## **TERMO DE REFERÊNCIA**

## 1. OBJETO

Aquisição de alto-falantes modelo FP6020-II (soundtube), sem cúpula:

## 2. JUSTIFICATIVA

Compra para reposição na sala Gols do Museu do Futebol.

# 3. ESPECIFICAÇÕES TÉCNICAS DO EQUIPAMENTO

System Type    2  x 25 mm stereo or mono high-directivity (8 ohm stereo, 4 ohm mono). Optional transformer for distributed systems (25/70.7/100-volt).						
mono). Optional transformer for distributed systems (25/70.7/100-volt).  Impedance (nominal) 8 ohm stereo, 4 ohm mono Sensitivity dB @ 2.83 V/1 m 75.0 dB  Sensitivity dB @ 1 W/1 m 2 75.0 dB  Frequency Response (- 3 dB) 3 170 Hz - 22 kHz (300 Hz with high-pass filter)  Frequency Response (-10 dB) 3 130 Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4 30 W  Max. Continuous Power RMS 5 15 W  5 Max. Power SPL @ 1 m 87.0 dB  Coverage Angle (-6 dB @ 2 kHz) 30°  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q) 19 (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  Directivity Index (DI) 11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  Tap Selector Optional J-box transformer with fourposition rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order						
Impedance (nominal)  Sensitivity dB @ 2.83 V/1 m  Sensitivity dB @ 1 W/1 m 2  Frequency Response (-3 dB) 3  Frequency Response (-10 dB) 3  Frequency Response (-10 dB) 3  Frequency Response (-10 dB) 3  To Hz - 22 kHz (300 Hz with high-pass filter)  Frequency Response (-10 dB) 3  To Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  To Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  To Hz - 22 kHz (200 Hz with high-pass filter)  To Hz - 22 kHz (200 Hz with high-pass filter)  To Hz - 22 kHz (200 Hz with high-pass filter)  To W	System Type					
Impedance (nominal) Sensitivity dB @ 2.83 V/1 m Sensitivity dB @ 1 W/1 m 2 Frequency Response (- 3 dB) 3 Frequency Response (- 10 dB) 3 Frequency Response (-10 dB) 3 Frequency Voice Coil Frequency Response (-3 dB) 3 Frequency Response (-10 dB) 3 Fr	System Type	mono). Optional transformer for				
Sensitivity dB @ 2.83 V/1 m  Sensitivity dB @ 1 W/1 m 2  Frequency Response (- 3 dB) 3  Frequency Response (-10 dB) 3  Frequency Response (-10 dB) 3  Frequency Response (-10 dB) 3  I30 Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  Max. Continuous Power RMS 5  Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  Network Type: High-Pass  Provide B 170 Hz - 10 kHz (10 in)  Frequency Voice Coil  Network Type: High-Pass  Provide B 170 Hz - 10 kHz (10 in)  Frequency Voice Coil  Frequency Voice Coil  Provide B 170 Hz - 10 kHz (10 in)  Frequency Voice Coil  Frequency Voice Coil  Provide B 170 Hz - 10 kHz (10 in)  Frequency Voice Coil  Frequency Voice Voice Coil  Frequency Kabo Value (200 Hz with high-pass Filter)  Frequency Kabo Value (200 Hz with high-pass Filter)  Freq		distributed systems (25/70.7/100-volt)				
Sensitivity dB @ 1 W/1 m 2 Frequency Response (- 3 dB) 3 Frequency Response (- 10 dB) 3 Frequency Response (-10 dB) 3 Frequency Response (-3 dB) 4 Frequency Response (-3 dB) 3 Frequency Response (-3 dB) 3 Frequency Response (-3 dB) 4 Frequency Response (-3 dB) 3 Frequency Response (-10 dB) 4	Impedance (nominal)	8 ohm stereo, 4 ohm mono				
Frequency Response (- 3 dB) 3  170 Hz - 22 kHz (300 Hz with high-pass filter)  Frequency Response (-10 dB) 3  130 Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  30 W  Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Factor (Q)  19 (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  Directivity Index (DI)  11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  Tap Selector  Optional J-box transformer with fourposition rotary switch  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  75 Hz or 350 Hz switchable  Network Type: High-Pass  6 dB per octave, 1st order	Sensitivity dB @ 2.83 V/1 m	75.0 dB				
Frequency Response (-10 dB) 3  Frequency Response (-10 dB) 3  130 Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  30 W  Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 bkHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Optional J-box transformer with four-position rotary switch  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  75 Hz or 350 Hz switchable  Network Type: High-Pass  6 dB per octave, 1st order	Sensitivity dB @ 1 W/1 m 2	75.0 dB				
Frequency Response (-10 dB) 3  130 Hz - 22 kHz (200 Hz with high-pass filter)  Max. Program Power 4  30 W  Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  Network Type: High-Pass  A 70 dB  87.0 dB	Frequency Response (- 3 dB) 3	170 Hz - 22 kHz (300 Hz with high-pass				
Max. Program Power 4  Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  Network Type: High-Pass  15 W  87.0 dB  87.0 dB		filter)				
Max. Program Power 4  Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  Network Type: High-Pass  15 W  87.0 dB  87.0 dB	Frequency Response (-10 dB) 3	130 Hz - 22 kHz (200 Hz with high-pass				
Max. Continuous Power RMS 5  5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  Network Type: High-Pass  15 W  87.0 dB  87.		filter)				
