Low Power Am Transmission

A New 24 Hour Radio Service For Patients & Staff of Heatherwood. Hospital.

Picture Removed For Copyright Reasons

The picture originally displayed was taken from a leaflet produced by the trust at the time which showed a radical re-design of the site and it's buildings

The Changing Site at Heatherwood.

An Artists Impression of the future for Heatherwood

Proposal By League of Friends Radio Service Radio Heatherwood

Author Peter Davidson-Smith

26 March 1999

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1 Low Power AM Project Objective

In partnership with other interested groups, raise enough funds to update and improve the radio transmission system at Heatherwood. Hospital for the benefit of patients and staff.

The radio station will cease broadcasting on the inductive loop AM service(33 aerials) and will broadcast on a new Low Power Freely Radiating Am service using 1 aerial mast

In addition the radio service will broadcast 24 hours a day offering entertainment, news & information using a computer operated program scheduler.

2 Radio Service (A Brief History)

2:1 Hospital Radio What is it all About ?

Hospital radio has been established at over 350 hospitals in the UK since the 1950's. established to provide entertainment for patients.

Almost 50 years of service to the NHS it has proven to aid recovery for patients and has been used to raise much needed funds for hospitals.

Each evening many volunteers around the UK will be visiting hospital wards to chat to patients and encourage them to participate in their programs. Thousands of volunteers have given time to the service over the years.

In addition it has provided the training arena for today's professional broadcasters.

2:2 When & How Did We Start Broadcasting ?

Radio Heatherwood first began regular transmissions in 1976 although a service was available prior to this. It wasn't until an injection of £6000 on equipment and bedhead units in early 1976, the first regular service was provided each evening on channel 3.

The launch of the radio service on the 10th June 1976 was officiated by Michael Parkinson who was then honorary patron.

After an ambitious start by the station, by the end of 1981, the station had fallen into the red and was in danger of being closed down.

In 1982 the present manager Dave Smith was appointed along with his brother Peter, to try and bring some discipline and turn the fortunes of the service around.

Over the next eight years the service went through a complete restructure of it's facilities and the way in which it is maintained and received on the wards. Large amounts of sponsorship from local trusts and businesses etc. All contributed to the service you hear today .

One of the major advances for the service came in 1987 when during this year over £10,000 was raised to provide the inductive loop AM service, which is available today.

The introduction of the AM service and the need for this type of radio was prompted by the deterioration of the bedhead units, which are very costly to repair. Each replacement bedhead unit above the bed costs £70 to replace. The plastic headsets are also £2-3 a time. (this system is maintained by the hospital).

In February 1988 the AM service was switched on and a new era for the radio station began. Radio Heatherwood was the fifth hospital radio station in the UK to have this service.

This is by no means the end of the story: 1990 saw the launch of the loan radio service which today stands at 230 units on five wards.

In 1994 the trust management board allocated another adjoining room to the studios, which has allowed us to provide proper reception facilities for visitors and allow wheelchair access to the production area. This was completed in July 1995.

In 1998 the station along with support from Crowthorne Rotary Club raised funds to replace the original bed-head system Amplifiers which were originally installed in 1976. (Some wards still rely on this system). The equipment was finally installed during March 1999 and the final cost was £3100.

2:3 Radio Heatherwood. (A Friend at the Bedside)

It's only a hospital radio service, but the service we provide, must deliver a presentation style which is equal to any local or national radio station output.

One of the rules for all presenters is they must carry out ward rounds and collect requests before their program. This is strictly adhered to and makes Radio Heatherwood one of the few hospital radio services which is valued by the patients.

Left

Kevin Donaldson Presenter accepts a kiss from the first Mug winner in 1993 Sylvia Sargeant

Right

A grateful patient accepts the latest edition of the mug celebrating:-

25 Years of the League of Friends Trolley Shop.

Each broadcast evening, patients have the opportunity to win a prize.

3 Radio Heatherwood. How Much Does It Cost ?

The radio service is run as a self supporting member of the league, raising it's own running costs each year. This has steadily increased over the years from £250 to an average of £3000 a year.

The station relies on the commitment of 20-25 volunteers each year to maintain the radio service.

