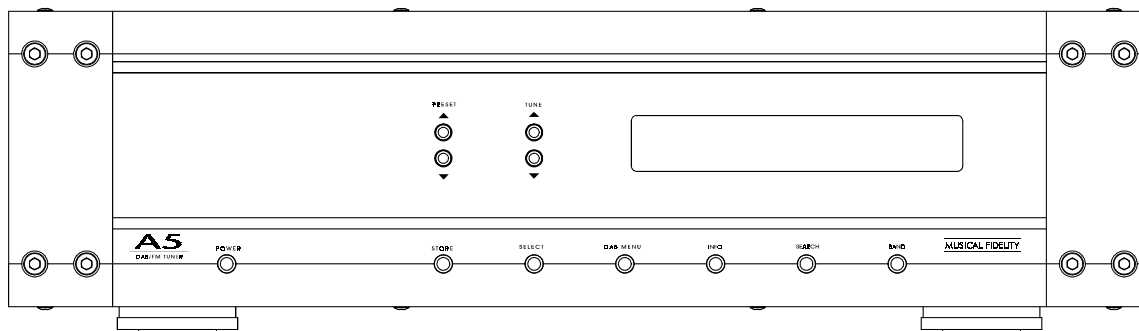


A5 DAB/FM TUNER

DAB/FM Tuner with Remote Control



INSTRUCTIONS FOR USE

Thank you for purchasing the Musical Fidelity A5 DAB/FM Tuner.

The A5 DAB/FM Tuner uses the latest technology in Digital Audio Broadcast receiver circuitry coupled with a high quality FM tuner, and valve output stage to give top quality reception of both analogue and digital stations. The FM section also features RDS and radio text

Both DAB and FM programmes are extracted digitally and up sampled to 192kHz sampling rate which allows the DAC to give better aliasing rejection, resulting in clearer, more decisive sound from DAB as well as FM.

The audio output uses a 6922 dual triode valve per channel to give the soothing valve sound to all your favourite stations.

Aesthetically, the A5 DAB/FM Tuner is a perfect match for other products in the Musical Fidelity A5 Series .

Together these components form one of the finest hi-fi systems available.

Dust regularly with a soft duster or soft brush, but be careful when using cleaning or polishing agents - they may harm the surface finish.

MUSICAL FIDELITY

SAFETY INFORMATION

IMPORTANT! (*U.K. only*)


This unit is supplied in the U.K. with a mains lead fitted with a moulded 13 amp plug. If, for any reason, you need to cut off the plug, please remove the fuse holder and dispose of the plug safely, out of reach of children. **It must not be plugged into a mains outlet.**

The wires in the mains lead supplied with this appliance are coloured in accordance with the following code:

Green and yellow.....Earth
Blue.....Neutral
Brown.....Live

WARNING - This appliance must be earthed

As the colours of the wires of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or coloured green or green-and-yellow, or by the earth symbol: 

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

If connecting to a BS1363 plug, a 13 amp fuse must be used.

WARNING:

Any modifications to this product not expressly approved by Musical Fidelity who is the party responsible for standards compliance could void the user's authority to operate this equipment.

GENERAL ADVICE

INSTALLATION PRECAUTIONS and USER INFORMATION

Your new A5 DAB/FM tuner is designed and built to provide trouble-free performance, but as with all electronic devices it is necessary to observe a few precautions:

Heed all warnings shown on the back of the product.

Only connect the A5 DAB/FM tuner to a mains outlet having the same voltage as marked at the back of the unit.

Always ensure that when disconnecting and reconnecting your audio equipment the mains supply is switched off.

Position the mains lead and signal interconnects where they are not likely to be walked on or trapped by items placed on them.

Do not use near water, or place water-filled containers on the tuner unit, for example, a flower vase or potted plants. **If water does spill inside, immediately pull out the mains plug from the wall socket and inform your dealer, who should then check the unit before further use. Entry of liquid into the tuner is dangerous, and may cause electric shock or fire hazard.**

Do not place the unit near direct heat sources such as radiators, direct sunlight or other equipment.

