

# DIRECTOR'S REPORT

The Directors of Audio Pixels Holdings Limited submit herewith the financial report of the company for the financial year ended 31 December 2019. In order to comply with the provisions of the Corporations Act 2001, the directors report as follows:

The names and particulars of the directors of the company during or since the end of the financial year are:

Name	Particulars
Fred Bart	Chairman and Chief Executive Officer. A director since 5 September 2000. He has been Chairman and Managing Director of numerous private companies since 1980, specialising in manufacturing, property and marketable securities. Mr Bart is also a director of Immunovative Therapies Limited, an Israeli company involved in the manufacture of cancer vaccines for the treatment of most forms of cancer. He is a member of the Audit Committee and a member of the Nomination and Remuneration Committee.
Ian Dennis	Non-executive director and Company Secretary. Ian is a chartered accountant with experience as director and secretary in various public listed and unlisted technology companies. He has been involved in the investment banking industry and stockbroking industry for the past thirty years. Prior to that, Ian was with KPMG, Chartered Accountants in Sydney. Appointed to the Board on 5 September 2000. He is a member of the Audit Committee and Nomination and Remuneration Committee.
Cheryl Bart AO	Non-executive director. Appointed to the Board on 26 November 2001. Cheryl Bart is a lawyer and company director. She is Chairman of Powering Australian Renewables and Ted X Sydney. Cheryl is a non-executive director of SG Fleet Australia Limited, ME Bank, and the Invictus Games. She is a fellow of the Australian Institute of Company Directors, Patron of SportsConnect and a member of Chief Executive Women. She is a member of the Audit Committee and a member of the Nominations and Remuneration Committee.

## Directorships of Other Listed Companies

Directorships of other listed companies held by directors in the 3 years immediately before the end of the financial year are as follows:

Name	Company	Period of directorship
Fred Bart	Electro Optic Systems Holdings Limited	Since May 2000
	Weebit Nano Limited	Since March 2018
Ian Dennis	Electro Optic Systems Holdings Limited	Since May 2000
Cheryl Bart	SG Fleet Australia Limited	Since February 2014

## Principal Activities

The principal activity of the Company is an investment in Audio Pixels Limited of Israel. Audio Pixels Limited is engaged in the development of digital speakers.

## Results

The net loss for the financial year ended to 31 December 2019 was \$6,231,930 (31 December 2018 - \$4,519,721).

## Dividends

The directors recommend that no dividend be paid and no amount has been paid or declared by way of dividend since the end of the previous financial year and up to the date of this report.

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## Review of Operations

Achievements during the reporting period were technical in nature, focused on advancing the company's proven prototype technologies into a mass-produced product. The primary accomplishment of the period has been fabrication of devices that reliably contend with the operational instabilities associated with electrostatically driven actuators and overcoming challenges related to processing the back side of the wafer. Achievement of this critical milestone enabled, for the first time, accurate assessment and optimization of the acoustic output of our MEMS transducer.

As has been covered in past reports, electrostatic actuators suffer from operational instability, sometimes called charge-trapping. Achieving control over the instabilities of charge trapping is considered by the industry to be perhaps the primary challenge in the development of micro-actuators, certainly in higher voltages and longer travel actuators such as ours. In practice, charge trapping related effects cause stiction, adhesion, slow release, arching and other concerns which not only lead to device failure but also place significantly greater constraints on fabrication processes and tolerances. The company in close collaboration with its fabrication partner(s) has expended considerable time, effort, and resources overcoming this gating item to the advancement of our technology.

The company devised and simultaneously implemented a number of approaches to manage the adverse effects of electrostatic actuation - some of which worked better than others. One particular approach however proved overtime to be far superior as it reliably and repeatably overcame the associated challenges.

Another challenge had to do with our need to process the back sides of the wafers. This requires placing the wafers, face down on the chucks of several different machines. The delicate structures on the face of the wafers were often damaged by the handling robots or scratched by microscopic particles left on the chucks. The (conductive) silicon fragments, broken off the structures, sometimes cause shorts if they fell into the pixels, rendering the chips inoperable. The company and its vendors tried numerous "standard" solutions, protecting the delicate structures, using a variety of different coatings. In some cases, the damage penetrated through the coating and in others, the coating proved to be difficult to remove. The company invented a new protection scheme (patents for which are being drafted), which proved to be highly effective, leaving the delicate structures pristine and not requiring complex coating removal steps. The number of damages resulting from back-side processing dropped from thousands to 3 or less per wafer. Having at long last devices that were short-free and proven to reliably actuate with the required electromechanical precision enabled the company to shift focus to the acoustic output of the device.

