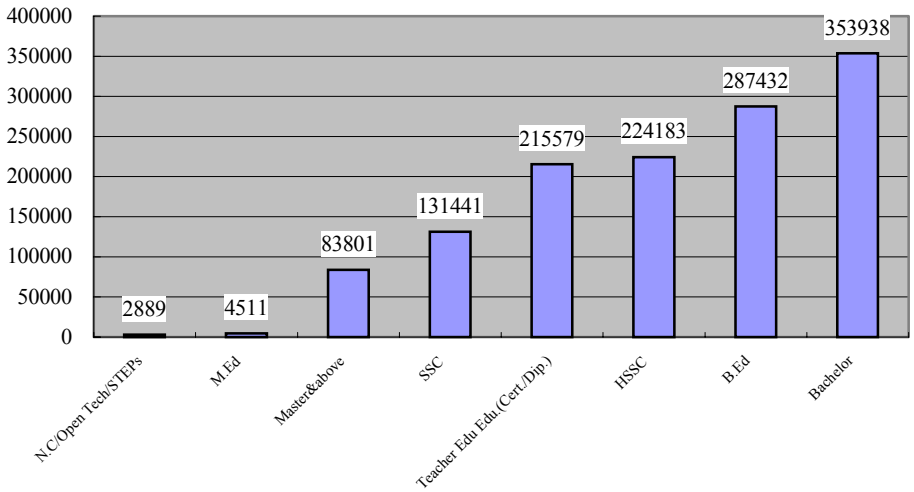


Table-1.2 Programme-wise Course Enrolment 2003



Source: AIOU Annual Report 2003-04

Table-1.3 Comparison of Tuitions

Teacher Training Programmes

Unit: Rs.

Course / Facility	Bachelor of Education	Certificate of Teaching	Note
AIOU	4,605	2,895	With textbooks
Federal College of Education	5,500	4,500	Plus approx. Rs. 2,000 for textbooks

Other Programmes

Course / Facility	a. Sociology (MA)	b. Library & Information Science (BA)	SSC	Note
AIOU	6,000	5,000	1,125	With textbooks
Bahudd Inzakara Multan City College	17,000	10,000	-	Without textbooks
Federal College of Education	-	-	1,500	Without textbooks
Model School	-	-	8,500	Without textbooks

a. and b.: hearing from students
SSC: 9-10 years

Source: AIOU

In order to decrease the gap of educational standards among regions and enhance the student support services, AIOU has established 32 regional campuses/regional centres and 950 study centres, which consist of 32,000 instructors, in coordination with educational institutions. These campuses/centres are equipped with audiovisual equipment such as radios and television sets to broadcast public radio/television programmes. AIOU has planned to improve these facilities as part of its physical development in order to enhance the study environment in rural areas.

In 2003, several facilities were built within the AIOU's own budget, namely a campus in Peshawar （Rs.19.0M）, an accommodation facility (3 rooms, kitchen, dining room and study room) （Rs. 40.0M）, a regional centre in D.G. Kahn（Rs.15.0M）, and an auditorium in Karachi（Rs. 3.0M）. There are plans to construct regional campuses and regional centres in Abbottabad, Muzaffarabad and Mianwali.

In addition to the enhancement of the facilities, AIOU also has been engaged in the development of educational materials. Although textbooks are the major materials in distance education, AIOU also produces videotapes and audiocassette tapes for broadcasting as supplementary materials.

Japan provided its "Grant Aid" fund to AIOU in 1996 to enhance the equipment for the production of television and radio programmes. The number of television and radio programmes produced between January 1997 and March 2004 as supplementary materials for the distance education are as follows:

Table-1.4 Audiovisual Material Production

Visual Materials	No. of Progs.	Audio Materials	No. of Progs.
Television Programmes	215	Radio Programmes	499
Educational Materials (Video Tapes)	76	Educational Materials (Cassette Tapes)	246
Total	291	Total	745

As AIOU does not possess broadcasting equipment, the programmes made by AIOU are entrusted to Pakistan Television (PTV) and Pakistan Broadcasting Corporation (PBC). The data tapes are sent to regional campuses/regional centres as sub educational materials. The programmes are for language courses such as "English", "Urdu" and "Arabic", technical courses such as "Farm Income Generating Skills" and "Agriculture", specialized courses such as "Mathematics", "Biology", "Physics", "Economics" and "Computer Science" and other courses such as "Women Studies", "Family & Community Health", "Teacher Training" and "Adult Literacy". These programmes were on television a total of 302 times in 2004.

Despite the accomplishments of AIOU, as mentioned above, since the number of student increases, the production and development of materials has become inefficient and been unable to meet the demand. Therefore it is necessary to enhance the quality of the equipment at AIOU, provide

technical assistance in order to organize the production of educational materials and manage the quality control of the products. This need resulted in a request made by the Government of Pakistan for assistant from “Japan’s Grant Aid” fund.

- Requested Equipment

The following tables show the equipment requested by Pakistan.

Table-1.5 Equipment for the production of educational programmes

No.	Equipment	Unit	Q'ty	New/Replace
1	Television Production Studio System	system	1	Replace
2	A/B Roll Linear Editing Equipment (Off-Line)	system	1	Replace
3	Non-Linear Editing	system	3	Replace
4	Digital Electronic Field Production System	set	1	Replace
5	Digital Audio Recording System	system	1	Replace
6	Digital Video→VHS Duplicator	system	1	Replace
7	Presentation Equipment (for Auditorium)	system	1	Replace
8	Digital Camera	set	2	Replace
9	Measurement Tools	set	1	Replace
10	Spare Parts	set	1	Replace
11	Digital Field Recording Mobile Van	system	1	Replace
12	Optical Recording Camcorder System	lot	1	Replace
13	Power Supply	set	1	Replace

Table-1.6 Equipment for the development of educational materials

No.	Equipment	Unit	Q'ty	New/Replace
1	Server Room	system	1	Replace
2	Digital Video Class Room	unit	33	Replace
3	Digital Video Editing	system	1	Replace
4	Software	lot	1	Replace
5	CD/DVD Publication Studio	lot	1	Replace
6	Spares	set	1	Replace
7	Video Conferencing Equipment	set	1	Replace
8	Video Lecture Delivery Hall	set	4	Replace

Table-1.7 Equipment for Printing

No.	Equipment	Unit	Q'ty	New/Replace
1	Computer	set	8	Replace
	Software for DTP	set	8	Replace
	Color Laser Printer	unit	2	Replace
	UPS	unit	2	Replace
	Monochrome Laser Printer	unit	1	Replace
2	Image Setter	set	1	Replace
	UPS	unit	1	Replace
3	Scanner	unit	1	Replace
	Software+options	set	1	Replace
4	Software RIP	set	1	Replace
5	Image Setter + On Line Film Processor	set	1	Replace
	Options	set	1	Replace
	Spare parts	set	1	Replace
	Consumable	set	1	Replace
6	Sink & Vat	set	1	Replace
7	Light Table	set	3	Replace
8	Vacuum Printer	set	1	Replace
	Consumable	set	1	Replace
9	Measuring Equipment Densitometer for film	set	1	Replace
	Measuring Equipment Densitometer for Printed Material	set	1	Replace
10	2-Color Offset Press A1 Perfectos	set	2	Replace
	Spare parts	set	2	Replace
	Plate puncher	set	1	Replace
11	Single Color Offset Press with Numbering & Perforating Machine	set	1	Replace
	Spare parts	set	1	Replace
	Color viewer	set	1	Replace
	Consumable	set	1	Replace
	Plate puncher	set	1	Replace
12	Water Roller Washing Machine	set	1	Replace
13	Installation & maintenance tools	set	1	Replace
14	Guillotine Cutter	set	1	Replace
	Consumable	set	1	Replace
15	Paper Folding Machine	set	3	Replace
	Spare parts	set	3	Replace
16	Paper Jogging	set	1	Replace
17	Gathering Machine	set	1	Replace
	Transfer Unit	set	1	Replace
	Stocker	set	1	Replace
	Perfect Binder	set	1	Replace

18	Knife Grinder	set	1	Replace
	Consumable	set	1	Replace
19	Wire Stitching Machine	set	1	Replace
20	Sewing machine	set	1	Replace
21	Forklift	set	1	Replace
22	Hand Lift	set	2	Replace
23	Generator	set	1	Replace
24	Waste-solution Treatment Equipment	set	1	Replace
25	Automatic Voltage Regulator	set	2	Replace

Table-1.8 Audiovisual Equipment

No.	Equipment	Unit	Q'ty	New/Replace
1	Monitor Television	set	32	Replace
2	DVD Player (DVD/VCD/CD)	set	32	Replace
3	Videocassettes Recorder	set	32	Replace
4	TV Antenna	set	32	Replace
5	Cable, Connection Plug, Electric Cable	set	32	Replace

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2.1 Basic Concept of the Project

(1) Master goal and project goal

The Government of Pakistan (Pakistan) considers the problems in the education sector as an important issue related to poverty alleviation. “Education Sector Reform” (ESR), the master plan of the education sector, aims at improving the quality of education for all levels. The Higher Education Commission (HEC), which is engaged in providing equal educational opportunities and reducing the gap between genders, aims at improving the level of education by enhancing the programmes of Allama Iqbal Open University (AIOU) in order to provide inexpensive and high quality educational opportunities for those who are in poverty or vulnerable groups, or rural areas where the access to education is difficult.

In this project, therefore, the goal is to enhance AIOU’s distance education programmes in order to correspond to the increasing students’ needs by enhancing the educational production equipment and printing equipment.

(2) Basic concept of the project

To achieve the goal mentioned above, the project provides the equipment for the production and development of educational materials, the equipment for printing and the audiovisual equipment and implement the soft component for Print Production Unit (PPU) in order to enhance its quality management control. By implementing this project, AIOU is expected to provide and develop adequate quality and quantity of the educational materials for the increasing students. Also, by enhancing the audiovisual equipment at the regional campuses/regional centres, the study environment for the students in the rural areas is expected to be improved.

2.2 Basic Design of the Requested Japanese Assistance

2.2.1 Design Policy

This project aims at improving the AIOU's distance education programmes and the production of educational materials. Although AIOU implemented a project to enhance the quality of the equipment in its facilities with the assistance from "Japan's Grant Aid" fund in 1996, it has been failing to meet the needs of the recently increasing amount of students'. Therefore, the project shall procure and install equipment for the production and development of educational materials, equipment for printing and audiovisual equipment, and it shall implement the soft component for PPU as the technical training.

The facilities concerned in this project are Institute of Educational Technology (IET), Multimedia Electronic Courseware Design Centre (MECDC) and Print Production Unit (PPU), which are located at the main campus of AIOU in Islamabad, and 32 regional campuses/regional centres.

2.2.1.1 Basis of the design

On implementing the basic design, considering the discussion with AIOU, the criteria for equipment selection is as follows.

(1) Definite criteria

- Equipment that is indispensable for implementing AIOU Master Plan
- Equipment that is hardly obtained by the university, judging from the estimated budget allocation among concerned sections for the next several years
- Equipment for which appropriate space for installation and storage is ensured
- Equipment for which appropriate instructors and technicians are secured
- Equipment that can be maintained by the university economically and technically

- Concerning expensive equipment or equipment that requires high maintenance cost, the proper maintenance environment or equipment, such as enough budget and appropriate staffs, that makes them durable for more than their lives must be ensured
- Equipment that comprises system, such as computer network, must be compatible with present equipment

2) Criteria for giving high priority

- Old equipment that is needed of improvement
- Equipment whose expendables, parts, and materials can be easily obtained in Pakistan (by Pakistan currency)

3) Criteria for elimination

- Equipment that needs repair or extension of the building for installation
- Equipment that is scheduled to be improved by other aid agencies
- Equipment that is fragile, that becomes old easily, that requires much cost or many kinds of expendables or spare parts for long-term use, and that are consumable, (except for these sorts of equipment that is necessary for effective initial use of other equipment covered by the project)
- Equipment that is mainly used for studies of university's staff irrelevant to university programmes
- Equipment that is hardly secured from theft
- Equipment whose maintenance or operation staffs are hardly secured due to poor budget

2.2.1.2 Basic policy for natural conditions

As lightning often occurs in Islamabad, during the monsoon, in order to minimize the damage, the planned electronic equipment shall have filter on its supply circuit and thunder protection.

Lighting rods shall be installed at the top of each building. Also as earthquakes relatively often occur in the northern part of Pakistan, including Islamabad, the buildings have quake-resistant structures. Therefore the project is required to consider the quake-resistant design for the installation of the equipment.

2.2.1.3 Basic policy for the social conventions

Among the students of AIOU, there are many female students who hope to become government officers or teachers and they are expected to improve the future educational quality of Pakistan, the literacy rate in rural areas, the women's education and etc. Therefore, especially for the installation of the audiovisual equipment at the regional campuses/regional centres, Pakistani social conventions, such as the gender issue, need to be considered in order to arrange a comfortable study environment for all students.

2.2.1.4 Basic policy for the use of the marketed equipment

The equipment for the production of educational materials in this project shall be procured in Japan as this country is superior to others on this kind of equipment. For other equipment, merits obtained and procured in Pakistan, such as prices and after-sale services shall be considered.

2.2.1.5 Basic policy for the local agents

During the procurement and management of the equipment, local consultants shall be considered to participate. For the installation work, it shall be considered to have experienced local workers for the after-sale services and cut down of the costs.

2.2.1.6 Basic policy for the AIOU's ability of operation and maintenance

- The equipment shall be selected according to the study of AIOU's organization, the number of faculty and staff members, the organization of the educational material production, the annual budget, the curriculum, the number of courses and students, the existing equipment and the scale of the facilities.
- The equipment shall be operated and maintained by AIOU's self-reliance without needing the participation of outside engineers.

2.2.1.7 Basic policy for the equipment

- Equipment for the production of educational materials shall be for consumer use so that it does not require specific techniques.
- Equipment for printing shall be for professional use, which generates the printing procedure, editing, plate making, printing and book making, as one system.

2.2.1.8 Basic policy for the procurement and schedule

- The equipment shall be procured from the suppliers who ensure after-sale services.
- The project shall be implemented within the budget of one fiscal year and the schedule shall include procurement period, shipment period, domestic transport period, installation period and training period.

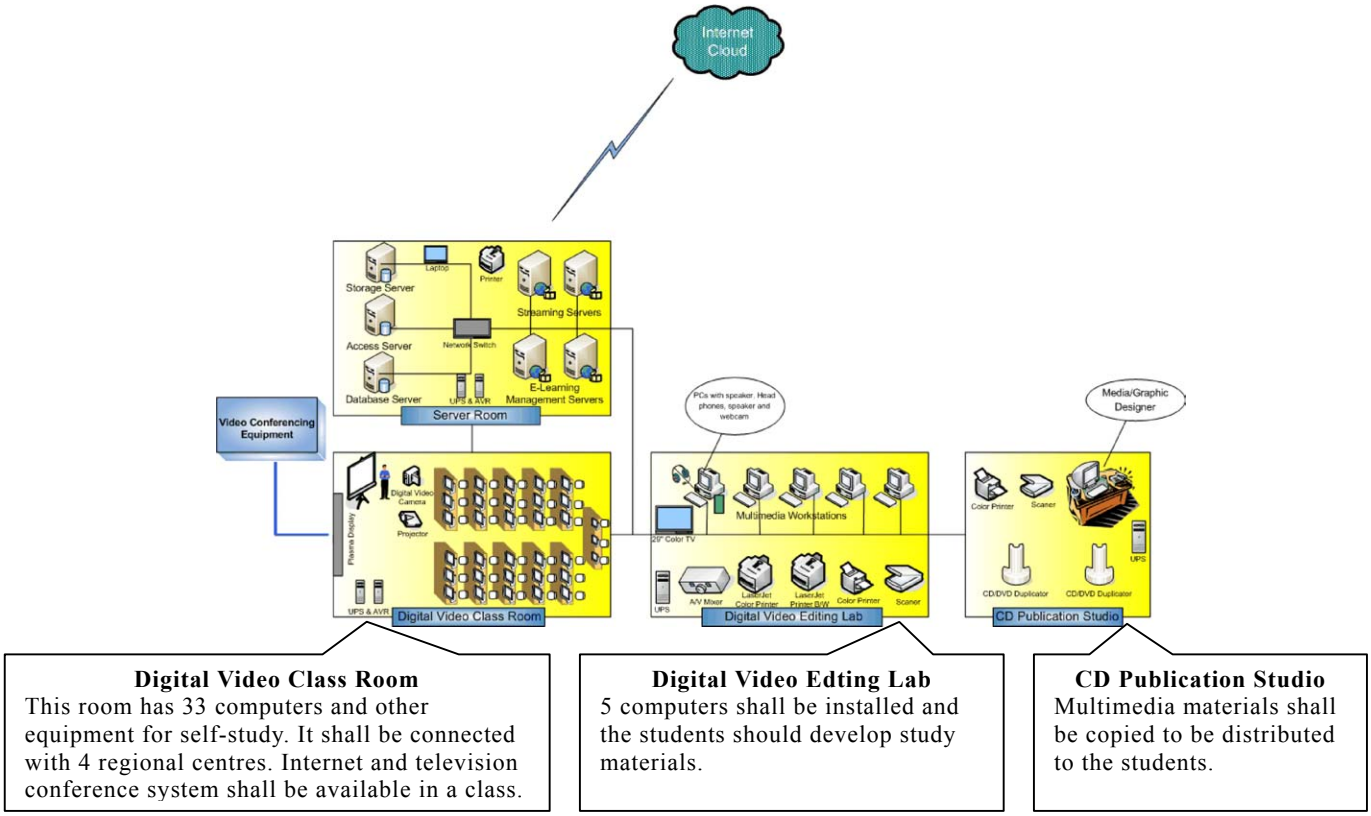
2.2.2 Basic Plan

2.2.2.1 General plan of the project

Although most of equipment at IET has been operating, some parts of it are broken or damaged. Therefore, this project plans to install digital equipment as well as analogue equipment. Comparing

the existing equipment to the planned digital equipment, the latter is superior to the former in terms of quality of images and sound, the necessary production time, the production cost, durability and the cost of delivery to the students and the regional campuses/regional centres. Also AIOU has been implementing the "OLIVE" project (Open Learning Institute of Virtual Education), the national pilot plan, which develops Internet related educational materials such as interactive lessons and e-learning. By developing these educational materials, the quality of education in urban and rural areas will be equalized. Hereby this project will provide equipment for the production of educational materials and enhance the facility which has computer rooms for self-study mainly used for the students in teacher training courses.

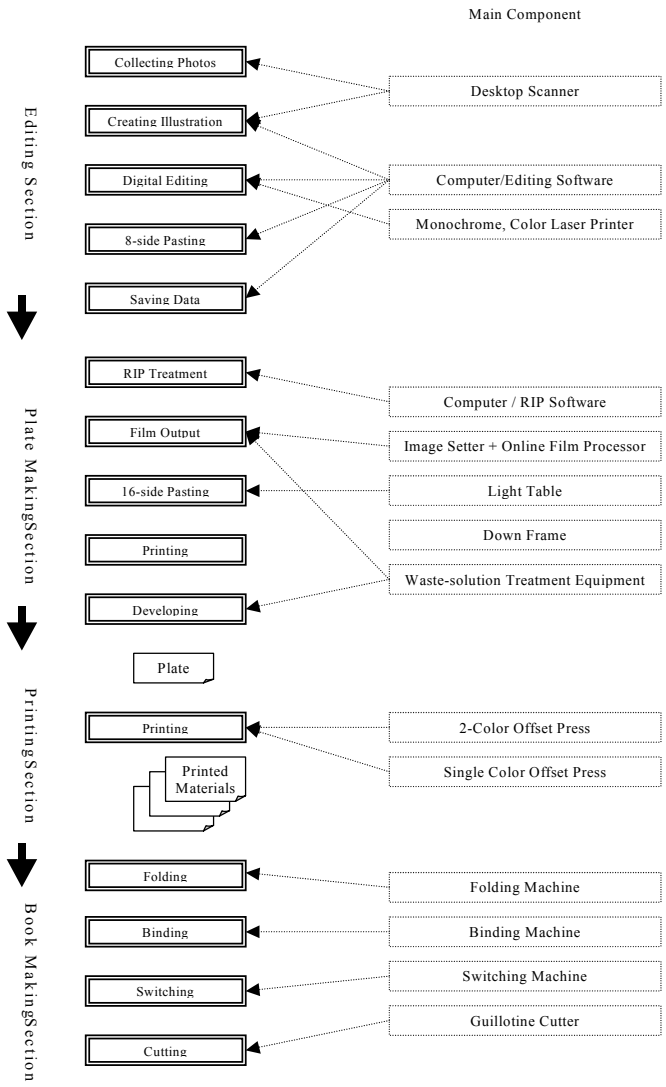
Figure-2.1 Development of the Educational Materials



The procurement of equipment for printing shall aim at enhancing the quality for educational materials which are the major media of AIOU's distance education. This project shall procure

equipment for editing, plate making, printing and book making. The equipment for editing, for plate making, for book making and for printing are usually durable for 5, 10, 15 and 20 years respectively. Therefore for PPU's constant printing for educational materials, each piece of equipment needs to be replaced in time. This project considers the minimum period, 5 years, and sets the target year as 2010. In this target year the amount of printing shall be 0.87 billion pages per year which is currently 0.14 billion. Also, the quality of the printed materials shall contain illustrations, photographs and charts for the better understanding of their contents. Enhancing the printing methods in PPU shall contribute not only to the increasing students but also the decrease of the cost.

Figure-2.2 Flowchart of Educational Material Production



The enhancement of the regional campuses/regional centres aims at improving the study environments for students and the facilities. The audiovisual equipment shall be provided for 9 regional campuses and 23 regional centres. For the installation of the equipment, the Pakistani social convention shall be well considered. Each piece of equipment shall be installed for both men and women to use.

The soft component shall be implemented for the new equipment. For equipment for the production and development of educational materials, some of the operators were trained when the last "Japan's Grant Aid" project was implemented. Therefore they shall be able to operate and maintain the new equipment with the instruction after the installation. On the other hand, though the operators at PPU have had a lot of printing experience with the existing equipment, the equipment is a special model. Therefore it is necessary to implement training for the operation and maintenance of the new equipment. After the implementation of the soft component, the operators at PPU should remain the sustainable maintenance of equipment and quality control of the educational materials. It is also expected to achieve the target quota.

2.2.2.2 Equipment plan

(1) General plan

The scale and the conditions of the installation facilities of the planned equipment are as follows.

Table-2.1 Scale and Conditions of the Installation Facilities

Equipment	Facilities	Scales and Conditions	Actions for the Conditions
Equipment for the production and the development of educational materials	The facility where equipment for the production of educational materials shall be installed (IET) has analogue equipment. IET building has large and small studios and a few production rooms. The facility where equipment for the development of educational materials shall be installed (MECDC) is an individual building and has equipment for the development of the multimedia educational materials.	・ There is no problem in terms of the space and infrastructure. ・ It is necessary to install lighting rods as lightening often occurs in the rainy season and it damages electronic devices. ・ The Television Production Studio, the Non-linear Editing Room and the Auditorium require new power supply, installation of cables and air conditioning units and reconstruction of the floor and the wall. ・ The facility allows students' entry. With a security system at night and holidays the installation should have no problems.	Production system for audiovisual materials shall be installed. The facility shall be enhanced for the development of media materials and teacher training.
Equipment for printing educational materials	The facility where equipment for printing shall be installed (PPU) has printing equipment located in the work area, the printing room and the book store room.	・ This facility has been built, and no problems are seen in terms of water supply, water treatment, electricity and communication infrastructure. ・ It is necessary for lightning rods to be installed.	Equipment for printing process (editing, plate making, printing and book making) shall be installed.
Audiovisual Equipment	The 32 regional campuses/regional centres have outdated type audiovisual equipment (most of it is broken, needs spare parts and has not used).	・ The regional campuses/regional centres have libraries or audiovisual classrooms for the new equipment.	1 set of audiovisual equipment shall be installed for both men and women. Enhancement of these facilities for the improvement of the communication with AIOU's head office shall be expected.