5 Max. Power SPL @ 1 m  Coverage Angle (-6 dB @ 2 kHz)  Coverage Angle (-6 dB @ 10 55° kHz)  Coverage Angle (Avg. 2 to 10 45° kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  Network Type: High-Pass  87.0 dB 87.	Max. Program Power 4	30 W				
Coverage Angle (-6 dB @ 2 kHz) 30°  Coverage Angle (-6 dB @ 10 kHz)  Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q) 19 (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  Directivity Index (DI) 11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  Tap Selector Optional J-box transformer with fourposition rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order	Max. Continuous Power RMS 5	15 W				
Coverage Angle (-6 dB @ 10 55°    kHz)  Coverage Angle (Avg. 2 to 10 45°    kHz)  Directivity Factor (Q)	5 Max. Power SPL @ 1 m	87.0 dB				
Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  Network Type: High-Pass  As a 10 d 5°  As April (Avg. 2 to 10 d 6 d 5°  As April (Avg. 2 to 10 d 6 d 5°  As April (Avg. 2 to 10 d 6 d 6 d 6 d 6 d 6 d 6 d 6 d 6 d 6 d	Coverage Angle (-6 dB @ 2 kHz)	30°				
Coverage Angle (Avg. 2 to 10 kHz)  Directivity Factor (Q)  Directivity Index (DI)  Tap Selector  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  Network Type: High-Pass  Age (2 kHz)  To (10 kHz); 20.9 (2 kHz)  11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  The concave of th	Coverage Angle (-6 dB @ 10	55°				
Directivity Factor (Q)  Directivity Factor (Q)  Directivity Index (DI)  Directivity Index (DI)  Tap Selector  Optional J-box transformer with four-position rotary switch  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  Network Type: High-Pass  19 (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T1.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  T1.9 dB (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T1.9 dB (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T1.9 dB (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T1.9 dB (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T1.9 dB (averaged 100 Hz - 10 kHz); 20.9 (2 kHz)  T2.9 dB (2 kHz)  Optional J-box transformer with four-position rotary switch  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  6 dB per octave, 1st order	kHz)					
Directivity Factor (Q)  Directivity Index (DI)  Directivity Index (DI)  11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  Tap Selector  Optional J-box transformer with fourposition rotary switch  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  High-Pass Filter  75 Hz or 350 Hz switchable  Network Type: High-Pass  6 dB per octave, 1st order	Coverage Angle (Avg. 2 to 10	45°				
kHz)  Directivity Index (DI)  11.9 dB (averaged 100Hz - 10kHz); 13.2 dB (2 kHz)  Tap Selector  Optional J-box transformer with fourposition rotary switch  Transducers  Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil  20.5 mm (0.81 in)  High-Pass Filter  75 Hz or 350 Hz switchable  Network Type: High-Pass  6 dB per octave, 1st order	kHz)					
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Tap Selector Optional J-box transformer with four- position rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order		kHz)				
Tap Selector Optional J-box transformer with four- position rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order	Directivity Index (DI)	11.9 dB (averaged 100Hz - 10kHz); 13.2				
position rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order	, , ,	, -				
position rotary switch  Transducers Twin 25 mm (1.0 in) full-range aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order	Tap Selector	Optional J-box transformer with four-				
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aluminum concave  Low-Frequency Voice Coil 20.5 mm (0.81 in)  High-Pass Filter 75 Hz or 350 Hz switchable  Network Type: High-Pass 6 dB per octave, 1st order	Transducers					
High-Pass Filter75 Hz or 350 Hz switchableNetwork Type: High-Pass6 dB per octave, 1st order						
Network Type: High-Pass 6 dB per octave, 1st order	Low-Frequency Voice Coil	20.5 mm (0.81 in)				
	High-Pass Filter	75 Hz or 350 Hz switchable				
Inputs Four-conductor 16-gauge hardwire	Network Type: High-Pass	6 dB per octave, 1st order				
	Inputs	Four-conductor 16-gauge hardwire				

	leads,	CAT-V	cable	included	for	
	optional accessories					
Regulatory - CE	Approv	Approved				
RoHS	Approv	⁄ed				

### 4. QUANTIDADES

03 unidades.

#### **5. GARANTIA**

Garantia mínima de 01 ano.

## 6. CONSIDERAÇÕES GERAIS

Para concorrer ao chamamento às empresas devem atender as especificações descritas nesta TR.

As propostas recebidas serão analisadas conforme o critério de melhor preço e técnica, forma de pagamento e prazo para entrega.

A proposta deverá conter: Preço unitário, pois, o IDBrasil se reserva o direito de alterar a quantidade a serem adquiridas. Exige-se apresentação das especificações da garantia, especialmente para troca/ substituição.

O IDBrasil se reserva o direito de cancelar ou suspender este processo de compra.