Do not remove any covers or try to gain access to the inside. There are no internal adjustments or fuses you can replace yourself. Refer all service work to an authorised Musical Fidelity agent.

Note: Unauthorised opening of the equipment will invalidate any warranty claim.

Dust regularly with a soft cloth or soft brush but be careful when using cleaning or polishing agents - they may harm the surface finish.

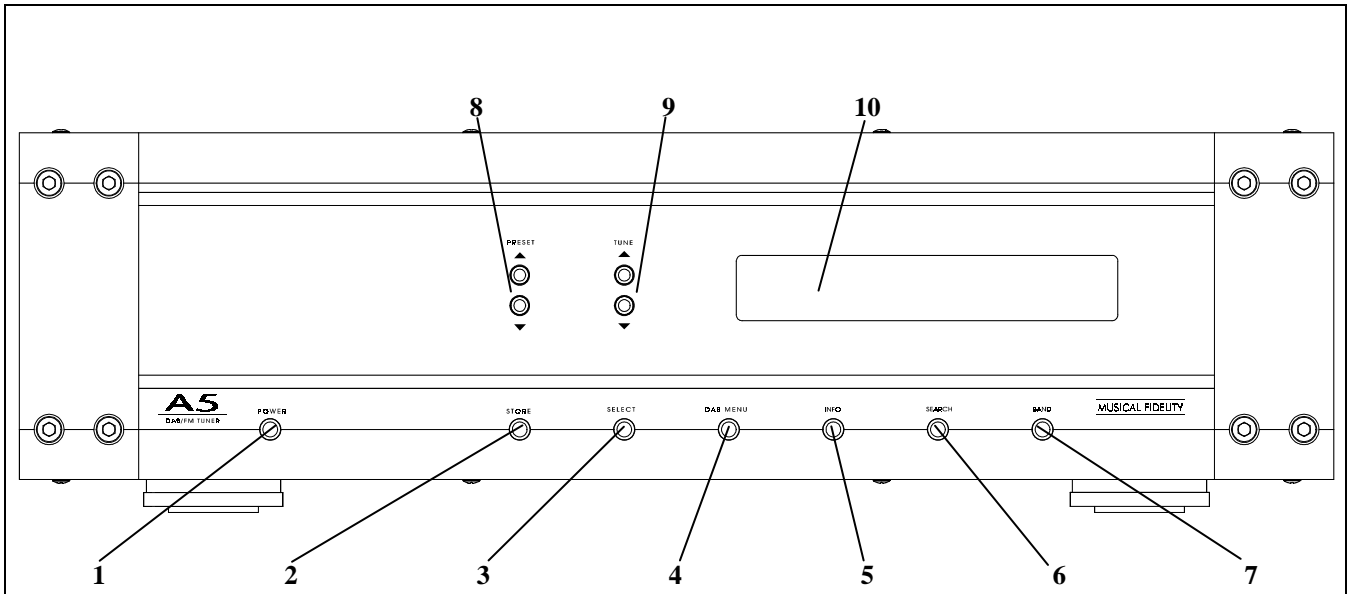
The electronics in modern hi-fi equipment is complex and may, therefore, be adversely affected or damaged by lightning. For protection of your audio system during electrical storms, remove the mains plugs and disconnect any aerial lead.

If after-sales service is required, to help your dealer identify the A5 DAB/FM tuner please quote the serial number located on the rear panel of the unit.

RADIO FREQUENCY INTERFERENCE (R.F.I)