3:1 Radio Accounts 1997/98

Radio Heatherwood

	1995/6		1997/8
Income			
	39.63	Bank Account Interest	58.34
	97.20	Charity Market Stall/Bandstand	112.41
	365.00	Donations And Fund-raising	1.590.00
	30.00	Loan Radio Donations (Sponsorship)	120.00
	------	Other Income (Wrong Payee)	220.00
	1.363.13	Proceeds Draws And Raffles	1.557.15
	384.00	Sweethearts Disco	--------
	2.278.96		3.657.90
Expenditure			
	------	Advertising (vacancies)	172.80
	95.00	Computer Hardware & Software	--------
	654.14	Engineering & Maintenance & Renewal	755.08
	130.00	Expenses	208.00
	229.98	Grand Draw Prizes	327.36
	73.32	Loan Radio 1 D Badges	82.72
	10.00	Long Service Awards	10.00
	35.00	National Association (N.A.H.B.O.)	30.00
	------	Other Expenses (Wrong Payee)	220.00
	129.27	Phone Costs	113.23
	225,00	Radio Broadcast Licence	225.00
	437.66	Records & Tape Etc.	306.24
	280.10	Stationary Printing & Post	502.18
	20.74	Sundries	------
	2.320.21		2.952.61
	-----	Excess Income Over Expenditure	705.29
	41.25	Excess Expenditure Over Income	-------
		Balance Sheet As At 30.4.98	
	2.176.97	Balance Forward	2.135.72
		Add Excess Income over Expenditure	705.29
	41,25	Less Excess Expenditure Over Income	-----
	2.135.72		2.841.01
Represented by			
	2.118.70	Current Account	1.634.08
	17.02	Cash On Hand	24.63
		Deposit	1.182.30
	2.135.72		2.841.01

4 Radio Heatherwood's Mission

The aim of the radio volunteers is to bring a visitor to the bedside of patients each evening and too provide a little light entertainment for those in need. We also aim to raise funds for the League of Friends ensuring continued support for Heatherwood. Hospital and it's Staff.

5 Existing Radio Listening Systems

5:1 Bed-Head Radio System(Old Style Plastic Stethoscope Headsets)

The bedhead radio system offering four choices of music services was introduced to the hospital in the late 1960's. Each bedhead requires an expensive selection unit which is costly to maintain along with the cable system which supports it.

The system on the old wards at Heatherwood. is now non-existent. These wards rely on the inductive loop service.

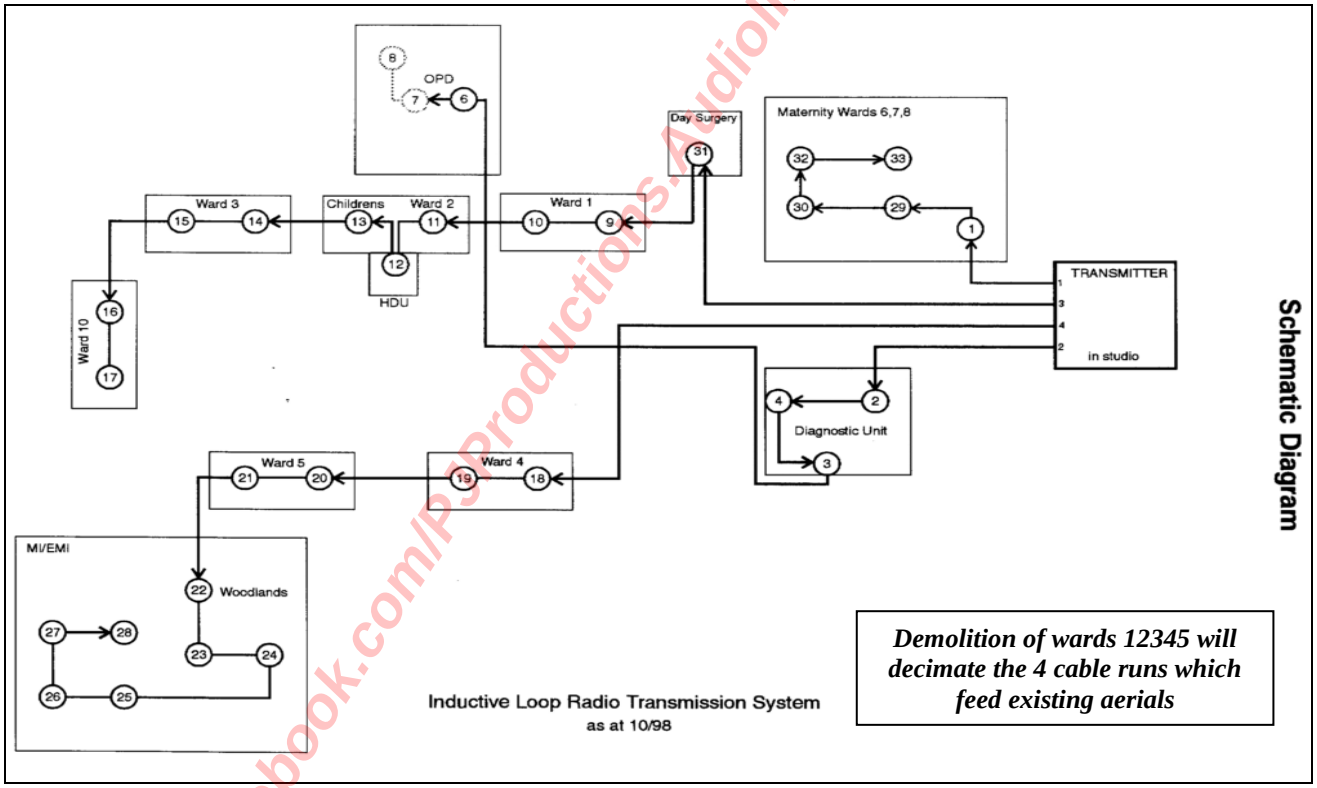
5:2 Inductive Loop Transmission System

This service was introduced in 1988 to supplement the ailing bed-head radio system.