Acoustic characterization revealed that while the devices produced sound throughout the spectrum (including the playing of speech and music), the performance deviated from expectations. The company designed and built extremely sophisticated measurement equipment and methods in order to trace the origins of the problem and discovered the presence of disruptive waves. These unexpected disruptive waves were ultimately traced to subtle deviation from manufacturing tolerances that were only detectable when we overcame the adverse effects of the electrostatic actuation.

In response to this finding, the company devised and introduced relatively minor design changes to the structure that both return the spec to compliance and diminishing the sensitivity to manufacturing tolerance. These changes were introduced into the MEMS manufacturing process with deliveries of fully functional devices expected in March 2020.

As we anticipate substantive and dramatic improvement to the acoustic output of the devices, our current plan is focused on having demonstratable technology on or about the end of March. In preparation, demonstration boards and systems are being designed and built by the company.

During the period the company has also advanced other critical aspects of the technology, such as completing development of the metal module for the MEMS chip. Deposition of "metals" on the MEMS chip is required for connection (wire bonding) in the assembly and packaging process. In conjunction the company began runs with its packaging partner in attempt to insure smooth and efficient assembly and packaging of the upcoming chip deliveries.

The company also expanded its testing abilities and capacity. The company is building several additional testing stations. Some of these stations would be placed at the vendors' facility, allowing them to quickly assess the quality of the produced wafers, while the material is still in the clean room (once a wafer left the fab's clean room, it is practically impossible to bring it back in due to risk of cross contamination).

Management continues to remain intimately engaged with its future customers, routinely conducting confidential communications as to the progress, potential, applications and demand for its impending products.

Management has also been intensifying discussions with our fabrication partners, reviewing and planning the actions required to transition from development to mass-production.

Further information concerning the operations and financial condition of the entity can be found in the financial report and in releases made to the Australian Stock Exchange (ASX) during the year.

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## Changes in State of Affairs

There was no significant change in the state of affairs of the company or the consolidated entity other than that referred to in the financial statements or notes thereto.

## Significant Events After Balance Date

There has not been any matter or circumstance that has arisen since the end of the financial year which is not otherwise dealt with in this report or in the financial statements, that has significantly affected or may significantly affect the operations of the company or the consolidated entity, the results of those operations or the state of affairs of the company or the consolidated entity in subsequent financial years.

## Future Developments

The consolidated entity will continue to focus on the development of its digital speaker technology.

## Environmental Regulations

In the opinion of the directors the company and the consolidated entity is in compliance with all applicable environmental legislation and regulations.

## Indemnification and Insurance of Officers and Auditors

During the financial year, the company paid a premium in respect of a contract insuring the Directors and Officers of the Company and any related body corporate against a liability incurred as such a Director or Officer to the extent permitted by the Corporations Act 2001. The contract of insurance prohibits disclosure of the nature of the coverage provided and the amount of the premium. The Company has agreed to indemnify the current Directors, Company Secretary and Executive Officers against all liabilities to other persons that may arise from their position as Directors or Officers of the Company and its controlled entities, except where to do so would be prohibited by law. The agreement stipulates that the Company will meet the full amount of any such liabilities, including costs and expenses.

The Company has not, during or since the financial year indemnified or agreed to indemnify an auditor of the company or of any related body corporate against any liability incurred as such an auditor.

## Directors' Interests and Benefits

The relevant interest of each director in the share capital of the Company as notified by the directors to the Australian Stock Exchange in accordance with Section 205G(1) of the Corporations Act as at the date of this report are:

Name	Ordinary Shares
Fred Bart	5,819,122
Ian Dennis	320,167
Cheryl Bart	1,282,777

During the year, a superannuation fund for the benefit of Fred Bart and Cheryl Bart purchased 38,482 ordinary shares on market at a cost of \$493,382.