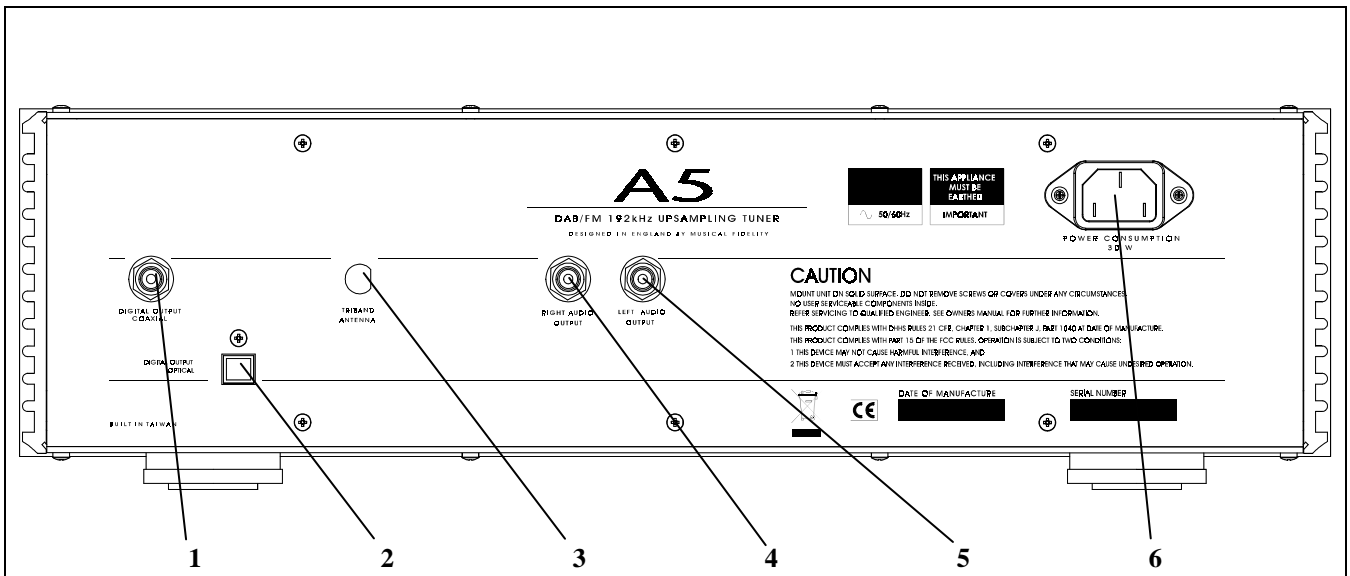
This product has been tested to ensure that its operation is not adversely affected by normal background levels of R.F.I., and that it does not itself generate excessive amounts of interference. However, if a problem persists, please contact your Musical Fidelity agent.

CONNECTIONS and FACILITIES



FRONT PANEL

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 POWER mains on/off switch 2 STORE button 3 SELECT button 4 DAB Menu button 5 INFO button | <ul style="list-style-type: none"> 6 SEARCH button 7 BAND button 8 PRESET up/down buttons 9 TUNE –up/down buttons 10 DISPLAY and IR Remote control window |
|---|--|



REAR PANEL

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 COAX digital output 2 OPTICAL digital output 3 F-TYPE connector for DAB and FM aerial | <ul style="list-style-type: none"> 4 PHONO line out RIGHT 5 PHONO line out LEFT 6 IEC Mains inlet socket |
|--|--|