(2) Equipment Plan

The following tables show the comparison of the requested and planned equipment.

Table-2.2 Comparison of the requested and planned equipment for the production of educational materials

Requested No.	Planned No.	Equipment	Unit	Requested Q'ty	Description	New/Replace	Unit	Planned Q'ty	Remarks
IET: Institute of Educational Technology									
A-1	I-A	Television Production Studio System	system	1	Ligntning equipment, video camera and VTR	New	set	1	
B-1)	-	A/B Roll Linear Editing Equipment (Off-Line)	system	1	Non-liner Video Editing Equipment fulfills the functions of A/B Roll Linear Editing Equipment.	-	-	-	
-	I-B	Cut to Cut Editing System	system	2	Cut to Cut Editing System (Off-line)	New	set	2	
B-3)	I-C	Non-Linear Editing	system	3	Non-Linear Editing	New	set	3	System equipment changed
C-1)	I-D	Digital Electronic Field Production System	set	1	Digital Electronic Field Production Equipment	New	set	2	
D-1)	I-E	Digital Audio Recording System	system	1	Digital Audio Recording System	New	set	1	System with multi-purposed computers will be used
E-1)	I-F	Digital Video→VHS Duplicator	system	1	Digital Video /VHS Duplicator	New	set	1	Present equipments will be used
F-1)	I-G	Presentation Equipment (for Auditorium)	system	1	Presentation Equipment	New	set	1	The way of installation changed
G-1)	I-H	Digital Camera	set	2	Digital Camera	New	set	2	
H-1)	I-I	Measurement Tools	set	1	Measurement Tools	New	set	1	
I-1)	-	Spare Parts	set	1	Spare Parts	-	-	-	deleted
J-1)	-	Digital Field Recording Mobile Van	system	1	Digital Field Recording Mobile Van	-	-	-	deleted
-	I-J	Media	lot	1	Media	New	set	1	
K-1)	-	Optical Recording Camcorder System	lot	1	Optical Recording Camcorder System	-	-	-	deleted
L-1)	I-K	Power Supply	set	1	Control of voltage for Electricity supply	New	Unit	1	

Table-2.3 Comparison of the requested and planned equipment for the development of educational materials

Requested No.	Planned No.	Equipment	Unit	Requested Q'ty	Description	New/Replace	Unit	Planned Q'ty	Remarks
MECDC: Multimedia Electronic Courseware Design Centre									
A	M-A	Server Room	system	1	Streaming Server, E-learning Management Server, Database Server, Access Server, Storage Server, UPS, Air Conditioner etc	New	set	1	
B	M-B	Digital Video Class Room	unit	33	33 sets of computer, Multimedia Projector, Plasma Display Screen, PA System, UPS and AVR	New	unit	33	
C	M-C	Digital Video Editing	system	1	5 sets of computer for video editing and producing multimedia materials, Printer and AVR	New	set	1	
D	M-D	Software	lot	1	Software for Server, Video Editing, Multimedia Production, Operating, Virus Shield etc.	New	set	1	
E	M-E	CD/DVD Publication Studio	lot	1	Computer, CD printer and CD&DVD Duplicator	New	set	1	
F	-	Spares	set	1	Computer with 17' Flat screen, Note book computer, UPS,AVR etc.,	-	-	-	deleted
G	M-F	Video Conferencing Equipment	set	1	Codec for MECDC Single Channel Codec for Peshawar, Lahore, Karachi and Multan	New	set	5	
H		Video Lecture Delivery Hall	set	4					
-	M-G	Installation Material			For Installation of TV sets, computers and other equipment system	New	set	1	

Table-2.4 Comparison of the requested and planned equipment for printing

Requested No.	Planned No.	Equipment	Unit	Requested Q'ty	Description	ew/Repla	Unit	Planned Q'ty	Remarks
PPU: Print Production Unit									
1-1	P-A-1）-1	Computer	set	8	Used for input, editing of document, layout setting, and data base of the materials, importing images, producing plates etc. Spec.:HD:36GB,CPU:2.8GHz with 17inch LCD including UPS 8units OS: windows XP	update	set	8	Editing Section
	P-A-1）-2	Software for DTP	set	8	Core Draw, Photoshop, Office XP media kit, Macromedia, Freehand, illustrator, Inpage Urdu, Acrobat Adobe Distiller Quark Xpress, Fine Reader	new	set	8	
	P-A-2)-1	Color Laser Printer	unit	2	Checks calibration and color tone of the edited data by computers before film processing. Spec: Printing quality 600x600dpi, Processor speed 400MHz	new	unit	1	the one is altered with monochrome
	P-A-2)	UPS	unit	2		new	unit	2	UPS is component with Item P-A-2)-1 and P-A-4)-1
	P-A-3)-1	Monochrome Laser Printer	unit	1	Checks calibration and monochrome tone of the edited data by computers before film processing. Spec: Processing speed 250MHz, Printing quality : 1200x1200dpi,600x600dpi paper tray 3	update	unit	1	
1-2	P-A-4)-1	Image Setter	set	1	Used for Image setting, etc. Spec: refer to P-A-1)-1	new	unit	1	
	P-A-4)	UPS	unit	1		new	unit	1	UPS is component with item P-A-4)

1-3	P-A-5)-1	Scanner	unit	1	Inputs printed materials, photos, drawings etc. into general picture quality materials. Spec: Type : flatbet Scan resolution 4800x4800dpi	update	unit	1	
	-	Software+options	unit	1	Unnecessary for P-A-5)-1	-	-	-	deleted
1-4	P-A-4)-2	Software RIP	set	1	Compatible with P-B-1)-1	new	set	1	
1-5	P-B-1)-1	Image Setter + On Line Film Processor	set	1	Converts layout data and outputs developed films Spec: Exposure system: flatbet imaging system, Resolution: 1000-3000dpi, Media widths: film and paper :254-609mm	new	set	1	
	-	Options	set	1	Spare media supply magazine, butcher punch, differential SCSI board, SCSI card and cable, Rack drip vat, Vats, Waste liquid tank, Drainage kit, Fixer and wash water filter	new	set	1	
	-	Spare parts	set	1	Unnecessary for the planned image setter	-	-	-	deleted
	-	Consumable	set	1	Not necessary	-	-	-	deleted
1-6	-	Sink & Vat	set	1	Manual development of PS plate, good of P-C-1)-1	update	set	1	Component with P-B-2)-1
1-7	P-B-2)-1	Light Table	set	3	Pastes output 8-page positive films on the light table to compose 16-page films. This is also used to check the films and prepare for printing during vacuum printing. Spec: Effective area : 821x1175mm, Light source : Fluorescent lamp	update	unit	3	
1-8	P-B-3)-1	Vacuum Printer	set	1	For PS Plate making, Spec: Effective exposure area : 850x1130mm, Light source : metal halide, Lighting device: movable	update	set	1	
	-	Consumable	set	1	Unnecessary	-	-	-	deleted
1-9	-	Measuring Equipment Densitometer for film	set	1	Measuring equipment	new	set	1	Component with P-C-2)
	-	Measuring Equipment Densitometer for Printed Material	set	1	Measuring equipment	new	set	1	Component with P-C-2)
2-1	P-C-1)-1	2-Color Offset Press A1 Perfectos	set	2	Mainly for plain color and prints 16 pages both sides. Spec: Max paper size: 1030x720mm Min. paper size :520x360mm, Max printing area : 1020x710mm, Printing speed: 4000-12000IPH, including color viewer and maintenance and installation tools	new	unit	2	
	-	Spare parts	set	2	Unnecessary	-	-	-	deleted
	-	Plate puncher	set	1	Compatible with P-C-1)-1	new	unit	1	
2-2	P-C-2)-1	Single Color Offset Press with Numbering & Perforating Machine	set	1	Prints sub materials and puts perforation and numbers, Spec: max paper size: 580x450mm min. paper size 257x182mm, max. printing area 570x440mm, Printing speed :4000-12000, # of digit of numbering unit :7 digits, # of numbering unit : 4 pcs. including plate puncher, densitometer for transparency and reflection.	new	unit	1	
	-	Spare parts	set	1	Unnecessary for the planned Color Offset Press	-	-	-	deleted
	-	Color viewer	set	1	Checks printing result	new	unit	1	Component with P-C-2)-1
	-	Consumable	set	1	Unnecessary	-	-	-	deleted
	-	Plate puncher	set	1	Compatible with P-C-2)-1	new	unit	1	
2-3	-	Water Roller Washing Machine	set	1	Unnecessary for new printing machine	-	-	-	deleted

2-4	-	Installation & maintenance tools	set	1	Used for installation of equipment and maintenance works, including gate, chain block, bogie roller, hydraulic jack etc.	new	set	1	Component with P-C-1)-1
3-1	P-D-1)-1	Guillotine Cutter	set	1	Cuts three sides of binder books. Spec: cutting width: 1168mm, cutting depth 1160mm, clamp opening :165mm	new	unit	1	
	-	Consumable	set	1	Unnecessary	-	-	-	deleted
3-2	P-D-2)-1	Paper Folding Machine	set	3	Folds printed materials 3 or 4 times into the size of prescribed sizes. Spec.: max. paper size: 740x1100mm, min.paper size: 200x250mm, max. folding pages: 32	new	unit	2	
	-	Spare parts	set	3	Unnecessary for the planned Paper Folding Machine	-	-	-	deleted
3-3	-	Paper Jogging	set	1	Not used often	-	-	-	deleted
3-4	P-D-3)-2	Gathering Machine	set	1	Used to collate the printed materials, folded by the paper folding machine which recognizes 32 pages as one unit. Spec: # of hoppers :12 pcs. Max. paper size: 250x330mm, min paper size: 128x182mm	new	unit	1	
	-	Transfer Unit	set	1	Necessary for on line binding system	-	-	-	deleted
	-	Stocker	set	1	Necessary for on line binding system	-	-	-	deleted
	P-D-3)-1	Perfect Binder	set	1	Uses hot melt glue. # of clamp : 8pcs. Max. book size: portrait 270x400mm, landscape: 320x210mm Book thickness :2-45mm	new	set	1	
3-5	P-D-4)-1	Knife Grinder	set	1	Grinds the cutter blade of the guillotine cutter. Spec.: grained length 1550mm Grinding wheel speed: 1400rpm	new	set	1	
	-	Consumable	set	1	Unnecessary	-	-	-	deleted
3-6	P-C-5)	Wire Stitching Machine	set	1	For book binding Spec. Stitching head : one, stitching thickness: 20mm	new	set	1	
3-7	-	Sewing machine	set	1	Not used often	-	-	-	deleted
3-8	P-E-1) -1	Forklift	set	1	Carries paper and printed materials indoors. Spec: Loading cap. : max.1.0ton Power: battery, Mast height : 2 stage 3000mm	new	unit	1	
3-9	P-E-2)-1	Hand Lift	set	2	Carries paper cut by the guillotine cutter for the book making section. This is small size manual machine driven by oil pressure. Spec. max. cap. 1.5 ton, Cylinder: hydraulic cylinder	new	unit	2	
3-10	-	Generator	set	1	Not used often	-	-	-	deleted
3-11	P-E-3)-1	Waste-solution Treatment Equipment	set	1	Neutralizes film/PS board developer waste (alkaline) and film fixer waste (acid) and discharges them into sewers. Spec: treatment cap. : 100litters per operation, The system comprises neutralizing tank, liquid tank, stirring device and Ph meter.	new	unit	1	
3-12	P-E-4)-1	Automatic Voltage Regulator	set	2	Used because of the instability of the power. The relevant equipment are 3 printers, 1 gathering, and 1 binding machine.	new	set	1	50KVAx2units, 、30KVAx1unit

Table-2.5 Comparison of the requested and planned audiovisual equipment

Requested No.	Planned No.	Equipment	Unit	Requested Q'ty	Description	New/Replace	Unit	Planned Q'ty	Remarks
Regional Campus/Regional Centre									
A-1-1	R-A-1)	Monitor Television	set	32	1 set for female exclusive use was added for 32 study centers; 64sets for each center in total.	New	set	64	
-	R-A-3)	Headphone Set	-	-	Added to prevent the disturbance by other students using audio equipment	New	set	64	For sound control of the audio equipment
A-1-2	R-A-5)	DVD Player (DVD/VCD/CD)	set	32	1 set for female exclusive use was added for 32 study centers; 64sets for each centre in total.	New	set	64	
A-1-3	-	Videocassettes Recorder	set	32	For Analogue video tape player	-	-	-	deleted
A-1-4	R-A-2)	TV Antenna	set	32	For 1 set of two set of TV monitors	New	set	32	
A-1-5	R-A-4)	Cable, Connection Plug, Electric Cable	set	32	The increase of the planned number responds to the increase of the TV sets	New	set	64	

The major planned equipment is as follows.

Table-2.6 List of major equipment for the production of educational materials

Exchange Rate $1=¥110.52 Rs.1=¥2.07

No	System/Section	Procured in	Manufactured in	Specifications	Type	Unit Price	Numb	Details
I-A	Television Production Studio System	Japan	Japan	Video Equipment, Audio Equipment, Monitoring Equipment, Video Sync System, Intercom System, Tally & On-air Lamp, Operation Console & Rack, Connecting Cables & Instillation Materials, Lighting Equipment, etc.	Broadcaster	¥175,556,000	1	This is a studio system for television production. One of the cameras which will be installed has the prompter system to project scripts so that the speaker can look into the camera all the time. A sufficient number of lighting equipment for multiple performers will be installed. Some of them have fluorescent lamps to restrict the heat from lighting. A set of cyclorama curtain system will be installed as the background. This system allows to combine other images. The VTR will be digital which is expected to prevent the degradation of the images during editing.
I-B	Cut to Cut Editing System	Japan	Japan	Video Equipment, Monitor Equipment, Operation Table & Rack, Connecting Cables & Instillation Materials, etc.	Broadcaster	¥4,027,000	1set × 2	This editing system is for viewing the recorded video tapes and pre-editing to acquire the whole image of the programme. 2 sets of videotape player, videotape recorder, two monitors and an editing controller. As the VTR is digital, every equipment shall be digital as well.
I-C	Non-linear Editing	Japan	Japan	Video Equipment, Audio Equipment, Operation Table, System Rack & Installation Materials, etc.	Broadcaster	¥18,820,000	1set × 3	This Non-linear editing system edits tapes, inserts subtitles, graphics, narration, music, etc. As the VTR equipment is digital, every equipment shall be digital but it is still able to correspond to the existing analogue equipment (β-cam SP and U-matic). As multi-purpose computers and standard sound editing software will be installed, the operation should be simple.
I-D	Digital Electronic Field Production Equipment	Japan	Japan	Video Equipment, Audio Equipment, Monitor Equipment, Lighting Equipment, Cable, Car	Broadcaster	¥12,795,000	1set × 2	This equipment is for filming outdoors. Portable camcorders and wireless microphones will be provided for the portability. This consists of 2 sets of portable camcorder, portable mixer, wireless microphone, gun microphone, monitor TV, battery lighting kit, portable lighting kit, car, etc.
I-E	Digital Audio Recording System	Japan	Japan	Audio Equipment, Monitor Equipment, Audio Jack, Announce Cough Box System, Table & Rack, Installation Materials, etc.	Broadcaster	¥12,547,000	1	This is for audio recording system and editing. It consists of microphones, audio mixers, monitor speakers, talk back monitors, announce cough system, etc. As multi-purpose computers and standard sound editing software will be installed, the operation should be simple.
I-F	Digital → VHS Duplicator	Japan	Japan	Video Equipment, Monitor Equipment, Rack & Instillation Material, etc.	Standard	¥15,831,000	1	This equipment duplicates VHS tapes for students from master tapes. It is capable to duplicate 14 VHS tapes from 1 master tape simultaneously. It consists of digital video recorder, VHS videotape recorder, remote controller, sequential switcher, video monitor, rack mount monitor speaker, etc.
I-G	Presentation Equipment (for Auditorium)	Japan	Japan	Video Equipment, Audio Equipment, Rack & Installation Material, etc.	Standard	¥6,161,000	1	This is the audiovisual equipment installed in the auditorium for lectures or seminars. The projector and screen are portable so that the images or lights will not disturb the audience. Wireless microphones and rack mount speaker will be build on to the present audio device.
I-H	Digital Camera	Japan	Japan	Digital Camera, Lens, Camera Accessory, etc.	Standard	¥969,000	1set × 2	This is a set of camera for the production of media materials. 2 sets of digital camera, standard zoom lens, telephoto zoom lens, macro lens, filter, strobe, tripod, etc.
I-I	Measurement Tools	Japan	Japan	Digital Phosphor Oscilloscope, Vector Scope, Multiformat Video Generator, Audio Measuring/Analyzer, Tool Set	Standard	¥7,691,000	1	This is for the checking and maintaining of digital equipment.
I-J	Media	Japan	Japan	Digital Video Tape, CDRW, DVD, etc.	Standard	¥787,000	1	This is for installation of the equipment. Digital videotapes, CDRW and DVD.
I-K	Power Supply	Japan	EU	AVR	Standard	¥2,783,000	1	AVR will be installed for the protection of electrical devices.
		Pakistan		Lighting Rod		$12,690 (¥1,402,000)		

Table-2.7 List of major equipment for the development of educational materials

Exchange Rate $1=¥110.52 Rs.1=¥2.07

No	System/Section	Procured in	Manufactured in	Specifications	Type	Unit Price	Numb	Details
M-A	Server Room	Pakistan	Japan	Streaming Server, E-learning Management Server, Database Server, Access Server, Storage Server, Network Switch, AVR, UPS, Laser Printer, Notebook Computer and Air Conditioner	Standard	$116,221 (¥12,845,000)	1	The E-learning and the development of multimedia educational materials which MECDC has planned require servers. This system consists of streaming server, E-learning management server, database server, access server, storage server.
M-B	Digital Video Class Room	Japan	Japan	Computer, Plasma Display Screen, Digital Video Camera, Multimedia Projector, Portable Screen, Network Switch, UPS, AVR, PA System, etc.	Standard	¥3,624,000	1	Some classrooms in MECDC are used for basic training of education and computer department. Thereafter, to meet the increasing number of students' demand, it is necessary to enlarge the number of computer and relevant equipment. As computer training is suitable for a small class, this project will provide 1 computer for 1 group consisted of 10 people.
		Pakistan	E U			$128,272 (¥14,177,000)		
M-C	Digital Video Editing	Japan	Japan	Computer, Notebook Computer, External CD/DVD Drives, UPS, Color TV Monitor, Color Laser Printer, B/W Laser Printer, Color Inkjet Printer, Scanner, Web Cam, Sound System, CD/DVD Player, VHS Tape Recorder, A/V Mixer, etc.	Standard	¥2,260,000	1	This equipment is for computer workshops. This consists of AV mixer, scanner, printer, etc.
		Pakistan	E U			$37,781 (¥4,176,000)		
M-D	Software	Pakistan		Microsoft Windows 2000 Advance Server, Microsoft Windows 2000 Professional and Office XP, Macromedia MX Suite, Adobe Photoshop 7 and premier, 3-D Studio Max, etc.	Standard	$6,958 (¥769,000)	1	Software for OS, development of multimedia materials, virus protection, E-learning, editing videotapes, etc will be provided.
M-E	CD/DVD Publication Studio	Japan	Japan	Computer, Color Inkjet Printer, Scanner, CD/DVD Duplicator, CD/DVD Color Printer and UPS	Standard	¥1,275,000	1	This is for the CD/DVD publishing. The multimedia materials and other materials produced in IET will be published here and distributed to the students.
		Pakistan	E U			$19,131 (¥2,114,000)		
M-F	Video Conferencing Equipment	Japan	Japan	Video Conferencing Equipment	Standard	¥5,949,000	1	This is to uniform the level of education for every student by video conferencing system. This will provide lecture and examination for the students in the 4 regional study centres (Lahore, Multan, Peshawar and Karachi) connected to the head office for mutual communication system.
M-G	Instillation Material	Japan	Japan	Installation Material	Standard	¥840,000	1	This is for installing the equipment.

Table-2.8 List of major equipment for printing

Exchange Rate $1=¥110.52 Rs.1=¥2.07

No	System/Section	Procured in	Manufactured in	Specifications	Type	Unit Price	Numb	Details
P-A	Editing	Japan	Japan	Computer, Color Laser Printer, Monochrome Laser Printer, Image Setter, Scanner, etc.	Standard	¥2,393,000	1	This is for editing and pasting images for materials.
		Pakistan				$119,017 (¥13,154,000)		
P-B	Plate Making	Japan	Japan	Image Setter + On-line Film Processor, Light Table, Down Frame, etc.	Standard	¥15,277,000	1	This is for inputting films and editing developed films.
P-C	Printing	Japan	Japan	2-color Offset Press A1 Perfector, Single Color Press with Numbering & Perforating Machine, etc.	Standard	¥185,141,000	1	This will allow about 110 kinds of materials to be printed yearly.
P-D	Book Making	Japan	Japan	Guillotine Cutter, Paper Folding Machine, Perfect Binding, Knife Grinder, Wire Stitching Machine, etc.	Standard	¥75,987,000	1	This is for folding, binding, wire stitching and cutting the materials to make books.
P-E	Miscellaneous	Japan	Japan	Folk Lift, Hand Lift, Waste Solution Treatment Equipment, Automatic Voltage Regulator, etc.	Standard	¥11,104,000	1	The lifts are for carrying and storing the printing paper. AVR will be necessary for electronic devises as the power is instable.