## Remuneration Report (Audited)

Since the end of the previous financial year no director of the Company has received or become entitled to receive any benefit (other than a benefit included in the aggregate amount of remuneration received or due and receivable by directors as shown in the financial statements) because of a contract made by the Company or related corporation with the director or with a firm of which the director is a member, or with a company in which the director has a substantial financial interest. There are no employment contracts for any of the directors.

This report outlines the remuneration arrangements in place for Directors and key management personnel of the Company. The Directors are responsible for remuneration policies and packages applicable to the Board members of the Company. The entire Board makes up the Nomination and Remuneration Committee. The Board remuneration policy is to ensure the remuneration package properly reflects the person's duties and responsibilities.

There are currently no performance based incentives to directors or executives based on the performance of the Company. There are no employment contracts in place with any Director of the Company. There are standard employment contracts for the executives of including at will employment and a notice period of three months for termination.

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## Remuneration Report (cont.)

The key management personnel of Audio Pixels Holdings Limited during the year were:

Fred Bart	Chairman and Chief Executive Officer
Cheryl Bart	Non executive director
Ian Dennis	Non executive director and company secretary
Danny Lewin	CEO and director of Audio Pixels Limited
Yuval Cohen	Chief Technical Officer of Audio Pixels Holdings Limited

The Directors fees are not dependent on the earnings of the Company and the consequences of the Company's performance on shareholder wealth. On 24 September 2010, the maximum total directors fees were increased to a total of \$250,000 per annum in line with the increased activities of the company. The actual directors fees paid were within the approved limit of \$250,000 per annum approved by shareholders at the Annual General Meeting held on 24 September 2010.

The table below sets out summary information about the Company's earnings and movements in shareholder wealth for the last 5 financial years.

	Year ended 31 December 2019 \$	Year ended 31 December 2018 \$	Year ended 31 December 2017 \$	Year ended 31 December 2016 \$	Year ended 31 December 2015 \$
Revenue	272,520	86,961	65,624	103,630	25,073
Net (loss) before tax	(6,231,930)	(4,519,721)	(5,914,957)	(5,054,771)	(1,840,940)
Net (loss) after tax	(6,231,930)	(4,519,721)	(5,914,957)	(5,054,771)	(1,840,940)

	Year ended 31 December 2019 \$	Year ended 31 December 2018 \$	Year ended 31 December 2017 \$	Year ended 31 December 2016 \$	Year ended 31 December 2015 \$
Share price at start of year/period	20.22	16.82	14.15	8.45	9.86
Share price at end of year/period	15.35	20.22	16.82	14.15	8.45
Dividend Paid	0.00	0.00	0.00	0.00	0.00

The aggregate compensation of the key management personnel of the Company is set out below:

	31 December 2019 \$	31 December 2018 \$
Short-term employee benefits	613,183	763,526
Post employment benefits	92,762	99,387
	705,945	862,913

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## Remuneration Report (Cont.)

The following table sets out each key management personnel's equity holdings (represented by holdings of fully paid ordinary shares in Audio Pixels Holdings Limited).

	Balance at 1/1/19 No.	Granted as remuneration No.	Received on exercise of options No.	Net other change No.	Balance at 31/12/19 No.
Mr Fred Bart*	5,780,640	-	-	38,482	5,819,122
Mrs Cheryl Bart*	1,244,295	-	-	38,482	1,282,777
Mr Ian Dennis	320,167	-	-	-	320,167
Mr Danny Lewin	1,430,819	-	-	7,800	1,438,619
Mr Yuval Cohen	1,430,819	-	-	-	1,430,819

\* Included in the above shareholdings in respect to both Fred Bart and Cheryl Bart are 782,777 (2018: 744,295) shares in Audio Pixels Holdings Limited held by the Bart Superannuation Fund, in respect to which each has a relevant interest.

In the previous year, a convertible note of \$1,500,000 was exercised on 7 November 2018 and resulted in the issue of 154,959 ordinary shares to 4F Investments Pty Limited, a company controlled by Fred Bart, at a price of \$9.68.

## Transactions with Related Entities

During the year ended 31 December 2019, the Company paid a total of \$107,857 (year ended 31 December 2018 - \$107,857) to 4F Investments Pty Limited, a company associated with Mr Fred Bart in respect of directors fees and superannuation for Mr Fred Bart and Mrs Cheryl Bart.