REMOTE CONTROL

REMOTE CONTROL

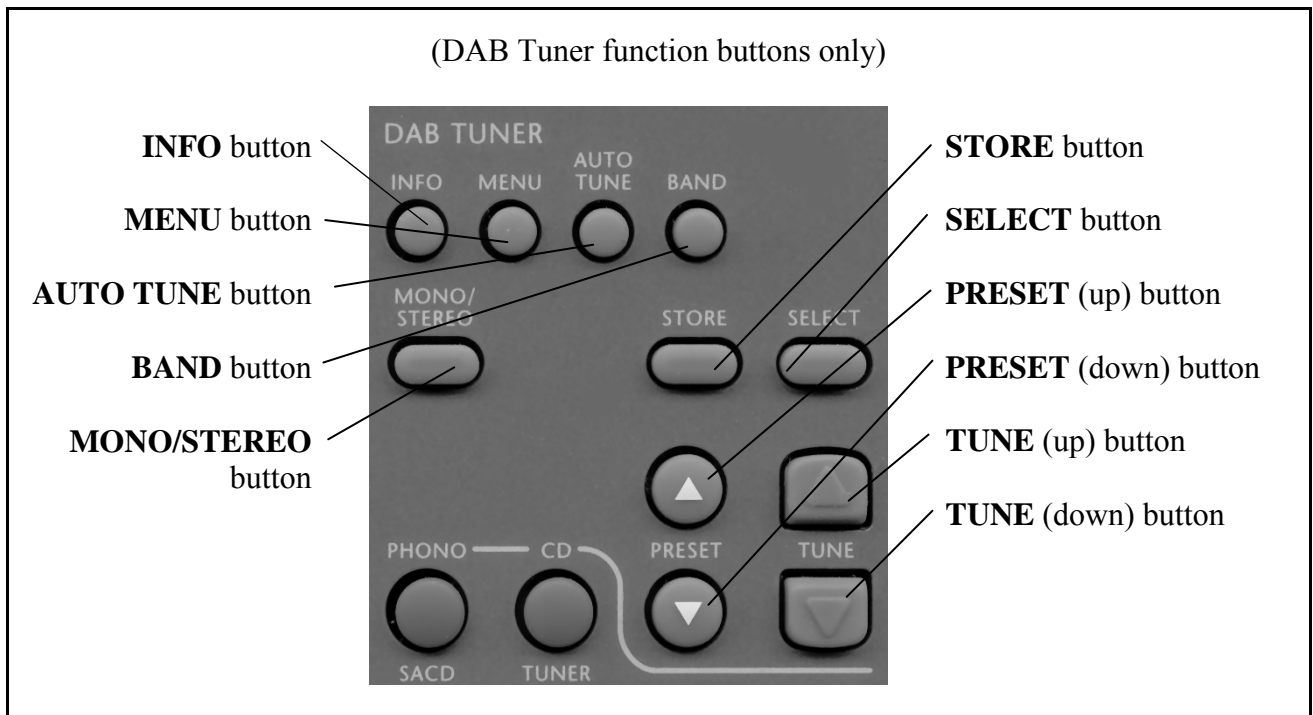
The upper group of buttons on the remote control enable main functions of the tuner to be operated from a convenient distance. Remaining buttons on this universal handset are for use with other Musical Fidelity products, and have no effect on the A5 DAB/FM tuner.

Equivalent buttons on the remote handset have the same functions as those on the front panel of the unit.

As the remote control uses an invisible infra-red light beam, the transmitter must be pointed directly towards the display window on the front of the amplifier, without visual obstruction between them.

If the range of the remote control greatly decreases, replace the batteries with new ones. Do not mix old and new batteries - two are required, size SUM-4, AAA or LR03.

Please dispose of used batteries in accordance to local regulations.



INTRODUCTION / INSTALLATION

INTRODUCTION

Congratulations on your purchase of an A5 DAB/FM Tuner and remote control.

This tuner is designed to bring DAB into the realms of hi fidelity sound reproduction with the smooth sound of valves to complement the very latest technology DAB/FM receiver circuit. To this end, a pair of 6922 dual triodes, (one per channel) are incorporated into the LINE OUT stages which themselves have vanishingly low noise and distortion and output impedance is low.

Great attention has been paid to internal layout, isolating each circuit section to prevent possible interaction.

The resultant performance achieved by this tuner is among the best in the world. It has excellent signal / noise ratio, low distortion, wide bandwidth, huge dynamic range and extraordinary resolution of fine detail.

To cater for later upgrades, both DAB and FM are available from the optical and coaxial digital outputs for connection to an external DAC of your choice

INSTALLATION

Position the tuner on a stable, horizontal surface where there is no risk of it being knocked, or subjected to vibration.

All input, output and power connections should be made with the mains power switched OFF.

AUDIO CONNECTION

The tuner should be connected to a suitable pre-amplifier or integrated amplifier input by audio cables with RCA / phono type plugs. These link the left and right AUDIO OUTPUT sockets on the rear panel of the A5 DAB/FM Tuner to the "tuner" or other suitable line-level input sockets on the amplifier.