Table-2.9 List of Major Audiovisual Equipment

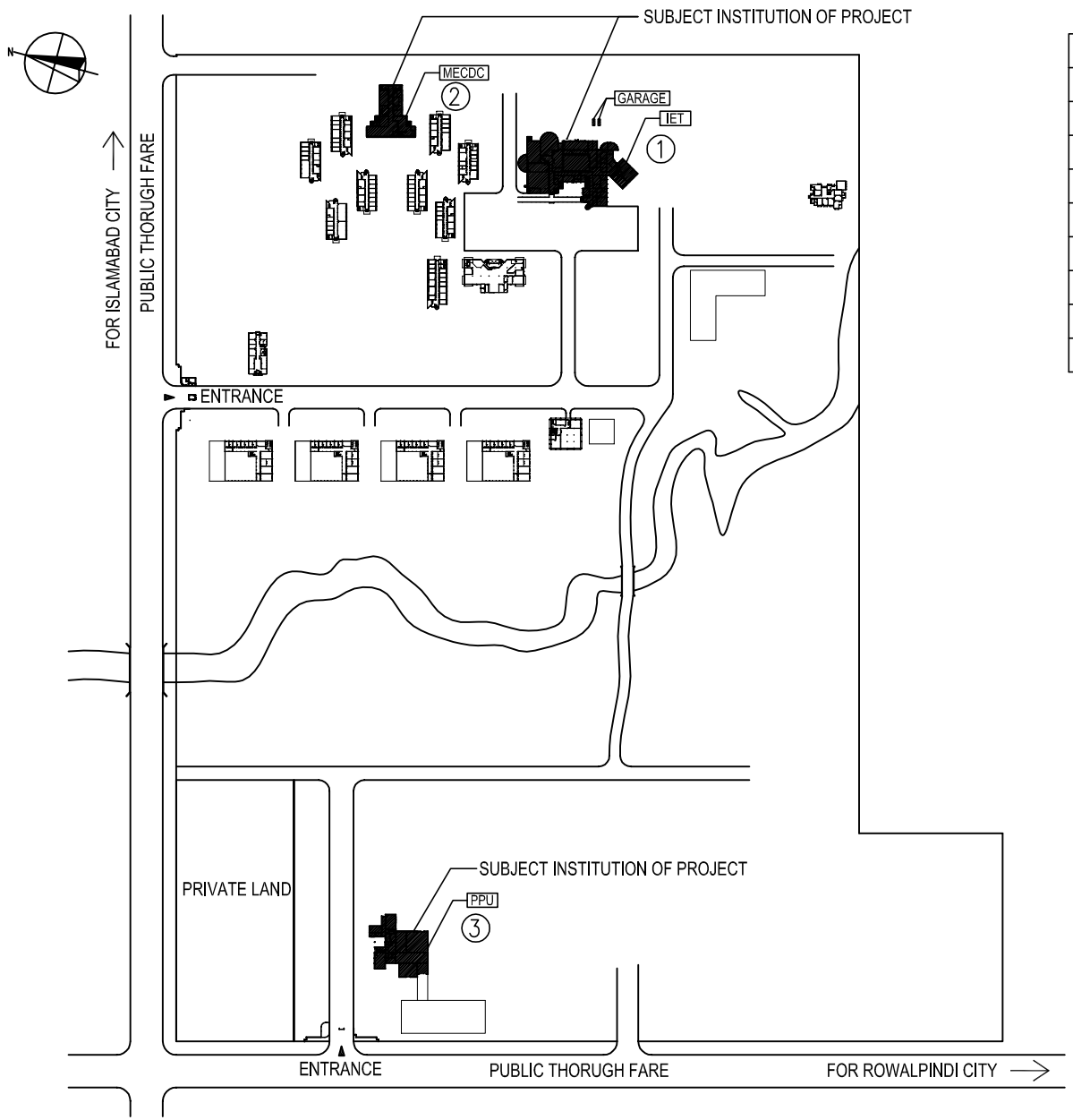
Exchange Rate $1=¥110.52 Rs.1=¥2.07

No	System/Section	Procured in	Manufactured in	Specifications	Type	Unit Price	Number	Details
R-A	Television System	Japan	Japan	Monitor Television Set, CD/DVD Player, TV Antenna, Headphone System, AC Power Consent Plate	Standard	¥340,000	64	Audiovisual equipment will be installed in 32 Regional Campus/Regional Centre.

2.2.3 Basic Design Drawing

Contents

1. Over All Plot Plan	18. Print Production Unit
2. IET Ground Floor Key Plan	19. Regional Campus/Regional Centre
3. IET First Floor Key Plan	20. Cut to Cut Editing System
4. IET Ground Floor Auditorium	21. Digital Video → VHS Duplicator
5. IET Ground Floor Editing & Duplication System	22. Television Production Studio System (1/3)
6. IET Ground Floor Digital Audio Recording System	23. Television Production Studio System (2/3)
7. IET Ground Floor Technical Store	24. Television Production Studio System (3/3)
8. IET Ground Floor Photo Studio	25. Non-linear Editing
9. IET Ground Floor Switch Room	26. Presentation Equipment for Auditorium
10. IET First Floor Studio-B & Control System	27. Digital Audio Recording System
11. IET First Floor Non-linear Editing System	28. Television Production Studio System Video Block Diagram
12. MECDC Ground Floor Key Plan	29. Television Production Studio System Sound Block Diagram
13. MECDC First Floor Key Plan	30. Non-linear Editing Block Diagram
14. MECDC Ground Floor Server System	31. Digital Audio Recording System Block Diagram
15. MECDC First Floor CD/DVD Duplication System	32. Digital Video → VHS Duplicator Block Diagram
16. MECDC First Floor Digital Video Editing System	33. Cut to Cut Editing System Block Diagram
17. MECDC First Floor Digital Video Study System	34. Presentation Equipment for Auditorium Block Diagram



Building Summary		
S. No.	Abbreviation	Building Name
①	IET	Institute Of Educational Technology
②	MECDC	Multimedia Electronic Courseware Design Centre
③	PPU	Print Production Unit
④	RC	Regional Centre
	VLDH−1	Video Lecture Delivery Hall At Lahore
	VLDH−2	Video Lecture Delivery Hall At Multan
	VLDH−3	Video Lecture Delivery Hall At Peshawar
	VLDH−4	Video Lecture Delivery Hall At Karachi

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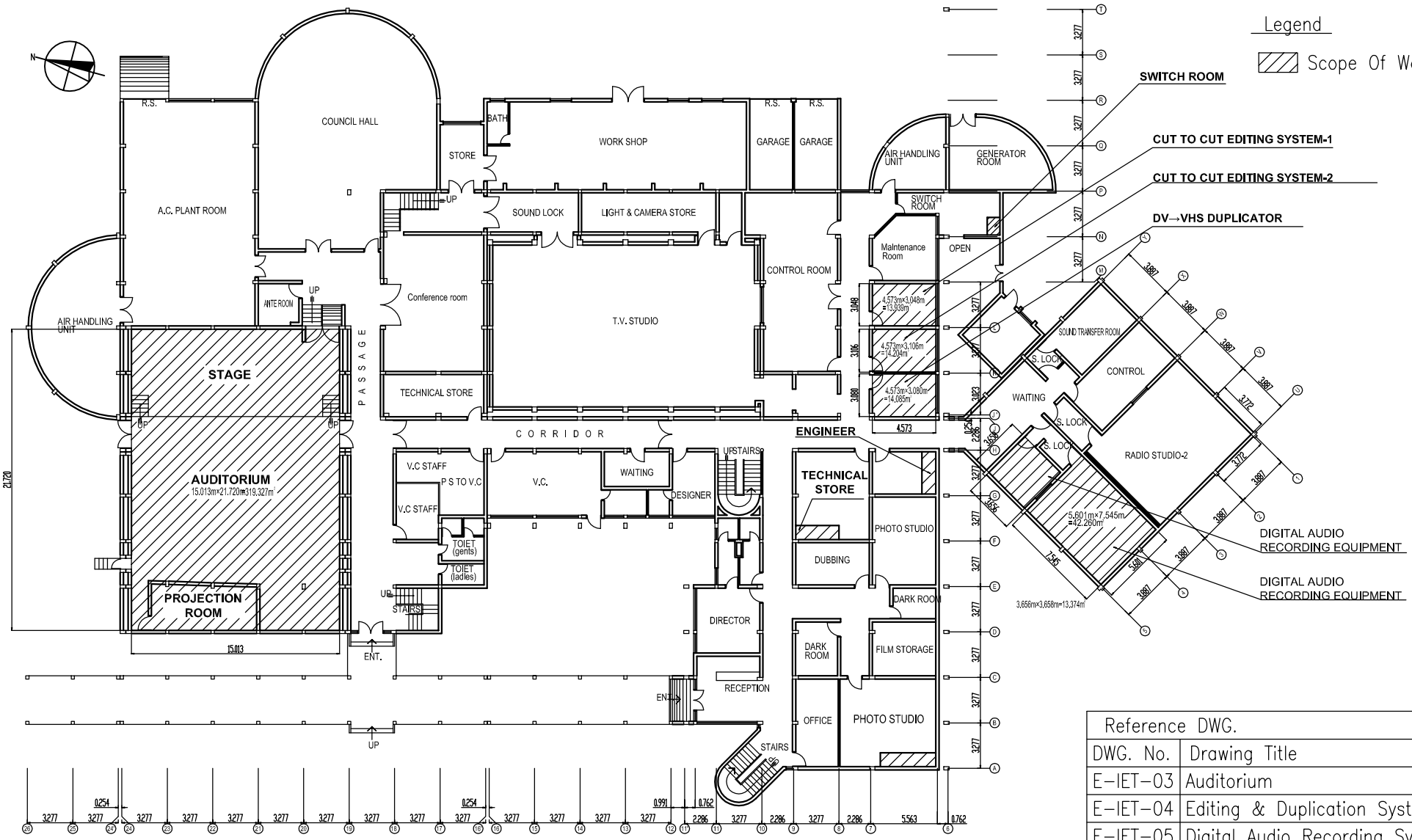
DRAWING TITLE

OVER ALL PLOT PLAN

SCALE 1/5000

DATE

DWG. NO E-PLT-01



GROUND FLOOR PLAN

Reference DWG.	
DWG. No.	Drawing Title
E-IET-03	Auditorium
E-IET-04	Editing & Duplication System
E-IET-05	Digital Audio Recording System
E-IET-06	Technical Store
E-IET-07	Photo Studio
E-IET-08	Switch Room

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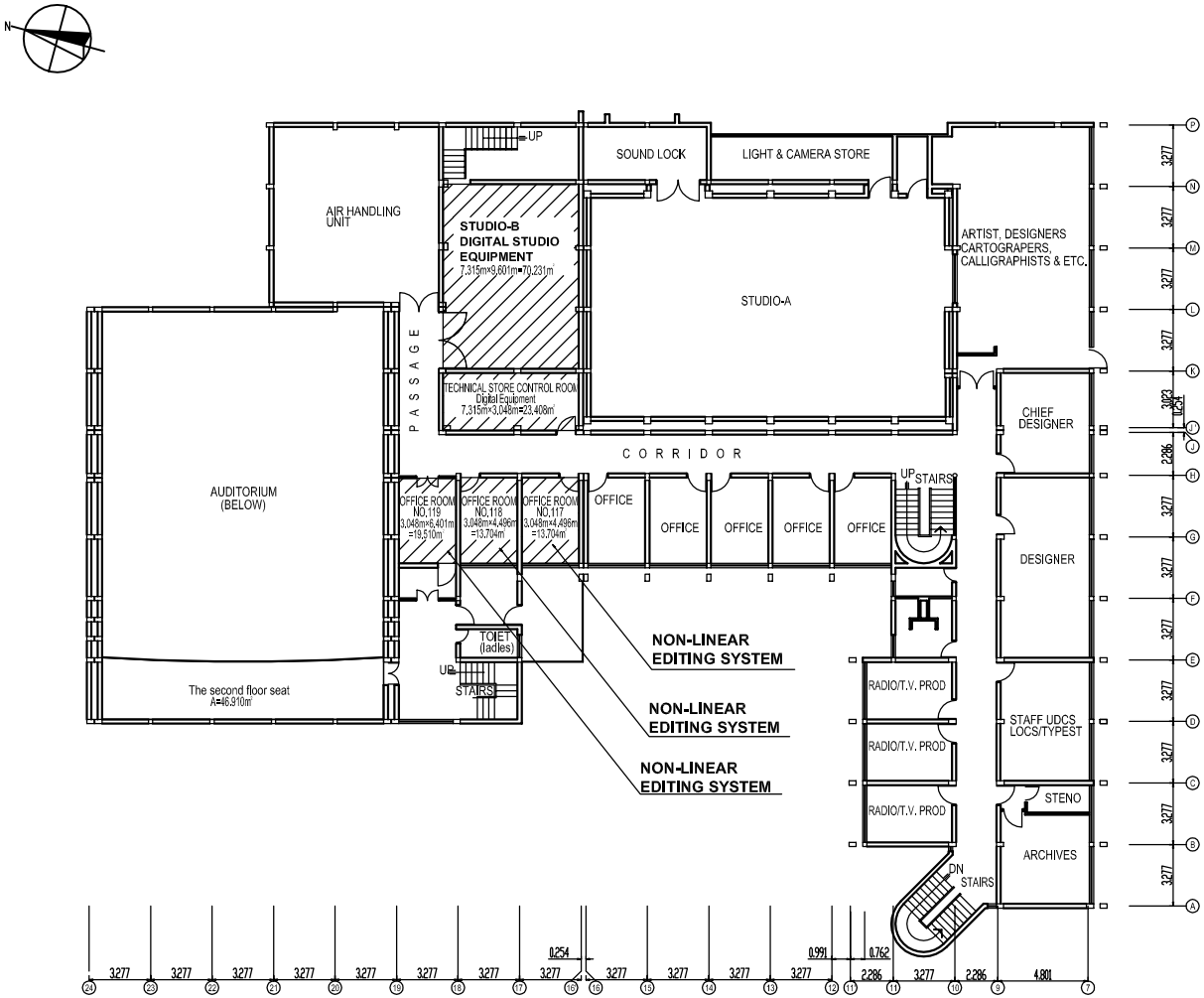
DRAWING TITLE: **IET GROUND FLOOR KEY PLAN**

SCALE: 1/400

DATE:

DWG. NO: E-IET-01



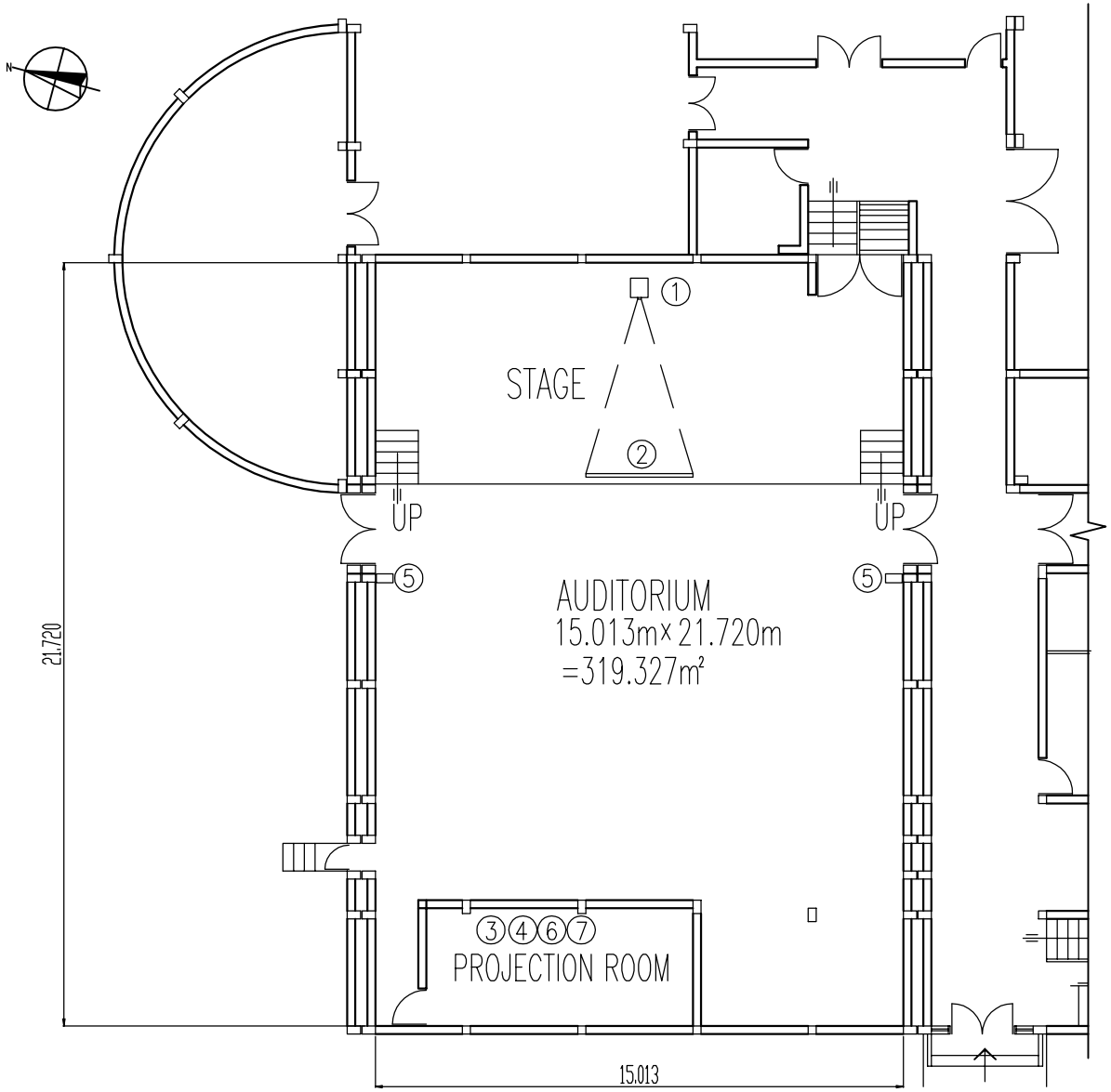
FIRST FLOOR PLAN

Legend

Scope Of Work

Reference DWG.	
DWG. NO.	Drawing Title
E-IET-09	Studio-B & Control System
E-IET-10	Non Linear Editing System

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE IET FIRST FLOOR KEY PLAN	SCALE 1/400 DATE DWG. NO E-IET-02



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
①	I-G-1)-1	Video Projector System	1	Set
②	I-G-1)-2	120Inch Flat Screen	1	Set
③	I-G-1)-3	9Inch Color Monitor	1	Set
④	I-G-1)-4	DVD Player	1	Set
⑤	I-G-2)-1	Speaker System	1	Set
⑥	I-G-2)-2	Wireless Microphone	4	Sets
⑦	I-G-3)-1	Equipment Small Rack	1	Set

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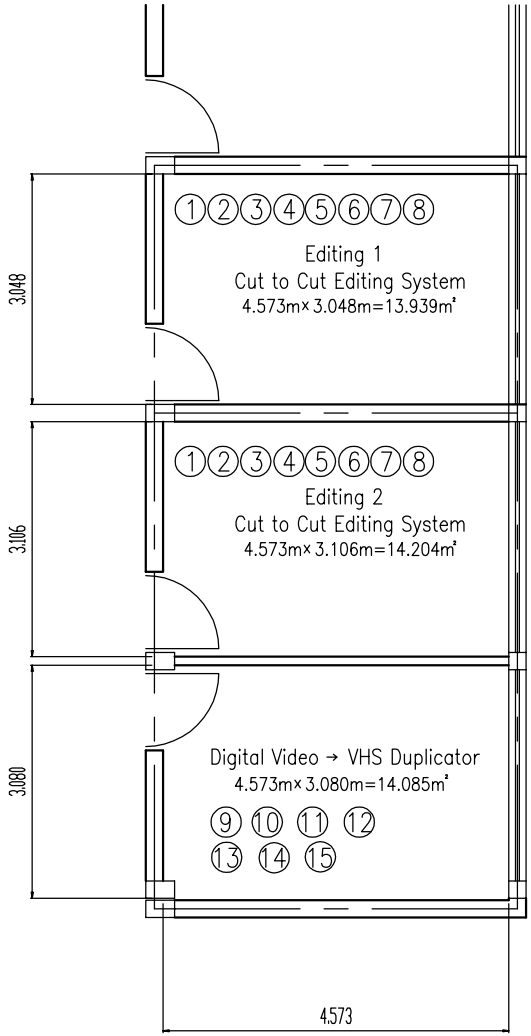
DRAWING TITLE

IET GROUND FLOOR AUDITORIUM

SCALE 1/200

DATE

DWG. NO E-IET-03



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
①	I-B-1)-1	DIgital Video Recorder	2	Sets
②	I-B-1)-2	DIgital Video Player	2	Sets
③	I-B-1)-3	Editor	2	Sets
④	I-B-2)-1	14-Inch Color Monitor	4	Sets
⑤	I-B-2)-2	Monitor Speaker System	2	Pair
⑥	I-B-2)-3	Headphone	2	Sets
⑦	I-B-3)-1	Operation Table	2	Sets
⑧	I-B-4)-1	Connecting Cables	2	Lots
⑨	I-F-1)-1	DigitaL VIdeo Recorder	1	Set
⑩	I-F-1)-2	VHS VTR	15	Sets
⑪	I-F-1)-3	Control Panel	1	Lot
⑫	I-F-1)-4	Sequential Switcher	2	Sets
⑬	I-F-2)-1	14Inch VIdeo Monitor	1	SET
⑭	I-F-2)-2	Rack Mount Monitor Speaker	1	SET
⑮	I-F-3)-1	Equipment Rack	1	SET

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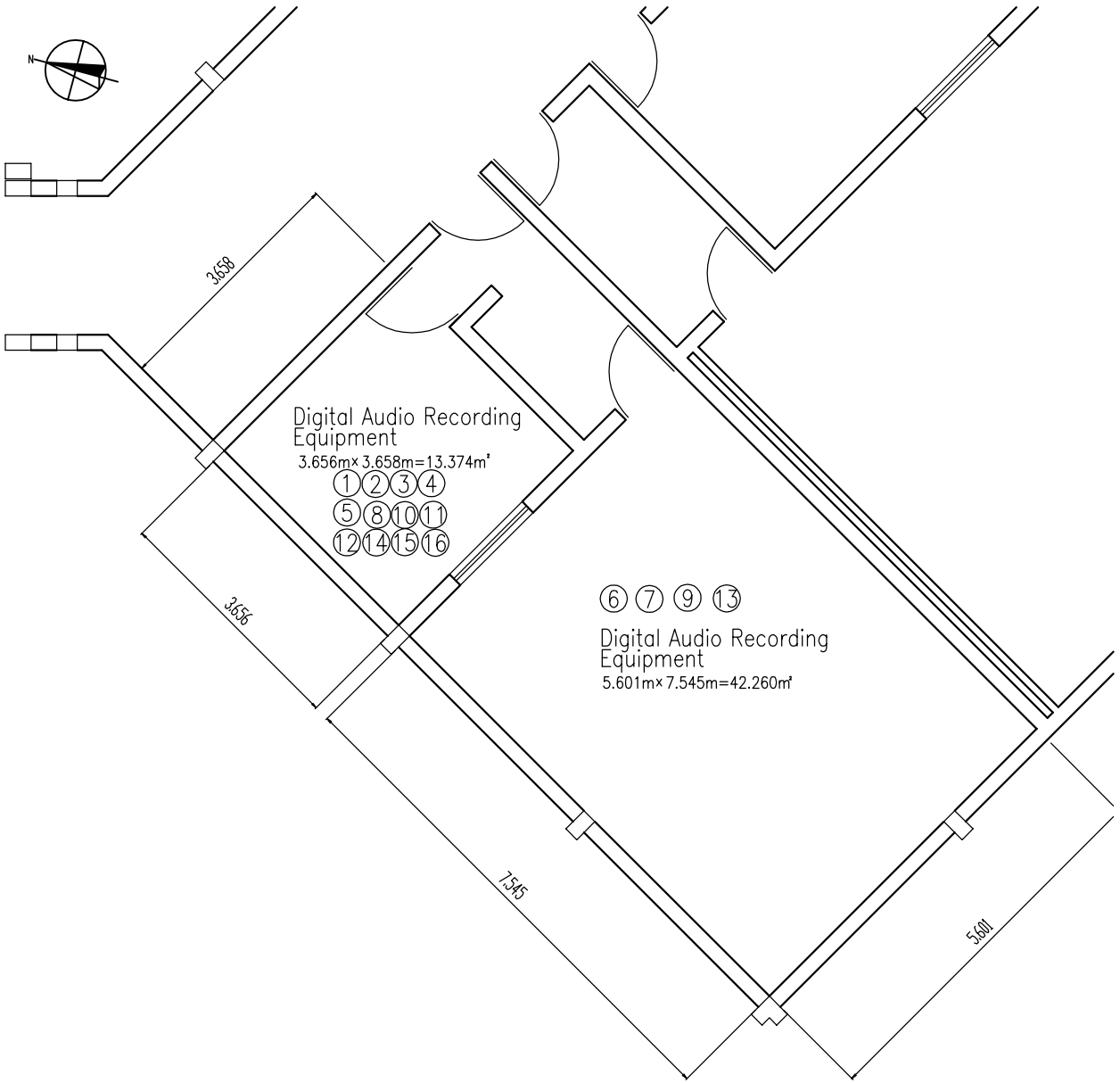
DRAWING TITLE
IET
GROUND FLOOR
EDITING & DUPLICATION SYSTEM

