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## SECTION 9 Studios and Operations



Kiss FM has selected a premises at Cross Guns Bridge, Dublin 9 which we feel will adequately service our requirements, and that of our staff, should we be awarded the franchise.

We have taken into account the need to provide wheelchair and disabled access and we have included ample wheelchair ramp access points to the proposed building. All offices, studios and open areas of the Kiss FM building will be fully wheelchair accessible. The Architect's plan, which is included in Appendix 7, also includes for the construction of a disabled toilet off the Reception area to provide facilities for visitors and staff alike.

We feel that the total floor area available to us will facilitate expansion for Kiss FM when it grows as a station.

The main broadcast area will be constructed with maximum sound insulation in mind. Each of the following areas will be constructed to the standard detailed in section 9 (iii) - On-Air Studio; Main Production area/Studio 2; Stand-by On-Air/Production/Studio 3, News/Studio 4.

The building will also be fully fitted out with smoke detectors in every area.

We have planned for a back-up power source for the complex with the proposed installation of a 20kVA Generator and Auto-switcher on premises. This will be located in the grounds of the building and will be enclosed in an Anti-Vibration canopy to reduce noise emissions when it is in use. We also intend to install an Uninterruptable Power Supply (UPS) to protect the main technical areas in the event of sudden power failure.

It is planned to demolish outbuildings on the southern border of the site to make way for eleven additional car-parking spaces. It is intended to locate the back-up generator at the southwest corner of the site. Cable ducts will be formed within the studio walls to provide access between the studios and other areas for equipment wiring.

It is proposed to use facilities at the Rock Solid Transmission Ltd. site at Three Rock Mountain. The studio will link to the site using a Moseley StarLink Digital STL in the 1.4Ghz band.

We have engaged the services of John Pender MRIAI Architect to design the proposed KISS FM studio location. The planning permission process has begun using Planning Consultants Manahan & Associates. A formal application is currently being prepared, and will be lodged in August.

Station Mews is located off Prospect Road in Glasnevin, just beside Crossguns Bridge. The premises are currently divided in to two sections with independent access to both parts. One section is occupied by creative design company MCG & A, and the second section is currently occupied by BP Colour Printing who are vacating the premises in October.

The broadcast area is located in the centre of the building. A corridor connects the on-air, main production, standby and news studios. This also leads to the racks area, the news gathering/show preparation area and the programme directors office. The Programme Director's office is located on the mezzanine above the show preparation area. This will help to facilitate the Programme Director's involvement in the every day compilation of broadcast material.

The northern facing area comprises the agency/direct sales area offices, prize room, and disabled toilets and ladies/gents facilities. The administration area comprises offices for the Chief Executive; Financial Controller, traffic/accounts and Sales Director flank the southwest wing. A large conference suite is situated next to the C.E.O. office and an entrance foyer of 4.8 metres by 6.5 metres is situated along-side a waiting area of 10.3 metres by 2.8 metres. Fire exits are abundant throughout the building.

**9 (ii) Proposed Location**

The proposed studio premises are located at: - see Appendix 5

**Station Mews,  
Lindsay Grove,  
Cross Guns Bridge,  
Dublin 9.**

The consortium has secured a 10-year lease option on the proposed building, which can be exercised, from December 1999.

**9 (iii) A detailed plan of the proposed studio is included in Appendix 7.**

**Proposed Facilities**

The broadcast area of the premises will consist of the following: -

- On-Air Studio;
- Main Production;
- Studio 3 - On-Air/Production/Editing;
- News Presentation/Recording/Editing;
- C.T.A./Racks area.

**On-Air Studio**

An On-Air Studio, approximately 4.3metres by 3.6metres in dimension. This will be utilised solely and exclusively for broadcasting. It will also be linked via Krone block connectors located in the Racks room to the other three studios.

**Studio 2 - Production/Editing**

A Main Production Studio approximately 3.3m by 3.6m in dimension. This studio will be used solely and exclusively for production of commercials, radio promo spots, jingles and recorded elements of programming. It will contain the Production Library Music and all filing of scripts and other paper work pertaining to the operation of the Production Department. It will contain a recording booth, approximately 3m by 3m in dimension.

While not being entirely suitable for broadcasting, the main production room will be capable of going on-air at a moment's notice in the event of emergency.

**Studio 3**

A third studio, approximately 3.3m by 3.6m in dimension. This studio will be capable of going on air via the Main On-Air studio or, in the case of emergency, independently directly to the Orban Optimod processing in the Racks room. This studio will also be equipped as a Production studio with full multi-track recording facilities. This will also incorporate a sound recording booth approximately 3m by 3m in dimension.