Do not use any amplifier sockets intended for "vinyl" phono cartridge input, as the sensitive circuit will overload, producing a severely distorted sound.

If desired, the unit can be attached to an external DAC of your choice. The unit outputs COAX and OPTICAL digital signal stream at 48kHz.

NOTE: The digital output works for both DAB and FM bands.

AERIAL (ANTENNA)

For ease of installation, a tri-band aerial is supplied with the unit. This covers the FM, DAB II, III and L-bands and picks up sufficient signal for most domestic purposes..

The aerial is plugged into the tri-band antenna F connector at the rear of the unit, and should be securely fastened by tightening the nut. However, if FM stereo background noise is obtrusive, radio text is corrupted or DAB cut-out is experienced, or unit is to be used in a fringe area, a rooftop DAB and FM aerial may be required, please contact an approved aerial contractor with good local knowledge.

CLEANING

Before cleaning the tuner, switch off power at the mains switch and remove the mains plug from the wall socket.

Clean the cabinet and remote control unit using a moist cloth. We do not advise using solvents, white spirit or thinners as they could damage the surface finish.

DAB BUTTON FUNCTIONS

POWER BUTTON

Press **POWER** to turn the power ON.

Press again to turn the power OFF.

Note: Whenever the power is turned ON, the station you were previously receiving will be selected automatically. The name of the station appears in the display.

All settings, and stored stations, will be retained in memory while the unit is turned off. On switch-on, the last band (DAB/FM) and station is remembered.

BAND

This button alternates the tuner between receiving DAB and FM stations

AUTO-TUNE

To update your tuner with locally available DAB stations Press the **AUTO TUNE** button. The tuner will search through all the ensembles and pick out all the locally available stations.

TUNE UP/DOWN

To select a station, press and hold down the “**TUNE UP**” or “**TUNE DOWN**” button to cycle up and down the list of receivable broadcasts in your area. When the required station is displayed press the **SELECT** button to listen

See the section on the **PRESET** buttons to store favourite stations for easy recall

PRESET UP and PRESET DOWN

PRESET UP/DOWN buttons are used to select one of ten DAB preset memory locations. Press select when the desired preset is displayed.

STORE

It is possible to store favourite stations in preset memory locations using the **STORE** button as follows:

- 1 Tune to the station required.
- 2 Press **PRESET UP/DOWN** buttons until the desired preset. is displayed. Press the **STORE** to accept this preset. The display revert to the selected station

Note: this will overwrite any station stored previously on this preset.

Briefly pressing the button will display current preset without storing.

There are 10 presets available for programmes on the DAB band (in addition to the 10 provided for FM). Presets are remembered even if the unit is switched off.

MONO/STEREO(remote only)

This button has no function when in DAB mode

INFO

Displays the current broadcast information in the following order:

- DAB programme text
- Music Type
- Network name
- Date and time (as transmitted by network)
- Transmission mode and bit rate
- Ensemble and frequency
- Signal Strength
- Returns to top of this list

MENU (DAB options)

Press **MENU** to access menu options whilst in DAB mode.

Use the **TUNE** up/down buttons to cycle through the options, and the **SELECT** button to choose displayed option.

Menu options available for DAB are:

Manual Tune: Allows manual search of ensembles and DAB frequencies

Canadian L band: Enables Canadian L-Band

European L Band: Enables European L band

Service Base: Factory use only

Customer Version: Software version reference

System reset: RESETS all presets and performs a new scan of DAB band

FM BUTTON FUNCTIONS

AUTO-TUNE

To auto search stations, press the **AUTO TUNE** button. The tuner will search upwards through the FM band and pick out the next station for you. If pressed and held for more than a second, the tuner will scan back down the band to the previous station (the scan-down function is not available on the remote).

BAND

This button alternates the tuner between receiving FM and DAB stations

TUNE UP/DOWN

To manually tune a station, press and hold down the **TUNE UP** or **TUNE DOWN** button to scan up and down the FM band. When the required station frequency is displayed, release the **TUNE** button. Pressing buttons briefly gives fine-tuning steps (50kHz).