SCALE 1/100
DATE
DWG. NO E-IET-04



Equipment Supply List

S. No.	Equip. No.	Equipment Name	Q'ty	Unit
①	I-E-1)-1	DIgital Non-Linear Editing System	1	Set
②	I-E-1)-2	Audio Mixer	1	Set
③	I-E-1)-3	Audio Effecter	1	Lot
④	I-E-1)-4	CD RW Recorder	1	Set
⑤	I-E-1)-5	Tape Recorder	1	Set
⑥	I-E-1)-6	Microphone	1	Lot
⑦	I-E-1)-7	Microphone Stand	1	Lot
⑧	I-E-2)-1	Control Room Monitor Speaker	1	Set
⑨	I-E-2)-2	Studio Speaker	1	Set
⑩	I-E-2)-3	TB Monitor	1	Lot
⑪	I-E-2)-4	Headphone	2	Sets
⑫	I-E-3)-1	Jack Panel	1	Set
⑬	I-E-3)-2	Studio Connector Panel	1	Set
⑭	I-E-4)-1	Announce Cough Box System	1	Set
⑮	I-E-5)-1	Operation Table	1	Set
⑯	I-E-5)-2	Mini Rack	1	Lot

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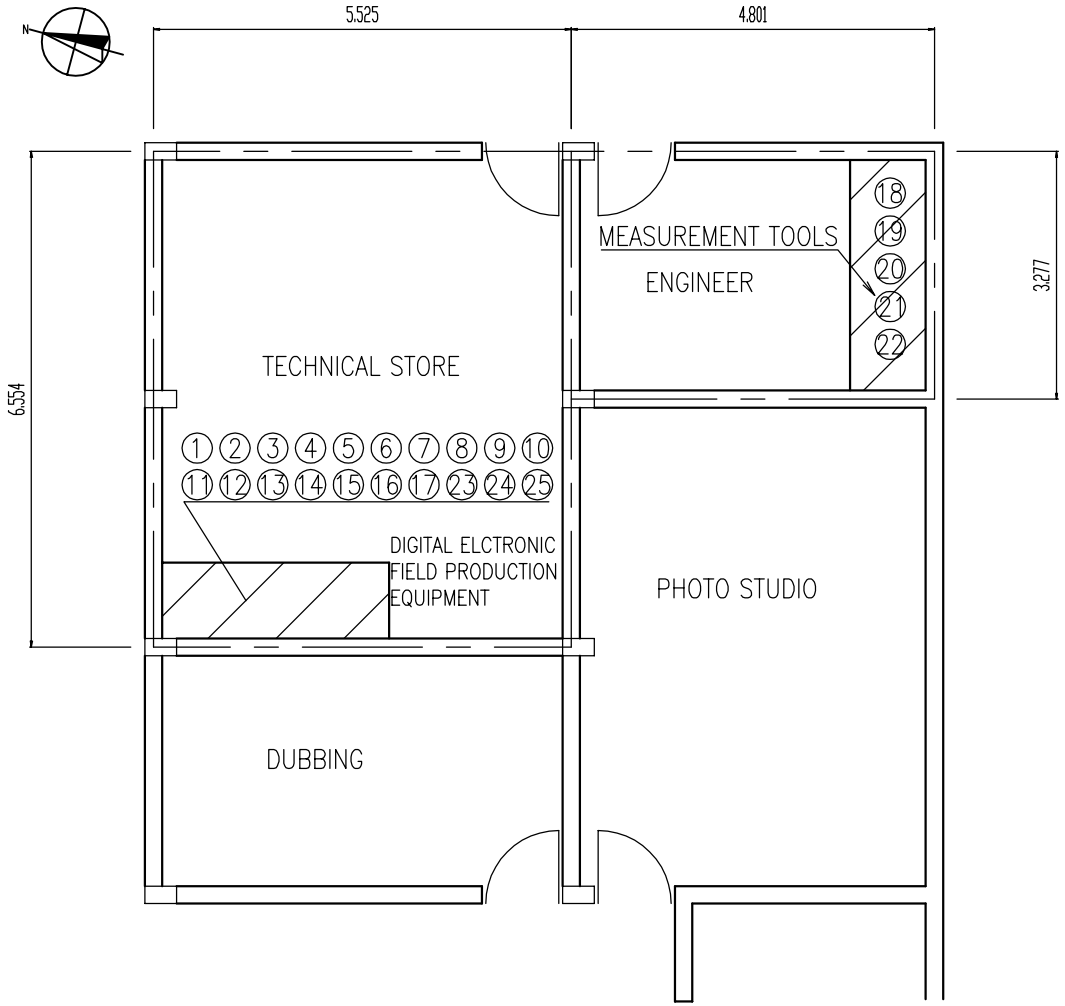
DRAWING TITLE
IET
GROUND FLOOR
DIGITAL AUDIO RECORDING SYSTEM

SCALE 1/100
DATE
DWG. NO E-ITE-05



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	I-D-1)-1	Portable Camcorder	2	Sets
2	I-D-1)-2	22X Zoom Lens	2	Sets
3	I-D-1)-3	Cam Light Set	2	Sets
4	I-D-1)-4	Reflecting Board (M,L)	2	Pair
5	I-D-1)-5	Rechargeable Battery Pack	10	Sets
6	I-D-1)-6	Battery Charger	2	Sets
7	I-D-1)-7	AC Power Adapter	2	Sets
8	I-D-1)-8	Tripod	2	Sets
9	I-D-2)-1	Portable Mixer	2	Sets
10	I-D-2)-2	Wireless Microphone	2	Sets
11	I-D-2)-3	Wireless Receiver	2	Sets
12	I-D-2)-4	Gun Microphone	2	Sets
13	I-D-3)-1	Color Monitor	2	Sets
14	I-D-4)-1	Battery Lighting Kit	2	Sets
15	I-D-4)-2	Portable Lighting Kit	2	Sets
16	I-D-5)-1	Connecting & AC Power Cable	2	Sets
17	I-I-1)-1	DIgital Phosphor Oscilloscope	1	Set
18	I-I-1)-2	Vector Scope	1	Set
19	I-I-1)-3	Multiformat VIdeo Generator	1	Set
20	I-I-1)-4	Audio Measuring/Analyzer	1	Set
21	I-I-1)-5	Tool Set	1	Lot
22	I-J-1)-1	DIgital VIdeo Tape	1	Lot
23	I-J-1)-2	CD-RW	1	Lot
24	I-J-1)-3	DVD	1	Lot

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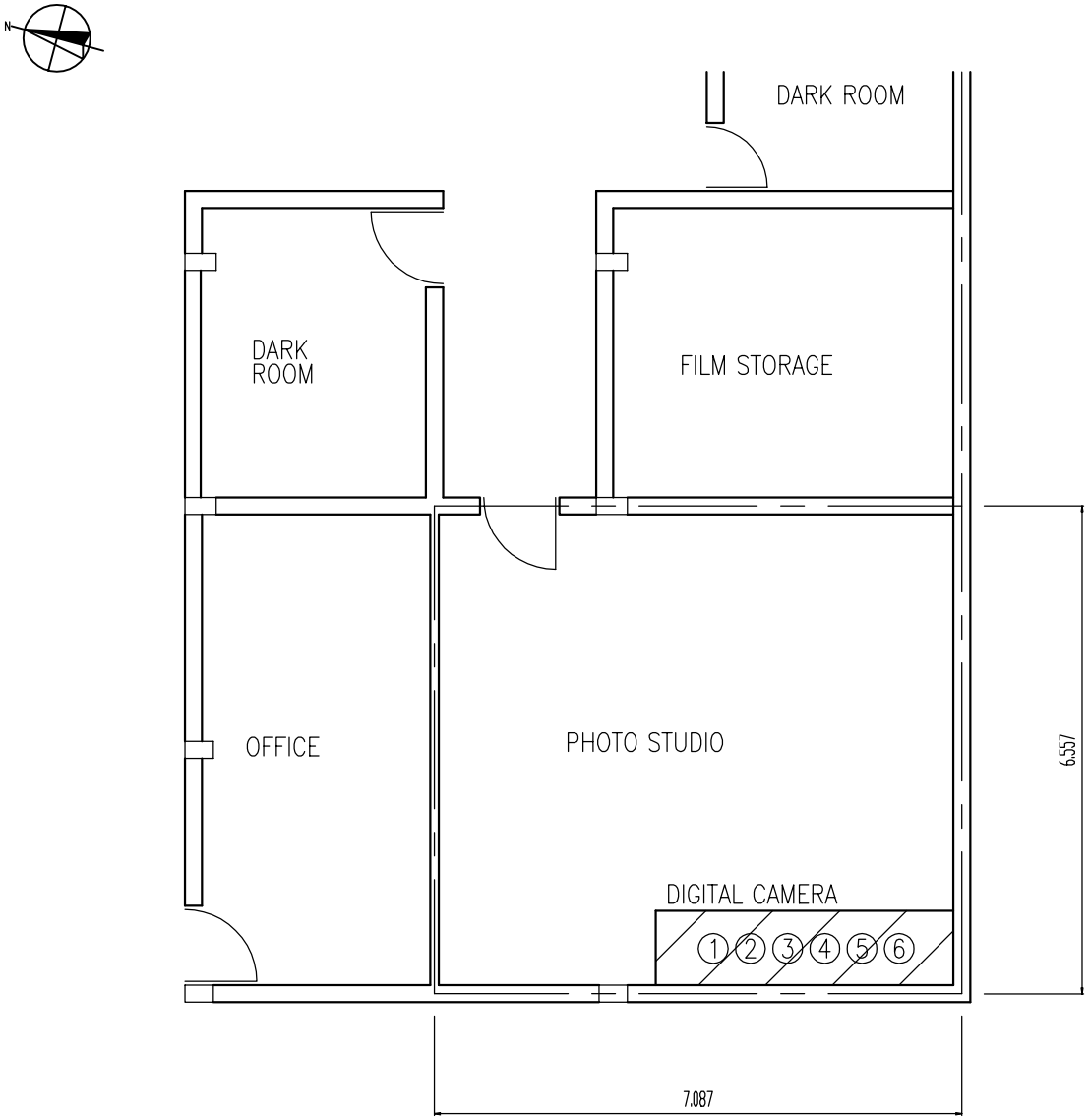
DRAWING TITLE
IET GROUND FLOOR TECHNICAL STORE

SCALE 1/100
DATE
DWG. NO E-IET-06



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	I-H-1)-1	11 Mega Pixel Digital Camera	1	Set
2	I-H-1)-2	6.3 Mega Pixel Digital Camera	1	Set
3	I-H-2)-1	Standard Lens	2	Sets
4	I-H-2)-2	Telephoto Zoom Lens	2	Sets
5	I-H-2)-3	Macro Lens	2	Sets
6	I-H-3)-1	Accessory	2	Sets

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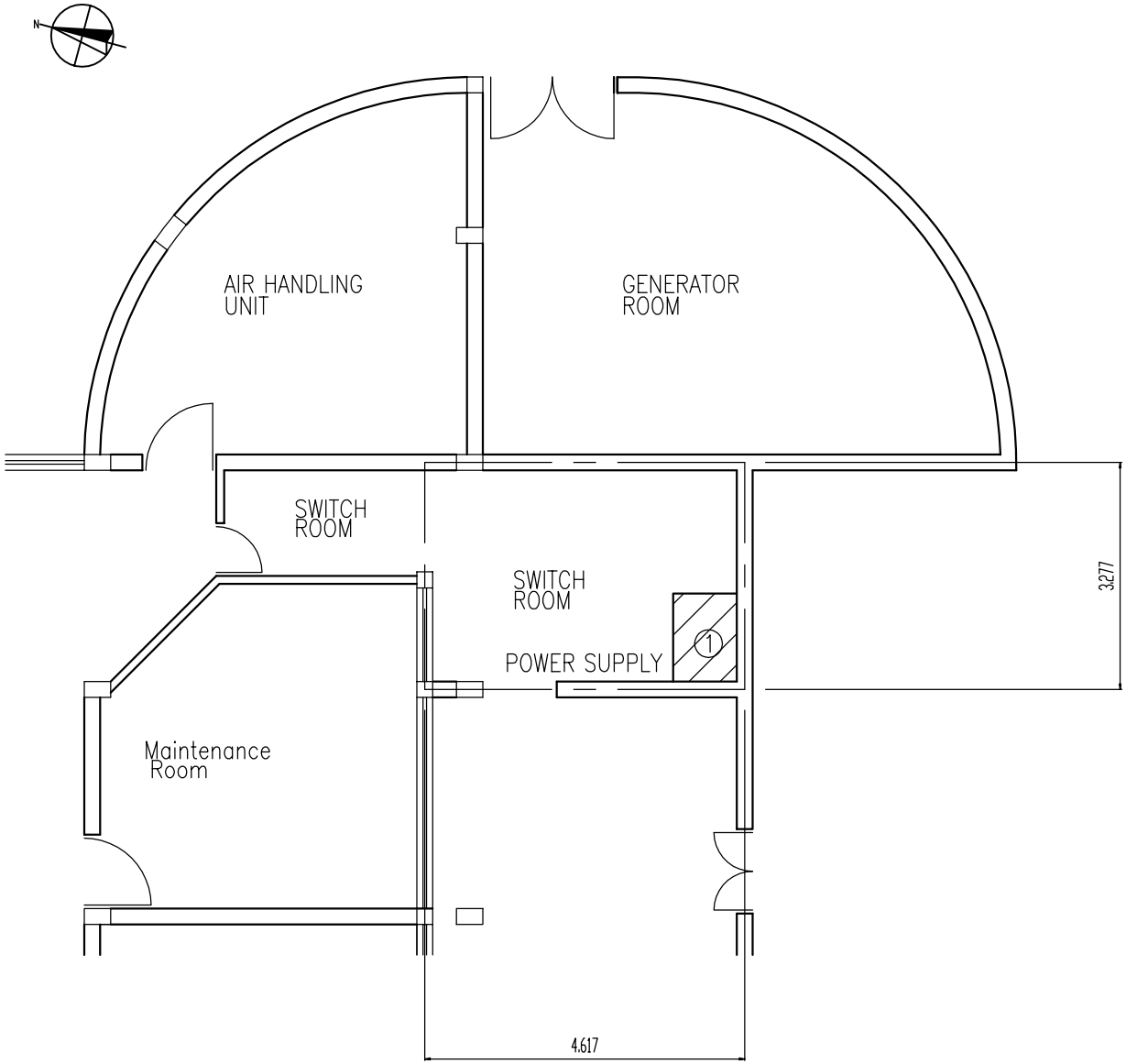
DRAWING TITLE
IET
GROUND FLOOR
PHOTO STUDIO

SCALE 1/100
DATE
DWG. NO E-IET-07

Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	I-K-1)	AVR	1	Set



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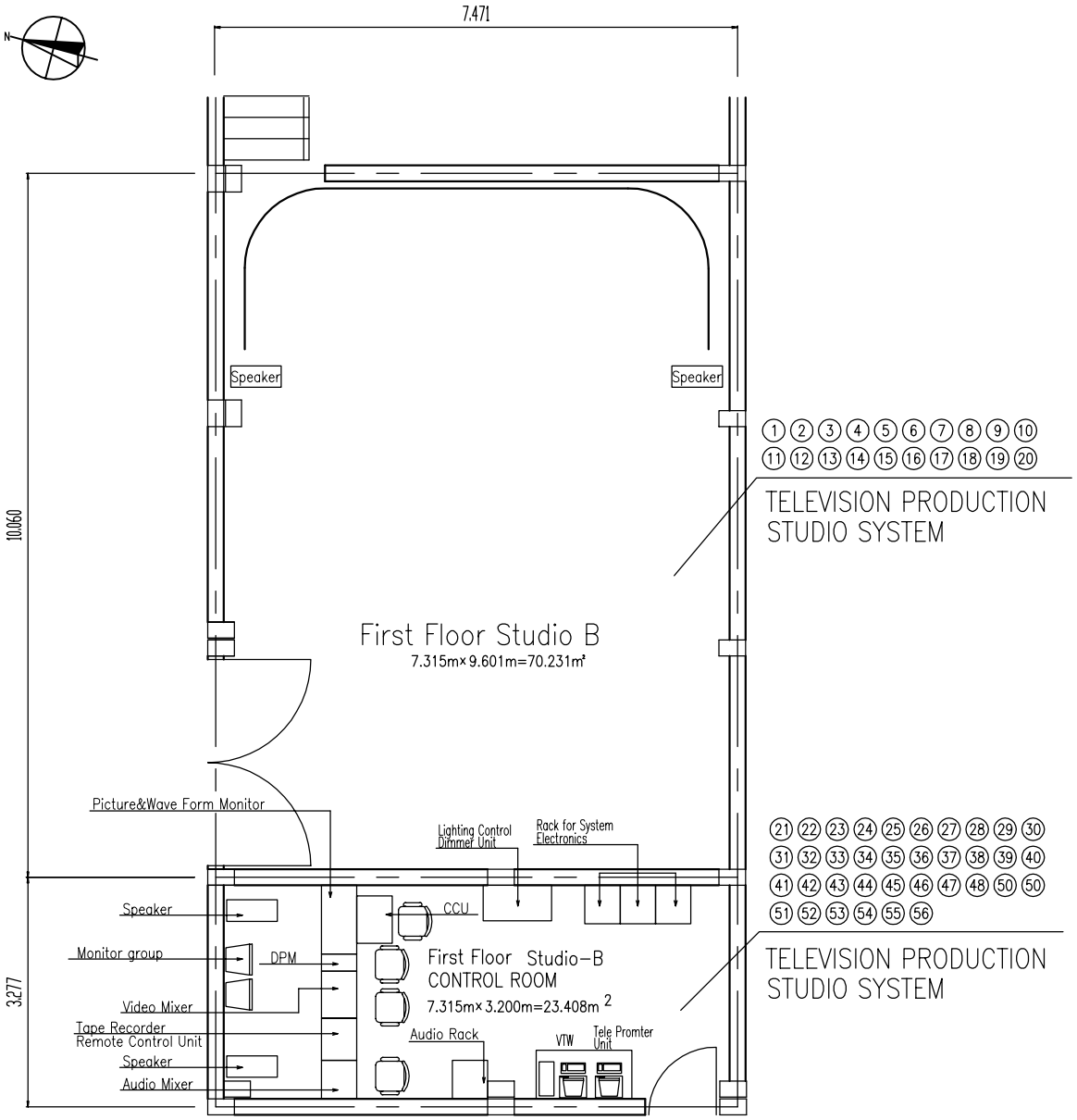
DRAWING TITLE

IET GROUND FLOOR SWITCH ROOM

SCALE 1/100

DATE

DWG. NO E-IET-08



Equipment Supply List

S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	I-A-1)-1	Studio Color Camera System	3	Sets
2	I-A-1)-2	17X Zoom Lens	3	Sets
3	I-A-1)-3	Camera Pedestal	2	Sets
4	I-A-1)-4	Prompter System	1	Set
5	I-A-1)-5	Camera Pedestal For Prompter System	1	Set
6	I-A-1)-8	Test Chart Set With Stand	1	Set
7	I-A-2)-10	Dynamic Microphone	4	Sets
8	I-A-2)-11	Microphone Stand	1	Lot
9	I-A-2)-12	Wireless Microphone	4	Sets
10	I-A-2)-13	Microphone Connector Panel & Cable	1	Lot
11	I-A-2)-16	Studio Monitor Speaker System	1	Set
12	I-A-3)-7	20Inch Floor Color Monitor	2	Sets
13	I-A-6)-1	Tally System	1	Set
14	I-A-6)-2	On-Air Lamp System	1	Set
15	I-A-9)-1	Main Switch Board And Dimmer Rack	1	Set
16	I-A-9)-2	Control Console	1	Set
17	I-A-9)-3	Lighting Equipment	1	Set
18	I-A-9)-4	Cyclorama Curtain System	1	Set
19	I-A-9)-7	Transformer For 50 KVA	1	Set
20	I-A-9)-8	Spare Lamp (300%)	1	Set
21	I-A-1)-6	Script Camera System	1	Set
22	I-A-1)-7	Camera Control Unit	3	Sets
23	I-A-1)-9	Digital Production Switcher	1	Set
24	I-A-1)-10	Digital VIdeo Routing Switcher	1	Set
25	I-A-1)-11	Digital Video Recorder	2	Sets
26	I-A-1)-12	VIdeo Interface Unit	1	Set
27	I-A-1)-13	Character Generator	1	Set
28	I-A-1)-14	Video Jack Panel	1	Lot
29	I-A-1)-15	Camera Connector Panel	1	Set
30	I-A-2)-1	Audio Mixer	1	Set
31	I-A-2)-2	Cassette Tape Recorder	1	Set
32	I-A-2)-3	CD Player	1	Set
33	I-A-2)-4	Digital Delay	1	Set
34	I-A-2)-5	Multi Effect Processor	1	Set
35	I-A-2)-6	Rack Mount Monitor Speaker	2	Sets
36	I-A-2)-7	Stereo Headphone	2	Sets
37	I-A-2)-8	Impedance Transformer	1	Set
38	I-A-2)-9	Interface Unit	1	Lot
39	I-A-2)-14	Control Room Monitor Speaker System	1	Set
40	I-A-2)-15	Control Room PGM Monitor Speaker System	1	Set
41	I-A-2)-17	Talkback System	1	Set
42	I-A-2)-18	Audio Jack Panel	1	Lot
43	I-A-2)-19	Microphone Storage	1	Set
44	I-A-3)-1	20Inch Color Monitor	2	Sets
45	I-A-3)-2	14Inch VE Monitor	1	Set
46	I-A-3)-3	Color Monitor	10	Sets
47	I-A-3)-4	Analog Waveform Vector Monitor	1	Set
48	I-A-3)-5	Digital Waveform Monitor	1	Set
49	I-A-3)-6	9Inch Color Monitor	2	Sets
50	I-A-4)-1	Sync/Test Signal Generator	1	Set
51	I-A-4)-2	Word Sync Generator	1	Set
52	I-A-4)-3	Word Sync Distributor	1	Set
53	I-A-5)-1	Production Intercom	1	Set
54	I-A-7)-1	Operation Console	1	Set
55	I-A-7)-2	System Rack	3	Sets
56	I-A-7)-3	Mini Rack For Audio Equipment	1	Set