An aerial located on a ward will generate a signal on 999 kHz Am into any personal radio within 20 metres of one of the aerials.

This at present relies on 4 cable networks and 33 aerials around the site, all of which have to be maintained (maintenance costs BI-yearly £450-£550 paid by League of Friends). The signal from any one of the 33 aerials must not overlap the property boundary.

The inductive loop service has been in operation for just over 10 years. This service is supported by 230 personal radios which have been issued since 1990(Loan Radio Service).



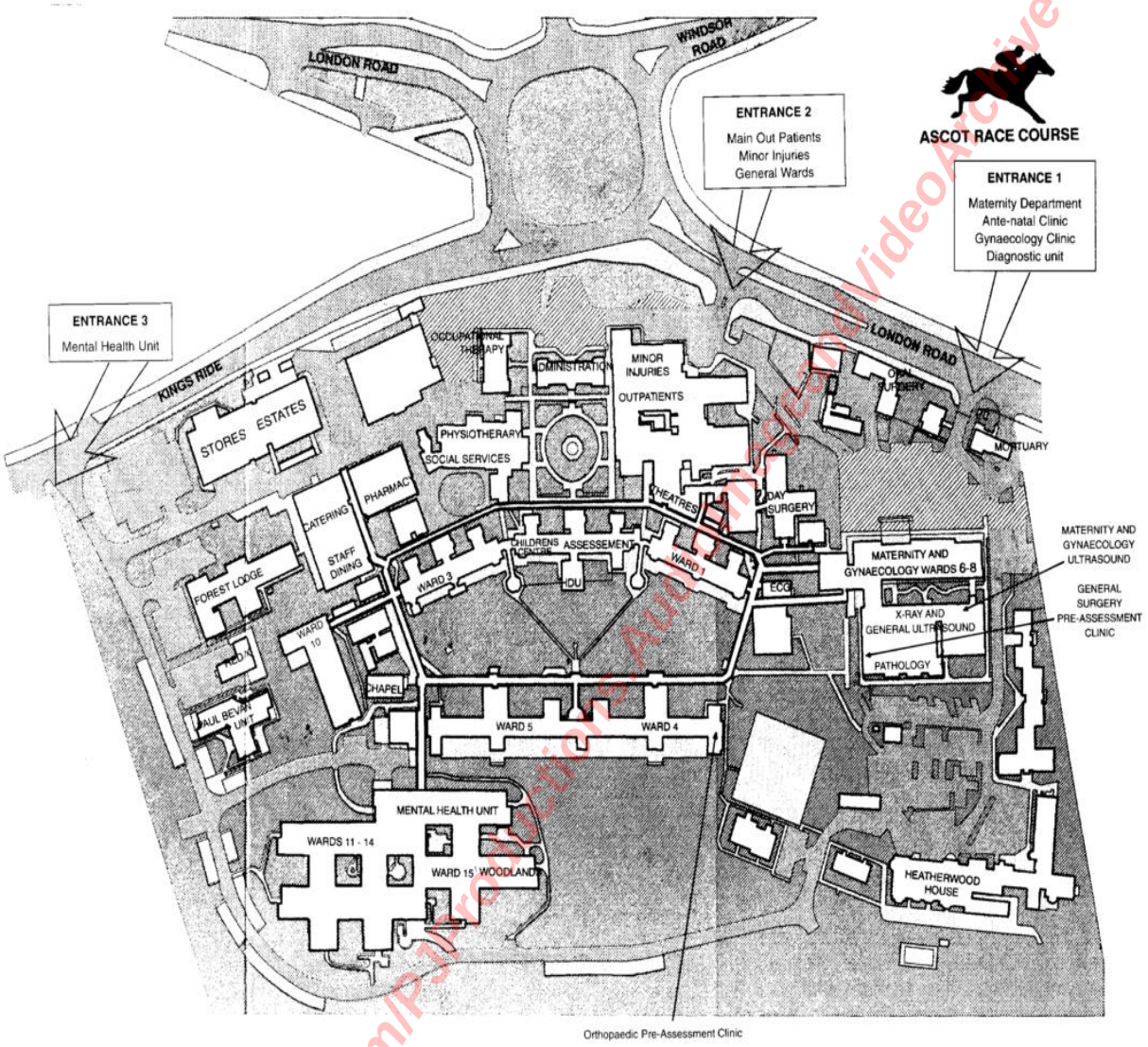
5:3 Inductive Loop System Damage Inflicted By Changes to Hospital Site

Since the introduction of the inductive loop system, building changes around the site have caused damage to aerials or part of the cable network which supports the system.