See the section on the **PRESET** buttons to store favourite stations for easy recall

PRESET UP and PRESET DOWN

PRESET UP/DOWN buttons are used to select one of ten FM preset memory locations. Press select when the desired preset is displayed.

STORE

It is possible to store favourite stations in preset memory locations using the **STORE** button as follows:

- 1 Tune to the station required.
- 2 Press **PRESET UP/DOWN** buttons until the desired preset. is displayed. Press the **STORE** to accept this preset. The display revert to the selected station

Note: this will overwrite any station stored previously on this preset.

Briefly pressing the button will display current preset without storing.

There are 10 presets available for programmes on the FM band (in addition to the 10 provided for DAB). Presets are remembered even if the unit is switched off.

MONO/STEREO(remote only)

This button enforces mono reception when inadequate aerial signal strength results in noisy stereo reception. MONO 'forces' mono at all times until the button is pressed again for AUTO. In **AUTO** mode, the tuner automatically switches according to signal strength.

INFO

Displays the current broadcast information in the following order:

PI: Programme identification*

PTY: Programme type*

RT: Radio text*

CT: Clock date and time (as transmitted by network)*

MS: Music/Speech (info only)*

DI: Decoder information*

Signal Strength with bargraph

Audio mode

AF: Alternate frequency*

- Returns to top of this list

* Relies on FM RDS. Not displayed if no or insufficient RDS signal.

MENU (FM options)

Press **MENU** to access menu options whilst in FM mode.

Use the **TUNE** up/down buttons to cycle through the options, and the **SELECT** button to choose displayed option.

Menu options available for FM are:

System reset: RESETS all presets and tuning to 87.50MHz (beginning of FM Band)

Customer Version: Current software version

PROBLEMS?

Basic problem-solving with a tuner is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power when POWER button is pressed	Mains power plug is not inserted fully into rear socket	Plug in securely.
No audio output	Mute function is still selected on the pre-amp or amplifier	Cancel mute function on the pre-amp or amplifier.
	Tape monitor function on the pre-amp or amplifier has been selected accidentally	Cancel tape monitor function on the pre-amp or amplifier.
	Speakers not connected, or incorrectly wired	Check speaker cables
Excessive background noise (hiss or crackle on FM) Audio cuts out on DAB	Position of aerial incorrect. Aerial signal strength insufficient.	Reposition aerial. Consider a rooftop DAB/FM aerial see P.6 Aerial (Antenna)
Tuner does not display FM RDS station name and/or text	Tuned station does not transmit the RDS feature	RDS information feature therefore unavailable.
	Signal insufficient to receive RDS	Try repositioning the whip aerial if used. Improve the aerial.
Remote control does not work	Tuner's POWER switch is set to off	Set switch to on
	One or more batteries fitted the wrong way round	Insert batteries correctly
	Batteries are flat	Change batteries – do not mix old and new ones
	Remote control is not pointed directly towards the front panel of the tuner	Ensure there is no obstruction between the remote control and player tuner
Remote control range has greatly reduced	Batteries are running out	Change batteries – do not mix old and new ones

If none of these actions affect a cure, please contact your dealer, or an authorised Musical Fidelity service agent. Remember never open the case of the A5 DAB/FM tuner yourself, as this will invalidate the guarantee.

A5 DAB/FM TUNER

SPECIFICATIONS

DAB Specifications

DAB modes	Supports modes: I, II, III, IV
VHF measurement to EN50248	VHF 174 240 MHz RF frequency range
L-Band measurement to EN50248.	L-Band (standard and Canada) 1452 1492 MHz
L-band after error correction	-96 -97 dBm Sensitivity
0.02	-95 -96.5 dBm
Band III after error correction	-15 dBm Maximum Input Signal for Pseudochannel BER with real value
Adjacent Channel Selectivity	0 dBm
Far-off selectivity. measurement to EN50248.	32 33 dBm (Measured to EN50248)
Acquisition sensitivity	45 48 dBm
Input Impedance	101 dBm
	50Ω F type connector (to VHF/L-Band diplexer)