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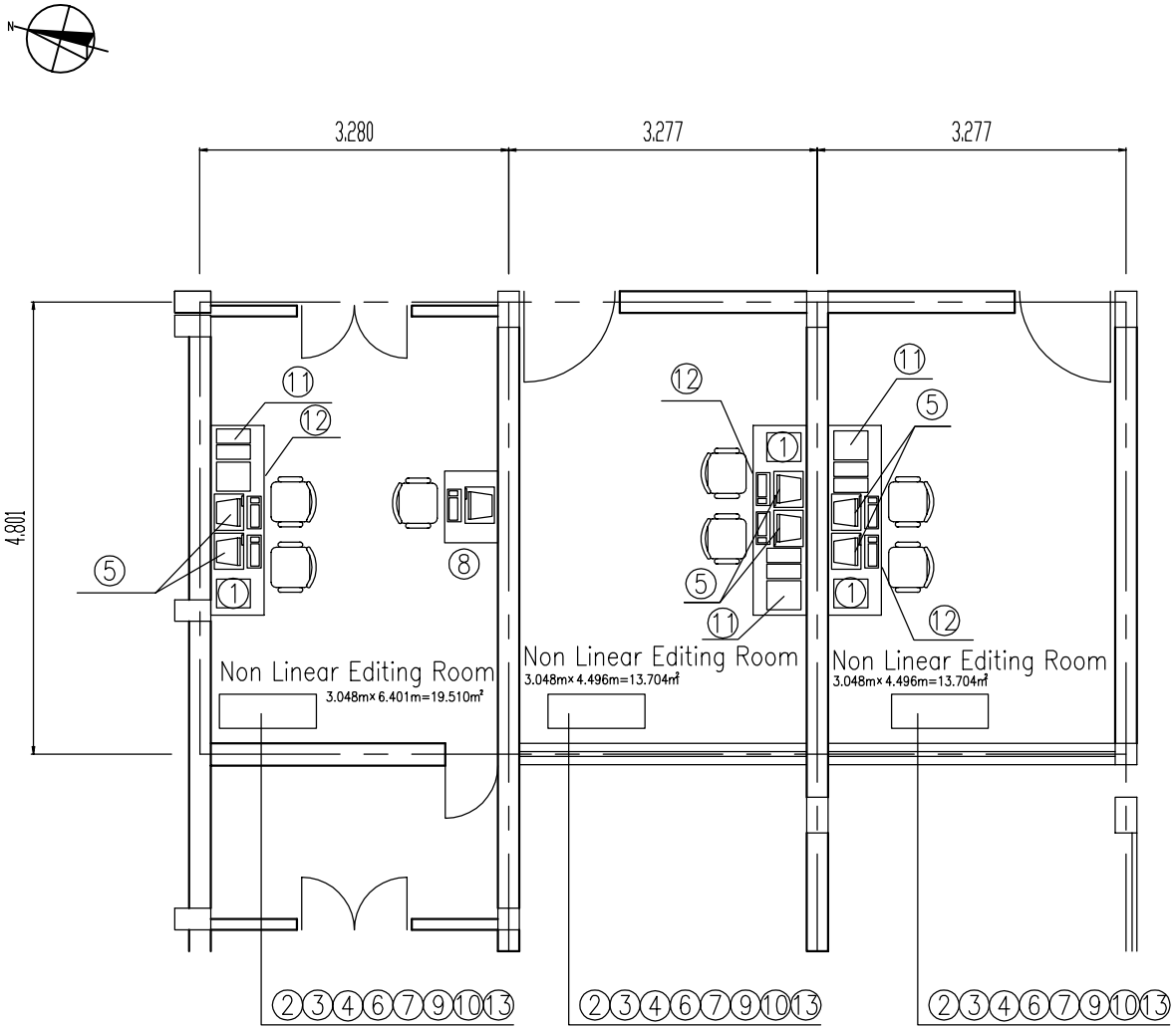
DRAWING TITLE
IET FIRST FLOOR STUDIO-B & CONTROL SYSTEM

SCALE 1/100
DATE
DWG. NO E-IET-09



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	I-C-1)-1	Non-Linear Editing System	3	Sets
2	I-C-1)-2	Digital VIdeo Tape Recorder DV Cam Format	3	Sets
3	I-C-1)-3	Video Tape Player B Cam SP Format	3	Sets
4	I-C-1)-4	Digital Video Tape Recorder DVC Pro Format	3	Sets
5	I-C-1)-5	14Inch Color Monitor	6	Sets
6	I-C-1)-6	Analog Waveform Vector Monitor	3	Sets
7	I-C-1)-7	AV Selector	3	Sets
8	I-C-1)-8	Computer Graphics Work Station	1	Set
9	I-C-2)-1	Cassette Tape Recorder	3	Sets
10	I-C-2)-2	CD Player	3	Sets
11	I-C-2)-3	Rack Mount Monitor Speaker	3	Sets
12	I-C-3)-1	Operation Table	3	Sets
13	I-C-4)-1	System Rack	3	Sets

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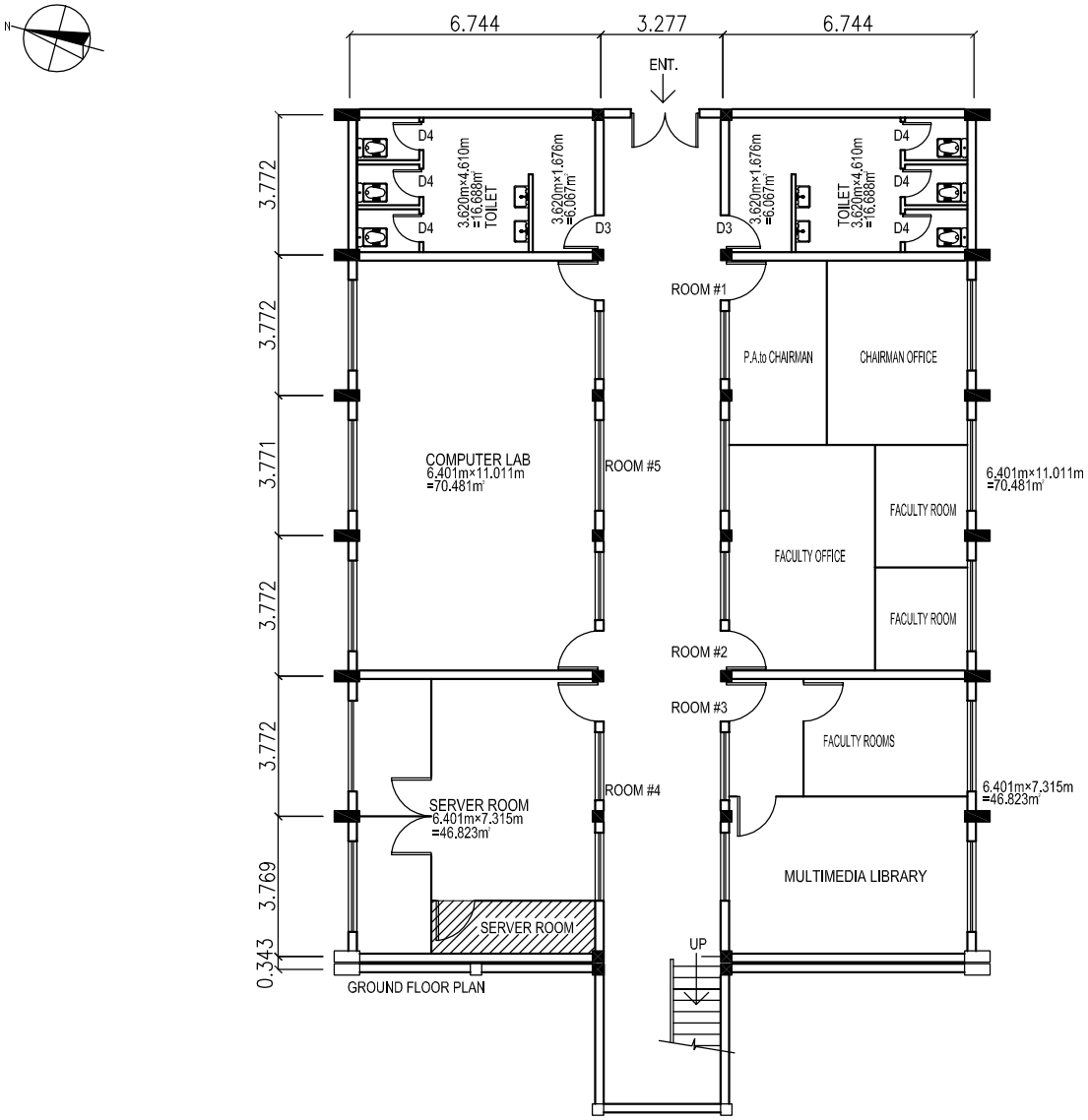
THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE
IET
FIRST FLOOR
NON LINEAR EDITING SYSTEM

SCALE 1/80
DATE
DWG. NO E-IET-10



GROUND FLOOR PLAN

Legend

Scope Of Work

Reference DWG.	
DWG. No.	Drawing Title
E-MEC-03	Server Room

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DRAWING TITLE

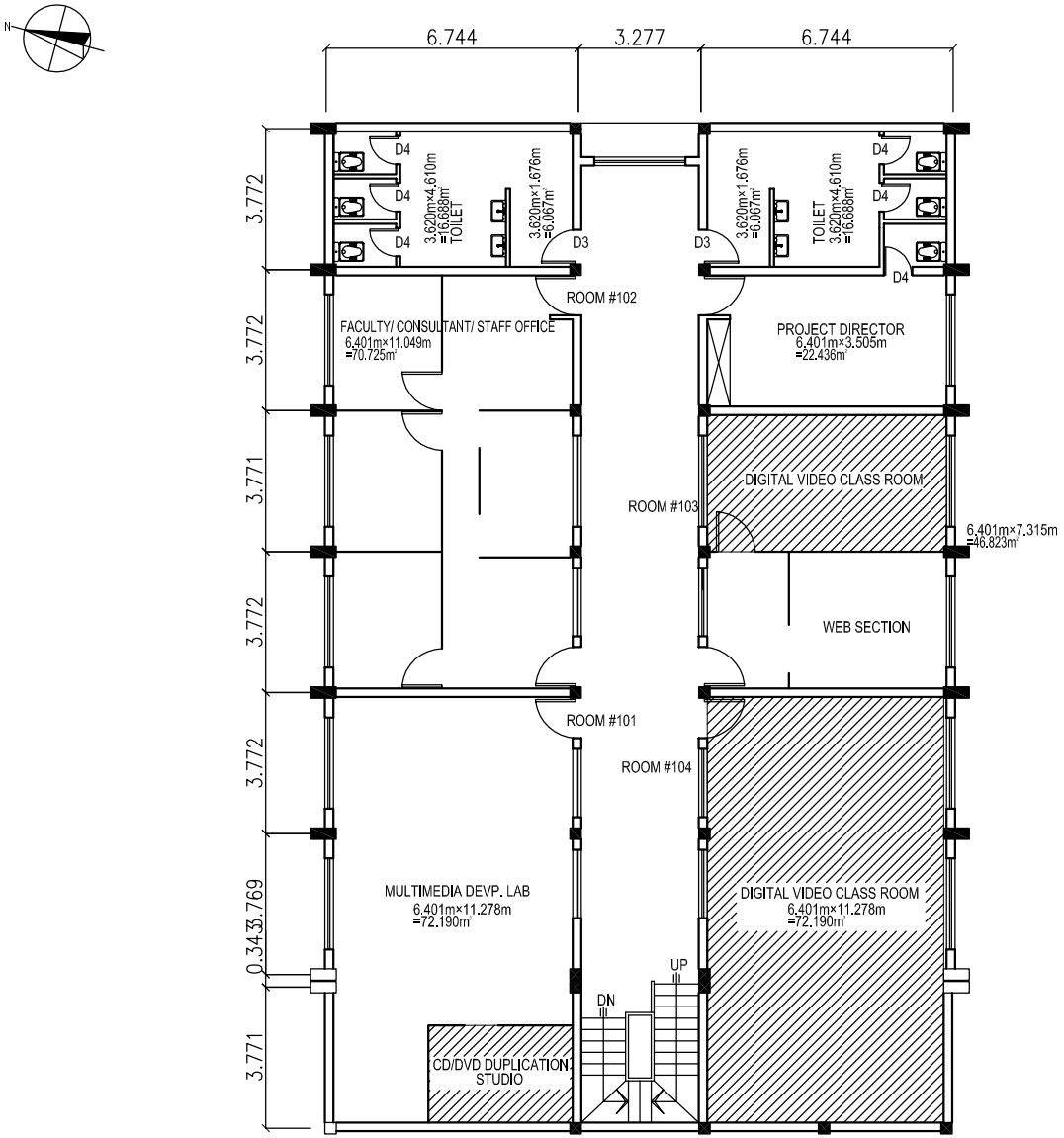
MECDC

GROUND FLOOR KEY PLAN

SCALE 1/200

DATE

DWG. NO E-MEC-01



Legend

Scope Of Work

Reference DWG.	
DWG. No.	Drawing Title
E-MEC-04	CD/DVD Duplication Studio
E-MEC-05	Digital Video Editing
E-MEC-06	Digital Video Class Room

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DRAWING TITLE

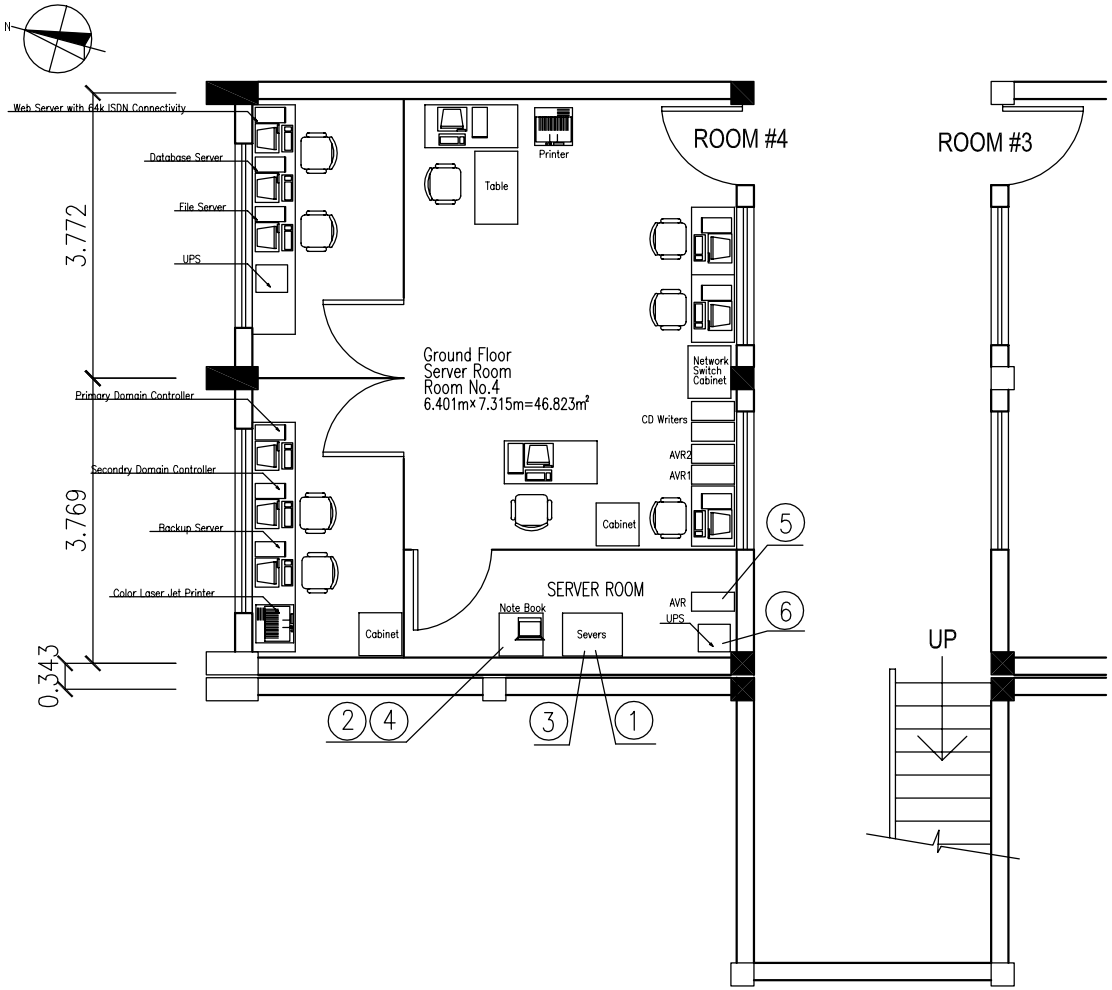
MECDC

FIRST FLOOR KEY PLAN

SCALE 1/200

DATE

DWG. NO E-MEC-02



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	M-A-1)	Streaming Server	2	Sets
2	M-A-10)	Note Book Computer For System Administrator	1	Set
3	M-A-6)	Network Switch	1	Set
4	M-A-9)	Laser Printer B/W-Heavy Duty (Network)	1	Set
5	M-A-7)	AVR(10KVA)	1	Set
6	M-A-8)	UPS(10KVA)	1	Set

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THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

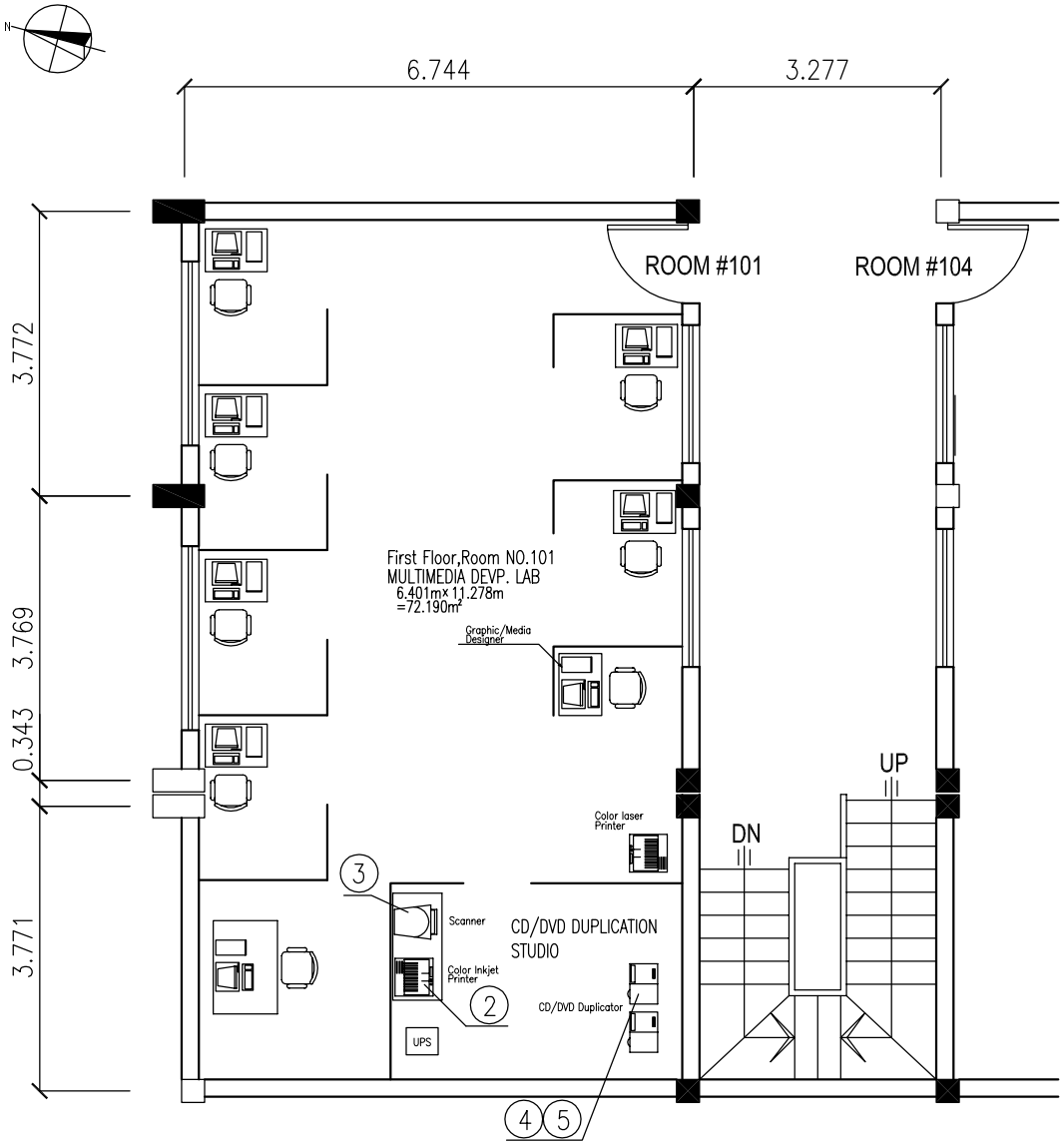
DRAWING TITLE

MECDC GROUND FLOOR SERVER SYSTEM

SCALE 1/100

DATE

DWG. NO E-MEC-03



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	M-E-1)	Computer With 17" Flat Screen (LCM-D)	1	Set
2	M-E-2)	Color Inkjet Printer	1	Set
3	M-E-3)	Scanner	1	Set
4	M-E-4)	CD/DVD Duplicator(100 Disc Capacity)	2	Sets
5	M-E-5)	CD/DVD Color Printer	1	Set

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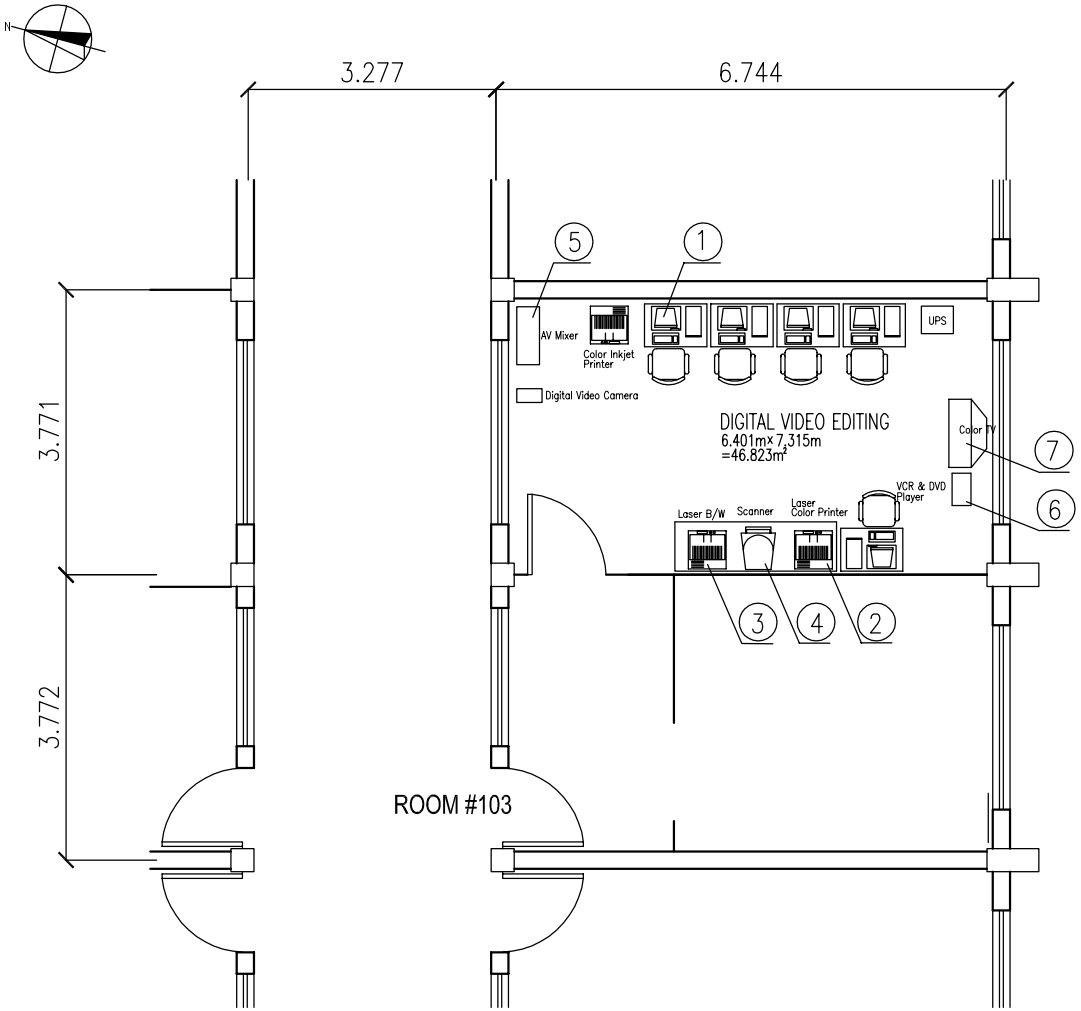
THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE
MECDC
FIRST FLOOR
CD/DVD DUPLICATION SYSTEM