**News Presentation/Recording/Editing**

A news studio approximately 2.7m by 4.2m in dimension. This will be a stand-alone facility. The on-air news will be broadcast from here. It will also act as a recording/editing facility for journalists/researchers. The news studio will be adjacent to the On-Air studio. All audio-based information feeds such as news/sport/entertainment will terminate in this studio (although they will originate from the Racks room).

**C.T.A./Racks area**

A C.T.A./Racks area approximately 3.4m by 2m in dimension. This will be the control hub of the broadcast section of Kiss FM. This facility will house the Microwave Studio to Transmitter Linking system, Orban processing, Sonifex Digital logging, profanity delay, and all systems pertaining to the computer network. It will also house the un-interruptable power supply (UPS), ISDN equipment, PABX, telephone hybrids and support equipment. Only authorised personnel will be permitted access to this section of the station.

**Administration Area**

The Administration area of the building will consist of the following: -

- Chief Executive's Office;
- Sales Director's Office;
- Programme Director's Office;
- Financial Controller's Office;
- Accounts/ Commercial Traffic Office;
- News gathering/Broadcast preparation area;
- Direct/Agency Sales area;
- Conference/ Meeting room;
- Reception/Waiting area;

**The Studios****Studio acoustic construction**

The studios will be designed to have a reverberation time of 0.2 of a second and an internal noise level of no greater than NR25 based on an octave band analysis. This complies with international broadcast recommendations.

The studio walls will be "a box within a box" structure. The studio will be sectioned off from the remainder of the building with a partition that is constructed to fit tightly up to the existing soffit.

The studios themselves will be constructed as individual boxes from a modified "Camden" partition that are contained within the outer wall. Each of the studios will have its own ceiling joists and isolation ceiling.

The outer barrier wall will be constructed from 75x47 studs on 400mm centres. The studwork will be clad each side with a 12mm layer of fibreboard and two layers of British Gypsum 15mm Soundbloc Plasterboard. All plasterboard joints are to be butt-jointed on the timber members, staggered, taped and filled. The exposed side of the outer wall is skimmed. This construction exceeds 30 minutes fire rating.

The studio walls will be constructed from similar softwood studs but modified to permit building from one side with 12mm fibreboard and two layers of 15mm Soundbloc plasterboard each side. All plasterboard joints are to be butt-jointed on the timber members, staggered, taped and filled.

The fibreboard, which serves to damp the resonance in the plasterboard as well as partially isolating the plasterboard from the timber frame, contributes a significant portion of the mass and therefore increases the sound insulating properties of the partition.

All studios will be filled with Rockwool insulation between the facing sheets.

The cavity between the partitions will be blocked at the end of each wall with dense Rockwool to

act as a cavity barrier and trimmed with hardwood edging.

All studio and outer walls will have their sole and head plates mounted resiliently from the existing structure using a quality hair felt material and non-setting mastic.

The inside of the studio walls will additionally be clad with softwood framing, Rockwool between the studs and a hardboard covering that is perforated depending on position on the walls to approximately 0.05% or 5% of area to control the acoustics of the room. This hardboard will then be covered with a plastic sheet; dustsheet and a tight weave fabric that is fire treated to class 1 speed of flame.

The ceilings will be constructed from 200mm x 47mm joists spaced at 400mm centres. The underside will be clad with a layer of 12mm fibreboard and two layers of 15mm Soundbloc Plasterboard. The cavity between the joists will be filled with 100mm Rockwool insulation. A suspended acoustic ceiling will be fitted in the studios and sound lobby underneath the plaster ceiling.

#### **Windows**

Vision windows having sound-resisting properties complementary to the wall structures will be installed where required. All sound-resisting windows will be double-glazed with three-ply laminated glass and angled to minimise internal visual and sound reflections.

#### **Doors**

Sound-resisting doors will be supplied and installed to the studios and have a natural wood finish. All sound-resisting doors will be fitted with vision panels and will be supplied complete with frame and overhead door closer, magnetic seals and stainless steel pull handle and push plate. They will have a sound reduction rating of 45dB (SR).

#### **Air-conditioning and Ventilation**

All studios will be provided with cooling only air-conditioning services. Due to the insulating properties of the studios and the amount of equipment operational in each one, heating will not be required. As the windows will not be opened, and to maintain acceptable levels of oxygen and to contain decoration and equipment soiling, the air-conditioning system will also provide approximately 20 litres of fresh air to mix with the re-circulating air in each studio.