21/05/93	A/E Dept	-£325.50
01/03/95	Ward Nine Damage	-£339.67
01/02/97	Ward Seven	-£389.38
27/08/98	SCBU Repairs	-£105.20
	Damage Costs	***-£1,159.75***

6 Heatherwood. Re-Development.

Over the next ten years, the hospital site at Heatherwood. will undergo a transformation to cater for new health policies and medical treatments to be administered at Heatherwood.



Orthopaedic Pre-Assessment Clinic

A large proportion of existing buildings will be swept away and existing buildings modified. This will decimate the existing cable networks which support the inductive loop or bedhead radio services.

Inductive loop Re- cabling costs are expected to exceed £ 8,000

In an effort to improve the radio services at Heatherwood. the League of Friends in association with the hospital trust is looking at an alternative to re-cabling existing systems.

The alternative which is favoured by the League of Friends and the Hospital Trust is the installation of the Low Power AM Service.

7 Background to Low Power AM Service For Hospital Radios

Over the last 20 years the National Association of hospital radio services has been pursuing the issue of a broadcasting frequency for which hospital radios could use.

On the 14th July 1998 The Radio Authority the body which regulates broadcasting frequencies for all transmission services in the UK; announced the introduction of a low power freely radiating Am broadcasting system for all hospitals/University campuses outside the M25 corridor.

Test sites around the UK Stoke Manderville, Radio Tyneside have proved that a low power transmitter will adequately cover the hospital site without the need for the installation of expensive cable listening systems.

All cable radio systems including inductive loop systems are constantly generating financial burdens for their hospitals because of ageing cable networks, construction work and changing developments on hospital sites.

8 Benefits of Moving to the Low Power Am System

8:1 What if Radio Heatherwood. Were to Change to the New Low Power AM System ?

A move to the new system(Low Power AM)would mean everywhere on the hospital would freely be able to listen to the hospital radio service including all residences.*(Residences at present do not receive a radio service or any patient area's which have been created since 1988).*

8:2 A Single Aerial

A single aerial mast would deliver the new service. This would be installed at the rear of the property adjacent to the Emi unit*(One aerial easier to maintain).*

See(Low Power AM Aerial Transmission Mast Page 14)

8:3 Loan Radio Service

The league of friends and Radio Heatherwood. have been supporting the issuing of loan radios for patients since 1990. 230 loan radios offer an opportunity for patients to be entertained during their stay.

The new service will continue to use the existing personal radio's.

8:4 A Friend at the Bedside

Radio Heatherwood. has always been classed as a friend at the bedside the flexibility of remaining with an Am service is the opportunity to maintain total freedom on the site to listen to the radio service without the need to be tied to the bed-head.

8:5 Minimal Chance of Damage

Any future remedial work carried out to wards/depts would not interfere with the broadcasting system causing any un-necessary financial burden for the radio station.

Any future building work or changes made to the site would mean buildings could automatically receive the am service without the need for installation of a new cable network.

8:6 A Voice for Heatherwood.

The installation of the low power am service allows us to deliver an entertainment/information radio service to the patients and staff of Heatherwood.

The nature of the delivery of the radio service, means more people will be able to listen in to the transmitted signal. This gives us the opportunity to encourage more people to support the hospital in all it's activities, i.e. fundraising etc.

An opportunity to inform patients during their stay, of after care services available once they leave, more information on services & charities working inside & outside the hospital for it's benefit and there's opportunities for promotion of involvement in these.

See Also*(Benefits of Using the Computer/software Page 20).*

9 Low Power Transmitter Contractor

9:1 Why Choose Radica as Contractor ?

We have a close relationship with Radica who installed the inductive loop system and have continued to maintain it over the years. Radica were involved as the leading supplier during the LPAM trials and are recognised by the Radio Authority as the preferred installer.

9:2 Radica Broadcast Systems Quote

Radica provide the main equipment and associated transmission equipment & installation work.

The site also requires ground work by a building contractor. This is priced separately from transmission equipment quote.

Certificate No. FM 38173
BS EN ISO 9001: 1994

Radica
BROADCAST SYSTEMS

18, Bolney Grange Industrial Park,
Hickstead, Haywards Heath,
West Sussex, RH17 5PB, UK.
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e-mail: radio@radica.com

SUBJECT: LOW POWER AM

QUOTATION NO.980714/1W/AM/FR/EQUIPMENT

TO SUPPLY and INSTALL:

ONE x Permanent Low Power AM restricted Service Licence
freely radiating Transmission system "package" comprising:-
1 x Site (investigative and suitability report) visit
1 x Radica AM50 50W AM Transmitter
1 x Inovonics 222-02AM Audio Processor
1 x Radica AT50 Aerial Tuning Unit with w/proof casing
1 x Radica AE50 10 metre top loaded Aerial System
1 x Rack case, RF feeder cable, earthing & misc.; items
1 x Maintenance Handbook and Spares Listing
Including: 1 x Installation of the above listed equipment.