SCALE 1/100
DATE
DWG. NO E-MEC-04



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	M-C-1)	Computer For Graphic Works With 17" Flat Screen	5	Sets
2	M-C-6)	Color Network Printer	1	Set
3	M-C-7)	B/W Network Printer	1	Set
4	M-C-9)	Scanner	1	Set
5	M-C-14)	A/V Mixer	1	Set
6	M-C-13)	VHS Tape Recorder	1	Set
7	M-C-5)	29-Inch Color TV Monitor	1	Set

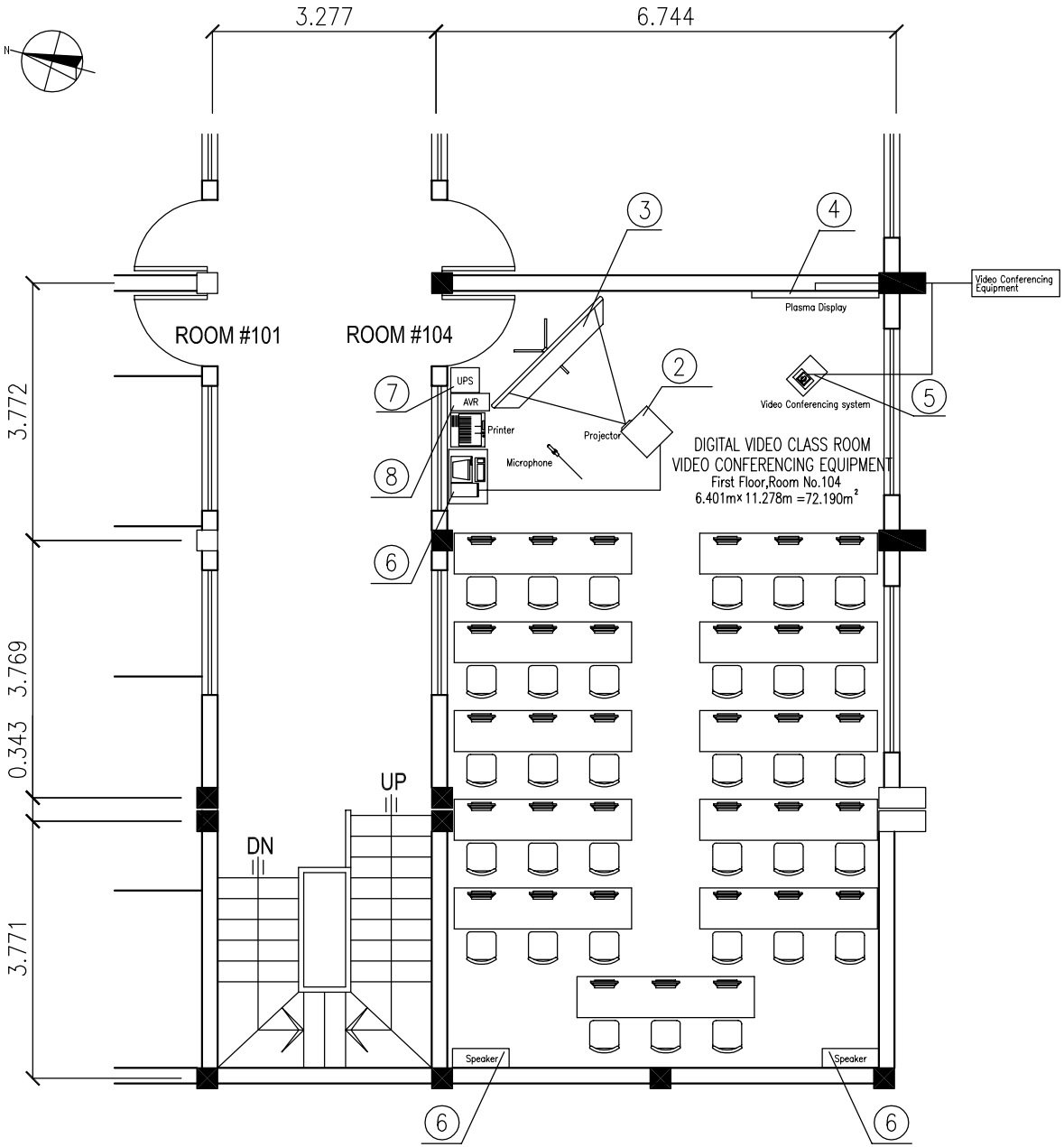
O.P.C. CORPORATION

Japan International Cooperation Agency

THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE
MECDC
FIRST FLOOR
DIGITAL VIDEO EDITING SYSTEM

SCALE 1/100
DATE
DWG. NO E-MEC-05



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	M-B-1)	Computer With 17-Inch Display	33	Sets
2	M-B-4)	Multimedia Projector 2000Lumens	1	Set
3	M-B-5)	Portable 120-Inch Screen	1	Set
4	M-B-2)	42-Inch Plasma Display Screen	1	Set
5	M-F-1)	Video Conferencing Eqipment	5	Sets
6	M-B-9)	PA System	1	Set
7	M-B-7)	UPS (10KVA)	1	Set
8	M-B-8)	AVR (10KVA)	1	Set

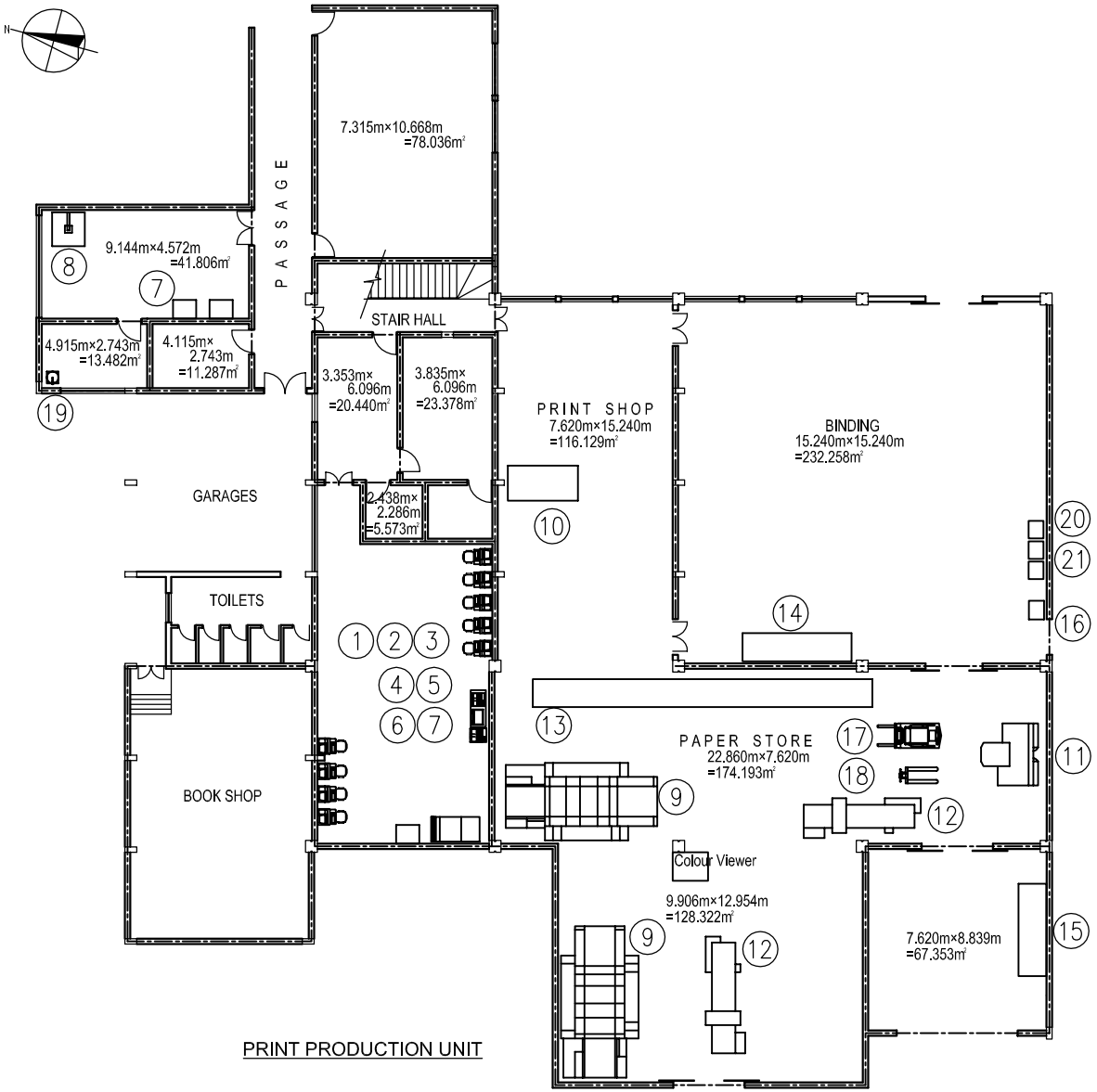
O.P.C. CORPORATION

Japan International Cooperation Agency

THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE
MECDC
FIRST FLOOR
DIGITAL VIDEO STUDY SYSTEM

SCALE 1/100
DATE
DWG. NO E-MEC-06



PRINT PRODUCTION UNIT

Equipment Supply List

S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	P-A-1)-1	Compatible Machine With Monitor	8	Sets
2	P-A-2)-1	Color Laser Printer	1	Set
3	P-A-3)-1	Monochrome Laser Printer	1	Set
4	P-A-4)-1	Computer For Image Setter	1	Set
5	P-A-5)-1	Scanner	1	Set
6	P-B-1)-1	Image Setter + Online Film Processor Main Body	1	Set
7	P-B-2)-1	Light Table	3	Sets
8	P-B-3)-1	Vacuum Printer	1	Set
9	P-C-1)-1	2-Color Offset Press A1 Perfector	2	Sets
10	P-C-2)-1	Single Color Offset Press With Numbering & Perforating Machine	1	Set
11	P-D-1)-1	Guillotine Cutter Main Body	1	Set
12	P-D-2)-1	Paper Folding Machine	2	Sets
13	P-D-3)-1	Perfect Binder	1	Set
14	P-D-3)-2	Gathering Machine	1	Set
15	P-D-4)-1	Knife Grinder	1	Set
16	P-D-5)-1	Wire Stitching Machine	1	Set
17	P-E-1)-1	Folk Lift Truck	1	Set
18	P-E-2)-1	Hand Lift	2	Sets
19	P-E-3)-1	Waste-Solution Treatment Equipment	1	Set
20	P-E-4)-1	Automatic Voltage Regulator (50KVA)	2	Sets
21	P-E-4)-2	Automatic Voltage Regulator (30KVA)	1	Set

O.P.C. CORPORATION

Japan International Cooperation Agency

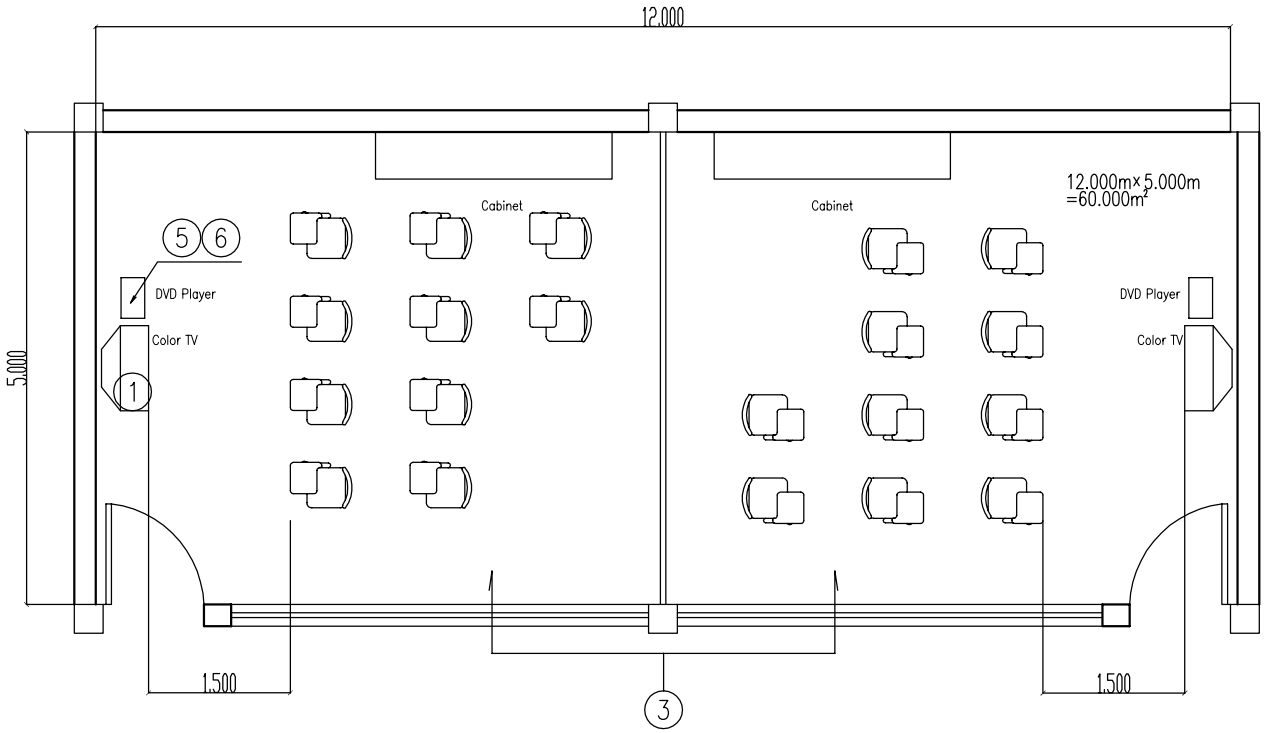
THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE: PRINT PRODUCTION UNIT

SCALE 1/300

DATE

DWG. NO E-PPU-01



Equipment Supply List				
S. No.	Equip. No.	Equipment Name	Q'ty	Unit
1	R-A-1)	29-Inch Television	64	Sets
2	R-A-2)	TV-Antenna	32	Sets
3	R-A-3)	Headphone System	64	Sets
4	R-A-4)	AC Power Consent Plate	64	Sets
5	R-A-5)	CD/DVD Player	64	Sets

O.P.C. CORPORATION

Japan International Cooperation Agency

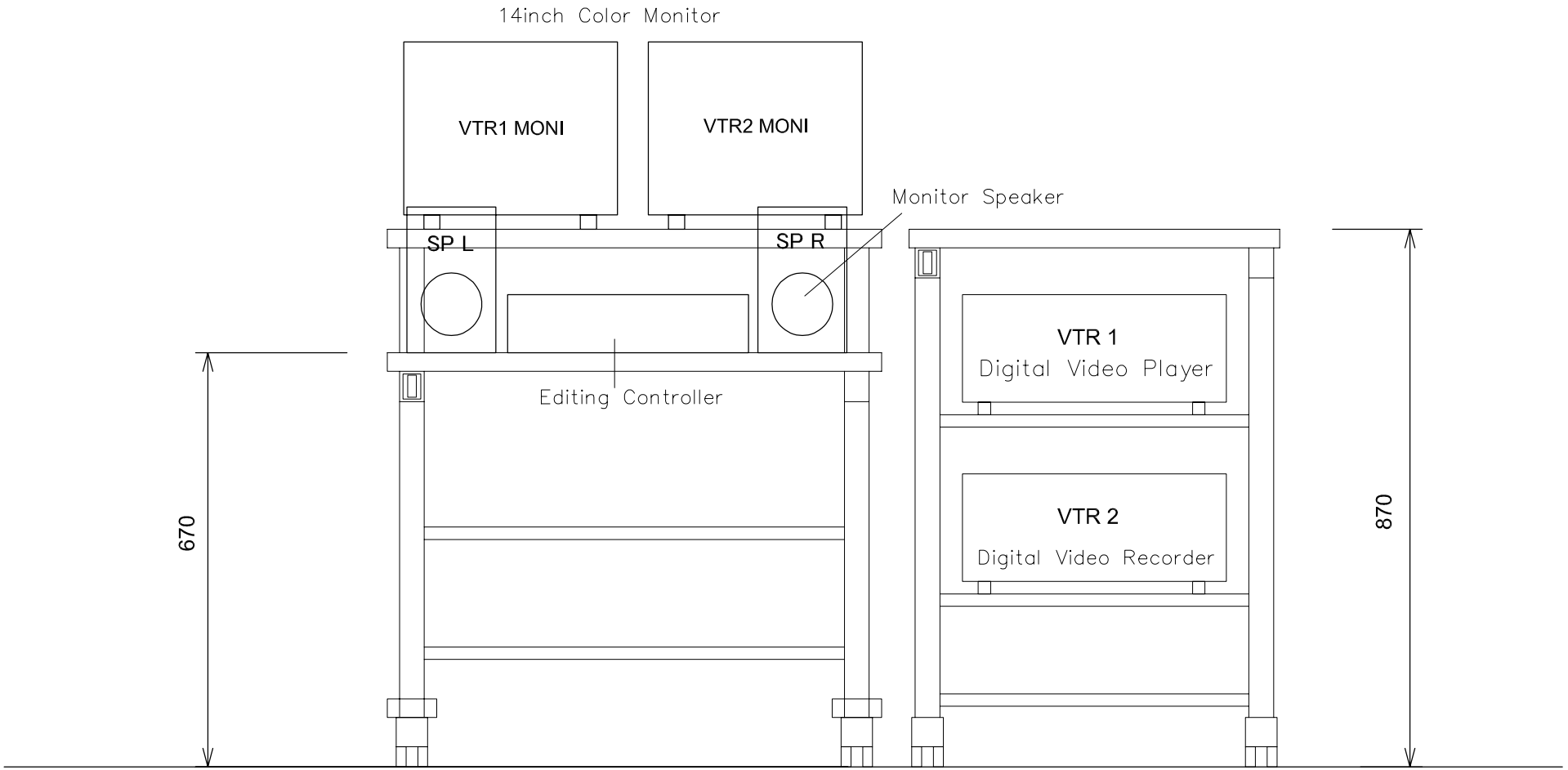
THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE: REGIONAL CAMPUS/ REGIONAL CENTRE