Humidity is very important in studios where speech is concerned. Presenters will be on-duty for several hours and, during holiday times and unexpected illness, often work extended shifts. To avoid dry throat defects, humidity levels will not be allowed to fall below 55%. Additionally, humidity is important in technical areas where static electricity could, inadvertently, be discharged to a sensitive piece of equipment resulting in premature failure.

Condensing units are to be located outdoors on the roof. All refrigerant pipework and associated electrical services are to be run overhead within ceiling voids.

#### **Studio Technical Services**

Cable ducts will be formed within the studio wall constructions to provide access between the studios and other areas for studio equipment wiring. Cable trays are to be installed within the ceiling voids to conduct cables from and between the studios and Racks. In the studios, within the wall construction, cable raceways are to be formed at skirting and dado levels with vertical accesses for equipment wiring. Skirting and dado covers are to be natural-finished timber secured in place with countersunk screws in recessed cups to provide a flush finish. Trims to corners at wall and ceiling junctions are to be in natural matching wood pinned in place.

**Stand-by Power Plant**

Standby power will be provided by an un-interruptable power supply and an auto-start generator powered by natural gas or diesel. The changeover switching will be electrically and mechanically interlocked to ensure that in no event could power back-feed into the ESB lines.

**Principle Equipment**

The principle play-out equipment will be the hard-disc audio system (RCS), this will store most of the frequently played music, commercial and promo spots. In the studios, play-out will be from compact disc and mini-disc, which will be mixed on a state-of-the-art studio mixer.

Full equipment lists are contained at the end of this section 9 (iv)

**Deviation Limiting**

In the studio, the operators will control their levels with the aid of peak programme meters (PPM's). Excess levels will be reduced electronically by the automatic level control function of the Orban Optimod processing equipment in the Racks room, which will be adjusted to ensure that the modulation level never exceeds specified limits.

**Linking to the Transmitter Site**

It is proposed to link to the Rock Solid Transmission Ltd. transmission site on Three Rock using the Moseley StarLink digital STL in the 1.4Ghz band. Perfect line-of-sight exists and a Gridpack style dish to 1.5m can be accommodated.

The proposed position of the Gridpack dish is at the opposite end of the Station Mews building to the Kiss FM studios.

We will erect a pole of 4 inches in diameter 5 feet off the roof of the premises. The dish will be approximately 1.5 metres in diameter and will be an open wire mesh construction.

It is envisaged that a back up to the Digital STL will be provided by an ISDN unit with Automatic dial-up.

**Test Equipment**

Broadcast Technical Solutions will be contracted to install, commission and maintain the technical equipment. They will supply all the necessary test and measurement equipment to ensure that the broadcast equipment is adjusted, calibrated and operating correctly.

Comprehensive breakdowns of equipment proposed for use in KISS FM can be found in Section 9 (iv)

**9 (iv) Principal Technical Equipment**

Set out below is a list of the principal technical equipment that will be purchased and installed

**ON AIR STUDIO/ STUDIO 1**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
On Air Digital System- Live Playout for On-Air Studio Interface for Production Studio			
500 Hours of Storage	1	10,000	10,000
Soundcraft Series 10 On-Air Broadcast Desk	1	8,051	8,051
Denon DN951A CD Cart	3	1,295	3,885
Denon DN991R Minidisc Record	1	1,295	1,295
Denon DN981F Minidisc Playout only	2	1,550	3,100
RODE NT2 Condenser Microphone	1	445	445
Shock-mount cradle for Rode NT-2	1	45	45
Beyer M201 Condensor Microphone	2	200	400
Anglepoise Microphone Stand	3	48	48
Anglepoise Arm Table Base	3	10	10
Beringer Multicom MDX2400 4-Way Microphone Compressor	1	295	295
Beringer Powerplay HA4000 4 way Headphone Amp1		259	259
Beyer DT100 Headphone	3	129	258
Gentner DH-22 Dual Digital Telephone Hybrid	1	1,499	1,499
Telos One Digital Telephone Hybrid TBU	1	795	795
Tascam 112MKII Snoop Cassette Machine	1	210	210
Alesis RA-100 75watt Speaker Amp	1	297	297
Studio Monitors- Alesis Monitor One Nearfield Speakers (set)	1	345	345
Ceiling Mounted Speaker Brackets	2	55	110
Krone Blocks	50	7.50	375
Krone Frames for Krone Blocks	10	25	125
13Amp Mains Distribution Fused 4Way Power Outlets	10	9	90
IEC Mains Cables	20	2.90	58
Rackmount Kits for Computer System/MD & CD units	3	74	222
<b>On Air Studio/Studio 1 Equipment Total:</b>			<b>£32,217</b>