TOTAL SYSTEM "PACKAGE" PRICE:	£9,750.00
Less non-profit Organisation Status (10% Discount)	£ 975.00
SYSTEM CONTRACT "PACKAGE" PRICE:	**£8,775.00**

Prices:	Pounds Sterling.
Staged Payments:	£250 holding deposit due before site investigation visit. 25% with confirming purchase order. Balance Net 30 days.
Delivery:	6/8 weeks from receipt of confirming order and site evaluation.
Carriage:	Packing and delivery of system to site included.
Expenses:	Travel and accommodation included.
VAT:	Chargeable extra at prevailing rate as applicable.
Validity:	This offer is valid 90 days after which at Seller's discretion.
Rider:	This offer assumes delivery & installation taking place within England, Wales or Scotland. Other destinations subject to price review and written confirmation.
Conditions:	Orders accepted subject to Radica Conditions of Sale. (encl.).
Exclusions:	**RA** main or T/D Licences, **PRS** Licence or any other fees, building, construction and mains electrical works, Architect fees, planning consent related matters or any other matter not specifically mentioned here is deemed to be excluded.

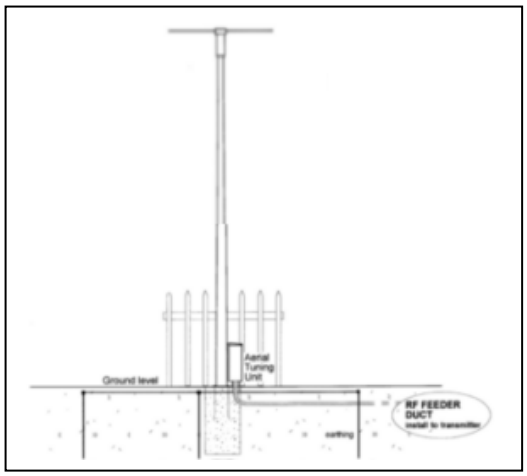
For and on Behalf of
RADICA Broadcast Systems Ltd

Graham S Sloggett
Sales Manager

9:3 Low Power AM Aerial Transmission Mast

10 Metre Mast

The low power Am service requires installation of a 10 metre mast.



Drawing Left

The New Single Aerial Installation will require a groundwork contractor too provide a concrete base and cable ducting.

Fig 1

This shows a similar installation at Stoke Mandeville Hospital. The transmitter mast with transmitter equipment contained in the Garden Shed..

Fig 2

A close up picture of the Aerial Top Array at Stoke Mandeville.

9:4 Quotation(Client/Radica Responsibilities)

Low Power AM broadcasting systems

RESPNSB.DOC TCF 27/5/98 Issue 1.1

Summary of usual areas of responsibility in planning and installation phases.

Client radio station:

1. **Planning permission:** find out if planning permission is needed and apply for it if necessary.
2. **Aerial site:** identify site and investigate underground services below mast area. Confirm suitability with Radica.
3. **Foundations:** dig hole for mast base, and fill with concrete. Set bolts supplied by Radica into concrete using supplied jig.
4. **Duct:** supply and install cable duct between transmitter and aerial foundations.
5. **Site protection:** identify risks associated with site, and provide appropriate protection (bollards, fencing, etc.)
6. **Transmitter location:** identify transmitter location and provide shelf/table.
7. **Mains:** provide 13A mains outlet socket at transmitter location.
8. **Audio:** provide audio feed at transmitter location.
9. **Audio quality:** verify quality of broadcast feed.
10. **Licence:** obtain Radio Authority licence.
11. **Site Liaison:** arrange permissions, access, etc.

Radica:

1. **Project management:** overall planning and overseeing of project.
2. **Specification:** define requirements to client, and approve details of installation.
3. **Scheduling:** in liaison with all parties, produce installation timetable.
4. **Equipment supply:** of audio processor, transmitter, ATU and mast.
5. **Pre-delivery:** arrange for delivery of mast root jig and mast to site.
6. **Mast installation:** install mast on pre-prepared foundations.
7. **RF Feeder:** supply and install aerial feeder cable from transmitter to ATU in pre-defined path.
8. **Equipment installation:** of audio processor, transmitter, and ATU.
9. **Earthing:** supply and install earthing rods.
10. **Commissioning of system:** tune and test system.
11. **Documentation:** provide detailed documentation of completed system.

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Low Power AM broadcasting systems

The following is a more detailed outline of the usual areas of the client's responsibilities:

1) Planning permission:
Determining if planning permission would be required, and if so obtaining it.