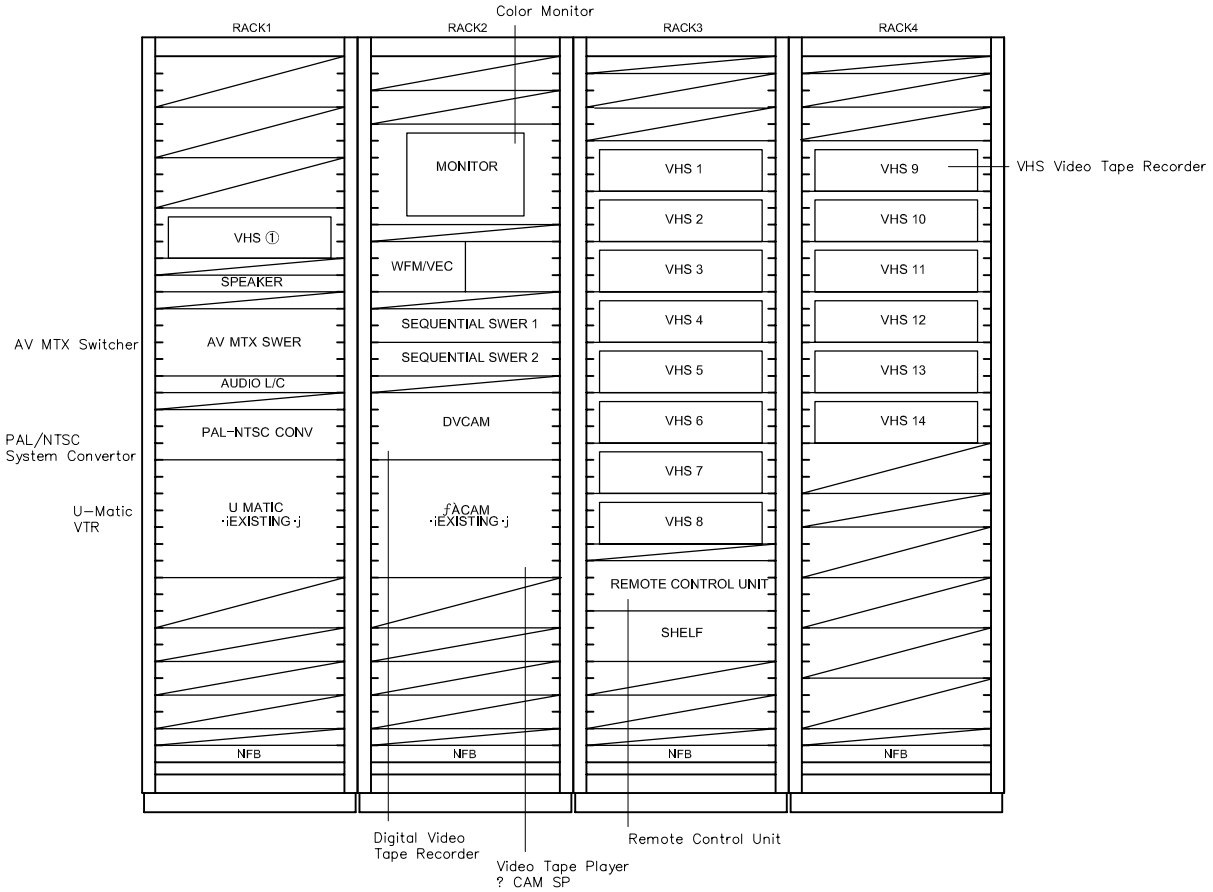
SCALE: 1/80

DATE

DWG. NO: E-RSC-01

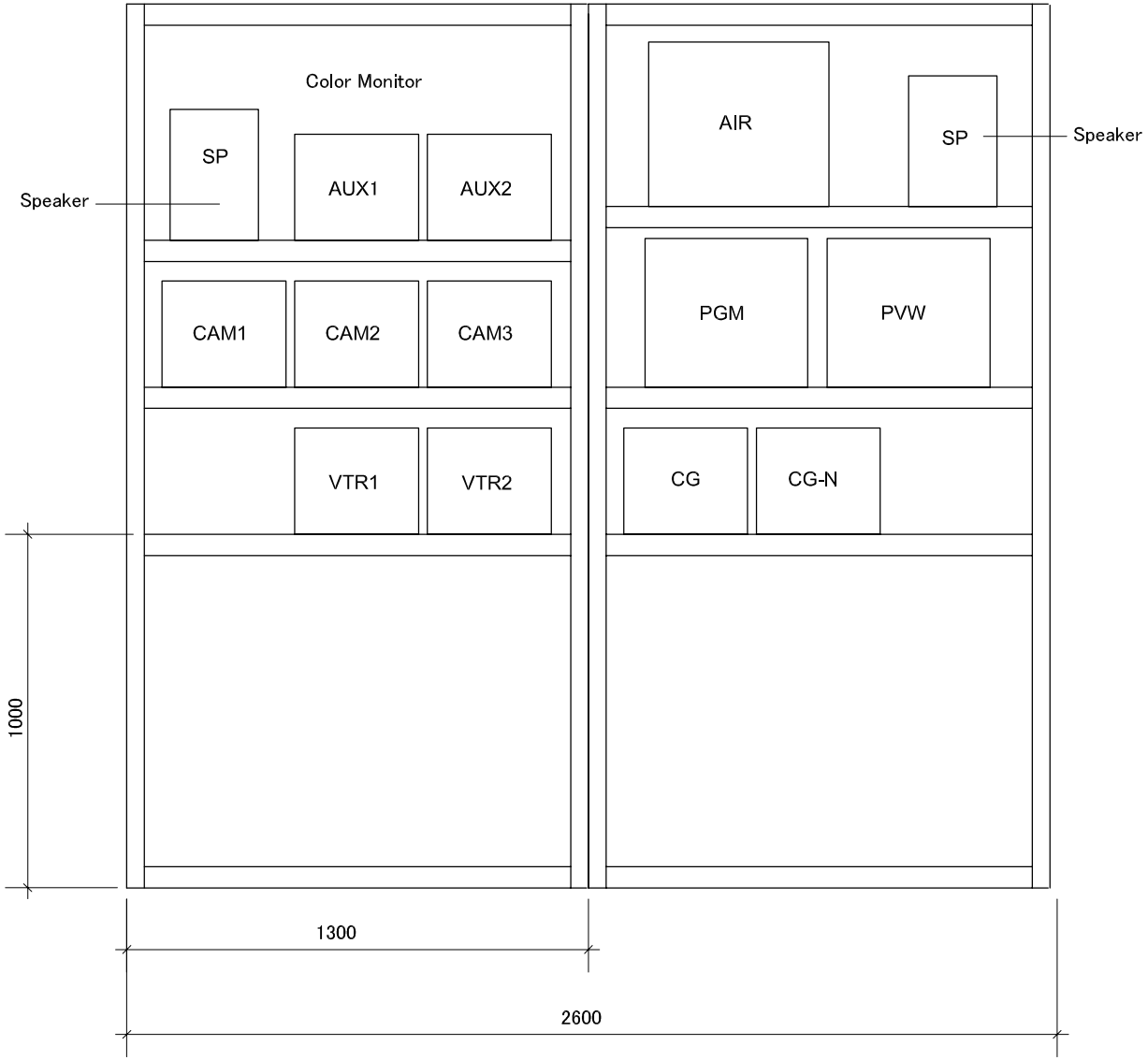


O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Cut to Cut Editing System	SCALE: NON SCALE DATE: DWG. NO: E-IET-11

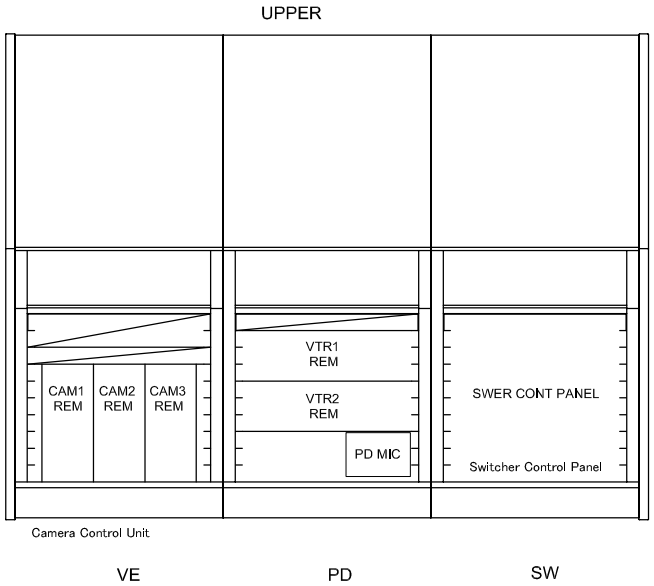


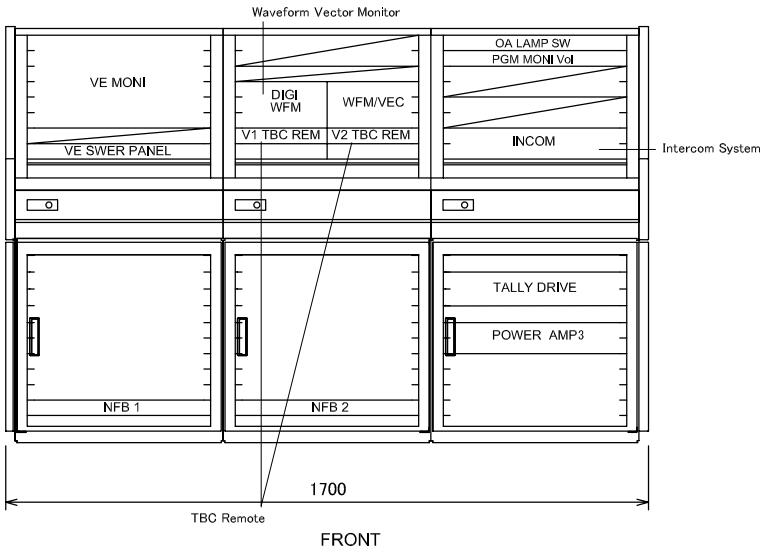
AIOU
DV to VHS Duplicator

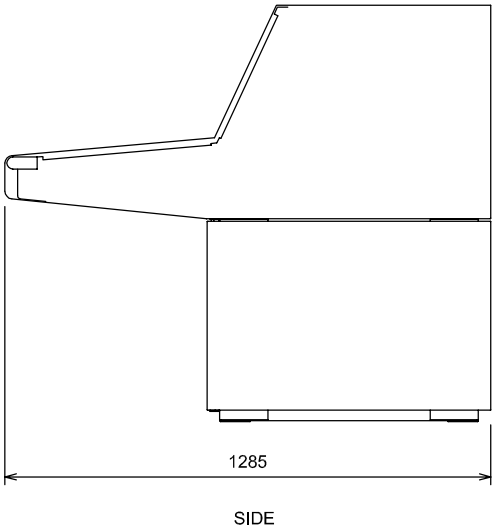
O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Digital Video →VHS Duplicator	SCALE: NON SCALE DATE: DWG. NO: E-IET-12



O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Television Production Studio System(1/3)	SCALE: NON SCALE DATE: DWG. NO: E-IET-13-1

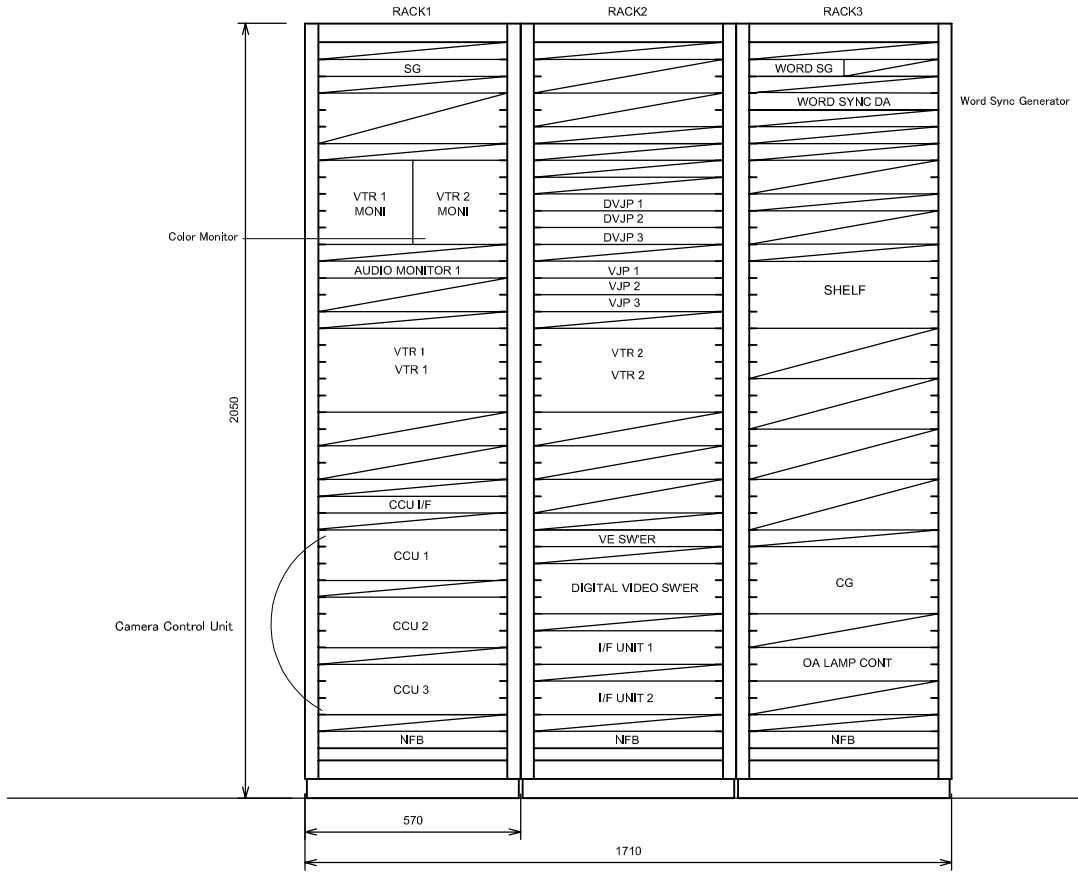


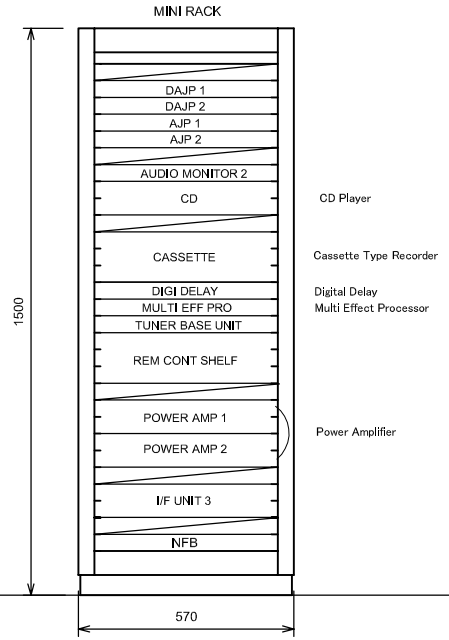




AIOU
SUTADIO B CONSOLE

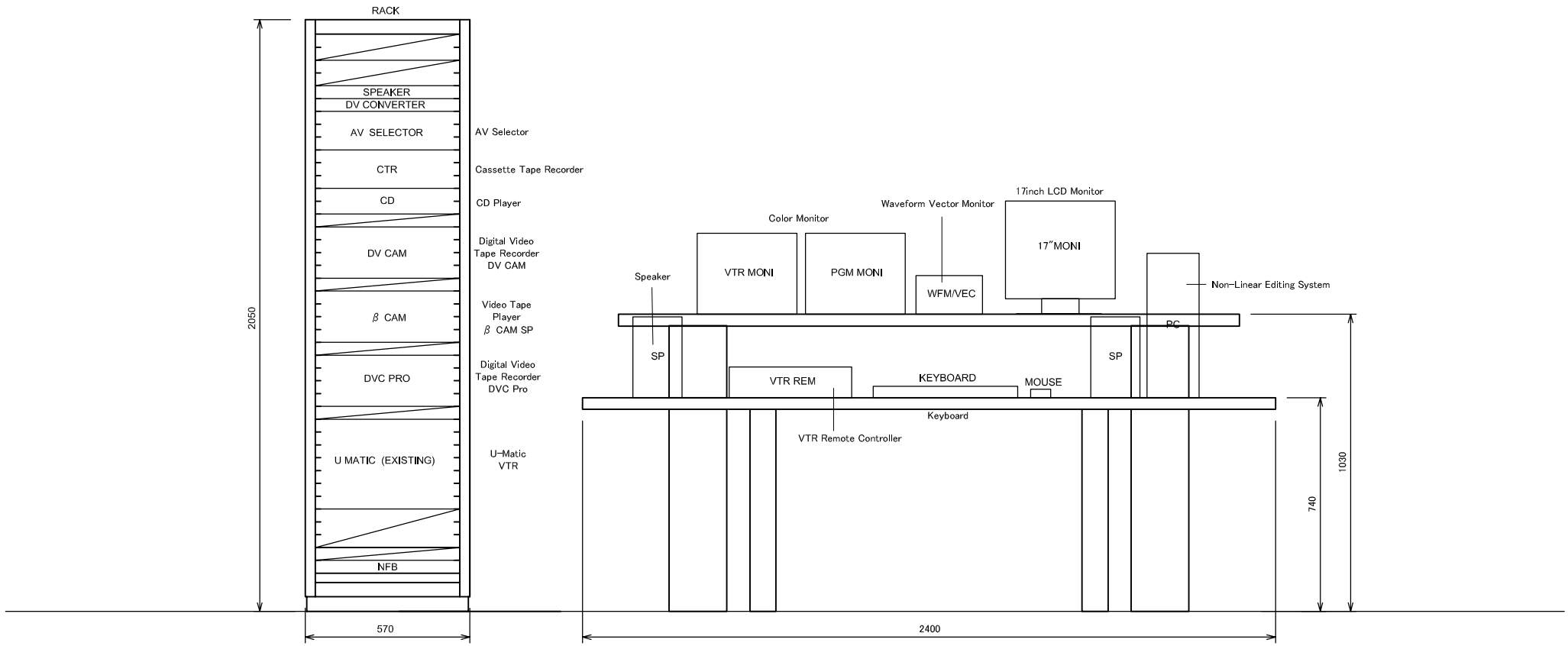
O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE Institute of Educational Technology (IET) Television Production Studio System(2/3)	SCALE NON SCALE DATE DWG. NO E-IET-13-2





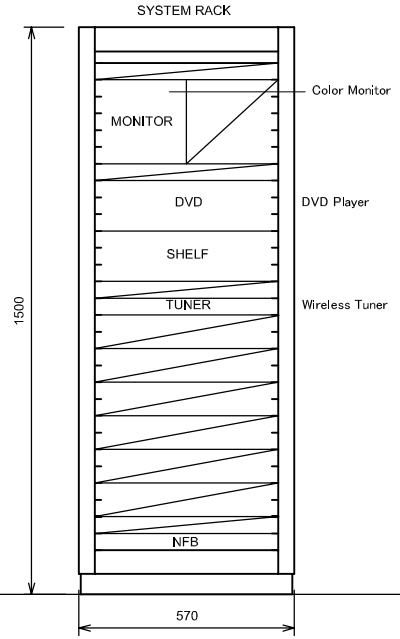
AIOU
STUDIO B SYSTEM RACK

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE Institute of Educational Technology (IET) Television Production Studio System(3/3)	SCALE NON SCALE DATE DWG. NO E-IET-13-3



AIOU
NON LINEAR EDITING

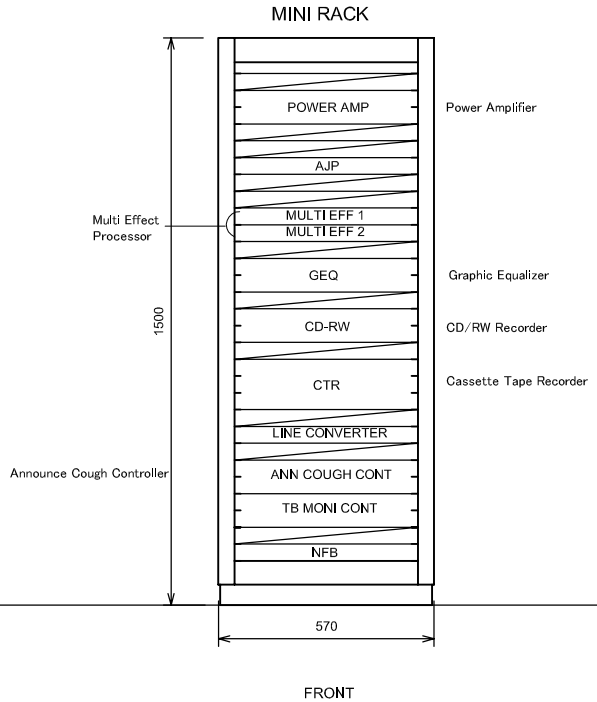
O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Non-Linear Editing	SCALE: NON SCALE DATE: DWG. NO: E-IET-14

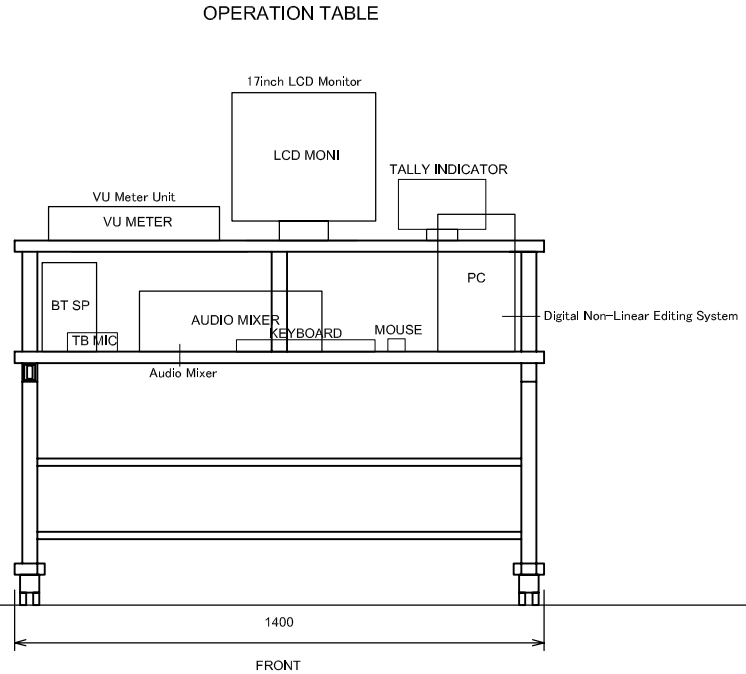


AIOU
PRESENTATION ROOM SYSTEM RACK

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Presentation Equipment for Auditorium

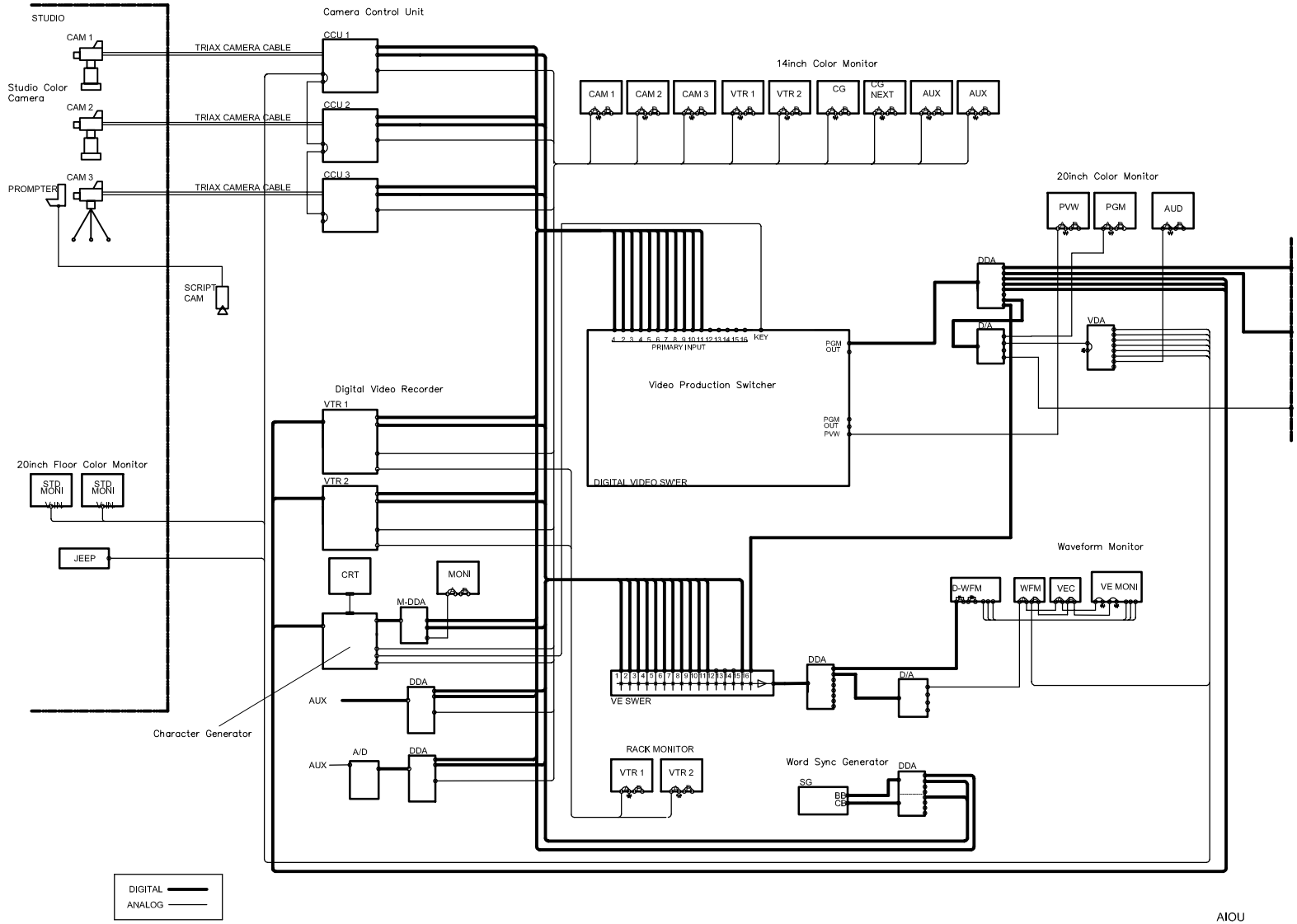
SCALE: NON SCALE
DATE:
DWG. NO: E-IET-15