## MAIN PRODUCTION STUDIO/STUDIO 2

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
Soundcraft Ghost Production Console 8 Bus/32 Ch I/P	1	4,990	4,990
Prisma Spectral Digital Editing System			
8 Track Multi-track	1	10,000	10,000
PC Monitor Bracket	1	24	24
Tascam DA30 Mk 2 Dat Recorder	1	848	848
Tascam MD801R Minidisc Recorder	1	1,295	1,295
HHB CDR 800 Cd Recorder	1	600	600
Pioneer CDJ 50011	1	595	595
Tascam 302 Cassette Recorder	1	381	381
RODE NT2 Condenser Microphone	2	445	990
Shock-mount cradle for Rode NT-2	1	45	45
Anglepoise Microphone Stand	3	16	48
Anglepoise Arm Table Base	3	3	10
LA Audio GCX-2 Microphone Compressor/Limiter	1	179	179
Beyer DT100 Headphone	2	115	330
Rane HC-6 Headphone Amp	1	450	450
Yamaha SPX 990 SFX unit	1	720	720
TC Electric Finaliser Express Studio Processor	1	1,800	1,800
TC Electric Fireworx Multi EFX Unit	1	1,200	1,200
Gentner DH-20 Telephone Hybrid (single)	1	995	995
Denon TU260LMk.II RD RDS Tuner	1	190	190
RM-4 Rackmount Kit (for tuner)	1	49	49
Pro Match Phono to XLR for tuner	1	170	170
Technics SL1210 (or equiv) Turntable	2	382	764
Alice Phono-pak RIAA Pre Amp	2	102	204
Mini Mix Mixer	1	400	400
Studio Monitors - Alesis Nearfield monitor speakers	1	345	345
Alesis RA-100 75Watt Speaker Amp.	1	297	297
RB DA6 Audio D/A - 6 Balanced Electronic O/P's	3	299	897
Purpose Made Ceiling Brackets	2	40	80
Krone Blocks	50	7.50	375
Krone Frame (for Krone Blocks)	10	25	250
13A Distribution Fused 4 Way outlets	10	9	90
IEC Mains Cables	0	2.90	58
<b>Main Production Studio/Studio 2 Equipment Total:</b>			<b>£29,669.00</b>

## STANDBY ON-AIR/ PRODUCTION/ WORK AREA-STUDIO 3

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
Spirit Production Console - 8Bus/ 16I/P	1	1,970	1,970
Soundscape PC Digital 8-Track Editor	1	4,500	4,500
PC Monitor Bracket	1	24	24
Tascam MD801R Minidisc Recorder	1	1,300	1,300
Tascam DA20 Mk2 Dat Recorder	1	509	509
Tascam CD301 MkII CD Player	1	390	390
Tascam 302 MkII Cassette Recorder	1	410	410
RODE NT2 Condenser Microphone	1	445	445
Shock-mount cradle for RODE NT-2	1	45	45
LA Audio GCX-2 Microphone Compressor/Limiter	1	179	179
Anglepoise microphone stand	1	48	48
Anglepoise arm table-top base	1	9.50	9.50
TC Electric Finaliser Express Studio Processor	1	1,200	1,200
Beyer Dynamic DT100 Headphones	1	115	115
Gentner DH-20 Telephone Hybrid (single)	1	945	945
Sony STS E200 Tuner	1	79	79
Rackmount kit for tuner	1	49	49
Pro-Match Phono to XLR for tuner	1	170	170
Alesis Nearfield Studio Monitors	1	345	345
Alesis Amp RA-100 Studio Monitors	1	297	297
RB-DA6 Audio D/A- 6 Electronic Balanced O/P's	1	299	299
Purpose-built ceiling brackets	1	40	40
Krone Blocks	20	7.50	150
Krone Frames (for Krone Blocks)	2	25	50
13 Amp Distribution Fused- 4 Way outlets	10	9	90
IEC Mains Cables	20	2.90	58
<b>STUDIO 3 Equipment Total:</b>			<b>£13,716.50</b>