2) Aerial site:
Determining where to site the aerial mast. The decision will be based choosing a site which is safe (minimising any interference risk), effective (for good transmission) and economic (as far as the cost of installation of feeders, ducts etc., is concerned) and arrived at through mutual agreement between Radica, the client radio station, and the site owners. Factors determining the choice include:

a) the site is in a position which is reachable by the feeder cable from the transmitter, whether by specially-installed underground duct, or by other means,
b) that a reasonable separation (ideally >~25 metres) is maintained from any building or area that may contain electronic apparatus, where a risk of interference may occur.
c) that a separation is maintained (>~4 metres) from objects such as trees, large vehicles, etc., where there is a possibility that those objects may exert a variable influence on the tuning of the aerial.
d) that the site is suitable for the excavation and installation of the foundations,
e) that there is sufficient space, and suitable surface, for the installation of the earthing system which, ideally, covers a 5 x 5 metre area around the base of the mast. This may be buried, so may or may not be part of the space the installation finally takes up.
f) that there are no underground services in the area of the mast that may be affected by the installation of the foundation, earth rods (down to 1½ metres), or feeder cable duct,
g) that there are no underground or overhead cables (e.g. telephones) in the vicinity that may be affected by interference.
h) that there is a clear "corridor" in one direction from the base at least 10 metres long and 1 metre wide, so that the mast may be raised and lowered to the ground.

The client is responsible in particular for investigating the detail of points (a), (d), (f) and (g).

3) Foundations:
The block requires at least 0.53m^3 of concrete. The recommended foundation block dimensions are 650 x 650 x 1250mm deep. We will pre-supply a jig holding the mast and ATU fixing bolts, which should be set in the concrete at least 3 days prior to our arrival on site to install the mast.

4) RF Feeder cable route/duct:
The client is normally responsible for providing the path for getting the RF signal from the transmitter to the ATU at the base of the mast. This will probably mean that a cable duct is needed if the cable has to cross roads, grass, etc., and emerges underneath the ATU. The duct should be min. 50mm dia. and provided with draw pits on right angle bends. The duct must be fitted with a draw rope.

5) Site protection:
It may be necessary to arrange for some protection of the aerial site to prevent vandalism, accidental damage, inadvertent de-tuning, etc. Precautions at our installations elsewhere have ranged from, at Essex University - nothing; at Royal Victoria Infirmary, Newcastle - concrete bollards to prevent cars driving into it; at Rangers FC, Glasgow - 3m high steel palisade fencing!

It is for the client to decide what precautions will be necessary, and to provide them.

Note: if a fence is installed it **must** be arranged with a gate in the centre of one side which allows the mast to be lowered to the ground through it.

6) Transmitter location:
See illustration of possible configurations. The two extreme cases are (i) transmitter in the studio (very short audio feeder and a long RF feeder to the aerial), or (ii) transmitter in a hut at the base of the mast (long audio feeder, very short RF feeder). Usually the compromise is to locate the transmitter in a building in reasonable proximity to the aerial (to avoid excessive cable losses, and to avoid running the RF feeder in ducts or trays which may pose an interference risk to other cabling): the transmitter can also take its mains power from a local outlet.

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Low Power AM broadcasting systems

6) Transmitter location (cont.):
Therefore, once the aerial site is identified, a location in a building in close proximity for the transmitter should be found. This place should be fairly clean, dust-free, and free of extremes of heat or humidity. The transmitter fan generates some noise (comparable with a PC, say).

A shelf or table should be provided for the transmitter rack. An area of 600 x 600mm is ideal, and it must support about 25kg (i.e. a big, heavy duty shelf!). The shelf or table should be placed where there is fairly easy access to front and back, but could be placed at head height if necessary to be out of the way, but allowing at least 600mm from the ceiling. Air flow around the unit should be unrestricted.

The question of access should be considered, too. Ideally, the station staff should be able to gain 24 hour access, in case the transmitter trips, etc.

7) Transmitter mains supply:
The transmitter requires a 240V AC mains power supply: a single 13A socket will suffice. NB: The power consumption of the unit is approx. 180 W max.

8) Audio Feeder
The audio signal from the studio output needs to be delivered to the transmitter. How this is done depends on where the transmitter is, and what is practical on site. If a cable is installed it is recommended that a screened, twisted pair is installed, and that the line is driven by a proper line driving amplifier. Other options include telephone lines or radio links.

9) Audio requirements:
The audio feed should be presented at the transmitter. This should be a mono signal, ideally fed from an amplifier capable of driving at least +8dBu into 600 ohms (output impedance <50 ohms is best). If the signal is being driven over a long distance a balanced line is best, and transformer balancing is better than electronic balancing (it will block RF and be more tolerant of transient voltage surges). The input to the transmitter unit contains a balancing transformer and 600 ohm line termination.