During the year ended 31 December 2019, the Company paid interest of Nil (year ended 31 December 2018 - \$125,918) on convertible notes to 4F Investments Pty Limited, a company associated with Mr Fred Bart.

During the year ended 31 December 2019, the Company paid a total of \$41,063 (year ended 31 December 2018 - \$41,063) to Dennis Corporate Services Pty Limited, a company associated with Mr Ian Dennis in respect of directors fees and superannuation.

During the year, the Company paid \$30,000 (31 December 2018 - \$30,000) to Dennis Corporate Services Pty Limited, a company associated with Mr Ian Dennis in respect of consulting fees for company secretarial and accounting services.

On 1 June 2018, the company exercised an option to renew a lease in respect of office premises at Suite 3, Level 12, 75 Elizabeth Street Sydney for a period of forty eight months to 30 March 2022. The Company recharged \$30,441 (year ended 31 December 2018 - \$28,441) of the rent and other tenancy charges to Electro Optic Systems Holdings Limited, a company of which Fred Bart and Ian Dennis are directors and \$30,441 (year ended 31 December 2018 - \$28,441) to 4F Investments Pty Limited, a company controlled by Fred Bart.

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## Remuneration Report (Cont.)

The following table sets out the remuneration of each key management personnel of the Company:

	Short Term		Post Employment		Total
	Directors fees/ Salary \$	Non-monetary \$	Superannuation \$	Social Security \$	\$
<b>December 2019</b>					
Fred Bart	61,000	-	5,794	-	66,794
Cheryl Bart	37,500	-	3,563	-	41,063
Ian Dennis	67,500*	-	3,563	-	71,063
Danny Lewin	170,962	41,828	-	60,846	273,636
Yuval Cohen	220,008	14,385	18,996	-	253,389
	556,970	56,213	31,916	60,846	705,945
<b>December 2018</b>					
Fred Bart	61,000	-	5,794	-	66,794
Cheryl Bart	37,500	-	3,563	-	41,063
Ian Dennis	67,500*	-	3,563	-	71,063
Danny Lewin	159,034	54,499	-	38,627	252,160
Yuval Cohen	220,008	21,810	18,996	-	260,814
Shay Kaplan	118,528	23,647	-	28,844	171,019
	663,570	99,956	31,916	67,471	862,913

\* The amounts disclosed for Ian Dennis include directors fees of \$37,500 and consulting fees of \$30,000.

## Audit Committee

The Audit Committee was formally constituted on 29 August 2014 with all three directors appointed to the Audit Committee. Ian Dennis was appointed chair of the Audit Committee.

## Directors' Meetings

During the year the Company held three meetings of directors, two meetings of the Audit Committee and no meetings of the Nomination and Remuneration Committee. The attendances of the directors at meetings of the Board were:

Directors	Board of directors		Audit committee		Nomination and Remuneration committee	
	Held	Attended	Held	Attended	Held	Attended
Mr Fred Bart	3	3	2	2	-	-
Mrs Cheryl Bart	3	3	2	2	-	-
Mr Ian Dennis	3	3	2	2	-	-

All current board members are on the Audit Committee and the Nomination and Remuneration Committee.

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## Non-audit Services

Details of amounts paid or payable to the auditor for non-audit services provided during the year by the auditor are outlined in Note 4 to the financial statements.

The directors are satisfied that the provision of non-audit services, during the year, by the auditor (or by another person or firm on the auditor's behalf) is compatible with the general standard of independence for auditors imposed by the Corporations Act 2001.

The directors are of the opinion that the services disclosed in Note 4 to the financial statements do not compromise the external auditors' independence for the following reasons:

- All non-audit services have been reviewed and approved to ensure that they do not impact the integrity and objectivity of the auditor, and
- None of the services undermine the general principles relating to auditor independence as set out in Code of Conduct APES 110 Code of Ethics for Professional Accountants issued by the Accounting Professional & Ethical Standards Board, including reviewing or auditing the auditor's own work, acting in a management or decision-making capacity for the company, acting as advocate for the company or jointly sharing economic risks and rewards.

## Auditor's Independence Declaration

The auditor's independence declaration is included on page 9.

Signed in accordance with a resolution of directors made pursuant to s.298(2) of the Corporations Act 2001.

On behalf of the Directors



**I A Dennis**

Director

Dated at Sydney this 27 day of February 2020