FM Specifications

RF Frequency Range	87.5 108 MHz
RF Sensitivity	
(S+N)/N=26dB, 90MHz@22.5KHz	5 μV
Dev. F.mod=1 KHz	
RF Limiting Sensitivity	0.5 μV
(S+N)/N Ultimate signal to noise ratio	63 dB
90MHz @200mV/22.5KHz Dev. Fmod=1KHz	
THD 90MHz@200mV/75KHz Dev. Fmod=1KHz	0.5%
Stereo Channel Separation	30 dB
RDS data	CENELEC EN50067 compliant

DAC and Output Specifications

DAC circuits	24 bit Delta-Sigma (Bitstream) dual differential 8x oversampling
Up sampling	192 kHz
Total correlated jitter	< 135 pS
Linearity	< 0.1dB down to -96dB
Output Circuits	Valve (tube) buffer stages
Audio output at digital 0dB level	2.15VRMS at 1 kHz nominal
Analog output impedance	47 Ohms
Frequency response	10Hz to 20 kHz -0.2dB max
Channel separation	> 105dB 20Hz to 20 kHz
Signal / noise ratio	> 113dB "A" weighted
Total harmonic distortion	< 0.003% 10Hz to 20 kHz

Aerial input	1 F-type (female) with securing thread DAB/FM
Analog output	1 pair RCA connectors
Digital outputs	1 optical (Toslink), 48 kHz
	1 S/PDIF (RCA connector), 48kHz

Power requirements	100 / 115 / 230V AC 50 / 60Hz (factory preset)
	30 Watts

Dimensions (approximate)	440mm, 17.3 inches wide
	126mm, 4.9 inches high including feet
	379mm, 14.9 inches deep including rear terminals and on/off button

Weight	8.8 kg, 19.5 lbs unit only, un-boxed
	11.8kg, 26 lbs in shipping carton

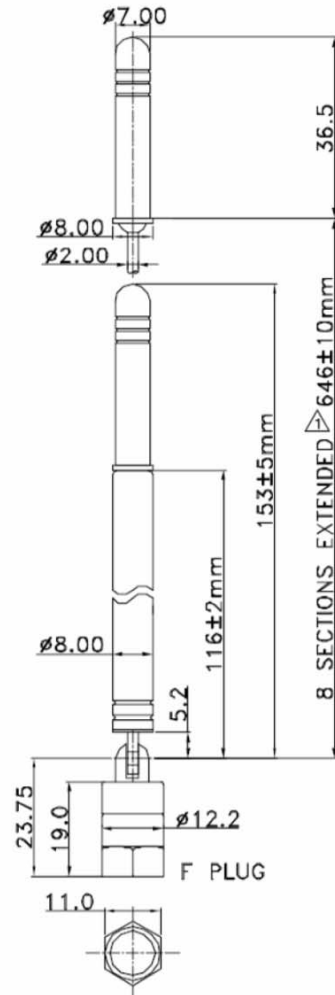
Standard accessories	Telescopic tri-band aerial with F-plug connector
	Remote control handset (universal type with DAB),
	2 batteries size LR03 or AAA, manganese alkaline type,
	IEC mains lead (10 Amp type)



Musical Fidelity reserves the right to make improvements which may result in specification or feature changes without notice.

A5 DAB/FM TUNER

SPECIFICATIONS



Operating Frequency	FM Band: 88~108MHz Band III: 174~240MHz L Band: 1452~1492MHz
Gain	FM&Band III: 2dBi ; L Band: 5dBi
Impedance	75Ω
S.W.R	≤2.0:1@Resonate Freq.
Polarization	Vertical
Connector	F type
Operating Temperature	-20°C to +65°C
Storage Temperature	-30°C to +75°C
Length	Sleeve Length: 36mm Compression Length: 153±10mm Total Extension Length: 646±10mm
Mechanical Fixation	180° Swivel

REVISION HISTORY

RELEASE	DATE	CHANGES
Issue 1	1 st March 2006	1 st release