The minimum recommended frequency response for the audio chain (from studio to transmitter) is 40Hz - 7kHz ±1dB. Note that this not as demanding as full-frequency "hi-fi", or FM broadcast requirements, but is considerably better than 300Hz - 3kHz "telephone" quality. Note that the transmitter contains a low-pass filter which removes all energy above 6.4kHz. The minimum acceptable noise performance is 50dB signal-to-noise ratio, where the noise is wideband and not in the form of induction or impulsive noise. No distortion performance specification is issued, although we advise having headroom in the entire chain of *at least* 10dB above nominal peak level, to reduce the chances of a clipped signal arriving at the transmitter.

We advise that you should not use limiters, compressors, or graphic equalisers on the studio output audio signal prior to the transmitter unit. Use of any of the above may adversely affect the quality, dynamics, or tonal balance broadcast sound. If limiters are used to protect audio lines or links their thresholds should be set much higher (6dB, say) than nominal peak level, so that final transmission limiting is done by the broadcast processor and not preceding equipment. It may be acceptable and beneficial to use a gentle, slow-acting, gated AGC device to exert overall control of levels. Use of individual microphone compressors or limiters is acceptable, although the effect they may have on the final broadcast sound should be borne in mind.

10) Licence:
The Radio Authority licence needs to be in force before Radica can carry out commissioning test transmissions, or full broadcasts can start.

11) Site Liaison:
All proposals need to be agreed with the site owners, and arrangements made for Radica to work on site, including finding out if the owners have any standing instructions for contractors which may affect us.

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10 Ground-Work Contractor

The installation of the aerial mast requires the laying down of a duct across the access road at the rear of the Emi unit. In addition a concrete base for the mast will need to be constructed.

Two competitive quotes were obtained and the contract has been awarded to ?.

10:1 Groundwork Quotation

11 Miscellaneous Costs

The figure for the groundwork contractor £7,000 includes the funds allocated for the following additionals.

11:1 Audio Link

As part of the installation of the aerial mast it will require an audio link to the current premises of the radio station. An existing link within the EMI unit will be intercepted and re-routed to the location of the transmitter equipment.

11:2 Power & Lighting

As part of the installation of the aerial mast, it will require a power source to be provided by the on-site electricians. At the location of the transmitter equipment.

12 Automated Transmission Computer & Software

12:1 Sustaining Service

When Radio Heatherwood. is not broadcasting its live programs using presenters we at present re-transmit Radio 2 on our Frequency. Radio 2 would be classed as our sustaining service. i.e. something on the airwaves for people to tune to.

12:2 Why Change to an Expensive Computer System to Deliver the Service ?

A requirement of the new low power am service licence is we don't re- transmit any existing radio service, which can be heard in our area on any other radio frequency.

This limits us quite considerably. Hence the use of a computer system..

12:3 Automatic Program Scheduler Computer & Software

The use of computers in radio stations is quite widespread and has been available for some years. The lowering of costs involved in computer hardware and the subsequent drop in the cost of the software makes it a viable option for which we can deliver our own sustaining service.

In effect broadcasting 24 hours a day, a program schedule which is tailor made to our own locale.

12:4 Benefits of Using the Computer/software

Apart from allowing us the opportunity to deliver the sustaining service, it also allows us use of the airwaves to carry information etc during the day which we would have not considered practical before. *(Radio Heatherwood. is only available evenings and weekends at present).*

Other benefits See*(A Voice for Heatherwood. Page 12)*

We can deliver a more dedicated service to our patients other than relaying other stations output, a true 24 hour service of music and information.

12:5 Computer/Software Contractor

The company who will be responsible for the installation of the computer network and software has been chosen from three possible's. Broadcast Computers & Software.

The software chosen is an American product which has a proven track record around the world. The company who are the nominated contractor are the authorised UK supplier and agents for the company.

They have advised we should set aside £5000 to ensure to cover the cost of two computers and associated hardware and software to deliver the service we require.

13 Project Costs

13:1 Low Power AM Project Set Up Cost

SUPPLIER	Low Power AM Project DESCRIPTION	QTY	UNIT PRICE	VAT CONTENT	TOTAL COST
Radica Broadcast	Site Survey	1	£250	£43.75	£294.75
Radica Broadcast	Am Transmitter Installation	1	£8,975	£1570.63	£10,545.63
Radio Authority	Licence Application	1	£200	£35.00	£235.00
Radio Authority	Licence Fee	1	£250	£43.75	£293.75
DTI	Wireless Telegraphy Licence	1	£100	£17.50	£117.50
PRS	Performing Rights Society Licence	1	£127	£22.23	£149.23
Windsor Council	Planning Permission	1	£95	£0.00	£95.00
Groundwork Contractors	Engineering/ducts/power install & Misc costs	1*	£7,000	£0.00	£7,000.00
Broadcast Computers	Sustaining Service Computers/Network	1*	£5,000	£0.00	£5,000.00
Various	Publicity and Launch Costs	1*	£1,500	£0.00	£1,500.00
		*	Estimated		
	Expected Cost			£1732.85	£25,230.85