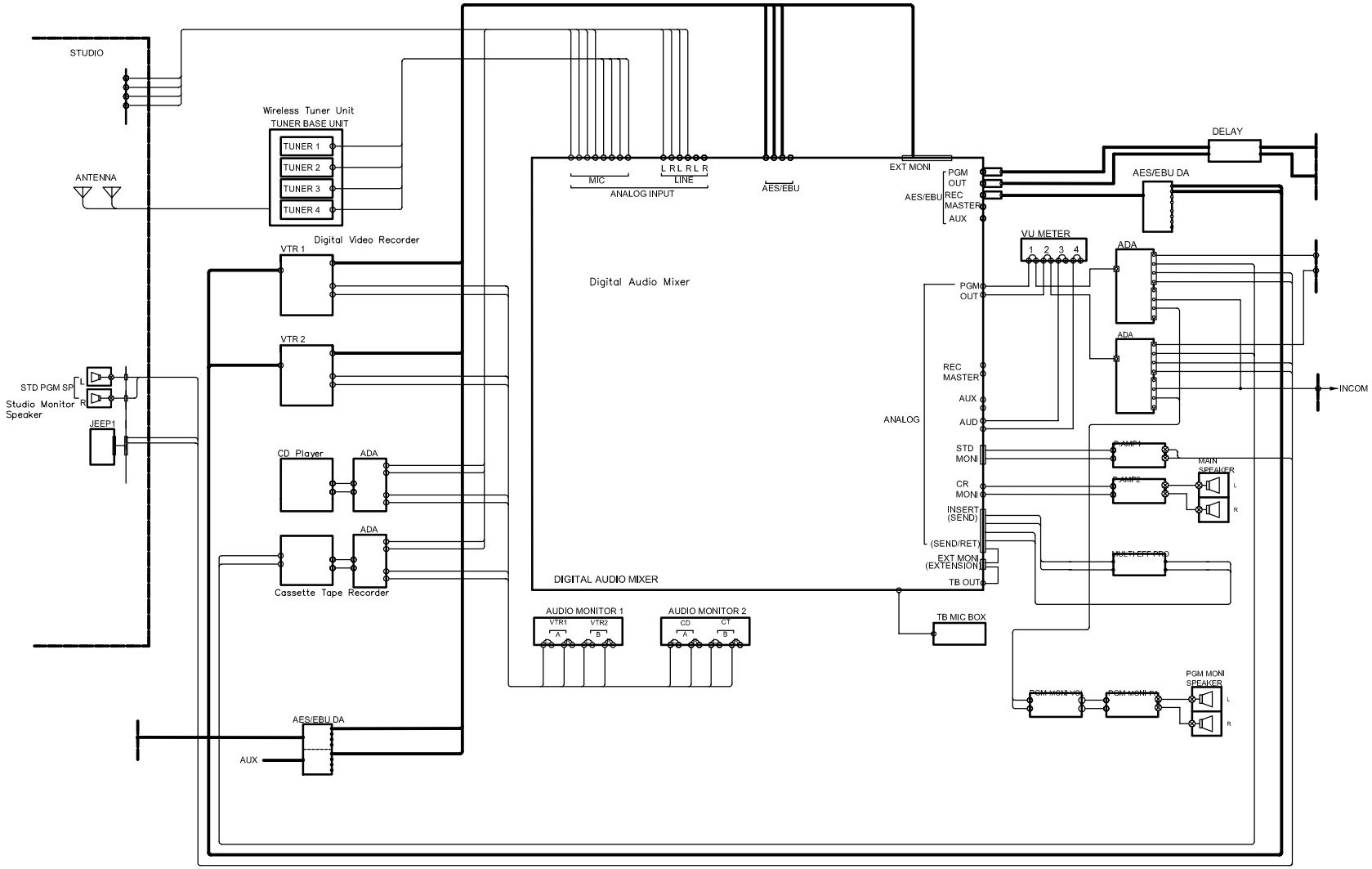
AIOU
RADIO PRODUCTION

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE Institute of Educational Technology (IET) Digital Audio Recording System	SCALE NON SCALE DATE DWG. NO E-IET-16



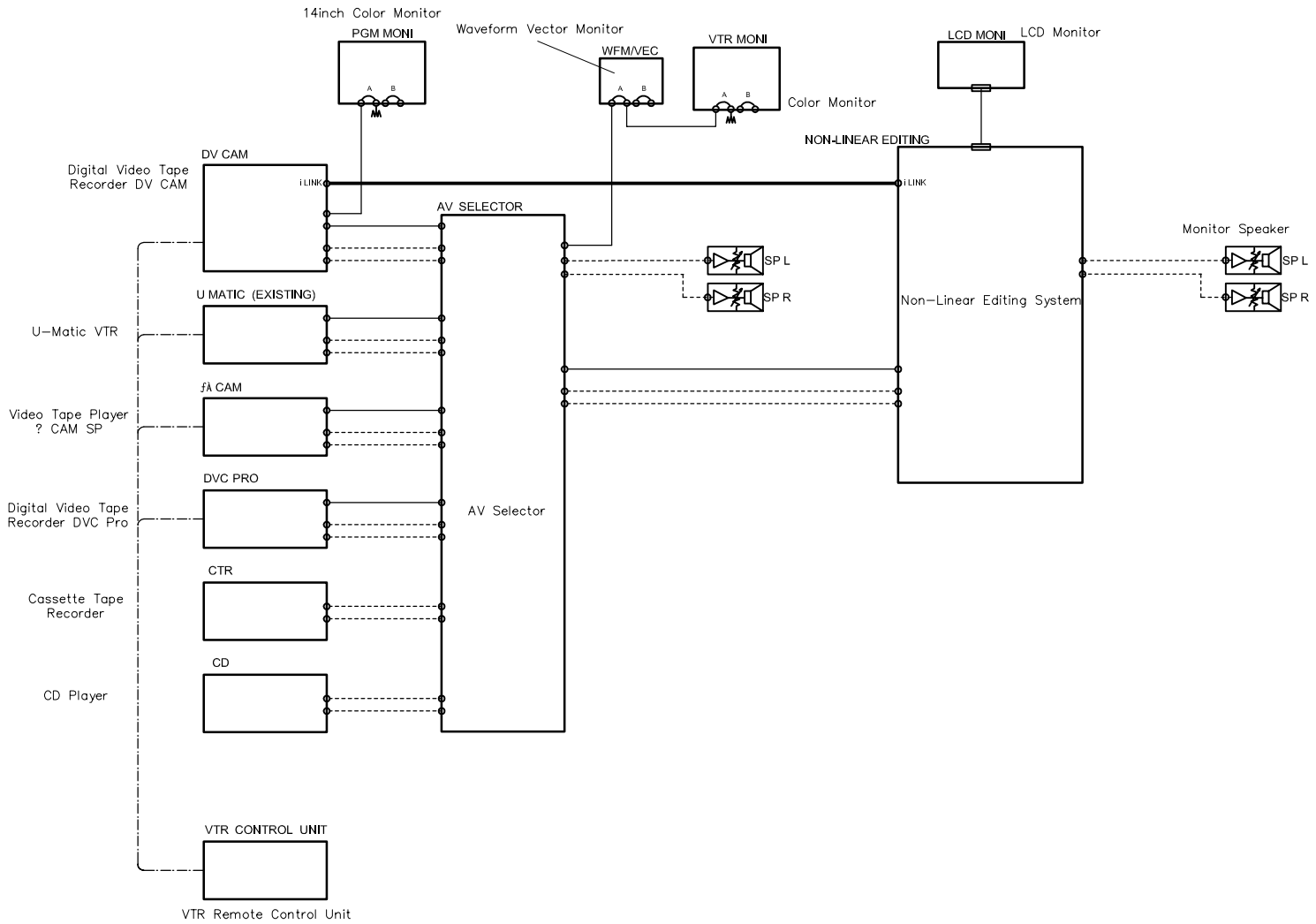
AIOU
Television Production Studio System
Video Block Diagram EA- 0001-2

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE Institute of Educational Technology (IET) Television Production Studio System Video Block Diagram	SCALE NON SCALE DATE DWG. NO E-IET-17



AIOU
Television Production Studio System
Audio Block Diagram EA- 0002-3

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE Institute of Educational Technology (IET) Television Production Studio System Sound Block Diagram	SCALE NON SCALE DATE DWG. NO E-IET-18



i LINK
ANALOG VIDEO
ANALOG AUDIO

Non-Linear Editing System
Block Diagram

EA- 0007-1

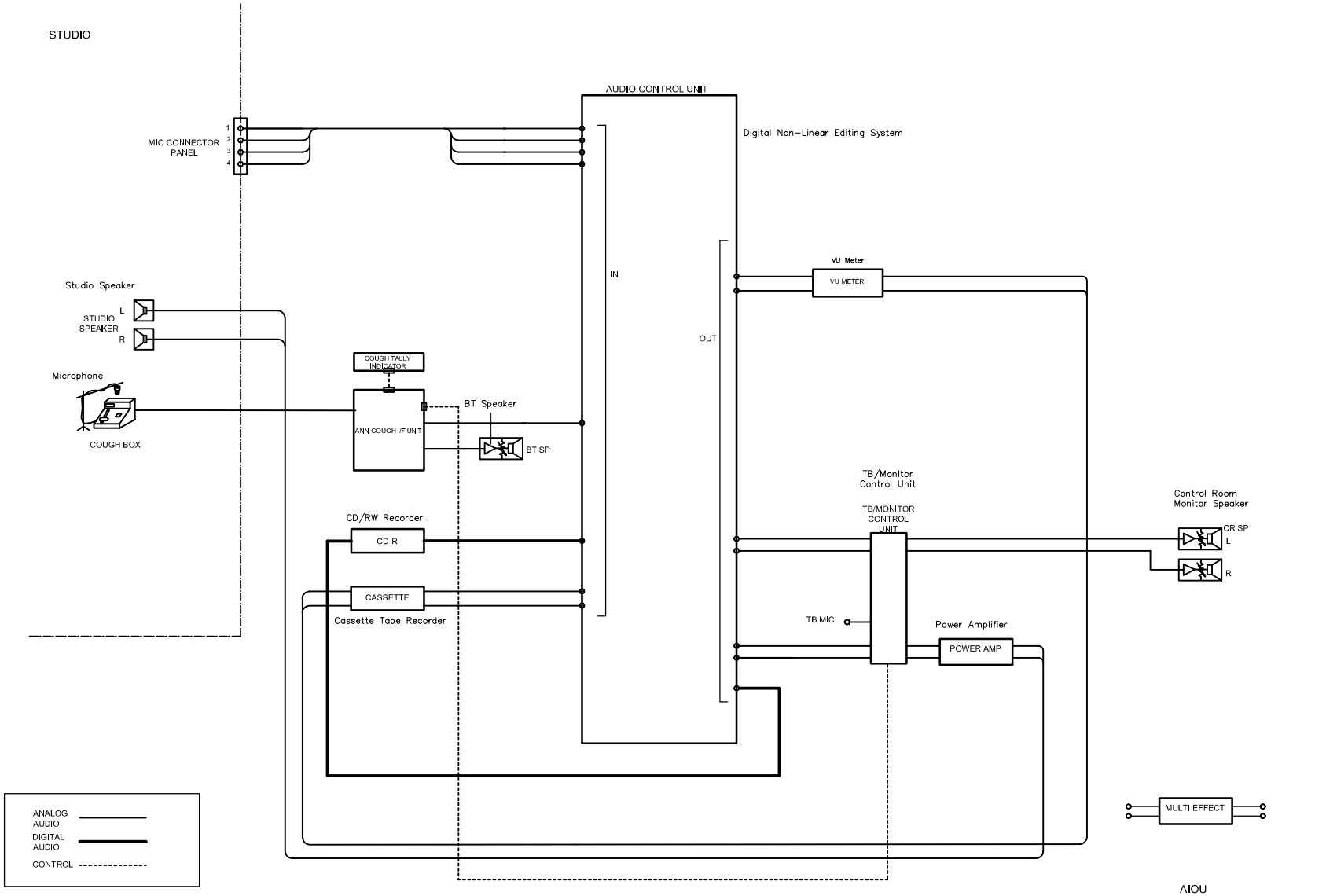
O.P.C. CORPORATION

Japan International Cooperation Agency

THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

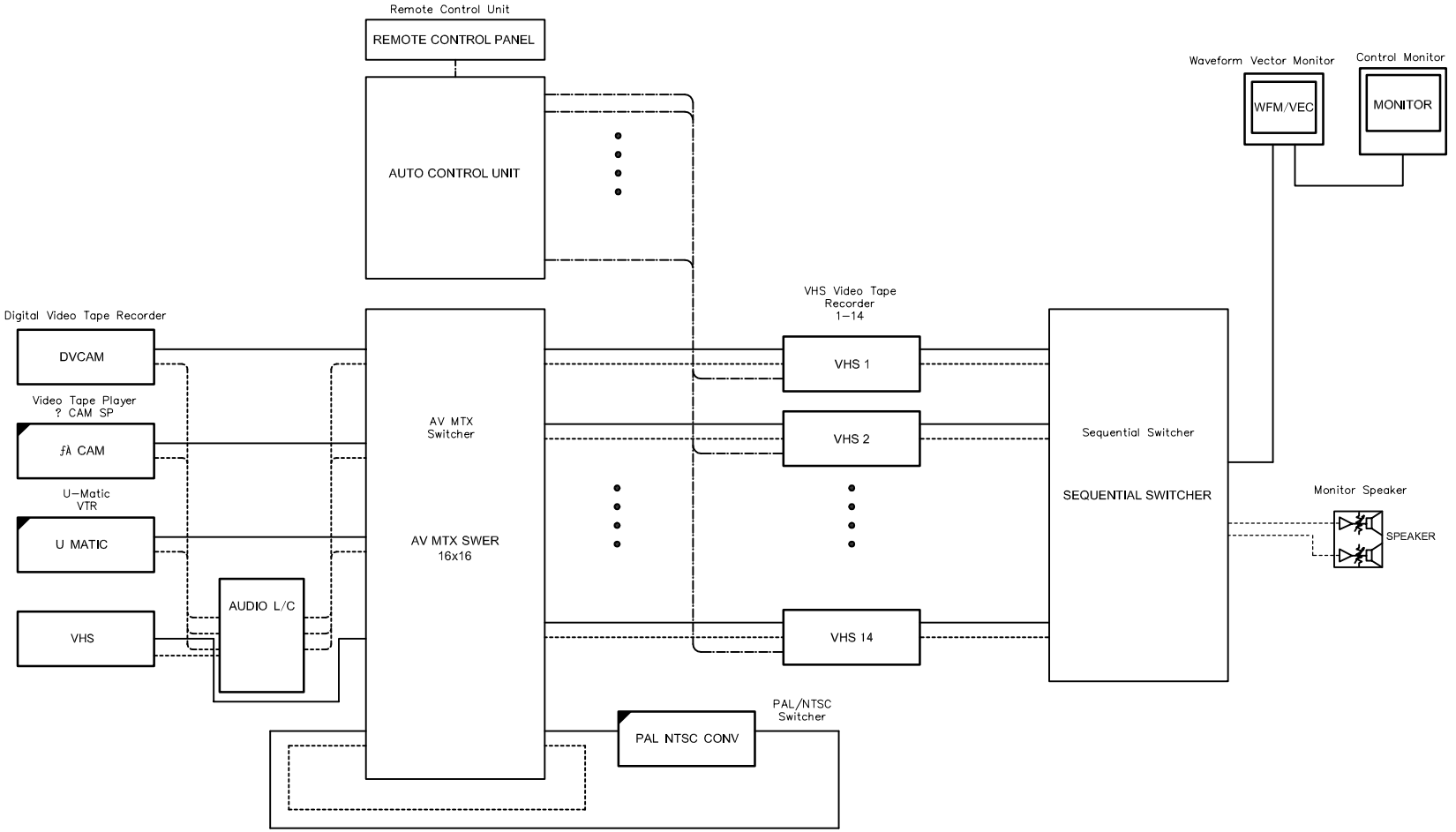
DRAWING TITLE
Institute of Educational Technology (IET)
Non-Linear Editing Block Diagram

SCALE NON SCALE
DATE
DWG. NO
E-IET-19



AIOU
Digital Radio Production Studio
Audio Block Diagram
EA- 0008-1

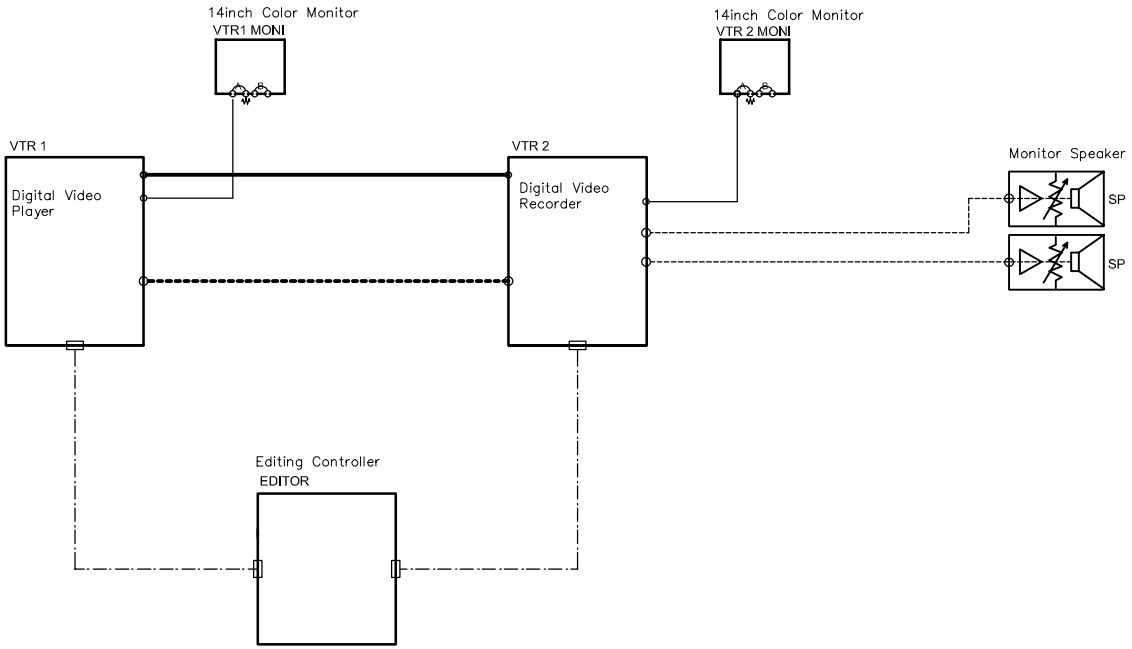
O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Digital Audio Recording System Block Diagram	SCALE: NON SCALE DATE: DWG. NO: E-IET-20



AIOU DV to VHS Duplicator
BLOCK DIAGRAM

EA-0013-1

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Digital Video →VHS Duplicator Block Diagram	SCALE: NON SCALE DATE: DWG. NO: E-IET-21



DIGITAL VIDEO	━━━━━━━━
DIGITAL AUDIO	┅┅┅┅┅┅┅┅
ANALOG VIDEO	────────
ANALOG AUDIO	- - - - - - - -
CONTROL	—·—·—·—

AIOU 1 to 1 Editing

BLOCK DIAGRAM

EA-0017

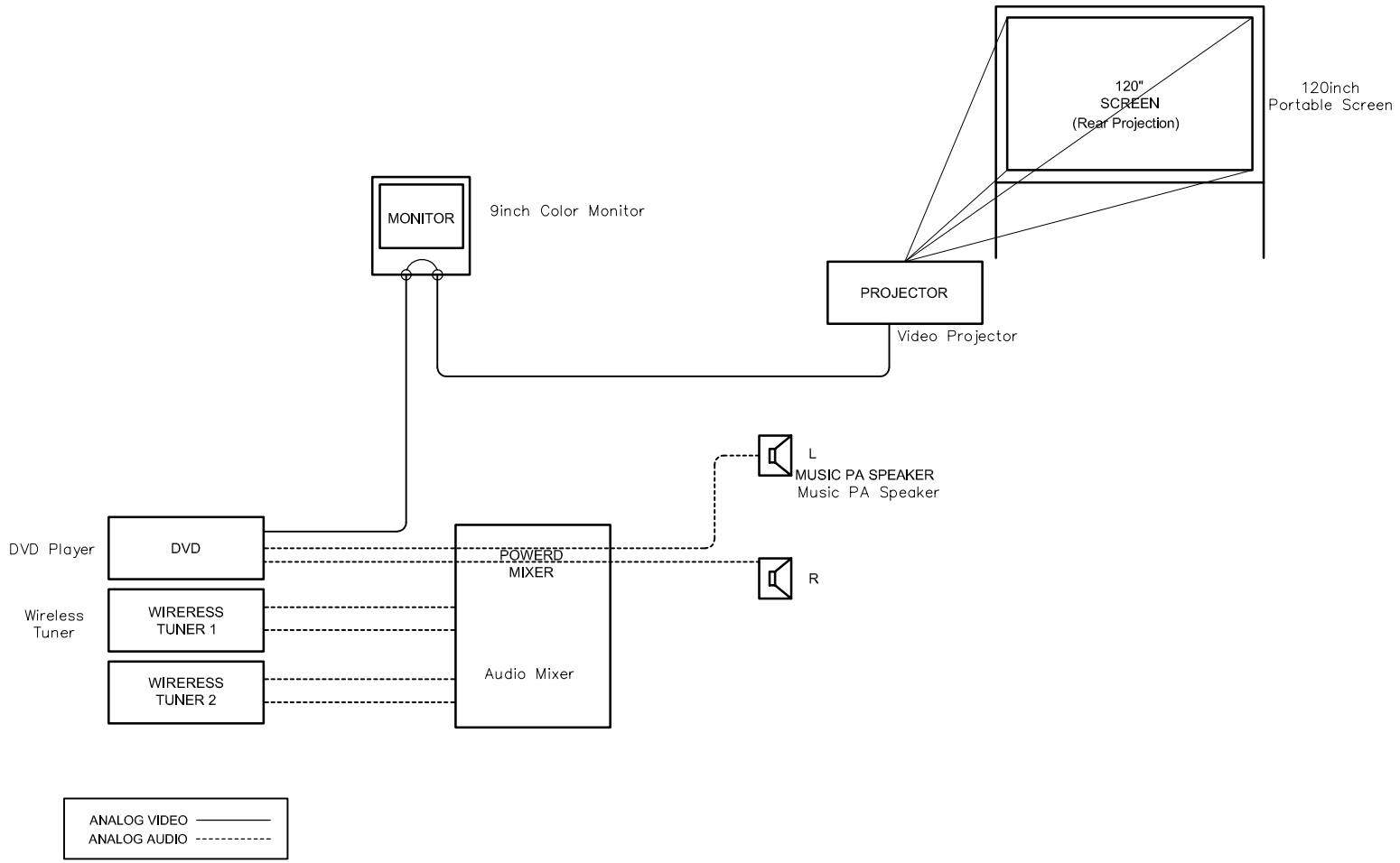
O.P.C. CORPORATION

Japan International Cooperation Agency

THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN

DRAWING TITLE
Institute of Educational Technology (IET)
Cut to Cut Editing System
Block Diagram

SCALE NON SCALE
DATE
DWG. NO E-IET-22



AIOU Presentation Equipment
BLOCK DIAGRAM

EA-0014-1

O.P.C. CORPORATION	Japan International Cooperation Agency	THE ENHANCEMENT OF EDUCATIONAL FACILITIES AT ALLAMA IQBAL OPEN UNIVERSITY IN PAKISTAN	DRAWING TITLE: Institute of Educational Technology (IET) Presentation Equipment for Auditorium Block Diagram
			SCALE: NON SCALE DATE: DWG. NO: E-IET-23