## CTA AREA

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
Orban Optimod 8200A (or equiv)	1	8,480	8,480
Orban Spatial Enhancer	1	2,245	2,245
RDS Encoder	1	495	495
Eventide BD-500 Profanity Delay	1	2,995	2,995
Sonifex Station Master SM-44 PPM (Talkback to 4 Studios)	1	2,590	2,590
Sonifex Sentinel+ Index + 4Ghz Hard Drive	1	£ 5,770	5,770
Data Dat tapes for Sonifex Sentinel+	60	5	300
Sony STS E200 Tuner (to feed Logger & intra-station feed)	1	79	79
Denon TU260LMKIIRD RDS Tuner (for off-air monitoring)	1	190	190
RM-4 Rackmount Kit for tuner	1	49	49
Pro-Match Phono to XLR for tuner	1	170	170
RB-BL2 Pro matching - Balanced to unbalanced output	1	210	210
RB-DA6 Distribution Amp - 6 Balanced Outputs	6	310	1,860
Patchcords	10	15	150
Telephone Mute controller	1	85	85
Alice MSU PPM Transmission Monitor	1	1,100	1,100
Canford Audio Studio Red lights (with built-in relay control)	3	90	270

## CTA Area Hardware:

Patch Bay	1	500	500
19" Rack Frames- 40Unit CTR Rack	4	580	2,320
19" Rack Hardware Cable sides	2	15	30
Nuts & bolts for 19" Racks	50	10	500
Krone Blocks	100	7.50	750
Krone Frames	10	25	250
13Amp Mains Distribution Fused - 4 Way outlets	10	9	90
E651 Emo - IEC Mains "Blue" Socket Distribution & Fuse Protection 4	4	110	440
IEC Mains Cables	20	2.90	58

## Studio to Transmitter Link (STL):

Moseley Simplex Digital Transmitter (Possible 1.4 Ghz Band)	1	6,995	6,995
GRIDPAK Dish - Link Antenna	1	800	800
Metres of 1/2" Co-axial cable	50	6.50	325
4" Ariel Pole to support GRIDPAK Dish	1	250	250

C.T.A. Area and Microwave Link Transmission Equipment Total: £ 40,346

**TRANSMISSION SITE**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
CTE VL2KW 1KW Transmitter (Linear Amp. only)	1	18,000	£ 18,000
CTE VL22M - Exiter for above - 20Watt	1	2,350	2,350
AEV Digital stereo encoder	1	1,200	1,200
Aldena Triple Cavity Band-pass filter	0	2,450	0
Directional Coupler	1	450	450
7/8" RF Extractor	1	350	350
Moseley 1.4 Ghz Digital Studio Link Receiver	1	6,995	6,995
1.4 Ghz GRIDPAK Link Receiving Dish & clamp	1	950	950
Metres of 1/2" Heliac RF Cable (for Digital Link Receiver Dish)	100	6.50	650
Back-up Music System	1	1,000	1,000
Capital contribution to new antenna system	1		13,000
Capital Contribution to antenna feeder system	1		5,500
Capital Contribution to antenna combiner system	1		5,500
Capital Contribution to Tower modification	1		6,000
Contribution to antenna installation	1		10,000
<b>Transmission Site Equipment Total:</b>			<b>£71,945.00</b>

**MISCELLANEOUS**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
MSF UK Radio Controlled Clock	3	60	180
Telephone System & Installation	1	7,400	7,400
CD Racks for On Air/Production	2000	0.40p	800
Magnetic locks for Studios	2	400	800
Studio Furniture	1	2,000	2,000
Script holders (Production)	2	83	166
Microphone Mesh Windshield	2	40	80
Minidisc holders	500	.75p	375
CACD-SB CD Carts	500	85 per 25	1,700
Integrated wiring materials of studios (connectors, wiring, etc)			5,390
<b>Miscellaneous Equipment Total:</b>			<b>£ 18, 891</b>

**NEWS Presentation/Gathering Room:**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
PC-Edit Multi Media PC with editing software for news cuts, along with 17" Monitor	1	2,500	2,500
ACS Buddy Workstation/Console/Mixer	1	1,450	1,450
RODE NT-2 Condensor Microphone	1	445	445
Anglepoise Microphone Stand	1	48	48
Anglepoise Arm Tabletop Base	1	9.50	9.50
Denon MD991R Mini-Disc Recorder	2	1,250	2,500
Tascam 302MKII CassetteRecorder	3	410	1,230
Sony STS E200 Tuner (for monitoring)	4	79	316
TV with Teletext - 23"	3	320	960
Alesis Nearfield Studio Monitors	1	345	345
Denon Monitor Amplifier	1	149	149