13:2 Annual Running Cost Fee's

SUPPLIER	Annual Running Costs DESCRIPTION	QTY	UNIT PRICE	VAT CONTENT	TOTAL COST
Radio Authority	Licence Fee	1	£250	£43.75	£293.75
DTI	Wireless Telegraphy Licence	1	£100	£17.50	£117.50
PRS	Performing Rights Society Licence	1	£127	£22.23	£149.23
Radica	Transmitter Maintenance Costs	1			
	Expected Running Cost			£83.48	£560.48

As part of the new service we would have to pay for a PRS licence which at present is waived.

13:3 Current Running Cost Fee's

SUPPLIER	Current Running Costs DESCRIPTION	QTY	UNIT PRICE	VAT CONTENT	TOTAL COST
DTI/Radio Authority	Present Inductive Loop costs (Licences etc)	1	£225	£39.38	£264
Radica	Present Inductive Loop Maintenance	1	£260	£-	£260
	Current Running			£39.38	£524.38

14 Leave Things As They Are !

14:1 The Do Nothing Option: is Not an Option!

In 1987 when we were fundraising for the inductive loop system we were faced with the same dilemma do nothing was not an option . If we had not gone ahead at that time with our proposals we are convinced there would be no hospital radio service today.

We would consider leaving things the way they are, but development on the site has made us aware long term we could be forever raising funds to pay for re-cabling and re-installation of one of the many aerials around the site.

We must take this opportunity now, rather than later to embrace the new technology available to us and move to Low Power AM at the earliest.

14:2 You are Broadcasting on Inductive Loop AM: Why Do You Need to Change to Low Power AM ?

The inductive loop system has served us well and has provided the opportunity for us to develop the radio service at Heatherwood. It was the only option available to us in 1987. If Low power AM was available back in 1987 we would have opted for it because of the maintenance implications and the way the service is delivered.

The future doesn't look assured for the inductive loop installation, proposed alterations to the hospital site make it necessary for a change and we must make alternative arrangements now, if we are to continue broadcasting at Heatherwood.

15 Summary

The radio station at Heatherwood. hospital will cease broadcasting on the 33 aerial Inductive loop system and move to the new system of Low Power AM with the installation of a single aerial to transmit their signal.

In addition the radio station will broadcast twenty fours a day using a computer controlled program scheduler. This will allow the radio station to transmit more patient information during automated sessions. These will include aftercare services, charity information and health education.

The new Low Power AM service will also allow us to reach a much wider audience improving our success in generating support for the work of the hospital and charity groups concerned for it's future.

The overall funding required for the new 24 hr service will be £25,230.85 pounds. Any funds received will be used towards the project and any funds received over and above the target will be used to improve listening facilities around the site; including day rooms and the provision of additional loan radios.

This is a real opportunity for the radio service to continue its role as entertainment for the patients and staff at Heatherwood.

Radio Heatherwood. has always been known as a friend at the bedside. We aim to continue that role and our future as the voice of Heatherwood. can be assured with the introduction of the new Low Power Am Service at the Earliest.

Appendix 1 Support: Who Contributes to Success of Project ?

Appendix 1.1 Heatherwood. & Wexham Park Hospitals Trust

Assist with Planning application and provide support from the works dept with assistance in choosing a location for transmission equipment and provide power and assistance in providing an audio link to the chosen location.

In addition negotiate with two contractors for two competitive quotes for ductwork and concrete base.

Appendix 1.2 League of Friends

To support the project by underwriting a minimum of £10.000 pounds to a maximum of £15,000 Pounds.

Appendix 1.3 League Correspondence Secretary

Overall Project co-ordinator and liaison between hospital and Radica Broadcast systems.

In addition co-ordinate correspondence to all outside groups and secure enough funding to complete project.

Appendix 1.4 Radio Heatherwood.

To nominate person/persons to co-ordinate setting up of automatic computer system including setting music policy for programs and co-ordinate with a representative from the hospital, information which can be broadcast and which adheres to Radio Authority guidelines.

Record 4000 songs on computer/system and categorise.

Establish a framework with hospital for future exchange of information which can be recorded for output. (Patient Information Trailers).

Appendix 2 Donations & Financial Support

Appendix 2.1 How will the Money be Raised ?

It is desirable that because of the large sum involved in completing the project: funds will be forthcoming from charitable trust funds and aid groups.

The radio volunteers already provide the yearly fund-raising to maintain the radio service. We could not expect them to make additional contributions of this scale.

Appendix 2.2 Cheques Made Payable:-

All donations should be made payable to League of Friends (Radio Heatherwood.).

Addressed to Project Co-ordinator Peter Davidson-Smith