**News Presentation/Gathering Equipment Total: £9,952.50**

**LIVE/OUTSIDE BROADCAST EQUIPMENT**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
Telos Zypher I.S.D.N. Codec + Built in T/A Layer II/ISO Mepeg II - G.722 - Layer II Compatible	1	4,495.00	4,495.00
Telos Express ISDN. Remote O/B End = Built in T/A Layer II/ISO Mepeg II - G.722 - Layer II Compatible	1	4,495.00	4,495.00

**Live/Outside Broadcast Equipment Total: £ 8,990.00**

**Stand-by Equipment:**

<i>Description</i>	<i>Quantity</i>	<i>Unit Cost £</i>	<i>Total Cost £</i>
Patchcords for patchbays	10	15.00	150.00
Denon DN991R Mini-disc Recorder	1	1,295.00	1,295.00
Denon DN-C630 CD Player	1	445.00	445.00
RB-DA6 Distribution Amplifier	1	310.00	310.00
Moseley Simplex Digital Transmitter (Possible 1.4Ghz Band)	1	£ 6,995.00	£ 6,995.00
Moseley Simplex Digital Receiver (Possible 1.4Ghz band)	1	£ 6,995.00	£ 6,995.00
(Both TX & RX to be on "Hot-Standby" at studio and TX site in the event of Link failure)			

**Stand-by Equipment Total: £16,190.00**

**INSTALLATION OF STUDIOS & TRANSMISSION EQUIPMENT/MATERIALS - Labour**

Installation and Integrated wiring of all studios	£7,500
Installation and Integrated wiring of C.T.A. area	£2,500
Installation of FM Transmitter and Microwave Digital Links	£2,000
Erection of Microwave link mast (inc erection of all antennas at studio)	£600
Erection of Microwave antennas at FM Transmission site	£2,000
Construction of all custom-built studios	£12,000

**INSTALLATION OF STUDIOS & TRANSMISSION SITE EQUIPMENT: £26,600.00**

**ANCILLARY****Studio Complex Electrical Back-up Generator**

Electrical 20 kVA Generator and Auto Switcher for Studio & Technical Facilities	£7,500
UPS for Studio/CTA and Broadcast Equipment only	£5,000
Anti-Vibration Canopy to enclose the generator and isolate its sound	£2,500
Double skin fuel "Fire Safe" Tank	£1,000

**STUDIO COMPLEX ELECTRICAL BACK-UP GENERATOR TOTAL: £16,000.00**

**AIR-CONDITIONING FOR ALL STUDIOS & CTA AREA**

Air-conditioning for all four studio locations:	£16,500.00
"Comfort" to CTA Equipment Racks location:	£ 3,500.00

**Air-conditioning total: £20,000.00**

**MATERIALS FOR STUDIO CONSTRUCTION**

On-Air Studio:- APX 12 X 12 Basic Acoustic Studio materials	£14,000.00
Main Production/Studio 2:- APX 12 X 12 Acoustic Studio with Voice-over booth	£12,000.00
Stand-by On-Air/Production/Work area - Studio 3: APX 12 X 12 Acoustic Voice-over booth	£12,000.00
News Studio/Studio 4 APX 12 X 12 Acoustic Voice-over booth	£ 8,000.00
<b>Materials for studio construction total:</b>	<b>£46,000.00</b>

**ANNUAL CHARGES (Re Transmission site, BTS Maintenance costs, Microlink licence)**

Three Rock Mountain Transmission Site Rent P/A	£ 40,000
Licence for Microlink from studio to Three Rock	£600
BTS Anual charge for maintenance for Transmission and Studio Equipment	£ 36,000
<b>Annual Charges Total:-</b>	<b>£76,600</b>

**TOTAL SUMMATION OF ALL TECHNICAL COSTINGS:**

On-Air Studio	32,217.00
Main Production Studio/Studio 2	29,669.00
Stand-by On-Air/Production	13,716.00
CTA Area	40,346.00
FM Transmission site	71,945.00
Miscellaneous	18,091.00
Stand-by Equipmant	16,190.00
Ancillary - Generator	16,000.00
News Presentation/Gathering Room	9,952.50
Llive/Outside Broadcast Equipment	8,990.00
Air-Conditioning	20,000.00
Materials for studio construction	46,000.00
Installation of studios (LABOUR)	26,200.00
Woodwork for studios	5,250.00
<b>TOTAL:-</b>	<b>£ 354,566.50</b>

